

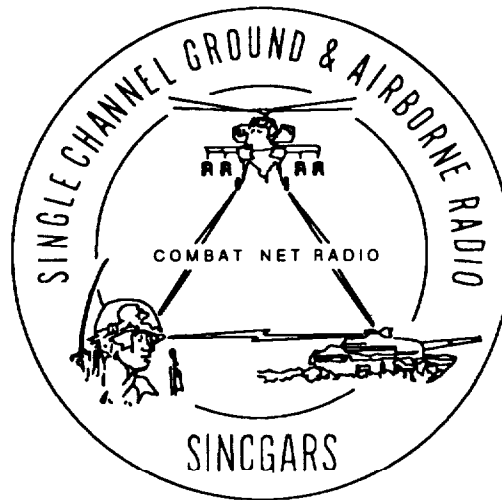
**UNIT, DIRECT SUPPORT AND
GENERAL SUPPORT
MAINTENANCE MANUAL**

**CHAPTER 1
INTRODUCTION**

**CHAPTER 2
UNIT MAINT**

**CHAPTER 3
DS MAINT**

**CHAPTER 4
GS MAINT**



**SINGGARS INTERCONNECT DEVICES (ICD)
USED WITH
AN/USM-410(V)2 AND AN/USM-465A**

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HEADQUARTERS, DEPARTMENT OF THE ARMY

1 FEBRUARY 1993

Change

No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 28 February 1995

**Unit, Direct Support And General Support
Maintenance Manual**

**SINGGARS INTERCONNECT DEVICES (ICD)
USED WITH
AN/USM-410(V)2 AND AN/USM-465A**

TM 11-6625-3094-24, 1 February 1993, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page.

Remove Pages	Insert Pages
i through xx	i through xx
1-3 and 1-4	1-3 and 1-4
1-27 and 1-28	1-27 and 1-28
None	1-28.1 through 1-28.10
1-29 through 1-32	1-29 through 1-32
None	1-33 and 1-34
4-269 and 4-270	4-269 and 4-270
4-275 and 4-276	4-275 and 4-276
4-281 and 4-282	4-281 and 4-282
4-321 and 4-322	4-321 and 4-322
4-387 and 4-388	4-387 and 4-388
None	4-445 through 4-458
B-3 through B-16	B-3 through B-16
None	B-17 through B-26
C-19 and C-20	C-19 and C-20
Index-1 through Index-8	Index-1 through Index-8
None	Index-9 and Index-10
None	FP-89 and FP-90

2. File this change sheet in front of the publication for reference purposes.

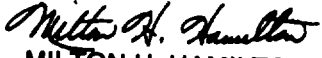
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08078

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5 SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

1 DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

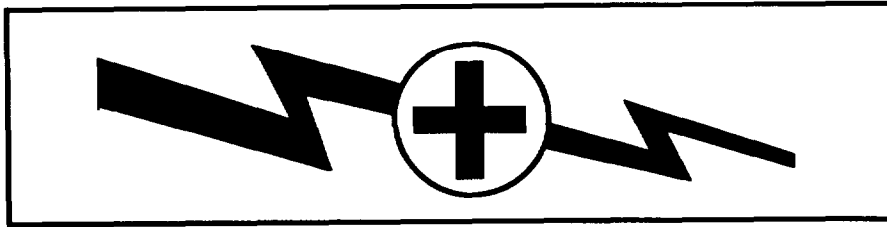
2 IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

3 IF YOU CANNOT TURN OFF THE ELECTRICAL POWER PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A DRY WOODEN POLE OR A DRY ROPE OR SOME OTHER INSULATION MATERIAL

4 SEND FOR HELP AS SOON AS POSSIBLE

5 AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION

WARNING



HIGH VOLTAGE

is used in the operation of this equipment

DEATH ON CONTACT

may result if personnel fail to observe safety precautions

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technicians are aided by operators, they must be warned about dangerous areas.

When possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take particular care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment, after the power has been turned off, always ground every part before touching it.

Be careful not to contact high-voltage connections or 115 volt ac input connections when installing or operating this equipment.

Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through the body.

Warning: do not be misled by the term "low voltage. " Potential as low as 50 volts may cause death under adverse conditions.

For Artificial Respiration, refer to FM 21-11.



CAUTION



**THIS EQUIPMENT CONTAINS PARTS
SENSITIVE TO DAMAGE
BY ELECTROSTATIC DISCHARGE (ESD).**

**USE PRECAUTIONARY PROCEDURES
WHEN TOUCHING, REMOVING OR INSERTING
PRINTED CIRCUIT BOARDS.**

GENERAL HANDLING PROCEDURES FOR ESD ITEMS

USE WRIST GROUND STRAPS OR
MANUAL GROUNDING PROCEDURES,
KEEP ESD ITEMS IN PROTECTIVE
COVERING WHEN NOT IN USE.
GROUND ALL ELECTRICAL TOOLS
AND TEST EQUIPMENT,

PERIODICALLY CHECK CONTINUITY AND
RESISTANCE OF GROUNDING SYSTEM.
USE ONLY METALIZED SOLDER SUCKERS.
HANDLE ESD ITEMS ONLY IN PROTECTED
AREAS.

MANUAL GROUNDING PROCEDURE

MAKE CERTAIN EQUIPMENT IS POWERED
DOWN,
TOUCH GROUND PRIOR TO REMOVING
ESD ITEMS.

TOUCH PACKAGE OF REPLACEMENT ESD
ITEM TO GROUND BEFORE OPENING,
TOUCH GROUND PRIOR TO INSERTING
REPLACEMENT ESD ITEMS.



ESD PROTECTIVE PACKAGING AND LABELING



INTIMATE COVERING OF ANTISTATIC MATERIAL WITH AN OUTER WRAP OF EITHER TYPE 1
ALUMINIZED MATERIAL OR CONDUCTIVE PLASTIC FILM
OR
HYBRID LAMINATED BAGS HAVING AN INTERIOR OF ANTISTATIC MATERIAL WITH AN OUTER
LAYER OF METALIZED MATERIAL.
LABEL WITH SENSITIVE ELECTRONIC SYMBOL AND CAUTION NOTE, AS ABOVE,

CAUTION

Devices such as CMOS, NMOS, VMOS, HMOS, thin-film resistors PMOS, and MOSFET used in many equipments can be damaged by static voltages present in most repair facilities. Most of the components contain internal gate protection circuits that are partially effective, but sound maintenance practice and the cost of equipment failure in time and money dictate careful handling of all electrostatic sensitive components.

The following precautions should be observed when handling all electrostatic sensitive components and units containing such components.

Failure to observe all of these precautions can cause permanent damage to the electrostatic sensitive device. This damage can cause the device to fail immediately or at a later date when exposed to an adverse environment.

STEP

- 1 Turn off and/or disconnect all power and signal sources and loads used with the unit.

STEP

- 2 Place the unit on grounded conductive work surfaces.

STEP

- 3 Ground the repair operator using a conductive wrist strap or other device using a 1 M Ω series resistor to protect the operator,

STEP

- 4 Ground any tools (including soldering equipment) that will contact the unit. Contact with the operator's hand provides a sufficient ground for tools that are otherwise electrically isolated.

STEP

- 5 All electrostatic sensitive replacement components are shipped in conductive foam or tubes and must be stored in the original shipping container until installed,

STEP

- 6 When these devices and assemblies are removed from the unit, they should be placed on the conductive work surface or in conductive containers,

STEP

- 7 When not being worked on, wrap disconnected circuit boards in aluminum foil or in plastic bags that have been coated or impregnated with a conductive material.

STEP

- 8 Do not handle these devices unnecessarily or remove from their packages until actually used or tested.

STEP

- 9 Static pads do not mount on conductive surfaces. No test equipment is to be placed on static pads. No equipment resting on a static pad is to be plugged into an electrical outlet.

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**SINGGARS INTERCONNECT DEVICES (ICD)
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AN/USM-410(V)2 AND AN/USM-465A**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-LM-LT Fort Monmouth, New Jersey 07703-5007.

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HOW TO USE THIS MANUAL

This manual provides instructions for testing and repair of ICDs and circuit card assemblies used in the radio systems listed on the front cover. The information presented in this manual will tell you:

- Test accessories you need.
- Which special repair tools or support equipment are required.

The manual is designed to help you find information quickly and easily. You should familiarize yourself with the manual content before beginning the maintenance task:

- Chapter 1 contains general information, technical data, and a reference guide for the ICD. The reference guide lists the units by part number and will assist you in locating information in the manual regarding a specific unit.
- Chapter 2 contains unit maintenance instructions.
- Chapter 3 contains direct support maintenance instructions.
- Chapter 4 contains general support maintenance instructions.

A Maintenance Allocation Chart, schematic diagrams, list of references, and a list of expendable/durable supplies and materials are located in the back of the manual.

NOTE

If ID-005C fails survey test during any procedure covered within this manual, return ID-005C to depot for repair.

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. Scope of Maintenance.

There is no unit or direct support maintenance authorized for the Interface Connect Device (ICD). The general support maintenance function is to inspect and test the ICD in order to isolate defects. The maintainer then repairs the ICD by replacing discrete components. The ICD are tested again and inspected in accordance with prescribed standards after repairs have been made. This manual provides unit, direct support, and general support maintenance instructions for interconnect devices, test adapters, and load cards used with the radio equipment listed on the cover.

1-2. Consolidated Index of Army Publications and Blank Forms.

Refer to the latest issue of DA Pam 25-30 to determine whether there are new editions, changes, or additional publications pertaining to this equipment.

1-3. Maintenance Forms, Records, and Reports.

a. *Reports of Maintenance and Unsatisfactory Equipment.* Department of Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, as contained in Maintenance Management Update.

b. *Reports of Packing and Handling Deficiencies.* Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/SECNAVINST 4355. 18/AFR 400-54/MCO 4430.3J.

c. *Discrepancy in Shipment Report (DISREP) (SF361),* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

1-4. Equipment Improvement Recommendations (EIR).

If your equipment needs improvement, let us know, Send us an EIR. You, the user, are the only one who can tell us what you don't like about the design, Put it on an SF368 (Quality Deficiency Report). Mail it to: Commander, U.S. Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-ED-PH, Fort Monmouth, NJ, 07703-5000. We'll send you a reply.

1-5. Preparation for Administrative Storage or Shipment.

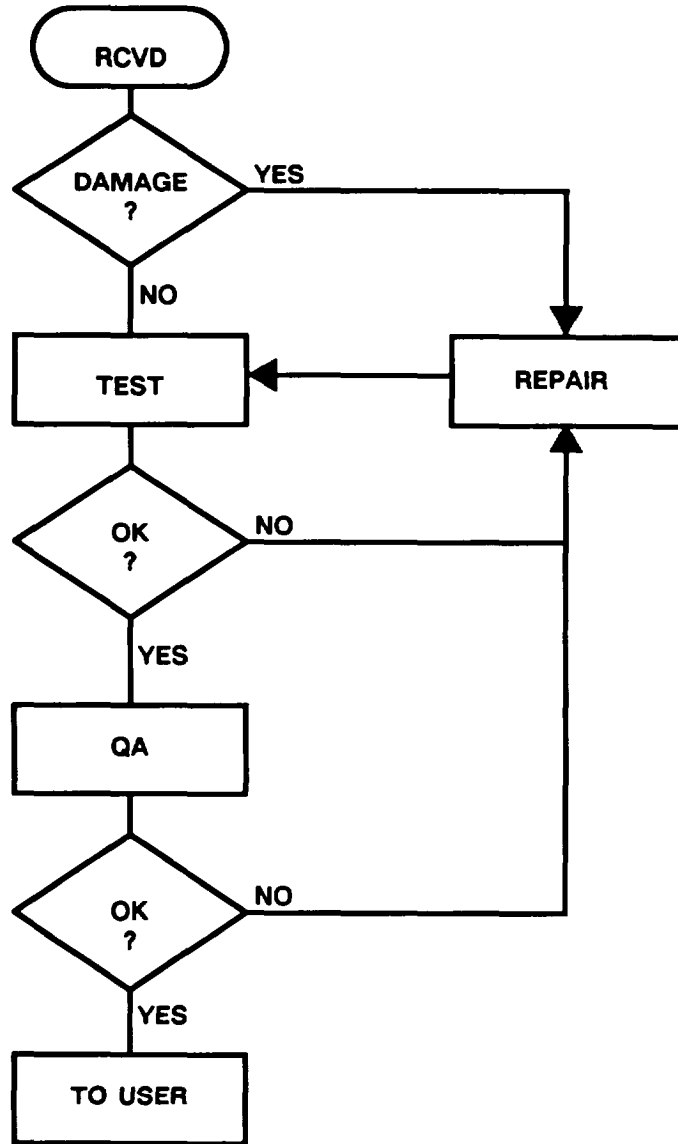
Administrative storage of equipment issued to and used by Army activities shall be in accordance with TM 740-90-1. Perform initial inspection procedures before storing and when removing the equipment from administrative storage,

1-6. Destruction of Army Materiel to Prevent Enemy Use.

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

1-7. General Support Facility Workflow.

The intermediate general support maintenance will inspect, test, and repair units by replacement of discrete components. After completion of the repair, the units are again tested and inspected in accordance with prescribed standards. See figure 1-1.



EL9RG100

Figure 1-1. General Support Facility Workflow Diagram

1-8. List of Abbreviations.

The following abbreviations are used in this manual:

<u>Abbreviation</u>	<u>Definition</u>
ADPTR	Adapter
AMPL	Amplifier
ANLG	Analog
ASSY	Assembly
ATE	Automatic test equipment
AUD	Audio
CCA	Circuit card assembly
CHAS	Chassis
CMPNT	Component
CONT	control
CPIN	Computer program identification number
DCT	Digital card tester
DEMOD	Demodulator
DIU	Dedicated interface unit
ESD	Electrostatic discharge
ELEK	Electronic
EXT	External
HCI	Hardness critical item
HCP	Hardness critical process
HTSK	Heatsink
ICD	Interface connect device
ID	Identification
IF	Intermediate frequency
IMPD	Impedance
INTFC	Interface
LL	Lower level
MDL	Module
MON	Monitor
MWO	Modification work order
NTWK	Network
PIU	Programmable interface unit
PN	Part number
PWB	Printed wiring board
PWR	Power
RF	Radio frequency
RT	Receiver-transmitter
SERNO	Serial number
SPLY	supply
SUBASSY	Subassembly
SYNC	Synchronize
TP	Test point
UL	Upper level
UUT	Unit under test
VDT	Video display terminal
W	Watt

1-9. Nomenclature Cross-Reference List.

The following are nomenclature cross-references used in this manual and in the associated software test programs:

COMMON NAME	OFFICIAL NAME
Accessory Kit	Accessory Kit, Test Adapter Set J-4831/G
Adapter Card A	Adapter, Test A, J-4823/G
Adapter Card B	Adapter, Test B, J4824/G
Adapter Card C	Adapter, Test C, J-4825/G
Adapter Card D	Adapter, Test D, J4826/G
Adapter Card E	Adapter, Test E, J4827/G
Adapter Card F	Adapter, Test F, J4828/G
Adapter Card G	Wiring Harness, Branched-Interface Device G, J-4830/G
Adapter Card H	Adapter, Test H, J4829/G
Adapter Card K	Adapter, Test K, J-4909/G
Adapter Card L	Adapter, Test L, J-4997/G
ICD A	Adapter, Test A, J-4821/G
ICD A5	CCA-Interconnect Device A5, J-4951/G
ICD A6	Adapter, Test Interconnect Device A6, J-4998/G
ICD A7	Adapter, Test Interconnect Device A7, J-4999/G
ICD A8	Adapter, Test Interconnect Device A8, J-6000/G
ICD A9	Adapter, Test Interconnect Device A9, J-6001/G
ICD A10	Adapter, Test Interconnect Device A10, J-6002/G
ICD A12	Adapter, Test Interconnect Device A12, J-6003/G
ICD A13	Adapter, Test Interconnect Device AI 3, J-6004/G
ICD A14	Adapter, Test Interconnect Device AI 4, J-6098/G
ICD A16	Adapter, Test Interconnect Device AI 6, J-6097/G
ICD B	Adapter, Test B, J4822/G
ICD C	Adapter, Test C, J4820/G
ICD D	Adapter, Test D, J-4819/G
Load Card A	Load Card A, J-4832/G
Load Card B	Load Card B, J-4834/G
Load Card C	Load Card C, J-4833/G

Section II. EQUIPMENT DESCRIPTION AND DATA

1-10. Introduction.

This section contains descriptive data about the ICD. Included are descriptions of ICD maintenance functions and characteristics, capabilities, and features of the ICD. There is no operator manual for the interface connect devices, test adapters or load card equipment. Refer To TM 11-5820-914-40 for the use of these items.

1-11. Equipment Characteristics, Capabilities, and Features.

This paragraph contains an overall description of the interface connect devices, test adapters, and load cards. Test adapters and load cards are used with the AN/USM-410(V)2 automatic test equipment. The interface connect devices (ICD) are used with the AN/USM-465A. Components of the automatic test equipment are not described. Troubleshooting and diagnosis are done by the automatic test equipment software.

a. Characteristics

- Provides electric and mechanical interface between UUT and the ATE,
- Provides a support for guided probing during diagnostic testing.

b. Capabilities and Features

- Open-air design allows easy maintenance of equipment.
- Each test adapter, ICD, or load card can be maintained independently.
- Component covers protect on-board components against physical damage.

1-12. Description of J-4819/G (Adapter, Test-interface Connect Device D).

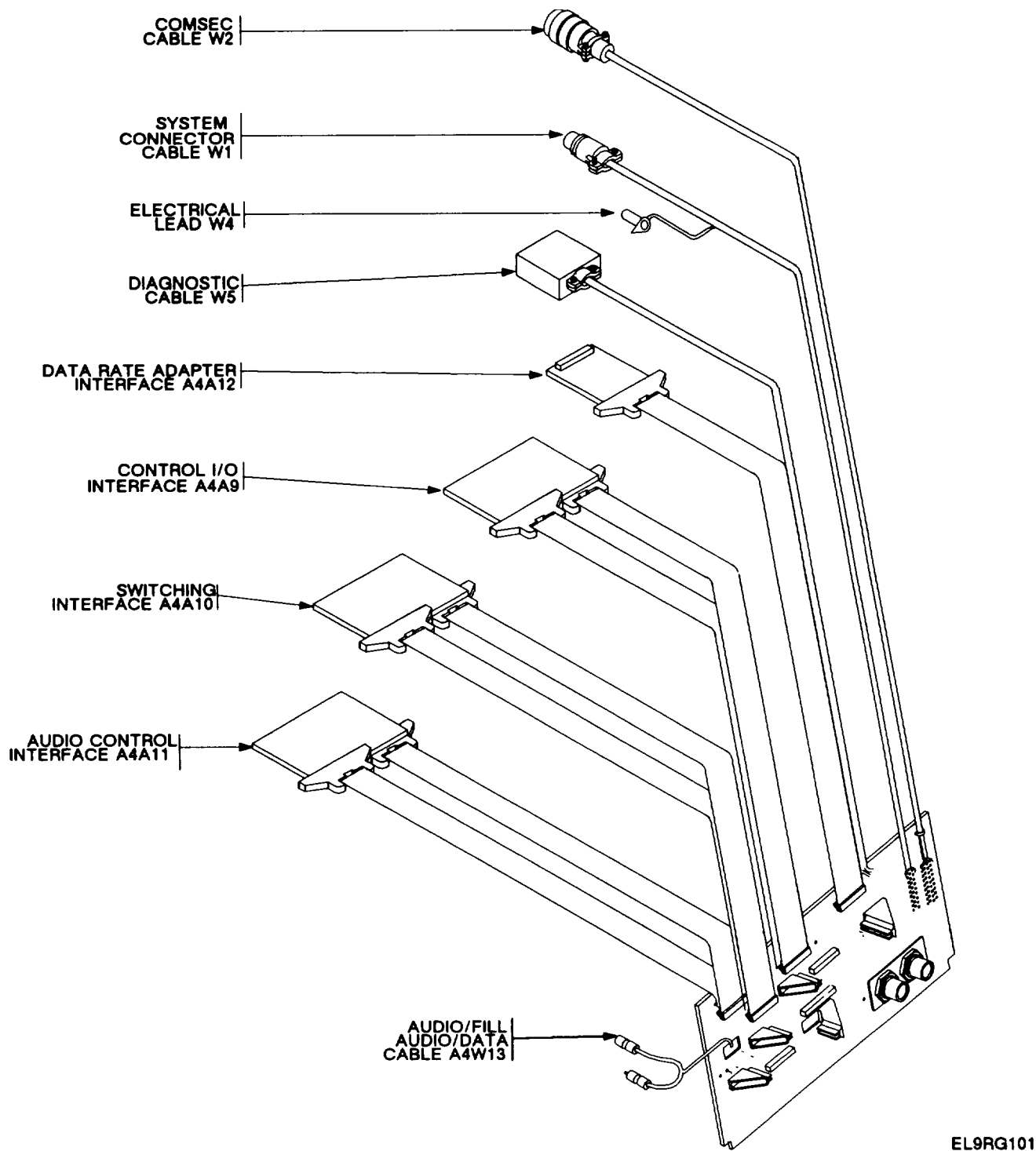
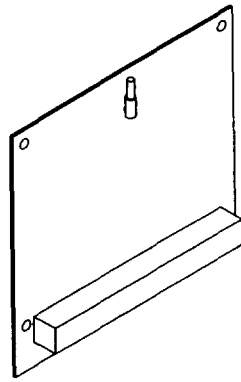


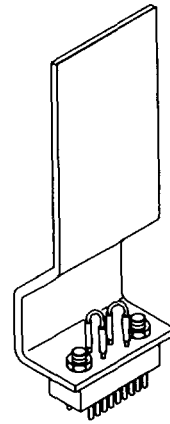
Figure 1-2. J-4819/G interface Connection Device D

Interface Connect Device D, J-4819/G, A3014296-1, is used to test the Chassis, Electrical Equipment-Receiver-Transmitter A3013364-1 on the AN/USM-465A.

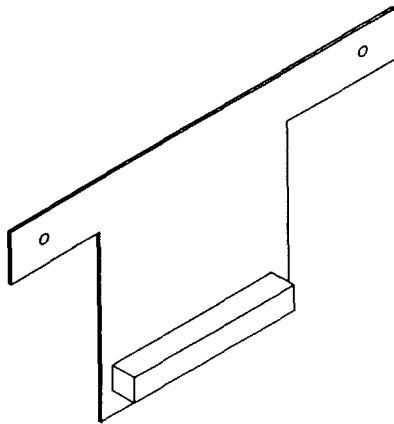
1-13. Backplane Jumpers used with J-4819/G.



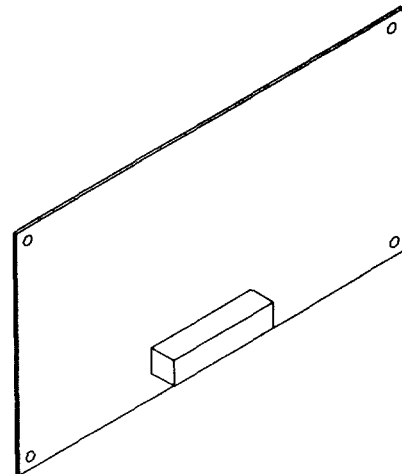
REMOTE I/O
BACKPLANE ASSEMBLY-JUMPER
A3014261-1 (A4A2)



RT JUMPER ASSEMBLY-
POWER SUPPLY
A3014264-1 (A4A3)



ECCM BACKPLANE
ASSEMBLY-JUMPER
A3014267-1 (A4A4)



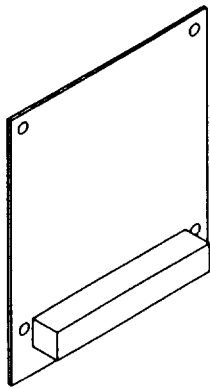
IF/DEMODULATOR
BACKPLANE ASSEMBLY-JUMPER
A3014270-1 (A4A5)

EL9RG102

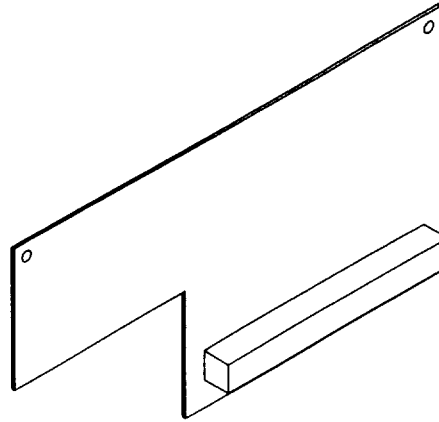
Figure 1-3. Backplane Jumpers Used with J-4819/G ICD D (Sheet 1 of 2)

Seven backplane jumpers are used in testing the RT chassis. They plug into the chassis to aid in testing the chassis.

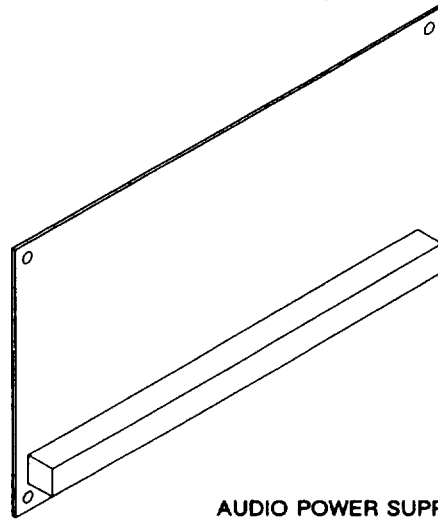
1-13. Backplane Jumpers used with J-4819/G. Continued



**EXCITER/POWER AMPLIFIER
BACKPLANE ASSEMBLY-JUMPER
A3014273-1 (A4A6)**



**AUDIO DATA I/O
BACKPLANE ASSEMBLY-JUMPER
A3014279-1 (A4A8)**



**AUDIO POWER SUPPLY
BACKPLANE ASSEMBLY-JUMPER
A3014276-1 (A4A7)**

EL9RG103

Figure 1-3. Backplane Jumpers Used with J-4819/G ICD D (Sheet 2 of 2)

1-14. Accessory Kit, A3132852-1, used with J-4819/G.

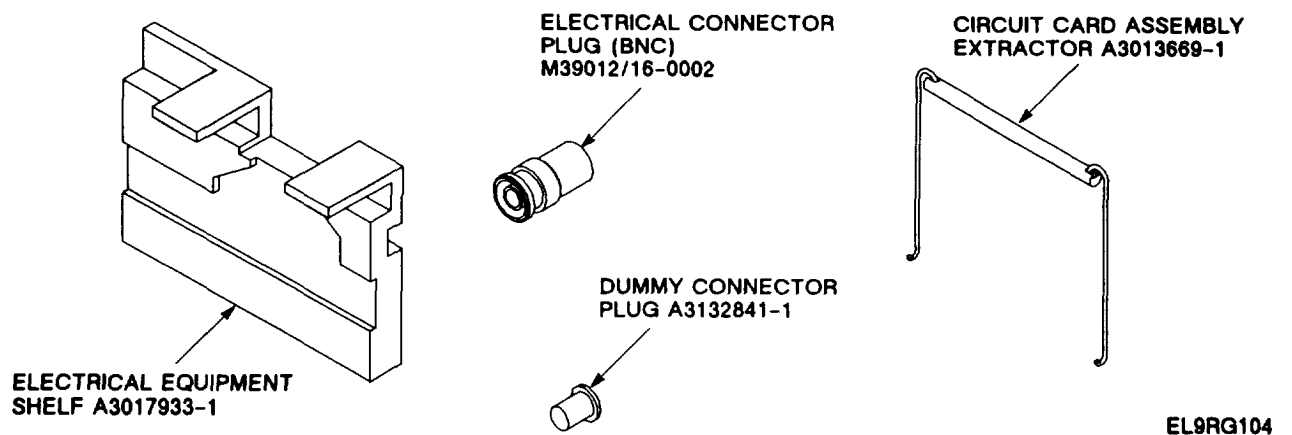


Figure 1-4. Accessory Kit, A3132852-1, Used with J-4819/G ICD D

This accessory kit contains the miscellaneous items required to test the RT Chassis with ICD D. The electrical equipment shelf is used to hold the CCA-Display in place for manual probing.

1-15. Description Of J-4820/G (Adapter, Test Interface Connect Device C).

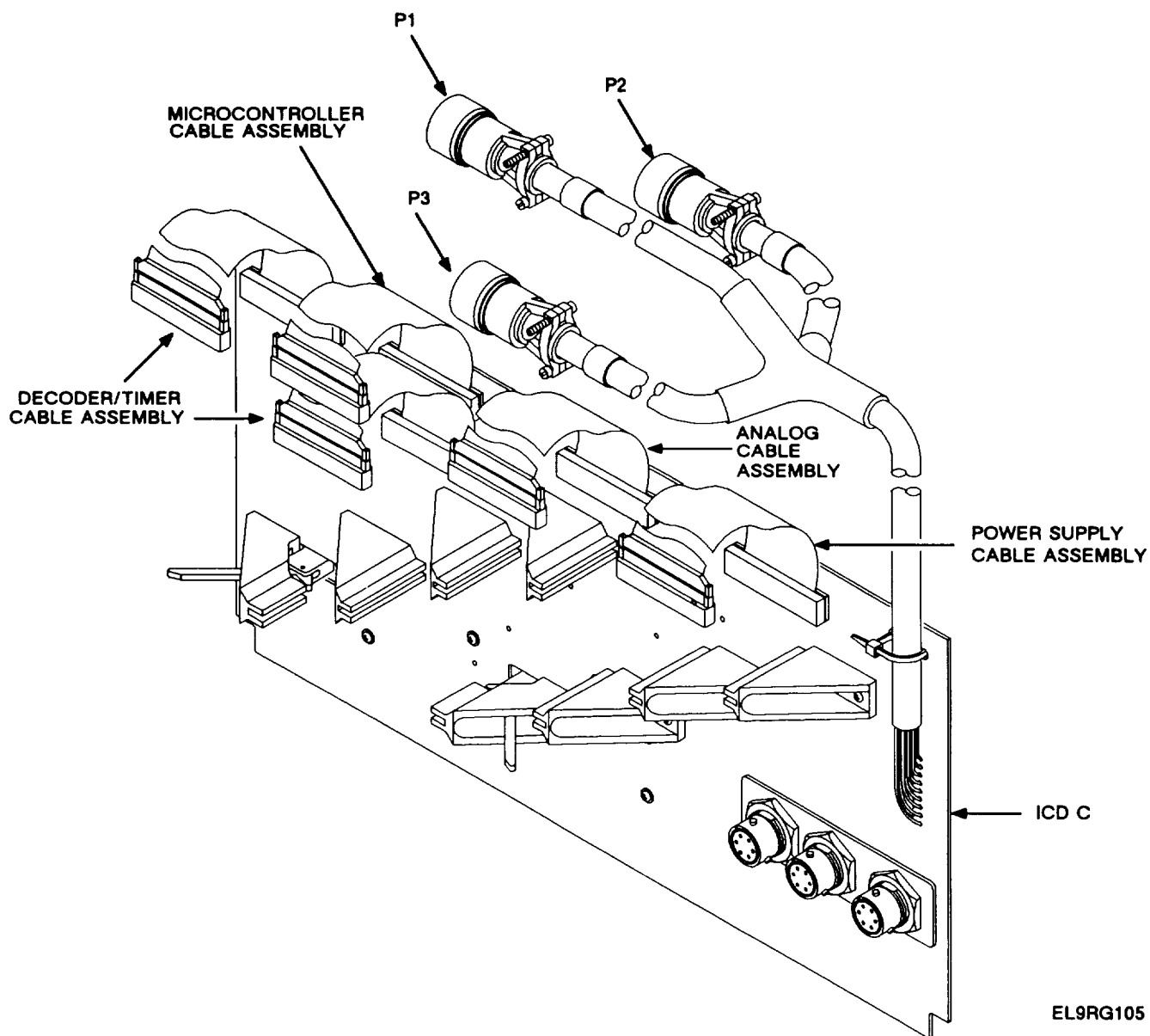


Figure 1-5. J-4820/G, Interface Connection Device C

Interface Connect Device C, J-4820/G, A3014255-1, is used to test the Chassis, Electrical Equipment-Control Monitor on the AN/USM-465A.

1-16. Description of J-4821/G (Adapter, Test-interface Connect Device A).

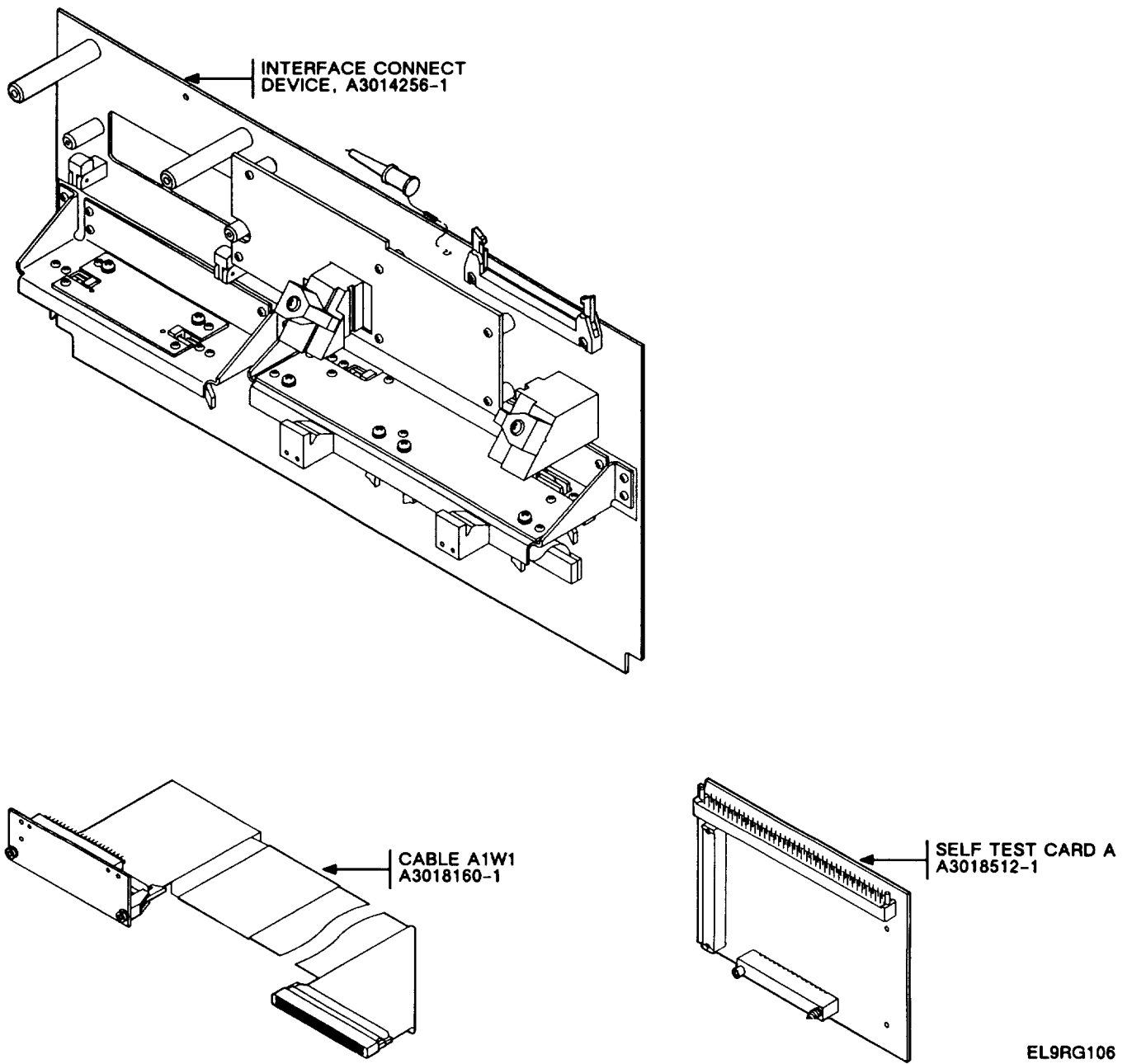
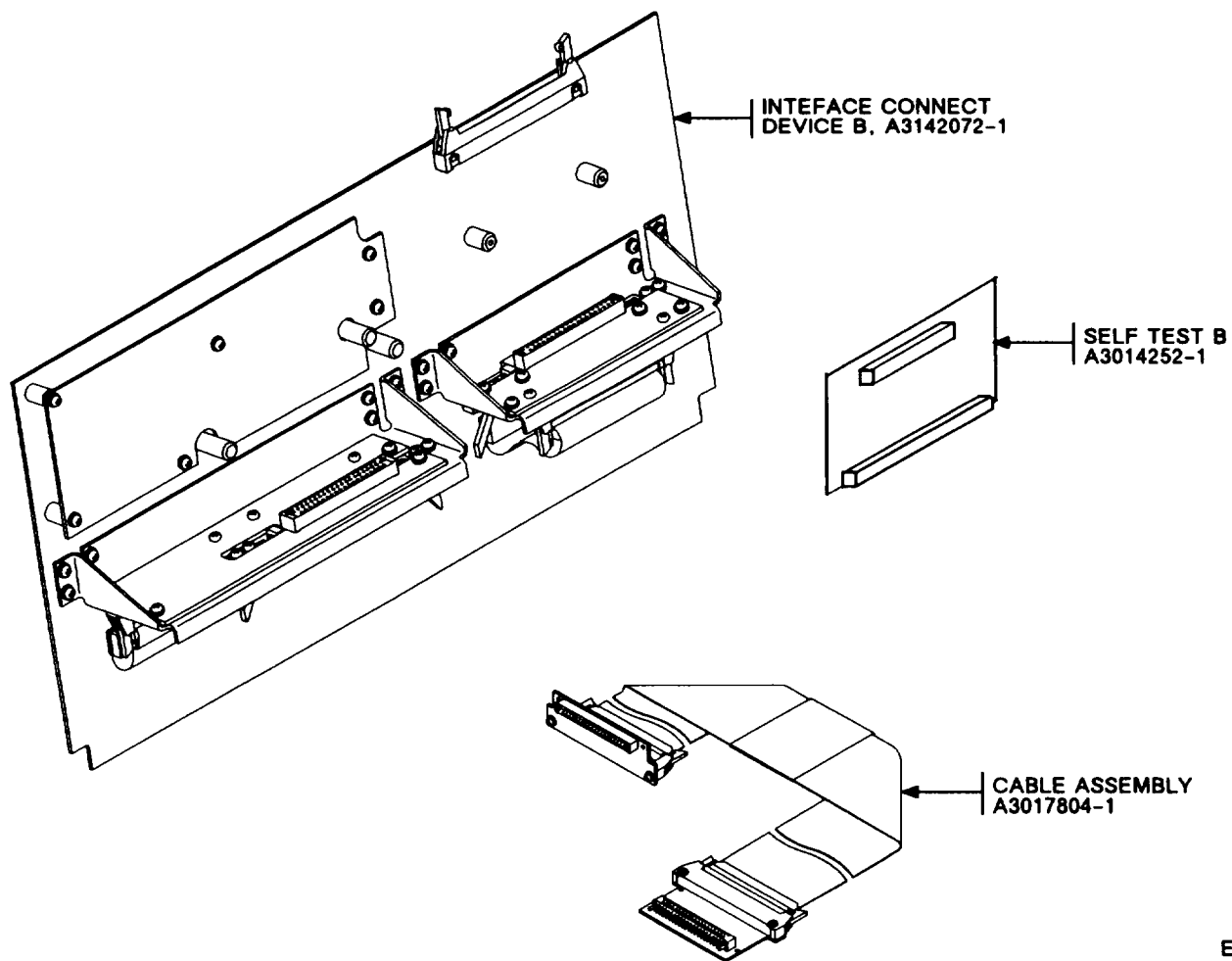


Figure 1-6. J-4821/G, Interface Connection Device A

Interface Connect Device A, J-4821/G, A3014256-1, is used to test the Audio Control, CCA-Fill Device, and the Microcontroller on the AN/USM-465A.

1-17. Description of J-4822/G (Adapter, Test-interface Connect Device B).

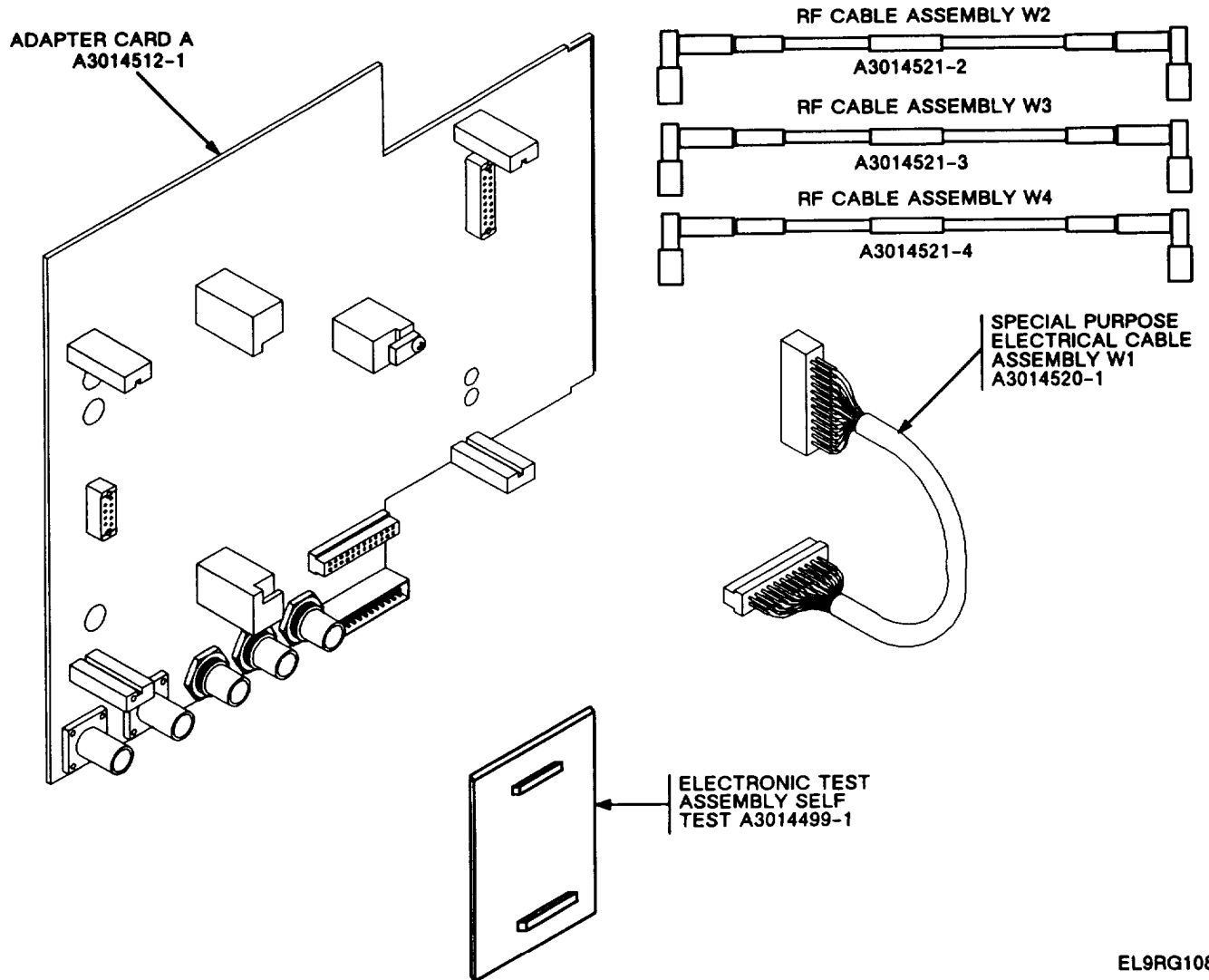


EL9RG107

Figure 1-7. J-48221G, Interface Connection Device B

Interface Connect Device B, J-4822/G, A3014302-1, is used to test the Electronics Components Assembly Control, the Decoder/Timer, and Remote I/O on the AN/USM-465/A.

1-18. Description of J-4823/G (Adapter, Test A).

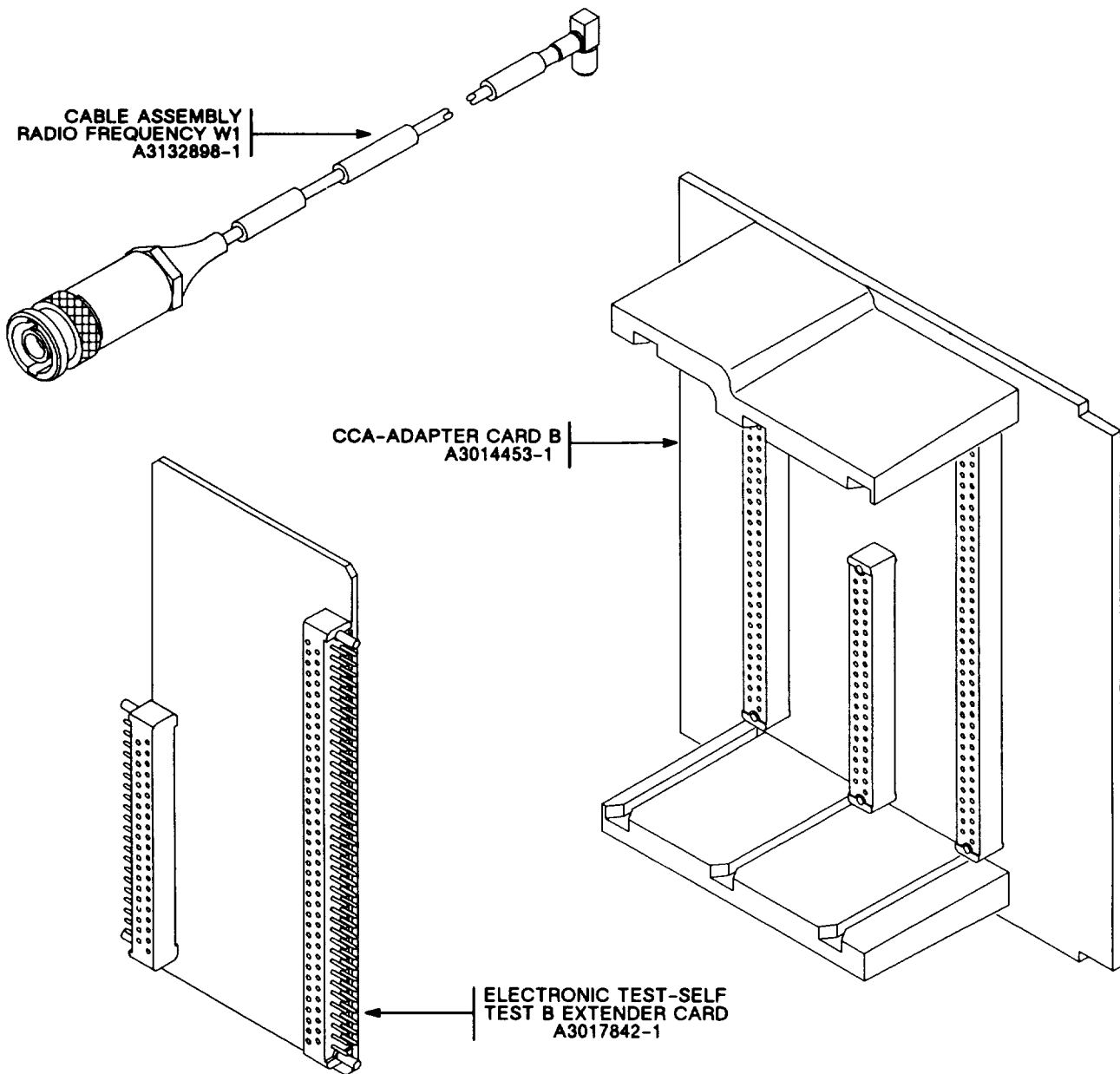


EL9RG108

Figure 1-8. J-4823/G, Test Adapter A

Test Adapter A, J-4823/G, A3018429-1, is used to test the Synthesizer and Tuner Mixer. It is composed of three RF cables, a special purpose cable, a self-test card, and an adapter card.

1-19. Description of J-4824/G (Adapter, Test B).

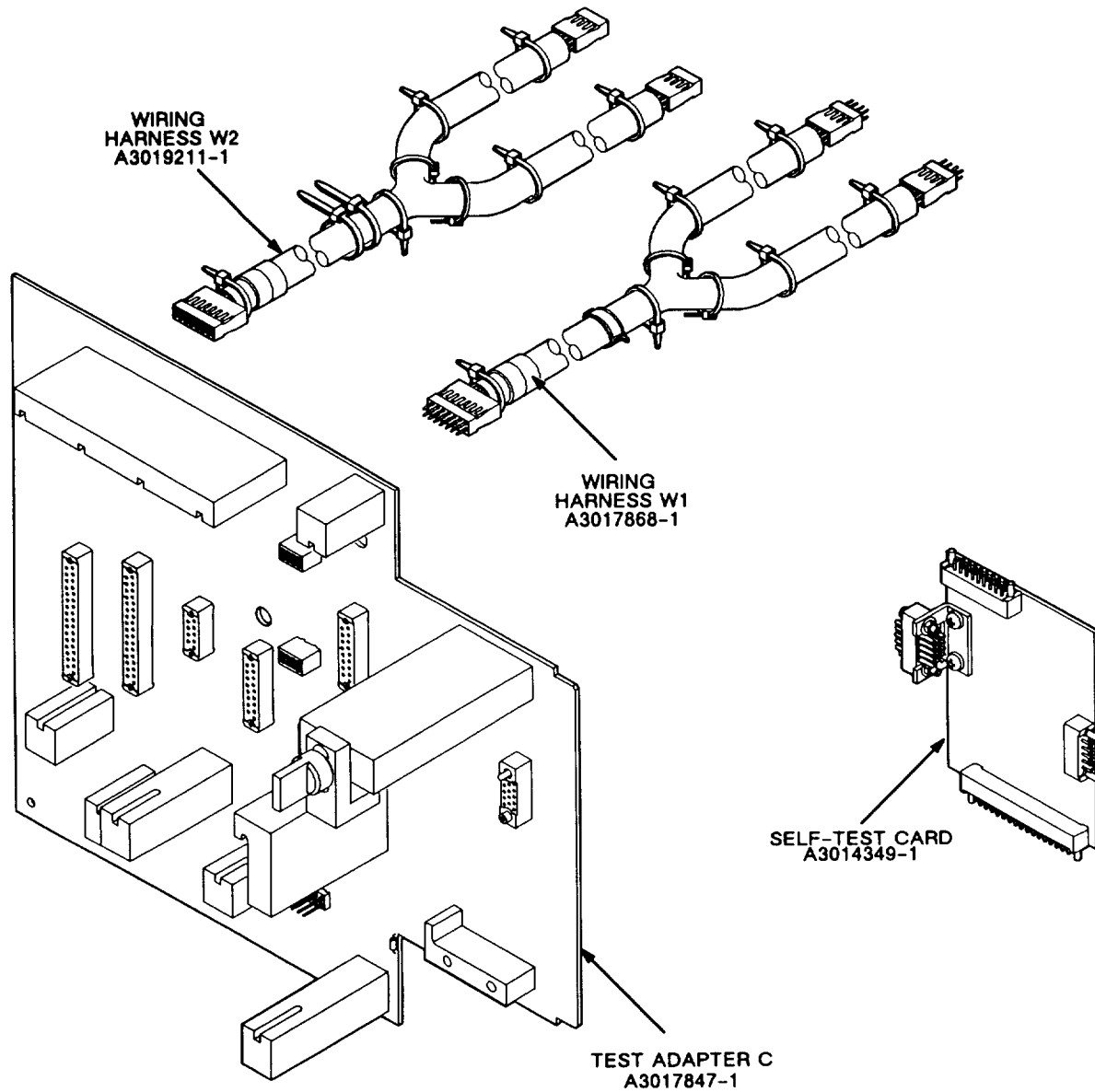


EL9RG109

Figure 1-9, J-4824/G, Test Adapter B

Test Adapter B, J-4824/G, A3019033-1, is used to test the Audio Data I/O, the Audio Power Supply and the CCA-Switching on the AN/USM-410.

