ARMY TM 5-6675-309-14
MARINE CORPS TM 08840A-14/1

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL

TEST SET, POWER SUPPLY, PADS AN/USM-428

PART NO 877410-1

NSN 6675-01-075-4033

This manual supersedes TM 5-6675-309-14 dated 7 December 1981

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND THE NAVY

1 AUGUST 1985

CHANGE

NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
AND HEADQUARTERS, U.S. MARINE CORPS
Washington, D.C. , 20 September 1991

Operator's, Organizational, Direct Support and
General Support Maintenance Manual
for
TEST SET, POWER SUPPLY, PADS
AN/USM-428
PART NO. 877410-1
NSN 6675-01-075-4033 (EIC:YOB)

Approved for public release; distribution is unlimited

TM 5-6675-309-14/TM 08840A–14/1, dated 1 August 1985, is changed as follows:

1. Title is changed as shown above.

2. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
i and ii	i and ii
1–1 and 1–2	1–1 and 1–2
8-7 through 8-30	8–7 through 8-30
8-47 and 8-48	8-47 and 8-48
8-75 through 8-80	8–75 through 8-80
8-83 and 8-84	8–83 and 8-84
8-107 and 8-108	8–107 and 8-108
8-111 through 8-114	8–111 through 8-114
8-123 and 8-124	8–123 and 8-124
8-129 and 8-130	8–129 and 8-130
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8-131 and 8-132	8–131 and 8-132
B-1 and B-2	B–1 and B-2
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3. Retain this sheet in front of manual for reference purposes.

TM 5-6675-309-14
TM 08840A-14/1
C1

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WARNING

Do not be mislead by the terms “low voltage” or “28 VDC”. DEATH OR SERIOUS INJURY can result under certain conditions if the 28 VDC amperage is high enough. Use EXTREME CAUTION when working around ANY HOT circuits.

WARNING

Isopropyl alcohol is flammable and gives off harmful vapors. Use only in well-ventilated area away from open flames and sparks. Avoid prolonged or repeated inhalation of vapors.

TECHNICAL MANUAL

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 1 August 1985

Operator's, Organizational, Direct Support, and General Support Maintenance Manual

TEST SET, POWER SUPPLY, PADS
AN/USM-428
PART NO. 877410-1
NSN 6675-01-075-4033 (EIC:YOB)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MMTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished directly to you.

Marine Corps users should submit NAVMC FORM 10772 "Reporting Errors and Recommending Improvement." Send to Commandant of the Marine Corps Headquarters, Marine Corps, Code LMA-1, Washington, DC 20380. A reply will be sent directly to you.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope. This manual covers maintenance instructions for Power Supply Test Set AN/USM-428 (PSTS). Unpacking and installation instructions, operating instructions, and functioning of equipment are also included.

1-2. Maintenance Forms and Records. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, the Army Maintenance Management System (TAMMS) or TM 4700-15/1, the Marine Corps.

1-3. Destruction of Army Materiel to Prevent Enemy Use. Refer to TM 750-244-2 for procedures for destruction of this equipment to prevent enemy use.

1-4. Administrative Storage. Refer to TM 740-90-1 for procedures, forms, records, and inspections required during administrative storage of the PSTS. Marine Corps users shall refer to MCO 4450.7 for this information.

Calibration. No calibration of the PSTS is required. Specific adjustment procedures are in chapter 8.

1-6. Reporting Equipment Improvement Recommendations (EIR). EIRs can and must be submitted by anyone who is aware of an unsatisfactory condition with the equipment design or use. It is not necessary to show a new design or list a better way to perform a procedure, just tell why the design is unfavorable or why a procedure is difficult. EIRs may be submitted on SF (Standard Form) 368 (Quality Deficiency Report). Mail directly to:

Commander, U.S. Army Troop Support Command
ATTN: AMSTR-MOF
4300 Goodfellow Blvd.
St. Louis, MO 63120-1798

Marine Corps users shall submit NAVMC FORM 10772 "Reporting Errors and Recommending Improvements." Send to:

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Headquarters, Marine Corps
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Washington, DC 20380

A reply will be sent directly to you.

Section II. DESCRIPTION AND DATA

1-7. Purpose and Use.

a. *Purpose.* The PSTS is specifically designed for testing and troubleshooting Power Supply PP-7352/USQ-70 and computer power supply (part of Computer CP-1283/USQ-70). Both power supplies are part of the Position and Azimuth Determining System AN/USQ-70. These equipments are referred to herein as PADS PS (or PS), and PADS COMP PS (or COMP PS). Although both power supplies are tested on the PSTS, only one can be connected and tested at any given time. A fixed 28-VDC power source and a variable 0-to 40-VDC power source are required to supplement the PSTS testing of the power supplies. These power sources are switched within the PSTS.

b. *Use.*

(1) The PSTS is used to verify a fault, isolate the fault to a plug-in module or chassis-mounted component, and to verify correct operation after repair.

(2) The PSTS tests for proper operation of overvoltage, undervoltage, and overcurrent circuitry in the unit under test (UUT). Each test is made using various loads, input voltages, or control signals. The UUT monitor and control signals are tested by controls, indicators, and test jacks on the PSTS front panel. The test jacks are monitored using the GFE oscilloscope or multimeter.

1-8. Description.

a. *General.* The PSTS, as illustrated in figure 1-1 and listed in table 1-2, consists of a transit case containing the power supply test set and a transit case containing a cable assembly set and a copy of this manual.

b. *Power Supply Test Set.* The PSTS consists of an instrument case containing a front panel, a mounting plate, and shrouds to which its components are attached. The instrument case includes hinged covers on each side so that either the front panel or the mounting plate may be accessed. All operating controls, indicators, and connectors are on the front panel.

c. *Cable Assembly Set, Electrical.* Cable assemblies W301 through W306, and W309 through W311 make up the electrical cable assembly set. Each cable has a straight-bayonet coupling plug at each end except for W306 and W311 which have two lugs at one end.

d. *Transit Cases.* Two transit cases are provided for transporting the PSTS or for long-term storage. Cases are watertight and dusttight and are fitted with pressure relief valves.

1-9. Differences Between Models. There is only one model of Power Supply Test Set AN/USM-428.

1-10. Tabulated Data. PSTS performance characteristics are given in table 1-1.

1-11. Items Comprising an Operable Equipment. Items comprising an operable PSTS are illustrated in figure 1-1 and listed in tables 1-2, 1-3, and 1-4.

Legend for Figure 1-1

1. Power Supply Test Set TS-3618/USM-428
2. Power Supply Test Set Case CY-7564/USM-428
3. Test Set Accessories Case CY-7610/USM-428
4. Cable Assembly, Electrical, W301
5. Cable Assembly, Electrical, W302
6. Cable Assembly, Electrical, W303
7. Cable Assembly, Electrical, W304
8. Cable Assembly, Electrical, W305
9. Cable Assembly, Electrical, W306
10. Cable Assemble, Electrical, W309
11. Cable Assembly, Electrical, W310
12. Cable Assembly, Electrical, W311
13. Maintenance Manual TM 5-6675-309-14
14. RPSTL TM 5-6675-309-24P
15. Card Extractor

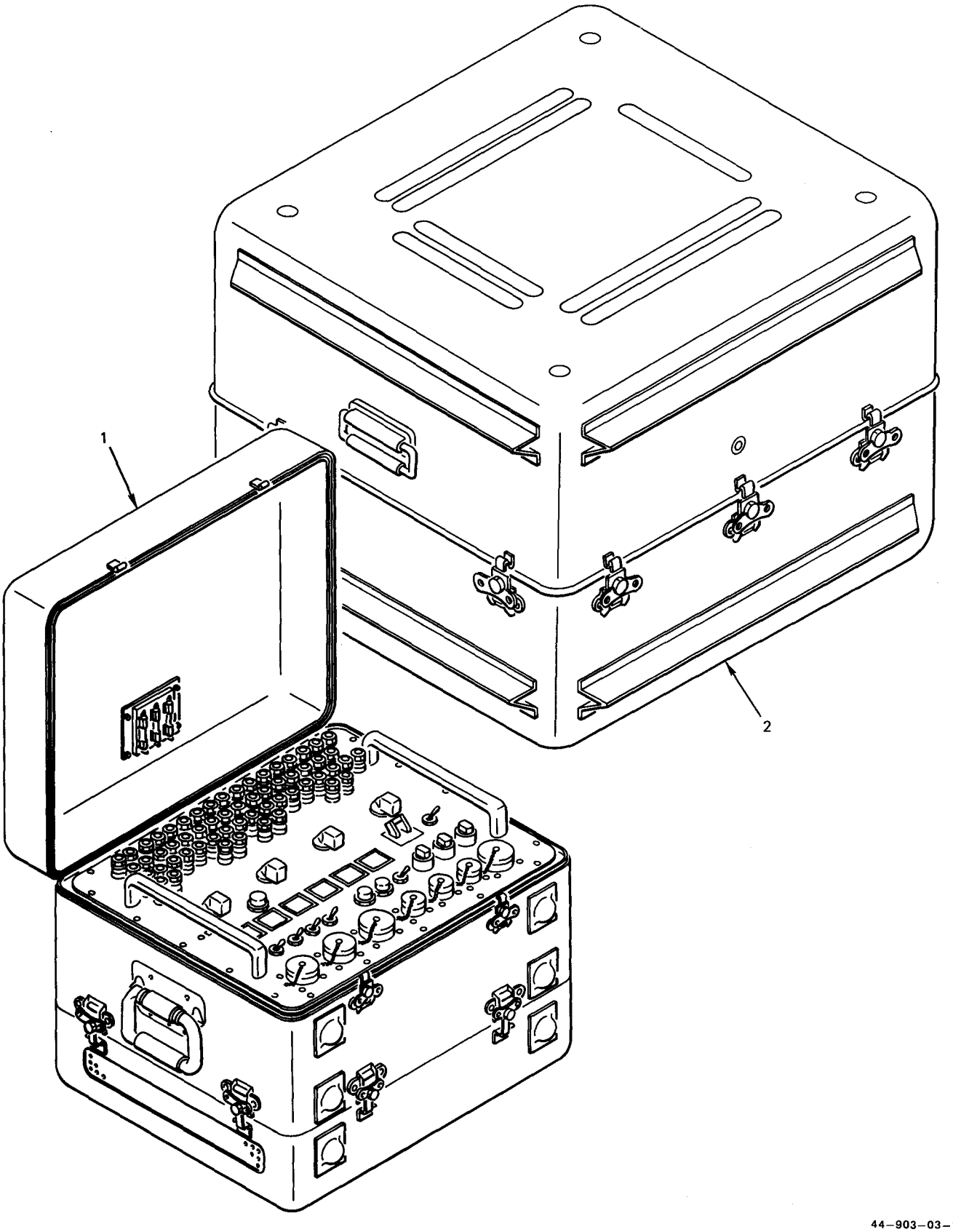

Figure 1-1. Power Supply Test Set AN/USM-428 (Sheet 1 of 2)

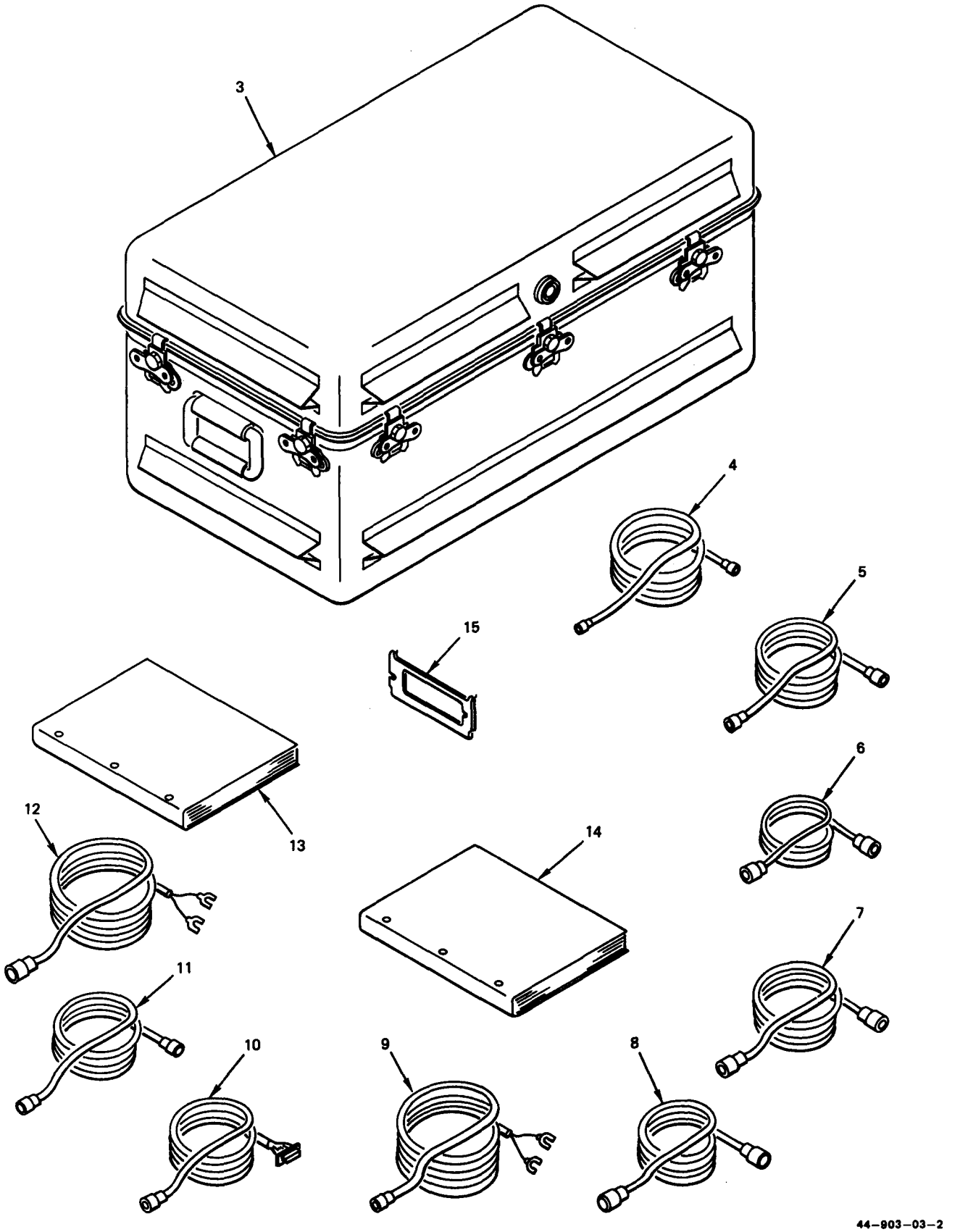

Figure 1-1. Power Supply Test Set AN/USM-428 (Sheet 2 of 2)

Table 1-1. Performance Data

Item	Particulars
Power Supply Test Set	
Input power	+28V, 1120 watts
	0 to +40V, 800 watts

Table 1-2. Major Components

NSN	Item	Qty	Dimensions MM (in.) Height	Depth	Width	Wt. Kg (lbs)
	PADS Power Supply Test Set AN/USM-428 consisting of:					
	Test Set, Power Supply, TS-3618/USM-428	1	308.3 (14.5)	515.6 (20.3)	426.7 (16.8)	37.7 (83.0)
	Case, Test Set, Power Supply, CY-7564/USM-428	1	525.8 (20.7)	609.6 (24.0)	660.4 (26.0)	22.7 (50.0)
	Case, Test Set Accessories CY-7610/USM-428	1	374.7 (14.75)	381.0 (15.0)	743.0 (29.25)	19.2 (42.5)

Table 1-3. Cable Assemblies

NSN	Item	Qty	Length MM (in.)
	Cable Assembly Set, Electrical, ON-162/ USM-428 consisting of:		
	Cable Assembly, Electrical, W301	1	1524.0 (60)
	Cable Assembly, Electrical, W302	1	1219.2 (48)
	Cable Assembly, Electrical, W303	1	914.4 (36)
	Cable Assembly, Electrical, W304	1	1219.2 (48)
	Cable Assembly, Electrical, W305	1	1219.2 (48)
	Cable Assembly, Electrical, W306	1	2438.4 (96)
	Cable Assembly, Electrical, W309	1	1219.2 (48)
	Cable Assembly, Electrical, W310	1	1219.2 (48)
	Cable Assembly, Electrical, W311	1	2438.4 (96)

Table 1-4. Auxiliary Equipment

NSN	Item	Qty
	Card Extractor	1

CHAPTER 2

SERVICE UPON RECEIPT AND INSTALLATION

Section I. SITE AND SHELTER REQUIREMENTS

2-1. General. This section describes site and shelter requirements for the PSTS.

2-2. Site and Shelter Requirements. The PSTS is designed for operation in a sheltered maintenance shop. The Semitrailer-Mounted Electronic Shop Set Number 5 or a permanent installation that has +28V and variable 0 to +40V power can be used for PSTS operation.

Section II. SERVICE UPON RECEIPT OF MATERIEL

2-3. Unpacking Instructions.

CAUTION

The PSTS is made up of delicate electronic equipment. Be extremely careful when removing each item from container.

a. The items comprising the PSTS are packaged in two containers. One container holds the transit case with the PSTS. The other container holds the transit case with cable assemblies and maintenance manual. Figure 2-1 is typical for either container.

b. Unpack a PSTS container as shown in figure 2-1.

c. Press transit case pressure relief valve.

d. Remove equipment from transit cases.

2-4. Checking Unpacked Equipment.

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6 (Packaging Improvement Report).

b. Check the equipment against the component listing in Appendix B and the packing slip to see if the shipment is complete. Report all discrepancies in accordance with paragraph 1-2. The equipment should be placed in service even though a minor assembly or part that does not affect proper functioning is missing.

c. Check to see whether the equipment has been modified. (Equipment which has been modified will have the MWO number on the front panel, near the nomenclature plate.) Check also to see whether all currently applicable MWO'S have been applied. (Current MWO'S applicable to the equipment are listed in DA PAM 310-7.)

d. For dimensions, weights, and volume of packaged items, see SB 700-20.

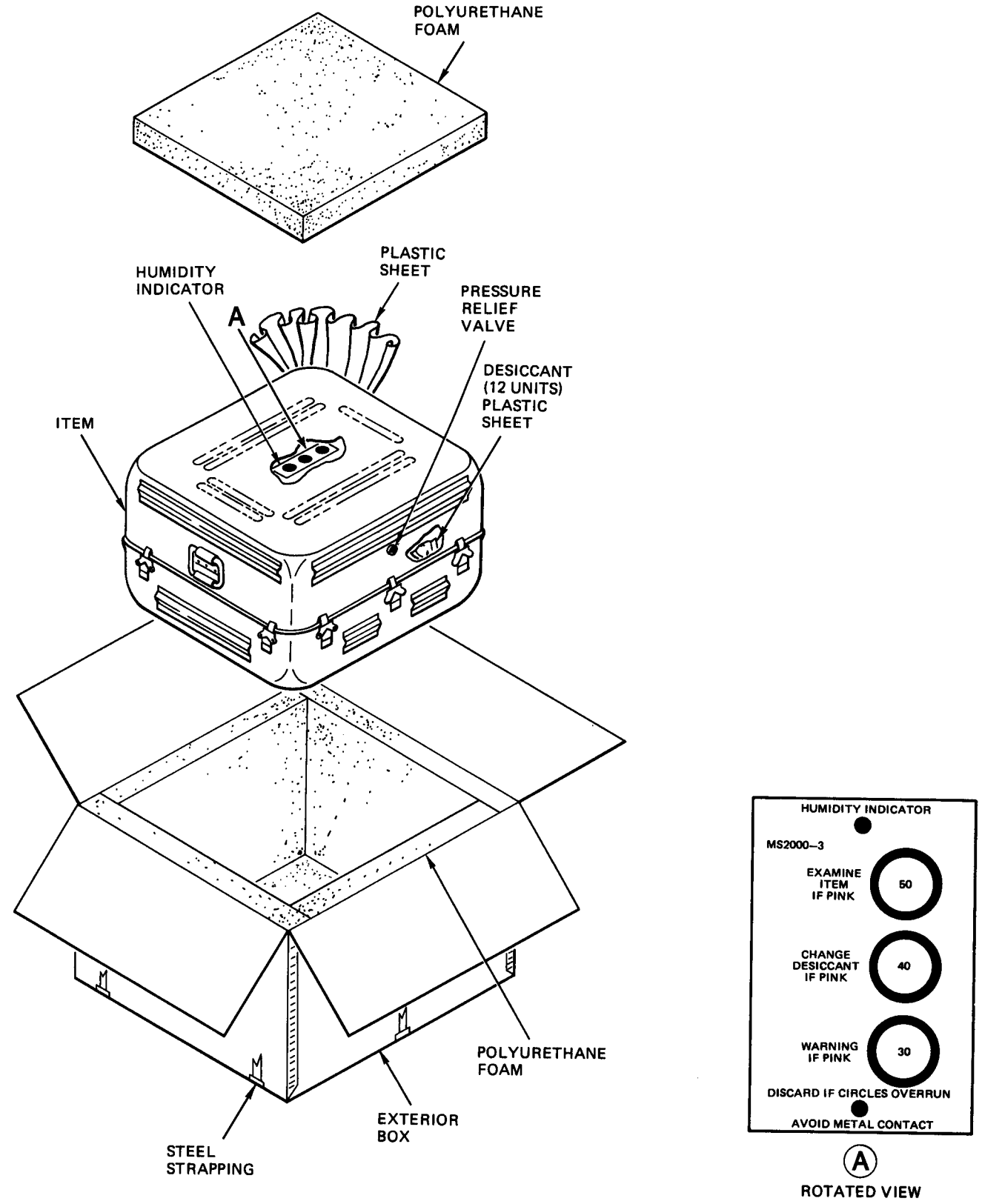

Figure 2-1. Typical Packaging Diagram

Section III. INSTALLATION INSTRUCTIONS

2-5. Installation Instructions.

WARNING

Ensure pressure relief valve has been released before removing cover from transit case.

a. Refer to figure 2-1 and press pressure relief valve on transit case cover.

b. Remove PSTS from transit case.

c. Raise cover to gain access to front panel of PSTS.

d. Examine humidity indicator; if humidity indicator is out of safe tolerance limits, notify personnel in charge.

e. Remove cable assemblies from transit case as required.

f. Perform complete test and adjustment sequence in accordance with table 8-5.

Section IV. PRELIMINARY ADJUSTMENT OF EQUIPMENT

2-6. General. Preliminary adjustment of the PSTS consists of performing the test and adjustment procedures described in table 8-5.

CHAPTER 3

OPERATING INSTRUCTIONS

Section I. CONTROLS AND INSTRUMENTS

3-1. General. This section describes the functions of the PSTS operator controls and indicators.

3-2. Damage from Improper Settings. No combination of control settings will cause damage to equipment or create a hazard to personnel.

3-3. Controls and Indicators. The PSTS controls, indicaters, and connectors are illustrated in figure 3-1. Table 3-1 lists the controls, indicators, and connectors with functional descriptions.

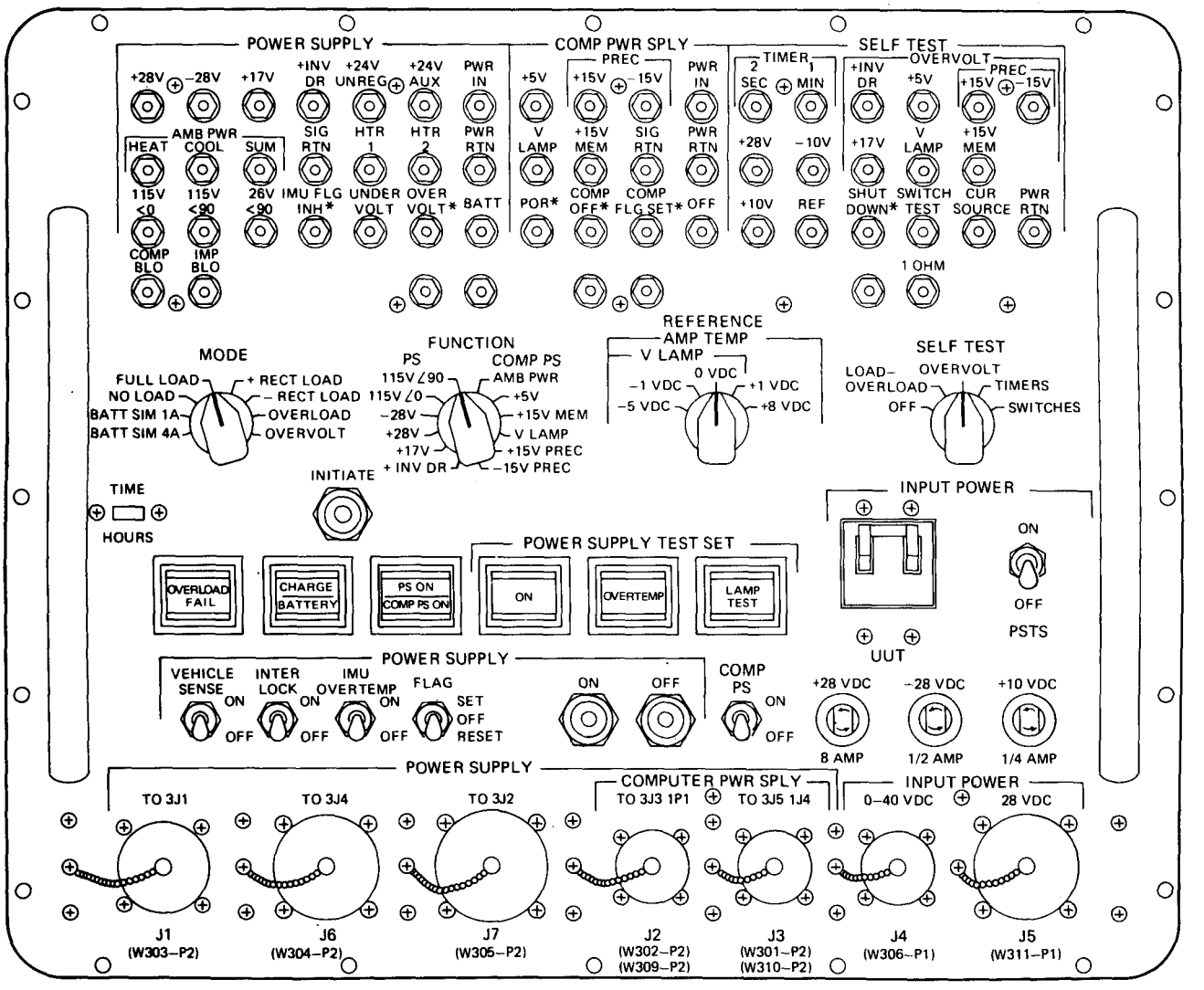

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Figure 3-1. Power Supply Test Set Controls, Indicators, and Connectors

Table 3-1. Controls, Indicators, and Connectors

Control, indicator, or connector	Function
POWER SUPPLY	
Test Jacks:	
+28V	Used to measure PS regulated +28V
-28V	Used to measure PS regulated -28V
+17V	Used to measure PS regulated +17V
+INV DR	Used to measure PS inverter drive voltage
+24V UNREG	Used to measure PS unregulated +24V
+24V AUX	Used to measure PS auxiliary +24V
PWR IN	Used to measure PS input voltage
AMB PWR HEAT	Used to measure PS voltage for IMU ambient heater
AMB PWR COOL	Used to measure PS voltage for IMU ambient cooler
AMB PWR SUM	Used to measure PS voltage summation for IMU environmental control
SIG RTN	Test jack for signal return
HTR 1	Used to measure PS voltage for IMU transient heater 1
HTR 2	Used to measure PS voltage for IMU transient heater 2
PWR RTN	Test jack for power return
115V∠0	Used to measure PS 115 VAC 0° phase
115V∠90	Used to measure PS 115 VAC 90° phase
26V∠90	Used to measure PS 26 VAC 90° phase
IMU FLG INH*	Used to measure PS control signal for IMU flag inhibit
UNDER VOLT	Used to measure PS undervoltage
OVER VOLT*	Used to measure PS overvoltage
BATT	Used to measure PS battery voltage
COMP BLO	Used to measure computer blower voltage
IMU BLO	Used to measure IMU blower voltage
COMP PWR SUPPLY	
Test Jacks:	
+5V	Used to measure COMP PS +5V
PREC +15V	Used to measure COMP PS precision +15V
PREC -15V	Used to measure COMP PS precision -15V
PWR IN	Used to measure COMP PS input voltage
V LAMP	Used to measure COMP PS voltage for CDU lamps
+15V MEM	Used to measure COMP PS +15V memory
SIG RTN	Test jack for signal return
PWR RTN	Test jack for power return
POR*	Used to measure COMP PS Power On Reset signal
COMP OFF*	Used to measure COMP OFF signal to COMP PS

Table 3-1. Controls, Indicators, and Connectors - Continued

Control, indicator, or connector	Function
COMP FLG SET*	Used to measure COMP PS computer flag set signal
OFF	Used to measure COMP PS off signal
SELF TEST	
Test Jacks:	
TIMER 2 SEC	Used to monitor PSTS 2-second timer signal
TIMER 1 MIN	Used to monitor PSTS 1-minute timer signal
OVERVOLT +INV DR	Used to measure overvoltage source for inverter driver
OVERVOLT +5V	Used to measure overvoltage source for +5V supply
OVERVOLT PREC +15V	Used to measure overvoltage source for precision +15V supply
OVERVOLT PREC -15V	Used to measure overvoltage source for precision -15V supply
+28V	Used to monitor PSTS +28V supply
-10V	Used to monitor PSTS -10V supply
OVERVOLT +17V	Used to measure overvoltage source for +17V
OVERVOLT V LAMP	Used to measure overvoltage source for lamp supply
OVERVOLT +15V MEM	Used to measure overvoltage source for memory +15V
+10V	Used to monitor PSTS +10V supply
REF	Used to monitor reference voltages
SHUT DOWN*	Used to monitor PSTS shutdown* control signal
SWITCH TEST	Used to check operation of PSTS switches
CUR SOURCE	Used to check current source calibration
PWR RTN	Test jack for power return
1 OHM	Used to check current source calibration
MODE switch	
Switch Position	
BATT SIM 4A	Used to test PS battery charger by simulating a low battery
BATT SIM 1A	Used to test PS battery charger by simulating a charged battery
NO LOAD	Allows measurement of unloaded power supply voltages
FULL LOAD	Used to test power supplies under fully loaded conditions
+RECT LOAD	Used to test ac power supplies under unbalanced (rectified) load conditions. Polarity is +
-RECT LOAD	Same as +RECT LOAD except polarity is -
OVERLOAD	Used to test power supply overload protection circuitry. The OVERLOAD mode is activated by INITIATE switch.

Table 3-1. Controls, Indicators, and Connectors - Continued

Control, indicator, or connector	Function
OVERVOLT	Used to test power supply overvoltage protection circuitry. The OVERVOLT mode is activated by INITIATE switch
FUNCTION switch	Selects power supply to be tested
Switch Position	
Ps	
+INV DR	PS + inverter drive circuitry
+17V	PS + 17V circuitry
+28V	PS +28V power supply
-28V	PS -28V power supply
115V ∠0	PS 115 VAC 0° phase power supply
115V ∠90°	PS 115 VAC 90° phase power supply
COMP PS	
AMB PWR	PS ambient heating or cooling power supply
+5V	COMP PS +5 VDC power supply
+15V MEM	COMP PS +15 VDC memory power supply
V LAMP	COMP PS CDU lamp power supply
+15V PREC	COMP PS precision + 15V power supply
-15V PREC	COMP PS precision -15V power supply
REFERENCE AMB TEMP switch	Provides -5, -1, 0, +1, and +8V reference voltages for the PS ambient heater and cooler power supply and COMP PS CDU lamp power supply
SELF TEST switch	Puts PSTS in self-test mode. Used in conjunction with MODE and FUNCTION switches
Switch Position	
OFF	PSTS not in self-test mode
LOAD-OVERLOAD	Allows measurement of load resistors at POWER SUPPLY or COMP PWR SPLY test points
OVERVOLT	Allows measurement of overvoltage supply voltages at SELF-TEST test points.
TIMERS	Allows measurement of the 2-second and 1-minute timer signals
SWITCHES	Allows checking of switches
TIME HOURS meter	Displays cumulative powered time of PSTS
INITIATE switch	When pressed, causes the selected OVERLOAD MODE or OVERVOLT MODE to be activated. Activates for 2 seconds
INPUT POWER UUT circuit breaker	Controls unit-under-test (UUT) input power
INPUT POWER PSTS circuit breaker	Controls PSTS input power

Table 3-1. Controls, Indicators, and Connectors - Continued

Control, indicator, or connector	Function
OVERLOAD FAIL switch-indicator	Lights when unit-under-test does not turn off when over-voltage or overload is applied. Press to reset
CHARGE/BATTERY indicator	Indicates functioning of battery charging circuitry. This indicator is split into CHARGE and BATTERY displays.
PS ON/COMP PS ON indicator	Split indicator. PS ON lights when PS cabling is properly connected to PSTS and PS power is on. COMP PS ON lights when COMP PS cabling is properly connected to PSTS and COMP PS power is on
POWER SUPPLY TEST SET	
ON switch-indicator	Alternate action switch. Turns PSTS power on and off. Lights when PSTS activated
OVERTEMP indicator	Lights when PSTS is too hot
LAMP TEST switch-indicator	When pressed, lights all PSTS front panel lamps
POWER SUPPLY	
VEHICLE SENSE switch	When in ON position, simulates connection to utility truck
INTERLOCK switch	When in ON position, simulates PADS battery power being supplied to PS
IMU OVERTEMP switch	When in ON position, simulates an IMU overtemperature condition
FLAG switch	When in SET position, sets the PS BIT flag
	When in RESET position, resets the PS BIT flag
ON switch	When pressed, turns on the PS
OFF switch	When pressed, turns off the PS
COMP PS switch	Turns COMP PS ON and OFF
Fuses:	
+28 VDC 8 AMP	Protects PSTS inverter PS3 and fan B1
-28 VDC 1/2 AMP	Protects PSTS DC/DC power supply PS1
+10 VDC 1/4 AMP	Protects PSTS DC/DC power supply PS2
POWER SUPPLY connectors:	
J1	Connects to PS (UUT) connector 3J1 through cable assembly W303 connector P2
J6	Connects to PS (UUT) connector 3J4 through cable assembly W304 connector P2
J7	Connects to PS (UUT) connector 3J2 through cable assembly W305 connector P2
J2	Connects to COMP PS (UUT) connector lP1 through cable assembly W309 connector P2 or to PS (UUT) connector 3J3 through cable assembly W302 connector P2
J3	Connects to COMP PS (UUT) connector 1J4 through cable assembly W310 connector P2 or PS (UUT) connector 3J5 through cable assembly W301 connector P2

Table 3-1. Controls, Indicators, and Connectors - Continued

Control, indicator, or connector	Function
INPUT POWER connector:	
J4	Connects to 0 to +40V input power source through cable assembly W306 connector P1
J5	Connects to +28V input power source through cable assembly W311 connector P1

Section II. OPERATION UNDER USUAL CONDITIONS

3-4. General. The PSTS is used to test and troubleshoot the PADS PS or the PADS COMP PS. Procedures for testing and troubleshooting PADS equipment are described in the direct support and general support maintenance manual for PADS (TM 5-6675-308-34 or TM 08837A-34/2). Under normal conditions, test and adjustment of the PSTS should be performed after installation and every 90 days, in accordance with table 8-5. Before each use of the PSTS, perform self-test in accordance with paragraph 3-5.

3-5. Self-Test Procedures.

a. The self-test procedure is given in table 3-2 along with the expected response. Should an unexpected response be obtained, troubleshoot using table 8-5.

b. See figure 3-2 for electrical connections used in self-test. Do not make any connections until specifically directed by test procedure.

3-6. Operating Procedure. Since the PSTS is a special purpose test set, the operating procedures are included with the test procedures for the PADS PS and computer PS in TM 5-6675-308-34. In addition, turnon and turnoff of the PSTS is included in the test procedures in this manual.

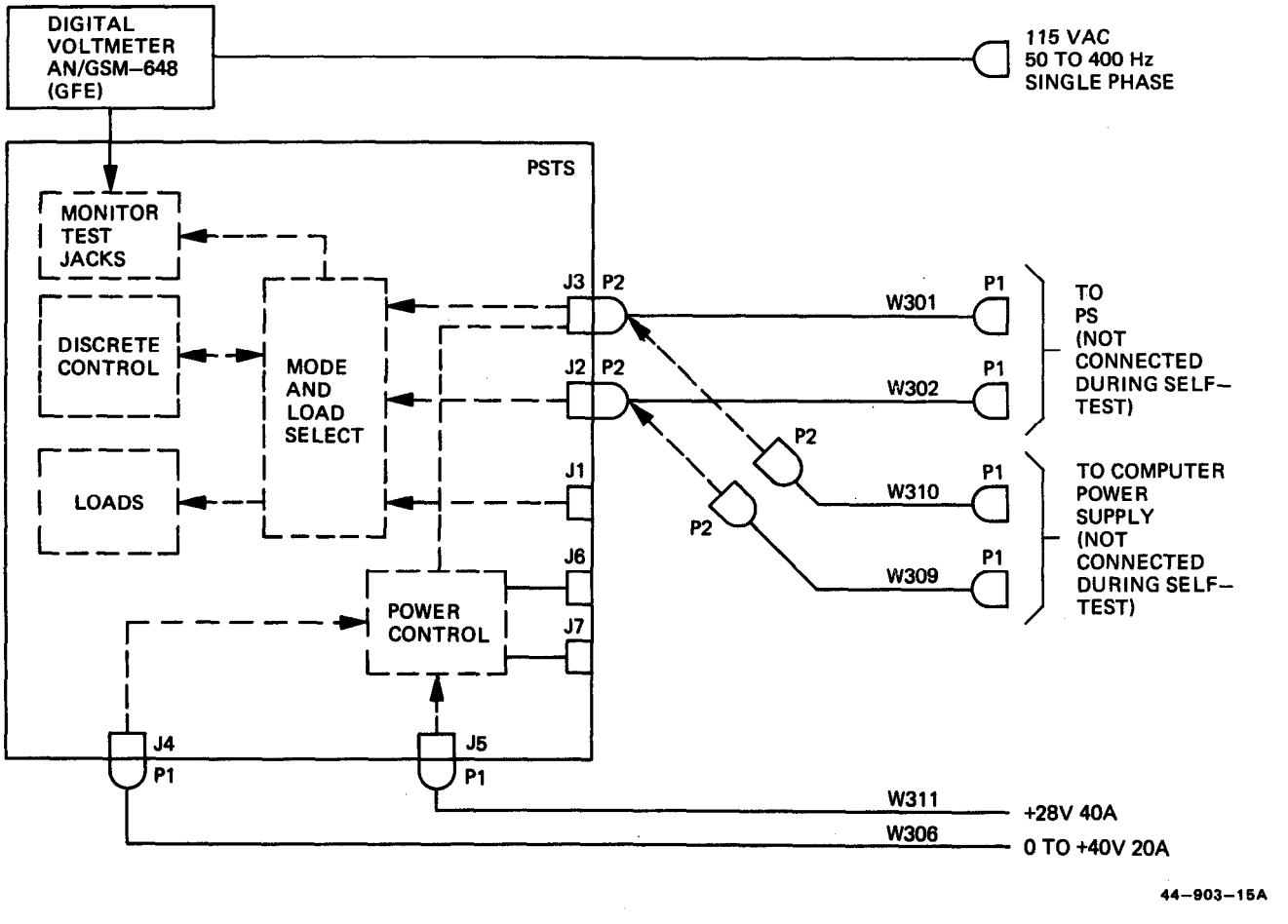


Figure 3-2. Self- Test Electrical Connection

Section III. OPERATION UNDER UNUSUAL CONDITIONS

3-7. Operation Under Emergency Conditions. There are no operations under emergency conditions applicable to the PSTS.

3-8. Operation at Temperature Extremes. The chart below gives the temperature extremes for operation and exposure of the PSTS without degradation in performance.

	Operating Temperatures	Nonoperating Temperatures
Minimum	0°C (+32°F)	-46°C (-50°F)
Maximum	+50°C (+125°F)	+71°C (+160°F)

No special precautions are required for operation within these limits.

Section IV. PREPARATION FOR MOVEMENT

3-9. General. Preparation for movement of the PSTS consists of disconnecting the interconnecting cables, multimeter, digital voltmeter, and oscilloscope, and placing the equipment in transit cases.

3-10. Preparation for Movement. See figure 1-1 and prepare the PSTS for movement as follows:

a. Check that the equipment has been shut down by setting INPUT POWER UUT and PSTS circuit breakers to OFF.

b. Disconnect the multimeter, digital voltmeter, and oscilloscope.

c. Disconnect all interconnecting cable assemblies.

d. Place PSTS in its transit case.

e. Place cable assemblies in the cable assembly transit case.

Table 3-2. Self-Test

Test procedure	Normal indication
1. INPUT POWER TEST	
CAUTION Before connecting cable, ensure +28 volt power supply is turned off Observe correct polarity. Reversed polarity can damage the PSTS	
1a. Connect (see figure 3-2) (1) Terminal lugs of cable W311 to +28V power supply (2) W311P1 to PSTS J5 (3) Digital voltmeter (DVM) to primery power	
1b. Turn on DVM	
1c. Set switches as follows: SWITCH — SETTING MODE — OVERLOAD FUNCTION — PS +17V REFERENCE — 0VDC SELF TEST — OFF INPUT POWER - UUT — OFF INPUT POWER - PSTS — OFF POWER SUPPLY VEHICLE SENSE — OFF INTERLOCK — OFF IMU OVERTEMP — OFF FLAG — OFF COMP PS — OFF	
1d. Turn on +28V power supply. If OVERTEMP indicator lights, check polarity of cable W311	
1e. Set INPUT POWER PSTS to ON	TIME HOURS meter is operating by observation of comma oscillation. Fan is operating
1f. Press POWER SUPPLY TEST SET ON switch-indicator to on	POWER SUPPLY TEST SET ON switch-indicator lights
1g. Set MODE switch to NO LOAD	
1h. Connect DVM positive test lead to SELF TEST +28V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +26 to +30V
1i. Connect DVM positive test lead to SELF TEST +10V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +9.9 to + 10.1V

Table 3-2. Self-Test - Continued

Test procedure	Normal indication
1j. Connect DVM positive test lead to SELF TEST -10V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates -9.9 to -10.1V
NOTE Keep DVM connected as above until told to change	
1k. Press POWER SUPPLY TEST SET LAMP TEST switch-indicator to on	Following switch-indicator and indicators go on: OVERLOAD FAIL CHARGE/BATTERY PS ON/COMP PS ON OVERTEMP
2. UUT INPUT POWER SAFETY	
2a. Set MODE switch to OVERVOLT	
2b. Jumper SELF TEST -10V test jack to POWER SUPPLY PWR IN test jack	DVM indicates -9.9 to -10.1V
2c. Set INPUT POWER UUT circuit breaker to ON	The INPUT POWER UUT circuit breaker trips off immediately and the DVM indicates -9.9 to -10.1V
2d. Press POWER SUPPLY TEST SET ON switch-indicator to off	POWER SUPPLY TEST SET ON goes off and the DVM indicates -0.1 to +0.1V
CAUTION Ensure that variable DC power supply is not energized.	
NOTE Do not connect W309 or W310 or erroneous readings may result.	
2e. Connect cables W301, W302, and W306 as shown in figure 3-2. Do not connect P1 connectors of cables W301 and W302	
2f. Press POWER SUPPLY TEST SET ON switch-indicator to ON	POWER SUPPLY TEST SET ON lights
2g. Set SELF TEST switch to TIMERS	PS ON indicator goes on. OVERTEMP indicator lights 45 to 75 seconds after the switch is set
NOTE To repeat the test, reinitialize by setting SELF TEST switch to SWITCHES and back to TIMERS.	

Table 3-2. Self-Test - Continued

Test procedure	Normal indication
2h. If lighted, press OVERLOAD FAIL switch-indicator to off	OVERLOAD FAIL switch-indicator goes off
2i. Press and hold INITIATE switch for more than 5 seconds	The OVERLOAD FAIL switch-indicator lights within approximately 2 to 3 seconds after the INITIATE switch is pressed. (POWER SUPPLY TEST SET OVERTEMP indicator may light after 45 to 75 seconds)
NOTE	
To repeat this test, return to step 2h.	
2j. Set SELF TEST switch to OFF	PS ON indicator goes off if lighted, POWER SUPPLY TEST SET OVERTEMP goes off
2k. Set INPUT POWER UUT circuit breaker to ON	INPUT POWER UUT circuit breaker trips off immediately and the DVM indicates -9.9 to -10.1V
2l. Press OVERLOAD FAIL switch-indicator to off	OVERLOAD FAIL switch-indicator goes off
2m. Set INPUT POWER UUT circuit breaker to ON	INPUT POWER UUT circuit breaker stays on and the DVM indicates +5 to +15V
2n. Energize the variable DC power supply and set its output to +7 to +13V	
2o. Set MODE switch to NO LOAD	
2p. Slowly increase the variable power supply voltage toward +37V	The INPUT POWER UUT circuit breaker trips off between +31 and +37V. DVM indicates -9.9 to -10.1V after the circuit breaker trips
2q. Remove jumper	
2r. Jumper SELF TEST/OVERVOLT/ +INV DR test jack and SELF TEST -10V test jack	DVM indicates -9.9 to -10.1V
2s. Remove jumper	
2t. Jumper SELF TEST/OVERVOLT/ +5V test jack and SELF TEST -10V test jack	DVM indicates -4.0 to -6.0V
2u. Remove jumper	
2v. Jumper SELF TEST/OVERVOLT/PREC +15V test jack and SELF TEST -10V test jack	DVM indicates -4.0 to -6.0V
2w. Remove jumper	
2x. Jumper SELF TEST/OVERVOLT/PREC -15V test jack and SELF TEST -10V test jack	DVM indicates -9.9 to -10.1V
2y. Remove jumper	
2z. Jumper SELF TEST/OVERVOLT/ +17V test jack and SELF TEST -10V test jack	DVM indicates -4.0 to -6.0V
2aa. Remove jumper	
2ab. Jumper SELF TEST/OVERVOLT/V LAMP jack and SELF TEST -10V test jacks	DVM indicates -4.0 to -6.0V

Table 3-2. Self-Test - Continued

Test procedure	Normal indication
2ac. Remove jumper	
2ad. Jumper SELF TEST/OVERVOLT/ +15V MEM test jack and SELF TEST -10V test jack	DVM indicates -4.0 to -6.0V
2ae. Remove jumper	
2af. Connect DVM positive test lead to SELF TEST +10V test jack and negative test lead to SELF TEST PWR RTN test jack. Keep DVM connected as above until told to change	
2ag. Jumper SELF TEST/OVERVOLT/ +INV DR test jack and SELF TEST +10V test jack	DVM indicates +9.9 to + 10.1V
2ah. Remove jumper	
2ai. Jumper SELF TEST/OVERVOLT/ +5V test jack and SELF TEST +10V testjack	DVM indicates +7.75 to +9.75
2aj. Remove jumper	
2ak. Jumper SELF TEST/OVERVOLT/PREC +15V test jack and SELF TEST +10V test jack	DVM indicates +9.9 to +10.1V
2al. Remove jumper	
2am. Jumper SELF TEST/OVERVOLT/PREC -15V test jack and SELF TEST +10V test jack	DVM indicates +4.0 to +6.0V
2an. Remove jumper	
2ao. Jumper SELF TEST/OVERVOLT/+17V test jack and SELF TEST +10V test jack	DVM indicates +4.0 to +6.0V
2ap. Remove jumper	
2aq. Jumper SELF TEST/OVERVOLT/V LAMP test jack and SELF TEST +10V test jack	DVM indicates +7.75 to +9.75
2ar. Remove jumper	
2as. Jumper SELF TEST/OVERVOLT/+15V MEM test jack and SELF TEST +10V test jack	DVM indicates +9.9 to +10.1V
2at. Remove jumper	
3. SAFE LOAD CHECK	
3a. Set MODE switch to OVERLOAD	
3b. Set FUNCTION switch to AMB PWR	
3c. Set SELF TEST switch to LOAD-OVERLOAD	PS ON indicator goes on
3d. Set MODE switch to FULL LOAD	
3e. Connect DVM positive test lead to SELF TEST CUR SOURCE jack and negative test lead to SELF TEST PWR RTN test jack. Keep DVM connected as above until told to change	
3f. Press POWER SUPPLY TEST SET ON switch-indicator to off. Set MODE switch to OVERLOAD	POWER SUPPLY TEST SET ON switch-indicator and PS ON indicator go off

Table 3-2. Self-Test - Continued

Test procedure	Normal indication
3g. Replace cables W301 and W302 with cables W310 and W309 as shown in figure 3-2. Do not connect P1 ends of cables	
3h. Press POWER SUPPLY TEST SET ON switch-indicator to on	POWER SUPPLY TEST SET ON and COMP PS ON light
3i. Set MODE switch to FULL LOAD	
3j. Set FUNCTION switch to COMP PS V LAMP	DVM indicates +1.35 to +1.90V
3k. Set FUNCTION switch to COMP PS +15V MEM	DVM indicates + 3.2 to + 5.3V
3l. Set FUNCTION switch to COMP PS +5V	DVM indicates +0.27 to +0.65V
3m. Connect DVM positive test lead to SELF TEST +28V test jack and negative test lead to SELF TEST PWR RTN test jack. Keep DVM connected as above until told to change	
3n. Jumper COMP PWR SPLY PREC +15V test jack and SELF TEST +28V test jack	DVM indicates +26 to +30V
3o. Remove jumper	
3p. Jumper COMP PWR SPLY PREC -15V test jack and SELF TEST +28V test jack	DVM indicates +26 to +30V
3q. Remove jumper	
3r. Jumper POWER SUPPLY 115V ∠0 test jack and SELF TEST +28V test jack	DVM indicates +26 to +30V
3s. Remove jumper	
3t. Jumper POWER SUPPLY 115V ∠90 test jack and SELF TEST +28V test jack	DVM indicates +26 to +30V
3u. Remove jumper	
3v. Disconnect the DVM	
3w. Press POWER SUPPLY TEST SET ON switch-indicator to off	POWER SUPPLY TEST SET ON switch-indicator and COMP PS ON indicator go off
3x. Set INPUT POWER PSTS circuit breaker to OFF	PSTS goes off
3y. Turn off variable DC power supply and disconnect from PSTS	
3z. Disconnect cables W309 and W310	
TEST COMPLETED	

CHAPTER 4

OPERATOR/CREW MAINTENANCE INSTRUCTIONS

Operator/crew maintenance is not authorized for the PSTS.

CHAPTER 5

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Organizational maintenance is not authorized for the PSTS.

CHAPTER 6

FUNCTIONING OF EQUIPMENT

6-1. General. This section describes the function of the PSSTS and interconnecting cable assemblies. A PSTS functional block diagram description is given, followed by detailed descriptions of each function.

6-2. PSTS Function. The PSTS is capable of testing the PADS PS and PADS COMP PS functions when used with a digital voltmeter, multimeter, and oscilloscope. A simplified functional block diagram is shown in figure 6-1, and a detailed functional block diagram is shown in figure FO-1.

a. Power to the unit under test (referred to herein as UUT) is routed through the PSTS and controlled by PSTS power control circuitry. Power inputs to the PSTS are +28V, 40 amps, and 0 to +40V, 20 amps. These voltages may also be provided to the UUT.

b. Mode and load select circuits are controlled by PSTS front panel switches to cause the UUT to accept selected input signals or to drive selected loads. Operation of the UUT is then monitored at the test jacks on the PSTS front panel or at front panel indicators. Loads are selectable as no-load, full-load, or overload values. These loads are applied in accordance with specified loading requirements of each UUT output voltage.

c. A multimeter is used to measure the various voltages or currents. An oscilloscope is used to measure timing signals and waveforms. Measured values are compared to values specified in the direct support and general support maintenance manual (TM 5-6675-308-34 or TM 08837A-34/2) to determine if the UUT is operating properly.

d. The PSTS contains built-in test equipment (BITE) circuitry which is used to assure the operator that the PSTS is operating correctly. Malfunctions of the PSTS are detected by BITE and a fault is isolated to a small group of replaceable components or circuit cards.

e. PSTS power control circuitry is shown in detail in figure 6-2. Both the INPUT POWER PSTS circuit breaker and POWER SUPPLY TEST SET ON switch-indicator must be in the closed (or ON) position to activate the 28 VDC power circuits. Only the TIME HOURS meter and fan is activated by the INPUT POWER PSTS circuit breaker alone. When the POWER SUPPLY TEST SET ON switch-indicator is pressed to on, it closes relays RG (figure 6-2). Closing relays RG causes the indicator of POWER SUPPLY TEST SET ON switch-indicator to light and to supply the -28V and +10V converters PS1 and PS2. The -28V power is also divided down to -10V for internal use in the PSTs. A +28V, 8 amp fuse, a -28V, 1/2 amp fuse, and a +10V, 1/4 amp fuse protect these circuits.

f. Switching input power to the UUT is shown in figure 6-3. The 0 to +40V, 20 amp power is applied to the UUT only when the MODE switch is in the NO LOAD position. Switching is accomplished by relays RE. The 0 to +40V power is also used for testing the PS battery charging circuitry (figure 6-3).

g. Power to the PS is applied whenever the INPUT POWER UUT circuit breaker is closed. Power to the COMP PS requires, in addition to INPUT POWER UUT circuit breaker being closed, that relays RF be closed by selecting the ON position of the COMP PS switch.

h. The ±28V source (figure FO-1) also powers the REFERENCE switch which selects reference voltages between +8V and -5V as required by the UUT. The reference voltage is fed through a voltage limit circuit for fail-safe operation and is then sent to the UUT through connector J2 to the COMP PS and to the PS.

i. Primary control of PSTS circuitry is by the MODE and FUNCTION switches. The MODE switch is active only when interconnecting cables for the PS, or for the COMP PS, are correctly connected. Correctness of interconnection is determined by a UUT detect circuit and by UUT on monitoring circuits in the PSTS (see figure FO-1). If the UUT is properly connected, and has been turned on, the corresponding PS ON/COMP PS ON indicator will light. The MODE switch is active when interconnecting cabling is correct, whether or not the UUT has been turned on. When the MODE switch is placeed in +RECT LOAD position, -RECT LOAD position, or FULL LOAD position, the FUNCTION switch will be activated so that the proper resistive loads will be applied to the UUT by relays RD. The load applied is dependent upon the function selected at the FUNCTION switch.

j. When the MODE switch is placed in the OVERLOAD or the OVERVOLT position, and the UUT is turned on, the 2-second timer will be activated by pressing the INITIATE switch. If the MODE switch is in the OVERLOAD position, the proper resistive overload will then be applied to the UUT through relays RD. If the MODE switch is in the OVERVOLT position, the proper overvoltage will be applied to the UUT from an overvoltage generator through relays RC.

