TECHNICAL MANUAL

OPERATOR'S, AVIATION UNIT AND AVIATION INTERMEDIATE MAINTENANCE MANUAL (INCLUDING DEPOT MAINTENANCE) REPAIR PARTS LIST)

TEST SET, FUEL QUANTITY GAGE CAPACITY TYPE

P/N 361-010-002

NSN 4920-00-503-1895

HEADQUARTERS, DEPARTMENT OF THE ARMY
8 DECEMBER 1980

CHANGE
NO. 3

HEADQUARTERS
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Aviation Unit and Aviation Intermediate Maintenance Manual
(Including Depot Maintenance Repair Parts List)

TEST SET, FUEL QUANTITY GAGE CAPACITY TYPE
P/N 361-010-002, NSN 4920-00-503-1895

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(Including Depot Maintenance Repair Parts List)

TEST SET, FUEL QUANTITY GAGE CAPACITANCE TYPE
P/N 361-010-002 (NSN 4920-00-503-1895)

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B-1 through B-4	B-1 through B-4
C-1 through C-63/C-64	C-1 through C-78

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Operator's, Aviation Unit and Aviation
Intermediate Maintenance Manual
(Including Depot Maintenance Repair Parts List)

TEST SET, FUEL QUANTITY GAGE
CAPACITY TYPE
P/N 361-010-002
NSN 4920-00-503-1895

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Appendix B	B-3 and B-4	B-3 and B-4
Appendix C	C-1/C-2	C-1 thru C-63/C-64

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WARNING

Personnel performing operations, procedures, and practices which are included or implied in this technical manual shall observe the following warnings. Disregard of these warnings and precautionary information can cause serious injury, death, or destruction of material.

Connect this equipment to 115 VAC, 400 Hz single phase power.

Permanently ground this equipment prior to connection to an aircraft.

TECHNICAL MANUAL

No. 55-4920-383-13&P

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 8 December 1980

AVIATION UNIT AND AVIATION INTERMEDIATE MAINTENANCE MANUAL (INCLUDING DEPOT MAINTENANCE REPAIR PARTS LIST) TEST SET, FUEL QUANTITY GAGE CAPACITY TYPE P/N 361-010-002 (NSN-4920-00-503-1895)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes of 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 to: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 631201798. A reply will be furnishd to you.

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LIST OF ILLUSTRATIONS

LIST OF ILLUSTRATIONS (Continued)

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. Scope.

This manual contains operation and maintenance instructions, and an illustrated parts list for Test Set, Fuel Quantity Gage, Capacitance Type, Part Number 361-010-002, NSN 4920-00-503-1895, Manufactured by Gull Airborne Instruments, Inc., Smithtown, New York.

1-2. Purpose.

Test Set, Fuel Quantity Gage, Capacitance Type, Part Number 361-010-002 (fig. 1-1), hereinafter referred to as Test Set, is used to test and check aircraft fuel quantity gage probes, indicators, and complete gaging systems, with the equipment installed in the aircraft or removed for bench tests. The Test Set, together with its interface cables, is compatible with the following aircraft:

a. AH-1

b. UH-1

c. OV-1

d. CH-47A, B, C

e. CH-54A, B

1-3. Forms and Records.

Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by DA PAM 738-751.

1-4. Reporting of Errors.

Refer to table of contents.

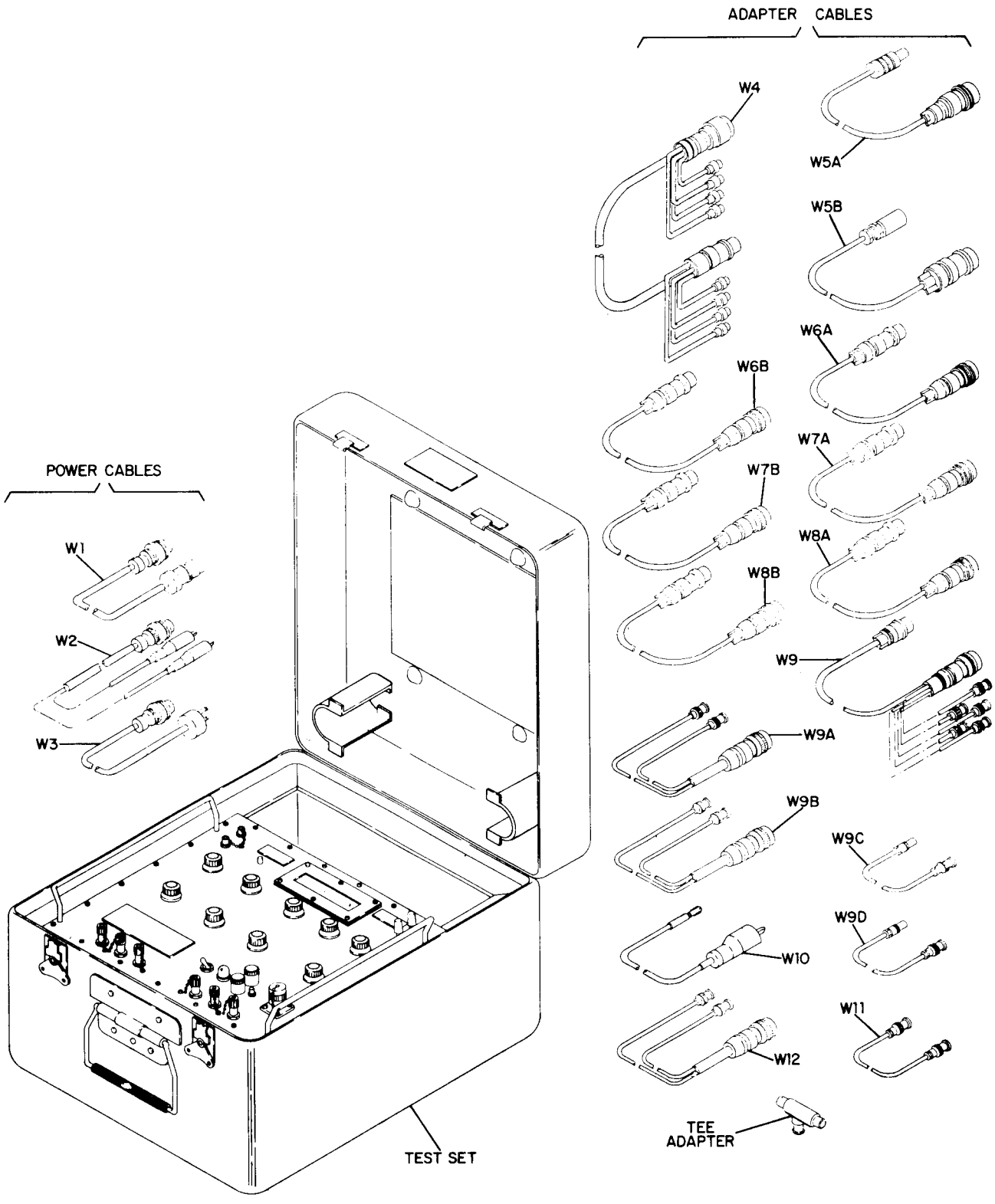


Figure 1-1. Test set, fuel quantity gage, capacitance type, 361-010-002

Section II. DESCRIPTION AND LEADING PARTICULARS

1-5. General.

The Test Set is housed within an aluminum combination case which serves as a means of easily transporting the Test Set as well as sealing the Test Set internal mechanism and circuitry from the ambient environment. The aluminum cover is secured to the combination case with two removable hinges on the rear and two trunk style latches on the front of the case. The body of the combination case is divided into two sections. The low section houses the Test Set unit the upper section of the case and the Test Set cover provide storage space for the accessory cables. The Test Set is operated within the combination case with the cover fully open or removed, with the Test Set on an approximately horizontal plane as shown in figure 1-1.

1-6. Leading Particulars.

The leading particulars of the Test Set are listed in table 1-1.

1-7. Equipment Supplied.

A list of the accessory cables supplied as part of the Test Set is contained in table 1-2. The accessory cables are used to provide input power and ground to the Test Set and to interconnect the Test Set and the equipment to be tested. A BNC tee connector is also supplied with the Test Set.

1-8. Test Equipment, Special Tools and Materials.

Special tools and test equipment required for maintenance of the Test Set are listed in table 1-3.

1-9. Consumable Materials.

All consumable materials required for maintenance of the Test Set are listed in table 1-4.

Table 1-1. Leading Particulars

Characteristic	Description
Dimensions	
Length	16.87 inches
Width	14.25 inches
Height	10.81 inches
Weight (complete with cables)	37 pounds
Voltage input	105-125 VAC, 360-440 Hz
Power consumption	40 watts
Capacitance measurement	
Range	0-8000 pF in four ranges
Accuracy	0.15% of full scale
Scales and resolution	Scale / Resolution: 200 pf / 0.05 pf; 1000 pf / 0.25 pf; 4000 pf / 1.00 pf; 8000 pf / 2.00 pf
Maximum short circuit current on all test leads	10 milliamperes
Self-testing feature	Precision capacitors of known value are included within Test Set for zero and full scale calibration.

Table 1-1. Leading Particulars-Continued

Characteristic	Description		
Insulation resistance measurement			
Range	0.1-100,000 Megohms in six ranges.		
Accuracy, scales, and resolution	Scale	Accuracy	Resolution
	0.1-1 Meg	5% reading	.01 Meg
	1-10 Meg	5% of reading	0.1 Meg
	10-100 Meg	5% of reading	1 Meg
	100-1000 Meg	5% of reading	10 Meg
	1000-10,000 Meg	10% of reading	100 Meg
	10,000-100,000 Meg	15% of reading	1000 Meg
Measurement capabilities	Selector switch provides means for testing resistance between the following: a) Unshielded conductor and compensator conductor to ground. b) Coaxial conductor to ground. c) Coaxial conductor to unshielded conductor. d) Coaxial conductor to compensator conductor.		

Table 1-1. Leading Particulars-Continued

Characteristic	Description
Measurement capabilities-Continued	e) External resistance terminals for measuring resistance using separate test leads.
Maximum short circuit current on all test leads	5 milliamperes at nominal 50 VDC operation.
Self-calibrating feature	Precision resistors of known value are provided for accuracy verification.
Capacitance simulators	
Range	15-8000 pF for probe simulation, 15-390 pF for compensator simulation
Accuracy	0.15% of measurement range full scale
Measurement capabilities	Selector switch provides means for following a) Using Test Set as junction box between aircraft tank units and fuel quantity indicator. b) Substituting capacitance for tank unit probes and compensator probe. c) Simulating the “added tank unit capacitance” and placing it in parallel with dry aircraft tank unit probes for full scale check.

Table 1-1. Leading Particulars-Continued

Characteristic	Description
Measurement capabilities-Continued	d) Simulating the “added tank unit capacitance” and the “added compensator capacitance” and placing them respectively in parallel with the dry aircraft tank unit probes and dry aircraft compensator probe for full scale calibration.

Table 1-2. Accessory Cables

Cable assembly	Qty	Cable designation	Part number	Aircraft	Use
Power	1	W1	467-100-001	-	Connect Test Set to 115 VAC, 400 Hz power.
Power adapter	1	W2	467-101-001	-	Use with cable W1 to connect Test Set to 115 VAC, 400 Hz power.
Power adapter	1	W3	467-102-001	-	Use with cable W1 to connect Test Set to 115 VAC, 400 Hz power.
Main	1	W4	467-103-001	OV-1, AH- 1, UH-1, CH-54A, B, CH-47A, B	Connect indicator, tank units, aircraft wiring and Test Set. Use directly with OV-1 aircraft and with adapter cables for all other aircraft.
Adapter	1	W5A	467-104-001	UH-1, AH-1	Use with cable W4.

Table 1-2. Accessory Cables- Continued

Cable assembly	Qty	Cable designation	Part number	Aircraft	Use
Adapter	1	W 5B	467-105-001	UH-1, AH-1	Use with cable W4.
Adapter	1	W 6A	467-106-001	CH-54B	Use with cable W4.
Adapter	1	W 6B	467-107-001	CH-54B	Use with cable W4.
Adapter	1	W 7A	467-108-001	CH-47A,B	Use with cable W4.
Adapter	1	W 7B	467-109-001	CH-47A,B	Use with cable W4.
Adapter	1	W 8A	467-110-001	CH-54A,B	Use with cableW4.
Adapter	1	W 8B	467-111-001	CH-54A,B	Use with cable W4.
Adapter	1	W9	467-113-001	CH-47C	Connect indicator, aircraft wiring and Test Set.
Adapter	1	W 9A	467-115-001	CH-47C	Connect tank units and Test Set.
Adapter	1	W9B	467-116-001	CH-47C	Connect units and Test Set.
Shielded adapter	2	W9C	467-117-001	CH-47C	Use with cables W9, W9A, W9B and W12.
Unshielded adapter	2	W9D	467-118-001	CH-47C	Use with cables W9, W9A, W9B and W12.
Test lead	3	Wl0	467-114-001		Connect Test Set ground terminal to local ground

Table 1-2. Accessory Cables - Continued

Cable assembly	Qty	Cable designation	Part number	Aircraft	Use
					bus. Connect Test Set external resistance terminals to resistance to be measured.
Shielded cable	1	W11	467-119-001	OV-1	Use with cable W4 for connection to two (2) Test Sets.
Adapter	1	W12	467-120-001	CH-47C	Connect tank units and Test Set.
BNC tee connector	1	-	629-232-001	OV-1	Use with cable W4 for connection to two (2) Test Sets.

Table 1-3. Special Tools and Test Equipment

Figure	Nomenclature	Part Number*
	Oscilloscope	AN-USM-140 (80009)
4-1	Precision variable capacitor No. 3	1413 (24655)
4-2	Precision variable capacitor No. 2	1422CB (24644)
4-1,4-2	Precision variable capacitor No. 1	1422CC (24655)
4-2	Capacitance bridge	1620 (24655)
4-3	Test fixture (see para 1-10)	199-202-001 (26055)
	Digital voltmeter	AN/USM-303A (81349)

* OR EQUIVALENT

Table 1-4. Consumable Materials

Item number	Nomenclature	Military specification
1	Ethyl alcohol	MIL-E-463
2	Solvent	P-D-680
3	Paint, yellow	MIL-C-22751-C
4	Solder	QQ-S-571
5	Paint, black	MIL-C-22751-C

1-10. Fabrication of test equipment, special tools and support equipment.

a. General. Local fabrication of a test fixture is required to perform the maintenance requirements in this manual.

b. Test Fixture. Assemble the test fixture in accordance with figure 1-2.

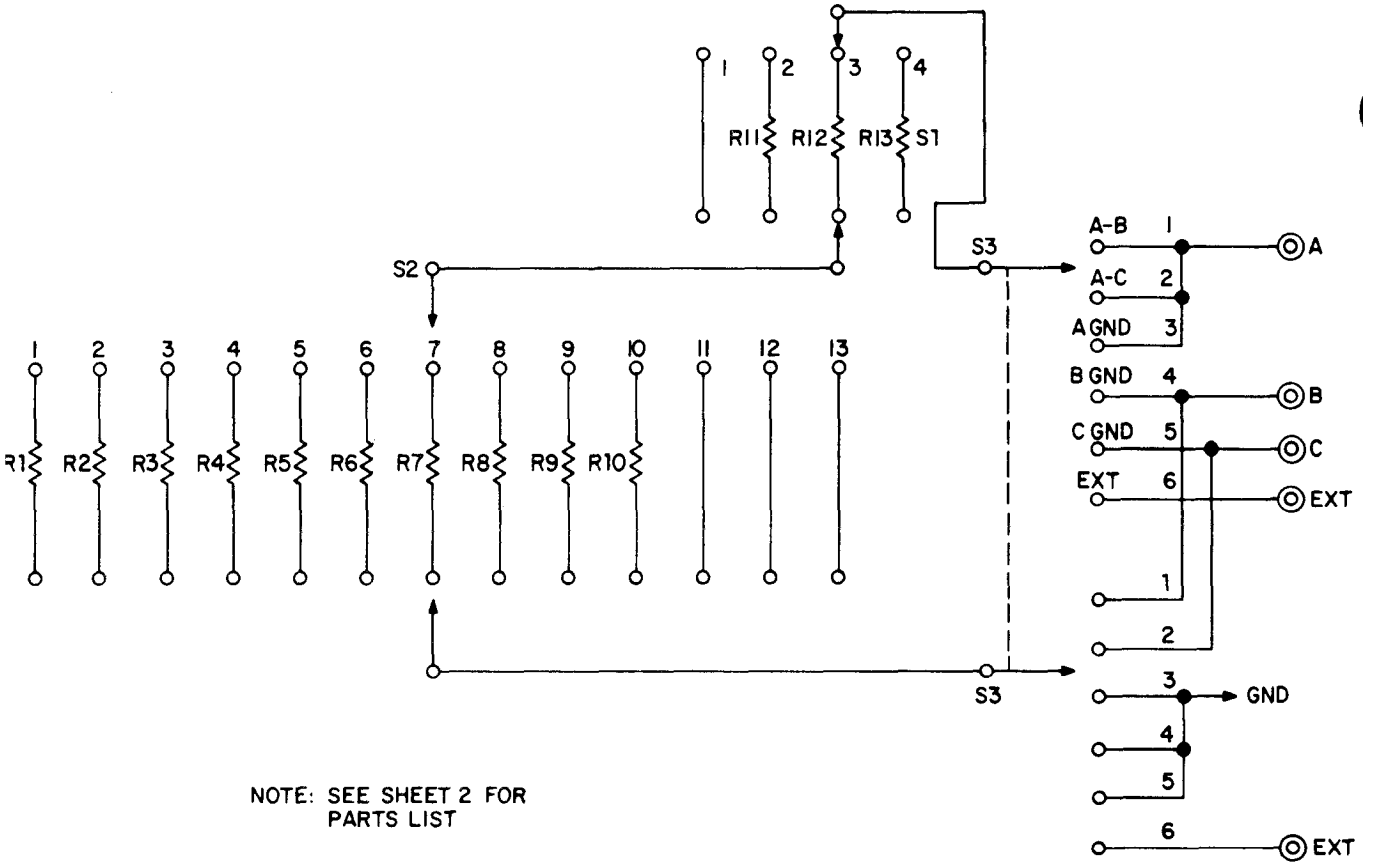


Figure 1-2. Test fixture fabrication

REF DESIG	QTY	PART NUMBER (MANUFACTURER)	DESCRIPTION
R1	1	RNR55J9502FR	RESISTOR
R2	1	M0X400. 5M1% (VICTOREEN)	RESISTOR
R3	1	M0X400 .95M1% (VICTOREEN)	RESISTOR
R4	1	M0X400 5.0M1% (VICTOREEN)	RESISTOR
R5	1	M0X400 9.5M1% (VICTOREEN)	RESISTOR
R6	1	M0X400 50M1% (VICTOREEN)	RESISTOR
R7	1	M0X400 95M1% (VICTOREEN)	RESISTOR
R8	1	M0X400 500M1% (VICTOREEN)	RESISTOR
R9	1	M0X400 950M1% (VICTOREEN)	RESISTOR
R10	1	RX-1 5000M1% (VICTOREEN)	RESISTOR
R11	1	RX-1 9500M1% (VICTOREEN)	RESISTOR
R12	1	RX-1 50,000M1% (VICTOREEN)	RESISTOR
R13	1	RX-1 95,000M1% (VICTOREEN)	RESISTOR
S1, S3	2	PA2003 (CENTRALAB)	SWITCH, ROTARY
S2	1	PA4003 (CENTRALAB)	SWITCH, ROTARY

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. INTRODUCTION

2-1. Scope.

The operating instructions in this chapter describe the use and capability of the Test Set. Included is a description of the front panel of the Test Set, turn-on and turn-off procedures, and complete operating instructions.

2-2. Front Panel Description.

Figure 2-1 shows the front panel of the Test Set and table 2-1 describes the function of each operating control, indicator, and connector.

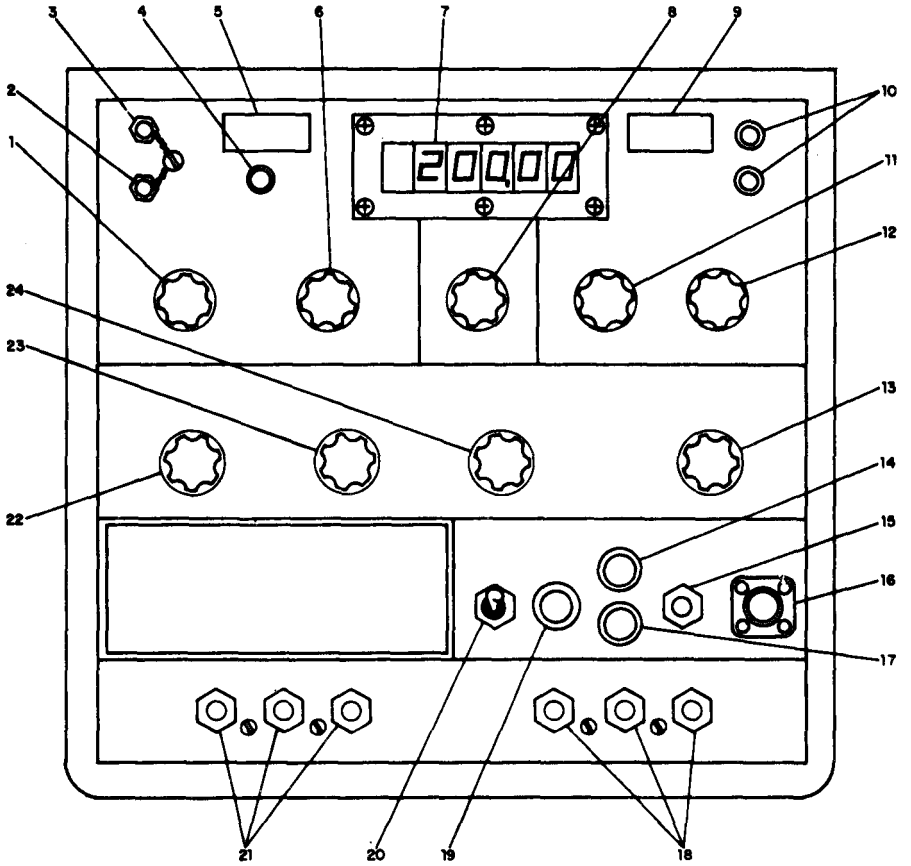


Figure 2-1. Test set front panel controls, indicators and connectors

Legend for fig. 2-1:

1. CAPACITANCE-FUNCTION switch
2. CAPACITANCE-LOW ADJ control
3. CAPACITANCE-HIGH ADJ control
4. DISPLAY TEST switch
5. CAPACITANCE STANDARDS placard
6. CAPACITANCE-RANGE switch
7. Digital display
8. DISPLAY SELECT switch
9. RESISTANCE TEST placard
10. EXT RES terminals (2)
11. RESISTANCE-FUNCTION switch
12. RESISTANCE-RANGE switch
13. SIMULATORS-COMP control
14. 3/4 AMP SLO BLO fuse
15. GND terminal
16. POWER-J1 connector
17. SPARE fuse
18. AIRCRAFT TANK UNITS connectors (3)
19. POWER-ON indicator
20. POWER-ON/OFF switch
21. INDICATOR connectors (3)
22. SIMULATORS-PROBE 0-7000 pF switch
23. SIMULATORS-PROBE 0-800 pF switch
24. SIMULATORS-PROBE 15-390 pF control

Table 2-1. F ront Panel Controls, Indicators and Connectors

Fig. 2-1 item no.	Panel component	Function
1	CAPACITANCE-FUNCTION switch	Funtional only when DISPLAY SELECT switch in CAP (pF) position.
	A/C TEST-COMP position	Connects Test Set circuitry to measure capacitance of the aircraft compensator.
	A/C TEST-UNSH position	Connects Test Set circuitry to measure capacitance of the aircraft tank units.
	SIM SET-COMP position	Connects Test Set circuitry to measure capacitance of SIMULATOR COMP.
	SIM SET-PROBE position	Connect Test Set circuitry to measure capacitance of SIMULATOR PROBE.
	IND TEST-SIM position	Connects Test Set PROBE and COMP SIMULATORS through INDICATOR connectors to indicator under test.
	IND TEST-A/C position	Connects aircraft tank units and compensator to indicator under test utilizing Test Set as a junction box.
	IND TEST-A/C + PROBE SIM-position	Connects parallel combination of aircraft tank units and simulated PROBE and the aircraft compensator to indicator under test.

Table 2-1. Front Panel Controls, Indicators and Connectors-Continued

Fig. 2-1 item no.	Panel component	Function
1-Continued	IND TEST-A/C + PROBE SIM + COMP SIM position	Connect parallel combination of aircraft tank units and simulated PROBE and parallel combination of aircraft compensator and simulated COMP to indicator under test.
2	CAPACITANCE- LOW ADJ control	Used for low range calibration of capacitance measurement circuitry when CAPACITANCE RANGE switch is in LOW ADJ position.
3	CAPACITANCE-HIGH ADJ control	Used for high range check of capacitance measurement circuitry when CAPACITANCE RANGE switch is in HIGH ADJ position.
4	DISPLAY TEST switch	When depressed causes digital display to read 8.8.8.8.8.8. Failure. of this test identifies malfunctioning digits in display.
5	CAPACITANCE STANDARDS placard	Placard is marked with capacitance values of Test Set internal LOW and HIGH standard capacitors.

Table 2-1. Front Panel Controls, Indicators and Connectors-Continued

Fig. 2-1 item no.	Panel component	Function
6	CAPACITANCE-RANGE (pF) switch	
	200, 1000, 4000, 8000 positions	Selects range and resolution of capacitance measurement as follows:

CAPACITANCE RANGE	RESOLUTION
200 pF	0.05 pF
1000 pF	0.25 pF
4000 pF	1.0 pF
8000 pF	2.0 pF

HIGH ADJ-position	High range check of capacitance measurement circuitry.
LOW ADJ-position	Low range check of capacitance measurement circuitry.
Digital Display	Displays measured capacitance in picofarads or resistance in megohms. Display is direct reading in-line numeric type.
DISPLAY SELECT switch	Selects capacitance measurement mode or resistance measurement mode of Test Set.

Table 2-1. Front Panel Controls, Indicators and Connectors-Continued

Fig. 2-1 item no.	Panel component	Function
9	RESISTANCE TEST placard	Placard is marked with acceptable tolerance band for resistance reading when RESISTANCE RANGE switch is in HIGH TEST and LOW TEST positions.
10	EXT RES terminals	Test lead input of resistance to be measured.
11	RESISTANCE-FUNCTION switch	Functional only when DISPLAY SELECT switch is in RES (MEG) position.
	A-B position	Connects Test Set circuitry to measure resistance between COAX A and UNSH B connectors.
	A-C position	Connects Test Set circuitry to measure resistance between COAX A and COMP C connectors.
	A-GND position	Connects Test Set circuitry to measure resistance between COAX A connector and ground.
	B-GND position	Connects Test Set circuitry to measure resistance between UNSH B connector and ground.

Table 2-1. Front Panel Controls, Indicators and Connectors-Continued

Fig. 2-1 item no.	Panel component	Function
11-Continued	C-GND position	Connects Test Set circuitry to measure resistance between COMP C connector and ground.
	EXT RES position	Connects Test Set circuitry to measure resistance presented across EXT RES terminals.
12	RESISTANCE-RANGE (MEG) switch	
	LOW TEST position	Low range check of resistance measurement circuitry.
	HIGH TEST position	High range check of resistance measurement circuitry.
	0.1-1, 1-10, 10-100 100-1K, 1K-10K	Selects range and resolution of resistance measurement as follows:

Resistance Range	Resolution
0.1-1 Meg	0.01 Meg
1-10 Meg	0.1 Meg
10-100 Meg	1 Meg
100-1K Meg	10 Meg
1K-100K Meg	100 Meg
10K-100K Meg	1000 Meg

Table 2-1. Front Panel Controls, Indicators and Connectors-Continued

Fig. 2-1 item no.	Panel component	Function
13	SIMULATORS-COMP control	A single knob sets the capacitance value of the simulated COMP in the range of 15 to 390 pF.
14	3/4 AMP SLO BLO FUSE	Front panel replaceable fuse, connected in Test Set primary power input line.
15	GND terminal	Terminal for attachment of case ground lead of Test Set.
16	POWER-J1-115 VAC-400 Hz connector	Input connector for Test Set primary power.
17	SPARE FUSE	May be used to store spare 3/4 AMP SLO BLO) fuse.
18	AIRCRAFT TANK UNITS connectors UNSH-B, COAX-A and COMP-C	Connects Test Set through accessory cables to aircraft tank unit and compensator under test.
19	POWER-ON indicator	Light located directly to right of ON/OFF switch. Light is illuminated when ON/OFF switch is in ON position.
20	POWER-ON/OFF switch	Test Set input power on/off switch.

Table 2-1. Front Panel Controls, Indicators and Connectors-Continued

Fig. 2-1 item no.	Panel component	Function
21	INDICATOR connectors UNSH, COAX and COMP	Connects Test Set through accessory cables to indicator under test.
22, 23, 24	SIMULATORS-PROBE	Two rotary switches and a fine adjustment knob to set capacitance value of simulated PROBE in range of 0 to 8000 pF.
22	SIMULATORS-PROBE 0-7000 pF switch	Rotary switch selects the simulated PROBE capacitance value in increments of approximately 1000 pF from 0 to 7000 pF .
23	SIMULATORS-PROBE 0-800 pF switch	Rotary switch selects the simulated PROBE capacitance value in increments of approximately 200 pF from 0 to 800 pF .
24	SIMULATORS PROBE 15-390 pF control	This fine adjustment control sets the simulated PROBE capacitance value in the range of 15 to 390 pF.

Section II. OPERATION

2-3. Turn-On Procedure.

To turn the Test Set on proceed as follows:

a. Position Test Set ON/OFF switch (20, figure 2-1) to OFF.

b. Connect one end of Test Set power cable (see table 1-2) W1 to Test Set input power connector J1 (16). Connect the other end of W 1 to either power adapter W2 or W3. Connect the free end of W2 or W3 to 115 VAC 400 Hz source. This connection requires no attention to polarization, since neither side of the power circuit is grounded in the Test Set.

WARNING

The Test Set must be grounded prior to connection to aircraft fuel gage system under test.

c. Connect the Test Set GND terminal (15) to a source of ground potential using test lead W10. Suitability of grounding connection depends upon where the Test Set is being used. If the Test Set is in use at a bench in the laboratory or field shop, make connection to the bench ground strap. If the Test Set is being used in an aircraft, attach the ground connection to any convenient point on the aircraft's ground bus or structure that is free of paint or other insulating material.

d. Connect Test Set accessory cables, as required, to unit or system to be tested. (See table 1-2 and para. 2-6.)

e. Position Test Set ON/OFF switch (20) to ON. No warm up time is required before performing specific tests.

2-4. Turn-off Procedure.

To turn off Test Set proceed as follows:

a. Position Test Set ON/OFF switch (20, figure 2-1) to OFF.

b. Disconnect Test Set power cable.

c. Disconnect Test Set accessory cables and test lead ground cable.

2-5. Test Set Functions.

The Test Set contains four basic types of circuitry. Each circuit performs a separate function and is described in the following paragraphs. (See fig. 2-1.)

a. Measuring tank unit and compensator capacitance.

b. Measuring tank unit and compensator insulation resistance.

c. Simulating tank unit and compensator capacitance for checking the aircraft indicator under test.

d. Checking the Test Set capacitance measurement and resistance measurement circuitry.

2-6. Typical Interconnection.

Figure 2-2 shows a typical system/Test Set interconnection. The specific interconnection is dependent on the type of aircraft and type of fuel quantity system. For more detailed information about a particular aircraft's fuel quantity system, reference should be made to the aircraft's applicable technical manual. Table 1-2 lists the accessory cables provided with the Test Set, to be used as required to connect the Test Set to the particular aircraft unit or system to be tested. The description which follows pertains to the typical system/Test Set interconnection shown in figure 2-2 and utilizing the cables as required which are listed in table 1-2. To interconnect the Test Set to the fuel quantity installation proceed as follows:

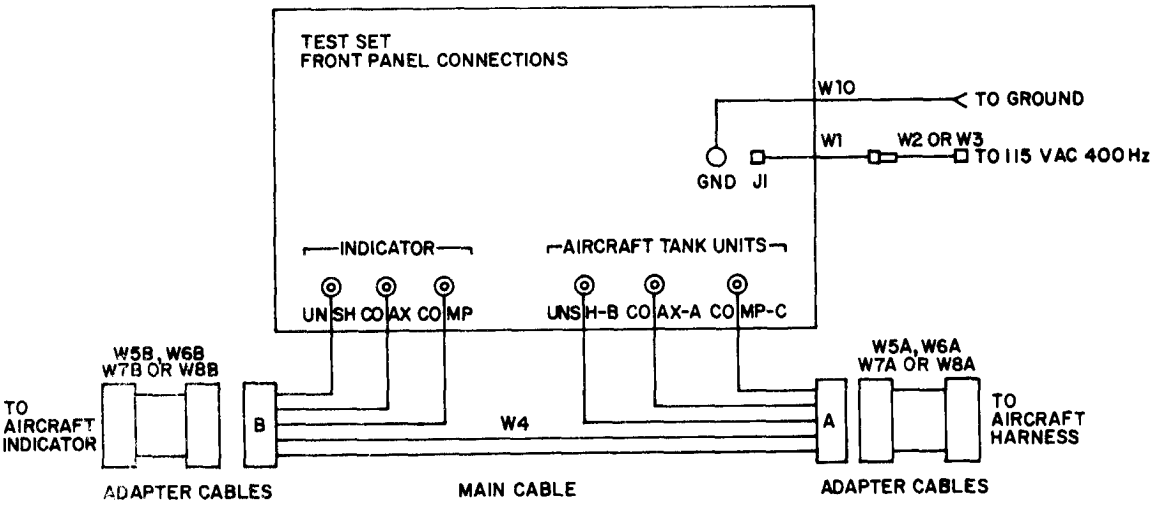
a. If necessary to gain access to the indicator connectors, remove the aircraft fuel quantity system indicator from the instrument panel. Disconnect the cable from the receptacle at the rear of the indicator. See applicable aircraft manual for removal of

aircraft instruments.

b. Referring to table 1-2 and figure 2-2, connect the appropriate adapter cables to main cable W4. Note that the multi-pin connectors on W4 are marked A and B. The connector marked A, mates with adapter cables W5A, W6A, W7A or W8A and the connector marked B, mates with adapter cables W5B, W6B, W7B and W8B. Adapter cables are not needed for testing of the OV-1 aircraft fuel quantity system.

c. Connect W4 with appropriate adapter cables into aircraft wiring as shown in figure 2-2. The two branch groups of leads (fig. 2-2) must now be connected to the proper receptacles on the Test Set front panel. Connect the three leads from the A branch of W4 to the appropriate receptacles marked UNSH B, COAX A and COMP C (18, figure 2-1) located in the lower right corner of the Test Set front panel. Connect the three leads from the B branch of W4 to the appropriate receptacles marked UNSH, COAX, and COMP (21) located in the lower left corner of the Test Set front panel.

d. Connect power and ground cables as described in paragraph 2-3.



NOTES:

1. MAIN CABLE W4 IS USED WITHOUT ADAPTER CABLES FOR OV-1 AIRCRAFT TESTING.
2. MAIN CABLE W4 MUST BE USED WITH ADAPTER CABLES FOR TESTING OF UH-1, AH-1 CH54A,B AND CH47A,B AIRCRAFT (SEE TABLE 1-2)

Figure 2-2. Typical system/test set interconnection

2-7. Measuring Aircraft Tank Unit and Compensator Capacitance.

a. With the equipment set up as shown in figure 2-2, position Test Set switches as follows:

Switch	Position
ON/OFF (20, figure 2-1)	ON
DISPLAY SELECT (8)	CAP (pF)
CAPACITANCE FUNCTION (1)	A/C TEST-UNSH
CAPACITANCE RANGE (6)	200

NOTE

DISPLAY SELECT (8) switch must be in CAP (pF) position for all capacitance measurements.

b. With the Test Set switches set as described, the Test Set is in the mode for measring aircraft tank unit capacitance. The number displayed on the Test Set digital display (7) is the aircraft tank unit capacitance in picofarads. If the display is blinking 199.95, the aircraft tank unit being measured has a capacitance greater than 200 pF. Rotate the CAPACITANCE RANGE switch (6) one position at a time until the blinking stops and a non-blinking number is obtained. The first position reached after 200 on the CAPACITANCE RANGE switch (6) that yields a non-blinking reading will give the aircraft tank unit capacitance to the greatest resolution. The overrange blinking condition for each position of the CAPACITANCE RANGE switch (6) is as follows:

CAPACITANCE RANGE switch position	Overrange blinking number
200	199.95
1000	999.75
4000	3999.
8000	7998.

c. To measure the capacitance of the aircraft compensator, position Test Set switches as in paragraph 2-7(a) for aircraft tank unit capacitance measurement, except set CAPACITANCE FUNCTION switch (1) to A/C TEST-COMP position. Set CAPACITANCE RANGE switch (6) to appropriate position to read capacitance to greatest resolution as described in paragraph 2-7(b).

2-8. Measuring Aircraft Tank Unit and Compensator Insulation Resistance and External Resistance.

a With the equipment set up as shown in figure 2-2, position Test Set switches as follows:

Switch	Position
ON/OFF (20, figure 2-1)	ON
DISPLAY SELECT (8)	RES (MEG)
RESISTANCE FUNCTION (11)	A-B
RESISTANCE RANGE (12)	0.1-1

NOTE

DISPLAY SELECT (8) switch must be in RES (MEG) position for all resistance measurements.

b. With the Test Set switches positioned as described, the Test Set is in the mode for measuring aircraft tank unit insulation resistance, the resistance betweeen COAX A and UNSH B Test Set receptacles (18). The number displayed on the Test Set digital display (7) is the resistance in megohms.

(1) If the display is blinking .9900, the aircraft tank unit being measured has an insulation resistance greater than 1 megohm. Rotate the RESISTANCE RANGE switch (12) one position at a time until the blinking stops and a non-blinking number is obtained. The overrange blinking condition for each position of the RESISTANCE RANGE switch (12) is as follows:

RESISTANCE RANGE switch position	Overrange blinking number
0.1-1	.9900
1-10	9.900
10-100	99.00
100-1K	990.0
1K-10K	9900
10K-100K	99000

(2) The Test Set, in the insulation resistance measurement mode, also indicates an underrange condition when the resistance being measured is less than the range as selected by the RESISTANCE RANGE switch (12). The underrange condition is indicated by a blinking display. The blinking condition for each position of the RESISTANCE RANGE switch (12) is as follows:

RESISTANCE RANGE switch position	Underrange blinking number
0.1-1	.0000
1-10	.000
10-100	.00
100-1K	.0
1K-10K	0.
10K-100K	00.

(3) The combined overrange blinking and underrange blinking indication force the Test Set operator to automatically position the RESISTANCE RANGE switch (12) in the correct position for measuring the unknown resistance. For overrange blinking, the RESISTANCE RANGE switch (12) must be rotated clockwise to obtain a resistance reading and for underrange blinking the RESISTANCE RANGE switch (12) must be rotated counter-clockwise to obtain a resistance reading.

c. To measure the insulation resistance of the aircraft compensator, that is the resistance between the COAX A and COMP C Test Set receptacles (18), position the RESISTANCE FUNCTION switch (11) to A-C position. Set the RESISTANCE RANGE switch (12) as described in paragraph 2-8(b).

d. To measure the insulation resistance between the center conductor of the coaxial signal lead and aircraft chassis ground, that is the resistance between the COAX A Test Set receptacle (18) and chassis ground, position the RESISTANCE FUNCTION switch (11) in position A-GND. Position the RESISTANCE RANGE switch (12) as described in paragraph 2-8(b).

e. To measure the insulation resistance between the unshielded signal lead and aircraft chassis ground, that is the resistance between the UNSH-B Test Set receptacle (18) and chassis ground, position the RESISTANCE FUNCTION switch (11) in position B-GND. Position RESISTANCE RANGE switch (12) as described in paragraph 2-8(b).

f. To measure the insulation resistance between the compensator signal lead and aircraft chassis ground, that is the resistance between the COMP C Test Set receptacle (18) and chassis ground, position the RESISTANCE FUNCTION switch (11) in position C-GND. Position the RESISTANCE RANGE switch (12) as described in paragraph 2-8(b).

g. To measure the insulation resistance of an unknown connected across the EXT RES terminals (10) of the Test Set, position RESISTANCE FUNCTION switch (11) in position EXT RES. Position the RESISTANCE RANGE switch (12) as described in paragraph 2-8(b).

2-9. Setting Simulated Tank Unit Capacitance and Simulated Compensator Capacitance.

a. To set the simulated tank unit capacitance (with the equipment set up as shown in figure 2-2), position Test Set switches as follows:

Switch	Position
ON/OFF (20, figure 2-1)	ON
DISPLAY SELECT (8)	CAP (pF)
CAPACITANCE FUNCTION (1)	SIM SET-PROBE

(1) Set the CAPACITANCE RANGE switch (6) to the range which is compatible with the value of tank unit capacitance to be simulated. For example, if it is desired to simulate 1900 pF, set the CAPACITANCE RANGE switch (6) to position 4000. Note that the best digital display resolution and setting accuracy is obtained when setting the CAPACITANCE RANGE switch (6) to the lowest range that will cover the value to be simulated. For the example presented, setting the CAPACITANCE RANGE switch (6) to position 8000 would not yield the best display resolution for simulating a tank unit capacitance of 1900 pF.

(2) Once the suitable CAPACITANCE RANGE switch (6) position is selected, the PROBE-SIMULATOR switches (22, 23) and fine adjustment control (24) must be set to the desired value of simulated tank unit capacitance. For example, to simulate 1900 pF, set the 1000 pF increment switch (22) to position 1000, set the 200 pF increment switch (23) to position 800 and then rotate the 15-390 pF fine adjustment control (24) for a display (7) reading of 1900.

b. To set the simulated compensator capacitance (with the equipment set up as shown in figure 2-2), position Test Set switches as follows:

Switch	Position
ON/OFF (20, figure 2-1)	ON
DISPLAY SELECT (8)	CAP (pF)
CAPACITANCE FUNCTION (1)	SIM SET-COMP

(1) Set the CAPACITANCE RANGE switch (6) to the range which is compatible with the value of compensator capacitance to be simulated. Refer to paragraph 2-9 (a) for setting

procedure of CAPACITANCE RANGE switch (6).

(2) Once the suitable CAPACITANCE RANGE swith (6) position is selected, the COMP-SIMULATOR fine adjustment control (13) must be set to the desired value of simulated compensator capacitance as read on the Test Set digital display (7).

2-10. Fuel Quantity System Calibration.

The following steps give a detailed procedure for adjusting the EMPTY and FULL controls located at the rear of the aircraft indicator under test:

NOTE

In order to avoid erroneous indications when testing a fuel quantity system that does not have a compensator, remove the wire in the W4 harness that is connected to the Test Set receptacle marked INDICATOR-COMP (21) and place the protective cover on the receptacle. The protective cover has a grounded pin which grounds the unused compensator section to eliminate any stray pickup when not in use.

a. Fuel Tank Completely Defueled.

(1) With the equipment set up as shown in figure 2-2, set Test Set switches as follows:

Switch	Position
ON/OFF (20, figure 2-1)	ON
DISPLAY SELECT (8)	CAP (pF)
CAPACITANCE FUNCTION (1)	IND TEST-A/C

(2) Adjust the EMPTY control at the rear of the aircraft indicator to obtain an empty indication.

(3) Set CAPACITANCE FUNCTION switch (1) to SIM SET-COMP position. Using the applicable aircraft technical manual, set the compensator simulator to a value equal to the aircraft wet value" minus the aircraft dry value.

(4) Set CAPACITANCE FUNCTION switch (1) to SIM SET-PROBE position. Using the applicable aircraft technical manual, set the tank unit simulator to a value equal to the aircraft full value minus the aircraft dry or empty value.

(5) Set CAPACITANCE FUNCTION switch (1) to IND TEST-A/C + PROBE SIM + COMP SIM position.

(6) Adjust the FULL control at the rear of the aircraft indicator to obtain the full indication.

b. Fuel Tank Defueled But Compensator Completely Covered With Fuel.

(1) With the equipment set up as shown in figure 2-2, position Test Set switches as follows :

Switch	Position
ON/OFF (20, figure 2-1)	ON
DISPLAY SELECT (8)	CAP (pF)
CAPACITANCE FUNCTION (1)	IND TEST-A/C

(2) Adjust the EMPTY control at the rear of the aircraft indicator to obtain an empty indication.

(3) Set CAPACITANCE FUNCTION switch (1) to SIM SET-PROBE position. Using the applicable aircraft technical manual, set the tank unit simulator to a value equal to the aircraft full value minus the aircraft dry or empty value.

(4) Set CAPACITANCE FUNCTION switch (1) to IND TEST-A/C + PROBE SIM position.

(5) Adjust the FULL control at the rear of the aircraft indicator to obtain the full indication.

c. Fuel Tank Partially or Completely Fueled.

Calibration of the fuel quantity indicator with a partially or completely fueled tank is performed by simulating the nominal values of capacitance for empty and full indication. The calibration does not match the aircraft indicator to the actual dry value of the aircraft tank units. Thus the manufacturing tolerances of the tank units are not cancelled out in the calibration. This means of calibration should be used only when it is impractical to completely drain the fuel tank and reduced accuracy can be tolerated.

(1) With the equipment set up as shown in figure 2-2, position Test Set switches as follows:

Switch	Position
ON/OFF (20, figure 2-1)	ON
DISPLAY SELECT (8)	CAP (pF)
CAPACITANCE FUNCTION (1)	SIM SET-COMP

(2) Using the applicable aircraft technical manual, set the compensator simulator to the dry value of the aircraft compensator.

(3) Set CAPACITANCE FUNCTION switch (1) to SIM SET-PROBE position. Using the applicable aircraft technical manual, set the tank unit simulator to the empty value of the aircraft tank units.

(4) Set CAPACITANCE FUNCTION switch (1) to IND TEST-SIM position. Adjust the EMPTY control at the rear of the aircraft indicator to obtain an empty indication.

(5) Set CAPACITANCE FUNCTION switch (1) to SIM SET-COMP position. Using the applicable aircraft technical manual, set the compensator simulator to the wet value of the aircraft compensator.

(6) Set CAPACITANCE FUNCTION switch (1) to SIM SET-PROBE position. Using the applicable aircraft technical manual, set the tank unit simulator to the full value of the

aircraft tank units.

(7) Set CAPACITANCE FUNCTION switch (1) to IND TEST-SIM position. Adjust the FULL control at the rear of the aircraft indicator to obtain the full indication.

Section III. THEORY OF OPERATION

2-11. Functional Block Diagram Description.

a. Figure 2-3 is a functional block diagram of the Test Set. Primary power required for operation is 115 VAC, 400 Hz, which is converted by the Test Set power supply to the necessary dc voltages required to operate the electronic analog and digital circuits. The primary power enters the Test Set through connector J1.

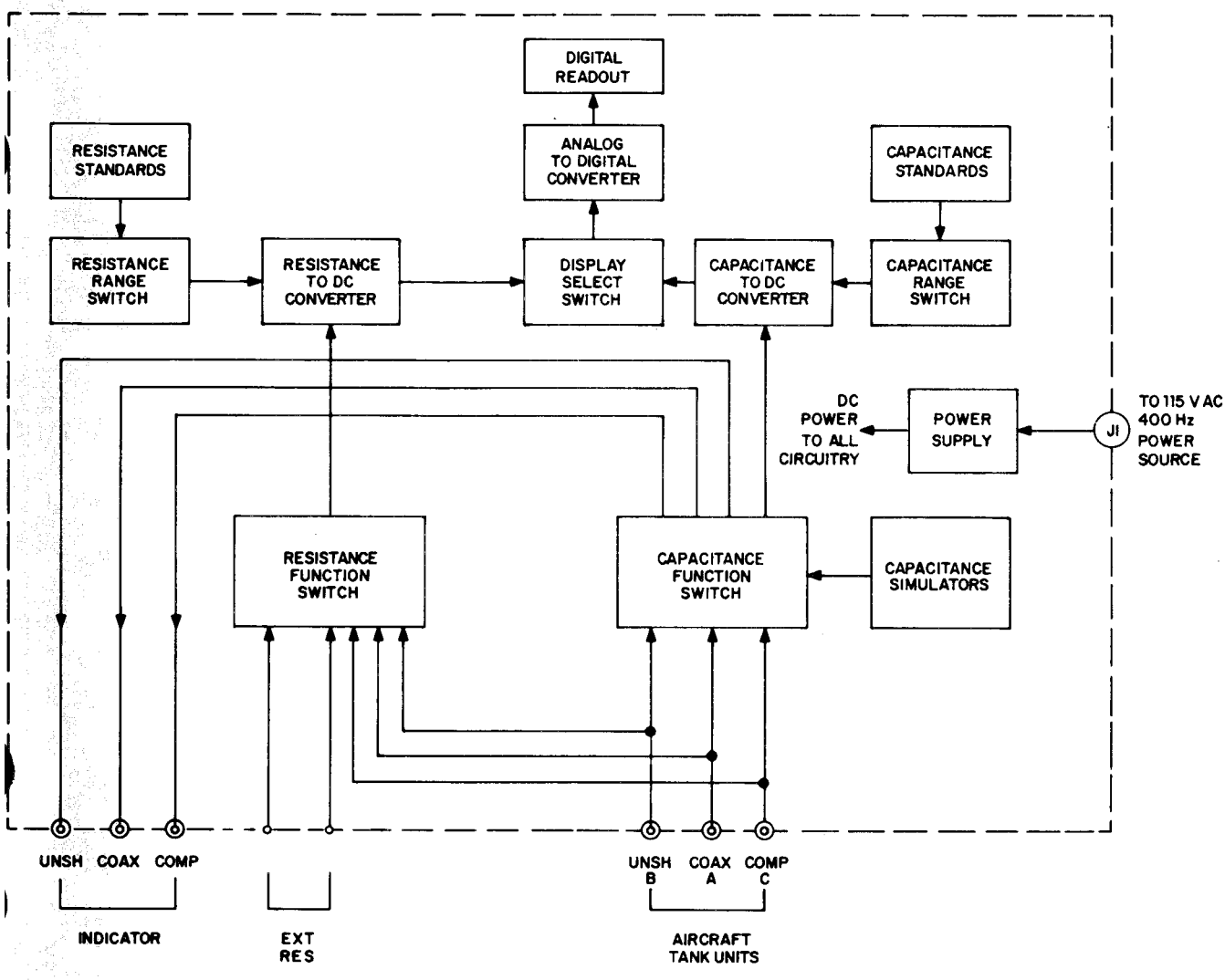


Figure 2-3. Test set, functional block diagram

b. The Test Set performs four basic functions. They are as follows:

(1) Capacitance measurement

(2) Capacitance simulation

(3) Insulation resistance measurement

(4) Capacitance and resistance self test

c. Capacitance measurement and capacitance simulation are under the control of the CAPACITANCE FUNCTION switch (1, figure 2-1). A tank unit applied across the COAX A and UNSH B input connectors (18) and a compensator applied across the COAX A and COMP C input connectors (18) are measured by routing the capacitance signals through the CAPACITANCE FUNCTION switch (1) and applying them to the capacitance-to-dc converter. The capacitance-to-dc converter generates a dc voltage proportional to either the tank unit or compensator being measured. This DC voltage is scaled by the CAPACITANCE RANGE switch (6). The scaled voltage is applied to the analog-to-digital converter when the DISPLAY SELECT switch (8) is in the CAP (pF) position. The analog-to-digital converter converts the dc voltage (which is proportional to the capacitance being measured) to a digital code. This code is applied to the digital display (7) which, in turn, displays the value of the capacitance being measured (in picofarads). Measurement of the Test Set capacitance simulators (tank unit and compensator) is also under the control of the CAPACITANCE FUNCTION switch (1), with the measurement process being identical to that previously described for the aircraft-located tank components applied to the UNSH B, COAX A and COMP C Test Set connectors (18).

d. The capacitance simulators for tank unit and compensator are applied to the indicator under test through the UNSH, COAX and COMP Test Set connectors (21). The simulator signals are routed through the CAPACITANCE FUNCTION switch (1) to the aforementioned Test Set connectors.

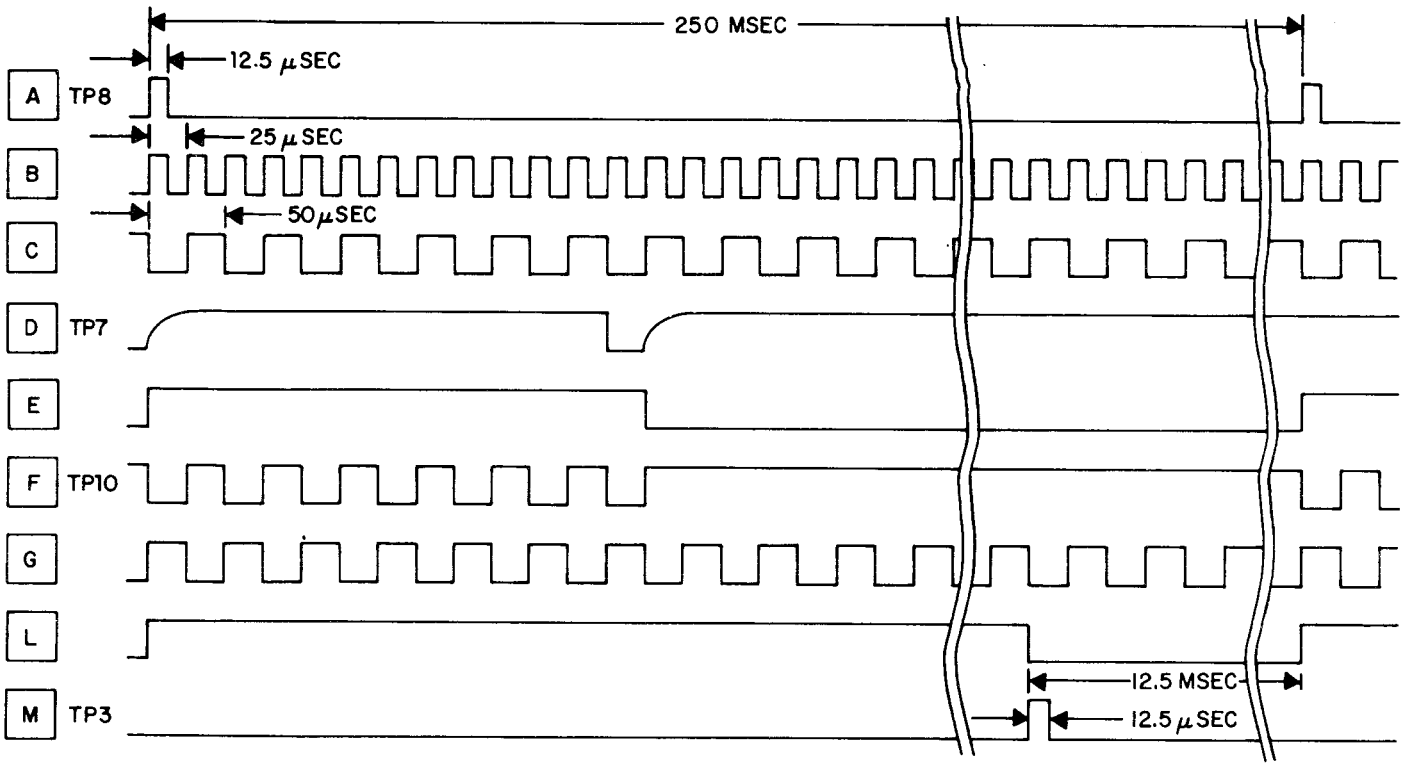
e. Resistance measurement is under the control of the RESISTANCE FUNCTION switch (11). The RESISTANCE FUNCTION switch (11) selects the resistance measurement mode (for example, resistance measurement across the EXT RES terminals (10), or measurement across the UNSH B and COAX A Test Set connectors (18), etc). The output of the RESISTANCE FUNCTION switch (11) feeds the resistance-to-de converter. The resistance-to-dc converter generates a dc voltage proportional to the resistance being measured. This dc voltage is scaled by the RESISTANCE RANGE switch (12). The scaled voltage is applied to the analog-to-digital converter when the DISPLAY SELECT switch (8) is in the RES (MEG) position. The analog-to-digital converter converts the dc voltage (which is proportional to the resistance being measured) to a digital code. This code is applied to the digital readout which, in turn, displays the value of the resistance being measured (in megohms).

f. The Test Set has built-in stable, standard capacitors and standard resistors used for verification and calibration of the Test Set accuracy. The standard capacitors are routed through the CAPACITANCE RANGE switch (6) and are measured by circuitry associated with capacitance measurement as previously described. Likewise, the standard resistors are routed through the RESISTANCE RANGE switch (12) and are measured by the circuitry associated with the resistance measurement as previously described.