1-20. Description of J-4825/G (Adapter, Test C).

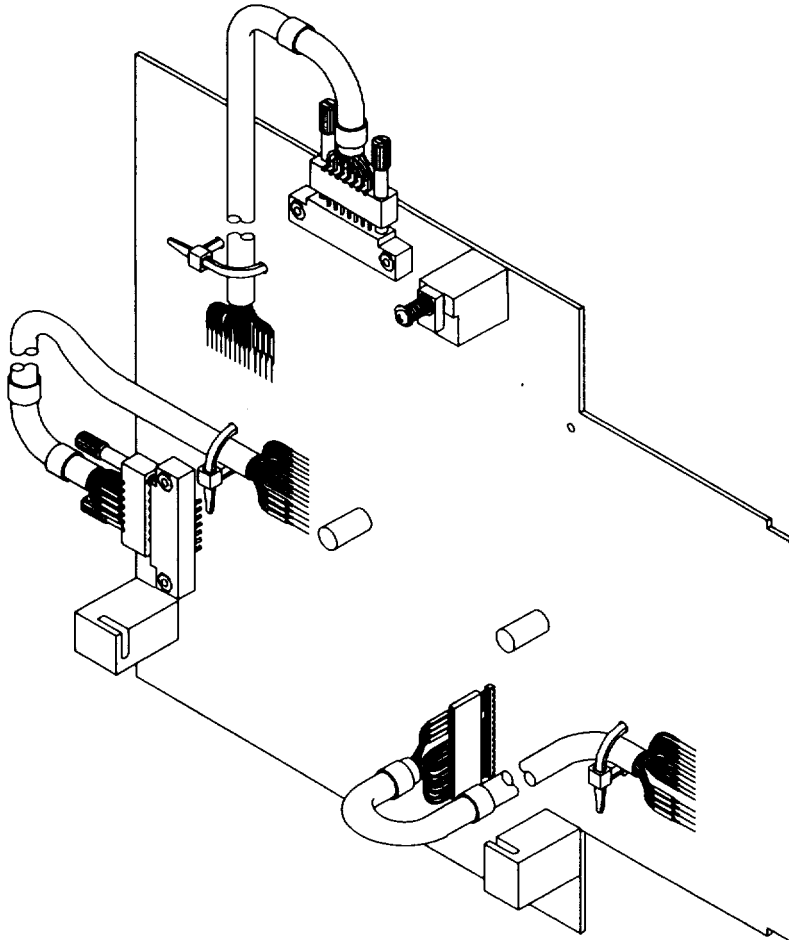


EL9RG110

Figure 1-10. J-4825/G, Test Adapter C

Test Adapter C, J-4825/G, A3019036-1, is used to test the following UUT: IF/Demodulator A3013360-1, CCA-Two Wire Interface A3014440-1 and A3018726-1. Power Supply A3013338-1, and CCA-Analog A3014176-1 and A3018025-1, CCA-Power Supply A3014158-1, and Impedance Matching Network A3018241-1. The adapter is composed of an adapter card, two wiring harnesses, and a self-test card.

1-21. Description of J-4826/G (Adapter, Test D).



EL9RG111

Figure 1-11. J-4826/G, Test Adapter D

Ad tar Card-D, J-4826/G, A3014468-1, is used to test the One Watt Audio module A3014195-1 on the AN/USM-410(V)2. This adapter is composed of a circuit card with three cables.

1-22. Description of J-4827/G (Adapter, Test E).

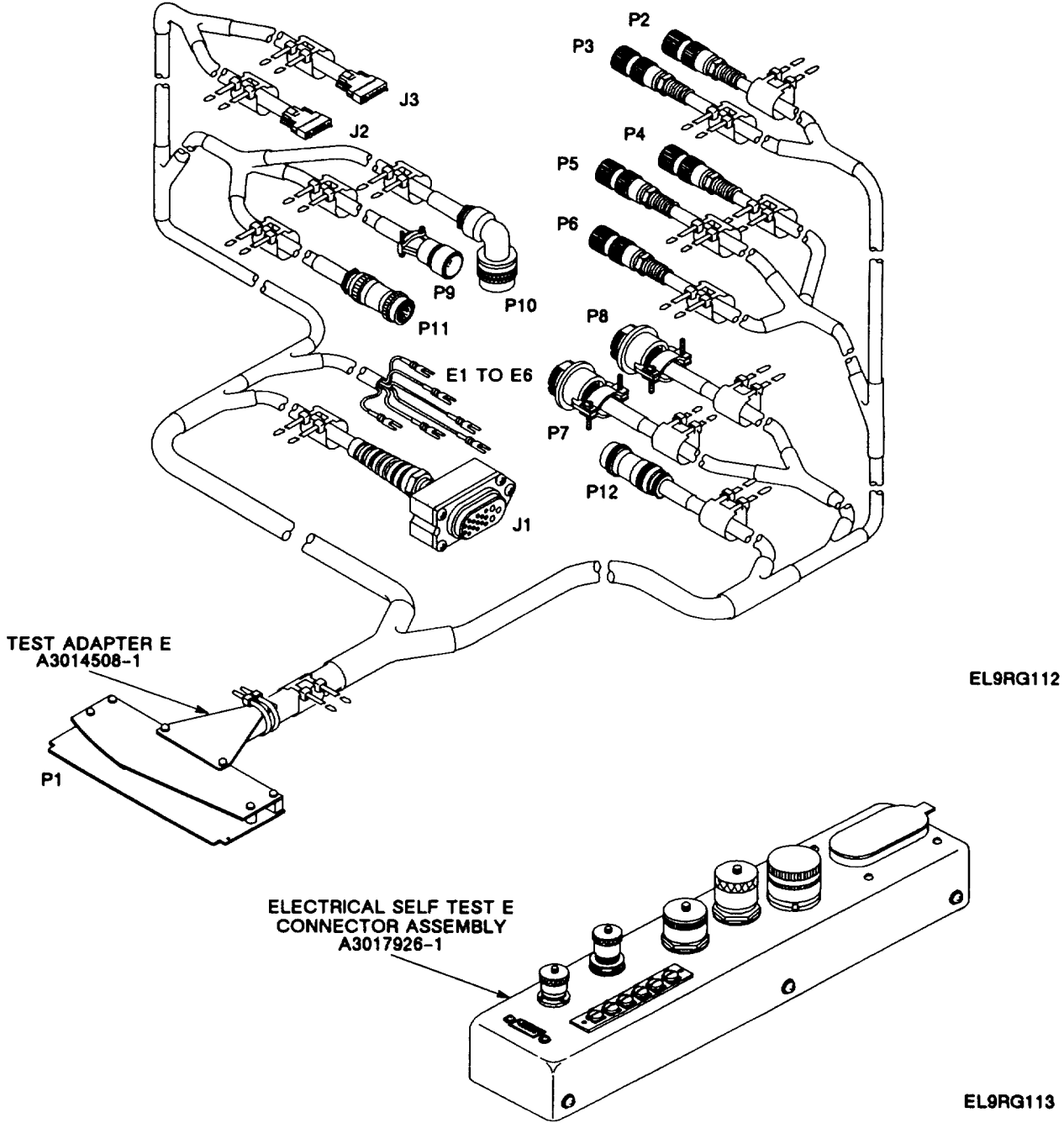
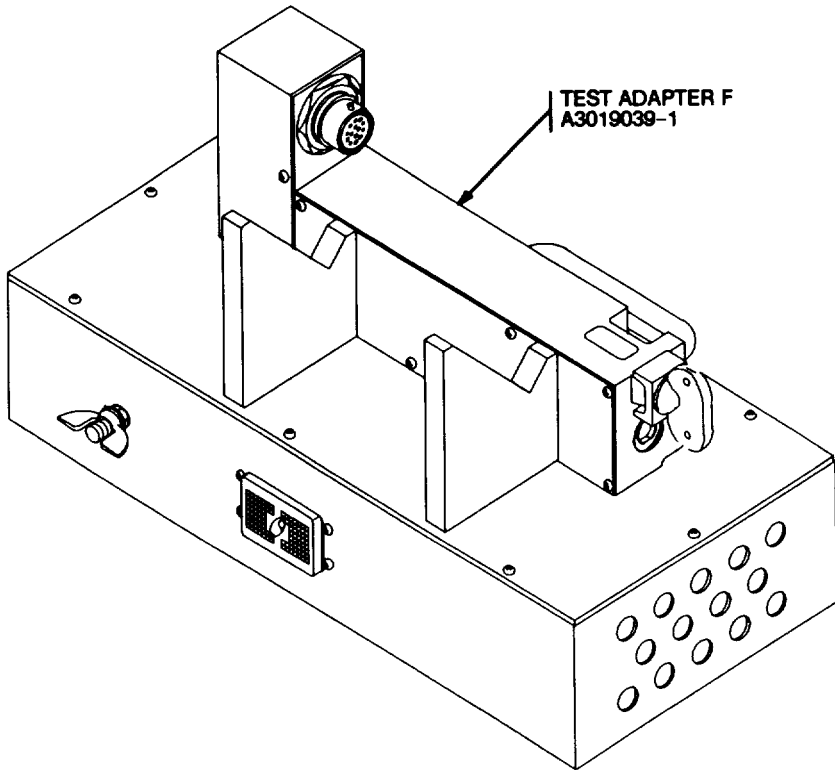


Figure 1-12. J-4827/G, Test Adapter E

Test Adapter E, A3014508-1, is used to test the Electrical Equipment-Amplifier-Adapter Chassis on the AN/USM-410(V)2. This unit is composed of an Electrical-Self Test E Connector assembly and Test Adapter E.

1-23. Description of J-4828/G (Adapter, Test F).



EL9RG114

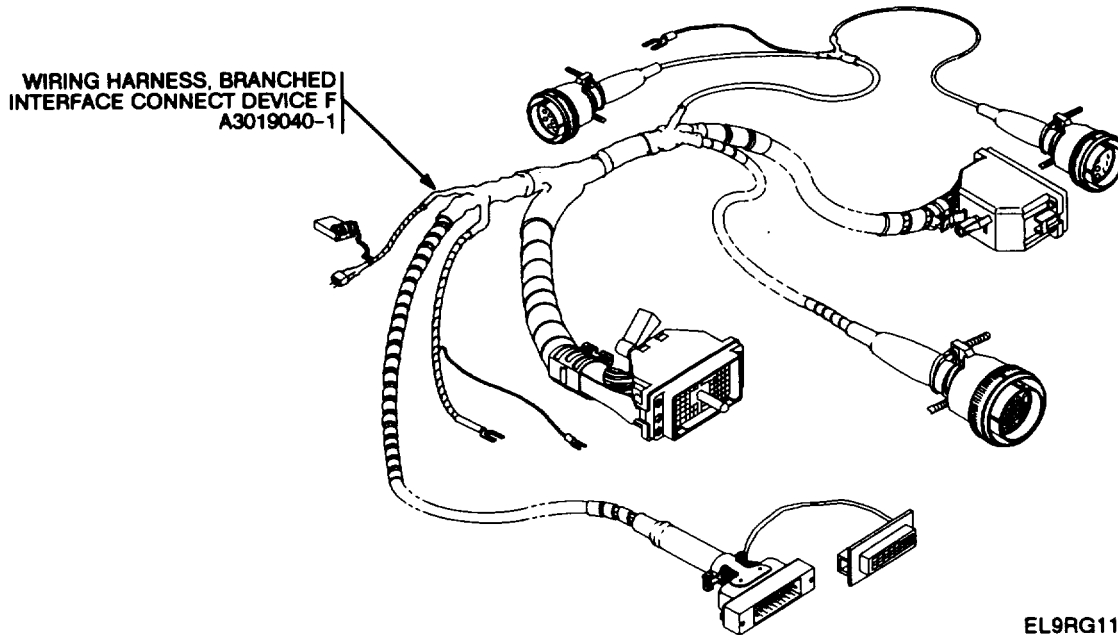
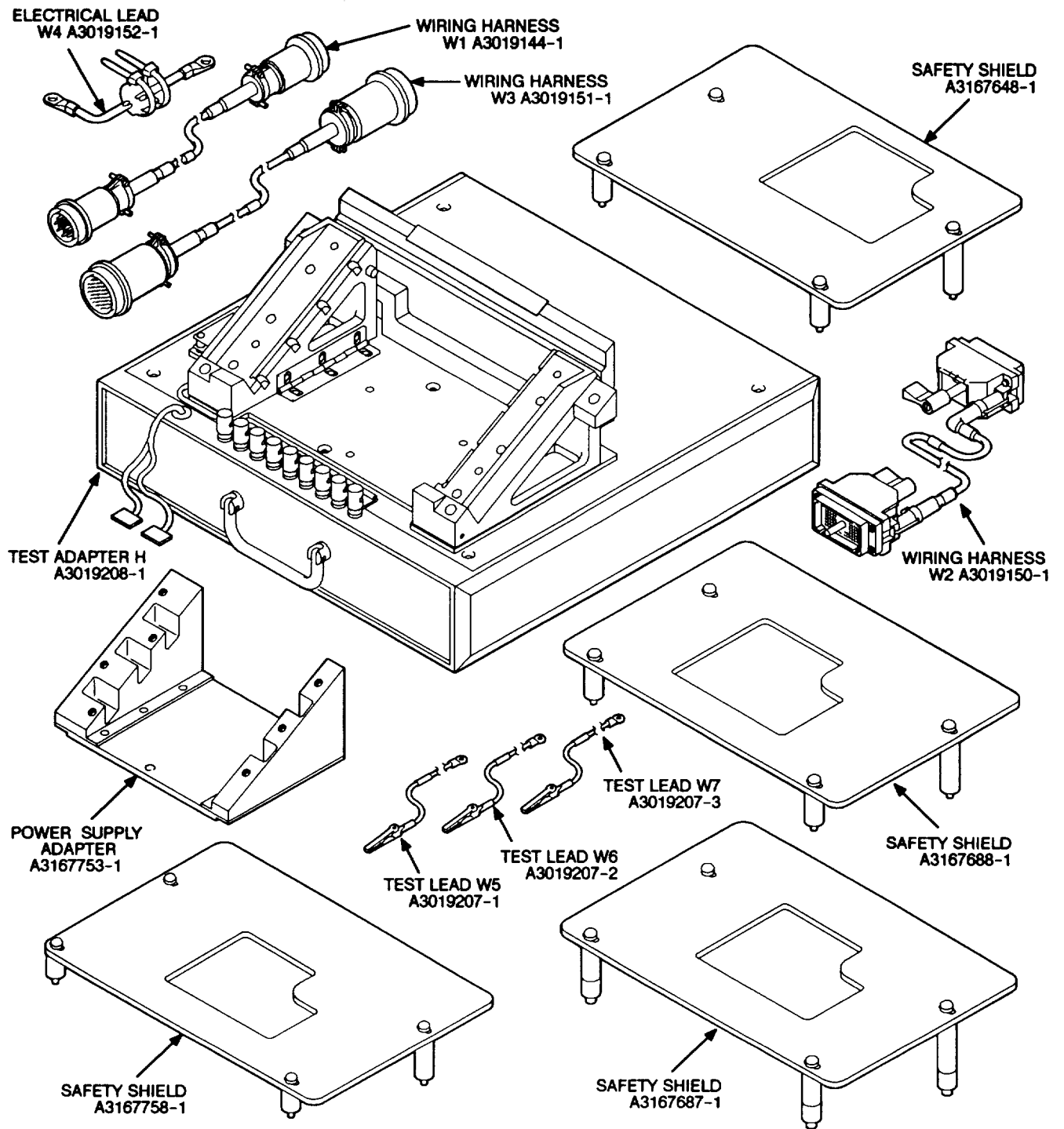


Figure 1-13. J-4828/G, Teat Adapter F

Test Adapter-F. J-4828/G. A3019038-1, is used to test the Case, Amplifier Radio Frequency, A3018432-1 and A3013379-1 on the AN/USM-410(V)2.

1-24. Description of J-4829/G (Adapter, Test H).



CE2JF007

Figure 1-14. J-4829/G, Test Adapter H

Test Adapter-H, J-4829/G, A3019209-1, is used to test the power supply, amplifier-adapter, A3018415-1, A3013369-1, A3142176-1(5A1), and Power Supplies A3018302-1, A3147937-1(16A1), A3018930-1(8A1) and A3148148-1 on the AN/USM-410(V)2.

1-25. Description of J-4830/G (Adapter, Test G).

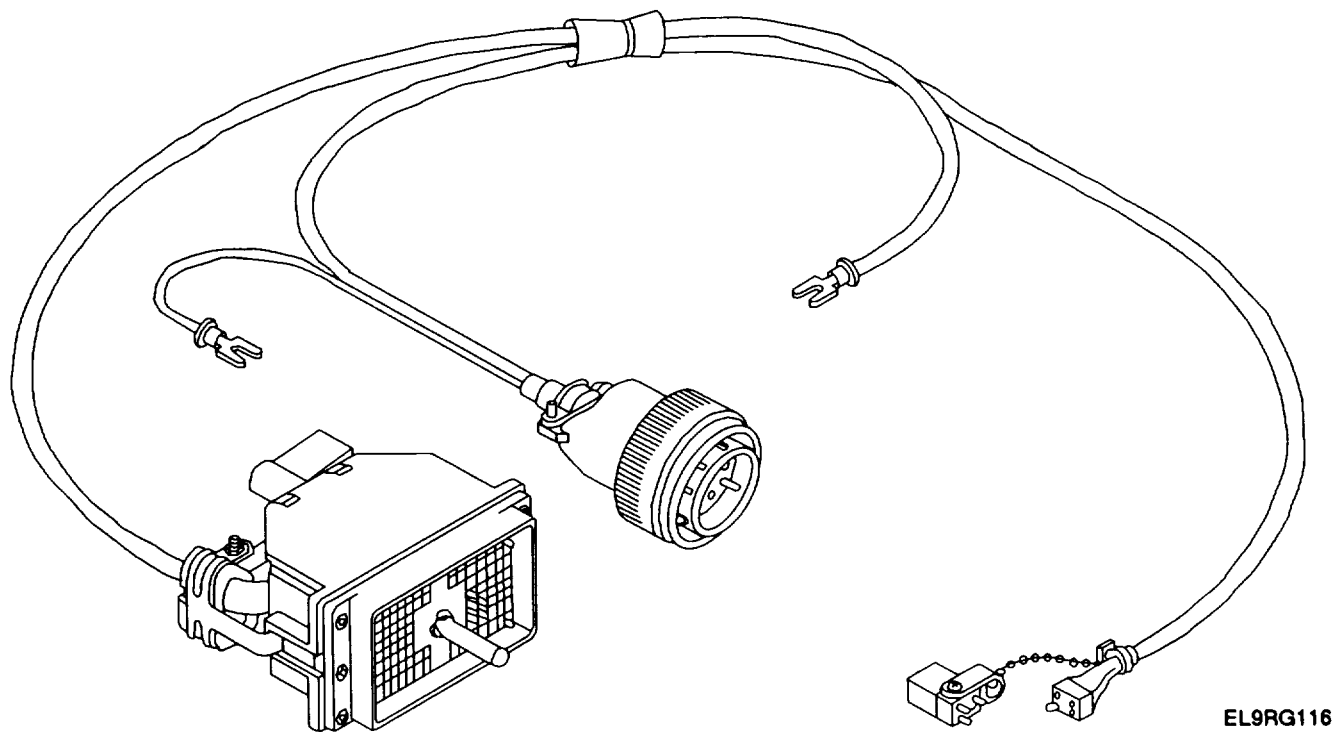
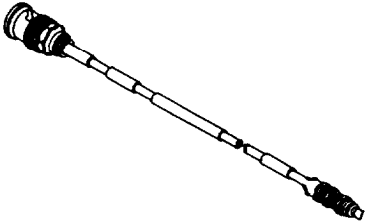


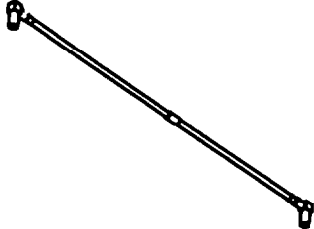
Figure 1-15. J-4830/G, Test Adapter G

Test Adapter-G, J-4830/G, A3014511-1, is used to test the Heat Sink, Electrical-Electronic Component-Amplifier, RF A3013374-1 on the AN/USM-410(V)2.

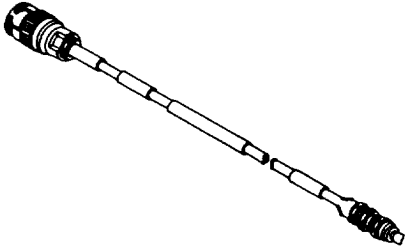
1-26. Accessory Kit, Test Adapter Set, A3018639-1, used with J-4831/G.



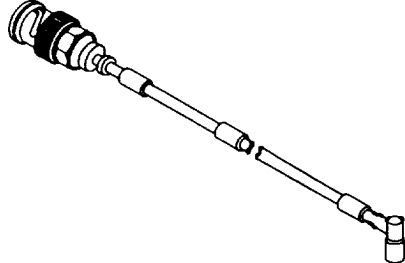
**RF CABLE ASSEMBLY, W1
A3018640-1**



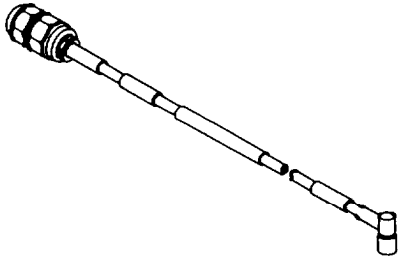
**RF CABLE ASSEMBLY, W4
A3018643-1**



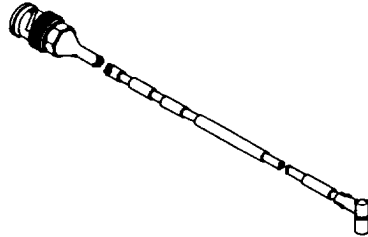
**RF CABLE ASSEMBLY, W2
A3018641-1**



**RF CABLE ASSEMBLY, W5
A3019037-1 AND RF CABLE
ASSEMBLY W6 A3019037-2**



**RF CABLE ASSEMBLY, W3
A3018642-1**

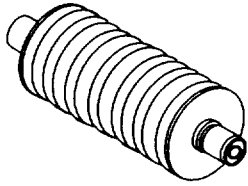


**RF CABLE ASSEMBLY, W7
A3140032-1 AND RF CABLE
ASSEMBLY, W8 A3140031-1**

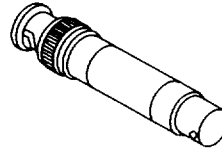
EL9RG117

Figure 1-16. Test Adapter Set Accessory Kit, A3018639-1, Used with J-4831/G (Sheet 1 of 3)

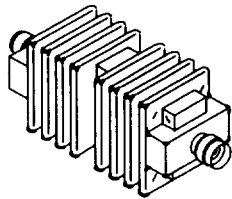
1-26. Accessory Kit, Test Adapter Set, A3018639-1, used with J-4831/G. Cont



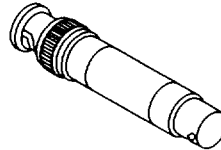
**10DB, 10 WATT ATTENUATOR
(AT1) A3018544-1**



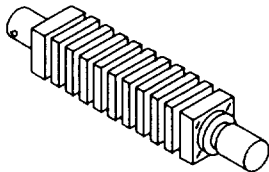
**10DB, 1 WATT ATTENUATOR
(AT5,6) M3933/19-08**



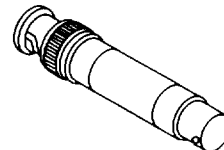
**30DB, 150 WATT ATTENUATOR
(AT2) A3018545-1**



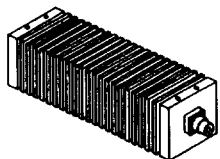
**20DB, 1 WATT ATTENUATOR
(AT7) M3933/19-12**



**3DB, 30 WATT ATTENUATOR
(AT3) A3132886-1**



**60DB, 1 WATT ATTENUATOR
(AT4) M3933/19-17**

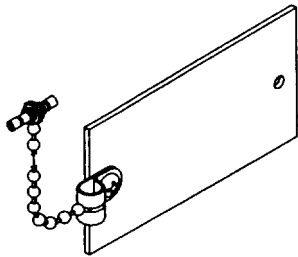


**100 WATT ATTENUATOR,
MISMATCH, A3018792-1**

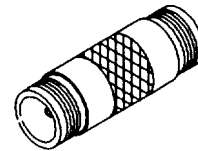
EL9RG118

Figure 1-16. Test Adapter Set Accessory Kit, A3018639-1, Used with J-4831/G (Sheet 2 of 3)

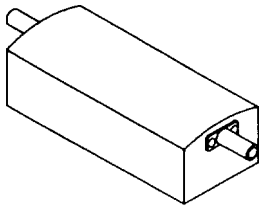
1-26. Accessory Kit, Test Adapter Set, A3018639-1, used with J-4831/G. Cont



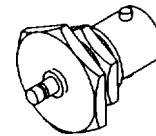
CONNECTOR ADAFTER
ASSEMBLY, CP3, A3140054-1



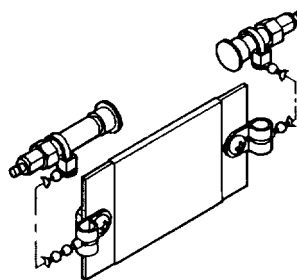
CONNECTOR ADAPTER
(CP1) M55339/07-00029



BANDPASS FILTER
(FL1) A3140091-1



CONNECTOR ADAPTER
(CP2)A3018791-1

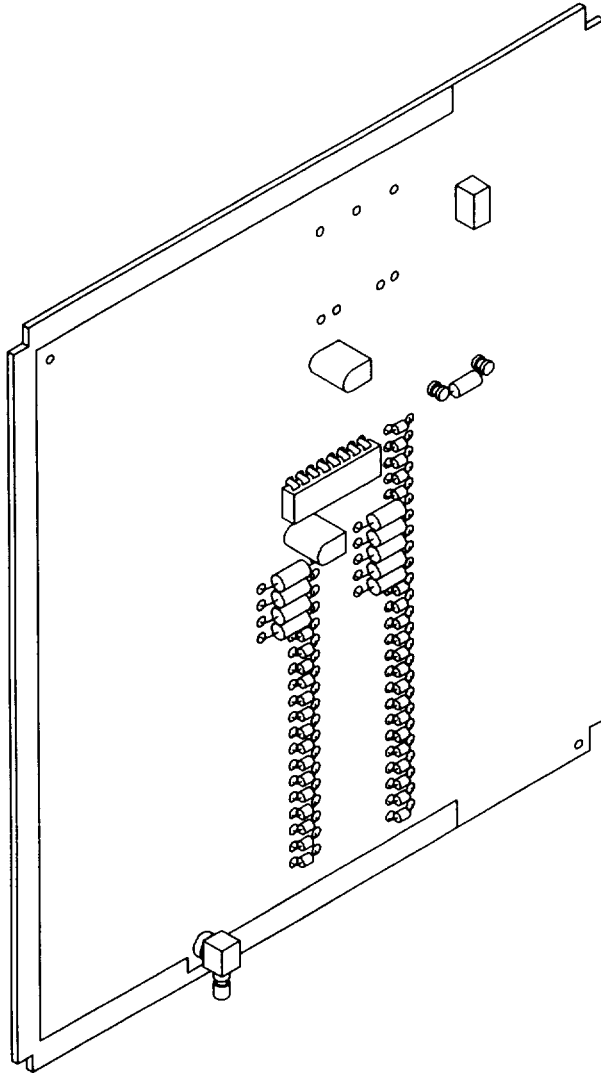


CONNECTOR ADAPTER
ASSEMBLY, (T1), A3140053-1

EL9RQ119

Figure 1-16. Test Adapter Set Accessory Kit, A3018639-1, Used with J-4831/G (Sheet 3 of 3)

1-27. Description of J-4832/G (Load Card A).

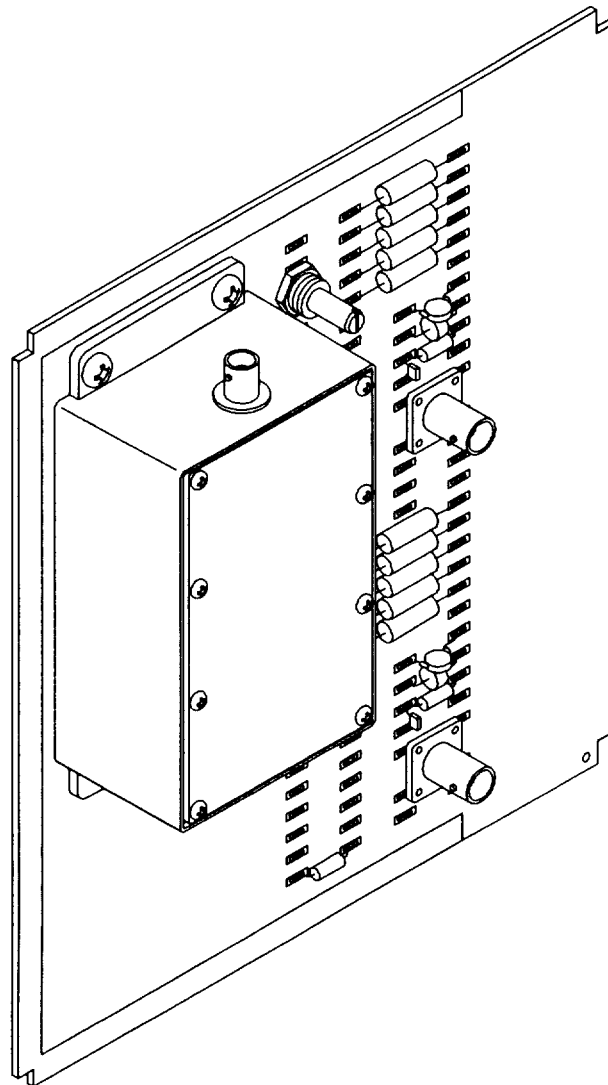


EL9RG120

Figure 1-17. J-4832/G, Load Card A

Load Card A, J-4832/G, A3014493-1, is used with Adapter Card B to provide UUT circuit loads.

1-28. Description of J-4833/G (Load Card C).

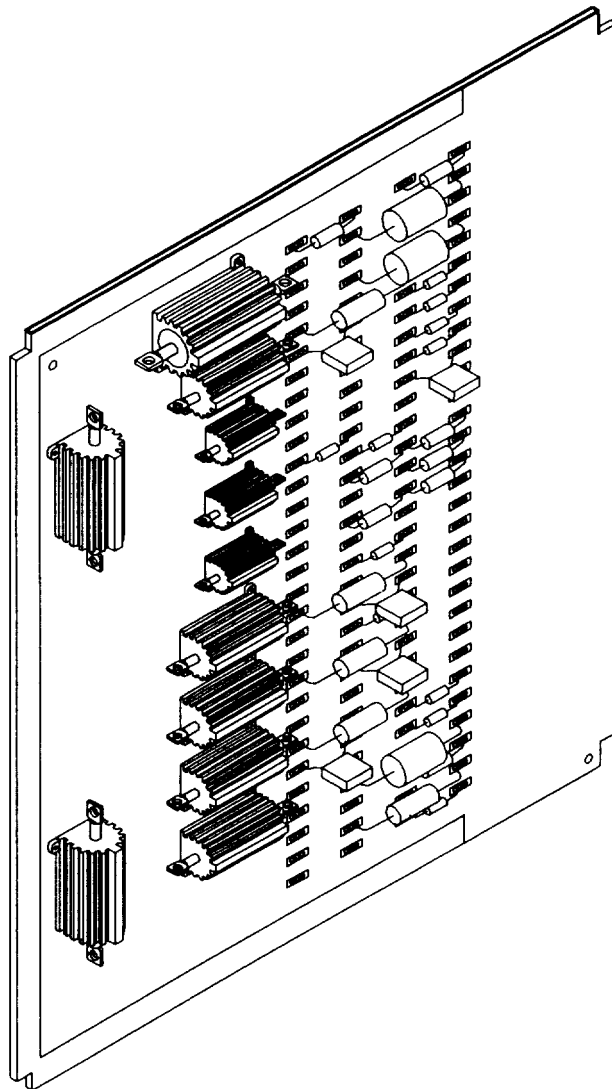


EL9RG121

Figure 1-18. J-4833/G, Load Card C

Load Card C, A3019205-1, is used with Adapter Card C to provide circuit loads for UUT

1-29. Description of J-4834/G (Load Card B).



EL9RG122

Figure 1-19. J-4834/G, Load Card B

Load Card B, J-4834/G, A3017839-1, is used with Adapter Card C and Adapter Card D to provide circuit loads for the UUT

1-30. Description of J-4909/G (Adapter, Test K).

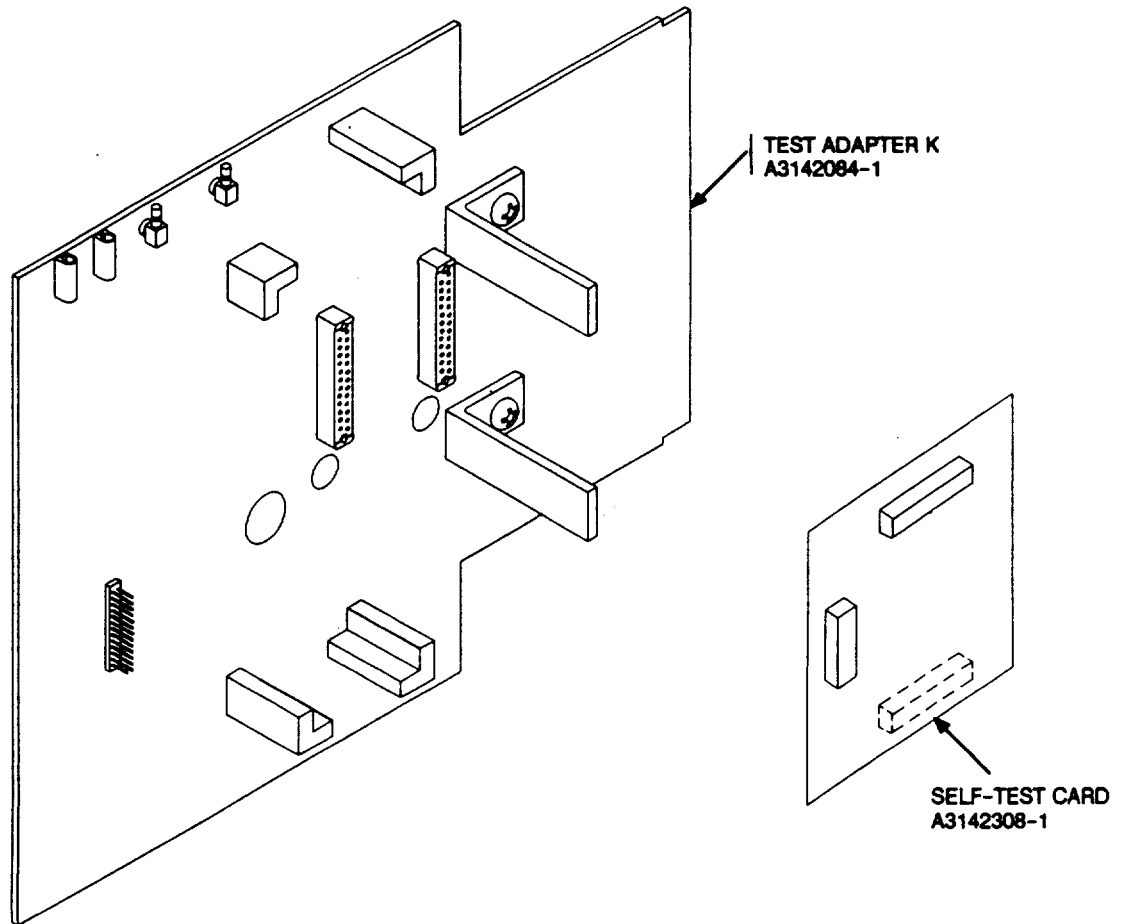


Figure 1-20. J-4909/G, Teat Adapter K

Test Adapter K is part of J-4909/G. This test adapter is used to test the Exciter/Power Amplifier Module.

1-30.1. Description of J-4951/G (Interface Connect Device A5)

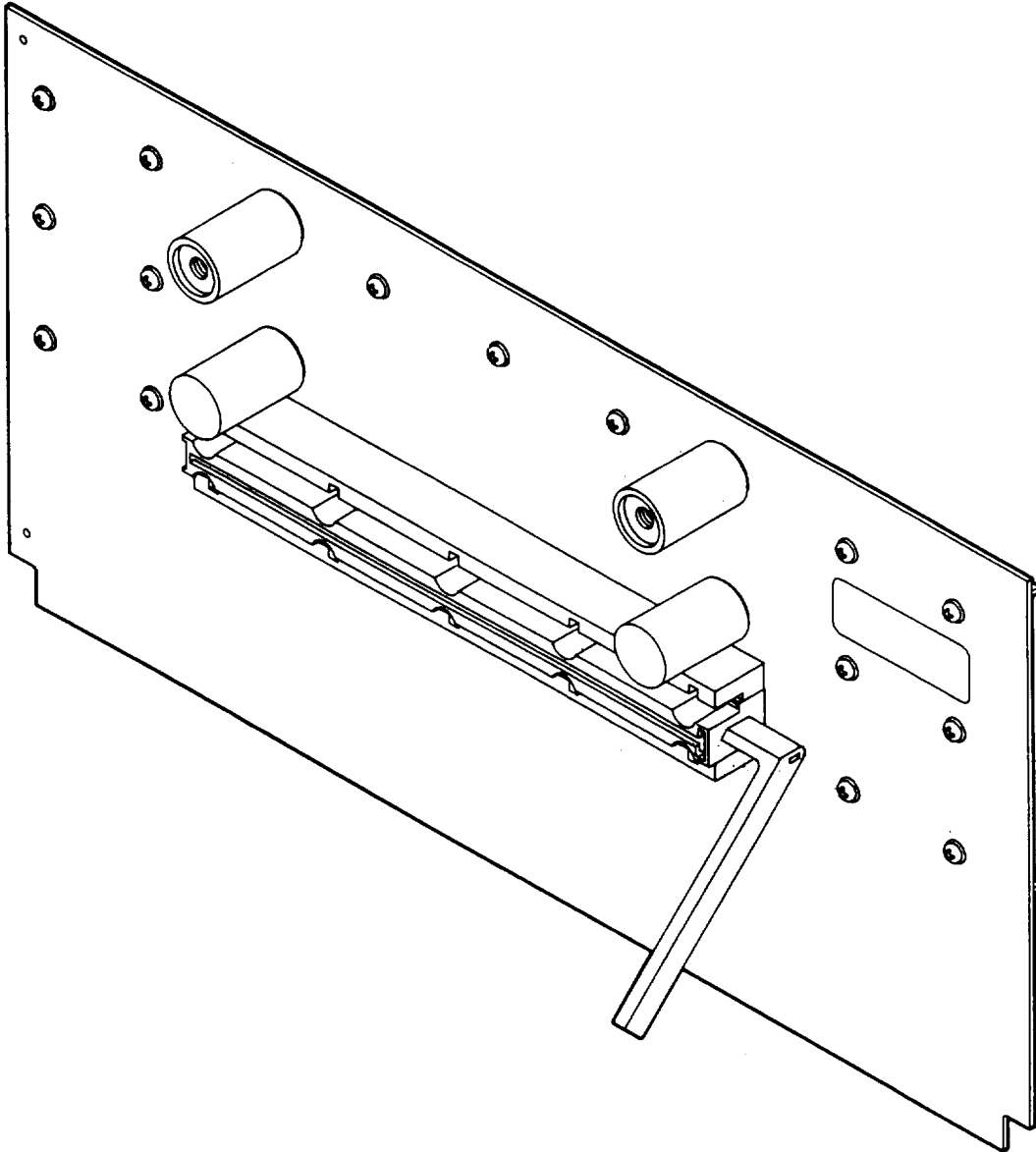


Figure 1-20.1. J-4951/G, Interface Connection Device A5

Interface Connect Device A5, J4951/G, B4041573-1, is to connect nine test adapters, A6 through A10, A12 through AI 4, and A16, to the AN/USM-465A Test Set.

1-30.2. Description of J-4997/G (Adapter, Test L)

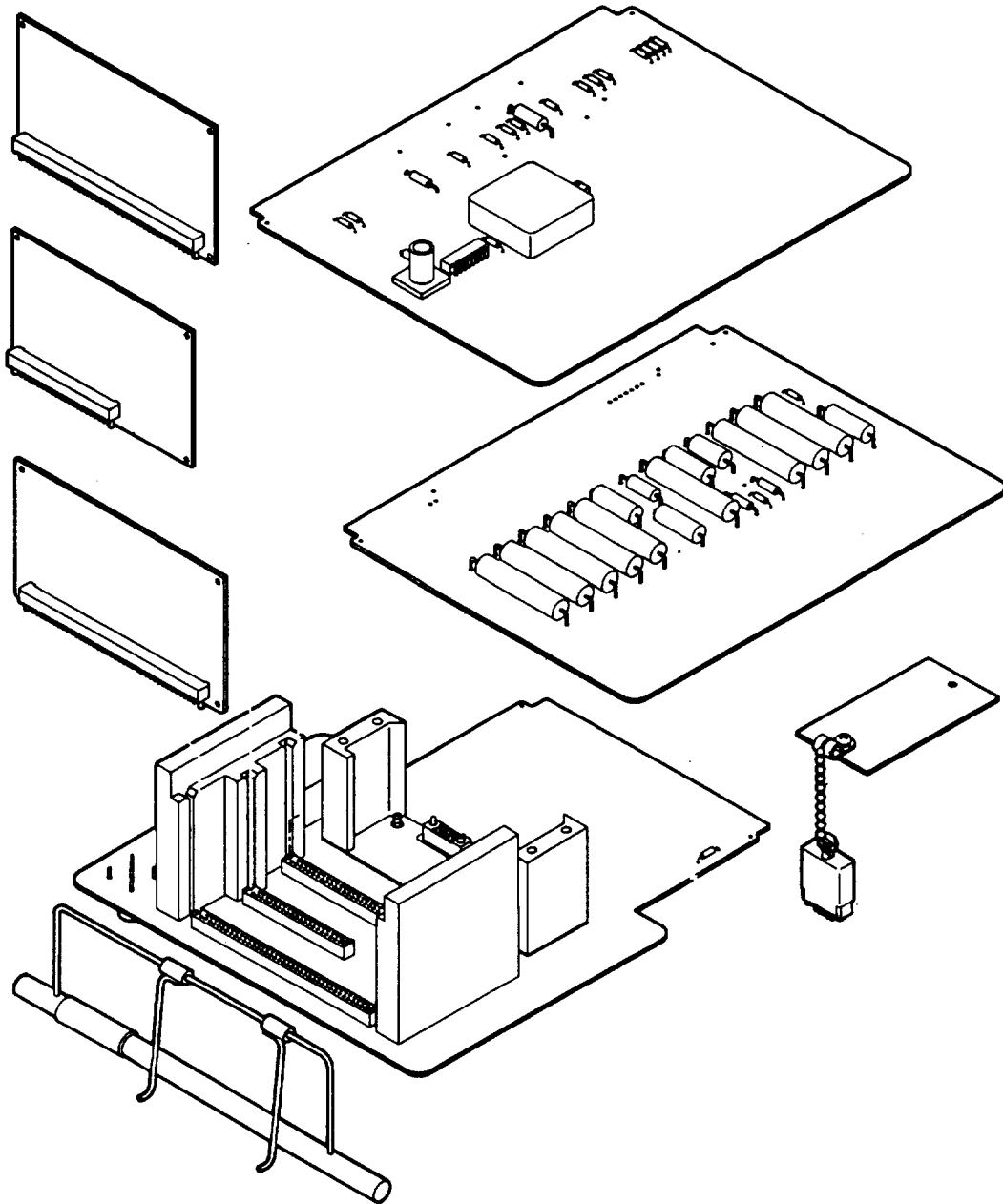


Figure 1-20.2. J-4997/G, Test Adapter L

Test Adapter L, A3148048-1, is used to test the Power Supply-Module Assembly, A3019261-1, the CCA Switching, A3142316-1, the CCA-ICOM Power Supply, A3014414-1, and the CCA-ICOM Data I/O, A3014408-1.

1-30.3. Description of J-4998/G (Adapter, Test A6)

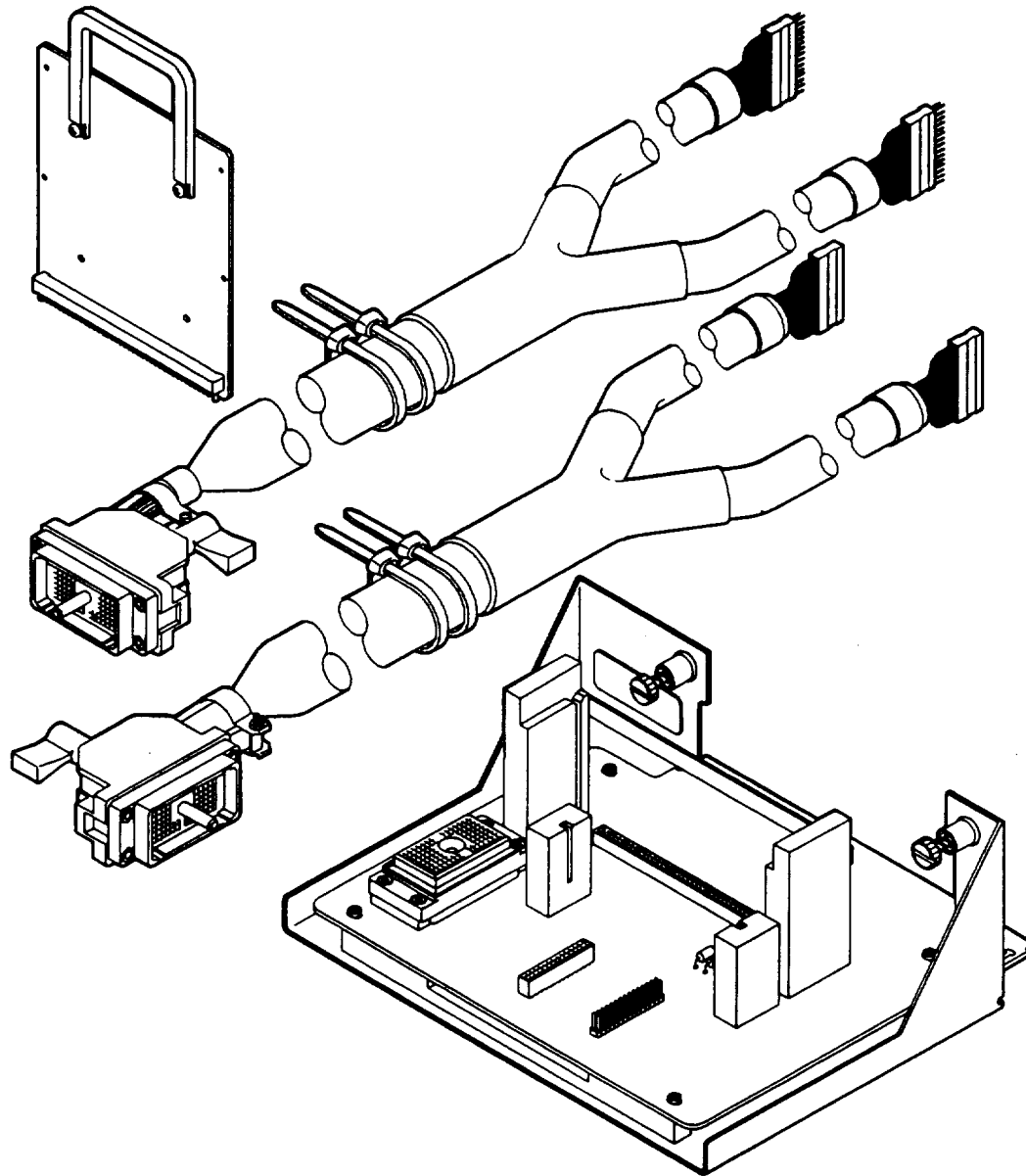


Figure 1-20.3. J-4998/G, Test Adapter A6

Test Adapter A6, A3146049-1, is used to test Electronic Components Assembly-Fill Routing, A3018890-1.