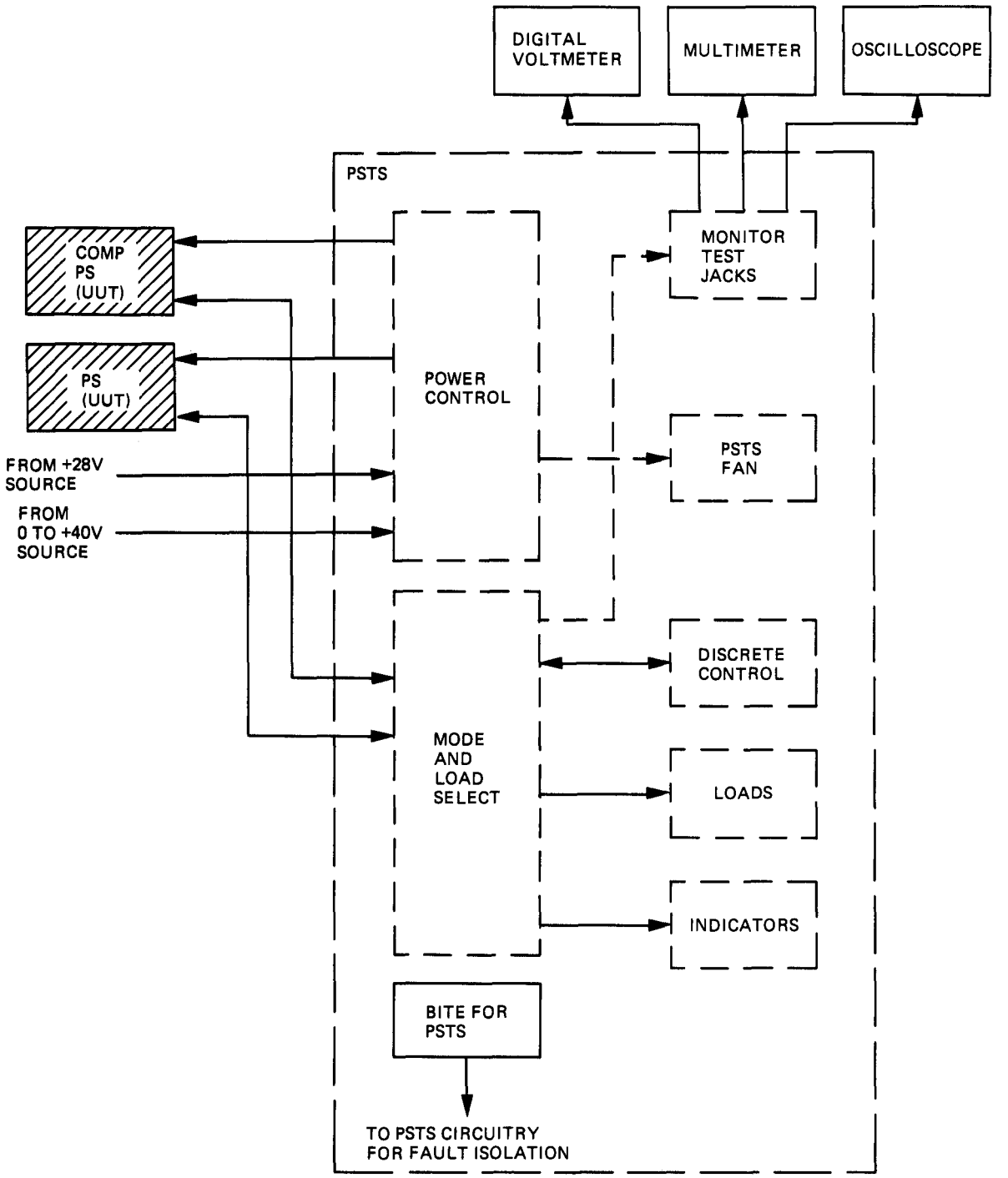
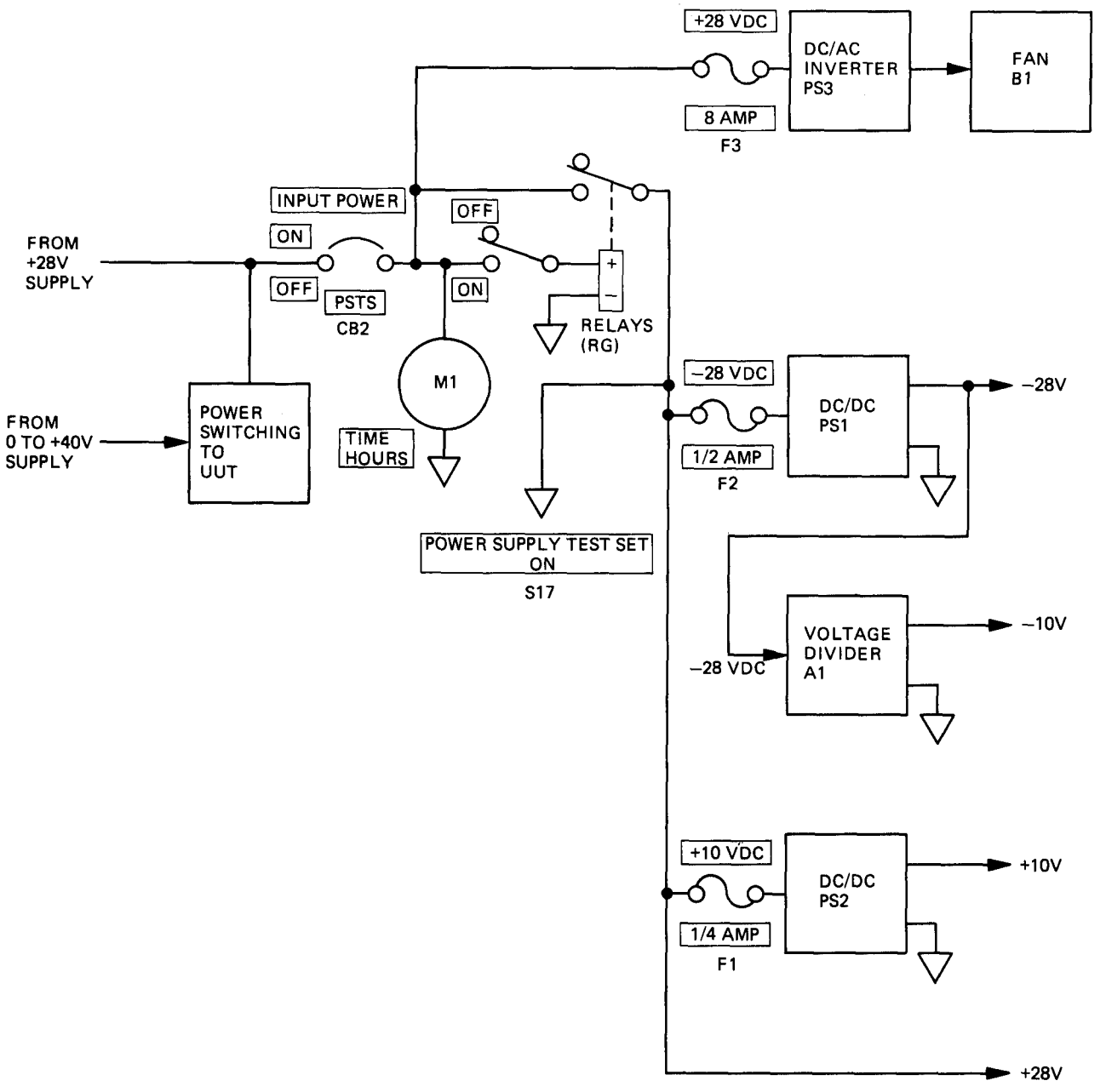


Figure 6-1. Power Supply Test Set Simplified Functional Block Diagram



NOTE:
SYMBOL [ ] INDICATES PANEL NOMENCLATURE

44-903-05A

Figure 6-2. Power Supply Test Set Power Control Functional Block Diagram

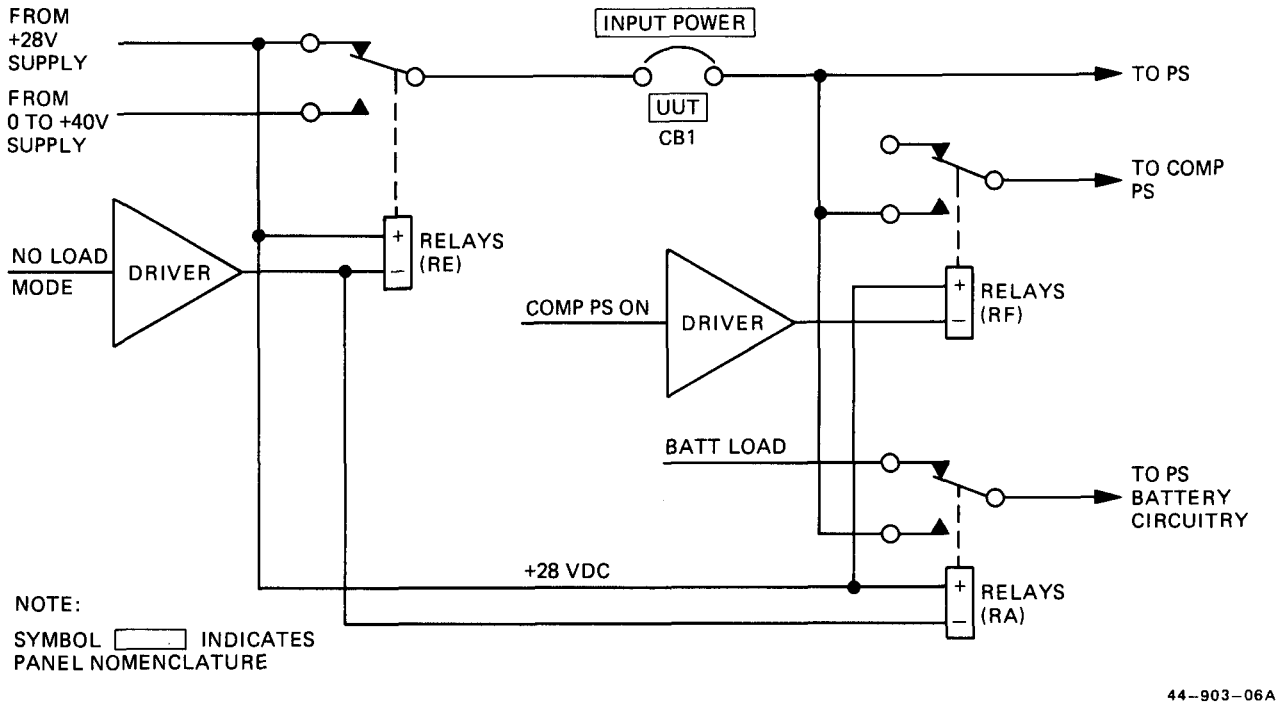


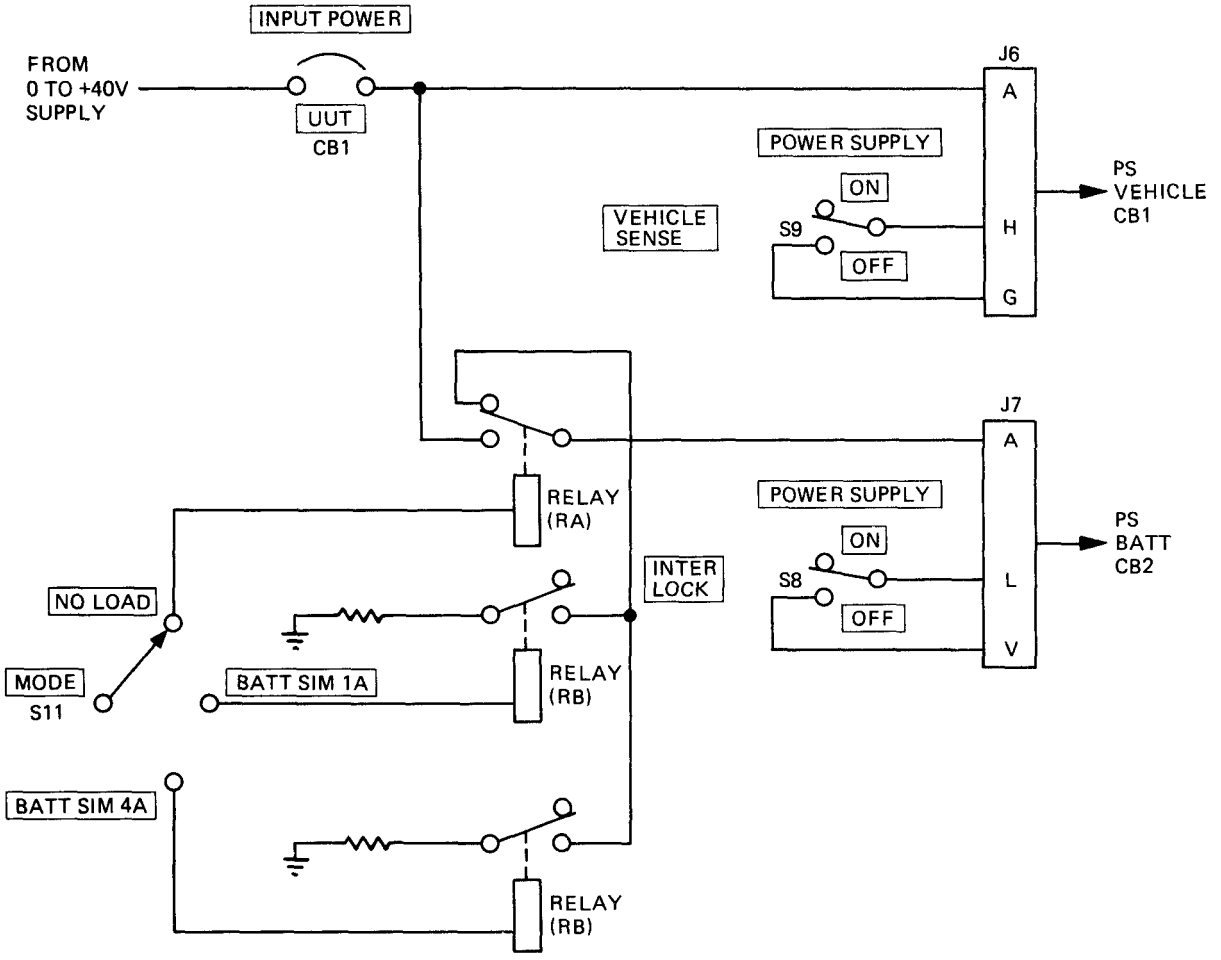
Figure 6-3. Power Supply Test Set Input Power Switching to the UUT

k. At the end of the 2-second interval measured by the 2-second timer, if the UUT has not crowbarred or turned itself off by its undervolt detection circuitry, the PSTS will turnoff power to the UUT. This turnoff is accomplished by fail detection circuitry which trips a 200-mA circuit breaker. The 200-mA circuit breaker is ganged with the INPUT POWER UUT circuit breaker so that both breakers trip. When the PSTS 2-second timer causes such a shutdown, the OVERLOAD FAIL switch-indicator lights, indicating that the UUT failed the overload testing.

l. Overtemperature protection is activated through overtemperature sensing circuitry. If internal temperature reaches 160°F, a 1-minute timer will be activated. At the end of the 1-minute interval, the POWER SUPPLY TEST SET OVERTEMP indicator will light and all loads will be removed from the UUT.

m. When the MODE switch is in the NO LOAD position, any function selected by the FUNCTION switch can be tested under no-load conditions, and the PS battery charging circuitry can be tested. Testing the PS battery charging circuitry is accomplished by using 0 to +40V, 20-amp input power with the PSTS MODE switch set in the NO LOAD position. Then, with INPUT POWER UUT circuit breaker closed, the input power is routed directly to PSTS connector J6 and to connector J7 through relay RA (RA is energized to the closed-contact state by the MODE switch being in NO LOAD position). The input power is also routed to the contacts of two other relays within the group labelled RB in figure FO-1. The normally open side of the contacts of each of these relays is connected, respectively, to a 1-amp resistive load and to a 4-amp resistive load (labelled resistive loads in figure FO-1). The circuitry is shown in figure 6-4.

n. PSTS self-test is accomplished when the SELF-TEST switch is placed in one of its active positions (any position except OFF).



NOTE:

SYMBOL [ ] INDICATES
PANEL NOMENCLATURE

44-903-07A

Figure 6-4. Battery Charging Test Circuitry

CHAPTER 7

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

Direct support maintenance is not authorized for the PSTS.

CHAPTER 8

GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

Section I. GENERAL

8-1. Scope of General Support Maintenance. General support maintenance consists of bench testing the PSTS and cable assemblies, preventive maintenance checks and services, testing and troubleshooting the PSTS, removal and replacement of PSTS components, and repair of cable assemblies.

8-2. PSTS Bench Testing. Bench testing of the PSTS consists of performing continuity checks when broken or shorted wires, or failing switch or relay contacts are suspected of causing a failure during operation of the equipment. A schematic diagram of the PSTS (Figure FO-2) is provided for bench testing. A PSTS wire list (table 8-1) is also provided for bench testing. Refer to paragraph 8-5 for an explanation of wire list format and notations. Out of circuit resistance values for transistors and diodes are shown in figures 8-1 and 8-2, respectively. Relay pin diagrams are shown in figure 8-3. Shown in figure 8-3A is a diagram of the pin arrangement for connectors J2 and J3.

8-3. Cable Assemblies Bench Testing. Bench testing of the cable assemblies consists of performing a point-to-point continuity check and testing for shorts between connector pins and between pins and connector backshells. A wire list (table 8-2) is provided for an explanation of wire list format and notations.

8-4. Preventive Maintenance Checks and Services. To ensure that the PSTS is always ready for operation, the preventive maintenance checks and services must be performed as outlined in table 8-3.

8-5. Wire List Format and Notations. Tables 8-1 and 8-2 contain wire lists for the PSTS and cable assemblies, respectively. The following paragraphs define wire list format and notations.

a. ***Wire List Format.*** The wire list column headings, from left to right, are listed with their respective entries defined as follows:

Column	Definition
Signal	Numbers of letters appearing in this column are used for logic terms and signal identification and are assigned per their respective circuit functions.
From Component Pin	Entries in this column denote point of origin.
To Component Pin	Entries in this column denote point of termination for items in the From Component Pin column.
Ref	The suffix letter A, B, C, etc., defines which of several wires attached to the same pin is intended. The suffix letter S defines the shield of wire connected to this pin.
AWG	Standard wire size is 22 gauge, except as noted.
Type	Symbols in this column specify configuration of a wire or wires. In the absence of a specific symbol, stranded insulated wire is intended. For flexible printed wiring, this column is not applicable.
Color	Standard wire color is white except as specifically color-coded. Numbers are coded to a color as follows:

Number	Color
0	Black
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray

9	White
Group	Multiple wires within a shield or multiple wires twisted in a group are identified with a unique group number (Example: SG12 or TG15). For flexible printed wiring, this column is not applicable.
Route	Wires which contain unique letters shall be bundled and routed separately from all others. *REF indicates jumper of circuit prewired at subassembly level. *DIR indicates wire shall be routed separately from harness by shortest possible route between components. Minimum service loop.
Note	Not applicable.
Remark	Used for signal description or any other type of comments.
Rev	Not used.

b. ***Wire List Notations.*** Notations used in the wire lists are defined as follows:

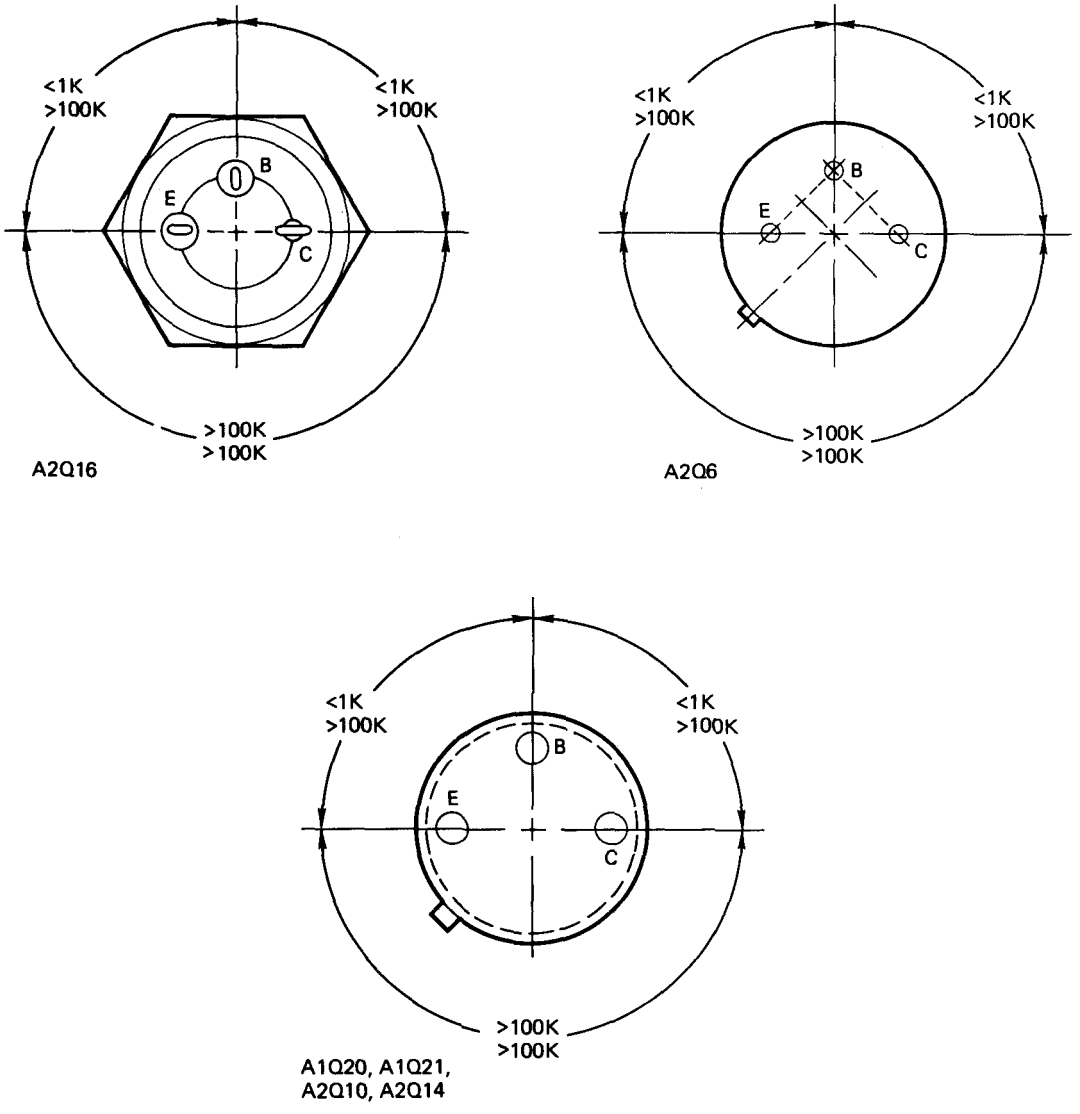
Symbol	Definition
Period	Period preceding capital letter indicates lowercase letter (Example: .A = a)
FL	Furnished lead supplied with component
HY	Hybrid splice configuration
NC	No connection; this terminal is reserved
SG	Shielded group
SL	Shield lead (wire connecting a shield to a termination point)
SP	Shielded pigtail
Spare	Indicates a terminal which is not wired and is not reserved for a specific function
S1	One conductor shielded
S2	Two conductor shielded
S3, etc.	Three conductor shielded, etc.
TG	Twisted group
T2	Two conductors twisted
T3	Three conductors twisted
T4, etc.	Four conductors twisted, etc.

Section II. TOOLS AND EQUIPMENT

8-6. General.

a. Tools and equipment required for use at general support level are listed in table 8-4.

b. Expendable consumable maintenance supplies and materials are listed in appendix F.

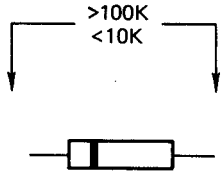


NOTE :

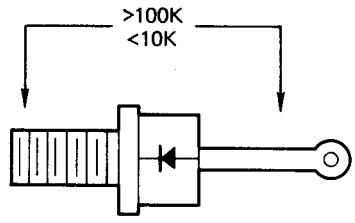
TWO RESISTANCE READINGS BETWEEN TERMINALS ARE GIVEN FOR A2Q14, A2Q6, A1Q20, A1Q21, AND A2Q10. THE LOW RESISTANCE READING BETWEEN BASE-EMITTER AND BASE-COLLECTOR IS MEASURED WITH THE MULTIMETER POSITIVE TEST LEAD CONNECTED TO THE BASE. THE HIGH RESISTANCE READING IS MEASURED WITH THE MULTIMETER NEGATIVE TEST LEAD CONNECTED TO THE BASE. FOR A2Q16, THE LOW RESISTANCE READING BETWEEN BASE-EMITTER AND BASE-COLLECTOR IS MEASURED WITH THE MULTIMETER NEGATIVE TEST LEAD CONNECTED TO THE BASE. THE HIGH RESISTANCE READING IS MEASURED WITH THE MULTIMETER POSITIVE TEST LEAD CONNECTED TO THE BASE. FOR ALL TRANSISTORS, EMITTER-COLLECTOR RESISTANCE READING IS HIGH WITH EITHER THE MULTIMETER NEGATIVE OR POSITIVE TEST LEAD CONNECTED TO THE EMITTER.

44-903-19

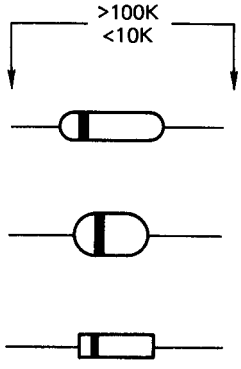
Figure 8-1. Transistor Diagrams



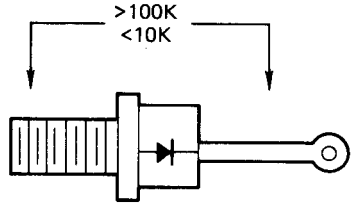
A2VR2, A2VR7, A2VR8, A2VR16



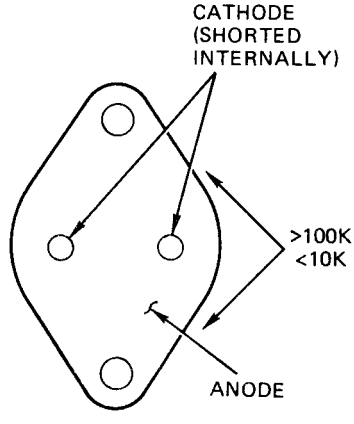
CR40, CR54, CR55 CR90 CR101



ALL OTHER DIODES



VR6, VR11, VR21



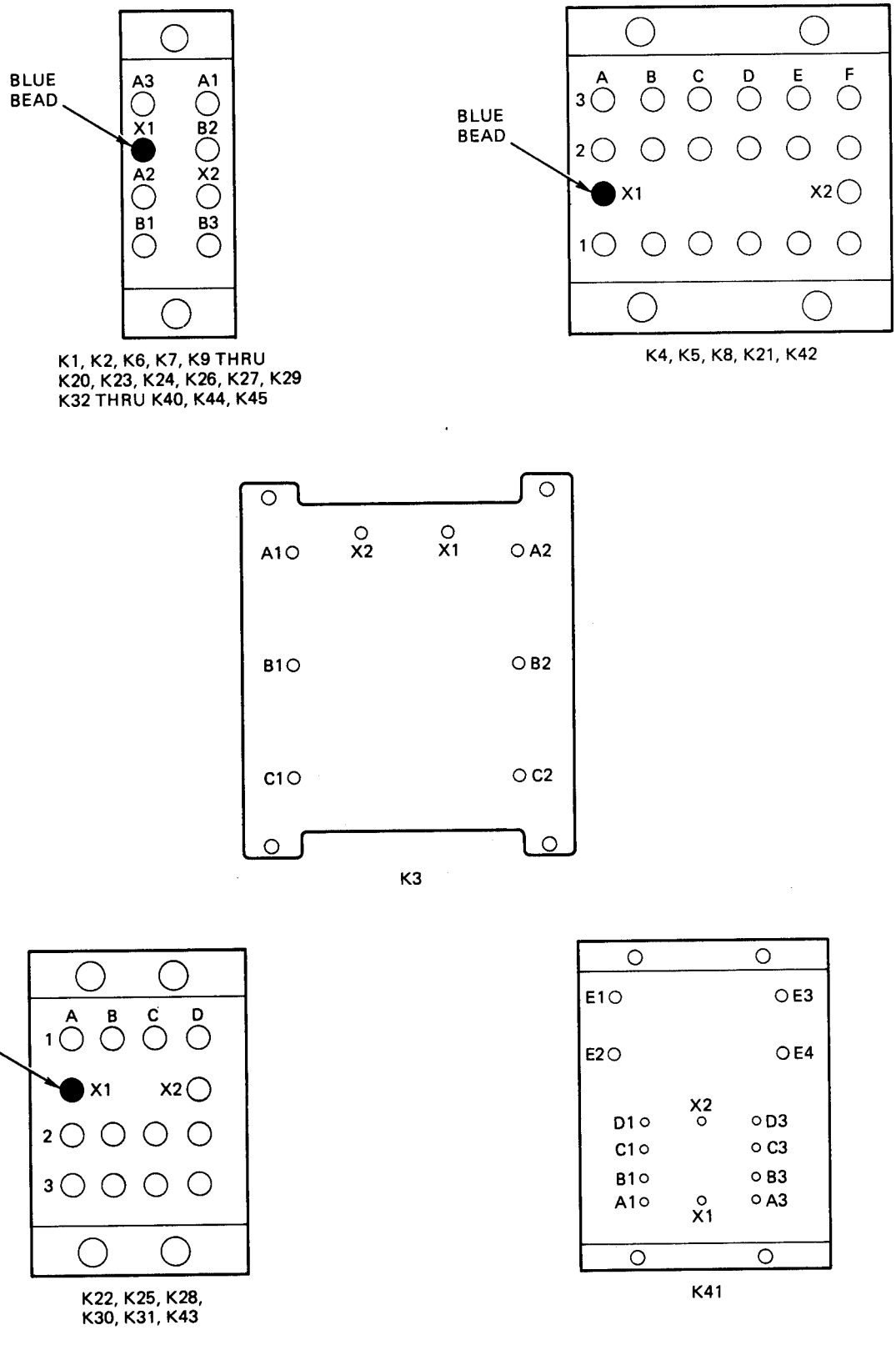
VR5, VR9, VR10

NOTE:

BAND ON DIODE
INDICATES CATHODE END

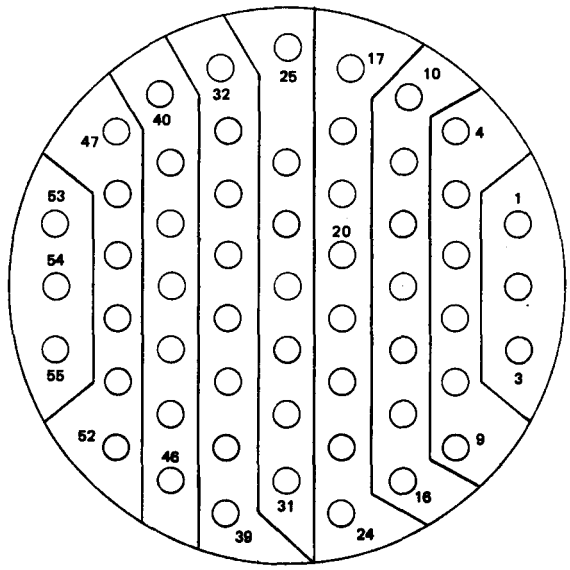
44-903-17

Figure 8-2. Diode Diagrams



44-903-18

Figure 8-3. Relay Diagrams



CONNECTORS J2 AND J3

44-903-22A

Figure 8-3A. Connector-Pin Arrangement Diagram

Table 8-1. Power Supply Test Set Wire List

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
110	A002	001		K004	C01									
110	A002	001		S016	C02									
035	A002	002		K006	X02									
111	A002	004		K005	C01									
111 A	A002	004		K009	X02									
P115 0C A	A002	007		J027	LUG								V LAMP	
P115 0C B	A002	007		R067	A									
P028 /5+B A	A002	010		J010	LUG									
P028 /5+B B	A002	010		R068	B									
044	A002	013		DS02	A								PS ON	
044 A	A002	013		K005	B01									
021	A002	014		S018	2NO								LAMP TEST 1*	
045	A002	016		DS02	C								COMP PS ON	
045 A	A002	016		K004	D01									
P015+07	A002	017		S013B-	007								MEM FULL*	
071	A002	018		K015	X02									
P028-03 A	A002	020		S013A-	002								FULL*	
P028-03 B	A002	020		K045	X02									
VARINPPWR E	A002	026		K041	E02									
P015+08	A002	027		S013E-	007								MEM OVRL*	
072	A002	028		K014	X02									
016	A002	036		P001	052						B		OVER PWR TIME	
043 A	A002	038		S011B-	C								COMPPS SENSE*	
043 B	A002	038		K004	F01									
049	A002	039		K003	X02									
P005+02 A	A002	040		S013B-	006								FULL*	
P005+02 B	A002	040		K021	X02									
P005+03 A	A002	041		S013E-	006								OVRL*	
P005+03 B	A002	041		K022	X02									
028 A	A002	043		K004	A01									
P015-04 A	A002	045		S013B-	010								PREC FULL*	
P015-04 B	A002	045		K011	X02									
P015 05 A	A002	046		S013E-	010								PREC OVRL*	
P015-05 B	A002	046		K010	X02									
P028+ R	A002	048		XF01	LUG				222					
P028+ V	A002	048		K001	X01				222					
038 B	A002	049		CB01B-	LOD									
038 D	A002	049		K001	A01									
039	A002	050		K039	X02									
091	A002	051		K041	X02									
042	A002	052		R003	B									
123	A002	053		VR10	LUG									
032	A002	054		K004	A02									
AMBPWR-04 A	A002	055		S013A-	005								FUL *	
AMBPWR-04 B	A002	055		K030	X02									
AMBPWR-05 A	A002	056		S013C-	005								OVR *	
AMBPWR-05 B	A002	056		K031	X02									
POPG-1 EF	A002	057		W001	- - -				000					
052	A002	058		K037	X02									
109	A002	059		K003	X01									
047 B	A002	060		R004	B									
VLAMP-01 A	A002	061		S013B-	008								FULL*	
VLAMP-01 B	A002	061		K024	X02									
VLAMP-02 A	A002	062		S013E-	008								OVRL*	
VLAMP-02 B	A002	062		K025	X02									
P028+ AP	A003	*		K007	B02				222				(*=R055-A)	
056 C	A003	E01		K037	A02									
POPG-1 EM	A003	003		W001	- -				000					
099 B	B001	001		E005	BOT									
100	B00 1	003		E004	BOT									
101 A	B001	004		E003	BOT									
VARINPPWR A	CB01A-	LIN		K041	E04		12							
VARINPPWR B	CB01A-	LIN		K041	E04		12							
VARINPPWR C	CB01A-	LIN		K041	E02		12							
PSPOWER A	CB01A-	LOD		W010B-			12							
PSPOWER B	CB01A-	LOD		W010B-			12							
PSPOWER C	CB01A-	LOD		W010B-			12							

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From Component	From Pin	From Ref	To Component	To Pin	To Ref	WG	ype	Color	Group	Route	Note	Remarks	lev
040	CB01B	LIN		R021	B									
038 A	CB01B	LOD		J045	LUG								SHUTDOWN*	
038 B	CB01B	LOD		A002	049									
P028+A V	CB02	LIN		W005B			16							
P028+A W	CB02	LIN		W005B			16							
P028+B A	CB02	LOD		S017	3C									
P028+B F	CB02	LOD		XF03	LUG		16						SW POWER	
P028+B G	CB02	LOD		K040	B02		16							
VARINP C	CR101	*A		K041	E01								(*A=TIP)	
093 D	CR101	*C		K002	A03								*C=LUG)	
LOAD 12 A	CR40	*A		K016	A01		16				A		*A=TIP)	
LOAD 11 A	CR40	*C		K016	B01		16				A		*C=LUG)	
AMBPWR 03 A	CR54	*C		J039	LUG								UM(*C=LUG)	
AMBPWR 03 F	CR54	*C		CR55	*C		16				*DIR		*C=LUG)	
AMBPWR 01 H	CR54	TIP		W011			16							
AMBPWR 03 F	CR55	*C		CR54	*C		16				*DIR		*C=LUG)	
AMBPWR 03 G	CR55	*C		K030	A02		16				*DIR		*C=LUG)	
AMBPWR 02 D	CR55	TIP		HY02	004		16							
AMBPWR 02 E	CR55	TIP		E034										
105 A	CR90	*C		K002	A01		16						(*C=LUG)	
105 B	CR90	*C		K002	B01		16						(*C=LUG)	
PSPOWER U	CR90	TIP		W010B			16							
024 A	DS01	A		P001	037								CHARGE*	
024 B	DS01	A		J003	015									
025 A	DS01	C		P001	038								BATTERY*	
025 B	DS01	C		J003	014									
P028+ G	DS01	G		S001	G				222					
P028+ H	DS01	G		S018	1C				222					
044	DS02	A		A002	013								PS ON	
045	DS02	C		A002	016								COMP PS ON	
046	DS02	G		P001	051									
013 A	DS03	A		P001	041								PSTS OVERTEMI	
013 B	DS03	A		K007	A03									
P028+B J	DS03	G		M001	*1									
101 B	E001			PS03	004			T2	000	TG001		F1		
101 C	E001			E003	TOP			T2	000	G001		F1		
LOAD 06R R	E002	BOT		R084	A		16							
LOAD 06R E	E002	TOP		K021	F01		16							
101 A	E003	BOT		B001	004									
101 C	E003	TOP		E001				T2	000	G001		F1		
100	E004	BOT		B001	003									
099 B	E005	BOT		B001	001									
099 A	E005	TOP		PS03	003			T2		G001		F1	SEE NOTE 8	
LOAD 18 B	E006	BOT		R083	B		16							
LOAD 18 A	E006	TOP		K031	C01		16							
LOAD 18 D	E006	TOP		K014	A01		16							
LOAD 17 G	E007	BOT		R011	B		16							
LOAD 17 A	E007	TOP		K022	B01		16							
LOAD 17 D	E007	TOP		E008	TOP		16							
LOAD 17 E	E007	TOP		K014	B01		16							
LOAD 17 F	E008	BOT		R010	B		16							
LOAD 17 C	E008	TOP		K030	D01		16							
LOAD 17 D	E008	TOP		E007	TOP		16							
LOAD 06 C	E009	BOT		R084	B		16							
LOAD 06 A	E009	TOP		K021	A01		16							
LOAD 02 C	E010	BOT		R009	B		16							
LOAD 02 B	E010	TOP		K023	B01		16							
LOAD 05 H	E011	BOT		R012	B		16							
LOAD 05	E011	TOP		K011	B01		16							
LOAD 05 B	E011	TOP		K019	B01		16							
LOAD 15 K	E012	BOT		R019	B		16							
LOAD 15 H	E012	TOP		E013	TOP		16							
LOAD 15 J	E012	TOP		K033	A01		16							
LOAD 15 M	E013	BOT		R020	B		16							
LOAD 15 G	E013	TOP		E017	TOP		16							
LOAD 15 H	E013	TOP		E012	TOP		16							
LOAD 15 P	E013	TOP		K045	A01									

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To									
	omponent	Pin	ef	omponent	Pin	ef		ype	olor	Group	Route	ote	Remarks	ev
LOAD-08 F	E014	BOT		R013	B		16							
LOAD-08 D	E014	TOP		K021	E01		16							
LOAD-08 E	E014	TOP		K031	A01		16							
LOAD 10 H	E015	BOT		R014	B		16							
LOAD-10 C	E015	TOP		K033	B01		20							
LOAD-10 G	E015	TOP		K018	B02		16							
LOAD-16 F	E016	BOT		R015	B		16							
LOAD-16 C	E016	TOP		K017	B01		16							
LOAD-16 D	E016	TOP		K028	C01		16							
LOAD-15 N	E017	BOT		R018	B		16							
LOAD-15	E017	TOP		K029	B01		16							
LOAD-15 G	E017	TOP		E013	TOP		16							
LOAD-01 D	E018	BOT		R008	B		16							
LOAD-01 A	E018	TOP		K030	B01		16							
LOAD-01 C	E018	TOP		K023	A01		16							
LOAD-19 D	E019	BOT		R007	B		16							
LOAD 19 A	E019	TOP		K030	A01		16							
LOAD 19 C	E019	TOP		K020	A01		16							
LOAD 19 E	E019	TOP		K015	A01		16							
LOAD-04 K	E020	BOT		R017	B		16							
LOAD-04 H	E020	TOP		E022	TOP		16							
LOAD-04 L	E020	TOP		K026	B01		16							
LOAD-20 B	E021	BOT		R006	B		16							
LOAD 20 A	E021	TOP		K020	B01		16							
LOAD 20 C	E021	TOP		K015	B01		16							
LOAD-04 J	E022	BOT		R016	B		16							
LOAD-04 G	E022	TOP		K010	B01		16							
LOAD 04 H	E022	TOP		E020	TOP		16							
LOAD 09 D	E025	BOT		R087	B		20							
LOAD 09 C	E025	TOP		K021	C01		20							
LOAD 09 E	E025	TOP		K031	D01		16							
LOAD 07 D	E026	BOT		R086	B		20							
LOAD 07 C	E026	TOP		K021	B01		20							
LOAD 07 E	E026	TOP		K031	B01		16							
LOAD-14 B	E027	BOT		R085	B		20							
LOAD 14 A	E027	TOP		K022	D01		20							
LOAD 14 C	E027	TOP		J067	TIP		20							
LOAD 13 D	E028	BOT		R005	B		20							
LOAD 13 C	E028	TOP		K021	D01		20							
LOAD 03 C	E029	BOT		R082	B		20							
LOAD 03 A	E029	TOP		K022	C01		20							
P115BLOCMP A	E030			J001	N								COMP BLO	
P115BLOCMP B	E030			J066	LUG									
POPG 2 CN	E031			W008B			20		000					
P115BLOIMU A	E032			J001	U								IMU BLO	
P115BLOIMU B	E032			J065	LUG									
129	E033			VR21	TIP									
AMBPWR 02 E	E034			CR55	TIP									
P115/90A A	HY01	001		J001	A		16							
P115/90A C	HY01	002		J057	LUG			S1						
POCG 01 C	HY01	002	S	HY01	004	S		SP						
P115/90A F	HY01	004		K019	B02		16	S2		SG001	A			
POCG 01 C	HY01	004	S	HY01	002	S		SP						
POCG 01 E	HY01	004	S	W013				SL	000					
AMBPWR 02 A	HY02	001		J001	C		16							
AMBPWR 02 B	HY02	002		J001	R		16							
AMBPWR 02 C	HY02	003		J040	LUG								COOL	
AMBPWR 02 D	HY02	004		CR55	TIP		16							
P015+01 A	HY03	001		J002	004								+15 PREC	
P015+01 C	HY03	002		J016	LUG			S1						
POCG 02 K	HY03	002	S	HY03	003	S		SP						
P015+01 D	HY03	003		S012A	C02			S1						
POCG 02 K	HY03	003	S	HY03	002	S		SP						
POCG 02 L	HY03	003	S	HY03	004	S		SP						
P015+01 F	HY03	004		K013	A02			S2		SG003				
POCG 02 L	HY03	004	S	HY03	003	S		SP						
POCG 02 N	HY03	004	S	W014B				SL	000					

Table 8-1 Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
OPG-2 AF	HY04	001		J002	021				000				15V RET	
OPG-2 AG	HY04	002		J002	044				000				15V RET	
OPG-2 AH	HY04	003		J002	047				000				15V RET	
OPG-2 AJ	HY04	004		W002A-	---			S2	000	SG003		6	15V RET	
028-01 B	HY05	001		J023	LUG								PS-28V/+15MEM	
028-01 D	HY05	002		J002	010									
028-01 E	HY05	003		J002	025									
028-01 G	HY05	004		K014	B02		16							
028-01 H	HY05	005		K014	A02		16							
024+ UNREG A	HY06	001		J003 -	006									
024+ UNREG B	HY06	002		J003	007									
024+ UNREG C	HY06	003		J003	022									
024+UNREG D	HY06	004		J003 -	023									
024+UNREG F	HY06	005		J020	LUG									
OSG A	HY07	001		J002	016				000					
OSG B	HY07	002		J003	034				000					
OSG C	HY07	003		J006	H		16		000					
OSG D	HY07	004		J007	L		12		000					
OSG F	HY07	005		S009	002				000					
OSG K	HY07	006		P001	068				000					
OSG M	HY07	007		S002	002				000					
OPG-2 AM	HY08	001		J002	008				000				PS 115	
OPG-2 AN	HY08	002		J002	022				000				PS 115	
OPG-2 AP	HY08	003		J002	023				000				PS 115	
OPG-2 AR	HY08	004		J002	049				000				V LAMP SENSE	
OPG-2 AS	HY08	005		W002A-	---		16	S3	000	SG004		6	PS 115	
115/0A U	HY13 -	001		W012	---		16	S3	222	SG004	A			
OCG-02 AC	HY13	001	S	HY13	003	S		SP						
115/0A V	HY13 -	002		K028	D02		16							
115/0A W	HY13	003		K029	A02	A	16	S1			A			
OCG-02 AC	HY13 -	003	S	HY13	001	S		SP						
OCG-02 AD	HY13 -	003	S	HY14	004	S		SP						
115/0A H	HY14 -	001		W012	---		16	S3		SG004	A			
115/0A J	HY14	002		K028	B02		16				A			
115/0A K	HY14 -	003		K028	C02		16				A			
115/0A L	HY14	004		K026	A02		16	S1			A			
OCG-02 AD	HY14	004	S	HY13	003	S		SP						
115/0A X	HY15	001		K029	A02	B	16	S2	000	SG005				
OCG-02 AH	HY15	001	S	HY15	003	S		SP						
115/0A Y	HY15	002		K025	B02		16							
115/0A Z	HY15 -	003		K024	A02		16	S1						
OCG-02 AH	HY15	003	S	HY15	001	S		SP						
OCG-02 AJ	HY15 -	003	S	K025	D02	S		SP						
115/0A P	HY16	001		K027	A02		16	S2		SG005				
115/0A Q	HY16	002		K025	C02		16							
115/0A R	HY16	003		K025	D02		20							
115/90A A	J001	A		HY01	001		16							
27 B	J001	B		J037	LUG		20							
MBPWR-02 A	J001	C		HY02	001		16							
MBPWR-01 A	J001	D		W011	---		16				*DIR			
MBPWR-01 B	J001	E		W011	---		16				*DIR			
26 C	J001	F		J036	LUG		20							
77 A	J001	G		S006	001								IMU OVERT OFF	
OPG-2 A	J001	H		W008B-	---		16		000				PS HTR/CLR	
OPG-2 C	J001	J		W008B -	---		16		000				PS HTR/CLR	
OPG-2 AC	J001	K		W002A-	---		16	S2	000	SG001		6	115 PS/COMP	
OPG-2 D	J001	L		W008B -	---		16		000				PS HTR/CLR	
115BLOCMP A	J001	N		E030	---								COMP BLO	
OPG-2 E	J001	P		W008B -	---		16		000				PS HTR/CLR	
MBPWR-02 B	J001	R		HY02	002		16							
MBPWR-01 C	J001	S		W011	---		16				*DIR			
26 B	J001	T		J036	LUG		20							
115BLOIMU A	J001	U		E032	---								IMU BLO	
OPG-2 G	J001	V		W008B-	---		16		000				PS HTR/CLR	
OPG-2 H	J001	W		W008B-	---		16		000				PS HTR/CLR	
MBPWR-01 D	J001	X		W011	---		16				*DIR			
OCG-04 C	J002	002	S	W014	---			SL	000					

Table 8-1. Power Supply Test Set Wire List - Continued

			Pin	Ref	Component	Pin	Ref	AWG	Type	Color	Group		Note	Remarks	Rev
		J002	002	A	J046	LUG	B		S1			B			
P0CG-04	B	J002 -	002	AS	J002	002	BS		SP						
068	C	J002	002	B	K004	E02			S1			B			
P0CG-04	B	J002 -	002	BS	J002 -	002	AS		SP						
P015+01	A	J002 -	004		HY03	001								+15 PREC	
P115/0A	A	J002	005		W012							*DIR			
P115/0A	B	J002	006		W012							*DIR			
P115/0A	C	J002 -	007		W012	- - -						*DIR			
P0PG-2	AM	J002 -	008		HY08	001				000				PS 115	
P028-01	D	J002 -	010		HY05 -	002									
P028+/5+	A	J002 -	011		W007							*DIR			
P028+/5+	C	J002	012		W007							*DIR			
P028+/5+	D	J002	013		W007							*DIR			
P0PG-2	J	J002	014		W008A -					000		*DIR		PS 28V	
P0PG-2	K	J002	015		W008A -	- - -				000		*DIR		PS 28V	
P0SG	A	J002	016		HY07	001				000					
030	B	J002	017		J051 -	LUG									
P0CG-02	R	J002	018		W014A -	- - -				000					
P0PG-2	AF	J002 -	021		HY04 -	001				000				15V RET	
P0PG-2	AN	J002	022		HY08	002				000				PS 115	
P0PG-2	AP	J002	023		HY08	003				000				PS 115	
029	B	J002	024		J049 -	LUG									
P028-01	E	J002 -	025		HY05 -	003									
P028+/5+	E	J002	026		W007							*DIR			
P028+/5+	F	J002	027		W007							*DIR			
P0PG-2	L	J002	028		W008A -					000		*DIR		PS 28V	
P0PG-2	M	J002	029		W008A -					000		*DIR		PS 28V	
P0CG-02	S	J002	030		W014A -					000					
P0PG-2	N	J002	035		W008A -					000		*DIR		PS 28V	
P028+/5+	G	J002 -	038		W007							*DIR			
P028+/5+	H	J002	039		W007 -							*DIR			
P028+/5+	J	J002	040		W007							*DIR			
P0PG-2	P	J002	041		W008A -					000		*DIR		PS 28V	
P0PG-2	R	J002	042		W008A -	- -				000		*DIR		PS 28V	
P0PG-2	S	J002	043		W008A -	- - -				000		*DIR		PS 28V	
P0PG-2	AG	J002	044		HY04	002				000				15V RET	
086		J002	045		K004	X02								COMPPS SENSE	
085		J002 -	046		J003 -	045								COMPPS SENSE	
P0PG-2	AH	J002 -	047		HY04	003				000				15V RET	
P115/0A	D	J002 -	048		W012	- - -						*DIR			
P0PG-2	AR	J002 -	049		HY08	004				000				V LAMP SENSE	
048	C	J002 -	052		S004	003									
P015-02	A	J002	053		J015 -	LUG								PREC	
P0PG-1	A	J002	054		W004A -	- - -				000				PS SENSE	
087		J002	055		J003	054								PS SENSE	
P115/90A	K	J003	001		K016	A02			S2		SG002	A			
P0PG-2	AD	J003	002		W002A -				S2	000	SG002		6	115 PS/COMP	
P0CG-03	E	J003	002	S	W015	- - -			SL	000					
P0CG-03	F	J003	002	S	J003 -	003	S		SP						
P026/90		J003	003		J056	LUG			S1						
P0CG-03	F	J003	003	S	J003 -	002	S		SP						
P0CG-03	G	J003 -	003	S	J003	016	S		SP						
P0PG-2	U	J003	004		W008A -	- - -				000				26VAC /90	
P024+AUX		J003	005		J019 -	LUG									
P024+UNREG	A	J003	006		HY06 -	001									
P024+UNREG	B	J003	007		HY06 -	002									
P0CG-03	A	J003	009		W015	- -				000					
P0CG-03	B	J003 -	011		W015	- - -				000					
073	A	J003	012		S005 -	003								FLAG SET	
074	A	J003	013		S005	001								FLAG RESET	
025	B	J003 -	014		DS01 -	C									
024	B	J003	015		DS01 -	A									
076	A	J003 -	016		S002 -	007	A		S1					ON*	
P0CG-03	G	J003 -	016	S	J003	003	S		SP						
P0CG-03	H	J003 -	016	S	J003 -	029	S		SP						
P017+PS1	A	J003	017		K009	A01									
063		J003	018		K009 -	B01								PS +INV DR	

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
014	J003	019		J054	LUG			S1			B		UNDER VOLT*	
POCG-05	J003	019	S	W015	- - -			SL	000					
033	J003	020		J053	LUG								OVERVOLT*	
POPG-2 V	J003	021		W008A-	- - -				000				DC POWER	
P024+UNREG C	J003	022		HY06	003									
P024+UNREG D	J003	023		HY06	004									
PSOFF A	J003	029		S003	004									
POCG-03 H	J003	029	S	J003	016	S		SP						
POPG-2 W	J003	031		W008B-	- -				000				DC POWER	
POPG-2 X	J003	032		W008B-					000				DC POWER	
POPG-2 Y	J003	033		W008B-	- - -				000				DC POWER	
POSG B	J003	034		HY07	002				000					
POPG 2 Z	J003	037		W008B-	- - -				000				DC POWER	
050	J003	039		J048	LUG								COMP PS OFF	
COMPPSPWR A	J003	040		W006	- -						*DIR			
COMPPSPWR B	J003	041		W006	- -						*DIR			
085	J003	045		J002	046								COMPPS SENSE	
POPG-1 C	J003	046		W004A-					000		*DIR		COMP PS SENSE	
COMPPSPWR D	J003	047		W006							*DIR			
COMPPSPWR E	J003	048		W006							*DIR			
POPG-1 E	J003	049		W004A-					000		*DIR		COMP PS POWER	
POPG 1 F	J003	050		W004A	- - -				000		*DIR		COMP PS POWER	
POPG-1 G	J003	051		W004A-					000		*DIR		COMP PS POWER	
POPG 1 H	J003	052		W004A	- - -				000		*DIR		COMP PS POWER	
POPG 1 J	J003	053		W004A-	- - -				000		*DIR		COMP PS POWER	
087	J003	054		J002	055								PS SENSE	
088	J003	055		K005	X02								PS SENSE	
VARINP A	J004	A		K041	E01		12							
VARINP B	J004	B		K041	E01		12							
POPG-1 M	J004	C		W004A			12		000		*DIR		VARIABLE	
POPG-1 N	J004	D		W004A			12		000		*DIR		VARIABLE	
P028+A A	J005	A		W005A-			12				*DIR			
P028+A B	J005	B		W005A	- -		12				*DIR			
P028+A C	J005	C		W005A-			16				*DIR			
P028+A D	J005	D		W005A-			12				*DIR			
P028+A E	J005	E		W005A-	- - -		12				*DIR			
P028+A F	J005	F		W005B			16				*DIR			
POPG-1 AA	J005	J		W004B			16		000		*DIR		28V	
POPG 1 AB	J005	K		W004B-			16		000		*DIR		28V	
POPG 1 R	J005	L		W004B-			12		000		*DIR		28V	
POPG 1 S	J005	M		W004B-			12		000		*DIR		28V	
POPG-1 AC	J005	N		W004B			16		000		*DIR		28V	
POPG 1 T	J005	P		W004B			12		000		*DIR		28V	
POPG 1 U	J005	R		W004B			12		000		*DIR		28V	
P028+A J	J005	S		W005A			12				*DIR			
P028+A K	J005	T		W005A			12				*DIR			
P028+A L	J005	U		W005B			16				*DIR			
POPG 1 AD	J005	V		W004B-			16		000		*DIR		28V	
POPG 1 AE	J005	W		W004B			16		000		*DIR		28V	
POPG 1 W	J005	X		W004B			12		000		*DIR		28V	
POPG-1 X	J005	Y		W004B			12		000		*DIR		28V	
P028+A P	J005	Z		W005B			16				*DIR			
P028+A R	J005	A		W005B			16				*DIR			
PSPOWER E	J006	A		W010A			12				*DIR			
PSPOWER F	J006	B		W010A			12				*DIR			
PSPOWER G	J006	C		W010B			16				*DIR			
PSPOWER H	J006	D		W010B			12				*DIR			
PSPOWER J	J006	E		W010A			12				*DIR			
PSPOWER K	J006	F		W010A			16				*DIR			
078 A	J006	G		S009	001								JEEP SENS OFF	
POSG C	J006	H		HY07	003		16		000					
POPG 1 AR	J006	J		W004B			16		000				PS POWER	
POPG 1 AS	J006	K		W004B			16		000				PS POWER	
POPG 1 AH	J006	L		W004B			12		000				PS POWER	
POPG 1 AJ	J006	M		W004B			12		000				PS POWER	
POPG 1 AT	J006	N		W004B			16		000				PS POWER	
POPG 1 AK	J006	P		W004B			12		000				PS POWER	

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To										Rev
	Component	Pin	Ref	Component	Pin	Ref	AWG	Type	Color	Group	Route	Note	Remarks	
P0PG 1 AL	J006	R		W004B			12		000				PS POWER	
PSPOWER L	J006	S		W010A			12				*DIR			
PSPOWER M	J006	T		W010A			12				*DIR			
PSPOWER N	J006	U		W010A			16				*DIR			
P0PG 1 AU	J006	V		W004B			16		000				PS POWER	
P0PG 1 AV	J006	W		W004B			16		000				PS POWER	
P0PG 1 AM	J006	X		W004B			12		000				PS POWER	
P0PG 1 AP	J006	Y		W004B			12		000				PS POWER	
PSPOWER P	J006	Z		W010B			16				*DIR			
PSPOWER Q	J006	A		W010B			16				*DIR			
PSBTR' A	J007	A		W009			12				*DIR			
PSBTR' B	J007	B		W009			12				*DIR			
PSBTR' C	J007	C		W009			12				*DIR			
PSBTR D	J007	D		W009			12				*DIR			
P0PG BA	J007	F		W004A			12		000				PS BATTERY	
P0PG BB	J00	G		W004A			12		000				PS BATTERY	
P0PG BC	J00	H		W004A			12		000				PS BATTERY	
P0PG BE	J00	J		W004A			12		000				PS BATTERY	
P0PG BF	J00	K		W004A			12		000				PS BATTERY	
P0SG D	J00	L		HY07	004		12		000					
PSBTR G	J00	M		W009			12				*DIR			
PSBTR H	J00	N		W009			12				*DIR			
PSBTR J	J00	P		W009			12				*DIR			
PSBTR K	J00	R		W009			12				*DIR			
P0PG BG	J00	S		W004A			12		000				PS BATTERY	
P0PG BH	J00	T		W004A			12		000				PS BATTERY	
P0PG BJ	J00	U		W004A			12		000				PS BATTERY	
079 A	J00	V		S008	001								INTERLOCK OFI	
P015 02 1 A	J00	LUG		K008	B02									
P015+06 A	J00	LUG		K008	A01									
P028+/5+B A	J010	LUG		A002	010									
065	J011	LUG		VR10	001								PS +INV DR	
011 A	J012	LUG		P001	059						B		TIMER 1 MIN	
011 B	J012	LUG		K007	X02						B			
017 A	J013	LUG		P001	022								TIMER 2 SEC	
017 B	J013	LUG		S001	INC									
COMPPSPWR G	J014	LUG		W006										
P015 02 A	J015	LUG		J002	053								PREC	
P015 02 B	J015	LUG		S012B	C01									
125	J015	TIP		S012B	002									
P015+01 C	J016	LUG		HY03	002			S1						
P015+02	J016	TIP		S012A	008			S1					TP PREC	
P028+/5+A	J017	TIP		J024	TIP									
PSPOWER R	J018	LUG		W010B										
P024+AUX	J019	LUG		J003	005									
P024+UNREG F	J020	LUG		HY06	005									
P024+UNREG G	J020	LUG		R033	A									
128	J020	TIP		S012C	002									
063	J021	LUG		K009	B01									
P017+PS1	J022	LUG		K009	A01									
P028 01 A	J023	LUG		P001	043									
P028 01 B	J023	LUG		HY05	001								PS 28V/+15MEI	
P028 02	J023	TIP		J033	TIP								PS 28V/+15MEI	
P028+/5+ K	J024	LUG		W007										
P028+/5+A	J024	TIP		J017	TIP									
P015+10 A	J026	LUG		K008	E01									
P115/0C A	J027	LUG		A002	007								V LAMP	
P017+PS2	J028	LUG		VR09	001									
P010	J029	LUG		P001	009									
P028+ A	J030	LUG		P001	042				222					
P028+ C	J030	LUG		S012E	C01				222					
P0PG 1 BV	J031	TIP		J035	TIP				000					
P0PG 1 BW	J031	TIP		W001					000					
P0SG T	J032	TIP		J038	TIP				000					
P0SG U	J032	TIP		P001	006				000					
P028 02	J033	TIP		J023	TIP								PS 28V/+15MEI	
P115/0A G	J034	LUG		J058	LUG	B		S1					V LAMP	

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Componen	Pin	Ref		Pin	Ref								
P0PG-1 BV	J035 -	TIP		J031 -	TIP				000					
026 A	J036	LUG		P001 -	036								PS HTR 2	
026 B	J036	LUG		J001	T		20							
026 C	J036 -	LUG		J001 -	F		20							
027 A	J037 -	LUG		P001	034								PS HTR 1	
027 B	J037 -	LUG		J001	B		20							
P0SG S	J038 -	TIP		S016 -	003				000					
P0SG T	J038 -	TIP		J032 -	TIP				000					
AMBPWR-03 A	J039 -	LUG		CR54 -	*C								SUM(*C=LUG)	
AMBPWR-02 C	J040 -	LUG		HY02	003								COOL	
AMBPWR -01 G	J041 -	LUG		W011	---								HEAT	
P0PG-1 BX	J042 -	TIP		W004A -	---				000					
060	J043 -	TIP		K043 -	A01								CUR SOURCE	
075	J044 -	TIP	A	S003 -	008			S1						
P0CG-03 L	J044 -	TIP	AS	J044 -	TIP	BS		SP						
075	J044	TIP	B	P001	033			S1						
P0CG-03 L	J044 -	TIP	BS	J044 -	TIP	AS		SP						
038 A	J045 -	LUG		CB01B-	LOD								SHUTDOWN*	
068 A	J046 -	LUG	A	P001 -	008			S1			B			
P0CG-04 A	J046 -	LUG	AS	J046 -	LUG	BS		SP						
068 B	J046 -	LUG	B	J002 -	002	A		S1			B			
P0CG-04 A	J046 -	LUG	BS	J046 -	LUG	AS		SP						
P010+ A	J047	LUG		P001 -	056									
P010+ B	J047 -	LUG		PS02	003									
050	J048 -	LUG		J003 -	039								COMP PS OFF	
050 A	J048 -	LUG		P001 -	077									
029 A	J049 -	LUG		P001 -	028								COMP FLG SET*	
029 B	J049 -	LUG		J002 -	024									
048 A	J050 -	LUG		P001	015								COMP PS OFF*	
048 B	J050 -	LUG		S004 -	003									
030 A	J051 -	LUG		P001 -	029									
030 B	J051 -	LUG		J002	017									
031	J051 -	TIP		J055 -	TIP									
PSBTRY M	J052 -	LUG		W009 -	---									
PSBTRYTP	J052 -	TIP		S012F -	008									
033	J053 -	LUG		J003 -	020								OVERVOLT*	
014	J054 -	LUG		J003 -	019			S1			B		UNDER VOLT*	
031	J055 -	TIP		J051 -	TIP									
P026/90	J056 -	LUG		J003 -	003			S1						
P115/90A C	J057 -	LUG		HY01	002			S1						
P115/0A F	J058	LUG	A	W012	---	A		S1						
P0CG-02 AA	J058 -	LUG	AS	J058	LUG	BS		SP						
P115/0A G	J058 -	LUG	B	J034	LUG			S1					V LAMP	
P0CG-02 AA	J058 -	LUG	BS	J058 -	LUG	AS		SP						
P115/0B	J058 -	TIP		S012C-	008			S1					TEST POINT	
P115BLOIMU B	J065 -	LUG		E032										
P115BLOCMP B	J066 -	LUG		E030	---									
LOAD-14 C	J067 -	TIP		E027	TOP		20							
038 D	K001 -	A01		A002	049									
038 E	K001 -	A01		K039 -	A01									
P0PG-1 DJ	K001 -	A02		K001 -	B02				000					
018 C	K001 -	B01		S001 -	2C									
P0PG-1 DJ	K001	B02		K001 -	A02				000					
P0PG-1 DK	K001 -	B02		K039	A02				000					
P028+ V	K001 -	X01		A002	048				222					
P028+ AN	K001 -	X01		K039	X01				222		*DIR			
017 D	K001 -	X02		S001 -	2NC									
105 A	K002 -	A01		CR90	*C		16						(*C=LUG)	
PSBTRY S	K002	A02		W009 -	---		16							
093 A	K002 -	A03		K032 -	A02		16						BAT LOAD	
093 D	K002 -	A03		CR101-	*C								(*C=LUG)	
105 B	K002 -	B01		CR90	*C		16						(*C=LUG)	
PSBTRY T	K002 -	B02		W009	---		16							
P028+ Z	K002 -	X01		K040	B01				222					
P028+ AB	K002 -	X01		K004 -	X01				222					
092	K002	X02		S011A-	001								BAT PWR*	
PSPOWER S	K003 -	A01		W010B-			16							