2-12. Schematic Diagram Description.

The schematic diagram, figures FO-1 thru FO-6 is a detailed logic and circuit diagram of the Test Set. As an aid to understanding of the Test Set, the diagram is keyed, utilizing squared letter references [X], to timing diagrams figures 2-4 and 2-5 and logic tables figures 2-6 thru 2-13. Logic levels are defined as follows:

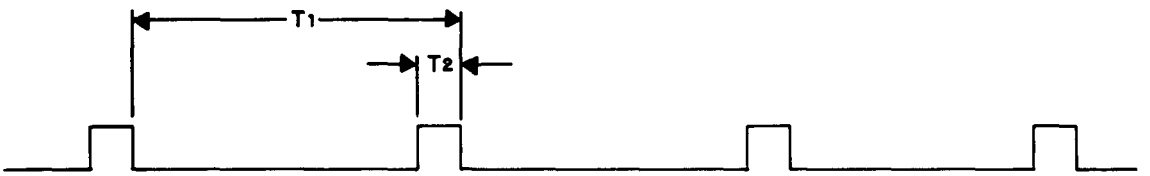
Logic 0: less than 0.4VDC
Logic 1: greater than 2.4VDC



NOTES:

1. If DISPLAY SELECT switch is in RES (MEG) position and an underrange condition exists (see para 2.8) for the Resistance Range Selected, [C] and [F] = logic 0, [D] and [E] = logic 1 continuously. All other waveforms will be as shown.
2. All Time intervals are ±5% tolerance.
3. The number of pulses in [F] may vary from 0 to 3999. The exact number depends upon the value of resistance or capacitance being measured and the Resistance Range or Capacitance Range selected. For the example shown, the signal in [D], [E], and [F] represent a six (6) pulse condition.

Figure 2-4. Overall timing diagram



Signal	T_1	T_2
H	250 usec	50 usec
I	2.5 msec	500 usec
J	25 msec	5 msec
K	250 msec	25 msec

NOTE: All time intervals are ±5% tolerance.

Figure 2-5. Timing diagram-binary counters A1Z32A, AlZ33, A1Z34, and A1Z35

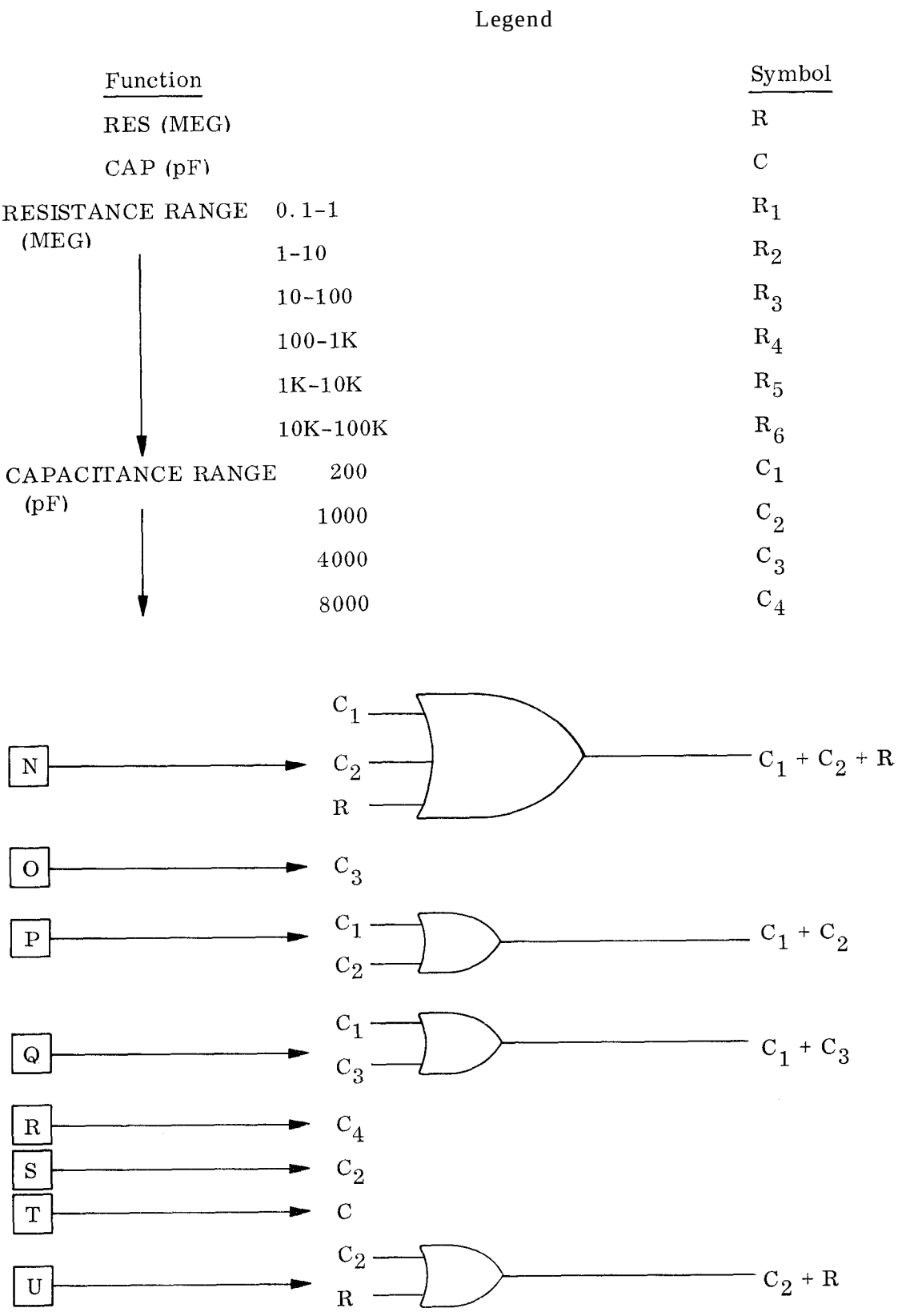


Figure 2-6. Logic table-resistance/capacitance measurement functions

Number Input Pulses (Pin 14) After Pulse A	Output			
	Pin 12	Pin 9	Pin 8	Pin 11
0	0	0	0	0
1	1	0	0	0
2	0	1	0	0
3	1	1	0	0
4	0	0	1	0
5	1	0	1	0
6	0	1	1	0
7	1	1	1	0
8	0	0	0	1
9	1	0	0	1
10	0	1	0	1
11	1	1	0	1
12	0	0	1	1
13	1	0	1	1
14	0	1	1	1
15	1	1	1	1

Figure 2-7. Logic table-binary counters A1Z36, A1Z37 and A1Z38

Number Input Pulses (Pin 14) After Pulse A	Output			
	Pin 12	Pin 9	Pin 8	Pin 11
o	0	0	0	0
1	1	0	0	0
2	0	1	0	0
3	1	1	0	0
4	0	0	1	0
5	1	0	1	0
6	0	1	1	0
7	1	1	1	0
8	0	0	0	1
9	1	0	0	1

Figure 2-8. Logic table-decade counters AIZ 17, AIZ 14, and AIZ 15

Number Input Pulses (Pin 1) After Pulse A	Output		
	Pin 9	Pin 8	Pin 11
o	0	0	0
1	1	0	0
2	0	1	0
3	1	1	0
4	0	0	1

Figure 2-9. Logic table-divide-by-5 counter AIZ27A

Input Pin	Corresponding Output Pin
2	16
3	15
6	10
7	9

NOTES:

1. If the input pin is at logic 0, the corresponding output pin is at logic 0 after pulse [M] .
2. If the input pin is at logic 1, the corresponding output pin is at logic 1 after pulse [M] .

Figure 2-10. Logic table for A1Z7, A1Z9, and A1Z10

Input Pin	Corresponding Output Pin
2	16
3	15
6	10
7	9

NOTES:

1. If the input pin is at logic 0, the corresponding output pin is at logic 1 after pulse [M] .
2. If the input pin is at logic 1, the corresponding output pin is at logic 0 after pulse [M] .

Figure 2-11. Logic table for A1Z6

Input Pin					Output Pin						
3	7	1	2	6	13	12	11	10	9	15	14
1	0	0	0	0	0	0	0	0	0	0	1
1	1	0	0	0	1	0	0	1	1	1	1
1	0	1	0	0	0	0	1	0	0	1	0
1	1	1	0	0	0	0	0	0	1	1	0
1	0	0	1	0	1	0	0	1	1	0	0
1	1	0	1	0	0	1	0	0	1	0	0
1	0	1	1	0	1	1	0	0	0	0	0
1	1	1	1	0	0	0	0	1	1	1	1
1	0	0	0	1	0	0	0	0	0	0	0
1	1	0	0	1	0	0	0	1	1	0	0
0	X	X	X	X	0	0	0	0	0	0	0

X = either 0 or 1

Figure 2-12. Logic table-binary coded decimal to seven segment display decoder driver A1Z1, A1Z2, A1Z3, A1Z4 and A1Z5

Input Pin							Output Displayed
14	13	10	6	5	2	3	
0	0	0	0	0	0	1	0
1	0	0	1	1	1	1	1
0	0	1	0	0	1	0	2
0	0	0	0	1	1	0	3
1	0	0	1	1	0	0	4
1	1	0	0	1	0	0	5
1	1	0	0	0	0	0	6
0	0	0	1	1	1	1	7
0	0	0	0	0	0	0	8
0	0	0	1	1	0	0	9
1	1	1	1	1	1	1	DISPLAY BLANKED (OFF)

NOTE: With pin 8 = 0, the Decimal Point Shall Be Illuminated.

Figure 2-13. Logic table-displays A1DS1 through A1DS6

CHAPTER 3

AVIATION UNIT MAINTENANCE INSTRUCTIONS

Section I. PREPARATION FOR INSTALLATION, STORAGE AND SHIPMENT

3-1. Preparation for Installation.

CAUTION

Care should be execised when moving the Test Set. The Test Set contains electronic and electro-mechanical components and assemblies which may be damaged if improperly handled.

The Test Set is shipped as a single, self-contained unit, integrally housed in a combination case. No special instructions are required to unpack and prepare the test set for use. Provision, at the using site, must be made to meet at least the minimum requirements listed below:

a. Adequate lighting and ventilation.

b. Provision for the power requirements stated in table 1-1.

3-2. Equipment Inspection on Delivery.

When the Test Set is received, inspect the Test Set for possible damage in transit. Report evidence of damage immediately as required. A visual inspection of the equipment should include the following as a minimum:

a. Check for dented or sprung covers or other visible signs of external damage.

b. Check for cracked or shattered glass.

c. Check all cables and accessories for evidence of damage.

d. Check the equipment received against the master shipping list making certain that all the materials have been received.

e. Check that all packing materials, dust, or other foreign matter has been removed from the Test Set. Pay particular attention to points of electrical contact.

f. Report any irregularities and/or damage to the responsible activity.

3-3. Preparation for Storage.

The method of storage of the Test Set is the same as that specified for reshipment. Refer to paragraph 3-4 for reshipment instructions.

3-4. Preparation for Reshipment.

Preservation, packaging, packing, and marking requirements for reshipment of the Test Set must be in accordance with the instructions contained in figure 3-1.

CONTINUATION SHEET
(AVSCOM Suppl 1 to AR 700-15)

REF NO OF DOCUMENT BEING CONTINUED: TM 55-4920-383-13&P
PAGE | OF

NAME OF OFFEROR OR CONTRACTOR

SECTION G - PRESERVATION/PACKAGING/PACKING
G. PRESERVATION, PACKAGING, PACKING AND MARKING REQUIREMENTS *(OVERHAUL)*

All specifications and standards applicable to the requirements herein shall be the issue in effect on date of invitations for bids.

NOMENCLATURE	STOCK NUMBER
Test Set, Fuel Quantity Gage Capacitance Type	4920-00-503-1895
	PART NUMBER: 361-010-002

NET WEIGHT	SHIPPING DIMENSIONS	GROSS WEIGHT	CUBIC FEET
37 lbs	23 x 21 x 17	40 lbs	4.8

PACKAGING ☒ LEVEL A ☐ LEVEL B

☒ PACKAGING SHALL BE IN ACCORDANCE WITH SPECIFICATION MIL-P-116. THE FOLLOWING DETAILED REQUIREMENTS SHALL APPLY:

UNIT PKG QTY	METHOD	PRESERVATIVE	WRAP	DUNNAGE	CONTAINER
1	III	None	MIL-B-121 Grade A	PPP-C-1120 Class A *	PPP-B-636 Weather Resistant

☐ OTHER * 3 inches of bound fiber material top, bottom and sides to prevent damage from shock or movement.

PACKING ☐ LEVEL A ☒ LEVEL B

☐ a. ITEMS SHALL BE PACKED IN CONTAINERS CONFORMING TO

☐ b. ITEMS SHALL BE PACKED IN CONTAINERS CONFORMING TO SPECIFICATION PPP-B-601 STYLE I, GRADE A.

☐ c. PLYWOOD USED SHALL BE STANDARD GRADE WITH EXTERIOR GLUE OF GROUP B OF NN-P-530.

☒ d. ITEMS SHALL BE PACKED IN A MANNER TO INSURE CARRIER ACCEPTANCE AND SAFE DELIVERY AT DESTINATION. CONTAINERS SHALL BE IN ACCORDANCE WITH UNIFORM FREIGHT CLASSIFICATION RULES OR REGULATIONS OF OTHER CARRIERS APPLICABLE TO THE MODE OF TRANSPORTATION.

☐ e. OTHER.

MARKING

☒ a. MARKING OF SHIPMENTS (1968 JUN)
THE CONTRACTOR SHALL MARK ALL SHIPMENTS UNDER THIS CONTRACT IN ACCORDANCE WITH THE EDITION OF MIL-STD-129, "MARKING FOR SHIPMENT AND STORAGE," IN EFFECT AS OF THE DATE OF THE SOLICITATION. (ASPR 7-104.68) IN ADDITION, CONTROL PART NUMBER, IF ANY, PART NUMBER, AND SERIAL NUMBER, IF ANY, SHALL BE MARKED ON THE UNIT CONTAINER.

☒ b. MATERIEL CONDITION MARKING SHALL BE APPLIED IN ACCORDANCE WITH MIL-STD-129. A MATERIEL CONDITION TAG OF THE APPLICABLE TYPE WILL BE SECURELY ATTACHED DIRECTLY TO ALL UNINSTALLED OR STORED AERONAUTICAL OR AIR DELIVERY ITEMS. WHEN SUCH ITEMS ARE PLACED OR STORED IN CARTONS, PACKAGES, CRATES OR METAL SHIPPING CONTAINERS, A DUPLICATE MATERIEL CONDITION TAG OR LABEL WILL BE SECURELY ATTACHED TO THE EXTERIOR OF THE PACKAGE OR CONTAINER IN SUCH A MANNER THAT WILL AFFORD MAXIMUM PROTECTION FROM HANDLING AND WEATHER. TAGS WILL BE COMPLETED EITHER BY TYPEWRITTEN OR PRINTED BLACK LEAD PENCIL ENTRIES. ITEMS OF A COMMON OR NONTECHNICAL NATURE (*i.e.*, COMMON HARDWARE, BULK MATERIALS, ETC.) THE SERVICEABILITY OF WHICH IS OBVIOUS, AND THE IDENTITY AND INSPECTION REQUIREMENTS ADEQUATELY INDICATED BY COMMERCIAL TAGS, LABELS OR MARKINGS, MAY BE RECEIVED, STORED, ISSUED OR SHIPPED WITHOUT MATERIEL CONDITION TAGS.

☐ c. EXTERIOR SHIPPING CONTAINERS OF SIMS (*Selected Item Management System*) MATERIEL SHALL BE MARKED WITH SIM PROJECT CODE DISC LABELS IN ACCORDANCE WITH MIL-STD-129. THE CONTRACTING OFFICER WILL PROVIDE SIM PROJECT CODE LABELS ON REQUEST. THEY ARE AVAILABLE IN TWO SIZES 3 X 3 AND 9 X 9. SPECIFY ON YOUR ORDER THE SIZE AND QUANTITY REQUIRED.

APPROVED BY	ORGANIZATION	DATE
Nathan Silverman NATHAN SILVERMAN	DRSTS-SDP	18 Mar 80

Figure 3-1. Preservation, packaging, packing, and marking requirements

Section II. INSTALLATION

3-5. Installation Requirements.

The Test Set does not require any special installation instructions. The unit may be placed on a maintenance area work bench with suitable lighting and ventilation which contains facilities for the power requirements listed in table 1-1.

WARNING

The Test Set must be grounded prior to connection to aircraft fuel gage system under test (see para. 2-3 for turn-on instructions).

Section III. INSPECTIONS AND SERVICING

3-6. Inspection Requirements.

Table 3-1 contains the requirements to complete daily, intermediate, periodic, and special inspections as applicable to the Test Set. These inspections must be accomplished at the specific periods by organizational maintenance activities to as sure that all defects are discovered and corrected before a malfunction or serious trouble occurs.

NOTE

All inspections required at each operation shall be reaccomplished during daily, intermediate, and periodic inspections. All daily inspections shall be reaccomplished during intermediate and periodic inspections. All intermediate inspections shall be reaccomplished during periodic inspections.

a. Each Operation. Every time the Test Set is operated the inspections noted in this column shall be performed.

b. Daily Inspection. The daily inspection is accomplished following the last operation of the day, or preceding the next day's operation. Daily inspection requirements consist

of visual examination and operational checks to insure that the Test Set can safely and efficiently perform its assigned mission.

c. Intermediate Inspection. The intermediate inspection is a combination of daily and intermediate inspection requirements for checking the Test Set that requires verification of normal operation at frequencies between the daily and periodic inspections. Intermediate inspection is accomplished every 25 to 30 hours of operation. It is intended that evidence of progressive inefficient operation or abnormal conditions be discovered during this inspection. This will avoid a progression of discrepancies, requiring a major maintenance action to remedy the deficiencies.

d. Periodic Inspection. The periodic inspection is a thorough and searching inspection of those items subject to failure or discrepancy. Periodic inspection is accomplished every 100 to 120 hours of operation.

e. Special Inspection. The special inspection is a series of tests to determine the cause of failure. Special inspections are not required at the unit level.

3-7. Servicing.

The test set does not require any servicing beyond the inspection requirements contained in paragraph 3-6 at the unit level.

Table 3-1. Inspection Requirements

Item	Major assembly, item, or area	Requirement
Each operation inspection		
Controls	Test Set front panel	Operate switches and controls. Performance shall be smooth and positive. Detents shall hold switches firmly in selected position.
POWER ON indicator	Test Set front panel	Check that POWER ON indicator lamp (19, figure 2-1) lights when POWER ON/OFF switch (20) is set to ON.
Digital Display	Test Set front panel	Check that Digital Display (7, figure 2-1) cover glass is not cracked.
Electrical connectors and cable assemblies	Test Set front panel and accessory cables.	Inspect connectors for bent pins, damaged shells, worn or frayed wiring.
Daily inspection		
Hardware	Test Set, general	Inspect for loose or missing hardware.
Fuses	Test Set front panel	Check that proper fuse is installed in fuse holder.

Table 3-1. Inspection Requirements-Continued

	Major assembly, item, or area	Requirement
Intermediate inspection		
Transit case	Test Set exterior	Check for dented or sprung cover on case.
Periodic inspection		
Test Set	Test Set and cable assemblies	Check for grease, dirt, dust, or grime.

Section IV. PREVENTIVE MAINTENANCE

3-8. Cleaning.

The removal of grease, dirt, dust and grime from the Test Set is necessary for the proper operation of the Test Set. All items, except electrical contacts, should be wiped with a clean, lint-free cloth dipped in ethyl alcohol (item 1, table 1-4). A dry, lint-free cloth should be used to clean contacts.

3-9. Lubrication.

No lubrication of the Test Set is required at the organizational level of maintenance.

Section V. OPERATIONAL CHECKOUT

3-10. Performance Checks.

Performance checks are given in table 3-2. Performance checks are used to determine if the test set is operating within its operating limits. If the test set does not meet the requirements established in the Normal indication column of table 3-2, a trouble is indicated and reference should be made to the Corrective action column to correct the malfunc-

tion. The steps given in table 3-2 must be performed in the sequence indicated, in order to ensure proper system build-up and provide an immediate means of detecting a fault. Before starting the performance checks given in table 3-2, the POWER ON/OFF switch (20, figure 2-1) must be set to OFF.

Table 3-2. Performance Checks

Step	Action	Normal indication	Abnormal indication	Corrective action
	NOTE Numbers in parentheses refer to index numbers of figure 2-1.			
1	Set POWER ON-OFF switch (20) to ON.	POWER ON indicator (19) lights.	POWER ON indicator (19) does not light.	Replace POWER ON indicator (19), 3/4 AMP SLO BLO fuse (14), power cable W1, or adapters W2 or W3, if defective. If normal indication cannot be obtained, refer Test Set to higher level of maintenance.
2	Depress DISPLAY TEST switch (4).	Digital display (7) reads 8.8.8.8.8.8.	Digital display (7) does not read 8.8.8.8.8.8.	Refer Test Set to higher level of maintenance.

Table 3-2. Performance Checks-Continued

Step	Action	Normal indication	Abnormal indication	Corrective action
3	Set CAPACITANCE RANGE switch (6) to LOW ADJ position and DISPLAY SELECT switch (8) to CAP (pF) position.	Digital display (7) reads LOW value stamped on CAP STANDARDS placard (5).	Digital display does not read LOW value stamped on CAP STANDARDS placard (5).	Remove protective cap and use screwdriver to adjust LOW ADJ control (2) until digital display (7) reads LOW value stamped on CAP STANDARDS placard (5). If normal indication cannot be obtained, refer Test Set to higher level of maintenance.
	Set CAPACITANCE RANGE switch (6) to HIGH ADJ position and DISPLAY select switch (8) to CAP (pF).	Digital display (7) reads HIGH value stamped on CAP STANDARDS placard (5).	Digital display (7) does not read HIGH value stamped on CAP STANDARDS placard (5).	Remove protective cap and use screwdriver to adjust HIGH ADJ control (3) until digital display (7) reads HIGH value stamped on CAP

Table 3-2. Performance Checks-Continued

Step	Action	Normal indication	Abnormal indication	Corrective action
4				STANDARDS placard (5). If normal indication cannot be obtained, refer Test Set to higher level of maintenance.
5	Set DISPLAY SELECT switch (8) to RES (MEG) position and RESISTANCE RANGE switch (12) to LOW TEST position.	Digital Display (7) reads within acceptable tolerance band stamped on RESISTANCE TEST placard (9) for LOW TEST.	Digital Display (7) does not read within acceptable tolerance band stamped on RESISTANCE TEST placard (9) for LOW TEST.	Refer Test Set to higher level of maintenance.
6	Set DISPLAY SELECT switch (8) to RES (MEG) position and RESISTANCE	Digital Display (7) reads within acceptable tolerance band stamped on	Digital Display (7) does not read within acceptable tolerance band	Refer Test Set to higher level of maintenance.

Table 3-2. Performance Checks-Continued

Step	Action	Normal indication	Abnormal indication	Corrective action
6 (cont)	RANGE switch (12) to HIGH TEST position.	RESISTANCE TEST placard (9) for HIGH	stamped on RESISTANCE TEST placard (9) for HIGH TEST.	

Section VI. REPAIR AND REPLACEMENT OF AUTHORIZED PARTS

3-11. Removal.

WARNING

High voltages, dangerous to personnel, are present in the Test Set. Do not attempt to work on Test Set components while Test Set is operating or connected to 115 volt power line. To prevent injury to personnel, make certain that POWER ON/OFF switch (20, figure 2-1) is in the OFF position when making minor parts replacements.

a. Power Indicator Lamp. The lampholder cap (1, figure 3-2) must be removed to gain access to lamp (6). Remove lampholder cap (1) from indicator socket (2) by unscrewing lampholder cap (1) counterclockwise and pulling from socket (2). Extract lamp (6) from lampholder cap (1).

b. Fuse. The fuseholder cap (3, figure 3-2) must be removed to gain access to fuse (4). Remove fuseholder cap (3) from fuseholder (5) by pressing cap down, rotating cap one-quarter turn counterclockwise, and pulling the cap and fuse (4) from fuseholder (5). Extract fuse (4) from fuseholder cap (3).

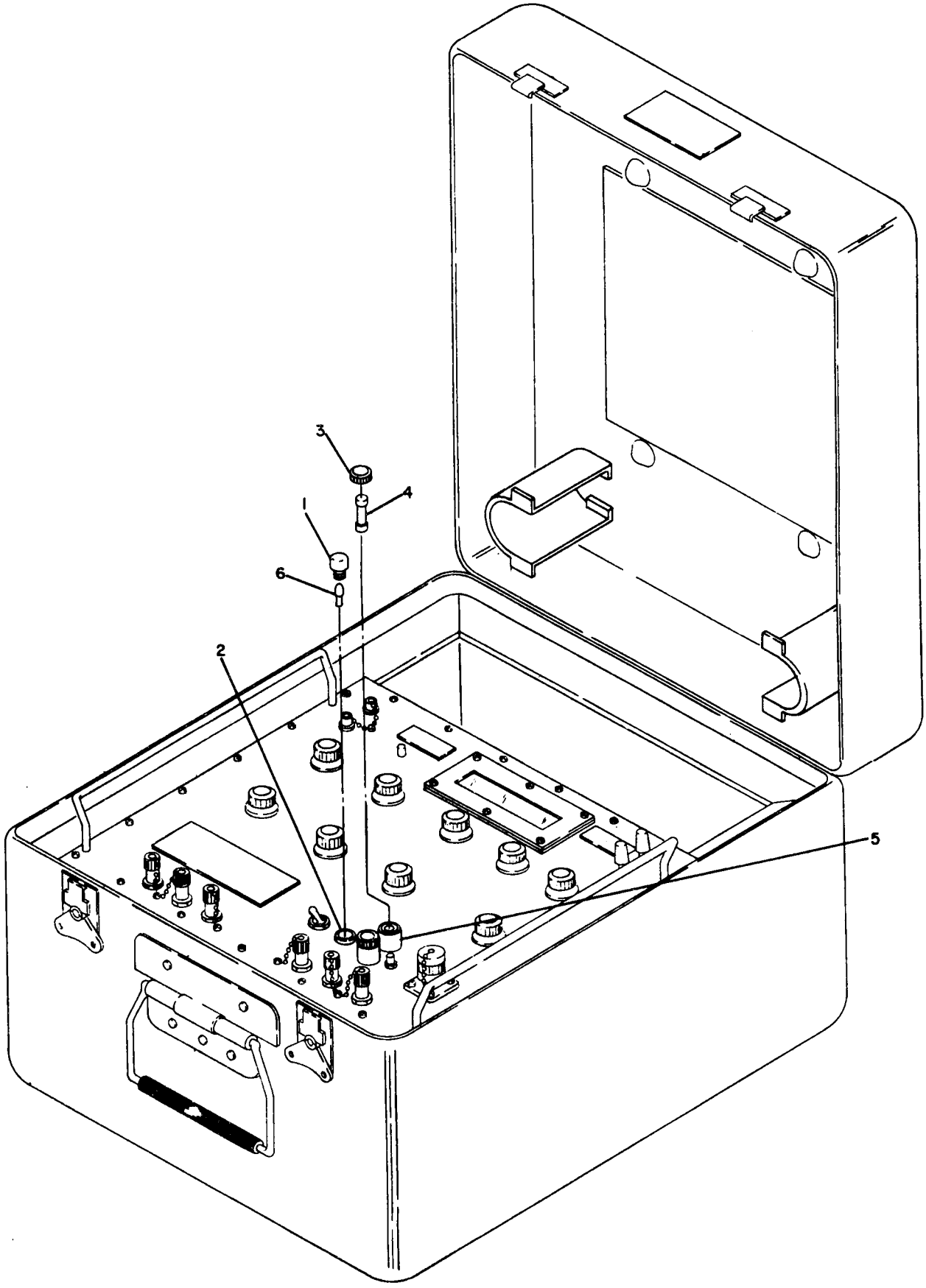


Figure 3-2. Removal and replacement of parts authorized at unit level

Section VII. PARTS LISTING

3-12. General.

All part numbers comprising the Test Set, up to and including the latest Government-approved configuration, are included in this section. Tables 3-3 through 3-20 are keyed to associated illustrations, figures 3-3 through 3-18, Part numbers are listed in figure and index number sequence, including the federal supply code of manufacturer (FSCM).

Legend for fig. 3-3:

1. Screw (2)
2. Bracket, protective (4)
   Power supply PC board assembly A5
4. Nut,hex
5. Post
6. Plate, interboard
7. Air capacitor PC board assembly A4
8. Bushing (2)
9. Post
10. Screw (26)
11. Washer (26)
12. Simulator PC circuit board assembly A3
13. Insulator
14. Washer, shoulder (7)
15. Analog PC board assembly A2
16. Post, center
17. Panel assembly
18. Screw (5)
19. Nameplate
20. O-ring (9)
21. Washer, flat (9)
22. Washer, insulated (7)
23. Nut, hex (5)
24. Knob (9)
25. Nut, hex (2)
26. Nameplate, capacitance standards
27. Nut, hex (2)

Legend for fig. 3-3:-continued

28. Nameplate, resistance standards
29. Screw (24)
30. Display, digital (6) A1DS1 through A1DS6
31. Digital PC board assembly A1
32. Nameplate, identification
33. Case, combination
34. Main adapter cable assembly W4
35. Adapter cable assembly W5A
36. Adapter cable assembly W5B
37. Adapter cable assembly W6A
38. Adapter cable assembly W6B
39. Adapter cable assembly W7A
40. Adapter cable assembly W7B
41. Adapter cable assembly W8A
42. Adapter cable assembly W8B
43. Adapter cable assembly W9
44. Adapter cable assembly W9A
45. Adapter cable assembly W9B
46. Adapter cable assembly W9C (2)
47. Adapter cable assembly W9D (2)
48. Test lead assembly W10 (3)
49. Adapter cable assembly W11
50. Adapter cable assembly W12
51. Tee adapter, BNC
52. Input power cable assembly W3
53. Input power cable assembly W2
54. Input power cable assembly W1
55. Placard instruction
56. Ribbon cable assembly
57. Bracket (2)
58. Post (2)
59. Integrated circuit A1Z40, digital-to- analog converter
60. Bracket
61. Bracket
62. Bracket
63. Ribbon cable assembly
64. Ribbon cable assembly
65. Instrument and panel assembly

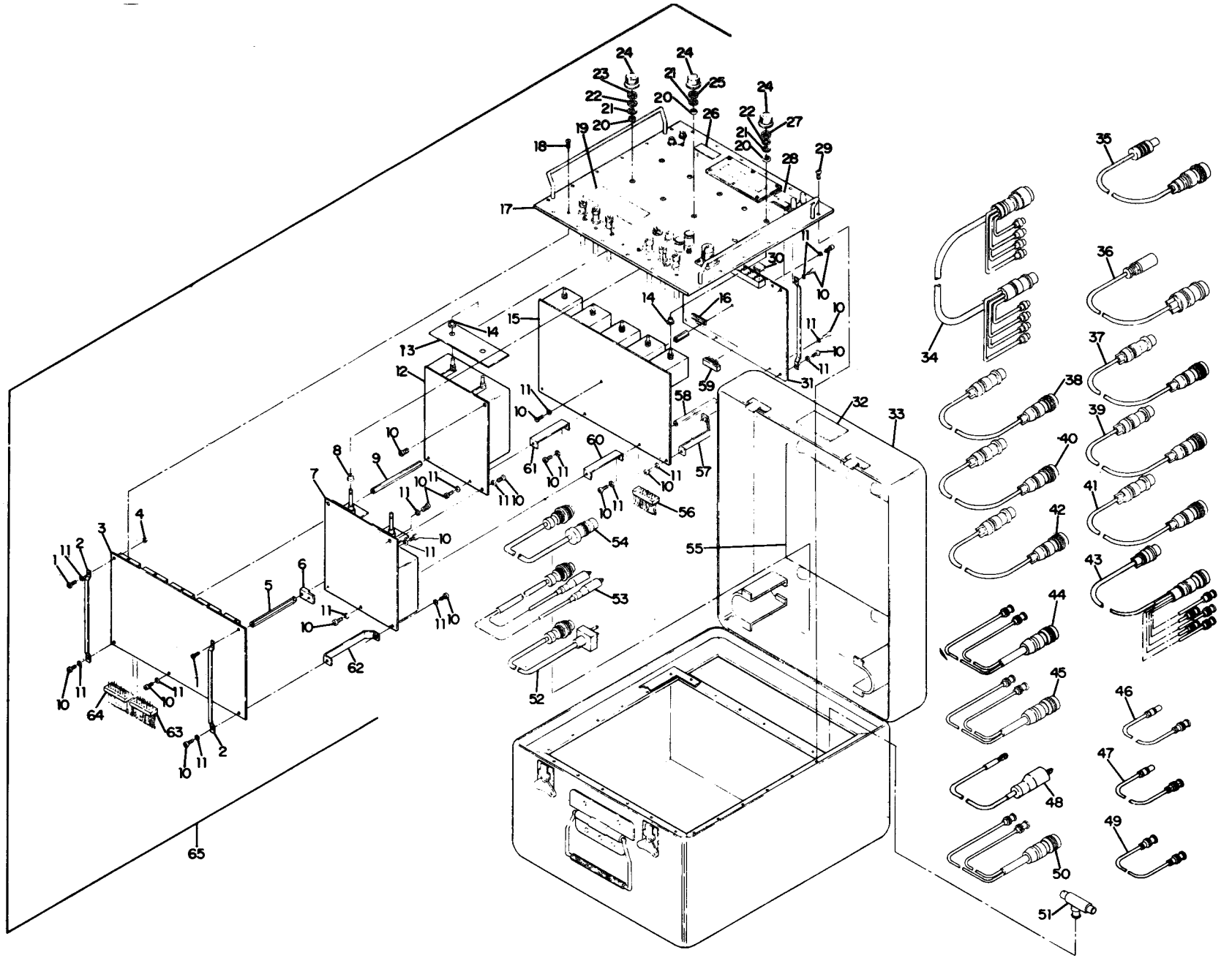


Figure 3-3. Test Set, part number 361-010-002- exploded view

Table 3-3. Test Set, Part Number 361-010-002

Figure and index no.	Part number	FSCM
3-3-1	MS21097-04001	96906
2	610-331-001	26055
3	546-381-001	26055
4	MS35649-224	96906
5	712-211-002	26055
6	708-559-001	26055
7	508-394-001	26055
8	604-026-002	26055
9	712-211-003	26055
10	MS21295-13	96906
11	MS15795-803	96906
12	546-380-001	26055
13	680-094-001	26055
14	680-093-001	26055
15	546-378-001	26055
16	712-203-004	26055
17	504-01-3-001	26055
18	722-031-106	26055
19	696-204-001	26055

Table 3-3. Test Set, Part Number 361-010-002-Continued

Figure and index no.	Part number	FSCM
3-3-20	AN6227B-7	96906
21	759-006-059	26055
22	758-064-001	26055
23	P/O 508-394-001	26055
24	684-015-001	26055
25	P/O 546-380-001	26055
26	696-205-001	26055
27	P/O 576-378-001	26055
28	696-205-002	26055
29	MS21097-04003	96906
30	872-008-001	26055
31	546-379-001	26055
32	696-204-001	26055
33	620-013-001	26055
34	467-103-001	26055
35	467-104-001	26055
36	467-105-001	26055
37	467-106-001	26055
38	467-107-001	26055
39	467-108-001	26055
40	467-109-001	26055

Table 3-3. Test Set, Part Number 361-010-002-Continued

Figure and index no.	Part number	FSCM
3-3-41	467-110-001	26055
42	467-111-001	26055
43	467-113-001	26055
44	467-115-001	26055
45	467-116-001	26055
46	467-117-001	26055
47	467-118-001	26055
48	467-114-001	26055
49	467-119-001	26055
50	467-120-001	26055
51	629-232-001	26055
52	467-102-001	26055
53	467-101-001	26055
54	467-100-001	26055
55	696-212-001	26055
56	467-086-001	26055
57	610-314-001	26055
58	712-211-001	26055
59	850-027-002	26055
60	610-316-002	26055
61	610-316-001	26055
62	610-332-001	26055

Table 3-3. Test Set, Part Number 361-010-002-Continued

Figure and index no.	Part number	FSCM
3-3-63	467-087-001	26055
64	467-088-001	26055
65	477-195-001	26055

Table 3-4. Panel Assembly, Part Number 504-013-001

Figure and index no.	Part number	FSCM
3-4-1	P/O 467-096-001	26055
2	618-055-001	26055
3	MS21097-04003	96906
4	618-053-001	26055
5	P/O 467-094-001	26055
6	P/O 467-097-001	26055
7	618-054-001	26055
8	P/O 467-098-001	26055
9	P/O MS24523-22	96906
10	P/O 467-095-001	26055
11	P/O 467-099-001	26055
12	P/O 790-222-001	26055
13	790-222-001	26055
14	P/O 855-027-003	26055

Table 3-4. Panel Assembly, Part Number 504-013-001-Continued

Figure and index no.	Part number	FSCM
3-4-15	618-048-001	26055
16	MS51957-13	96906
17	P/O 855-027-002	26055
18	P/O 861-022-001	26055
19	MS21097-04003	96906
20	716-098-001	26055
21	760-026-001	26055
22	658-035-001	26055
23	855-027-002	26055
24	855-027-002	26055
25	712-213-001	26055
26	861-022-001	26055
27	712-213-001	26055
28	P/O 712-213-001	26055
29	658-026-001	2605.5
30	P/O 712-213-001	26055
31	657-002-001	26055
32	851-002-017	26055
33	851-002-017	26055
34	790-232-001	26055
35	MS21097-04003	96906

Table 3-4. Panel Assembly, Part Number 504-013-001-Continued

Figure and Index no.	Part number	FSCM
3-4-36	MS3102R-10SL-3P	96906
37	658-025-001	26055
38	712-212-001	26055
39	MS9068-006	96906
40	AN960-8L	96906
41	P/O 712-212-001	26055
42	P/O 657-002-001	26055
43	P/O 790-222-001	26055
44	P/O 790-222-001	26055
45	MS24523-22	96906
46	MS25196-1	96906
47	P/O 467-099-001	26055
48	467-099-001	26055
49	467-095-001	26055
50	658-037-001	26055
51	P/O 467-095-001	26055
52	P/O 467-098-001	26055
53	467-098-001	26055
54	467-097-001	26055
55	P/O 467-097-001	26055

Table 3-4. Panel Assembly, Part Number 504-013-001-Continued

Figure and index no.	Part number	FSCM
3-4-56	P/O 467-094-001	26055
57	467-094-001	26055
58	467-096-001	26055
59	P/O 467-096-001	26055
60	MS24694-249	96906
61	504-2112-002	26055
62	668-006-001	26055

Legend for fig. 3-4:

1. Nut, hex
2. Cap, protective
3. Screw (4)
4. Cap, protective (4)
5. Nut, hex
6. Nut, hex
7. Cap, protective
8. Nut, hex
9. Nut, hex
10. Nut, hex
11. Nut, hex
12. Lamp DS1
13. Lampholder
14. Nut, hex
15. Cap, protective (2)
16. Screw
17. Nut, hex
18. Nut, hex
19. Screw (6)
20. Bezel
21. Glass, display cover
22. Gasket

Legend for fig. 3-4:-continued

23. Potentiometer R1
24. Potentiometer R2
25. Post, binding E2
26. Switch, pushbutton S2
27. Post, binding E1
28. Washer (2)
29. Gasket (2)
30. Nut, hex (4)
31. Fuseholder (2)
32. Fuse F1
33. Fuse, spare
34. Cap, protective
35. Screw (4)
36. Connector J1
37. Gasket
38. Post, binding E3
39. O-ring (3)
40. Washer, fist
41. Nut, hex (2)
42. Nut, hex (2)
43. Washer, flat
44. Nut, hex
45. Switch, toggle, S1
46. Washer, seal
47. Washer, flat
48. Cable assembly, internal, coaxial
49. Cable assembly, internal, coaxial
50. Gasket (2)
51. Washer, flat
52. Washer, flat
53. Cable assembly, internal, coaxial
54. Cable assembly, internal, coaxial
55. Washer, flat
56. Washer, flat
57. Cable assembly, internal, coaxial
58 l Cable assembly, internal, coaxial
59. Washer, flat
60. Screw (4)
61. Panel subassembly
62. Handle (2)

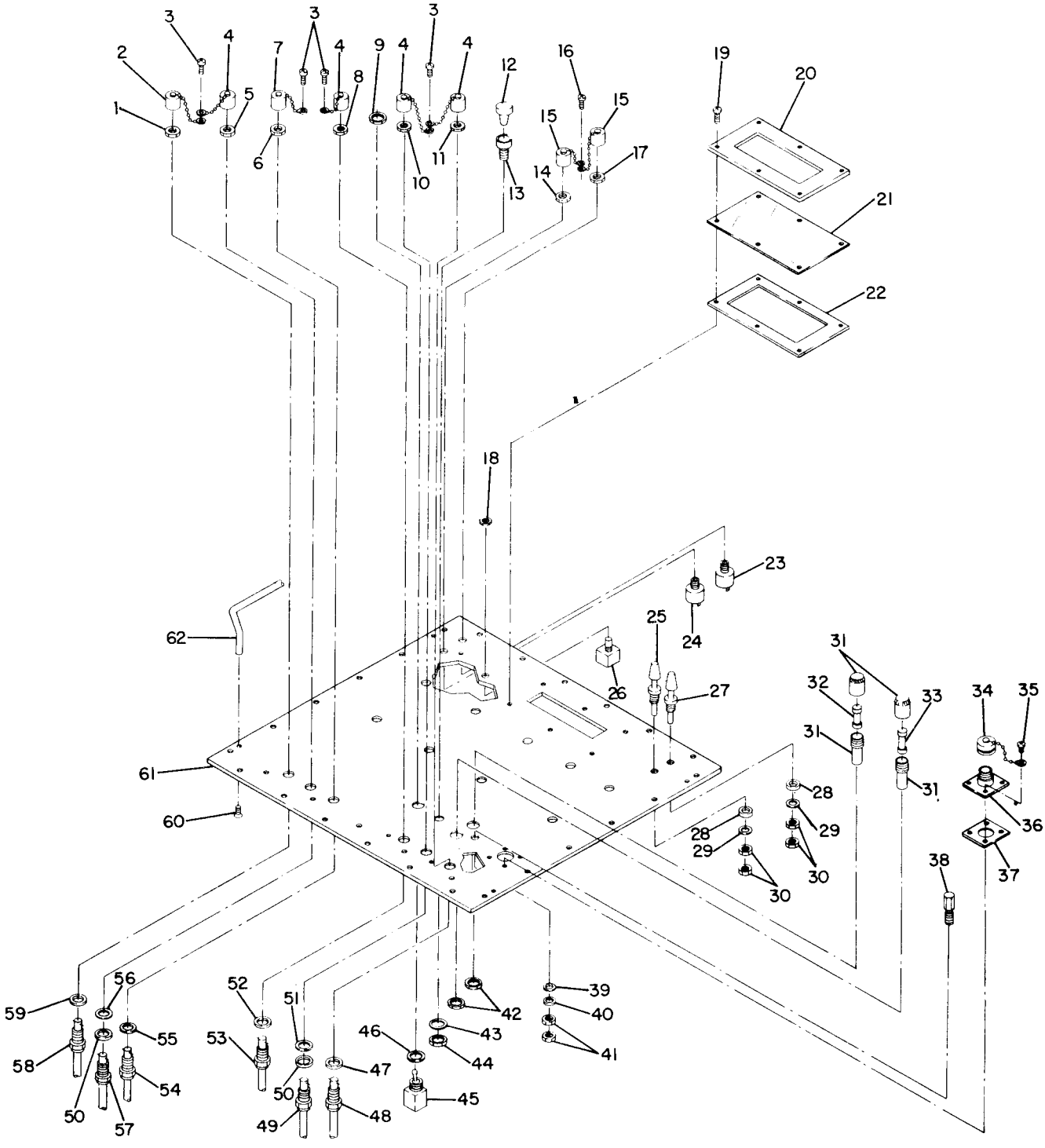


Figure 3-4. Panel assembly, part number 504-013-001 - exploded view.

Table 3-5. Input Power Cable Assembly W1, Part Number 467-100-001

Figure and index no.	Part number	FSCM
3-5-1	MS3106A10SL-3S	96906
-2	MS3057-4A	96906
-3	690-001-216	26055
-4	MS3101A-10SL-3P	96906
-5	CO-03MGF(3/18)0340	96906

Legend for fig. 3-5:

1. Connector
2. Clamp, strain relief (2)
3. Marker, cable
4. Connector
5. Cable

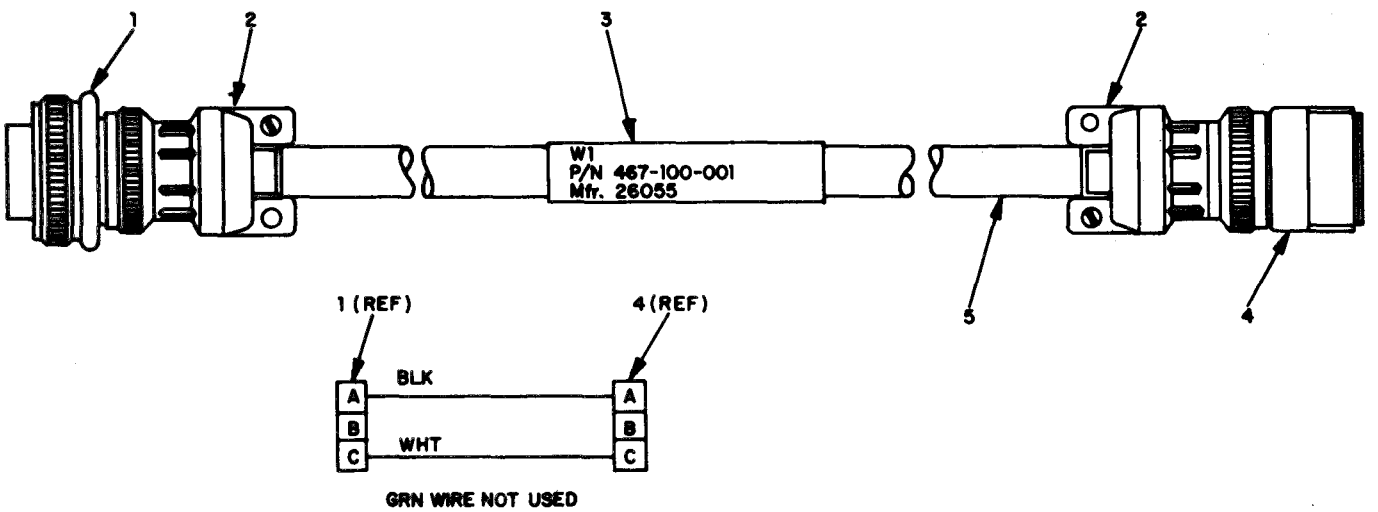


Figure 3-5. Input power cable assembly W1, part number 467-100-001

Table 3-6. Input Power Cable Assembly W2, Part Number 467-101-001

Figure and index no.	Part number	FSCM
3-6-1	MS3106A-10SL-3S	96906
-2	MS3057-4A	96906
-3	728-058-004	26055
-4	626-093-001	26055
-5	680-080-001	26055
-6	728-057-002	26055
-7	690-001-217	26055
-8	CO-03MGF(3/18)0340	96906

Legend for fig. 3-6:

1. Connector
2. Clamp, strain relief
3. Sleeving, shrink
4. Clip, alligator (2)
5. Boot, black (2)
6. Sleeving, shrink
7. Marker, cable
8. Cable

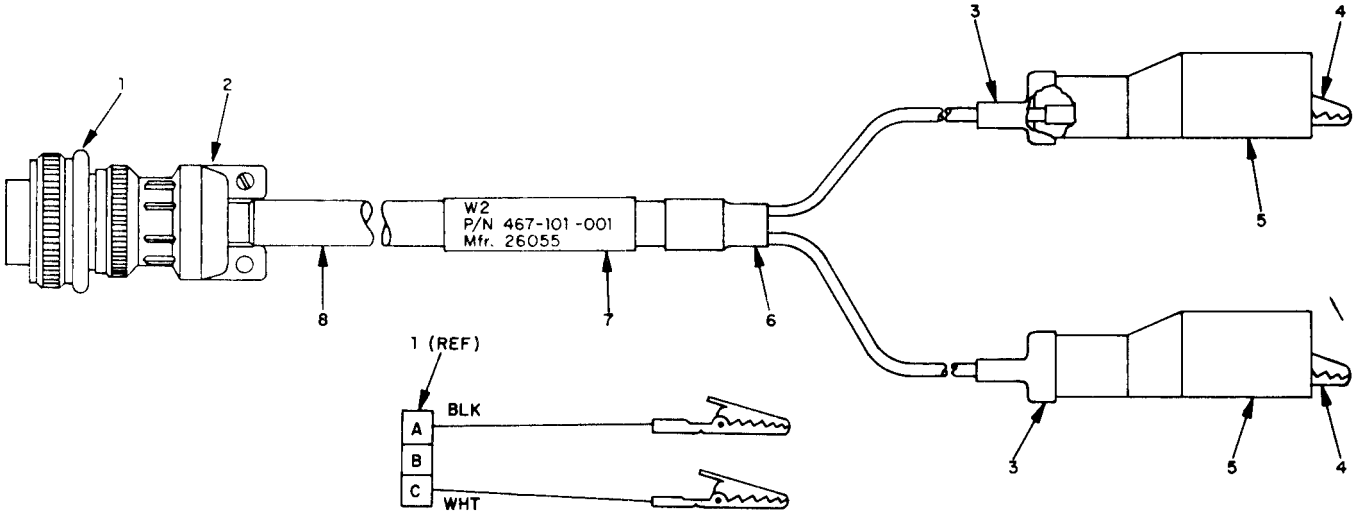


Figure 3-6. Input power cable assembly W2, part number 467-101-001

Table 3-7. Input Power Cable Assembly W3, Part Number 467-102-001

Figure and index no.	Part number	FSCM
3-7-1	MS3106A-10SL-3S	96906
-2	MS3057-4A	96906
-3	690-001-218	26055
-4	CO-03MGF(3/18)0340	96906
-5	MIL-C-3767/12C-UP131M	96906

Legend for fig. 3-7:

1. Connector
2. Clamp, strain relief
3. Marker, cable
4. Cable
5. Plug, connector

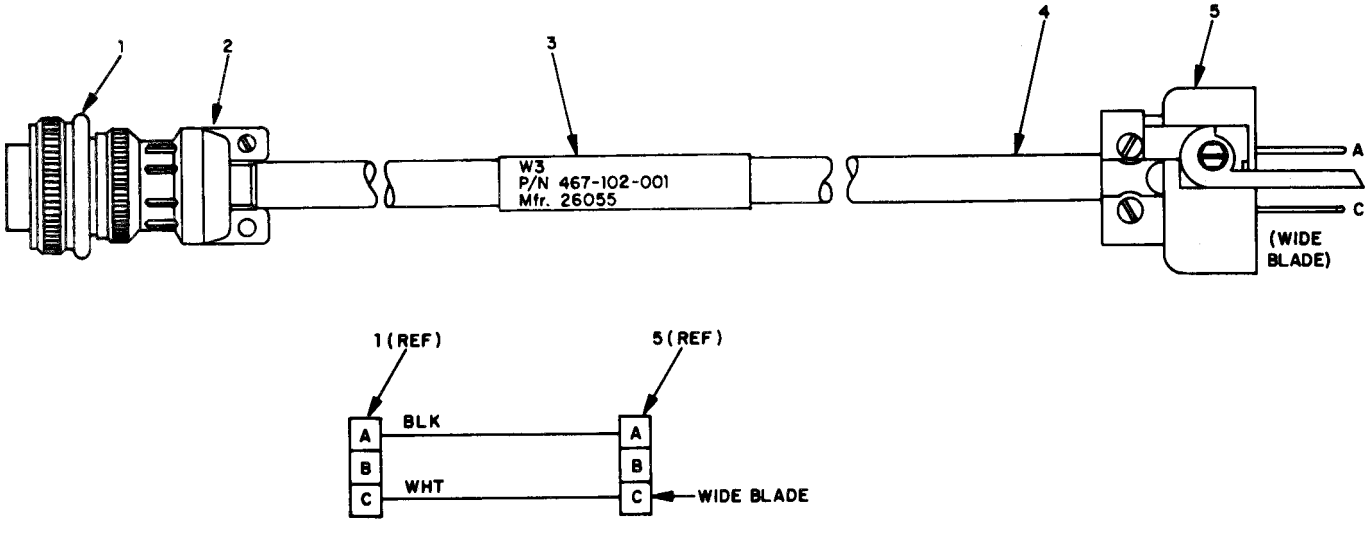


Figure 3-7. Input power cable assembly W3, part number 467-102-001

Table 3-8. Main Adapter Cable Assembly W4, Part Number 467-103-001

Figure and index no.	Part number	FSCM
3-8-1	629-229-003	26055
-2	736-159-002	26055
-3	742-041-001	26055
-4	728-057-002	26055
-5	690-001-263	26055
-6	629-228-003	26055
-7	790-230-001	26055
-8	690-001-227	26055
-9	629-222-001	26055
-10	690-001-226	26055
-11	690-001-225	26055
-12	629-223-001	26055
-13	690-001-273	26055
-14	690-001-221	26055
-15	690-001-219	26055
-16	690-001-220	26055
-17	690-001-278	26055
-18	690-001-224	26055
-19	690-001-223	26055

Table 3-8. Main Adapter Cable Assembly W4, Part Number 467-103-001-Continued

Figure and index no.	Part number	FSCM
3-8-20	690-001-222	26055
-21	766-013-001	26055
-22	634-002-001	26055

Legend for fig. 3-8:

1. Connector
2. Adapter (2)
3. Lug, terminal (2)
4. Sleeving, shrink
5. Marker, cable
6. Connector
7. Termination, center conductor (6)
8. Marker, cable
9. Connector, BNC (4)
10. Marker, cable
11. Marker, cable
12. Connector, BNC (4)
13. Marker, cable
14. Marker, cable
15. Marker, cable
16. Marker, cable
17. Marker, cable
18. Marker, cable
19. Marker, cable
20. Marker, cable
21. Cable, coax
22. Tape, lacing

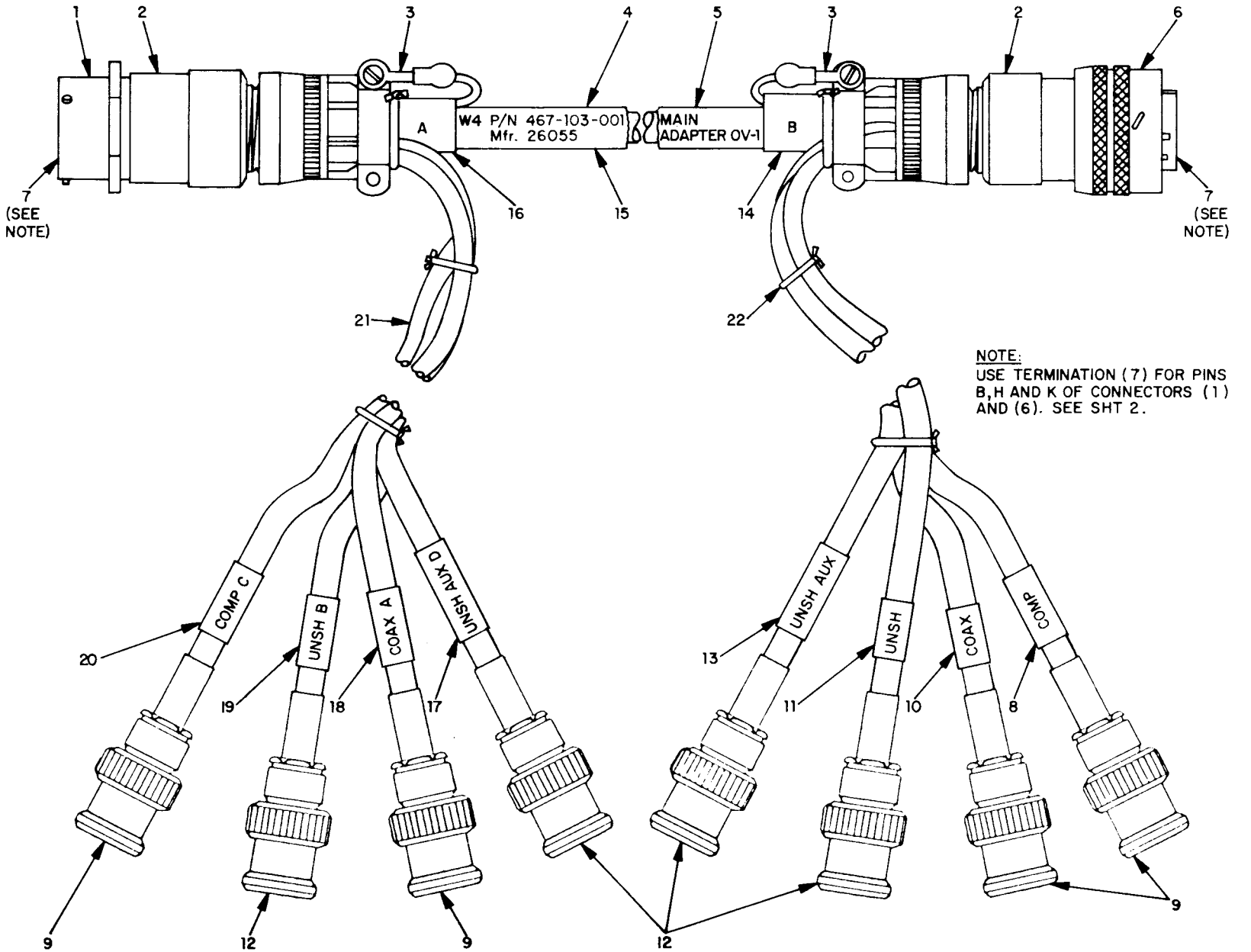


Figure 3-8. Main adapter cable assembly W4, part number 467-103-001 (sheet 1 of 2)