1-30.4. Description of J-4999/G (Adapter, Test A7)

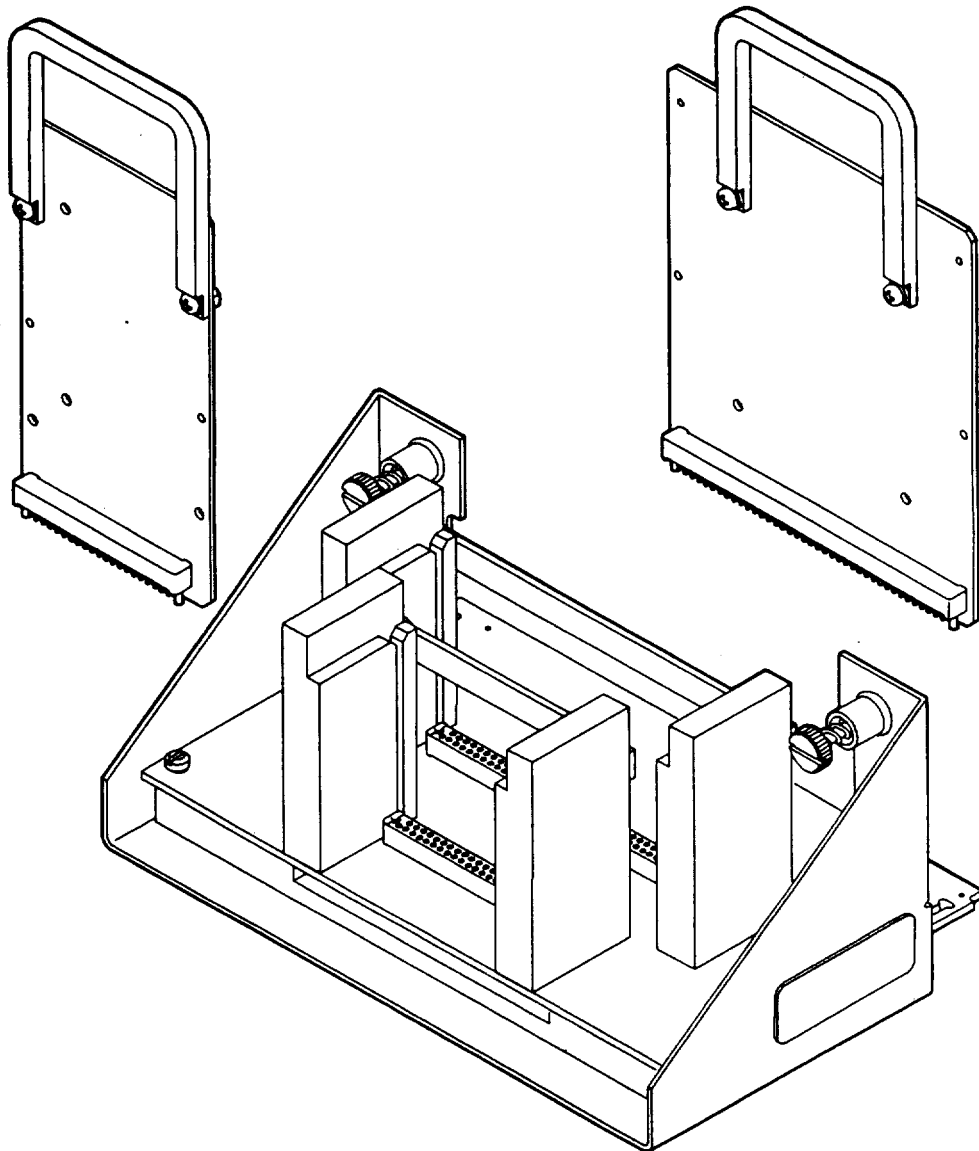


Figure 1-20.4. J-49991G, Test Adapter A7

Test Adapter A7, A31 48050-1, is used to test Remote I/O, A31 42337-1 and CCA-ICOM Control, 1A13, A3142334-1.

1-30.5. Description of J-6000/G (Adapter, Test A8)

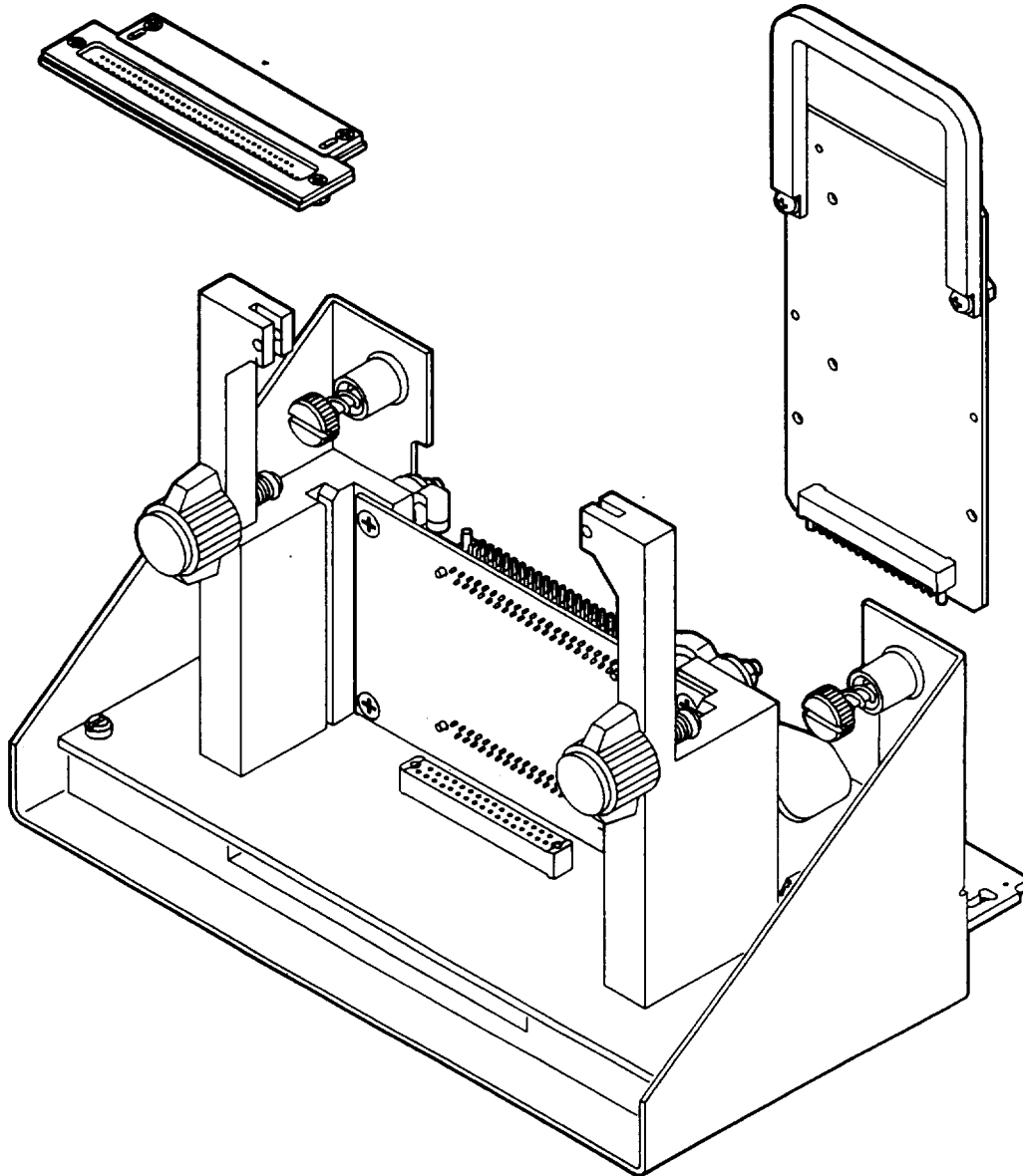


Figure 1-20.5. J-6000/G, Test Adapter A8

Test Adapter A8, A3148051-1, is used to test ECCM Control 1A5, A3019053-1.

1-30.6. Description of J-6001/G (Adapter, Test A9)

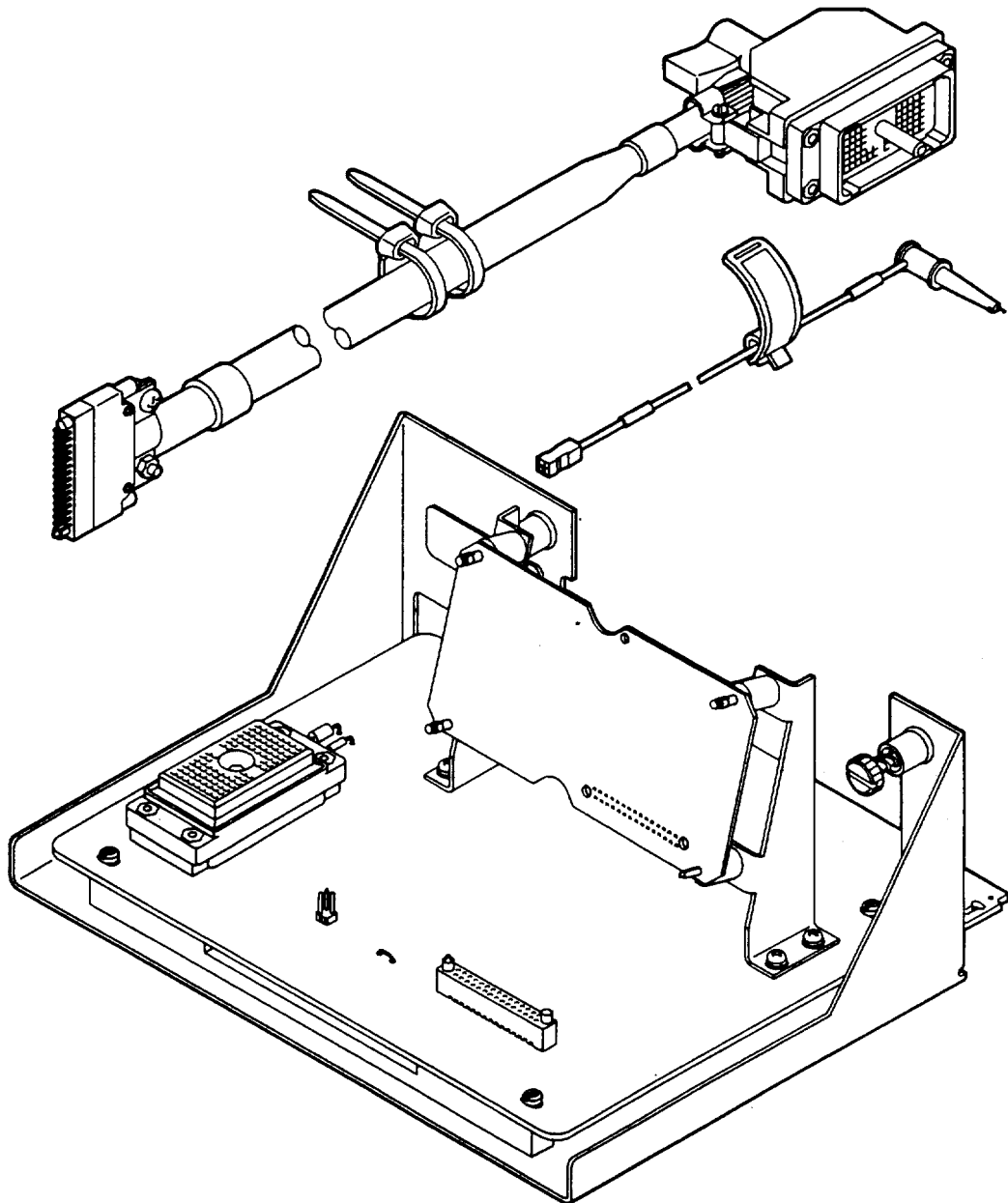


Figure 1-20.6. J-6001/G, Test Adapter A9

Test Adapter A9, A3148052-1, is used to test Electronic Components Assembly-CCA Fill Device, 10A1, A3142305-1.

1-30.7. Description of J-6002/G (Adapter, Test A10)

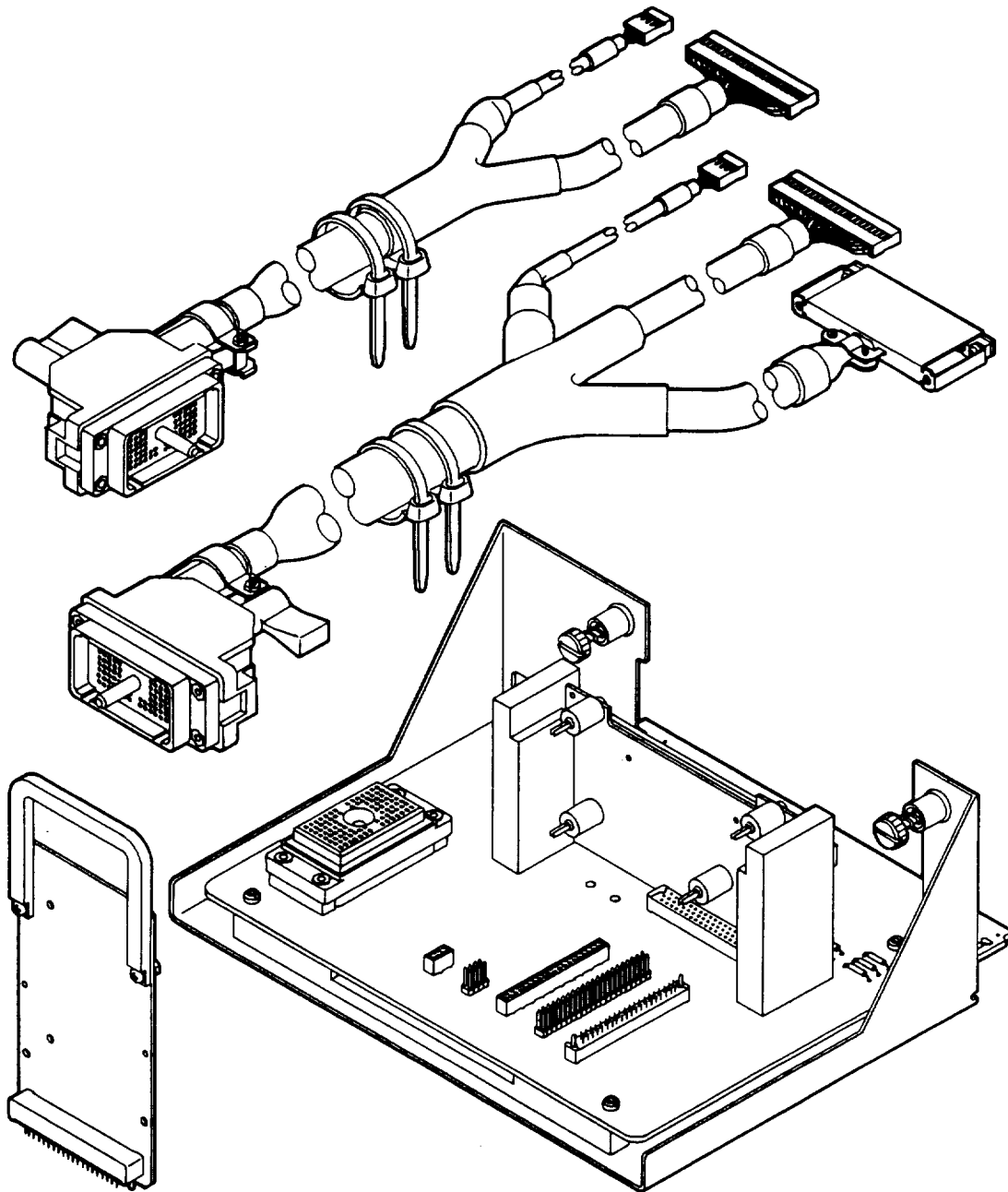


Figure 1-20.7. J-6002/G, Test Adapter A10

Test Adapter A10, A3148053-1, is used to test Electronic Components Assembly-Control, 1A4, A3148179.

1-30.8. Description of J-6003/G (Adapter, Test A12)

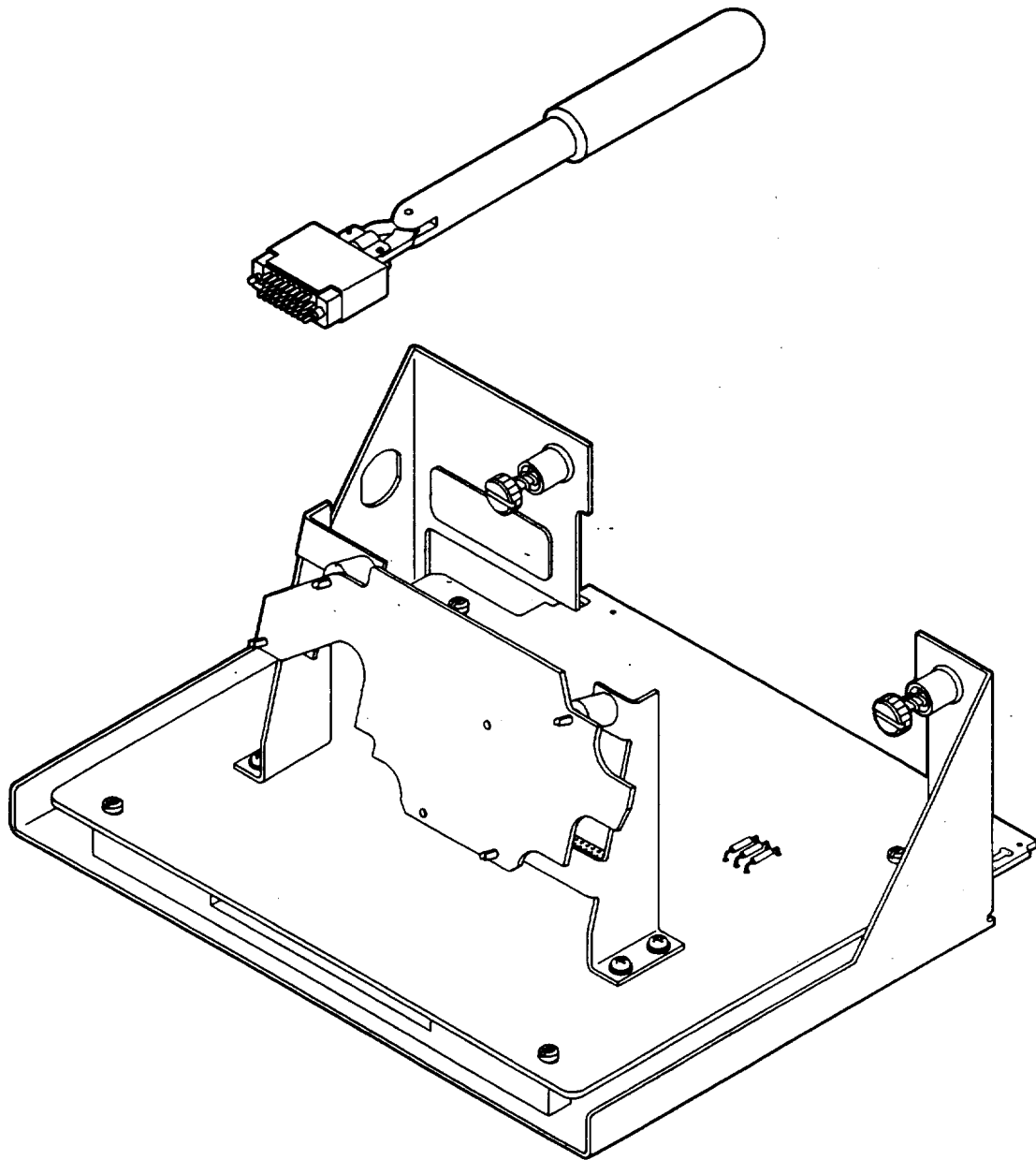


Figure 1-20.8. J-6003/G, Test Adapter A12

Test Adapter A1 2, A3148055-1, is used to test CCA-Display, A3142328-1.

1-30.9. Description of J-6004/G (Adapter, Test A13)

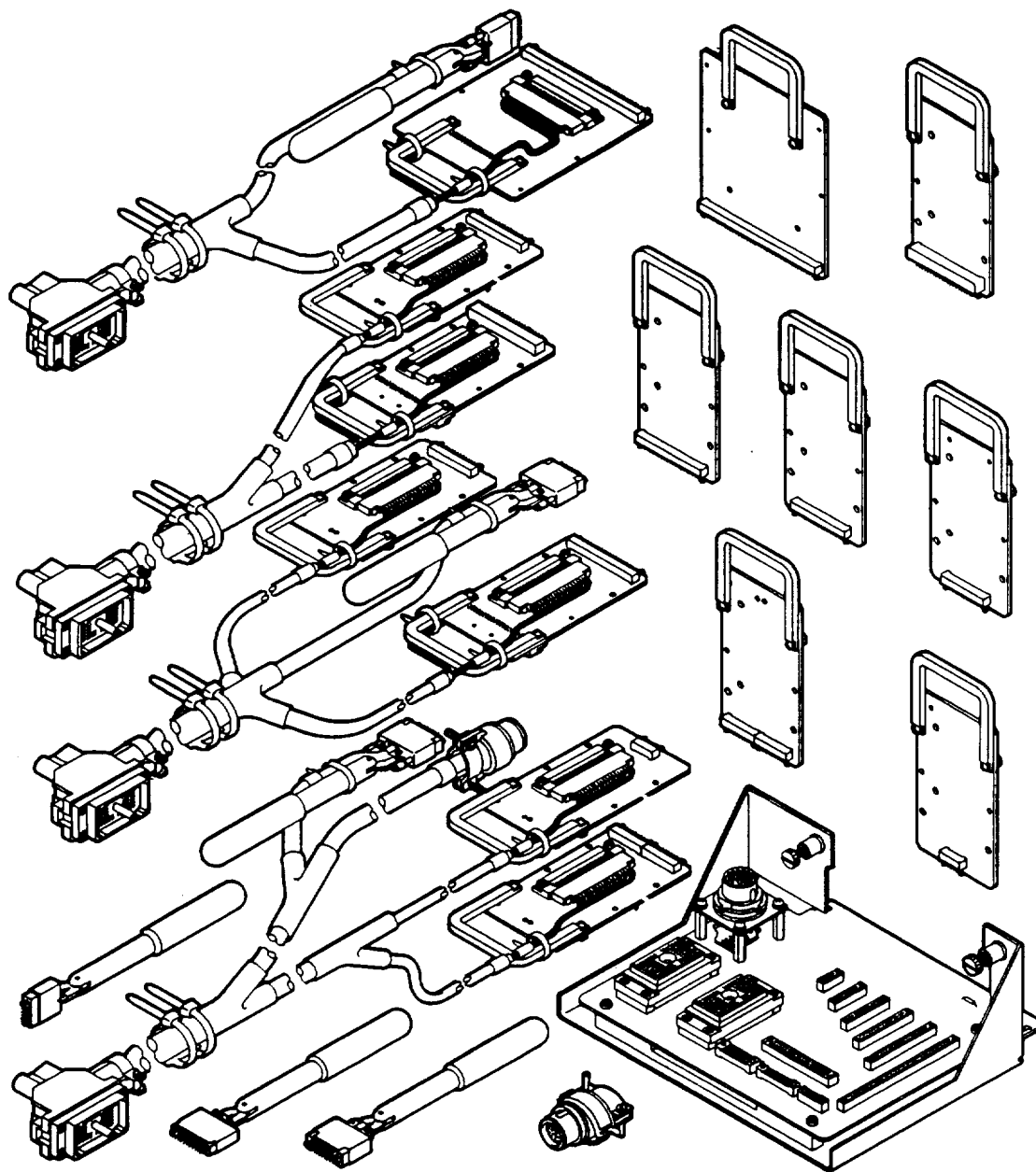


Figure 1-20.9. J-6004/G, Teat Adapter A13

Test Adapter A13, A3148056-1, is used to test the Chassis, Electrical Equipment-Receiver-Transmitter Subassembly, A3148159-1. This adapter is also used with J-6097/G, Test Adapter A16, to test the Chassis, Electrical Equipment-Control, Receiver-Transmitter Subassembly, A3167954-1.

1-30.10. Description of J-6097/G (Adapter, Test A16)

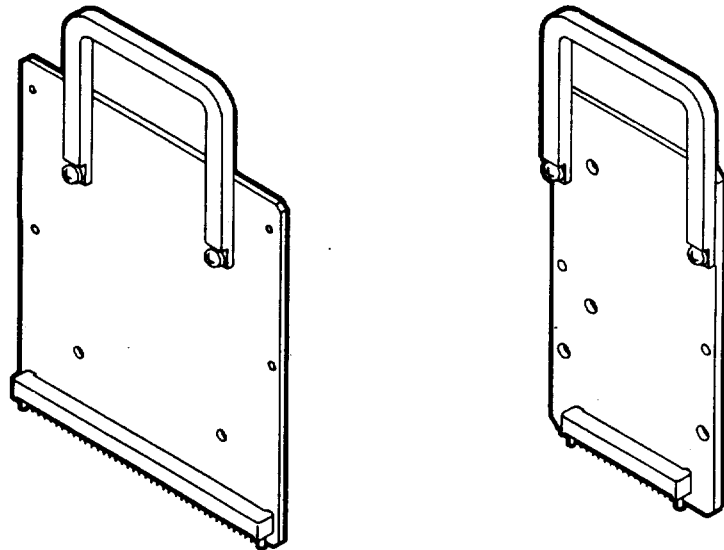


Figure 1-20.10. J-6097/G, Test Adapter A16

Test Adapter A16, A3190663-1, is used with J-6004/G, Test Adapter A13, to test the Chassis, Electrical Equipment-Control, Receiver-Transmitter Subassembly, A3167954-1.

1-30.11. Description of J-6098/G (Adapter, Test A14)

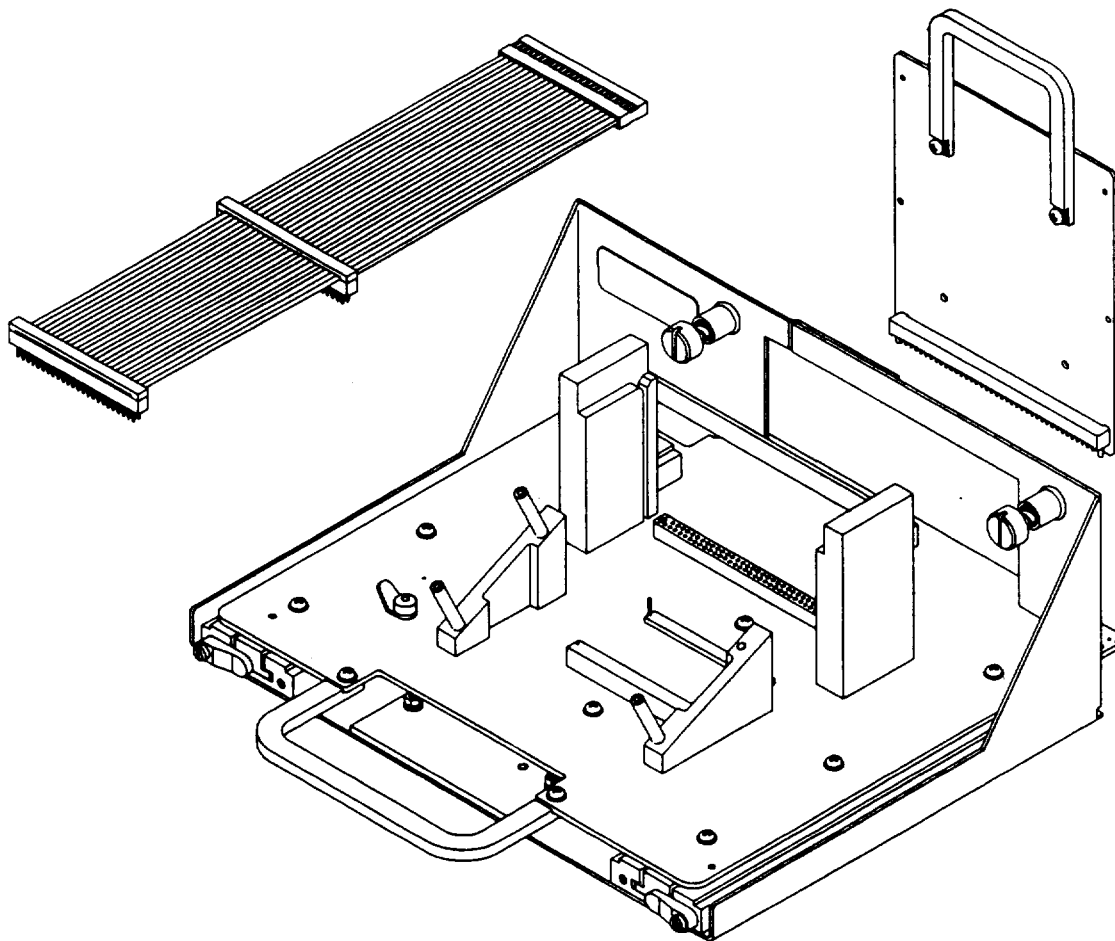


Figure 1-20.11. J-6098/G, Test Adapter A14

Test Adapter A14, A3190861-1, is used to test the Chassis, Electrical Equipment-Control, Receiver-Transmitter Subassembly, A3167954-1.

1-31. Technical Data

The following table provides technical data and dimensions for each unit under test.

Table 1-1. Technical Data for Units Under Test

ICD	LENGTH	WIDTH	HEIGHT	WEIGHT
Adapter, Test J-4819/G (ICD D) A3014296-1 (NSN 6625-01-298-4975)	15.00 in 38.10 cm	7.50 in 19.05 cm	3.00 in 7.62 cm	5.40 lb 2.45 kg
Adapter, Test J4820/G (ICD C) A3014255-1 (NSN 6625-01-298-4976)	15.00 in 38.10 cm	7.50 in 19.05 cm	2.50 in 6.35 cm	2.50 lb 1.13 kg
Adapter, Test J-4821/G (ICD A) A3014256-1 (NSN 6625-01-298-4977)	15.00 in 38.10 cm	9.75 in 24.77 cm	3.25 in 8.26 cm	3.50 lb 1.59 kg
Adapter, Test J-4822/G (ICD B) A3014302-1 (NSN 6625-01-298-4978)	15.00 in 38.10 cm	7.50 in 19.05 cm	2.50 in 6.35 cm	1.50 lb 0.68 kg
Adapter, Test J-4823/G (Test Adapter A) A3018429-1 (NSN 6625-01-298-4979)	8.00 in 45.72 cm	9.75 in 24.77 cm	0.75 in 1.91 cm	1.13 lb 0.51 kg
Adapter, Test J-4824/G (Test Adapter B) A3019033-1 (NSN 6625-01-300-3556)	8.00 in 20.32 cm	9.75 in 24.77 cm	2.38 in 6.05 cm	0.03 lb 0.01 kg
Adapter, Test J-4825/G (Test Adapter C) A3019036-1 (NSN 6625-01-300-3557)	8.00 in 20.32 cm	9.75 in 24.77 cm	3.13 in 7.95 cm	.69 lb 0.31 kg
Adapter, Test J-4826/G (Test Adapter D) A3014468-1 (NSN 6625-01-300-3556)	9.75 in 24.77 cm	8.00 in 20.32 cm	1.00 in 2.54 cm	1.19 lb 0.54 kg
Adapter, Test J-4827/G (Test Adapter E) A3014508-1 (NSN 6625-01-300-3559)	84.00 in 213.36 cm	6.00 in 15.24 cm	4.00 in 10.16 cm	9.13 lb 4.14 kg
Adapter, Test J-4826/G (Test Adapter F) A3019038-1 (NSN 6625-01-300-3560)	15.00 in 36.10 cm	7.75 in 19.69 cm	7.00 in 17.78 cm	7.63 lb 3.46 kg
Adapter, Test J-4829/G (Test Adapter H) A3019209-1 (NSN 6625-01-298-1400)	16.55 in 420.00 cm	4.02 in 102.30 cm	16.65 in 422.74 cm	7.20 lb 3.26 kg

1-31. Technical Data Cont

Table 1-1. Technical Data for Units Under Test. Continued

ICD	LENGTH	WIDTH	HEIGHT	WEIGHT
Adapter, Test J-4830/G (Wiring Harness, Branched-Interface Connect Device G) A3014511-1 (NSN 6625-01-298-1401)	37.00 in 93.98 cm	2.00 in 5.08 cm	3.00 in 7.62 cm	0.69 lb 0.31 kg
Accessory Kit J-4831/G A3018639-1 (NSN 6625-01-298-1399)	24.00 in 60.96 cm	24.00 in 60.96 cm	24.00 in 60.96 cm	10.00 lb 4.54 kg
Adapter, Test J-4832/G (Load Card A) A3014493-1 (NSN 6625-01-298-1402)	7.86 in 20.02 cm	8.63 in 21.92 cm	0.50 in 1.27 cm	0.63 lb 0.29 kg
Adapter, Test J-4833/G (Load Card C) A3019205-1 (NSN 6625-01-298-1403)	7.88 in 20.02 cm	8.63 in 21.92 cm	2.00 in 5.08 cm	2.25 lb 1.02 kg
Adapter, Test J-4834/G (Load Card B) A3017839-1 (NSN 6625-01-298-1404)	7.86 in 20.02 cm	8.63 in 21.92 cm	0.50 in 1.27 cm	0.75 lb 0.34 kg
Adapter, Test J-4909/G (Test Adapter K) A3142084-1	7.88 in 20.02 cm	8.63 in 21.92 cm	2.00 in 5.08 cm	2.50 lb 1.13 kg

1-32. Test Information.

The following table provides information to test each ICD or test adapter and to assist locating information in the manual.

Table 1-2. Test Information for Interconnect Devices.

<u>Test Adapter or ICD</u>	<u>ATE used</u>	<u>UUT Part No.</u>	<u>UUT Name</u>	<u>Test Program Tape CPIN File No.</u>	<u>Test Para</u>
Test Adapter A	410	A3018235-1	SYNTHESIZER	CP0400030G A3018235F	4-39
Test Adapter A	410	A3013361-1	TUNER/MIXER	CP0700030G A3013361F	4-39
Test Adapter B	410	A3014134-1	CCA-AUDIO PWR SUPPLY	CP0900030G A3013177F	4-42
Test Adapter B	410	A3014136-1	CCA-AUDIO DATA	CP0800030G A3013204F	4-42
Test Adapter B	410	A3014383-1	CCA-SWITCHING	CP0900030G A3014383F	4-42
Test Adapter C	410	A3013338-1	PWR SPLY-MDL ASSY	CP0700030G A3013338	4-46
Test Adapter C	410	A3013360-1	IF/DEMOD	CP0700030G A3013360	4-46
Test Adapter C	410	A3014140-1	2-WIRE INTFC	CP0700030G A3014140F	4-46
Test Adapter C	410	A3014158-1	PWR SPLY	CP0700030G A3014158	4-46
Test Adapter C	410	A3014176-1	ANLG	CP0200030G A3013243	4-46
Test Adapter C	410	A3018025-1	ANLG	CP0200030G A3013243	4-46
Test Adapter C	410	A3013243-1	ANLG	CP0200030G A3013243	4-46
Test Adapter C	410	A3018241-1	IMP MATCHING	CP0900030G A3018241F	4-46
Test Adapter C	410	A3018726-1	2-WIRE INTFC	CP0700030G A3018726F	4-46
Test Adapter D	410	A3014195-1	1-W AUD AMPL	CP0300030G A3014002	4-51
Test Adapter E	410	A3013349-1	ELEK EQPT AMP ADPTR CHAS	CP0200030G A3013349	4-54
Test Adapter F	410	A3013379-1	RF AMPL CASE	CP0300030G A3013379	4-56
Test Adapter F	410	A3018432-1	RF AMPL CASE	CP0300030G A3013379	4-56
Test Adapter F	410	A3142064-1	RF AMPL CASE	CP0300030G A3142064	4-56
Test Adapter G	410	A3013374-1	RF HTSK	CP0200030G A3013374A A3013374B	4-64
Test Adapter H	410	A3013369-1	AMPL-ADPTR PWR SPLY	CP0400030G A3013369	4-67

1-32. Test Information. Cont

Table 1-2. Test Information for Interconnect Devices. Cont

<u>Test Adapter or ICD</u>	<u>ATE used</u>	<u>UUT Part No.</u>	<u>UUT Name</u>	<u>Test Program Tape CPIN File No.</u>	<u>Test Para</u>
Test Adapter H	410	A3018415-1	AMPL ADPTR PWR SPLY	CP0400030G A3018415	4-67
Test Adapter K	410	A3018124-1	EXCITER/POWER AMPLIFIER	CP0800030G A3018124F	4-74
Test Adapter L	410	A3014408-1	ICOM DATA 1/0	CP2900030G A3014408	4-80
Test Adapter L	410	A3014414-1	ICOM PWR SPLY	CP2900030G A3014414	4-60
Test Adapter L	410	A3019261-1	MOD ASSY PWR SPLY	CP2900030G A3019261	4-80
Test Adapter L	410	A3142316-1	SWITCHING	CP2900030G A3142316F	4-80
ICD-A	465	A3014138-1	CCA-AUDIO CTRL	CP1300030G	4-30
ICD-A	465	A3014174-1	MICROCONTROLLER	CP1800030G	4-30
ICD-A6	465	A3018890-1	ELEC COMP ASSY FILL ROUTING	CP2700030G	4-90
ICD-A7	465	A3142334-1	ICOM CONTROL	CP2500030G	4-97
ICD-A7	465	A3142337-1	REMOTE I/O	CP2400030G	4-97
ICD-A8	465	A3013353-1	ECCM CONT	CP1900030G	4-102
ICD-A8	465	A3019053-1	ECCM CTRL	CP2600030G	4-102
ICD-A9	465	A3142305-1	FILL DEVICE	CP2800030G	4-107
ICD-A10	465	A3148179-1	ELEC COMP ASSY CTRL	CP2300030G	4-112
ICD-A12	465	A3142328-1	DISPLAY	CP2100030G	4-117
ICD-A13	465	A3148159-1	CHASSIS ASSY	CP2200030G	4-122
ICD-A14	465	A3167969-1	SRCU CONTROL	CP3300030G	4-139
ICD-A16	465	A3167954-1	CHASSIS ASSY	CP2200030G	4-146
ICD-B	465	A3018077-1	ELEK CMPNT ASSY CONT	CP1000030G	4-33
ICD-B	465	A3014178-1	CCA-DECODER/ TIMER	CP1100030G	4-33
ICD-B	465	A3018751 -1	CCA-DECODER/ TIMER	CP1200030G	4-33
ICD-B	465	A3014142-1	CCA-REMOTE	CP1400030G	4-33
ICD-C	465	A3013377-1 P/O A3013347-1	CONT MON CHAS	CP1500030G	4-23
ICD-D	465	A3014168-1	DATA RATE ADPTR	CP0800030G A3014168	4-7
ICD-D	465	A3019045-1	DATA RATE ADPTR	CP0600030G	4-7
ICD-D	465	A3132855-1	RT SUBASSY	CP0500030G A3013364	4-8
ICD-D	465	A3013364-1	RT SUBASSY	CP0500030G A3013364	4-8

Section III. PREPARATION FOR STORAGE OR SHIPMENT

1-33. Special Preservation, Packaging, Packing, Marking, and Shipping Requirements

Electrostatic discharge (ESD) poses a serious problem to users of equipment containing ICDS, test adapters, or load cards that are susceptible to electrostatic static discharge damage. Many of the items you are packing and processing are highly susceptible to damage from the discharge of static electricity, even at levels which can neither be seen nor felt.

1-34. Procedures

The following steps should be followed when packing a static sensitive module for storage or shipment.

- ICD or Test adapter(1) Place inside antistatic bag or inside antistatic wrapping material (2).
- Antistatic package (3) Seal with approved antistatic adhesive tape. Attach 'static sensitive contents" unit pack label.

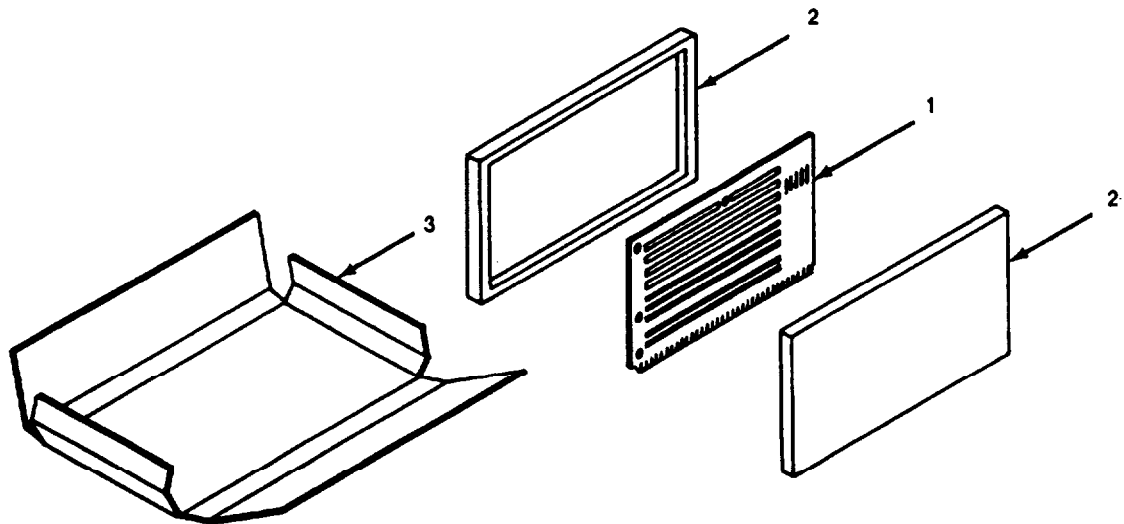


Figure 1-21. Packaging of Interconnect Devices.

CHAPTER 2
UNIT MAINTENANCE

Unit maintenance is not authorized for the ICD.



CHAPTER 3
DIRECT SUPPORT MAINTENANCE

Direct support maintenance is not authorized for the ICDs.

CHAPTER 4

GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

SECTION 1. REPAIR PARTS, SPECIAL TOOLS; TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

4-1. Common Tools and Equipment.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

4-2. Special Tools, TMDE and Support Equipment.

- a. *Special Tools.* No special tools are required.
- b. *TMDE and Support Equipment.* Refer to the Maintenance Allocation Chart for TMDE and Support Equipment required for maintenance.

4-3. Repair Parts.

Repair parts are listed and illustrated in TM 11-6625-3094-24P.

SECTION II. GENERAL MAINTENANCE PROCEDURES

4-4. General.

WARNING

Turn OFF power to test adapters and ICDS and remove test cables before performing repair procedures,

- a. *General Shop Procedures.* The general shop practices and safety precautions contained in TB 43-0127 are not repeated in this manual.
- b. *Sequence of Maintenance Operations.* Maintenance operations should be done in the following sequence.
 - (1) *Inspection.* Determine if an ICD, load card or adapter card is damaged or incomplete. If a component, cable, or component is missing, replace it.
 - (2) *Troubleshooting.* Done on faulty equipment; do not troubleshoot good equipment. Each test program has a built in self-test that checks a portion of the test adapter or ICD.

- (3) Replacement of Parts. The automatic test equipment will produce a list of components at the end of testing. This list contains all components which may be faulty. Replace all parts on the list.
- (4) Placing in Service. After all defective parts have been replaced, retest the ICD. Run all test program tapes for the UUT tested on the ICD, adapter or load card. This will ensure that the equipment is completely serviceable. Return the operational equipment to the user.

4-5. Inspection Procedures.

Inspection of a unit is done before and after any repair action is taken. The initial inspection checks for physical damage that must be repaired before testing. Final inspection checks the quality of all repair work.

ITEM	ACTION
Cables	Complete and unbroken.
Circuit Card Assemblies	Inspect for cleanliness.
Identification	Letters and numbers are legible.
Conformal Coating	Inspect to see if the circuit card is properly coated.
Bonding	Insure that components requiring bonding are bonded.
Circuit Card Components	Inspect capacitors, resistors, diodes, and integrated circuits for damaged leads. Ensure that no parts are missing. Inspect connector pins for over-heating. All pins should be straight, not pitted, burned or dirty.
Printed Circuit Board	Inspect for breaks, cracks, warpage, burned paths, contacts, or plated hole damage.
Connectors	Inspect for bent pins and damaged shells.

**Section III. MAINTENANCE OF J-4819/G
(TEST ADAPTER-INTERFACE CONNECT DEVICE D)**

4-6. Required Test Accessories for ICD D.

Three test programs are required to test this ICD. To verify repairs, **PERFORM ALL TPS TESTS**; this will insure that ICD D (figure 4-3 on page 4-9) will function properly. Install each test program tape and perform the ICD survey test.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP0800030G
File Tape Number	A3014168-1
● Test Program Tape	CPIN CP0600030G
File Tape Number	A301904541-1
● Test Program Tape	CPIN CP0500030G
File Tape Number	A3013364-1
● ICD D A3014296-1 items:	
CCA-interface Connector Device A4A1	A3014476-1
Backplane Assy-interface, Data Rate A4A12	A3014293-1
Backplane Assy-interface, Control I/O A4A9	A3014284-1
Backplane Assy-interface, Switching A4A10	A3014287-1
Backplane Assy-interface, Audio Control A4A11	A3014290-1
Shorting Plug	A3132841-1
Remote I/O Jumper A4A2	A3014261-1
R/T Power Supply Jumper A4A3	A3014264-1
ECCM Jumper A4A4	A3014267-1
IF Demodulator Jumper A4A5	A3014270-1
Exciter P/A Jumper A4A6	A3014273-1
Audio Power Supply Jumper A4A7	A3014276-1
Audio Data I/O Jumper A4A8	A3014279-1
Electrical Connector Plug BNC	M39012/16-0002

CAUTION

This ICD contains static sensitive components. Handle in accordance with ESD practices,

4-7. Test Procedures for ICD D When Testing Data Rate Adapter.

- a. Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

c. Load test program.

- (1) Install test program tape CPIN CP0800030G or CP0600030G in DCT in accordance with TM 11-6625-3038-10.
- (2) Enter LOAD 0, then press EXECUTE.
- (3) When READY appears on the display, type RUN and press EXECUTE.
- (4) Verify that the following information is printed:

```
>ENTER THE LAST FOUR  
>DIGITS OF THE UUT  
>P/N A301????-1
```

THEN 

```
>LOADING P1  
>PRINT PROGRAM NOTES?  
>ENTER YES OR NO,  
>PRESS EXECUTE
```

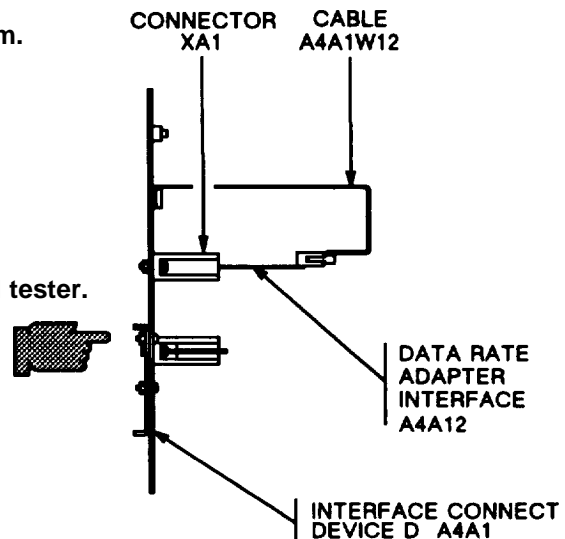
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- (5) Follow operator actions as instructed by program.

- d. Run ATE survey test if desired.
- e. Run ICD survey test if desired.

- (1) Install data rate adapter interface A4A12 before running survey test.
- (2) Follow instructions presented by the digital card tester.

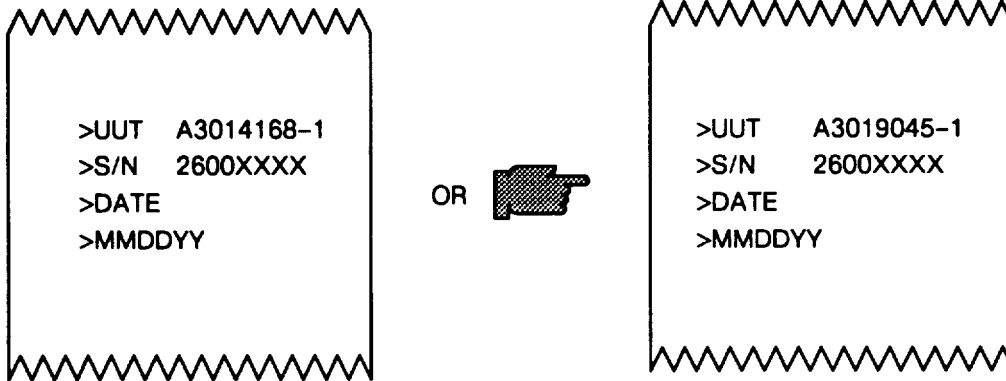
- f. Install ICD D. See figure 4-2 on page 4-8.



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4-7. Test Procedures for ICD D When Testing Data Rate Adapter. Cont.

g. Verify that the following information is printed:



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h. Run ICD survey test.

i. After testing do one of the following:

- (1) If the ICD passes the survey test exit the program by pressing the AITN Key.
- (2) If the ICD fails the survey test go to paragraph 4-9 on page 4-14.

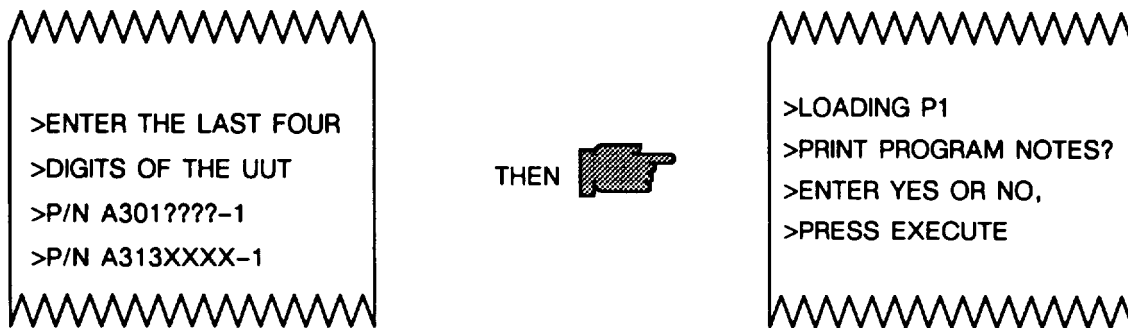
4-8. Test Procedures for ICD D When Testing RT Chassis.