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
PSPOWER T	K003	A01		W010B			16							
COMPPSPWR H	K003	A02		W006			16							
COMPPSPWR J	K003	A02		W006	- - -		16							
109	K003	X01		A002	059									
049	K003	X02		A002	039									
028	K004	A01		P001	027									
028 A	K004	A01		A002	043									
032	K004	A02		A002	054									
110	K004	C01		A002	001									
POPG-1 EJ	K004	C02		K004	D02				000					
045 A	K004	D01		A002	016									
POPG-1 EH	K004	D02		K004	F02				000					
POPG-1 EJ	K004	D02		K004 -	C02				000					
068 C	K004	E02		J002	002	B		S1			B			
043 B	K004	F01		A002	038									
POPG-1 DR	K004	F02		K005	C02				000					
POPG-1 EH	K004 -	F02		K004	D02				000					
P028+ AB	K004	X01		K002	X01				222					
P028+ AD	K004 -	X01		K005	X01				222					
086	K004	X02		J002	045								COMPPS SENSE	
037 A	K005 -	A01		S011A -	C									
POPG-1	K005 -	A02		W001	- - -				000					
POPG-1 DE	K005	A02		K005	B02				000					
044 A	K005	B01		A002	013									
POPG-1 DE	K005 -	B02		K005	A02				000					
POPG-1 DM	K005	B02		K005	C02				000					
111	K005	C01		A002	004									
POPG-1 DM	K005	C02		K005	B02				000					
POPG-1 DR	K005 -	C02		K004	F02				000					
054	K005	E01		S013C -	C								PS OVRL EN*	
053	K005 -	E02		K037	B01									
055	K005	E03		S013E -	C								COMPPS OL EN*	
P028+ AD	K005	X01		K004 -	X01				222					
P028+ AF	K005	X01		K042	X01				222					
088	K005	X02		J003	055								PS SENSE	
POPG-1 DL	K006 -	A02		K039	A02				000					
POPG-1 DN	K006	A02		W001	- - -				000					
038 F	K006	A03		K039	A01									
036 A	K006	X01		S012E -	001								ST OFF	
036 B	K006 -	X01		K008	X01									
035	K006	X02		A002	002									
107	K007 -	A02		S017	4NO									
013 B	K007	A03		DS03	A									
001 M	K007	B01		K011	X01									
001 N	K007 -	B01		K032	X01									
P028+ AL	K007	B02		K007	X01				222					
P028+ AP	K007	B02		A003	*				222				(*=R055-A)	
P028+ AJ	K007 -	X01		K043	X01				222					
P028+ AL	K007 -	X01		K007	B02				222					
011 B	K007	X02		J012	LUG						B			
P015+06 A	K008 -	A01		J009 -	LUG									
P015+06 B	K008	A01		VR06 -	TIP						*DIR			
P015+01 J	K008 -	A02		K012	B02			S1						
P015-02 D	K008 -	B01		K010 -	B02									
P015-02 G	K008	B01		K011	B02									
P015-02 1 A	K008 -	B02		J008	LUG									
P015-02 1 B	K008 -	B02		VR11	*A								(*A=LUG)	
P028+/5+B C	K008	C01		R068 -	B						*DIR			
P028+/5+ X	K008	C02		K022 -	C02		20							
P115/0C C	K008 -	D01		R067	A									
P115/0A S	K008	D02		K025 -	D02		20	S1						
P015+10 A	K008	E01		J026 -	LUG									
P015+10 D	K008 -	E01		VR05	002						*DIR			
P028-01 N	K008 -	E02		K015 -	B02		20							
P028-01 R	K008 -	E02		K042	B01		20							
036 B	K008 -	X01		K006	X01									
036 C	K008	X01		K009 -	X01									

Table 8-1. Power Supply Test Set Wire List - Continued

Signal		From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
		Component	Pin	Ref	Component	Pin	Ref								
104	C	K008	X02		S016	007									
P017+PS1		K009	A01		J022	LUG									
P017+PS1	A	K009	A01		J003	017									
P017+PS2	B	K009	A02		VR09	002									
P017+PS2	C	K009	A02		R070	B									
063		K009	B01		J003	018								PS +INV DR	
063		K009	B01		J021	LUG									
065	B	K009	B02		VR10	002									
065	C	K009	B02		K035	A01									
036	C	K009	X01		K008	X01									
111	A	K009	X02		A002 -	004									
LOAD-04	A	K010	B01		K032 -	A01		16							
LOAD-04	G	K010	B01		E022	TOP		16							
P015-02	C	K010	B02		S012B-	C01									
P015-02	D	K010 -	B02		K008	B01									
001	Y	K010	X01		K014	X01									
001	Z	K010	X01		K021	X01									
P015-05	B	K010 -	X02		A002	046									
LOAD-05		K011 -	B01		E011	TOP		16							
P015-02	G	K011 -	B02		K008	B01									
001	L	K011 -	X01		K012	X01									
001	M	K011 -	X01		K007	B01									
P015-04	B	K011 -	X02		A002	045									
LOAD-05	C	K012 -	B01		K019	B01		16							
P015+01	H	K012 -	B02		K013	B02									
P015+01	J	K012 -	B02		K008 -	A02			S1						
POCG-02	J	K012 -	B02		K013	A02	S		SP						
001	K	K012	X01		K013	X01									
001	L	K012	X01		K011 -	X01									
P015+04		K012	X02		S013E-	009								PREC OVRL*	
LOAD-16	A	K013	A01		K017	B01		16							
P015+01	F	K013	A02		HY03	004			S2		SG003				
P015+01	G	K013	A02		K013	B02									
POCG-02	J	K013	A02		K012	B02	S		SP						
LOAD-10	A	K013	B01		K033	B01		20							
P015+01	G	K013	B02		K013	A02									
P015+01	H	K013	B02		K012	B02									
001	J	K013	X01		K033	X01									
001	K	K013	X01		K012	X01									
P015+03		K013	X02		S013B-	009								PREC FULL *	
LOAD-18	C	K014	A01		K022	A01		20							
LOAD-18	D	K014	A01		E006	TOP		16							
P028-01	H	K014	A02		HY05	005		16							
P028-01	K	K014	A02		K015	A02		16							
LOAD-17	E	K014	B01		E007	TOP		16							
P028-01	G	K014	B02		HY05	004		16							
001	X	K014 -	X01		K015	X01									
001	Y	K014 -	X01		K010	X01									
072		K014	X02		A002	028									
LOAD-19	E	K015 -	A01		E019	TOP		16							
P028-01	K	K015	A02		K014	A02		16							
P028-01	L	K015	A02		K015	B02		16							
LOAD-20	C	K015	B01		E021	TOP		16							
P028-01	L	K015	B02		K015	A02		16							
P028-01	N	K015	B02		K008 -	E02		20							
001	W	K015	X01		K020	X01									
001	X	K015	X01		K014	X01									
071		K015	X02		A002	018									
LOAD-12	A	K016	A01		CR40	*A		16				A		(*A=TIP)	
LOAD-12	B	K016	A01		K018	B01		16				A			
P115/90A	J	K016	A02		K017	B02		16				A			
P115/90A	K	K016	A02		J003	001			S2		SG002	A			
LOAD-11	A	K016	B01		CR40	*C		16				A		(*C=LUG)	
LOAD-11	B	K016	B01		K018	A01		16				A			
LOAD-10	E	K016 -	B02		K028	B01		16							
LOAD-10	F	K016 -	B02		K018	B02		16							
003	B	K016 -	X01		K027	X01						A			

Table 8-1. Power Supply Test Set Wire List - Continued

Signal		From	Pin	Ref	To Component	Pin	Ref	AWG	Type	Color	Group	Route	Note	Remarks	Rev
114		K016	X02		P001	071									
LOAD-16	A	K017	B01		K013	A01		16							
LOAD-16	C	K017	B01		E016	TOP		16							
P115/90A	H	K017	B02		K018	A02		16				A			
P115/90A	J	K017 -	B02		K016 -	A02		16				A			
001	C	K017	X01		K019	X01						A			
001	E	K017 -	X01		K028	X01						A			
P115/90D		K017 -	X02		S013A-	004						A		FULL*	
LOAD-11	B	K018	A01		K016 -	B01		16				A			
LOAD-11	C	K018	A01		K027	B02		16				A			
P115/90A	G	K018	A02		K019 -	B02		16				A			
P115/90A	H	K018 -	A02		K017	B02		16				A			
LOAD-12	B	K018	B01		K016	A01		16				A			
LOAD-12	C	K018 -	B01		K027	A01		16				A			
LOAD 10	F	K018 -	B02		K016	B02		16							
LOAD 10	G	K018	B02		E015	TOP		16							
004	B	K018	X01		K029 -	X01						A			
115		K018	X02		P001 -	072									
LOAD-05	B	K019	B01		E011 -	TOP		16							
LOAD-05	C	K019 -	B01		K012	B01		16							
P115/90A	F	K019	B02		HY01	004		16	S2		SG00	A			
P115/90A	G	K019	B02		K018	A02		16				A			
001	B	K019	X01		K026	X01						A			
001	C	K019 -	X01		K017 -	X01						A			
P115/90C		K019	X02		S013C-	004						A		OVRL*	
LOAD-19	C	K020	A01		E019	TOP		16							
P028+/5+	AF	K020	A02		K023	A02		16							
P028+/5+	AH	K020	A02		W007	---		16							
LOAD-20	A	K020 -	B01		E021	TOP		16							
P028+/5+	AU	K020	B02		K021	E02		20							
P028+/5+	AV	K020	B02		W007 -	---		16							
001	V	K020	X01		K023	X01									
001	W	K020	X01		K015	X01									
P028+03		K020 -	X02		S013A-	001								FULL*	
LOAD-06	A	K021 -	A01		E009	TOP		16							
P028+/5+	AB	K021	A02		K021	B02		20				*DIR			
LOAD-07	A	K02	B01		K024	A01		20							
LOAD-07	C	K02	B01		E026	TOP		20							
P028+/5+	AB	K02	B02		K021	A02		20				*DIR			
P028+/5+	AC	K02	B02		K022	D02		20							
LOAD-09	A	K02	C01		K025	C01		20							
LOAD-09	C	K02	C01		E025	TOP		20							
P028+/5+	AS	K02	C02		K021 -	D02		20				*DIR			
LOAD-13	A	K02	D01		K025	D01		20							
LOAD-13	C	K02	D01		E028	TOP		20							
P028+/5+	AS	K02	D02		K021 -	C02		20				*DIR			
P028+/5+	AT	K02	D02		K021	E02		20				*DIR			
LOAD-08	C	K02	E01		K025	B01		20				*DIR			
LOAD-08	D	K02	E01		E014	TOP		16							
P028+/5+	AT	K02	E02		K021	D02		20				*DIR			
P028+/5+	AU	K021	E02		K020	B02		20							
LOAD-06R	C	K021	F01		K023	X02									
LOAD-06R	E	K021	F01		E002	TOP		16							
POPG-2	CM	K021	F02		W002A-	---		16		000					
001	Z	K021	X01		K010	X01									
001	AC	K021	X01		K025	X01									
P005+02	B	K021	X02		A002	040									
LOAD-18	C	K022	A01		K014	A01		20							
P028+/5+	T	K022	A02		K042	C01		20							
P028+/5+	U	K022	A02		K022	B02		20				*DIR			
LOAD-17	A	K022	B01		E007	TOP		16							
P028+/5+	U	K022	B02		K022	A02		20				*DIR			
P028+/5+	V	K022	B02		K022	C02		20				*DIR			
LOAD-03	A	K022	C01		E029	TOP		20							
P028+/5+	V	K022	C02		K022	B02		20				*DIR			
	X	K022	C02		K008	C02		20							
	A	K022	D01		E027	TOP		20							

Table 8-1. Power **Supply** *Test Set Wire List - Continued*

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Componen	Pin	Ref	Componen	Pin	Ref								
P028+/5+ AC	K022	D02		K021	B02		20							
P028+/5+ AE	K022	D02		K023	A02		20							
001 AD	K022	X01		K025	X01									
001 AE	K022	X01		K045	X01									
P005+03 B	K022	X02		A002	041									
LOAD-01 C	K023	A01		E018	TOP		16							
P028+/5+ AE	K023	A02		K022	D02		20							
P028+/5+ AF	K023 -	A02		K020	A02		16							
LOAD-02 A	K023	B01		K030	C01		16							
LOAD-02 B	K023	B01		E010 -	TOP		16							
P028+/5+ R	K023	B02		W007	- - -		16							
P028+/5+ S	K023	B02		K042	C01		20							
001 T	K023	X01		K024 -	X01									
001 V	K023	X01		K020 -	X01									
LOAD-06R B	K023 -	X02		S013C-	001								OVRL*	
LOAD-06R C	K023	X02		K021	F01									
LOAD-07 A	K024 -	A01		K021	B01		20							
P115/0A Z	K024	A02		HY15	003		16	S1						
P115/0A AA	K024	A02		K024	B02						*DIR			
090 A	K024	B01		K025	A01									
P115/0A AA	K024	B02		K024	A02						*DIR			
P115/0A AB	K024	B02		K025	A02						*DIR			
001 S	K024 -	X01		K030	X01									
001 T	K024	X01		K023	X01									
VLAMP-01 B	K024 -	X02		A002	061									
090	K025 -	A01		K042	D01									
090 A	K025 -	A01		K024	B01									
P115/0A AB	K025	A02		K024	B02						*DIR			
LOAD-08 C	K025	B01		K021	E01		20				*DIR			
P115/0A Y	K025	B02		HY15	002		16							
LOAD-09 A	K025	C01		K021	C01		20							
P115/0A Q	K025	C02		HY16	002		16							
LOAD-13 A	K025	D01		K021	D01		20							
P115/0A R	K025	D02		HY16	003		20							
P115/0A S	K025	D02		K008	D02		20	S1						
POCG-02 AJ	K025	D02	S	HY15	003	S		SP						
001 AC	K025	X01		K021	X01									
001 AD	K025	X01		K022 -	X01									
VLAMP-02 B	K025	X02		A002	062									
P115/0A L	K026	A02		HY14	004		16	S1			A			
P115/0A M	K026	A02		K026	B02		16				*DIR			
LOAD-04 L	K026	B01		E020	TOP		16							
P115/0A M	K026	B02		K026	A02		16				*DIR			
P115/0A N	K026	B02		K027	A02		16				A			
001 A	K026	X01		S011E-	C						A		RELAY ENABLE	
001 B	K026	X01		K019	X01						A			
P115/0E	K026	X02		S013C-	003								OVRL*	
LOAD-12 C	K027 -	A01		K018	B01		16				A			
LOAD-12 D	K027	A01		K029	B02		16				A			
P115/0A N	K027	A02		K026	B02		16				A			
P115/0A P	K027	A02		HY16	001		16	S2		SG005				
LOAD-15 A	K027 -	B01		K029	B01		16							
LOAD-15 C	K027 -	B01		K028	D01		16							
LOAD-11 C	K027 -	B02		K018	A01		16				A			
LOAD-11 D	K027 -	B02		K029	A01		16				A			
003 A	K027 -	X01		S011E-	003						A		+RECT LOAD EN	
003 B	K027 -	X01		K016	X01						A			
112	K027 -	X02		P001	074									
LOAD-10 E	K028 -	B01		K016	B02		16							
P115/0A J	K028	B02		HY14	002		16				A			
LOAD-16 D	K028	C01		E016	TOP		16							
P115/0A K	K028	C02		HY14	003		16				A			
LOAD-15 C	K028	D01		K027	B01		16							
P115/0A V	K028	D02		HY13	002		16							
001 E	K028	X01		K017	X01						A			
001 F	K028	X01		K038	X01									
P115/0D	K028	X02		S013A-	003								FULL*	

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
LOAD-11 D	K029	A01		K027	B02		16				A			
P115/0A W	K029	A02	A	HY13	003		16	S1			A			
POCG-02 AF	K029	A02	AS	K029	A02	BS		SP						
P115/0A X	K029 -	A02	B	HY15	001		16	S2	000	SG005				
POCG-02 AF	K029	A02	BS	K029	A02	AS		SP						
LOAD-15	K029	B01		E017	TOP		16							
LOAD-15 A	K029 -	B01		K027 -	B01		16							
LOAD-12 D	K029 -	B02		K027	A01		16				A			
004 A	K029 -	X01		S011E-	004						A		-RECT LOAD E	
004 B	K029	X01		K018	X01						A			
113	K029	X02		P001	076									
LOAD-19 A	K030 -	A01		E019	TOP		16							
AMBPWR-03 G	K030	A02		CR55	*C		16				*DIR		(*C=LUG)	
AMBPWR-03 J	K030	A02		K030	B02		20				*DIR			
LOAD-01 A	K030	B01		E018 -	TOP		16							
AMBPWR-03 J	K030 -	B02		K030	A02		20				*DIR			
AMBPWR-03 K	K030 -	B02		K030	C02		20				*DIR			
LOAD-02 A	K030	C01		K023	B01		16							
AMBPWR-03 K	K030 -	C02		K030	B02		20				*DIR			
AMBPWR-03 L	K030 -	C02		K030	D02		20				*DIR			
LOAD-17 C	K030 -	D01		E008	TOP		16							
AMBPWR-03 L	K030 -	D02		K030 -	C02		20				*DIR			
AMBPWR-03 M	K030	D02		K042	E01		20				*DIR			
001 R	K030	X01		K031	X01									
001 S	K030 -	X01		K024	X01									
AMBPWR-04 B	K03	X02		A002	055									
LOAD-08 E	K03	A01		E014	TOP		16							
AMBPWR-01 J	K03	A02		W011 -	---		16							
AMBPWR-01 L	K03	A02		K031	B02		20				*DIR			
LOAD-07 E	K03	B01		E026	TOP		16							
AMBPWR-01 L	K03	B02		K031	A02		20				*DIR			
LOAD-18 A	K03	C01		E006	TOP		16							
AMBPWR-01 K	K03	C02		W011	---		16							
AMBPWR-01 N	K03	C02		K031	D02		20				*DIR			
LOAD-09 E	K03	D01		E025	TOP		16							
AMBPWR-01 N	K03	D02		K031	C02		20				*DIR			
001 P	K03	X01		K032	X01									
001 R	K03	X01		K030	X01									
AMBPWR-05 B	K031	X02		A002	056									
LOAD-04 A	K032 -	A01		K010	B01		16							
093 A	K032	A02		K002 -	A03		16						BA LOAD	
093 B	K032 -	A02		K033	A02		20							
001 N	K032	X01		K007	B01									
001 P	K032	X01		K031 -	X01									
006	K032	X02		S011A-	011								BA SIM 4A*	
LOAD-15 J	K033 -	A01		E012 -	TOP		16							
093 B	K033 -	A02		K032	A02		20							
093 C	K033	A02		K033	B02									
LOAD-10 A	K033 -	B01		K013	B01		20							
LOAD-10 C	K033	B01		E015	TOP		20							
093 C	K033 -	B02		K033	A02									
001 G	K033 -	X01		K038	X01									
001 J	K033 -	X01		K013	X01									
005	K033	X02		S011A-	012								BAT SIM 1A*	
127	K034 -	A01		R070	A									
056 A	K034 -	A02		K035	A02								OVERVOLT DR	
056 B	K034 -	A02		K037 -	A02									
P017+OVRV	K034 -	X01		P001 -	010									
POPG-1 DS	K034	X02		K035 -	X02				000					
POPG-1 DT	K034 -	X02		K036 -	X02				000					
065 C	K035	A01		K009	B02									
056 A	K035	A02		K034	A02								OVERVOLT DR	
069	K035	X01		P001 -	020								+INV DR OVRV	
POPG-1 DS	K035	X02		K034 -	X02				000					
070	K036 -	B01		R071	A									
P028- B	K036 -	B02		PS01	004									
P015-03	K036 -	X01		S013F-	010								PREC OVRV	

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			WG	Type	Color	Group	Route	Note	Remarks	Rev
		Pin	Ref		Pin	Ref								
POPG-1 DT	K036	X02		K034 -	X02				000					
POPG-1 DU	K036	X02		W001	---				000					
057	K037 -	A01		K038 -	B02									
056 B	K037 -	A02		K034 -	A02									
056 C	K037 -	A02		A003 -	E01									
053	K037	B01		K005 -	E02									
010 B	K037 -	B02		S010	006						B			
010 C	K037	B02		K043 -	B01						B			
051	K037 -	X01		P001 -	048								UUT ON	
052	K037 -	X02		A002 -	058									
058	K038 -	B01		S013F -	C								OVERVOLT	
057	K038	B02		K037	A01									
059 G	K038 -	B03		K043	A02									
001 F	K038	X01		K028	X01									
001 G	K038 -	X01		K033	X01									
009 E	K038	X02		S012D -	009						B			
038 E	K039	A01		K001 -	A01									
038 F	K039	A01		K006	A03									
POPG-1 DK	K039	A02		K001 -	B02				000					
POPG-1 DL	K039 -	A02		K006	A02				000					
P028+ X	K039	X01		K040 -	B01				222		*DIR			
P028+ AN	K039	X01		K001	X01				222		*DIR			
039	K039 -	X02		A002	050									
P028+ X	K040 -	B01		K039	X01				222		*DIR			
P028+ Z	K040	B01		K002	X01				222					
P028+B G	K040 -	B02		CB02	LOD		16							
P028+B H	K040	B02		R021	A									
094	K040	X01		S017 -	2NO									
106	K040 -	X02		S015	002									
VARINP A	K041 -	E01		J004	A		12							
VARINP B	K041 -	E01		J004	B		12							
VARINP C	K041 -	E01		CR 101 -	*A								(*A=TIP)	
VARINPPWR C	K041 -	E02		CB01A -	LIN		12							
VARINPPWR E	K041	E02		A002	026									
P028+A X	K041	E03		W005B -			12							
P028+A Y	K041	E03		W005B -			12							
P028+A Z	K041	E03		W005B -	---		12							
P028+A AA	K041	E03		K041	X01									
VARINPPWR A	K041	E04		CB01A -	LIN		12							
VARINPPWR B	K041	E04		CB01A -	LIN		12							
P028+A AA	K041	X01		K041	E03									
091	K041 -	X02		A002	051									
059 A	K042	A02		K042	B02								ST CURREN	
P028-01 R	K042 -	B01		K008	E02		20							
059 A	K042 -	B02		K042 -	A02								ST CURREN	
059 B	K042	B02		K042	C02									
P028+/5+ S	K042	C01		K023	B02		20							
P028+/5+ T	K042	C01		K022	A02		20							
059 B	K042	C02		K042	B02									
059 C	K042	C02		K042	D02									
090	K042	D01		K025	A01									
059 C	K042	D02		K042	C02									
059 D	K042	D02		K042	E02									
AMBPWR-03 M	K042	E01		K030	D02		20				*DIR			
059 D	K042	E02		K042	D02									
059 E	K042	E02		K042	F02									
AMBPWR-01 M	K042	F01		W011	---									
059 E	K042 -	F02		K042	E02									
059 F	K042	F02		K043	A02									
P028+ AF	K042	X01		K005	X01				222					
P028+ AH	K042	X01		K043	X01				222					
103 A	K042	X02		S012A -	002								LOAD S.T.*	
103 B	K042	X02		K043	X02									
060	K043	A01		J043	TIP								CUR SOURCE	
059 F	K043	A02		K042	F02									
059 G	K043	A02		K038	B03									
010 C	K043	B01		K037	B02						B			

Table 8-1. Power Supply Test Set Wire List - Continued

Sigr	Fro Compone	F	R	Compone	F	R	AW	Ty	Co	Grc	Rou	Nc	Remar	R
n	KO	R		S01	0									
1	KO	R		SO	0									
PORC	KO	0		WO					0					
PORC	KO	0		WO					0					
PORC	KO	0		W002					0				DUPLICA	
PORC	KO	0		W00 ?					0				DUPLICA	
P02	KO	Y		KO	Y				2					
P02	KO	Y		KO	Y				2					
1	KO	Y		KO	Y									
P015	KO	A		VR	0								M M OV	
P015	KO	A		S01	0									
P015	KO	A		KO	Y									
P015	KO	Y		KO	A									
PORC	KO	Y		VR					0				(*A=LU	
LOAD	KO	A		EO	T									
P028	KO	A		WO										
n	KO	Y		KO	Y									
P028	KO	Y		AO	0									
P028	M			SO									(*1=PLUS)TI	
P028	MO			DS										
PORC	MO			S011					0				(*2=MIN	
PORC	MO			SO					0				(*2=MIN	
n	DS	0		XE	T									
PORC	DS	0		PS	0				0					
PORC	DS	0		W00					0					
PORC	DS	0		W004					0					
P02	DS	0		PC	C									
PC	DS	0		KO	R									
OC	DS	C		XE	T									
PORC	DS	0		PS	C				C					
P01	DS	0		IC	I									
PORC	DS	0		W00					C					
n	DS	C		XE	T									
PORC	DS	C		SC	C				C					
PORC	DS	C		W00					C					
n	DS	C		EC	T					TC			S F NC	
1	DS	C		EC					C	TC				
[illegible]	[illegible]	[illegible]		SC	C									
[illegible]	[illegible]	[illegible]		SC	C									
P00	[illegible]	[illegible]		SC	C									
P000	[illegible]	[illegible]		SC	C									
[illegible]	[illegible]	[illegible]		S01	C									
[illegible]	[illegible]	[illegible]		IC					C					
P017	[illegible]	[illegible]		[illegible]	[illegible]									
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]								CC IP 'S OI	
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]								IV IR OI	
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]								TI 2	
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]								TI 2	
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]								OVERL IN E	
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]								AD TI T	
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]								CI AD C	
U3C	[illegible]	[illegible]		[illegible]	[illegible]									
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]								[illegible]	

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
		Pin	Ref	Component	Pin	Ref								
J27 A	P001	034		J037	LUG								PS HTR 1	
J26 A	P001	036		J036	LUG								PS HTR 2	
J24 A	P001	037		DS01	A								CHARGE*	
J25 A	P001	038		DS01	C								BATTERY*	
J23	P001	039		S018	3NO								LAMP TEST 3*	
J13 A	P001	041		DS03	A								PSTS OVERTEMP	
P028+ A	P001	042		J030	LUG				222					
P028 01 A	P001	043		J023	LUG									
J83	P001	044		S012E	002								ST ON 1	
P028+/5+ L	P001	046		W007	- - -									
J84 A	P001	047		S012I	003								ST ON 2	
J51	P001	048		K037	X01								UUT ON	
J22	P001	049		S018	1NO								LAMP TEST	
J46	P001	051		DS02	G									
J16	P001	052		A002	036						B		OVER PWR TIME	
J09 A	P001	053		S010	007						B			
J10 A	P001	054		S010	006						B		OVRLD EN*	
P010+ A	P001	056		J047	LUG									
J15 A	P001	057		S012	008						B		OVER PWR GO*	
J12 A	P001	058		S012E	010						B		TIME*	
J11 A	P001	059		J012	LUG						B		TIMER 1 MIN	
POPG 1 BR	P001	061		W004A					000					
P028+03 A	P001	062		S013A	001									
LOAD 06R A	P001	063		S013C	001									
124	P001	064		S014	001									
117	P001	066		S010	008									
118	P001	067		S010	005									
POSG K	P001	068		HY07	006				000					
P115/90E	P001	069		S013D	004									
114	P001	071		K016	X02									
115	P001	072		K018	X02									
P115/0F	P001	073		S013D	003									
112	P001	074		K027	X02									
113	P001	076		K029	X02									
050 A	P001	077		J048	LUG									
041 A	R003	A		S011E	001								NO LD EN	
042	R003	B		A002	052									
108	R004	A		S004	001									
047 B	R004	B		A002	060									
POPG 2 BA	R005	A		W002B			20		000					
LOAD 13 D	R005	B		E028	BOT		20							
POPG 2 BB	R006	A		W002B	- - -		16		000					
LOAD 20 B	R006	B		E021	BOT		16							
POPG 2 BC	R007	A		W002B			16		000					
LOAD 19 D	R007	B		E019	BOT		16							
POPG 2 BD	R008	A		W002B			16		000					
LOAD 01 D	R008	B		E018	BOT		16							
POPG 2 BE	R009	A		W002B			16		000					
LOAD 02 C	R009	B		E010	BOT		16							
POPG 2 BF	R010	A		W002B			16		000					
LOAD 17 F	R010	B		E008	BOT		16							
POPG 2 BG	R011	A		W002B			16		000					
LOAD 17 G	R011	B		E007	BOT		16							
POPG 2 BH	R012	A		W002B			16		000					
LOAD 05 H	R012	B		E011	BOT		16							
POPG 2 BJ	R013	A		W002B			16		000					
LOAD 08 F	R013	B		E014	BOT		16							
POPG 2 BK	R014	A		W002B			16		000					
LOAD 10 H	R014	B		E015	BOT		16							
POPG 2 BL	R015	A		W002B			16		000					
LOAD 16 F	R015	B		E016	BOT		16							
POPG 2 BM	R016	A		W002B			16		000					
LOAD 04 J	R016	B		E022	BOT		16							
POPG 2 BN	R017	A		W002B			16		000					
LOAD 04 K	R017	B		E020	BOT		16							
POPG 2 BP	R018	A		W002B			16		000					
LOAD 15 N	R018	B		E017	BOT		16							

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref		Pin	Ref								
'OPG 2 BR	R019	A		W002B-	---		16		000					
OAD-15 K	R019	B		E012	BOT		16							
'OPG 2 BS	R020	A		W002B-			16		000					
OAD-15 M	R020	B		E013	BOT		16							
'028+B H	R021	A		K040	B02									
140	R021	B		CB01B-	LIN									
'024+ UNREG G	R033	A		J020	LUG									
'024+ UNREG H	R033	A		S012C-	C01									
'OPG-2 CL	R033	B		W002A-	---				000					
'015+05	R066	A		S013F-	009								PREC OVRL	
'015+06 C	R066	B		VR06	TIP						*DIR			
'115/0C B	R067	A		A002	007									
'115/0C C	R067	A		K008	D01									
'LAMP-03	R067	B		S013F-	008								OVRL	
'005+04	R068	A		S013F-	006								OVRL	
'028+/5+B B	R068	B		A002	010									
'028+/5+B C	R068	B		K008	C01						*DIR			
26	R069	A		S013F-	005									
29	R069	B		VR21	TIP									
27	R070	A		K034	A01									
'01 7+PS2 C	R070	B		K009	A02									
170	R071	A		K036	B01									
'015-02 1 C	R071	B		VR11	*A								(*A=LUG)	
'OPG-2 BV	R082	A		W002B-	---		20		000					
OAD-03 C	R082	B		E029	BOT		20							
'OPG-2 BW	R083	A		W002B-			16		000					
OAD 18 B	R083	B		E006	BOT		16							
OAD-06R R	R084	A		E002	BOT		16							
OAD-06 C	R084	B		E009	BOT		16							
'OPG-2 BX	R085	A		W002B-			20		000					
OAD-14 B	R085	B		E027	BOT		20							
'OPG-2 BY	R086	A		W002B-			20		000					
OAD 07 D	R086	B		E026	BOT		20							
'OPG 2 BZ	R087	A		W002B	---		20		000					
OAD-09 D	R087	B		E025	BOT		20							
'017+PS2 D	R129	A		VR09	002									
'OPG 1 EL	R129	B		VR09	LUG				000					
119 A	S001	A		P001	024								OVERLOAD FAIL	
119 B	S001	A		S001	C									
119 B	S001	C		S001	A									
'028+ E	S001	G		S012E-	C01				222					
'028+ G	S001	G		DS01	G				222					
118 A	S001	1C		P001	023								TIMER 2 SEC	
118 B	S001	1C		S001	2C									
118 B	S001	2C		S001	1C									
118 C	S001	2C		K001	B01									
117 B	S001	1NC		J013	LUG									
117 C	S001	1NC		S001	2NC									
117 C	S001	2NC		S001	1NC									
117 D	S001	2NC		K001	X02									
'OSG M	S002	002		HY07	007				000					
176 A	S002	007	A	J003	016			S1					ON*	
'OCG-03 M	S002	007	AS	S002	007	BS		SP						
176 B	S002	007	B	P001	018			S1						
'OCG-03 M	S002	007	BS	S002	007	AS		SP						
WLOW	S003	001		P001	031									
'SOFF A	S003	004		J003	029									
180	S003	005		S012F-	C01								SW HI	
175	S003	008		J044	TIP	A		S1						
08	S004	001		R004	A									
'OSG L	S004	002		S005	002				000					
'OSG P	S004	002		S012F-	001				000					
148 B	S004	003		J050	LUG									
148 C	S004	003		J002	052									
174 A	S005	001		J003	013								FLAG RESET	
174 B	S005	001		P001	017									
'OSG J	S005	002		S006	002				000					

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Componen	Pin	Ref		Pin	Ref								
POSG L	S005	002		S004	002				000					
073 A	S005	003		J003	012								FLAG SET	
073 B	S005	003		P001	016									
077 A	S006	001		J001	G								IMU OVERT OFF	
077 B	S006	001		P001	014									
POSG H	S006	002		S008	002				000					
POSG J	S006	002		S005	002				000					
079 A	S008	001		J007	V								INTERLOCK OFF	
079 B	S008	001		P001	013									
POSG G	S008	002		S009	002				000					
POSG H	S008	002		S006	002				000					
078 A	S009 -	001		J006	G								JEEP SENS OFF	
078 B	S009	001		P001	012									
POSG F	S009	002		HY07	005				000					
POSG G	S009	002		S008	002				000					
121 A	S010	001		S010	002									
121 A	S010	002		S010	001									
121 B	S010	002		S012D-	007									
122	S010 -	003		S010	004									
122	S010	004		S010	003									
122 A	S010	004		K043	B03									
118	S010	005		P001	067									
010 A	S010	006		P001	054						B		OVRLD EN*	
010 B	S010	006		K037	B02						B			
009 A	S010	007		P001	053						B			
009 B	S010	007		S012D-	009						B			
117	S010 -	008		P001	066									
037 A	S011A-	C		K005	A01									
092	S011A-	001		K002	X02								BAT PWR*	
061	S011A-	002		S013A-	C								PS FULL LOAD*	
006	S011A-	011		K032	X02								BAT SIM 4A*	
005	S011A-	012		K033	X02								BAT SIM 1A*	
043 A	S011B-	C		A002	038								COMPPS SENSE*	
062	S011B-	002		S013B-	C								COMP PS F LD*	
POPG-1 CA	S011C-	C		M001	*2				000				(*2=MINUS)	
002 A	S011C-	003		S011C-	004								RECT LOAD*	
002 A	S011C-	004		S011C-	003								RECT LOAD*	
002 B	S011C-	004		S013D-	C								RECT LOAD*	
008 A	S011C-	005		K043	B02									
007 A	S011C-	006		S012D-	C02									
001 A	S011E-	C		K026	X01						A		RELAY ENABLE	
041 A	S011E-	001		R003	A								NO LD EN	
003 A	S011E-	003		K027	X01						A		+RECT LOAD EN	
004 A	S011E-	004		K029	X01						A		-RECT LOAD EN	
POPG-1 BS	S012A-	C01		W004A-	- - -				000					
P015+01 D	S012A-	C02		HY03	003			S1						
POCG-02 H	S012A-	C02	S	S012A-	008	S		SP						
103 A	S012A-	002		K042	X02								LOAD S.T *	
P015+02	S012A-	008		J016	TIP			S1					TP PREC	
POCG-02 H	S012A-	008	S	S012A-	C02	S		SP						
P015-02 B	S012B-	C01		J015	LUG									
P015-02 C	S012B-	C01		K010	B02									
125	S012B-	002		J015	TIP									
P024+UNREG H	S012C-	C01		R033	A									
P115/0A E	S012C-	C02		W012	- - -	B		S1						
POCG-02 AB	S012C-	C02	S	S012C-	008	S		SP						
128	S012C-	002		J020	TIP									
P115/0B	S012C	008		J058	TIP			S1					TEST POINT	
POCG-02 AB	S012C-	008	S	S012C-	C02	S		SP						
007 A	S012D-	C02		S011C-	006									
121 B	S012D-	007		S010	002									
121 C	S012D-	007		S012D-	010									
009 B	S012D-	009		S010	007						B			
009 E	S012D-	009		K038	X02						B			
121 C	S012D-	010		S012D	007									
P028+ C	S012E-	C01		J030	LUG				222					
P028+ E	S012E-	C01		S001	G				222					

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note		Rev
		Pin	Ref	Component	Pin	Ref								
POPG-1 BT	S012E-	C02		W004A -					000					
036 A	S012E-	001		K006	X01								ST OFF	
083	S012E-	002		P001	044								ST ON 1	
084 A	S012E-	003		P001	047								ST ON 2	
084 B	S012E-	003		S012E -	004									
084 B	S012E-	004		S012E -	003									
082	S012E-	005		P001	032								SW EN	
015 A	S012E-	008		P001	057						B		OVER PWR GO*	
015 B	S012E-	008		S012E -	009						B			
015 B	S012E-	009		S012E -	008						B			
012 A	S012E-	010		P001	058						B		TIME*	
080	S012F-	C01		S003 -	005								SW HI	
PSBTRY P	S012F-	C02		W009 -	---									
POSG P	S012F-	001		S004	002				000					
POSG R	S012F-	001		S016	003				000					
PSBTRYTP	S012F-	008		J052	TIP									
061	S013A-	C		S011 A-	002								PS FULL LOAD'	
P028+03	S013A-	001		K020	X02								FULL*	
P028+03 A	S013A-	001		P001	062									
P028-03 A	S013A-	002		A002 -	020								FULL*	
P115/0D	S013A-	003		K028	X02								FULL*	
P115/90D	S013A-	004		K017	X02						A		FULL*	
AMBPWR -04 A	S013A-	005		A002	055								FULL*	
062	S013B-	C		S011 B-	002								COMP PS F LD'	
P005+02 A	S013B-	006		A002 -	040								FULL*	
P015+07	S013B-	007		A002	017								MEM FULL*	
VLAMP-01 A	S013B-	008		A002	061								FULL*	
P015+03	S013B-	009		K013	X02								PREC FULL*	
P015-04 A	S013B-	010		A002 -	045								PREC FULL*	
054	S013C-	C		K005	E01								PS OVRL EN*	
LOAD-06R A	S013C-	001		P001	063									
LOAD-06R B	S013C-	001		K023	X02								OVRL*	
P115/0E	S013C-	003		K026	X02								OVRL*	
P115/90C	S013C-	004		K019	X02						A		OVRL*	
AMBPWR -05 A	S013C-	005		A002	056								OVRL*	
002 B	S013D-	C		S011C-	004								RECT LOAD*	
P115/0F	S013D-	003		P001	073									
P115/90E	S013D-	004		P001	069									
055	S013E-	C		K005	E03								COMPPS OL EN'	
P005+03 A	S013E-	006		A002	041								OVRL*	
P015+08	S013E-	007		A002	027								MEM OVRL*	
VLAMP-02 A	S013E-	008		A002	062								OVRL*	
P015+04	S013E-	009		K012	X02								PREC OVRL*	
P015-05 A	S013E-	010		A002	046								PREC OVRL*	
058	S013F-	C		K038 -	B01								OVERVOLT	
126	S013F-	005		R069	A									
P005+04	S013F-	006		R068	A								OVRL	
P015+09	S013F-	007		K044	A02								MEM OVRV	
VLAMP-03	S013F-	008		R067	B								OVRL	
P015+05	S013F-	009		R066	A								PREC OVRL	
P015-03	S013F-	010		K036	X01								PREC OVRV	
120	S013F-	011		P001	021									
119	S013F-	012		P001	005									
124	S014	001		P001 -	064									
POPG-1 EG	S014	002		W001 -					000					
POPG-1 DB	S015	001		PS03	002				000					
106	S015	002		K040	X02									
067	S016 -	C01		P001	007									
110	S016	C02		A002	001									
P005-	S016	001		P001	001									
P001	S016	002		P001 -	002									
POSG R	S016	003		S012F -	001				000					
POSG S	S016	003		J038	TIP				000					
P001+VLAMP	S016 -	004		P001 -	003									
P008+VLAMP	S016	005		P001	004									
104 B	S016 -	007		S016 -	008									
104 C	S016	007		K008	X02									

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
104 A	S016 -	008		S016	009									
104 B	S016 -	008		S016	007									
104 A	S016 -	009		S016	008									
P0PG-1 CB	S017	A		M001 -	*2				000				(*2= MINUS)	
P0PG-1 CC	S017	A		S017 -	C				000					
P0PG-1 CC	S017 -	C		S017	A				000					
P0PG-1 CE	S017 -	C		S017	4C				000					
102	S017 -	G		S017	2C									
102	S017 -	2C		S017	G									
P028+B A	S017 -	3C		CB02	LOD									
P028+B D	S017 -	3C		M001	*1								(*1= PLUS) TIME	
P0PG-1 CD	S017 -	4C		S018	2C				000					
P0PG-1 CE	S017 -	4C		S017	C				000					
094	S017	2NO		K040 -	X01									
107	S017 -	4NO		K007	A02									
P028+ H	S018	1C		DS01 -	G				222					
P028+ L	S018	1C		XF02 -	LUG				222					
P0PG-1 CD	S018	2C		S017 -	4C				000					
P0PG-1 CF	S018	2C		S018	3C				000					
P0PG-1 CF	S018	3C		S018 -	2C				000					
P0PG-1 CG	S018	3C		S018	4C				000					
P0 PG-1 CG	S018	4C		S018	3C				000					
P0 PG-1 CH	S018 -	4C		W004A-	---				000					
022	S018 -	1NO		P001	049								LAMP TEST	
021	S018	2NO		A002	014								LAMP TEST 1*	
023	S018 -	3NO		P001 -	039								LAMP TEST 3*	
020	S018	4NO		P001	026								LAMP TEST 2*	
P0PG-1 DX	VR05	*A		VR06	*A				000				(*A=LUG)	
P0PG-1 DZ	VR05 -	*A		K044	X02				000				(*A=LUG)	
P015+10 B	VR05 -	001		VR05	002						*DIR			
P015+10 C	VR05	001		K044	A01									
P015+10 B	VR05 -	002		VR05 -	001						*DIR			
P015+10 D	VR05	002		K008	E01						*DIR			
P0PG-1 DX	VR06	*A		VR05 -	*A				000				(*A=LUG)	
P0PG-1 DY	VR06	*A		VR11 -	*C				000				*C=TIP *A=LUG	
P0PG-1 EK	VR06	LUG		VR21 -	LUG				000					
P015+06 B	VR06 -	TIP		K008	A01						*DIR			
P015+06 C	VR06 -	TIP		R066	B						*DIR			
P0PG-1 EC	VR09	LUG		VR11	*C				000				(*C=TIP)	
P0PG-1 ED	VR09	LUG		W001	---				000					
P0PG-1 EL	VR09	LUG		R129	B				000					
P017+PS2	VR09	001		J028	LUG									
P017+PS2 A	VR09	001		VR09	002									
P017+PS2 A	VR09	002		VR09	001									
P017+PS2 B	VR09	002		K009	A02									
P017+PS2 D	VR09	002		R129	A									
123	VR10	LUG		A002 -	053									
065	VR10	001		J011	LUG								PS +INV DR	
065 A	VR10	001		VR10	002									
065 A	VR10	002		VR10	001									
065 B	VR10	002		K009	B02									
P015-02 1 B	VR11	*A		K008	B02								(*A=LUG)	
P015-02 1 C	VR11	*A		R071	B								(*A=LUG)	
P0PG-1 DY	VR11	*C		VR06	*A				000				*C=TIP *A=LUG	
P0PG-1 EC	VR11	*C		VR09	LUG				000				(*C=TIP)	
P0PG-1 EK	VR21	LUG		VR06	LUG				000					
129	VR21	TIP		E033	---									
129	VR21	TIP		R069	B									
P0PG-1 EM	W001 -	--		A003	003				000					
P0PG-1	W001	---		K005	A02				000					
P0PG-1	W001	---		W004A-	---		16		000					
P0PG-1 BW	W001 -	---		J031	TIP				000					
P0PG-1 CR	W001 -	---		W004A-	---		16		000					
P0PG-1 CS	W001	---		W004B-	---		16		000					
P0PG-1 DF	W001	---		K043	D01		16		000			7		
P0PG-1 DG	W001	---		K043	D01		16		000			7		
P0PG-1 DN	W001	--		K006	A02				000					

Table 8-1. Power Supply Test Set Wire List - Continued

Signal		From Component	From Pin	From Ref	To	To Pin	To Ref	AWG	Type	Color	Group		Note	Remarks	Rev
	DU	W001	---		K036	X02				000					
POPG-1	ED	W001	---		VR09	LUG				000					
POPG-1	EF	W001	---		A002	057				000					
POPG-1	EG	W001	---		S014	002				000					
POPG-2	AC	W002A	---		J001	K		16	S2	000	SG001		6	115 PS. COMP	
POPG-2	AD	W002A	---		J003	002			S2	000	SG002		6	115 PS. COMP	
POPG-2	AJ	W002A	---		HY04	004			S2	000	SG003		6	15V RE	
POPG-2	AS	W002A	---		HY08	005		16	S3	000	SG004		6	PS 115	
POPG-2	CC	W002A	---		W008A			12		000					
POPG-2	CD	W002A	---		W008A			12		000					
POPG-2	CE	W002A	---		W008B			12		000					
POPG-2	CF	W002A	---		W008B	---		12		000					
POPG-2	CJ	W002A	---		K043	D02		16		000			7	DUPLICATE	
POPG-2	CK	W002A	---		K043	D02		16		000			7	DUPLICATE	
POPG-2	CL	W002A	---		R033	B				000					
POPG-2	CM	W002A	---		K021	F02		16		000					
POPG-2	BA	W002B	---		R005	A		20		000					
POPG-2	BB	W002B	---		R006	A		16		000					
POPG-2	BC	W002B	---		R007	A		16		000					
POPG-2	BD	W002B	---		R008	A		16		000					
POPG-2	BE	W002B	---		R009	A		16		000					
POPG-2	BF	W002B	---		R010	A		16		000					
POPG-2	BG	W002B	---		R011	A		16		000					
POPG-2	BH	W002B	---		R012	A		16		000					
POPG-2	BJ	W002B	---		R013	A		16		000					
POPG-2	BK	W002B	---		R014	A		16		000					
POPG-2	BL	W002B	---		R015	A		16		000					
POPG-2	BM	W002B	---		R016	A		16		000					
POPG-2	BN	W002B	---		R017	A		16		000					
POPG-2	BP	W002B	---		R018	A		16		000					
POPG-2	BR	W002B	---		R019	A		16		000					
POPG-2	BS	W002B	---		R020	A		16		000					
POPG-2	BV	W002B	---		R082	A		20		000					
POPG-2	BW	W002B	---		R083	A		16		000					
POPG-	BX	W002B	---		R085	A		20		000					
POPG-	BY	W002B	---		R086	A		20		000					
POPG-	BZ	W002B	---		R087	A		20		000					
POPG-		W004A	---		W001	---		16		000					
POPG-	A	W004A	---		J002	054				000				PS SENSE	
POPG-	C	W004A	---		J003	046				000		*DIR		COMP PS SENSE	
POPG-	E	W004A	---		J003	049				000		*DIR		COMP PS POWER	
POPG-	F	W004A	---		J003	050				000		*DIR		COMP PS POWER	
POPG-	G	W004A	---		J003	051				000		*DIR		COMP PS POWER	
POPG-	H	W004A	---		J003	052				000		*DIR		COMP PS POWER	
POPG-	J	W004A	---		J003	053				000		*DIR		COMP PS POWER	
POPG-	M	W004A	---		J004	C		12		000		*DIR		VARIABLE	
POPG-	N	W004A	---		J004	D		12		000		*DIR		VARIABLE	
POPG-1	BA	W004A	---		J007	F		12		000				PS BATTERY	
POPG-1	BB	W004A	---		J007	G		12		000				PS BATTERY	
POPG-1	BC	W004A	---		J007	H		12		000				PS BATTERY	
POPG-1	BE	W004A	---		J007	J		12		000				PS BATTERY	
POPG-1	BF	W004A	---		J007	K		12		000				PS BA TERY	
POPG-1	BG	W004A	---		J007	S		12		000				PS BA TERY	
POPG-1	BH	W004A	---		J007	T		12		000				PS BA TERY	
POPG-1	BJ	W004A	---		J007	U		12		000				PS BA TERY	
POPG-1	BR	W004A	---		P001	061				000					
POPG-1	BS	W004A	---		S012A	C01				000					
POPG-1	BT	W004A	---		S012E	C02				000					
POPG-1	BX	W004A	---		J042	TIP				000					
POPG-1	CH	W004A	---		S018	4C				000					
POPG-1	CR	W004A	---		W001	---		16		000					
POPG-1	DC	W004A	---		PS03	002		16		000					
POPG-1	R	W004B	---		J005	L		12		000		*DIR		28V	
POPG-1	S	W004B	---		J005	M		12		000		*DIR		28V	
POPG-1	T	W004B	---		J005	P		12		000		*DIR		28V	
POPG-1	U	W004B	---		J005	R		12		000		*DIR		28V	
POPG-1	W	W004B	---		J005	X		12		000		*DIR		28V	

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
P0PG-1 X	W004B -	---		J005 -	Y		12		000		*DIR		28V	
P0PG-1 AA	W004B-	---		J005 -	J		16		000		*DIR		28V	
P0PG-1 AB	W004B-	---		J005 -	K		16		000		*DIR		28V	
P0PG-1 AC	W004B -	---		J005 -	N		16		000		*DIR		28V	
P0PG-1 AD	W004B -	---		J005 -	V		16		000		*DIR		28V	
P0PG-1 AE	W004B -	---		J005 -	W		16		000		*DIR		28V	
P0PG-1 AH	W004B-	---		J006 -	L		12		000				PS POWER	
P0PG-1 AJ	W004B -	---		J006 -	M		12		000				PS POWER	
P0PG-1 AK	W004B-	---		J006	P		12		000				PS POWER	
P0PG-1 AL	W004B-	---		J006	R		12		000				PS POWER	
P0PG-1 AM	W004B -	---		J006 -	X		12		000				PS POWER	
P0PG-1 AP	W004B -	---		J006	Y		12		000				PS POWER	
P0PG-1 AR	W004B-	---		J006	J		16		000				PS POWER	
P0PG-1 AS	W004B-	---		J006 -	K		16		000				PS POWER	
P0PG-1 AT	W004B -	---		J006	N		16		000				PS POWER	
P0PG-1 AU	W004B -	---		J006	V		16		000				PS POWER	
P0PG-1 AV	W004B -	---		J006	W		16		000				PS POWER	
P0PG-1 CS	W004B -	---		W001 -	---		16		000					
P0PG-1 CX	W004B -	---		PS02	004		16		000					
P0PG-1 CY	W004B -	---		PS01	002				000					
P0PG-1 CZ	W004B -	---		PS01	003		16		000					
P028+A A	W005A -	---		J005 -	A		12				*DIR			
P028+A B	W005A -	---		J005	B		12				*DIR			
P028+A C	W005A -	---		J005	C		16				*DIR			
P028+A D	W005A -	---		J005	D		12				*DIR			
P028+A E	W005A -	---		J005	E		12				*DIR			
P028+A J	W005A -	---		J005	S		12				*DIR			
P028+A K	W005A -	---		J005 -	T		12				*DIR			
P028+A F	W005B -	---		J005 -	F		16				*DIR			
P028+A L	W005B -	---		J005 -	U		16				*DIR			
P028+A P	W005B -	---		J005 -	Z		16				*DIR			
P028+A R	W005B -	---		J005 -	.A		16				*DIR			
P028+A V	W005B -	---		CB02 -	LIN		16							
P028+A W	W005B -	---		CB02	LIN		16							
P028+A X	W005B -	---		K041 -	E03		12							
P028+A Y	W005B -	---		K041 -	E03		12							
P028+A Z	W005B -	---		K041 -	E03		12							
COMPPSPWR A	W006 -	---		J003 -	040						*DIR			
COMPPSPWR B	W006 -	---		J003	041						*DIR			
COMPPSPWR D	W006 -	---		J003	047						*DIR			
COMPPSPWR E	W006 -	---		J003	048						*DIR			
COMPPSPWR G	W006	---		J014	LUG									
COMPPSPWR H	W006	---		K003	A02		16							
COMPPSPWR J	W006	---		K003	A02		16							
P028+/5+ A	W007	---		J002	011						*DIR			
P028+/5+ C	W007 -	---		J002	012						*DIR			
P028+/5+ D	W007 -	---		J002 -	013						*DIR			
P028+/5+ E	W007	---		J002 -	026						*DIR			
P028+/5+ F	W007	---		J002 -	027						*DIR			
P028+/5+ G	W007 -	---		J002	038						*DIR			
P028+/5+ H	W007 -	---		J002 -	039						*DIR			
P028+/5+ J	W007	---		J002 -	040						*DIR			
P028+/5+ K	W007	---		J024	LUG									
P028+/5+ L	W007	---		P001	046									
P028+/5+ R	W007 -	---		K023	B02		16							
P028+/5+ AH	W007	---		K020	A02		16							
P028+/5+ AV	W007 -	---		K020	B02		16							
P028+/5+ AW	W007	---		K045	A02									
P0PG-2 J	W008A-	---		J002	014				000		*DIR		PS 28V	
P0PG-2 K	W00 8A -	---		J002	015				000		*DIR		PS 28V	
P0PG-2 L	W008A -	---		J002	028				000		*DIR		PS 28V	
P0PG-2 M	W008A -	---		J002	029				000		*DIR		PS 28V	
P0PG-2 N	W008A -	---		J002	035				000		*DIR		PS 28V	
P0PG-2 P	W008A-	---		J002	041				000		*DIR		PS 28V	
P0PG-2 R	W008A -	---		J002	042				000		*DIR		PS 28V	
P0PG-2 S	W008A-	---		J002	043				000		*DIR		PS 28V	
P0PG-2 U	W008A-	---		J003	004				000				26VAC /90	

Table 8-1. Power Supply Test Set Wire List - Continued

Signal		From Component	From Pin	From Ref	To Component	To Pin	To Ref	AWG	Type	Color	Group	Route	Note	Remarks	Rev
POPG-2	V	W008A	---		J00	021				000				DC POWER	
POPG-2	CC	W008A	---		W00			12		000					
POPG-2	CD	W008A	---		W00	--		12		000					
POPG-2	A	W008B	---		J00	H		16		000				PS HTR/CLR	
POPG-2	C	W008B	---		J00	J		16		000				PS HTR/CLR	
POPG-2	D	W008B	---		J00	L		16		000				PS HTR/CLR	
POPG-2	E	W008B	---		J00	P		16		000				PS HTR/CLR	
POPG-2	G	W008B	---		J00	V		16		000				PS HTR/CLR	
POPG-2	H	W008B	---		J00	W		16		000				PS HTR/CLR	
POPG-2	W	W008B	---		J00	031				000				DC POWER	
POPG-2	X	W008B	---		J00	032				000				DC POWER	
POPG-2	Y	W008B	---		J00	033				000				DC POWER	
POPG-2	Z	W008B	---		J00	037				000				DC POWER	
POPG-2	CE	W008B	---		W00			12		000					
POPG-2	CF	W008B	---		W00			12		000					
POPG-2	CN	W008B	---		E03	--		20		000					
PSBTRY	A	W009	---		J007	A		12				*DIR			
PSBTRY	B	W009	---		J007	B		12				*DIR			
PSBTRY	C	W009	---		J007	C		12				*DIR			
PSBTRY	D	W009	---		J007	D		12				*DIR			
PSBTRY	G	W009	---		J007	M		12				*DIR			
PSBTRY	H	W009	---		J007	N		12				*DIR			
PSBTRY	J	W009	---		J007	P		12				*DIR			
PSBTRY	K	W009	---		J007	R		12				*DIR			
PSBTRY	M	W009	---		J052	LUG									
PSBTRY	P	W009	---		S012F	C02									
PSBTRY	S	W009	---		K002	A02		16							
PSBTRY	T	W009	---		K002	B02		16							
PSPOWER	E	W010A	---		J006	A		12				*DIR			
PSPOWER	F	W010A	---		J006	B		12				*DIR			
PSPOWER	J	W010A	---		J006	E		12				*DIR			
PSPOWER	K	W010A	---		J006	F		16				*DIR			
PSPOWER	L	W010A	---		J006	S		12				*DIR			
PSPOWER	M	W010A	---		J006	T		12				*DIR			
PSPOWER	N	W010A	---		J006	U		16				*DIR			
PSPOWER	A	W010B	---		CB01A	LOD		12							
PSPOWER	B	W010B	---		CB01A	LOD		12							
PSPOWER	C	W010B	---		CB01A	LOD		12							
PSPOWER	G	W010B	---		J006	C		16				*DIR			
PSPOWER	H	W010B	---		J006	D		12				*DIR			
PSPOWER	P	W010B	---		J006	Z		16				*DIR			
PSPOWER	Q	W010B	---		J006	A		16				*DIR			
PSPOWER	R	W010B	---		J018	LUG									
PSPOWER	S	W010B	---		K003	A01		16							
PSPOWER	T	W010B	---		K003	A01		16							
PSPOWER	U	W010B	---		CR90	TIP		16							
AMBPWR-01	A	W011	---		J001	D		16				*DIR			
AMBPWR-01	B	W011	---		J001	E		16				*DIR			
AMBPWR-01	C	W011	---		J001	S		16				*DIR			
AMBPWR-01	D	W011	---		J001	X		16				*DIR			
AMBPWR-01	G	W011	---		J041	LUG								HEAT	
AMBPWR-01	H	W011	---		CR54	TIP		16							
AMBPWR-01	J	W011	---		K031	A02		16							
AMBPWR-01	K	W011	---		K031	C02		16							
AMBPWR-01	M	W011	---		K042	F01									
P115/0A	A	W012	---		J002	005						*DIR			
P115/0A	B	W012	---		J002	006						*DIR			
P115/0A	C	W012	---		J002	007						*DIR			
P115/0A	D	W012	---		J002	048						*DIR			
P115/0A	H	W012	---		HY14	001		16	S3		SG004	A			
P115/0A	U	W012	---		HY13	001		16	S3	222	SG004	A			
P115/0A	F	W012	---	A	J058	LUG	A		S1						
POCG-02	W	W012	---	AS	W014B				SL	000					
POCG-02	X	W012	---	AS	W012	---	BS		SP						
P115/0A	E	W012	---	B	S012C	C02			S1						
POCG-02	X	W012	---	BS	W012	---	AS		SP						
POCG-01	E	W013	---		HY01	004	S		SL	000					

Table 8-1. Power Supply Test Set Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
'0 CG-04 C	W014	---		J002	002	S		SL	000					
'0 CG-02 R	W014A -	---		J002	018				000					
'0 CG-02 S	W014A -	---		J002	030				000					
'0 CG-02 M	W014B -	---		HY03	004	S		SL	000					
'0 CG-02 W	W014B -	---		W012	---	AS		SL	000					
'0 CG-03 A	W015 -	---		J003	009				000					
'0 CG-03 B	W015 -	---		J003	011				000					
'0 CG-03 E	W015 -	---		J003	002	S		SL	000					
'0 CG-05	W015 -	---		J003 -	019	S		SL	000					
'028+ N	XF01 -	LUG		XF02	LUG				222					
'028+ R	XF01 -	LUG		A002 -	048				222					
)98	XF01	TIP		PS02 -	001									
'028+ L	XF02 -	LUG		S018 -	1C				222					
'028+ N	XF02 -	LUG		XF01 -	LUG				222					
)97	XF02 -	TIP		PS01 -	001									
'028+B F	XF03	LUG		CB02 -	LOD		16						SW POWER	
)96	XF03 -	TIP		PS03	001		16							