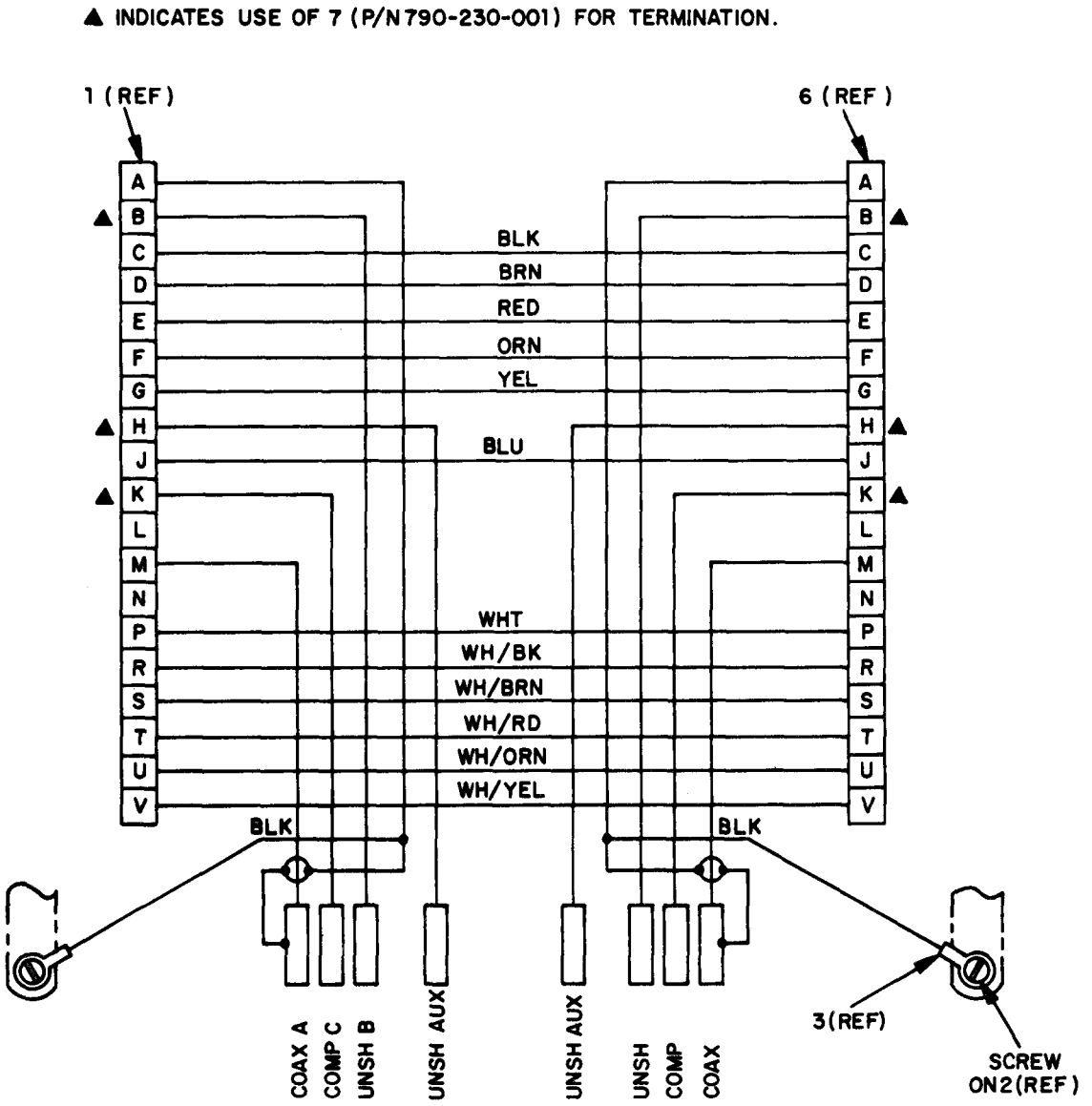


Figure 3-8. Main adapter cable assembly W4, part number 467-103-001 (sheet 2 of 2)

Table 3-9. Adapter Cable Assembly W5A, Part Number 467-104-001

Figure and index no.	Part number	FSCM
3-9-1	629-231-001	26055
-2	728-057-002	26055
-3	690-001-228	26055
-4	690-001-264	26055
-5	736-159-001	26055
-6	629-228-003	26055
-7	790-230-001	26055

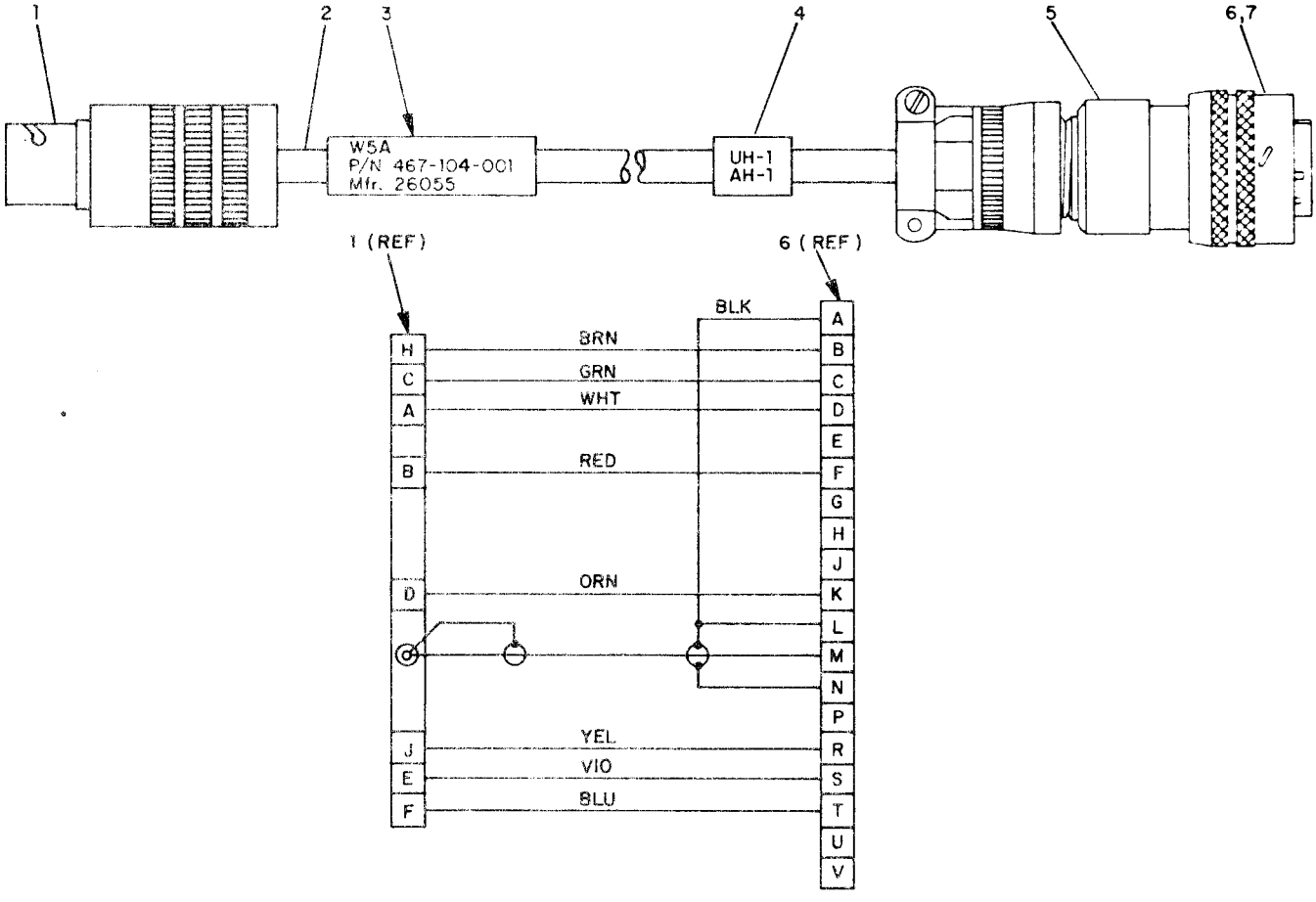


Figure 3-9. Adapter cable assembly W5A, part number 467-104-001

Legend for fig. 3-9:

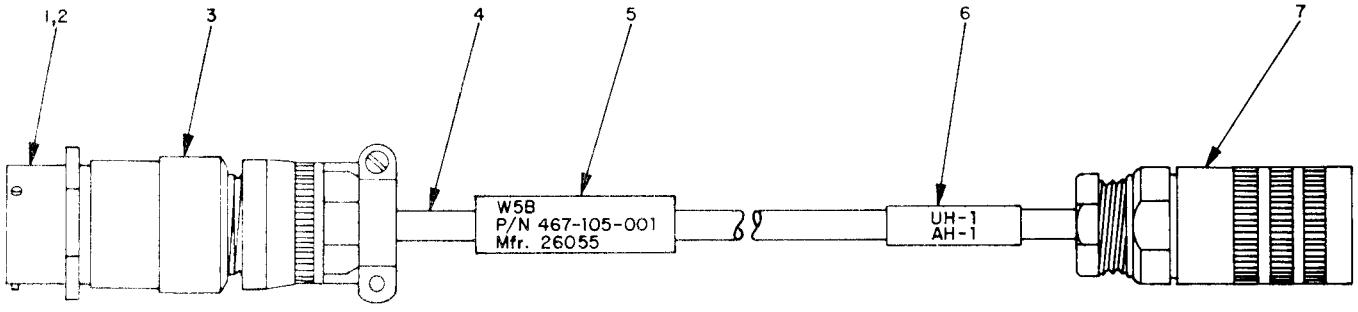
1. Connector
2. Sleeving, shrink
3. Marker, cable
4. Marker, cable
5. Adapter
6. Connector
7. Termination, center conductor

Table 3-10. Adapter Cable Assembly W5B, Part Number 467-105-001

Figure and index no.	Part number	FSCM
3-10-1	629-229-003	26055
-2	790-230-001	26055
-3	736-159-001	26055
-4	728-057-002	26055
-5	690-001-229	26055
-6	690-001-264	26055
-7	629-230-001	26055

Legend for fig. 3-10:

1.	Connector	5.	Marker, cable
2.	Termination, center conductor	6.	Marker, cable
3.	Adapter	7.	Connector
4.	Sleeving, shrink		



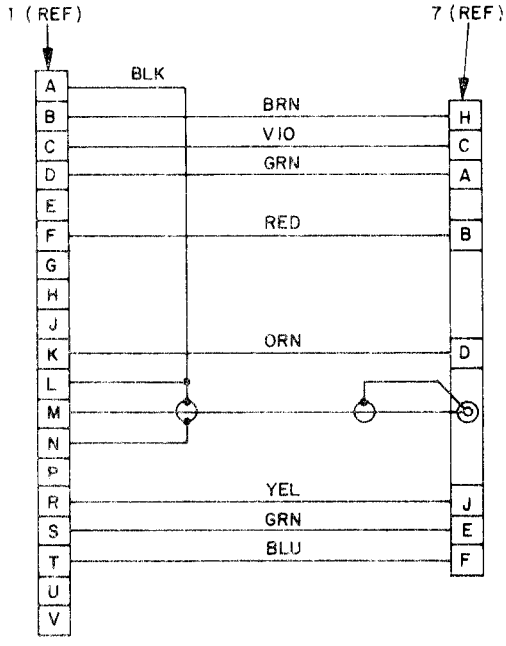


Figure 3-10. Adapter cable assembly W5B, part number 467-105-001

Table 3-11. Adapter Cable Assembly W6A, Part Number 467-106-001

Figure and index no.	Part number	FSCM
3-11-1	629-229-002	26055
-2	790-230-001	26055
-3	736-159-001	26055
-4	742-041-001	26055
-5	690-001-230	26055
-6	728-057-002	26055
-7	690-001-265	26055
-8	629-228-003	26055

Legend for fig. 3-11:

1. Connector
2. Termination, center conductor (2)
3. Adapter (2)
4. Lug, terminal (2)
5. Marker, cable
6. Sleeving, shrink
7. Marker, cable
8. Connector

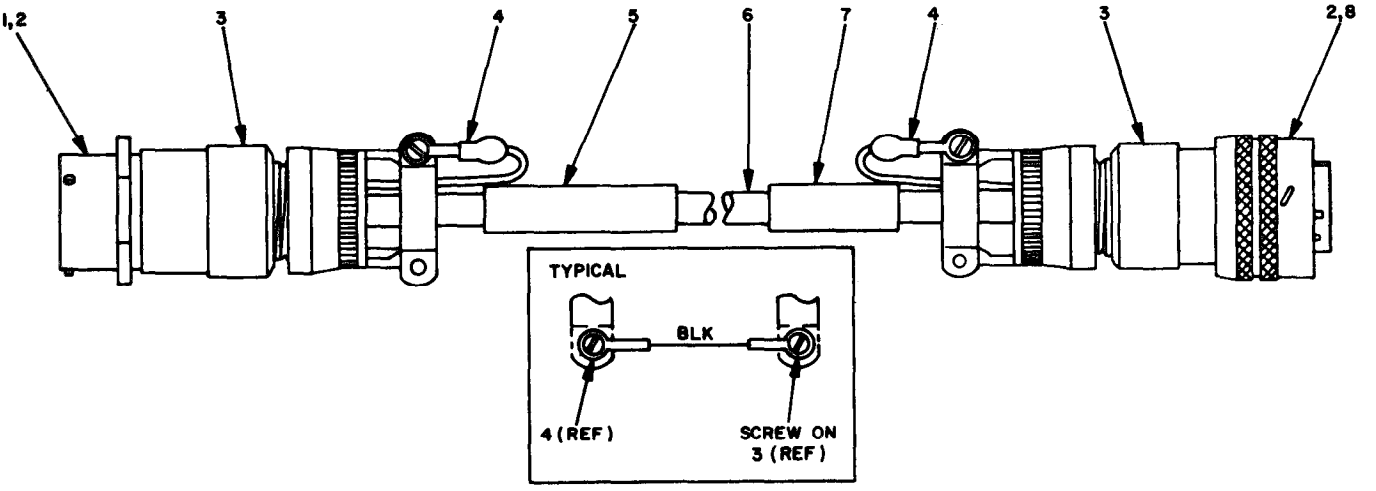


Figure 3-11. Adapter cable assembly, W6A (467-106-001) W6B (467-107-001) W7A (467-108-001) W7B (467-109-001) W8A (467-110-001) and W8B (467-111-001) (sheet 1 of 2)

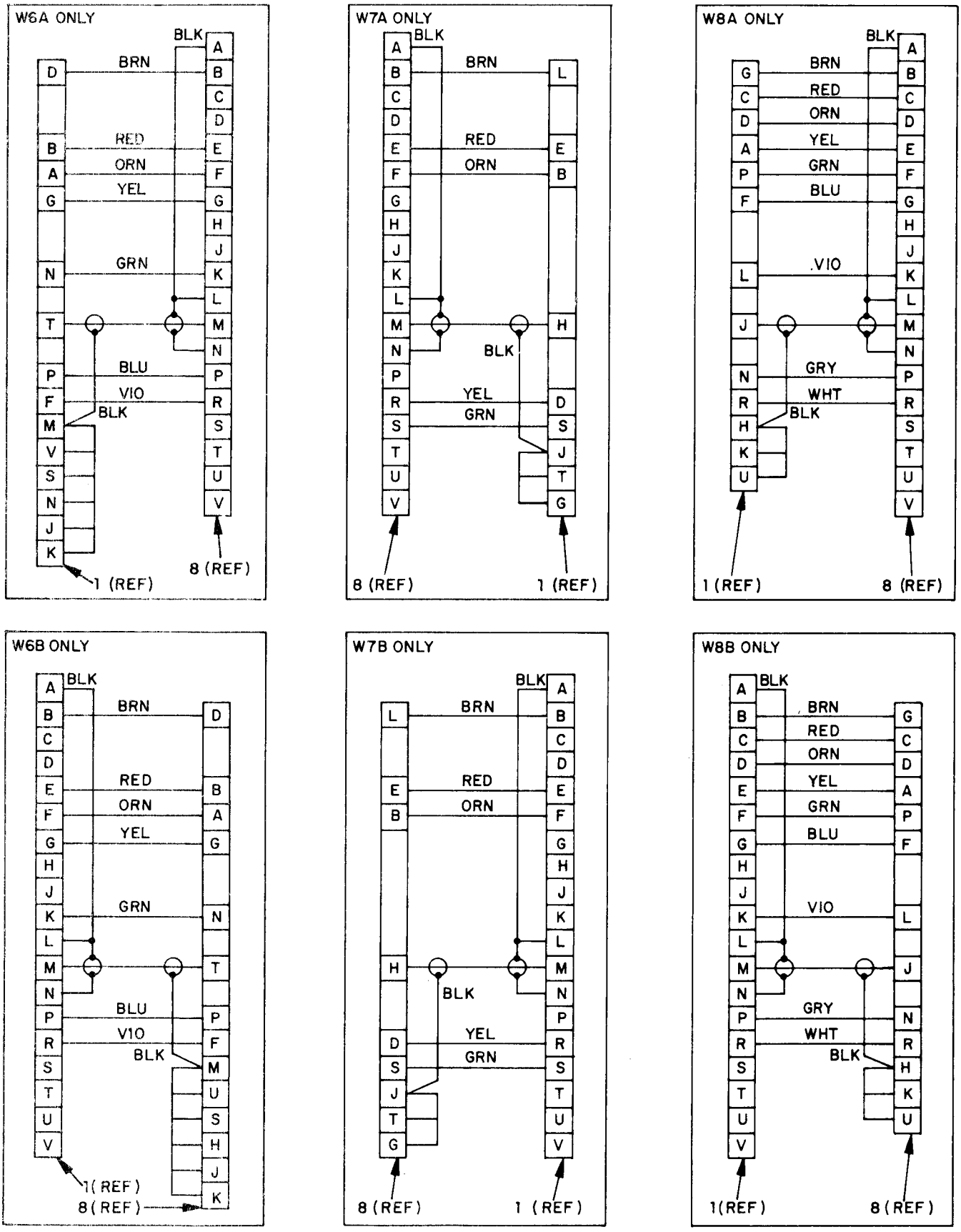


Figure 3-11. Adapter cable assembly, W6A (467-106-001) W6B (467 -107-001) W7A (467-1.08-001) W7B (467-109-001) W8A (467-110-001) and W8B (467-111-001) (sheet 2 of 2)

Table 3-12. Adapter Cable Assembly W6B, Part Number 467-107-001

Figure and index no.	Part number	FSCM
3-11-1	629-229-003	26055
-2	790-230-001	26055
-3	736-159-001	26055
-4	742-041-001	26055
-5	690-001-231	26055
-6	728-057-002	26055
-7	690-001-265	26055
-8	629-228-002	26055

Table 3-13. Adapter Cable Assembly W7A, Part Number 467-108-001

Figure and index no.	Part number	FSCM
3-11-1	629-229-003	26055
-2	790-230-001	26055
-3	736-159-001	26055
-4	742-041-001	26055
-5	690-001-232	26055
-6	728-057-002	26055
-7	690-001-266	26055
-8	629-228-003	26055

Table 3-14. Adapter Cable Assembly W7B, Part Number 467-109-001

Figure and index no.	Part number	FSCM
3-11-1	629-229-003	26055
-2	790-230-001	26055
-3	736-159-001	26055
-4	742-041-001	26055
-5	690-001-233	26055
-6	728-057-002	26055
-7	690-001-266	26055
-8	629-228-003	26055

Table 3-15. Adapter Cable Assembly W8A, Part Number 467-110-001

Figure and index no.	Part number	FSCM
3-11-1	629-229-003	26055
-2	790-230-001	26055
-3	736-159-001	26055
-4	742-041-001	26055
-5	690-001-234	26055
-6	728-057-002	26055
-7	690-001-267	26055
-8	629-228-003	26055

Table 3-16. Adapter Cable Assembly W8B Part Number 467-111-001

Figure and index no.	Part number	FSCM
3-11-1	629-229-003	26055
-2	790-230-001	26055
-3	736-159-001	26055
-4	742-041-001	26055
-5	690-001-235	26055
-6	728-057-002	26055
-7	690-001-267	26055
-8	629-228-003	26055

Table 3-17. Adapter Cable Assembly W9, Part Number 467-113-001

Figure and index no.	Part number	FSCM
3-12-1	629-229-001	26055
-2	690-001-268	26055
-3	728-057-002	26055
-4	690-001-269	26055
-5	736-159-002	26055
-6	629-228-001	26055
-7	790-230-001	26055
-8	690-001-245	26055

Table 3-17. Adapter Cable Assembly W9, Part Number 467-113-001 (Cont)

Figure and index no.	Part number	FSCM
3-12-9	629-223-001	26055
-10	690-001-244	26055
-11	690-001-243	26055
-12	690-001-242	26055
-13	629-222-001	26055
-14	690-001-241	26055
-15	634-002-001	26055

Legend for fig. 3-12:

1. Connector
2. Marker, cable
3. Sleeving, shrink
4. Marker, cable
5. Adapter
6. Connector
7. Termination, center conductor
8. Marker, cable
9. Connector, coaxial
10. Marker, cable
11. Marker, cable
12. Marker, cable
13. Connector
14. Marker, cable
15. Tape, lacing

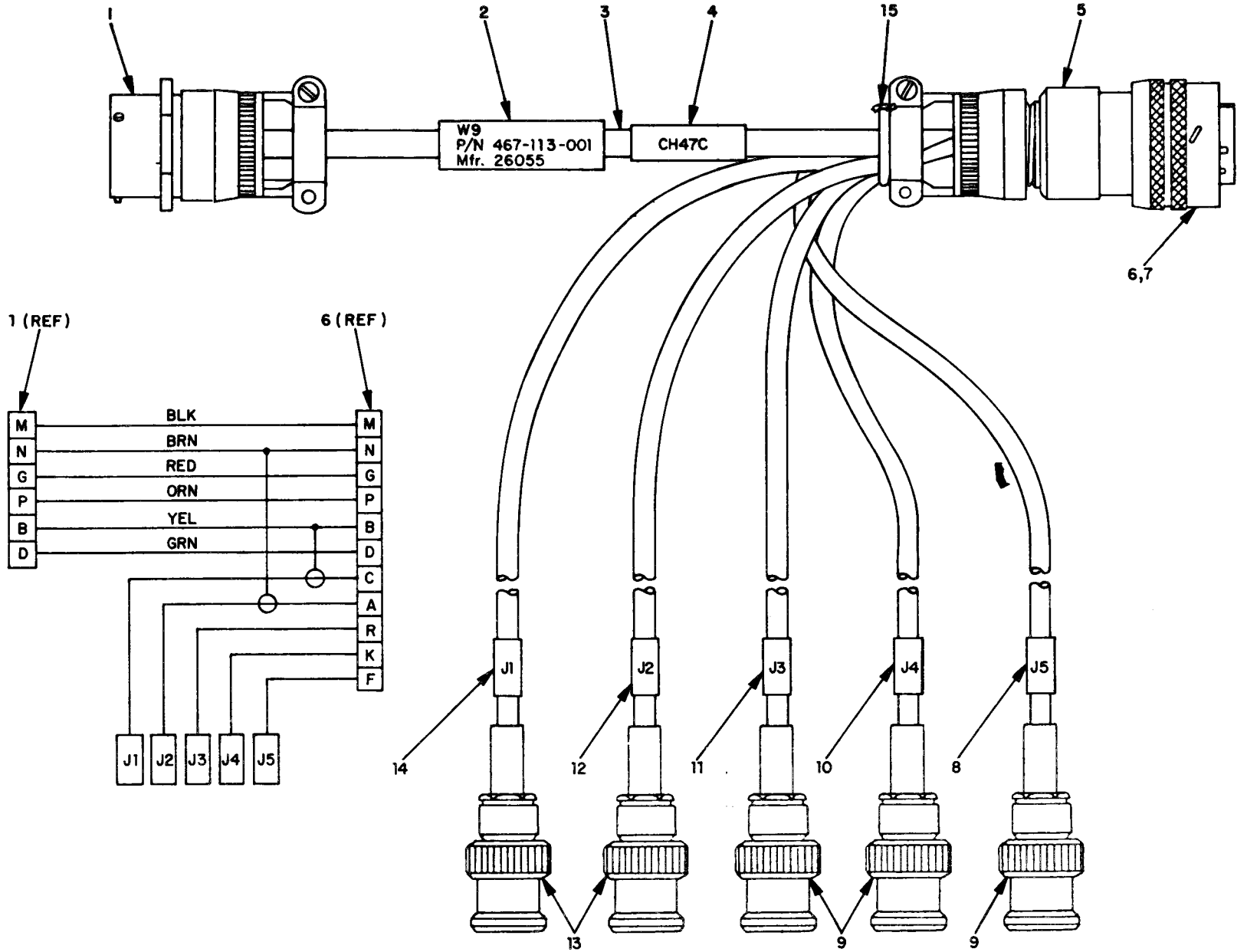


Figure 3-12. Adapter Cable Assembly W9 (467-113-001).

Table 3-18. Adapter Cable Assembly W9A, Part Number 467-115-001

Figure and index no.	Part number	FSCM
3-13-1	629-222-001	26055
-2	690-001-236	26055
-3	736-159-001	26055
-4	629-228-004	26055
-5	790-230-001	26055
-6	742-041-001	26055
-7	629-223-001	26055

Legend for fig. 3-13:

1. Connector, coaxial
2. Marker, cable
3. Adapter
4. Connector
5. Termination, center conductor (2)
6. Lug, terminal
7. Connector, coaxial

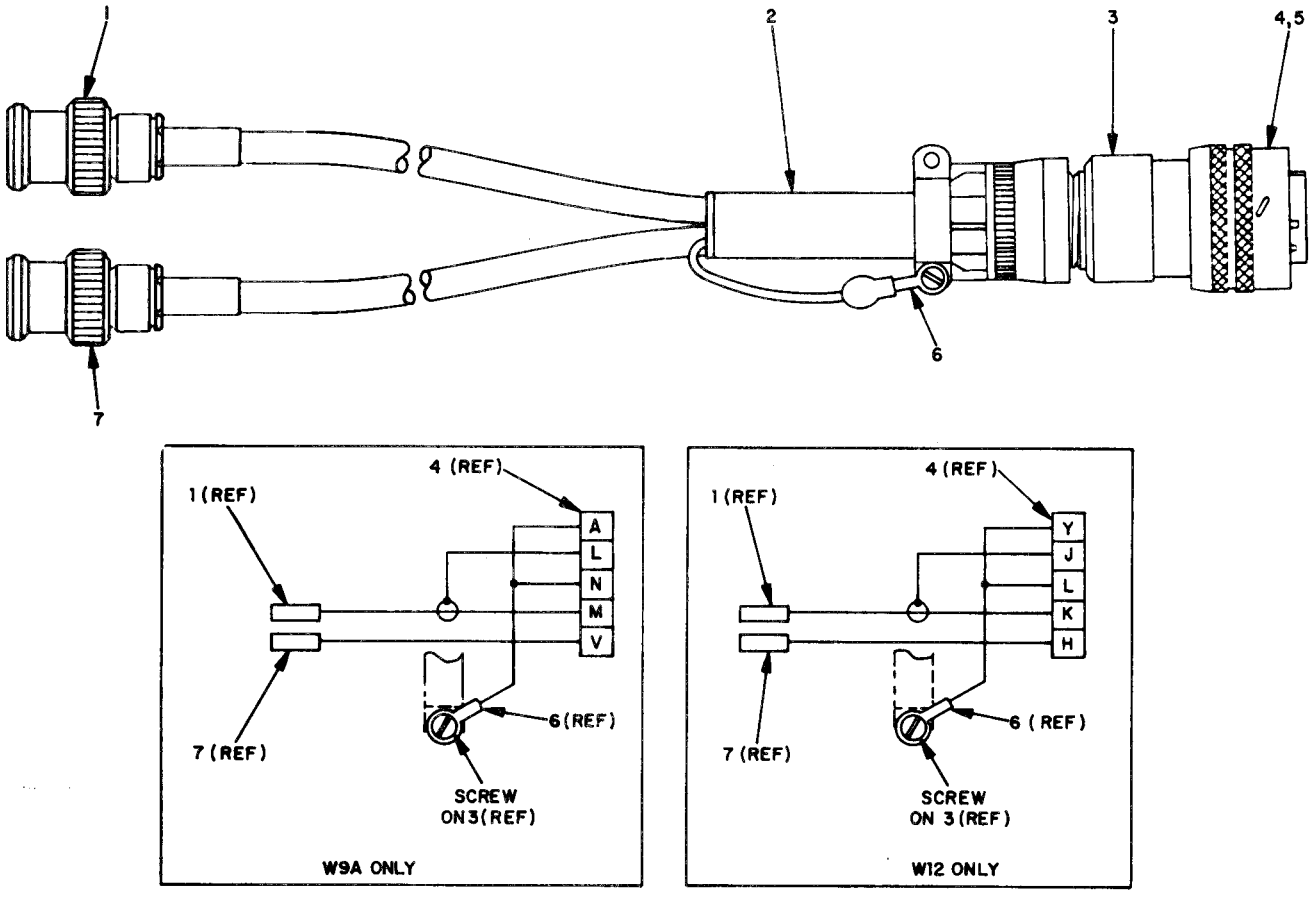


Figure 3-13. Adapter cable assembly W9A (467-115-001) and W12 (467-120-001)

Table 3-19. Adapter Cable Assembly W12, Part Number 467-120-001

Figure and index no.	Part number	FSCM
3-13-1	629-222-001	26055
-2	690-001-274	26055
-3	736-161-001	26055
-4	629-228-005	26055
-5	790-230-001	26055
-6	742-041-001	26055
-7	629-223-001	26055

Table 3-20. Adapter Cable Assembly W9B, Part Number 467-116-001

Figure and index no.	Part number	FSCM
3-14-1	629-222-001	26055
-2	690-001-237	26055
-3	736-159-001	26055
-4	629-229-004	26055
-5	790-230-001	26055
-6	742-041-001	26055
-7	629-223-001	26055

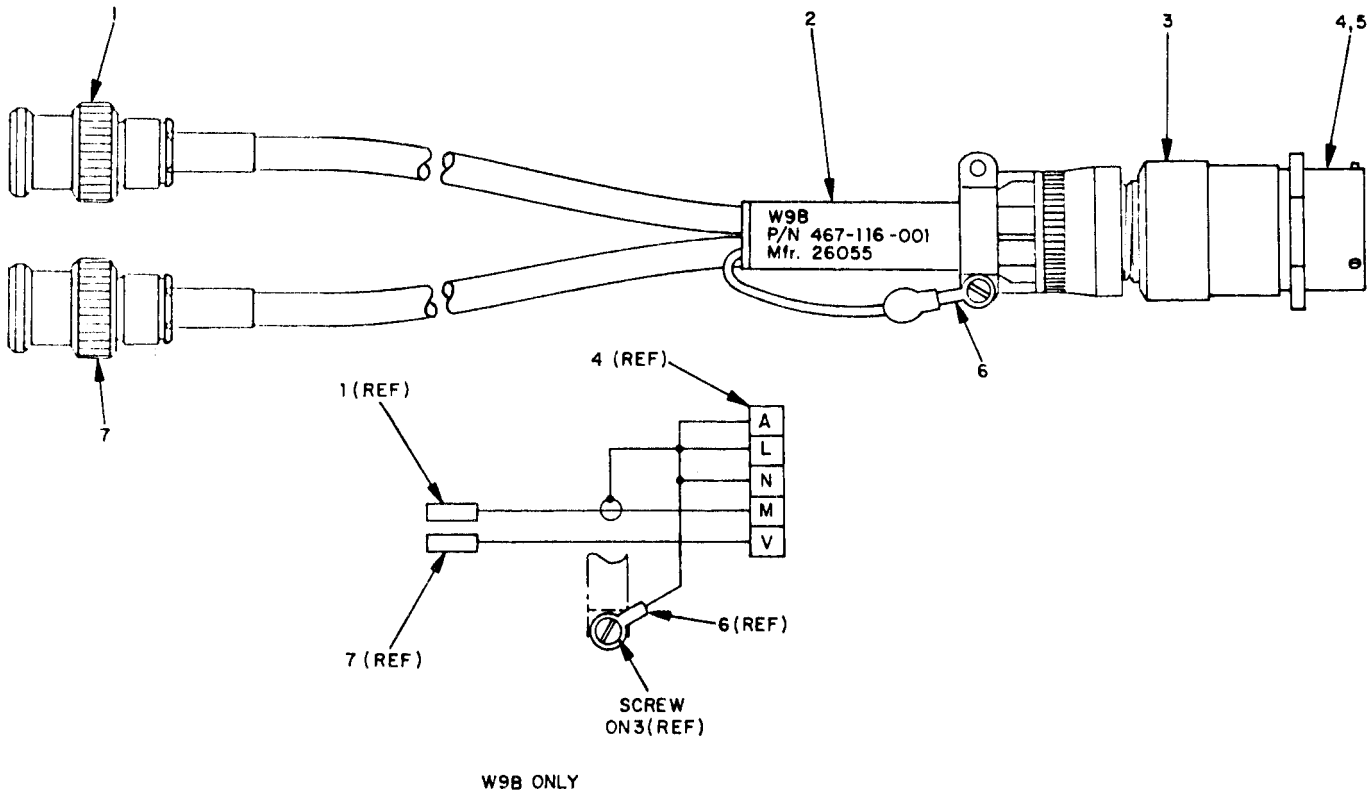


Figure 3-14. Adapter cable assembly W9B, part number 467-116-001

Legend for fig. 3-14:

1. Connector, coaxial
2. Marker, cable
3. Adapter
4. Connector
5. Termination, center conductor (2)
6. Lug, terminal
7. Connector, coaxial

Table 3-21. Adapter Cable Assembly W9C, Part Number 467-117-001

Figure and index no.	Part number	FSCM
3-15-1	629-226-001	26055
-2	766-013-001	26055
-3	690-001-270	26055
-4	690-001-279	26055
-5	629-222-001	26055

Legend for fig. 3-15:

1. Connector, coaxial
2. Cable
3. Marker, cable
4. Marker, cable
5. Connector, coaxial

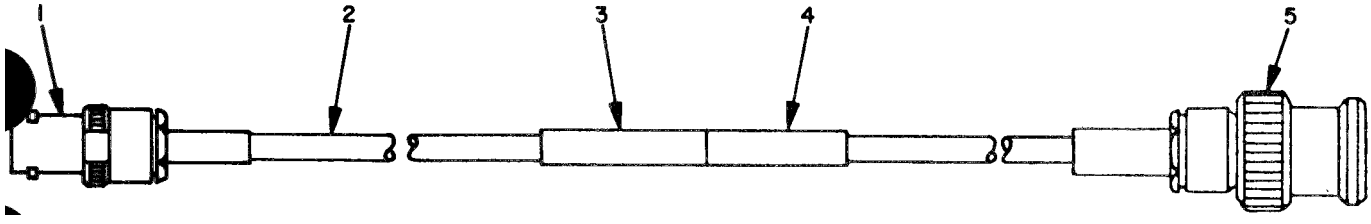


Figure 3-15. Adapter cable assembly W9C (467-117-001) and W9D (467-118-001)

Table 3-22. Adapter Cable Assembly W9D, Part Number 467-118-001

Figure and Index no.	Part number	FSCM
3-15-1	629-227-001	26055
-2	766-013-001	26055
-3	690-001-271	26055
-4	690-001-280	26055
-5	629-223-001	26055

Table 3-23. Test Lead Assembly W10, Part Number 467-114-001

Figure and index no.	Part number	FSCM
3-16-1	629-210-001 (BLK)	26055
-2	690-001-238	26055
-3	728-058-004	26055
-4	680-080-001(BLK)	26055
-5	626-093-001(BLK)	26055

Legend for fig 3-16:

1. Plug, banana
2. Marker, cable
3. Sleeving, shrink
4. Boot
5. Clip, alligator

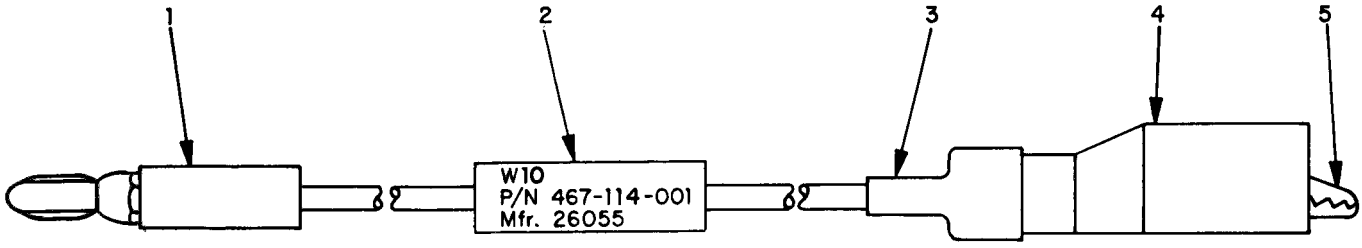


Figure 3-16. Test lead assembly W10, part number 467-114-001

Table 3-24. Adapter Cable Assembly W11, Part Number 467-119-001

Figure and index no.	Part number	FSCM
3-17-1	629-222-001 (2)	26055
-2	766-013-001	26055
-3	690-001-272	26055
-4	690-001-281	26055

Legend for fig. 3-17:

1. Connector, coaxial (2)
2. Cable
3. Marker, cable
4. Marker, cable

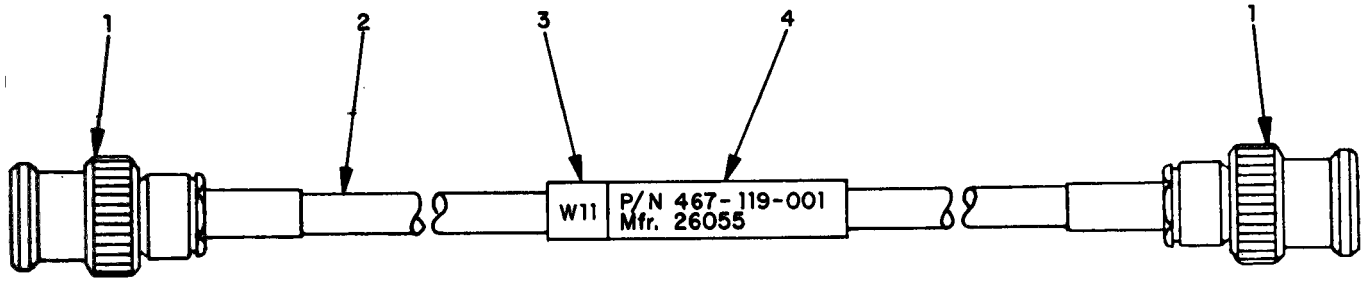


Figure 3-17. Adapter cable assembly W11, part number 467-119-001

Table 3-25. Internal Coaxial Cable Assembly, Part Number 467-094-001

Figure and index no.	Part number	FSCM
3-18-1	37P106-1	24931
-2	690-001-246	26055
-3	690-001-288	26055
-4	690-001-247	26055
-5	766-012-001	26055
-6	28JS105-4	24931

Legend for fig. 3-18:

1. Plug, connector
2. Marker, cable
3. Marker, cable
4. Marker, cable
5. Cable
6. Connector, bulkhead

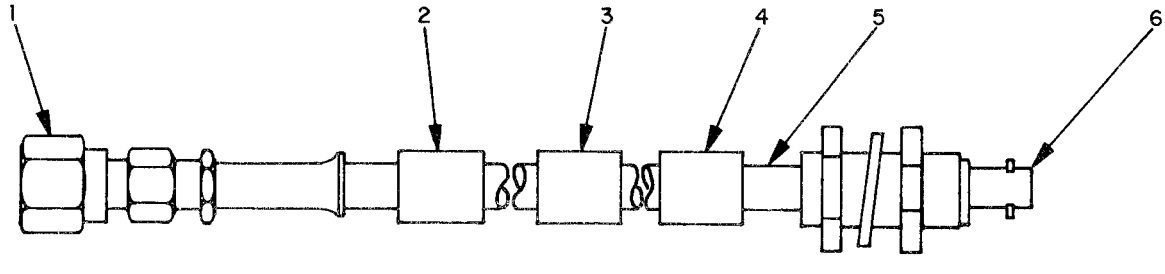


Figure 3-18. Internal coaxial cable assembly, part numbers 467-094-001, 467-095-001, 467-096-001, 467-097-001, 467-098-001 and 467-099-001

Table 3-26. Internal Coaxial Cable Assembly, Part Number 467-095-001

Figure and index no.	Part number	FSCM
3-18-1	37P106-1	24931
-2	690-001-248	26055
-3	690-001-289	26055
-4	690-001-249	26055
-5	766-012-001	26055
-6	28JS 122-3	24931

Table 3-27. Internal Coaxial Cable Assembly, Part Number 467-096-001

Figure and index no.	Part number	FSCM
3-18-1	37P106-1	24931
-2	690-001-261	26055
-3	690-001-290	26055
-4	690-001-262	26055
-5	766-012-001	26055
-6	28JS168-1	24931

Table 3-28. Internal Coaxial Cable Assembly, Part Number 467-097-001

Figure and index no.	Part number	FSCM
3-18-1	37P106-1	24931
-2	690-001-250	26055
-3	690-001-291	26055
-4	690-001-251	26055
-5	766-012-001	26055
-6	28J5122-3	24931

Table 3-29. Internal Coaxial Cable Assembly, Part Number 467-098-001

Figure and index no.	Part number	FSCM
3-18-1	37P106-1	24931
-2	690-001-252	26055
-3	690-001-292	26055
-4	690-001-253	26055
-5	766-012-001	26055
-6	28JS168-1	24931

Table 3-30. Internal Coaxial Cable Assembly, Part Number 467-099-001

Figure and index no.	Part number	FSCM
3-18-1	37P106-1	24931
-2	690-001-254	26055
-3	690-001-293	26055
-4	690-001-255	26055
-5	766-012-001	26055
-6	28JS122-3	24931

CHAPTER 4

AVIATION INTERMEDIATE MAINTENANCE (CRC) INSTRUCTIONS

Section I. PREPARATION FOR MAINTENANCE, STORAGE, AND RESHIPMENT

4-1. Preparation for Maintenance.

a. If Test Set is packed, unpack in accordance with paragraph 3-1.

b. Inspect the Test Set in accordance with paragraph 3-2.

c. Make certain proper size fuse is installed in the Test Set prior to operation.

4-2. Preparation for Storage.

Prepare the Test Set for storage in accordance with paragraph 3-3.

4-3. Preparation for Reshipment.

Prepare the Test Set for reshipment in accordance with paragraph 3-4.

Section II. CHECKOUT AND ANALYSIS

4-4. Checkout Instructions.

The following instructions are used to determine whether or not the Test Set and accessory cables meet minimum performance standards.

a. Initial Setup.

(1) Set switches on Test Set as follows:

Switch	Position
CAPACITANCE FUNCTION (1, figure 2-1)	A/C TEST-COMP
CAPACITANCE RANGE (6)	LOW ADJ

DISPLAY SELECT (8)	CAP (pF)
RESISTANCE FUNCTION (11)	A-B
RESISTANCE RANGE (12)	LOW TEST
POWER ON/OFF (20)	OFF

(2) Connect equipment as shown in figure 4-1.

(3) Set POWER ON/OFF switch (20) to ON. Check that POWER ON indicator (19) lights.

(4) Depress DISPLAY TEST pushbutton switch (4). Check that digital display (7) reads 8.8.8.8.8.8.

b. Capacitance LOW ADJ & HIGH ADJ Checkout.

(1) Remove CAPACITANCE-LOW ADJ control (2, figure 2-1) protective cap. Using a screwdriver, adjust CAPACITANCE -LOW ADJ control (2) until digital display (7) reads LOW values stamped on CAPACITANCE STANDARDS (5).

(2) Set CAPACITANCE RANGE switch (6) to HIGH ADJ position. Remove protective cap from CAPACITANCE -HIGH ADH control (3).

(3) Adjust CAPACITANCE-HGIH ADH control (3) until digital display (7) reads HIGH value stamped on CAPACITANCE STANDARDS placard (5).

(4) Set CAPACITANCE RANGE switch (6) to LOW ADJ position. Check that digital display (7) reads LOW value stamped on CAPACITANCE STANDARDS placard (5).

NOTE

Repeat steps 2 through 4 until no further adjustment is required.

(5) Mount protective caps on CAPACITANCE HIGH ADJ (3) and LOW ADJ (2) controls.

c. Capacitance Measurement Accuracy Checkout.

(1) Set CAPACITANCE RANGE switch (6) to 200 pF and adjust precision variable capacitor No. 1 to 6.00 pF. Check that digital display (7) reads between 5.50 and 6.50 pF.

(2) Set CAPACITANCE RANGE switch (6) to 1000 pF. Check that digital display reads between 3.5 and 8.5 pF.

(3) Set CAPACITANCE RANGE switch (6) to 4000 pF. Check that digital display (7) reads between 0 and 16.0 pF.

(4) Set CAPACITANCE RANGE switch (6) to 8000 pF. Check that digital display (7) reads between 0 and 26.0 pF.

(5) Set precision variable capacitor No. 1 to 100.00 pF and set CAPACITANCE RANGE switch (6) to 200 pF. Check that digital display (7) reads between 99.50 and 100.50 pF.

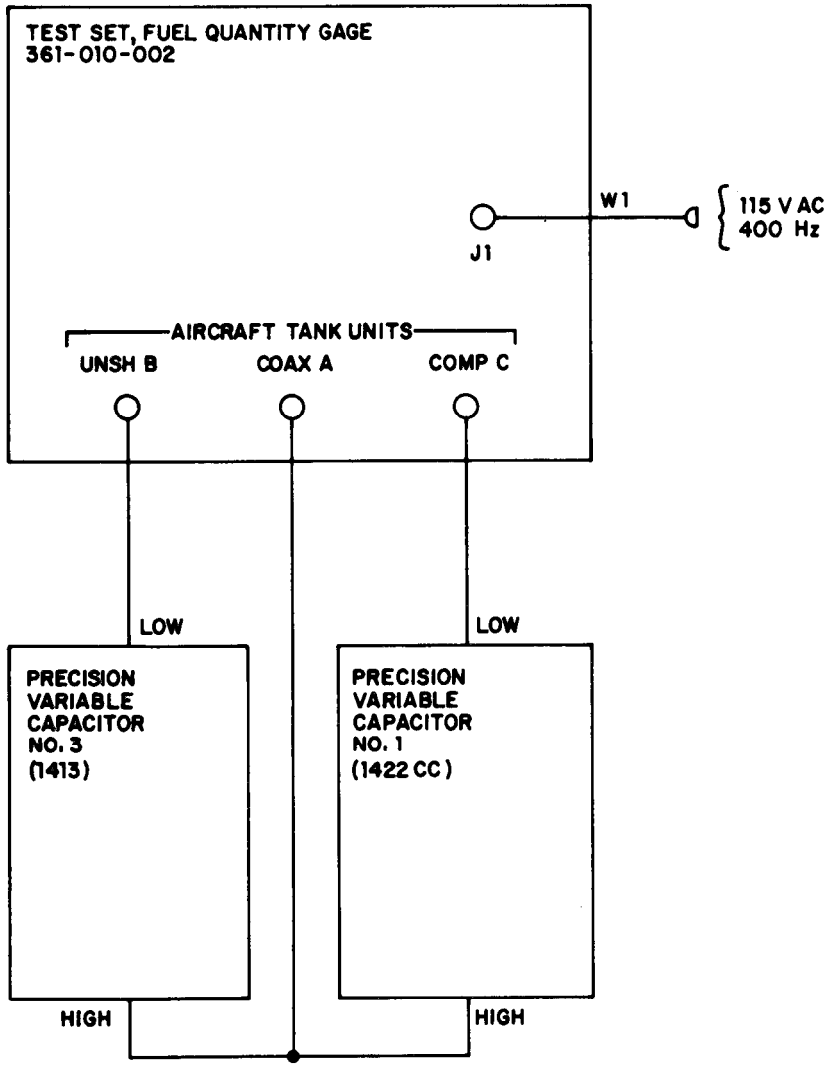


Figure 4-1. Capacitance measurement and simulation checkout, setup diagram

(6) Substitute precision variable capacitor No. 2 for precision variable capacitor No. 1 (see table 1-3).

(7) Set precision variable capacitor No. 2 to 198.00 pF. Check that digital display (7) reads between 197.00 and 199.00 pF.

(8) Set precision variable capacitor No. 2 to 500.00 pF and set CAPACITANCE RANGE switch (6) to 1000 pF. Check that digital display (7) reads between 497.5 and 502.5 pF.

(9) Set precision variable capacitor No. 2 to 990.0 pF. Check that digital display (7) reads between 985.0 and 995.0 pF.

(10) Set precision variable capacitor No. 3 to 2000 pF. Set CAPACITANCE RANGE switch (6) to 4000 pF and CAPACITANCE FUNCTION switch (1) to A/C TEST-UNSH. Check that digital display (7) reads between 1990.0 and 2010.0 pF.

(11) Set precision variable capacitor No. 3 to 3900 pF. Check that digital display (7) reads between 3880.0 and 3920.0 pF.

(12) Set precision variable capacitor No. 3 to 4000 pF and set CAPACITANCE RANGE switch (6) to 8000 pF. Check that digital display (7) reads between 3980.0 and 4020.0 pF.

(13) Set precision variable capacitor No. 3 to 7900 pF. Check that digital display (7) reads between 7860.0 and 7940.0 pF.

(14) Set precision variable capacitor No. 3 to 9000 pF and set CAPACITANCE RANGE switch (6) to 200 pF. Check that digital display (7) reads 199.95 pF with overrange blinking.

(15) Set CAPACITANCE RANGE switch (6) to 1000 pF. Check that digital display (7) reads 999.75 with overrange blinking.

(16) Set CAPACITANCE RANGE switch (6) to 4000 pF. Check that digital display (7) reads 3999.0 pF with overrange blinking.

(17) Set CAPACITANCE RANGE switch (6) to 8000 pF. Check that digital display (7)

reads 7998.0 pF with overrange blinking.

d. Capacitance Simulation Range Checkout.

(1) Set CAPACITANCE FUNCTION switch (1, figure 2-1) to SIM SET-COMP position and set CAPACITANCE RANGE switch (6) to 1000 pF. Rotate SIMULATORS-COMP control (13) fully counterclockwise. Check that digital display (7) reads less than 15.0 pF.

(2) Rotate SIMULATORS-COMP control (13) fully clockwise. Check that digital display (7) reads greater than 390.0 pF.

(3) Set CAPACITANCE FUNCTION switch (1) to SIM SET-PROBE position. Set SIMULATOR-PROBE 0-7000 pF (22) and 0-800 pF (23) switches to 0 pF and rotate SIMULATORS-PROBE control (24) fully counterclockwise. Check that digital display (7) reads less than 15.0 pF.

(4) Rotate SIMULATORS-PROBE control (24) fully clockwise. Check that digital display (7) reads greater than 390.0 pF.

(5) Adjust SIMULATORS-PROBE control (24) to obtain digital display (7) reading of 100.0 pF.

(6) Perform probe simulator checkout by setting SIMULATORS-PROBE 0-7000 pF switch (22), SIMULATORS-PROBE 0-800 pF switch (23) and CAPACITANCE RANGE switch (6) to positions listed for tests 1 through 11 of table 4-1. Check that digital display (7) reads between minimum and maximum value for each test listed in table 4-1.

e. Digital Circuit and Display Checkout.

(1) Set CAPACITANCE FUNCTION switch (1, figure 2-1) to A/C TEST-UNSH position

(2) Perform high range capacitance measurement checkout by setting CAPACITANCE RANGE switch (6) to positions listed for tests 1 through 18 of table 4-2. For each test,

adjust precision variable capacitor No. 3 to obtain required reading of digital display (7); then check that precision capacitor No. 3 setting is between minimum and maximum values listed in table 4-2.

Table 4-1. Probe Simulator Checkout

	Simulators-PROBE -switch settings		CAPACITANCE	Digital Display (7) reading	
Test	0-7000 pF (22)	0-800 pF (23)	RANGE switch (6) settings (pF)	Minimum (pF)	Maximum (pF)
1	0	200	1000	277.5	322.5
2	0	400	1000	457.5	542.5
3	0	600	1000	636.5	763.5
4	0	800	1000	815.5	984.5
5	1000	0	4000	1070.	1130.
6	2000	0	4000	2050.	2150.
7	3000	0	4000	3025.	3175.
8	4000	0	8000	4000.	4200.
9	5000	0	8000	4975.	5225.
10	6000	0	8000	5950.	6250.
11	7000	0	8000	6925.	7275.

(3) Substitute precision variable capacitor No. 2 for No. 3 (see table 1-3) and set CAPACITANCE RANGE switch (6) to 1000 pF. Adjust precision variable capacitor No. 2 until digital display (7) reads 555.5 pF. Check that precision variable capacitor No. 2 setting is between 553.0 and 558.0 pF.

(4) Adjust precision variable capacitor No. 2 until digital display (7) reads 777.0 pF. Check that precision variable capacitor No. 2 setting is between 773.5 and 780.5 pF.

Table 4-2. Tank Unit Capacitance Measurement Checkout

Test	Capacitance range (6) setting (pF)	Digital display (7) reading (pF)	Precision variable capacitor No. 3 setting	
			Minimum	Maximum
1	4000	2.	0	12.0
2	4000	4.	0	14.0
3	4000	8.	0	18.0
4	4000	16.	6.0	26.0
5	4000	32.	22.0	42.0
6	4000	64.	54.0	74.0
7	4000	128.	118.0	138.0
8	4000	256.	246.0	266.0
9	4000	512.	502.0	522.0
10	4000	1024.	1014.0	1034.0
11	4000	1111.	1101.0	1121.0
12	4000	2048.	2038.0	2058.0
13	4000	2229.	2218.0	2240.0
14	4000	3333.	3316.5	3349.5
15	4000	3337.	3320.5	3353.5
16	8000	4096.	4076.0	4116.0
17	8000	4444.	4422.0	4466.0
18	8000	6666.	6634.0	6698.0

(5) Adjust precision variable capacitor No. 2 until digital display (7) reads 888.0 pF. Check that precision variable capacitor No. 2 setting is between 884.0 and 892.0 pF.

(6) Adjust precision variable capacitor No. 2 until digital display (7) reads 999.0 pF. Check that precision variable capacitor No. 2 setting is between 994.0 and 1004.0 pF.

f. Capacitance Simulation Accuracy Checkout.

(1) Connect equipment as shown in figure 4-2. Set precision variable capacitor No. 1 to 15.00 pF and No. 2 to 70.00 pF.

(2) Set DISPLAY SELECT switch (S) to CAP (pF), CAPACITANCE RANGE switch (6) to 200, and CAPACITANCE FUNCTION switch (1) to SIM SET-COMP position.

(3) Adjust SIMULATORS-COMP control (13) to obtain digital display (7) readout of 50.00 pF.