- a. Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10.
- c. Load test program.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

- (1) Install test program tape CPIN CP0500030G in DCT in accordance with TM 11-6625-3038-10.
- (2) Enter LOAD 0, then press EXECUTE.
- (3) When READY appears on the display, type RUN and press EXECUTE.
- (4) Verify that the following information is printed:

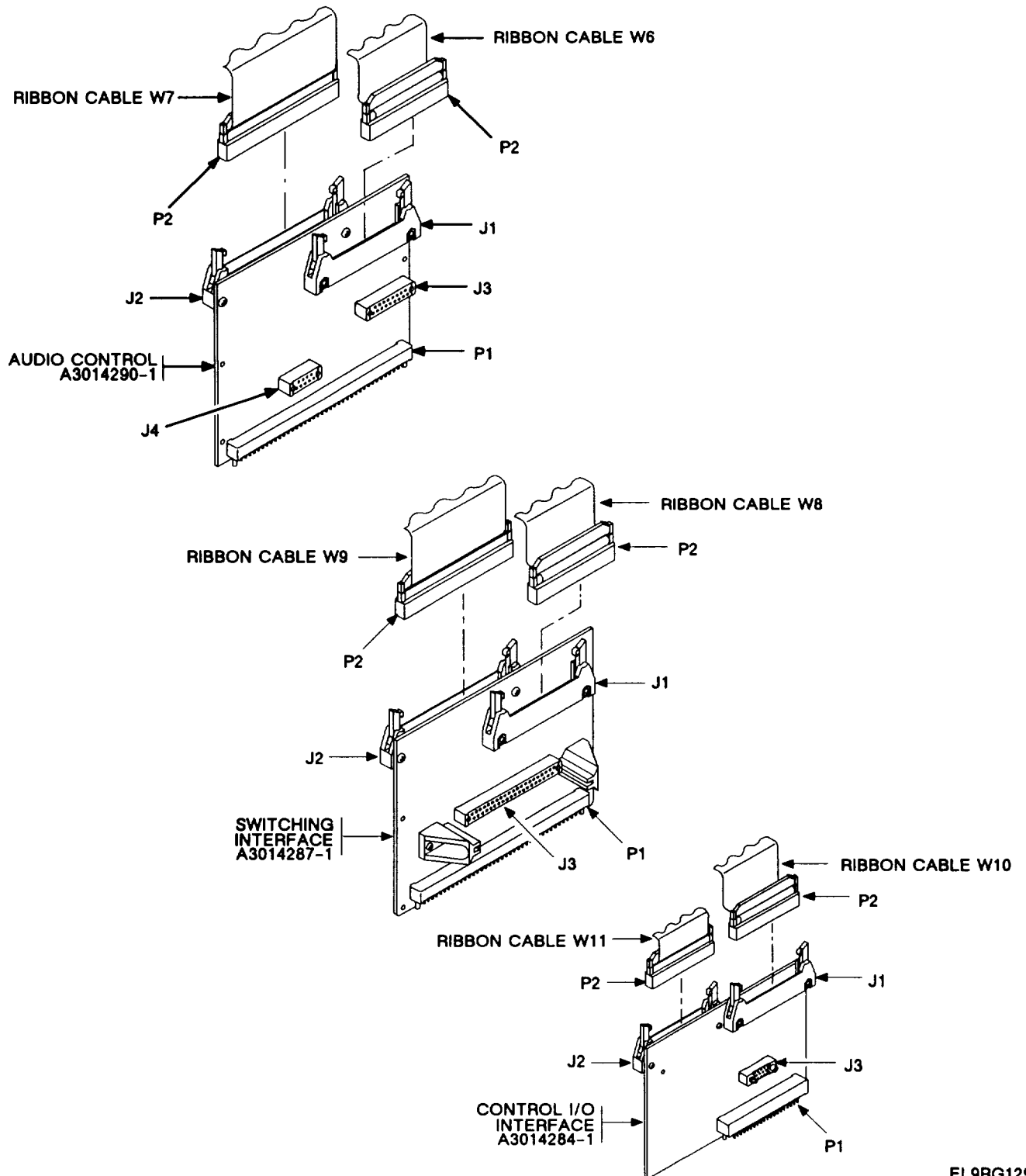


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- (5) Follow operator actions as instructed by program.

- d. Run ATE survey test.
- e. Install ICD-D (figure 4-2 on page 4-8).
- f. Install interface connectors on ICD cables. Refer to figure 4-1 on page 4-7.
- g. Run ICD survey test.
- h. After testing do one of the following:
 - (1) If the ICD passes the survey exit the program by pressing the ATTN key.
 - (2) If the ICD fails the survey then go to paragraph 4-9 on page 4-14.

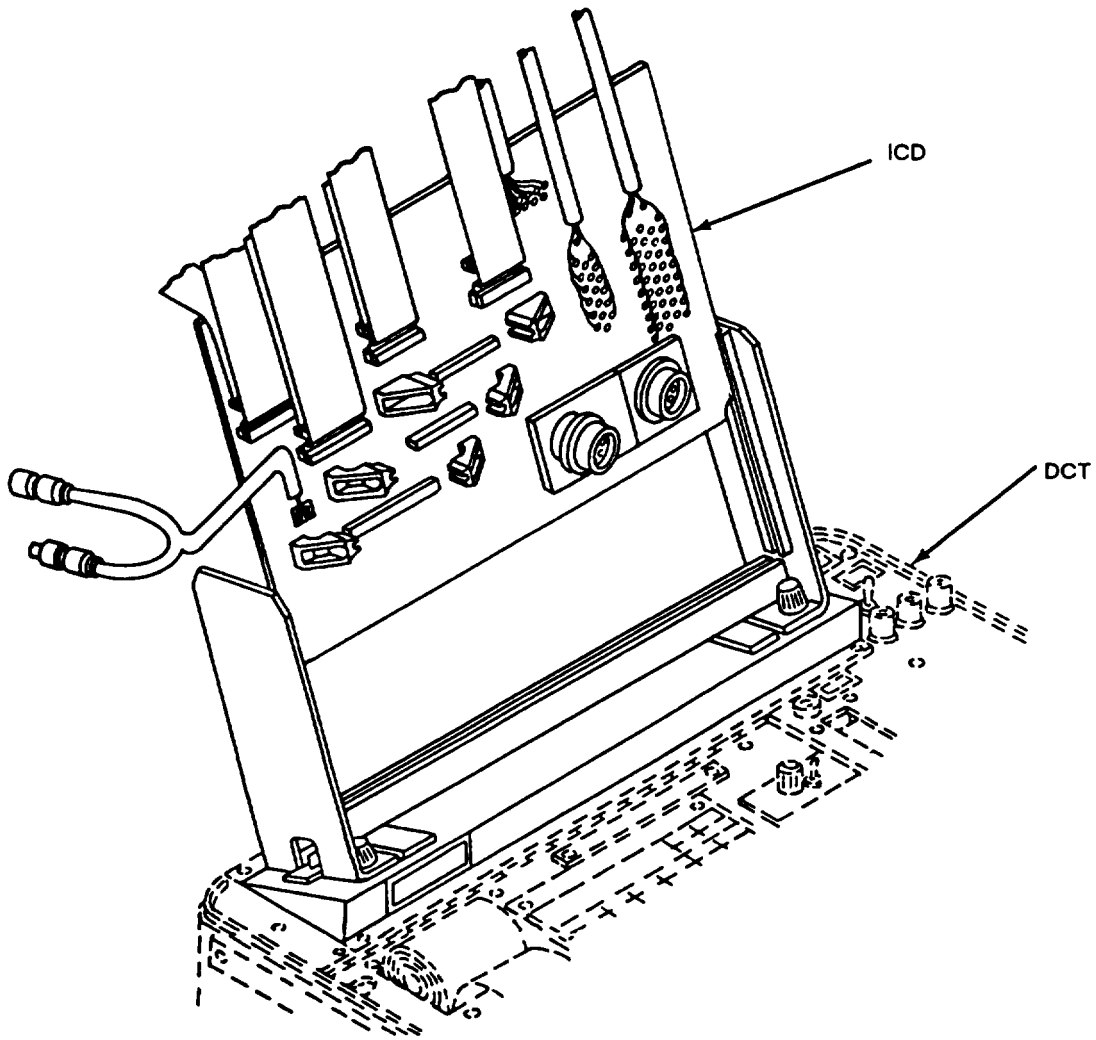
4-8. Test Procedures for ICD D When Testing RT Chassis. Cont



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Figure 4-1. Installation of Interface Cards on ICD D

4-8. Test Procedures for ICD D When Testing RT Chassis. Cont



EL9RG130

Figure 4-2. Installation of ICD D

4-8. Test Procedures for ICD D When Testing RT Chassis. Cont

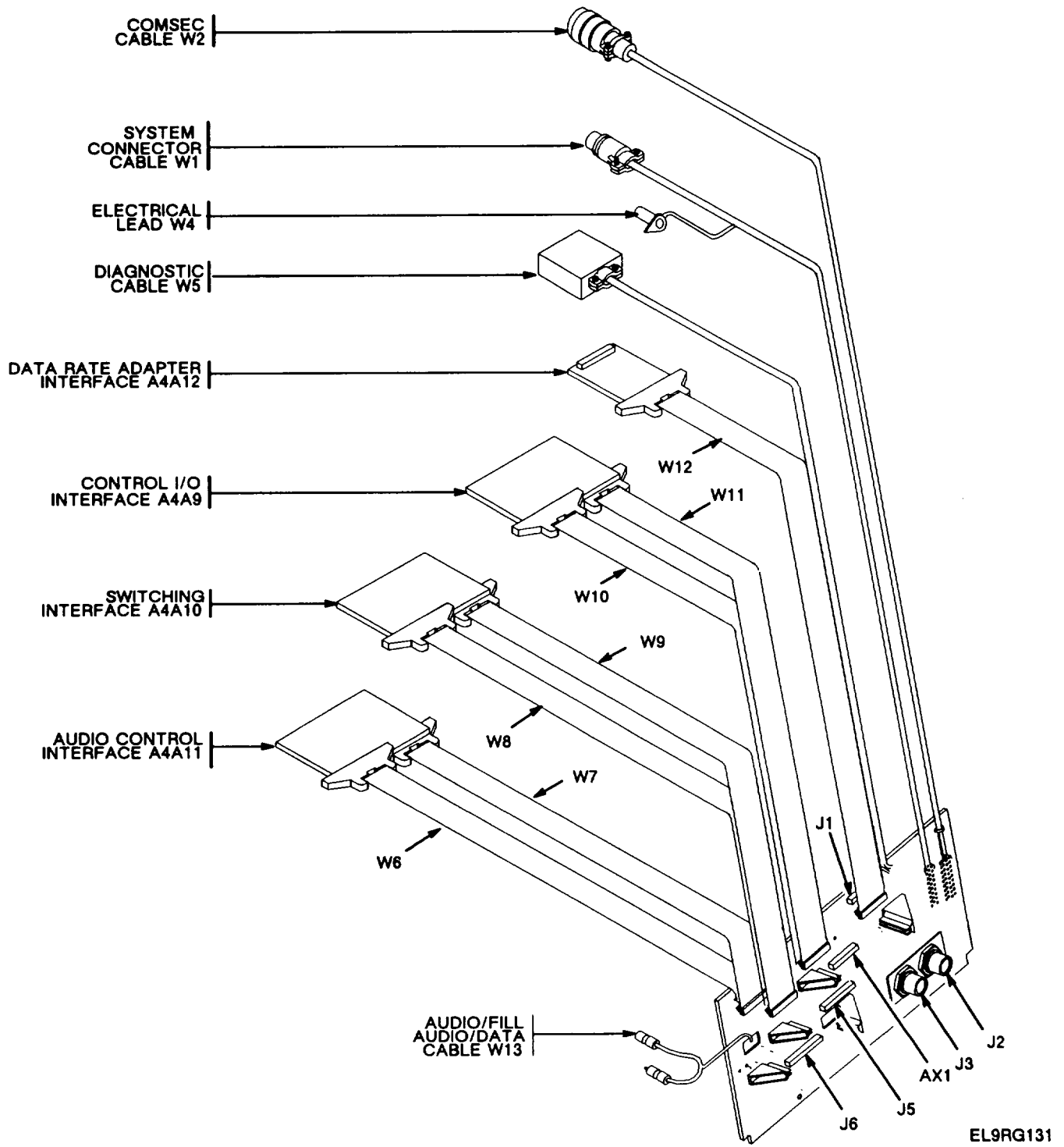


Figure 4-3. ICD D Components

4-8. Test Procedures for ICD D When Testing RT Chassis. Cont

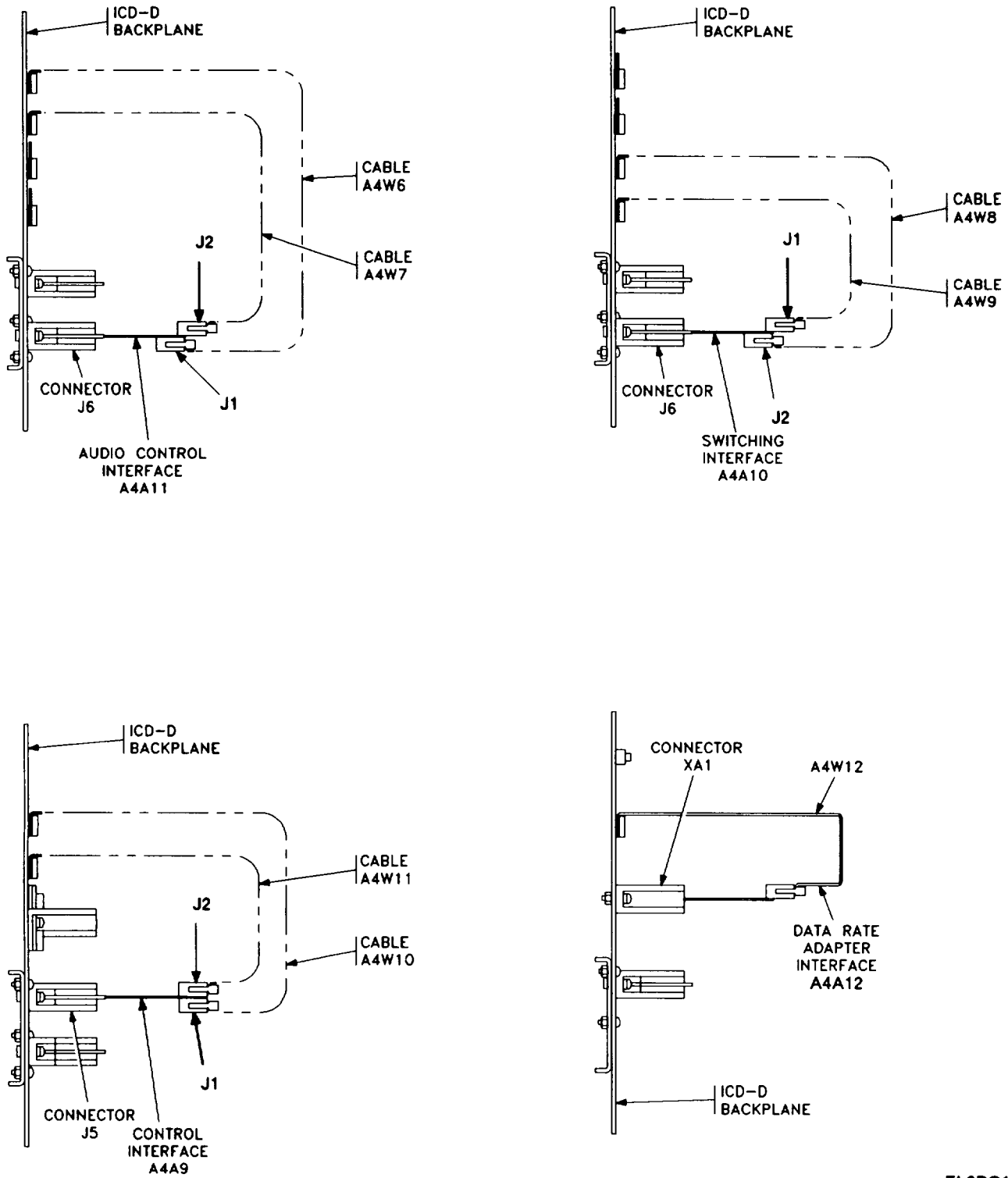


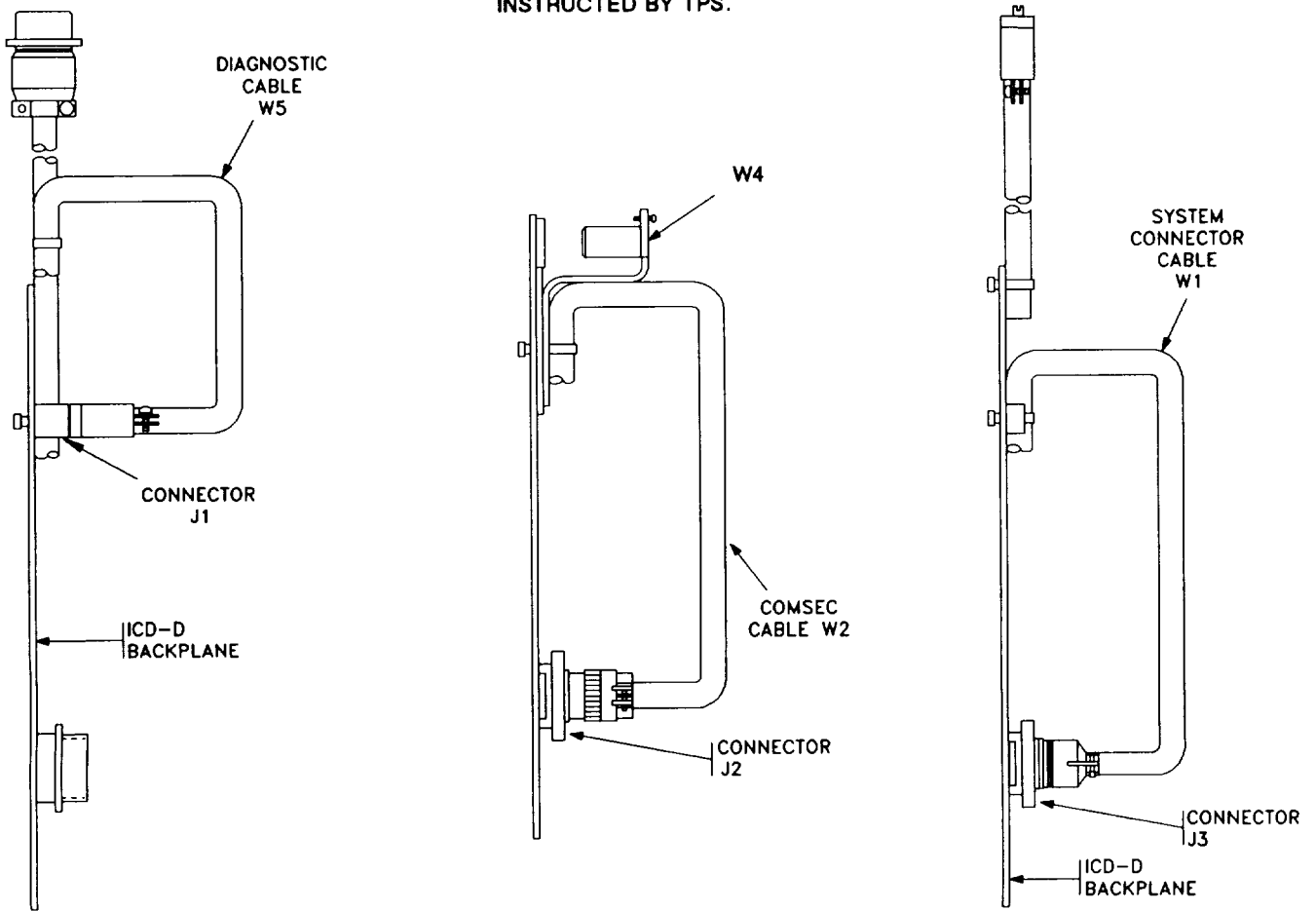
Figure 4-4. Self-Test Intraconnections (Sheet 1 of 4)

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4-8. Test Procedures for ICD D When Testing RT Chassis. Cont

NOTE

W4 SHOULD BE SHORTED TO ATE +5V BNC GND AS INSTRUCTED BY TPS.



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Figure 4-4. Self-Test Intraconnections (Sheet 2 of 4)

4-8. Test Procedures for ICD D When Testing RT Chassis. Cont

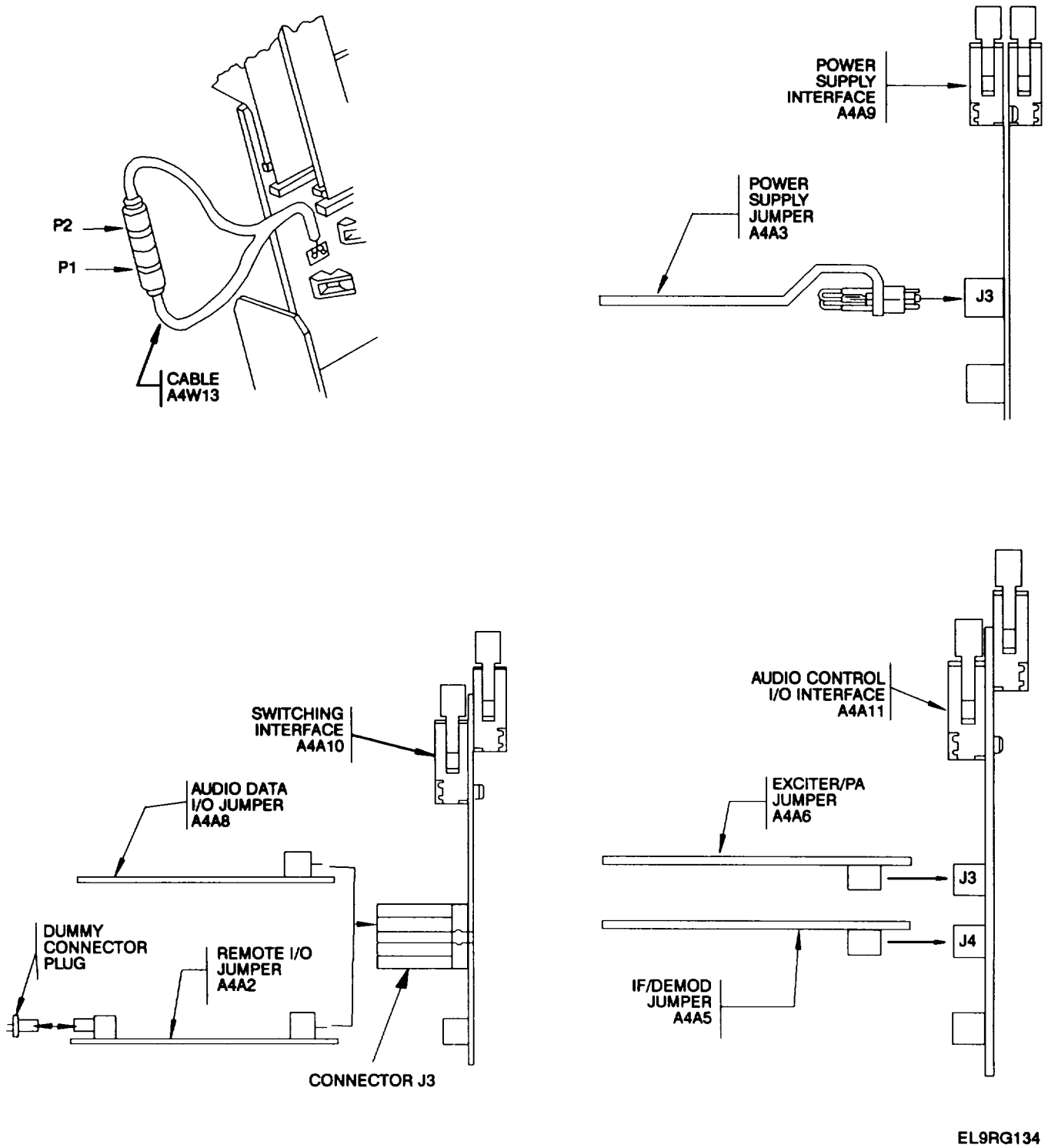
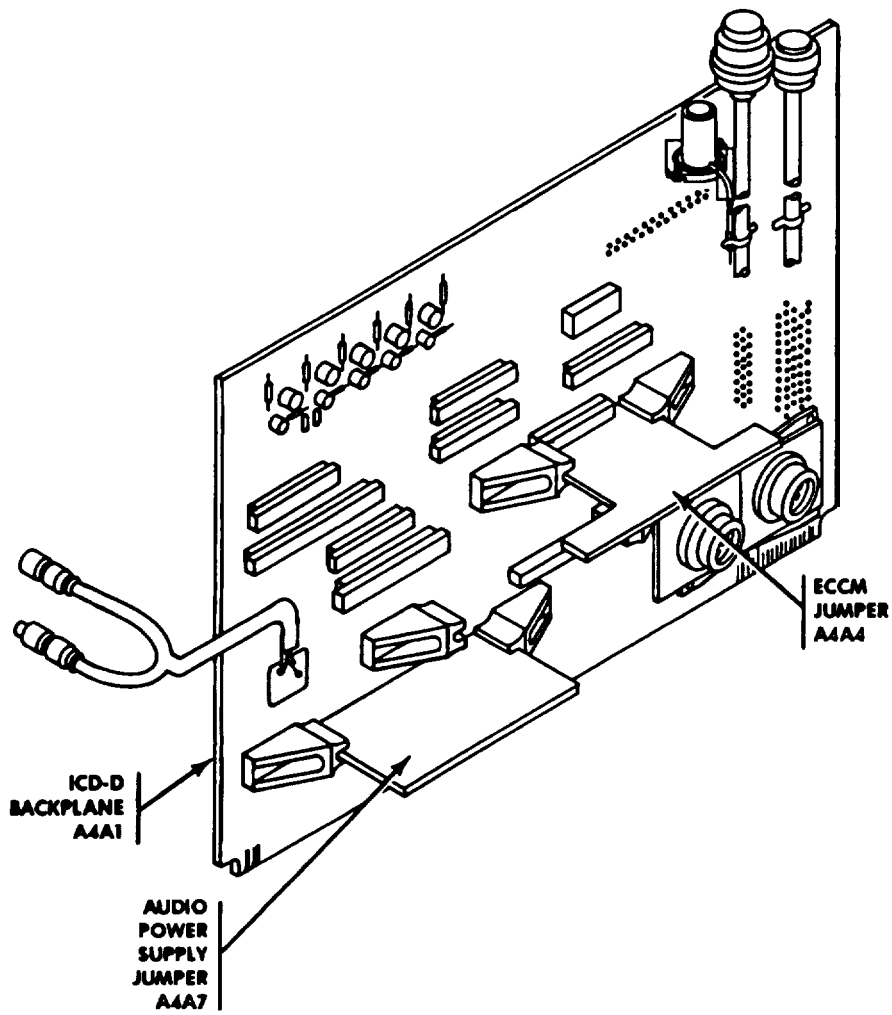


Figure 4-4. Self-Test Intraconnections (Sheet 3 of 4)

4-8. Test Procedures for ICD D When Testing RT Chassis. Cont



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Figure 4-4. Self-Test Intraconnections (Sheet 4 of 4)

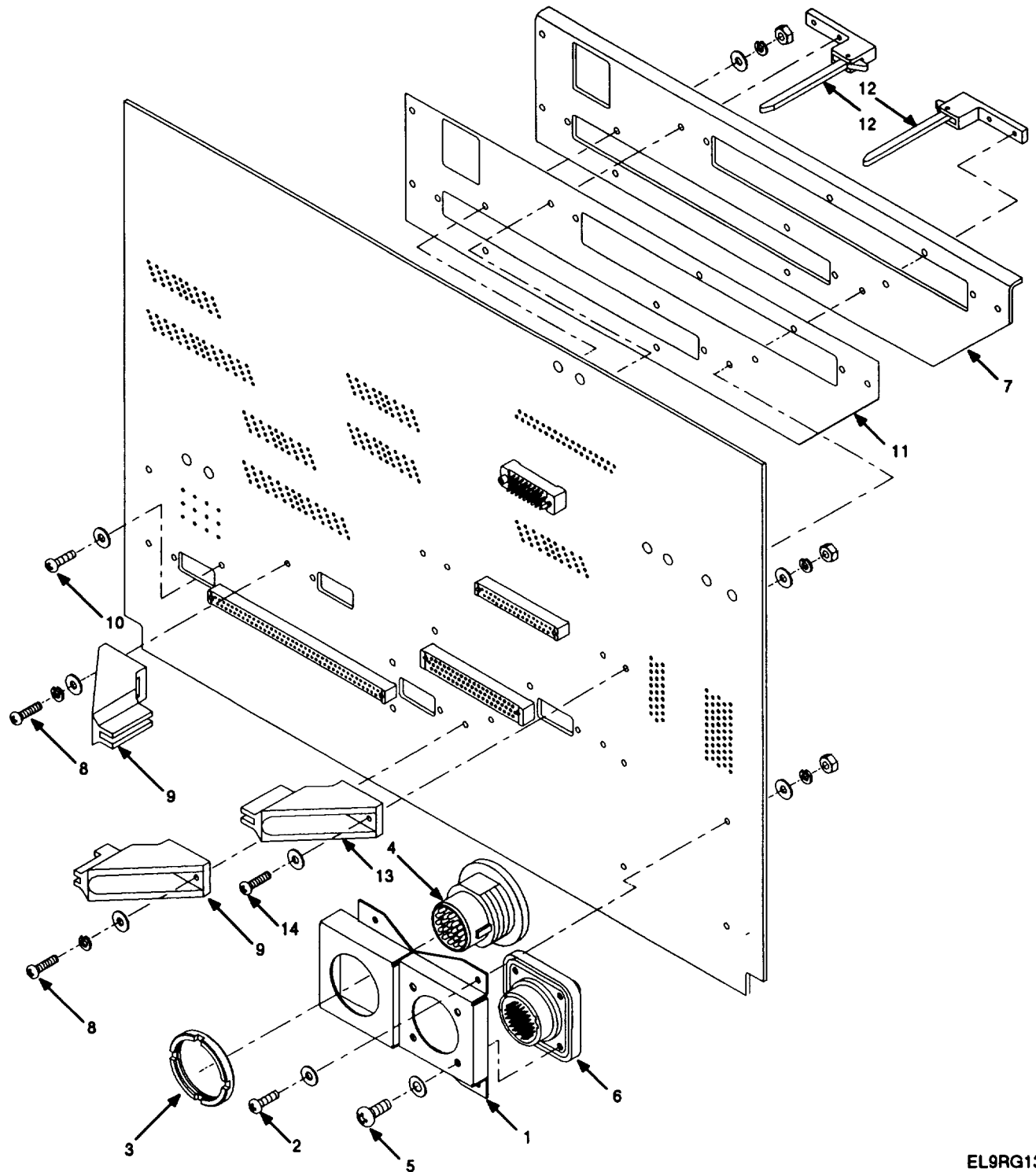
4-9. Maintenance Procedures for ICD D.

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT Digital Test Set AN/USM-465A (6625-01-126-2473) Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>REFERENCES: TM 11-5820-914-40 TM 11-6625-3038-10 TM 11-6625-3094-24P TB 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>	<p>TOOLS Tool Kit Electronic Equipment TK-105/G (5160-00-610-6177) Solder Repair Center PRC-151 (3439-01-109-8590) Tool, Extraction MS24256R16 (5120-00-079-4602) Tool Crimping M22520/1-01 (5120-00-165-3912) Turret Head Assembly M22-520/1-02 (5120-00-016-6362)</p>
---	--

ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|---------------------------------|--|--|
| <p>a. Connector Bracket (1)</p> | <p>Remove four screws(2) and eight flat washers, four lock washers, and four hex nuts from connector bracket (1).</p> <p>Remove spanner nut(3) from connector J3(4).</p> <p>Remove four screws(5) and four flat washers from connector J2(6).</p> <p>Remove connector bracket.</p> <p>Install connector bracket and secure with four screws(2), eight flat washers, four lock washers and four hex nuts.</p> <p>install spanner nut(3) on connector J3.</p> <p>install four screws(5) and four flat washers on connector J2.</p> | <p>Refer to figure 4-5 on page 4-15. Refer to FO-1 for schematic diagram of ICD D.</p> |
| <p>b. Connector J3 (4)</p> | <p>Remove connector bracket (1).</p> <p>Unsolder connector J3(4) from circuit board.</p> <p>Replace connector J3(4).</p> <p>Solder connector pins.</p> <p>Install connector bracket (1).</p> | <p>Refer to step a.</p> <p>Note orientation of connector prior to removal.</p> |

4-9. Maintenance Procedures for ICD D. Cont



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Figure 4-5. Breakdown of CCA, ICD D (Without Cable Assemblies)

4-9. Maintenance Procedures for ICD D. Cont

ITEM	ACTION	REMARKS
c. Connector J2(6)	<p>Remove connector bracket(1). Unsolder connector J2(6). Replace connector J2(6). Solder connector pins. Install connector bracket (1).</p>	Refer to step a.
d. Retainer/Ejector(12)	<p>Remove two screws (8), two flat washers, electrical card holder and two lock washers securing electrical card holder(9) and retainer/ejector(12) to circuit board.</p> <p>Replace card holder(9) and retainer/ejectors (12) and secure with two screws (8), two flat washers and two lock washers.</p>	
e. Remove card holder(13)	<p>Remove four screws (14), eight flat washers, four lock washers, and four hex nuts.</p> <p>Replace card holder (13) and secure with four screws(14), eight flat washers, eight lock washers and four hex nuts.</p>	
f. Structural Channel(7)	<p>Remove four retainer/ejectors and electrical card holders.</p> <p>Remove eight screws(10), sixteen flat washers, eight lock washers, and eight hex nuts that secure structural channel (7) and insulator(11) to circuit board.</p> <p>Replace structural channel(7) and insulator(11) and secure with eight screws (10), sixteen flat washers, eight lock washers, and eight hex nuts.</p> <p>Install four card holders (9) and four retainer/ejectors.</p>	<p>Refer to step d.</p> <p>Refer to step d.</p>

4-9. Maintenance Procedures for ICD D. Cont

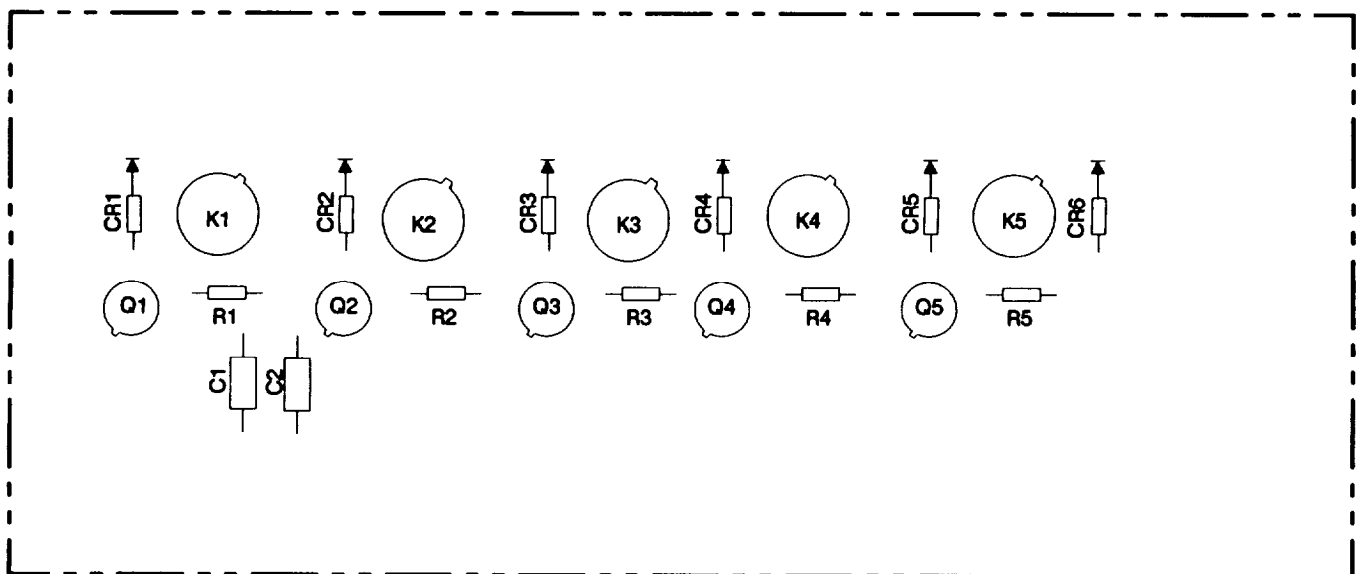
ITEM	ACTION	REMARKS
g. Discrete Components	Replace as required.	Components are located in upper left-hand corner of CCA-Backplane.
h. Tiewraps	Replace as required.	Use item 120, App. C

CAUTION

ALL DIODES AND SEMICONDUCTORS ARE ELECTROSTATIC SENSITIVE ELECTRONIC DEVICES



EL9RG137

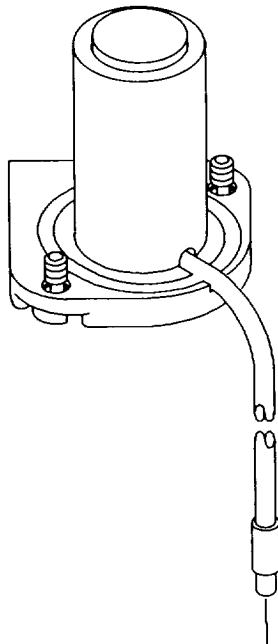


EL9RG138

4-9. Maintenance Procedures for ICD D. Cont

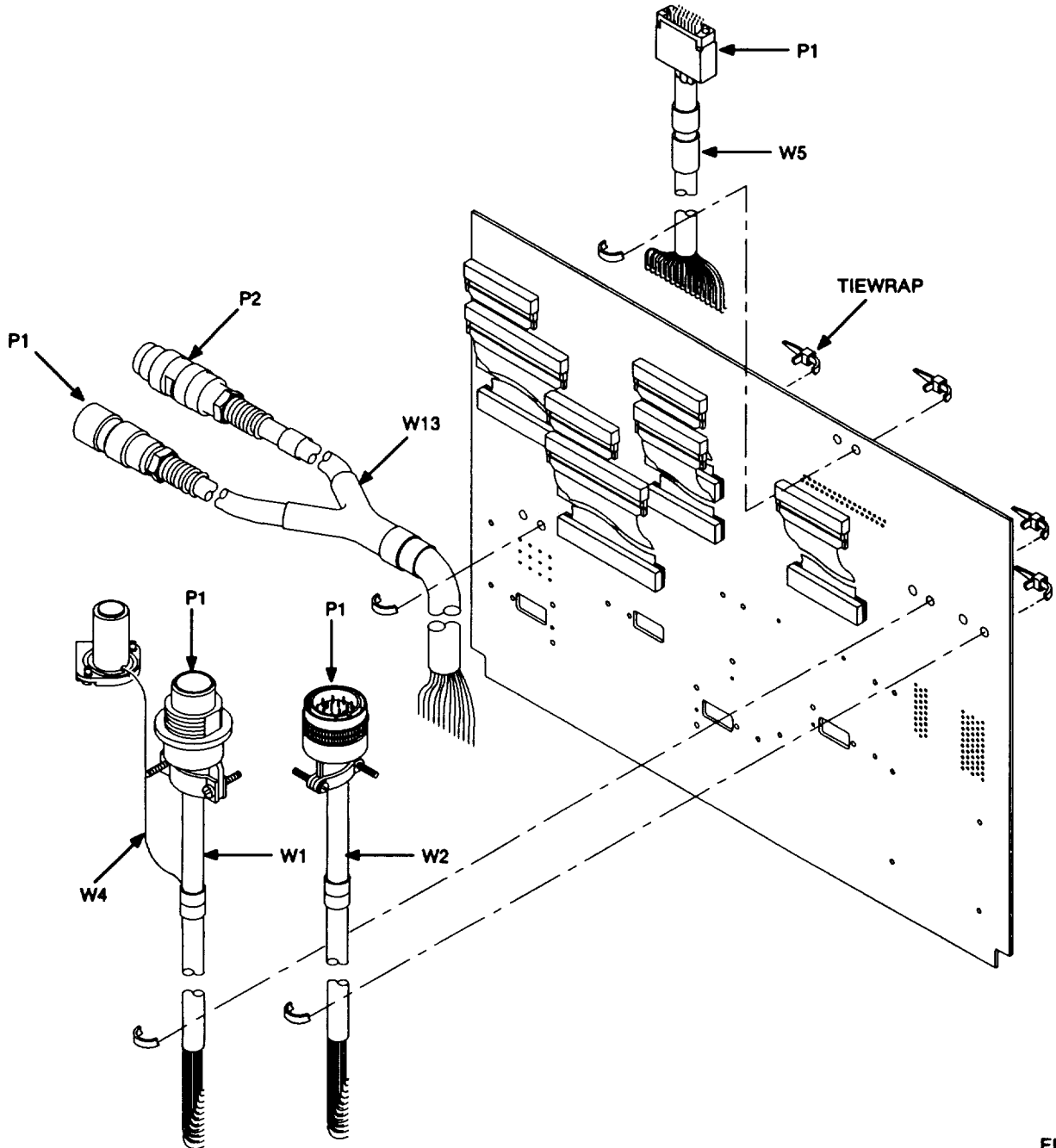
ITEM	ACTION	REMARKS
i. Lead, Electrical W4	Unsolder defective lead from circuit board. Remove tiedown strap. Replace lead and solder to circuit board. Replace tiedown strap.	Refer to figure 4-6 on page 4-19. Use item 120, App. C

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1	E389	White



EL9RG139

4-9. Maintenance Procedures for ICD D. Cont



EL9RG140

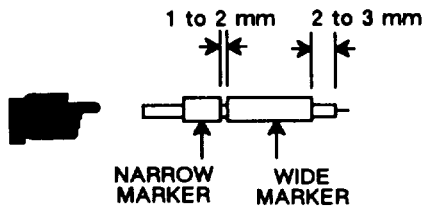
Figure 4-6. ICD D Cable Layout.

4-9. Maintenance Procedures for ICD D. Cont

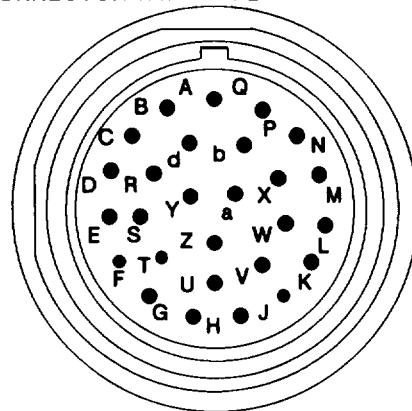
ITEM	ACTION	REMARKS
j. Cable Assembly W1		
(1) Connector P1	<p>Loosen two screws securing cable clamp to cable.</p> <p>Unscrew cable clamp from connector body.</p> <p>Unwrap spiral tubing enough to access wires.</p> <p>Remove connector pins from defective connector.</p> <p>Replace connector and install connector pins.</p> <p>Rewrap spiral tubing.</p> <p>Screw cable clamp onto connector body.</p> <p>Tighten two screws on cable clamp.</p>	<p>Refer to figure 4-6 on page 4-19 for part location.</p>
(2) Connector Pins	<p>Replace as required.</p>	
(3) Spiral Tubing	<p>Replace as required.</p>	<p>Use item 126, App. C.</p>
(4) Marker Sleeves P1	<p>Replace as required.</p>	<p>Use item 61, App. C.</p>
(5) Marker Sleeves W1	<p>Replace as required.</p>	<p>Use item 60, App. C.</p>
(6) Wires	<p>Replace as required.</p>	

MARKER INSTALLATION FOR CABLE W1, 2, 5, AND 13

NOTE
TWO MARKERS ARE USED FOR IDENTIFYING WHITE WIRES. THE FIRST MARKER IS WIDE AND THE SECOND MARKER IS NARROW.



CONNECTOR W1P1 PIN LOCATION

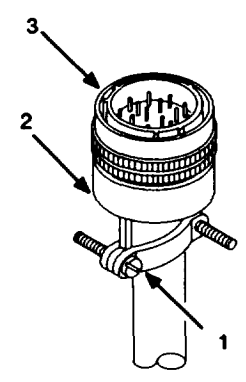


EL9RG141

4-9. Maintenance Procedures for ICD D. Cont

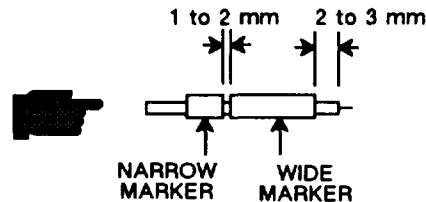
<u>FROM</u>	<u>TO</u>	<u>COLOR</u>	<u>MARKER</u>
P1-A	E1	Black, item 148, App.C	none
P1-B	E2	Brown, item 149, App. C	none
P1-C	E3	Red, item 150, App. C	none
P1-D	E4	Orange, item 151, App. C	none
P1-E	E5	Yellow, item 152, App. C	none
P1-F	E6	Green, item 153, App. C	none
P1-G	E7	Blue, item 154, App. C	none
P1-H	E8	Violet, item 155, App. C	none
P1-J	E9	Gray, item 156, App. C	none
P1-K	E10	White, item 157, App. C	none
P1-L	E11	White, item 157, App. C	(Wide) item 19, App. C
P1-M	E12	White, item 157, App. C	(Wide) item 20, App. C
P1-N	E13	White, item 157, App. C	(Wide) item 21, App. C
P1-P	E14	White, item 157, App. C	(Wide) item 22, App. C
P1-Q	E15	White, item 157, App. C	(Wide) item 23, App. C
P1-R	E16	White, item 157, App. C	(Wide) item 24, App. C
P1-S	E17	White, item 157, App. C	(Wide) item 25, App. C
P1-T	E18	White, item 157, App. C	(Wide) item 26, App. C
P1-u	E19	White, item 157, App. C	(Wide) item 27, App. C
P1-v	E20	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 29, App. C
P1-W	E21	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 30, App. C
P1-x	E22	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 31, App. C
P1-Y	E23	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 32, App. C
P1-z	E24	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 33, App. C
P1-a	E25	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 34, App. C
P1-b	E26	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 35, App. C
P1-d	E27	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 36, App. C

4-9. Maintenance Procedures for ICD D. Cont

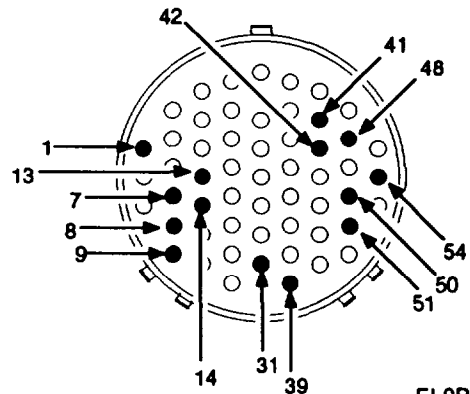
ITEM	ACTION	REMARKS
k. Cable Assembly W2		
(1) Connector P1	<p>Loosen two screws(1) securing connector backshell(2) to cable.</p> <p>Unscrew backshell(2) from connector(3).</p> <p>Move backshell down cable to allow working room.</p> <p>Remove connector pins from defective connector.</p> <p>Replace backshell and connector, as required.</p> <p>Replace defective connector pins and marker sleeves as required.</p> <p>Install connector pins into appropriate connector positions.</p> <p>Screw backshell(2) onto connector(3).</p> <p>Tighten two screws (1) securing backshell(2) to cable.</p>	 <p>EL9RG142</p> <p>Use extractor tool supplied with new pins.</p>
(2) Spiral Tubing	Replace as required.	Use item 126, App. C
(3) Marker Sleeve P1	Replace as required.	Use item 61, App. C
(4) Marker Sleeve W1	Replace as required.	Use item 60, App. C
(5) Wires	Replace as required.	

MARKER INSTALLATION FOR CABLE W1, 2, 5, AND 13

NOTE
TWO MARKERS ARE USED FOR IDENTIFYING WHITE WIRES. THE FIRST MARKER IS WIDE AND THE SECOND MARKER IS NARROW. NOT ALL EQUIPMENT WILL HAVE MARKERS INSTALLED.



CONNECTOR W2P1 PIN LOCATION



4-9. Maintenance Procedures for ICD D. Cont

ITEM	ACTION	REMARKS
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(6) Cable W2 Wire List

<u>FROM</u>	<u>TO</u>	<u>COLOR</u>	<u>MARKER</u>
P1-1	E28	Black, item 148, App. C	
P1-2	N/C		
P1-3	N/C		
P1-4	N/C		
P1-5	N/C		
P1-6	N/C		
P1-7	E34	Brown, item 149, App. C	
P1-8	E35	Red, item 150, App. C	
P1-9	E36	Orange, item 151, App. C	
P1-10	N/C		
P1-11	N/C		
P1-12	N/C		
P1-13	E40	Yellow, item 152, App. C	
P1-14	E41	Green, item 153, App. C	
P1-15	N/C		
P1-16	N/C		
P1-17	N/C		
P1-18	N/C		
P1-19	N/C		
P1 -20	N/C		
P1-21	N/C		
P1 -22	N/C		
P1 -23	N/C		
P1 -24	N/C		
P1 -25	N/C		
P1 -26	N/C		
P1 -27	N/C		
P1 -28	N/C		
P1 -29	N/C		
P1 -30	N/C		
P1-31	E58	Blue, item 154, App. C	
P1 -32	N/C		
P1 -33	N/C		
P1 -34	N/C		
P1 -35	N/C		
P1 -36	N/C		
P1 -37	N/C		
P1 -39	E66	Violet, item 155, App. C	
P1 -40	N/C		
P1-41	E68	Gray, item 156, App. C	
P1-42	E69	White, item 157, App. C	
P1-43	N/C		
P1-44	N/C		
P1 -45	N/C		
P1 -46	N/C		
P1 -47	N/C		
P1 -48	E75	White, item 157, App. C	item 19, App. C

4-9. Maintenance Procedures for ICD D. Cont

ITEM	ACTION	REMARKS
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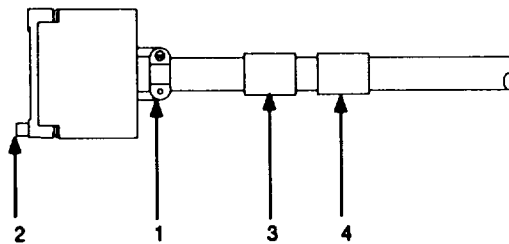
(6) Cable W2 Wire List, Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR</u>	<u>MARKER</u>
P1 -49	N/C		
P1 -50	E77	White, item 157, App. C	item 20, App. C
P1-51	E78	White, item 157, App. C	item 21, App. C
P1-52	N/C		
P1 -53	N/C		
P1 -54	E81	White, item 157, App. C	item 22, App. C
P1 -55	N/C		

1. Cable Assembly W5

(1) Connector P1

Loosen two screws(1) from cable clamp
 Remove jacksheet (2) from end of connector.
 Slide connector cover up wires.