Table 8-2. Cable Assemblies - Wire List -

Signal	From			To			AWG	Type	Color		Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
W310P1-005 A	HY01 -	001		W310P1-	005							10		
W310P1-005 B	HY01 -	002		W310P1-	006							10		
W310P1-005 C	HY01 -	003		HY02 -	003							10		
W310P1-005 E	HY02 -	001		W310P2-	005							10		
W310P1-005 D	HY02 -	002		W310P2-	040							10		
W310P1-005 C	HY02 -	003		HY01 -	003							10		
POSH-01 A	W301P1-	GND		W301P1-	009								GND RING	
POSH-01 C	W301P1-	GND		W30 P1-	001	S		SL	000	SG001			GND RING	
POSH-01 E	W301P1-	GND		W30 P1-	016	S		SL	000	SG002			GND RING	
W301P1-001	W301P1-	001		W30 P2-	001			S2		SG001				
POSH-01 C	W301P1-	001		W30 P1-	GND			SL	000	SG001			GND RING	
W301P1 002	W301P1-	002		W30 P2-	002			S2	000	SG001				
W301P1 003	W301P1-	003		W30 P2-	003			T2		TG003				
W301P1 004	W301P1-	004		W30 P2-	004			T2	000	TG003				
W301P1 005	W301P1-	005		W30 P2-	005									
W301P1 006	W301P1-	006		W30 P2-	006									
W301P1 007	W301P1-	007		W30 P2-	007									
W301P1 008	W301P1-	008		W30 P2-	008									
POSH-0 A	W301P1-	009		W30 P1-	GND								GND RING	
W301P1 010	W301P1-	010		W30 P2-	010									
W301P1 011	W301P1-	011		W30 P2-	011									
W301P1 012	W301P1-	012		W30 P2-	012									
W301P1 013	W301P1-	013		W30 P2-	013									
W301P1 014	W301P1-	014		W30 P2-	014									
W301P1 015	W301P1-	015		W30 P2-	015									
W301P1 016	W301P1-	016		W30 P2-	016			S2		SG002				
POSH-0 E	W301P1-	016		W30 P1-	GND			SL	000	SG002			GND RING	
W30 P1 017	W301P1-	017		W30 P2-	017									
W30 P1-018	W30 P1-	018		W3 01P2-	018									
W30 P1-019	W30 P1-	019		W301P2-	019									
W30 P1-020	W30 P1-	020		W301P2-	020									
W30 P1-021	W30 P1-	021		W301P2-	021									
W30 P1-022	W30 P1-	022		W301P2-	022									
W30 P1-023	W30 P1-	023		W301P2-	023									
W30 P1-024	W30 P1-	024		W301P2-	024									
W30 P1-025	W30 P1-	025		W301P2-	025									
W30 P1-026	W30 P1-	026		W301P2-	026			T2		TG001				
W30 P1-027	W30 P1-	027		W301P2-	027			T2	000	TG001				
W30 P1-028	W30 P1-	028		W301P2-	028			T2		TG002				
W30 P1-029	W30 P1-	029		W301P2-	029			S2	000	SG002				
W30 P1-030	W3 0 P1-	030		W301P2-	030									
W30 P1-031	W30 P1-	031		W301P2-	031									
W30 P1-032	W30 P1-	032		W301P2-	032									
W301P1-033	W30 P1-	033		W301P2-	033									
W301P1-034	W301P1-	034		W301P2-	034									
W301P1-035	W301P1-	035		W301P2-	035			T2	000	TG002				
W301P1-036	W301P1-	036		W301P2-	036									
W301P1-037	W301P1-	037		W301P2-	037									
POSH-01 B	W301P2-	GND		W3 01P2-	009								GND RING	
POSH-01 D	W301P2-	GND		W301P2-	001	S		SL	000	SG001			GND RING	
POSH-01 F	W301P2-	GND		W301P2-	016	S		SL	000	SG002			GND RING	
W301P1-001	W301P2-	001		W3 01P1-	001			S2		SG001				
POSH-01 D	W301P2-	001		W301P2-	GND			SL	000	SG001			GND RING	
W301P1-002	W301P2-	002		W301P1-	002			S2	000	SG001				
W301P1-003	W301P2-	003		W301P1-	003			T2		TG003				
W301P1-004	W301P2-	004		W301P1-	004			T2	000	TG003				
W301P1-005	W301P2-	005		W301P1-	005									
W301P1-006	W301P2-	006		W301P1-	006									
W301P1-007	W301P2-	007		W301P1-	007									
W301P1-008	W301P2-	008		W301P1-	008									
POSH-01 B	W301P2-	009		W301P2-	GND								GND RING	
W301P1-010	W301P2-	010		W301P1-	010									
W301P1-011	W301P2-	011		W301P1-	011									
W301P1-012	W301P2-	012		W301P1-	012									
W301P1-013	W301P2-	013		W301P1-	013									
W301P1-014	W301P2-	014		W301P1-	014									
W301P1-015	W301P2-	015		W301P1-	015									

Table 8-2. Cable Assemblies - Wire List - Continued

Signal	From	Pin	Ref	To Component	Pin	Ref	AWG	Type	Color	Group	Route	Note	Remarks	Re
W301P1-016	W301P2-	016		W301P1-	016			S2		SG002				
POSH-01 F	W301P2-	016	S	W301P2-	GND			SL	000	SG002			GND RING	
W301P1-017	W301P2-	017		W301P1-	017									
W301P1-018	W301P2-	018		W301P1-	018									
W301P1-019	W301P2-	019		W301P1-	019									
W301P1-020	W301P2-	020		W301P1-	020									
W301P1-021	W301P2-	021		W301P1-	021									
W301P1-022	W301P2-	022		W301P	022									
W301P1-023	W301P2-	023		W301P	023									
W301P1-024	W301P2-	024		W301P	024									
W301P1-025	W301P2-	025		W301P	025									
W301P1-026	W301P2-	026		W301P	026			T2		TG001				
W301P1-027	W301P2-	027		W301P	027			T2	000	TG001				
W301P1-028	W301P2-	028		W301P	028			T2		TG002				
W301P1-029	W301P2-	029		W301P	029			S2	000	SG002				
W301P1-030	W301P2-	030		W301P	030									
W301P1-031	W301P2-	031		W301P	031									
W301P1-032	W301P2-	032		W301P	032									
W301P1-033	W301P2-	033		W301P	033									
W301P1-034	W301P2-	034		W301P	034									
W301P1-035	W301P2-	035		W301P	035			T2	000	TG002				
W301P1-036	W301P2-	036		W301P	036									
W301P1-037	W301P2-	037		W301P	037									
W301P2-054	W301P	054		W301P2-	055									
W301P2-054	W301P	055		W301P2-	054									
POSH-02 A	W302P	GND		W302P1-	018								GND RING	
POSH-02 C	W302P	GND		W302P1-	004	S		SL	000	SG003			GND RING	
POSH-02 E	W302P	GND		W302P1-	019	S		SL	000	SG008				
W302P1-001	W302P	001		W302P2-	001									
W302P1-002	W302P	002		W302P2-	002									
W302P1-003	W302P	003		W302P2-	003									
W302P-004	W302P	004		W302P2-	004			S2		SG003				
POSH-02 C	W302P	004	S	W302P1-	GND			SL	000	SG003			GND RING	
W302P-005	W302P	005		W302P2-	005			T2		TG005				
W302P-006	W302P	006		W302P2-	006			T2		TG004				
W302P-007	W302P	007		W302P2-	007			T2		TG006				
W302P-008	W302P	008		W302P2-	008			T2	000	TG006				
W302P-009	W302P	009		W302P2-	009									
W302P-010	W302P	010		W302P2-	010									
W302P-011	W302P	011		W302P2-	011									
W302P-012	W302P	012		W302P2-	012									
W302P-013	W302P	013		W302P2-	013									
W302P-014	W302P	014		W302P2-	014									
W302P-015	W302P	015		W302P2-	015									
W302P-016	W302P	016		W302P2-	016									
W302P-017	W302P	017		W302P2-	017									
POSH-02 A	W302P	018		W302P1-	GND								GND RING	
W302P-019	W302P	019		W302P2-	019			S1		SG008				
POSH-02 E	W302P1-	019	S	W302P1-	GND			SL	000	SG008				
W302P1-020	W302P1-	020		W302P2-	020									
W302P1-021	W302P1-	021		W302P2-	021			S2	000	SG003				
W302P1-022	W302P1-	022		W302P2-	022			T2	000	TG005				
W302P1-023	W302P1-	023		W302P2-	023			T2	000	TG004				
W302P1-024	W302P1-	024		W302P2-	024									
W302P1-025	W302P1-	025		W302P2-	025									
W302P1-026	W302P1-	026		W302P2-	026									
W302P1-027	W302P1-	027		W302P2-	027									
W302P1-028	W302P1-	028		W302P2-	028									
W302P1-029	W302P1-	029		W302P2-	029									
W302P1-030	W302P1-	030		W302P2-	030									
W302P1-031	W302P1-	031		W302P2-	031									
W302P1-032	W302P1-	032		W302P2-	032									
W302P1-033	W302P1-	033		W302P2-	033			T2		TG007				
W302P1-034	W302P1-	034		W302P2-	034			T2	000	TG007				
W302P1-035	W302P1-	035		W302P2-	035									
W302P1-036	W302P1-	036		W302P2-	036			T2		TG008				
W302P1-037	W302P1-	037		W302P2-	037			T2	000	TG008				

Table 8-2. Cable Assemblies - Wire List - Continued

Signal	From Component	From Pin	From Ref	To Component	To Pin	To Ref	AWG	Type	Color	Group	Route	Note	Remarks	Rev
POSH-02 B	W302P2-	GND		W302P2-	018								GND RING	
POSH-02 D	W302P2-	GND		W302P2-	004	S		SL	000	SG003			GND RING	
POSH-02 F	W302P2-	GND		W302P2-	019	S		SL	000	SG008				
W302P1-001	W302P2-	001		W302P1-	001									
W302P1-002	W302P2-	002		W302P1-	002									
W302P1-003	W302P2-	003		W302P1-	003									
W302P1-004	W302P2-	004		W302P1-	004			S2		SG003				
POSH-02 D	W302P2-	004		W302P2-	GND			SL	000	SG003			GND RING	
W302P1-005	W302P2-	005		W302P1-	005			T2		TG005				
W302P1-006	W302P2-	006		W302P1-	006			T2		TG004				
W302P1-007	W302P2-	007		W302P1-	007			T2		TG006				
W302P1-008	W302P2-	008		W302P1-	008			T2	000	TG006				
W302P1-009	W302P2-	009		W302P1-	009									
W302P1-010	W302P2-	010		W302P1-	010									
W302P1-011	W302P2-	011		W302P1-	011									
W302P1-012	W302P2-	012		W302P1-	012									
W302P1-013	W302P2-	013		W302P1-	013									
W302P1-014	W302P2-	014		W302P1-	014									
W302P1-015	W302P2-	015		W302P1-	015									
W302P1-016	W302P2-	016		W302P1-	016									
W302P1-017	W302P2-	017		W302P1-	017									
POSH-02 B	W302P2-	018		W302P2-	GND								GND RING	
W302P1-019	W302P2-	019		W302P1-	019			S1		SG008				
POSH-02 F	W302P2-	019		W302P2-	GND			SL	000	SG008				
W302P1-020	W302P2-	020		W302P1-	020									
W302P1-021	W302P2-	021		W302P1-	021			S2	000	SG003				
W302P1-022	W302P2-	022		W302P1-	022			T2	000	TG005				
W302P1-023	W302P2-	023		W302P1-	023			T2	000	TG004				
W302P1-024	W302P2-	024		W302P1-	024									
W302P1-025	W302P2-	025		W302P1-	025									
W302P1-026	W302P2-	026		W302P1-	026									
W302P1-027	W302P2-	027		W302P1-	027									
W302P1-028	W302P2-	028		W302P1-	028									
W302P1-029	W302P2-	029		W302P1-	029									
W302P1-030	W302P2-	030		W302P1-	030									
W302P1-031	W302P2-	031		W302P1-	031									
W302P1-032	W302P2-	032		W302P1-	032									
W302P1-033	W302P2-	033		W302P1-	033			T2		G007				
W302P1-034	W302P2-	034		W302P1-	034			T2	000	G007				
W302P1-035	W302P2-	035		W302P1-	035									
W302P1-036	W302P2-	036		W302P1-	036			T2		G008				
W302P1-037	W302P2-	037		W302P1-	037			T2	000	G008				
W302P2-054	W302P2-	054		W302P2-	055									
W302P2-054	W302P2-	055		W302P2-	054									
W303P1-A	W303P1-	A		W303P2-	A		18	T4		G009		8		
W303P1-B	W303P1-	B		W303P2-	B		18							
W303P1-C	W303P1-	C		W303P2-	C		18							
W303P1-D	W303P1-	D		W303P2-	D		18							
W303P1-E	W303P1-	E		W303P2-	E		18							
W303P1-F	W303P1-	F		W303P2-	F		18							
W303P1-G	W303P1-	G		W303P2-	G		18							
W303P1-H	W303P1-	H		W303P2-	H		18							
W303P1-J	W303P1-	J		W303P2-	J		18							
W303P1-K	W303P1-	K		W303P2-	K		18	T4	000	TG009		8		
W303P1-L	W303P1-	L		W303P2-	L		18							
POSH-03	W303P1-	M		W303P1-	GND		18						GND RING	
W303P1-N	W303P1-	N		W303P2-	N		18	T4	222	TG009		8		
W303P1-P	W303P1-	P		W303P2-	P		18							
W303P1-R	W303P1-	R		W303P2-	R		18							
W303P1-S	W303P1-	S		W303P2-	S		18							
W303P1-T	W303P1-	T		W303P2-	T		18							
W303P1-U	W303P1-	U		W303P2-	U		18	T4	555	TG009		8		
W303P1-V	W303P1-	V		W303P2-	V		18							
W303P1-W	W303P1-	W		W303P2-	W		18							
W303P1-X	W303P1-	X		W303P2-	X		18							
POSH-03	W303P1-	GND		W303P1-	M		18						GND RING	
W303P1-A	W303P2-	A		W303P1-	A		18	T4		TG009		8		

Table 8-2. Cable Assemblies - Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
W303P1-B	W303P2-	B		W303P1-	B		18							
W303P1-C	W303P2-	C		W303P1-	C		18							
W303P1-D	W303P2-	D		W303P1-	D		18							
W303P1-E	W303P2-	E		W303P1-	E		18							
W303P1-F	W303P2-	F		W303P1-	F		18							
W303P1-G	W303P2-	G		W303P1-	G		18							
W303P1-H	W303P2-	H		W303P1-	H		18							
W303P1-J	W303P2-	J		W303P1-	J		18							
W303P1-K	W303P2-	K		W303P1-	K		18	T4	000	TG009		8		
W303P1-L	W303P2-	L		W303P1-	L		18							
POSH-03	W303P2-	M		W303P2-	GND		18						GND RING	
W303P1-N	W303P2-	N		W303P1-	N		18	T4	222	TG009		8		
W303P1-P	W303P2-	P		W303P1-	P		18							
W303P1-R	W303P2-	R		W303P1-	R		18							
W303P1-S	W303P2-	S		W303P1-	S		18							
W303P1-T	W303P2-	T		W303P1-	T		18							
W303P1-U	W303P2-	U		W303P1-	U		18	T4	555	TG009		8		
W303P1-V	W303P2-	V		W303P1-	V		18							
W303P1-W	W303P2-	W		W303P1-	W		18							
W303P1-X	W303P2-	X		W303P1-	X		18							
POSH-03	W303P2-	GND		W303P2-	M		18						GND RING	
W304P1-A	W304P1-	A		W304P2-	A		14							
W304P1-B	W304P1-	B		W304P2-	B		14							
W304P1-C	W304P1-	C		W304P2-	C		18							
W304P1-D	W304P1-	D		W304P2-	D		14							
W304P1-E	W304P1-	E		W304P2-	E		14							
W304P1-F	W304P1-	F		W304P2-	F		18							
W304P1-G	W304P1-	G		W304P2-	G		18							
W304P1-H	W304P1-	H		W304P2-	H		18							
W304P1-J	W304P1-	J		W304P2-	J		18							
W304P1-K	W304P1-	K		W304P2-	K		18							
W304P1-L	W304P1-	L		W304P2-	L		14							
W304P1-M	W304P1-	M		W304P2-	M		14							
W304P1-N	W304P1-	N		W304P2-	N		18							
W304P1-P	W304P1-	P		W304P2-	P		14							
W304P1-R	W304P1-	R		W304P2-	R		14							
W304P1-S	W304P1-	S		W304P2-	S		14							
W304P1-T	W304P1-	T		W304P2-	T		14							
W304P1-U	W304P1-	U		W304P2-	U		18							
W304P1-V	W304P1-	V		W304P2-	V		18							
W304P1-W	W304P1-	W		W304P2-	W		18							
W304P1-X	W304P1-	X		W304P2-	X		14							
W304P1-Y	W304P1-	Y		W304P2-	Y		14							
W304P1-Z	W304P1-	Z		W304P2-	Z		18							
W304P1-.A	W304P1-	A		W304P2-	.A		18							
W304P1-A	W304P2-	A		W304P1-	A		14							
W304P1-B	W304P2-	B		W304P1-	B		14							
W304P1-C	W304P2-	C		W304P1-	C		18							
W304P1-D	W304P2-	D		W304P1-	D		14							
W304P1-E	W304P2-	E		W304P1-	E		14							
W304P1-F	W304P2-	F		W304P1-	F		18							
W304P1-G	W304P2-	G		W304P1-	G		18							
W304P1-H	W304P2-	H		W304P1-	H		18							
W304P1-J	W304P2-	J		W304P1-	J		18							
W304P1-K	W304P2-	K		W304P1-	K		18							
W304P1-L	W304P2-	L		W304P1-	L		14							
W304P1-M	W304P2-	M		W304P1-	M		14							
W304P1-N	W304P2-	N		W304P1-	N		18							
W304P1-P	W304P2-	P		W304P1-	P		14							
W304P1-R	W304P2-	R		W304P1-	R		14							
W304P1-S	W304P2-	S		W304P1-	S		14							
W304P1-T	W304P2-	T		W304P1-	T		14							
W304P1-U	W304P2-	U		W304P1-	U		18							
W304P1-V	W304P2-	V		W304P1-	V		18							
W304P1-W	W304P2-	W		W304P1-	W		18							
W304P1-X	W304P2-	X		W304P1-	X		14							
W304P1-Y	W304P2-	Y		W304P1-	Y		14							

Table 8-2. Cable Assemblies - Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note		Rev
	Componen	Pin	Ref	Componen	Pin	Ref								
W304P1-Z	W304P2-	Z		W304P1-	Z		18							
W304P1-.A	W304P2-	A		W304P1-	.A		18							
W305P1-A	W305P1-	A		W305P2-	A		14							
W305P1-B	W305P1-	B		W305P2-	B		14							
W305P1-C	W305P1-	C		W305P2-	C		14							
W305P1-D	W305P1-	D		W305P2-	D		14							
W305P1-E	W305P1-	E		W305P2-	E		14							
W305P1-F	W305P1-	F		W305P2-	F		14							
W305P1-G	W305P1-	G		W305P2-	G		14							
W305P1-H	W305P1-	H		W305P2-	H		14							
W305P1-J	W305P1-	J		W305P2-	J		14							
W305P1-K	W305P1-	K		W305P2-	K		14							
W305P1-L	W305P1-	L		W305P2-	L		14							
W305P1-M	W305P1-	M		W305P2-	M		14							
W305P1-N	W305P1-	N		W305P2-	N		14							
W305P1-P	W305P1-	P		W305P2-	P		14							
W305P1-R	W305P1-	R		W305P2-	R		14							
W305P1-S	W305P1-	S		W305P2-	S		14							
W305P1-T	W305P1-	T		W305P2-	T		14							
W305P1-U	W305P1-	U		W305P2-	U		14							
W305P1-V	W305P1-	V		W305P2-	V		14							
W305P1-A	W305P2-	A		W305P1-	A		14							
W305P1-B	W305P2-	B		W305P1-	B		14							
W305P1-C	W305P2-	C		W305P1-	C		14							
W305P1-D	W305P2-	D		W305P1-	D		14							
W305P1-E	W305P2-	E		W305P1-	E		14							
W305P1-F	W305P2-	F		W305P1-	F		14							
W305P1-G	W305P2-	G		W305P1-	G		14							
W305P1-H	W305P2-	H		W305P1-	H		14							
W305P1-J	W305P2-	J		W305P1-	J		14							
W305P1-K	W305P2-	K		W305P1-	K		14							
W305P1-L	W305P2-	L		W305P1-	L		14							
W305P1-M	W305P2-	M		W305P1-	M		14							
W305P1-N	W305P2-	N		W305P1-	N		14							
W305P1-P	W305P2-	P		W305P1-	P		14							
W305P1-R	W305P2-	R		W305P1-	R		14							
W305P1-S	W305P2-	S		W305P1-	S		14							
W305P1-T	W305P2-	T		W305P1-	T		14							
W305P1-U	W305P2-	U		W305P1-	U		14							
W305P1-V	W305P2-	V		W305P1-	V		14							
W306P1-AB	W306L1-	+		W306P1-	A		14					9	LUG	
W306P1-AB	W306L1-	+		W306P1-	B		14					9	LUG	
W306P1-CD	W306L2-			W306P1-	C		14					9	LUG	
W306P1-CD	W306L2-	-		W306P1-	D		14					9	LUG	
W306P1-AB	W306P1-	A		W306L1-	+		14					9	LUG	
W306P1-AB	W306P1-	B		W306L1-	+		14					9	LUG	
W306P1-CD	W306P1-	C		W306L2-			14					9	LUG	
W306P1-CD	W306P1-	D		W306L2-	-		14					9	LUG	
W309P1-001	W309P1-	001		W309P2-	014									
W309P1-002	W309P1-	002		W309P2-	015									
W309P1-003	W309P1-	003		W309P2-	004									
W309P1-004	W309P1-	004		W309P2-	053									
W309P1-005	W309P1-	005		W309P2-	033									
W309P1-006	W309P1-	006		W309P2-	034									
W309P1-007	W309P1-	007		W309P2-	021									
W309P1-008	W309P1-	008		W309P2-	050									
W309P1-009	W309P1-	009		W309P2-	025									
W309P1-010	W309P1-	010		W309P2-	010									
W309P1-011	W309P1-	011		W309P2-	008									
W309P1-012	W309P1-	012		W309P2-	037			S2		SG004				
W309P1-013	W309P1-	013		W309P2-	036			S2	000	SG004				
W309P1-014	W309P1-	014		W309P2-	048			T2		TG011				
W309P1-015	W309P1-	015		W309P2-	049			T2	000	TG011				
W309P1-016	W309P1-	016		W309P2-	011									
W309P1-017	W309P1-	017		W309P2-	012									
W309P1-018	W309P1-	018		W309P2-	028									
W309P1-019	W309P1-	019		W309P2-	029									

Table 8-2. Cable Assemblies - Wire List - Continued

Signal	From			To				Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref		Pin	Ref								
W309P1-020	W309P1-	020		W309P2-	052									
W309P1-021	W309P1-	021		W309P2-	020									
W309P1-022	W309P1-	022		W309P2-	002			S2		SG005				
W309P1-023	W309P1-	023		W309P2-	016			S2	000	SG005				
W309P1-024	W309P1-	024		W309P2-	044									
W309P1-025	W309P1-	025		W309P2-	047									
W309P1-026	W309P1-	026		W309P2-	019									
W309P1-027	W309P1-	027		W309P2-	022									
W309P1-028	W309P1-	028		W309P2-	023									
W309P1-029	W309P1-	029		W309P2-	005									
W309P -030	W309P	030		W309P2-	006									
W309P -031	W309P	031		W309P2-	007									
W309P -032	W309P	032		W309P2-	013									
W309P -033	W309P	033		W309P2-	026									
W309P -034	W309P	034		W309P2-	041									
W309P -035	W309P	035		W309P2-	035									
W309P -036	W309P	036		W309P2-	042									
W309P -037	W309P	037		W309P2-	043									
W309P -038	W309P	038		W309P2-	017									
W309P -039	W309P	039		W309P2-	031			T2		TG010				
W309P -040	W309P	040		W309P2-	032			T2	000	TG010				
W309P -041	W309P	041		W309P2-	024									
W309P -042	W309P	042		W309P2-	051									
W309P -043	W309P	043		W309P2-	001									
W309P -044	W309P	044		W309P2-	030									
W309P -045	W309P	045		W309P2-	009									
W309P -046	W309P	046		W309P2-	003									
W309P -047	W309P	047		W309P2-	027									
W309P -048	W309P	048		W309P2-	038									
W309P -049	W309P	049		W309P2-	039									
W309P -050	W309P	050		W309P2-	040									
POSH- 4 A	W309P	GND		W309P2-	018								GND RING	
POSH- 4 D	W309P	GND		W309P2-	037	S		SL	000	SG004			GND RING	
POSH- 4 E	W309P	GND		W309P2-	002	S		SL	000	SG005			GND RING	
W309P1-043	W309P2-	001		W309P1-	043									
W309P1-022	W309P2-	002		W309P1-	022			S2		SG005				
POSH-04 E	W309P2-	002	S	W309P2-	GND			SL	000	SG005			GND RING	
W309P1-046	W309P2-	003		W309P1-	046									
W309P1-003	W309P2-	004		W309P1-	003									
W309P1-029	W309P2-	005		W309P1-	029									
W309P1-030	W309P2-	006		W309P1-	030									
W309P1-031	W309P2-	007		W309P1-	031									
W309P1-011	W309P2-	008		W309P1-	011									
W309P1-045	W309P2-	009		W309P1-	045									
W309P1 010	W309P2-	010		W309P1-	010									
W309P1 016	W309P2-	011		W309P1-	016									
W309P1 017	W309P2-	012		W309P1-	017									
W309P1 032	W309P2-	013		W309P1-	032									
W309P1 001	W309P2-	014		W309P1-	001									
W309P1 002	W309P2-	015		W309P1-	002									
W309P1 023	W309P2-	016		W309P1-	023			S2	000	SG005				
W309P1 038	W309P2-	017		W309P1-	038									
POSH-0 A	W309P2-	018		W309P2-	GND								GND RING	
W309P1-026	W309P2-	019		W309P1-	026									
W309P1-021	W309P2-	020		W309P1-	021									
W309P1-007	W309P2-	021		W309P1-	007									
W309P1-027	W309P2-	022		W309P1-	027									
W309P1-028	W309P2-	023		W309P1-	028									
W309P1-041	W309P2-	024		W309P1-	041									
W309P1-009	W309P2-	025		W309P1-	009									
W309P1-033	W309P2-	026		W309P1-	033									
W309P1-047	W309P2-	027		W309P1-	047									
W309P1-018	W309P2-	028		W309P1-	018									
W309P1-019	W309P2-	029		W309P1-	019									
W309P1-044	W309P2-	030		W309P1-	044									
W309P1-039	W309P2-	031		W309P1-	039			T2		TG010				
W309P1-040	W309P2-	032		W309P1-	040			T2	000	TG010				

Table 8-2. Cable Assemblies - Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Rev
	Component	Pin	Ref	Component	Pin	Ref								
W309P1-005	W309P2-	033		W309P1-	005									
W309P1-006	W309P2-	034		W309P1-	006									
W309P1-035	W309P2-	035		W309P1-	035									
W309P1-013	W309P2-	036		W309P1-	013			S2	000	SG004				
W309P1-012	W309P2-	037		W309P1-	012			S2		SG004				
POSH-04 D	W309P2-	037	S	W309P2-	GND			SL	000	SG004			GND RING	
W309P1-048	W309P2-	038		W309P1-	048									
W309P1-049	W309P2-	039		W309P1-	049									
W309P1-050	W309P2-	040		W309P1-	050									
W309P1-034	W309P2-	041		W309P1-	034									
W309P1-036	W309P2-	042		W309P1-	036									
W309P1-037	W309P2-	043		W309P1-	037									
W309P1-024	W309P2-	044		W309P1-	024									
W309P2-045	W309P2-	045		W309P2-	046									
W309P2-045	W309P2-	046		W309P2-	045									
W309P1-025	W309P2-	047		W309P1-	025									
W309P1-014	W309P2-	048		W309P1-	014			T2		TG011				
W309P1-015	W309P2-	049		W309P1-	015			T2	000	TG011				
W309P1-008	W309P2-	050		W309P1-	008									
W309P1-042	W309P2-	051		W309P1-	042									
W309P1-020	W309P2-	052		W309P1-	020									
W309P1-004	W309P2-	053		W309P1-	004									
POSH-05 A	W310P1-	GND		W310P1-	016	S		SL	000	SG006			GND RING	
POSH-05 B	W310P1-	GND		W310P1-	001	S		SL	000	SG007			GND RING	
POSH-05 E	W310P1-	GND		W310P1-	009								GND RING	
W310P1-001	W310P1-	001		W310P2-	001			S2		SG007				
POSH-05 B	W310P1-	001	S	W310P1-	GND			SL	000	SG007			GND RING	
W310P1-002	W310P1-	002		W310P2-	002			S2	000	SG007				
W310P1-003	W310P1-	003		W310P2-	003			T2		TG014				
W310P1-004	W310P1-	004		W310P2-	004			T2	000	TG014				
W310P1-005 A	W310P1-	005		HY01 -	001							10		
W310P1-005 B	W310P1-	006		HY01 -	002							10		
W310P1-007	W310P1-	007		W310P2-	041									
W310P1-008	W310P1-	008		W310P2-	008									
POSH-05 E	W310P1-	009		W310P1-	GND								GND RING	
W310P1-010	W310P1-	010		W310P2-	010									
W310P1-011	W310P1-	011		W310P2-	011									
W310P1-012	W310P1-	012		W310P2-	012									
W310P1-013	W310P1-	013		W310P2-	013									
W310P1-014	W310P1-	014		W310P2-	014									
W310P1-015	W310P1-	015		W310P2-	015									
W310P1-016	W310P1-	016		W310P2-	016			S2		SG006				
POSH-05 A	W310P1-	016	S	W310P1-	GND			SL	000	SG006			GND RING	
W310P1-017	W310P1-	017		W310P2-	017									
W310P1-018	W310P1-	018		W310P2-	018									
W310P1-019	W310P1-	019		W310P2-	019									
W310P1-020	W310P1-	020		W310P2-	020									
W310P1-021	W310P1-	021		W310P2-	049									
W310P1-022	W310P1-	022		W310P2-	047									
W310P1-023	W310P1-	023		W310P2-	048									
W310P1-024	W310P1-	024		W310P2-	024									
W310P1-025	W310P1-	025		W310P2-	025									
W310P1-026	W310P1-	026		W310P2-	026			T2		TG012				
W310P1-027	W310P1-	027		W310P2-	027			T2	000	TG012				
W310P1-028	W310P1-	028		W310P2-	028			T2		TG013				
W310P1-029	W310P1-	029		W310P2-	039			S2	000	SG006				
W310P1-030	W310P1-	030		W310P2-	030									
W310P1-031	W310P1-	031		W310P2-	050									
W310P1-032	W310P1-	032		W310P2-	051									
W310P1-033	W310P1-	033		W310P2-	052									
W310P1-034	W310P1-	034		W310P2-	034									
W310P1-035	W310P1-	035		W310P2-	035			T2	000	TG013				
W310P1-036	W310P1-	036		W310P2-	036									
W310P1-037	W310P1-	037		W310P2-	053									
POSH-05 C	W310P2-	GND		W310P2-	016	S		SL	000	SG006			GND RING	
POSH-05 D	W310P2-	GND		W310P2-	001	S		SL	000	SG007			GND RING	
POSH-05 F	W310P2-	GND		W310P2-	009								GND RING	

Table 8-2. Cable Assemblies - Wire List - Continued

Signal	From	Pin	Ref	To	Pin			Type	Color	Group	Route	Note	Remarks	Rev
W310P1-001	W310P2-	001		W310P1	001			S2		SG007				
POSH-05 D	W310P2-	001	S	W310P2	GND			SL	000	SG007			GND RING	
W310P1-002	W310P2-	002		W310P1	002			S2	000	SG007				
W310P1-003	W310P2-	003		W310P1	003			T2		TG014				
W310P1-004	W310P2-	004		W310P1	004			T2	000	TG014				
W310P1-005 E	W310P2-	005		HY02	001							10		
W310P1-008	W310P2-	008		W310P1	008									
POSH-05 F	W310P2-	009		W310P2	GND								GND RING	
W310P1-010	W310P2-	010		W310P1	010									
W310P1-011	W310P2-	011		W310P1	011									
W310P1-012	W310P2-	012		W310P1	012									
W310P1-013	W310P2-	013		W3 0P1	013									
W310P1-014	W310P2-	014		W3 0P1	014									
W310P -015	W3 0P2-	015		W3 0P1	015									
W310P -016	W3 0P2-	016		W3 0P1	016			S2		SG006				
POSH- 5 C	W3 0P2-	016	S	W3 0P2	GND			SL	000	SG006			GND RING	
W310P -017	W3 0P2-	017		W3 0P1	017									
W310P -018	W3 0P2-	018		W3 0P1	018									
W310P -019	W3 0P2-	019		W3 0P1	019									
W310P -020	W3 0P2-	020		W3 0P1	020									
W310P -024	W3 0P2-	024		W3 0P1	024									
W310P -025	W3 0P2-	025		W310P1	025									
W3 0P -026	W3 0P2-	026		W310P1	026			T2		TG012				
W3 0P -027	W3 0P2-	027		W310P1	027			T2	000	TG012				
W3 0P -028	W3 0P2-	028		W310P1	028			T2		TG013				
W3 0P -030	W3 0P2-	030		W310P1	030									
W3 0P -034	W3 0P2-	034		W310P1	034									
W3 0P -035	W3 0P2-	035		W310P1	035			T2	000	TG013				
W3 0P -036	W3 0P2-	036		W310P1	036									
W3 0P1-029	W310P2-	039		W310P1	029			S2	000	SG006				
W3 0P1-005 D	W310P2-	040		HY02	002							10		
W3 0P1-007	W310P2-	041		W310P1	007									
W3 0P2-045	W310P2-	045		W310P2	046									
W3 0P2-045	W310P2-	046		W310P2	045									
W3 0P1-022	W310P2-	047		W310P1	022									
W3 0P1-023	W310P2-	048		W310P1	023									
W3 0P1-021	W310P2-	049		W310P1	021									
W3 0P1-031	W310P2-	050		W310P1	031									
W310P1-032	W31 P2-	051		W310P1	032									
W310P1-033	W31 P2-	052		W310P1	033									
W310P1-037	W31 P2-	053		W310P1	037									
W311P1-.A	W31 E1-			W311P1	A		16							
W311P1-A	W31 E1-			W311P1	A		12							
W311P1-B	W31 E1-			W311P1	B		12							
W311P1-C	W31 E1-	---		W311P1	C		16							
W311P1-D	W31 E1-			W311P1	D		12							
W311P1-E	W31 E1-	--		W311P1	E		12							
W311P1-F	W31 E1-	--		W311P1	F		16							
W311P1-S	W31 E1-			W311P1	S		12							
W311P1-T	W31 E1-	---		W311P1	T		12							
W311P1-U	W31 E1-			W311P1	U		16							
W311P1-Z	W31 E1-	--		W311P1	Z		16							
W311P1-J	W31 E2-	--		W311P1	J		16							
W311P1-K	W31 E2-	--		W311P1	K		16							
W31 P1-L	W311E2-	--		W311P1	L		12							
W31 P1-M	W311E2-	---		W311P1	M		12							
W31 P1-N	W311E2-	---		W311P1	N		16							
W31 P1-P	W311E2-	--		W311P1	P		12							
W31 P1-R	W311E2-	---		W311P1	R		12							
W31 P1-V	W311E2-	---		W311P1	V		16							
W31 P1-W	W311E2-	---		W311P1	W		16							
W31 P1-X	W311E2-	---		W311P1	X		12							
W31 P1-Y	W311E2-	--		W311P1	Y		12							
W31 P1-A	W311P1-	A		W311E1			12							
W31 P1-B	W311P1-	B		W311E1	---		12							
W31 P1-C	W311P1-	C		W311E1	--		16							
W31 P1-D	W311P1-	D		W311E1	---		12							

Table 8-2. Cable Assemblies - Wire List - Continued

Signal	From			To			AWG	Type	Color	Group	Route	Note	Remarks	Re
	Component	Pin	Ref	Component	Pin	Ref								
W311P1-E	W311P1-	E		W311E1-			12							
W311P1-F	W311P1-	F		W311E1-	---		16							
W311P1-G	W311P1-	G		SPARE										
W31 P1-H	W31 P1-	H		SPARE										
W31 P1-J	W31 P1-	J		W311E2-			16							
W31 P1-K	W31 P1-	K		W311E2-			16							
W31 P1-L	W31 P1-	L		W311E2-			12							
W31 P1-M	W31 P1-	M		W311E2-			12							
W31 P1-N	W31 P1-	N		W311E2-			16							
W31 P1-P	W31 P1-	P		W311E2-			12							
W31 P1-R	W31 P1-	R		W311E2-			12							
W31 P1-S	W31 P1-	S		W311E1-			12							
W31 P1-T	W31 P1-	T		W311E1-			12							
W31 P1-U	W31 P1-	U		W311E1-			16							
W31 P1-V	W31 P1-	V		W311E2-			16							
W31 P1-W	W31 P1-	W		W311E2-			16							
W31 P1-X	W31 P1-	X		W311E2-			12							
W31 P1-Y	W31 P1-	Y		W311E2-			12							
W31 P1-Z	W31 P1-	Z		W311E1-			16							
W31 P1-A	W31 P1-	A		W311E1-			16							

Table 8-3. Power Supply Test Set Preventive Maintenance Checks and Services

Interval	Procedure	Reference
90 days	Self-test	Paragraph 8-10, Table 8-5
90 days	Adjustments	Paragraph 8-9e

Table 8-4. Tools and Equipment Requipment Required for General Support Maintenance

Item	Purpose	NSN or specification
Crimping tool MS3191-4	Used for connector repair	5120-00-165-3912
Crimping tool MS3198-1	Used for connector repair	5120-00-165-3910
Pliers, diagonal, cutting, 4-1 /2-inch	Used during various PSTS removal and replacement procedures	5110-00-240-6209
Extraction tools	Used for connector repair	
MS27495R12		5120-00-102-9703
MS27495R16		5120-00-409-5206
MS27495R20		5120-00-177-6966
MS27495R22		5120-00-146-6557
Insertion tools	Used for connector repair	
MS27495A12		5120-00-018-0531
MS27495A16		5120-00-018-0529
MS27495A20		5120-00-171-6967
MS27495A22		5120-00-127-9140
Key, socket, L-Type handle, 5/64-inch	Used during various PSTS removal and replacement procedure	5120-00-234-2504
Multimeter AN/USM-223	Used during bench testing and self-test procedure	6625-00-999-7465
Oscilloscope	Used during PSTS self-test procedure	
AN/USM-273		6625-00-930-6637
Pliers, long nose, 6-1/2-inch	Used during various PSTS removal and replacement procedures	5120-00-293-3481
Positioner for MS3191-4 crimping tool MS3191-9T	Used for connector repair	5120-00-016-7582
Positioner for MS3198-1 crimping tool MS3198-6P	Used for connector repair	5120-00-017-3809
Power Supply, 0 to 40 VDC, HP Model 6268A	Used during PSTS self-test procedure	
Power Supply, 28 VDC MH 28-200RS (Christie)	Used during PSTS self-test procedure	6130-00-947-9670
Screwdriver, cross-tip, No. 1, 3-inch	Used during various PSTS removal and replacement procedures	5120-00-240-8716
Screwdriver, cross-tip, No. 1, 8-inch	Used during various PSTS removal and replacement procedures	5120-529-3101
Screwdriver, cross-tip, No. 2, 4-inch	Used during various PSTS removal and replacement procedures	5120-00-234-8913
Screwdriver, flat-tip, 1/8-inch, 2-inch	Used during various PSTS removal and replacement procedures	5120-00-236-2140

Table 8-4. Tools and Equipment Requipment Required for General Support Maintenance - Continued

Item	Purpose	NSN or specification
Screwdriver, flat-tip, 3/16-inch, 8-inch	Used during various PSTS removal and replacement procedures	5120-00-260-4837
Screwdriver, flat-tip, 1/4-inch, 4-inch	Used during various PSTS removal and replacement procedures	5120-00-222-8852
Socket, nut 13/ 16-inch for 3/8-inch drive	Used during various PSTS removal and replacement procedures	5120-00-596-0836
Soldering/desoldering set	Used during various PSTS removal and replacement procedures	3439-00-460-7198
Voltmeter, digital AN/GSM-64B	Used during PSTS self-test procedure	6625-00-022-7894
Wire stripper, crimper	Used during various PSTS removal and replacement procedures	5120-00-278-2423
Wrench, adjustable, 6-inch	Used during various PSTS removal and replacement procedures	5120-00-264-3795
Wrench, combination, 5/16-inch	Used during various PSTS removal and replacement procedures	5120-00-228-9503
Wrench, combination, 3/4-inch	Used during various PSTS removal and replacement procedures	5120-00-228-9510
Wrench, open end, 3/16-inch and 1/4-inch	Used during various PSTS removal and replacement procedures	5120-00-228-9527
Wrench, open end, 3/8-inch and 7/16-inch	Used during various PSTS removal and replacement procedures	5120-00-277-2342
Wrench, open end, 1/2-inch and 9/16-inch	Used during various PSTS removal and replacement procedures	5120-00-187-7124
Wrench, ratchet, reversible, 3/8-inch drive	Used during various PSTS removal and replacement procedures	5120-00-240-5364
Wrench, single socket spinner, 1/4-inch	Used during various PSTS removal and replacement procedures	5120-00-241-3188
Wrench, single socket spinner, 5/16-inch	Used during various PSTS removal and replacement procedures	5120-00-224-2696
Wrench, single socket spinner, 3/8-inch	Used during various PSTS removal and replacement procedures	5120-00-974-6369
Wrench, single socket spinner, 7/16-inch	Used during various PSTS removal and replacement procedures	5120-00-222-1499
Wrench, single socket spinner, 1/2-inch	Used during various PSTS removal and replacement procedures	5120-00-293-0375
Wrench, single socket spinner, 11/32-inch	Used during various PSTS removal and replacement procedures	5120-00-293-0796
Wrench, strap, TG-70 (or equivalent)	Used in removal and replacement of connector shells	

Section III. TROUBLESHOOTING

8-7. General. Should malfunction of the PSTS be suspected, perform test procedure in accordance with table 8-5. The table is arranged in four columns. The first column contains the test operation to be performed. The second column contains the normal indication to be observed when the procedure has been performed. The third column contains the corrective action to be taken if the normal indication is not obtained. The fourth column gives the coordinates on the schematic diagram of the affected circuitry. When performing corrective actions, refer to the PSTS schematic diagram (figure FO-2) and wire list (table 8-1) to determine where to make voltage measurements. For J2 and J3 connector-pin locations, see figure 8-3A. See the PSTS arts location diagram (figure 8-5) and exploded view (figure 8-6) for location of parts. Wherever a corrective action has been taken, the complete test procedure must be repeated to verify repair. The self-test procedure must be followed in the order given.

8-8. Power Supply Test Set Troubleshooting.

a. ***Test Equipment and Materials.***

(1) Digital Voltmeter AN/GSM-64B, or equivalent, for all voltage and impedance measurements.

(2) Stopwatch.

(3) Oscilloscope AN/USM-281A or AN/USM-273.

(4) Multimeter AN/USM-233.

b. Test Connections. Connect cables only when called for in the test procedures.

NOTE

Incorrect connections can cause wrong indications. See figure 8-4 for electrical connections.

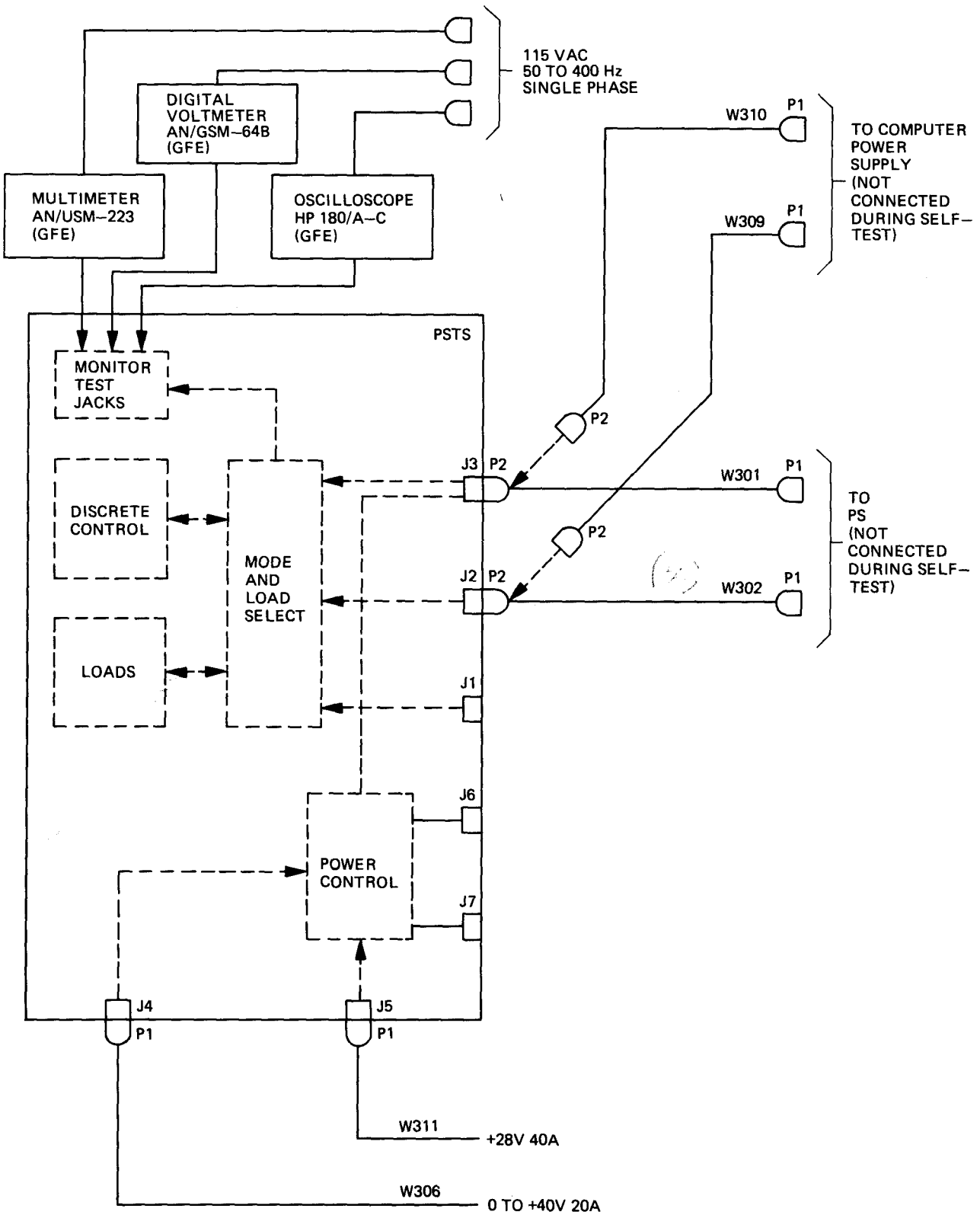
c. Procedure. Perform testing in accordance with table 8-5.

CAUTION

Correct digital voltmeter scale must be selected manually. The digital voltmeter does not change range automatically.

NOTE

In the malfunction indication/corrective action column of table 8-5, components to be replaced are listed in order of most likely failure. Verify component failure by making voltage and resistance checks before replacement. After a component is replaced, check for normal indication before attempting to replace another component.
Indicators may light at various times throughout this test. Unless listed in table 8-5 as a normal indication, disregard the lighted indicator.
If the corrective action does not eliminate the malfunction, then check for parallel shorting paths (e.g., shorted diodes, shorted relay contacts, etc.)



44-903-04A

Figure 8-4. Electrical Connections for Test

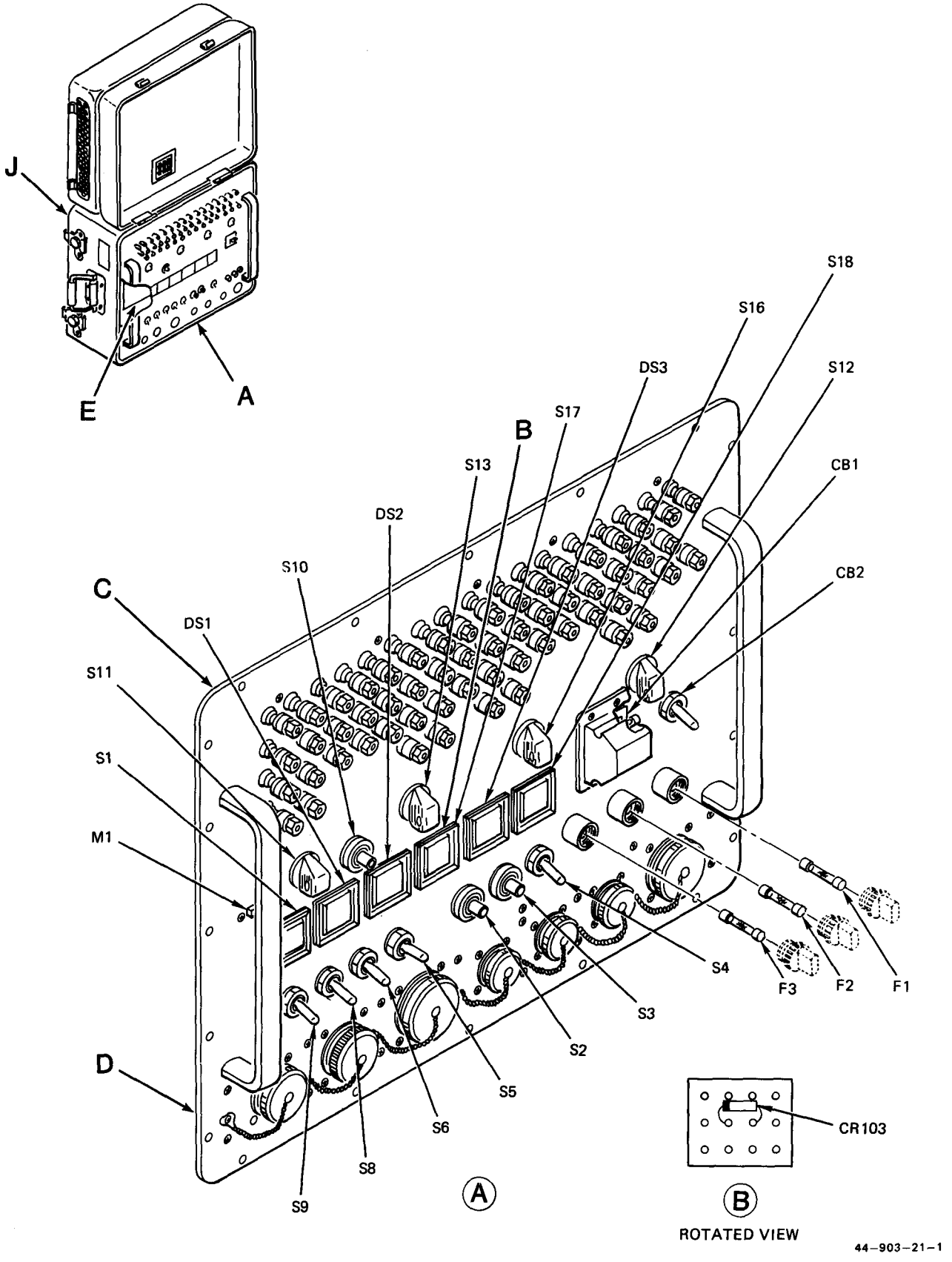
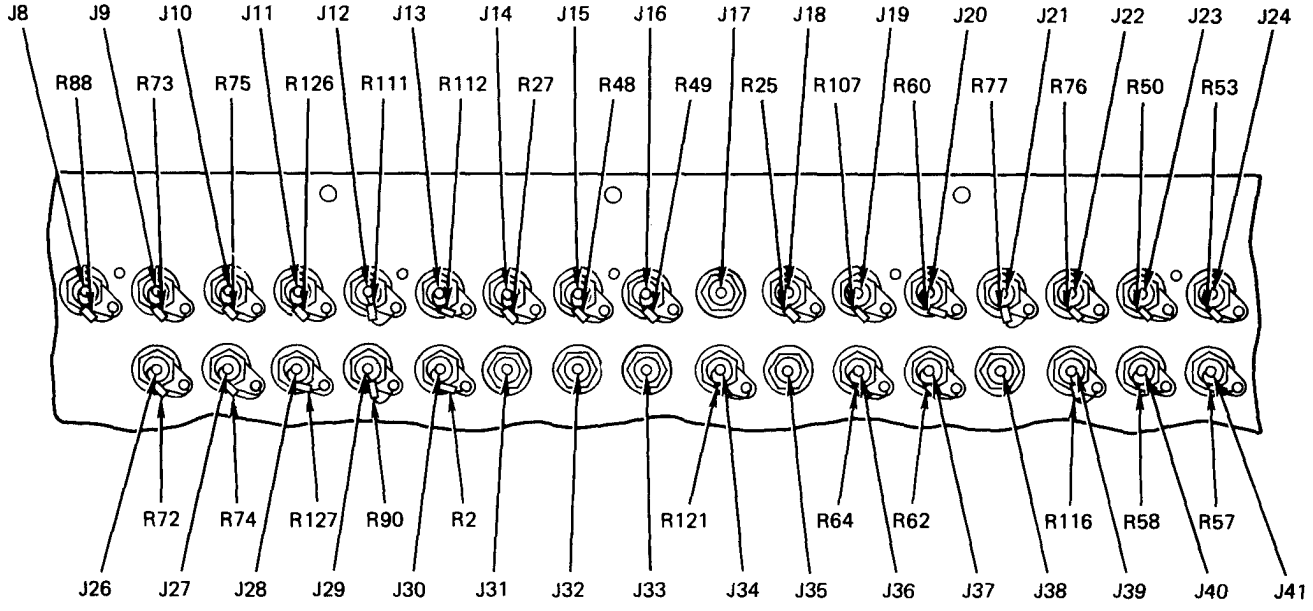
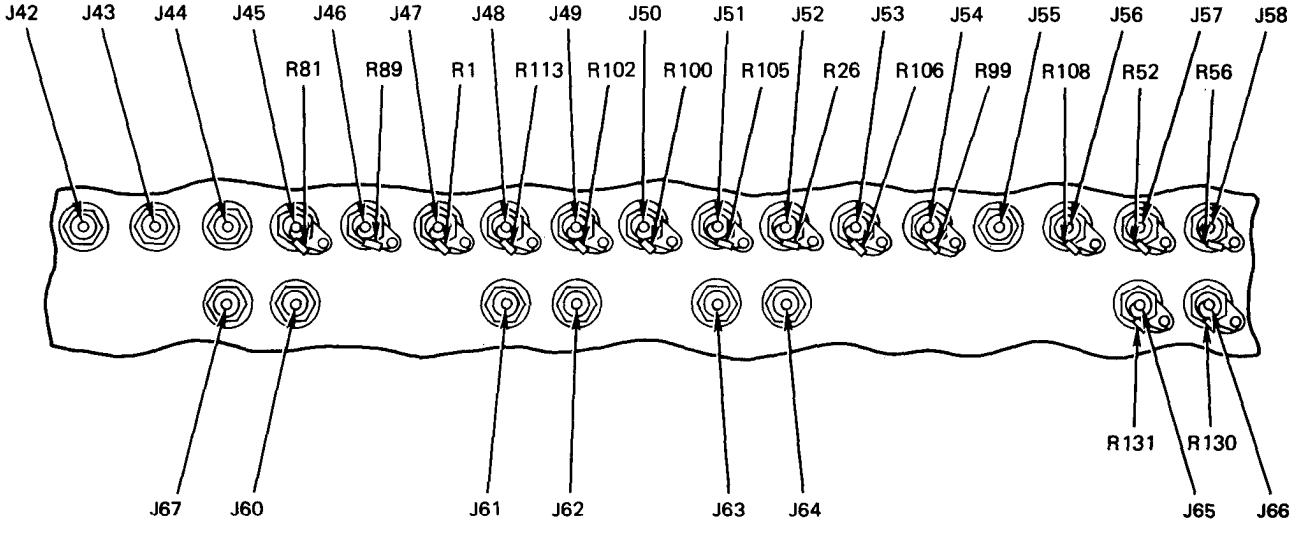


Figure 8-5. Power Supply Test Set Parts Location Diagram (Sheet 1 of 6)





C

ROTATED VIEW

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Figure 8-5. Power Supply Test Set Parts Location Diagram (Sheet 2 of 6)