(4) Set CAPACITANCE FUNCTION switch (1) to SIM SET-PROBE position. Adjust SIMULATORS-PROBE control (24) to obtain digital display (7) readout of 25.00 pF.

(5) Set CAPACITANCE FUNCTION switch (1) to IND TEST-SIM position.

(6) Adjust capacitance bridge for 1 KHz, 30 volts excitation. Null the capacitance bridge. Check that capacitance bridge bridge reads between 24.50 and 25.50 pF.

(7) Set CAPACITANCE FUNCTION switch (1) to IND TEST-A/C position and null capacitance bridge. Check that capacitance bridge reads between 69.50 and 70.50 pF.

(8) Set CAPACITANCE FUNCTION switch (1) to IND TEST-A/C + PROBE SIM position and null capacitance bridge. Check that capacitance bridge reads between 94.50 and 95.50 pF.

(9) Set CAPACITANCE FUNCTION switch (1) to IND TEST-A/C + PROBE SIM + COMP SIM position and null capacitance bridge. Check that capacitance bridge reads between 94.50 and 95.50 pF.

(10) Set CAPACITANCE FUNCTION switch (1) to IND TEST-SIM position. Move capacitance bridge "low" lead to INDICATOR-COMP connector (21) and connect shorting cap to INDICATOR-UNSH connect or (21). Null the capacitance

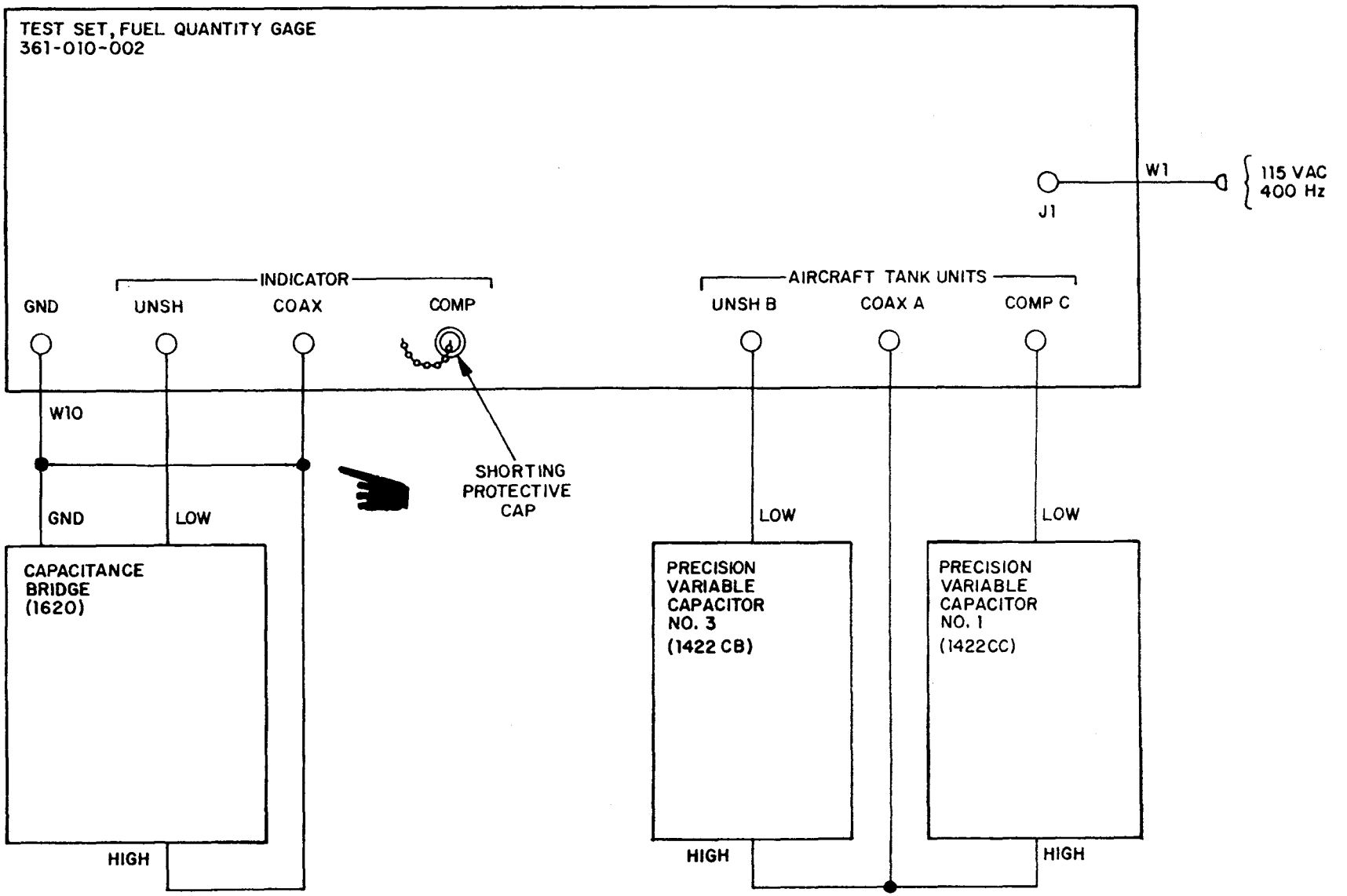


Figure 4-2. Capacitance simulation-indicator test, setup diagram

bridge. Check that capacitance bridge reads between 49.50 and 50.50 pF.

(11) Set CAPACITANCE FUNCTION switch (1) to IND TEST-A/C position and null capacitance bridge. Check that capacitance bridge reads between 14.50 and 15.50 pF.

(12) Set CAPACITANCE FUNCTION switch (1) to IND TEST-A/C + PROBE SIM position and null capacitance bridge. Check that capacitance bridge reads between 14.50 and 15.50 pF.

(13) Set CAPACITANCE FUNCTION switch (1) to IND TEST-A/C + PROBE SIM + COMP SM position and null capacitance bridge. Check that capacitance bridge reads between 64.50 and 65.50 pF.

g. Resistance Measurement Checkout.

(1) Connect equipment as shown in figure 4-3.

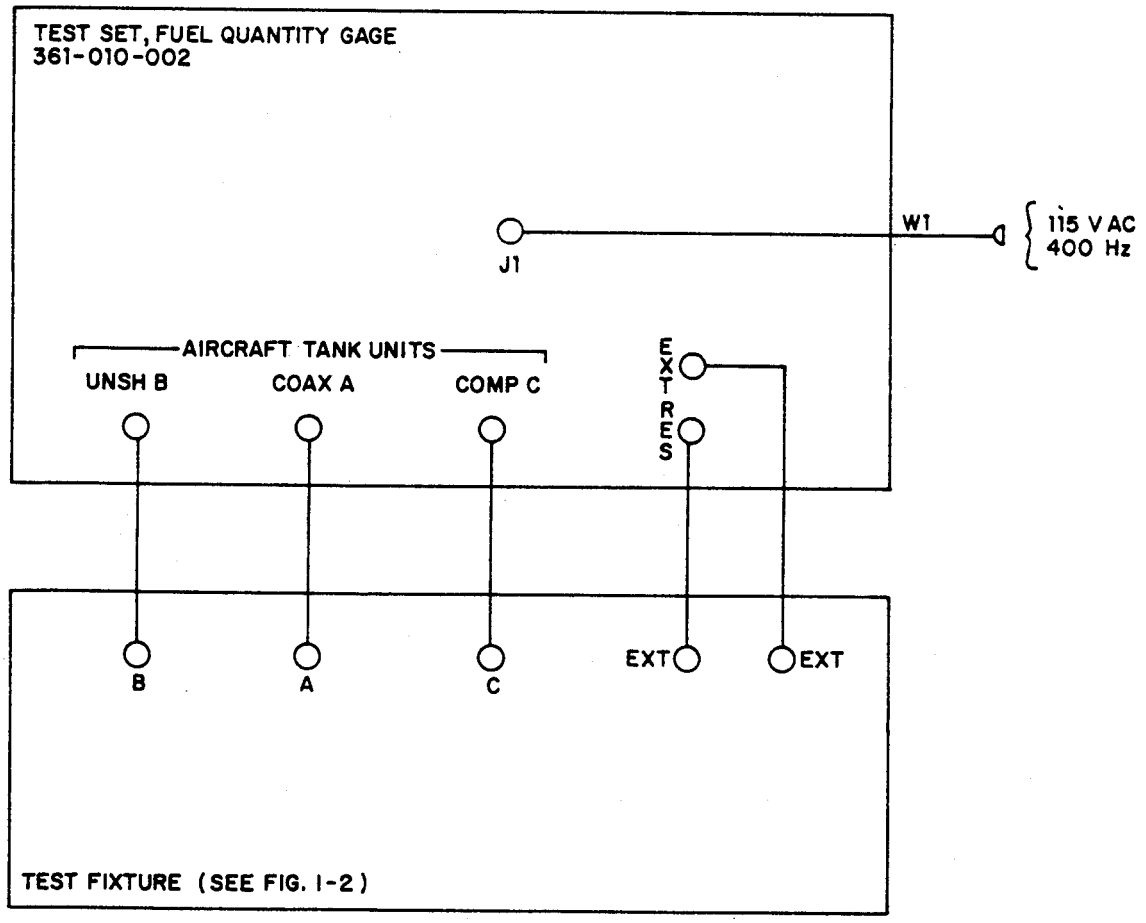


Figure 4-3. Resistance measurement checkout, setup diagram

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PIN: 047683-003

(2) Set DISPLAY SELECT switch (8, figure 2-1) to RES (MEG) and RESISTANCE RANGE switch (12) to LOW TEST position. Check that digital display (7) reads 0.1000 megohm.

(3) Set RESISTANCE RANGE switch (12) to HIGH TEST position. Check that digital display (7) reads between 0.9400 and 0.9600 megohm.

(4) Set test fixture switch S1 (fig. 1-2) to position 1. Perform resistance range checkout by setting test fixture switches S2 and S3 and RESISTANCE RANGE switch (12, figure 2-1) to position listed for tests 1 through 17 of table 4-3. Check that digital display (7) reads between minimum and maximum values listed in table 4-3 for each test.

(5) Set RESISTANCE RANGE switch (12) to 1-10 position. Set test fixture switch S2 to position 2 and S1 to position 1. Check that digital display reads 0.000 with underrange blinking.

(6) Set test fixture switch S2 to position 6. Check that digital display reads 9.900 megohms with overrange blinking.

(7) Set RESISTANCE RANGE switch (12) to 1K-10K position and RESISTANCE FUNCTION switch (11) to A-C position. Set test fixture switch S2 to position 10 and S3 to position 2. Check that digital display (7) reads between 4000 and 6000 megohms.

(8) Set RESISTANCE FUNCTION switch (11) to A-GND position. Set test fixture switch S3 to position 3. Check that digital display reads between 4000 and 6000 megohms.

(9) Set RESISTANCE FUNCTION switch (11) to B-GND position. Set test fixture switch S3 to position 4. Check that digital display reads between 4000 and 6000 megohms.

(10) Set RESISTANCE FUNCTION switch (11) to C-GND position. Set test fixture switch S3 to position 5. Check that digital display reads between 4000 and 6000 megohms.

(11) Set RESISTANCE FUNCTION switch (11) to EXT RES position. Set test fixture switch S3 to position 6. Check that digital display reads between 4000 and 6000 megohms.

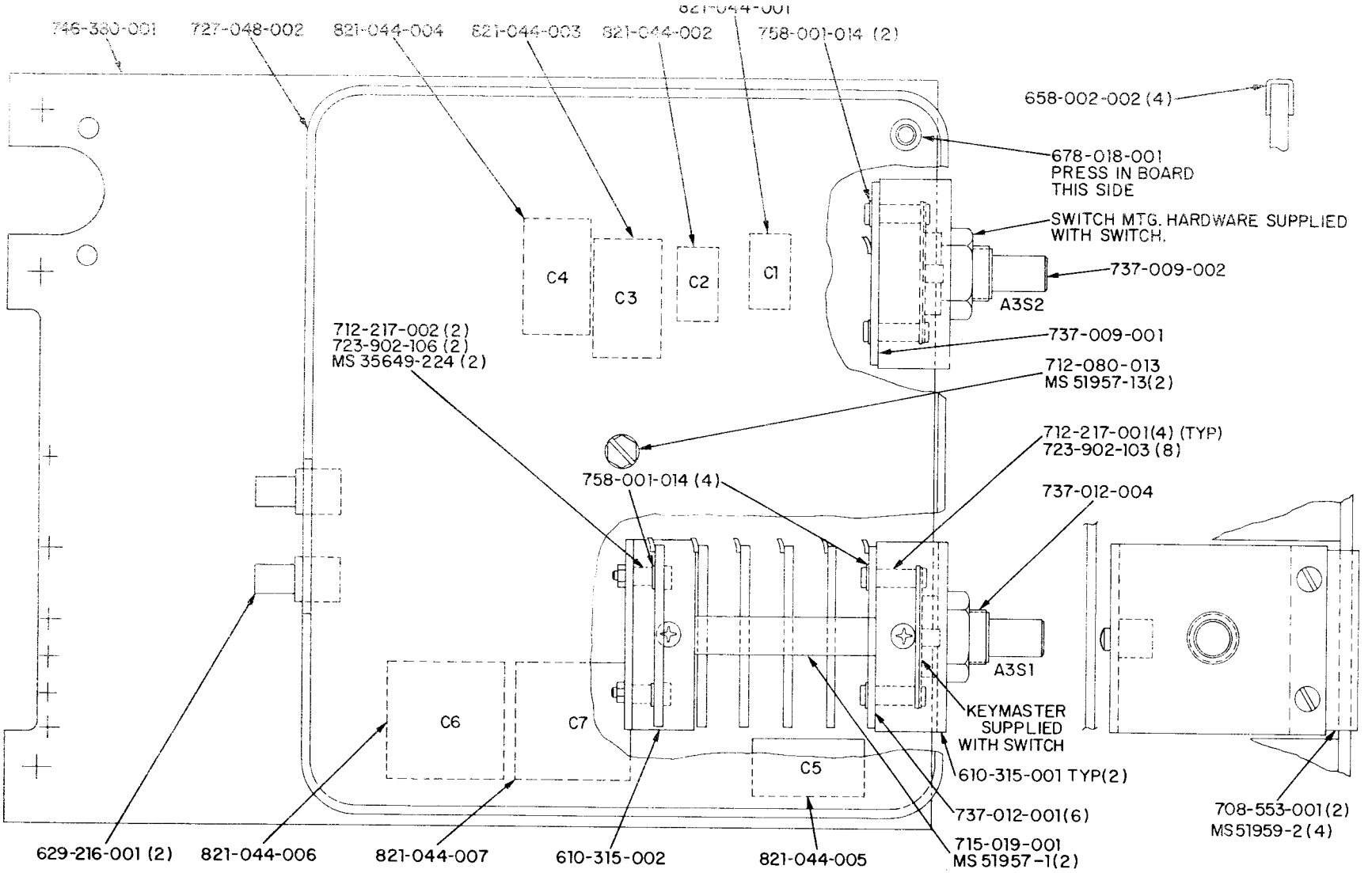
Table 4-3. Resistance Range Checkout

Test	Resistance range (12) setting	Test fixture switch settings		Digital display (7) reading	
		S1	S2	Minimum	Maximum
1	0.1-1	1	1	0.0800	0.1100
2	0.1-1	1	2	0.4000	0.6000
3	0.1-1	1	3	0.7600	0.9900 Blinking
4	1-10	1	3	0.800	1.100
5	1-10	1	4	4.000	6.000
6	1-10	1	5	7.600	9.900 Blinking
7	10-100	1	5	8.00	11.00
8	10-100	1	6	40.00	60.00
9	10-100	1	7	76.00	99.00 Blinking
10	100-1K	1	7	80.0	110.0
11	100-1K	1	8	400.0	600.0
12	100-1K	1	9	760.0	990.0 Blinking
13	1K-10K	1	9	800.0	1100.
14	1K-10K	1	10	4000.	6000.
15	1K-10K	2	11	7600.	9900. Blinking
16	10K-100K	2	11	8000.	11000.
17	10K-100K	3	11	40000.	60000.

h. Cable Checkout. Refer to figures 3-5 through 3-17 as necessary and use AN/USM 303A set to R x 1 scale to check continuity of cables W1 through W12.

4-5. Troubleshooting Analysis.

Troubleshooting of the Test Set is presented in table 4-4 which lists common malfunctions, probable causes and appropriate corrective action. Procedures provided in table 4-4 are used in conjunction with the schematic diagrams, figures FO-1 through FO-9 and circuit board component location diagrams figures 4-4, 4-5, and FO-8 through FO-13 as a guide to efficient troubleshooting. Troubleshooting is further aided by the theory of operation (see Chapter 2, Section III) which provides a functional explanation of Test Set circuits. Where specific figure or paragraph references are not made in the corrective action column of table 4-4, refer to figures FO-1 through FO-13.



NOTE:
"LOCTITE" ALL SCREWS USING 790-005-001
PER PPS 100-100.

Figure 4-4. Simulator PC board assembly A-3

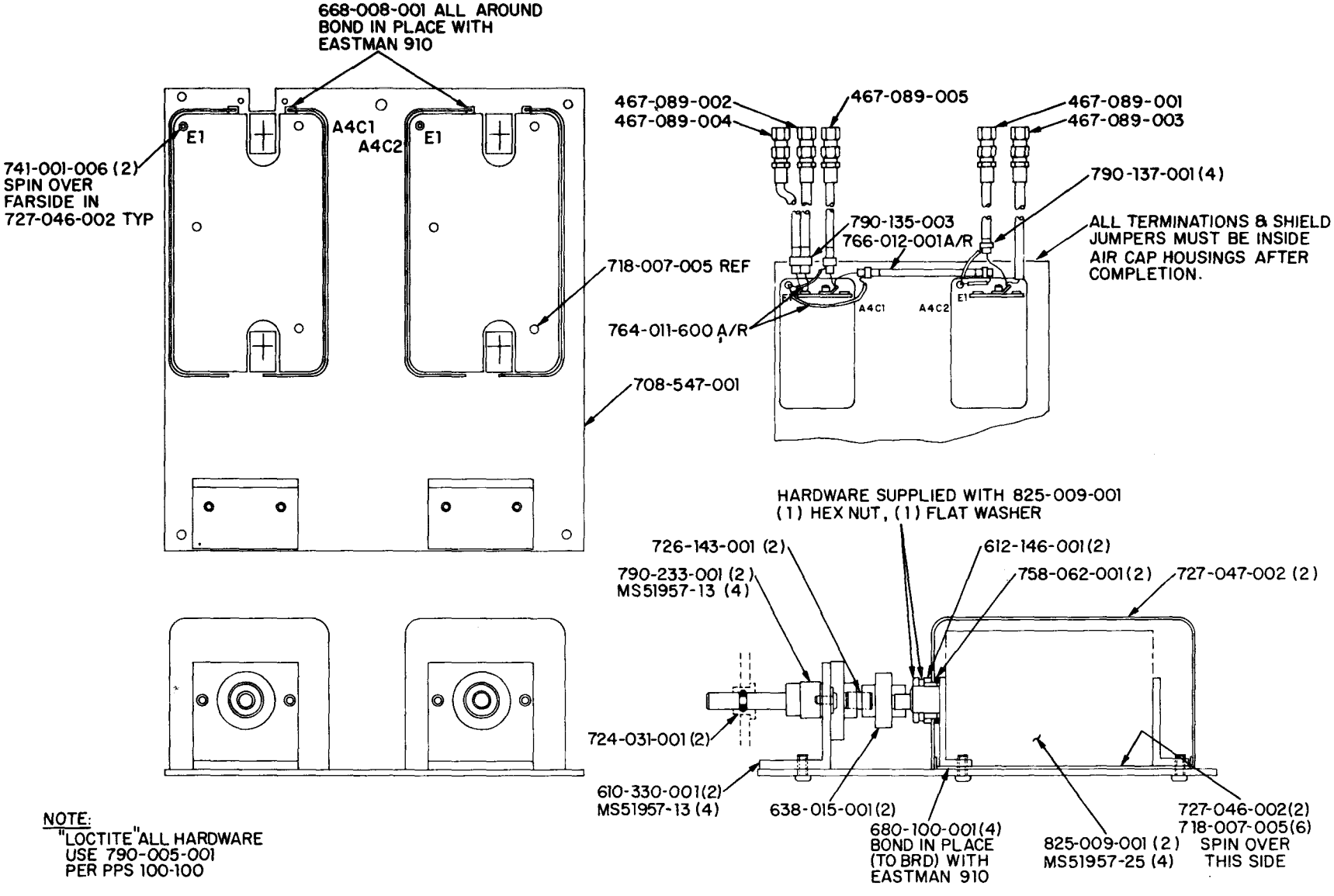


Figure 4-5. Air capacitor PC board assembly A-4

Table 4-4. Troubleshooting Chart

Malfunction	Probable cause	Corrective action
	NOTE Numbers in parentheses refer to index numbers of figure 2-1.	
1. Test Set completely inoperative.	a. Fuse F1 open.	a. Replace fuse.
	b. Main 115 VAC, 400 Hz power source faulty.	b. Use digital voltmeter and check input power.
	c. Faulty POWER ON/OFF switch S1.	c. Replace switch S1.
	d. DC power supply failure.	d. On power supply board A 5, check voltage test points (see paragraph 4-14 a (4). Replace power supply A 5 as required.
2. With DISPLAY TEST switch depressed, digital display (7) does not display 8.8.8.8.8.8.	Burned out filament in digital displays A1DS1 through A1 DS6.	Check and replace A1DS1 through A1DS6 as required.

Table 4-4. Troubleshooting Chart - Continued

Malfunction	Probable cause	Corrective action
Capacitance measurements incorrect.	CAPACITANCE FUNCTION switch A2S1, CAPACITANCE RANGE switch A2S2, integrated circuits A2Z8 through A2Z10 or transistors Q5 through Q10 and associated circuitry.	Check and replace analog board A2 as required.
4. LOW ADJ control (2) cannot be adjusted to obtain digital display (7) reading of LOW on value stamped on CAPACITANCE STANDARDS placard (5).	a. LOW ADJUST potentiometer R1 open or shorted.	a. Using multimeter, check and replace R1 as required.
	b. Capacitor A2C70 open or shorted, or relay A2K1 inoperative.	b. Check and replace analog board A2 as required.
5. HIGH ADJ control (3) cannot be adjusted to obtain digital display (7) reading of HIGH value stamped on CAPACITANCE STANDARDS placard (5).	a. HIGH ADJUST potentiometer R2 open or shorted.	a. Using multi meter, check and replace R2 as required.
	b. Capacitor A2C69 open or shorted, or relay A2K2 inoperative.	b. Check and replace analog board A2 as required.

Table 4-4. Troubleshooting Chart - Continued

Malfunction	Probable cause	Corrective action
6. Resistance measurements incorrect.	Defective RESISTANCE FUNCTION switch A2S4, RESISTANCE RANGE switch A2S5, or A2Z11, Z12, Z14 and associated circuitry.	Check and replace analog board A2 as required.
7. Underrange blinking (resistance measurements) not functioning.	Defective integrated circuits A2Z1-10, A2Z13 and associated circuitry.	Check and replace analog board A2 as required.
8. Unable to simulate specific PROBE capacitance.	a. Defective SIMULATORS-PROBE 0-7000 pF switch A3S1, 0-800 pF switch A3S2, or capacitors A3C1 through C7.	a. Check and replace simulator board A3 as required.
	b. Defective SIMULATORS-PROBE A4C1.	b. Check and replace air capacitor board A4 as required.

Table 4-4. Troubleshooting Chart - Continued

Malfunction	Probable cause	Corrective action
Unable to simulate specific COMPENSATOR. capacitance.	Defective SIMULATORS-COMP A4C2.	Check and replace air capacitor board A4 as required.
10. Nonlinear capacitance and resistance measurements.	a. Defective binary counters A1Z36, A1Z37 or A1Z38.	a. Check and replace digital board A1 as required (see figure 2-7).
	b. Defective analog to digital converter A1Z40.	b. Check and replace A1Z40 as required.
1. Erratic capacitance and resistance readouts.	Defective digital board A1.	Check and replace digital board A1 as required (see figures 2-3 through 2-13) .
12. Digital display (7) readout shows characters that are not numbers.	a. Burned out filaments in digital displays A1DS1 through A1DS6.	a. Depress DISPLAY TEST switch (4). If digital display does not read 8.8.8.8.8.8., check and replace digital displays A1DS1 through A1DS6 as required (see figure 2-13) .

Table 4-4. Troubleshooting Chart - Continued

Malfunction	Probable cause	Corrective action
12. -Continued	b. Defective integrated circuits A1Z1 through A1Z5.	b. Check and replace digital board A1 as required (see figure 2-12) .

Section III. REPAIR PROCEDURES

4-6. Scope.

This section contains instructions for authorized repair of the Test Set and replacement of defective components at direct and general support levels of maintenance. These instructions include removal and disassembly, cleaning, detail repair instructions, lubrication, and testing.

4-7. Removal and Disassembly.

Disassembly of the entire Test Set is not recommended; disassemble the Test Set only to the extent required to replace defective components. The following procedures are keyed to figures 3-3 and 3-4.

a. Test Set Disassembly. To disassemble the Test Set, refer to figure 3-3, and proceed as follows:

(1) Release two latches and remove cover from combination case (33, figure 3-3).

(2) Remove power cables W1 (54), W2 (53) and W3 (52) from cover of combination case (33).

(3) Remove 21 adapter cables (34 through 50), and BNC tee adapter (51) from storage compartment of combination case (33).

(4) Remove 24 screws (29) and carefully remove instrument and panel assembly (65) from combination case (33).

NOTE

As disassembly proceeds, tag and disconnect cables and wires as necessary.

(5) Remove flat cable assemblies (56), (59), (63) and (64).

(6) Remove nine screws (10) and nine flat washers (11) and detach digital PC board assembly (31) from panel assembly (17), three posts (58) and two brackets (57). Remove two brackets (2) from digital PC board assembly (31).

(7) Remove two screws (10) and two flat washers (11) and detach two brackets (57) from analog PC board assembly (15).

(8) Remove three screws (10) and three flat washers (11) and detach three posts (58) from analog PC board assembly (15).

(9) Loosen associated setscrews and remove nine front panel knobs (24).

(10) Remove five hex nuts (27), five flat washers (21), five insulated washers (22) and five O-rings (20) and carefully detach analog PC board (15) and insulator (16) from panel assembly (17).

(11) Remove five shouldered washers (14) from panel assembly (17).

(12) Remove two screws (10) and two flat washers (11) and detach two brackets (60 and 61) from air capacitor board assembly (7) and simulator board assembly (12)

(13) Remove two screws (10) and two flat washers (11) securing air capacitor board assembly (7) to bracket (62) and post (5).

(14) Remove two screws (10) and two flat washers (11) securing air capacitor board assembly (7) to panel assembly (17).

(15) Remove two hex nuts (25), two flat washers (21), and two O-rings (20) and carefully detach air capacitor board (7) from panel assembly (17).

(16) Remove two bushings (8) from panel assembly (17).

(17) Remove screw (10) and flat washer (11) and detach interboard plate (6) from simulator PC board (12) and post (5).

(18) Remove screw (10) and flat washer (11) securing simulator PC board assembly (12) to post (9).

(19) Remove screw (10) securing simulator PC board assembly (12) to front panel assembly (17).

(20) Remove two hex nuts (23), two flat washers (21), two insulated washers (22) and two O-rings (20) and carefully detach simulator PC board assembly (12) and insulator (13) from panel assembly (17).

(21) Remove two shouldered washers (14) from panel assembly (17).

(22) Remove three screws (10) and three flat washers (11) and detach bracket (62) and two posts (5 and 9) from power supply PC board assembly (3).

(23) Remove five screws (18) and detach power supply PC board assembly (3) from panel assembly (17).

(24) Remove two screws (1) and one nut (4) and detach two brackets (2) from power supply PC board assembly (3).

(25) Remove six digital displays (30) from digital PC board assembly (31).

(26) Remove digital-to-analog converter integrated circuit (59) from digital PC board assembly (31).

(27) Refer to paragraph 4-7b to disassemble panel assembly (17).

b. Disassembly of Front Panel Assembly. To disassemble the front panel assembly, refer to figure 3-4 and proceed as follows:

(1) Remove six screws (19, figure 3-4) and detach bezel (20), gasket (22), and display cover glass (21) from panel subassembly (61).

(2) Remove two protective caps (15) from two potentiometers (23 and 24). Detach protective caps from panel subassembly (61) by removing screw (16).

(3) Remove two hex nuts (14 and 17) and detach two potentiometers (23 and 24) from panel subassembly (61).

(4) Remove hex nut (18) and detach pushbutton switch (26) from panel subassembly (61).

(5) Remove four hex nuts (30) and two washers (28) and detach two binding posts (25 and 27) and two gaskets (29) from panel subassembly (61).

(6) Remove hex nut (9) and detach toggle switch (45) and seal washer (46) from panel subassembly (61).

(7) Remove lamp (12) from panel subassembly (61).

(8) Remove two fuses (32 and 33) from fuseholders (31).

(9) Remove two hex nuts (42) and detach two fuseholders (31) from panel subassembly (61).

(10) Remove two hex nuts (4), flat washer (40) and O-ring (39) and detach binding post (38) from panel subassembly (61).

(11) Remove protective cap (34) from connector (36). Remove four screws (35) and detach connector (36), gasket (37), and protective cap (34) from panel subassembly (61).

(12) Remove six protective caps (2, 4 and 7) from cable assemblies (48, 49, 53, 54, 57, and 58). Remove four screws (3) and detach protective caps from panel subassembly (61).

(13) Remove hex nut (1) and detach flat washer (59) and internal coaxial cable assembly (58) from panel subassembly (61).

(14) Remove hex nut (5) and detach flat washer (56), gasket (50) and internal coaxial cable assembly (57) from panel subassembly (61).

(15) Remove hex nut (6) and detach flat washer (55) and internal coaxial cable assembly (54) from panel subassembly (61).

(16) Remove hex nut (8) and detach flat washer (52) and internal coaxial cable assembly (53) from panel subassembly (61).

(17) Remove hex nut (10) and detach flat washer (51), gasket (50) and internal coaxial cable assembly (49) from panel subassembly (61).

(18) Remove hex nut (11) and detach flat washer (47) and internal coaxial cable assembly (48) from panel subassembly (61).

(19) Remove four screws (60) and detach two handles (62) from panel subassembly (61).

(20) Remove hex nut (44) and flat washer (43) and detach lampholder (13) from panel subassembly (61).

4-8. Cleaning.

WARNING

Solvent (item 2, table 1-4) is toxic and flammable. Use in well ventilated area. Avoid breathing of vapors and contact with skin. Keep away from flames and other ignition sources.

Clean all parts, except electrical contacts, using a clean, lint-free cloth moistened in ethyl alcohol (item 1, table 1-4). Remove stubborn deposits of dirt, grease and grime, using solvent (item 2, table 1-4) and a soft-bristled brush; dry using compressed air, 15 psi maximum. Clean electrical contacts using a dry lint-free cloth.

4-9. Detailed Repair Instructions.

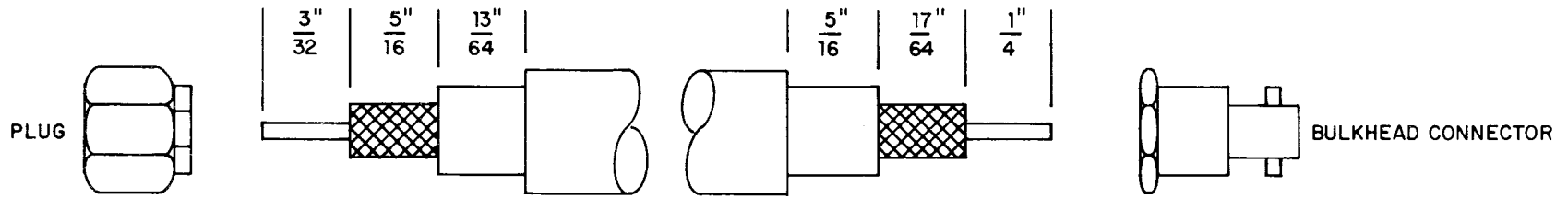
Detailed repair of the Test Set consists of replacing defective parts or assemblies. Refer

to paragraph 4-7 and perform only those steps of the disassembly procedures required to remove the defective component. The following paragraphs provide instructions for repair of the case and cover, repair and reassembly of the panel assembly, repair of cable assemblies, and repair of PC board assemblies. After all assemblies are repaired and reassembled, refer to paragraph 4-13 for reassembly of the Test Set.

a. Case and Cover Repair. Straighten minor dents in combination case or cover (33, figure 3-3) using a mallet and suitable blocks. If damage is severe, replace case or cover. If necessary, touch up repaired area with paint (item 3, table 1-4) as specified in TM 9-213.

b. Cable Assembly Repair. Repair of cable assemblies is limited to replacement of damaged connectors or pins in accordance with practices outlined in TM 55-1500-323-25. Items which are non-repairable and which must be replaced if defective include the three ribbon cable assemblies (56, 63, and 64, figure 3-3) and BNC/coaxial connectors. In addition, cable assemblies with shorted or open wires, or damaged insulation (cuts, cracks, fraying, etc.) are not repairable and must be replaced. Multipin connectors with removable pins are repairable. Remove damaged pins using suitable extraction tool, crimp new pin to wire, and install pin in connector using suitable insertion tool. Use solder (item 4, table 1-4) as required for soldering of wires, splices, terminations, and shields. Refer to figure 4-6 for stripping dimensions of internal coaxial cable assemblies (48, 49, 53, 54, 57 and 58, figure 3-4) attached to front panel connectors J2 through J7. Refer to section VII of Chapter 3 for cable illustrations and repair parts.

c. Front Panel Assembly Repair. Repair of the panel assembly consists of replacing defective parts. Straighten minor dents in panel subassembly (61, figure 3-4) using a mallet and suitable blocks. Replace panel subassembly (61) if damage is severe. If necessary, touch up repaired area with paint (item 5, table 1-4) as specified in TM 9-213. Referring to figure 3-4, reassemble the front panel assembly as follows:



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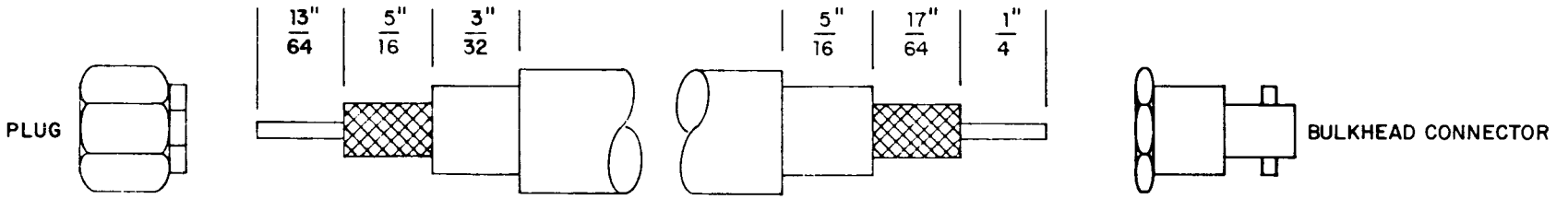


PART NUMBER 467-098-001

Figure 4-6. Internal coaxial cable stripping dimensions

(1) Attach two handles (62, figure 3-4) to panel subassembly (61) using four screws (60).

(2) Mount four internal coaxial cable assemblies (48, 53, 57 and 58) and four flat washers (47, 52, 55 and 59) on panel subassembly (61) and secure using four hex nuts (10, 8, 6 and 1).

(3) Mount two internal coaxial cable assemblies (49 and 57), two flat washers (51 and 56) and two gaskets (50) on panel subassembly (61) and secure using two hex nuts (9 and 5).

(4) Mount six protective caps (2, 4 and 7) on connectors of six internal coaxial cable assemblies (48, 49, 53, 54, 57 and 58). Secure chains of protective caps to panel subassembly (61) using four screws (3).

(5) Attach connector (36), gasket (37) and chain of protective cap (34) to panel subassebmly (61) using four screws (35). Mount protective cap (34) on connector (36).

(6) Install binding post (38) on panel subassembly (61) using O-ring (39) and flat washer (40) and two hex nuts (41).

(7) Mount two fuseholders (31) on panel subassembly (61) and secure using two hex nuts (42). Install two fuses (32 and 33) in fuseholders (31).

(8) Install lampholder (13) in panel subassembly (61) and secure using flat washer (43) and hex nut (44). Install lamp (12) in lampholder (13).

(9) Install toggle switch (45) and seal washer (46) on panel subassembly (61) and secure using hex nut (9).

(10) Mount two binding posts (25 and 27), two gaskets (29) and two washers (28) panel subassembly (61) and secure using four hex nuts (30).

(11) Install pushbutton switch (26) on panel subassembly (61) and secure using hex nut (18).

(12) Install two potentiometers (23 and 24) on panel subassembly (61) and secure using

two hex nuts (17 and 14). Mount two protective caps (15) on potentiometers (23 and 24) and secure chain of protective caps to panel subassembly (61) using screw (16).

(13) Attach gasket (22), display cover glass (21) and bezel (20) to panel subassembly (61) using six screws (19).

d. Printed Circuit Board Repair. Repair of boards at direct support and general support levels of maintenance is limited to replacement of six digital displays (30, figure 3-3) and the plug-in integrated circuit (59) on digital board A1 (31).

4-10. Lubrication.

The Test Set does not require lubrication at the direct and general support levels of maintenance.

4-11. Testing.

After repairing internal coaxial cables (48, 49, 53, 54, 57 and 58), check continuity of inner conductor, and shield using AN/USM303A set to R x 1 scale prior to reassembly of Test Set.

Section IV. REASSEMBLY AND ALIGNMENT

4-12. Scope.

This section contains instructions for installing components and assemblies that have been repaired and reassembled in accordance with paragraphs 4-6 through 4-11. In addition, before the Test Set is installed in the combination case, instructions are provided for adjusting power supply A5.

4-13. Reassembly.

To reassemble the Test Set, refer to figure 3-3 and proceed as follows:

NOTE

As reassembly proceeds, reconnect wires and cables in accordance with tags on wires. Check that wires and cables are connected to proper terminal or connector and remove tags.

a. Attach two brackets (2) to power supply board (3) using two screws (1) and two nuts (4).

b. Attach power supply board assembly (3) to panel assembly (17) using five screws (18).

c. Secure bracket (62), post (5) and post (9) to power supply board assembly (3) using three screws (10) and three flat washers (11).

d. Mount two bushings (8) on panel assembly (17).

e. Attach air capacitor board assembly (7) to panel assembly (17) using two screws (10) and two flat washers (11).

f. Mount interboard plate (6) between post (6) and air capacitor board assembly (7). Secure air capacitor board assembly (7) and interboard plate (6) to post (5) using screw (10) and flat washer (11).

g. Secure sir capacitor board assembly (7) to bracket (62) using screw (10) and flat washer (11).

h. Mount two O-rings (20) and two flat washers (21) over air capacitor shafts and secure to panel assembly (17) using two hex nuts (25).

i. Install two shouldered washers (14) in panel assembly (17).

j. Mount insulator (13) over switch shafts of simulator board assembly (12).

k. Attach simulator board assembly (12) to panel assembly (17) using screw (10). Secure simulator board assembly (12) to interboard plate (6) and post (9) using two screws (10) and two flat washers (11).

l. Mount two O-rings (20), two flat washers (21), and two insulated washers (22) over switch shafts of simulator board assembly (12) and secure to panel assembly (17) using two hex nuts (23).

m. Attach bracket (60) to air capacitor board assembly (7) using screw (10) and flat washer (11).

n. Attach bracket (61) to simulator board assembly (12) using screw (10) and flat washer (11).

o. Mount five shouldered washers (14) on panel assembly (17).

p. Mount insulator (16) over switch shafts of analog board assembly (15).

q. Attach analog board assembly (15) and secure to two brackets (60 and 61) using two screws (10), two flat washers (11) and two posts (58).

r. Mount five O-rings (20), five flat washers (21) and five insulated washers (22) over shafts of analog board assembly (15) and secure panel assembly (17) using five hex nuts (27).

s. Attach two brackets (57) and post (58) to analog board assembly (15) using three screws (10) and three flat washers (11).

t. Install six digital displays (30) and digital-to-analog converter integrated circuit (59) on digital board assembly (31).

u. Attach digital board assembly (31) to three posts (58) using three screws (10) and three flat washers (11).

v. Secure two brackets (2), two brackets (57) and digital board assembly (31) to panel assembly (17) using two screws (10) and two flat washers (11).

w. Mount nine knobs (24) over protruding shafts of analog board assembly (15), simulator board assembly (12) and air capacitor board assembly (7) and secure using associated setscrews.

x. Using AN/US M303A set to R x 1, check continuity of flat cable assemblies (56, 59, 63 and 64), pin 1 to pin 1, pin 2 to pin 2, etc. Install flat cable assemblies in accordance with tags on cables.

NOTE

Perform alignment procedures (para 4-14) before proceeding to step y.

y. Install instrument. and panel assembly (65) in combination case (33) and secure using 24 screws (29).

NOTE

Perform checkout procedures (para 4-4) before proceeding to step z.

z. Stow adapter cables (34 through 50), and BNC tee connector (51) in storage compartment of combination case (33).

aa. Store power cables (52, 53 and 54) in cover of combination case (33).

ab. Install cover on combination case (33) and secure two latches.

4-14. Alignment.

Alignment is to be accomplished before the completely assembled chassis is installed in the case.

a. Power Supply A5.

(1) Using cable W1, connect Test Set to 115 vat, 400 Hz power source.

(2) Set POWER ON/OFF switch (20, figure 2-1) to ON and RESISTANCE FUNCTION switch (11) to A-B position.

(3) Connect digital voltmeter (-) to GND test point on power supply board A5. Connect (+) had to +15V test point on power supply board A5. Adjust potentiometer A5R2 to obtain reading of +15.00 vdc on digital voltmeter.

NOTE

If potentiometer A5R2 requires adjustment, perform measuring circuit alignment after power supply A5 alignment is complete.

(4) Connect digital voltmeter (+) to points listed in table 4-5 and check that digital voltmeter reads within minimum and maximum values for each test point. If voltage is not within minimum and maximum values, replace power supply board A5.

Table 4-5. Power Supply Voltages

Test point	Digital voltmeter reading	
	Minimum (vdc)	Maximum (vdc)
+15 V	*+15.00	*+15.00
-15 V	-14.25	-15.75
+14 V	+13.30	+14.70
+10 V	+9.50	+10.50
+9 V	+8.55	+9.45
-6 V	-5.70	-6.30
+5V LOG	+4. 75	+5.25
+5V DIS	+4.75	+5.25
- 1 V	-0.95	-1.05
+2 2V	+18.00	+26.00
-50 V	-45.00	-55.00

*Adjust potentiometer A5R2 for exact value.

b. Measuring Circuitry. Measuring circuitry alignment must be performed after replacing digital board Al, analog board A2, simulator board A3, air capacitor board A4, power

supply board A5, or D/A converter integrated circuit A1Z40, and after adjusting potentiometer A5R2 (see a. (3) above). Refer the Test Set to a higher level of maintenance for alignment of measuring circuitry.

APPENDIX A
REFERENCES

A-1. Dictionaries of Terms and Abbreviations.

AR 310-25	Dictionary of United States Army Terms
AR 310-50	Authorized Abbreviations and Brevity Codes

A-2. Publication Indexes.

DA PAM 310-1	Consolidated Index of Army Publications and Blank Forms

A-3. Logistics and Storage.

TM 740-90-1	Administrative Storage of Equipment
TM 743-200-1	Storage and Materials Handling

A-4. Maintenance of Supplies and Equipment.

AR 750-1	Army Material Maintenance Concepts and Policies
DA PAM 738-751	Functional Users Manual for the Army Maintenance Management System - Aviation (TAMMS-A)
TM 43-0139	Painting Operations Instructions for Field Use
TM 55-1500-323-25	Aircraft Electric and Electronic Wiring

A-5. Other Publications.

AR 55-38	Reporting of Transportation Discrepancies in Shipments
AR 420-90	Fire Prevention and Protection
AR 700-58	Packaging Improvement Report
FM-21-11	First Aid for Soldiers
TB 43-180	Calibration Requirements for the Maintenance of Army Materiel
TM 750-244-1-4	Procedures for the Destruction of Aviation Ground Support Equipment (FSC 4920) to Prevent Enemy Use.

APPENDIX B
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. Maintenance Allocation Chart.

a. This Maintenance Allocation Chart (MAC) assigns maintenance functions in accordance with the Three Levels of Maintenance concept for army aircraft.. These maintenance levels: Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM) and Depot Maintenance are depicted on the MAC as:

AVUM which corresponds to the O code in the Repair Parts and Special Tools List (RPSTL).

AVIM which corresponds to the F code in the Repair Parts and Special Tools List (RPSTL).

Depot which corresponds to the D code in the Repair Parts and Special Tools List (RPSTL).

b. The maintennace to be performed below depot and in the fiels is described as follows:

(1) Aviation Unit Maintenance (AVUM). AVUM activities will be staffed and equipped to perform high frequency "On-Equipment" maintenance tasks required to retain or return equipment to a serviceable condition. The maintenance capability of the AVUM will be governed by the MAC and limited by the amount and complexity of support equipment, facilities required, and number of spaces and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignment of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources and air mobility requirements).

(a) Company Size Aviation Units. Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of equipment. operational readiness. Perform maintenance inspections and servicing to include daily, intermediate, periodic and special inspections as authorized by the MAC or higher headquarters. Identify the cause of equipment/system malfunctions using applicable technical manual troubleshooting instructions, Built-In-Test Equipment (BITE), installed instruments, or easy to use Test Measurement and Diagnostic Equipment (TMDE). Replace worn or damaged modules/components or system alignment and which can be removed/installed with available skills, tools and equipment. Perform operational and continuity checks and make minor repairs. Perform servicing, functional adjustments, and minor repair/replacement. Evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the supporting AVIM.

(b) Less than Company Size Aviation Units. Aviation elements organic to brigade, group, battalion headquarters and detachment size units are normally small and have less than ten aircraft assigned. Maintenance tasks performed by the aircraft crew chief or assigned aircraft repairman will normally be limited to preventive maintenance inspections, servicing, spot painting, stop drilling, minor adjustments, module/component fault diagnosis and replacement of selected modules/components. Repair functions will normally be accomplished by the supporting AVIM unit.

(2) Aviation Intermediate Maintenance (AVIM). AVIM provides mobile, responsive "One Stop" maintenance support. (Maintenance functions which are not conductive to sustaining air mobility will be assigned to depot maintenance). Performs all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/components and end items which can be accomplished efficiently with available skills, tools, and equipment. Establishes the Direct Exchange (DX) program for AVUM units be repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level. Inspects, troubleshoots, tests, diagnoses, repairs, adjust, calibrates, and aligns system modules/components. Module/component disassembly and repair will support the DX program and will normally be limited to tasks requiring cleaning and the replacement of seals, fittings and items of common hardware. Unserviceable reparable modules/components and end items which are beyond the capability of AVIM to repair will be evacuated to Depot Maintenance. This level will perform special inspections which exceed AVUM capability. Provides quick response maintenance

support, on-the-job-training, and technical assistance through the use of mobile maintenance contact teams. Maintenance authorized operational readiness float. Provides collections and classification services for serviceable/unserviceable material. Operates a cannibalization activity in accordance with AR 750-50. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting non-divisional AVIM unit).

B-2. Use of the Maintenance Allocation Chart.

a. The MAC assigns maintenance functions to the lowest level of maintenance based on past experience and the following considerations:

(1) Skills available.

(2) Time required.

(3) Tools and test equipment required and/or available.

b. Only the lowest level of maintenance authorized to perform a maintenance function is indicated. If the lowest level of maintenance cannot perform all tasks of any single maintenance function (e.g., test, repair), then the higher maintenance level(s) that can accomplish additional tasks will also be indicated.

c. A maintenance function assigned to a maintenance level will automatically be authorized to be performed at any higher maintenance level.

d. A maintenance function that cannot be performed at, the assigned level of maintenance for any reason may be evacuated to the next higher maintenance organization. Higher maintenance levels will perform the maintenance functions of lower maintenance levels when required or directed by the appropriate commander.

e. The assignment of a maintenance function will not be construed as authorization to carry the associated repair parts in stock. Authority to requisition, stock, or otherwise secure necessary repair parts will be as specified in the repair parts and special tools list appendix.

f. Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, maintenance functions assigned to a maintenance level may, on a one-time basis rind at the request of the lower maintenance level, be specifically authorized by the maintenance officer to the level of maintenance to which the function is assigned. The special tools, equipment, etc. required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of a maintenance function to a lower maintenance level does not relieve the higher maintenance level of the responsibility of the function. The higher level of maintenance has the authority to determine:

(1) If the lower level is capable of performing the work.

(2) If the lower level will require assistance or technical supervision and on-site inspection.

(3) If the authorization will be granted.

g. Organizational through depot maintenance of the US Army Electronics Command equipment will be performed by designated US Army Electronics Command personnel.

h. Changes to the MAC will be based on continuing evaluation and analysis by responsible technical personnel and on reports received from field activities.

B-3. Definitions.

a. Inspect. To determine serviceability of an item by comparing its physical, mechanical and electrical characteristics with established standards.

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. To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents and air.

d. Adjust. To rectify to the extent necessary to bring into proper operating range.

e. Aline. To adjust specified variable elements of an item to bring to optimum performance.

f. Calibrate. To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the comparison 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 or test equipment being compared with the certified standard.

g. lnstall. To set up for use in an operational environment such as an emplacement, site or vehicle.

h. Replace. To replace unserviceable items with serviceable assemblies, subassemblies or parts.

i. Repair. To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This includes, but is not limited to, inspection, cleaning, preserving, adjusting, replacing, welding, riveting, and strengthening.

j. Overhaul. To restore an item to a completely serviceable condition as prescribed by maintenance serviceability standards prepared and published for the specific item to be overhauled.

k. Rebuild. To restore an item to a standard as nearly as possible to the original or new condition in appearance, performance, and life expectancy. This is accomplished through the maintenance technique of complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable elements (items) using original manufacturing tolerances and specifications, and subsequent reassembly of the item.

B-4. Functional Groups. Standard functional groupings are not considered feasible for aviation ground support equipment due to variation and complexity. Therefore, variations to functional groupings may occur.

B-5. **Maintenance Categories and Work Times.** The maintenance categories (levels) AVUM, AVIM, and DEPOT are listed on the Maintenance Allocation Chart with individual columns that indicate the work times for maintenance functions at each maintenance level. Work time presentations such as 0.1 indicate the average time it requires a maintenance level to perform a specified maintenance function. If a work time has not been established, the columnar presentation shall indicate "-•-". Maintenance levels higher than the level of maintenance indicated are authorized to perform the indicated function,

B-6. Tools and Test Equipment (Section III). Common tool sets (not individual tools), special tools, test and support equipment required to perform maintenance functions are listed alphabetically with a reference number to permit cross-referencing to column 5 in the MAC. In addition, the maintenance category authorized to use the device is listed along with the item National Stock Number (NSN) and, if applicable, the tool number to aid in identifying the tool/device.

Section II. MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

FUEL QUANTITY GAGE 'TEST SET P/N 361-010-002

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM (CRC)	DEPOT		
01	Case and Cover	Inspect	.2				A
		Repair		1.0		114	B
		Replace		3.0		109	B
02	Front Panel Assy	Inspect	.2				A
		Repair		2.0		109	B
		Replace		3.0		109	B
03	Input Power Cables	Inspect	.2			105	A
		Repair		1.0			
		Replace	.5			109	B
04	Adapters and Coaxial Cables	Inspect	.2			105	A
		Repair		1.0		109	B
		Replace	.5			109	B
05	Digital and Analog PC Boards	Inspect		.5			
		Repair			2.0		
		Replace		1.0		109	B
06	Simulator PC and Air Cap Boards	Inspect		.5			
		Repair			2.0		
		Replace		1.0		109	B
07	Power Supply PC Board	Inspect		.5			
		Repair			2.0		
		Replace		1.0		109	B

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENT

REF. NO.	MAINT. CAT.	NOMENCLATURE	NSN	TOOL NO.
100	0	TOOL SET, AVUM,SET NO. 1	4920-00-159-8727	SC492099CLA90
101	O	TOOL SET, AVUM, SET NO. 2	4920-00-567-0476	SC492099CLA92
102	O	TOOL KIT,ACFT MECH GEN	5180-00-323-4692	SC518099CLA01
103	O	TOOL KIT, ARFRM RPMN	5180-00-323-4876	SC518099CLA02
104	O	TOOL KIT, HYD RPMN	5180-00-323-4891	SC518099CLA03
105	O	TOOL KIT, INSTR RPMN	5180-00-323-4913	SC518099CLA05
106	O	TOOL KIT, ELEC RPMN	5180-00-323-4915	SC518099CLA06
107	O	TOOL KIT, ENG RPMN	5180-00-323-4944	SC518099CLA07
108	O	TOOL KIT, PWR TRN	5180-00-003-5267	SC518099CLA13
109	F	SHOP SET, AVIM, ELEC-INSTR	4920-00-165-1453	SC492099CLA91ELAM
110	F	SHOP SET, AVIM, HYD	4920-00-165-1454	SC492099CLA91HYAM
111	F	SHOP SET, AVIM, MACHINE SHOP	4920-00-405-9279	SC492099CLA91MAAM
112	F	SHOP SET, AVIM, PWR TRN	4920-00-001-4132	SC492099CLA91PTAM
113	AVIM	SHOP SET, AVIM, RTR SHOP	4920-00-405-9270	SC492099CLA91ROAM
114	AVIM	SHOP SET, AVIM, SHEET METAL	4920-00-166-5505	SC492099CLA91SMAM
115	AVIM	SHOP SET, AVIM, TOOL CRIB	4920-00-472-4183	SC492099CLA91TCAM
116	AVIM	SHOP SET, AVIM, TURBINE ENGINE	4920-00-224-3684	492099CLA91ENTAM
117	AVIM	SHOP SET, AVIM, WELDING	4920-00-163-5093	492099CLA91WEAM

REMARKS
FUEL QUANTITY GAGE TEST SET

CODE	REMARKS
A	EXTERNAL ONLY
B	USE AVAILABLE EQUIPMENT FROM SHOP SET
C	OPERATIONAL TEST ON UNIT

APPENDIX C

REPAIR PARTS AND SPECIAL TOOLS LIST

SECTION I. INTRODUCTION

C-1. Scope. This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of Aviation Unit and Aviation Intermediate maintenance of the Test Set, Fuel Quantity Gage. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

C-2. General. In addition to Section I. Introduction, this Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name sequence. Repair parts kits are listed separately in their own functional group within Section II. Repair parts for repairable special tools are also listed in this section. Items listed are shown on the associated illustration(s) figure(s).

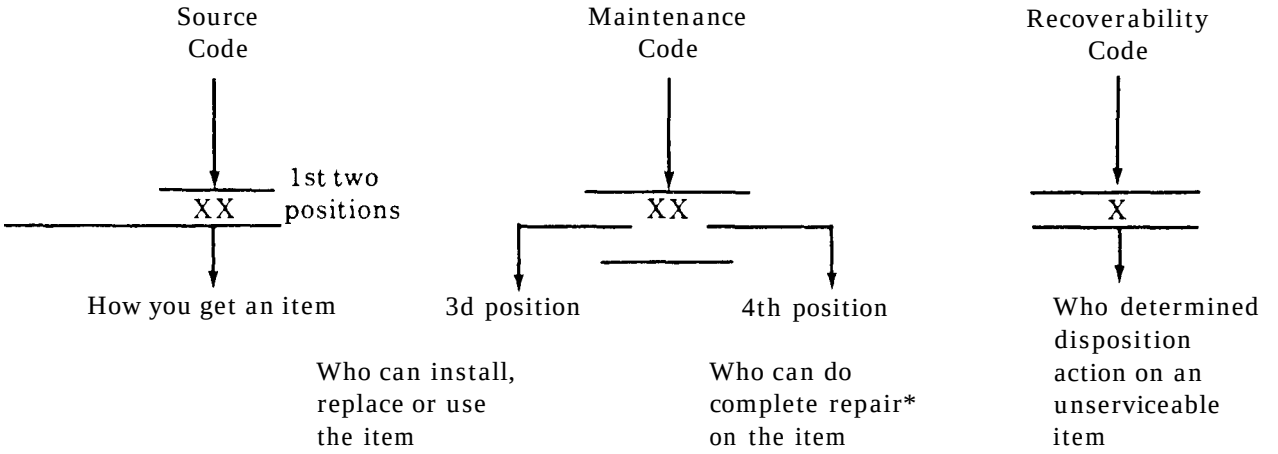
b. Section III. Special Tools List. A list of special tools, special TM DE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance. (Not applicable)

c. Section IV. National Stock Number and Part Number Index. A list. in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

C-3. Explanation of Columns (Sections II and III).

a. Item No. (Column (1)). Indicates the number used to identify items called out in the illustration.

b. SMR Code (Column (2)). The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply requisitioning information. maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use user environment in order to restore serviceability to a failed item.