EL9RQ144

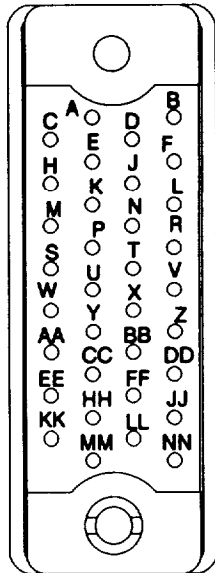
Unsolder wires from connector pins.
 Replace connector.
 Solder wires to appropriate connector pins on replacement connector.
 Slide connector cover over connector body.
 Install and tighten jacksheet to secure cover.
 Install two screws to secure cable clamp onto connector body.

- (2) Spiral Tubing
- (3) Marker W5(3)
- (4) Marker P1 (4)
- (5) Tiewrap
- (6) Wires

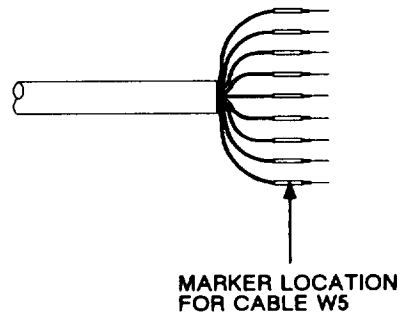
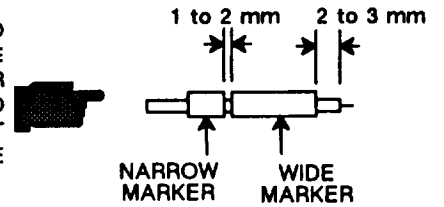
Replace as required. Use item 126, App. C.
 Replace as required. Use item 66, App. C.
 Replace as required. Use item 67, App. C.
 Replace as required. Use item 120, App. C.
 Replace as required.

4-9. Maintenance Procedures for ICD D. Cont

ITEM	ACTION	REMARKS
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TWO MARKERS ARE USED FOR IDENTIFYING WHITE WIRES. THE FIRST MARKER IS WIDE AND THE SECOND MARKER IS NARROW. NOT ALL EQUIPMENT WILL HAVE MARKERS INSTALLED.



EL9RG145

(7) Cable W5 Wire List

FROM	TO	COLOR	MARKER 1 and 2
P1-A	E83	Black, item 148, App. C	
P1-B	E84	Brown, item 149, App. C	
P1-C	E85	Red, item 150, App. C	
P1-D	E86	Orange, item 151, App. C	
P1-E	E87	Yellow, item 152, App. C	
P1-F	E88	Green, item 153, App. C	
P1-H	E89	Blue, item 154, App. C	
P1-J	E90	Violet, item 155, App. C	
P1-K	E91	Gray, item 156, App. C	
P1-L	E92	White, item 157, App. C	
P1-M	E93	White item 157, App. C	(Wide) item 19, App. C
P1-N	E94	White item 157, App. C	(Wide) item 20, App. C
P1-P	E95	White, item 157, App. C	(Wide) item 21, App. C
P1-R	E96	White, item 157, App. C	(Wide) item 22, App. C
P1-S	E97	White, item 157, App. C	(Wide) item 23, App. C
P1-T	E98	White, item 157, App. C	(Wide) item 24, App. C
P1-U	E99	White, item 157, App. C	(Wide) item 25, App. C
P1-V	E100	White, item 157, App. C	(Wide) item 26, App. C
P1-W	E101	White, item 157, App. C	(Wide) item 27, App. C
P1-X	E102	White, item 157, App. C	(Wide) item 19, App. C (Wide) item 29, App. C
P1-Y	E103	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 30, App. C
P1-Z	E104	White item 157, App. C	(Wide) item 19, App. C (Narrow) item 31, App. C
P1-AA	E105	White, item 157, App. C	(Wide) item 19, App. C (Narrow) item 32, App. C

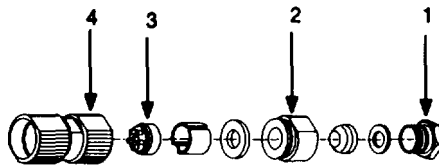
4-9. Maintenance Procedures for ICD D. *Cont*

ITEM		ACTION		REMARKS
(8) Cable W5 Wire List		Cent		
<u>FROM</u>	<u>TO</u>	<u>COLOR</u>		<u>MARKER 1 and 2</u>
P1-BB	E106	White, item 157, App. C		(Wide) item 19, App. C (Narrow) item 33, App. C
P1-CC	E107	White, item 157, App. C		(Wide) item 19, App. C (Narrow) item 34, App. C
P1-DD	E108	White, item 157, App. C		(Wide) item 19, App. C (Narrow) item 35, App. C
P1-EE	E109	White, item 157, App. C		(Wide) item 19, App. C (Narrow) item 36, App. C
P1-FF	E110	White, item 157, App. C		(Wide) item 20, App. C (Narrow) item 30, App. C
P1-HH	E111	White, item 157, App. C		(Wide) item 20, App. C (Narrow) item 31, App. C
P1-JJ	E112	White, item 157, App. C		(Wide) item 20, App. C (Narrow) item 32, App. C
P1-KK	E113	White, item 157, App. C		(Wide) item 20, App. C (Narrow) item 33, App. C
P1-LL	E114	White, item 157, App. C		(Wide) item 20, App. C (Narrow) item 34, App. C
P1-MM	E115	White, item 157, App. C		(Wide) item 20, App. C (Narrow) item 35, App. C
P1-NN	E116	White, item 157, App. C		(Wide) item 20, App. C (Narrow) item 36, App. C

m. Cable Assembly W13

(1) Connectors P1, P2

- Loosen stud (1) from adapter nut (2).
- Loosen adapter nut (2) from shell receptacle (4).
- Remove insulator (3) from shell receptacle (4).



EL9RG146

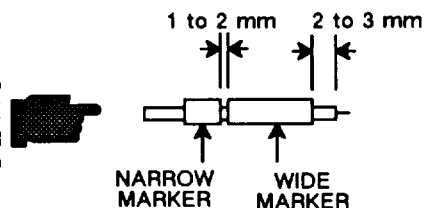
- Remove connector pins from insulator (3).
- Unsolder wires from connector pins.
- Replace insulator.
- Replace marker sleeve P1 Use item 58, App. C
- Replace marker sleeve P2 Use item 59, App. C
- Replace marker sleeve W13 Use item 80, App. C

4-9. Maintenance Procedures for ICD D. Cont

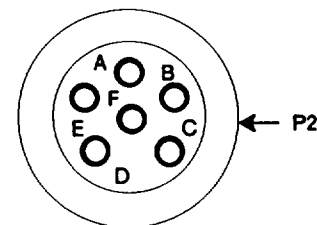
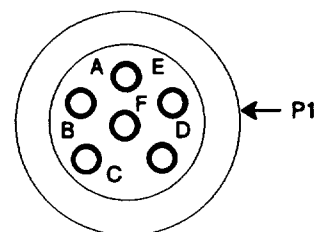
ITEM	ACTION	REMARKS
	Install all parts of new connector with the exception of the shell receptacle (4). Solder wires to appropriate new connector pins. Replace pins in insulator (3). Replace shell receptacle. Secure adapter nut (2) to shell receptacle (4). Secure stud(1) to adapter nut (2).	
(2) Spiral Tubing	Replace as required.	Use item 126, App. C

MARKER INSTALLATION FOR CABLE W1, 2, 5, AND 13

NOTE
TWO MARKERS ARE USED FOR IDENTIFYING WHITE WIRES. THE FIRST MARKER IS WIDE AND THE SECOND MARKER IS NARROW.



CONNECTOR PIN LOCATION



EL9RG147

(3) Cable W13 Wire List

FROM	TO	COLOR/TRACER	MARKER
P1-A	E390	Black, item 148, App. C	
P1-B	E391	Brown, item 149, App.C	
P1-C	E392	Red, item 150, App. C	
P1-D	E393	Orange, item 151, App. C	
P1-E	E394	Yellow, item 152, App. C	
P1 -F	E395	Green, item 153, App. C	
P2-A	E396	Blue, item 154, App. C	
P2-B	E397	Violet, item 155, App. C	
P2-C	E398	Gray, item 156, App. C	
P2-D	E399	White, item 157, App. C	
P2-E	E400	White/Black, item 157, App. C	(Wide) item 19, App. C
P2-F	E401	White/Brown, item 157, App. C	(Wide) item 20, App. C

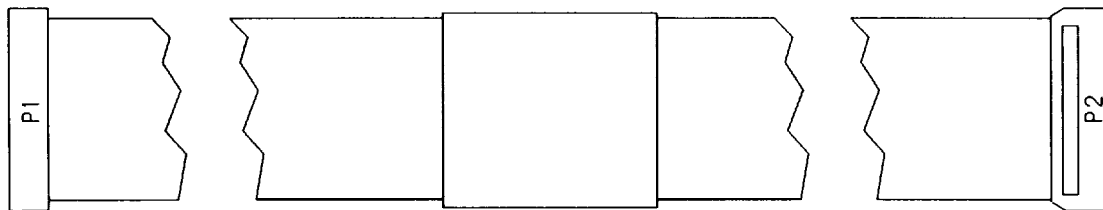
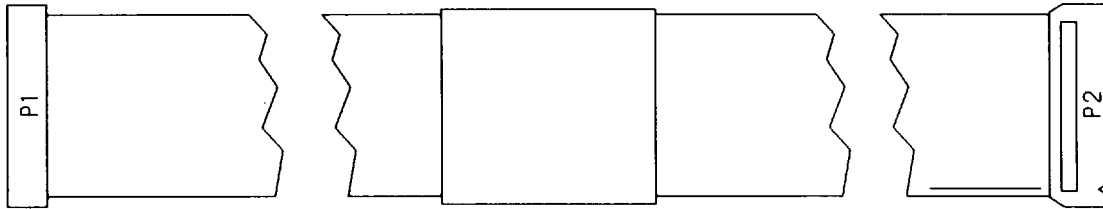
4-9. Maintenance Procedures for ICD D. Cont

ITEM	ACTION	REMARKS
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n. Cable Assemblies
W6 thru W12.

Unsolder defective cable
from circuit board.

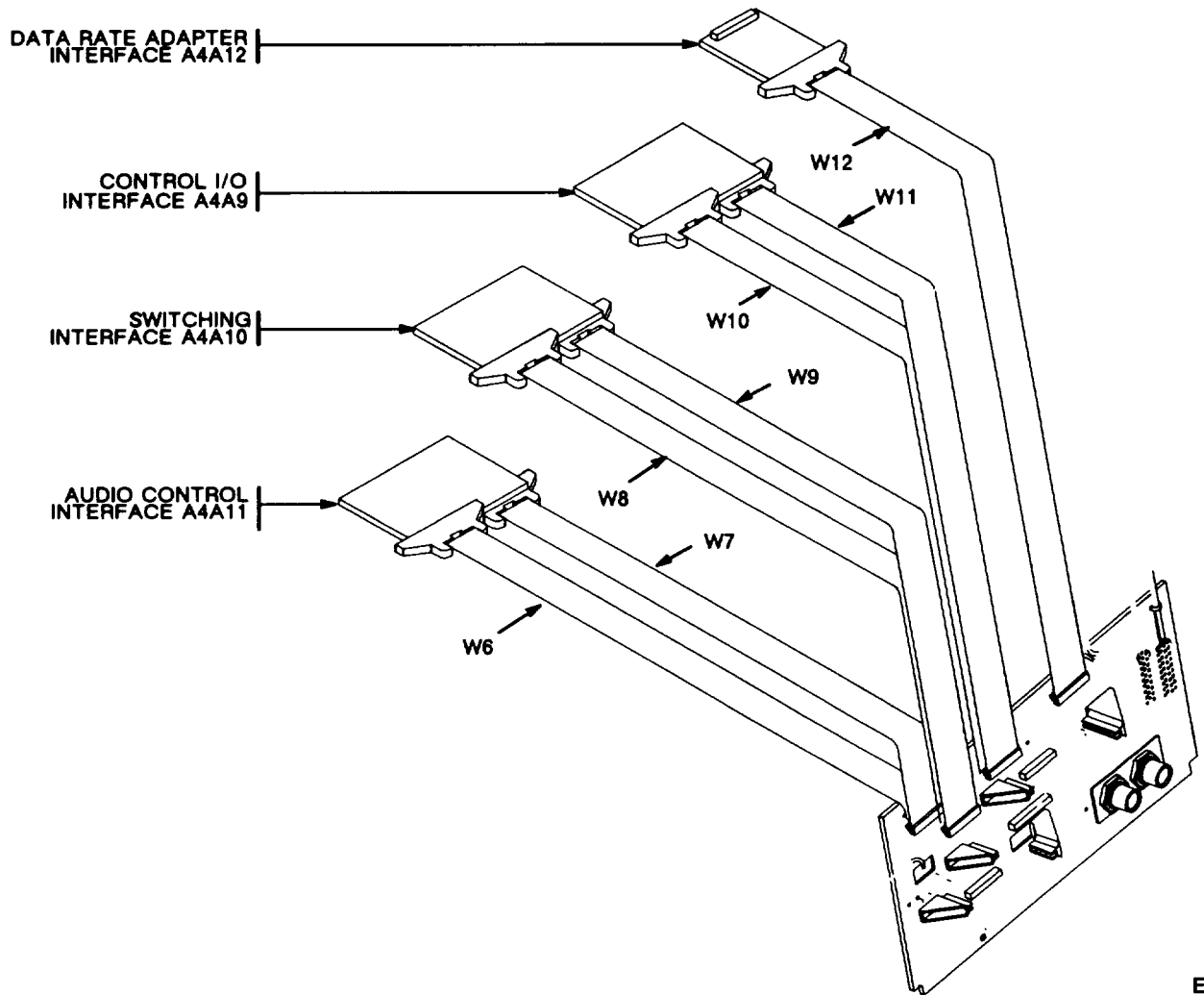
Refer to figure 4-7
on page 4-29.



EL9RG148

Remove and discard defective cable.
Install new cable onto circuit board,
Solder connector pins.

4-9. Maintenance Procedures for ICD D. Cont

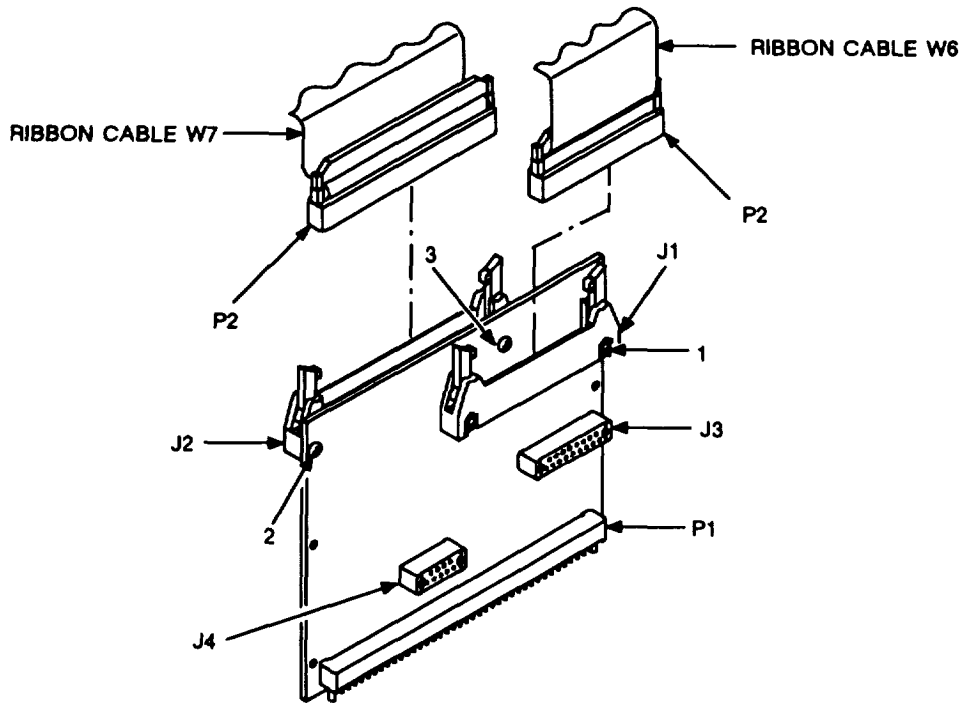


EL9RG149

Figure 4-7. Maintenance of Ribbon-Type Cables on ICD D

4-10. Maintenance of Audio Control Interface A4A11.

ITEM	ACTION	REMARKS
a. Connector J1	<p>Remove two screws (1), two lock washers, two flat washers and two nuts.</p> <p>Unsolder connector.</p> <p>Replace connector and secure to backplane with two screws, two lock washers, two flat washers and two hex nuts.</p> <p>Solder connector to backplane.</p>	
b. Connector J2	<p>Remove one screw (2), one flat washer, one lock washer, and one hex nut.</p> <p>Remove one flathead screw (3), one flat washer, one lock washer, and one hex nut.</p> <p>Unsolder connector.</p> <p>Replace connector and secure with one screw (2), one lock washer, one flat washer, and one hex nut.</p> <p>Install one flathead screw (3), through backplane and connector then install one flat washer, one lock washer, and one hex nut.</p> <p>Solder connector to backplane.</p>	
c. Traces	Repair as required.	



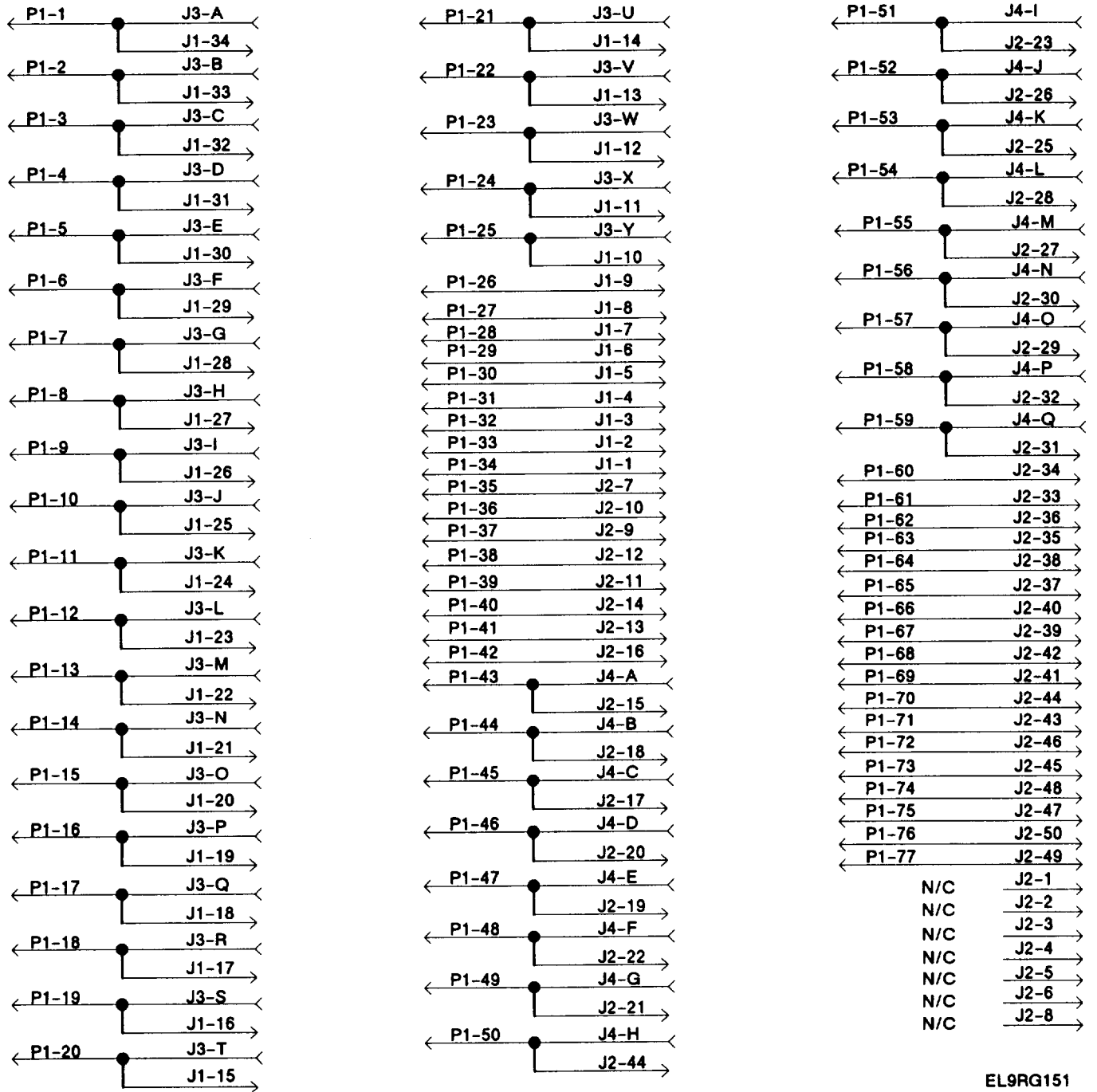
EL9RG150

Figure 4-8. Breakdown of Audio Control Interface Backplane

4-10. Maintenance of Audio Control Interface A4A11. Cont

ITEM	ACTION	REMARKS
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d. Schematic diagram Use the following schematic to troubleshoot traces.



EL9RG151

Figure 4-9. Schematic Diagram of Audio Control Interface Card

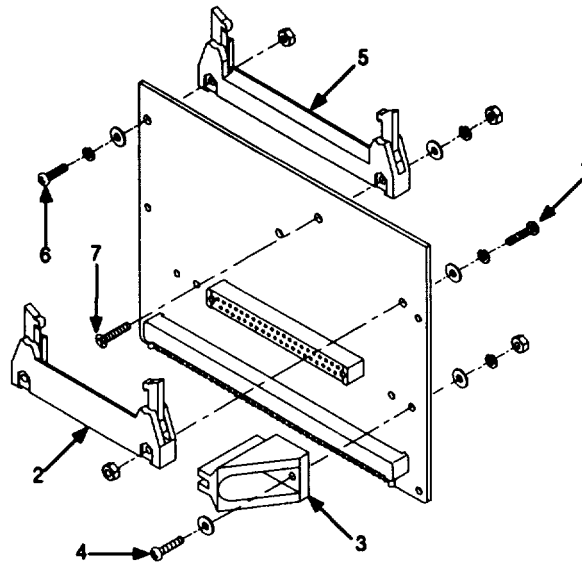
4-11. Maintenance of Switching Interface A4A10.

ITEM	ACTION	REMARKS
a. Connector J1 (2)	<p>Remove two screws(1), two lock washers, two flat washers, and two hex nuts.</p> <p>Unsolder connector.</p> <p>Replace connector and secure to backplane with two screws(1), two lock washers, two flat washers, and two hex nuts.</p> <p>Solder connector to backplane.</p>	
b. Card holder (3)	<p>Remove two screws (4), two lock washers, four flat washers, and two hex nuts securing card holder to backplane.</p> <p>Remove and discard defective card holder.</p> <p>Install new card holder with two screws (4), four flat washers, two lock washers, and two hex nuts.</p>	
c. Card holder (left side)	<p>Remove two screws, four flat washers, two lock washers, two fiber washers, and two hex nuts securing card holder to backplane,</p> <p>Replace card holder and secure with two screws, four flat washers, two lock washers, two fiber washers, and two hex nuts.</p>	
d. Connector J2(5)	<p>Remove one screw (6), one flat washer, one lock washer, and one hex nut.</p> <p>Remove one screw (7), one flat washer, one lock washer, and one hex nut.</p> <p>Replace connector and secure to backplane with one screw (6), one lock washer, one flat washer, and one hex nut.</p> <p>Install one screw (7) through backplane and connector and install one flat washer, one lock washer, and one hex nut.</p> <p>Solder connector to backplane.</p>	

4-11. Maintenance of Switching Interface A4A1O. Cont

ITEM	ACTION	REMARKS
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e. Traces	Refer to figure 4-11 on page 4-34 for schematic.	
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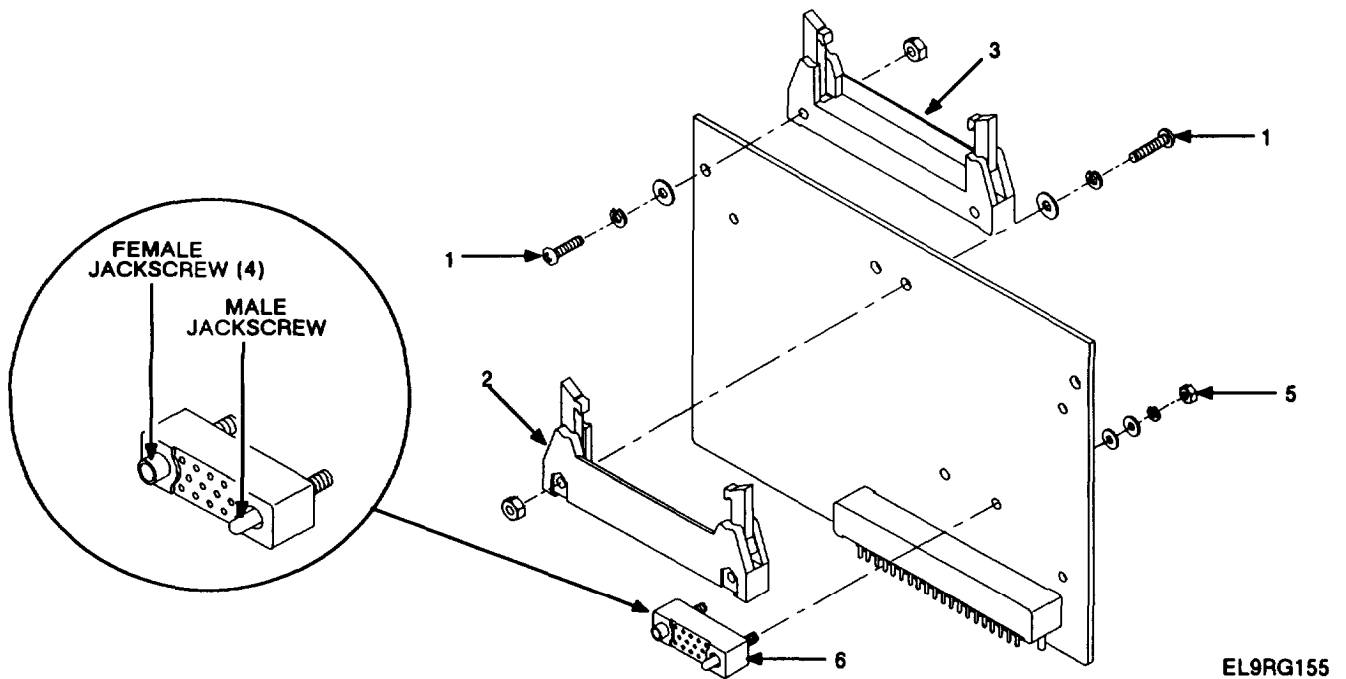


EL9RG153

Figure 4-10. Breakdown of Switching Backplane

4-12. Maintenance of Control I/O Interface A4A9.

ITEM	ACTION	REMARKS
a. Connector J1 (2), J2 (3)	<p>Remove two screws(1), two lock washers, two flat washers, and two hex nuts.</p> <p>Unsolder connector.</p> <p>Replace connector and secure to backplane with two screws(1), two lock washers, two flat washers, and two hex nuts.</p> <p>Solder connector to backplane.</p>	
b. Connector J3 (6)	<p>Remove two jackscrews (4), two flat washers, two lock washers, two fiber washers, and two hex nuts (5) from connector.</p> <p>Unsolder connector.</p> <p>Replace connector and secure to backplane with two jackscrews (4), two flat washers, two lock washers, two fiber washers, and two hex nuts (5).</p> <p>Solder connector to backplane.</p>	



EL9RG155

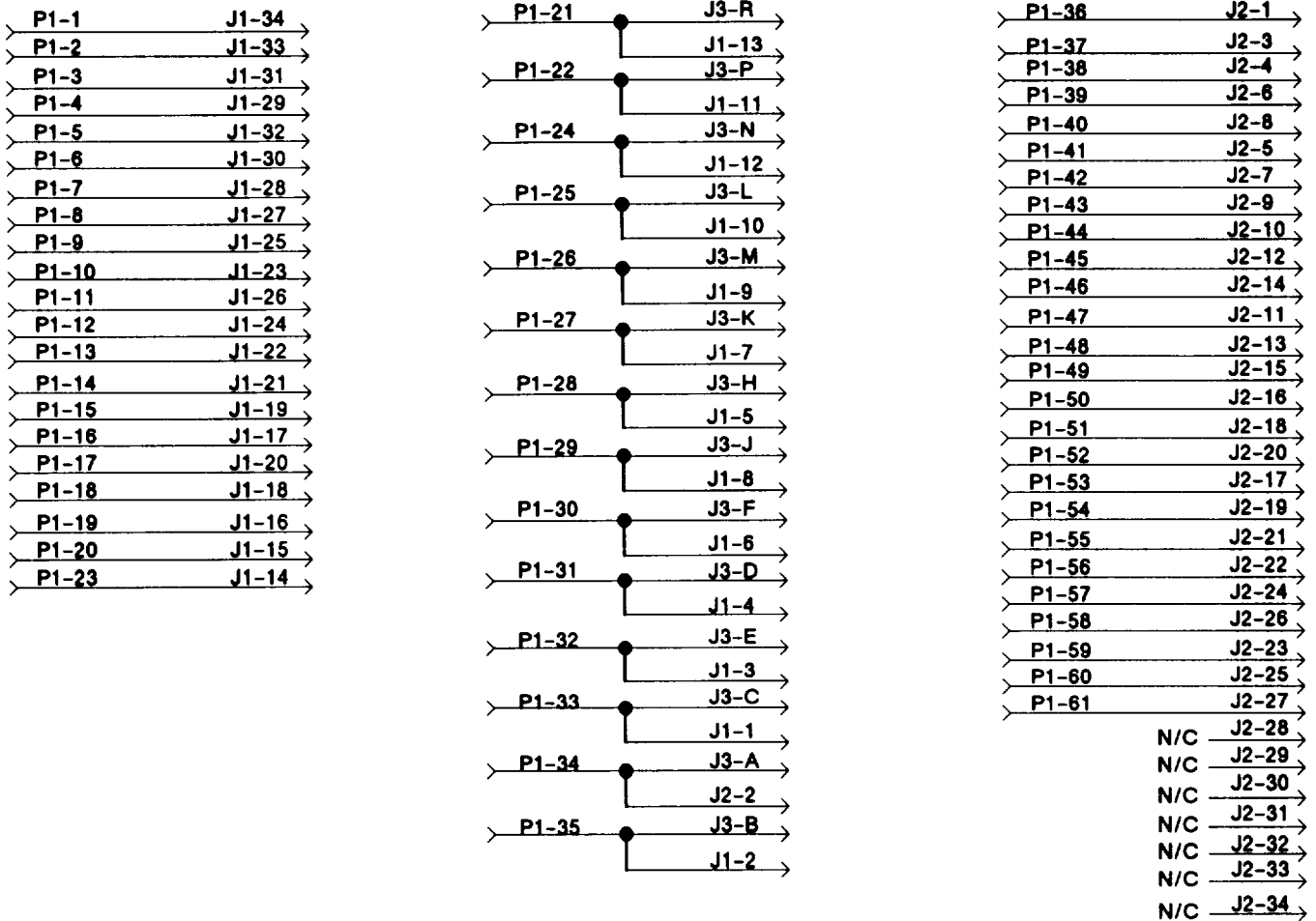
Figure 4-12. Breakdown of Control I/O Interface Backplane

4-12. Maintenance of Control I/O interface A4A9. Cont

ITEM	ACTION	REMARKS
------	--------	---------

c. Traces

Use the following schematic to troubleshoot traces.

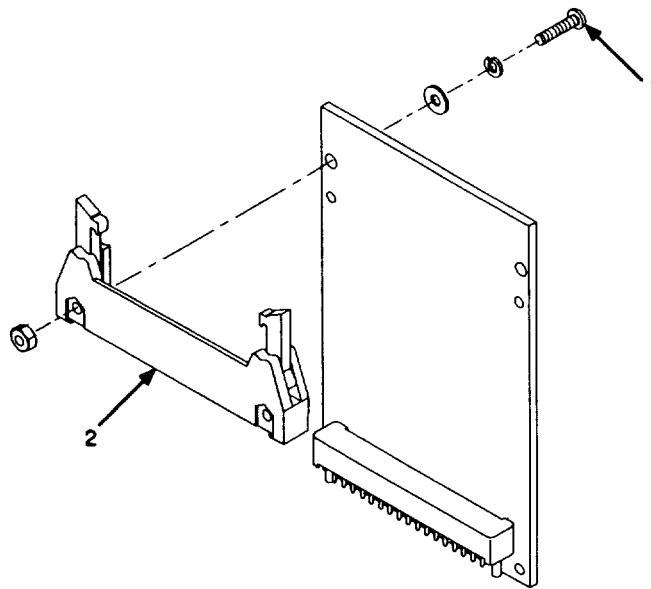


EL9RG156

Figure 4-13. Schematic Diagram of Control I/O

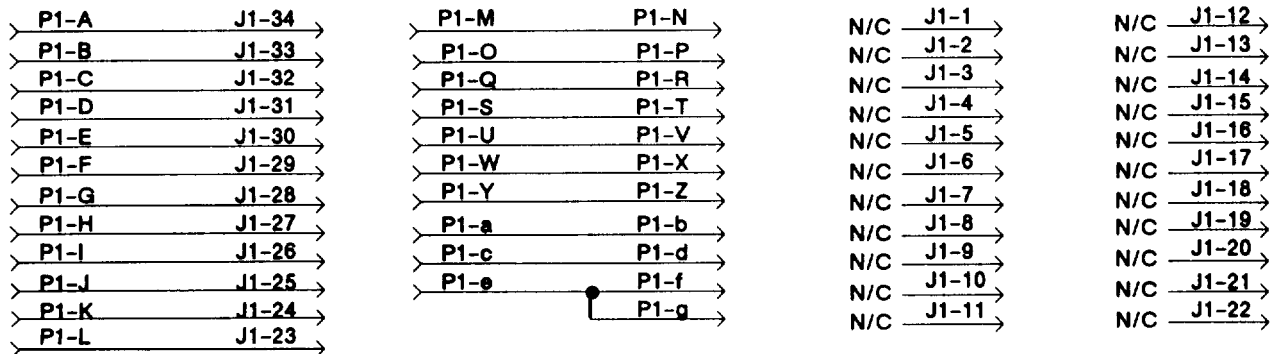
4-13. Maintenance of Data Rate Interface A4A12.

ITEM	ACTION	REMARKS
a. Connector J1 (2)	<p>Remove two screws(1), two lock washers, two flat washers, and two hex nuts.</p> <p>Unsolder connector (2).</p> <p>Replace connector and secure to backplane with two screws (1), two lock washers, two flat washers, and two hex nuts.</p> <p>Solder connector to backplane.</p>	



EL9RG157

Figure 4-14. Breakdown of Data Rate Interface Backplane

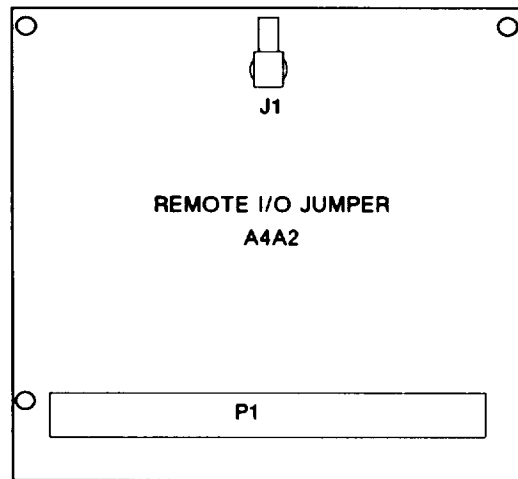


EL9RG158

Figure 4-15.

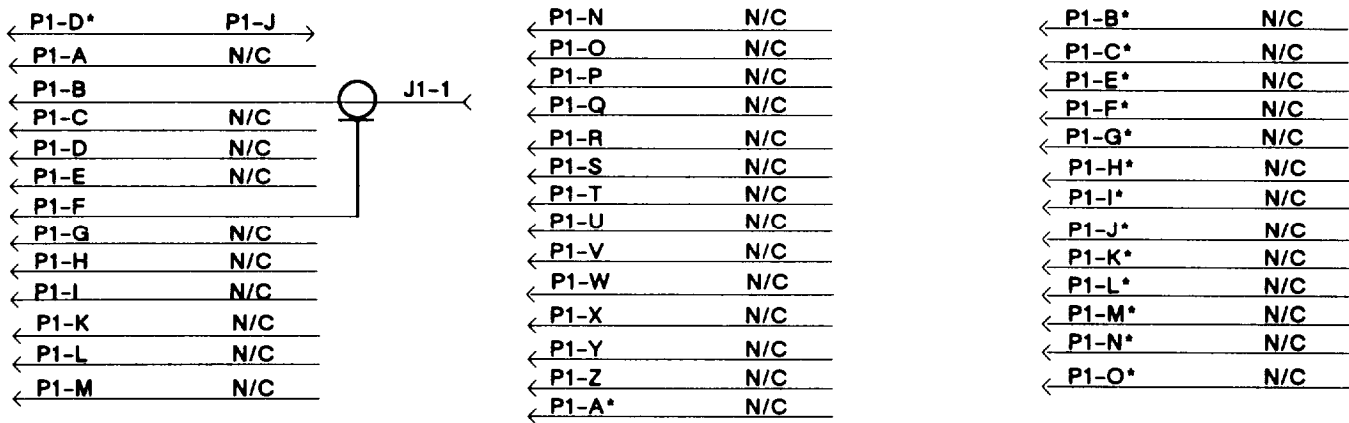
4-14. Maintenance of Remote I/O Jumper A4A2.

ITEM	ACTION	REMARKS
a. Connector J1	Unsolder connector J1. Replace and solder to backplane assembly.	
b. Traces	Repair as required.	



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Figure 4-16. Maintenance of Remote I/O Jumper Card



NOTE: All letters on connector pin designators are upper case for ease of reading.
An asterisk (*) after a letter denotes it is actually lower case.

EL9RG160

Figure 4-17. Schematic Diagram of Remote I/O Jumper Card

4-15. Maintenance of RT Power Supply Jumper Card A4A3

ITEM	ACTION	REMARKS
Jumper card A4A3, RT Power Supply	Inspect. Replace as required.	

4-16. Maintenance of ECCM Jumper Card A4A4

ITEM	ACTION	REMARKS
Jumper card A4A4, ECCM	Inspect. Replace as required.	

4-17. Maintenance of IF Demodulator Jumper Card A4A5

ITEM	ACTION	REMARKS
Jumper card A4A5, IF Demodulator	Inspect. Replace as required.	

4-18. Maintenance of Exciter/PA Jumper Card A4A6.

ITEM	ACTION	REMARKS
Jumper cards A4A6, Exciter PA	Inspect. Replace as required.	

4-19. Maintenance of Audio Power Supply Jumper Card A4A7.

ITEM	ACTION	REMARKS
Jumper card A4A7, Audio Power Supply	Inspect, Replace as required.	

4-20. Maintenance of Audio Data I/O Jumper Card A4A8.

ITEM	ACTION	REMARKS
Jumper cards A4A8. Audio Data I/O	Inspect. Replace as required.	

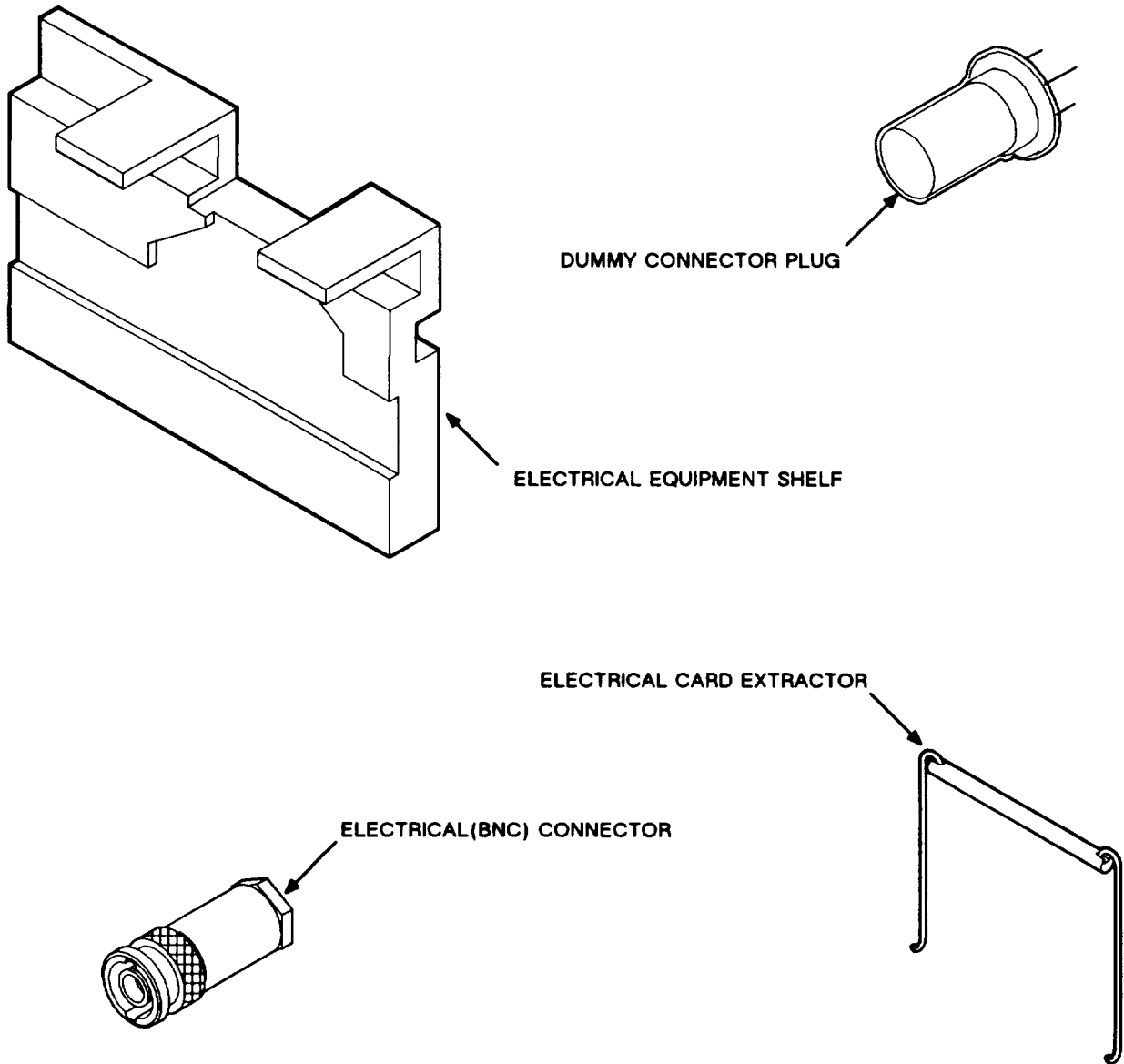
4-21. ICD D Accessory Kit.

ITEM	ACTION	REMARKS
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Accessory Kit

Inspect.
Replace.

None of the items in this kit are repairable.



EL9RG161

Figure 4-18. ICD D Accessory Kit

**Section IV. MAINTENANCE INSTRUCTIONS FOR J-4820/G
(TEST ADAPTER-INTERFACE CONNECT DEVICE C)**

4-22. Required Test Accessories for ICD C.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CP1500030G
File Number	A3013377
● ICD C	A3014255-1
Backplane Microcontroller Interface A3A2	A3014303-1
Backplane Decoder/Timer Interface A3A3	A3014306-1
Backplane Analog Interface A3A4	A3014309-1
Backplane Power Supply Interface A3A5	A3014312-1

CAUTION

This ICD contains static sensitive components. Handle in accordance with ESD practices.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

4-23. Test Procedures for ICD C.

- a. Turn on digital card tester ANIUSM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10.
- c. Install Interfaces on ICD cables W2 through W6.
- d. Load test program.
 - (1) Install test program tape CP1500030G in digital card tester in accordance with TM 11-6625-3038-10.
 - (2) Enter LOAD \emptyset , then press EXECUTE.
 - (3) When READY appears on the display, type RUN and press EXECUTE.

4-23. Test Procedures for ICD C.Cont

NOTE

When prompted for part number, enter 3377.

(4) Verify that the following information is printed:

```
>ENTER THE LAST FOUR
>DIGITS OF THE UUT
>P/N A301 ????-1
```

THEN 

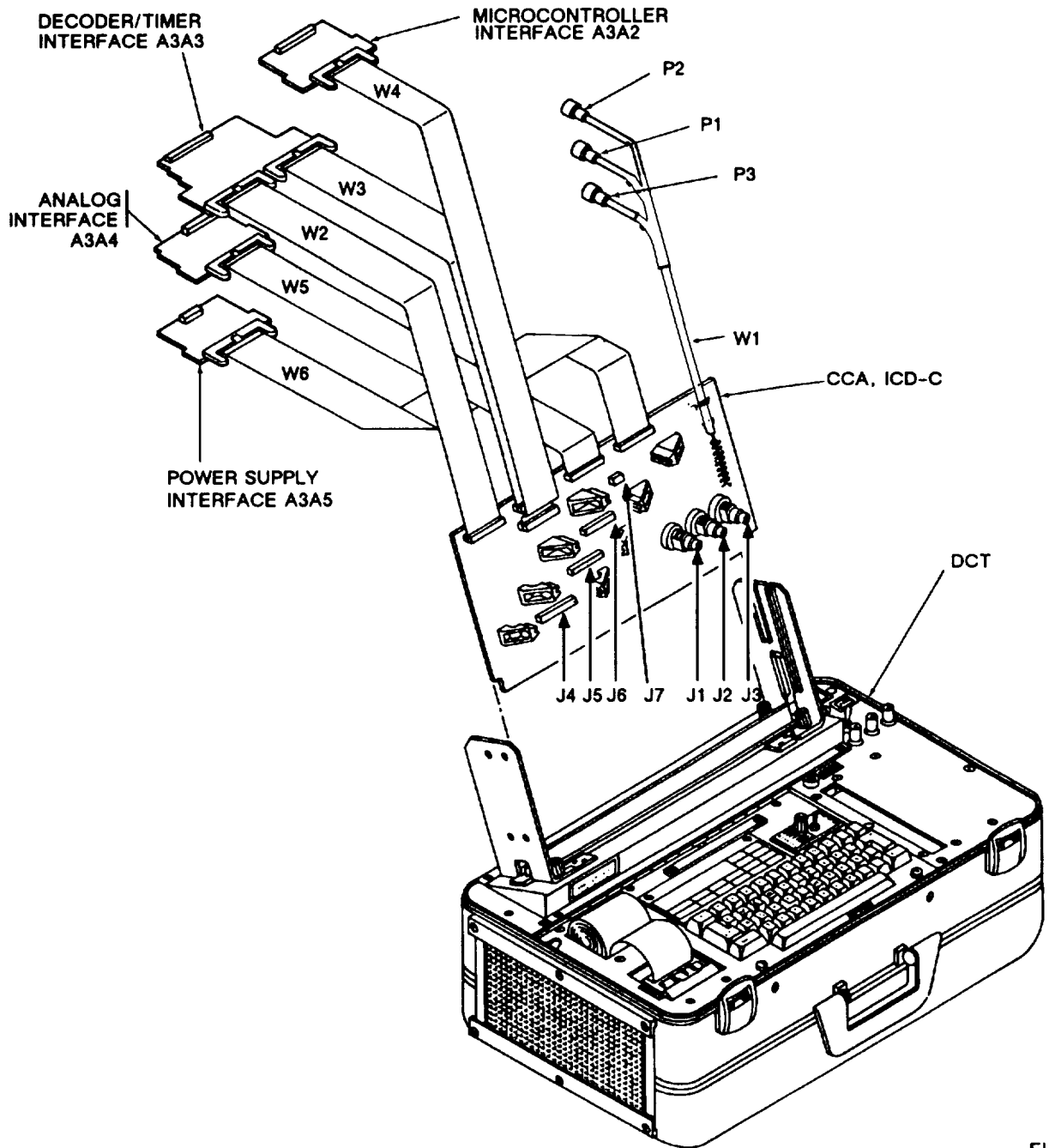
```
>LOADING PI
>PRINT PROGRAM NOTES?
>ENTER YES OR NO,
>PRESS EXECUTE
```

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(5) Follow operator actions as instructed by program.

- e. Run ATE survey test if desired. If survey test fails, refer to TM 11-6625-3038-20.
- f. Install ICD C. See figure 4-19 on page 4-43.
- g. Run ICD survey test if desired.
- h. After testing do one of the following:
 - (1) If the ICD passes the survey exit the program by pressing the ATTN key.
 - (2) If the ICD fails the survey then go to paragraph 4-24 on page 4-44.