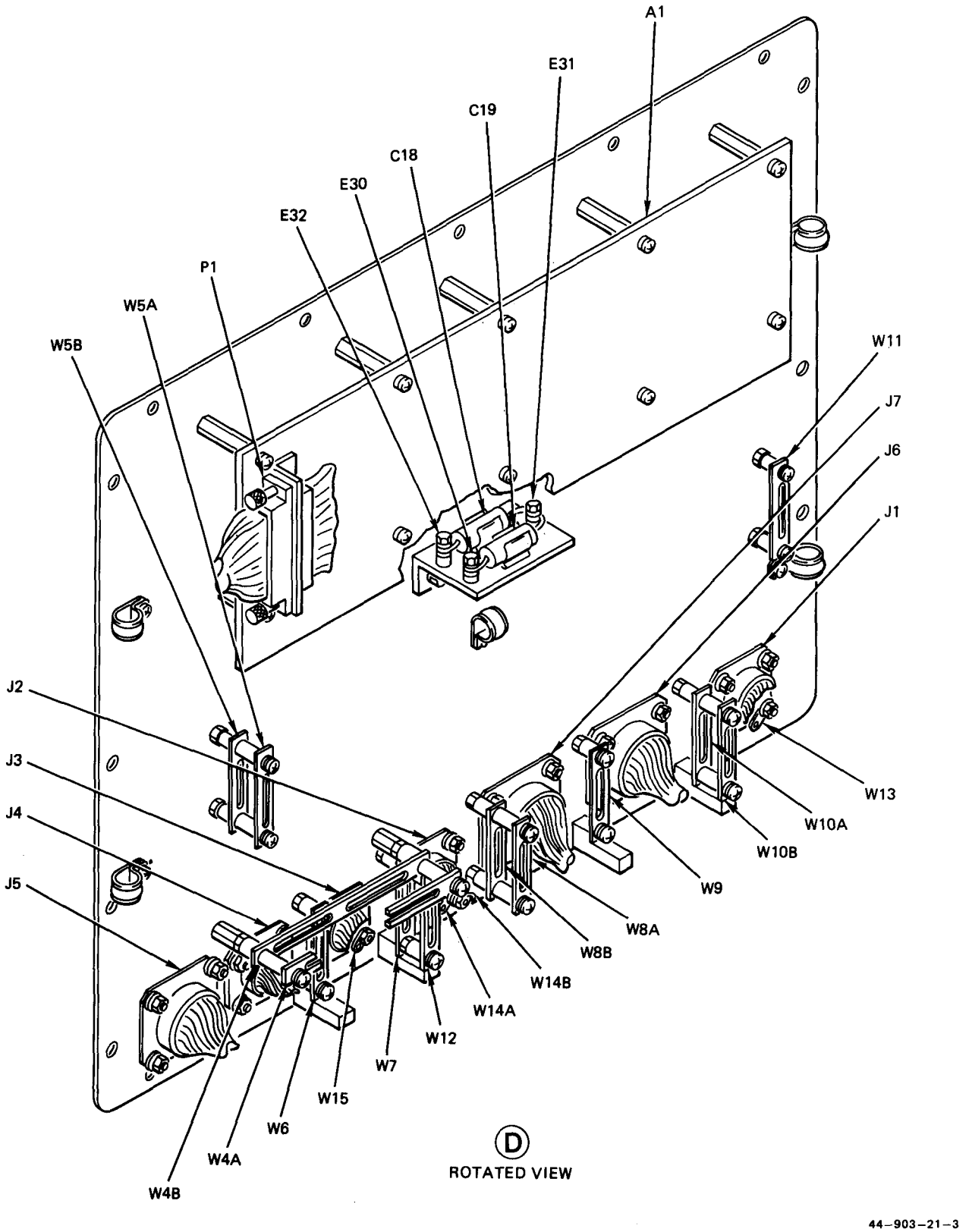
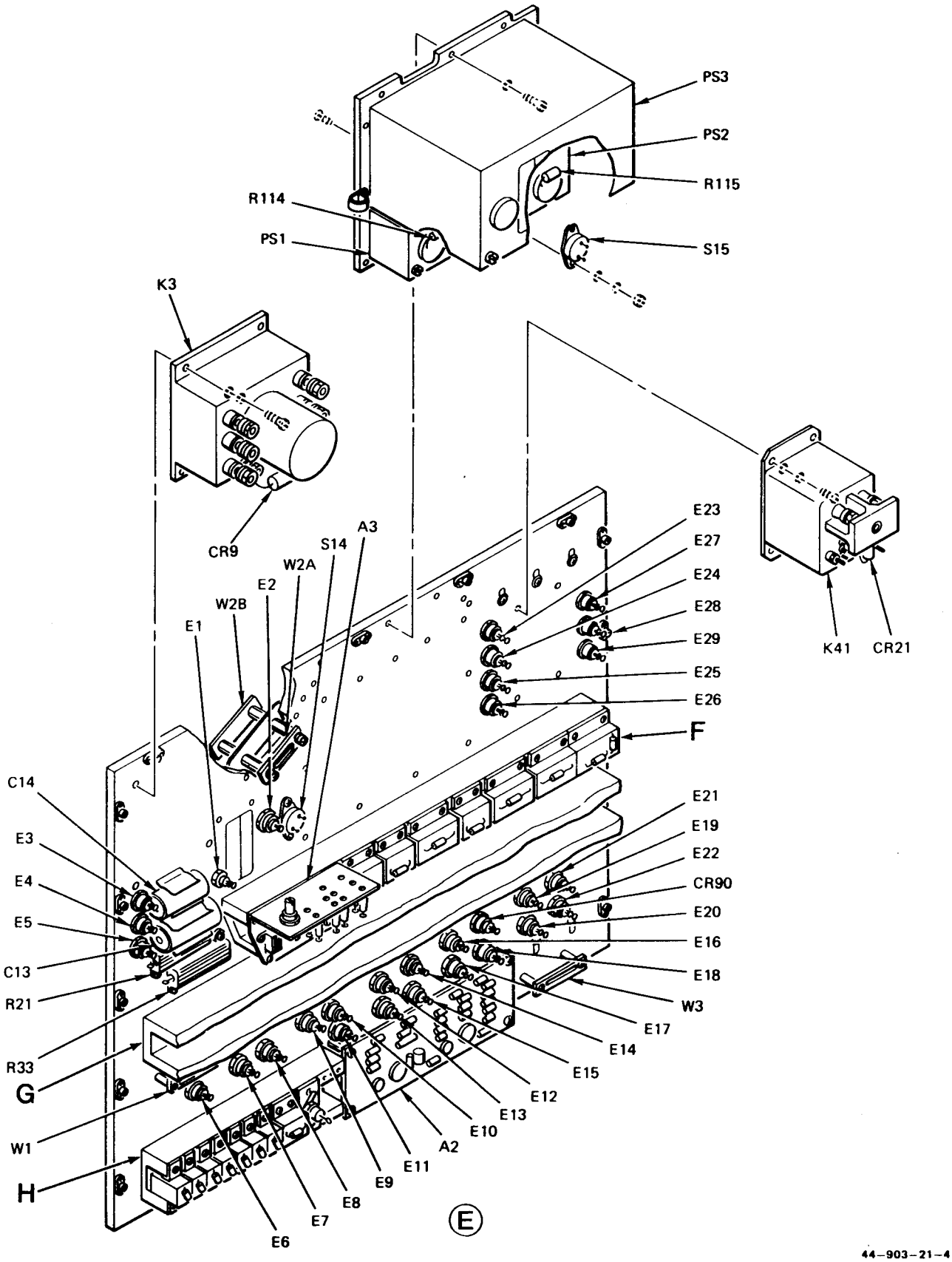


Figure 8-5. Power Supply Test Set Parts Location Diagram (Sheet 3 of 6)



44-903-21-4

Figure 8-5. Power Supply Test Set Parts Location Diagram (Sheet 4 of 6)

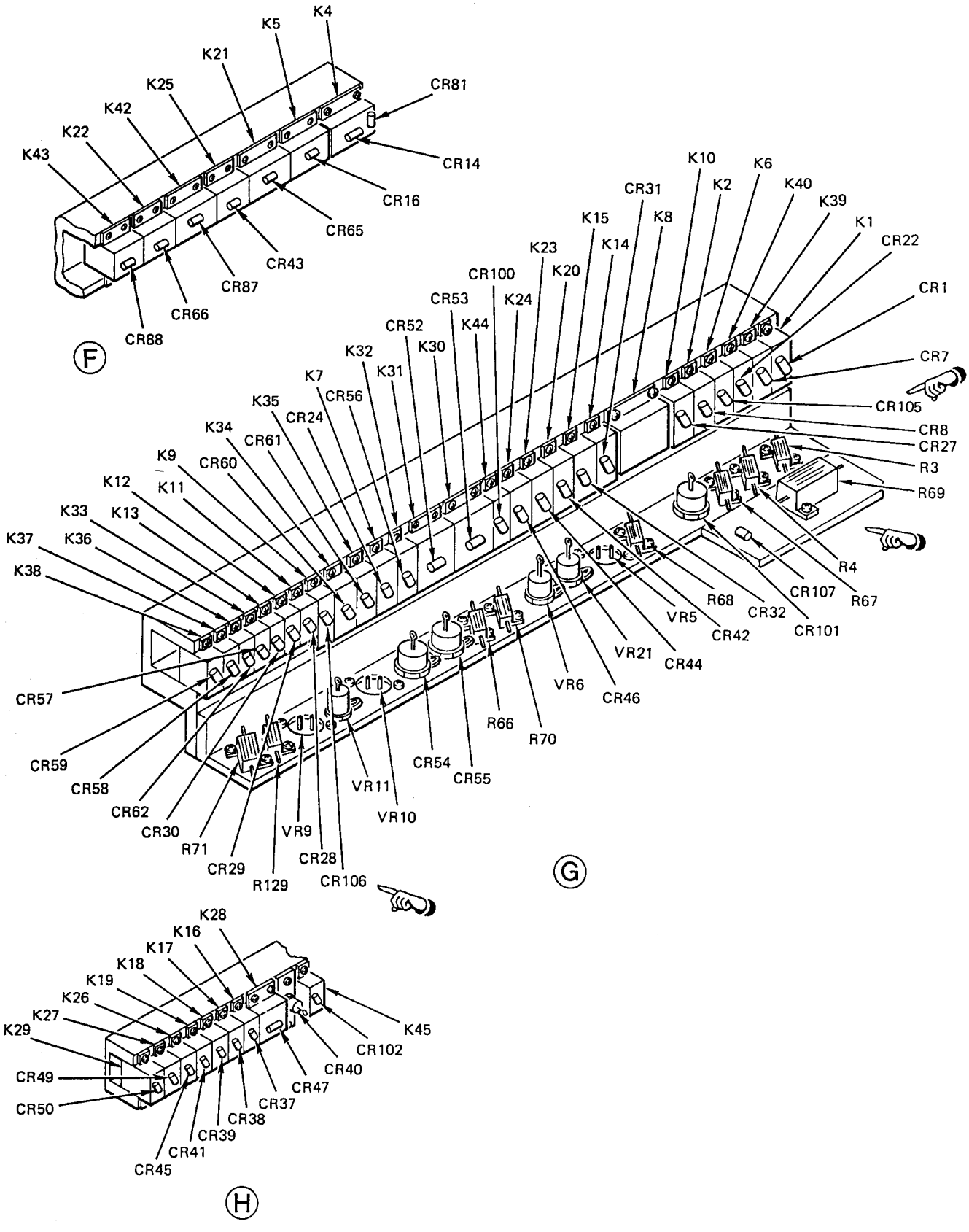


Figure 8-5. Power Supply Test Set Parts Location Diagram (Sheet 5 of 6)

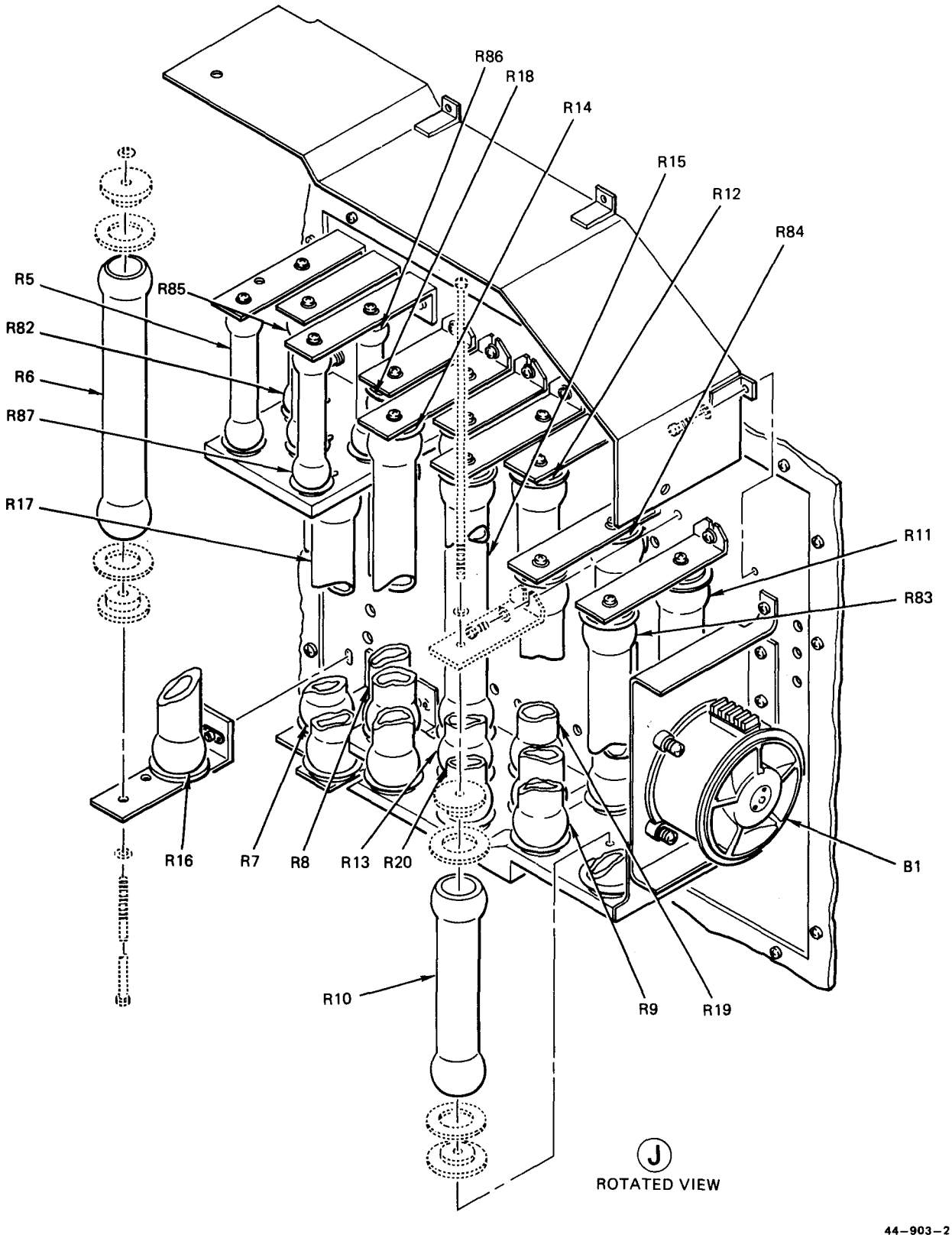


Figure 8-5. Power Supply Test Set Parts Location Diagram (Sheet 6 of 6)

Table 8-5. Power Supply Test Set Test Procedure

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
1. POWER TEST.			
1a. Check that +28V power source is off and connect it to PSTS J5 with cable W311. Check that polarity is correct or damage will result. Do not connect any other cables to the PSTS			
1b. Connect digital voltmeter (DVM) and oscilloscope to primary power and turn on			
1c. Set switches as follows: SWITCH — SETTING MODE — OVERLOAD FUNCTION — PS +17V REFERENCE AMB TEMP V LAMP — 0 VDC SELF TEST — OFF INPUT POWER UUT — OFF INPUT POWER PSTS — OFF POWER SUPPLY VEHICLE SENSE — OFF			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
1c. - continued SWITCH — SETTING POWER SUPPLY INTERLOCK — OFF POWER SUPPLY IMU OVERTEMP — OFF POWER SUPPLY FLAG — OFF COMP PS — OFF			
1d. Energize +28V power source			
1e. Set INPUT POWER PSTS circuit breaker to ON	TIME HOURS meter is operating when the comma is oscillating on and off. Fan is operating	a. Both the fan and the TIME HOURS meter do not operate: Check CB2 and replace if defective. If both still do not operate, check for shorts	31-H
		b. TIME HOURS meter (only) does not operate: Replace M1	30-G
		c. Fan (only) does not operate. Check +28V fuse. If fuse is good, check output of PS3 for 108 to 122 VAC. If voltage out of tolerance, replace PS3. If PS3 good, check C13, C14, and B1, and replace defective components	29-H 29-G 28-H

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
1f. Press POWER SUPPLY TEST SET ON switch-indicator to on	POWER SUPPLY TEST SET ON switch-indicator lights	POWER SUPPLY TEST SET-ON switch-indicator does not light	
	POWER SUPPLY TEST SET OVERTEMP indicator does not light	Replace lamp in switch-indicator. If indication still abnormal, replace S17	30-F
		POWER SUPPLY TEST SET OVER-TEMP indicator lights: +28V is connected to PSTS in reverse. Reconnect +28V	
1g. Set MODE switch to NO LOAD			
1h. Set DVM to measure DC volts. Connect DVM positive test lead to SELF TEST +28V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +26 to +30V	a. Adjust input voltage. If no voltage, check if PSTS overheated	
		b. Measure voltage between PS1 pins 1 and 2. If greater than +20V, replace R2	29-G 29-F
		c. Measure voltage between K40 pin X1 and W4. If greater than +20V, go to step d. If less than +20V, check CR22. If CR22 is good, replace S17	30-E 30-F
		d. Measure voltage between K40 pin X2 and W4. If less than +20V, replace K40. If greater than +20V, replace S15	30-E
1i. Connect DVM positive test lead to SELF TEST +10V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +9.9 to +10.1V	Voltage out of tolerance: Check +10V fuse. If fuse is good, adjust output of PS2; if output is still out of tolerance, check R1 and R115; if good, then replace PS2. Replace defective components	29-F

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
1j. Connect DVM positive test lead to SELF TEST -10V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates -9.9 to -10.1V	Voltage out of tolerance:	
		a. Check -28V fuse. If fuse good, adjust PS1 for the proper output	29-G
		b. Measure between PS1 pin 4 and SELF TEST PWR RTN test jack and adjust PS1 over the range of -27 to -29V. If PS1 adjusts properly, check R90. Replace A1 if R90 is good. If PS1 does not adjust properly, check R114. Replace PS1 if R114 is good	64-C 29-G
1k. Press POWER SUPPLY TEST SET LAMP TEST switch-indicator to on	Following switch-indicator and indicators go on: OVERLOAD FAIL CHARGE/BATTERY PS ON/COMP PS ON OVERTEMP	a. If any or all indicators do not light, check and replace defective lamp(s)	
		b. If both CHARGE and BATTERY indicators do not light, replace S18; if only one does not light, check A1CR79 and A1CR80; if good, replace DS1	19-D 15-G 19-A
		c. If both OVERTEMP and OVERLOAD FAIL indicators do not light, replace S18. If only OVERLOAD FAIL indicator does not light, check A1CR6; if good, replace S1. If only OVERTEMP indicator does not light, check A1CR78; if good, replace DS3	15-F 28-C 16-F 23-H

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
1k. - continued		d. If both PS ON and COMP PS ON indicators do not light, check A1CR13; if good, replace S18. If only one indicator lights, check A2CR19 and A2CR20; if good, replace DS2	9-D 19-D 25-B 25-C
2. SHUTDOWN TEST			
2a. Connect DVM positive test lead to SELF TEST SHUT DOWN* test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates less than +1V	Voltage is greater than +1V: a. Measure voltage between A2 pin 2 and W4. If greater than +20V, replace K6 b. Measure voltage between S12 pin E1 and W4. If less than +20V, replace S12 c. Check K4 and K5 for being stuck closed. Replace if defective	25-B 23-B 53-F 26-A, 26-C
2b. Press POWER SUPPLY TEST SET ON switch-indicator to off	POWER SUPPLY TEST SET ON switch-indicator goes off	POWER SUPPLY TEST SET ON switch-indicator does not go off: Replace S17	30-F
2c. Connect DVM positive test lead to SELF TEST +28V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates 0 (±1.0) VDC	Voltage out of tolerance: Measure voltage between K4 pin X1 and W4. If passes, replace K40. If fails, replace S17	26-C 30-F
2d. Connect cables W301 and W302 as shown in figure 8-4. Do not connect P1 ends of cables			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
2d. - continued **CAUTION** Check that variable DC power supply is not energized. **NOTE** Do not connect cables W309 and W310 or erroneous readings may result			
2e. Connect cable W306 as shown in figure 8-4			
3. PS POWER TEST			
3a. Turn on variable DC power source and set voltage to +10 (±1) V			
3b. Press POWER SUPPLY TEST SET ON switch-indicator to on	POWER SUPPLY TEST SET ON switch-indicator goes on		
3c. Connect DVM positive test lead to SELF TEST SHUT DOWN* test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates greater than +20V	Voltage is less than +20V: a. Press POWER SUPPLY TEST SET LAMP TEST switch-indicator to light all lamps as in step 1K. If any lamp fails to light, start test over from beginning (step 1e)	

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
3c. - continued		b. Measure resistance between K1 pin A3 and W4. If less than 5 ohms, go to step d	29-B
		c. Measure voltage between K1 pin X1 and K1 pin X2. If greater than +20V, replace A1. If less than +20V, replace K1	31-A 29-B
		d. Measure resistance between K39 pin A3 and W4. If less than 5 ohms, go to step f	29-C
		e. Measure voltage between K39 pin X1 and K39 pin X2. If less than +20V, replace K39. If greater than +20V, check A2Q10, A2VR2, and A2R79	29-C 30-C
		f. Check A2R80 and R81	28-C 29-C
		g. Measure voltage between A2 pin 4 and W4. If greater than +2.0V, measure VDC between K5 pin X2 and W4. If 0 VDC, check CR16, replace K5 if CR16 is good. If greater than +2.0V, check pins 54 and 55 of connectors J2 and J3 and cables W302P2 and W301P2 for bent or pushed pins. Pins 54 and 55 of cables W302P2 and W301P2 should be shorted together with jumper in cable	25-B 26-A 27-A 27-B

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
3c. - continued		h. Measure voltage between A2 pin 2 and W4. If greater than +3V, replace A2CR18	25-B
		i. Measure voltage between S12E pin 1 and W4. If less than +20V, replace S12. If greater than +20V, replace K6	53-F 23-B
3d. Set INPUT POWER UUT circuit breaker to on	INPUT POWER UUT circuit breaker stays on	Circuit breaker trips off: Replace CB1	29-D
3e. Connect DVM positive test lead to POWER SUPPLY PWR IN test jack and negative test lead to POWER SUPPLY PWR RTN test jack	DVM indicates +8 to +12V	Voltage out of tolerance:	
		a. Check R25, replace if defective	27-G
		b. Measure voltage between S11E pin 1 and W4. If greater than +20V, go to step e	56-F
		c. Measure voltage between S11E pin C and W4. If greater than +20V, replace S11	56-F
		d. Measure voltage between K7 pin X1 and K7 pin X2. If greater than +20V, replace K7. If less than +20V, check CR24 and replace A1 if CR24 is good	23-F 23-G
		e. Measure voltage between K41 pin X1 and K41 pin X2. If greater than +20V, replace K41	31-D 30-D
		f. Check CR21; check Q6 on A2 card	31-D 30-C

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
3f. Connect DVM positive test lead to POWER SUPPLY BATT test jack and negative test lead to POWER SUPPLY PWR RTN test jack	DVM indicates +8 to +12V	Voltage out of tolerance: a. Measure voltage between S11A pin 1 and W4. If less than +2V, go to step c b. Measure voltage between S11A pin C and W4. If less than +2V, replace S11. If greater than +2V, check CR16 and replace K5 if CR16 is good c. Check CR90, R26, and CR8. If good, replace K2	58-G 26-A 26-H 25-G 26-G
3g. Connect DVM positive test lead to POWER SUPPLY PWR IN test jack and negative test lead to POWER SUPPLY PWR RTN test jack			
3h. Attempt to increase the variable DC power source to +37 (±1)V	INPUT POWER UUT circuit breaker turns off between +31.0 and +37V. DVM indicates 0 (±1.0)V	Voltage out of tolerance and/or circuit breaker does not turn off: a. Measure voltage between SELF TEST SHUT DOWN and PWR RTN test jacks. If greater than +2V, go to step c. If less than +2V, go to step b b. Check R21. If good, replace CB1. Measure voltage between A2 pin 26 and W4. If less than +26V, check K41. Replace if defective	29-D 30-C

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
3h. - continued		c. Measure voltage between A2 pin 50 and W4. If less than +5V, check CR7 and replace K39 if CR7 is good	30-C 29-C
		d. Measure voltage between A2 pin 26 and W4. If less than +27V, check A2CR82 and A2R78	30-C
		e. Check A2Q10, A2VR2, and A2R79	30-C
3i. Decrease variable DC power source to +18 (±1)V			
3j. Set INPUT POWER UUT circuit breaker to ON	DVM indicates +17 to +19V	Voltage out of tolerance: Perform malfunction indication/corrective action in accordance with step 3e	
3k. Set MODE switch to FULL LOAD	DVM indicates +26 to +30V	Voltage out of tolerance: Measure voltage between A2 pin 51 and W4. If less than +20V, replace A2Q6. If greater than +20V, replace K41. Check CR21	30-C
3l. Connect DVM positive test lead to POWER SUPPLY BATT test jack and negative test lead to POWER SUPPLY PWR RTN test jack	DVM indicates +17 to +19V	Voltage out of tolerance: Replace K2	26-G
3m. Connect DVM positive test lead to POWER SUPPLY IMU FLG INH* test jack and negative test lead to POWER SUPPLY SIG RTN test jack	DVM indicates +25 to +30V	Voltage out of tolerance: a. Measure voltage between A2 pin 43 and W4. If less than +3V, replace A2R109	 19-F

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
3m. - continued		b. Measure voltage between A2 pin 43 and W4. If less than +20V, replace K4	19-E
		c. Check A1R104 and R105	15-E 18-D
3n. Disconnect DVM from PSTS			
3o. Set INPUT POWER UUT circuit breaker to OFF			
4. CURRENT SOURCE TEST			
4a. Connect DVM positive test lead to SELF TEST CUR SOURCE test jack and negative test lead to SELF TEST PWR RTN test jack			
4b. Set SELF TEST switch to LOAD-OVERLOAD	PS ON indicator goes on	PS ON indicator does not light:	
		a. Measure voltage between A1 terminal 53 and W4. If less than +20V, replace S12	13-D 53-H
		b. Measure voltage between A1 terminal 20 and W4. If greater than +20V, replace K5. If less than +20V, replace A1	9-D 26-A
4c. Set MODE switch to OVERVOLT			
4d. Connect jumper between SELF TEST CUR SOURCE and SELF TEST 1 OHM test jacks	DVM indicates +1.5 to +1.8V	Voltage out of tolerance: a. If voltage is greater than +0.05V but out of tolerance, go to step i	

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
4d. - continued		b. Measure voltage between K37 pin A2 and K37 pin A1. If less than +20V, go to step g	37-B
		c. Measure voltage between K37 pin X1 and K37 pin X2. If greater than +20V, replace K37. Check CR58 (between K37 pin X1 and K37 pin X2)	37-B
		d. Measure voltage between K37 pin X1 and SELF TEST PWR RTN test jack. If less than +20V, replace A1	37-B
		e. Measure voltage between A1-113 and W4. If greater than +1V, replace S12	13-G 53-H
		f. Measure voltage between A2 pin 36 and SELF TEST PWR RTN test jack. If less than +2V, replace A1. If greater than +2V, check A2R59 and A2Q14, and replace if defective	37-A
		g. Measure voltage between K38 pin B3 and K38 pin B2. If greater than +2V, replace K38	35-A
		h. Measure voltage between K43 pin X1 and K43 pin X2. If less than +20V, check CR88 and replace S12 if CR88 is good. If greater than +20V, replace K43	38-C 54-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
4d. - continued		i. Lift wire on A3 pin E1 that goes to K37 pin A2. Measure between 1.4 and 1.6A from (+) A3 pin E1 to (-) SELF TEST PWR RTN test jack. If out of tolerance: Adjust A3R119 for voltage of +1.65 (±0.03)V. If cannot adjust, replace A3	38-B 37-B 39-B
		j. Replace wire on A3 pin E1 that goes to K37 pin A2 and repeat step 4d. If fails again, check for parallel loading	38-B
4e. Set SELF TEST switch to OFF	PS ON indicator goes off	PS ON/COMP PS ON indicator does not go off: replace A1	
4f. Disconnect DVM and jumper from PSTS			
4g. Set MODE switch to FULL LOAD			
5. PS NO LOAD TEST			
5a. Set multimeter to measure resistance			
5b. Connect multimeter test leads to POWER SUPPLY +28V and POWER SUPPLY PWR RTN test jacks	Multimeter indicates greater than 100 kilohms	Resistance out of tolerance: a. Measure resistance between K20 pin A3 and K20 pin B3. If greater than 5 ohms, replace K20	43-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
5b. - continued		b. Measure resistance between:	
		K21 pin A3 and K21 pin B3.	
		K21 pin C3 and K21 pin D3.	40-G
		K21 pin C3 and K21 pin E3.	39-F 39-G
		If greater than 5 ohms, replace K21	
		c. Measure resistance between:	
		K22 pin A3 and K22 pin B3.	
		K22 pin C3 and K22 pin D3.	38-G
		If greater than 5 ohms, replace K22	38-F
		d. Measure resistance between K23 pin A3 and K23 pin B3. If greater than 5 ohms, replace K23	43-F
		e. Measure resistance between K8 pin C2 and K8 pin C3. If greater than 5 ohms, replace K8	61-H
5c. Connect multimeter test leads to POWER SUPPLY -28V and POWER SUPPLY PWR RTN test jacks	Multimeter indicates greater than 100 kilohms	Resistance out of tolerance:	
		a. Measure resistance between K14 pin A3 and K14 B3. If greater than 5 ohms, replace K14	46-D
		b. Measure resistance between K15 pin A3 and K15 pin B3. If greater than 5 ohms, replace K15	45-D

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
5c. - continued		c. Measure resistance between K8 pin E2 and K8 pin E3. If greater than 5 ohms, replace K8	61-G 61-H
5d. Connect multimeter test leads to SELF TEST OVERVOLT +17V and SELF TEST PWR RTN test jacks	Multimeter indicates 1.9 to 3.2 kilohms	Resistance out of tolerance: Check R76 and R129	62-E
5e. Connect multimeter test leads to POWER SUPPLY HTR 1 and POWER SUPPLY PWR RTN test jacks	Multimeter indicates 9.8 to 14.6 kilohms	Resistance out of tolerance: Check R62. If good, replace A1R61	21-B 16-F
5f. Connect multimeter test leads to POWER SUPPLY HTR 2 and POWER SUPPLY PWR RTN test jacks	Multimeter indicates 9.8 to 14.6 kilohms	Resistance out of tolerance: Check R64. If good, replace A1R63	21-B 16-E
5g. Connect multimeter test leads to POWER SUPPLY 115V ∠0 and POWER SUPPLY PWR RTN test jacks	Multimeter indicates greater than 100 kilohms	Resistance out of tolerance: a. Measure resistance between K24 pin A3 and K24 pin B3. If greater than 5 ohms, replace K24	41-E
		b. Measure resistance between K25 pin A3 and K25 pin B3, and between K25 pin C3 and K25 pin D3. If greater than 5 ohms, replace K25	41-F
		c. Measure resistance between K26 pin A3 and K26 pin B3. If greater than 5 ohms, replace K26	43-D
		d. Measure resistance between K26 pin A3 and K27 pin A3. If greater than 5 ohms, replace K27	41-B

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
5g. - continued		e. Measure resistance between K28 pin B3 and K28 pin C3, and between K28 pin D2 and K28 pin D3. If greater than 5 ohms, replace K28	41-C
		f. Measure resistance between K29 pin A3 and K29 pin A2. If greater than 5 ohms, replace K29	43-B
		g. Measure resistance between K8 pin D2 and K8 pin D3. If greater than 5 ohms, replace K8	61-G
5h. Connect multimeter test leads to POWER SUPPLY 115 ∠90 and POWER SUPPLY PWR RTN test jacks	Multimeter indicates greater than 100 kilohms	Resistance out of tolerance:	
		a. Measure resistance between K16 pin A3 and K17 pin B3.	46-B
		If less than 5 ohms, go to step c	45-B
		b. Measure resistance between K16 pin A3 and K16 pin A2. If greater than 5 ohms, replace K16.	46-B
		If less than 5 ohms, replace K17	45-B
		c. Measure resistance between K16 pin A3 and K18 pin A3.	46-B
		If greater than 5 ohms, replace K18	46-A
		d. Measure resistance between K16 pin A3 and K19 pin B3.	46-B
		If greater than 5 ohms, replace K19	45-A

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
5i. Turn off variable DC power source	**NOTE** Use negative ground meter or reverse leads as necessary		
5j. Connect multimeter test leads to POWER SUPPLY BATT and POWER SUPPLY PWR RTN test jacks	Multimeter indicates greater than 100 kilohms	Resistance out of tolerance: Measure resistance between K33 pin A3 and K33 pin B3. If greater than 5 ohms, replace K33. If less than 5 ohms, replace K32	35-B 35-C
5k. Disconnect multimeter from PSTS and turn on variable DC power source			
5l. Connect multimeter test leads to POWER SUPPLY +INV DR and SELF TEST OVERVOLT +INV DR test jacks	Multimeter indicates 3.9 to 5 kilohms	Resistance out of tolerance: a. Measure resistance between K35 pin A1 and W4. If less than +1V, go to step c b. Measure resistance between A1 pin 208 and W4. If greater than +20V, replace A1Q21. If less than +20V, replace K35 c. Check R77 and R127. If good, replace K9	63-D 15-H 63-D 62-E 61-D

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
5m. Connect multimeter test leads to POWER SUPPLY +17V and SELF TEST OVERVOLT +17 test jacks	Multimeter indicates 3.9 to 5 kilohms	Resistance out of tolerance:	
		a. Measure resistance between K34 pin A1 and W4. If less than +1V, go to step c	63-E
		b. Measure resistance between A1 pin 207 and W4. If greater than +20V, replace A1Q20. If less than +20V, replace K34	15-G 63-E
		c. Check R76 and R126. If good, replace K9	62-E 61-E
5n. Disconnect multimeter from PSTS			
5o. Jumper SELF TEST +28V and POWER SUPPLY AMB PWR SUM test jacks			
5p. Connect DVM positive test lead to POWER SUPPLY AMB PWR SUM and negative test lead to POWER SUPPLY PWR RTN test jacks	DVM indicates greater than +20V	Voltage out of tolerance:	
		a. Measure resistance between K30 pin A3 and K30 pin B3, and between K30 pin C3 and K30 pin D3. If greater than 5 ohms, check K30	35-F
		b. Measure resistance between K31 pin A3 and K31 pin B3, and between K31 pin C3 and K31 pin D3. If greater than 5 ohms, check K31	35-D
5q. Remove jumper			
5r. Jumper POWER SUPPLY AMB PWR HEAT and SELF TEST +28V test jacks			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
5s. Jumper POWER SUPPLY AMB PWR SUM and POWER SUPPLY PWR RTN test jacks			
5t. Connect DVM positive test lead to POWER SUPPLY AMB PWR HEAT test jack and negative test lead to POWER SUPPLY RTN test jack	DVM indicates +17V to +21	Voltage out of tolerance: Check CR54, R116, and R57. Replace defective component	36-G
5u. Remove jumpers			
5v. Jumper POWER SUPPLY AMB PWR SUM and SELF TEST +28V test jacks			
5w. Jumper POWER SUPPLY AMB PWR HEAT and POWER SUPPLY PWR RTN			
5x. Connect DVM positive test lead to POWER SUPPLY AMB PWR SUM test jack and negative test lead to POWER SUPPLY AMB PWR HEAT test jack	DVM indicates greater than +25V	Voltage is less than +25V: Replace CR54	36-G
5y. Remove jumpers			
5z. Jumper POWER SUPPLY AMB PWR COOL and SELF TEST +28V test jacks			
5aa. Jumper POWER SUPPLY AMB PWR SUM and POWER SUPPLY PWR RTN test jacks			
5ab. Connect DVM positive test lead to POWER SUPPLY AMB PWR COOL test jack and negative test lead to POWER SUPPLY PWR RTN test jack	DVM indicates +17 to +21V	Voltage out of tolerance: Check CR55 and R58. Replace if defective	36-F
5ac. Remove jumpers			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
5ad. Jumper POWER SUPPLY AMB PWR SUM and SELF TEST +28V test jacks			
5ae. Jumper POWER SUPPLY AMB PWR COOL and POWER SUPPLY PWR RTN test jacks			
5af. Connect DVM positive test lead to POWER SUPPLY AMB PWR SUM test jack and negative test lead to POWER SUPPLY AMB PWR COOL test jack	DVM indicates greater than +25V	Voltage is less than +25V: Replace CR55	36-F
5ag. Remove jumpers			
5ah. Set SELF TEST switch to LOAD-OVERLOAD	PS ON indicator goes on	a. COMP PS ON indicator is not off: Replace K4 b. If PS ON indicator is not on: Same as step 4a	26-C
5ai. Set multimeter to measure resistance			
5aj. Set MODE switch to OVERLOAD	**NOTE** Multimeter may indicate infinity.		
5ak. Connect multimeter test leads to POWER SUPPLY +INV DR and SELF TEST OVERVOLT +INV DR test jacks	Multimeter indicates greater than 30 kilohms	Resistance is less than 30K ohms: a. Measure voltage between K35 pin A1 and W4. If less than +1V go to step 5c	63-D

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
5ak. - continued		b. Measure voltage between A1 pin 208 and W4. If greater than +20V, replace A1Q21. If less than +20V, replace K35	15-H 63-D
	NOTE Multimeter may indicate infinity.		
5al. Connect multimeter test leads to POWER SUPPLY +17V and SELF TEST OVERVOLT +17V test jacks	Multimeter indicates greater than 30 kilohms	Same as step 5ak	
5am. Disconnect multimeter from PSTS			
6. PS LOAD TEST			
6a. Set MODE switch to FULL LOAD			
6b. Set FUNCTION switch to PS +28V			
6c. Connect DVM positive test lead to POWER SUPPLY +28V test jack and negative test lead to POWER SUPPLY PWR RTN test jack	DVM indicates +3.8 to +6.0V	Voltage out of tolerance: a. If voltage is greater than +20V, go to step e b. If voltage is +7.4 to +9.4V, check R6 and R7. Replace K20 if R6 and R7 are good c. If voltage is +1.8 to +2.5V, check A1CR89	 34-H 43-G 15-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6c. - continued		d. If voltage is less than +0.2V, or open circuit, check R53. If R53 is good, go to step j	44-G
		e. Measure voltage between K20 pin X1 and W4. If less than +20V, check S14 and CR42 and replace K7 if S14 and CR42 are good	43-G 24-D 23-G 43-G
		f. Measure voltage between K20 pin X1 and K20 pin X2. If greater than +20V, go to step i	43-G
		g. Check CR42. Replace if defective	43-G
		h. Measure voltage between S11A pin 2 and W4. If greater than +2V, replace S11. If less than +2V, replace S13	57-H 51-G
		i. Check R6 and R7. If good, replace K20	34-H 43-G
		j. Check CR87 and replace K42 if CR87 is good	40-C
6d. Set MODE switch to OVERLOAD	Digital multimeter indicates +1.8 to +2.5V	Voltage out of tolerance:	
		a. If voltage is +2.5 to +3.0V, check R8 and R9; if good, replace K23	34-G 43-F
		b. Check CR44	43-F

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6d. – continued		c. If voltage is +3.2 to +5.2V, check A1CR89; if good, replace K23	15-G 43-F
		d. Measure voltage between K5 pin E1 and W4. If less than +2V, go to step h	26-A
		e. Measure voltage between K5 pin E2 and W4. If less than +2V, replace K5	26-A
		f. Measure voltage between S11C pin 5 and W4. If less than +2V, replace S11	56-G
		g. Measure voltage between K43 pin B1 and W4. If less than +2V, replace K37. If more than +2V, replace K43	38-D 37-B
		h. Measure voltage between S13C pin 1 and S13C pin C. If fails, replace S13	51-H
6e. Set MODE switch to FULL LOAD			
6f. Set FUNCTION switch to PS -28V			
6g. Connect DVM positive test lead to POWER SUPPLY -28V test jack and negative test lead to POWER SUPPLY PWR RTN test jack	DVM indicates +3.8 to +6.0V	Voltage out of tolerance:	
		a. If voltage is +7.4 to +9.4V, replace K15	45-D
		b. If voltage is +0.8 to +1.8V, check A2CR35	
		c. Check CR32 and A2CR33	45-D

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6g. - continued		d. Measure voltage between S13A pin 2 and W4. If greater than +2V, replace S13. If less than +2V, replace K15	51-G 45-D
6h. Set SELF TEST switch to OFF	PS ON indicator goes off		
6i. Set MODE switch to OVERLOAD			
6j. Set MODE switch to FULL LOAD			
6k. Set SELF TEST switch to LOAD-OVERLOAD	DVM indicates 0 (±0.1) VDC PS ON indicator lights	Voltage out of tolerance: Repeat steps 6h thru 6k	
6l. Disconnect DVM from PSTS. Set multimeter to measure resistance			
6m. Connect multimeter positive test lead to POWER SUPPLY +28V test jack and negative test lead to POWER SUPPLY PWR RTN test jack	Multimeter indicates 1.9 to 2.5 kilohms	If resistance greater than 3 kilohms, replace K45	45-E
6n. Disconnect multimeter from PSTS and set MODE switch to OVERLOAD			
6o. Connect DVM positive test lead to POWER SUPPLY +28V test jack and negative test lead to POWER SUPPLY PWR RTN test jack			
6p. Set MODE switch to FULL LOAD	DVM indicates +3.2 to +5.2V	Voltage out of tolerance: Repeat steps 6n and 6p	
6q. Set FUNCTION switch to PS AMB PWR			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6r. Connect DVM positive test lead to POWER SUPPLY AMB PWR SUM test jack and negative test lead to POWER SUPPLY PWR RTN test jack	DVM indicates +1.3 to +2.1V	Voltage out of tolerance:	
		a. If voltage is +2.1 to +9.2V, check R10 and R11; if good, replace K30	34-G 35-F
		b. If voltage is +0.31 to +0.60V, check A2CR51	35-F
		c. Check R116 and CR53	36-G 35-F
		d. If voltage is -0.2 to +0.3V or +0.8 to +1.3V, replace K42	40-C
		e. Measure voltage between S13A pin 5 and W4. If less than +2V, replace K30. If greater than +2V, replace S13	51-G 35-F
6s. Set MODE switch to OVERLOAD	DVM indicates +0.31 to +0.60V	Voltage out of tolerance:	
		a. Check A2CR51	35-F
		b. Check R13, R83, R86, and R87	34-E 34-D
		c. If voltage is +1.3 to +2.1V, measure the same voltage (±0.1V) between POWER SUPPLY AMB PWR HEAT test jack and POWER SUPPLY PWR RTN test jack. If voltage does not measure the same, check R57; if it does measure the same, replace K42	36-G 39-C
		d. Check CR52	35-D

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6s. - continued		e. Measure voltage between S13C pin 5 and W4. If greater than +2V, replace S13. If less than +2V, replace K31	51-G 35-D
6t. Disconnect DVM from PSTS			
6u. Set MODE switch to FULL LOAD			
6v. Set FUNCTION switch to PS 115V ∠0			
6w. Set multimeter to measure resistance			
6x. Connect multimeter test leads to POWER SUPPLY 115V ∠0 and POWER SUPPLY PWR RTN test jacks	Multimeter indicates 25 to 35 ohms	Resistance out of tolerance:	
		a. Measure resistance between S12C pin 8 and S12C pin C2. If greater than 2 ohms, replace S12	54-C
		b. Measure voltage between K28 pin X1 and K28 pin X2. If less than +20V, go to step d	41-C
		c. Check R14, R15, R18, R19, and R20. If good, replace K28	34-E 34-F 41-C

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6x. - continued		d. Check CR47. If good, replace S13	41-C 51-G
6y. Set MODE switch to OVERLOAD	Multimeter indicates 6 to 11 ohms	Resistance out of tolerance:	
		a. Measure resistance between K26 pin X1 and K26 pin X2. If less than +20V, go to step c	43-D
		b. Check R16 and R17. If good, replace K26	34-E 43-D
		c. Check CR45. If good, replace S13	43-D 51-G
6z. Set MODE switch to FULL LOAD			
6aa. Set FUNCTION switch to PS 115V ∠90			
6ab. Connect multimeter test leads to POWER SUPPLY 115V ∠90 and POWER SUPPLY PWR RTN test jacks	Multimeter indicates 135.0 to 165.0 Ohms	Resistance out of tolerance:	
		a. Measure resistance between S12B pin 8 and S12B pin C2. If greater than 2 ohms, replace S12	54-E
		b. Measure voltage between K17 pin X1 and K17 pin X2. If less than +20V, go to step d	45-B
		c. Check R15. If good, replace K17	34-D
		d. Check CR38. If good, replace S13	45-B 51-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6ac. Set MODE switch to OVERLOAD	Multimeter indicates 13.0 to 17.0 Ohms	Resistance out of tolerance:	
		a. Measure resistance between K19 pin X1 and K19 pin X2. If less than +20V, go to step c	45-A
		b. Check R12. If good, replace K19	34-F 45-A
		c. Check CR41. If good, replace S13	45-A 51-G
6ad. Set MODE switch to BATT SIM 1A			
6ae. Turn off variable DC power source and disconnect cable W306			
6af. Connect multimeter test leads to POWER SUPPLY BATT and POWER SUPPLY PWR RTN test jacks	Multimeter indicates 34 to 44 ohms	Resistance out of tolerance:	
		a. Measure resistance between S12F pin 8 and S12F pin C2. If greater than 2 ohms, replace S12	53-C
		b. Measure voltage between K33 pin X1 and K33 pin X2. If less than +20V, go to step d	35-B
		c. Measure resistance between S12 F pin C2 and K2 pin A3. If greater than 2 ohms, replace K2. If less than 2 ohms, replace K33	54-G 26-H 35-B
		d. Check CR57. If good, replace S11	35-B 57-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6ag. Set MODE switch to BATT SIM 4A	Multimeter indicates 6 to 11 ohms	Resistance out of tolerance:	
		a. Measure voltage between K32 pin X1 and K32 pin X2. If greater than +20V, replace K32	35-C 35-C
		b. Check CR45. If good, replace S11	43-C 57-G
6ah. Connect multimeter test leads to POWER SUPPLY +24V UNREG and POWER SUPPLY PWR RTN test jacks	Multimeter indicates 51 to 61 ohms	Resistance out of tolerance:	
		a. Measure resistance between S12C pin 2 and S12C pin C1. If greater than 2 ohms, replace S12	54-D
		b. Check R33	18-E
6ai. Set MODE switch to +RECT LOAD			
6aj. Set FUNCTION switch to PS 115V ∠0			
6ak. Connect cable W306 and turn on variable DC power source			
6al. Disconnect multimeter from PSTS			
6am. Jumper POWER SUPPLY 115V ∠0 and SELF TEST +28V test jacks			
6an. Connect DVM positive test lead to POWER SUPPLY 115V ∠0 test jack and negative test lead to POWER SUPPLY PWR RTN test jack	DVM indicates +1.0 to +1.6V	Voltage out of tolerance:	
		a. Measure voltage between K27 pin X1 and K27 pin X2. If less than +20V, go to step c	41-B

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6an. – continued		b. Check CR49. If good, replace K27	41-B
		c. Check A1CR95 and A1CR96	15-F
		d. Measure voltage between S11E pin 3 and S11C pin 3. If less than +20V, replace S11. If greater than +20V, replace S13	56-F 57-F 51-G
6ao. Remove jumper and DVM from PSTS			
6ap. Set FUNCTION switch to PS 115V ∠90			
6aq. Jumper POWER SUPPLY 115V ∠90 and SELF TEST +28V test jacks			
6ar. Connect DVM positive test lead to POWER SUPPLY 115V ∠90 test jack and negative test lead to POWER SUPPLY PWR RET test jack	DVM indicates +1.5 to +3.0 VDC	Voltage out of tolerance: a. Measure voltage between K16 pin X1 and K16 pin X2. If greater than +20V, replace K16	46-B
		b. Check CR37, A1CR89, and A1CR94; if good, replace S13	46-B 15-G 51-G
6as. Set MODE switch to -RECT LOAD	DVM indicates greater than +20V	Voltage is less than +20V: Check CR49; if good, check for parallel loading	41-B
6at. Remove jumper and DVM from PSTS			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6au. Jumper POWER SUPPLY 115V ∠90 and SELF TEST -10V test jacks			
6av. Connect DVM positive test lead to POWER SUPPLY PWR RTN test jack and negative test lead to POWER SUPPLY 115V ∠90 test jack	DVM indicates +0.5 to +1.6 VDC	Voltage out of tolerance	
		a. Measure voltage between K18 pin X1 and K18 pin X2. If greater than +20V, replace K18	46-A
		b. Check CR39	46-A
		c. Measure voltage between S11E pin 4 and S11C pin 4. If less than +20V, replace S11	58-D
		d. Measure voltage between S13D pin 4 and W4. If greater than +2V, replace S13. If less than +2V, replace A1CR95	50-G 15-F
6aw. Remove jumper and DVM from PSTS			
6ax. Jumper POWER SUPPLY 115V ∠0 and SELF TEST -10V test jacks			
6ay. Set FUNCTION switch to PS 115V ∠0			
6az. Connect DVM positive test lead to POWER SUPPLY PWR RTN test jack and negative test lead to POWER SUPPLY 115V ∠0 test jack	DVM indicates less than +5V	Voltage is greater than +5V: Check CR50 and A1CR97. If good, replace K29	43-B 15-F
6ba. Remove jumper			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
6bb. Disconnect DVM from PSTS			
6bc. Set MODE switch to OVERVOLT			
7. PS OVERVOLT TEST			
7a. Set SELF TEST switch to OVERVOLT	OVERLOAD FAIL switch-indicator may light		
7b. Set FUNCTION switch to PS +17V			
NOTE Take reading within 15 seconds.			
7c. Connect DVM positive test lead to SELF TEST OVERVOLT +17V test jack and negative test lead to SELF TEST PWR RTN test jacks	DVM indicates +20 to +26V	Voltage out of tolerance: a. Measure voltage between A3 pin E1 and R70 pin B. If greater than +5V, go to step c	38-B 63-F
		b. Check VR9 and R129	63-E
		c. Check R70	63-F
		d. Measure voltage between K34 pin X1 and K34 pin X2. If greater than +18V, replace K34. If less than +18V, check CR60	63-E
		e. Check A1Q20	15-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
7c. - continued		f. Measure voltage between K38 pin X1 and K38 pin X2. If less than +20V, go to step i	35-A
		g. Measure voltage between S13F pin C and S13F pin 12. If greater than +5V, replace S13.	50-C
		If less than +5V, replace K38	35A
		h. Check CR59	35A
		i. Measure voltage between S11C pin 6 and S11C pin C. If greater than +2V, replace S11.	58-D
		If less than +2V, replace S12	54-G
7d. Connect DVM positive test lead to SELF TEST OVERVOLT +INV DR test jack and negative test lead to SELF TEST PWR RTN test jack **NOTE** Take reading within 15 seconds.	DVM indicates less than +1V	Voltage is greater than +1V: Check A1Q21. If good, replace K35	15-H 63-D
7e. Set FUNCTION switch to PS +INV DR	DVM indicates +16.0 to +19.0V	Voltage out of tolerance:	
		a. Measure voltage between A3 pin E1 and SELF TEST OVERVOLT +INV DR test jack. If greater than +5V, go to step c	38-B
		b. Check VR10, A2CR11, and A2CR15	63-D

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
7e. - continued		c. Measure voltage between K35 pin X1 and K35 pin X2. If greater than +20V, replace K35	63-D
		d. Check CR61 and A1Q21. If good, replace S13	63-D 15-H 51-G
7f. Connect DVM positive test lead to SELF TEST OVERVOLT +17V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates less than +1V	Voltage is greater than +1V: Check A1Q20. If good, replace K34	15-G 63-E
7g. Connect DVM positive test lead to POWER SUPPLY AMB PWR COOL test jack and negative test lead to POWER SUPPLY PWR RTN test jack **NOTE** Take reading within 15 seconds.			
7h. Set FUNCTION switch to PS AMB PWR	DVM indicates +20 to +24 VDC for 877420-3 +8 to +12 VDC for 877420-4	Voltage out of tolerance: a. Check R58	36-F
		b. Measure voltage between S13F pin 5 and W4. If less than +20V, replace S13	50-C
		c. Check R69 and VR21	49-C

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
8. PS REFERENCE TEST			
8a. Connect DVM positive test lead to SELF TEST REF test jack and negative test lead to POWER SUPPLY SIG RTN test jack	DVM indicates 0 (±10) mV	Voltage out of tolerance: Measure resistance between S16 pin 3 and S16 pin C1. If greater than 2 ohms, replace S16. If less than 2 ohms, check capacitors A1C11 and A1C12. Replace if defective	62-B 15-C
8b. Set REFERENCE switch to AMB TEMP V LAMP -5V	DVM indicates -4.75 to -5.25V	Voltage out of tolerance: a. Check R89 b. Measure voltage between S16 pin C1 and S16 pin 1. If greater than +2V, replace S16. If less than +2V, check CR81, A1R91, A1R95, A1R96, A1R97, A1R98, and A1VR15. Replace if defective	62-C 62-B 61-F 15-C 15-B
8c. Set REFERENCE switch to AMB TEMP V LAMP -1 VDC	DVM indicates -0.9 to -1.1V	Voltage out of tolerance: Measure voltage between S16 pin C1 and S16 pin 2. If greater than +2V, replace S16. If less than +2V, check same A1 components as in step 8b	62-B
8d. Set REFERENCE switch to AMB TEMP +1 VDC	DVM indicates +0.9 to to +1.1V	Voltage out of tolerance: a. Measure resistance between K4 pin E2 and K4 pin E3. If greater than 2 ohms, replace K4	61-F

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
8d. - continued		b. Measure resistance between S16 pin 4 and S16 pin C1. If greater than 2 ohms, replace S16. If less than 2 ohms, check A1R92, A1R93, A1R94, and and A1VR14	62-B 16-B 15-B 16-A
8e. Set REFERENCE switch to AMB TEMP +8 VDC	DVM indicates +7.6 to +8.4V	Voltage out of tolerance: Measure resistance between S16 pin 5 and S16 pin C1. If greater than 2 ohms, replace S16. If less than 2 ohms, check same A1 components as in step 8d	62-B
8f. Set SELF TEST switch to OFF	PS ON indicator goes off		
9. COMP PS POWER TEST			
9a. Press POWER SUPPLY TEST SET ON switch-indicator to off and turn off variable DC power source	POWER SUPPLY TEST SET ON switch-indicator goes off		
9b. Disconnect cables W301, W302, and W306			
9c. Connect cables W309 and W310 as shown in figure 8-4. P1 connectors of cables are not connected			
9d. Set REFERENCE switch to AMB TEMP V LAMP -5 VDC			
9e. Press POWER SUPPLY TEST SET ON switch-indicator to on	POWER SUPPLY TEST SET ON switch-indicator lights		

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
9f. Connect DVM positive test lead to SELF TEST SHUTDOWN* test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates greater than +20V	Voltage is less than +20V:	
		a. Incorrect cable connection	
		b. Check A2CR17 and CR14. If good, replace K4	25-B 26-C
9g. Set INPUT POWER UUT circuit breaker to ON			
9h. Connect DVM positive test lead to COMP PWR SPLY PWR IN test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates less than +1V	Voltage is greater than +1V:	
		a. Measure voltage between S4 pin 1 and W4. If less than +20V, replace S4	19-G
		b. Check A2Q16. If good, replace K3	26-E
9i. Set COMP PS switch to ON	DVM indicates +26 to +30V	Voltage out of tolerance:	
		a. Measure voltage between K3 pin X1 and K3 pin X2. If less than +20V, go to step c	26-E
		b. Check R27. If good, replace K3	25-E 26-E
		c. Check CR9, R4, and A2CR84	26-E
		d. Measure voltage between S4 pin 1 and W4. If greater than +2V, replace S4	20-G
		e. Measure voltage between A2 pin 38 and W4. If greater than +2V, replace K4	26-E 26-C
		f. Check A2Q16	26-E

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
9j. Set REFERENCE switch to AMB TEMP V LAMP 0 VDC			
9k. Disconnect DVM from PSTS and set multimeter to measure resistance			
9l. Connect multimeter to COMP PWR SPLY +5V and SELF TEST OVER-VOLT +5V test jacks	Multimeter indicates less than 6 kilohms	Resistance is greater than 6 kilohms:	
		a. Check R75	59-H
		b. Measure voltage between S16 pin 8 and W4. If greater than +2V, replace S16. If less than +2V, replace K8	62-B 61-G
9m. Connect multimeter test leads to COMP PWR SPLY V LAMP and SELF TEST OVERVOLT V LAMP test jacks	Multimeter indicates less than 6 kilohms	Resistance is greater than 2 kilohms: Check R121 and R74. If good, replace K8	43-E 59-G 61-G
9n. Connect multimeter test lead to COMP PWR SPLY PREC +15V and SELF TEST OVERVOLT PREC +15V test jacks	Multimeter indicates less than 6 kilohms	Resistance is greater than 6 kilohms: Check R49 and R73. If good, replace K8	47-G 59-G 61-G
9o. Connect multimeter test leads to COMP PWR SPLY PREC -15V and SELF TEST OVERVOLT PREC -15V test jacks	Multimeter indicates less than 6 kilohms	Resistance is greater than 6 kilohms: Check R48 and R88. If good, replace K8	47-G 62-C 61-G
9p. Connect multimeter test leads to COMP PWR SPLY +15V MEM and SELF TEST OVERVOLT +15V MEM test jacks	Multimeter indicates less than 6 kilohms	Resistance is greater than 6 kilohms: Check R72. If good, replace K8	59-G 61-G
9q. Set REFERENCE switch to AMB TEMP +8 VDC			

Table 8-5. Power Supply Test Set Test Procedure — Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
9r. Connect multimeter to COMP PWR SPLY +5V and SELF TEST OVER-VOLT +5V test jacks	Multimeter indicates greater than 6 kilohms	Resistance out of tolerance: Replace K8	61-G
9s. Connect multimeter test leads to COMP PWR SPLY V LAMP and SELF TEST OVERVOLT V LAMP test jacks	Multimeter indicates greater than 6 kilohms	Resistance out of tolerance: Replace K8	61-G
9t. Connect multimeter test leads to COMP PWR SPLY PREC +15V and SELF TEST OVERVOLT PREC +15V test jacks	Multimeter indicates greater than 6 kilohms	Resistance out of tolerance: Replace K8	61-G
9u. Connect multimeter test leads to COMP PWR SPLY PREC -15V and SELF TEST OVERVOLT PREC -15V test jacks	Multimeter indicates greater than 6 kilohms	Resistance out of tolerance: Replace K8	61-G
9v. Connect multimeter test leads to COMP PWR SPLY +15V MEM and SELF TEST OVERVOLT +15V MEM test jacks	Multimeter indicates greater than 6 kilohms	Resistance out of tolerance: Replace K8	61-G
9w. Disconnect multimeter from PSTS			
10. COMP PS NO LOAD TEST			
10a. Set MODE switch to FULL LOAD			
10b. Jumper SELF TEST +28V and COMP PWR SPLY PREC +15V test jacks			

Table 8-5. Power Supply Test Set Test Procedure – Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
10c. Connect DVM positive test lead COMP PWR SPLY PREC +15V test jack and negative test lead to COMP PWR SPLY PWR RTN test jack	DVM indicates greater than +20V	Voltage is less than +20V: Measure resistance between S12A pin C2 and K12 pin B3. If greater than 2 ohms, replace K12. If less than 2 ohms, replace K13	54-G 46-F 46-E
10d. Remove jumper			
10e. Jumper SELF TEST –10V and COMP PWR SPLY PREC –15V test jacks			
10f. Connect DVM positive test lead to COMP PWR SPLY PREC –15V test jack and negative test lead to COMP PWR SPLY PWR RTN test jack	DVM indicates more negative than –8V	Voltage is less negative than –8V: Measure resistance between K10 pin B2 and K10 pin B3. If greater than 2 ohms, replace K10. If less than 2 ohms, replace K11	46-G 45-G
10g. Disconnect DVM from PSTS			
10h. Remove jumper			
10i. Set INPUT POWER UUT circuit breaker to OFF			
10j. Set REFERENCE switch to AMB TEMP V LAMP 0 VDC			
10k. Set SELF TEST switch to LOAD–OVERLOAD	COMP PS ON indicator is on	COMP PS ON indicator is off a. Replace K4 b. If still fails, replace A1	 26-C 23-D

Table 8-5. Power Supply Test Set Test Procedure — Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
11. COMP PS LOAD TEST			
11a. Set MODE switch to OVERLOAD			
11b. Set MODE switch to FULL LOAD			
11c. Set FUNCTION switch to COMP PS +5V			
11d. Connect DVM positive test lead test to COMP PWR SPLY +5V test jack and negative test lead to COMP PWR SPLY PWR RTN test jack	DVM indicates +0.27 to +0.65V	Voltage out of tolerance:	
		a. Check R5, R84, CR65, and A2CR67	34-C 35-E 40-F
		b. Measure voltage between K21 pin X2 and K21 pin X1. If greater than +20V, replace K21	
		c. Measure voltage between S13B pin C and W4. If greater than +2V, replace S11. If less than +2V, replace S13	51-F 57-G 51-G
11e. Set MODE switch to OVERLOAD	DVM indicates +0.15 to +0.40V	Voltage out of tolerance:	
		a. Check R82 and R85	34-D 34-C
		b. Measure voltage between K22 pin X1 and K22 pin X2. If less than +20V, go to step d	38-F