(1) Source Code. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item equipment. Explanations of source codes follows:

Code	Explanation
PA PB PC** PD PE PF PG	Stocked items; use the applicable NSN to request requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3d position of the SMR code. **NOTE: Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.

Code	Explanation
MO- (Made at org AVUM Level) MF- (Made at DS AVUM Level) MH- (Made at GS Level) ML- (Made at Specialized Repair Act (SRA)) MD- (Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

Code	Explanation
AO- (Assembled by org/AVUM Level) **AF- (Assembled by DS/AVIM Level)** **AH- (Assembled by GS Category)** **AL- (Assembled by SRA)** **AD- (Assembled by Depot)**	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.

XA- Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)
XB- If an "XB" item is not available from salvage, order it using the FSCM and part number given.
XC- Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD- Item is not stocked. Order an "XD"-coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE: Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 700-42.

(2) Maintenance Code. Maintenance codes tells you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance.

Code	Application/Explanation
C	-Crew or operator maintenance done within organizational or aviation unit maintenance.
O	-Organizational or aviation unit category can remove, replace, and use the item.
F	-Direct support or aviation intermediate level can remove, replace, and use the item.
H	-General support level can remove, replace, and use the item.
L	-Specialized repair activity can remove, replace, and use the item.
D	-Depot level can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions.) (NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.) This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	-Organizational or (aviation unit) is the lowest level that can do complete repair of the item.
F	-Direct support or aviation intermediate is the lowest level that can do complete repair of the item.
H	-General support is the lowest level that can do complete repair of the item.
L	-Specialized repair activity (designate the specialized repair activity) is the lowest level that can do complete repair of the item.
D	-Depot is the lowest level that can do complete repair of the item.
Z	-Nonreparable. No repair is authorized.
B	-No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item). However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability Codes	Application/Explanation
Z	-Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of SMR Code.
O	-Reparable item. When uneconomically reparable, condemn and dispose of the item at organizational or aviation unit level.
F	-Reparable item. When uneconomically reparable, condemn and dispose of the item at the direct support or aviation intermediate level.
H	-Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support level.
D	-Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
L	-Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).
A	-Item requires special handling or condemnation procedures because of specific reasons (e. g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals directives for specific instructions.

c. FSCM (Column (3)). The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. Part Number (Column (4)). Indicates the primary number used by the manufacturer (individual company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specification standards, and inspection requirements to identify an item or range of items.

NOTE: When you use a NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. Description and Usable On Code (UOC) (Column (5)). This column includes the following informs tion:

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) The physical security classification of the item is indicated by the parenthetical entry (insert applicable physical security classification abbreviation, e.g., Phy Sec C1 (C) - Confidential, Phy Sec C1 (S)- Secret, Phy Sec C1 (T) - Top Secret).

(3) Items that are included in kits and sets are listed below the name of the kit or set.

(4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.

(5) Part numbers for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.

(6) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC).

(7) The usable on code, when applicable (see pararaph C-5, Special information).

(8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment: When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.

(9) The statement "END OF FIGURE" appears just below the last item description in Column 5 for a given figure in both Section II and Section III.

f. QTY (Column (6)). The QTY (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

***C-4.* Explanation of Columns (Sect. IV).**

a. National Stock Number (NSN) Index.

(1) Stock Number Column. This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN (i.e., 5305-01-674-1467). When using this column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

NSN
NIIN

(2) Fig. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section III.

(3) Item Column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. Part Number Index. Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

(1) FSCM Column. The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) Part Number Column. Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), 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.

(3) Stock Number Column. This column lists the NSN for the associated part number and manufacturer identified in the Part Number and FSCM Columns to the left.

(4) FIG. Column. This column lists the number of the figure where the item is identified/located in Section II and III.

(5) Item Column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

C-5. Special Information. Use the following subparagraphs as applicable:

a. Usable On Code. The usable on code appears in the lower left corner of the Description column heading. Usable on codes are shown as "UOC: . . ." in the Description Column (justified left) on the first line applicable item description/nomenclature. Uncoded items are applicable to all models.

b. Index Numbers. Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the National Stock Number/Part Number Index and the bulk material list in Section II.

c. Associated Publications. Not Applicable.

C-6. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Not Known.

(1) First. Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) Second. Find the figure covering the assembly group or subassembly group to which the item belongs.

(3) Third. Identify the item on the figure and note the item number.

(4) Fourth. Refer to the Repair Parts List for the figure to find the part number for the item number noted on the figure.

(5) Fifth. Refer to the Part Number Index to find the NSN, if assigned.

b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN) sequence (see C-4.a(1)). The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see C-4.b.). Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

(2) Second. After finding the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

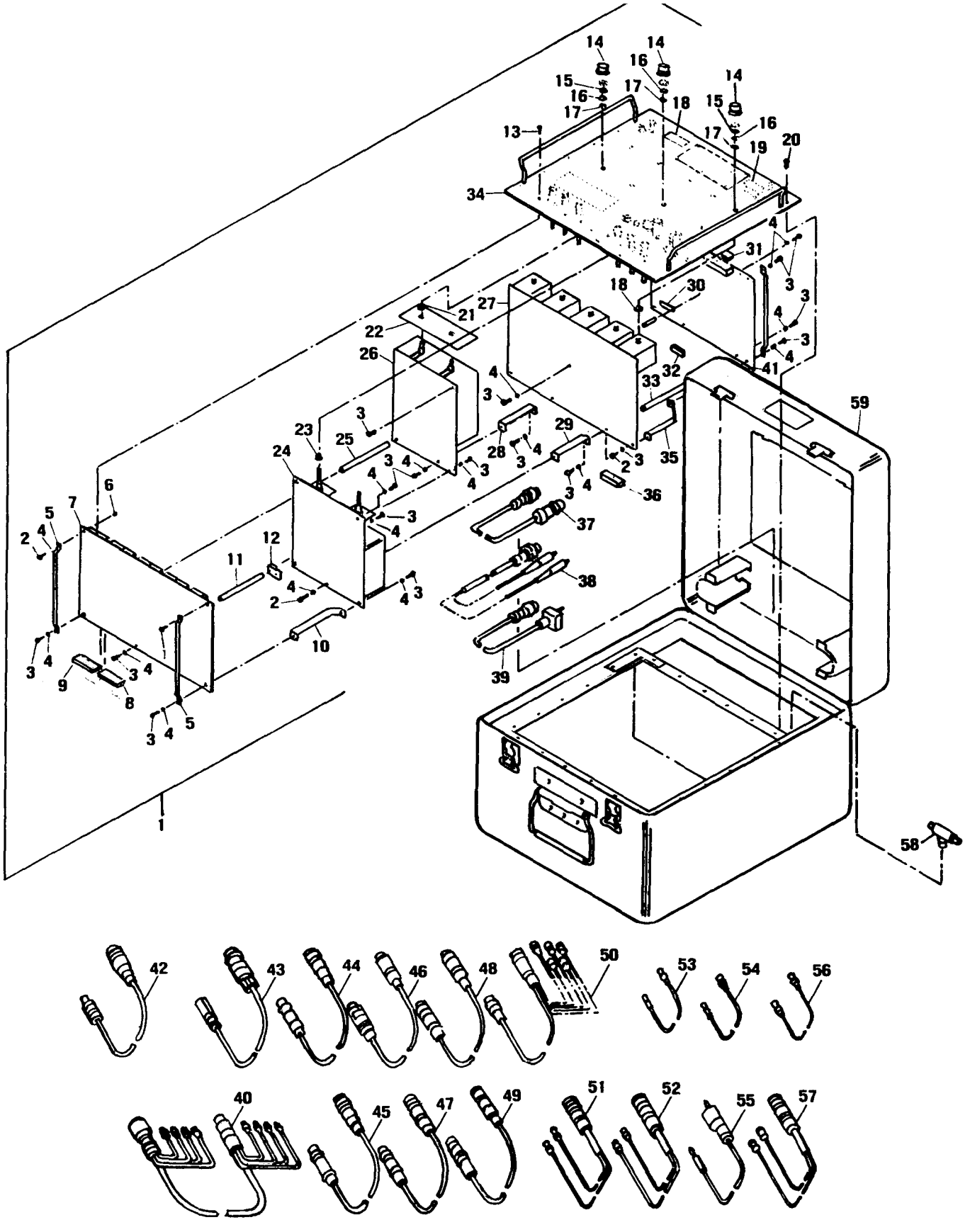


Figure 1.Test Set, part number 361-010-002-exploded view

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 01. CASE AND COVER	
				FIGURE 1. TEST SET, PART NUMBER 361-010-002 - EXPLODED VIEW	
1	XDFFF	26055	477-195-001	INST & PANEL ASSY	1
2	XDFZZ	96906	MS21097-04001	SCREW	2
3	XDFZZ	96906	MS21295-13	SCREW,SELF-LOCKING	26
4	XDFZZ	96906	MS15795-803	WASHER,FLAT	26
5	XDFZZ	26055	610-331-001	BRACKET PROTECTIVE	4
6	XDFZZ	96906	MS35649-224	NUT,PLAIN,HEXAGON	2
7	PBFDD	26055	546-381-001	CIRCUIT CARD ASSEMB A5 SEE FIG. 21 FOR BREAKDOWN	1
8	PBFZZ	26055	467-087-001	CABLE ASSEMBLY	1
9	PBFZZ	51167	16-009.8-103	CABLE ASSEMBLY,SPEC	1
10	XDFZZ	26055	610-332-001	BRACKET PWR SUPPLY	1
11	XDFZZ	26055	712-211-002	POST	1
12	XDFZZ	26055	708-559-001	PLATE INTERBOARD	1
13	XDFZZ	26055	722-031-106	SCREW	5
14	PBOZZ	99813	81C4GA	KNOB	9
15	XDFZZ	26055	758-064-001	WASHER INSULATED	7
16	XDFZZ	26055	759-006-059	WASHER	9
17	XDFZZ	88044	AN6227B-7	O RING	9
18	XDFZZ	26055	696-205-001	NAMEPLATE STANDARD	1
19	XDFZZ	26055	696-205-002	NAMEPLATE STANDARDS	1
20	XDFZZ	96906	MS21097-04003	SCREW,SELF-LOCKING	24
21	XDFZZ	26055	680-093-001	WASHER SHOULDER	7
22	XDFZZ	26055	680-094-001	INSULATOR	1
23	XDFZZ	26055	604-026-001	BUSHING AIR CAP	2
24	XDFDD	26055	508-394-001	BOARD ASSEMBLY,AIR SEE FIG. 20 FOR BREAKDOWN	1
25	XDFZZ	26055	712-211-003	POST	1
26	PBFDD	26055	546-380-001	ELECTRONIC COMPONEN A3 SEE FIG.19 FOR BREAKDOWN	1
27	PBFDD	26055	546-378-001	CIRCUIT CARD ASSEMB A2 SEE FIG.18 FOR BREAKDOWN	1
28	XDFZZ	26055	610-316-001	BRACKET	1
29	XDFZZ	26055	610-316-002	BRACKET	1
30	XDFZZ	26055	712-203-004	POST CENTER	1
31	PBFZZ	26055	872-008-001	INDICATOR,DIGITAL D	6
32	XDDZZ	26055	850-027-002	INTEG CIRCUIT	1
33	XDFZZ	26055	712-211-001	POST	2
34	XDFFF	26055	504-013-001	PANEL ASSY SEE FIG. 2 FOR BREAKDOWN	1
35	XDFZZ	26055	610-314-001	BRACKET	2
36	PBFZZ	51167	16-004-103	CABLE ASSEMBLY,SPEC	1
37	PBOFZ	26055	467-100-001	CABLE ASSEMBLY,POWE SEE FIG. 3 FOR BREAKDOWN	1
38	PBOFF	26055	467-101-001	CABLE ASSEMBLY,POWE SEE FIG. 4 FOR BREAKDOWN	1
39	PBOFZ	26055	467-102-001	CABLE ASSEMBLY,POWE SEE FIG. 5 FOR BREAKDOWN	1
40	PBOFZ	26055	467-103-001	CABLE ASSEMBLY,SPEC SEE FIG. 6 FOR	1

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				BREAKDOWN	
41	PBFDD	26055	546-379-001	CIRCUIT CARD ASSEMB A1 SEE FIG. 17 FOR BREAKDOWN	1
42	PBOFZ	26055	467-104-001	CABLE ASSEMBLY,SPEC SEE FIG. 7 FOR BREAKDOWN	1
43	PBOFZ	26055	467-105-001	CABLE ASSEMBLY,SPEC SEE FIG. 8 FOR BREAKDOWN	1
44	PBOFZ	26055	467-106-001	CABLE ASSEMBLY,SPEC SEE FIG. 9 FOR BREAKDOWN	1
45	PBOFZ	26055	467-107-001	CABLE ASSEMBLY,SPEC SEE FIG. 9 FOR BREAKDOWN	1
46	PBOFZ	26055	467-108-001	CABLE ASSEMBLY,SPEC SEE FIG. 9 FOR BREAKDOWN	1
47	PBOFZ	26055	467-109-001	CABLE ASSEMBLY,SPEC SEE FIG. 9 FOR BREAKDOWN	1
48	PBOFZ	26055	467-110-001	CABLE ASSEMBLY,SPEC SEE FIG. 9 FOR BREAKDOWN	1
49	PBOFZ	26055	467-111-001	CABLE ASSEMBLY,SPEC SEE FIG. 9 FOR BREAKDOWN	1
50	PBOFZ	26055	467-113-001	CABLE ASSEMBLY,SPEC SEE FIG. 10 FOR BREAKDOWN	1
51	PBOFF	26055	467-115-001	ADAPTER,RADIO FREQU SEE FIG. 11 FOR BREAKDOWN	1
52	PBOFF	26055	467-116-001	ADAPTER,RADIO FREQU SEE FIG. 12 FOR BREAKDOWN	1
53	PBOFZ	26055	467-117-001	CABLE ASSEMBLY,RADI SEE FIG. 13 FOR BREAKDOWN	2
54	PBOFZ	26055	467-118-001	CABLE ASSEMBLY,RADI SEE FIG. 13 FOR BREAKDOWN	2
55	PBOFZ	26055	467-114-001	LEAD,TEST SEE FIG. 14 FOR BREAKDOWN	3
56	PBOFZ	26055	467-119-001	CABLE ASSEMBLY,RADI SEE FIG. 15 FOR BREAKDOWN	1
57	PBOFF	26055	467-120-001	ADAPTER,RADIO FREQU SEE FIG. 11 FOR BREAKDOWN	1
58	PBOZZ	24931	28AT101-3	ADAPTER,CONNECTOR	1
59	XDFZZ	26055	620-013-001	CASE COMBINATION	1
				END OF FIGURE	

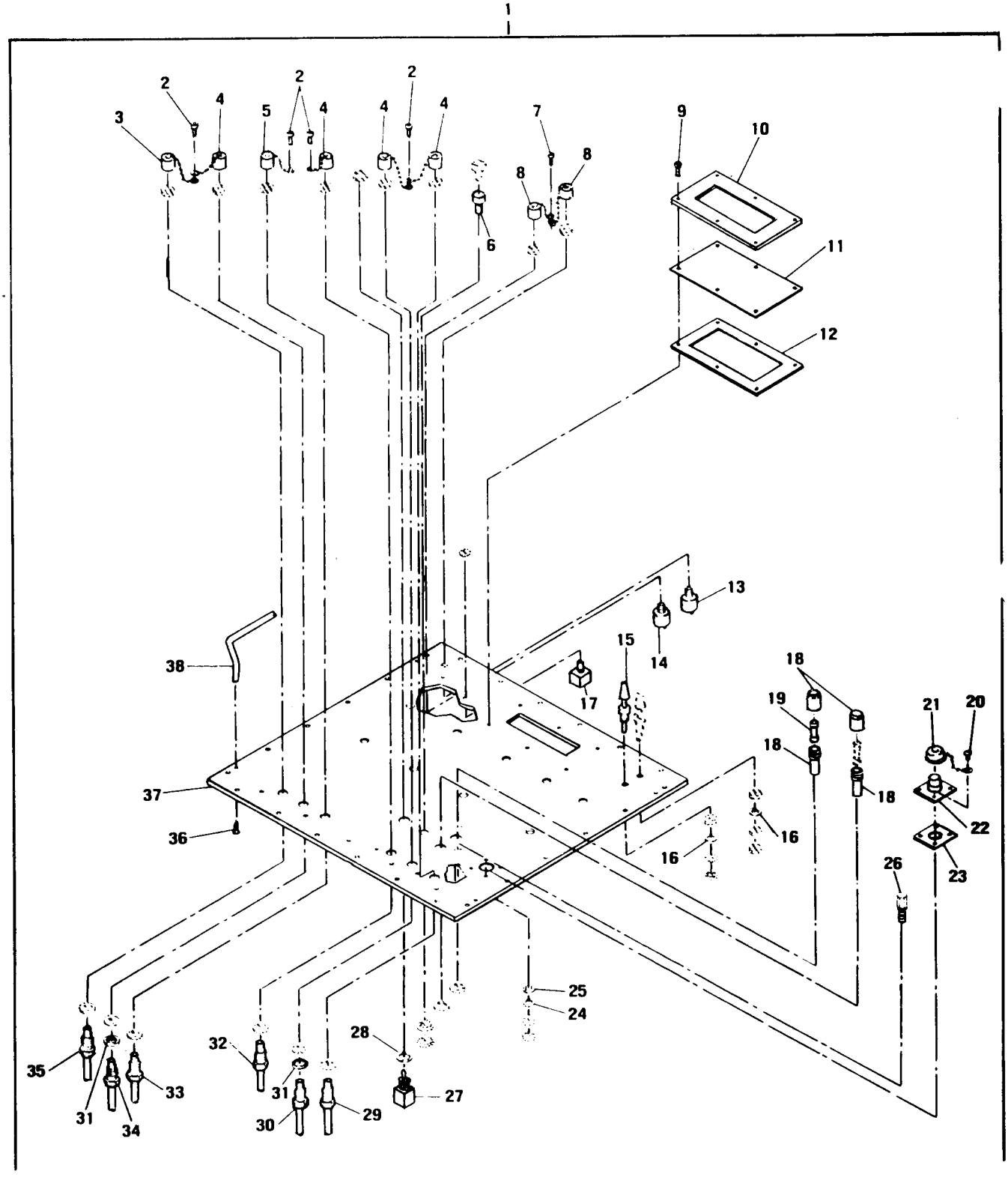


Figure 2. Panel assembly, part number 504-013-001-exploded view.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 02. FRONT PANEL ASSEMBLY	
				FIGURE 2. PANEL ASSEMBLY, PART NUMBER 507-013-001 - EXPLODED VIEW	
1	XDFFF	26055	504-013-001	PANEL ASSY SEE FIG. 1 FOR NHA	1
2	PBOZZ	96906	MS21097-04003	.SCREW,SELF-LOCKING	4
3	PBOZZ	26055	618-055-001	.COVER,ELECTRICAL CO	1
4	PBOZZ	24931	28PC106-1	.COVER,ELECTRICAL CO	4
5	PBOZZ	24931	28PC108-1	.COVER,ELECTRICAL CO	1
6	PBFZZ	72619	181-8836-0931-553	.LIGHT,INDICATOR	1
7	PBOZZ	96906	MS51957-13	.SCREW,MACHINE	1
8	PBOZZ	24931	33PC101-1	.COVER,ELECTRICAL CO	2
9	PBOZZ	96906	MS21097-04003	.SCREW,SELF-LOCKING	6
10	XDOZZ	26055	716-098-001	.BEZEL,INSTRUMENT MO	1
11	PBOZZ	26055	760-026-001	.COVER GLASS,DISPLAY	1
12	PBOZZ	26055	658-035-001	.GASKET	1
13	PBFZZ	26055	855-027-002	.RESISTOR,VARIABLE,W	1
14	PBFZZ	26055	855-027-003	.RESISTOR,VARIABLE,W	1
15	XDFZZ	26055	712-213-001	.POST BINDING	2
16	XDFZZ	26055	658-026-001	.GASKET	2
17	PBFZZ	81073	46150BLK	.SWITCH,PUSH	1
18	PBFZZ	81349	FHN26G1	.FUSEHOLDER,EXTRAC TO	1
19	PAOZZ	81349	F02B250V3/4A	.FUSE,CARTRIDGE	2
20	PBOZZ	96906	MS21097-04003	.SCREW,SELF-LOCKING	4
21	PBOZZ	26055	790-232-001	.COVER,ELECTRICAL CO	1
22	PBFZZ	96906	MS3102R10SL-3P	.CONNECTOR,RECEPTACL	1
23	PBFZZ	26055	658-025-001	.GASKET	1
24	PBFZZ	88044	AN960-8L	.WASHER,FLAT	1
25	XDFZZ	96906	MS9068-006	.O RING	1
26	XDFZZ	26055	712-212-001	.BINDING POST GND	1
27	PBFZZ	96906	MS24523-22	.SWITCH, TOGGLE	1
28	PBFZZ	96906	MS25196-1	.PACKING WITH RETAIN	1
29	PBFFZ	26055	467-099-001	.CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 16 FOR BREAKDOWN	1
30	PBFFZ	26055	467-095-001	..CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 16 FOR BREAKDOWN	1
31	XDFZZ	26055	658-037-001	.GASKET	2
32	PBFFZ	26055	467-098-001	.CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 16 FOR BREAKDOWN	1
33	PBFFZ	26055	467-097-001	.CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 16 FOR BREAKDOWN	1
34	PBFFZ	26055	467-094-001	.CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 16 FOR BREAKDOWN	1
35	PBFFZ	26055	467-096-001	.CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 16 FOR BREAKDOWN	1
36	XDFZZ	96906	MS24694-249	.SCREW,MACHINE	4
37	XDFFF	26055	504-212-002	.PANEL SUB-ASSY	1
38	XDFZZ	26055	668-006-001	HANDLE	2
				END OF FIGURE	

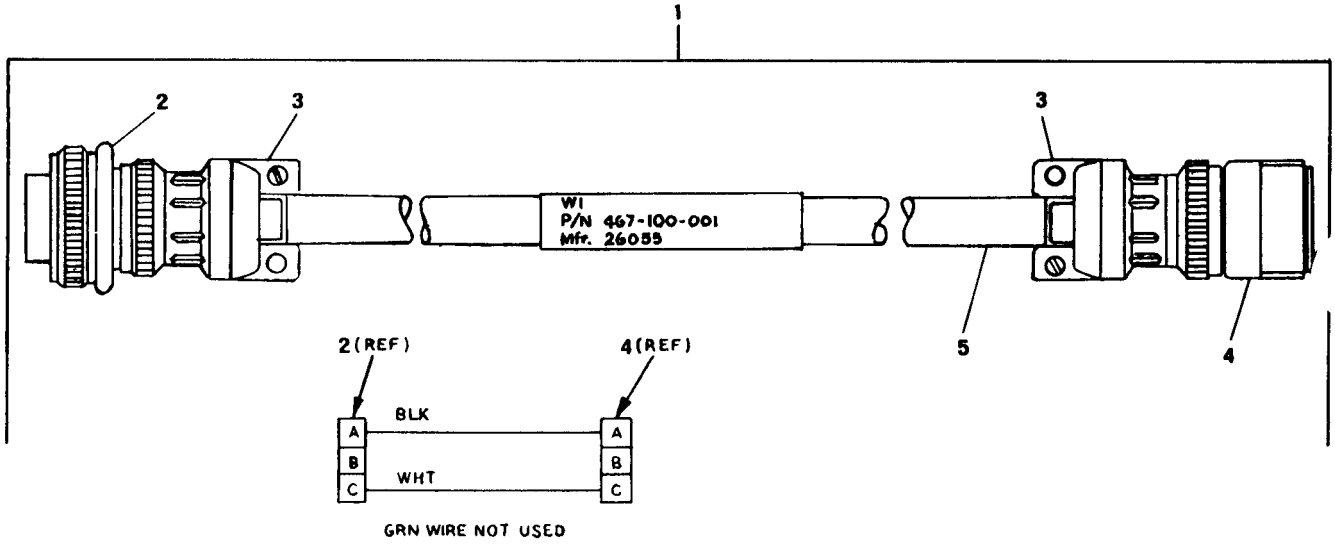


Figure 3. Input power cable assembly W1, part number 467-100-001

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 03. INPUT POWER .CABLES	
				FIGURE 3. INPUT POWER .CABLE ASSEMBLY W1, PART NUMBER 467-100-001	
1	PBOFZ	26055	467-100-001	CABLE ASSEMBLY,POWS SEE FIG. 1 FOR NHA	1
2	XDFZZ	96906	MS3106A-10SL-3S	.CONNECTOR	1
3	XDFZZ	96906	MS3057-4A	.CLAMP,.CABLE,ELECTRI	2
4	XDFZZ	96906	MS3101A-10SL-3P	.CONNECTOR	1
5	XDFZZ	81349	C0-03MGF(3/18)03	.CABLE 21 FT LG	1
				END OF FIGURE	

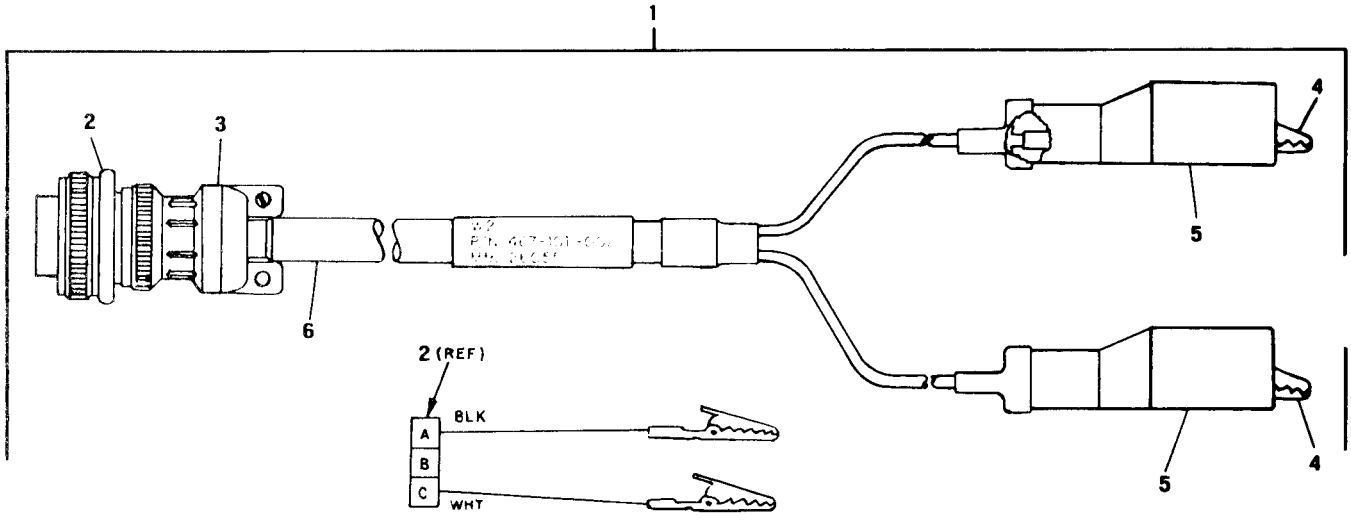


Figure 4. Input power cable assembly W2, part number 467-101-001

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 4. INPUT POWER CABLE ASSEMBLY W2, PART NUMBER 467-101-001	
1	PBOFF	26055	467-101-001	CABLE ASSEMBLY,POWE SEE FIG. 1 FOR NHA	1
2	XDFZZ	96906	MS3106A-10SL-3S	.CONNECTOR	1
3	XDFZZ	96906	MS3057-4A	.CLAMP,CABLE,ELECTRI	1
4	XDFZZ	26055	626-093-001	.CLIP ALLIGATOR	2
5	XDFZZ	26055	680-080-001	.BOOT	2
6	XDFZZ	81349	C0-03MGF(3/18)03	.CABLE 14 IN. LG	1
				END OF FIGURE	

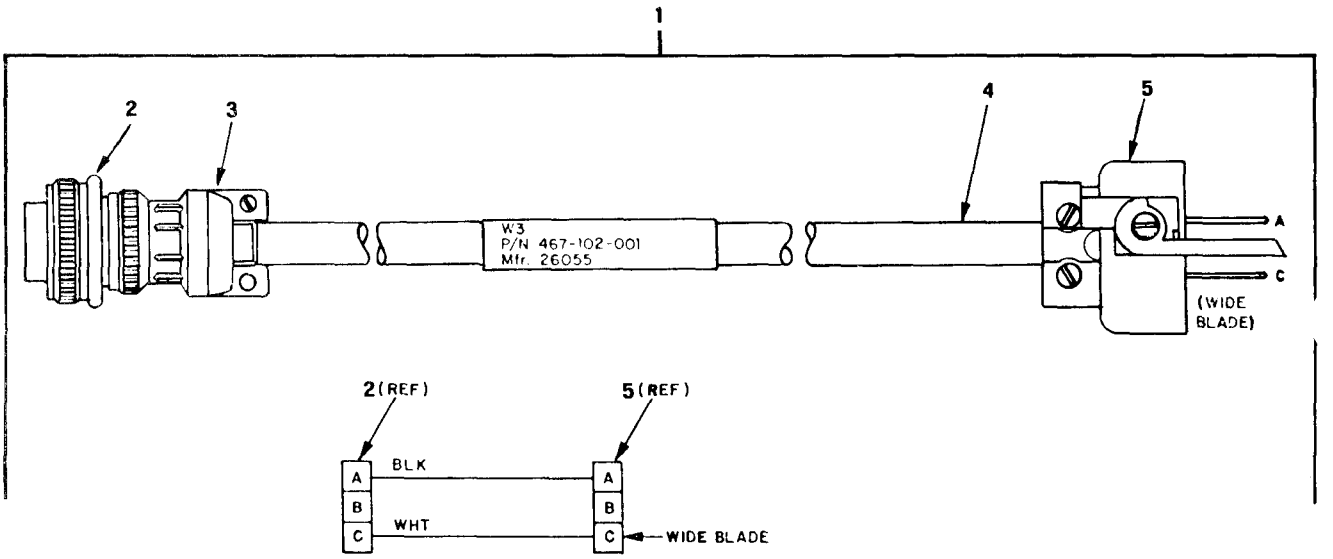


Figure 5. Input power cable assembly W3, part number 467-102-001

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 5. INPUT POWER CABLE ASSEMBLY W3, PART NUMBER 467-102-001	
1	PBOFZ	26055	467-102-001	CABLE ASSEMBLY,POWE SEE FIG. 1 FOR NHA	1
2	XDFZZ	96906	MS3106A-10SL-3S	.CONNECTOR	1
3	XDFZZ	96906	MS3057-4A	.CLAMP,CABLE,ELECTRI	1
4	XDFZZ	81349	C0-03MGF(3/18)03	.CABLE 14 IN. LG	1
5	XDFZZ	81349	MIL-C-3767/12C	.PLUG	1
				END OF FIGURE	

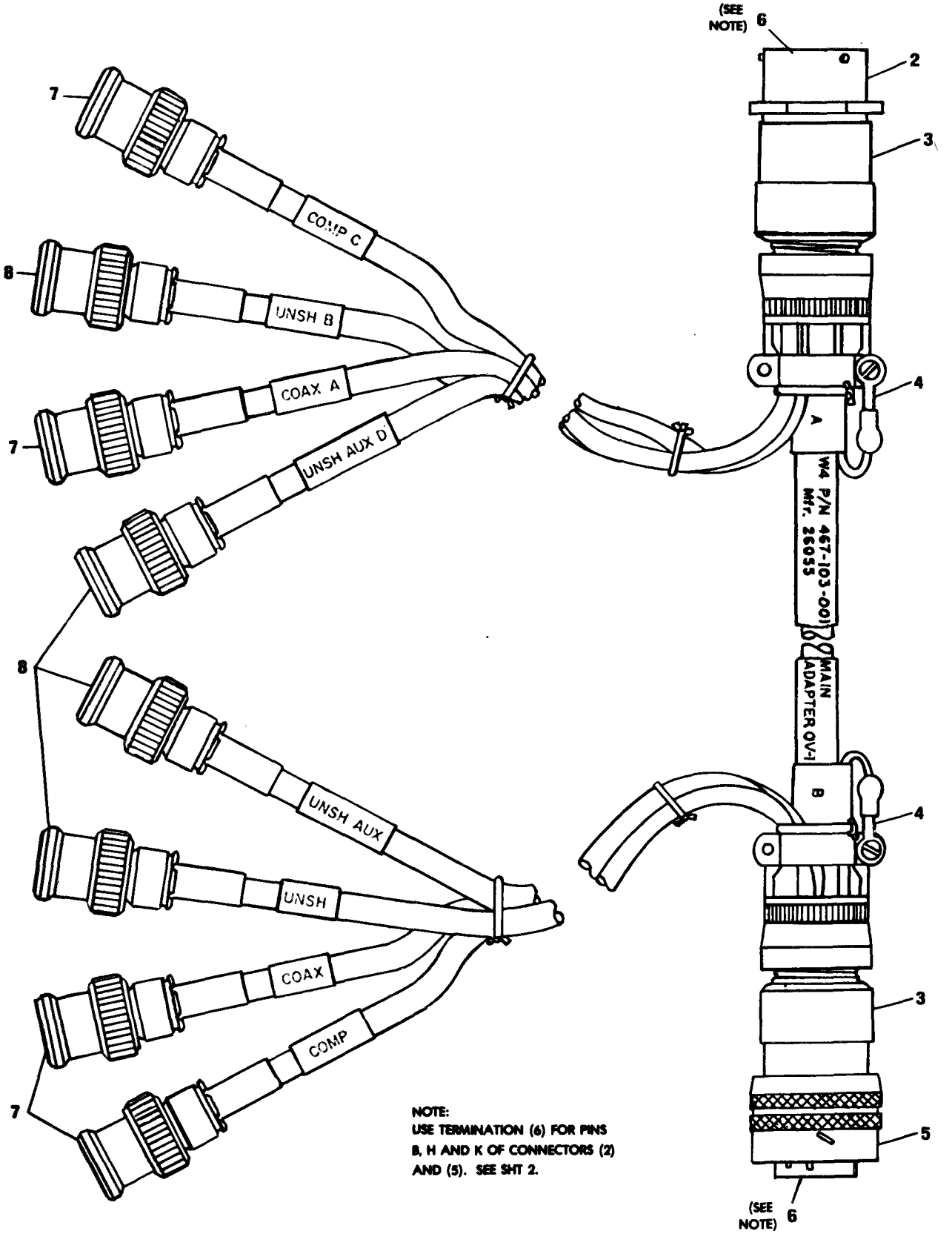


Figure 6. Main adapter cable assembly W4, part number 467-103-001 (sheet 1 of 2)

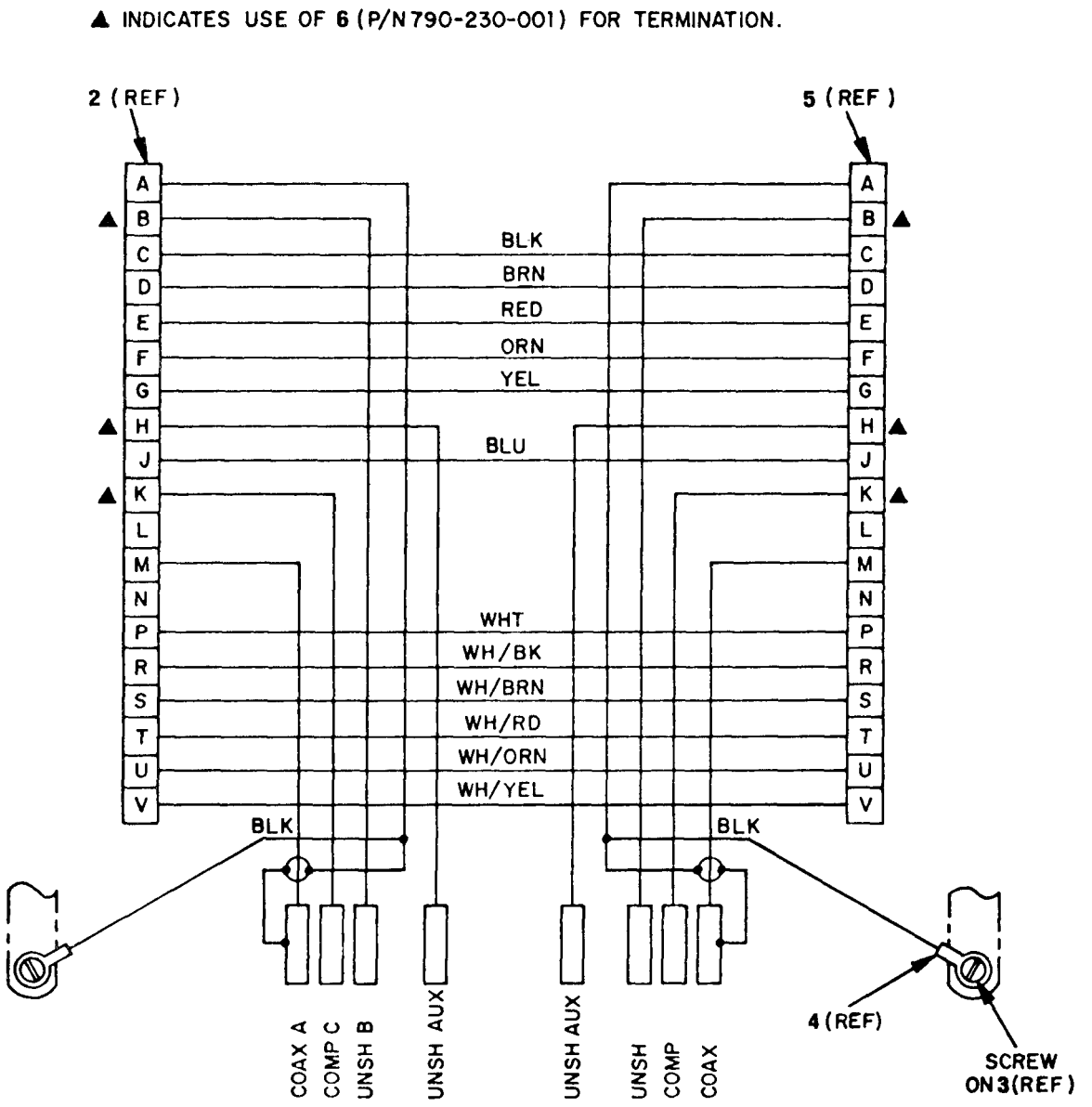


Figure 6. Main adapter cable assembly W4, part number 467-103-001 (sheet 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 04. ADAPTERS AND COAXIAL CABLES	
				FIGURE 6. MAIN ADAPTER CABLE ASSEMBLY W4, PART NUMBER 467-103-001	
1	PBOFZ	26055	467-103-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
2	XDFZZ	26055	629-229-003	.CONNECTOR	1
3	XDFZZ	26055	736-159-002	.ADAPTER	2
4	XDFZZ	26055	742-041-001	.LUG	2
5	XDFZZ	26055	629-228-003	.CONNECTOR	1
6	XDFZZ	26055	790-230-001	.SPLICE	6
7	XDFZZ	26055	629-222-001	.CONNECTOR BNC	4
8	XDFZZ	26055	629-223-001	.CONNECTOR BNC	4
				END OF FIGURE	

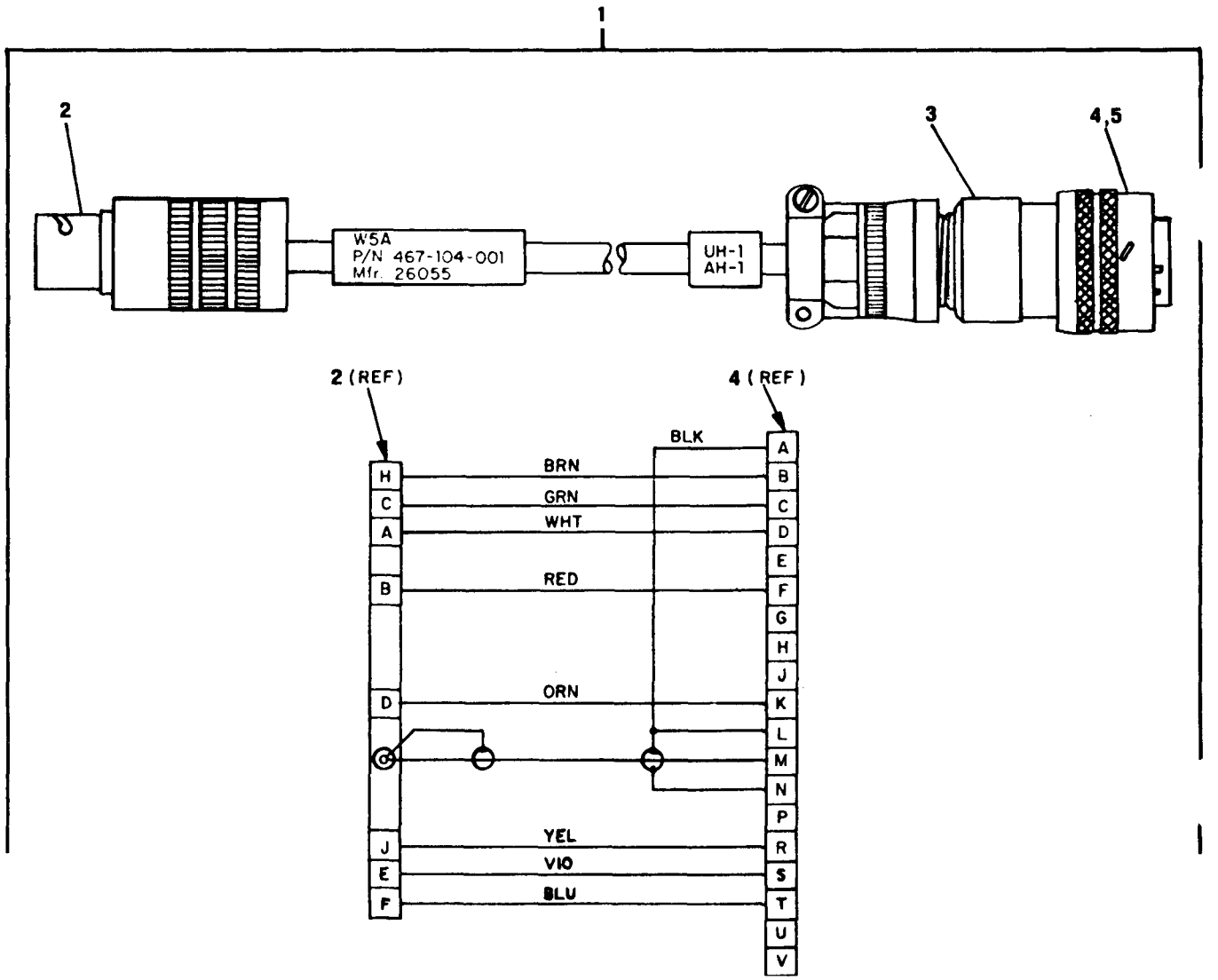


Figure 7. Adapter cable assembly W5A, part number 467-104-001

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 7. ADAPTER CABLE ASSEMBLY W5A, PART NUMBER 467-104-001	
1	PBOFZ	26055	467-104-001	CABLE ASSEMBLY,SPEC SEE FIG. FOR NHA	1
2	XDFZZ	26055	629-231-001	.CONNECTOR	1
3	XDFZZ	26055	736-159-001	.ADAPTER	1
4	XDFZZ	26055	629-228-003	.CONNECTOR	1
5	XDFZZ	26055	790-230-001	.SPLICE	1
				END OF FIGURE	

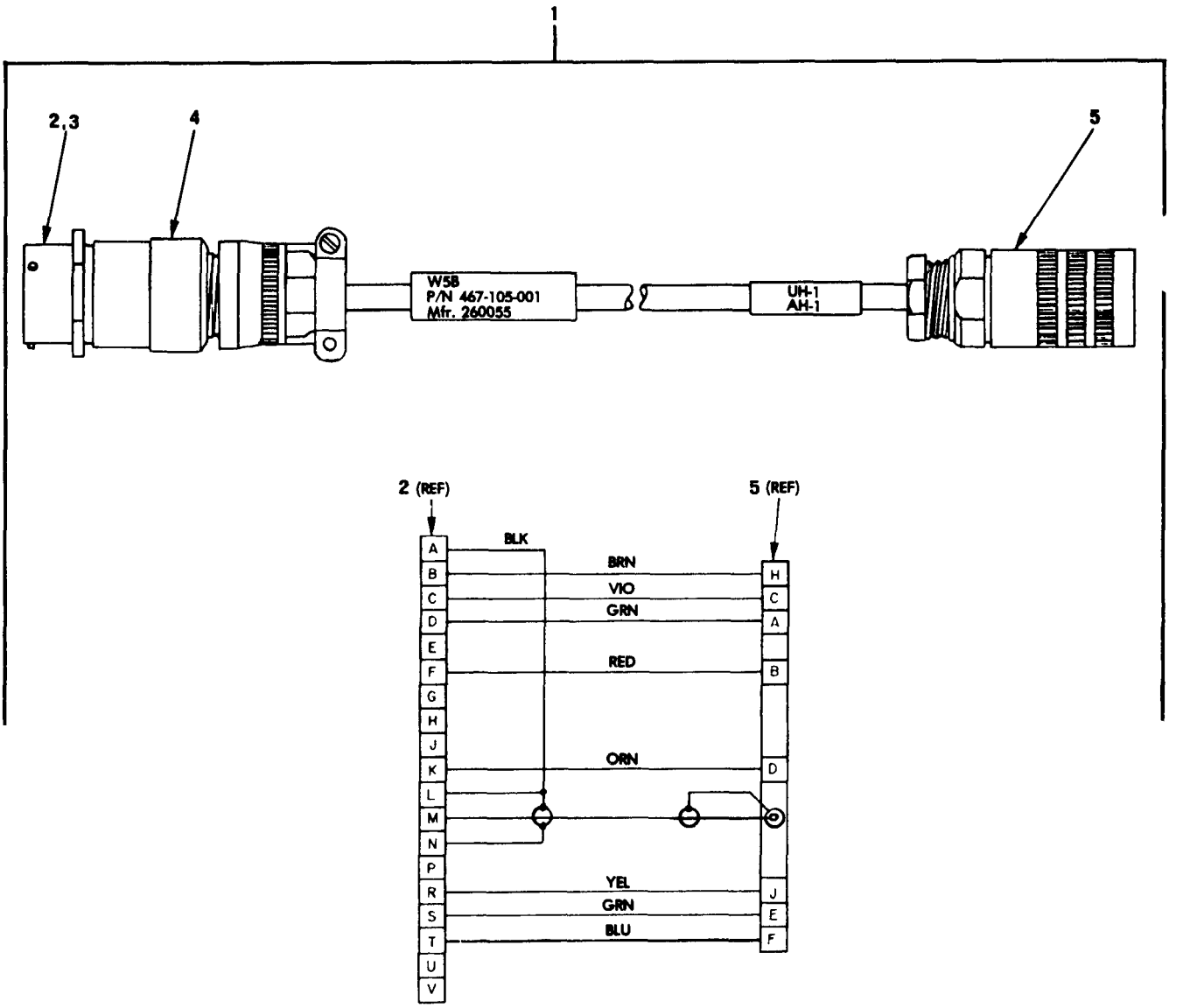


Figure 8. Adapter cable assembly W5B, part number 467-105-001

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 8. ADAPTER CABLE ASSEMBLY W5B, PART NUMBER 467-105-001	
1	PBOFZ	26055	467-105-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
2	XDFZZ	26055	629-229-003	.CONNECTOR	1
3	XDFZZ	26055	790-230-001	.SPLICE	1
4	XDFZZ	26055	736-159-001	.ADAPTER	1
5	XDFZZ	26055	629-230-001	.CONNECTOR	1
				END OF FIGURE	

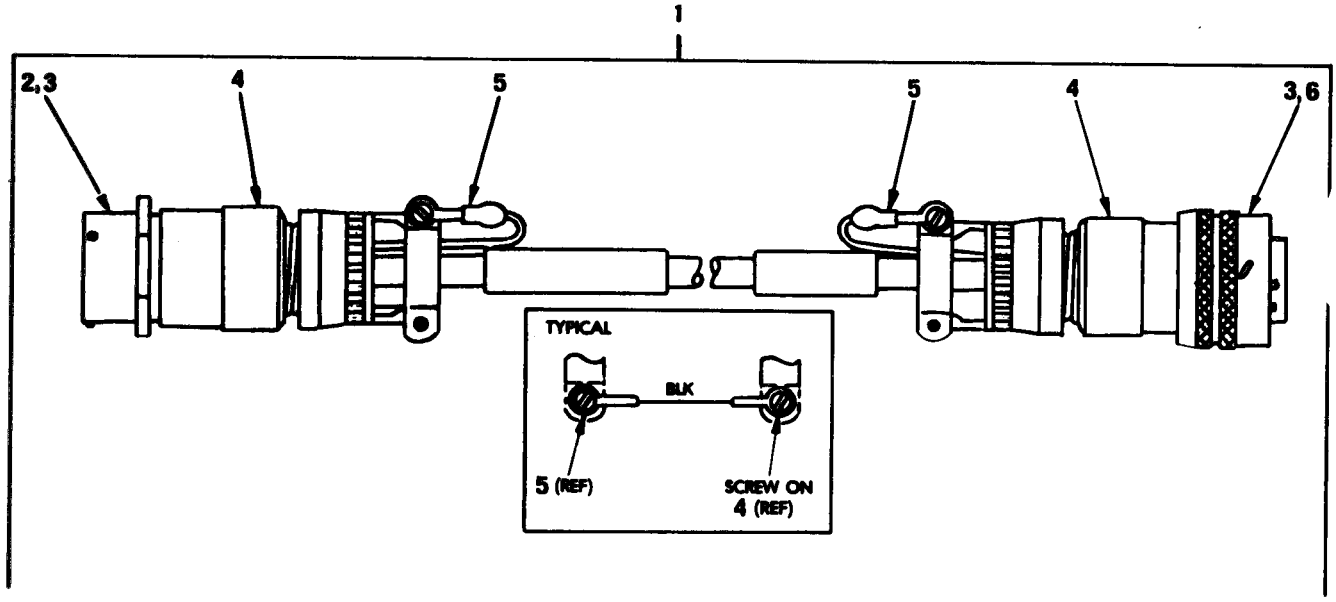


Figure 9. Adapter cable assembly, W6A (467-106-001) W6B (467-107-001) W7A (467-108-001) W7B (467-109-001) W8A (467-110-001) and W8B (467-111-001) (sheet 1 of 2)

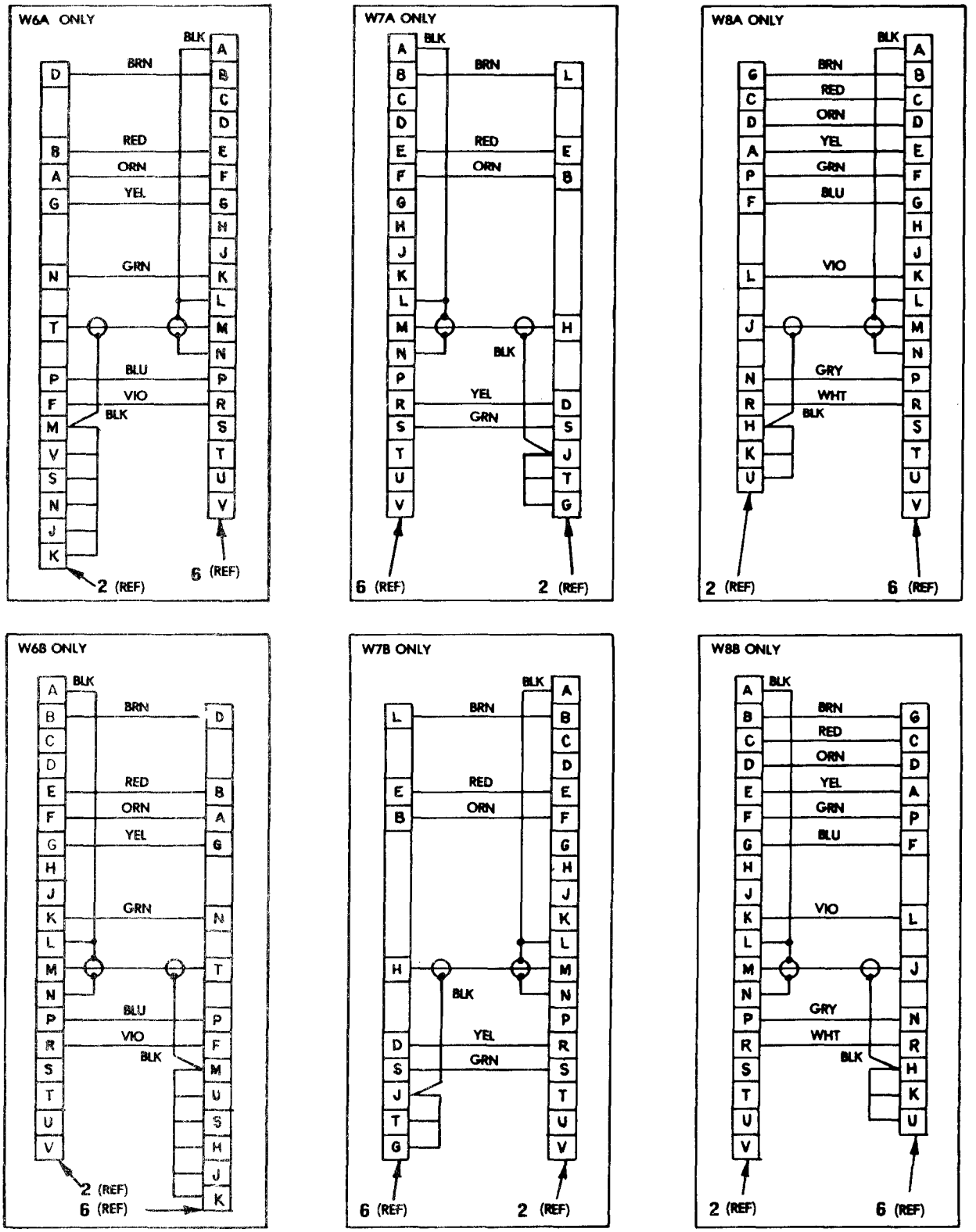


Figure 9. Adapter cable assembly, W6A (467-106-001) W6B (467-107-001) W7A (467-108-001) W7B (467-109-001) W8A (467-110-001) and W8B (467-1 11-001) (sheet 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 9. ADAPTER CABLE ASSEMBLY, W6A (467-106-001), W6B (467-107-001) ,W7A (467-108-001), W7B (467-109-00 1), W8A (467-110-001) AND W8B (467-111-001)	
1	PBOFZ	26055	467-106-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
1	PBOFZ	26055	467-107-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
1	PBOFZ	26055	467-108-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
1	PBOFZ	26055	467-109-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
1	PBOFZ	26055	467-110-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
1	PBOFZ	26055	467-111-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
2	XDFZZ	26055	629-229-002	.CONNECTOR U/O 467-106-001	
3	XDFZZ	26055	790-230-001	.SPLICE	2
4	XDFZZ	26055	736-159-001	.ADAPTER	2
5	XDFZZ	26055	742-041-001	.LUG	2
6	XDFZZ	26055	629-228-003	.CONNECTOR U/U 467-106-001,467-108-001,467-109-001,467-110-001 & 467-111-001	1
6	XDFZZ	26055	629-228-002	.CONNECTOR U/O 467-107-001	1
				END OF FIGURE	