4-23. Test Procedures for ICD C. Cont



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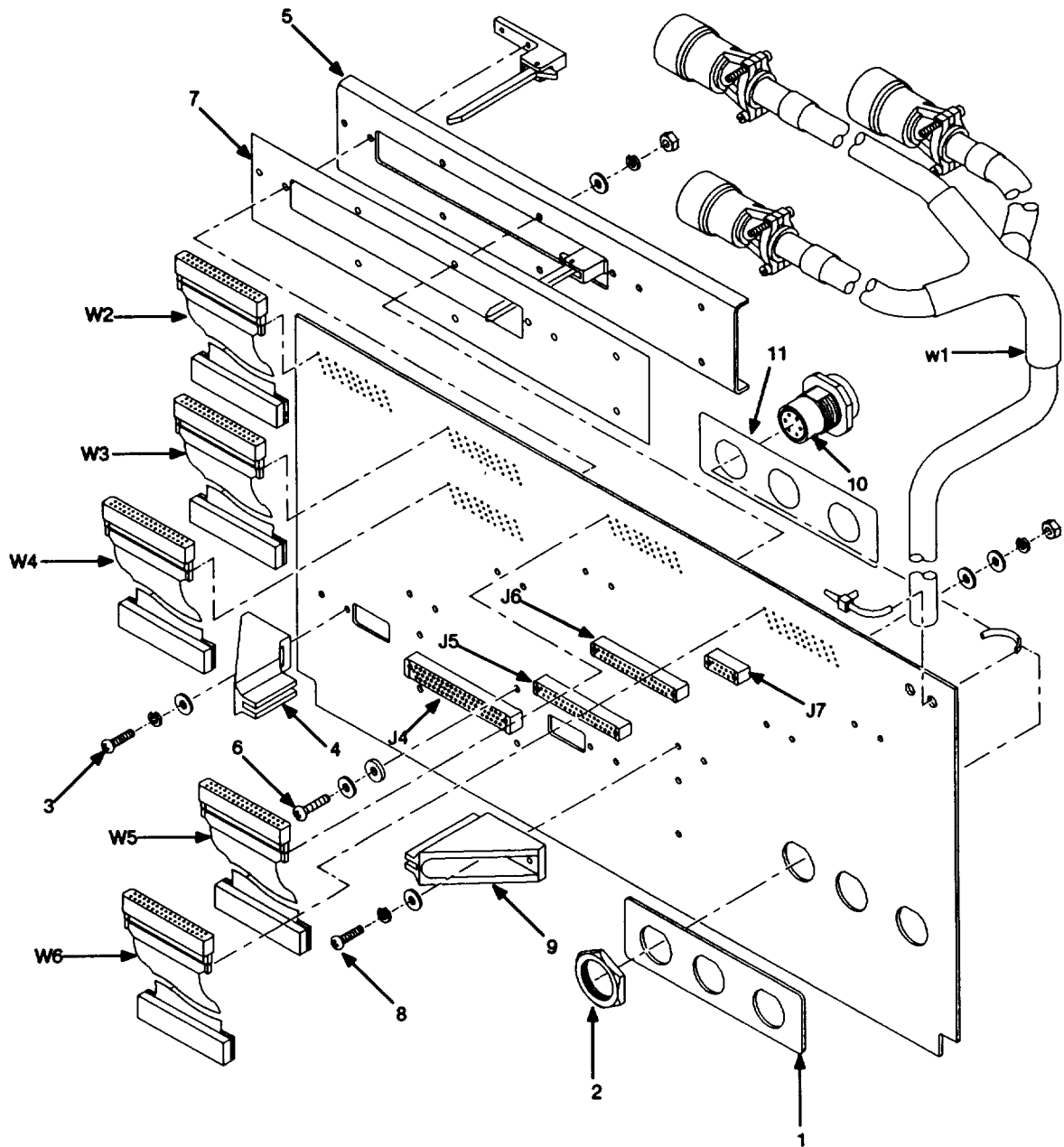
Figure 4-19. installation of ICD C on Digital Card Tester

4-24. Maintenance Procedures for ICD C.

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT: Digital Test Set AN/USM-465A (6625-01-126-2473) Multimeter AN/USM-486 (8825-01-145-2430)</p> <p>TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-00-610-8177) Solder Repair Center PRC-151 (3439-01-109-8590) Tool Kit Electronic Equipment TK-101/G (51 80-00-064-5178) Maintenance Group OA-9297/GRC (5820-01-270-3938) OA-9283A/GRC (5820-01-304-2010)</p>	<p>REFERENCES TM 11-5820-914-40 TM 11-6625-3030-10 TM 11-6625-3094-24P TB 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>
---	--

ITEM	ACTION	REMARKS
a. Connector bracket (1)	Remove lock nuts (2) from connector J1, J2, and J3.	Refer to FO-2 for schematic diagram of ICD C. Refer to figure 4-20 on page 4-45 for breakdown.
b. Card holder (4) and ejector	Replace connector bracket and secure with lock nuts, Remove two screws (3), two lock washers, and two flat washers. Replace card holder or ejector and secure with two screws (3), two lock washers, and two flat washers.	Socket (7/8 in) is located in the maintenance group. Refer to figure 4-20 on page 4-45 for connector J4.
c. Structural Channel (5)	Remove retainer/ejectors, and card holders. Remove six screws (6), six lock washers, twelve flat washers (six front and six rear), six fiber washers, and six hex nuts from structural channel, Replace structural channel (5). Replace insulator as required (7).	Refer to step b. Refer to figure 4-20 on page 4-45.

4-24. Maintenance Procedures for ICD C. Cont

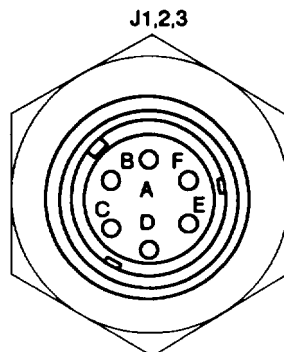


EL9RG164

Figure 4-20. Component Layout of ICD C

4-24. Maintenance Procedures for ICD C. Cont

ITEM	ACTION	REMARKS
	<p>Install structural channel (5) and insulator (7), and secure with six screws (6), six lock washers, twelve flat washers, six fiber washers, and six hex nuts.</p>	
<p>d. Card Holders (9)</p>	<p>Install card holders and ejectors.</p> <p>Remove two screws (8), two lock washers, four flat washers (two front and two rear), two fiber washers and two hex nuts securing card holder to circuit board.</p>	<p>Refer to step b.</p> <p>Refer to figure 4-20 on page 4-45.</p>
<p>e. Connector, Electrical J1, J2 or J3 (10)</p>	<p>Replace card holder and secure with two screws (8), two lock washers, four flat washers (two front and two rear), two fiber washers and two hex nuts.</p> <p>Remove lock nut (2).</p> <p>Remove rear nut, spacer, and insulation from connector body and slide up wires. Tag wires.</p> <p>Unsolder wires from connector pins.</p> <p>Replace connector and solder wires to connector pins.</p> <p>Replace insulator (11) as required.</p> <p>Remove wire tags.</p> <p>Install insulator, spacer, and rear nut onto connector body.</p> <p>Install connector onto circuit board with lock nut (2).</p>	<p>Socket (7/8 in.) is located in the maintenance group.</p>



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4-24. Maintenance Procedures for ICD C. Cont

ITEM	ACTION	REMARKS
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- f. Connector wiring Use the following wire list to replace wires as required.

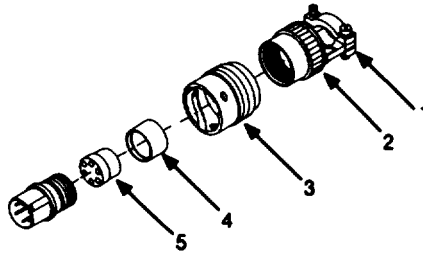
<u>FROM</u>	<u>TO</u>	<u>COLOR</u>
J1-A	E189	White (use item 157, App. C)
J1-B	E190	White (use item 157, App. C)
J1-C	E191	White (use item 157, App. C)
J1-D	E192	White (use item 157, App. C)
J1-E	E193	White (use item 157, App. C)
J1-F	E194	White (use item 157, App. C)
J2-A	E195	White (use item 157, App. C)
J2-B	E196	White (use item 157, App. C)
J2-C	E197	White (use item 157, App. C)
J2-D	E198	White (use item 157, App. C)
J2-E	E199	White (use item 157, App. C)
J2-F	E200	White (use item 157, App. C)
J3-A	E201	White (use item 157, App. C)
J3-B	E202	White (use item 157, App. C)
J3-C	E203	White (use item 157, App. C)
J3-D	E204	White (use item 157, App. C)
J3-E	E205	White (use item 157, App. C)
J3-F	E206	White (use item 157, App. C)

4-24. Maintenance Procedures for ICD C. Cont

ITEM	ACTION	REMARKS
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g. Wiring harness, WI Refer to figure 4-21 on page 4-49 for location of wiring harness WI.
Refer to wire list in figure 4-22 on page 4-50.

(1) Connectors P1, P2, P3 Loosen two screws(1) securing cable clamp.
Unscrew backshell (2) and slide up cable.



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Slide lock ring (3), shield (4), rubber insulator and spiral wrap up wires to access connector pins.

Tag wires.

Unsolder wires.

Replace connector and solder wires.

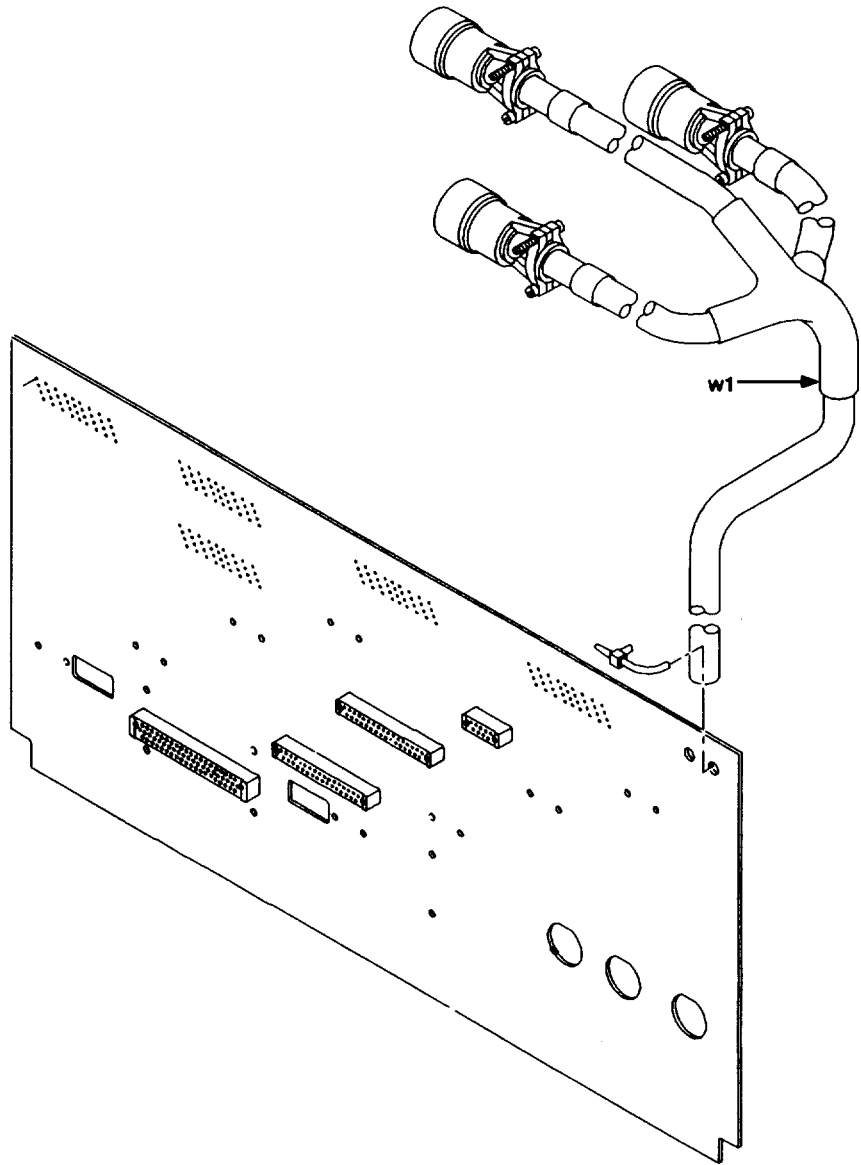
Remove wire tags.

Install rubber insulator (5), shield (4), lock ring (3) and backshell (2).

Secure with Screw(1)

(2) Marker Sleeve P1	Replace as required.	Use item 69, App. C
(3) Marker Sleeve P2	Replace as required.	Use item 70, App. C
(4) Marker Sleeve P3	Replace as required.	Use item 71, App. C
(5) Marker Sleeve W1	Replace as required,	Use item 68, App. C
(6) Spiral Tubing	Replace as required.	Use item 126, App. C
(7) Wires	Replace as required.	

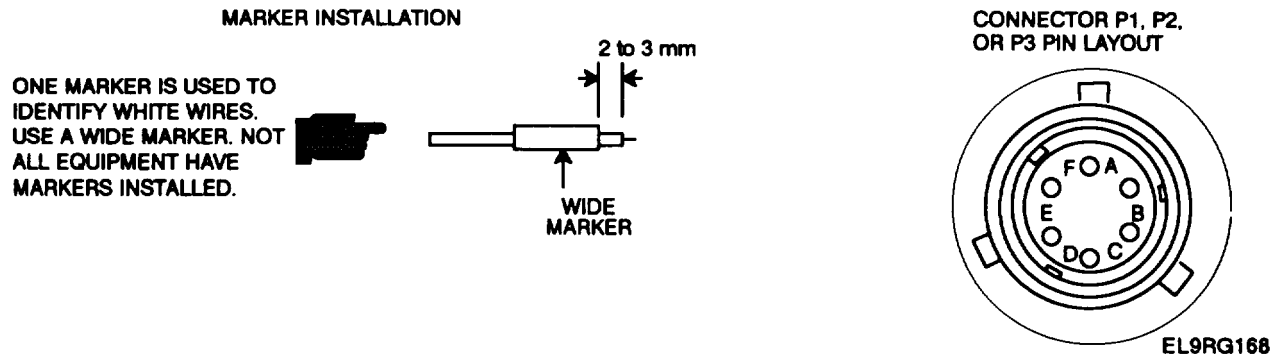
4-24. Maintenance Procedures for ICD C.Cont



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Figure 4-21. Maintenance of ICD C Cable W1

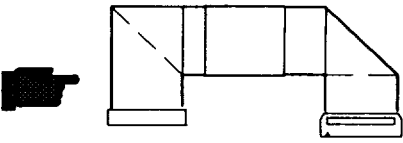
4-24. Maintenance Procedures for ICD C.Cont

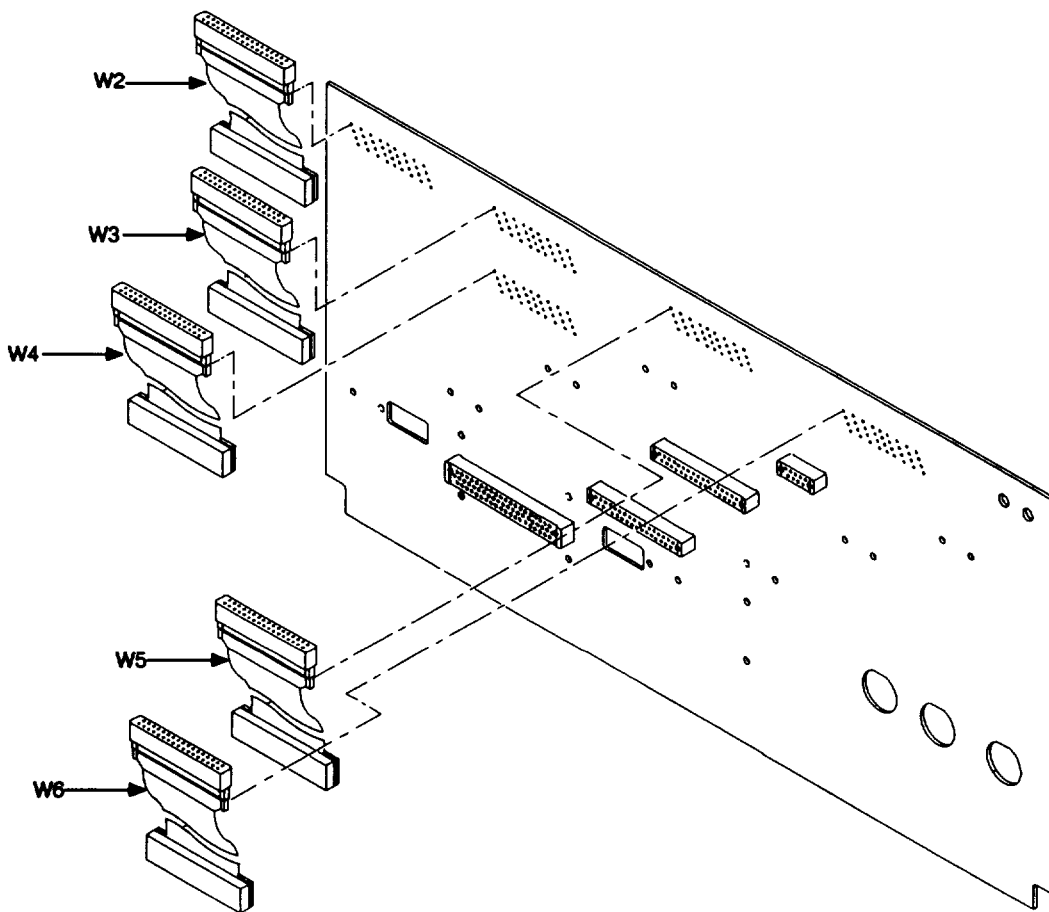


<u>FROM</u>	<u>TO</u>	<u>COLOR</u>	<u>MARKER</u>
P1-A	E1	Black, item 148, App. C	none
P1-B	E2	Brown, item 149, App. C	none
P1 -c	E3	Red, item 150, App. C	none
P1 -D	E4	Orange, item 151, App. C	none
P1 -E	E5	Yellow, item 152, App. C	none
P1-F	E6	Green, item 153, App. C	none
P2-A	E7	Blue, item 154, App. C	none
P2-B	E8	violet, item 155, App. c	none
P2-C	E9	Gray, item 156, App. C	none
P2-D	E10	White, item 157, App. C	none
P2-E	E11	White, item 157, App. C	item 19, App. C
P2-F	E12	White, item 157, App. C	item 20, App. C
P3-A	E13	White, item 157, App. C	item 21, App. c
P3-B	E14	White, item 157, App. C	item 22, App. C
P3-C	E15	White, item 157, App. C	item 23, App. c
P3-D	E16	White, item 157, App. C	item 24, App. C
P3-E	E17	White, item 157, App. C	item 25, App. c
P3-F	E18	White, item 157, App. C	item 26, App. C

Figure 4-22. Wire List for ICD C Connectors P1, P2, and P3

4-24. Maintenance Procedures for ICD C. Cont

ITEM	ACTION	REMARKS
h. Cable Assemblies W2 thru W6.	<p>Unsolder defective cable from circuit board.</p> <p>Remove and discard defective cable.</p> <p>Install new cable onto circuit board.</p> <p>Solder connector pins.</p>	 <p>EL9RG169</p>



EL9RG170

Figure 4-23. Maintenance of ICD C Cables W2 to W6

4-24. Maintenance Procedures for ICD C. Cont

ITEM	ACTION	REMARKS
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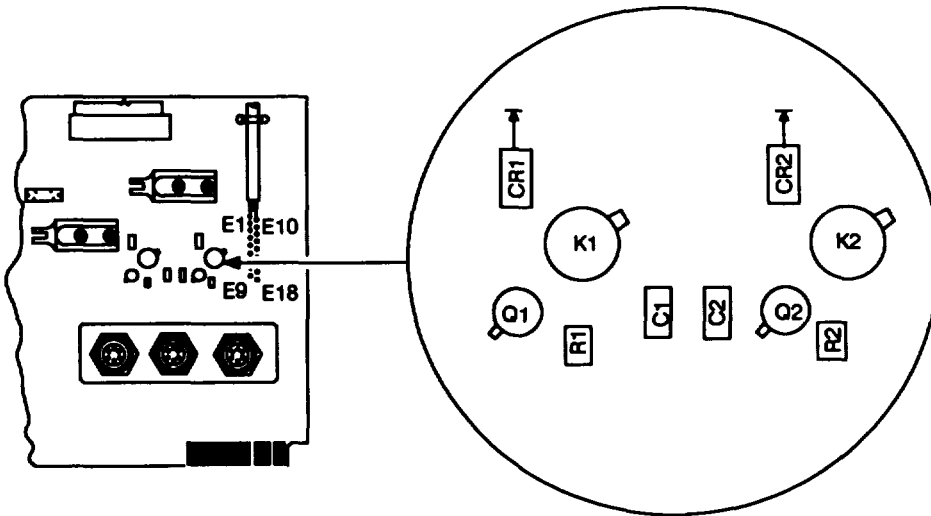
- | | | |
|------------------------|---|---|
| i. Discrete components | Trim and form leads of replacement component. | Lead protrusion will not exceed 1.6 mm. |
|------------------------|---|---|

CAUTION

ALL DIODES AND SEMICONDUCTORS ARE ELECTROSTATIC SENSITIVE ELECTRONIC DEVICES



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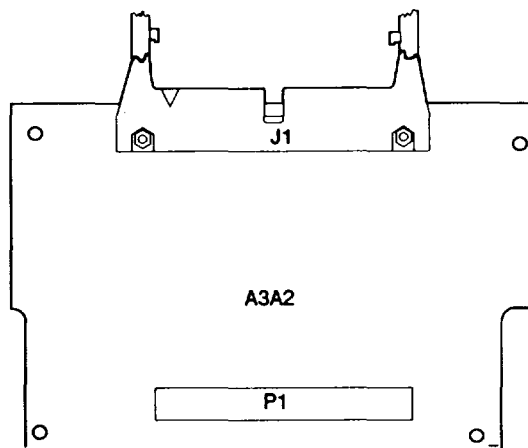
EL9RG171

Figure 4-24. Component Layout of Discrete Components

- | | | |
|----------------|--|--|
| j. Diodes | Mount diodes so that cathode end is soldered to square mounting pad on backplane assembly. | |
| k. Transistors | Trim and form leads of replacement component.
Install transistor on mounting pad.
Lead protrusion will not exceed 1.6 mm. | |
| l. Relays | Trim and form leads of replacement component.
To avoid shorting traces on the board, relays must not be flush mounted,
Lead protrusion will not exceed 1.6 mm. | |

4-25. Backplane Assembly-Microcontroller Interface A3A2, A3014303-1.

ITEM	ACTION	REMARKS
a. Connector J1	<p>Remove two screws, two lock washers, two flat washers, and two hex nuts.</p> <p>Unsolder connector pins from circuit board.</p> <p>Replace connector and secure to backplane with two screws, two lock washers, two flat washers, and two hex nuts.</p> <p>Solder connector to backplane.</p>	



EL9RG172

Figure 4-25. Breakdown of Microcontroller Backplane Assembly Interface

<p>b. Traces</p> <p>← P1-A J1-33 →</p> <p>← P1-B J1-32 →</p> <p>← P1-C J1-31 →</p> <p>← P1-D J1-30 →</p> <p>← P1-E J1-29 →</p> <p>← P1-F J1-28 →</p> <p>← P1-G J1-27 →</p> <p>← P1-H J1-26 →</p> <p>← P1-I J1-25 →</p> <p>← P1-J J1-24 →</p> <p>← P1-K J1-23 →</p> <p>← P1-L J1-22 →</p> <p>← P1-M J1-21 →</p>	<p>Check traces using the following wire diagram.</p> <p>← P1-N J1-20 →</p> <p>← P1-O J1-19 →</p> <p>← P1-P J1-18 →</p> <p>← P1-Q J1-17 →</p> <p>← P1-R J1-16 →</p> <p>← P1-S J1-15 →</p> <p>← P1-T J1-14 →</p> <p>← P1-U J1-13 →</p> <p>← P1-V J1-12 →</p> <p>← P1-W J1-11 →</p> <p>← P1-X J1-10 →</p> <p>← P1-Y J1-9 →</p> <p>← P1-Z J1-8 →</p>	<p>← P1-a J1-7 →</p> <p>← P1-b J1-6 →</p> <p>← P1-c J1-5 →</p> <p>← P1-d J1-4 →</p> <p>← P1-e J1-3 →</p> <p>← P1-f J1-2 →</p> <p>← P1-g J1-1 →</p> <p>N/C J1-34 →</p>
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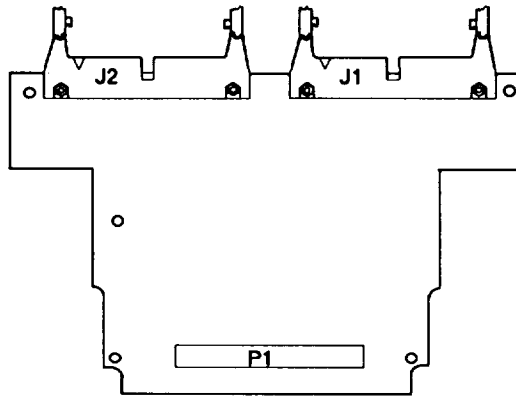
EL9RG173

Figure 4-26. Schematic Diagram of Microcontroller Interface

4-26. Backplane Assembly-Decoder/Timer Interface A3A3, A3014306-1.

ITEM	ACTION	REMARKS
------	--------	---------

- a. Connector J1 or J2 Remove two screws, two lock washers, two flat washers, and two hex nuts.
 Unsolder connector pins from circuit board.
 Replace connector and secure to backplane with two screws, two lock washers, two flat washers, and two hex nuts,
 Solder connector to backplane.



EL9RG174

Figure 4-27. Breakdown of Decoder/Timer Backplane Assembly Interface

- b. Traces Check traces using the following wire diagram.

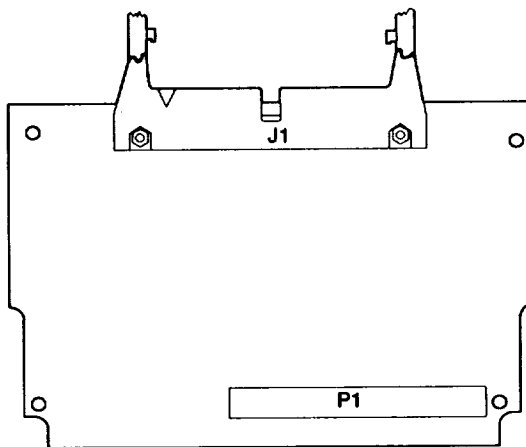
← P1-1	← J1-29	← P1-22	← J1-6	← P1-43	← J2-25	N/C	← J2-1
← P1-2	← J1-31	← P1-23	← J1-11	← P1-44	← J2-22	N/C	← J2-2
← P1-3	← J1-30	← P1-24	← J1-12	← P1-45	← J2-20	N/C	← J2-3
← P1-4	← J1-25	← P1-25	← J1-3	← P1-46	← J2-21	N/C	← J2-4
← P1-5	← J1-27	← P1-26	← J1-10	← P1-47	← J2-19	N/C	← J1-32
← P1-6	← J1-28	← P1-27	← J1-7	← P1-48	← J2-18	N/C	← J1-33
← P1-7	← J1-21	← P1-28	← J1-4	← P1-49	← J2-17	N/C	← J1-34
← P1-8	← J1-26	← P1-29	← J1-8	← P1-50	← J2-16		
← P1-9	← J1-23	← P1-30	← J1-34	← P1-51	← J2-15		
← P1-10	← J1-17	← P1-31	← J1-1	← P1-52	← J2-13		
← P1-11	← J1-24	← P1-32	← J1-32	← P1-53	← J2-14		
← P1-12	← J1-22	← P1-33	← J1-31	← P1-54	← J2-12		
← P1-13	← J1-13	← P1-34	← J1-2	← P1-55	← J2-9		
← P1-14	← J1-19	← P1-35	← J2-30	← P1-56	← J2-11		
← P1-15	← J1-20	← P1-36	← J2-28	← P1-57	← J2-10		
← P1-16	← J1-9	← P1-37	← J2-33	← P1-58	← J2-5		
← P1-17	← J1-18	← P1-38	← J2-27	← P1-59	← J2-8		
← P1-18	← J1-15	← P1-39	← J2-26	← P1-60	← J2-7		
← P1-19	← J1-5	← P1-40	← J2-29	← P1-61	← J2-6		
← P1-20	← J1-16	← P1-41	← J2-24				
← P1-21	← J1-14	← P1-42	← J2-23				

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Figure 4-28. Schematic Diagram of Decoder/Timer Interface

4-27. Backplane Assembly-Analog Interface A3A4, A3014309-1.

ITEM	ACTION	REMARKS
a. Connector J1	<p>Remove two screws, two lock washers, two flat washers, and two hex nuts.</p> <p>Unsolder connector pins from circuit board.</p> <p>Replace connector and secure to backplane with two screws, two lock washers, two flat washers, and two hex nuts.</p> <p>Solder connector to backplane.</p>	



EL9RG176

Figure 4-29. Breakdown of Analog Backplane Assembly Interface

b. Traces

Check traces using the following wire diagram.

← P1-A ← J1-33 ←	← P1-N ← J1-20 ←	← P1-a ← J1-7 ←
← P1-B ← J1-32 ←	← P1-O ← J1-19 ←	← P1-b ← J1-6 ←
← P1-C ← J1-31 ←	← P1-P ← J1-18 ←	← P1-c ← J1-5 ←
← P1-D ← J1-30 ←	← P1-Q ← J1-17 ←	← P1-d ← J1-4 ←
← P1-E ← J1-29 ←	← P1-R ← J1-16 ←	← P1-e ← J1-3 ←
← P1-F ← J1-28 ←	← P1-S ← J1-15 ←	← P1-f ← J1-2 ←
← P1-G ← J1-27 ←	← P1-T ← J1-14 ←	← P1-g ← J1-1 ←
← P1-H ← J1-26 ←	← P1-U ← J1-13 ←	N/C ← J1-34 ←
← P1-I ← J1-25 ←	← P1-V ← J1-12 ←	
← P1-J ← J1-24 ←	← P1-W ← J1-11 ←	
← P1-K ← J1-23 ←	← P1-X ← J1-10 ←	
← P1-L ← J1-22 ←	← P1-Y ← J1-9 ←	
← P1-M ← J1-21 ←	← P1-Z ← J1-8 ←	

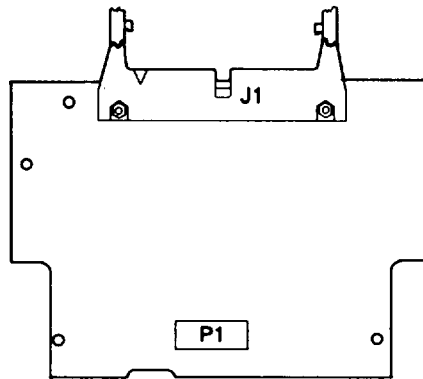
EL9RG177

Figure 4-30. Schematic Diagram of Analog Backplane Assembly Interface

4-28. Backplane Assembly-Power Supply Interface A3A5, A3014312-1.

ITEM	ACTION	REMARKS
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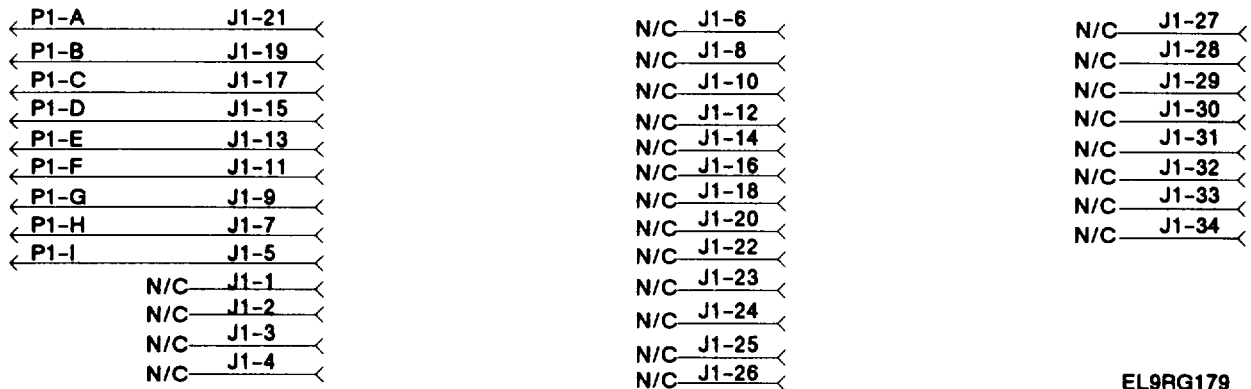
- | | |
|-----------------|--|
| a. Connector J1 | <p>Remove two screws, two lock washers, two flat washers, and two hex nuts.</p> <p>Unsolder connector pins from circuit board.</p> <p>Replace connector and secure to backplane with two screws, two lock washers, two flat washers, and two hex nuts.</p> <p>Solder connector to backplane.</p> |
|-----------------|--|



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Figure 4-31. Breakdown of Power Supply Backplane Assembly Interface

- | | |
|-----------|--|
| b. Traces | Check traces using the following wire diagram. |
|-----------|--|



EL9RG179

Figure 4-32. Schematic Diagram of Power Supply Interface

**Section V. MAINTENANCE INSTRUCTIONS FOR J-4821/G
(TEST ADAPTER-INTERFACE CONNECT DEVICE A).**

The following procedure is used to test and troubleshoot test adapter ICD-A. This interface connect device is used to test three different modules. Three test programs are required to test this interface device. Install each test program and perform the ICD survey test. The AN/USM-465A will produce a tape listing of the faulty parts. Replace only the defective parts listed for a particular section of the ICD. To verify repair, **PERFORM ALL TPS TESTS**; this will insure that the interface connect device will function properly.

The operational steps are the same for all test programs and are listed once.

4-29. Required Test Accessories For Test Adapter A.

The following test accessories are required to test and troubleshoot test adapter A.

- | REQUIRED TEST ACCESSORIES | |
|---|-------------|
| ● Audio Control Test Program Tape | CP 1300030G |
| File number | A3014138 |
| ● Microcontroller Test Program Tape | CP 1800030G |
| File number | A3014174 |
| ● IDA | A3014256-1 |
| ● Self-Test Card A A1A2 | A3018512-1 |
| ● Cable Assembly A1W1 | A3018160-1 |
| ● CCA, Test Adapter A A1A3 | A3142091-1 |

CAUTION

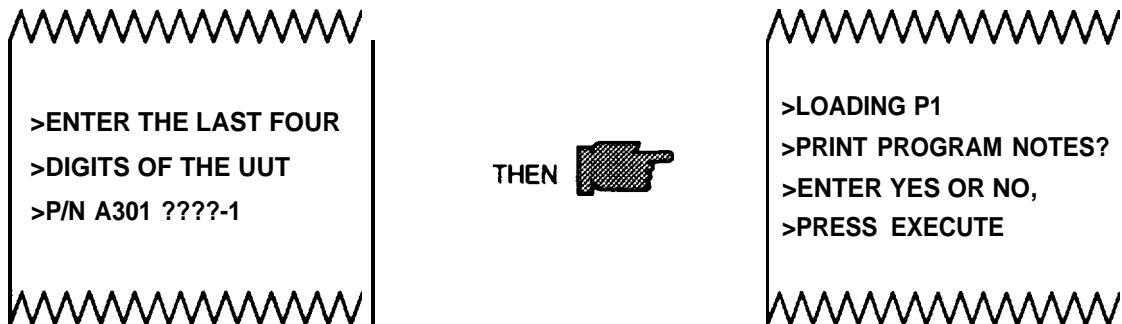
This ICD contains static sensitive components. Handle in accordance with ESD practices.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

4-30. Test Procedures for ICD A.

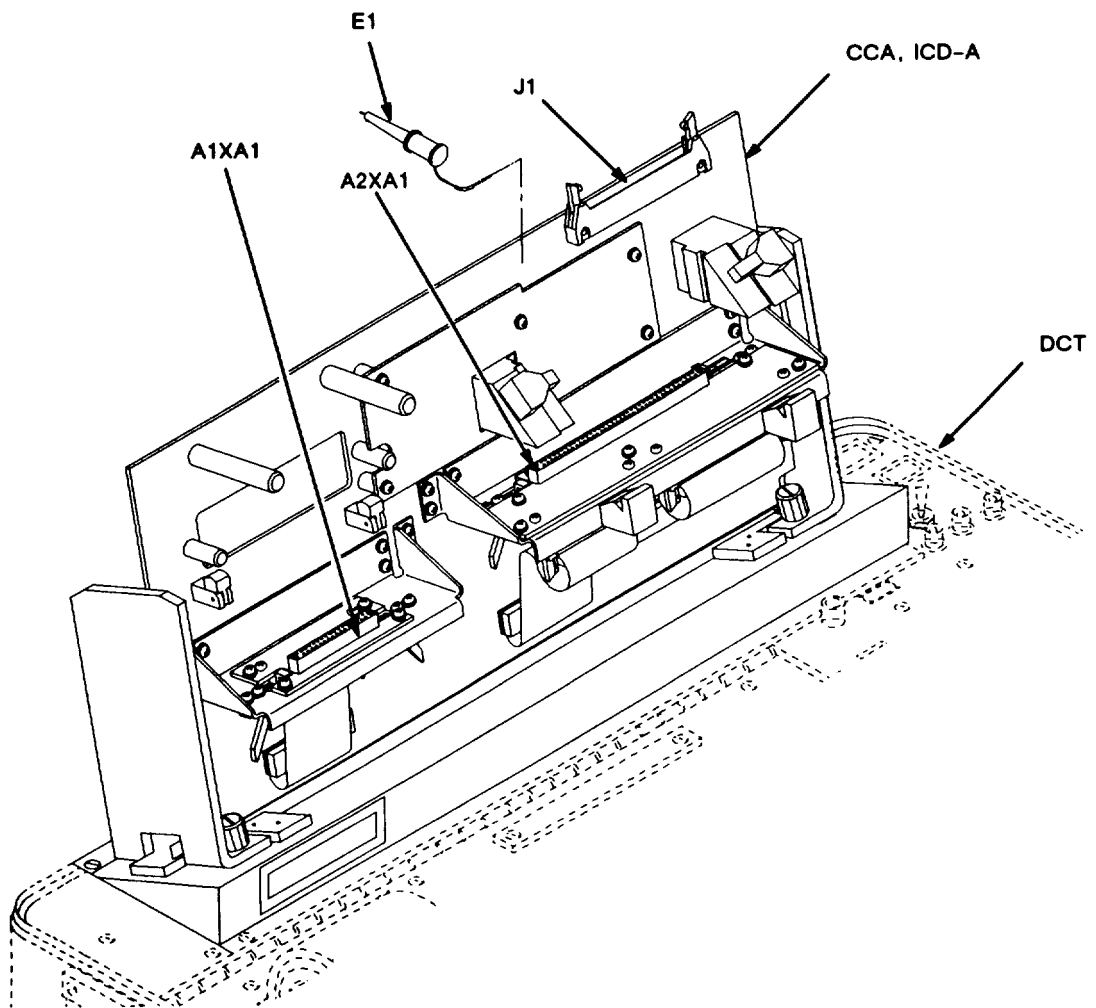
- a. Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10,
- c. Select one of the following test program tapes and install in digital card tester in accordance with TM 11-6625-3038-10.
 - Audio Control CP1300030G File A3014138
 - Microcontroller CP1800030G File A30141 74
- d. Enter LOAD \emptyset and press EXECUTE.
- e. When READY appears on the display type RUN and press EXECUTE.
 - (1) Verify that the following information is printed:



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- (2) Follow operator actions as instructed by program,
- f. Install ICD on automatic test equipment (figure 4-33 on page 4-59)
- g. Run ATE survey test if desired. If survey test fails, refer to TM 11-6625-3038-20.
- h. Run ICD survey test. If survey test fails, replace components listed on test results.
- i. After testing do one of the following:
 - (1) If the ICD passes the survey exit the program by pressing the ATTN key,
 - (2) If the ICD fails the survey test go to paragraph 4-31 on page 4-60.

4-30. Test Procedures for ICD A. Cont



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Figure 4-33. Installation of CCA, ICD A on Digital Card Tester

4-31. Maintenance Procedures for ICD A.

INITIAL SETUP	
TEST EQUIPMENT: Digital Test Set AN/USM-465A (6625-01 -126-2473) Multimeter AN/USM-486 (6625-01-145-2430)	REFERENCES TM 11-5820-914-40 TM 11-6625-3038-10 TM 11-6625-3094-24P TB 43-0127
TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-00-610-8177) Solder Repair Center PRC-151 (3439-01-109-8590)	PERSONNEL REWIRED: 1

ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|----|---|--|
| a. | Refer to FO-3 for schematic diagram of ICD A. | |
| b. | Self-Test Card A Assembly. | Replace as required. |
| c. | Posts | Remove one screw (1), one lock washer, and one flat washer.

Replace post and secure with one screw(1), one lock washer, one flat washer. |
| d. | Support Spacer Assembly. | Remove one screw (2), one lock washer, and one flat washer.

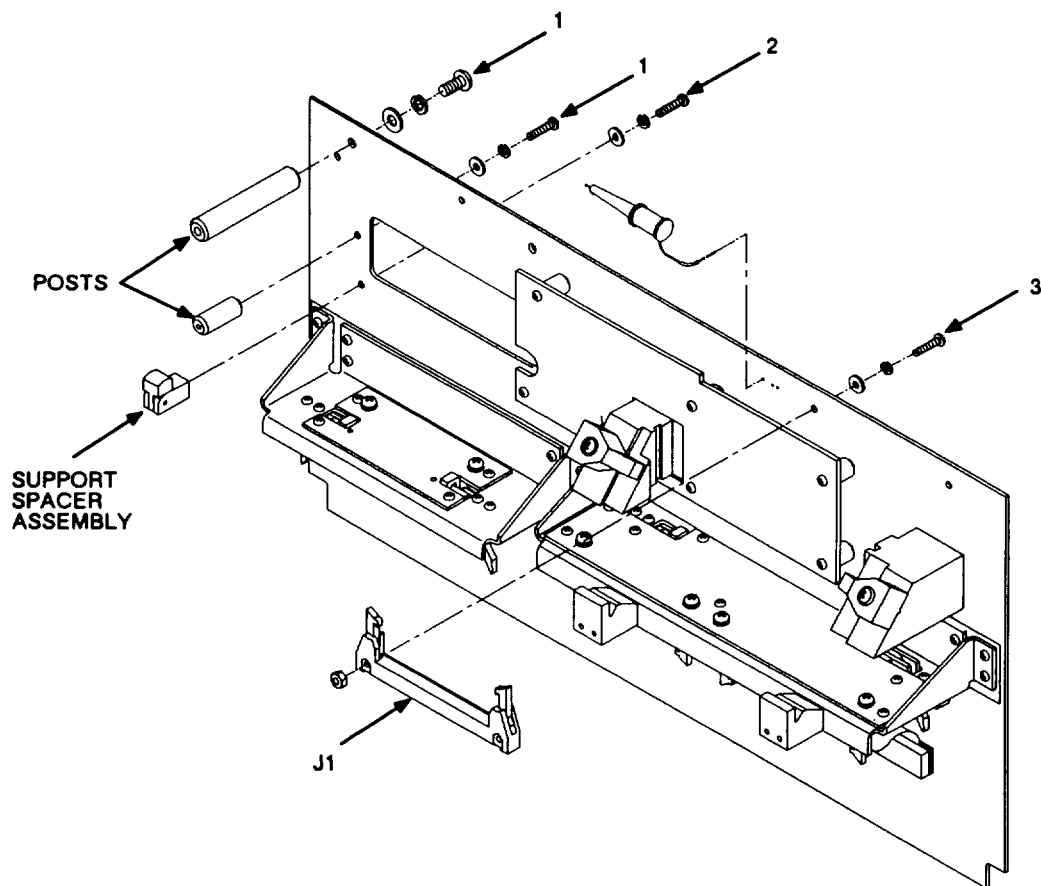
Replace support spacer assembly and secure with one screw, one lock washer, and one flat washer. |
| e. | Connector J1 | Remove two screws (3), two lock washers, two flat washers, and two hex nuts.

Unsolder connector pins from circuit board.

Replace connector and secure with two screws (3), two lock washers, two flat washers and two hex nuts.

Solder connector pins to circuit board. |

4-31. Maintenance Procedures for ICD A. Cont



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Figure 4-34. Removal of Posts and Support Spacer Assembly from ICD A

4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
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f. Latch Assembly (right)

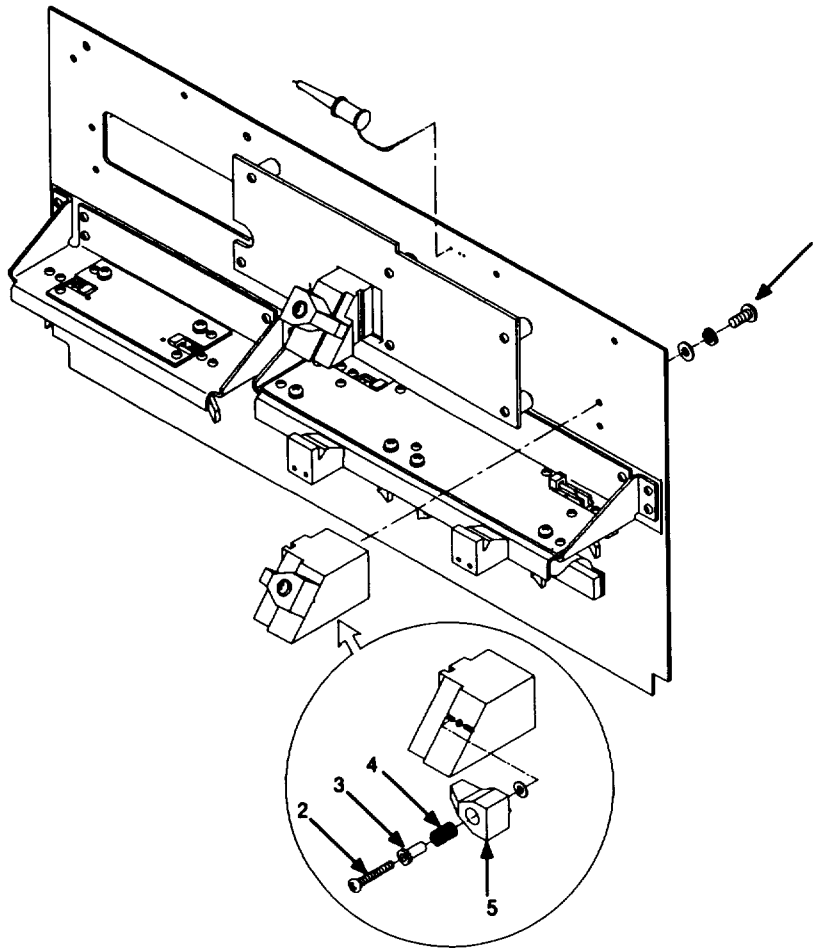
Remove two screws(1), two lock washers, two flat washers.

Refer to figure 4-35.

Remove one screw (2), sleeve (3) one spring (4) and support block (5).

Replace defective component and secure with one screw(2), sleeve (3) one spring (4) and support block (5).

Install latch assembly and secure with two screws(1) two lock washers, and two flat washers.