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
11e. - continued		c. Check A2CR67. If good, replace K22	38-F
		d. Check CR66	38-F
		e. Measure voltage between S13E pin 6 and K43 pin B1. If less than +2V, go to step g	50-E 38-D
		f. Measure voltage drop across each of the following: S13E pin 6 and S13E pin C; K5 pin E2 and K5 pin E3; and K43 pin B1 and K43 pin B2. If any of the above measure more than +2V, replace K43	50-E 36-B 38-D
		g. Measure voltage between S11C pin 5 and W4. If greater than +2V, replace S11. If less than +2V, replace K43	57-D 38-D
11f. Set MODE switch to FULL LOAD			
11g. Set FUNCTION switch to COMP PS +15V MEM			
11h. Connect DVM positive test leads to COMP PWR SPLY +15V MEM test jack and negative test lead to COMP PWR SPLY PWR RTN test jack	DVM indicates +3.2 to +5.2V	Voltage out of tolerance: Check A2CR34. If good, replace S13	45-D 51-G
11i. Set MODE switch to OVERLOAD	DVM indicates +1.0 to +1.6V	Voltage out of tolerance:	
		a. Check CR31, A2CR35, and A2CR36	46-C 45-C

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
11i. - continued		b. Measure voltage between A2 pin 27 and W4. If less than +2V, replace K14. If greater than +2V, replace S13	45-C 46-C 51-G
11j. Set MODE switch to FULL LOAD			
11k. Set FUNCTION switch to COMP PS V LAMP			
11l. Connect DVM positive test lead to COMP PWR SPLY V LAMP test jack and negative test lead to COMP PWR SPLY PWR RTN test jack	DVM indicates +1.35 to +1.80V	Voltage out of tolerance: a. Check CR46 and A2CR48 b. Measure voltage between K24 pin X1 and K24 pin X2. If greater than +20V, replace K24. If less than +20V, replace S13	 41-E 41-F 41-E 51-G
11m. Set MODE switch to OVERLOAD	DVM indicates +0.34 to +0.70V	Voltage out of tolerance: a. Check CR43 and A2CR48 b. Measure voltage between K25 pin X1 and K25 pin X2. If greater than +20V, replace K25. If less than +20V, replace S13	 41-F 51-G
11n. Disconnect DVM from PSTS			
11o. Set MODE switch to FULL LOAD			
11p. Set FUNCTION switch to COMP PS -15V PREC			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
11q. Set multimeter to measure resistance			
11r. Connect multimeter test leads to COMP PWR SPLY PREC -15V and COMP PWR SPLY PWR RTN test jacks	Multimeter indicates 12 to 18 ohms	Resistance out of tolerance:	
		a. Check R12	34-F
		b. Check CR28 and A2CR26	45-G 46-G
		c. Measure voltage between K11 pin X1 and K11 pin X2. If greater than +20V, replace K11.	45-G
		If less than +20V, replace S13	51-G
11s. Set MODE switch to OVERLOAD	Multimeter indicates 4.0 to 8.0 ohms	Resistance out of tolerance:	
		a. Measure voltage between K10 pin X1 and K10 pin X2. If greater than +20V, replace K10	46-G
		b. Check CR27 and A2CR26. If good, replace S13	46-G 50-G
11t. Set MODE switch to FULL LOAD			
11u. Set FUNCTION switch to COMP PS +15V PREC			
11v. Connect multimeter test leads to COMP PWR SPLY PREC +15V and COMP PWR SPLY PWR RTN test jacks	Multimeter indicates 60 to 90 ohms	Resistance out of tolerance:	
		a. Measure voltage between K13 pin X1 and K13 pin X2. If greater than +20V, replace K13	46-E
		b. Check CR30. If good, replace S13	46-E 50-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
11w. Set MODE switch to OVERLOAD	Multimeter indicates 12 to 19 ohms	Resistance out of tolerance:	
		a. Measure voltage between K12 pin X1 and K12 pin X2. If greater than +20V, replace K12	46-F
		b. Check CR29. If good, replace S13	46-F 50-G
11x. Disconnect multimeter from PSTS			
12. COMP PS OVERVOLT TEST			
12a. Set SELF TEST switch to OVERVOLT	OVERLOAD FAIL switch-indicator may light		
12b. Set FUNCTION switch to PS AMB PWR			
12c. Set MODE switch to OVERVOLT			
12d. Connect DVM positive test lead to SELF TEST OVERVOLT PREC -15V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates -1 to +1V	Voltage out of tolerance: Replace K36	63-C
12e. Set FUNCTION switch to COMP PS +5V			
NOTE Take reading within 15 seconds.			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
12f. Connect DVM positive test lead to SELF TEST OVERVOLT +5V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +6.8 to +8.2V	Voltage out of tolerance: a. Measure voltage between S13F pin 6 and W4. If less than +15V, replace S13 b. Check R68. If good, replace A2VR8	 50-C 60-C 59-E
12g. Set FUNCTION switch to COMP PS +15V MEM **NOTE** Take reading within 15 seconds.			
12h. Connect DVM positive test lead to SELF TEST OVERVOLT +15V MEM test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +22 to +28V	Voltage out of tolerance: a. If K44 chatters continuously on and off, replace VR5 b. If voltage is greater than +5V, replace VR5 c. Check CR100 d. Measure voltage between S13F pin 7 and W4. If less than +20V, replace S13. If greater than +20V, replace K44	 59-D 59-F 59-F 59-D 50-C 59-D
12i. Set FUNCTION switch to COMP PS V LAMP			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
NOTE Take reading within 15 seconds.			
12j. Connect DVM positive test lead to SELF TEST OVERVOLT V LAMP test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +6.8 to +8.2V	Voltage out of tolerance: a. Measure voltage between S13F pin 8 and W4. If less than +15V, replace S13 b. Check R67. If good, replace A2VR7	50-C 60-D 59-E
12k. Set FUNCTION switch to COMP PS +15V PREC **NOTE** Take reading within 15 seconds.			
12l. Connect DVM positive test lead to SELF TEST OVERVOLT PREC +15V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +20 to +24V	Voltage out of tolerance: a. Measure voltage between S13F pin 9 and W4. If less than +15V, replace S13 b. Check R66. If good, replace VR6	50-C 60-B 59-F
12m. Set FUNCTION switch to COMP PS -15V PREC **NOTE** Take reading within 15 seconds.			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
12n. Connect DVM positive test lead to SELF TEST OVERVOLT PREC -15V test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates -20 to -24V	Voltage out of tolerance:	
		a. Measure voltage between R71 pin A and W4. If more negative than +20V, check R71; if good, replace VR11	63-C
		b. Measure voltage between K36 pin X1 and K36 pin X2. If greater than +20V, replace K36	63-C
		c. Check CR62. If good, replace S13	63-C 50-C
13. COMP PS REFERENCE TEST			
13a. Set REFERENCE switch to AMB TEMP V LAMP -5 VDC			
13b. Connect DVM positive test lead to SELF TEST REF test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates -4 to -6V	Voltage out of tolerance: Replace CR81	61-F
13c. Set REFERENCE switch to AMB TEMP V LAMP -1 VDC	DVM indicates -0.5 to -1.5V	Same as step 13b	
13d. Set REFERENCE switch to AMB TEMP +8 VDC	DVM indicates -1 to +2V	Check CR81. If good, replace K4	61-F
13e. Connect DVM positive test lead to COMP PWR SPLY OFF test jack and negative test lead to COMP PWR SPLY SIG RTN test jack	DVM indicates +4 to +6V	Voltage out of tolerance:	
		a. Check A1R104 and R105 between A2 pin 43 and A2 pin 54. If greater than +2V, replace K4	16-E 18-D 19-E 61-F

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
13e. - continued		b. Check A1R125 and R113	16-D 18-G
		c. Check A2R109. If good, replace A2VR16	19-F 19-E
13f. Connect DVM positive test lead to COMP PWR SPLY COMP FLG SET* test jack and negative test lead to COMP PWR SPLY SIG RTN test jack	DVM indicates +4 to +6V	Voltage out of tolerance: Check A1R103 and R102	16-E 18-E
13g. Connect DVM positive test lead to COMP PWR SPLY POR* test jack and negative test lead to COMP PWR SPLY SIG RTN test jack	DVM indicates +4 to +6V	Voltage out of tolerance: Check A1R104 and R105	16-E 18-D
14. TIMER TEST **NOTE** Read entire timer test before proceeding. This test may be repeated as necessary.			
14a. Connect DVM positive test lead to SELF TEST TIMER 1 MIN test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates -0.5 to +0.5V	Voltage out of tolerance: Check S14 and replace A1 if S14 is good	24-D
14b. If lighted, press OVERLOAD FAIL switch-indicator to off	OVERLOAD FAIL switch-indicator goes off	Light fails to go off: Simultaneously press and hold OVERLOAD FAIL switch-indicator while measuring less than 2 ohms between S1A and S1B. If less than 2 ohms, replace K1. If greater than 2 ohms, replace S1	28-C

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
14c. Simultaneously set SELF TEST switch to TIMERS and start stopwatch	DVM indicates greater than +15V within 45 to 75 seconds. OVERTEMP indicator goes on	Time interval out of tolerance:	
		a. Check R111	23-F
		b. Measure voltage between S12E pin 10 and S12E pin C2. If greater than +2V, replace S12. If less than +2V, replace A1. OVERTEMP indicator does not light: Measure voltage between S17D-NO and W4. If less than +2V, replace K7. If greater than +2V, replace S17	53-D 30-F 23-F 30-F
14d. Adjust oscilloscope for 0.5 SEC/DIV sweep and 5V/DIV			
14e. Connect oscilloscope test leads to SELF TEST TIMER 2 SEC and SELF TEST PWR RTN test jacks	Oscilloscope indicates greater than +20V	Voltage is less than +20V: Check R112. If R112 is good, check VDC between K1 pin X1 and K1 pin X2. If greater than +20V, replace A1. If less than +20V, replace K1	28-B 29-B
14f. Press and hold INITIATE switch **NOTE** OVERTEMP indicator may light after approximately 75 seconds.	Oscilloscope indicates less than +2V within 1.5 to 2.5 seconds. OVERLOAD FAIL switch-indicator goes on and OVERTEMP indicator goes off and then on again after 45 to 75 seconds	Time interval out of tolerance:	
		a. Check CR1	29-A
		b. Measure voltage between S10 pin 7 and W4 (INITIATE held in). If less than +2V, replace A1	37-C 31-A
		c. Measure voltage between S12D pin 7 and W4. If greater than +2V, replace S12. If less than +2V, replace S10	53-G 37-C

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
14f. – continued		OVERLOAD FAIL switch-indicator does not light: (INITIATE held in)	
		a. Check CR1	29-A
		b. Check A2CR5	15-F
		c. Replace K1	29-A
14g. Release INITIATE switch	OVERLOAD FAIL switch-indicator stays on	OVERLOAD FAIL switch-indicator does not stay on (INITIATE not held in): Replace S1	28-C
14h. Set SELF TEST switch to OFF	COMP PS ON and OVERTEMP indicators go off		
14i. Connect DVM positive test lead to SELF TEST SHUT DOWN* test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates less than +1V	Voltage is greater than +1V: Replace K1	29-B
14j. Press OVERLOAD FAIL switch-indicator to off	OVERLOAD FAIL switch-indicator goes off. DVM indicates greater than +20V	OVERLOAD FAIL switch-indicator does not go off: Same as step 14b	
		Voltage is less than +20V: Replace K1	29-B
14k. Set SELF TEST switch to SWITCHES	OVERTEMP indicator is off. OVERLOAD FAIL may light; reset if it does light	OVERTEMP indicator is on:	
		a. Measure voltage between S18 pin C1 NO and W4. If less than +2V, check A1CR78 and replace S18 if A1CR78 is good	19-B 16-F
		b. Measure voltage between K7 pin X1 and K7 pin X2. If greater than +20V, replace K7	23-F

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
14k. - continued		c. Check CR24 and S14 for less than 2 ohms between pins 1 and 2. If good, replace A1	23-F 24-E
15. SWITCH TEST			
15a. Connect DVM positive test lead to SELF TEST SWITCH TEST test jack and negative test lead to SELF TEST PWR RTN test jack	DVM indicates +4 to +6V	Voltage out of tolerance:	
		a. If voltage is greater than +1.5V, replace A1VR12	15-D
		b. Measure voltage between S12E pin 5 and W4. If less than +20V, replace S12	53-E
		c. If voltage is less than +0.25V, check A1R101 and A1VR12	15-D
		d. Check S2, S3, S4, S5, S6, S8, and S9 for proper operation by taking continuity check of contacts	21-D 21-G 19-G 21-E 21-G 21-H
		e. Check A1R101 and A1VR12. Replace if defective	15-D
15b. Set POWER SUPPLY VEHICLE SENSE switch to ON	DVM indicates 0.0 to +1.0V	Voltage out of tolerance:	
		a. If voltage is less than +0.4V replace A1CR68	15-F
		b. Measure voltage between A1 pin 179 and W4. If less than +2V, go to step c	15-E
		c. Check A1CR68. If good, replace S9	15-F 21-H

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
15b. - continued		d. Measure voltage between S12F pin C1 and W4. If greater than +2V, replace S12. If less than +2V, replace S3	53-D 21-E
15c. Set POWER SUPPLY VEHICLE SENSE switch to OFF	DVM indicates +4 to +6V	Same as step 15a	
15d. Set POWER SUPPLY INTERLOCK switch to ON	DVM indicates 0.0 to +1.0V	Voltage out of tolerance: Check A1CR69. If good, replace S8	15-F 21-G
15e. Set POWER SUPPLY INTERLOCK switch to OFF	DVM indicates +4 to +6V	Same as step 15a	
15f. Set and hold POWER SUPPLY IMU OVERTEMP switch to ON	DVM indicates 0.0 to +1.0V	Voltage out of tolerance: Check A1CR70. If good, replace S6	15-E 21-G
15g. Release POWER SUPPLY IMU OVERTEMP switch	DVM indicates +4 to +6V	Same as step 15a	
15h. Set and hold POWER SUPPLY FLAG switch to SET	DVM indicates 0.0 to +1.0V	Voltage out of tolerance: Check A1CR73. If good, replace S5	15-E 21-F
15i. Set and hold POWER SUPPLY FLAG switch to RESET	Same as step 15h	Check A1CR72. If good, replace S5	15-E 21-F
15j. Release POWER SUPPLY FLAG switch	DVM indicates +4 to +6V	Same as step 15a	
15k. Press and hold POWER SUPPLY ON switch	DVM indicates 0.0 to +1.0V	Voltage out of tolerance: Check A1CR74. If good, replace S2	15-E 21-D
15l. Release POWER SUPPLY ON switch	DVM indicates +4 to +6V	Same as step 15a	
15m. Set COMP PS switch to OFF	DVM indicates 0.0 to +1.0V	Voltage out of tolerance: Check A1CR71. If good, replace S4	15-E 20-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
15n. Press and hold POWER SUPPLY OFF switch	DVM indicates +4 to +6V	Voltage out of tolerance: Replace S3	21-D
15o. Release POWER SUPPLY OFF switch	DVM indicates less than 0.0 to +1.0V	Same as step 15a	
15p. Disconnect DVM and oscilloscope from PSTS			
15q. Set MODE switch to NO LOAD			
15r. Set REFERENCE switch to AMB TEMP V LAMP 0 VDC			
15s. Set SELF TEST switch to OFF			
15t. Press POWER SUPPLY TEST SET ON switch-indicator to off	POWER SUPPLY TEST SET ON switch-indicator goes off		
15u. Set INPUT POWER PSTS switch to OFF			
15v. Disconnect cables W309 and W310 from PSTS as shown in figure 8-4			
15w. Set multimeter to measure resistance			
15x. Connect multimeter test leads to COMP PWR SUPPLY COMP OFF* and COMP PWR SPLY SIG RTN	Multimeter indicates 2.0 to 2.4 kilohms	Resistance out of tolerance: Replace R100	18-G
15y. Connect multimeter to POWER SUPPLY OVERVOLT* and J3 pin 20 (see figure 8-3A for pin locations)	Multimeter indicates 2.0 to 2.4 kilohms	Resistance out of tolerance: Replace R106	18-G
15z. Connect multimeter test leads to POWER SUPPLY +24V AUX and J3 pin 5	Multimeter indicates 2.0 to 2.4 kilohms	Resistance out of tolerance: Replace R107	18-G

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
15aa. Connect multimeter test leads to POWER SUPPLY +24V UNREG and J3 pin 6	Multimeter indicates 2.0 to 2.4 kilohms	Resistance out of tolerance: Replace R60	18-F
15ab. Connect multimeter test leads to POWER SUPPLY +26V ∠90 and J3 pin 3	Multimeter indicates 2.0 to 2.4 kilohms	Resistance out of tolerance: Replace R108	18-F
15ac. Connect multimeter test leads to POWER SUPPLY UNDERVOLT and J3 pin 19	Multimeter indicates 2.0 to 2.4 kilohms	Resistance out of tolerance: Replace R99	21-F
16. BLOWER CAPACITOR TEST			
16a. Connect cables W309 and W310 as shown in figure 8-4			
16b. Set INPUT POWER PSTS circuit breaker to ON			
16c. Press POWER SUPPLY TEST SET ON switch-indicator to on	POWER SUPPLY TEST SET ON switch-indicator lights		
16d. Set SELF-TEST switch to LOAD-OVERLOAD	COMP PS ON indicator lights		
16e. Adjust oscilloscope for IV/DIV			
16f. Connect X10 probe to oscilloscope and connect probe negative lead to POWER SUPPLY PWR RTN test jack			
16g. Jumper SELF TEST +28V and POWER SUPPLY COMP BLO test jacks			
16h. Remove jumper after 30 seconds			

Table 8-5. Power Supply Test Set Test Procedure - Continued

Test procedure	Normal indication	Malfunction indication/ corrective action	Zone
16i. Connect oscilloscope probe positive tip to POWER SUPPLY COMP BLO test jack	Oscilloscope indicates +26 to +30V, then decreases to 0 to +1.0V within 10 seconds	Voltage out of tolerance: Replace C15	36-D
16j. Jumper SELF TEST +28V and POWER SUPPLY IMU BLO test jacks			
16k. Remove jumper after 30 seconds			
16l. Connect oscilloscope probe positive tip to POWER SUPPLY IMU BLO test jack	Oscilloscope indicates +26 to +30V, then decreases to 0 to +1.0V within 10 seconds	Voltage out of tolerance: Replace C16	36-D
16m. Disconnect oscilloscope			
16n. Set SELF TEST switch to OFF	PS ON indicator goes off		
16o. Press POWER SUPPLY TEST SET ON switch-indicator to off	POWER SUPPLY TEST SET ON switch-indicator goes off		
16p. Set INPUT POWER PSTS circuit breaker to OFF			
16q. Disconnect all cables			
TEST COMPLETED			

Section IV. MAINTENANCE OF THE PSTS

8-9. General. Maintenance of PSTS allocated to general support by MAC consists of PSTS testing, repair, adjustments, and cable testing and repair.

NOTE

Where similar components are removed and replaced by identical procedures, one typical procedure will be given. If applicable, replace heat shrinkable tubing and shrink in place.

a. *PSTS Testing.* Testing is performed as described in paragraph 8-10.

b. *Cable Testing.* Testing is performed as described in paragraph 8-3.

c. *Cable Repair.* Cable and connector repair consists of replacing contact pins and repairing wires in accordance with paragraph 8-12.

d. *PSTS Repair.* Maintenance of PSTS is divided into two categories, repair and replacement. Electronic component assembly no. 1 A1, current limiter assembly A3, and chassis-mounted components are replaced. Electronic component assembly no. 2 A2 and electrical connectors are repaired. Figure 8-6 is an exploded view. Non-critical components on A1 are replaced.

(1) *Electronic component assembly no. 1 A1.* Remove and replace electronic component assembly no. 1 A1 (7, figure 8-6, sheet 2) as follows:

(a) Removal.

1. Remove 20 screws (49, figure 8-6, sheet 1), and washers (50) securing the power supply test set (PSTS) front panel (51) to the PSTS instrument case (1). Remove PSTS front panel (51) far enough to provide access to electronic component assembly no. 1 A1 (7, figure 8-6, sheet 2).
2. Disconnect connector P1 (5) from electronic component assembly no. 1 A1 (7) by turning two jackscrews (6).
3. Remove 10 screws (2), washers (4), and lockwashers (3) securing electronic component assembly A1 (7) to spacers (8). Remove electronic component assembly A1.

(b) *Replacement.*

1. Place electronic component assembly A1 (7) on spacers (8); align mounting holes.
2. Install 10 screws (2), washers (4), and lockwashers (3) securing electronic component assembly A1 (7) to spacers (8).
3. Connect connector P1 (5) to electronic component assembly no. 1 A1 (7) b engaging and turning two jackscrews (6).
4. When electronic component assembly no. 1 A1 (7) is replaced, it must be adjusted in accordance with paragraph 8-9e.
5. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1), align mounting holes.
6. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(2) *Current limiter component assembly A3.* Remove and replace current limiter component assembly A3 (123, figure 8-6, sheet 3) as follows:

(a) *Removal.*

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing the PSTS front panel (51) to the PSTS instrument case (1). Remove PSTS front panel far enough to provide access to current limiter component assembly A3 (123, figure 8-6, sheet 3).
2. Tag and unsolder wires from current limiter component assembly A3 (123).
3. Remove four screws (125) and washers (124) securing current limiter component assembly A3 123) to relay bracket no. 3 (109).

(b) *Replacement.*

1. Place current limiter component assembly A3 (123) on relay bracket no. 3 (109); align mounting holes.
2. Install four screws (125) and washers (124) securing current limiter component assembly A3 (123) to relay bracket no. 3 (109).
3. Solder wires to current limiter component assembly A3 (123).
4. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1); align mounting holes.
5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(3) *Switch-Indicators S1, S17, and S18.* Remove and replace typical switch-indicator S1 (44, figure 8-6, sheet 1) as follows:

Legend for Figure 8-6

1. PSTS instrument case
2. Screw
3. Lockwasher
4. Washer
5. Connector P1
6. Jackscrew
7. Electronic component assembly no. 1 A1
8. Spacer
9. Circuit breaker CB1
10. Lockwasher and gasket
11. Nut
12. Locking tab
13. Circuit breaker CB2
14. Capacitor C18
15. Terminal board
16. Nonmetallic washer
17. Terminal lug
18. Washer
19. Nut
20. Resistor R88
21. Binding post J8
22. Nut
23. LockWasher
24. Screw
25. Fuseholder XF1
26. Boot
27. Nut
28. Washer
29. Nut
30. Nut
31. Knob
32. Setscrew
33. Lamp
34. Seal
35. Lens assembly
36. Lamp board
37. Indicator DS1
38. Screw
39. Captive nut
40. Seal
41. Lens assembly
42. Lamp board
43. Lamp
44. Switch indicator S1
45. Screw
46. Captive nut
47. Connector J6
48. Screw
49. Screw
50. Washer
51. PSTS front panel
52. Connector J1
53. Terminal Lug W13
54. Washer
55. Nut
56. Screw
57. Flange
58. Washer
59. Nut
60. Time totalizing meter M1
61. Screw
62. Switch-indicator cover
63. Indicator cover
64. Switch S11
65. Lockwasher
66. Washer
67. Switch S2
68. Switch S4
69. Lockwasher
70. Nut
71. Mounting plate
72. Insulated stud terminal E1
73. Capacitor C14
74. Screw
75. Lockwasher
76. Washer
77. Screw
78. Washer
79. Thermostatic switch S14
80. Diode C9
81. Relay K3
82. Cable clamp
83. Screw
84. Washer
85. Cable clamp
86. Screw
87. Cable clamp
88. Power supply plate
89. Screw
90. Screw
91. Screw
92. Power supply PS3
93. Thermostatic switch S15
94. Washer
95. Lockwasher
96. Nut
97. Resistor R115
98. Power supply PS2
99. Resistor R114
100. Power supply PS1
101. Screw
102. Lockwasher
103. Washer
104. Relay K41
105. Screw
106. Terminal cover
107. Diode CR21

Legend for Figure 8-6 - Continued

108. Cable clamp
109. Relay bracket no. 3
110. Screw
111. Washer
112. Diode CR81
113. Diode CR14
114. Relay K4
115. Screw
116. Washer
117. Relay K1
118. Diode CR1
119. Relay K42
120. Washer
121. Screw
122. Diode CR87
123. Current limiter component assembly A3
124. Washer
125. Screw
126. Electronic component assembly no. 2 A2
127. Screw
128. Washer
129. Resistor R71
130. Washer
131. Lockwasher
132. Nut
133. Screw
134. Washer
135. Resistor R33
136. Insulated terminal E2
137. Spring tension clip
138. Relay bracket no. 1
139. Washer
140. Lug
141. Washer
141.1 Washer
142. Screw
143. Diode CR59
144. Relay K38
145. Washer
146. Screw
147. Diode VR11
148. Lug
149. Mica washer
150. Heat-shrinkable tubing
151. Diode CR54
152. Lug
153. Mica washer
154. Heat-shrinkable tubing
155. Mica washer
156. Washer
157. Lockwasher
158. Nut
159. Screw
160. Washer
161. Diode CR40
162. Lug
163. Mica washer
164. Heat-shrinkable tubing
165. Diode plate
166. Mica washer
167. Washer
168. Lockwasher
169. Nut
170. Screw
171. Washer
172. Diode CR47
173. Relay K28
174. Mica washer
175. Washer
176. Lockwasher
177. Nut
178. Nut
179. Lockwasher
180. Washer
181. Diode VR9
182. Insulator
183. Relay bracket no. 2
184. Washer
185. Screw
186. Resistor R18
187. Screw
188. Washer
189. R18 mounting bracket
190. Screw
191. No. 3 shroud
192. Washer
193. Screw
194. Washer
195. Mounting plate
196. Fan mounting bracket
197. Washer
198. Screw
199. Axial fan B1
200. Screw
201. Rim clenching clamp
202. Resistor mounting plate no. 2
203. Resistor mounting bracket no. 5
204. Centering washer
205. Mica washer
206. Resistor R10
207. Mica washer
208. Centering washer
209. Screw
210. Washer
211. Screw

Legend for Figure 8-6 - Continued

212. Washer
213. Shroud no. 2
214. Spacer
215. Screw
216. Washer
217. Resistor mounting bracket no. 2
218. Washer
219. Lockwasher
220. Nut
221. Centering washer
222. Mica washer
223. Resistor mounting plate no. 1
224. Resistor R6
225. Nut
226. Lockwasher
227. Washer
228. Resistor mounting bracket no. 4
229. Mica washer
230. Spacer
231. Centering washer

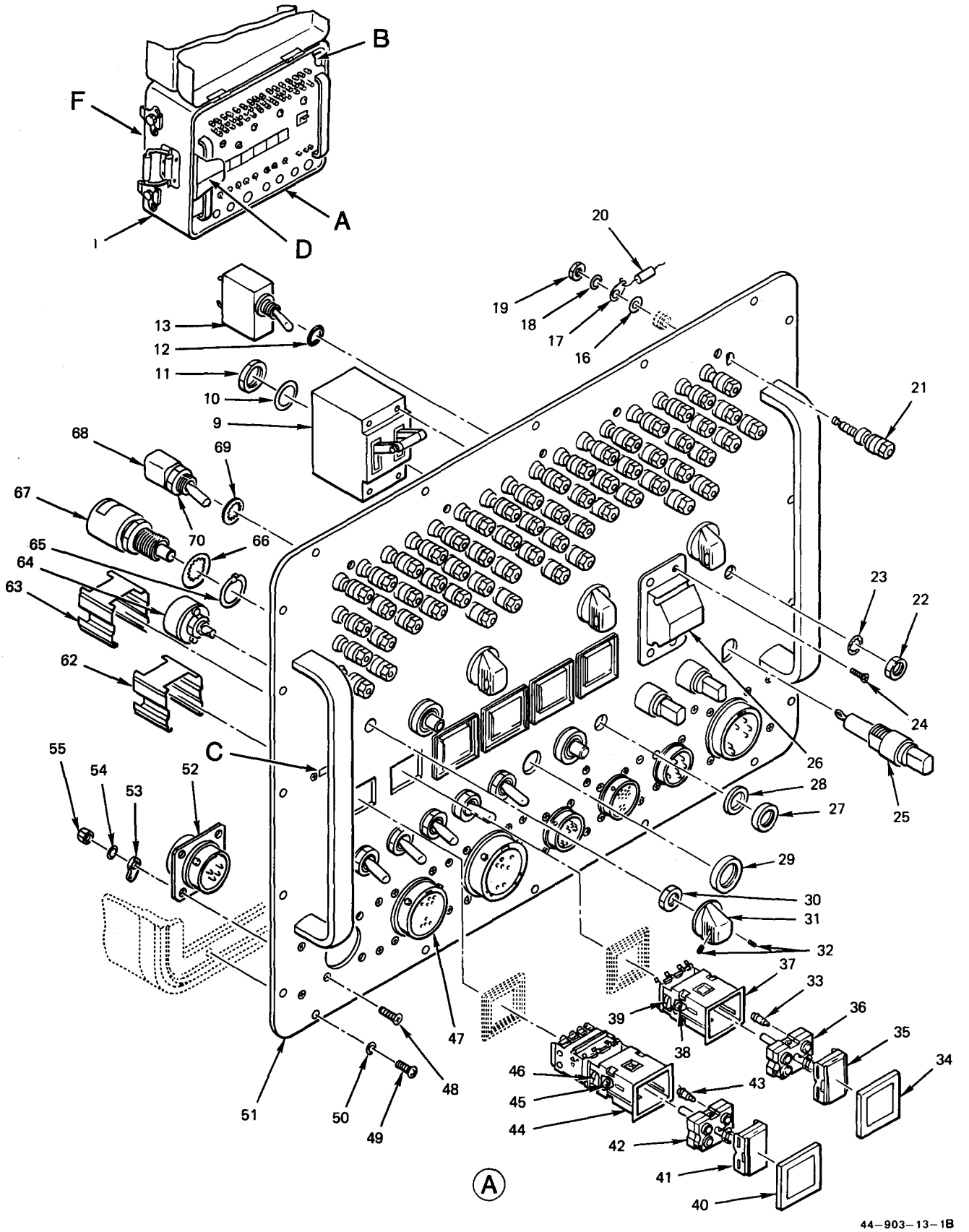


Figure 8-6. Power Supply Test Set Exploded View (Sheet 1 of 5)

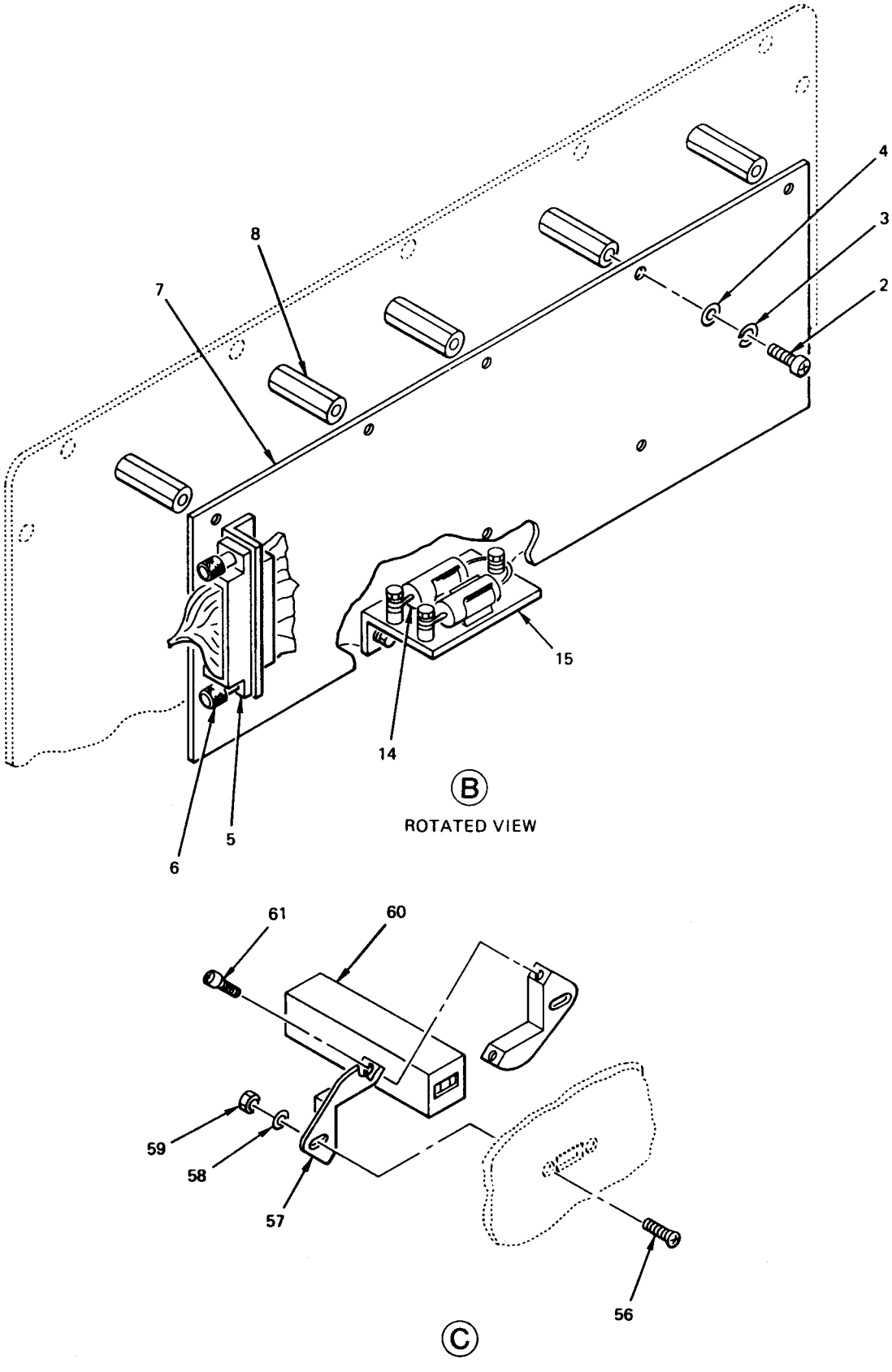


Figure 8-6. Power Supply Test Set Exploded View (Sheet 2 of 5)

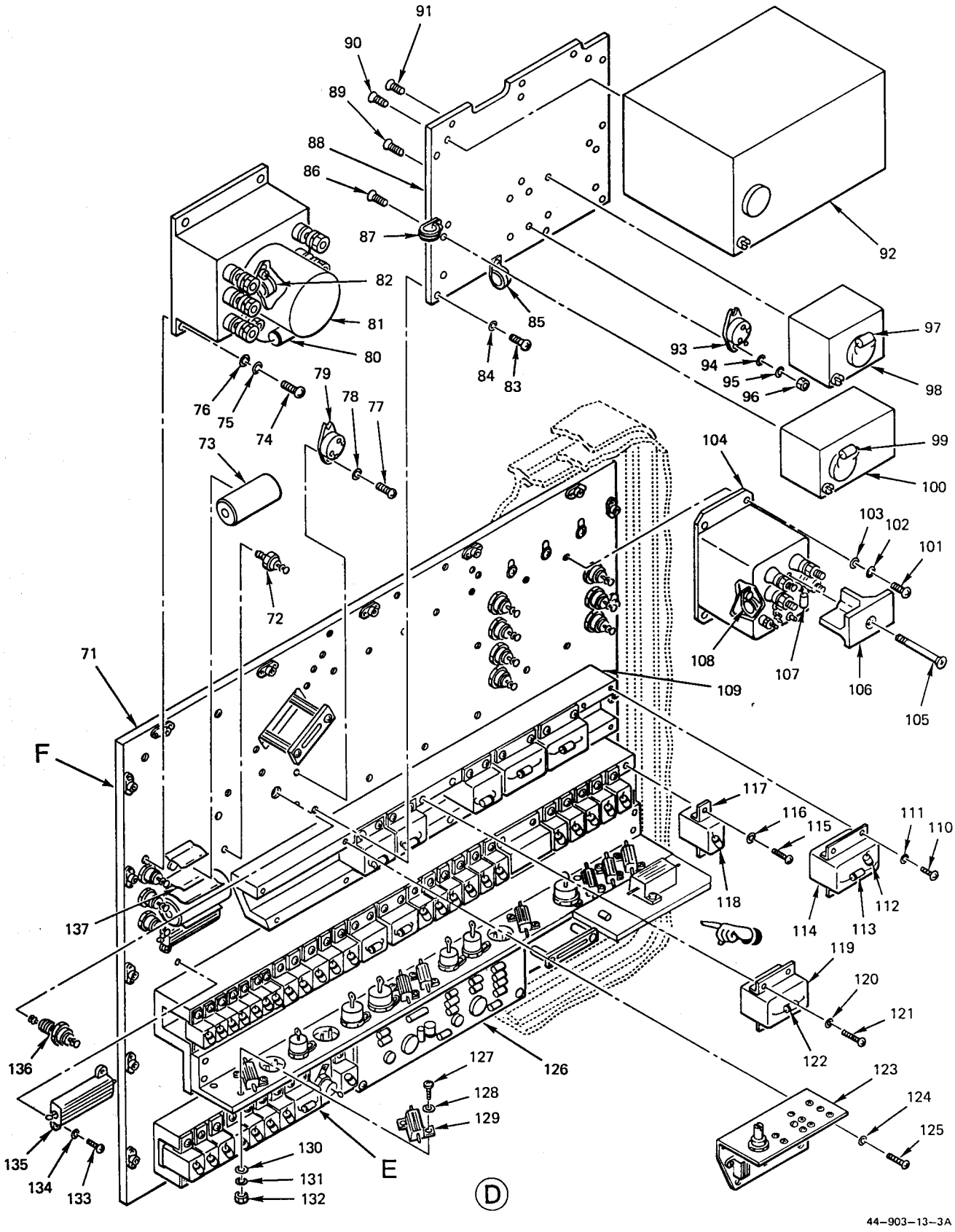


Figure 8-6. Power Supply Test Set Exploded View (Sheet 3 of 5)

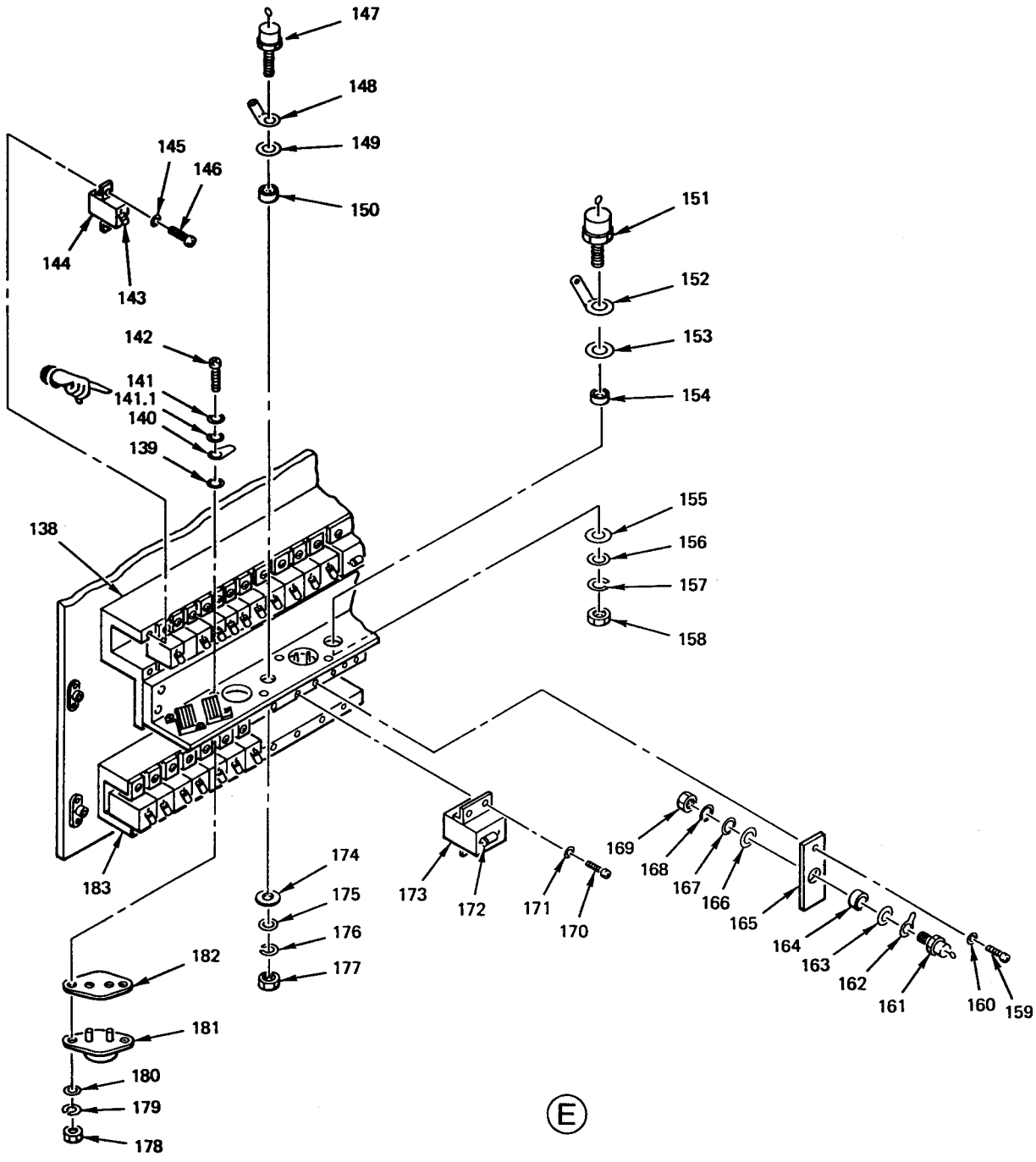


Figure 8-6. Power Supply Test Set Exploded View (Sheet 4 of 5)

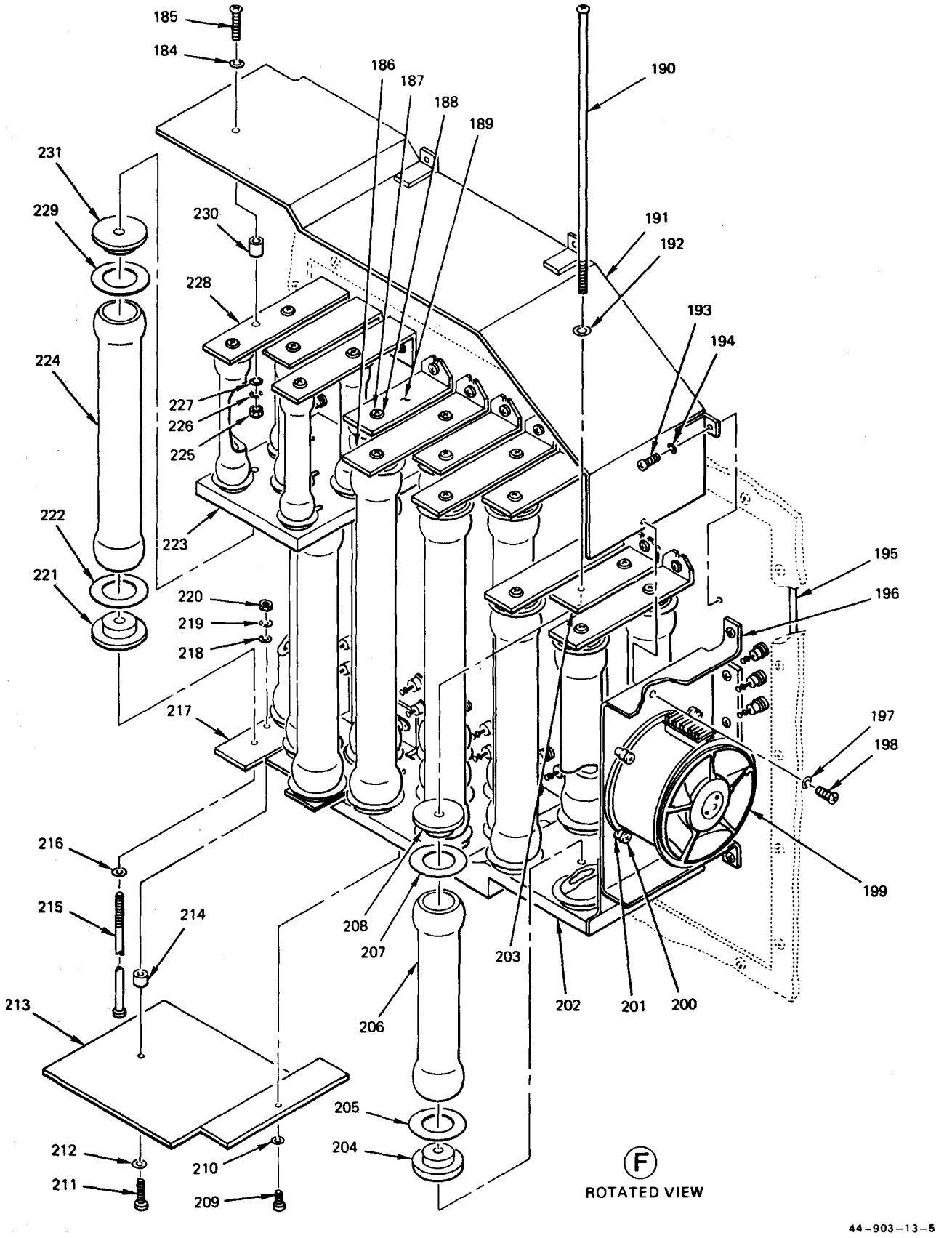


Figure 8-6. Power Supply Test Set Exploded View (Sheet 5 of 5)

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing the PSTS front panel (51) to the PSTS instrument case (1) . Remove PSRS front panel far enough to permit access to wires connected to rear of switch indicator S1 (44).
2. Tag and unsolder wires from switch-indicator S1 (44).
3. Remove seal (40) by peeling away from switch housing.
4. Using fingernail slots, pull out lens assembly (41) to the limit of its travel. Rotate lens assembly 90 degrees.
5. Push lens assembly (41) in to release tension on index keys, then pull lens assembly and lamp board (42) out of switch-indicator S1 (44).
6. Release two screws (45) securing switch-indicator cover (62). Remove switch-indicator cover (62). Remove switch-indicator cover from rear of PSTS front panel (51). Remove switch indicator S1 (44) from front of PSTS front panel.

(b) ***Replacement.***

NOTE

If new switch is to be installed, perform steps 1, 2, and 3, otherwise, proceed to step 4.

1. Using fingernail slots, pull out lens assembly (41) approximately 5/8 inch. Rotate lens assembly 90 degrees.
2. Push lens assembly (41) in to release tension on index keys, then pull out lens assembly and lamp board (42).
3. Rotate two screws (45) to rear limit of their travel range. Remove switch-indicator cover (62).
4. Insert switch-indicator S1 (44) from front of PSTS front panel (51).
5. Place switch-indicator cover (62) on switch-indicator S1 (44) from rear of PSTS front panel (51)
6. Tighten two screws (45) securing switch-indicator cover (62) to switch-indicator S1 (44).
7. Install lamp board (42) and lens assembly (41) aligning slot in lamp board with index in switch-indicator S1 (44).
8. Rotate lens assembly (41) 90 degrees until lens assembly index slot is at top. Push lens assembly into switch-indicator S1 (44) to secure in place.
9. Install seal (40) covering front of switch-indicator S1 (44).
10. Solder tagged wires to switch-indicator S1 (44).
11. Place PSTS front panel (51) in PSTS instrument case (1); align mounting holes.
12. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(4) ***Indicators DS1, DS2, and DS3.*** Remove and replace typical indicator DS1 (37, figure 8-6, sheet 1) as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to permit access to wires connected to rear of indicator DS1 (37).
2. Tag and unsolder wires from indicator DS1 (37).
3. Remove seal (34) covering front of indicator DS1 (37) by peeling away from switch housing.
4. Using fingernail slots, pull out lens assembly (35) to the limit of its travel. Rotate lens assembly 90 degrees.
5. Push lens assembly (35) in to release tension on index keys, then pull out lens assembly and lamp board (36).
6. Release two screws (38) securing indicator cover (63). Remove indicator cover from rear of PSTS front panel (51). Remove indicator DS1 (37) from front of PSTS front panel.

(b) ***Replacement.***

NOTE

If new indicator is to be installed, perform steps 1, 2, and 3, otherwise, proceed to step 4.

1. Using fingernail slots, pull out lens assembly (35) approximately 5/8 inch. Rotate lens assembly 90 degrees.
2. Push lens assembly (35) in to release tension on index keys, then pull out lens assembly and lamp board (36).

3. Rotate two screws (38) to drive two captive nuts (39) to rear limit of their travel range. Remove indicator cover (63).
4. Insert indicator DS1 (37) into PSTS front panel (51) from the front.
5. Place indicator cover (63) on indicator DS1 (37) from rear of PSTS front panel (51).
6. Tighten two screws (38) securing indicator cover (63) to indicator DS1 (37).
7. Install lamp board (36) and lens assembly (35), aligning slot in lamp board with index in indicator DS1 (37).
8. Rotate lens assembly (35) 90 degrees until slot in lens assembly is at top. Push lens assembly into indicator DS1 (37) to secure in place.
9. Install seal (34) covering front of indicator DS1 (37).
10. Solder tagged wires to indicator DS1 (37).
11. Place PSTS front panel (51) in PSTS instrument case (1); align mounting holes.
12. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(5) ***Switch-Indicator lamp.*** Remove and replace switch-indicator lamp (43, figure 8-6, sheet 1) from typical switch-indicator S1 (44) as follows:

(a) ***Removal.***

1. Remove seal (40) by peeling away from switch housing.
2. Using fingernail slots, pull out lens assembly (41) to the limit of its travel. Rotate lens assembly 90 degrees.
3. Push lens assembly (41) in to release tension on index keys, then pull lens assembly and lam board (42) out of switch-indicator S1 (44).
4. Remove failed lamp (43) from rear of lamp board (42).

(b) ***Replacement.***

1. Install lamp (43) in lamp board (42) from the rear.
2. Install lamp board (42) and lens assembly (41), aligning index slot in lamp board with index in switch-indicator S1 (44).
3. Rotate lens assembly (41) 90 degress until lens assembly index slot is at top. Push lens assembly into switch-indicator S1 (44) to secure in place.
4. Install seal (40) covering front of switch-indicator S1 (44).

(6) ***Indicator lamp.*** Remove and replace indicator lamp (33, figure 8-6, sheet 1) in typical indicator DS1 (37) as follows:

(a) ***Removal.***

1. Remove seal (34) covering front of indicator DS1 (37) by peeling away from switch housing.
2. Using fingernail slots, pull out lens assembly (35) to the limit of its travel. Rotate lens assembly 90 degrees.
3. Push lens assembly (35) in to release tension on index keys, then pull out lens assembly and lamp board (36).
4. Remove failed lamp (33) from rear of lamp board (36).

(b) ***Replacement.***

1. Install lamp (33) in lamp board (36) from the rear.
2. Install lamp board (36) and lens assembly (35), aligning slot in lamp board with index in indicator DS1 (37).
3. Rotate lens assembly (35) 90 degrees until slot in lens assembly is at top. Push lens assembly into indicator DS1 (37) to secure in place.
4. Install seal (34) covering front of indictor DS1 (37).

(7) ***Switches S2, S3, and S10.*** Remove and replace typical switch S2 (67, figure 8-6, sheet 1) as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to switch S2 (67) connections.
2. Tag and disconnect wires connected to switch S2 (67).
3. Loosen switch S2 (67) counterclockwise with fingers from nut (29). Remove switch S2 (67), lockwasher (65), and washer (66).

(b) ***Replacement.***

1. Screw switch S2 (67) with washer (66) and lockwasher (65) clockwise into nut (29) with fingers until finger tight.

2. Connect switch S2 (67) wires to termination points. Replace spot ties as required.
3. Place PSTS front panel (51) in PSTS instrument case (1). Align mounting holes.
4. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(8) ***Switches S4 thru S9.*** Remove and replace typical switch S4 (68, figure 8-6, sheet 1) as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to switch S4 (68) connections.
2. Tag and unsolder wires from switch S4 (68).
3. Remove nut (27), washer (28), and lockwasher (69), securing switch S4 to PSTS front panel (51). Remove switch S4.

(b) ***Replacement.***

1. Install nut (70) and lockwasher (69) on switch S4 (68).
2. Insert switch S4 (68) in PSTS front panel.
3. Install washer (28) and nut (27) securing switch to front panel.
4. Solder wires to switch S4 (68).
5. Place PSTS front panel (51) in PSTS instrument case (1). Align mounting holes.
6. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(9) ***Switches S11, S12, S13, and S16.*** Remove and replace typical switch S11 (64, figure 8-6, sheet 1) as follows:

(a) ***Removal***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to switch S11 (64) connections.
2. Tag and unsolder wires from switch S11 (64).
3. Release two setscrews (32) securing knob (31) to shaft of switch S11. Remove knob.
4. Remove nut (30) securing switch S11 (64) to PSTS front panel (51). Remove switch S11.

(b) ***Replacement***

1. Insert switch S11 (64) in PSTS front panel (51).
2. Install nut (30) securing switch S11 (64) to PSTS front panel (51).
3. Place knob (31) on switch S11 (64) shaft.
4. Tighten two setscrews (32) securing knob (31) to switch S11 (64) shaft.
5. Solder wires to switch S11 (64).
6. Place PSTS front panel (51) in PSTS instrument case (1). Align mounting holes.
7. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(10) ***Circuit breaker CB1.*** Remove and replace circuit breaker CB1 (9, figure 8-6, sheet 1) as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel (51) far enough to provide access to circuit breaker CB1 (9).
2. Tag and disconnect all wires from circuit breaker CB1 (9).
3. Remove four screws (24) securing circuit breaker CB1 (9) and boot (26) to PSTS front panel (51). Remove circuit breaker CB1 and boot.

(b) ***Replacement.***

WARNING

Isopropyl alcohol is flammable and gives off harmful vapors. Use only in well-ventilated area away from open flames and sparks. Avoid prolonged or repeated inhalation of vapors.

1. Clean threads of four screws (24) with isopropyl alcohol using lint-free material. Wipe dry.
2. Apply sealing compound primer (MIL-S-22473) to threads of four screws (24). Allow to air dry.
3. Apply sealing compound (MIL-S-22473, Grade C) to threads of four screws (24).

4. Insert circuit breaker CB1 (9) and boot (26) in PSTS front panel (51). Align mounting holes.
5. Install four screws (24) securing circuit breaker CB1 (9) and boot (26) to PSTS front panel (51).
6. Connect all wires to circuit breaker CB1 (9).
7. Place PSTS front panel (51) in PSTS instrument case (1). Align mounting holes.
8. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(11) ***Circuit breaker CB2.*** Remove and replace circuit breaker CB2 (13, figure 8-6, sheet 1) as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to circuit breaker CB2 (13).
2. Tag and unsolder wires from circuit breaker CB2 (13).
3. Remove nut (22) and lockwasher (23) securing circuit breaker CB2 (13) to PSTS front panel (51). Remove circuit breaker CB2 and locking tab (12).

(b) ***Replacement.***

1. Insert circuit breaker CB2 (13) with locking tab (12) in PSTS front panel (51).
2. Install lockwasher (23), and nut (22) securing circuit breaker CB2 (13) to PSTS front panel (51).
3. Solder wires to circuit breaker CB2 (13).
4. Place PSTS front panel (51) in PSTS instrument case (1). Align mounting holes.
5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(12) ***Fuseholders XF1, XF2, and XF3.*** Remove and replace typical fuseholder XF1 (25, figure 8-6, sheet 1) as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to fuseholder XF1 (25).
2. Tag and unsolder wires from fuseholder XF1 (25).
3. Remove nut (11) and lockwasher and gasket (10) securing fuseholder XF1 (25) to PSTS front panel (51). Remove fuseholder.

(b) ***Replacement.***

1. Insert fuseholder XF1 (25) in PSTS front panel (51).
2. Install nut (11) and lockwasher and gasket (10) securing fuseholder XF1 (25) to PSTS front panel (51).
3. Solder wires to fuseholder XF1 (25).
4. Place PSTS front panel (51) in PSTS instrument case (1). Align mounting holes.
5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(13) ***Binding post J8 thru J24 and J26 thru J58.*** Remove and replace typical binding post J8 (21, figure 8-6, sheet 1) as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide to binding post J8 (21).
2. Remove electronic component assembly no. 1 A1 (7, figure 8-6, sheet 2) following procedures described in paragraph 8-9d(1)(a).
3. Unsolder resistor R88 (20, figure 8-6, sheet 1) from binding post J8 (21). Do not unsolder resistor R88 and wures from terminal lug (17).
4. Remove nut (19), washer (18), terminal lug (17), and nonmetallic washer (16) securing binding post J8 (21) to PSTS front panel (51). Remove binding post J8.

(b) ***Replacement.***

1. Insert binding post J8 (21) into PSTS front panel (51).
2. Install nut (19), washer (18), terminal lug (17), and nonmetallic washer (16) securing binding post J8 (21) to PSTS front panel (51).
3. Check that shoulder portion of nonmetallic washer (16) is inserted through terminal lug (17) to prevent lug from shorting to binding post J8 (21). Use multimeter to

check for short between lug and binding post J8.

4. Solder resistor R88 (20) to binding post J8 (21).

5. Replace electronic component assembly no. 1 A1 (7, figure 8-6, sheet 2) following procedures described in paragraph 8-9d(1)(b).

6. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

7. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(14) ***Time totalizing meter M1.*** Remove and replace time totalizing meter M1 (60, figure 8-6, sheet 2) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to time totalizing meter M1 (60, figure 8-6, sheet 2).

2. Loosen two screws (56), washers (58), and nuts (59) securing flange (57) and meter M1 (60) to PSTS front panel (51, figure 8-6, sheet 1).

3. Loosen two flange screws (61, figure 8-6, sheet 2) securing meter M1 (60) to flange (57); remove meter M1.

(b) ***Replacement.***

1. Install meter M1 (60) into flange (57), tight against back of PSTS front panel (51, figure 8-6, sheet 1), and using two flange screws (61, figure 8-6, sheet 2), secure flange to meter M1.

2. Center meter M1 (60) in PSTS front panel (51, figure 8-6, sheet 1) opening and secure with two screws (56, figure 8-6, sheet 2), washers (58), and nuts (59).

3. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

4. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

NOTE

The cathode of each relay-mounted diode is always connected to relay terminal X1 identified by a blue bead. In addition, on relay K4 (114, figure 8-6, sheet 3) the cathode of diode CR81 (112) is connected to terminal F2 and the anode to terminal E1. There is no diode mounted on relay K6.

All relays are removed and replaced in the same manner, with the exception of K3 and K41, which will be covered separately. The only difference being the number of screws securing the relay and whether or not it has a diode. The below procedure covers all relays except K3 and K41.

(15) ***Relays K1, K2, K4 thru K40, and K42 thru K45.*** Remove and replace typical relay K1 (117, figure 8-6, sheet 2) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to relay K1 (117, figure 8-6, sheet 3).

2. Remove two screws (115) and washers (116) securing relay K1 (117) to relay bracket no. 1 (138, figure 8-6, sheet 4).

3. Unsolder and remove diode CR1 (118, figure 8-6, sheet 3).

4. Tag and unsolder all wires from relay K1 (117). Remove relay K1.

(b) ***Replacement.***

1. Install and solder connections to diode CR1 (118), observing polarity.

2. Solder all wires to relay K1 (117).

3. Place relay K1 (117) on relay bracket no, 1 (138, figure 8-6, sheet 4).

4. Install two screws (115, figure 8-6, sheet 3) and washers (116) securing relay K1 (117) to relay bracket no. 1 (121, figure 8-6, sheet 4).

5. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

6. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(16) ***Relay K41.*** Remove and replace relay K41 (104, figure 8-6, sheet 3) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front

panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to relay K41 (104, figure 8-6, sheet 3).

2. Remove terminal cover (106) from relay (104) by removing one screw (105).
3. Tag and remove wires from relay that were under cover.
4. Tag and unsolder remaining wires and diode CR21 (107) from relay K41 (104).
5. Remove four screws (101), washers (103), and lockwashers (102) and one cable clamp (108) securing relay K41 (104) to mounting plate (71). Remove relay K41.