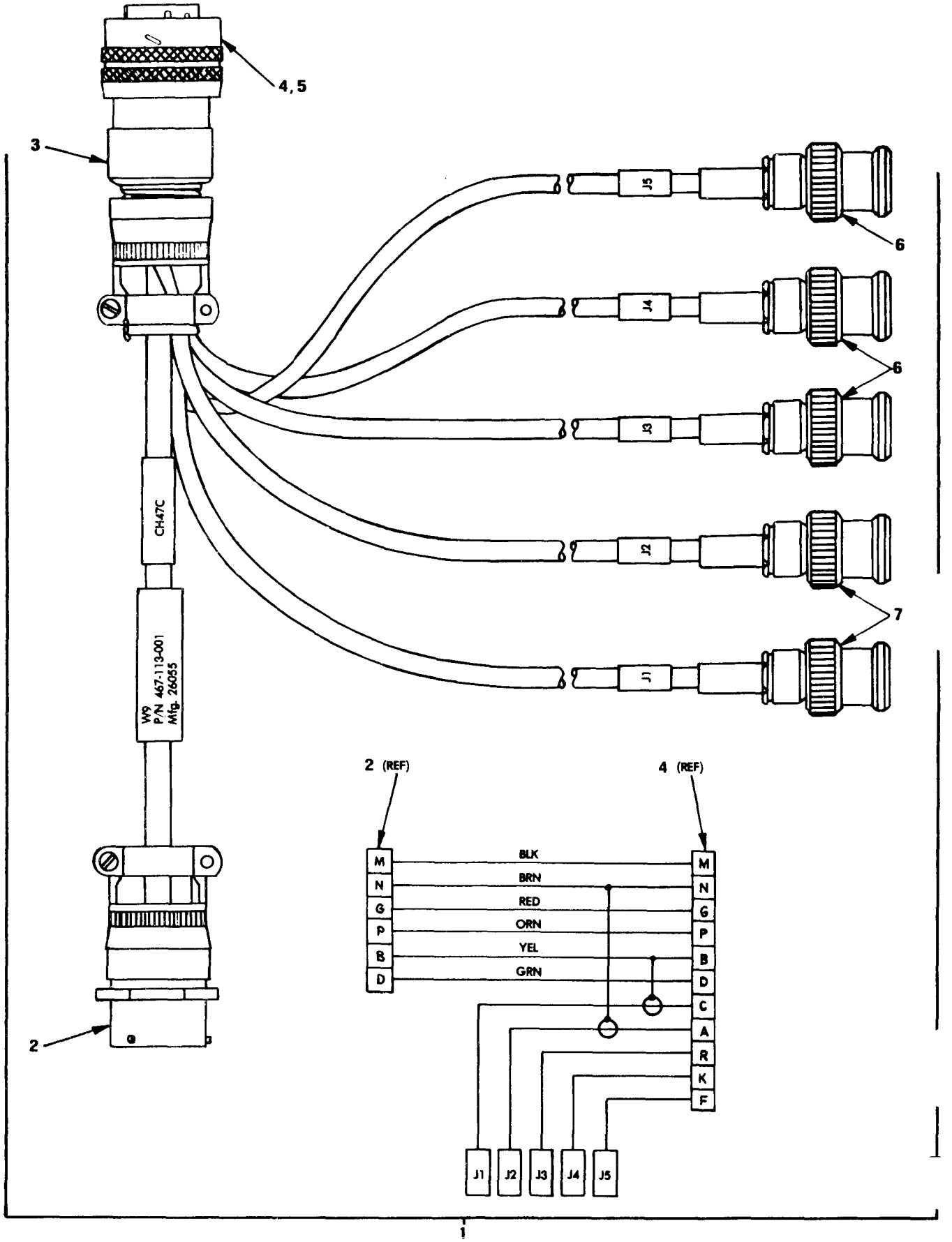


Figure 10. Adapter Cable Assembly W9 (467-113-001)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 10. ADAPTER CABLE ASSEMBLY W9 (467-113-001)	
1	PBOFZ	26055	467-113-001	CABLE ASSEMBLY,SPEC SEE FIG. 1 FOR NHA	1
2	XDFZZ	26055	629-229-001	.CONNECTOR	1
3	XDFZZ	26055	736-159-002	.ADAPTER	1
4	XDFZZ	26055	629-228-001	.CONNECTOR	1
5	XDFZZ	26055	790-230-001	.SPLICE	5
6	XDFZZ	26055	629-223-001	.CONNECTOR COAX	3
7	XDFZZ	26055	629-222-001	.CONNECTOR COAX	2
				END OF FIGURE	

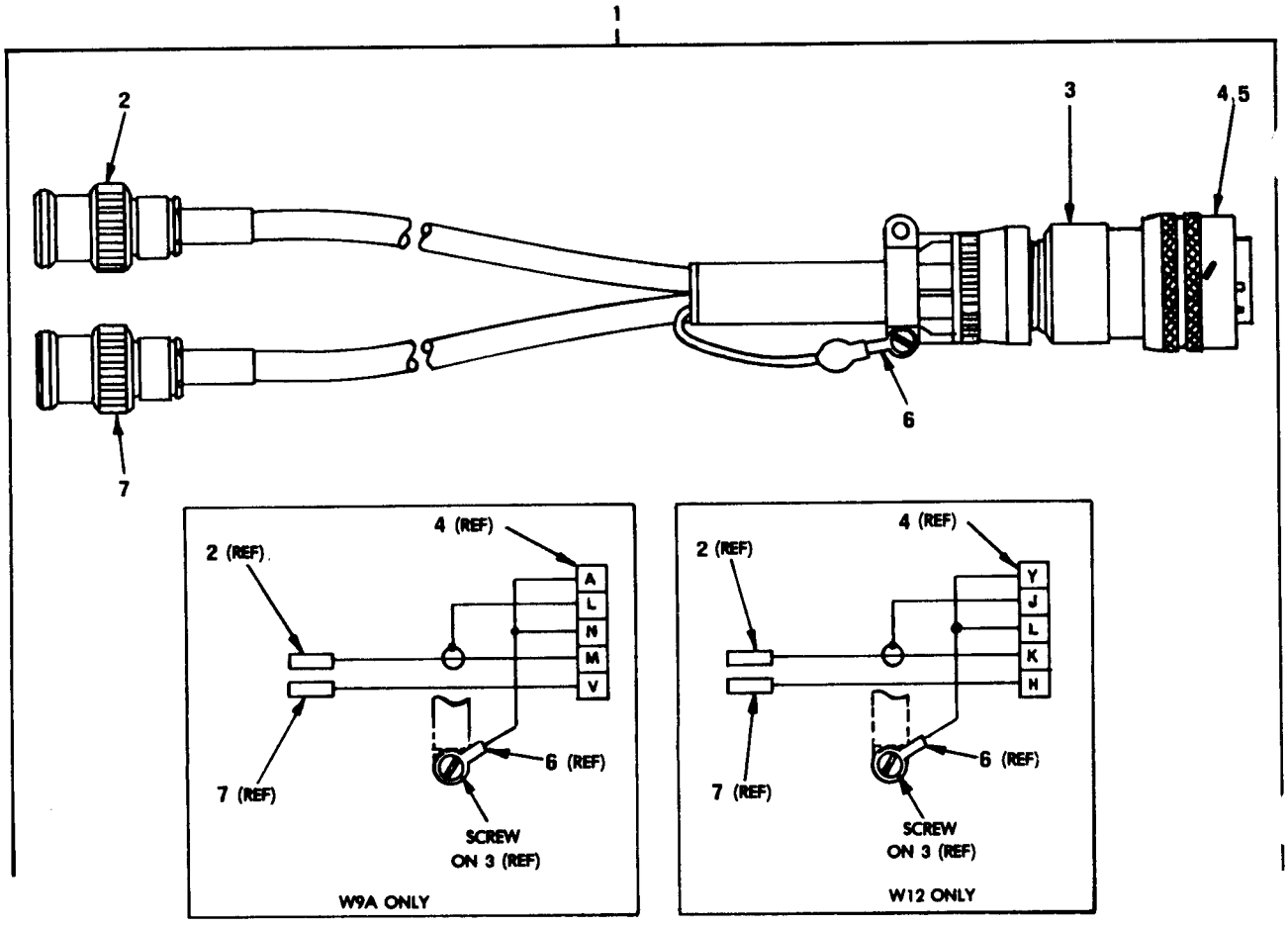


Figure 11. Adapter cable assembly W9A (467-115-001) and W12 (467-120-001)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 11. ADAPTER CABLE ASSEMBLY W9A (467-115-001) AND W12 (467-120-001)	
1	PBOFF	26055	467-115-001	ADAPTER,RADIO FREQU SEE FIG. 1 FOR NHA	1
1	PBOFF	26055	467-120-001	ADAPTER,RADIO FREQU SEE FIG. 1 FOR NHA	1
2	XDFZZ	26055	629-222-001	.CONNECTOR COAX	1
3	XDFZZ	26055	736-159-001	.ADAPTER U/O 467-115-001	1
3	XDFZZ	26055	736-161-001	.ADAPTER U/O 467-120-001	1
4	XDFZZ	26055	629-228-004	.CONNECTOR U/O 467-115-001	1
4	XDFZZ	26055	629-228-005	.CONNECTOR U/O 467-120-001	1
5	XDFZZ	26055	790-230-001	.SPLICE	2
6	XDFZZ	26055	742-041-001	.LUG	1
7	XDFZZ	26055	629-223-001	.CONNECTOR COAX	1
				END OF FIGURE	

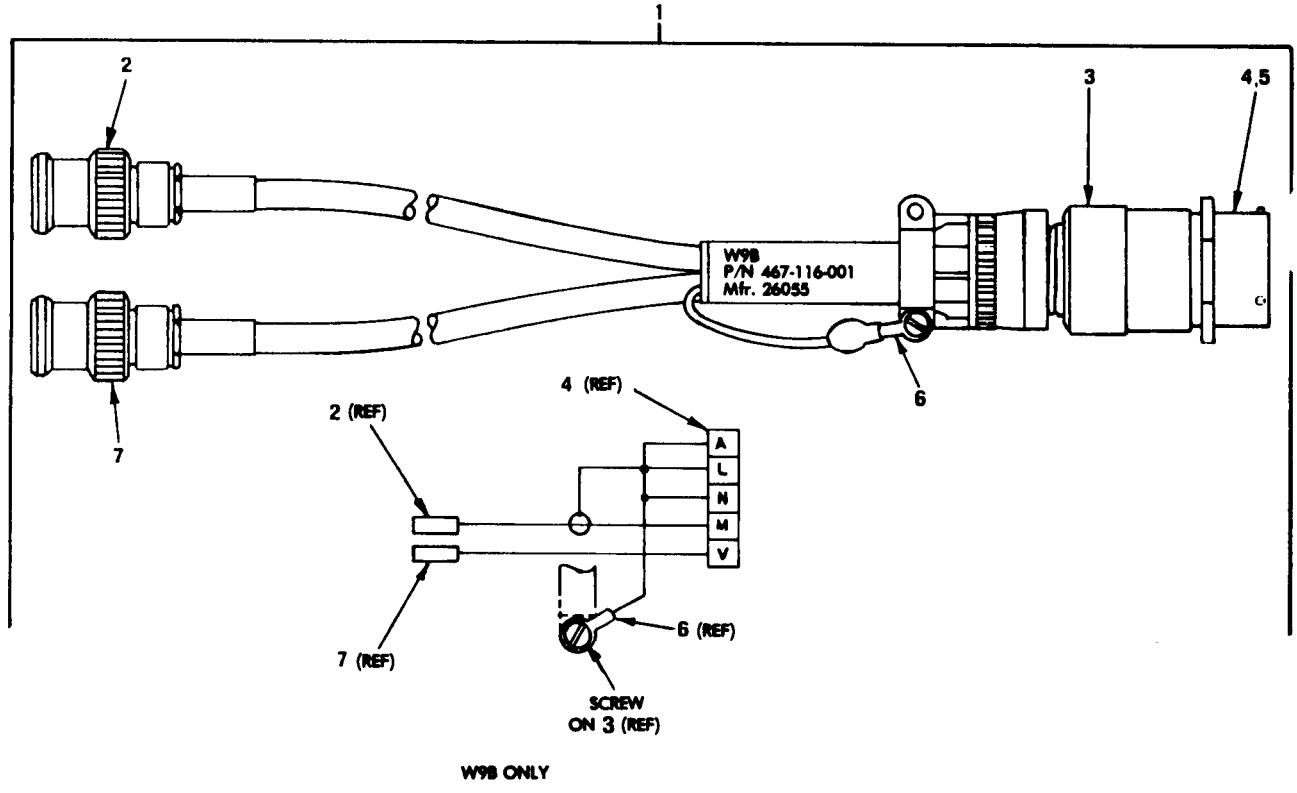


Figure 12. Adapter cable assembly W9B, part number 467-116-001

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 12. ADAPTER CABLE ASSEMBLY W9B, PART NUMBER 467-116-001	
1	PBOFF	26055	467-116-001	ADAPTER,RADIO FREQU SEE FIG. 1 FOR NHA	1
2	XDFZZ	26055	629-222-001	.CONNECTOR COAX	1
3	XDFZZ	26055	736-159-001	.ADAPTER	1
4	XDFZZ	26055	629-229-004	.CONNECTOR	1
5	XDFZZ	26055	790-230-001	.SPLICE	2
6	XDFZZ	26055	742-041-001	.LUG	1
7	XDFZZ	26055	629-223-001	.CONNECTOR COAX	1
				END OF FIGURE	

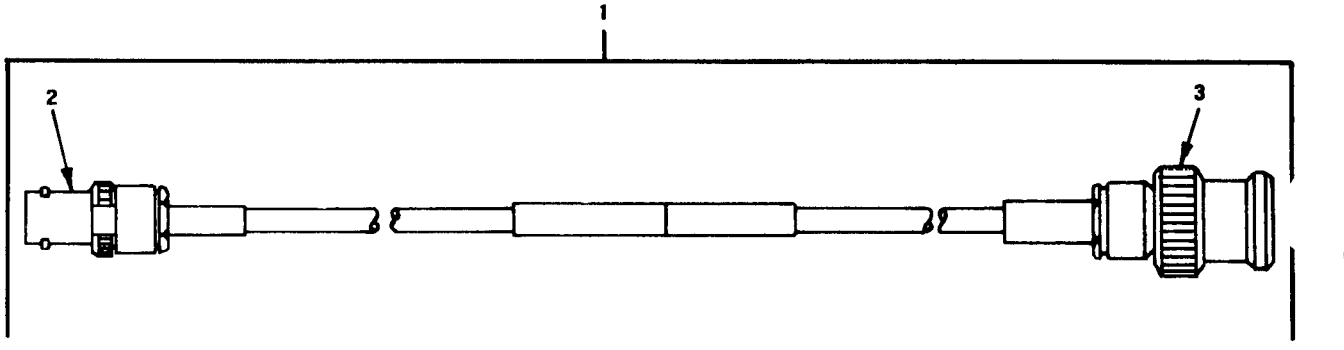


Figure 13. Adapter cable assembly W9C (467-117-001) and W9D (467-118-001)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 13. ADAPTER CABLE ASSEMBLY W9C, 467-117-001 AND W9D, 467-118-001	
1	PBOFZ	26055	467-117-001	CABLE ASSEMBLY,RADI SEE FIG. 1 FOR NHA	2
1	PBOFZ	26055	467-118-001	CABLE ASSEMBLY,RADI SEE FIG. 1 FOR NHA	2
2	XDFZZ	26055	629-226-001	.CONNECTOR U/O 467-117-001	1
2	XDFZZ	26055	629-227-001	.CONNECTOR U/O 467-118-001	1
3	XDFZZ	26055	629-222-001	.CONNECTOR U/O 467-117-001	1
3	XDFZZ	26055	629-223-001	.CONNECTOR U/O 467-118-001	1
				END OF FIGURE	

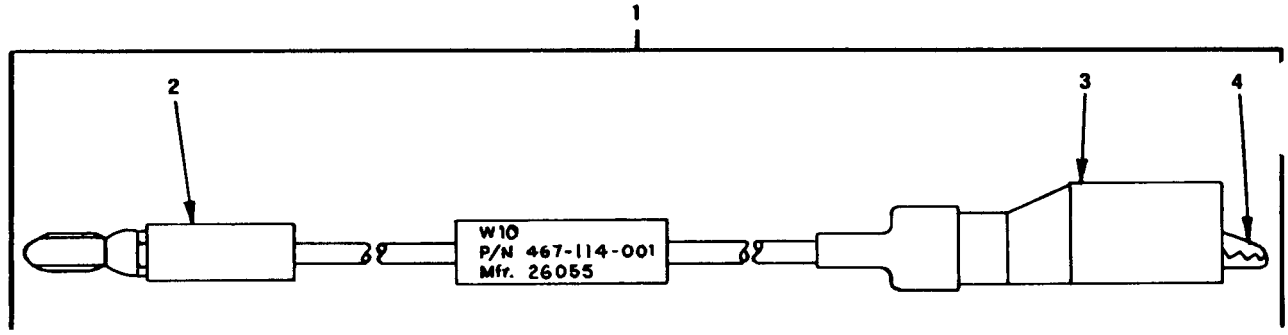


Figure 14. Test lead assembly W10, part number 467-114-001

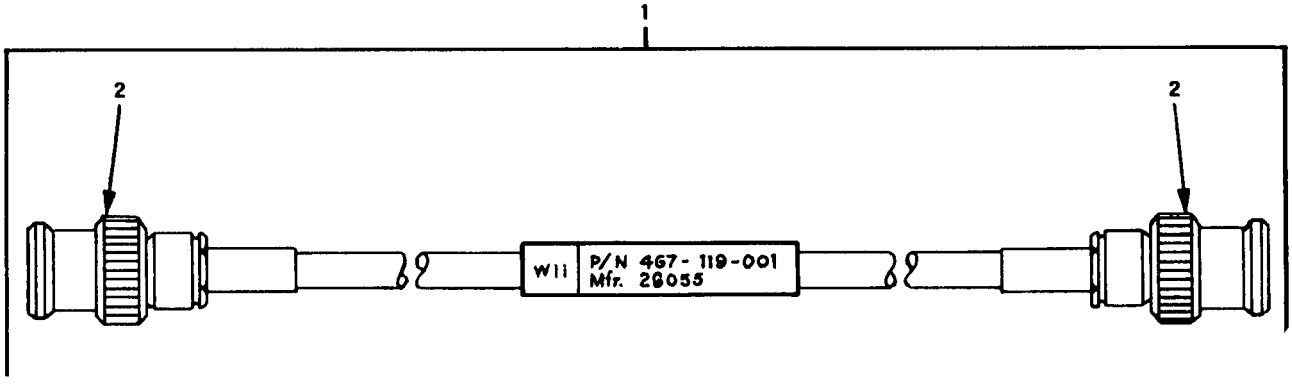


Figure 15. Adapter cable assembly W11, part number 467-119-001

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 14. TEST LEAD ASSEMBLY W10, PART NUMBER 467-114-001	
1	PBOFZ	26055	467-114-001	LEAD,TEST SEE FIG. 1 FOR NHA	3
2	XDFZZ	26055	629-222-001	.CONNECTOR	2
3	XDFZZ	26055	680-080-001	.BOOT	1
4	XDFZZ	26055	626-093-001	.CLIP ALLIGATOR	1
				END OF FIGURE	

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 15. ADAPTER CABLE ASSEMBLY W11, PART NUMBER 467-119-001	
1	PBOFZ	26055	467-119-001	CABLE ASSEMBLY,RADI SEE FIG. 1 FOR NHA	1
2	XDFZZ	26055	629-222-001	.CONNECTOR COAX	1
				END OF FIGURE	

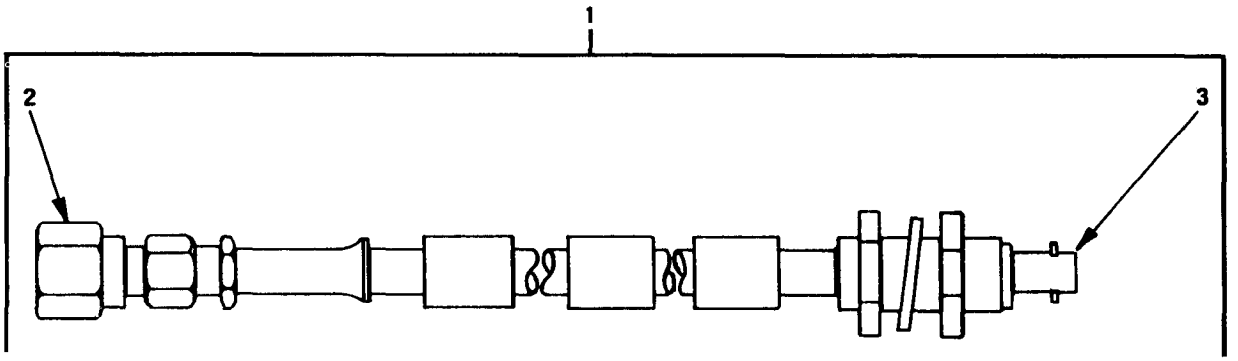


Figure 16. Internal coaxial cable assembly, part numbers 467-094-001, 467-095-001, 467-096-001, 467-097-001, 467-098-001 and 467-099-001

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 16. INTERNAL COAXIAL ASSEMBLY , PART NUMBER 467-094-001, 467-095-001, 467-096-001, 467-097-001, 467-098-001 AND 467-099-001	
1	PBFFZ	26055	467-094-001	CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 2 FOR NHA	1
1	PBFFZ	26055	467-095-001	CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 2 FOR NHA	1
1	PBFFZ	26055	467-096-001	CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 2 FOR NHA	1
1	PBFFZ	26055	467-097-001	CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 2 FOR NHA	1
1	PBFFZ	26055	467-098-001	CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 2 FOR NHA	1
1	PBFFZ	26055	467-099-001	CABLE ASSEMBLY,RADI COAXIAL SEE FIG. 2 FOR NHA	1
2	XDFZZ	24931	37P106-1	.CABLE PLUG	1
3	XDFZZ	24931	28JS105-4	.CONNECTOR BULKHEAD U/O 467-094-001 & 467-095-001	1
3	XDFZZ	24931	28JS168-1	.CONNECTOR BULKHEAD U/O 467-096-001 & 467-098-001	1
3	XDFZZ	24931	28JS122-3	.CONNECTOR BULKHEAD U/O 467-097-001 & 467-099-001	1
				END OF FIGURE	

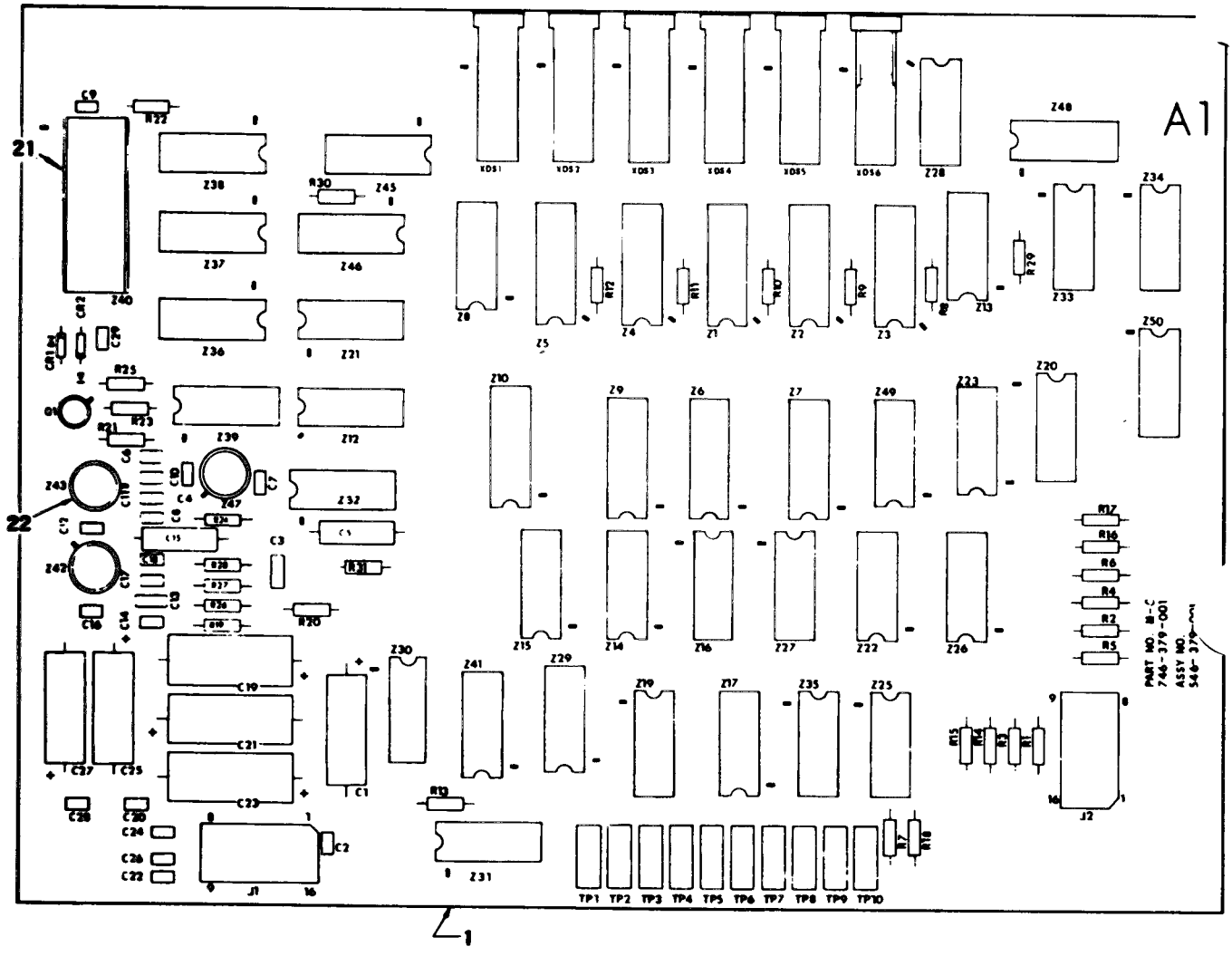


Figure 17. Digital P.C. Board A1 (Sheet 1 of 2)

LEGEND

REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO
CR1	2	J2	11	R31	14	Z17	29
CR2	2	Q1	12	TP1	19	Z19	26
C1	8	R1	14	TP2	19	Z20	31
C2	4	R2	14	TP3	19	Z21	26
C3	6	R3	14	TP4	19	Z22	24
C4	4	R4	14	TP5	19	Z23	24
C5	10	R5	14	TP6	19	Z25	24
C6	5	R6	14	TP7	19	Z26	24
C7	4	R7	14	TP8	19	Z27	29
C8	3	R8	14	TP9	19	Z28	28
C9	4	R9	14	TP10	19	Z29	27
C10	4	R10	14	XDS1	20	Z30	28
C11	4	R11	14	XDS2	20	Z31	24
C12	4	R12	14	XDS3	20	Z32	29
C13	6	R13	13	XDS4	20	Z33	29
C14	4	R14	14	XDS5	20	Z34	29
C15	10	R15	14	XDS6	20	Z35	29
C16	5	R16	14	Z1	33	Z36	32
C17	17	R17	14	Z2	33	Z37	32
C18	3	R18	14	Z3	33	Z38	32
C19	9	R19	17	Z4	33	Z39	27
C20	4	R20	17	Z5	33	Z40	36
C21	9	R21	15	Z6	30	Z41	27
C22	4	R22	14	Z7	30	Z42	35
C23	9	R23	16	Z8	25	Z43	34
C24	4	R24	18	Z9	30	Z45	25
C25	7	R25	13	Z10	30	Z46	25
C26	4	R26	17	Z12	31	Z47	35
C27	8	R27	17	Z13	24	Z48	26
C28	4	R28	15	Z14	29	Z49	31
C29	3	R29	14	Z15	29	Z50	24
J1	11	R30	14	Z16	24		

Figure 17. Digital P.C. Board A1 (Sheet 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 05. DIGITAL AND ANALOGUE PC BOARDS	
				FIGURE 17. DIGITAL P.C. BOARD A1	
	PBFDD	26055	546-379-001	CIRCUIT CARD ASSEMB A1 SEE FIG. 1 FOR NHA	1
1	XDDZZ	26055	746-379-001	.P C BOARD SUB ASSY DRILLING	1
2	XDDZZ	81349	JAN1N4148	.DIODE CR1 & CR2	2
3	XDDZZ	81349	CK05BX102K	.CAPACITOR C8,C18 & C29	3
5	XDDZZ	81349	CK05BX330K	.CAPACITOR C6 & C16	2
6	XDDZZ	81349	CK06BX104K	.CAPACITOR C3 & C13	2
7	XDDZZ	81349	CSR13D226KM	.CAPACITOR C25	1
8	XDDZZ	81349	CK05BX103K	.CAPACITOR C2,C4,C7,C9 THRU C12, .C14,C17,C20,C22,C24,C26 & C28	14
9	XDDZZ	81349	CSR13E107KM	.CAPACITOR C19,C21 & C23	3
10	XDDZZ	26055	820-001-003	.CAPACITOR C5 & C15	2
11	XDDZZ	51167	16-511-11	..SOCKET 16 PIN J1 & J2	2
12	XDDZZ	81349	JAN2N2222A	.TRANSISTOR Q1	1
13	XDDZZ	81349	RCR07G102JS	.RESISTOR,FIXED,COMP R13 & R25	2
14	XDDZZ	81349	RCR07G103JS	.RESISTOR,FIXED,COMP RI THRU R12, R14 THRU R18,R22,R29,R30 & R31	21
15	XDDZZ	81349	RCR07G221JS	.RESISTOR,FIXED,COMP R21 & R28	2
16	XDDZZ	81349	RCR07G242JS	.RESISTOR,FIXED,COMP R23	1
17	XDDZZ	81349	RCR07G394JS	.RESISTOR,FIXED,COMP R19,R20,R26 & R27	4
18	XDDZZ	81349	RCR07G512JS	.RESISTOR,FIXED,COMP R24	1
19	XDDZZ	78947	119437G	.TEST POINT TP1 THRU TP10	10
20	XDDZZ	26055	730-001-001	.SOCKET DISPLAY XDS1 THRU XDS6	6
21	XDDZZ	26055	730-004-001	.SOCKET	1
22	XDDZZ	26055	680-113-001	.INSULATOR U/O Z42,Z43 & Z47	3
24	XDDZZ	26055	850-007-301	.INTEG CIRCUIT Z13,Z16,Z22,Z23,Z25, Z26,Z31 & Z50	8
25	XDDZZ	26055	850-007-303	.INTEG CIRCUIT Z8, Z45 & Z46	3
26	XDDZZ	26055	850-007-304	.INTEG CIRCUIT Z19,Z21 & Z48	3
27	XDDZZ	26055	850-007-307	.INTEG CIRCUIT Z29,Z39 & Z41	3
28	XDDZZ	26055	850-007-308	.INTEG CIRCUIT Z28 & Z30	2
29	XDDZZ	26055	850-007-310	.INTEG CIRCUIT Z14,Z15,Z17,Z27 & Z32 THRU Z35	8
30	XDDZZ	26055	850-007-312	.INTEG CIRCUIT Z6,Z7,Z9 & Z10	4
31	XDDZZ	26055	850-007-315	.INTEG CIRCUIT Z12,Z20 & Z49	3
32	XDDZZ	26055	850-007-317	.INTEG CIRCUIT Z36,Z37 & Z38	3
33	XDDZZ	26055	850-007-322	.INTEG CIRCUIT Z1 THRU Z5	5
34	XDDZZ	26055	850-007-717	.INTEG CIRCUIT Z43	1
35	XDDZZ	26055	850-007-736	.INTEG CIRCUIT Z42 & Z47	2
36	XDDZZ	26055	850-027-002	.INTEG CIRCUIT Z40	1
				END OF FIGURE	

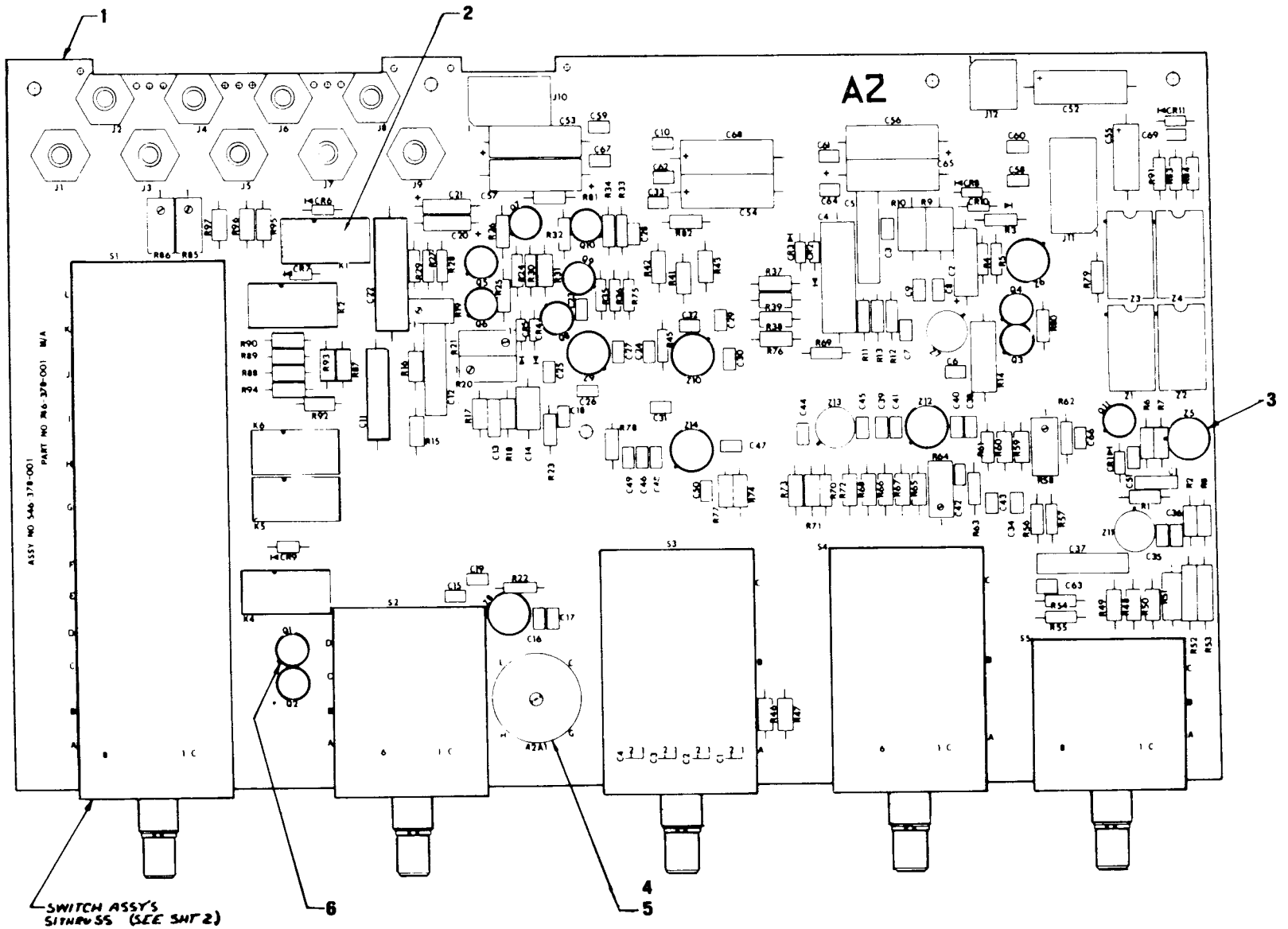


Figure 18. Analog P. C. Board Assembly A 2 (Sheet 1 of 3)

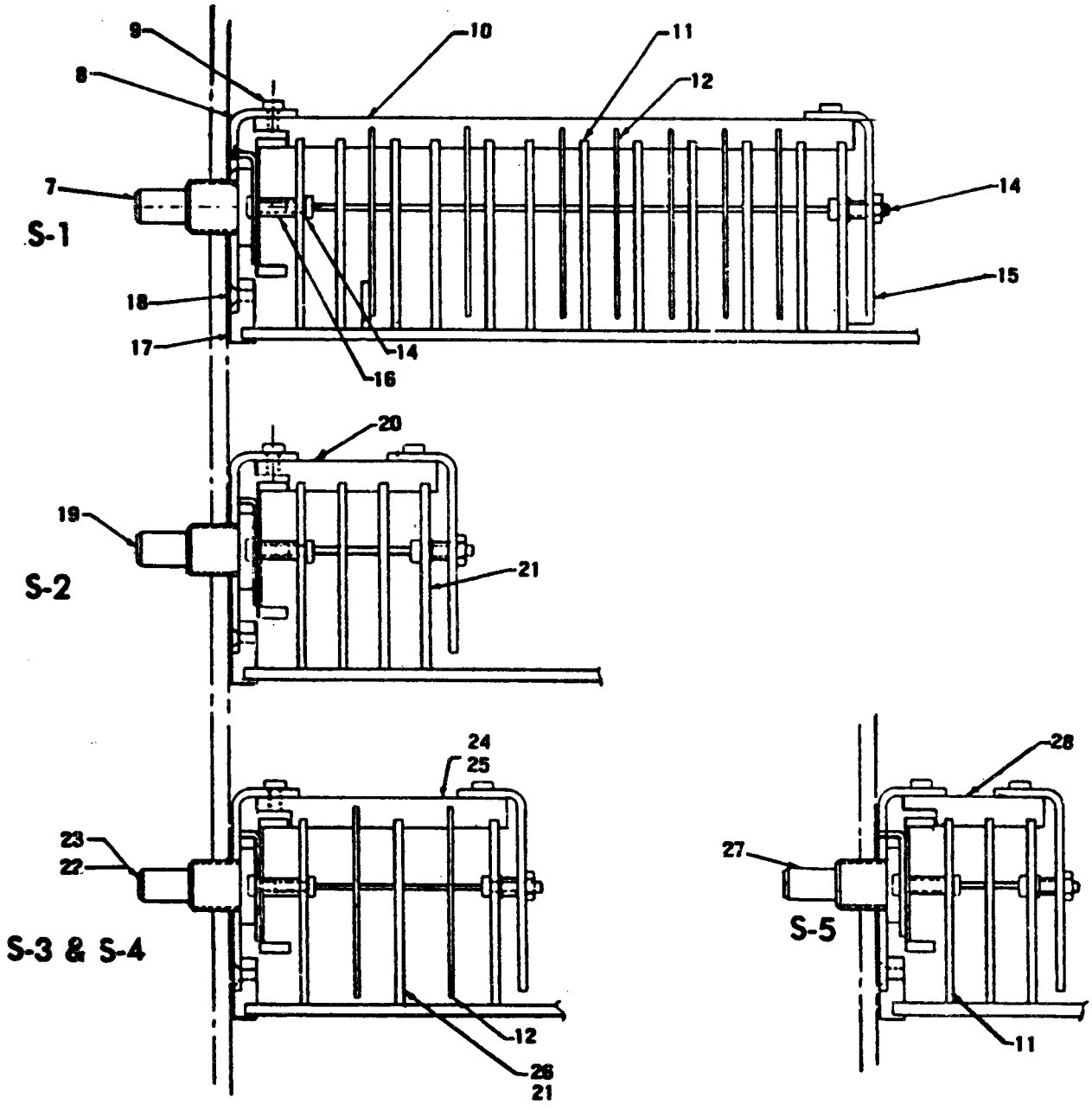


Figure 18. Analog P.C. Board Assembly A2 (Sheet 2 of 3)

LEGEND

REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO
CRI	29	C22	51	C54	41	K6	56	R21	111	R55	69	R87	81
CR2	29	C23	36	C55	40	Q1	59	R22	77	R56	69	R88	84
CR3	29	C24	38	C56	41	Q2	59	R23	71	R57	69	R89	84
CR4	29	C25	32	C57	41	Q3	57	R24	62	R58	105	R90	81
CR5	29	C26	32	C58	32	Q4	58	R25	62	R59	83	R91	62
CR6	29	C27	34	C59	32	Q5	57	R26	78	R60	87	R92	81
CR7	29	C28	31	C60	32	Q6	58	R27	78	R61	65	R93	81
CR8	29	C29	36	C61	32	Q7	60	R28	70	R62	71	R94	84
CR9	29	C30	32	C62	32	Q8	57	R29	70	R63	73	R95	84
CR10	29	C31	32	C63	37	Q9	58	R30	67	R64	106	R96	81
CR11	29	C32	34	C64	32	Q10	57	R31	103	R65	90	R97	86
C1	47	C33	31	C65	41	Q11	57	R32	72	R66	90	Z1	115
C2	43	C34	36	C66	31	R1	102	R33	79	R67	92	Z2	114
C3	31	C35	32	C67	32	R2	97	R34	79	R68	92	Z3	113
C4	51	C36	32	C68	41	R3	62	R35	63	R69	62	Z4	112
C5	48	C37	50	C69	38	R4	66	R36	63	R70	74	Z5	118
C6	32	C38	39	J1	52	R5	75	R37	104	R71	94	Z6	118
C7	32	C39	32	J2	52	R6	62	R38	95	R72	91	Z7	117
C8	34	C40	32	J3	52	R7	63	R39	95	R73	80	Z8	118
C9	32	C41	35	J4	52	R8	97	R41	97	R74	93	Z9	118
C10	32	C42	32	J5	52	R9	108	R42	96	R75	71	Z10	118
C11	45	C43	36	J6	52	R10	108	R43	104	R76	104	Z11	119
C12	49	C44	32	J7	52	R11	63	R45	79	R77	67	Z12	118
C13	46	C45	32	J8	52	R12	63	R46	97	R78	71	Z13	116
C14	44	C46	32	J9	52	R13	68	R47	88	R79	61	Z14	118
C15	32	C47	32	J10	53	R14	107	R48	100	R80	61		
C16	32	C48	34	J11	54	R15	98	R49	101	R81	64		
C17	32	C49	31	J12	55	R16	99	R50	85	R82	71		
C18	31	C50	32	K1	56	R17	82	R51	89	R83	76		
C19	33	C51	30	K2	56	R18	86	R52	109	R84	76		
C20	42	C52	41	K4	56	R19	106	R53	110	R85	106		
C21	42	C53	41	K5	56	R20	105	R54	69	R86	106		

Figure 18. Analog P.C. Board Assembly A2 (Sheeet 3 of 3)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIGURE 18. ANALOGUE P.C. BOARD ASSEMBLY A2	
	PBFDD	26055	546-378-001	CIRCUIT .CARD ASSEMB A2 SEE FIG. 1 FOR NHA	1
1	XDDZZ	26055	746-378-001	.PC BOARD SUB ASSY	1
2	XDDZZ	26055	680-078-001	.INSULATOR U/O K1,K2,K4,K5 & K6	5
3	XDDZZ	26055	680-113-001	.INSULATOR,CIRCUIT C U/O Z5 THRU Z14	10
4	XDDZZ	26055	444-138-001	.CAP STANDARD ASSY	1
5	XDDZZ	26055	680-103-001	.INSULATOR	1
6	XDDZZ	26055	680-115-001	.INSULATOR U/O Q1 THRU Q11	11
7	XDDZZ	26055	737-012-002	..DETENT MECHANISM U/O S1	1
8	XDDZZ	26055	610-315-001	.BRACKET	5
9	XDDZZ	96906	MS51957-3	.SCREW,MACHINE	20
10	XDDZZ	26055	715-014-001	.0.CARD GUIDE U/O S1	1
11	XDDZZ	26055	737-012-001	..WAFER SWITCH U/O S1 & S5	15
12	XDDZZ	26055	527-007-001	.SHIELD PLATE ASSY U/O S1,S3 & S4	14
14	XDDZZ	26055	758-001-014	.SPACER	20
15	XDDZZ	26055	610-315-003	.BRACKET	1
16	XDDZZ	26055	712-217-001	.SPACER	10
17	XDDZZ	26055	708-553-001	.BRACKET	5
18	PBDZZ	96906	MS51959-2	.SCREW,MACHINE	10
19	XDDZZ	26055	737-011-002	.DETENT MECHANISM U/O S2	1
20	XDDZZ	26055	715-015-001	.CARD GUIDE U/O S2	1
21	XDDZZ	26055	737-010-001	.WAFER SWITCH U/O S2 & S4	7
22	XDDZZ	26055	737-010-002	.DETENT MECHANISM U/O S4	1
23	XDDZZ	26055	737-008-002	.DETENT MECHANISM U/O S3	1
24	XDDZZ	26055	715-016-001	.CARD GUIDE U/O S3	1
25	XDDZZ	26055	715-017-001	.CARD GUIDE U/O S4	1
26	XDDZZ	26055	737-008-001	.WAFER SWITCH U/O S3	3
27	XDDZZ	26055	737-012-003	.WAFER SWITCH U/O S5	1
28	XDDZZ	26055	715-018-001	.CARD GUIDE U/O S5	1
29	XDDZZ	81349	JAN1N4148	.DIODE CR1 THRU CR11	11
30	XDDZZ	81349	CK05BX101K	.CAPACITOR 051	1
31	XDDZZ	81349	CK05BX102K	.CAPACITOR C3,C18,C28,C33,C49 & C66	6
32	XDDZZ	81349	CK05BX103K	.CAPACITOR C6,C7,C9,C10,C15,C16 C17,C25,C26,C30,C31,C35,C36,C39,C40, C42,C44 THRU C47,C50,C58 THRU C62, C64 & C67	28
33	XDDZZ	81349	CK05BX150K	.CAPACITOR C19	1
34	XDDZZ	81349	CK05BX330K	.CAPACITOR C8,C27,C32 & C48	4
35	XDDZZ	26055	CK05BX471K	.CAPACITOR C41	1
36	XDDZZ	81349	CK06BX104K	.CAPACITOR C23,C29,C34 & C43	4
37	XDDZZ	81349	CK06BX222K	.CAPACITOR C63	1
38	XDDZZ	81349	CK068X478K	.CAPACITOR C24 & C69	2
39	XDDZZ	81349	CK06BX682K	.CAPACITOR C38	1
40	XDDZZ	81349	CSR13D226KM	.CAPACITOR C55	1
41	XDDZZ	81349	CSR13E476KM	.CAPACITOR C52,C53,C54,C56,C57,C65 & C68	7
42	XDDZZ	81349	CSR13G105KM	.CAPACITOR C20 & C21	2
43	XDDZZ	81349	CSR13G475KM	.CAPACITOR C2	1

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
44	XDDZZ	26055	821-002-056	.CAPACITOR C14	1
45	XDDZZ	26055	821-002-094	.CAPACITOR C11	1
46	XDDZZ	26055	821-002-113	.CAPACITOR C13	1
47	XDDZZ	26055	821-002-135	.CAPACITOR C1	1
48	XDDZZ	26055	821-002-136	.CAPACITOR C5	1
49	XDDZZ	26055	821-002-137	.CAPACITOR C12	1
50	XDDZZ	26055	821-002-138	.CAPACITOR C37	1
51	XDDZZ	26055	821-010-002	.CAPACITOR C4 & C22	2
52	XDDZZ	24931	37JR1C4-2	.CONNECTOR COAX J1 THRU J9	9
53	XDDZZ	26055	730-002-001	.CONNECTOR 14P J10	1
54	XDDZZ	26055	730-002-002	.CONNECTOR 16P J11	1
55	XDDZZ	26055	730-002-003	.CONNECTOR 80 J12	1
56	XDDZZ	26055	858-011-004	.RELAY K1,K2,K4,K5 & K6	5
57	XDDZZ	81349	JAN2N2222A	.TRANSISTOR Q3,Q5,Q8,Q10 & Q11	5
58	XDDZZ	81349	JAN2N2907A	.TRANSISTOR Q4,Q6 & Q9	3
59	XDDZZ	26055	863-005-003	.TRANSISTOR Q1 & Q2	2
60	XDDZZ	26055	863-007-002	.TRANSISTOR Q7	1
61	XDDZZ	81349	RCR07G102JS	.RESISTOR,FIXED,COMP R79 & R80	2
62	XDDZZ	81349	RCR07G103JS	.RESISTOR,FIXED,COMP R3,R6,R24,R25, R69 & R91	6
63	XDDZZ	81349	RCR07G104JS	.RESISTOR,FIXED,COMP R7,R11,R12 R353 & R36	5
64	XDDZZ	81349	RCR07G111JS	.RESISTOR,FIXED,COMP R81	1
65	ADDZZ	81349	RCR07G124JS	.RESISTOR,FIXED,COMP R61	1
66	XDDZZ	81349	RCR07G153JS	.RESISTOR,FIXED,COMP R4	1
67	XDDZZ	81349	RCR07G203JS	.RESISTOR,FIXED,COMP R30 & R77	2
68	XDDZZ	81349	RCR07G204JS	.RESISTOR,FIXED,COMP R13	1
69	XDDZZ	81349	RCR07G206JS	.RESISTOR R54 THRU R57	4
70	XDDZZ	81349	RCR07G220JS	.RESISTOR,FIXED,COMP R28 & R29	2
71	XDDZZ	81349	RCR07G221JS	.RESISTOR,FIXED,COMP R23,R62,R75 R78 & R82	5
72	XDDZZ	81349	RCR07G222JS	.RESISTOR,FIXED,COMP R32	1
73	XDDZZ	81349	RCR07G244JS	.RESISTOR,FIXED,COMP R63	1
74	XDDZZ	81349	RCR07G304JS	.RESISTOR,FIXED,COMP R70	1
75	XDDZZ	81349	RCR07G333JS	.RESISTOR,FIXED,COMP R5	1
76	XDDZZ	81349	RCR07G392JS	.RESISTOR,FIXED,COMP R83 & R84	2
77	XDDZZ	81349	RCR07G394JS	.RESISTOR,FIXED,COMP R22	1
78	XDDZZ	81349	RCR07G470JS	.RESISTOR,FIXED,COMP R26 & R27	2
79	XDDZZ	81349	RCR07G512JS	.RESISTOR,FIXED,COMP R33,R34 & R45	3
80	XDDZZ	81349	RNR55J1004FM	.RESISTOR R73	1
81	XDDZZ	81349	RNR55J1103FM	.RESISTOR R87,R90,R92,R93 & R96	5
82	XDDZZ	26055	RNR55J1153FM	.RESISTOR R17	1
83	XDDZZ	81349	RNR55J1303FM	.RESISTOR R59	1
84	XDDZZ	81349	RNR55J2000FM	.RESISTOR R88,R89,R94 & R95	4
85	XDDZZ	81349	RNR55J3013FM	.RESISTOR R50	1
86	XDDZZ	81349	RNR55J5763FM	.RESISTOR R18 & R97	2
87	XDDZZ	81349	RNR55J9093FM	.RESISTOR R60	1
88	XDDZZ	81349	RNR55J9533FM	.RESISTOR R47	1
89	XDDZZ	81349	RNR60J3014FM	.RESISTOR R51	1
90	XDDZZ	81349	RN55C1000F	.RESISTOR R65 & R66	2
91	XDDZZ	81349	RN55C1102F	.RESISTOR R72	1
92	XDDZZ	81349	RN55C1502F	.RESISTOR R67 & R68	2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
93	XDDZZ	81349	RN55C2002F	.RESISTOR R74	1
94	XDDZZ	81349	RN55C4021F	.RESISTOR R71	1
95	XDDFF	81349	RN55E1001F	.RESISTOR R38 & R39	2
96	XDDZZ	81349	RN55E1002F	.RESISTOR R42	1
97	XDDZZ	81349	RN55E1003F	.RESISTOR R2,R8,R41 & R46	4
98	XDDZZ	81349	RN55E1502F	.RESISTOR R15	1
99	XDDZZ	81349	RN55E2872F	.RESISTOR R16	1
100	XDDZZ	81349	RN55E3011F	.RESISTOR R48	1
101	XDDZZ	81349	RN55E3012F	.RESISTOR R49	1
102	XDDZZ	81349	RN55E3652F	.RESISTOR R1	1
103	XDDZZ	81349	4955E4022F	.RESISTOR R31	1
104	XDDZZ	81349	RN55E7681F	.RESISTOR R37,R43 & R76	3
105	PBDZZ	81349	M39015/2-007WP	.RESISTOR,VARIABLE,W R20 & R58	2
106	PBDZZ	81349	M39015/2-005WP	.RESISTOR,VARIABLE,W R19,R64,R85 & R86	4
107	XDDZZ	81349	RWR89SS101FR	.RESISTOR R14	1
108	XDDZZ	26055	800-001-038	.RESISTOR R9 & R10	2
109	XDDZZ	26055	802-003-003	.RESISTOR R52	1
110	XDDZZ	26055	802-003-004	.RESISTOR R53	1
111	PBDZZ	26055	855-033-001	.RESISTOR,VARIABLE,W R21	1
112	XDDZZ	26055	850-007-302	.INTEG CIRCUIT Z4	1
113	XDDZZ	26055	850-007-307	.INTEG CIRCUIT Z3	1
114	XDDZZ	26055	850-007-310	.INTEG CIRCUIT Z2	1
115	XDDZZ	26055	850-007-315	.INTEG CIRCUIT Z1	1
116	XDDZZ	26055	850-007-717	.INTEG CIRCUIT Z13	1
117	XDDZZ	26055	850-007-731	.INTEG CIRCUIT Z7	1
118	XDDZZ	26055	850-007-736	.INTEG CIRCUIT Z5,Z6,Z8,Z9,Z10,Z12 Z14	7
119	XDDZZ	26055	850-028-001	.INTEG CIRUIT Z11	1
				END OF FIGURE	

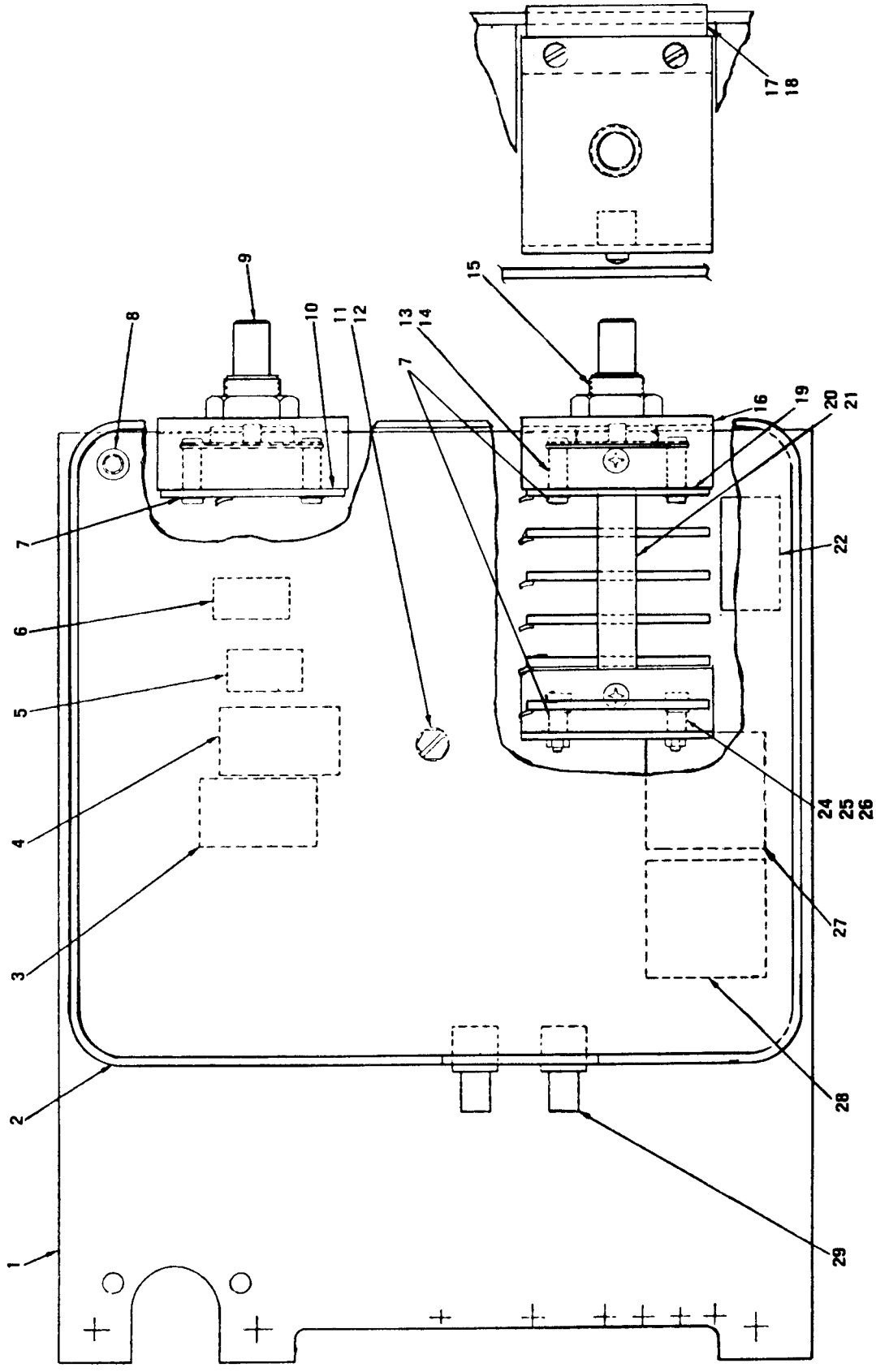


Figure 19. Simulator P.C. Board A3

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 06. SIMULATOR PC AND AIR BOARDS	
				FIGURE 19. SIMULATOR P.C. BOARD A3	
	PBFDD	26055	546-380-001	ELECTRONIC COMPONEN A3 SEE FIG. 1 FOR NHA	1
1	XDDZZ	26055	746-380-001	.BOARD PC DRILLING	1
2	XDDZZ	26055	727-048-002	.COVER SHIELD	1
3	XDDZZ	26055	821-044-004	.CAPACITOR 800 PF	1
4	XDDZZ	26055	821-044-003	.CAPACITOR 600 PF	1
5	XDDZZ	26055	821-044-002	.CAPACITOR 400 PF	1
6	XDDZZ	26055	821-044-001	.CAPACITOR 200 PF	1
7	XDDZZ	26055	758-001-014	.SPACER	6
8	XDDZZ	46384	KFS-2-440	.FASTENER	1
9	XDDZZ	26055	737-009-002	.DETENT MECHANISM	1
10	XDDZZ	26055	737-009-001	.WAFER SWITCH	1
11	XDDZZ	26055	712-080-013	.POST	1
12	PBDZZ	96906	MS51957-13	.SCREW,MACHINE	2
13	XDDZZ	26055	712-217-001	.SPACER	4
14	PBDZZ	96906	MS51957-2	.SCREW,MACHINE	4
15	XDDZZ	26055	737-012-004	.DETENT MECHANISM	1
16	XDDZZ	26055	610-315-001	.BRACKET	2
17	XDDZZ	26055	708-553-001	.BRACKET	2
18	PBDZZ	96906	MS51959-2	.SCREW,MACHINE	4
19	XDDZZ	26055	737-012-001	.WAFER SWITCH	6
20	XDDZZ	26055	715-019-001	.0CARD GUIDE	1
21	PBDZZ	96906	MS51957-1	.SCREW,MACHINE	6
22	XDDZZ	26055	821-044-005	.CAPACITOR 1000PF	1
24	XDDZZ	26055	712-217-002	.SPACER	2
25	PBDZZ	96906	MS51957-5	.SCREW,MACHINE	2
26	PBDZZ	96906	MS35649-224	.NUT,PLAIN,HEXAGON	2
27	XDDZZ	26055	821-044-007	.CAPACITOR 400 PF	1
28	XDDZZ	26055	821-044-006	.CAPACITOR 2000 PF	1
29	XDDZZ	24931	372R110-1	.CONNECTOR COAX	2
				END OF FIGURE	