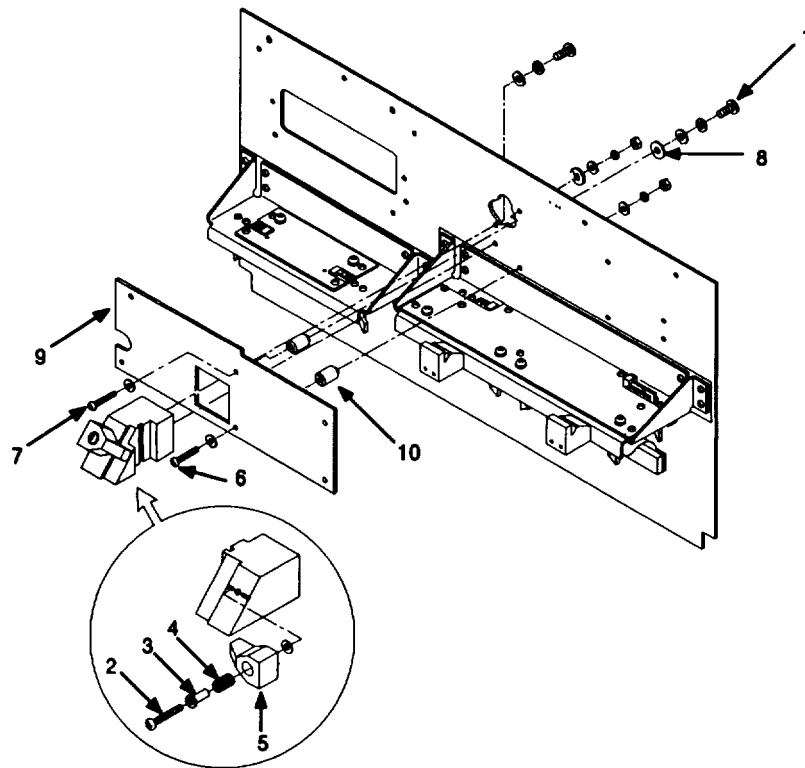


EL9RG183

Figure 4-35. Removal of Right Latch from ICD A

4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
g. Latch Assembly (left)	<p>Remove two screws(1), two lock washers, two flat washers and one fiber washer (8).</p> <p>Remove one screw (2), sleeve (3), one spring (4) and support block (5).</p> <p>Replace defective component and secure with one screw (2), sleeve (3) one spring (4) and support block (5).</p> <p>Install two screws(1), two lock washer, two flat washers, and one fiber washer (8).</p>	<p>Refer to figure 4-36.</p> <p>Install fiber washer on bottom screw.</p>



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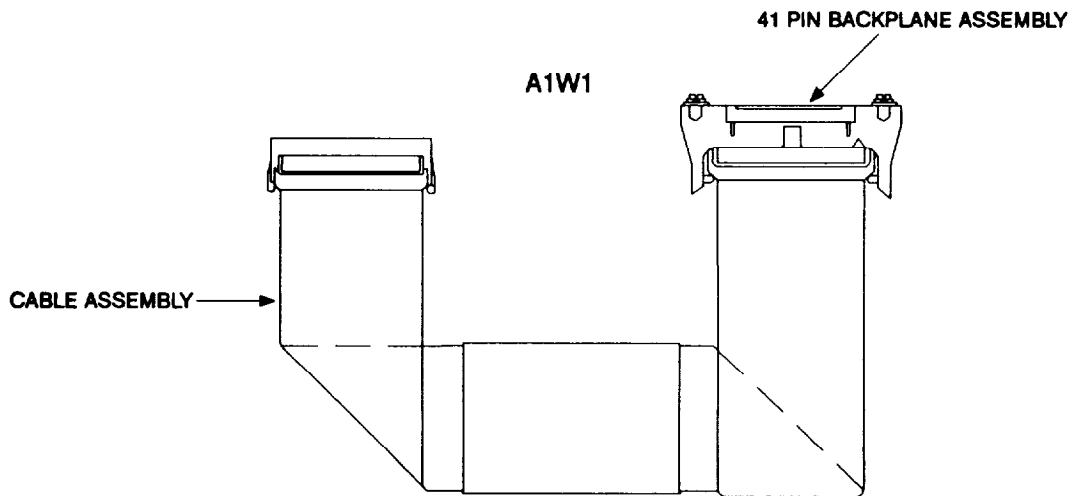
Figure 4-36. Removal of Left Latch from ICD A

4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
<p>h. Component cover</p>	<p>Remove latch assembly (left).</p> <p>Remove five screws (6), ten flat washers, five lock washers, and five hex nuts.</p> <p>Remove one screw (7), two flat washers, one lock washer, one fiber washer and one hex nut.</p> <p>Remove cover (9) and six spacers.</p> <p>Replace components as required.</p> <p>Install six spacers on backplane.</p> <p>Install cover (9).</p> <p>Install five screws (6), ten flat washers, five lock washers and five nuts.</p> <p>Install one screw (7), two flat washers, one lock washer, one fiber washer, and one hex nut.</p>	<p>Refer to step g.</p> <p>Refer to figure 4-36 on page 4-63.</p>
<p>i. Electrical clip (6)</p>	<p>Install latch assembly (left).</p> <p>Unsolder, replace, and solder in place.</p>	<p>Refer to step g.</p> <p>Refer to figure 4-35 on page 4-62.</p>

4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
j. Special Purpose Cable, A1W1	<p>Remove backplane assembly.</p> <p>Replace defective cable and install backplane assembly.</p> <p>Replace or repair backplane assembly and install cable.</p>	



EL9RG185

Figure 4-37. Breakdown of Special Purpose Cable A1W1

4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
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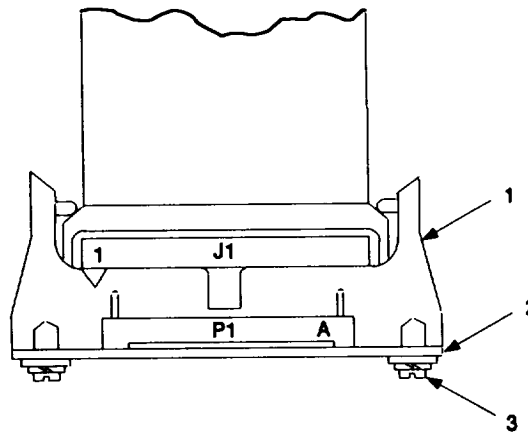
k. 41 pin backplane assembly

Remove two screws (3), two lock washers, and two flat washers from backplane (2).

Unsolder connector J1 (1).

Replace connector J1 (1) and secure to backplane with two screws, two flat washers, and two lock washers.

Solder connector J1 (1) to backplane.



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Figure 4-38. 41 Pin Backplane Assembly

← P1-A	← J1-50	← P1-T	← J1-31	← P1-M*	← J1-12
← P1-B	← J1-49	← P1-U	← J1-30	← P1-N*	← J1-11
← P1-C	← J1-48	← P1-V	← J1-29	← P1-O*	← J1-10
← P1-D	← J1-47	← P1-W	← J1-28	N/C	← J1-1
← P1-E	← J1-46	← P1-X	← J1-27	N/C	← J1-2
← P1-F	← J1-45	← P1-Y	← J1-26	N/C	← J1-3
← P1-G	← J1-44	← P1-Z	← J1-25	N/C	← J1-4
← P1-H	← J1-43	← P1-A*	← J1-24	N/C	← J1-5
← P1-I	← J1-42	← P1-B*	← J1-23	N/C	← J1-6
← P1-J	← J1-41	← P1-C*	← J1-22	N/C	← J1-7
← P1-K	← J1-40	← P1-D*	← J1-21	N/C	← J1-8
← P1-L	← J1-39	← P1-E*	← J1-20	N/C	← J1-9
← P1-M	← J1-38	← P1-F*	← J1-19		
← P1-N	← J1-37	← P1-G*	← J1-18		
← P1-O	← J1-36	← P1-H*	← J1-17		
← P1-P	← J1-35	← P1-I*	← J1-16		
← P1-Q	← J1-34	← P1-J*	← J1-15		
← P1-R	← J1-33	← P1-K*	← J1-14		
← P1-S	← J1-32	← P1-L*	← J1-13		

NOTE: All letters on connector pin designators are upper case for ease of reading. An asterisk (*) after a letter denotes it is actually lower case.

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Figure 4-39. Maintenance of 41 Pin Backplane Assembly

4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
<p>I. 33 Pin Bracket Assembly (part of CCA ICD A)</p>	<p>Remove cable W1(1) from connector J1(2).</p> <p>Remove eight screws (3), sixteen flat washers (8 each side), eight lock washers, and eight hex nuts securing 33 pin bracket assembly and insulator to CCA backplane.</p> <p>Replace insulator as required.</p> <p>Install replacement 33 pin bracket assembly and Insulator with eight screws (3), sixteen flat washers (8 each side), eight lock washers, and eight hex nuts.</p> <p>Install cable W1 (1) on connector J1 (2).</p>	<p>Refer to figure 4-40 on page 4-69.</p>
<p>m. Bracket Assembly Component Removal/installation.</p>		<p>NOTE</p>
<p>(1) Connector J1 (2)</p>	<p>Remove two screws (4), two lock washers, and two flat washers.</p>	<p>Perform step I before performing the following component removal and Installation of individual components of the bracket assembly.</p>
	<p>Unsolder connector J1 (2) from backplane (7)</p>	
	<p>Replace connector and secure to backplane with two screws (4), two lock washers, and two flat washers.</p>	
	<p>Solder connector to backplane.</p>	
<p>(2) Ejectors (9)</p>	<p>Remove two screws (8), two lock washers, and two flat washers.</p>	
	<p>Replace ejector (9) and secure with two screws (8), two lock washers, and two flat washers.</p>	
<p>(3) Backplane (7)</p>	<p>Remove four screws (5), eight flat washers, four lock washers, and four hex nuts.</p>	
	<p>Remove connector J1(2).</p>	<p>Refer to step (1).</p>
	<p>Replace backplane.</p>	
	<p>Install backplane (7) on bracket (6) and secure with four screws (5), eight flat washers, four lock washers, and four hex nuts.</p>	

4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
(4) Bracket	Remove backplane.	Refer to step (3).
	Remove ejectors	Refer to step (2).
	Remove eight screws (3), sixteen flat washers (eight front and eight back), eight lock washers and eight hex nuts.	
	Replace bracket and secure with eight screws (3), sixteen flat washers (eight front and eight back), eight lock washers and eight hex nuts.	
	Install ejectors.	Refer to step (2).
	Install backplane.	Refer to step (3).

4-31. Maintenance Procedures for ICD A. Cont

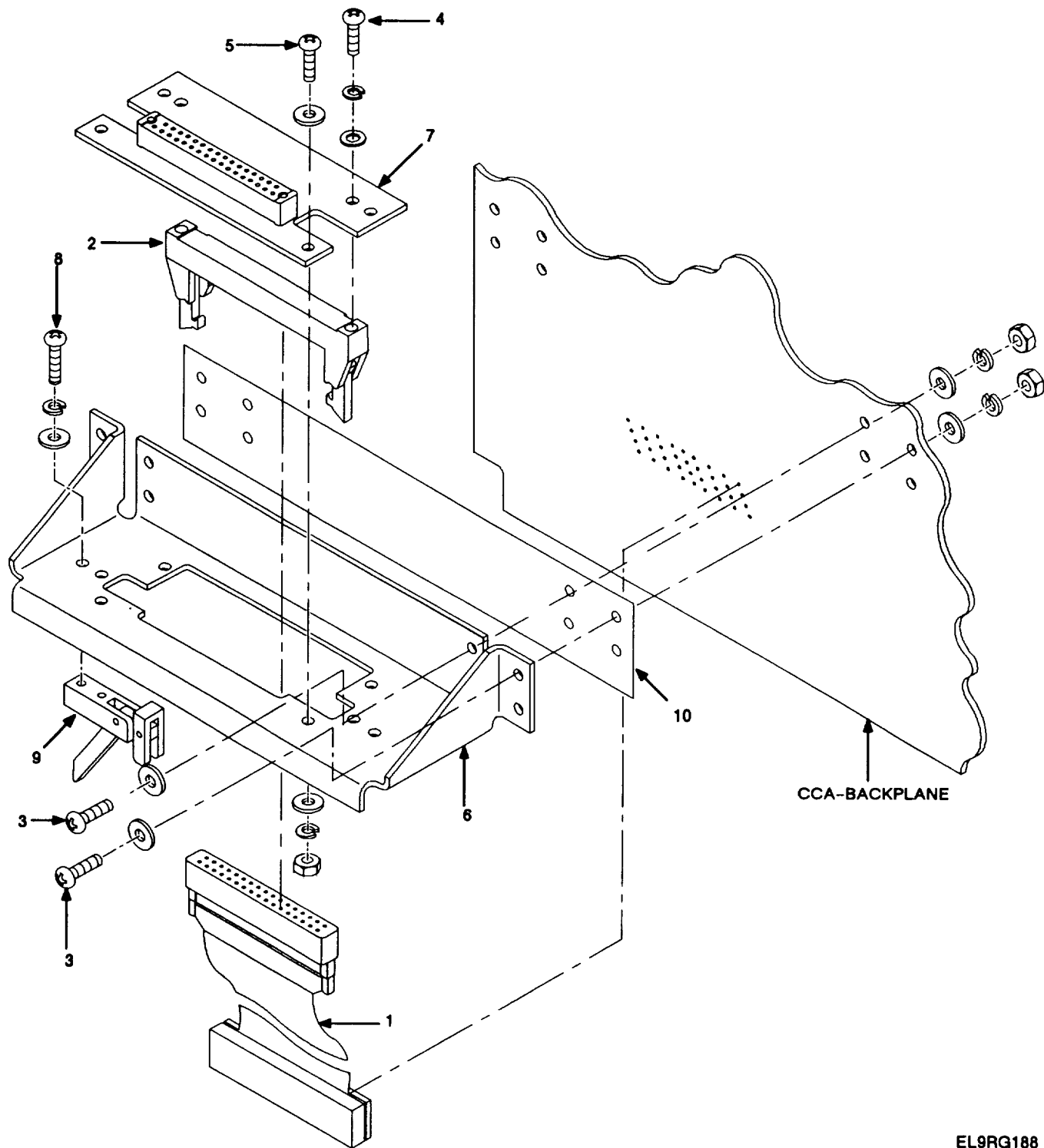


Figure 4-40. Breakdown of 33 Pin Bracket Assembly

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4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
n. 77 Pin Bracket Assembly (part of CCA ICD-A)	<p>Remove cables W2 (1) and W3 (2) from connectors J1 (3) and J2 (4) respectively.</p> <p>Remove eight screws (5), sixteen flat washers (eight each side), eight lock washers, and eight hex nuts securing 77 pin bracket (6) and insulator (8) to CCA-backplane.</p> <p>Replace any defective parts as required.</p> <p>Install 77 pin bracket on backplane assembly with eight screws (5), sixteen flat washers (eight each side), eight lock washers, and eight hex nuts.</p> <p>Install cable assemblies W2 (1) and W3 (2) on connectors J 1 (3) and J2 (4) respectively.</p>	Refer to figure 4-41 on page 4-71.
o. Bracket Assembly Component Removal/Installation.		<p style="text-align: center;">NOTE</p> <p>Perform step n before performing the following component removal/installation of individual components of the bracket assembly.</p>
(1) Connectors J1, J2	<p>Remove two screws, two lock washers, two flat washers.</p> <p>Unsolder connector from backplane.</p> <p>Replace connector and secure to backplane with two screws (7), two lock washers, and two flat washers.</p> <p>Solder connector to backplane.</p>	Refer to figure 4-41 on page 4-71.
(2) Ejectors (10)	<p>Remove two screws (9), two lock washers, and two flat washers.</p> <p>Replace ejector and secure with two screws (9), two lock washers, and two flat washers.</p>	Refer to figure 4-41 on page 4-71.

4-31. Maintenance Procedures for ICD A. Cont

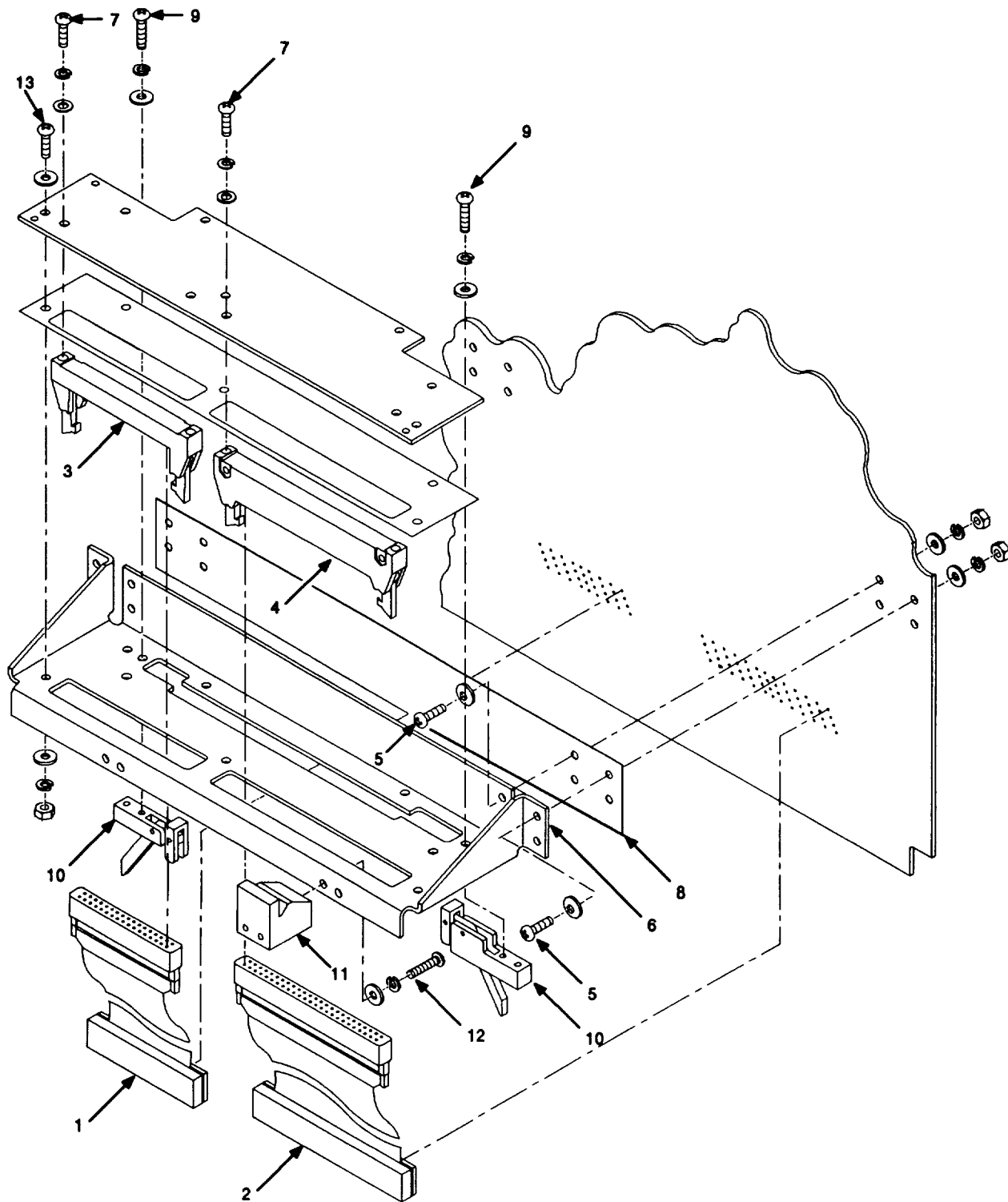


Figure 4-41. Breakdown of 77 Pin Bracket Assembly

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4-31. Maintenance Procedures for ICD A. Cont

ITEM	ACTION	REMARKS
(3) CCA Support (1 1)	<p>Remove two screws (12), two lock washers, and two flat washers.</p> <p>Replace support and secure with two screws, two lock washers, and two flat washers.</p>	Refer to figure 4-41 on page 4-71.
(4) Backplane	<p>Remove seven screws, 14 flat washers, seven lock washers, and seven hex nuts, and insulator plate.</p> <p>Remove connectors J1 and J2.</p> <p>Replace backplane.</p> <p>Install connectors J1 and J2.</p> <p>Install insulator plate and backplane.</p> <p>Install seven screws, 14 flat washers, seven lock washers, and seven hex nuts.</p>	<p>Refer to figure 4-41 on page 4-71.</p> <p>Refer to step (1).</p> <p>Refer to step (1).</p>
(5) Bracket	<p>Remove ejectors.</p> <p>Remove backplane assembly.</p> <p>Remove two screws, two lock washers, and two flat washers from circuit card support</p> <p>Remove eight screws (5), 16 flat washers, eight lock washers, eight hex nuts, and one insulator plate (8).</p> <p>Replace bracket.</p> <p>Install circuit card support and secure with two screws (12), two lock washers, and two flat washers.</p>	<p>Refer to step (2).</p> <p>Refer to step (4).</p>
p. Cover, Electronic	Remove cover	Refer to step h.
q. Resistors, relays	Replace and solder in place.	Refer to figure 4-42 on page 4-73.
r. ICs and diodes	Replace and solder in place.	Observe component polarity.

4-31. Maintenance Procedures for ICD A. Cont

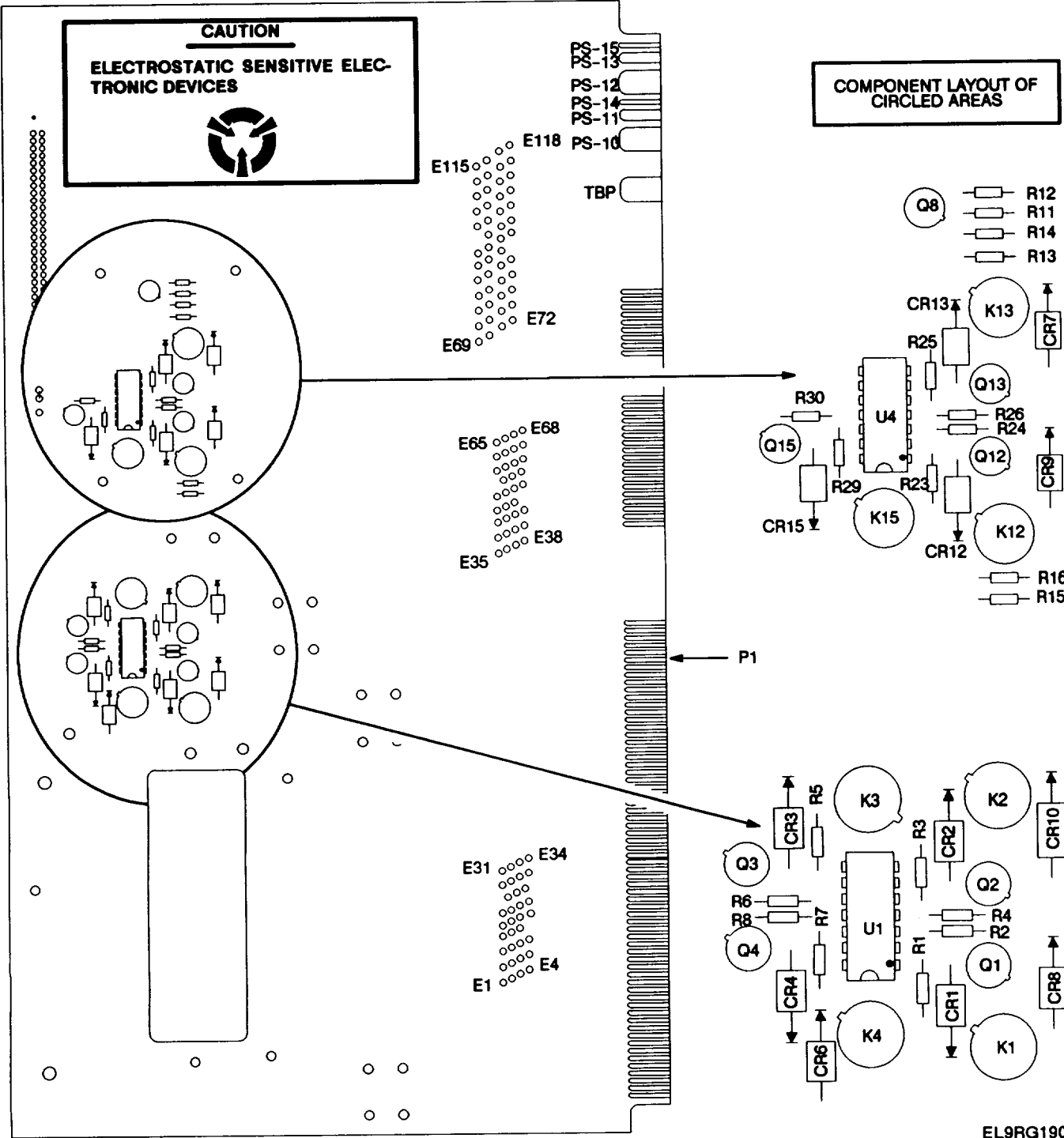


Figure 4-42. Discrete Component Layout for CCA, ICD A

**Section VI. MAINTENANCE INSTRUCTIONS FOR J-4822/G
(TEST ADAPTER-INTERFACE CONNECT DEVICE B)**

The following procedure is used to test and troubleshoot ICD B. This interface connect device is used to test three different modules. Three test programs are required to test this interface connection device. Install each test program and perform the ICD survey test. The AN/USM-485A will produce a tape listing of the faulty parts. Replace only the defective parts listed for a particular section of the ICD. To verify repair, **PERFORM ALL TPS TESTS**; this will insure the interface connect device will function properly.

The operational steps are the same for all test programs and are listed once.

4-32. Required Test Accessories for ICD B.

- | | |
|---|------------|
| ● Test Program Tape - Electronics Components Assembly-Control . CP1 000030G | |
| File Number | A3018077 |
| ● Test Program Tape - Decoder/Timer..... CP1100030G | |
| File Number..... | A3014178 |
| | or |
| ● Test Program Tape -Decoder/Timer | CP1200030G |
| File Number | A3018751 |
| ● Test program Tape -Remote I/O..... | CP1400030G |
| File Number | A3014142 |
| ● ICD-B | A3014302-1 |
| . Self-Test Card A2A2 | A3014252-1 |
| ● Cable Assembly A2W1 | A3017804-1 |
| . Cable Interface A2W1A1 | A3014354-1 |
| ● Cable Interface A2W1A2 | A3014315-1 |
| . Circuit Card Support | A3019130-1 |

CAUTION

This ICD contains static sensitive components. Handle in accordance with ESD practices.

NOTE

This program requires AN/USM-485A software version 2.0 be installed.

4-33. Test Procedures for ICD B.

- a Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures In accordance with TM 11-6825-3038-10.
- c. Select one of the following test program tapes and install in digital card tester in accordance with TM 11-6625-3038-10.
 - Electronics Components
Assembly-ControlCP1000030G File A3018077
 - Decoder/Timer CP1100030G File A3014178

or

CP1200030G File A3018751
 - Remote I/O CP1400030G FileA3014142
- d Enter LOAD Ø, then press EXECUTE.
- e. When READY appears on the display, type RUN and press EXECUTE.
 - (1) Verify that the following information is printed:

>ENTER THE LAST FOUR
>DIGITS OF THE UUT
>P/N A301????-1

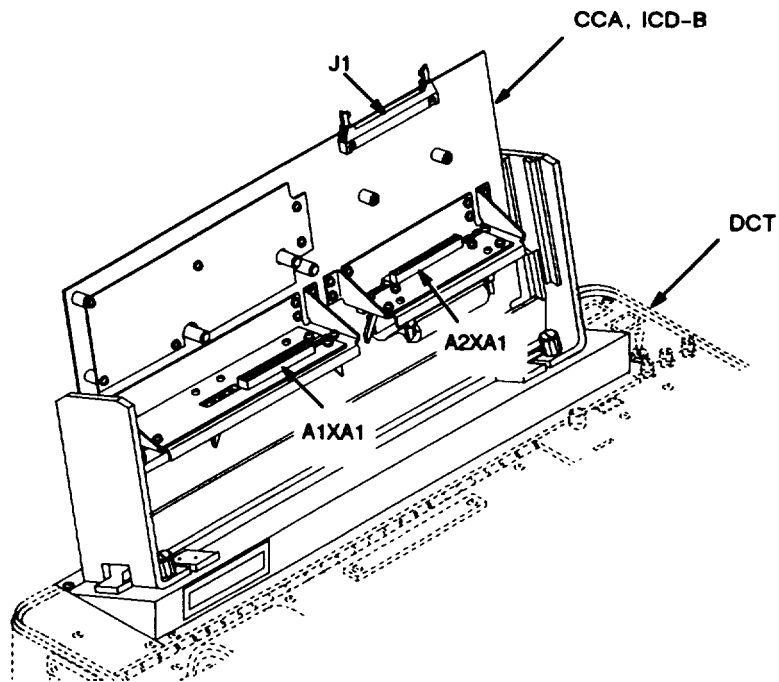
THEN 

>LOADING P1
>PRINT PROGRAM NOTES?
>ENTER YES OR NO,
>PRESS EXECUTE

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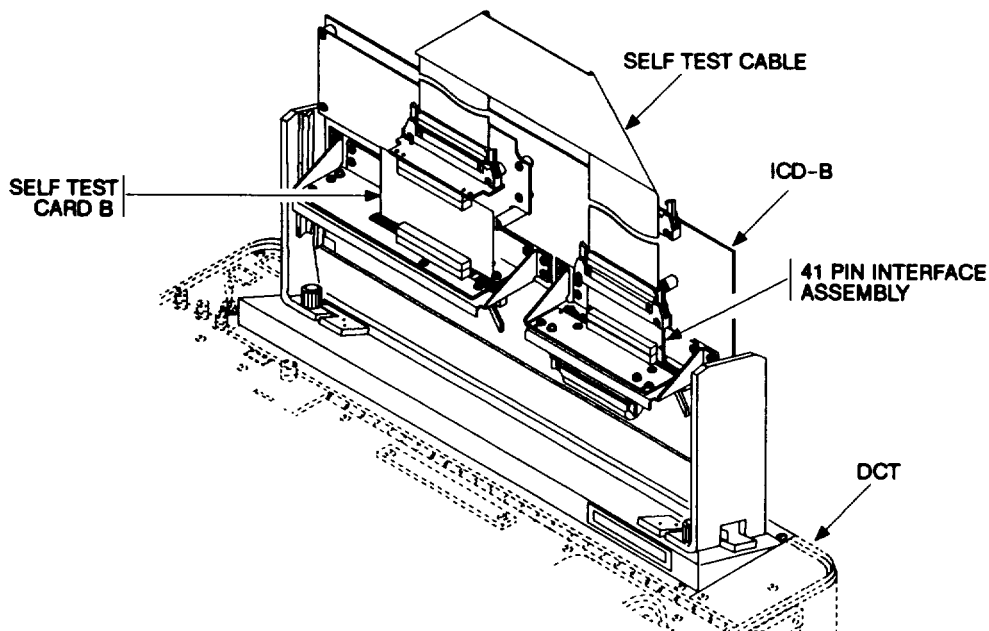
- (2) Follow operator actions as instructed by program.
- f. Install ICD on digital card tester (figure 4-43 on page 4-76).
- g. Run ATE survey test if desired. If survey test fails, refer to TM 11-6625-3038-20.
- h. Run ICD survey test. If survey test fails, replace components listed on printed results.
- i. After testing do one of the following:
 - (1) If the ICD passes the survey exit the program by pressing the ATTN key.
 - (2) If the ICD fails the survey go to paragraph 4-34 on page 4-77.

4-33. Test Procedures for ICD B. Cont



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Figure 4-43. Installation of CCA, ICD B on Digital Card Tester



EL9RG193

Figure 4-44. Installation of Self-Test Cable on ICD B

4-34. Maintenance Procedures for ICD B

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT Digital Test Set AN/USM-465A (6625-01-126-2473) Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-00-610-8177) Solder Repair Center PRC-151 (3439-01-109-8590)</p>		<p>REFERENCES TM 11-5820-914-40 TM 11-6625-3038-10 TM 11-6625-3094-24P TB 43-0127</p>
		<p>PERSONNEL REQUIRED: 1</p>

ITEM	ACTION	REMARKS
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a. Self-Test Card B Assembly	Replace as required.	Refer to FO-4 for schematic diagram of ICD-B.
b. Removal and Installation of 41 Pin Bracket Assembly	<p>Remove cable W3(2) from connector J1 (3).</p> <p>Remove eight screws (4), sixteen flat washers (eight each side), eight lock washers, four fiber washers, and eight hex nuts securing 41 pin bracket assembly(l) and insulator (5) to CCA backplane (7).</p> <p>Replace insulator (5) as required.</p> <p>Install replacement 41 pin bracket assembly and insulator with eight screws (4), sixteen flat washers (eight each side), eight lock washers, four fiber washers, and eight hex nuts</p> <p>Install cable W3(2) on connector J1 (3).</p>	Refer to figure 4-45 on page 4-79.
c. Bracket Assembly Component		<p>NOTE Remove bracket assembly In accordance with step b prior to performing procedures below.</p>

4-34. Maintenance Procedures for ICD B. Cont

ITEM	ACTION	REMARKS
(1) Connector J1(3)	<p>Remove two screws (6), two lock washers, and two flat washers.</p> <p>Unsolder connector from backplane.</p> <p>Replace connector J1(3) and secure to backplane with two screws (6), two lock washers, and two flat washers.</p> <p>Solder connector to backplane.</p>	
(2) Ejectors(9)	<p>Remove two screws(10), two lock washers, and two flat washers.</p> <p>Replace ejectors(9) and secure with two screws(10), two lock washers, and two flat washers.</p>	
(3) Backplane	<p>Remove five screws(8), ten flat washers, five lock washers and five hex nuts.</p> <p>Remove connector J1 (3).</p> <p>Replace backplane.</p> <p>Install connector J1 (3).</p> <p>Install backplane and secure with five screws(8), ten flat washers, five lock washers, and five hex nuts.</p>	Refer to step (1).
(4) Bracket(1)	<p>Remove backplane.</p> <p>Remove ejectors(9).</p> <p>Replace bracket(1).</p> <p>Install ejectors(9).</p> <p>Install backplane.</p> <p>Install bracket assembly on ICD backplane.</p>	<p>Refer to step (3).</p> <p>Refer to step (2).</p> <p>Refer to step (2).</p> <p>Refer to step (3).</p> <p>Refer to step b.</p>
(5) Special Purpose Cable W3(2)	<p>Remove from connector J1 (3).</p> <p>Unsolder from CCA backplane.</p> <p>Remove and discard defective cable W3(2).</p> <p>Solder new cable onto CCA backplane.</p> <p>Install cable onto connector J1 (3).</p>	Refer to figure 4-45 on page 4-79.

4-34. Maintenance Procedures for ICD B. Cont

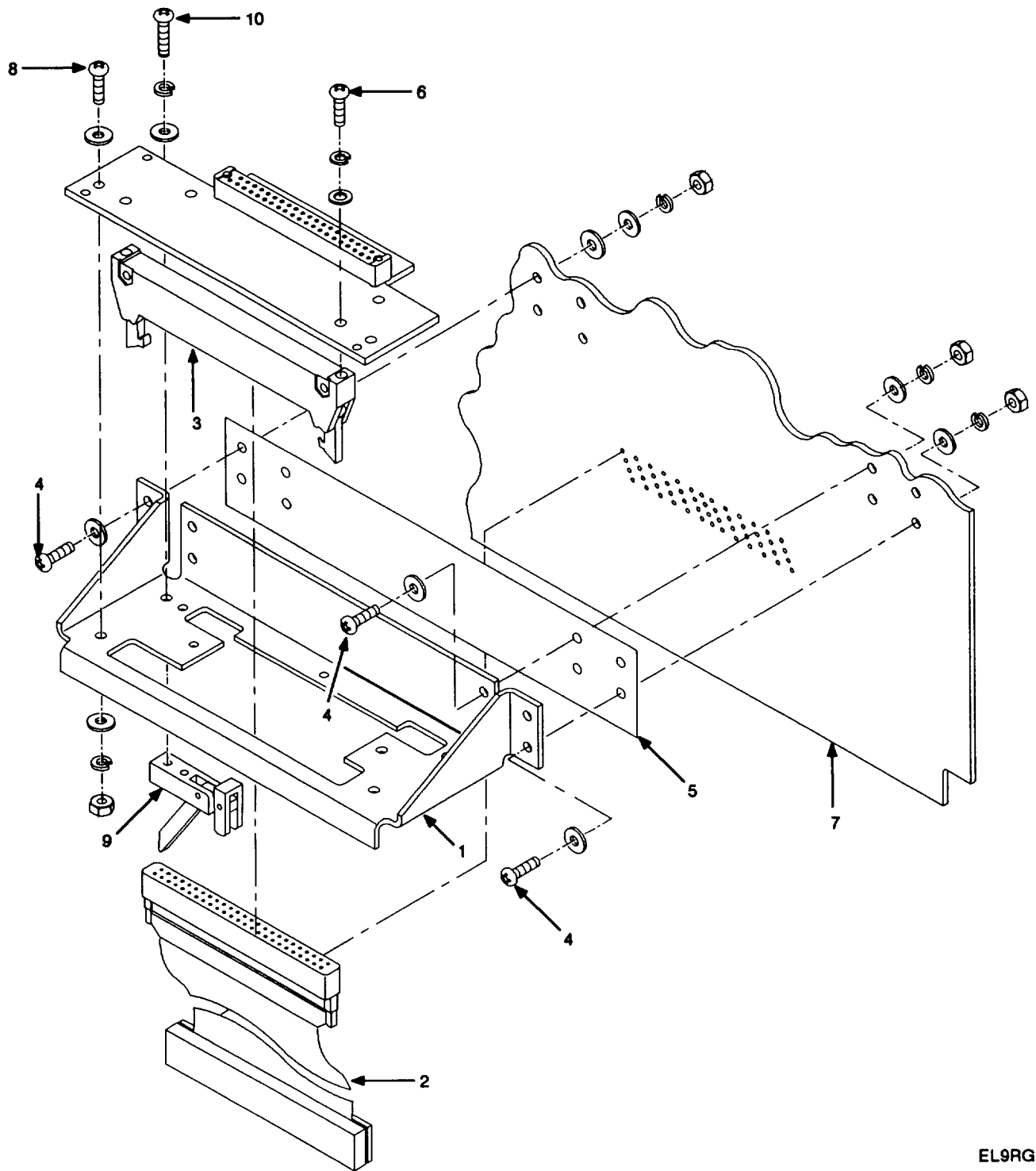


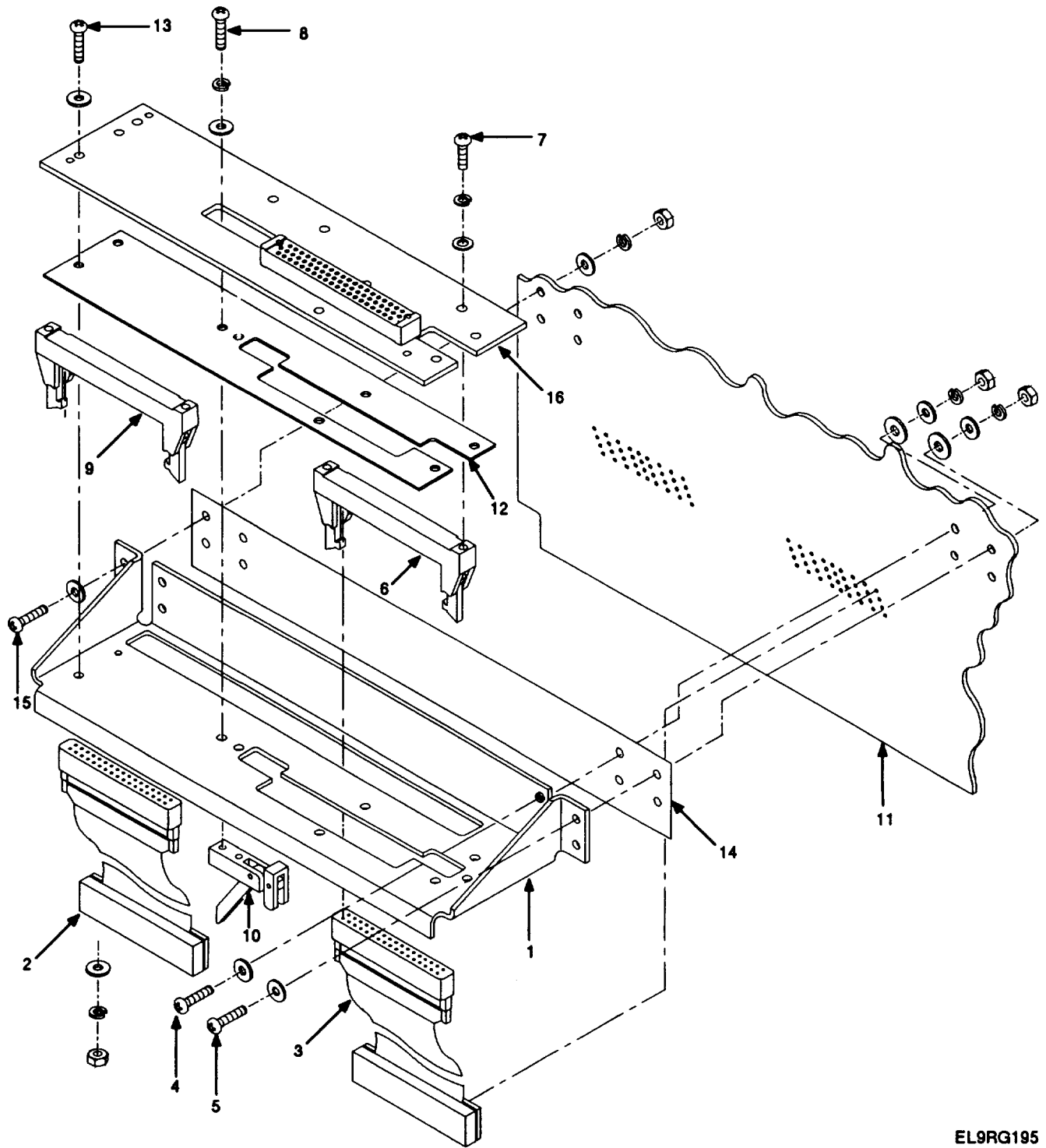
Figure 4-45. 41 Pin Connector Bracket Board Disassembly

EL9RG194

4-34. Maintenance Procedures for ICD B. Cont

ITEM	ACTION	REMARKS
d. 61 Pin Bracket Assembly(I)	<p>Remove cables W1 (2) and W2(3) from connectors J1 (9) and J2(6) respectively.</p> <p>Remove eight screws(4, 5, 15), sixteen flat washers (eight each side), eight lock washers, four fiber washers and eight hex nuts securing 61 pin bracket assembly and insulator (14) to CCA backplane(11).</p> <p>Replace insulator as needed.</p> <p>Install 61 pin bracket assembly and insulator and secure with eight screws(4, 5, 15) , sixteen flat washers (eight each side), eight lock washers, eight fiber washers, and eight hex nuts.</p> <p>Install cables W1 (2) and W2(3) onto connectors J1 and J2 respectively.</p>	Refer to figure 4-46 on page 4-81.
e. Bracket Assembly	Removal/installation Components	<p style="text-align: center;">NOTE</p> <p>Remove bracket assembly in accordance with step d prior to performing procedures below.</p>
(1) Connectors J1 (9) and J2(6)	<p>Remove two screws (7), two lock washers, and two flat washers.</p> <p>Unsolder connector from backplane.</p> <p>Replace connector and secure to backplane with two screws(7), two lock washers, and two flat washers.</p> <p>Solder connector to backplane.</p>	
(2) Ejectors(10)	<p>Remove two screws(8), two lock washers, and two flat washers.</p> <p>Replace ejectors and secure with two screws(8), two lock washers and two flat washers.</p>	

4-34. Maintenance Procedures for ICD B. Cont



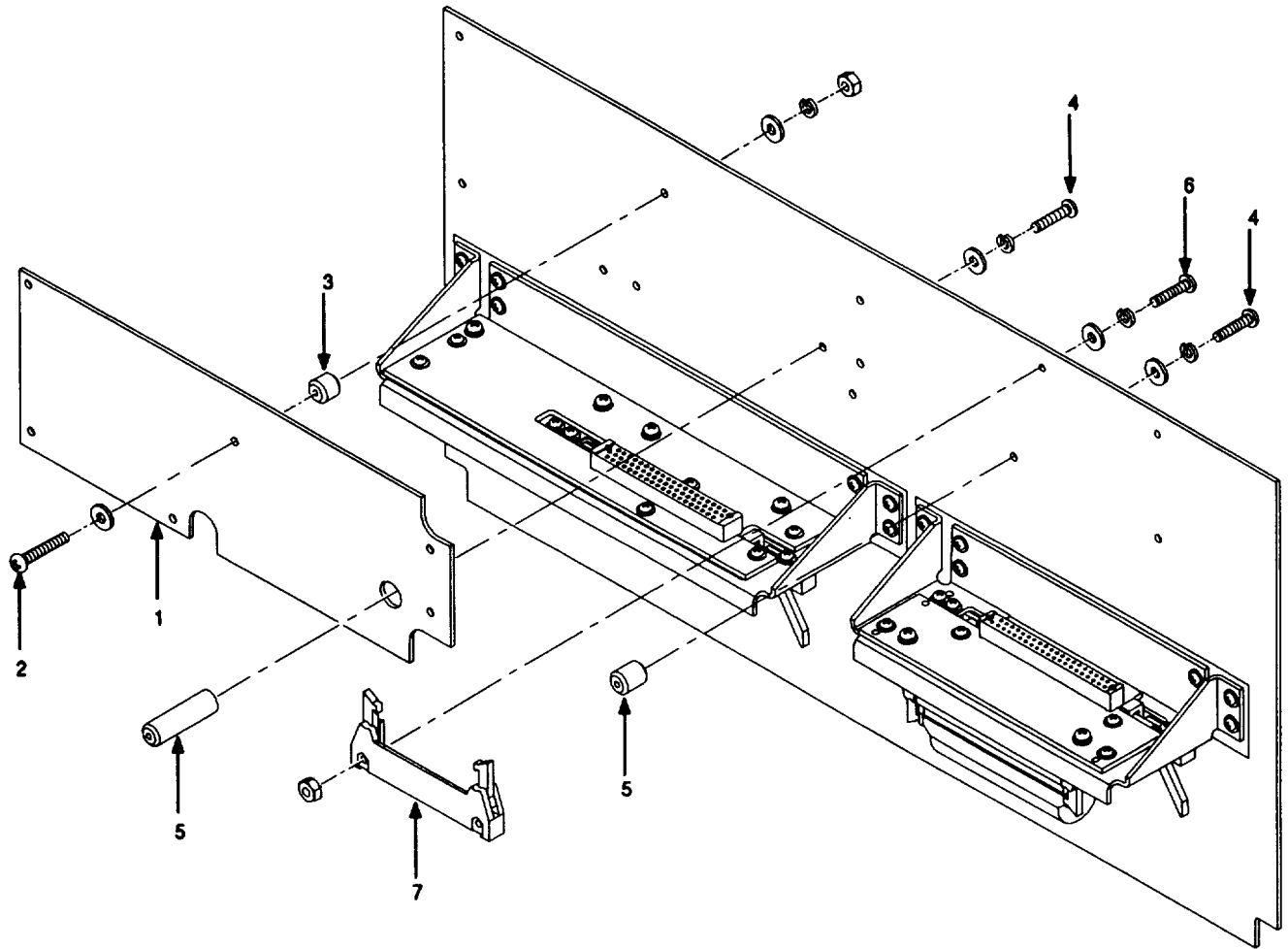
EL9RG195

Figure 4-46. 61 Pin Connector Bracket Board Assembly

4-34. Maintenance Procedures for ICD B. Cont

ITEM	ACTION	REMARKS
(3) Backplane	Remove six screws(13), twelve flat washers (six in front and six in rear), six lock washers, insulator plate(12) and six hex nuts.	Refer to figure 4-46 on page 4-81.
	Remove connectors J1 (9) and J2(6).	Refer to step(1).
	Replace backplane assembly.	
	Install connectors J1 and J2.	
	Install insulator plate(12) and backplane(16).	
	Install six screws(13), twelve flat washers (six in front and six in rear), six lock washers, insulator plate(12) and six hex nuts.	
(4) Bracket	Remove ejectors.	Refer to step (2).
	Remove backplane and insulator.	Refer to step (3).
	Replace bracket.	
	Install backplane and insulator.	Refer to step (3).
	Install ejectors.	Refer to step (2).
f. Posts(5)	Remove two screws(4), two lock washers, and two flat washers.	Refer to figure 4-47 on page 4-83.
	Replace posts as required.	
	Install posts(5) and secure with two screws(6), two lock washers, and two flat washers.	
g. Connector J1(7)	Remove two screws(6), two lock washers, two flat washers and two hex nuts.	
	Unsolder connector.	
	Replace connector J1 (7) and secure to backplane with two screws(8), two lock washers, two flat washers, and two hex nuts.	
	Solder connector to backplane.	
h. Cover(1) and Spacers (3)		Refer to figure 4-47 on page 4-83.
	Remove six hex nuts(2), six lock washers, six spacers(3), twelve flat washers (six back and six front), and six screws from cover.	
	Remove cover from backplane.	
	Replace spacers and/or cover as required.	

4-34. Maintenance Procedures for ICD B. Cont



EL9RG196

Figure 4-47. Removal and Installation of Component Cover

4-34. Maintenance Procedures for ICD B. Cont

ITEM	ACTION	REMARKS
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Install cover(1) on backplane and secure with six screws, 12 flat washers (six front and six back), six lock washers, six spacers(3) and six nuts.

CAUTION

ALL DIODES AND SEMICONDUCTORS ARE ELECTROSTATIC SENSITIVE ELECTRONIC DEVICES



EL9RG137

i. Discrete Components

Remove cover in accordance with step h prior to performing the following procedures.

(1) Resistors and relays

Unsolder from circuit board.
Replace and solder in place.

Refer to figure 4-48 on page 4-85.

Ensure that relays are not mounted flush to circuit board or traces will be Shorted out.

(2) ICS and Diodes

Replace and solder in place.

Observe component polarity.

4-34. Maintenance Procedures for ICD B. Cont

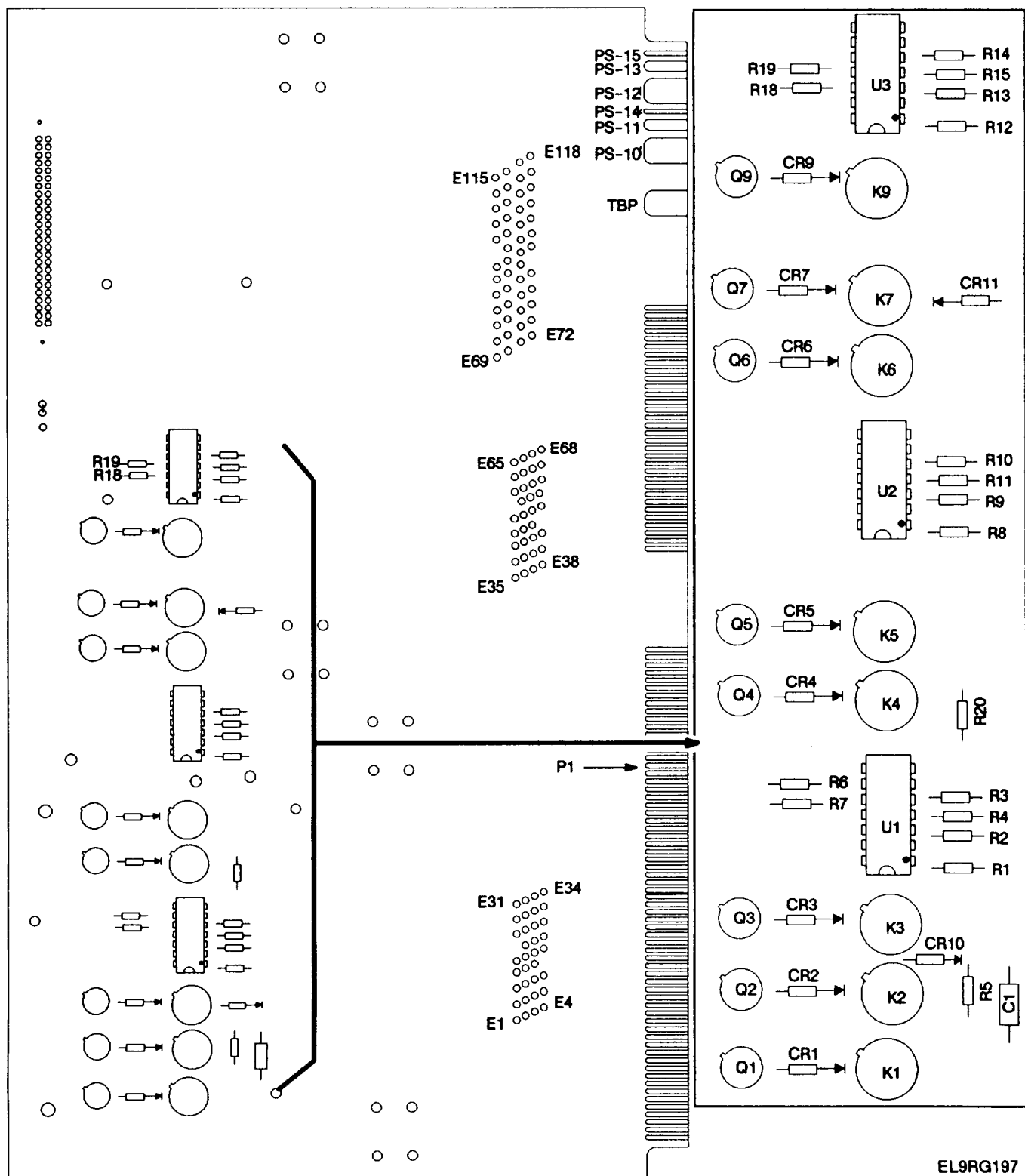
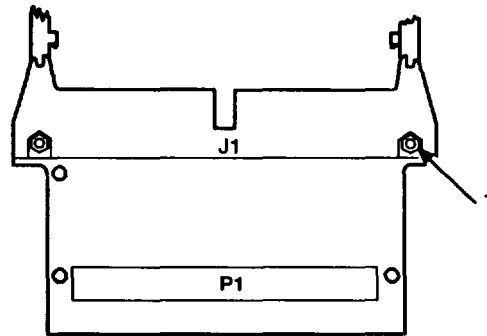


Figure 4-48. Backplane Component Layout for ICD B

4-35. Maintenance of 41 Pin Cable Interface Assembly A2W1A2.