(b) ***Replacement.***

1. Install four screws (101), washers (103), and lockwashers (102) and one cable clamp (108) securing relay K41 (104) to mounting plate (71).
2. Solder tagged wires to relay K41 (104).
3. Install and solder leads to diode CR21 (107) to relay K41 (104) terminals, observing polarity.
4. Replace tagged wires under cover.
5. Install screw (105) securing terminal cover (106).
6. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
7. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(17) ***Relay K3.*** Remove and replace relay K3 (81, figure 8-6, sheet 3) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to relay K3 (81, figure 8-6, sheet 3).
2. Tag and remove wires and diode CR9 (80) from relay K3 (81),
3. Remove four screws (74), washers (76), and lockwashers (75) and one cable clamp (82) securing relay K3 (81) to mounting plate (71). Remove relay K3.

(b) ***Replacement.***

1. Install four sccrews (74), washers (76), and lockwashers (75) and one cable clamp (82) securing relay K3 (81) to mounting plate (71).
2. Attach all wires and diode CR9 (80) to relay K3 (81). Observe polarity of diode.
3. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
4. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(18) ***Thermostatic switch S14.*** Remove and redate thermostatic switch S14 (79, figure 8-6, sheet 3), as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to thermostatic switch S14 (79, figure 8-6, sheet 3).
2. Tag and unsolder wires from thermostatic switch S14 (79).
3. Loosen one screw (77) and remove one screw (77) and washer (78) securing thermostatic switch S14 (79) to mounting plate (71). Remove thermostatic switch S14.

(b) ***Replacement.***

1. Place thermostatic switch S14 (79) on mounting late (71) with slotted hole under screw (77).
2. Install one screw (77) and washer (78) securing thermostatic switch S14 (79) to mounting plate (71). Tighten two screws (77).
3. Solder wire to thermostatic switch S14 (79).
4. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(19) ***Thermostatic switch S15.*** Remove and replace thermostatic switch S15 (93, figure 8-6, sheet 3) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel (51) far enough

to provide access to thermostatic switch S15 (93, figure 8-6, sheet 3).

2. Remove 11 screws (83) and washers (84) and two cable clamps (85 and 87) securing power supply plate (88) to mounting plate (71). Remove power supply plate (88) far enough to provide access to screws (89) securing thermostatic switch S15 (93).

3. Loosen one screw (89) and remove one screw (89), lockwasher (95), washer (94), and nut (96) securing thermostatic switch S15 (93) to power supply plate (88).

4. Tag and unsolder wires from thermostatic switch S15 (93). Remove thermostatic switch S15.

(b) Replacement.

1. Place thermostatic switch S15 (93) on power supply late (88) with slotted hole under washer (94). Align mounting holes.

2. Install screw (89), lockwasher (95), washer (94), and nut (96) securing thermostatic switch S15 (93) to power supply plate (88). Tighten two screws (89) and nuts (96).

3. Solder wires to thermostatic switch S15 (93).

4. Place power supply plate (88) on mounting plate (71). Align mounting holes.

5. Install 11 screws (83) and washers (84) and two cable clamps (85 and 87) securing power supply plate (88) to mounting plate (71).

6. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1).

7. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

NOTE

Power supplies PS1, PS2, and PS3 are all removed and replaced in the same manner except PS3 has no resistor and has six screws securing it instead of four. Typical example of all three is shown below using power supply PS1.

(20) ***Power supply PS1.*** Remove and replace power supply PS1 (100, figure 8-6, sheet 3), as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to power supply PS1 (100, figure 8-6, sheet 3).

2. Tag and unsolder wires and resistor R114 (99) from power supply PS1 (100).

3. Remove 11 screws (83) and washers (84) and two cable clamps (85 and 87) securing power supply plate (88) to mounting plate (71). Remove power supply plate far enough to provide access to screws (86) securing power supply PS1 (100) to power supply plate.

4. Remove four screws (86) securing power supply (100) to power supply plate (88). Remove power supply PS1.

(b) Replacement.

WARNING

Isopropyl alcohol is flammable and gives off harmful vapors. Use only in well-ventilated area away from open flames and sparks. Avoid prolonged or repeated inhalation of vapors.

1. Clean threads of four screws (86) using isopropyl alcohol and lint- free material; wipe dry.

2. Apply sealing compound primer (MIL-S-22473) to threads of four screws (86). Allow to air dry.

3. Apply sealing compound (MIL-S-22473, Grade C) to threads of four screws (86).

4. Place power supply PS1 (100) on power supply plate (88). Align mounting holes.

5. Install four screws (86) securing power supply PS1 (100) to power supply plate (88).

6. Place power supply plate (88) on mounting plate (71). Align mounting holes.

7. Install 11 screws (83) and washers (84) and two cable clamps (85 and 87) securing power supply plate (88) to mounting plate (71).

8. Install and solder wires and leads of resistor R114 (99) to terminals of power supply PS1 (100).

9. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

10. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(21) ***Diode CR40.*** Remove and replace diode CR40 (161, figure 8-6, sheet 4), as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to diode CR40 (161, figure 8-6, sheet 4).
2. Unsolder wire from CR40 (161).
3. Remove two screws (159) and washers (160) securing diode plate (165) to relay bracket no. 2 (183). Remove diode plate (165) far enough to provide access to connections and mounting hardware for diode CR40 (161).
4. Remove nut (169), lockwasher (168), washer (167), two mica washers (163 and 166), heat shrinkable tubing (164), and lug (162) securing diode CR40 (161) to diode plate (165). Remove diode CR40 from diode plate. Do not unsolder wires from lug.

(b) Replacement.

1. Cut a length of heat-shrinkable tubing (164), (MIL-I-23053/5A) sufficient to insulate diode CR40 (161) from diode plate (165).
2. Install lug (162), mica washer (163), and heat-shrinkable tubing (164) on stud of diode CR40 (161). Shrink the heat-shrinkable tubing.
3. Place diode CR40 (161) in diode plate (165).
4. Install mica washer (166), washer (167), lockwasher (168), and nut (169) securing diode CR40 (161) to diode plate (165).

NOTE

Check that there is no continuity between conductive materials separated by mica washers to ensure mica washer has not been damaged during assembly.

5. Solder wire to diode CR40 (161).
6. Place diode plate (165) on relay bracket no. 2 (183), Align mounting holes.
7. Install two screws (159) and washers (160) securing diode plate (165) to relay bracket no. 2 (183).
8. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
9. Install 20 screws (49) and washers (50) securing PST front panel (51) to PSTS instrument case (1).

(22) *Diodes CR54, CR55, CR90, and CR101.* Remove and replace typical diode CR54 (151, figure 8-6, sheet 4) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to diode CR54 (151, figure 8-6, sheet 4).
2. Tag and unsolder wires from diode CR54 (151). (Do not unsolder wires from lug.)
3. Remove nut (158), lockwasher (157), washer (156), two mica washers (153 and 155), heat-shrinkable tubing (154), and lug (152) securing diode CR54 (151) to relay bracket no. 1 (138). Remove diode CR54.

(b) Replacement.

1. Cut a length of heat-shrinkable tubing (137) (MIL-I-23053/5A) sufficient to insulate diode CR54 (151) stud from relay bracket no. 1 (138).
2. Install lug (152), mica washer (153), and heat-shrinkable tubing (154) on dode CR54 (151) stud. Shrink heat-shrinkable tubing.
3. Place diode CR54 (151) in relay bracket no. 1 (138).
4. Install mica washer (155), washer (156), lockwasher (157), and nut (158) securing diode CR54 (151) to relay bracket no. 1 (138).

NOTE

Check that there is no continuity between conductive materials separated by mica washers to ensure mica washer has not been damaged during assembly.

5. Solder wires to diode CR54 (151).
6. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
7. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(23) ***Diodes VR6, VR11, and VR21.*** Remove and replace typical diode VR11 (147, figure 8-6, sheet 4) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to diode VR11 (147, figure 8-6, sheet 4).
2. Tag and unsolder wires from diode VR11 (147). (Do not unsolder wires from lug.)
3. Remove nut (177), lockwasher (176), washer (175), two mica washers (149 and 174), heat-shrinkable tubing (150), and lug (148) securing diode VR11 (147) to relay bracket no. 1 (138). Remove diode VR11.

(b) ***Replacement.***

1. Cut length of heat-shrinkable tubing (150) (MIL-I-23053/5A) sufficient to insulate diode VR11 (147) stud from relay bracket no. 1 (138).
2. Install lug (148), mica washer (149), and heat-shrinkable tubing (150) on diode VR11 (147) stud.
3. Place diode VR11 (147) in relay bracket no. 1 (138).
4. Install mica washer (174), washer (175), lockwasher (176), and nut (177) securing diode VR11 (147) to relay bracket no. 1 (138).

NOTE

Check that there is no continuity between conductive materials separated by mica washers to ensure mica washer has not been damaged during assembly.

5. Solder wires to diode VR11 (147).
6. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
7. Install 20 screws (49) and washers (50) securing PSTS front panel (57) to PSTS instrument case (1).

(24) ***Diodes VR5, VR9, and VR10.*** Remove and replace typical diode VR9 (181, figure 8-6, sheet 4) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to diode VR9 (181, figure 8-6, sheet 4).
2. Tag and unsolder wires from diode VR9 (181). (Do not unsolder wire from lug.)
3. Remove two screws (142), six washers (141, 141.1, and 180), one lug (140), two washers (139), one insulator (182), two lockwashers (179), and two nuts (178) securing diode VR9 (18 1) to relay bracket no. 1 (138). Remove diode VR9.

(b) Replacement.

1. Place diode VR9 (181) in relay bracket no. 1 (138).
2. Install two screws (142), six washers (141, 141.1, and 180), one lug (140), two washers (139), one insulator (182), two lockwashers (179), and two nuts (178) securing diode VR9 (181) to relay bracket no. 1 (138).
3. Solder wires to diode VR9 (181).
4. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(25) ***Resistors R3, R4, R66 thru R71, and R129.*** Remove and replace typical resistor R71 (129, figure 8-6, sheet 3) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to resistor R71 (129, figure 8-6, sheet 3).
2. Tag and unsolder wires from resistor R71 (129).
3. Remove two screws (127), washers (128 and 130), lockwashers (131), and nuts (132) securing resistor R71 (129) to relay bracket no. 1 (138, figure 8-6, sheet 4. Remove resistor R71.

(b) ***Replacement.***

1. Place resistor R71 (129, figure 8-6, sheet 3) on relay bracket no. 1 (138, figure 8-6, sheet 4). Align mounting holes.
2. Install two screws (127, figure 8-6, sheet 3), two washers (128), two washers (130),

two lockwashers (131), and two nuts (132) securing resistor R71 (129) to relay bracket no. 1 (138, figure 8-6, sheet 4).

3. Solder wires to resistor R71 (129, figure 8-6, sheet 3).

4. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(26) ***Resistors R21 and R33.*** Remove and replace typical resistor R33 (135, figure 8-6, sheet 3) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to resistor R33 (135, figure 8-6, sheet 3).

2. Tag and unsolder wires from resistor R33 (135).

3. Remove two screws (133) and washers (34) securing resistor R33 (135) to mounting plate (71). Remove resistor R33 from mounting plate.

(b) ***Replacement.***

1. Place, resistor R33 (135) on mounting plate (71). Align mounting holes.

2. Install two screws (133) and washers (134) securing resistor R33 (135) to mounting plate (71).

3. Solder wires to resistor R33 (135).

4. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(27) ***Capacitors C13 and C14.*** Remove and replace typical capacitor C14 (73, figure 8-6, sheet 3) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to capacitor C14 (73, figure 8-6, sheet 3).

2. Tag and unsolder wires connected to capacitor C14 (73).

3. Remove capacitor C14 (73) from spring tension clips (137).

(b) ***Replacement.***

1. Install capacitor C14 (73) in spring tension clip (137).

2. Install heat-shrinkable tubing on capacitor (73) leads.

3. Solder wires to capacitor C14 (73).

4. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(28) ***Capacitors C18 and C19.*** Remove and replace typical capacitor C18 (14, figure 8-6, sheet 2) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to capacitor C18 (14, figure 8-6, sheet 2).

2. Tag and unsolder wires connected to capacitor C18 (14).

3. Remove capacitor C18 (14) from termial board (15) spring clips.

(b) Replacement.

1. Install capacitor C18 (14) in terminal board (15) spring clips.

2. Solder wires to capacitor C18 (14).

3. Place PSTS front panel (51. figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

4. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(29) Insulated stud terminal E1. Remove and replace insulated stud terminal E1 (72, figure 8-6, sheet 3) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to

provide access to insulated stud terminal E1 (72, figure 8-6, sheet 3).

2. Tag and unsolder wires from insulated stud terminal E1 (72).

3. Remove insulated stud terminal E1 (72) by unscrewing from mounting plate (71).

(b) ***Replacement.***

1. Discard mounting hardware supplied with insulated stud terminal E1 (71).

2. Install insulated stud terminal E1 (72) by screwing into threaded hole in mounting plate (71).

3. Solder wires to insulated stud terminal E1 (72).

4. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(30) ***Insulated terminals E2 thru E29.*** Remove and replace typical insulated terminal E2 (136, figure 8-6, sheet 3) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to insulated terminal E21 136, figure 8-6, sheet 3).

2. Loosen six latches securing back cover; remove back cover.

3. Remove three screws (193, figure 8-6, sheet 5) and washers (194) securing no. 3 shroud (191) to mounting plate (195).

4. Remove screw (185), one washer (184), spacer (230), one washer (227), lockwasher (226), and nut (225) securing no. 3 shroud (191) to resistor mounting bracket no. 4 (228).

5. Remove screw (198) and washer (197) securing no. 3 shroud (191) to fan mounting bracket (196). Remove no. 3 shroud (191).

6. Loosen screw (187) and washer (188) securing R10 mounting bracket (189) to mounting base.

7. Remove screw (190), washer (192), centering washer (208), and mica washer (207) securing resistor R10 (206) to resistor mounting bracket no. 5 (203) and resistor mounting plate no. 2 (202); displace resistor to gain access.

8. Tag and unsolder wires from exposed ends of insulated terminal E2 (136, figure 8-6, sheet 3).

9. Remove insulated terminal E2 (136) by unscrewing from front of mounting plate (71).

(b) Replacement.

1. Discard nut and lockwasher received with insulated terminal E2 (136).

WARNING

Isopropyl alcohol is flammable and gives off harmful vapors. Use only in well-ventilated area away from open flames and sparks. Avoid prolonged or repeated inhalation of vapors.

2. Clean threads of insulated terminal E2 (136) using isopropyl alcohol and lint-free material. Wipe dry.

3. Apply sealing compound primer (MIL-S-22473) to threads of insulated terminal E2 (136). Allow to air dry.

4. Apply sealing compound (MIL-S-22473, Grade C) to threads of insulated terminal E2 (136).

5. Install insulated terminal E2 (136) by screwing into threaded hole from front of mounting plate (71).

6. Solder wires to both ends of insulated terminal E2 (136).

7. Install centering washer (204, figure 8-6, sheet 5) and mica washer (205) on lower end of resistor R10 (206).

8. Install screw (190), washer (192), centering washer (208), and mica washer (207) securing resistor R10 (206) to resistor mounting plate bracket no. 5 (203) and resistor mounting plate no. 2 (202).

NOTE

Check terminals of R10 to insure they are not shorted to adjacent resistors or mounting bracket. Check that there is no continuity between conductive materials separated by mica washers to ensure mica washer has not been damaged during assembly.

9. Tighten screw (187) and washer (188) securing R10 mounting bracket (189) to mounting base.
10. Tighten resistor mounting bracket screw securing mounting bracket (203) to mounting plate (71, figure 8-6, sheet 3).
11. Install three screws (193, figure 8-6, sheet 5) and washers (194) securing shroud no. 3 (191) to mounting plate (71, figure 8-6, sheet 3).
12. Install screw (185, figure 8-6, sheet 5), washer (184), spacer (230), washer (227), lockwasher (226), nut (225) securing no. 3 shroud (191) to resistor mounting bracket no. 4 (228).
13. Install screw (198) and washer (197) securing no. 3 shroud (191) to fan mounting bracket (196).
14. Install back cover and secure with six latches.
15. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
16. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(31) ***Resistors R5, R9 thru R15, R18 thru R20, and R82 thru R87.*** Remove and replace typical resistor R10 (206, figure 8-6, sheet 5) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel.
2. Loosen six latches securing back cover; remove back cover.
3. Remove three screws (193, figure 8-6, sheet 5) and washers (194) securing no. 3 shroud (191) to mounting plate (71, figure 8-6, sheet 3).
4. Remove screw (185, figure 8-6, sheet 5), washer (184), spacer (230), washer (227), lockwasher (226), and nut (225) securing no. 3 shroud to resistor mounting bracket no. 4 (228).
5. Remove screw (198) and washer (197) securing no. 3 shroud (191) to fan mounting bracket (196). Remove no. 3 shroud.
6. Remove screw (190), washer (192), centering washer (208), mica washer (207), mica washer (205), and centering washer (204) securing resistor R10 (206) to resistor mounting bracket no. 5 (203) and resistor mounting plate no. 2 (202); remove resistor.
7. Tag and unsolder wires from resistor R10 (206).

(b) ***Replacement.***

1. Discard nut and lockwasher supplied with resistor R10 (206).
2. Solder wires to resistor R10 (206).
3. Install centering washer (204) and mica washer (205) on lower end of resistor R10. (206).
4. Install screw (190), washer (192), centering washer (208), mica washer (207), mica washer (205), and centering washer (204) securing resistor R10 to resistor mounting bracket no. 5 (203) and resistor mounting plate no. 2 (202).

NOTE

Check that there is no continuity between conductive materials separated by mica washers to ensure mica washer has not been damaged during assembly.

5. Install three screws (193) and washers (194) securing shroud no. 3 (191) to mounting plate (71, figure 8-6, sheet 3).
6. Install screw (185, figure 8-6, sheet 5), washer (184), spacer (230), washer (227), lockwasher (226), and nut (225) securing shroud no. 3 (191) to resistor mounting bracket no. 4 (228).
7. Install screw (198) and washer (197) securing shroud no. 3 (191) to fan mounting bracket (196).
8. Install back cover and secure with six latches.
9. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
10. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(32) ***Resistors R6 thru R8, R16, and R17.*** Remove and replace typical resistor R6 (224, figure 8-6, sheet 5) as follows:

(a) ***Removal.***

1. Remove 20 screws (49, figure 8-6, sheet 1) and washers (50) securing PSTS front

panel (51) to PSTS instrument case (1). Remove PSTS front panel.

2. Loosen six latches securing back cover; remove back cover.

3. Remove screw (211, figure 8-6, sheet 5), washer (212), spacer (214), washer (218), lockwasher (219), and nut (220) securing shroud no. 2 (213) to resistor mounting bracket no. 2 (217).

4. Remove screw (209) and washer (210) securing shroud no. 2 (213) to resistor mounting plate no. 2 (202). Remove shroud no. 2.

5. Remove screw (215), washer (216), mica washer (222), and centering washer (221) securing resistor R6 (224) to resistor mounting bracket no. 2 (217) and resistor mounting plate no. 1 (223). Remove resistor.

6. Tag and unsolder wires from resistor R6 (224).

(b) ***Replacement.***

1. Discard nut and washer supplied with resistor (224).

2. Solder wires to resistor R6 (224).

3. Install centering washer (231) and mica washer (229) on upper end of resistor R6 (224).

4. Install screw (215), washer (216), mica washer (222), and centering washer (221) securing resistor R6 (224) to resistor mounting bracket no. 2 (217), and resistor mounting plate no. 1 (223).

NOTE

Check that there is no continuity between conductive materials separated by mica washers to ensure mica washer has not been damaged during assembly.

5. Install screw (211), washer (212), spacer (214), washer (218), lockwasher (219, and nut (220) securing shroud no. 2 (213) to resistor mounting plate no. 2 (202).

6. Install screw (209) and washer (210) securing shroud no. 2 (213) to resistor mounting plate no. 2 (202).

7. Install back cover and secure with six latches.

8. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.

9. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(33) ***Axial fan B1.*** Remove and replace axial fan B1 (199, figure 8-6, sheet 5) as follows:

(a) ***Removal.***

1. Loosen six latches securing back cover; remove back cover.

2. Tag and remove wires from axial fan B1 (199).

3. Release four screws (200) and rotate four rim clenching clamps (201) securing axial fan B1 (199) to fan mounting bracket (196) 180 degrees. Remove axial fan B1 (199).

(b) ***Replacement.***

1. Place fan on fan mounting bracket (196).

2. Rotate four rim clenching clamps (201) to engage edge of fan housing.

3. Tighten four screws (200) to secure axial fan B1 (199) to fan mounting bracket (196).

4. Attach wires to axial fan B1 (206).

5. Install back cover and secure with six latches.

(34) ***Electronic component assembly no. 1 A1.*** Repair of electronic component assembly no. 1 A1 (7, figure 8-6, sheet 2) consists of replacing selected failed components using standard shop practices. Component locations are shown in figure 8-7. Refer to paragraph 8-9d(1) for removal of electronic component assembly no. 1 A1.

(35) ***Electronic component assembly no. 2 A2.*** Repair of electronic component assembly no. 2 A2 (126, figure 8-6, sheet 3) consists of replacing individual failed components by standard shop practice. Component locations are shown in figure 8-8. To provide access to electronic assembly no. 2 A2 (126, figure 8-6, sheet 3), the PSTS front panel (51, figure 8-6, sheet 1) must be removed. Remove and replace the PSTS front panel as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

2. Remove PSTS front panel (51) far enough to provide access to electronic assembly no. 2 A2 (126, figure 8-6, sheet 3).

(b) ***Replacement.***

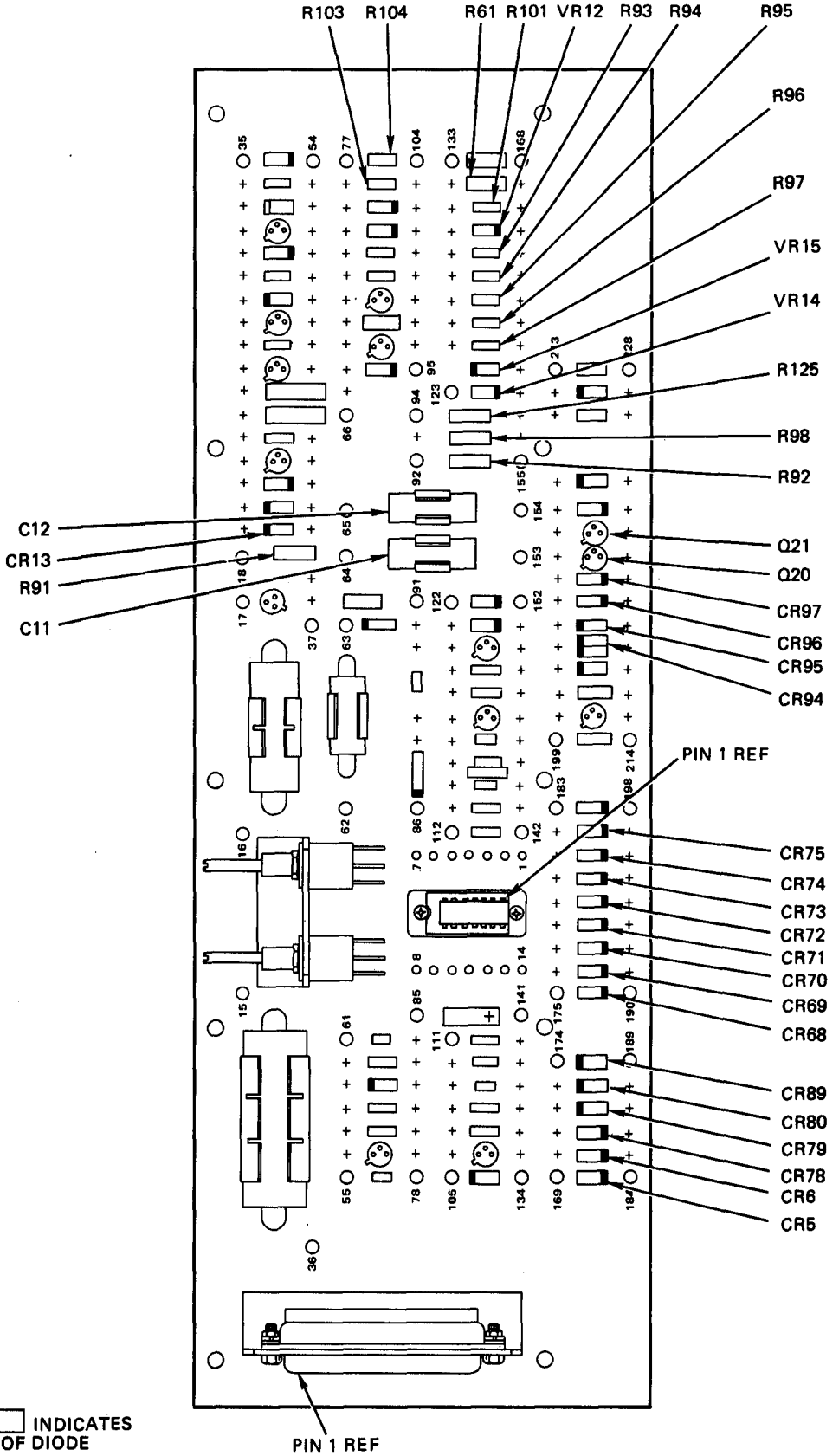


Figure 8-7. Component Assembly No. 1 A1 Parts Location Diagram

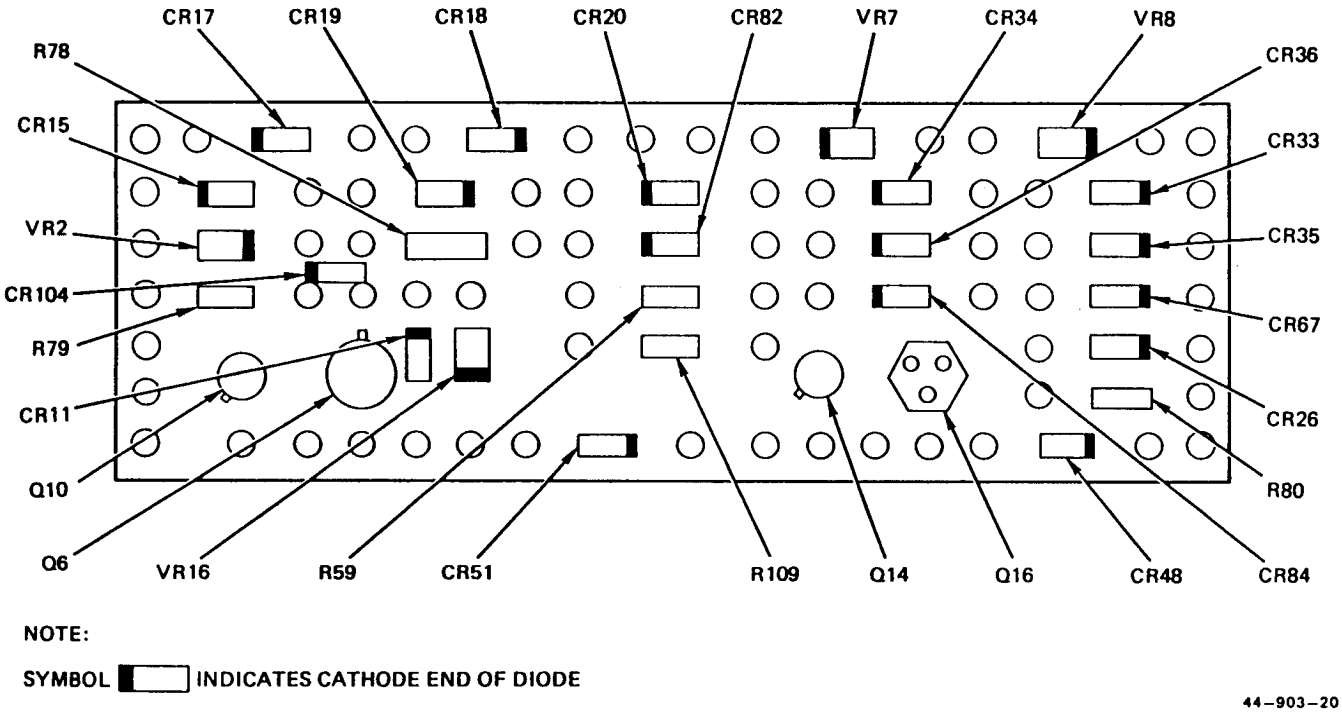


Figure 8-8. Electronic Component Assembly No. 2 A2 Parts Location Diagram

1. Place PSTS front panel (51, figure 8-6, sheet 1) in PSTS instrument case (1). Align mounting holes.
2. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

(36) ***Connectors J1 thru J7.*** Remove and replace typical connector J1 (52, figure 8-6, sheet 1) as follows:

(a) ***Removal.***

1. Remove 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1). Remove PSTS front panel far enough to provide access to connector J1 (52) .
2. Tag and remove wires from connector J1 (52). (Do not unsolder wires from lug.)
3. Remove four nuts (55), washers (54), screws (48), and one terminal lug W13 (53) securing connector J1 (52) to PSTS front panel 51). Remove connector.

(b) ***Replacement.***

1. Replace connector J1 (52) in PSTS front panel (51).
2. Install four screws (48), washers (54), nuts (55), and one terminal lug W13 (53) securing connector J1 (52) to PSTS front panel (51).
3. Replace wires on connector J1 (52).
4. Place PSTS front panel (51) in PSTS instrument case (1). Align mounting holes.
5. Install 20 screws (49) and washers (50) securing PSTS front panel (51) to PSTS instrument case (1).

e. ***PSTS Adjustments.*** The PSTS adjustments consist of adjusting two modular power supplies to their specified output voltage, adjusting two timer circuits to their specified times, and adjusting a current limiter circuit. All adjustments should be performed every 90 days. Make sure +28V power source is turned off. Connect the PSTS to the +28V power source with cable W311 (see figure 8-4). Check that polarity is correct. Connect cable W301 connector P2 to PSTS connector J3 and cable W302 connector P2 to PSTS connector J2. Leave other end of cables disconnected. See figure 8-9 for location of adjustments and perform adjustment procedures in accordance with the following paragraphs.

(1) ***Modular power supply PS1 voltage adjustment.*** Perform voltage adjustment of modular power supply PS1 as follows:

(a) Turn on +28V power source and set INPUT POWER PSTS circuit breaker to ON.

(b) Press POWER SUPPLY TEST SET ON switch-indicator to on (switch-indicator lights).

(c) Connect digital voltmeter (DVM) test leads to SELF TEST +28V and SELF TEST PWR RTN test jacks.

(d) Ensure that DVM indicates +28V. If not, adjust +28V power source for +28V.

(e) Connect DVM positive test lead to power supply PSI terminal 4 and negative test lead to power supply PS1 terminal 3.

NOTE

Prior to making voltage adjustments, take cover off the adjustment screw.

(f) Adjust modular power supply PS1 voltage adjustment for -28 (±1)V.

(g) Place cover back on adjustment screw and disconnect DVM test leads.

(h) Press POWER SUPPLY TEST SET ON switch-indicator to off (switch-indicator goes off).

(i) Set INPUT POWER PSTS circuit breaker to OFF.

(2) ***Modular power supply PS2 voltage adjustment.*** Perform voltage adjustment of modular power supply PS2 as follows:

(a) Set INPUT POWER PSTS circuit breaker to ON.

(b) Press POWER SUPPLY TEST SET ON switch-indicator to on (switch-indicator lights).

(c) Connect DVM test leads to SELF TEST +28V and SELF TEST PWR RTN test jacks.

(d) Ensure that DVM indicates +28V. If not, adjust +28V power source for +28V.

(e) Connect DVM test leads to SELF TEST +10V and SELF TEST PWR RTN test jacks.

NOTE

Prior to making voltage adjustments, take cover off the adjustment screw.

(f) Adjust modular power supply PS2 voltage adjustment for +10 (+ 0.1, -0.2)V.

(g) Place cover back on adjustment screw and disconnect DVM test leads.

(h) Connect DVM test leads to SELF TEST -10V and SELF TEST PWR RTN test jacks. Observe that DVM indicates -9.8 to - 10.1 V.

(i) Press POWER SUPPLY TEST SET ON switch-indicator to off (switch-indicator goes off).

(j) Set INPUT POWER PSTS circuit breaker to OFF.

(3) ***1-minute timer adjustment.*** Perform 1-minute timer adjustment as follows:

(a) Set INPUT POWER PSTS circuit breaker to ON.

(b) Press POWER SUPPLY TEST SET ON switch-indicator to on (switch-indicator lights).

(c) Connect DVM test leads to SELF TEST +28V and SELF TEST PWR RTN test jacks.

(d) Ensure that DVM indicates +28V. If not, adjust +28V power source for +28V.

(e) Set MODE switch to NO LOAD.

(f) Set FUNCTION switch to PS+17V.

(g) Set REFERENCE AMB TEMP switch to +8 VDC.

(h) Set SELF TEST switch to SWITCHES.

(i) If necessary, reset the OVERLOAD FAIL switch-indicator.

(j) Connect DVM test leads to SELF TEST TIMER 1 MIN and SELF TEST PWR RTN test jacks.

(k) While observing DVM, set SELF TEST switch to TIMERS. DVM indicates 0.0 to +1.0V for 50 to 70 seconds, then goes to greater than +20V. If necessary, adjust resistor A1R44 for desired time interval. OVERTEMP indicator will also light.

(l) Disconnect DVM test leads.

(m) Press POWER SUPPLY TEST SET ON switch-indicator to off (switch-indicator goes off).

(n) Set INPUT POWER PSTS circuit breaker to OFF.

(4) ***2-second timer adjustment.*** Perform 2-second timer adjustment as follows:

(a) Set INPUT POWER PSTS circuit breaker to ON.

(b) Press POWER SUPPLY TEST SET ON switch-indicator to on (switch-indicator lights).

(c) Connect DVM test leads to SELF TEST +28V and SELF TEST PWR RTN test jacks.

(d) Ensure that DVM indicates +28V, If not, adjust +28V power source for +28V.

(e) Connect DVM test leads to SELF TEST TIMER 2 SEC and SELF TEST PWR RTN test jacks.

(f) Set SELF TEST switch to TIMERS.

(g) Set MODE switch to OVERLOAD.

NOTE

The OVERLOAD FAIL switch-indicator must be momentarily pressed to reset circuitry each time 2-second timer is initiated.

(h) While observing DVM, press and hold INITIATE switch. DVM indicates greater than +20V for 1.8 to 2.2 seconds. If necessary, adjust resistor A1R37 for desired time interval. OVERLOAD FAIL switch-indicator also lights.

(i) Release INITIATE switch.

(j) Disconnect DVM test leads.

(k) Press POWER SUPPLY TEST ON switch-indicator to off (switch-indicator goes off).

(l) Set INPUT POWER PSTS circuit breaker to OFF.

(5) ***Current limiter adjustment.*** Perform current limiter adjustment as follows:

(a) Set INPUT POWER PSTS circuit breaker to ON.

(b) Press POWER SUPPLY TEST SET ON switch-indicator to on (switch-indicator lights.)

(c) Connect DVM test leads to SELF TEST +28V and SELF TEST PWR RTN test jacks.

(d) Ensure that DVM indicates +28V. If not, adjust +28V power source for +28V.

(e) Connect DVM positive test lead to SELF TEST CUR SOURCE test jack and negative test lead to SELF TEST PWR RTN test jack.

(f) Connect jumper lead between SELF TEST CUR SOURCE test jack and 1 OHM test jack.

(g) Set MODE switch to OVERLOAD.

NOTE

Take reading within 10 seconds after setting SELF TEST switch to LOAD-OVERLOAD. To repeat test, set SELF TEST switch to OFF for 1 minute, then return to LOAD-OVERLOAD.

(h) Set FUNCTION switch to PS + 17V.

(i) Set SELF TEST switch to LOAD-OVERLOAD.

(j) Adjust resistor A3R119 for 1.65 (±0.15)V indication.

(k) Press POWER SUPPLY TEST SET ON switch-indicator to off (switch-indicator goes off).

(l) Set INPUT POWER PSTS circuit breaker to OFF.

(m) Disconnect test leads.

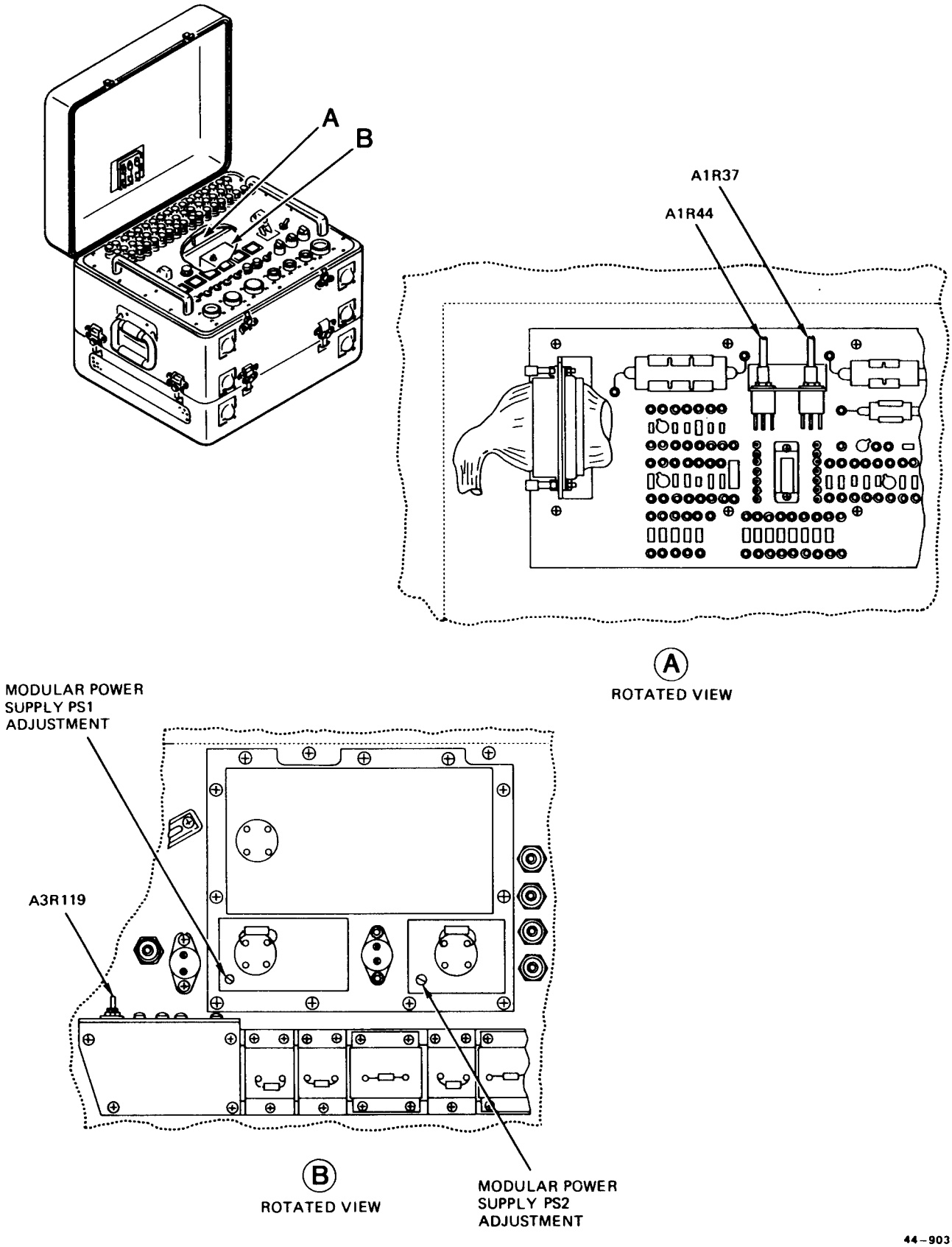


Figure 8-9. Power Supply Test Set Adjustments Location Diagram

Section V. GENERAL SUPPORT TESTING PROCEDURES

8-10. General. General support testing of the PSTS consists of performing the self-test procedure contained in table 8-5. Refer to paragraphs 8-7 and 8-8 for an explanation on the use of table 8-5.

8-11. Repair Criteria.

a. PSTS. The PSTS has been successfully repaired if it passes the test procedure of table 8-5 and visual inspection reveals no defects which might impair operation.

b. ***Cables.*** Cables have been successfully repaired if they pass a continuity and short test of all conductors and visual inspection reveals no defects which might impair operation.

Section VI. CABLE AND CONNECTOR REPAIR

8-12. Cable and Connector Repair.

a. ***General.*** Cable repair consists of connector pin replacement, terminal lug replacement, and repair of broken wires by substituting wires. Connectors are repaired by pin replacement.

(1) Connector pins are replaced from the connector rear. Remove the appropriate covers and panels to obtain access to chassis-mounted connectors. The backshell must be disassembled for cable connectors.

(2) After access is obtained, remove the defective pin and cut off the wire. Prepare the wire and crimp a new pin on the wire. If the newly prepared wire is too short, there are usually spare wires in cables. Insert the new pin into the connector and reassemble the equipment.

(3) Procedures for backshell disassembly/assembly, pin removal and replacement, crimping tool operation, and lug replacement are given in the following paragraphs.

b. ***Backshell Disasssembly/Assembly.*** Two nearly identical styles of backshells are used with the PSTS cable connectors. Connectors may differ in minor details such as the use of shields, etc. Adapt procedures as appropriate for the particular connector. Use a strap wrench to loosen or tighten backshell components. To loosen or tighten backshell components, mate the connector to a chassis-mounted connector. See figure 8-10 for proper use of the strap wrench.

CAUTION

Use of pliers, pipe wrench, etc. to loosen or tighten backshell components may damage the connector.

(1) Disassembly. See figure 8-11 and disassemble backshell as follows:

(a) Slide cable marker away from connector to allow clearance for disassembly.

(b) Loosen two screws securing cable clamps to cable. Remove any tape, etc., which may prevent ring from sliding.

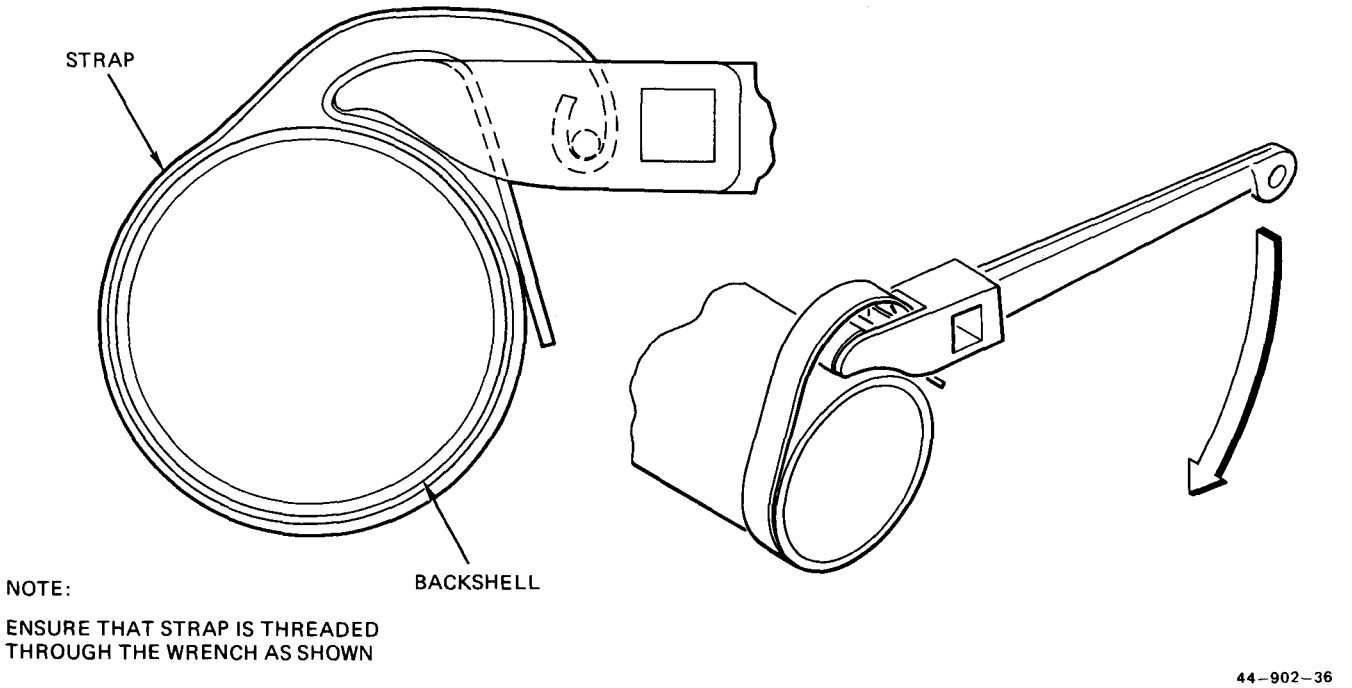


Figure 8-10. Backshell Strap Wrench

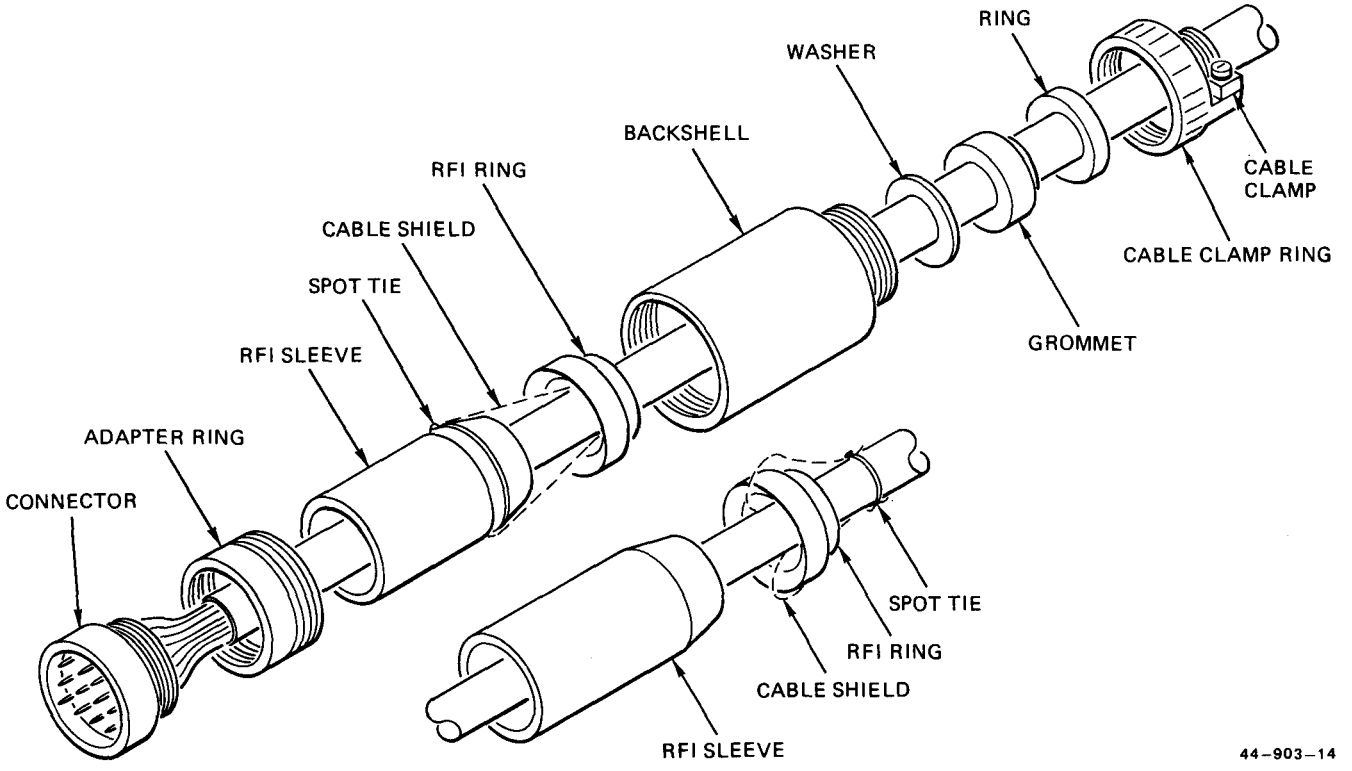


Figure 8-11. Straight Backshell Disassembly/Assembly

(c) Unscrew cable clamp ring from backshell. Slide cable clamp ring away from connector.

(d) Carefully pull ring, rubber grommet, and washer out of backshell and slide away from connector.

(e) Unscrew backshell from adapter ring and slide away from connector.

CAUTION

Different shield terminations are used with different backshells. Do not damage shield.

(f) Slide RFI ring away from connector.

(g) Carefully manipulate the shield and slide the RFI sleeve a short distance away from adapter ring.

(h) Unscrew adapter ring from connector and expose rear of connector.

(2) ***Assembly.*** See figure 8-11 and assemble backshell as follows:

(a) Screw adapter ring onto connector.

(b) Slide RFI sleeve against rear of adapter ring.

NOTE

If shields originally were terminated differently than shown, they may be reterminated as they were originally or as shown.

There may be grounded wires from the connector which must be terminated with the shield.

Different shield terminations are shown for the different RFI sleeves and rings.

The shield should be spot tied around the RFI sleeve or cable as appropriate.

(c) Terminate cable shield against RFI sleeve with RFI ring.

(d) Slide backshell over RFI sleeve and screw onto adapter ring.

(e) Slide washer, rubber grommet, and ring into end of backshell.

(f) Screw cable clamp ring onto rear of backshell. Tighten enough to encompass rubber grommet.

(g) Tighten screws to tighten cable clamp around cable.

c. ***Removal/Insertion.***

(1) ***Tools and contact pins.*** Refer to table 8-6 for correct size and sex contact pin and the correct size insertion and removal tools are shown in figure 8-12.

CAUTION

Use of wrong size insertion or removal tool may damage the connector beyond repair.

(2) ***Removal.***

NOTE

Bent pins must be straightened before removal.

(a) Clip removal tool around wire connected to pin to be removed. See figure 8-13.

(b) Slide tool down wire until it enters the connector grommet.

(c) Carefully work the tool over the contact barrel until it hits the contact shoulder.

(d) Simultaneously pull the tool and wire out the rear of the connector.

(e) Disengage the tool from the contact pin.

(3) ***Insertion.***

(a) Clip insertion tool around wire the slide tool against contact shoulder. See figure 8-14, view A.

(b) Guide the contact into the correctly numbered grommet hole in the rear face of the insert and feed the contact carefully into the hole. See figure 8-14, view B.

(c) Push the tool straight in at right angles to the grommet surface, until contact is fully seated and you feel the contact retention clip snap into place on the contact with a slight audible click.

CAUTION

Do not attempt to reseat a contact once the insertion tool has been removed. Remove contact and start over again.

(d) Withdraw the tool, keeping it perpendicular to the grommet face. Check the contact by pulling on wire lightly to assure contact is firmly locked.

d. ***Crimping Tool Operation.***

(1) ***General.*** Two types of crimping tools and positioners are used depending on the contact pin size. (See figure 8-15 and 8-16.) Refer to

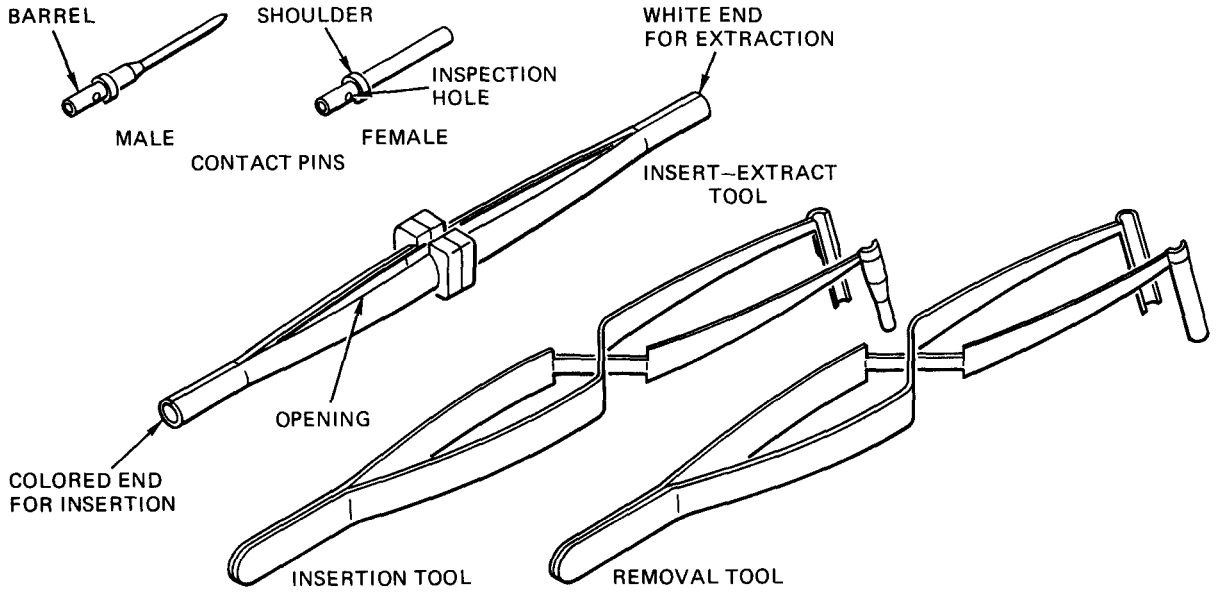


Figure 8-12. Contact Pins and Insertion and Removal Tools

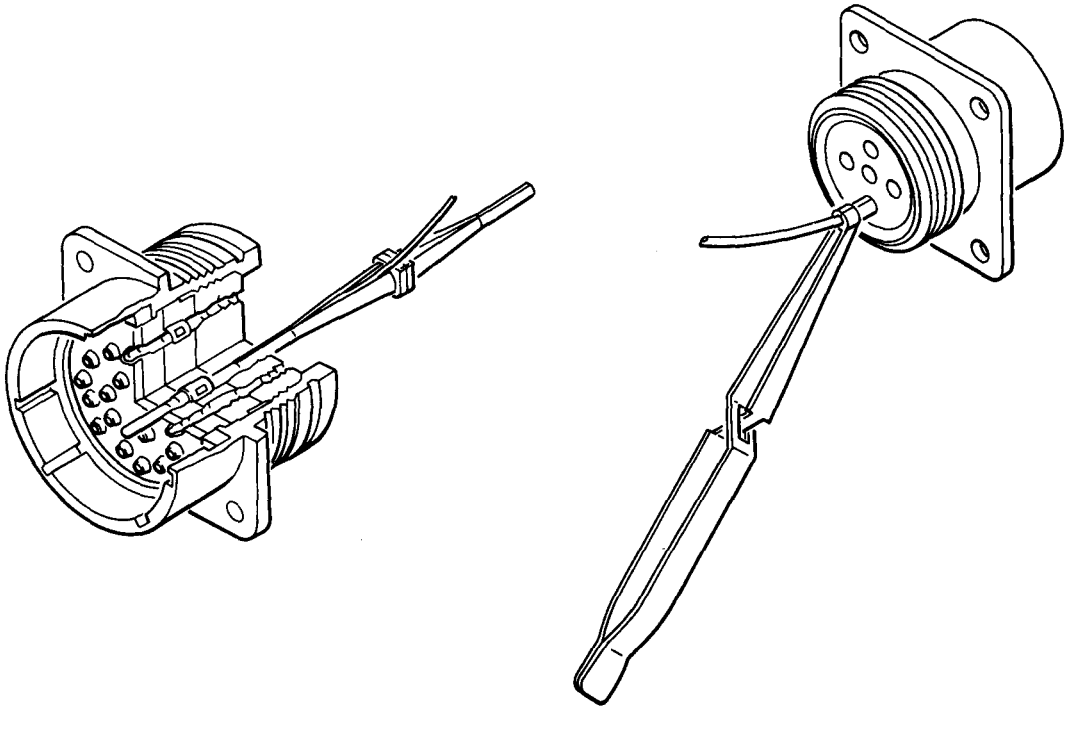


Figure 8-13. Contact Pin Removal

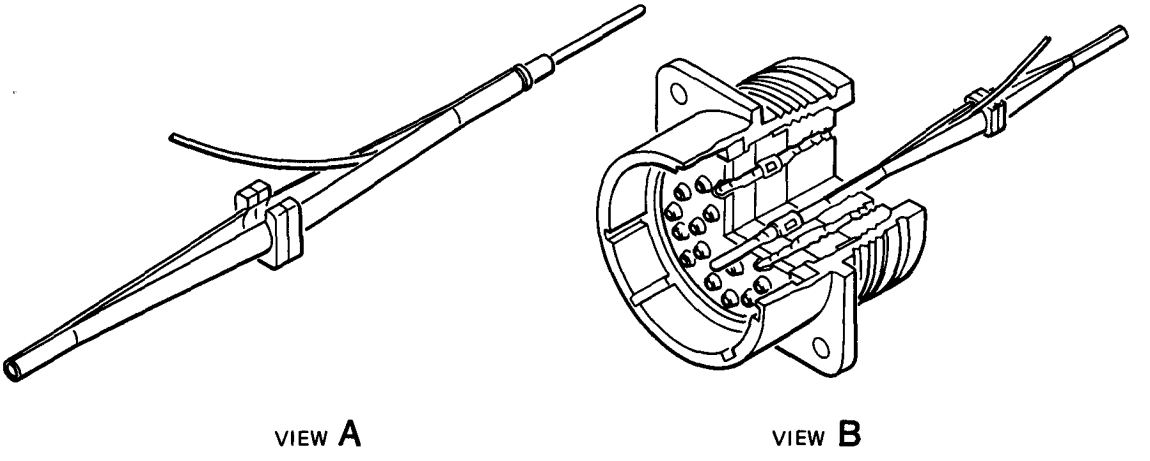


Figure 8-14. Contact Pin Insertion Tool Loading

table 8-6 for the correct contact size, crimping tool, and positioner.

(2) ***Crimping tool MS3198-1, positioner MS3198-6P assembly.***

NOTE

The tool handles must be fully opened when inserting the positioner, and when changing the selector positioner.

(a) To install the positioner, place positioner in bayonet socket at the back of the tool.

(b) Push positioner in and rotate 90 degrees clockwise until locked in position.

(3) ***Crimping tool MS3191-1, positioner MS3191-9T assembly.***

NOTE

The tool handle must be fully opened when inserting the positioner and when changing the selector position.

(a) To install the positioner, depress the trigger to release turret to the indexing positioner.

(b) Position the positioner over the retaining ring on the back of the tool. Make certain the positioner is seated on the tool; then secure the 9/64-inch socket head screws with sockethead screw key. Turret should now index easily without binding.

(c) Press trigger and spring-loaded turret will snap out to indexing positions.

(d) The turret has three positions which are color coded and marked with the applicable contact size. Rotate the turret until the correct position is lined up with the index mark on the positioner.

(e) Push the turret into the positioner until it snaps into the locked position.