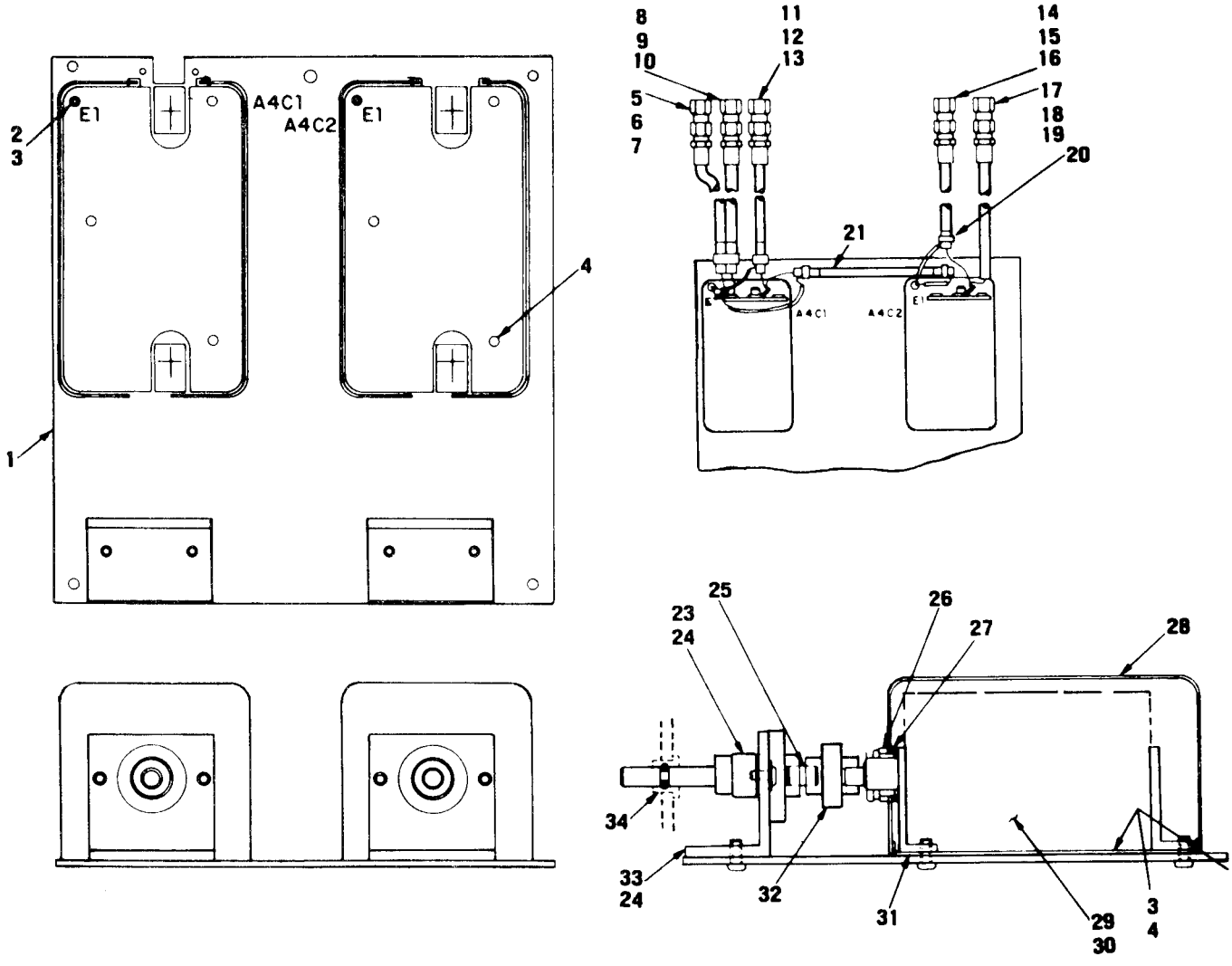


Figure 20. Air Cap Board Assembly A4

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG 20. AIR CAP BOARD ASSEMBLY A4	
1	XDFDD	26055	508-394-001	BOARD ASSEMBLY,AIR A4 SEE FIG. 1 FOR NHA	1
2	XDDZZ	26055	741-001-006	.TERMINAL	2
3	XDDZZ	26055	727-046-002	.BASE SHIELD	2
4	XDDZZ	26055	718-007-005	.RIVET	6
5	PBDDZ	26055	467-089-004	.CABLE ASSEMBLY,RADI	1
6	XDDZZ	26055	766-012-001	..CABLE 13.25 IN.LG	1
7	XDDZZ	24931	37P106-1	..CABLE PLUG	1
8	PBDDZ	26055	467-089-002	.CABLE ASSEMBLY,RADI	1
9	XDDZZ	26055	766-012-001	..CABLE 17 IN. LG	1
10	XDDZZ	24931	37P106-1	..CABLE PLUG	1
11	PBDDZ	26055	467-089-001	.CABLE ASSEMBLY,RADI	1
12	XDDZZ	26055	766-012-001	..CABLE 16.5 IN.LG	1
13	XDDZZ	24931	37P106-1	..CONNECTOR,PLUG,ELEC	1
14	PBDDZ	26055	467-089-005	.CABLE ASSEMBLY,RADI	1
15	XDDZZ	26055	766-012-001	..CABLE 15 IN. LG	1
16	XDDZZ	24931	37P106-1	..CABLE PLUG	1
17	PBDDZ	26055	467-089-003	.CABLE ASSEMBLY,RADI	1
18	XDDZZ	26055	766-012-001	..CABLE 19.5 IN. LG	1
19	XDDZZ	24931	37P106-1	..CABLE PLUG	1
20	XDDZZ	26055	790-137-001	.SOLDER SLEEVE	4
21	XDDZZ	26055	766-012-001	.CABLE COAX 8 IN.LG	1
23	XDDZZ	26055	790-233-001	.REDUCER	2
24	PBDZZ	96906	MS51957-13	.SCREW,MACHINE	8
25	XDDZZ	26055	726-143-001	.SHAFT	2
26	XDDZZ	26055	612-146-001	.WASHER SHOULDER	2
27	XDDZZ	26055	758-062-001	.WASHER INSULATED	2
28	XDDZZ	26055	727-047-002	.COVER SHIELD	2
29	XDDZZ	26055	825-009-001	.CAPACITOR AIR	2
30	PBDZZ	96906	MS51957-25	.SCREW,MACHINE	4
31	XDDZZ	26055	680-100-001	.INSULATOR	4
32	XDDZZ	99813	AK5610	.COUPLING	2
33	XDDZZ	26055	610-330-001	.BRACKET	2
34	XDDZZ	96906	MS9068-006	.O RING	2
				END OF FIGURE	

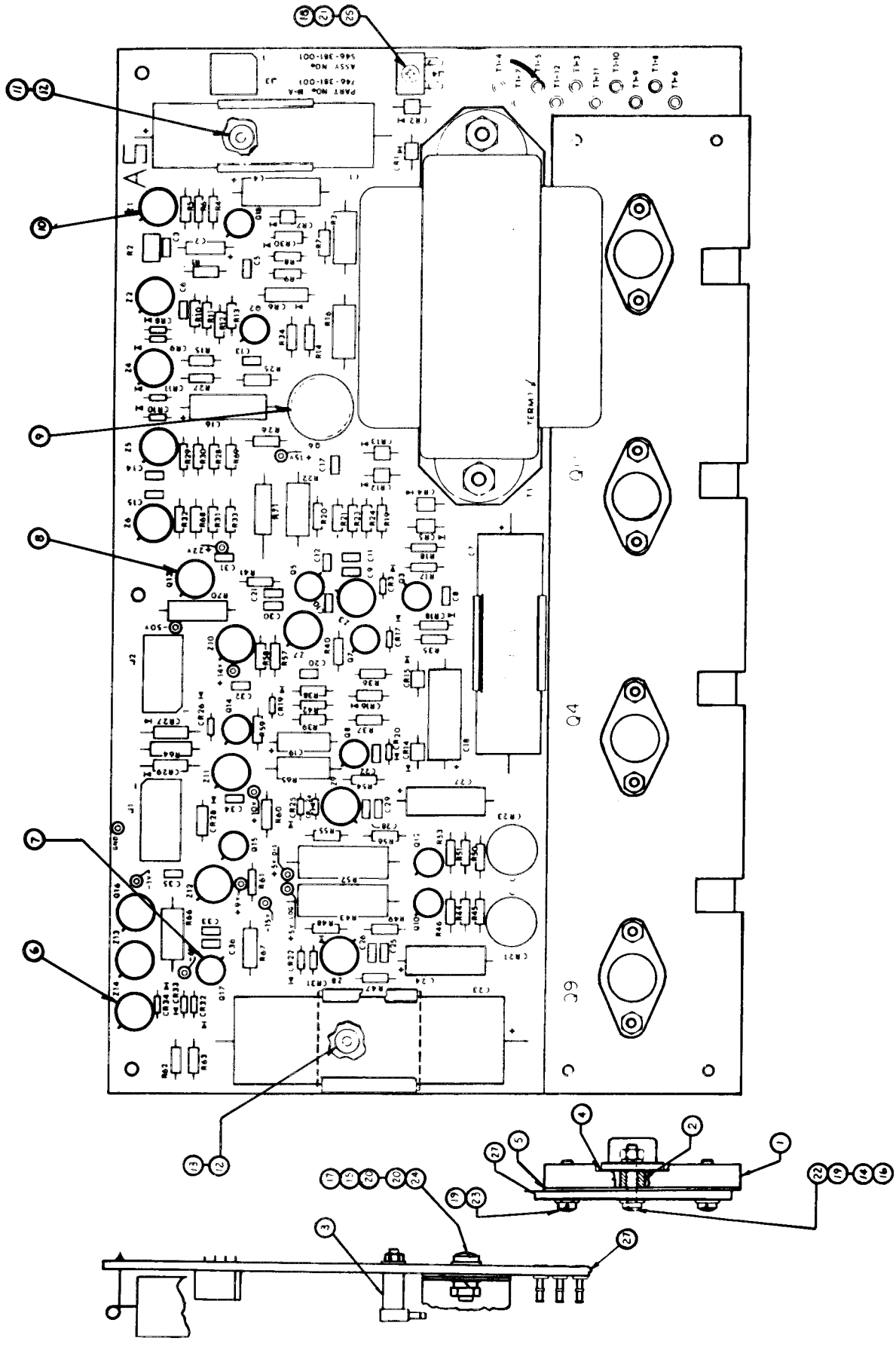


Figure 21. Power Supply P. C. Board A 5 (Sheet 1 of 2)

LEGEND

REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO	REF DES	ITEM NO
CR1	39	CR33	32	C31	41	R5	100	R37	90	R69	98
CR2	39	CR34	32	C32	44	R6	75	R38	92	R70	107
CR3	32	C1	53	C33	43	R7	92	R39	92	R71	88
CR4	39	C2	51	C34	43	R8	81	R40	76	T1	110
CR5	39	C3	42	C35	44	R9	87	R41	77	Z1	112
CR6	40	C4	50	C36	44	R10	94	R42	74	Z2	113
CR7	39	C5	43	J1	57	R11	85	R43	106	Z3	113
CR8	32	C6	43	J2	56	R12	92	R44	68	Z4	113
CR9	32	C7	53	J3	58	R13	71	R45	83	Z5	113
CR10	32	C8	43	J4	55	R14	84	R46	78	Z6	113
CR11	32	C9	42	Q1	64	R15	79	R47	82	Z7	113
CR12	39	C10	45	Q2	61	R16	103	R48	96	Z8	113
CR13	39	C11	45	Q3	61	R17	70	R49	92	Z9	113
CR14	39	C12	46	Q4	67	R18	79	R50	83	Z10	111
CR15	39	C13	43	Q5	59	R19	79	R51	68	Z11	111
CR16	34	C14	43	Q6	66	R20	74	R52	107	Z12	111
CR17	32	C15	43	Q7	63	R21	72	R53	78	Z13	111
CR18	37	C16	50	Q8	65	R22	105	R54	82	Z14	111
CR19	32	C17	43	Q9	67	R23	82	R55	96		
CR20	32	C18	52	Q10	59	R24	92	R56	92		
CR21	38	C19	49	Q11	67	R25	92	R57	91		
CR22	32	C20	45	Q12	59	R26	97	R58	95		
CR23	38	C21	43	Q13	62	R27	71	R59	91		
CR24	32	C22	47	Q14	59	R28	71	R60	101		
CR25	32	C23	54	Q15	59	R29	70	R61	91		
CR26	32	C24	48	Q16	60	R30	93	R62	96		
CR27	36	C25	42	Q17	61	R31	70	R63	101		
CR28	36	C26	45	Q18	61	R32	93	R64	89		
CR29	35	C27	48	R1	99	R33	71	R65	104		
CR30	33	C28	45	R2	109	R34	69	R66	102		
CR31	32	C29	42	R3	105	R35	80	R67	86		
CR32	32	C30	43	R4	73	R36	73	R68	98		

Figure 21. Power Supply P.C. Board A5 (Shed 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 07. POWER SUPPLY PC BOARD	
				FIGURE 21. AIR .CAP BOARD ASSEMBLY A4	
	PBFDD	26055	546-331-001	CIRCUIT CARD ASSEMB A5 SEE FIG. 1 FOR NHA	1
1	XDDZZ	26055	708-555-001	.HEAT SINK	1
2	XDDZZ	26055	736-160-001	.SPACER	8
3	XDDZZ	26055	736-162-001	.SPACER	1
4	XDDZZ	26055	680-049-002	.INSULATOR U/O Q1,Q4,Q9,Q11	8
5	XDOZZ	26055	680-097-001	.INSULATOR HEAT SINK U/O PN 708-555-001	1
6	XDDZZ	26055	680-113-001	.INSULATOR U/O Z2 THRU Z14	13
7	XDDZZ	26055	680-115-001	.INSULATOR U/0 Q2.Q3.Q5.Q7,Q8,Q10, Q12,Q14,Q15,Q17 & Q18	11
8	XDDZZ	26055	680-077-001	.INSULATOR,DISK U/O Q13 & Q16	2
9	XDDZZ	26055	680-099-001	.INSULATOR U/O Q6	1
10	XDDZZ	26055	680-055-001	.INSULATOR U/O Z1	1
11	XDDZZ	26055	626-114-001	.CLIP COMPONENT	2
12	XDDZZ	96906	MS16535-155	.RIVET,TUBULAR	4
13	XDDZZ	26055	626-115-001	.CLIP COMPONENT	1
14	XDDZZ	96906	MS35338-135	.WASHER,LOCK	8
15	XDDZZ	96906	MS35338-137	.WASHER,LOCK	4
16	XDDZZ	80205	NAS671-4	.NUT,PLAIN,HEXAGO	8
17	XDDZZ	96906	MS35649-284	.NUT,PLAIN,HEXAGON	2
18	XDDZZ	96906	MS35649-224	.NUT,PLAIN,HEXAGON	1
19	XDDZZ	96906	MS15795-803	.WASHER,FLAT	4
20	XDDZZ	96906	MS15795-807	.WASHER,FLAT	4
21	XDDZZ	96906	MS15795-802	.WASHER,FLAT	1
22	XDDZZ	96906	MS51957-17	.SCREW,MACHINE	8
23	XDDZZ	81349	RCR07G102JS	.RESISTOR,FIXED,COMP R34	1
24	XDDZZ	96906	MS21097-08001	.SCREW,SELF-LOCKING	2
25	XDDZZ	96906	MS51959-9	.SCREW,MACHINE	1
27	XDDZZ	26055	746-381-001	.P.C. BOARD DRILLING	1
32	XDDZZ	81349	JAN1N4148	.DIODE CR3,CR8 THRU CR11,CR17,CR19 THRU CR22,CR24 THRU CR26 & CR31 THRU CR34	16
33	XDDZZ	81349	JAN1N746A	.SEMICONDUCTOR DEVIC CR30	1
34	XDDZZ	81349	JAN1N754A	.SEMICONDUCTOR DEVIC CR16	1
35	XDDZZ	81349	JAN1N755A	.SEMICONDUCTOR DEVIC CR29	1
36	XDDZZ	81349	JAN1N759A	.SEMICONDUCTOR DEVIC CR27 & CR28	2
38	XDDZZ	26055	849-009-002	.DIODE CR21 & CR23	2
39	XDDZZ	26055	849-009-003	.DIODE CR1,CR2,CR4,CR5,CR7 & CR12 THRU CR15	9
40	XDDZZ	26055	849-027-001	.DIODE CR6	1
41	XDDZZ	81349	CK05BX101K	.CAPACITOR C31	1
42	XDDZZ	81349	CK05BX102K	.CAPACITOR C3,C9,C25 &C29	4
43	XDDZZ	81349	CK05BX103K	.CAPACIOTOR C5,C6,C13,C14,C15 C17,C21,C30,C33 & C34	11
44	XDDZZ	81349	CK05BX330K	.CAPACITOR C32,C35 & C36	3
45	XDDZZ	81349	CK05BX560K	.CAPACITOR C10,C11,C20,C26 & C28	5
46	XDDZZ	81349	CK06BX474K	.CAPACITOR C12	1

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
47	XDDZZ	81349	CK06BX684K	.CAPACITOR C22	1
48	XDDZZ	81349	CSR13C127KM	.CAPACITOR C24 & C27	2
49	XDDZZ	81349	CSR13E156KM	.CAPACITOR C19	1
50	XDDZZ	81340	CSR13E476KM	.CAPACITOR C4 & C16	2
51	XDDZZ	81349	CSR13G105KM	.CAPACITOR C2	1
52	XDDZZ	26055	821-009-004	.CAPACITOR C18	1
53	XDDZZ	26055	821-013-005	.CAPACITOR C1 & C7	2
54	XDDZZ	26055	821-013-010	.CAPACITOR INCL INSULATOR	1
55	XDDZZ	26055	629-242-002	.CONNECTOR PLUG 110V J4	1
56	XDDZZ	26055	730-002-001	.CONNECTOR 14 PIN J2	1
57	XDDZZ	26055	730-002-002	.CONNECTOR 16 PIN J1	1
58	XDDZZ	26055	730-002-003	.CONNECTOR 8 PIN J3	1
59	XDDZZ	81349	JAN2N2222A	.TRANSISTOR Q5,Q10,Q12,Q14, & Q15	5
60	XDDZZ	81349	JAN2N2905A	.TRANSISTOR Q16	1
61	XDDZZ	81349	JAN2N2907A	.TRANSISTOR Q2,Q3,Q17 & Q18	4
62	XDDZZ	81349	JAN2N657	.TRANSISTOR Q13	1
63	XDDZZ	81349	JAN2N912	.TRANSISTOR Q7	1
64	XDDZZ	26055	863-006-001	.TRANSISTOR Q1	1
65	XDDZZ	26055	863-007-003	.TRANSISTOR Q8	1
66	XDDZZ	26055	863-015-002	.TRANSISTOR Q6	1
67	XDDZZ	26055	863-018-001	.TRANSISTOR Q4,Q9 & Q11	3
68	XDDZZ	81349	RCR07G100JS	.RESISTOR,FIXED,COMP R44 & R51	2
70	XDDZZ	81349	RCR07G103JS	.RESISTOR,FIXED,COMP R17,R29 & R31	3
71	XDDZZ	81349	RCR07G105JS	.RESISTOR,FIXED,COMP R13,R27,R28 & R33	4
72	XDDZZ	81349	RCR07G111JS	.RESISTOR,FIXED,COMP R21	1
73	XDDZZ	81349	RCR07G122JS	.RESISTOR,FIXED,COMP R4 & R36	2
74	XDDZZ	81349	RCR07G152JS	.RESISTOR,FIXED,COMP R20 & R42	2
75	XDDZZ	81349	RCR07G153JS	.RESISTOR,FIXED,COMP R6	1
76	XDDZZ	81349	RCR07G183JS	.RESISTOR,FIXED,COMP R40	1
77	XDDZZ	81349	RCR07G221JS	.RESISTOR,FIXED,COMP R41	1
78	XDDZZ	81349	RCR07G332JS	.RESISTOR,FIXED,COMP R46 & R53	2
79	XDDZZ	81349	RCR07G392JS	.RESISTOR,FIXED,COMP R15,R18 & R19	3
80	XDDZZ	81349	RCR07G393JS	.RESISTOR,FIXED,COMP R35	1
81	XDDZZ	81349	RCR07G471JS	.RESISTOR,FIXED,COMP R8	1
82	XDDZZ	81349	RCR07G512JS	.RESISTOR,FIXED,COMP R23,R47 & R54	3
83	XDDZZ	81349	RCR07G560JS	.RESISTOR,FIXED,COMP R45 & R50	2
84	XDDZZ	81349	RCR07G621JS	.RESISTOR,FIXED,COMP R14	1
85	XDDZZ	81349	RCR20G202JS	.RESISTOR,FIXED,COMP R11	1
86	XDDZZ	81349	RCR07G752JS	.RESISTOR,FIXED,COMP R67	1
87	XDDZZ	81349	RCR20G121JS	.RESISTOR,FIXED,COMP R9	1
88	XDDZZ	81349	RCR20G511JS	.RESISTOR,FIXED,COMP R71	1
89	XDDZZ	81349	RCR20G820JS	.RESISTOR,FIXED,COMP R64	1
90	XDDZZ	81349	RNC55K1003FS	.RESISTOR,FIXED,FILM R37	1
91	XDDZZ	81349	RN55D1001F	.RESISTOR R57,R59 & R61	3
92	XDDZZ	81349	RN55D1502F	.RESISTOR R7,R12,R24,R25,R38,R39, R49 & R56	8
93	XDDZZ	81349	RN55D1691F	.RESISTOR R30 & R32	2
94	XDDZZ	81349	RN55D3482F	.RESISTOR R10	1
95	XDDZZ	81349	RN55D4021F	.RESISTOR R58	1
96	XDDZZ	81349	RN55D4991F	.RESISTOR R48,R55 & R62	3
97	XDDZZ	81349	RN55D4992F	.RESISTOR R26	1

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
98	XDDZZ	81349	RN55D5111F	.RESISTOR R68 & R69	2
99	XDDZZ	26055	RN55D6981F	.RESISTOR R1	1
100	XDDZZ	81349	RN55D7151F	.RESISTOR R5	2
101	XDDZZ	81349	RN55D9091F	.RESISTOR R60 & R63	2
102	XDDZZ	81349	RW69V121	.RESISTOR,FIXED,WIRE R66	1
103	XDDZZ	81349	RW69V122	.RESISTOR,FIXED,WIRE R16	1
104	XDDZZ	81349	RW69V181	.RESISTOR,FIXED,WIRE R65	1
105	XDDZZ	81349	RW69V5R6	.RESISTOR R3 & R22	2
106	XDDZZ	81349	RW74UR825F	.RESISTOR R43	1
107	XDDZZ	81349	RW74U1R00F	.RESISTOR R52	1
108	XDDZZ	81349	RW79U2001F	.RESISTOR R70	1
109	XDDZZ	26055	855-017-008	.RESISTOR R2	1
110	PBDZZ	26055	842-034-001	.TRANSFORMER T1 INCL INSULATOR	1
111	XDDZZ	26055	850-007-703	.MICROCIRCUIT,LINEAR Z10 THRU Z14	5
112	XDDZZ	26055	850-007-723	.INTEG CIRCUIT Z1	1
113	XDDZZ	26055	850-007-736	.INTEG CIRCUIT Z2 THRU Z9	8

END OF FIGURE

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
5305-00-054-5635	19	21	5935-01-067-9489	2	21
5305-00-054-5636	19	14	5905-01-068-2474	2	13
5305-00-054-5639	19	25	5330-01-068-5537	2	23
5305-00-054-5647	2	7	5330-01-068-8800	2	12
	19	12	5355-01-069-0564	1	14
	20	24	5995-01-070-4907	1	36
5305-00-054-6649	20	30	5935-01-073-7090	2	8
5310-00-167-0833	2	24	4920-01-092-1974	2	11
5905-00-267-1917	18	106	4920-01-092-2371	1	7
5905-00-547-8604	18	105		21	
5930-00-683-1628	2	27	5995-01-096-9117	1	42
5935-00-726-0708	2	22		7	1
5920-00-755-3235	2	19	5995-01-097-1979	1	9
5305-00-764-2966	18	18	5995-01-097-1980	1	43
	19	18		8	1
5330-00-806-8769	2	28	5995-01-097-1981	1	44
5920-00-892-9311	2	18		9	1
6210-00-900-9423	2	6	5995-01-097-1982	1	45
5310-00-938-2013	19	26		9	1
5305-01-009-6681	2	2	5995-01-097-1983	1	46
	2	9		9	1
	2	20	5995-01-097-1984	1	47
5930-01-039-7130	2	17		9	1
4920-01-063-2177	1	41	5995-01-097-1985	1	48
	17			9	1
4920-01-063-3602	1	26	5995-01-097-1986	1	49
	19			9	1
4920-01-063-3613	1	27	5995-01-097-1993	2	35
	18			16	1
4920-01-064-7007	1	31	5995-01-097-1994	1	53
5905-01-066-7103	2	14		13	1
5995-01-067-3560	20	11	5995-01-097-1995	1	54
5995-01-067-3561	20	8		13	1
5995-01-067-3562	20	17	5995-01-097-1996	1	56
5995-01-067-3563	20	5		15	1
5995-01-067-6292	1	8	6625-01-097-1999	1	55
5995-01-067-6444	20	14		14	1
5995-01-067-6447	2	33	5995-01-097-2086	1	40
	16	1		6	1
5995-01-067-6448	2	34	5995-01-097-2087	1	50
	16	1		10	1
5995-01-067-6449	2	29	5905-01-097-5795	18	111
	16	1	5935-01-112-5938	1	51
5995-01-067-6450	2	30		11	1
	16	1	5935-01-112-5939	1	52
5995-01-067-6451	2	32		12	1
	16	1	5935-01-112-5940	1	57
5935-01-067-9486	2	4		11	1
5935-01-067-9487	2	5	4920-01-123-8797	1	39
5935-01-067-9488	2	3		5	1

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STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
4920-01-123-8798	1	38			
	4	1			
4920-01-123-8799	1	37			
	3	1			
5935-01-132-3304	1	58			
5950-01-168-0584	21	110			

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99813	AK5610		20	32
88044	AN6227B-7		1	17
88044	AN960-8L	5310-00-167-0833	2	24
81349	CK05BX101K		18	30
			21	41
81349	CK05BX102K		17	3
			18	31
			21	42
81349	CK05BX103K		17	8
			18	32
			21	43
81349	CK05BX150K		18	33
81349	CK05BX330K		17	5
			18	34
			21	44
26055	CK05BX471K		18	35
81349	CK05BX560K		21	45
81349	CK06BX104K		17	6
			18	36
81349	CK06BX222K		18	37
81349	CK06BX473K		18	38
81349	CK06BX474K		21	46
81349	CK06BX682K		18	39
81349	CK06BX684K		21	47
81349	CSR13C127KM		21	48
81349	CSR13D226KM		17	7
			18	40
81349	CSR13E107KM		17	9
81349	CSR13E156KM		21	49
81349	CSR13E476KM		18	41
			21	50
81349	CSR13G105KM		18	42
			21	51
81349	CSR13G475KM		18	43
81349	C0-03MGF(3/18)03		3	5
			4	6
			5	4
81349	FHN26G1	5920-00-892-9311	2	18
81349	F02B250V3/4A	5920-00-755-3235	2	19
81349	JAN1N4148		17	2
			18	29
			21	32
81349	JAN1N746A		21	33
81349	JAN1N754A		21	34
81349	JAN1N755A		21	35
81349	JAN1N759A		21	36
81349	JAN2N2222A		17	12
			18	57
			21	59
81349	JAN2N2905A		21	60
81349	JAN2N2907A		18	58

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81349	JAN2N2907A		21	61
81349	JAN2N657		21	62
81349	JAN2N912		21	63
46384	KFS-2-440		19	8
81349	MIL-C-3767/12C		5	5
96906	MS15795-802		21	21
96906	MS15795-803		1	4
			21	19
96906	MS15795-807		21	20
96906	MS16535-155		21	12
96906	MS21097-04001		1	2
96906	MS21097-04003		1	20
		5305-01-009-6681	2	2
			2	9
			2	20
96906	MS21097-08001		21	24
96906	MS21295-13		1	3
96906	MS24523-22	5930-00-683-1628	2	27
96906	MS24694-249		2	36
96906	MS25196-1	5330-00-806-8769	2	28
96906	MS3057-4A		3	3
			4	3
			5	3
96906	MS3101A-10SL-3P		3	4
96906	MS3102R10SL-3P	5935-00-726-0708	2	22
96906	MS3106A-10SL-3S		3	2
			4	2
			5	2
96906	MS35338-135		21	14
96906	MS35338-137		21	15
96906	MS35649-224		1	6
		5310-00-938-2013	19	26
			21	18
96906	MS35649-284		21	17
96906	MS51957-1	5305-00-054-5635	19	21
96906	MS51957-13	5305-00-054-5647	2	7
			19	12
			20	24
96906	MS51957-17		21	22
96906	MS51957-2	5305-00-054-5636	19	14
96906	MS51957-25	5305-00-054-6649	20	30
96906	MS51957-3		18	9
96906	MS51957-5	5305-00-054-5639	19	25
96906	MS51959-2	5305-00-764-2966	18	18
			19	18
96906	MS51959-9		21	25
96906	MS9068-006		2	25
			20	34
81349	M39015/2-005WP	5905-00-267-1917	18	106
81349	M39015/2-007WP	5905-00-547-8604	18	105
80205	NAS671-4		21	16

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81349	RCR07G100JS		21	68
81349	RCR07G102JS		17	13
			18	61
			21	23
81349	RCR07G103JS		17	14
			18	62
			21	70
81349	RCR07G104JS		18	63
81349	RCR07G105JS		21	71
81349	RCR07G111JS		18	64
			21	72
81349	RCR07G122JS		21	73
81349	RCR07G124JS		18	65
81349	RCR07G152JS		21	74
81349	RCR07G153JS		18	66
			21	75
81349	RCR07G183JS		21	76
81349	RCR07G203JS		18	67
81349	RCR07G204JS		18	68
81349	RCR07G206JS		18	69
81349	RCR07G220JS		18	70
81349	RCR07G221JS		17	15
			18	71
			21	77
81349	RCR07G222JS		18	72
81349	RCR07G242JS		17	16
81349	RCR07G244JS		18	73
81349	RCR07G304JS		18	74
81349	RCR07G332JS		21	78
81349	RCR07G333JS		18	75
81349	RCR07G392JS		18	76
			21	79
81349	RCR07G393JS		21	80
81349	RCR07G394JS		17	17
			18	77
81349	RCR07G470JS		18	78
81349	RCR07G471JS		21	81
81349	RCR07G512JS		17	18
			18	79
			21	82
81349	RCR07G560JS		21	83
81349	RCR07G621JS		21	84
81349	RCR07G752JS		21	86
81349	RCR20G121JS		21	87
81349	RCR20G202JS		21	85
81349	RCR20G511JS		21	88
81349	RCR20G820JS		21	89
81349	RNC55K1003FS		21	90
81349	RNR55J1004FM		18	80
81349	RNR55J1103FM		18	81
26055	RNR55J1153FM		18	82

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81349	RNR55J1303FM		18	83
81349	RNR55J2000FM		18	84
81349	RNR55J3013FM		18	85
81349	RNR55J5763FM		18	86
81349	RNR55J9093FM		18	87
81349	RNR55J9533FM		18	88
81349	RNR60J3014FM		18	89
81349	RN55C1000F		18	90
81349	RN55C1102F		18	91
81349	RN55C1502F		18	92
81349	RN55C2002F		18	93
81349	RN55C4021F		18	94
81349	RN55D1001F		21	91
81349	RN55D1502F		21	92
81349	RN55D1691F		21	93
81349	RN55D3482F		21	94
81349	RN55D4021F		21	95
81349	RN55D4991F		21	96
81349	RN55D4992F		21	97
81349	RN55D5111F		21	98
26055	RN55D6981F		21	99
81349	RN55D7151F		21	100
81349	RN55D9091F		21	101
81349	RN55E1001F		18	95
81349	RN55E1002F		18	96
81349	RN55E1003F		18	97
81349	RN55E1502F		18	98
81349	RN55E2872F		18	99
81349	RN55E3011F		18	100
81349	RN55E3012F		18	101
81349	RN55E3652F		18	102
81349	RN55E7681F		18	104
81349	RWR89SS101FR		18	107
81349	RW69V121		21	102
81349	RW69V122		21	103
81349	RW69V181		21	104
81349	RW69V5R6		21	105
81349	RW74UR825F		21	106
81349	RW74U1R00F		21	107
81349	RW79U2001F		21	108
78947	119437G		17	19
51167	16-004-103	5995-01-070-4907	1	36
51167	16-009.8-103	5995-01-097-1979	1	9
51167	16-511-11		17	11
72619	181-8836-0931-553	6210-00-900-9423	2	6
24931	28AT101-3	5935-01-132-3304	1	58
24931	28JS105-4		16	3
24931	28JS122-3		16	3
24931	28JS168-1		16	3
24931	28PC106-1	5935-01-067-9486	2	4

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24931	28PC108-1	5935-01-067-9487	2	5
24931	33PC101-1	5935-01-073-7090	2	8
24931	37JR104-2		18	52
24931	37P106-1		16	2
			20	7
			20	10
			20	13
			20	16
			20	19
24931	372R110-1		19	29
26055	444-138-001		18	4
81073	46150BLK	5930-01-039-7130	2	17
26055	467-087-001	5995-01-067-6292	1	8
26055	467-089-001	5995-01-067-3560	20	11
26055	467-089-002	5995-01-067-3561	20	8
26055	467-089-003	5995-01-067-3562	20	17
26055	467-089-004	5995-01-067-3563	20	5
26055	467-089-005	5995-01-067-6444	20	14
26055	467-094-001	5995-01-067-6448	2	34
			16	1
26055	467-095-001	5995-01-067-6450	2	30
			16	1
26055	467-096-001	5995-01-097-1993	2	35
			16	1
26055	467-097-001	5995-01-067-6447	2	33
			16	1
26055	467-098-001	5995-01-067-6451	2	32
			16	1
26055	467-099-001	5995-01-067-6449	2	29
			16	1
26055	467-100-001	4920-01-123-8799	1	37
			3	1
26055	467-101-001	4920-01-123-8798	1	38
			4	1
26055	467-102-001	4920-01-123-8797	1	39
			5	1
26055	467-103-001	5995-01-097-2086	1	40
			6	1
26055	467-104-001	5995-01-096-9117	1	42
			7	1
26055	467-105-001	5995-01-097-1980	1	43
			8	1
26055	467-106-001	5995-01-097-1981	1	44
			9	1
26055	467-107-001	5995-01-097-1982	1	45
			9	1
26055	467-108-001	5995-01-097-1983	1	46
			9	1
26055	467-109-001	5995-01-097-1984	1	47
			9	1
26055	467-110-001	5995-01-097-1985	1	48

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FSCM	PART NUMBER	STOCK NUMBER	FIG	ITEM
26055	467-110-001	5995-01-097-1985	9	1
26055	467-111-001	5995-01-097-1986	1	49
			9	1
26055	467-113-001	5995-01-097-2087	1	50
			10	1
26055	467-114-001	6625-01-097-1999	1	55
			14	1
26055	467-115-001	5935-01-112-5938	1	51
			11	1
26055	467-116-001	5935-01-112-5939	1	52
			12	1
26055	467-117-001	5995-01-097-1994	1	53
			13	1
26055	467-118-001	5995-01-097-1995	1	54
			13	1
26055	467-119-001	5995-01-097-1996	1	56
			15	1
26055	467-120-001	5935-01-112-5940	1	57
			11	1
26055	477-195-001		1	1
81349	4955E4022F		18	103
26055	504-013-001		1	34
			2	1
26055	504-212-002		2	37
26055	508-394-001		1	24
			20	1
26055	527-007-001		18	12
26055	546-378-001	4920-01-063-3613	1	27
			18	
26055	546-379-001	4920-01-063-2177	1	41
			17	
26055	546-380-001	4920-01-063-3602	1	26
			19	
26055	546-381-001	4920-01-092-2371	1	7
			21	
26055	604-026-001		1	23
26055	610-314-001		1	35
26055	610-315-001		18	8
			19	16
26055	610-315-003		18	15
26055	610-316-001		1	28
26055	610-316-002		1	29
26055	610-330-001		20	33
26055	610-331-001		1	5
26055	610-332-001		1	10
26055	612-146-001		20	26
26055	618-055-001	5935-01-067-9488	2	3
26055	620-013-001		1	59
26055	626-093-001		4	4
			14	4
26055	626-114-001		21	11

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26055	626-115-001		21	13
26055	629-222-001		6	7
			10	7
			11	2
			12	2
			13	3
			14	2
			15	2
26055	629-223-001		6	8
			10	6
			11	7
			12	7
			13	3
26055	629-226-001		13	2
26055	629-227-001		13	2
26055	629-228-001		10	4
26055	629-228-002		9	6
26055	629-228-003		6	5
			7	4
			9	6
26055	629-228-004		11	4
26055	629-228-005		11	4
26055	629-229-001		10	2
26055	629-229-002		9	2
26055	629-229-003		6	2
			8	2
26055	629-229-004		12	4
26055	629-230-001		8	5
26055	629-231-001		7	2
26055	629-242-002		21	55
26055	658-025-001	5330-01-068-5537	2	23
26055	658-026-001		2	16
26055	658-035-001	5330-01-068-8800	2	12
26055	658-037-001		2	31
26055	668-006-001		2	38
26055	680-049-002		21	4
26055	680-055-001		21	10
26055	680-077-001		21	8
26055	680-078-001		18	2
26055	680-080-001		4	5
			14	3
26055	680-093-001		1	21
26055	680-094-001		1	22
26055	680-097-001		21	5
26055	680-099-001		21	9
26055	680-100-001		20	31
26055	680-103-001		18	5
26055	680-113-001		17	22
			18	3
			21	6
26055	680-115-001		18	6

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26055	680-115-001		21	7
26055	696-205-001		1	18
26055	696-205-002		1	19
26055	708-553-001		18	17
			19	17
26055	708-555-001		21	1
26055	708-559-001		1	12
26055	712-080-013		19	11
26055	712-203-004		1	30
26055	712-211-001		1	33
26055	712-211-002		1	11
26055	712-211-003		1	25
26055	712-212-001		2	26
26055	712-213-001		2	15
26055	712-217-001		18	16
			19	13
26055	712-217-002		19	24
26055	715-014-001		18	10
26055	715-015-001		18	20
26055	715-016-001		18	24
26055	715-017-001		18	25
26055	715-018-001		18	28
26055	715-019-001		19	20
26055	716-098-001		2	10
26055	718-007-005		20	4
26055	722-031-106		1	13
26055	726-143-001		20	25
26055	727-046-002		20	3
26055	727-047-002		20	28
26055	727-048-002		19	2
26055	730-001-001		17	20
26055	730-002-001		18	53
			21	56
26055	730-002-002		18	54
			21	57
26055	730-002-003		18	55
			21	58
26055	730-004-001		17	21
26055	736-159-001		7	3
			8	4
			9	4
			11	3
			12	3
26055	736-159-002		6	3
			10	3
26055	736-160-001		21	2
26055	736-161-001		11	3
26055	736-162-001		21	3
26055	737-008-001		18	26
26055	737-008-002		18	23
26055	737-009-001		19	10

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26055	737-009-002		19	9
26055	737-010-001		18	21
26055	737-010-002		18	22
26055	737-011-002		18	19
26055	737-012-001		18	11
			19	19
26055	737-012-002		18	7
26055	737-012-003		18	27
26055	737-012-004		19	15
26055	741-001-006		20	2
26055	742-041-001		6	4
			9	5
			11	6
			12	6
26055	746-378-001		18	1
26055	746-379-001		17	1
26055	746-380-001		19	1
26055	746-381-001		21	27
26055	758-001-014		18	14
			19	7
26055	758-062-001		20	27
26055	758-064-001		1	15
26055	759-006-059		1	16
26055	760-026-001	4920-01-092-1974	2	11
26055	766-012-001		20	6
			20	9
			20	12
			20	15
			20	18
			20	21
26055	790-137-001		20	20
26055	790-230-001		6	6
			7	5
			8	3
			9	3
			10	5
			11	5
			12	5
26055	790-232-001	5935-01-067-9489	2	21
26055	790-233-001		20	23
26055	800-001-038		18	108
26055	802-003-003		18	109
26055	802-003-004		18	110
99813	81C4GA	5355-01-069-0564	1	14
26055	820-001-003		17	10
26055	821-002-056		18	44
26055	821-002-094		18	45
26055	821-002-113		18	46
26055	821-002-135		18	47
26055	821-002-136		18	48
26055	821-002-137		18	49

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26055	821-002-138		18	50
26055	821-009-004		21	52
26055	821-010 002		18	51
26055	821-013-005		21	53
26055	821-013-010		21	54
26055	821-044-001		19	6
26055	821-044-002		19	5
26055	821-044-003		19	4
26055	821-044-004		19	3
26055	821-044-005		19	22
26055	821-044-006		19	28
26055	821-044-007		19	27
26055	825-009-001		20	29
26055	842-034-001	5950-01-168-0584	21	110
26055	849-009-002		21	38
26055	849-009-003		21	39
26055	849-027-001		21	40
26055	850-007-301		17	24
26055	850-007-302		18	112
26055	850-007-303		17	25
26055	850-007-304		17	26
26055	850-007-307		17	27
			18	113
26055	850-007-308		17	28
26055	850-007-310		17	29
			18	114
26055	850-007-312		17	30
26055	850-007-315		17	31
			18	115
26055	850-007-317		17	32
26055	850-007-322		17	33
26055	850-007-703		21	111
26055	850-007-717		17	34
			18	116
26055	850-007-723		21	112
26055	850-007-731		18	117
26055	850-007-736		17	35
			18	118
			21	113
26055	850-027-002		1	32
			17	36
26055	850-028-001		18	119
26055	855-017-008		21	109
26055	855-027-002	5905-01-068-2474	2	13
26055	855-027-003	5905-01-066-7103	2	14
26055	855-033-001	5905-01-097-5795	18	111
26055	858-011-004		18	56
26055	863-005-003		18	59
26055	863-006-001		21	64
26055	863-007-002		18	60
26055	863-007-003		21	65

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG	ITEM
26055	863-015-002		21	66
26055	863-018-001		21	67
26055	872-008-001	4920-01-064-7007	1	31

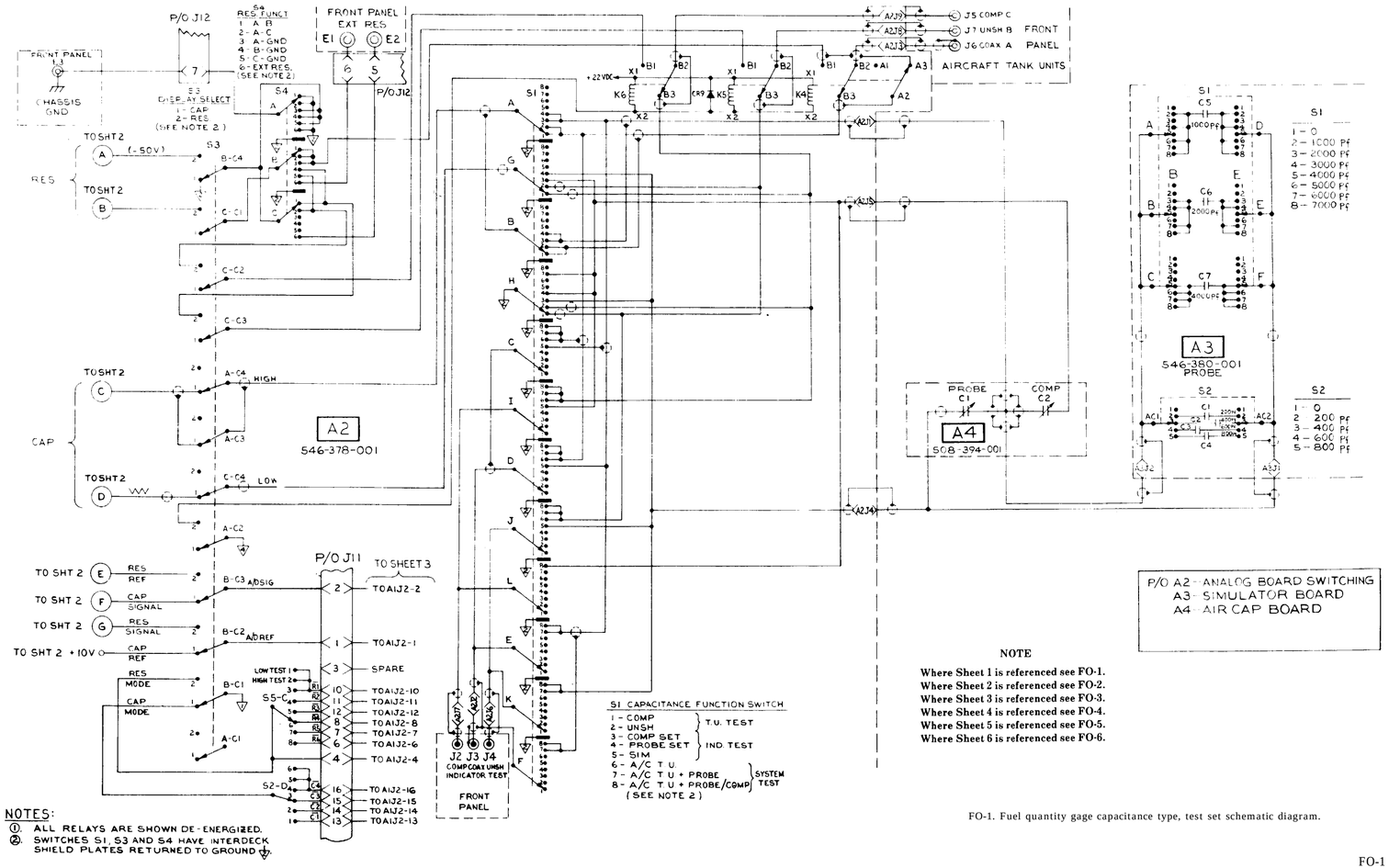
INDEX

INDEX-Continued

INDEX-Continued

INDEX-Continued

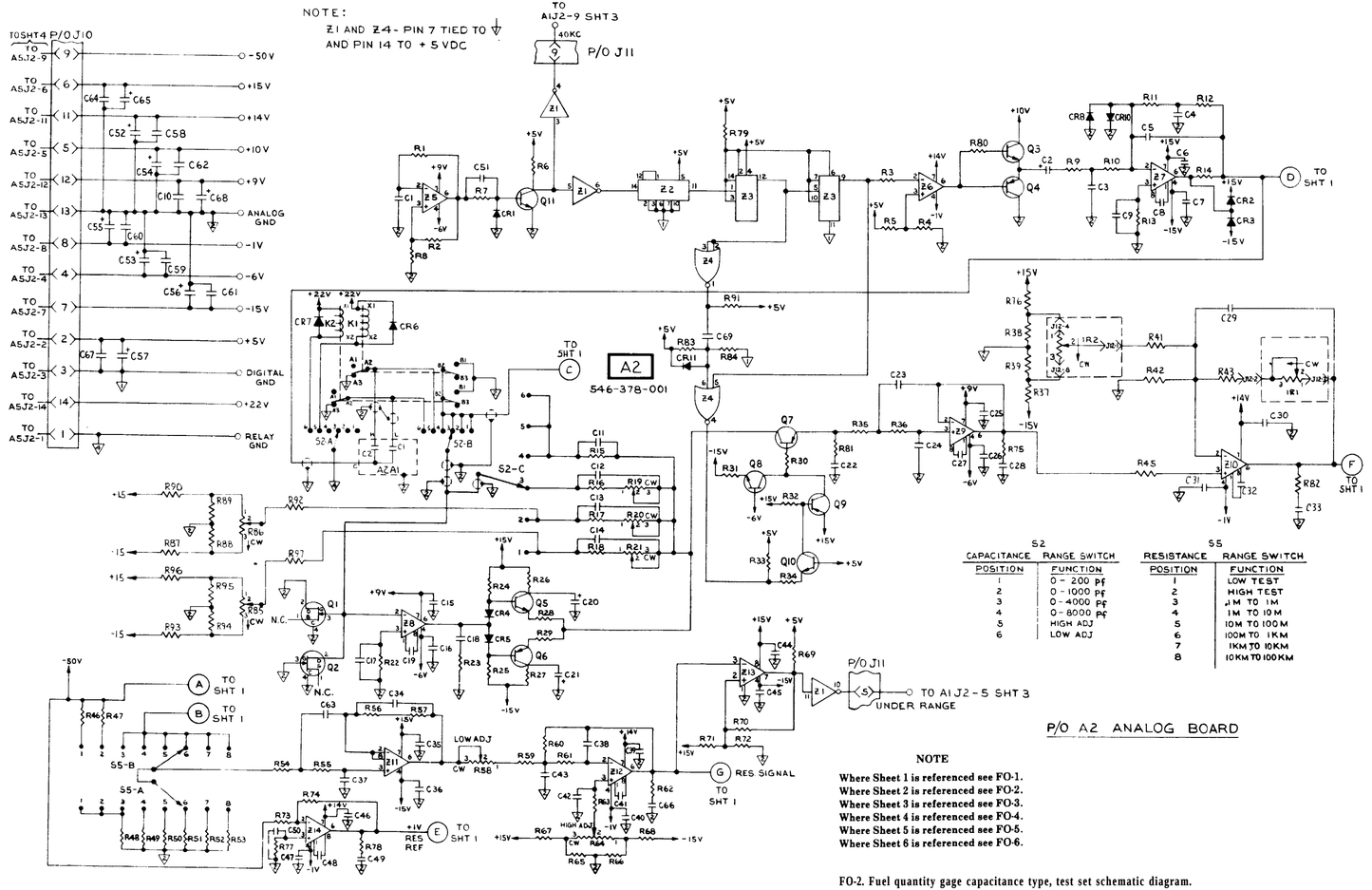
INDEX-Continued



NOTE

Where Sheet 1 is referenced see FO-1.
Where Sheet 2 is referenced see FO-2.
Where Sheet 3 is referenced see FO-3.
Where Sheet 4 is referenced see FO-4.
Where Sheet 5 is referenced see FO-5.
Where Sheet 6 is referenced see FO-6.

FO-1. Fuel quantity gage capacitance type, test set schematic diagram.



S2

CAPACITANCE RANGE SWITCH POSITION	FUNCTION
1	0 - 200 PF
2	0 - 1000 PF
3	0 - 4000 PF
4	0 - 8000 PF
5	HIGH ADJ
6	LOW ADJ

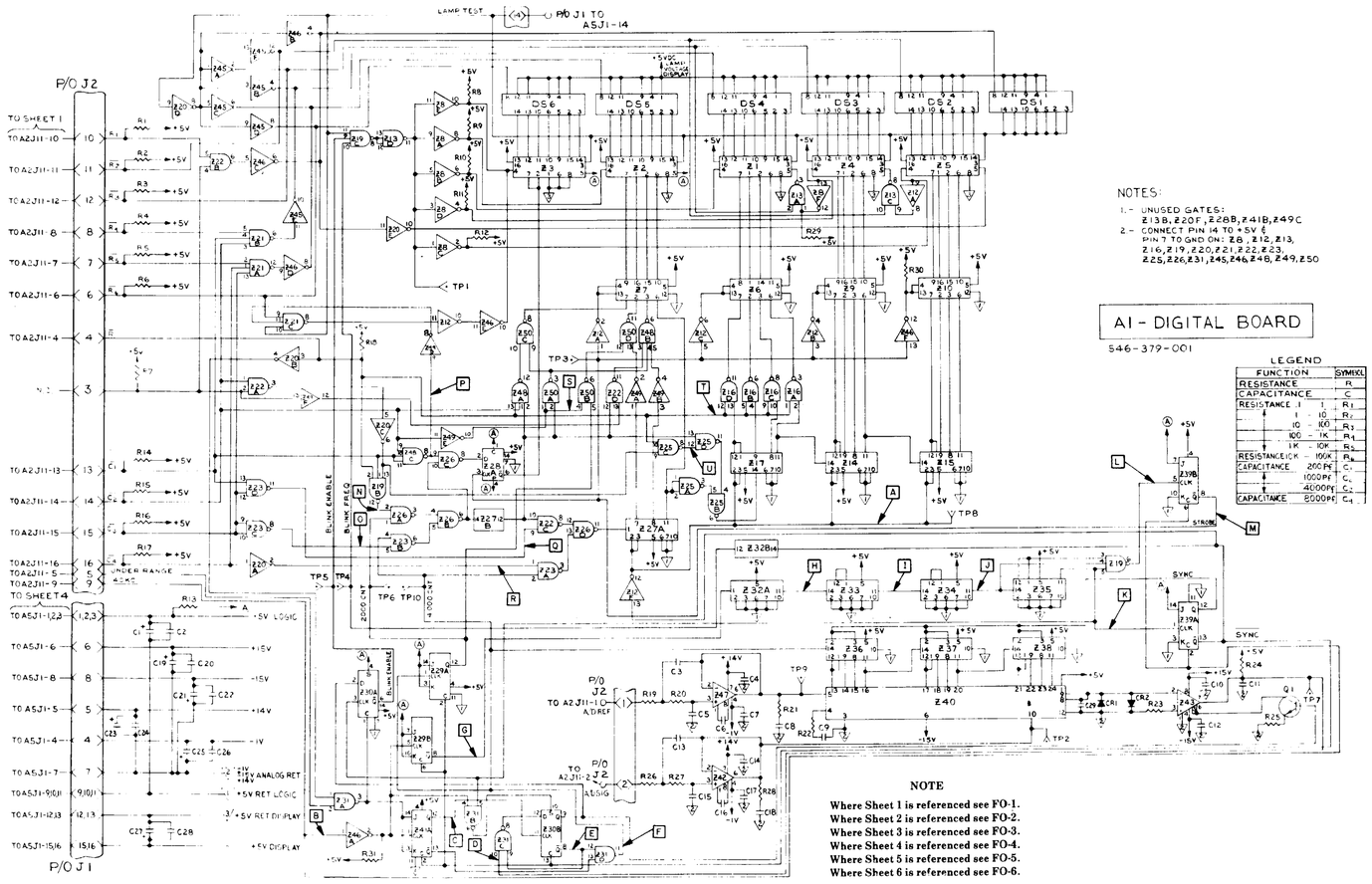
S5

RESISTANCE RANGE SWITCH POSITION	FUNCTION
1	LOW TEST
2	HIGH TEST
3	.1M TO 1M
4	1M TO 10M
5	10M TO 100M
6	100M TO 1KM
7	1KM TO 10KM
8	10KM TO 100KM

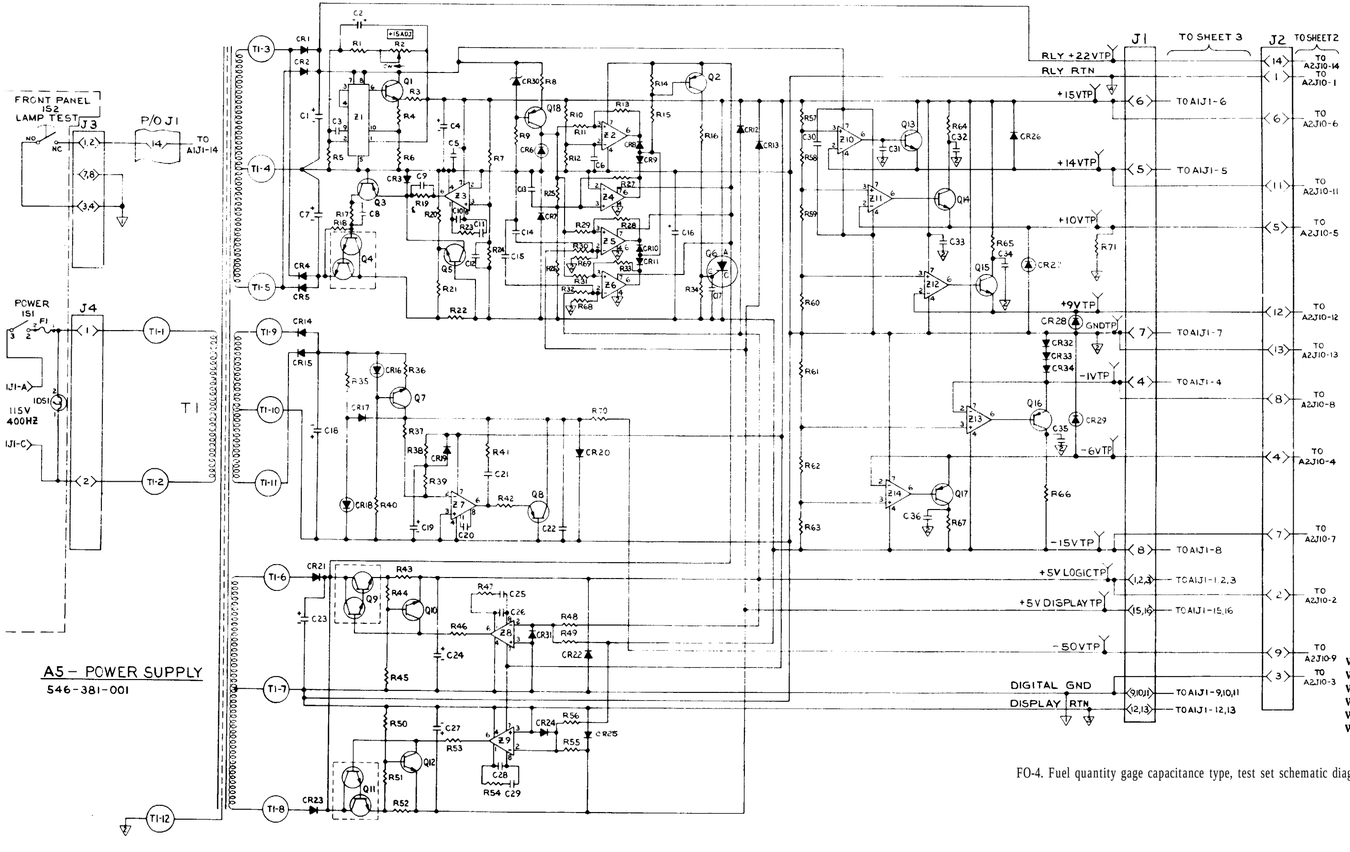
NOTE

Where Sheet 1 is referenced see FO-1.
Where Sheet 2 is referenced see FO-2.
Where Sheet 3 is referenced see FO-3.
Where Sheet 4 is referenced see FO-4.
Where Sheet 5 is referenced see FO-5.
Where Sheet 6 is referenced see FO-6.

FO-2. Fuel quantity gage capacitance type, test set schematic diagram.



FO-3. Fuel quantity gage capacitance type, test set schematic diagram.



NOTE

Where Sheet 1 is referenced see FO-1.
Where Sheet 2 is referenced see FO-2.
Where Sheet 3 is referenced see FO-3.
Where Sheet 4 is referenced see FO-4.
Where Sheet 5 is referenced see FO-5.
Where Sheet 6 is referenced see FO-6.

FO-4. Fuel quantity gage capacitance type, test set schematic diagram.

A1 DIGITAL BOARD

SYMBOL	QTY	PART NUMBER	DESCRIPTION
Z1 thru Z5	5	850-007-322	INTEG. CIRCUIT
Z6,7,9,10	4	850-007-312	INTEG. CIRCUIT
Z8,45,46	3	850-007-303	INTEG. CIRCUIT
Z12,20, 49	3	850-007-315	INTEG. CIRCUIT
Z13,16, 22,23,25, 26,31,50	8	850-007-301	INTEG. CIRCUIT
Z14,15, 17,27,32 thru 35	8	850-007-310	INTEG. CIRCUIT
Z19,21,48	3	850-007-304	INTEG. CIRCUIT
Z28,30	2	850-007-308	INTEG. CIRCUIT
Z29,39,41	3	850-007-307	INTEG. CIRCUIT
Z36,37,38	3	850-007-317	INTEG. CIRCUIT
Z40	1	850-027-002	INTEG. CIRCUIT
Z42,47	2	890-001-004	INTEG. CIRCUIT
Z43	1	850-007-717	INTEG. CIRCUIT
TP1-10	10	629-206-007	TEST POINT
J1, 2	2	730-002-002	SOCKET, 16 PIN
Q1	1	JAN2N2222A	TRANSISTOR
CR1,2	2	JAN1N4148	DIODE
C1,27	2	CSR13D686KM	CAPACITOR
C2,4,7,9, 10,11,12. 14,17,20, 22,24,26, 28	14	CK05BX103K	CAPACITOR
C3,13	2	CK06BX104K	CAPACITOR
C5,15	2	820-001-003	CAPACITOR
C6,16	2	CK05BX330K	CAPACITOR
C8,18,29	3	CK05BX102K	CAPACITOR
C19,21,23	3	CSR13E107KM	CAPACITOR
C25	1	CSR13D226KM	CAPACITOR
XZ40	1	730-004-001	SOCKET
DS1-DS6	6	872-008-001	DISPLAY, DIGITAL
XDS1-XDS6	6	730-001-001	SOCKET, DISPLAY
R1 thru R12, R14 thru R18, R22,29,30, 31	21	RCR07G103JS	RESISTOR
R13,25	2	RCR07G102JS	RESISTOR
R19,20, 26, 27	4	RCR07G394JS	RESISTOR
R21,28	2	RCR07G221JS	RESISTOR
R23	1	RCR07G242JS	RESISTOR
R24	1	RCR07G512JS	RESISTOR

A2 ANALOG BOARD

SYMBOL	QTY	PART NUMBER	DESCRIPTION
J1-J9	9	629-217-001	CONNECTOR
J10	1	730-002-001	CONNECTOR
J11	1	730-002-002	CONNECTOR
J12	1	730-002-003	CONNECTOR
CR1 - CR11	11	JAN1N4148	DIODE
C1	1	821-002-135	CAPACITOR
C2	1	CSR13G475KM	CAPACITOR
C3,18,28, 33,49,66	6	CK05BX102K	CAPACITOR
C4, 22	2	821-010-002	CAPACITOR
C5	1	821-002-136	CAPACITOR
C6,7,9, 10,15,16, 17,25,26, 30,31,35, 36,39,40, 42,44,45, 46,47,50, 58,59,60, 61,62,64, 67	28	CK05BX103K	CAPACITOR
C8,27,32, 41, 48	5	CK05BX330K	CAPACITOR
C11	1	821-002-094	CAPACITOR
C12	1	821-002-137	CAPACITOR
C13	1	821-002-113	CAPACITOR
C14	1	821-002-056	CAPACITOR
C19	1	CK05BX150K	CAPACITOR
C20,21	2	CSR13G105KM	CAPACITOR
C23,29,34, 43	4	CK06BX104K	CAPACITOR
C24,69	2	CK06BX473K	CAPACITOR
C37	1	821-002-138	CAPACITOR
C38	1	CK06BX682K	CAPACITOR
C51	1	CK05BX101K	CAPACITOR
C52,53, 54,56,57, 65,68	7	CSR13E476KM	CAPACITOR
C55	1	CSR13D226KM	CAPACITOR
C63	1	CK06BX222K	CAPACITOR
S1	12	737-012-001	WAFER
	1	737-012-002	DETENT MECH
S2	4	737-010-001	WAFER
	1	737-011-002	DETENT MECH
S3	3	737-008-001	WAFER
	1	737-008-002	DETENT MECH
S4	3	737-010-001	WAFER
	1	737-010-002	DETENT MECH
S5	3	737-012-001	WAFER
	1	737-012-003	DETENT MECH
R1	1	RN55E3652F	RESISTOR
R2,8,41, 46	4	RN55E1003F	RESISTOR
R3,6,24, 25,R69, 91	6	RCR07G103JS	RESISTOR
R4	1	RCR07G153JS	RESISTOR
R5	1	RCR07G333JS	RESISTOR

A2 ANALOG BOARD

SYMBOL	QTY	PART NUMBER	DESCRIPTION
R7,11,12, 35,36	5	RCR07G104JS	RESISTOR
R9,10	2	800-001-038	RESISTOR
R13	1	RCR07G204JS	RESISTOR
R14	1	RWR89S1501FR	RESISTOR
R15	1	RN55E1502F	RESISTOR
R16	1	RN55E2872F	RESISTOR
R17,87, 90,92, 93,96	6	RNR55J1103FM	RESISTOR
R18,97	2	RNR55J5763FM	RESISTOR
R19,64, 85,86	4	RT22C2W202	RESISTOR, VARIABLE
R20,58	2	RT22C2W103	RESISTOR, VARIABLE
R21	1	855-033-001	RESISTOR
R22	1	RCR07G394JS	RESISTOR
R23,62, 75,78,82	5	RCR07G221JS	RESISTOR
R26,27	2	RCR07G470JS	RESISTOR
R28,29	2	RCR07G220JS	RESISTOR
R30,77	2	RCR07G203JS	RESISTOR
R31	1	RN55E4022F	RESISTOR
R32	1	RCR07G222JS	RESISTOR
R33,34,45	3	RCR07G512JS	RESISTOR
R47	1	RNR55J9533FM	RESISTOR
R38,39	2	RN55E1001F	RESISTOR
R42	1	RN55E1002F	RESISTOR
R43,37,76	3	RN55E7681F	RESISTOR
R48	1	RN55E3011F	RESISTOR
R49	1	RN55E3012F	RESISTOR
R50	1	RNR55J3013FM	RESISTOR
R51	1	RNR60J3014FM	RESISTOR
R52	1	802-003-003	RESISTOR
R53	1	802-003-004	RESISTOR
R54,55, 56,57	4	RCR07G206JS	RESISTOR
R59	1	RNR55J1003FM	RESISTOR
R60	1	RNR55J9093FM	RESISTOR
R61	1	RCR07G124JS	RESISTOR
R63	1	RCR07G244JS	RESISTOR
R65,66	2	RN55C1000F	RESISTOR
R67,68	2	RN55C1502F	RESISTOR
R70	1	RCR07G304JS	RESISTOR
R71	1	RN55C4021F	RESISTOR
R72	1	RN55C1102F	RESISTOR
R73	1	RNR55J1004FM	RESISTOR
R74	1	RN55C2002F	RESISTOR
R79,80	2	RCR07G102JS	RESISTOR

NOTE

Where Sheet 1 is referenced see FO-1.
Where Sheet 2 is referenced see FO-2.
Where Sheet 3 is referenced see FO-3.
Where Sheet 4 is referenced see FO-4.
Where Sheet 5 is referenced see FO-5.
Where Sheet 6 is referenced see FO-6.

FO-5. Fuel quantity gage capacitance type, test set schematic diagram

A2 ANALOG BOARD

SYMBOL	QTY	PART NUMBER	DESCRIPTION
R81	1	RCR07G111JS	RESISTOR
R83,84	2	RCR07G393JS	RESISTOR
R88,89, 94,95	4	RNR55J2000FM	RESISTOR
Z1	1	850-007-315	INTEG. CIRCUIT
Z2	1	850-007-310	INTEG. CIRCUIT
Z3	1	850-007-307	INTEG. CIRCUIT
Z4	1	850-007-302	INTEG. CIRCUIT
Z5,6,8, 9,10,12, 14	7	850-007-736	INTEG. CIRCUIT
Z7	1	850-007-731	INTEG. CIRCUIT
Z11	1	850-028-001	INTEG. CIRCUIT
Z13	1	850-007-717	INTEG. CIRCUIT
REF	1	821-032-017	CAPACITOR (C2) PART OF A2A1
REF	1	821-002-016	CAPACITOR (C1) PART OF A2A1
A2A1	1	444-138-001	CAP, STANDARD ASSY
K1,2,4, 5,6	5	858-011-004	RELAY
Q1, 2	2	863-005-003	TRANSISTOR
Q3,5,8, 10, 11	5	JAN2N2222A	TRANSISTOR
Q4,6,9	3	JAN2N2907A	TRANSISTOR
Q7	1	863-007-002	TRANSISTOR

A3 SIMULATOR BOARD

SYMBOL	QTY	PART NUMBER	DESCRIPTION
S1	6	737-012-001	WAFER
	1	737-012-004	DETENT MECH
S2	1	737-009-001	WAFER
	1	737-009-002	DETENT MECH
C1	1	821-044-001	CAPACITOR
C2	1	821-044-002	CAPACITOR
C3	1	821-044-003	CAPACITOR
C4	1	821-044-004	CAPACITOR
C5	1	821-044-005	CAPACITOR
C6	1	821-044-006	CAPACITOR
C7	1	821-044-007	CAPACITOR

A4 AIR CAP BOARD

SYMBOL	QTY	PART NUMBER	DESCRIPTION
C1, 2	2	825-009-001	CAPACITOR, VARIABLE

FRONT PANEL

SYMBOL	QTY	PART NUMBER	DESCRIPTION
DS1	1	790-222-001	LAMP
S1	1	MS24523-22	SWITCH
S2	1	861-022-001	SWITCH
F1	1	851-002-017	FUSE
R1	1	855-027-002	RESISTOR, VARIABLE
R2	1	855-027-003	RESISTOR, VARIABLE

A5 POWER SUPPLY

SYMBOL	QTY	PART NUMBER	DESCRIPTION
T1		842-034-001	TRANSFORMER
CR1,2,4, 5,CR7,12, 13,CR14, 15	9	849-009-003	DIODE
CR3,8,9, 10,CR11, 17,19, CR20,22, 24,CR25, 26,31, CR32,33, 34	16	JAN1N4148	DIODE
CR6	1	849-027-001	DIODE
CR16	1	JAN1N754A	DIODE
CR18	1	JAN1N979B	DIODE
CR21, 23	2	849-009-002	DIODE
CR27, 28	2	JAN1N759A	DIODE
CR29	1	JAN1N755A	DIODE
CR30	1	JAN1N746A	DIODE
J1	1	730-002-002	CONNECTOR 16P
J2	1	730-002-001	CONNECTOR 14P
J3	1	730-002-003	CONNECTOR 8P
J4	1	629-242-002	CONNECTOR 2P
Q1	1	863-006-001	TRANSISTOR
Q2,3,17, 18	4	JAN2N2907A	TRANSISTOR
Q4,9,11	3	863-018-001	TRANSISTOR
Q5,10,12, 14, 15	5	JAN2N2222A	TRANSISTOR
Q6	1	863-015-002	TRANSISTOR
Q7	1	JAN2N912	TRANSISTOR
Q8	1	863-007-003	TRANSISTOR
Q13	1	JAN2N657	TRANSISTOR
Q16	1	JAN2N2905A	TRANSISTOR
R1, 5	2	RN55D7151F	RESISTOR
R2	1	855-017-008	RESISTOR, VARIABLE
R3, 22	2	RW69V5R6	RESISTOR
R4, 36	2	RCR07G122JS	RESISTOR
R6	1	RCR07G153JS	RESISTOR
R7,12,24, 25,R38, 39,49,56	8	RN55D1502F	RESISTOR
R8	1	RCR07G471JS	RESISTOR
R9	1	RCR07G681JS	RESISTOR
R10	1	RN55D3482F	RESISTOR
R11	1	RCR07G752JS	RESISTOR
R13,27, 28,33	4	RCR07G103JS	RESISTOR
R14	1	RCR07G621JS	RESISTOR
R15,18,19	3	RCR07G392JS	RESISTOR
R16	1	RW69V122	RESISTOR
R17,29,31	3	RCR07G103JS	RESISTOR

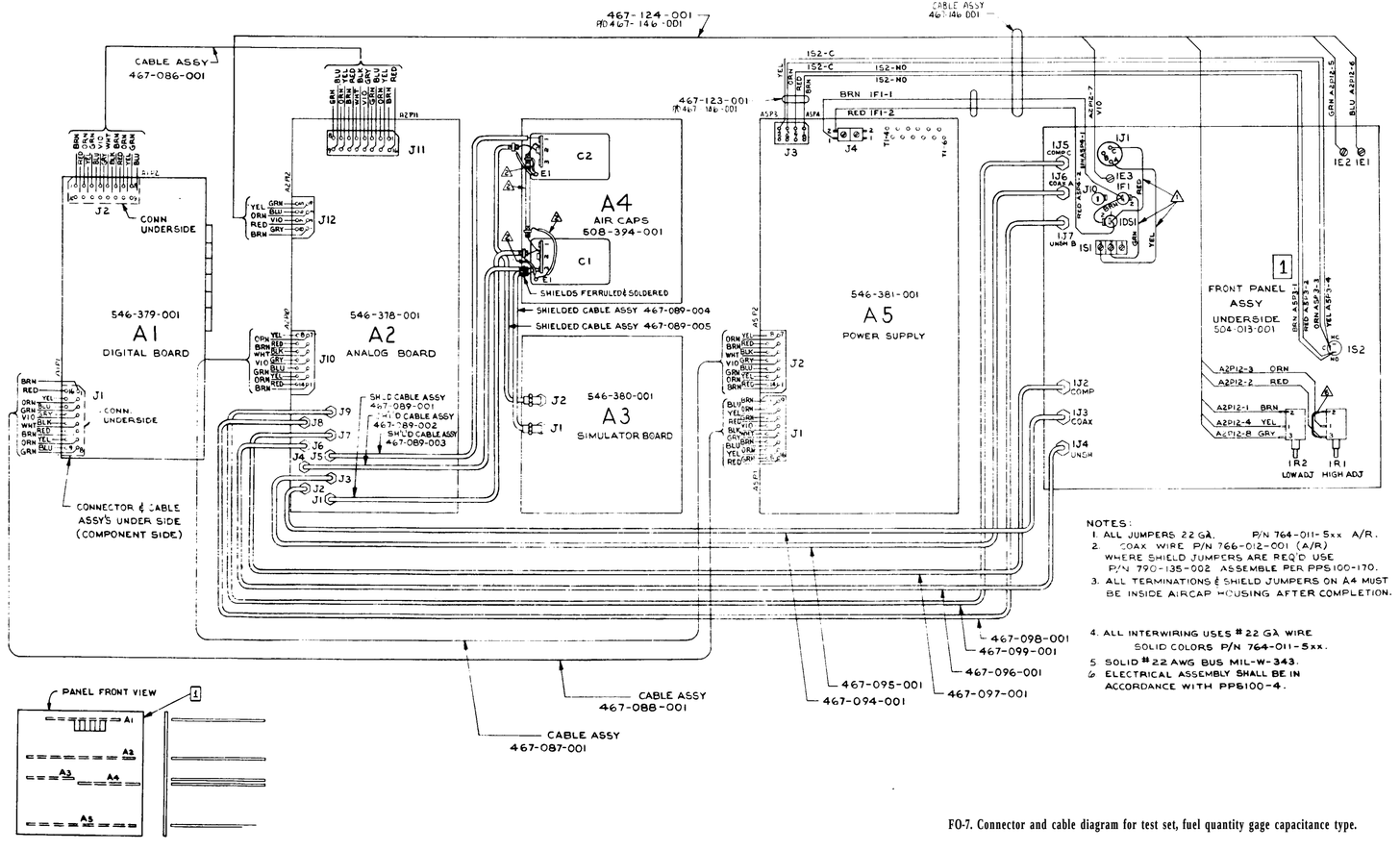
A5 POWER SUPPLY

SYMBOL	QTY	PART NUMBER	DESCRIPTION
R20, 42	2	RCR07G152JS	RESISTOR
R21	1	RCR07G111JS	RESISTOR
R23,47,54	3	RCR07G472JS	RESISTOR
R26	1	RN55D4992F	RESISTOR
R30, 32	2	RN55D1501F	RESISTOR
R34	1	RCR07G102JS	RESISTOR
R35	1	RCR07G393JS	RESISTOR
R37	1	RN55D1003F	RESISTOR
R40	1	RCR07G183JS	RESISTOR
R41	1	RCR07G221JS	RESISTOR
R43	1	RW74UR825F	RESISTOR
R44,51	2	RCR07G100JS	RESISTOR
R45,50	2	RCR07G560JS	RESISTOR
R46,53	2	RCR07G332JS	RESISTOR
R48,55, 62	3	RN55D4991F	RESISTOR
R52	1	RW74UR00F	RESISTOR
R57,59, 61	3	RN55D1001F	RESISTOR
R58	1	RN55D4021F	RESISTOR
R60,63	2	RN55D9091F	RESISTOR
R64	1	RCR20G820JS	RESISTOR
R65	1	RW69V181	RESISTOR
R66	1	RW69V121	RESISTOR
R67	1	RCR20G121JS	RESISTOR
R68,69	2	RN55D5111F	RESISTOR
R70	1	RW74U2001F	RESISTOR
R71	1	RCR20G511JS	RESISTOR
Z1	1	850-007-723	INTEG. CIRCUIT
Z2thru Z9	8	850-007-736	INTEG. CIRCUIT
Z10thru Z14	5	850-007-703	INTEG. CIRCUIT
C1,7	2	821-013-005	CAPACITOR
C2	1	CSR13G105KM	CAPACITOR
C3,9,25 29	4	CK05BX502K	CAPACITOR
C4,16	2	CSR13F476KM	CAPACITOR
C5,6,8, 13,14, C15,17, 21,30 C33,34	11	CK05BX103K	CAPACITOR
C10,11, 20,C26, 28	5	CK05BX560K	CAPACITOR
C12	1	CK06BX474K	CAPACITOR
C18	1	821-009-004	CAPACITOR
C19	1	CSR13F156KM	CAPACITOR
C22	1	CK06BX684K	CAPACITOR
C23	1	821-013-010	CAPACITOR
C24,27	2	CSR13C127KM	CAPACITOR
C31	1	CK05BX101K	CAPACITOR
C32,35, 36	3	CK05BX330K	CAPACITOR

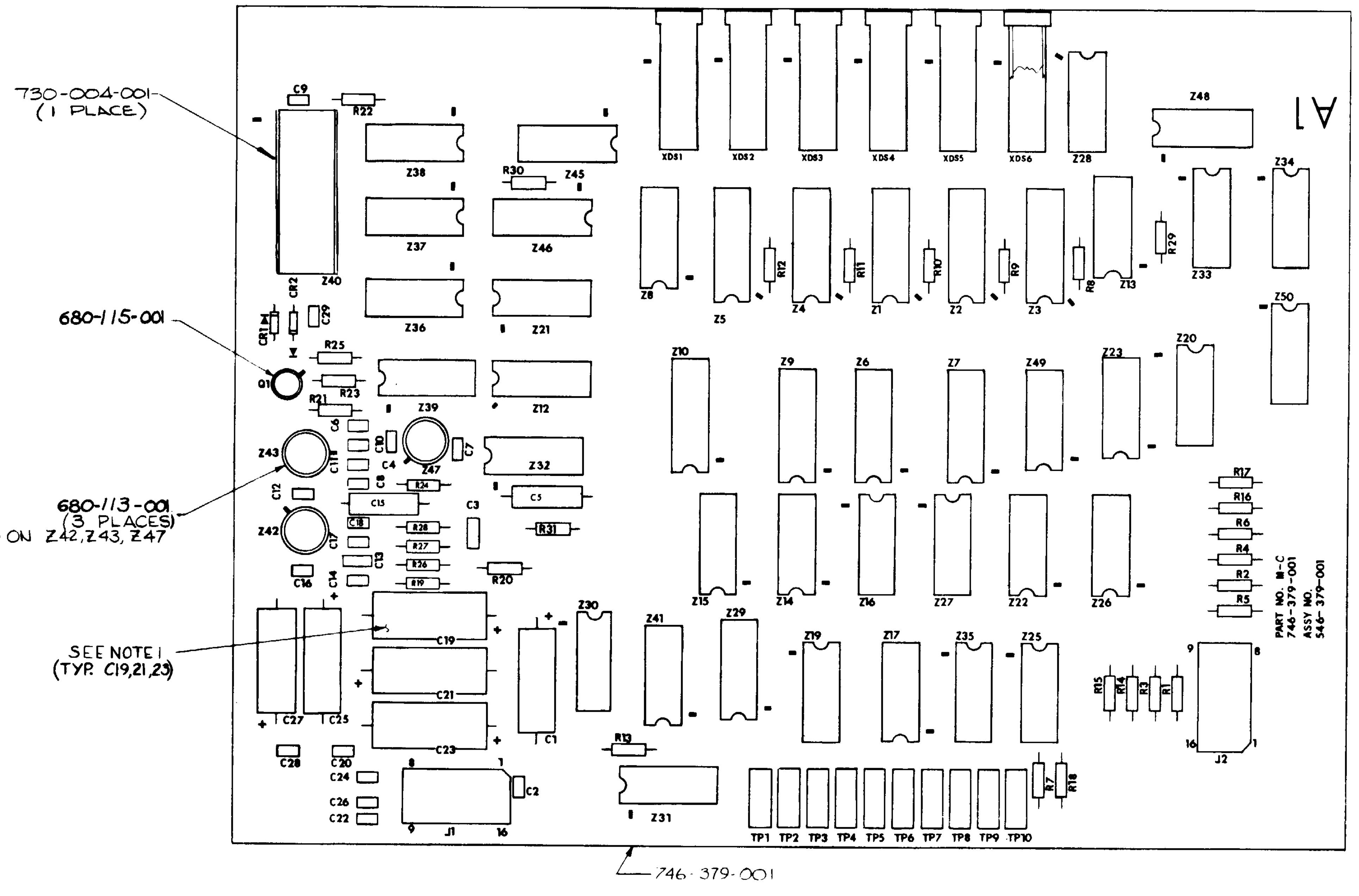
NOTE

Where Sheet 1 is referenced see FO-1.
Where Sheet 2 is referenced see FO-2.
Where Sheet 3 is referenced see FO-3.
Where Sheet 4 is referenced see FO-4.
Where Sheet 5 is referenced see FO-5.
Where Sheet 6 is referenced see FO-6.

FO-6. Fuel quantity gage capacitance type, test set schematic diagram.



FO-7. Connector and cable diagram for test set, fuel quantity gage capacitance type.

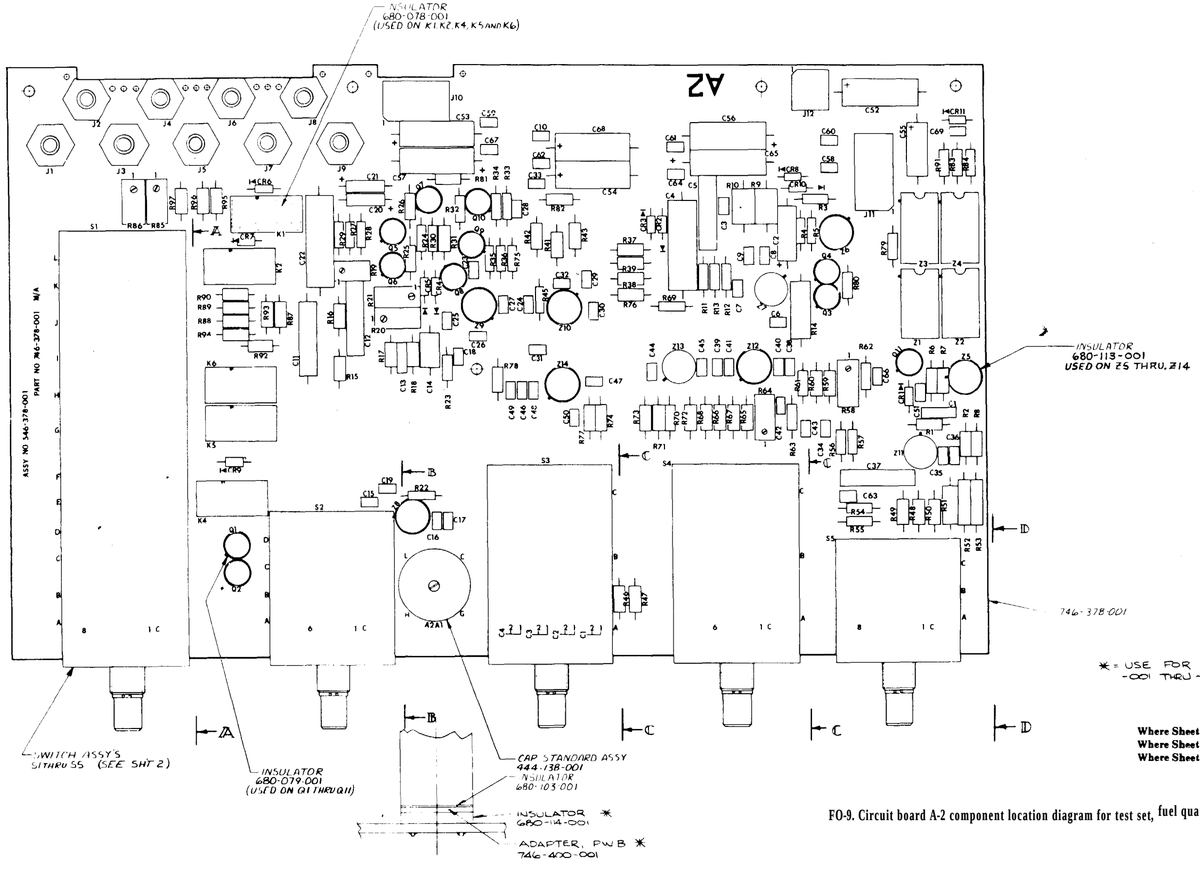


NOTES:
1. RTV 162 (WHITE) UNDER C19, C21, C23
2. ASSEMBLE PER PPS-100-155

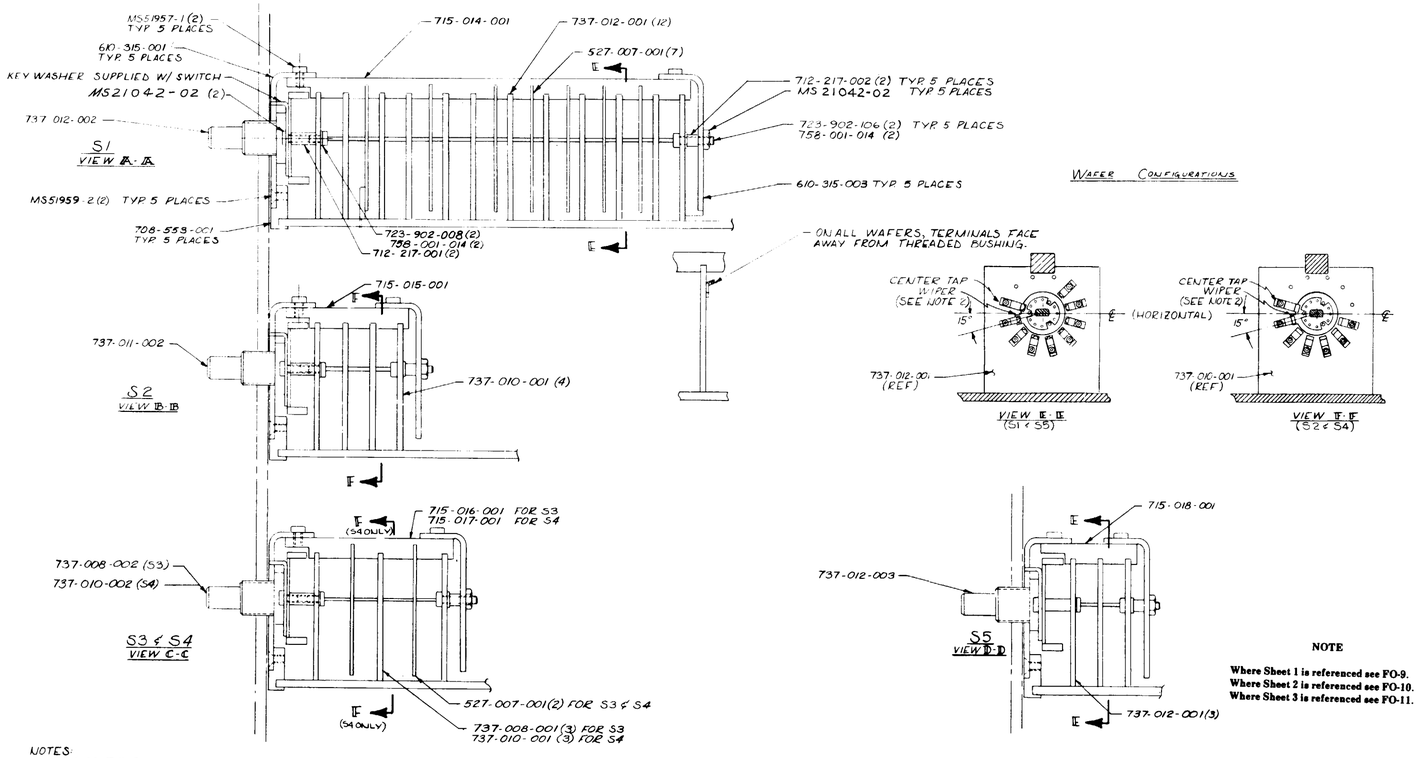
SYMBOL	QTY	PART NUMBER	DESCRIPTION	SPEC
R24	1	RCR07G512JS	RESISTOR	
R23	1	RCR07G242JS	↑	
R21, 28	2	RCR07G221JS		
R19, 20, 26, 27	4	RCR07G394JS		
R13, 25	2	RCR07G102JS	↓	
R1 THRU R12, R14 THRU R18, R22, 29, 30, R31	21	RCR07G103JS	RESISTOR	
XDS1-XDS6	6	730-001-001	SOCKET, DISPLAY	
XZ40	1	730-004-001	SOCKET	
TP1 THRU TP10	10	629-206-007	TEST POINT	
J1, J2	2	730-002-002	SOCKET, 16 PIN	
C19, 21, 23	3	CSR13E107KM	CAPACITOR	
C8, 18, 29	3	CK05BX102K	↑	
C6, 16	2	CK05BX330K		
C5, 15	2	820-001-003		
C3, 13	2	CK06BX104K		
C2, 4, 7, 9, 10, 11, 12, 14, 17, 20, 22, 24, 26, 28	14	CK05BX103K	↓	
C1, C27	2	CSR13D686KM	CAPACITOR	
C25	1	CSR13D226KM	CAPACITOR	
CR1, CR2	2	JAN1N4148	DIODE	
Q1	1	JAN2N2222A	TRANSISTOR	
Z43	1	850-007-717	INTEGRATED CIRCUIT	
Z42, 47	2	850-007-736	↑	
Z36, 37, 38	3	850-007-317		
Z29, 39, 41	3	850-007-307		
Z28, 30	2	850-007-308		
Z19, 21, 48	3	850-007-304		
Z14, 15, 17, 27, 32 THRU 35	8	850-007-310		
Z13, 16, 22, 23, 25, 26, 31, 50	8	850-007-301		
Z12, 20, 49	3	850-007-315		
Z8, 45, 46	3	850-007-303		
Z6, 7, 9, 10	4	850-007-312	↓	
Z1 THRU Z5	5	850-007-322	INTEGRATED CIRCUIT	

PARTS LIST

FO-8. Circuit board A-1 component location diagram for test set, fuel quantity gage capacitance type



FO-9. Circuit board A-2 component location diagram for test set, fuel quantity gage capacitance type



NOTES:
1. "LOCKTITE" ALL SCREWS USING 790-005-001 PER PPS100-100
2. S1,2,4,&5 - WITH SHAFT TURNED COMPLETELY CCW AS VIEWED FROUT OF SWITCH (POS 1), ORIENTATION OF WIPER OF EACH DECK SHOULD BE OFFSET 15° FROM HORIZONTAL ℄ AS SHOWN IN VIEWS E-E & F-F

NOTE

Where Sheet 1 is referenced see FO-9.
Where Sheet 2 is referenced see FO-10.
Where Sheet 3 is referenced see FO-11.

FO-10. Circuit board A-2 component location diagram for test set, fuel quantity gage capacitance type.

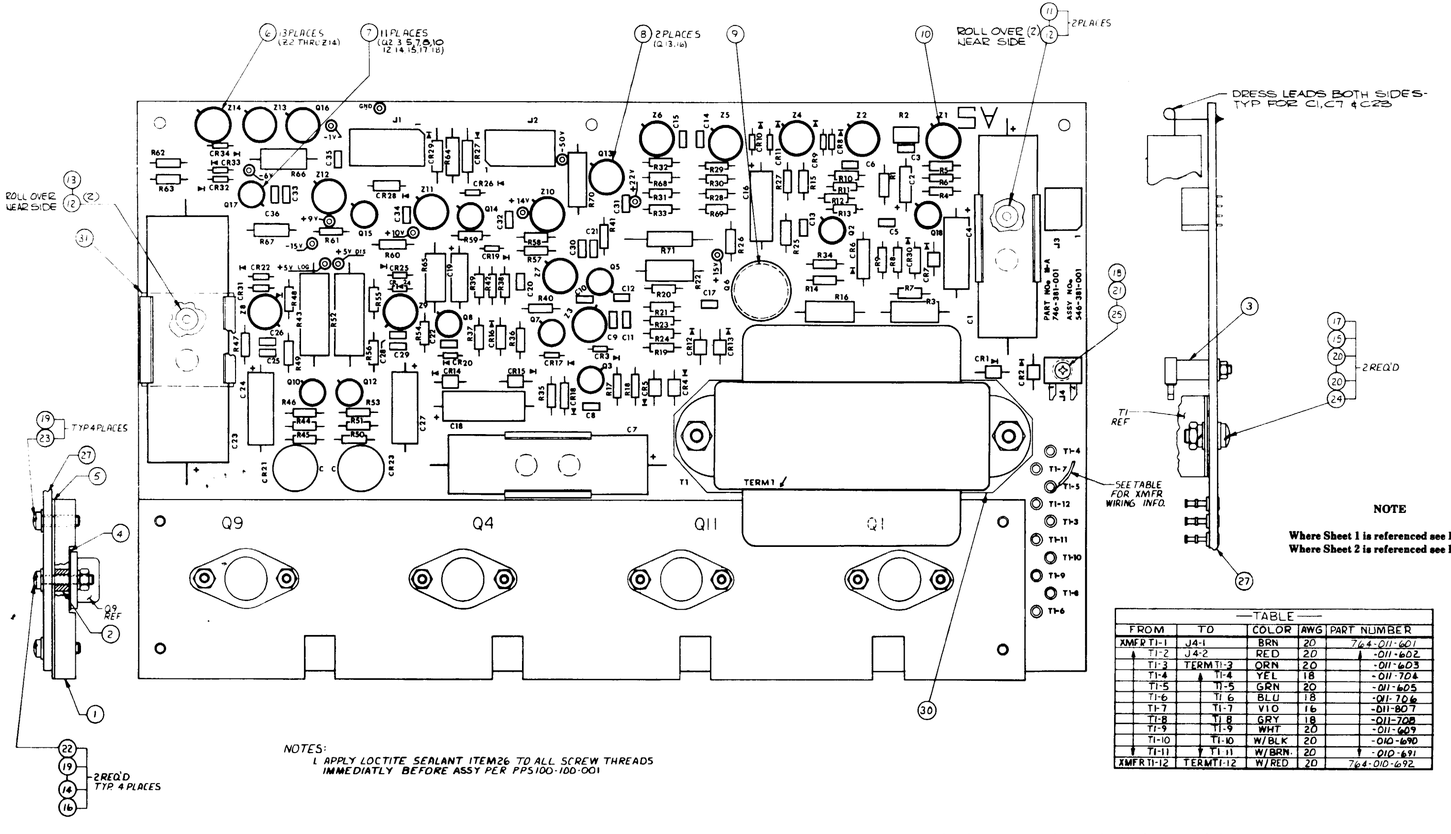
SYMBOL	QTY	PART NUMBER	DESCRIPTION
C41	1	CK05BX471K	CAPACITOR
C57,65,68 C52,53,54, 56	7	CSR13E476KM	CAPACITOR
C63	1	CK06BX222K	CAPACITOR
C55	1	CSR13D226KM	CAPACITOR
C51	1	CK05BX101K	CAPACITOR
C38	1	CK06BX682K	CAPACITOR
C37	1	821-002-138	CAPACITOR
C24, C69	2	CK06BX473K	CAPACITOR
C23, 29, 34, 43	4	CK06BX104K	CAPACITOR
C20, 21	2	CSR13G105KM	CAPACITOR
C19	1	CK05BX150K	CAPACITOR
C14	1	821-002-056	CAPACITOR
C13	1	821-002-113	CAPACITOR
C12	1	821-002-137	CAPACITOR
C11	1	821-002-094	CAPACITOR
C8,27,32, 48	4	CK05BX330K	CAPACITOR
C6,7,9,10, 15,16,17, 25,26,30, 31,35,36, 39, 40,42, 44,45,46, 47,50,58, 59,60,61, 62,64,67	28	CK05BX103K	CAPACITOR
C5	1	821-002-136	CAPACITOR
C4, C22	2	821-010-002	CAPACITOR
C3,18,28, 33,49,66	6	CK05BX102K	CAPACITOR
C2	1	CSR13G475KM	CAPACITOR
C1	1	821-002-135	CAPACITOR
Q7	1	863-007-002	TRANSISTOR
Q4, 6, 9	3	JAN2N2907A	TRANSISTOR
Q3,5,8,10, 11	5	JAN2N2222A	TRANSISTOR
Q1, Q2	2	863-005-003	TRANSISTOR
K1,2,4,5,6	5	858-011-004	RELAY
Z13	1	850-007-717	INTEG. CIRCUIT
Z11	1	850-028-001	INTEG. CIRCUIT
Z7	1	850-007-731	INTEG. CIRCUIT
Z5,6,8,9, 10, 12, 14	7	850-007-736	INTEG. CIRCUIT
Z4	1	850-007-302	INTEG. CIRCUIT
Z3	1	850-007-307	INTEG. CIRCUIT
Z2	1	850-007-310	INTEG. CIRCUIT
Z1	1	850-007-315	INTEG. CIRCUIT
R60	1	RNR55J9093FM	RESISTOR
R59	1	RNR55J1303FM	RESISTOR
R54 thru R57	4	RCR07G206JS	RESISTOR
R53	1	802-003-004	RESISTOR
R52	1	802-003-003	RESISTOR
R51	1	RNR60J3014FM	RESISTOR
R50	1	RNR55J3013FM	RESISTOR
R49	1	RN55E3012F	RESISTOR
R48	1	RN55E3011F	RESISTOR

SYMBOL	QTY	PART NUMBER	DESCRIPTION
R47	1	RNR55J9533FM	RESISTOR
R42	1	RN55E1002F	RESISTOR
R38, R39	2	RN55E1001F	RESISTOR
R37,43,76	3	RN55E7681F	RESISTOR
R33,34,45	3	RCR07G512JS	RESISTOR
R32	1	RCR07G222JS	RESISTOR
R31	1	RN55E4022F	RESISTOR
R30, R77	2	RCR07G203JS	RESISTOR
R28, R29	2	RCR07G220JS	RESISTOR
R26, R27	2	RCR07G470JS	RESISTOR
R23,62,75, 78, 82	5	RCR07G221JS	RESISTOR
R22	1	RCR07G394JS	RESISTOR
R21	1	850-033-001	RESISTOR, VARIABLE
R20, R58	2	RT22C2W103	RESISTOR, VARIABLE
R19,64,85, 86	4	RT22C2W202	RESISTOR, VARIABLE
R18, R97	2	RNR55J5763FM	RESISTOR
R92,87 R90,93,96		RNR55J1103FM	RESISTOR
R16	1	RN55E2872F	RESISTOR
R15	1	RN55E1502F	RESISTOR
R14	1	RWR89S1501FR	RESISTOR
R13	1	RCR07G204JS	RESISTOR
R9, R10	1	800-001-038	RESISTOR
R7,11,12, 35, 36	5	RCR07G104JS	RESISTOR
R5	1	RCR07G333JS	RESISTOR
R4	1	RCR07G153JS	RESISTOR
R3,6,24,25 R69, 91	6	RCR07G103JS	RESISTOR
R2,8,41,46	4	RN55E1003F	RESISTOR
R1	1	RN55E3652F	RESISTOR
CR1 thru CR11	11	JAN1N4148	DIODE
J12	1	730-002-003	CONNECTOR (8 PINS)
J11	1	730-002-002	CONNECTOR (16 PINS)
J10	1	730-002-001	CONNECTOR (14 PINS)
J1,2,3,4,5 J6,7,8,9	9	629-217-001	CONNECTOR (COAX)
R17	1	RNR55J1153FM	RESISTOR
R88,89,94, 95	4	RNR55J2000FM	RESISTOR
R83, R84	2	RCR07G392JS	RESISTOR
R81	1	RCR07G111JS	RESISTOR
R79, R80	2	RCR07G102JS	RESISTOR
R74	1	RN55C2002F	RESISTOR
R73	1	RNR55J1004FM	RESISTOR
R72	1	RN55C1102F	RESISTOR
R71	1	RN55C4021F	RESISTOR
R70	1	RCR07G304JS	RESISTOR
R67, R68	2	RN55C1502F	RESISTOR
R65, R66	2	RN55C1000F	RESISTOR
R63	1	RCR07G244JS	RESISTOR
R61	1	RCR07G124JS	RESISTOR

NOTE

Where Sheet 1 is referenced see FO-9.
Where Sheet 2 is referenced see FO-10.
Where Sheet 3 is referenced see FO-11.

FO-11. Circuit board A-2 component location diagram for test set, fuel quantity gage capacitance type



NOTE

Where Sheet 1 is referenced see FO-12.
Where Sheet 2 is referenced see FO-13.

FROM	TO	COLOR	AWG	PART NUMBER
XMFR T1-1	J4-1	BRN	20	764-011-601
T1-2	J4-2	RED	20	-011-602
T1-3	TERM T1-3	ORN	20	-011-603
T1-4	T1-4	YEL	18	-011-704
T1-5	T1-5	GRN	20	-011-605
T1-6	T1-6	BLU	18	-011-706
T1-7	T1-7	VIO	16	-011-807
T1-8	T1-8	GRY	18	-011-708
T1-9	T1-9	WHT	20	-011-609
T1-10	T1-10	W/BLK	20	-010-690
T1-11	T1-11	W/BRN	20	-010-691
XMFR T1-12	TERM T1-12	W/RED	20	764-010-692

FO-12. Circuit board A-5 component location diagram for test set, fuel quantity gage capacitance type.

SYMBOL	QTY	PART NUMBER	DESCRIPTION
Q16	1	JAN2N2905A	TRANSISTOR
Q13	1	JAN2N657	TRANSISTOR
Q8	1	863-007-003	TRANSISTOR
Q7	1	JAN2N912	TRANSISTOR
Q6	1	863-015-002	TRANSISTOR
Q5,10,12, 14, 15	5	JAN2N2222A	TRANSISTOR
Q4, 9, 11	3	863-018-001	TRANSISTOR
Q2,3,17,18	4	JAN2N2907A	TRANSISTOR
Q1	1	863-006-001	TRANSISTOR
J4	1	629-242-002	CONNECTOR (2 PINS)
J3	1	730-002-003	CONNECTOR (8 PINS)
J2	1	730-002-001	CONNECTOR (14 PINS)
J1	1	730-002-002	CONNECTOR (16 PINS)
CR30	1	JAN1N746A	DIODE
CR29	1	JAN1N755A	DIODE
CR27,CR28	2	JAN1N759A	DIODE
CR21,CR23	2	849-009-002	DIODE
CR18	1	JAN1N979B	DIODE
CR16	1	JAN1N754A	DIODE
CR6	1	849-027-001	DIODE
CR3,8,9,10, CR11,17,19, 20,CR22,24, 25, CR26,31 32,CR33,34	16	JAN1N4148	DIODE
CR1,2,4,5, CR7,12,13, CR14, 15	9	849-009-003	DIODE
T1	1	842-034-001	TRANSFORMER
C32,35,36	3	CK05BX330K	CAPACITOR
C31	1	CK05BX101K	CAPACITOR
C24,C27	2	CSR13C127KM	CAPACITOR
C23	1	821-013-010	CAPACITOR
C22	1	CK06BX684K	CAPACITOR
C19	1	CSR13E156KM	CAPACITOR
C18	1	821-009-004	CAPACITOR
C12	1	CK06BX474K	CAPACITOR
C10,11,20 C26, 28	5	CK05BX560K	CAPACITOR
C5,6,8,13 C14,15,17, 21, C30,33, 34	11	CK05BX103K	CAPACITOR
C4, C16	2	CSR13E476KM	CAPACITOR
C3,9,25,29	4	CK05BX102K	CAPACITOR

SYMBOL	QTY	PART NUMBER	DESCRIPTION
C2	1	CSR13G105KM	CAPACITOR
C1, C7	2	821-013-005	CAPACITOR
Z10 thru Z14	5	850-007-703	INTEG. CIRCUIT
Z2 thru Z9	8	890-001-004	INTEG. CIRCUIT
Z1	1	850-007-723	INTEG. CIRCUIT
R71	1	RCR20G511JS	RESISTOR
R70	1	RW79U2001F	RESISTOR
R67	1	RCR20G121JS	RESISTOR
R66	1	RW69V121	RESISTOR
R65	1	RW69V181	RESISTOR
R64	1	RCR20G820JS	RESISTOR
R58	1	RN55D4021F	RESISTOR
R57,59,61	3	RN55D1001F	RESISTOR
R52	1	RW74U1R00F	RESISTOR
R48,55,62	3	RN55D4991F	RESISTOR
R46,R53	2	RCR07G332JS	RESISTOR
R45,R50	2	RCR07G560JS	RESISTOR
R44, R51	2	RCR07G100JS	RESISTOR
R43	1	RW74UR825F	RESISTOR
R41	1	RCR07G221JS	RESISTOR
R40	1	RCR07G183JS	RESISTOR
R37	1	RN55D1003F	RESISTOR
R35	1	RCR07G393JS	RESISTOR
R34	1	RCR07G102JS	RESISTOR
R30,R32	2	RN55D1691F	RESISTOR
R26	1	RN55D4992F	RESISTOR
R23,47,54	3	RCR07G512JS	RESISTOR
R21	1	RCR07G111JS	RESISTOR
R20,R42	2	RCR07G152JS	RESISTOR
R17,29,31	3	RCR07G103JS	RESISTOR
R16	1	RW69V122	RESISTOR
R15,18,19	3	RCR07G392JS	RESISTOR
R14	1	RCR07G621JS	RESISTOR
R13,27,28, 33	4	RCR07G105JS	RESISTOR
R68, 69	2	RN55D5111F	RESISTOR
R11	1	RCR07G752JS	RESISTOR
R10	1	RN55D3482F	RESISTOR
R9	1	RCR20G202TS	RESISTOR
R8	1	RCR07G471JS	RESISTOR
R7,12,24, R25,38,39, R49,56	8	RN55D1502F	RESISTOR
R6	1	RCR07G153JS	RESISTOR
R4, R36	2	RCR07G122JS	RESISTOR
R3, R22	2	RW69V5R6	RESISTOR
R2	1	855-017-008	RESISTOR
R5	2	RN55D7151F	RESISTOR
R60, R63	2	RN55D9091F	RESISTOR
R1	1	RN55D6981F	RESISTOR

ITEM	QTY	PART NUMBER	DESCRIPTION	REMARKS
31	1	680-095-001	INSULATOR	USED ON C23
30	1	680-096-001	INSULATOR	USED ON T1
29	AR	728-002-XXX	SLEEVING, SHRINK	
28				
27	REF	746-381-001	P.C. BOARD POWER SUPPLY	
26	A R	790-005-001	LOCTITE SEALANT	
25	1	MS51959-9	SCREW, 100° C5K	
24	2	MS21097-08001	SCREW #8-32 x 3 8	
23	4	MS51957-16	SCREW #4-40 x 7 16	
22	8	MS51957-17	SCREW #4-40 x 5 8	
21	1	MS15795-802	WASHER, FLAT	
20	4	MS15795-806	WASHER, FLAT	
19	12	MS15795-803	WASHER, FLAT	
18	1	MS35649-224	NUT, HEX #2-56	
17	2	MS35649-284	NUT, HEX #8	
16	8	NAS671-4	NUT, HEX #4	
15	2	MS35338-137	LK WASHER	
14	8	MS35338-135	LK WASHER	
13	1	626-115-001	CLIP, COMPONENT	
12	6	MS16535-155	RIVET	
11	2	626-114-001	CLIP, COMPONENT	
10	1	680-055-001	INSULATOR	USED ON Z1
9	1	680-099-001	INSULATOR	USED ON Q6
8	2	680-077-001	INSULATOR	USED ON Q13, Q16
7	11	680-115-001	INSULATOR	USED ON Q2,3,5,7,8, 10, 12, 14, 15, 17, 18
6	13	680-113-001	INSULATOR	USED ON Z2 thru Z14
5	1	680-097-001	INSULATOR	USED ON ITEM 1
4	4	680-049-002	INSULATOR	USED ON Q1,Q4 Q9,Q11
3	1	736-162-001	SPACER	
2	8	736-160-001	SPACER	
1	1	708-555-001	PLATE, HEAT SINK	

NOTE

Where Sheet 1 is referenced see FO-12.
Where Sheet 2 is referenced see FO-13.

FO-13. Circuit board A-5 component location diagram for test set, fuel quantity gage capacitance type

E.C. MEYER
General, United States Army
Chief of Staff

Official:

J.C. PENNINGTON
Major General, United States Army
The Adjutant General

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SOMETHING WRONG WITH THIS MANUAL?

THEN. . .JOT DOWN THE DOPE ABOUT IT ON THIS FORM, TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

FROM: (YOUR UNIT'S COMPLETE ADDRESS)
PFC JOHN DOE
COA, 3d ENGINEER BN
FT. LEONARD WOOD MO 63108

DATE

PUBLICATION NUMBER	DATE	TITLE
TM 55-4920-383-13&P	8 Dec 80	Test Set Fuel Quantity Gage

BE EXACT. . .PIN-POINT WHERE IT IS

PAGE NO.	PARAGRAPH	FIGURE NO.	TABLE NO.
6	2-1 a		
81		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 cylinders. The engine on my set only has 4 cylinders. Change the manual to show 4 cylinders.

Callout 16 on figure 4-3 is pointing at a bolt. In the key to fig. 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.

SAMPLE

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

SIGN HERE:
John Doe

DA FORM 1 AUG 74 2028-2

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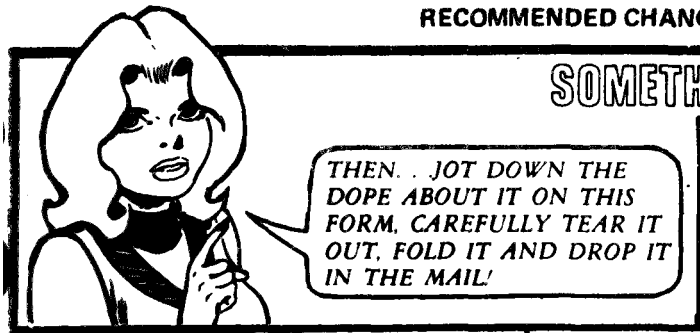

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The Metric System and Equivalents

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

Liquid Measure

1 centiliter = 10 milliliters = .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	1.365	metric tons	short tons	1.102
pound-inches	mewton-meters	.11375			

Temperature (Exact)

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