(4) ***Crimping.*** See figure 8-17 and perform crimping operation as follows:

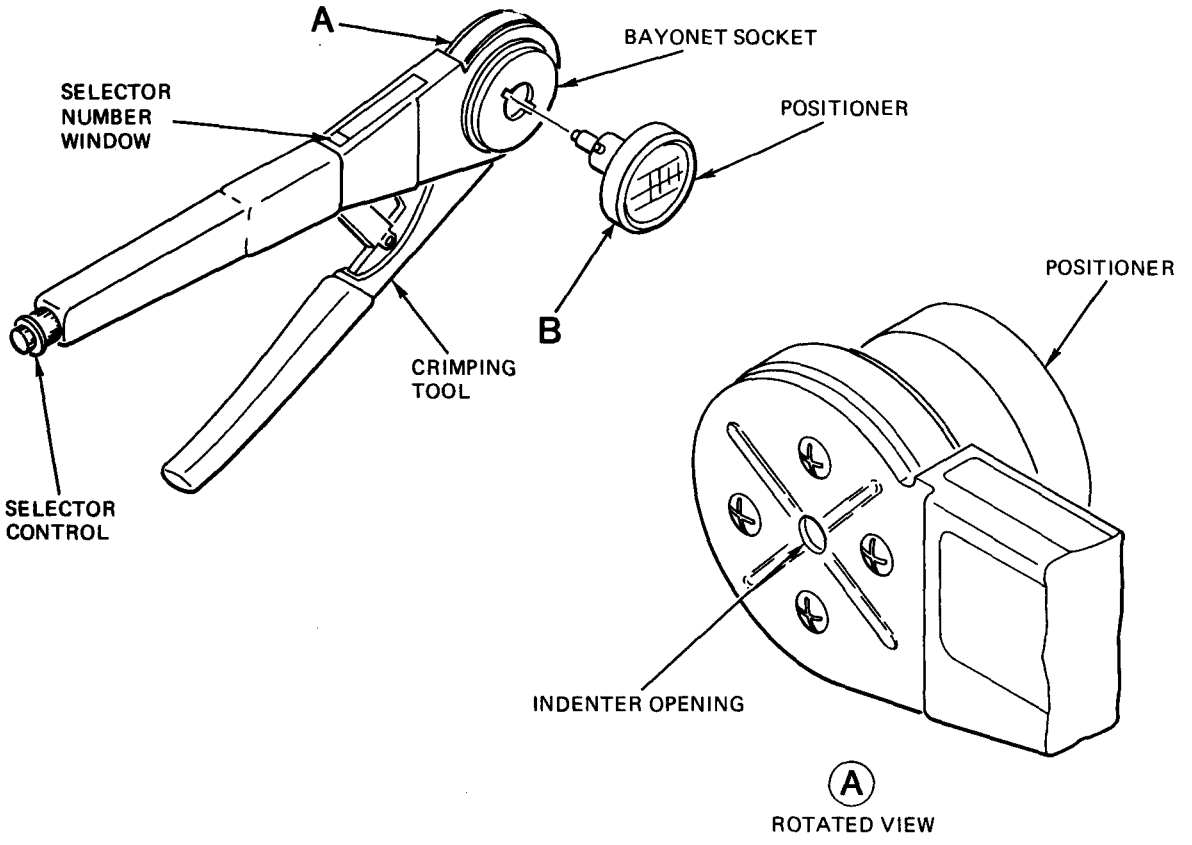
(a) Tool must be in open position. Close handles to trip ratchet and then release pressure.

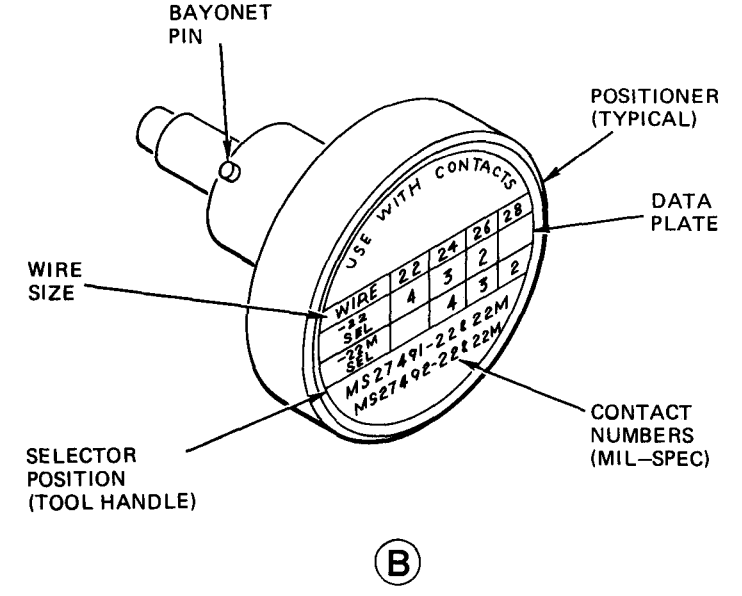
(b) Remove safety clip wire from selector control.

(c) Turn selector control in complete revolutions until correct selector number is visible in the selector number window.

(d) Tool is now ready for use. Replace safety clip wire.

(e) Insert the stripped wire into the contact until end of wire can be seen through the





NOTE:

1. CONTACT PIN SIZE 22. SELECTOR NUMBER 4
2. THE TOOL HANDLES MUST BE FULLY OPENED WHEN INSERTING THE POSITIONER AND WHEN CHANGING THE SELECTOR POSITION

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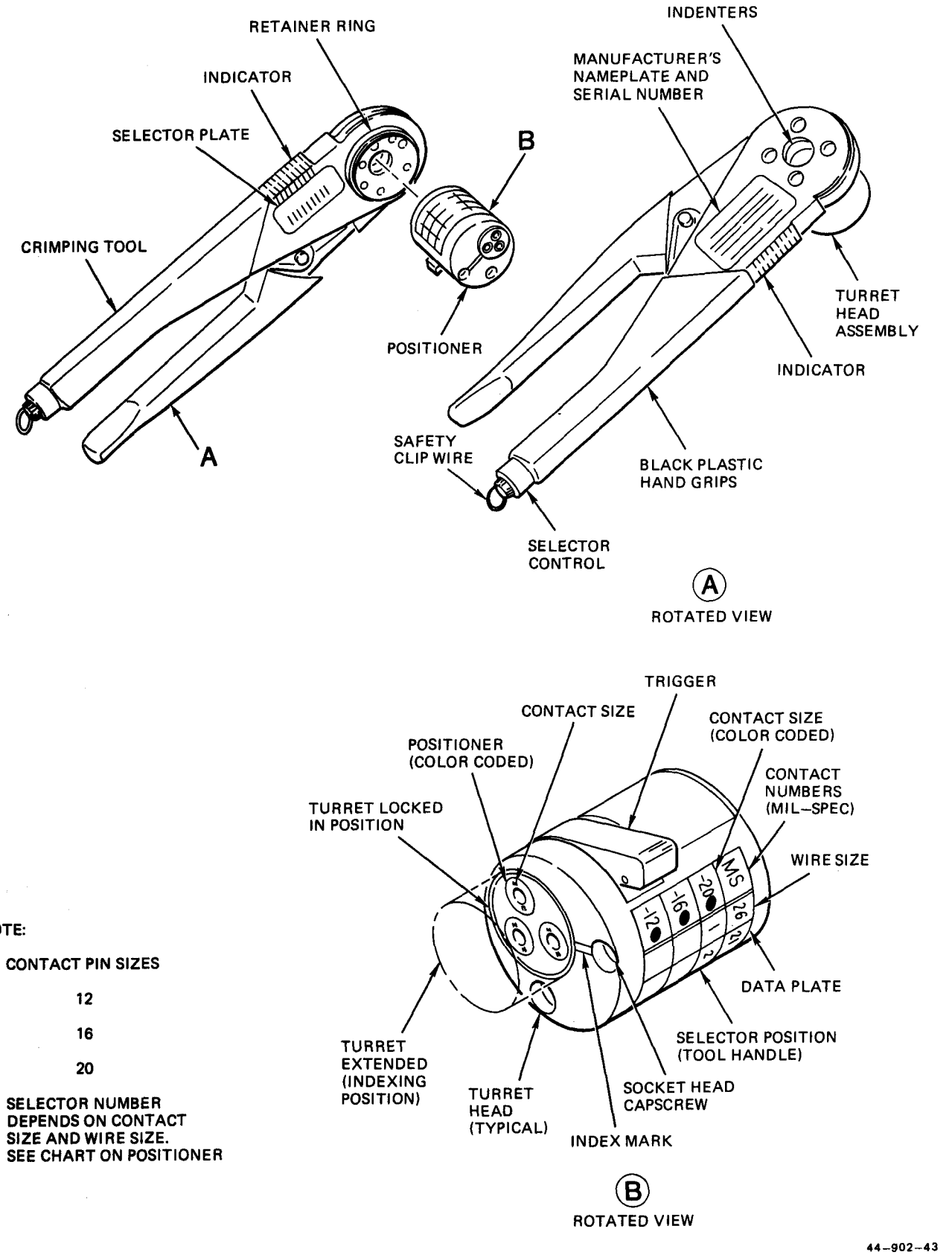
Figure 8-15. Crimping Tool MS3198-1 with Positioner MS3198-6P



NOTE:

1. CONTACT PIN SIZES

   12

   16

   20

2. SELECTOR NUMBER DEPENDS ON CONTACT SIZE AND WIRE SIZE. SEE CHART ON POSITIONER

Figure 8-16. Crimping Tool MS3191-4 with Positioner MS3191-9T

Table 8-6. Cable and Connector Tooling and Contact Identification

Cable	W	Conn ref	Connector part no.	Contact part no.	Crimping tool	Positioner	Insertion tool	Extraction tool
875769-1	301	P1	MS27484T14B35PA	MS27493-22				
		P2	MS27484T16B35PD	MS27493-22				
875769-2	302	P1	MS27484T14B35PB	MS27493-22				
		P2	MS27484T16B35SC	MS27491-22	MS3198-1	MS3198-6P	MS27495-A22	MS27495-R22
8757569-3	303	P1	MS27484T22B21PB	MS27493-16	MS3191-4	MS3191-9T	MS27495-A16	MS27495-R16
		P2	MS27484T22B21SB	MS27491-16			MS27495-A16	MS27495-R16
875769-4	304	P1	MS27484T24B24S	MS27491-16			MS27495-A16	MS27495-R16
				MS27491-12			MS27495-A12	MS27495-R12
		P2	MS27484T24B24P	MS27493-16			MS27495-A16	MS27495-R16
				MS27493-12			MS27495-A12	MS27495-R12
875769-5	305	P1	MS27467T25B19S	MS27491-12			MS27495-A12	MS27495-R12
		P2	MS27467T25B19P	MS27493-12			MS27495-A12	MS27495-R12
875769-6	306	P1	MS27484T16B6S	MS27491-12	MS3191-4	MS3191-9T	MS27495-A12	MS27495-R12
		LUGS						
875769-7	309	P1	NOT REPAIRABLE					
875769-7	309	P2	MS27484T16B35SC	MS27491-22	MS3198-1	MS3198-6P	MS27495-A22	MS27495-R22
875769-8	310	P1	MS27484T14B35SC	MS27491-22	MS3198-1	MS3198-6P	MS27495-A22	MS27495-R22
		P2	MS27484T16B35PD	MS27493-22	MS3198-1	MS3198-6P	MS27495-A22	MS27495-R22
875769-9	311	P1	MS27484T24B24SB	MS27491-16	MS3191-4	MS3191-9T	MS27495-A16	MS27495-R16
		LUGS		MS27491-12			MS27495-A12	MS27495-R12
		J1	MS27508E22B21PB	MS27493-16	MS3191-4	MS3191-9T	MS27495-A16	MS27495-R16
		J2	MS27508E16B35PC	MS27493-22	MS3198-1	MS3198-6P	MS27495-A22	MS27495-R22
		J3	MS27508E16B35SD	MS27491-22	MS3198-1	MS3198-6P	MS27495-A22	MS27495-R22
		J4	MS27508E16B6P	MS27493-12	MS3191-4	MS3191-9T	MS27495-A12	MS27495-R12
		J5	MS27508E24B24PB	MS27493-16	MS3191-4	MS3191-9T	MS27495-A16	MS27495-R16
				MS27493-12			MS27495-A12	MS27495-R12
		J6	MS27508E24B24S	MS27491-16	MS3191-4	MS3191-9T	MS27495-A16	MS27495-R16
				MS27491-12			MS27495-A12	MS27495-R12
		J7	MS27656T25B19S	MS27491-12	MS3191-4	MS3191-9T	MS27495-A12	MS27495-R12

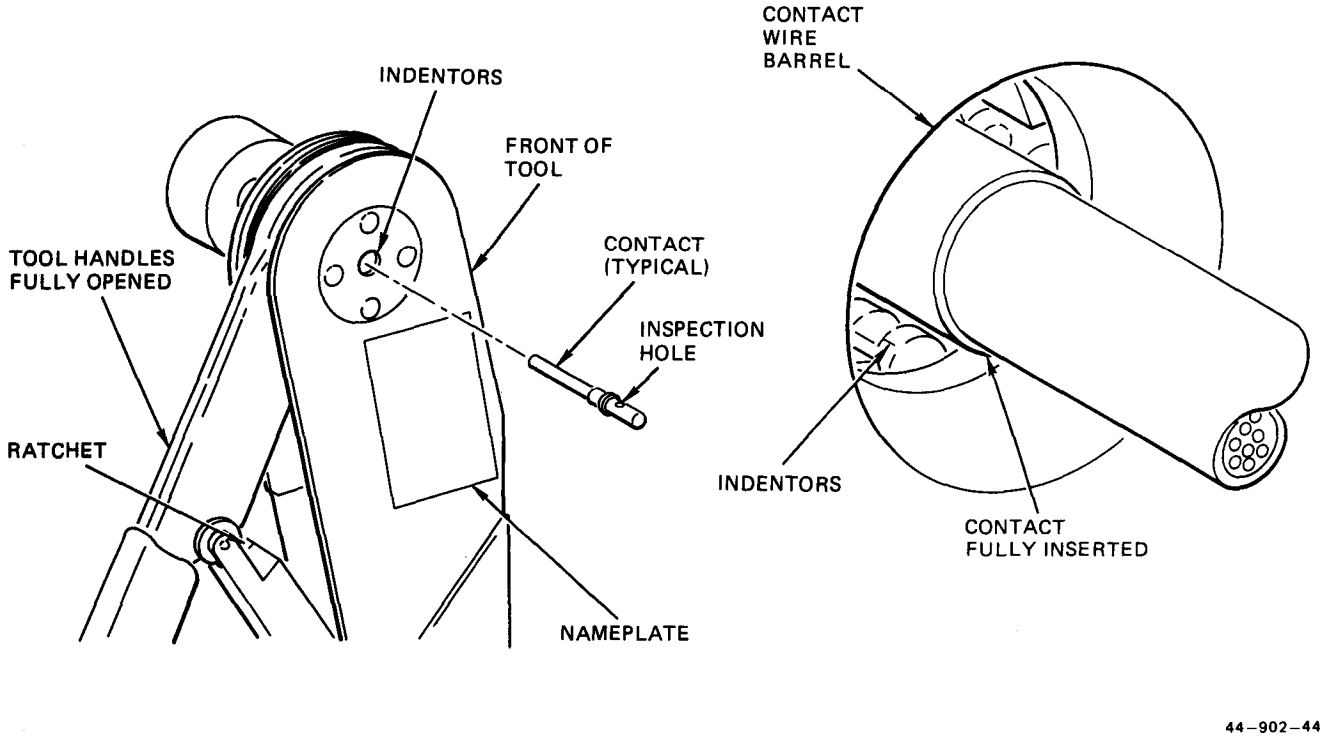


Figure 8-17. Contact Pin Crimping Tool Operation

inspection hole. Turn the tool around so the front is facing you then insert wire and contact through the indentor opening until it bottoms in the positioner.

(f) Squeeze handles together until the positive stop is reached. Tool will then release the return to fully open position. Remove crimped contact and wire. Make sure the wire strands are visible through the inspection hole in the contact.

e. ***Lug Replacement.*** Large terminal lugs, used on the ends of power cables, etc., may be replaced using crimping tool MY28-4 (figure 8-18 and the following procedure.

(1) Remove any insulating tubing from terminal and use hacksaw to cut off old lug at the point where cable just enters lug barrel.

(2) Strip cable insulation to the depth of the lug barrel. Clean cable as required. See figure 8-19.

(3) See figure 8-18 and adjust crimping tool as follows:

(a) Loosen nest die lock screw.

(b) Turn knurled screw until index line on nest die is aligned with proper cable size on cable scale.

(c) Lock nest die by tightening nest die lock screw.

(4) Insert stripped end of cable into lug barrel.

(5) Insert cable and terminal assembly into the open nest die so the terminal barrel is centered in the die. See figure 8-20.

(6) Close crimping tool handles until stop hits the other handle.

(7) Open crimping tool handles and remove crimped terminal. Tug on terminal to make sure it is firmly crimped.

(8) Replace insulating tubing as required.

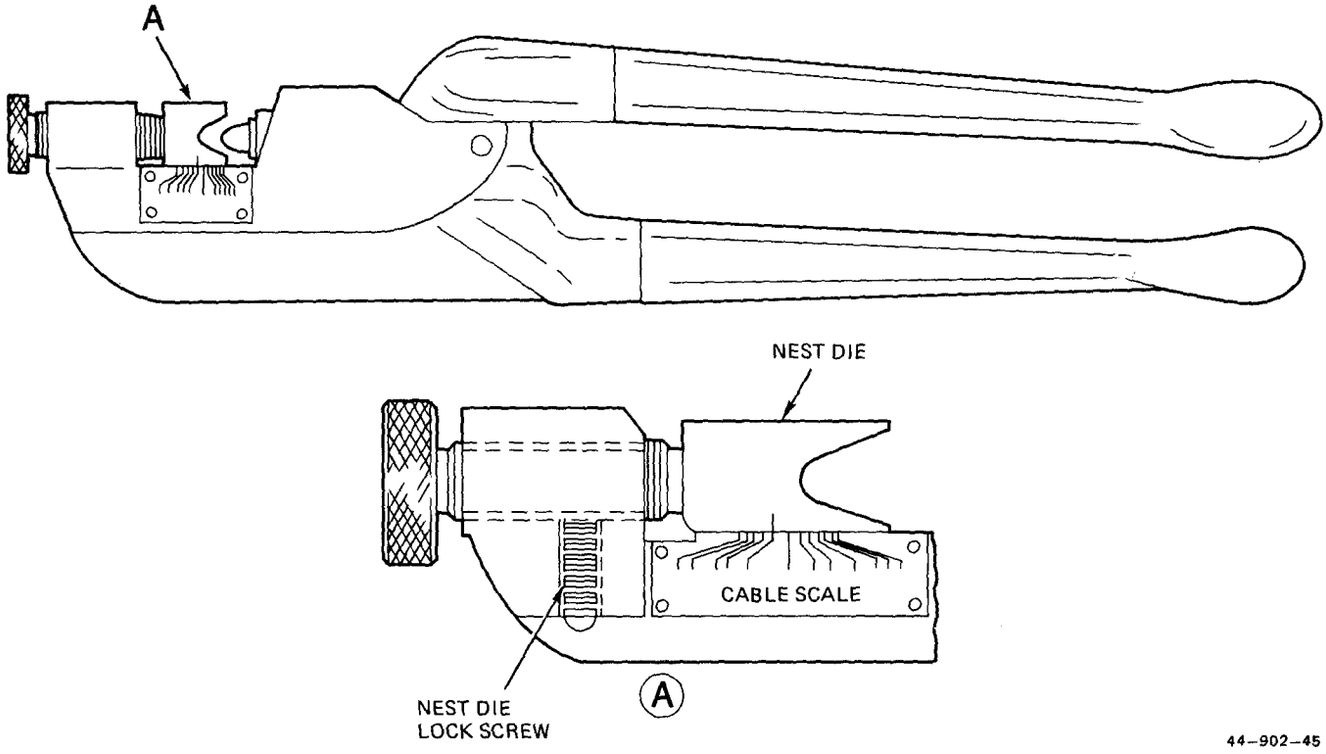


Figure 8-18. Crimping Tool MY28-4

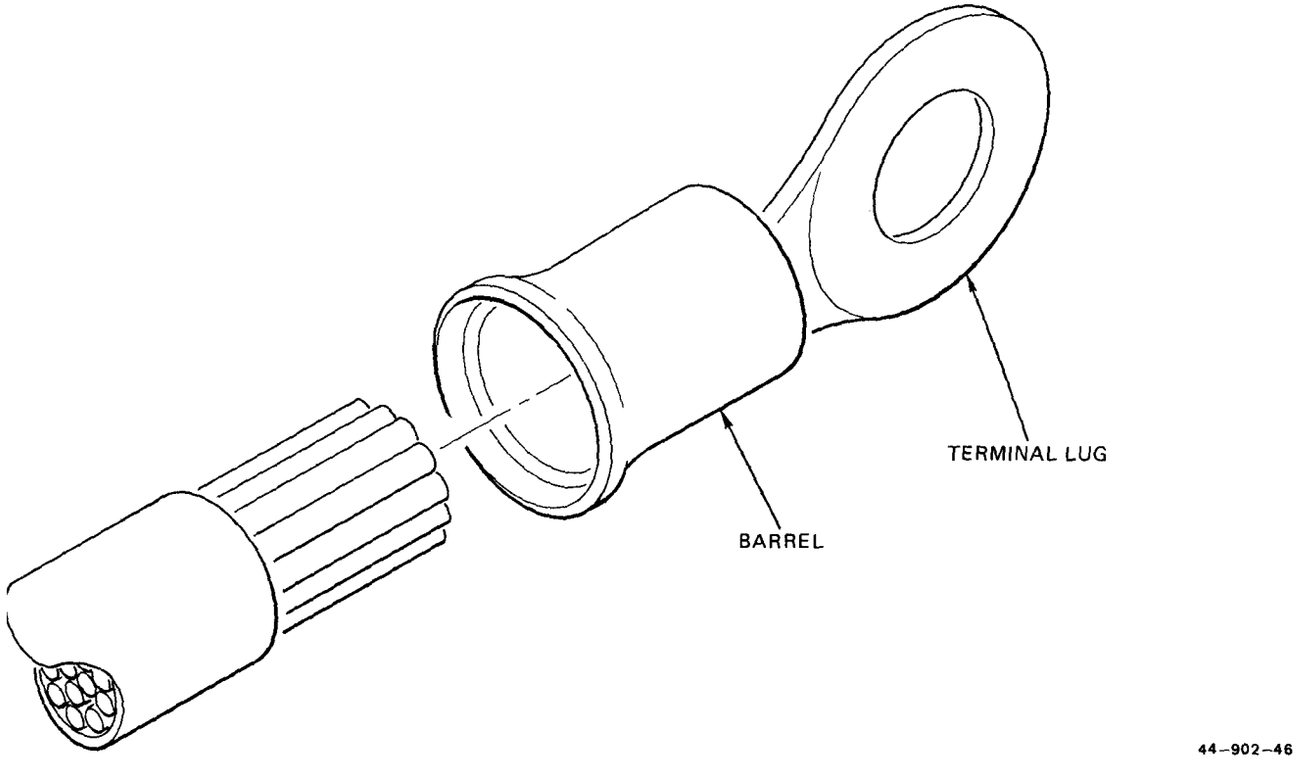


Figure 8-19. Terminal Lug and Wire Preparation

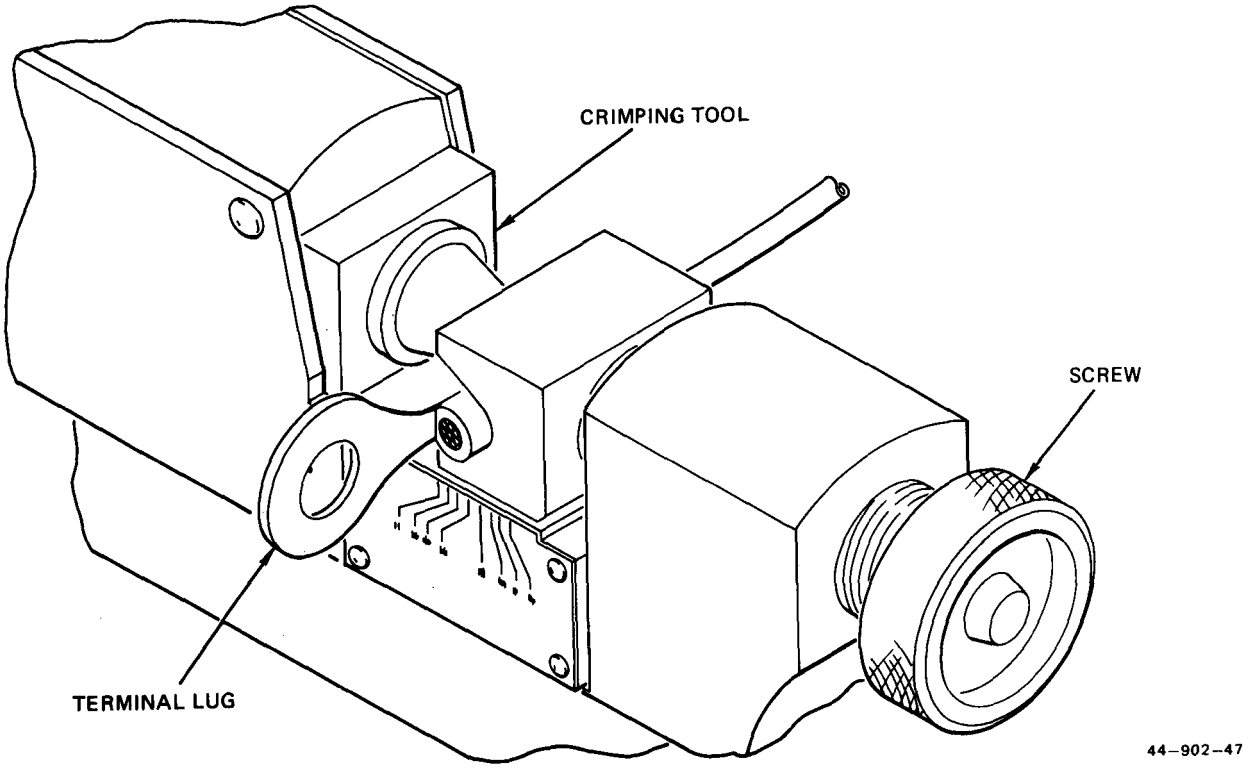


Figure 8-20. Cable and Terminal Assembly Crimping

CHAPTER 9

MATERIEL USED IN CONJUNCTION WITH MAJOR ITEM

Not applicable.

APPENDIX A
REFERENCES

A-1. Painting

TB 43-0139	Painting Instructions for Field Use

A-2. Shipment and Storage

TB 740-97-2	Preservation of USATSARCOM Mechanical Equipment for Shipment and Storage
TM 740-90-1 or MCO 4450.7	Administrative Storage of Equipment

A-3. Maintenance

DA PAM 738-750 or TM 4700-15/l	The Army Maintenance Management System
TM 5-6675-309-24P or TM 08840A-24P/2	Organizational, Direct Support, General Support, and Depot Maintenance Repair parts and Special Tool List for Test Set, Power Supply, PADS, AN/USM-428

A-4. Demolition

TM 750-244-3	Destruction of Army Materiel to Prevent Enemy Use

APPENDIX B
COMPONENTS OF END ITEM LIST

Section I. INTRODUCTION

B-1. Scope. This appendix lists integral components of and basic issue items for the PSTS to help you inventory items required for safe and efficient operation.

B-2. General. The Components of End Item List is divided into the following sections:

a. ***Section II.*** Integral Components of the End Item. These items, when assembled, comprise the PSTS and must accompany it whenever it is transferred or turned in. These illustrations will help you identify these items.

b. ***Section III.*** Basic Issue Items. These are minimum essential items required to place the PSTS in operation, to operate it, and to perform emergency repairs. Although shipped separately packed, they must accompany the PSTS during operation and whenever it is transferred between accountable officers. The illustrations will assist you with hard-to-identify items. This manual is your authority to requisition replacement BII, based on Table(s) of Operation and Equipment (TOE)/ Modification Table of Organization and Equipment (MTOE) authorization of the end item.

B-3. Explanation of Columns.

a. ***Illustration.*** This column is divided as follows:

(1) ***Figure number.*** Indicates the figure number of the illustration on which the item is shown (if applicable).

(2) ***Item number.*** The number used to identify item called out in the illustration.

b. ***National Stock Number (NSN).*** Indicates the National stock number assigned to the item and which will be used for requisitioning.

c. ***Part Number (PIN).*** Indicates the primary number used by the manufacturer, which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

d. ***Description.*** Indicates the Federal item name and, if required, a minimum description to identify the item.

e. ***Location.*** The physical location of each item listed is given in this column. The lists are designed to inventory all items in one area of the major item before moving on to an adjacent area.

f. ***Usable on Code.*** USABLE ON codes are included to help you identify which component items are used on the different models. Identification of the codes used in these lists are

Code	Used on
DEC	AN/USM-428

g. ***Quantity Required (Qty Reqd).*** This column lists the quantity of each item required for a complete major item.

h. ***Quantity.*** This column is left blank for use during inventory. Under the Rcd'd column, list the quantity you actually receive on your major item. The Date columns are for your use when you inventory the major item at a later date, such as for shipment to another site.

Section II. INTEGRAL COMPONENTS OF END ITEM

(1) Illustration		(2)	(3)	(4)	(5)	(6)	(7)	(8) Quantity			
(a) Figure no.	(b) Item no.	National stock number	Part no. & FSCM	Description	Location	Usable on code	Qty reqd	Rcvd	Date	Date	Date
1-1(2)	3		877426-2 (06481)	Case, Accessory, Test Set CY-7610/ USM-428		DEC	1				
1-1(1)	2		877425-1 (06481)	Case, Power Supply Test Set CY-7564/ USM-428		DEC	1				
1-1(1)	1		877420-4 (06481)	Test Set, Power Supply TS-3618/USM-428		DEC	1				
1-1(2)	4		875769-1 (06481)	Cable Assembly, Electrical, W301		DEC	1				
1-1(2)	5		875769-2 (06481)	Cable Assembly, Electrical, W302		DEC	1				
1-1(2)	6		875769-3 (06481)	Cable Assembly, Electrical, W303		DEC	1				
1-1(2)	7		875869-4 (06481)	Cable Assembly, Electrical, W304		DEC	1				
1-1(2)	8		875769-5 (06481)	Cable Assembly, Electrical, W305		DEC	1				
1-1(2)	9		875769-6 (06481)	Cable Assembly, Electrical, W306		DEC	1				
1-1(2)	10		875769-7 (06481)	Cable Assembly, Electrical, W309		DEC	1				

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Section II. INTEGRAL COMPONENTS OF END ITEM - Continued

(1) Illustration		(2)	(3)	(4)	(5)	(6)	(7)	(8) Quantity			
(a) Figure no.	(b) Item no.	National stock number	Part no. & FSCM	Description	Location	Usable on code	Qty reqd	Rcvd	Date	Date	Date
1-1(3)	11		875869-8 (06481)	Cable Assembly, Electrical, W310		DEC	1				
1-1(2)	12		875769-9 (06481)	Cable Assembly, Electrical, W311		DEC	1				
1-1(2)			877490-1 (06481)	Card Extractor		DEC	1				

Section III. BASIC ISSUE ITEMS

(1) Illustration		(2)	(3)	(4)	(5)	(6)	(7)	(8) Quantity			
(a) Figure no.	(b) Item no.	National stock number	Part no. & FSCM	Description	Location	Usable on code	Qty reqd	Rcvd	Date	Date	Date
1-1 (2)	13			TM 5-6675-309-14 or TM08840A-14/1		DEC	1				

APPENDIX C
ADDITIONAL AUTHORIZATION LIST

Section I. INTRODUCTION

C-1. Scope. This appendix lists additional items you are authorized for the support of the PSTS.

C-2. General. This list identifies items that do not have to accompany the PSTS and that do not have to be turned in with it. These items are authorized to you by CTA, MTOE, TDA, or JTA.

C-3. Explanation of Listing. National stock number, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment. Usable on codes are identified as follows:

Code	Used on
DEC	AN/USM-428

Section II. ADDITIONAL AUTHORIZATION LIST

(1) National stock number	(2) Part number and FSCM	Description	Usable on code	(3) U/M	(4) Qty auth
	F03A250V8A (81349)	Fuse	DEC	EA	2
	F02B250V1/2A (81349)	Fuse	DEC	EA	2
	F02B250V1/4A (81349)	Fuse	DEC	EA	2

APPENDIX D
MAINTENANCE ALLOCATION CHART

Section 1. INTRODUCTION

D-1. General.

a. This appendix lists the maintenance operations for the Power Supply Test Set, AN/USM-428, LIN T24899, SSN M767, NSN 6675-02-0075-4033. It authorizes categories of maintenance functions for specific maintenance functions on repairable items and components, and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

b. The Maintenance Allocation Chart (MAC) in Section II designates the overall responsibility for the performance of maintenance functions on each item or component. Implementation of the maintenance formations will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function as referenced in Section II.

d. Section IV contains supplemental instructions and explanatory notes for particular maintenance functions.

D-2. Maintenance Functions. Maintenance functions will be limited to and defined as follows:

a. ***Inspect.*** To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. ***Test.*** To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. ***Service.*** Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate); to preserve; to drain; to paint; or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. ***Adjust.*** To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. ***Align.*** To adjust specified variable elements of an item to ring about optimum or desired performance.

f. ***Calibrate.*** To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. ***Install.*** The act of emplacing, seating, or fixing into position item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. ***Replace.*** The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. ***Repair.*** The application of maintenance services (inspect, test, service, adjust, align, calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing), to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. ***Overhaul.*** That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards, i.e., DMWR, in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. ***Rebuild.*** Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles etc.) considered in classifying Army equipment/components.

D-3. Maintenance Allocation Chart Column Entries, Section II.

a. ***Column 1: Group Number.*** Column 1 lists the group numbers which identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. ***Column 2: Component/Assembly.*** Column 2 lists the noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. ***Column 3: Maintenance Functions.*** Column 3 lists functions to be performed on the items listed in Column 2.

d. ***Column 4: Maintenance Category.*** Column 4 specifies, by listing of a "work-time" figure in the appropriate column(s), the lowest level of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate "work-time" figures will be shown for each category. The number of man-hours specified by the work-time figure represents the average time required to restore an item (assembly subassembly, component, module, end item, or system) to a serviceable condition under typical field operation conditions. Subcolumns of the maintenance category are as follows:

H	General Support
D	Depot

e. ***Column 5: Tools and Equipment.*** Column 5 specifies by code, defined in Section III, those common tool sets not individual tools) and special tools, test, and support equipment required to perform the designated function.

f. ***Column 6: Remarks.*** Column 6 contains an alphabetic code referring to Section IV, Remarks, which is pertinent to the item opposite the particular code.

D-4. Tools and Test Equipment Requirements, Section III.

a. ***Column 1: Reference Code.*** The numbers in this column coincide with the numbers used in the tools and equipment column of the Maintenance Allocation Chart.

b. ***Column 2: Maintenance Category.*** The codes in this column indicate the maintenance categories allocated.

c. ***Column 3: Nomenclature.*** This column lists tools, tests, and maintenance equipment required to perform the maintenance functions.

d. ***Column 4: National/NATO Stock Number. This*** column lists the National/ NATO Stock Number of the specific tool or test equipment.

e. ***Column 5: Tool Number.*** This column lists manufacturing part number and Federal Supply Code for Manufacturers (FSCM).

Section II. MAINTENANCE ALLOCATION CHART

(1) Group number	(2) Component/assembly	(3) Maintenance function	(4) Maintenance level C	O	F	H	D	(5) Tools and equipment	(6) Remarks
01	Test Set, Power supply	Test				1.5		3,4,5,7,8	A
		Adjust				2.0		3,8	
		Repair				2.0			
		Overhaul					**		
0101	Case, Instrument	Inspect				0.1			
		Replace				0.5		9,12	
		Repair				0.2	**		
0102	Front Panel Circuit Card	Test				0.1		3,4,5,7,8	
		Adjust				0.2		3,28	
		Replace				0.3		9,11,12	
		Repair					**		
	Switch, Toggle	Test				0.1		4	
		Replace				0.2		6,13,16,18	
	Switch, Rotary	Test				0.1		4	
		Replace				0.2		2,6,13,16	
	Switch, Push	Test				0.1		4	
		Replace				0.2		6,13,29	
	Indicator, Time	Test				0.1		4	
		Replace				0.2		6,12,13,18,28	
	Circuit Breaker	Test				0.5		3,4,7,8	
		Replace				0.3		6,9,14,18,26, 30	
	Binding Post	Test				0.1		4	
		Replace				0.1		6,13,27	
	Fuseholder	Test				0.1		4	
		Replace				0.2		6,18,30,31,32	
0103	Mounting Plate								
	Current Limiter Assembly	Test				0.1		3,4	
		Adjust				0.2		3,4,28	
		Replace				0.2		6,11,12,13	
		Repair					**		

**Worktime is included in DMWR.

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group number	(2) Component/assembly	(3) Maintenance function	(4) Maintenance level C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0103 (cont)	Switch, Thermostats	Test				0.1		4	
		Replace				0.1		6,9,12,13,22	
	Relay	Test				0.1		4	
		Replace				0.3		6,11,12,13, 23,26	
	Power Supplies	Test				0.1		4	
		Adjust				0.2		3,28	
		Replace				0.4		6,11,12,13	
	Resistor	Test				0.1		4	
		Replace				0.2		6,12,13,14, 17,18	
	Capacitors	Test				0.1		4	
		Replace				0.1		6,13,14,18	
	Fan	Test				0.1			
		Replace				0.2		6,11,18	
	Terminals	Test				0.1			
		Replace				0.2		1,6,10,11,12, 13,14,17,18	
	Diode and Transistors	Test				0.1		4	
		Replace				0.2		6,11,12,13,14 17,18,20,26	
02	Cable								
	Power	Test				0.1		4	
		Replace				0.1			
		Repair				1.0		6,9,13,14,25	
	Interconnecting	Test				0.1		4	
		Replace				0.1			
		Repair				1.0		6,9,13,14,25	
	Connectors	Test				0.1			
		Repair				1.0		6,14,18,25,33	

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group number	(2) Component/assembly	(3) Maintenance function	(4) Maintenance level C	O	F	H	D	(5) Tools and equipment	(6) Remarks
03	Case								
	Case, Transit	Inspect				0.1			
		Replace				0.2			
		Repair				0.2	**		

* *Worktime is included in DMWR.

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) Reference code	(2) Maintenance category	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
1	H	Screwdriver, flat-tip, 1/4, 4-inch	5120-00-222-8852	
2	H	Key, sockethead, L-type handle, 5/64 inch	5120-00-224-2504	
3	H	Voltmeter, digital	6625-00-022-7894	AN/GSM-64B
4	H	Multimeter	6625-00-999-7465	AN/USM-223
5	H	Oscilloscope	6625-00-228-2201	AN/USM-281A
			6625-00-930-6637	AN/USM-273
6	H	Pliers, long-nose, 6-1/2-inch	5120-00-293-3481	
7	H	Power supply, 0-40 VDC		HP model 6268A
8	H	Power supply, 28 VDC	6130-00-947-9670	MH-28-200RS
9	H	Screwdriver, flat-tip, 3/16, 8-inch	5120-00-260-4837	
10	H	Wrench, single socket spinner, 1/2-inch	5120-00-293-0375	
11	H	Screwdriver, cross-tip, no. 1, 3-inch	5120-00-240-8716	
12	H	Screwdriver, cross-tip, no. 2, 4-inch	5120-00-234-8913	
13	H	Soldering/desoldering set	3439-00-460-7198	
14	H	Pliers, diagonal cutting, 4-1/2-inch	5110-00-240-6209	
15	H	Screwdriver, cross-tip, no. 1, 8-inch	5120-00-529-3101	
16	H	Wrench, adjustable, 6-inch	5120-00-264-3795	
17	H	Wrench, open end, 3/16-inch and 1/4-inch	5120-00-228-9527	
18	H	Wire strippers	5120-00-278-2423	
19	H	Wrench, combination, 5/16-inch	5120-00-228-9503	
20	H	Wrench, open end, 3/8-inch and 7/16-inch	5120-00-277-2342	
21	H	Wrench, open end, 1/2-inch and 9/16-inch	5120-00-187-7124	
22	H	Wrench, single socket spinner, 1/4-inch	5120-00-241-3188	
23	H	Wrench, single socket spinner, 3/8-inch	5120-00-974-6369	
24	H	Wrench, single socket spinner, 7/16-inch	5120-00-222-1499	
25	H	Crimping tool	5120-00-165-3912	MS3191-4

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance category	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
		Crimping tool	5120-00-165-3910	MS3198-1
		Insertion tool	5120-00-018-0529	MS27495A16
		Insertion tool	5120-00-137-9140	MS27495A22
		Insertion tool	5120-00-018-0531	MS27495A12
		Insertion tool	5120-00-171-6967	MS27495A20
		Extraction tool	5120-00-409-5206	MS27495R16
		Extraction tool	5120-00-146-6557	MS27495R22
		Extraction tool	5120-00-103-9708	MS27495R12
		Extraction tool	5120-00-177-6966	MS27495R20
		Positioner for MS3191-4 crimping tool	5120-00-016-7582	MS3191-9T
		Positioner for MS3198-1 crimping tool	5120-00-017-3809	MS3198-6P
26	H	Wrench, single socket spinner, 5/16-inch	5120-00-224-2696	
27	H	Wrench, single socket spinner, 11/32-inch	5120-00-293-0796	
28	H	Screwdriver, flat-tip, 1/8-inch, 2-inches	5120-00-236-2140	
29	H	Wrench, combination, 3/4-inch	5120-00-228-9510	
30	H	Soldering gun	3439-00-004-0915	
31	H	Socket, nut, 13/ 16-inch for 3/8-inch drive	5120-00-596-0836	
32	H	Wrench, ratchet, reversible, 3/8-inch drive	5120-00-240-5364	
33	H	Wrench, strap		TG-70

Section IV. REMARKS

Maintenance Allocation Chart

Reference code	Remarks
A	Testing of the Test Set, Power Supply AN/USM-428 includes use of built-in test features.

APPENDIX E
REPAIR PARTS AND SPECIAL TOOLS LIST

Refer to TM 5-6675-309-24P or TM 08840A-24P/2, Organizational, Direct Support, General Support, and Depot Maintenance Repair Parts and Special Tool List for Test Set, Power Supply, PADS, AN/USM-428.

APPENDIX F
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

F-1. Scope. This appendix lists expendable supplies and materials you will need to operate and maintain the PSTS. These items are authorized to you by CTA 50-970, Expendable Items (except Medical, Class V, Repair Parts, and Heraldic Items).

F-2. Explanation of Columns.

a. ***Column 1. Item number.*** This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., use cleaning compound, Item 5, App. D).

b. ***Column 2. Level.*** This column identifies the lowest level of maintenance that requires the listed item (enter as applicable):

C Operator/Crew
O Organizational Maintenance
F Direct Support Maintenance
H General Support Maintenance

c. ***Column 3. National Stock Number.*** This is the National stock number assigned to the item; use it to request or requisition the item.

d. ***Column 4. Description.*** Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. ***Column 5. Unit of Measure (U/M).*** Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) Item number	(2) Level	(3) National stock number	(4) Description	(5) U/M
1	H	6180-00-753-4993	Alcohol, isopropyl	PT
2	H	7920-00-401-8035	Cloth, lint-free, non-abrasive, general purpose, part no. 1001	BX
3	H		Primer, thread sealant, MIL-S-22473	QT
4	H		Sealant, thread, MIL-S-22473, Grade C	QT
5	H	3439-00-555-4629	Solder, Resin Core	SP
6	H		Insulation sleeving, electrical, heat shrinkable, polyolefin, flexible crosslinked, MIL-I-23053/5A	As required

GLOSSARY

Section I. NONSTANDARD ABBREVIATIONS

BATT - Battery
COMP - Computer
COMP PS - Computer power supply
FLG - Flag
IMU - Inertial measurement unit
INH - Inhibit
OVERTEMP - Overtemperature
PADS - Position and azimuth determining system
POR - Power-on reset
PREC - Precision
PS - Power supply
PSTS - Power supply test set
RPSTL - Repair parts and special tools list
UNREG - Unregulated
UUT – Unit under test

Section II. SYMBOLS

∠0 - 0° phase
∠90 - 90° phase
* - Logic not condition

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INDEX – Continued

INDEX — Continued

INDEX - Continued

INDEX – Continued

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PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 5-6675-309-14	1 Aug 85	Test Set, Power Supply, Pads AN/USM-428

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
6	2-1 a		
B1		4-3	
125	line 20		

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

In line 6 of paragraph 2-1a the manual states the engine has 6 Cylenders. The engine on my set only has 4 Cylenders. Clenge the manual to show 4 Cylenders.

Callout 16 on figure 4-3 is pointing at a bolt. In key to figure 4-3, item 16 is called a shim - Please Correct one or the Other.

I ordered a gasket, item 19 on figure B-16 by NSN 2910-00-762-3001. I got a gasket but it doesn't fit. Supply says I got what I ordered, so the NSN is wrong. Please give me a good NSN

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER
JOHN DOE, PFC (268) 317-7111

SIGN HERE John Doe
JOHN DOE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

DRSTS-M Overprint 1, 1 Nov 80

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

TEAR ALONG PERFORATED LINE

TEAR ALONG PERFORATED LINE

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

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TM 5-6675-309-14	1 Aug 85	Test Set, Power Supply, Pads AN/USM-428

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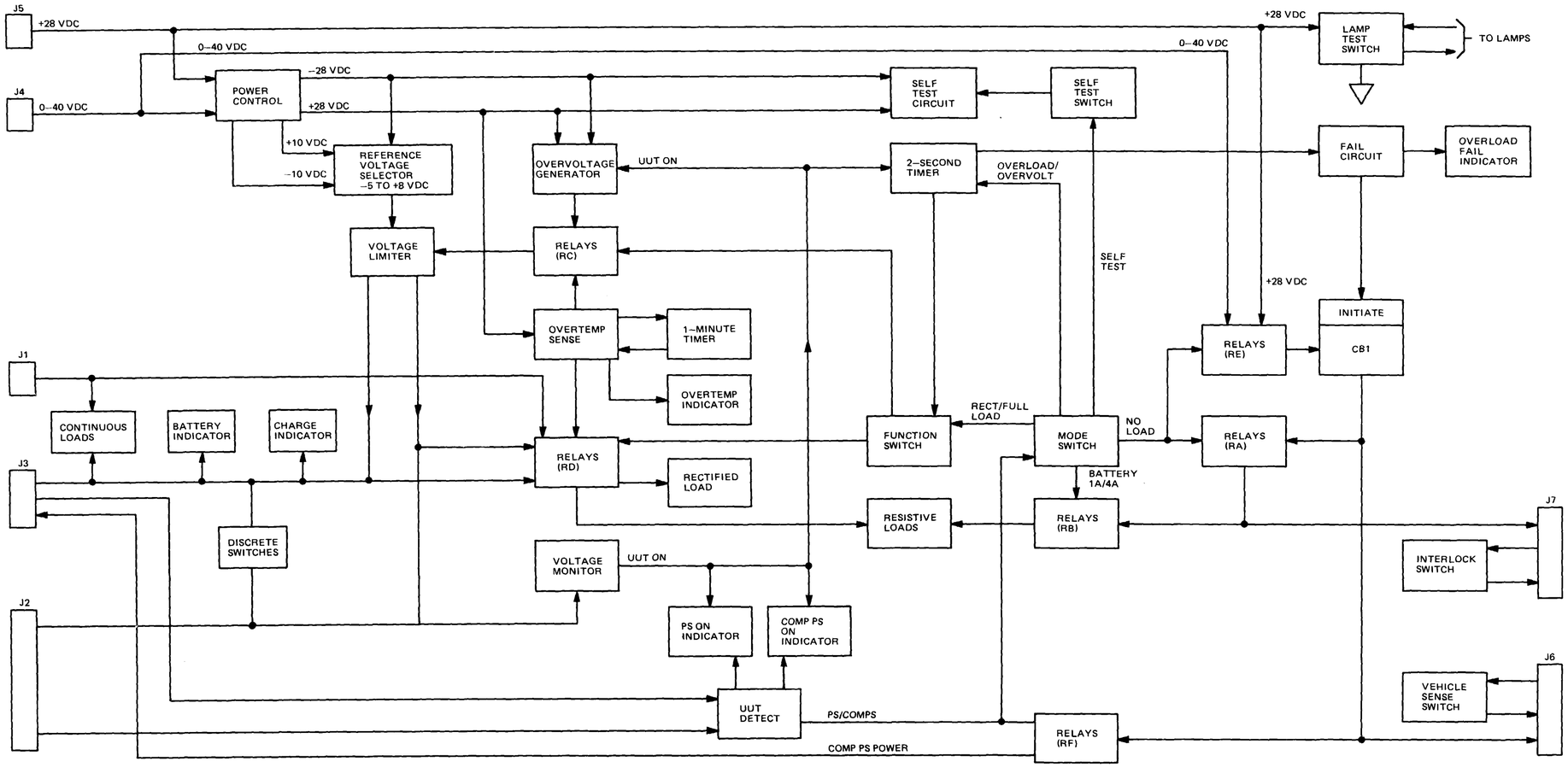
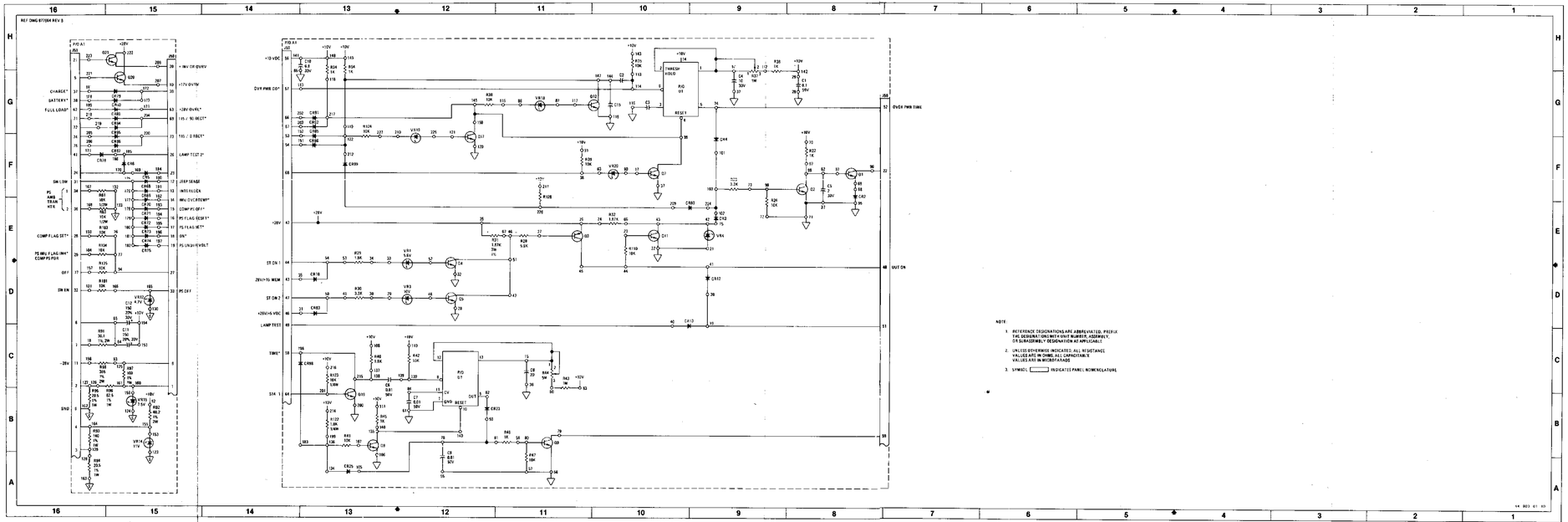


NOTE:

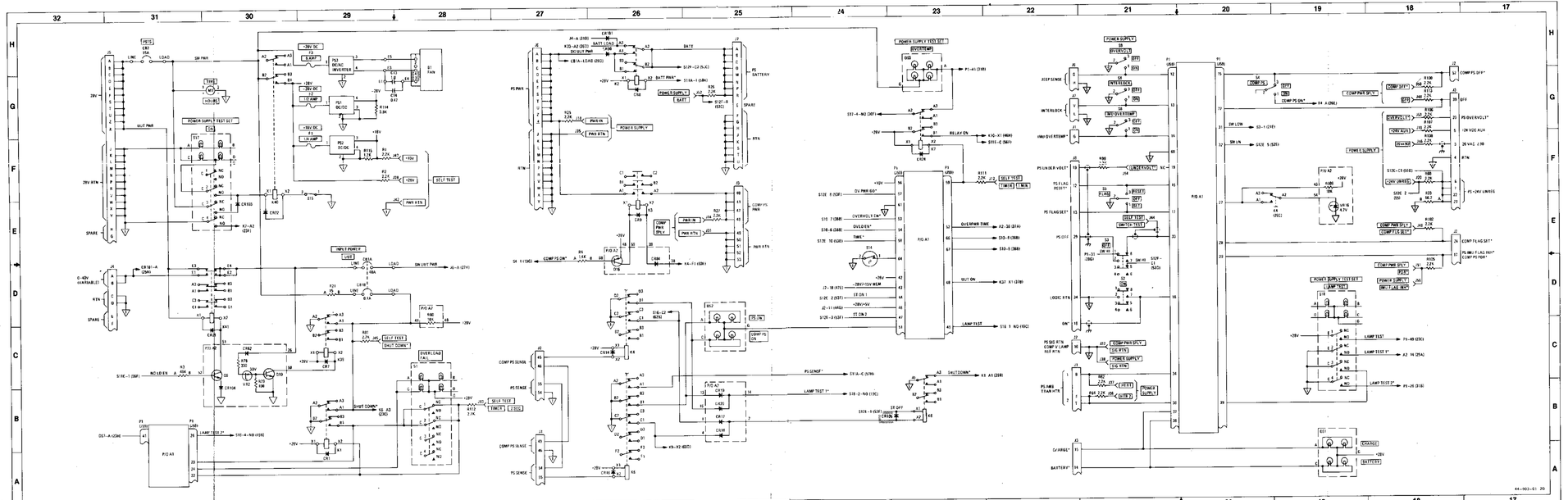
1. J1 TO PS CONNECTOR 3J1. SIMULATES IMU UPPER SUBASSEMBLY
2. J2 (SHARED) TO PS CONNECTOR 3J3. SIMULATES IMU LOWER SUBASSEMBLY
3. J2 (SHARED) TO COMP PS 1P1. SIMULATES COMPUTER
4. J3 (SHARED) TO PS 3J5. SIMULATES COMPUTER
5. J3 (SHARED) TO COMP PS 1J4. SIMULATES PS (POWER INPUT)
6. J2 AND J3 HAVE ELECTRICAL INTERLOCKS FOR SENSING PROPER UUT CONNECTIONS
7. J4 0–40 VDC SUPPLY
8. J5 +28 VDC SUPPLY
9. J6 TO PS CONNECTOR 3J4. SIMULATES VEHICLE POWER
10. J7 TO PS CONNECTOR 3J2. SIMULATES PADS BATTERIES

44–903–08A

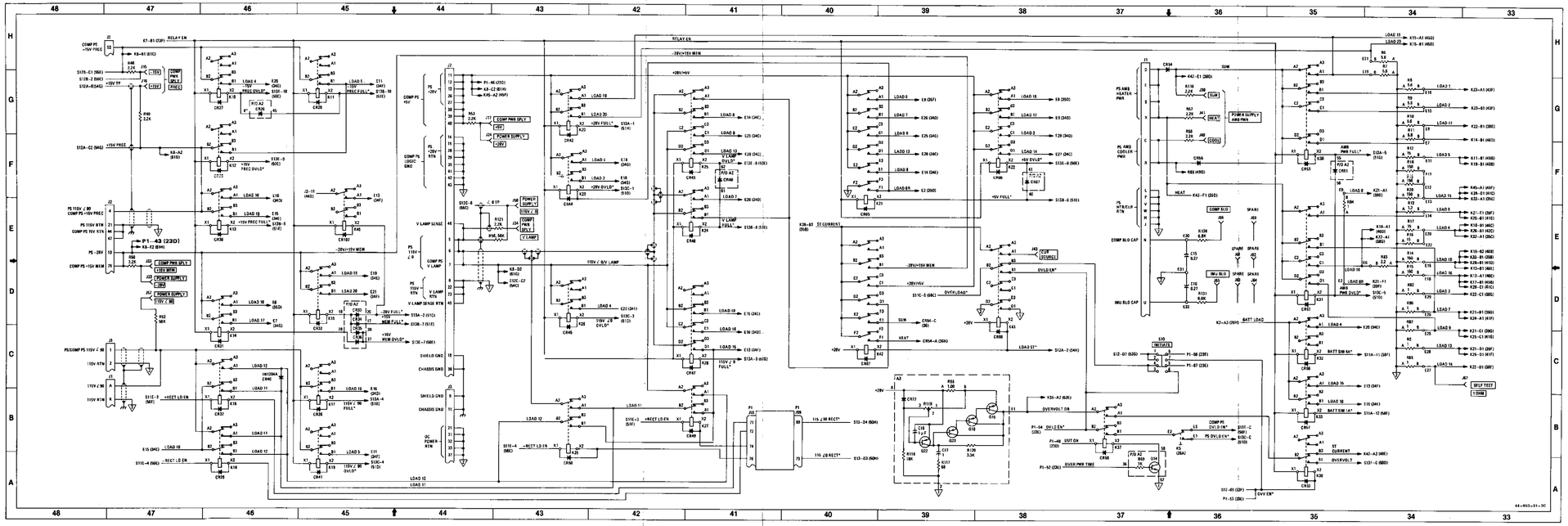
FO-1. Power Supply Test Set Functional Block Diagram



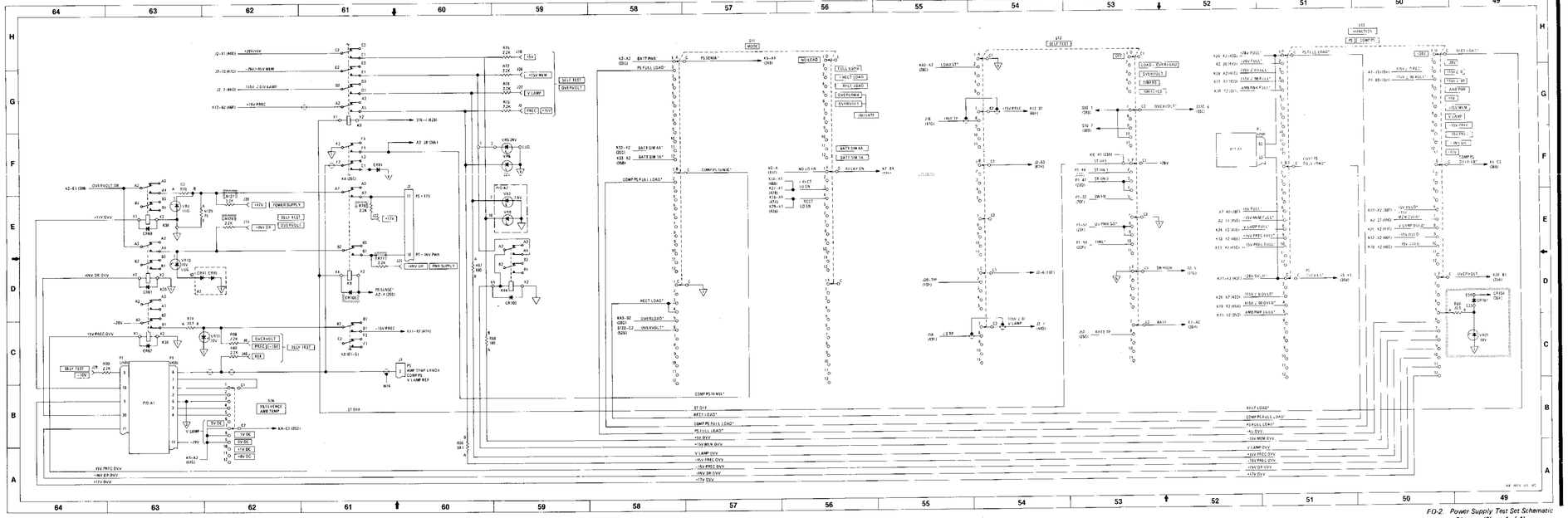
FO-2. Power Supply Test Set Schematic Diagram (Sheet 1 of 4)



FO 2. Power Supply Test Set Schematic Diagram (Sheet 2 of 4)



FO-2. Power Supply Test Set Schematic Diagram (Sheet 3 of 4)



FO-2. Power Supply Test Set Schematic Diagram (Sheet 4 of 4)

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

LiquidMeasure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To Change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C