ITEM	ACTION	REMARKS
a. Connector J1	<p>Remove two screws(1), two lock washers, two flat washers, and two hex nuts.</p> <p>Unsolder connector.</p> <p>Replace connector and secure to backplane with two screws(1), two lock washers, two flat washers, and two hex nuts.</p> <p>Solder connector to backplane.</p>	



EL9RG198

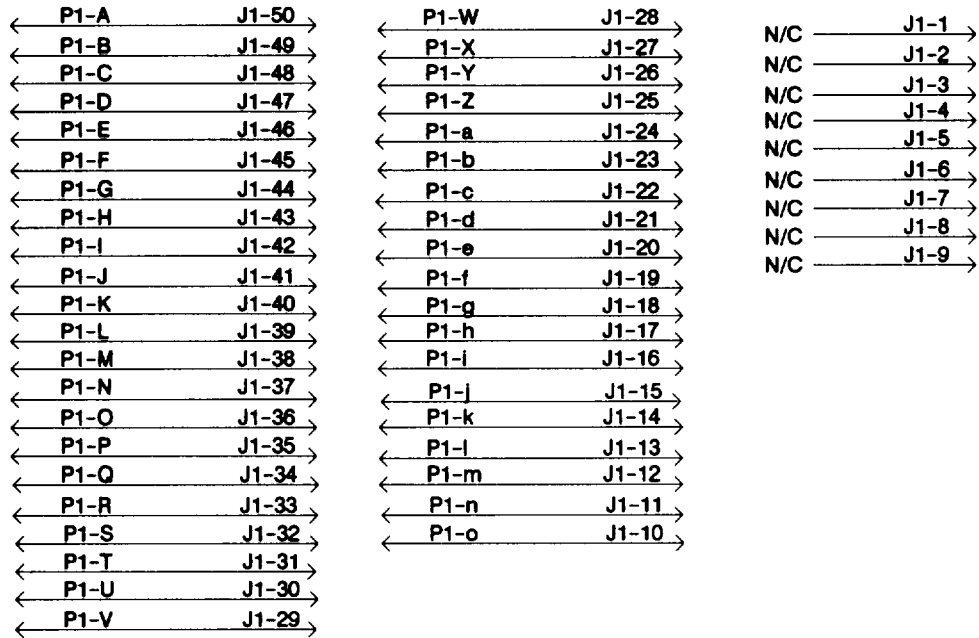
4-49. Breakdown of 41 Pin Cable Interface Assembly A2W1A2

4-35. Maintenance of 41 Pin Cable Interface Assembly A2W1A2. Cont

b. Traces

Replace as required.

Use the following schematic diagram to troubleshoot the traces.

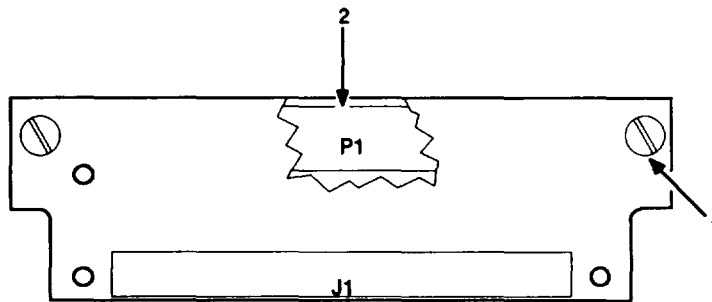


EL9RG199

Figure 4-50. Schematic Diagram of 41 Pin Cable Interface A2W1A2

4-36. Maintenance of 41 Pin Cable Interface Assembly A2W1A1.

ITEM	ACTION	REMARKS
a. connector P1	<p>Remove two screws(1), two flat washers, two lock washers, and two hex nuts.</p> <p>Unsolder connector P1.</p> <p>Replace connector and secure to backplane with two screws(1), two flat washers, two lock washers, and two hex nuts.</p> <p>Solder connector to backplane.</p>	



EL9RQ200

Figure 4-51. Breakdown of 41 Pin Cable Interface Assembly A2W1A1

4-36. Maintenance of 41 Pin Cable Interface Assembly A2W1A1. Cont

ITEM	ACTION	REMARKS
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b. Traces

Replace as required.

Use the following schematic diagram to troubleshoot the traces.

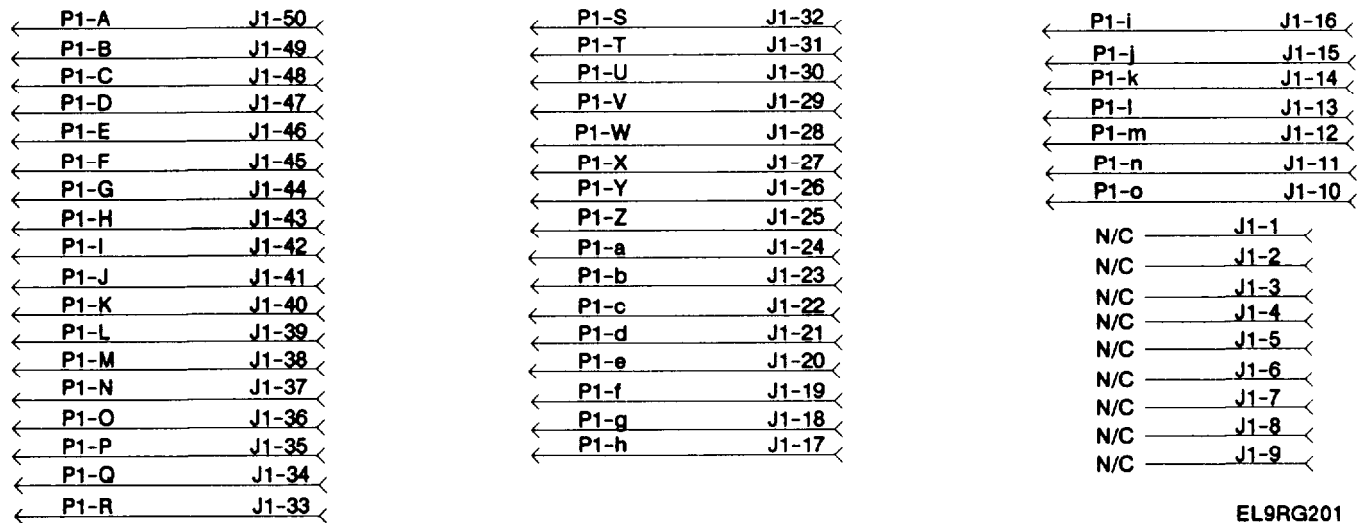
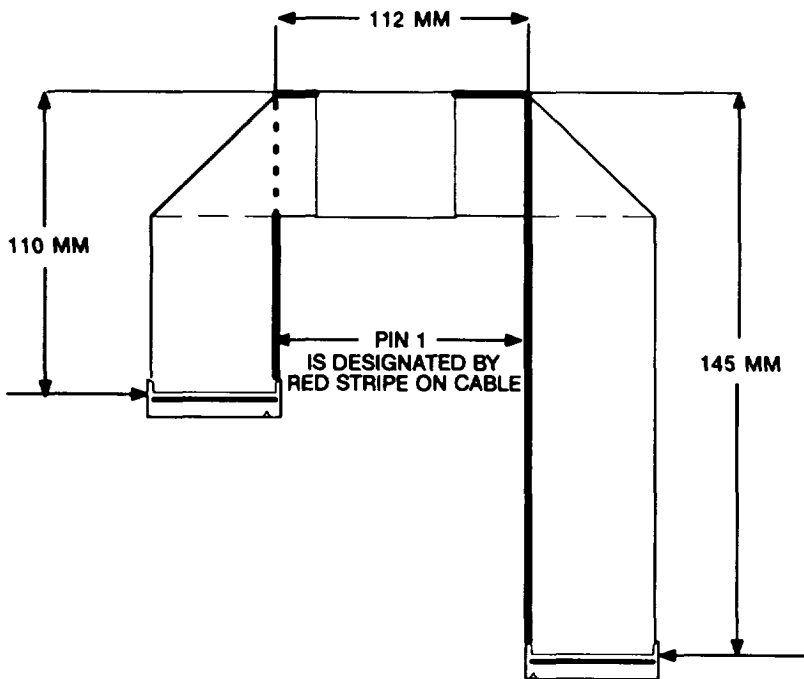


Figure 4-52. Schematic Diagram of 41 Pin Cable Interface A2W1A1

4-37. Maintenance of Special Purpose Cable A2W1.

ITEM	ACTION	REMARKS
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a. Cable assembly	Replace as required.	
-------------------	----------------------	--



NOTE
 FOLD THE CABLE AS SHOWN.
 THIS WILL INSURE THAT THE
 CABLE WILL NEATLY FIT ON
 THE ICD FOR PERFORMING
 THE SELF-TEST

EL9RG202

Figure 4-53. Preparation of ICD B Cable A2W1

Section VII. MAINTENANCE OF J-4823/G (TEST ADAPTER A)

4-38. Required Test Accessories for Test Adapter A.

The following procedure is used to troubleshoot Test Adapter A. Test the test adapter by performing the following procedures. To verify repair, PERFORM ALL TPS TESTS; this will insure that the test adapter or load card will function properly.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP0400030G
File No.	A3018235F
● Test Program Tape	CPIN CP0700030G
File No.	A3013361F
● ICD	ID-005C
● Adapter, Test - A A3018429-1 Items:	
Adapter Card A	A3014512-1
Extender Card, Electronic-Test Self-Test A	A3014499-1
Wiring Harness, Adapter Card A-W1	A3014520-1
Wiring Harness, Adapter Card A-W2	A3014521-2
Wiring Harness, Adapter Card A-W3	A3014521-3
Wiring Harness, Adapter Card A-W4	A3014521-4
● Accessory Kit A3018639-1 Items:	
Cable Assembly, RF (W3)	A3018642-1
Cable Assembly, RF (W5)	A3019037-1
Termination Assembly (T1)	A3140053-1
Adapter, Connector (CP2)	A3018791-1
Adapter, Assembly (CP3)	A3140054-1
Adapter, Connector (CP4)	A3018688-1
Attenuator (AT5)	M3933/19-08
Band Pass Filter(FLI)	A3140091-1
● AN/USM-410 Test Accessory Kit B4021292 Items:	
Cable, Assembly, RF (W101)	B4021271
Cable, Assembly, RF (W103)	B4021273
● AN/USM-410 Test Accessory Kit B4039143 Items:	
Adapter, Connector (2 reqd)	UG201A/U
Adapter, Connector	UG491A/U
Cable, Assembly, RF (W107)	B4021252
● HP-IB Interconnect Cable	10833B
● HP Network Analyzer	3577A
● ENI RF Amplifier	325LA
● HP S-Parameter Test Set	35677A/B

NOTE

Before testing adapter card A, run the ID-005C survey. Use test program CPIN 11GSG10 File Number ID005C. if ID-005C fails the survey test during any procedure in this manual, return ID-005 to depot for repair.

4-39. Test Procedures for Test Adapter A.

- a. Turn test station AN/USM-410(V)2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10
- c. Enter DIR USERAREA1 and press RETURN on VDT keyboard.

NOTE

The intermediate code of this program will require 27 blocks on the removable disk pack (DP \emptyset). Before loading the test program ensure that the DP \emptyset has sufficient space to load the intermediate code. if there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

This program contains a Survey test for the adapter card. When the survey is completed, you will be instructed to remove all test connections. DO NOT remove the hardline cables on the RF test station.

- d. Load test program.
 - (1) Install test program tape CPIN CP0400030G and CP0700030G in accordance with TM 11-6625-2773-10.
 - (2) Load file on to disk in accordance with TM 11-6625-2773-10.
 - (3) Enter TEST A3018235F or A3013361F and press RETURN on VDT keyboard.
 - (4) Follow operator instructions on VDT. Enter part number and serial number and read operator instructions on VDT.
 - (5) Verify that the following information is displayed on the VDT:

-----SYNTHESIZER-----	
PART NUMBER:	A3018235-1
PROGRAM DATE/REV:	MM/DD/YY REV
SERIAL NO. EFFECTIVITY:	001 THRU *****
MWO EFFECTIVITY:	NONE

OR

-----TUNER/MIXER-----	
PART NUMBER:	A3013361-1
PROGRAM DATE/REV:	MM/DD/YY REV
SERIAL NO. EFFECTIVITY:	001 THRU *****
MWO EFFECTIVITY:	NONE

- (6) Press STRT/PROC on the VDT keyboard.
- e. Run ATE survey test if desired. if ATE survey fails refer to TM 11-6625-2773-10.
- f. install ICD ID-005C on J1 of PIU.
- g. Install adapter card A on ID-005C (See figure 4-54 on page 4-93).
- h. Run adapter card survey test. if survey fails, go to paragraph 4-40 on page 4-94.
- i. When survey passes, continue with UUT testing.

4-39. Test Procedures for Test Adapter A. Cont

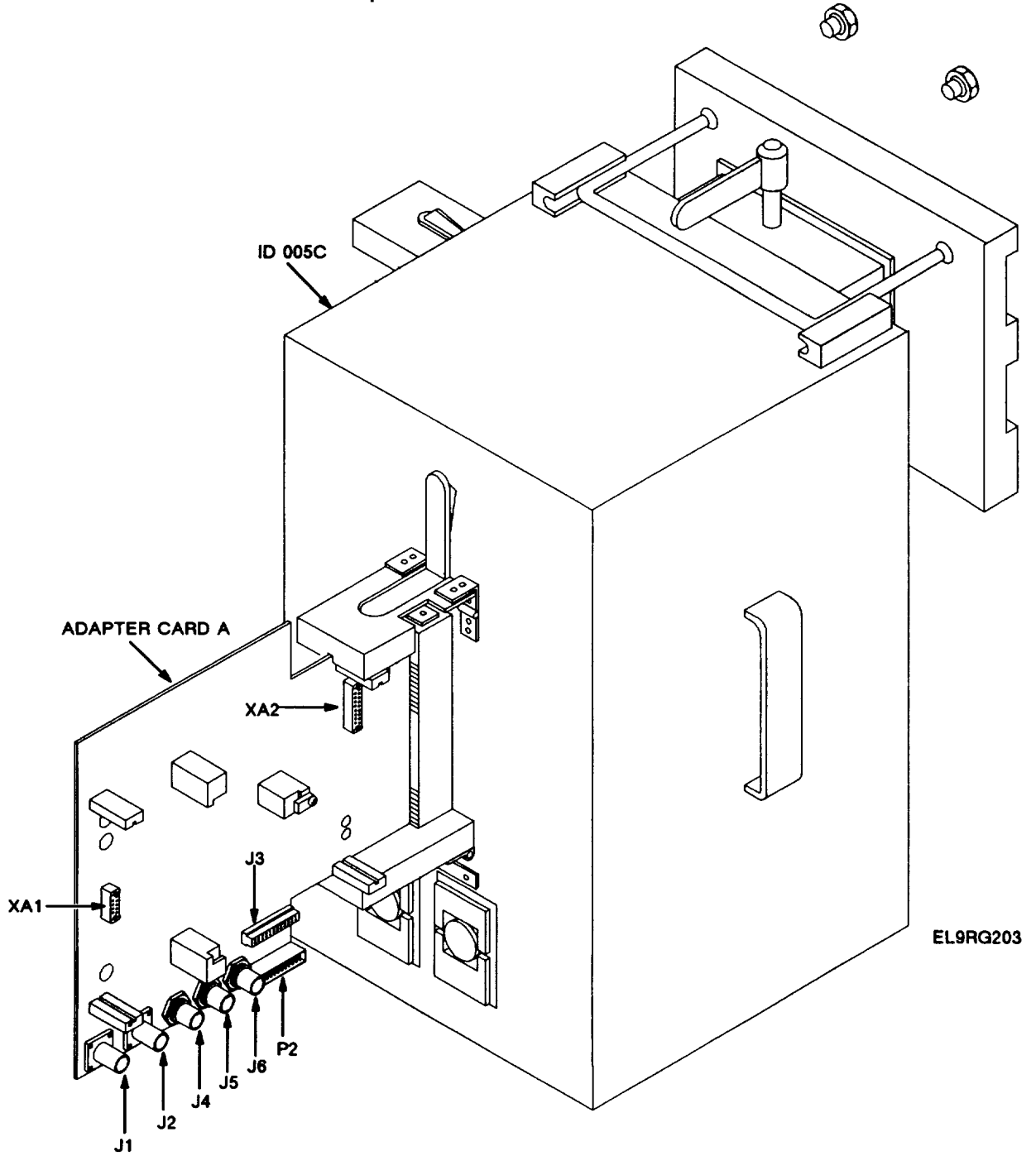


Figure 4-54. Installation of Adapter Card A on ID-005C

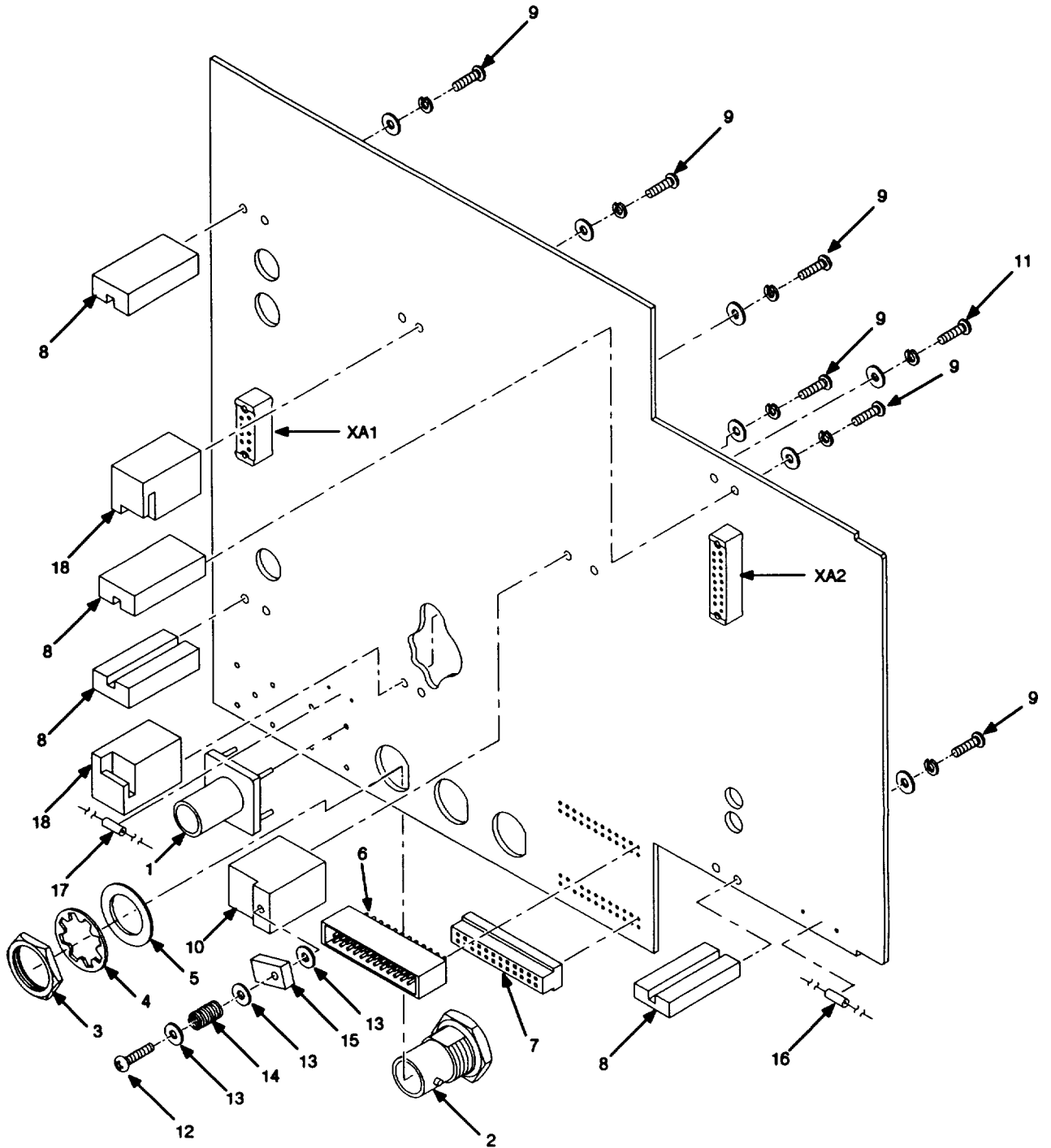
4-40. Maintenance Procedures for Test Adapter A.

INITIAL SETUP	
<p>TEST EQUIPMENT</p> <p>Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223)</p> <p>Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>TOOLS:</p> <p>Tool Kit Electronic Equipment TK-105/G (5180-00-610-8177)</p> <p>Solder Repair Center PRC-151 (3439-01-109-8590)</p>	<p>REFERENCES</p> <p>TM 11-5820-914-40</p> <p>TM 11-6625-2773-10</p> <p>TM 11-6625-3094-24P</p> <p>TB 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>

ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|---|---|--|
| a. Schematic diagram | Refer to figure 4-56 on page 4-96. | |
| b. Adapter Card A | Refer to figure 4-55 on page 4-95 for parts layout. | |
| (1) BNC female PC J1, J2(1) | <p>Unsolder connector from circuit board.</p> <p>Replace connector J1 or J2(1) and solder to circuit board.</p> | |
| (2) BNC female connectors J4, J5, J6(2) | <p>Remove hex nut(3), internal/external tooth lock washer(4), and flat washer(5), from connector.</p> <p>Replace connector(2) and secure with flat washer(5), internal/external tooth lock washer(4), and hex nut(3).</p> | |
| (3) Connectors J3(6), P2(7) | <p>Unsolder connector from circuit board.</p> <p>Replace connector (observe orientation) and solder to circuit board.</p> | |
| (4) Electrical card holders(8,18) | <p>Remove two screws(9), two lock washers, and two flat washers.</p> <p>Replace electrical card holder(8 or 18) end secure with two screws(9), two lock washers, and two flat washers.</p> | |

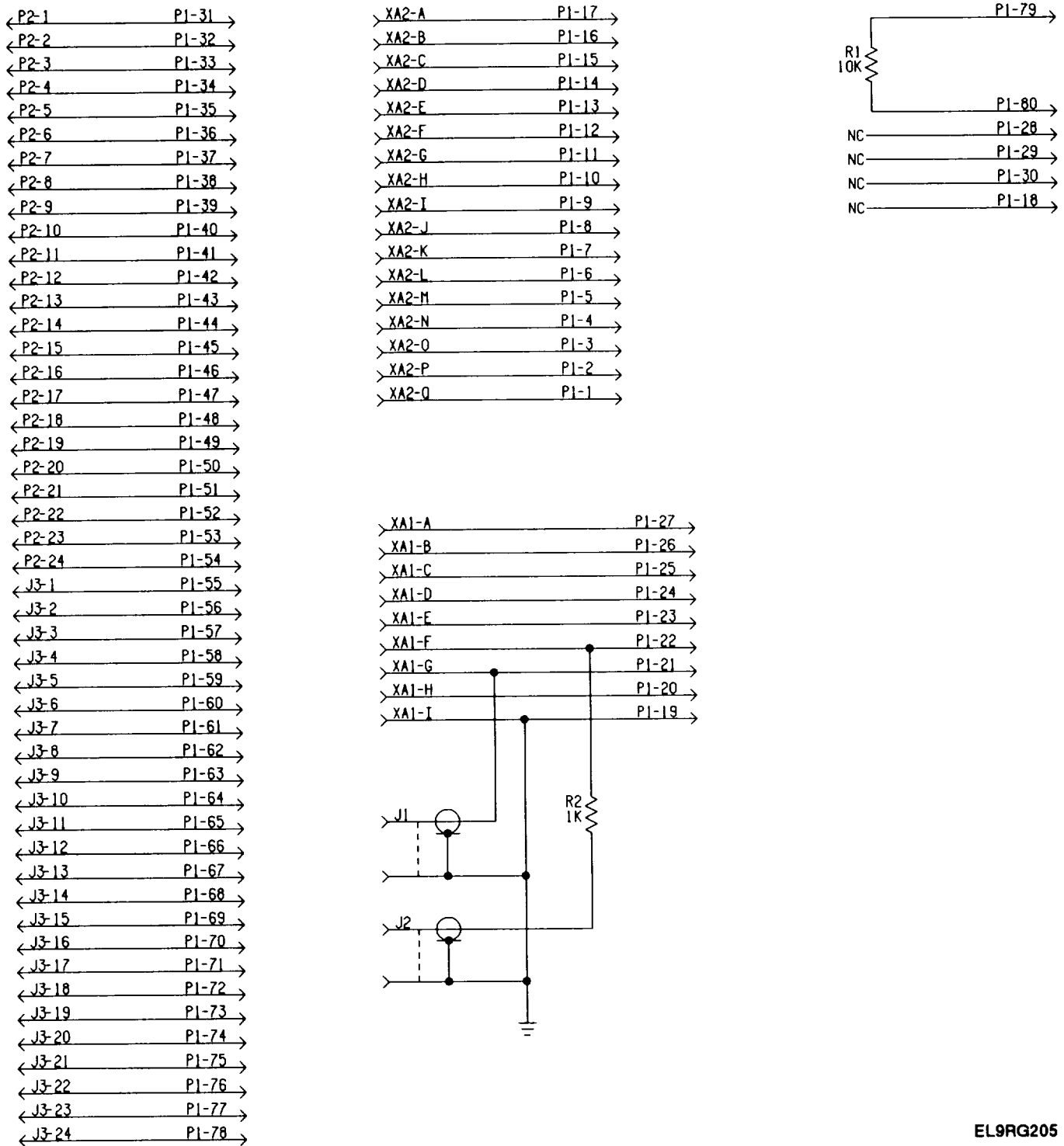
4-40. Maintenance Procedures for Test Adapter A. Cont



EL9RG204

Figure 4-55. Component Layout of CCA-Adapter Card A

4-40. Maintenance Procedures for Test Adapter A. Cont



EL9RG205

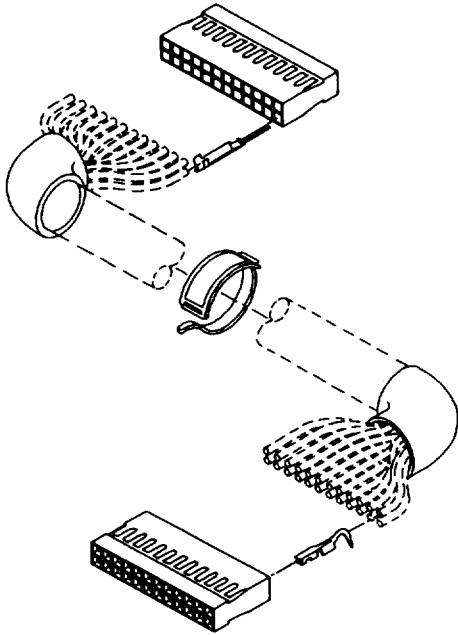
Figure 4-56. CCA-Adapter Card A Schematic Diagram

4-40. Maintenance Procedures for Test Adapter A. Cont

ITEM	ACTION	REMARKS
(5) Electrical card holder/retainer(10)	<p>Remove two screws(11), two lock washers, and two flat washers securing electrical card holder/retainer(10) to circuit board.</p> <p>Remove and retain screw 12), three flat washers, spring(14), and retaining plate(15) from top of electrical card holder/retainer(10).</p> <p>Replace electrical card holder/retainer and secure with two screws(11 , two lock washers, and two flat washers.</p> <p>Install screw(12), three fiat washers, spring, and retaining plate(15) onto top of card holder.</p>	
(6) Resistor RI (16), R2(17)	<p>Unsolder resistor from circuit board.</p> <p>Replace resistor and solder to circuit board.</p>	
c. Wiring Harnesses W2,3,4	Non-repairable item.	Refer to TM 11-6625-3094-24P
d. Cable Assembly W1		Refer to figure 4-57 on page 4-96 for parts layout.
(1) Connectors P1, J1	<p>Tag wires.</p> <p>Replace any defective pins from defective connector.</p> <p>Replace marker sleeve J1.</p> <p>Replace marker sleeve P1.</p> <p>Remove wire tags.</p>	<p>Use item 73, App. C</p> <p>Use item 55, App. C</p>
(2) Wires/Pins	<p>Remove pins from connectors at both ends of defective wire.</p> <p>Attach new wire to old wire and pull new wire into cable.</p> <p>Detach and discard defective wire.</p> <p>Crimp new pins on both ends of new wire.</p> <p>Install pins into connectors.</p>	
(3) Plastic Tubing	Replace as required.	Use item 126, App. C
(4) Identification strap	Replace as required.	Use item 262, App. C
(5) Sleeve marker P1	Replace as required.	Use item 55, App. C
(6) Sleeve marker J1	Replace as required.	Use item 73, App. C

4-40. Maintenance Procedures for Test Adapter A. Cont

ITEM	ACTION	REMARKS
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WIRE LIST

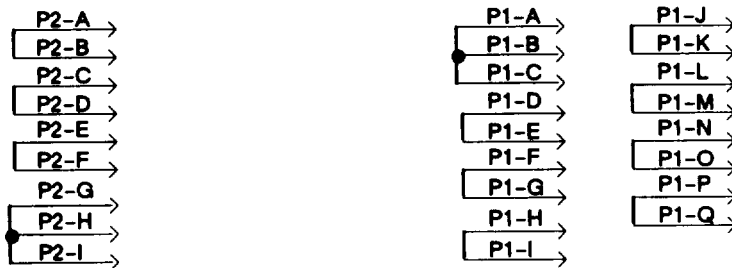
<	P1-1	J1-1	<
<	P1-2	J1-2	<
<	P1-3	J1-3	<
<	P1-4	J1-4	<
<	P1-5	J1-5	<
<	P1-6	J1-6	<
<	P1-7	J1-7	<
<	P1-8	J1-8	<
<	P1-9	J1-9	<
<	P1-10	J1-10	<
<	P1-11	J1-11	<
<	P1-12	J1-12	<
<	P1-13	J1-13	<
<	P1-14	J1-14	<
<	P1-15	J1-15	<
<	P1-16	J1-16	<
<	P1-17	J1-17	<
<	P1-18	J1-18	<
<	P1-19	J1-19	<
<	P1-20	J1-20	<
<	P1-21	J1-21	<
<	P1-22	J1-22	<
<	P1-23	J1-23	<
<	P1-24	J1-24	<

EL9RG206

Figure 4-57. Maintenance of Test Adapter A Special Purpose Cable A1W1

- e. Extender Card, Electronic Non-repairable.
- Test self-test A

Refer to TM 11-6625-3094-24P.



EL9RG207

Figure 4-58. Schematic Diagram of Self-Test A Electronic Extender Card

**Section VIII. MAINTENANCE OF J-4824/G (TEST ADAPTER B)
AND J-4832/G (CCA-LOAD CARD A)**

The following procedure is used to test and troubleshoot test adapter B and CCA-load card A. This test adapter is used to test two different modules. Two test programs are required to test this device. Install each test program and perform the survey test. The AN/USM-410 (V) 2 will produce a printout listing of the faulty parts. Replace only the defective parts listed for a particular section of the adapter or CCA-load card A. To verify repair, PERFORM ALL TPS TESTS; this will insure that the test adapter will function properly.

The operational steps are the same for all test programs and are listed once.

4-41. Required Test Accessories for Test Adapter B and CCA-Load Card A.

REQUIRED TEST ACCESSORIES	
● Test Program Tape – Audio Data I/O	CPIN CP0800030G
File Number	A3013204F
● Test Program Tape – Audio Power Supply	CPIN CP0900030G
File Number	A3013177F
● Test Program Tape – Switching	CPIN CP0900030G
File Number	A3014383F
● ICD	ID-005C
● Adapter Card B A3019033-1 items:	
CCA-Adapter Card B	A3014453-1
● CCA-Load Card A	A3014493-1
● Extender Card, Electronic	
Test-Self Test B	A3017842-1

CAUTION

This UUT contains static sensitive components. Handle in accordance with ESD practices.

NOTE

Before testing adapter card B, run the ID-005C survey. Use test program CPIN 11GSG10 File Number ID005C, If ID-005C fails the survey test during any procedure in this manual, return ID-005C to depot for repair.

4-42. Test Procedures for Test Adapter B and CCA-Load Card A.

- a. Turn on test station AN/USM-410(V)2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and press RETURN on VDT keyboard.
- d. Load test program.

NOTE

The intermediate code of this program requires 32 blocks on the removable disk pack (DPØ). Before loading the test program ensure that the DPØ has sufficient space to load the intermediate code. If there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

- (1) Install test program tape CPIN CP0800030G or CP0900030G in accordance with TM 11-6625-2773-10.
- (2) Load file onto disk in accordance with TM 11-6625-2773-10.
- (3) Enter TEST A3013204 (for CP0800030G) or either A3013177 or A3014383 (for CP0900030G) and press RETURN on VDT keyboard.
- (4) Follow operator instructions on VDT. Enter part number and serial number and read operator instructions on VDT.
- (5) Verify that the following information is displayed on the VDT:

```
-----CCA-AUDIO DATA I/O-----  
  
PART NUMBER           A3013204-1  
PROGRAM DATE/REV.:    MM/DD/YY REV.  
SERIAL NO. EFFECTIVITY 001 THRU ***  
MWO EFFECTIVITY       NONE
```

OR

```
-----CCA-AUDIO DATA I/O-----  
  
PART NUMBER           A3014136-1  
PROGRAM DATE/REV.:    MM/DD/YY REV.  
SERIAL NO. EFFECTIVITY 001 THRU ***  
MWO EFFECTIVITY       NONE
```

4-42. Test Procedures for Test Adapter B and CCA-Load Card A. Cont

OR

```

-----CCA-AUDIO POWER SUPPLY-----

PART NUMBER           A3013177-1
PROGRAM DATE/REV.:    MM/DD/YY REV.
SERIAL NO. EFFECTIVITY 001 THRU ***
MWO EFFECTIVITY       NONE
    
```

OR

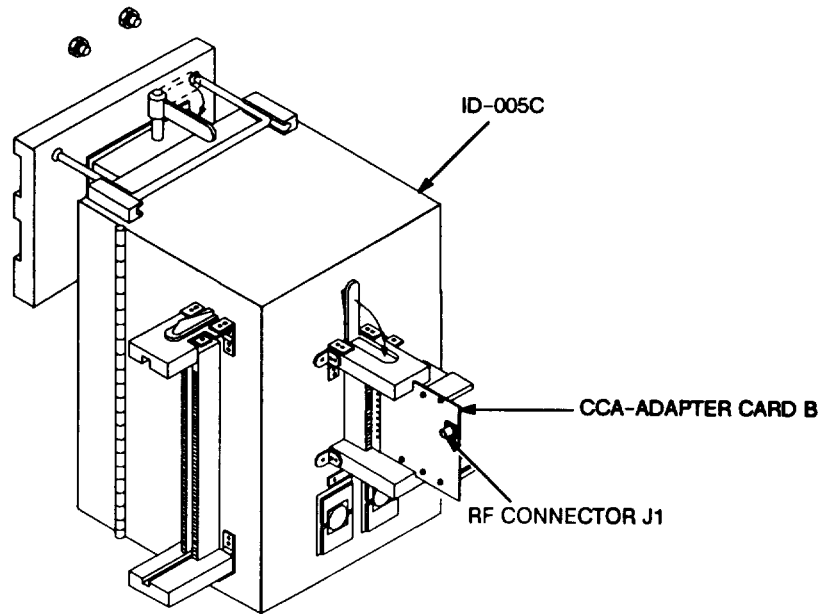
```

-----CCA-SWITCHING-----

PART NUMBER           A3014383-1
PROGRAM DATE/REV.:    MM/DD/YY REV.
SERIAL NO. EFFECTIVITY 001 THRU ***
MWO EFFECTIVITY       NONE
    
```

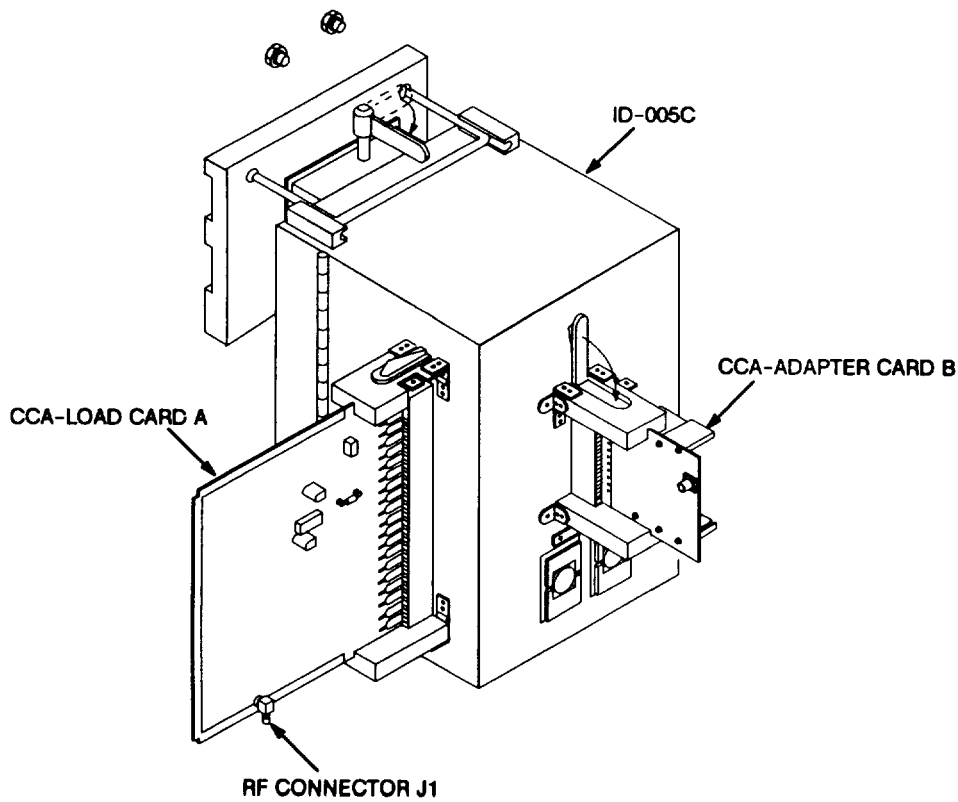
- (6) Press STRT/PROC on the VDT keyboard.
- e. Run ATE survey test if desired, If ATE survey fails refer to TM 11-6625-2773-10.
- f. Install ICD ID-005C on J1 on PIU.
- g. Install adapter card B on ID-005C (see figure 4-59 on page 4-102).
- h. Run adapter card survey test. If survey test fails, go to paragraph 4-43 on page 4-103.
- i. Install CCA-load card A on ID-005C (see figure 4-60 on page 4-102).
- j. Select load card survey, If load card survey test fails refer to paragraph 4-44 on page 4-106,
- k. When survey passes continue with UUT testing.

4-42. Test Procedures for Test Adapter B and CCA-Load Card A. Cont



EL9RG208

Figure 4-59. Installation of CCA - Adapter Card B on ID-005C



EL9RG209

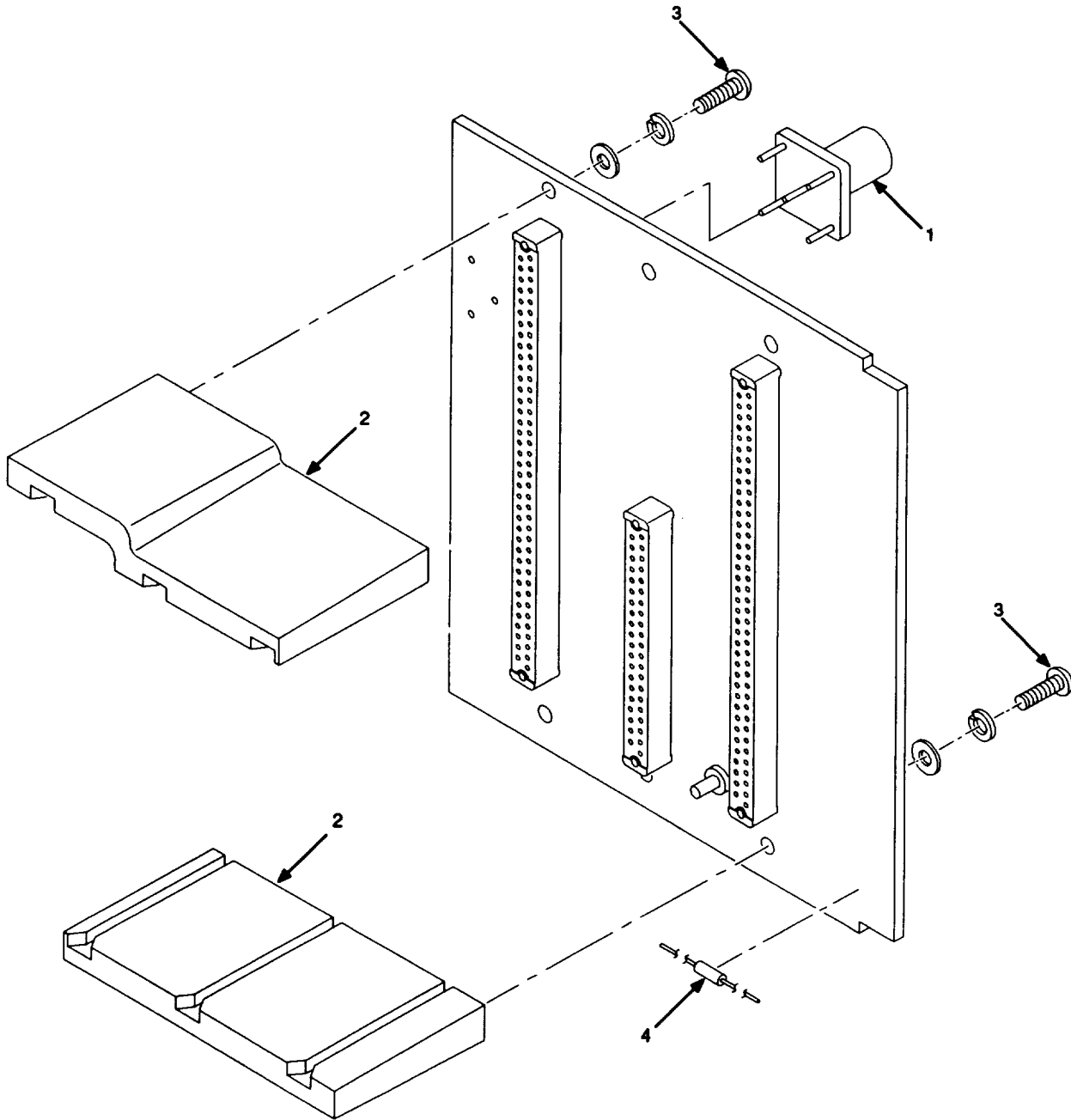
Figure 4-60. Installation of CCA-Load Card A on ID-005C

4-43. Maintenance Procedures for Test Adapter B.

INITIAL SETUP	
TEST EQUIPMENT: Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223) Multimeter AN/USM-486 (6625-01-145-2430)	REFERENCES: TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-24P TB 43-0127
TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-00-610-8177) Solder Repair Center PRC-151 (3439-01-109-8590)	PERSONNEL REQUIRED: 1

ITEM	ACTION	REMARKS
a. CCA-Adapter Card B (1) Connector J1(1)	Refer to FO-5 for schematic diagram. Unsolder connector from circuit board. Replace connector J1 (1) and solder to circuit board.	Refer to figure 4-61 on page 4-104.
(2) Electrical Card Holder(2)	Remove three screws(3), three lock washers, and three fiat washers securing electrical card holder. Replace electrical card holder and secure with three screws(3), three lock washers, and three flat washers.	
(3) Resistor R1(4)	Remove electrical card holder(2). Unsolder resistor R1 from circuit board. Replace resistor R1 and solder to circuit board. Install retained electrical card holder.	Refer to step (2) .
b. RF Cable Assembly	Non-repairable.	Refer to TM 11-6625-3094-24P.
c. Electronic Test-Self Test B Extender Card.	Non-repairable item. Refer to figure 4-62 on page 4-105 for schematic diagram.	Refer to TM 11-6625-3094-24P.

4-43. Maintenance Procedures for Test Adapter B. Cont



EL9RG210

Figure 4-61. Component Layout of CCA-Adapter Card B

4-43. Maintenance Procedures for Test Adapter B. Cont

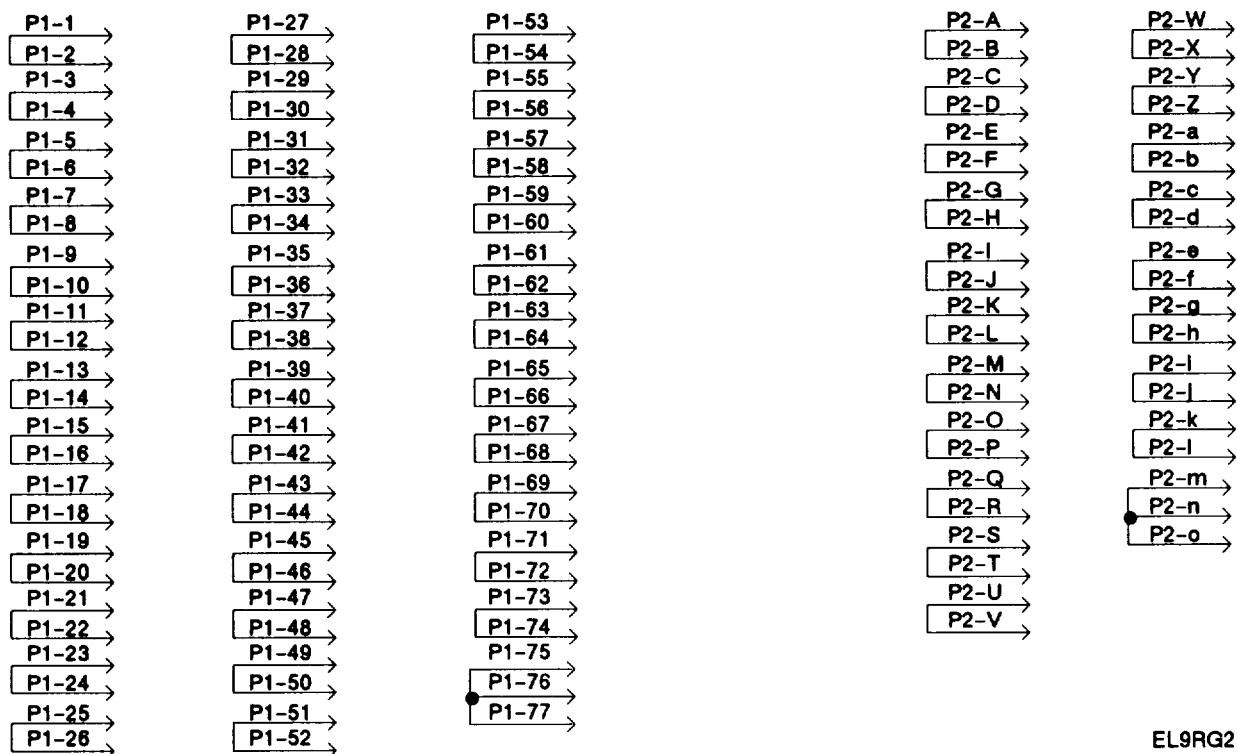


Figure 4-62. Schematic Diagram of Self-Test B Electronic Extender Card

4-44. Maintenance Procedures for CCA-Load Card A.

INITIAL SETUP	
TEST EQUIPMENT: Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223) Multimeter AN/USM-486 (6625-01-145-2430)	REFERENCES: TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-24P TB 43-0127
TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-00-610-8177) Solder Repair Center PRC-151 (3439-01-109-8590)	PERSONNEL REQUIRED: 1

ITEM	ACTION	REMARKS
a. CCA-Load Card A	Refer to FO-10 for schematic diagram.	
(1) Connector J1	Unsolder from circuit card. Replace and solder to circuit card.	Refer to figure 4-63 on page 4-107.
(2) Crystal Oscillator Z1	Unsolder from circuit card. Remove oscillator and discard insulator plate. Replace oscillator and install new insulator plate.	
(3) Digital Microcircuit U1	Unsolder from circuit card.	Observe proper polarity when Replace microcircuit and installing new component. solder to circuit card (Square pad indicates pin 1)
(4) Capacitors C1, C2 Resistor R36	Unsolder from circuit card. Replace component and solder to circuit card.	Square pad indicates pin 1 or positive terminal.
(5) Resistors R1-27, 31-35,37-50	Replace as required.	

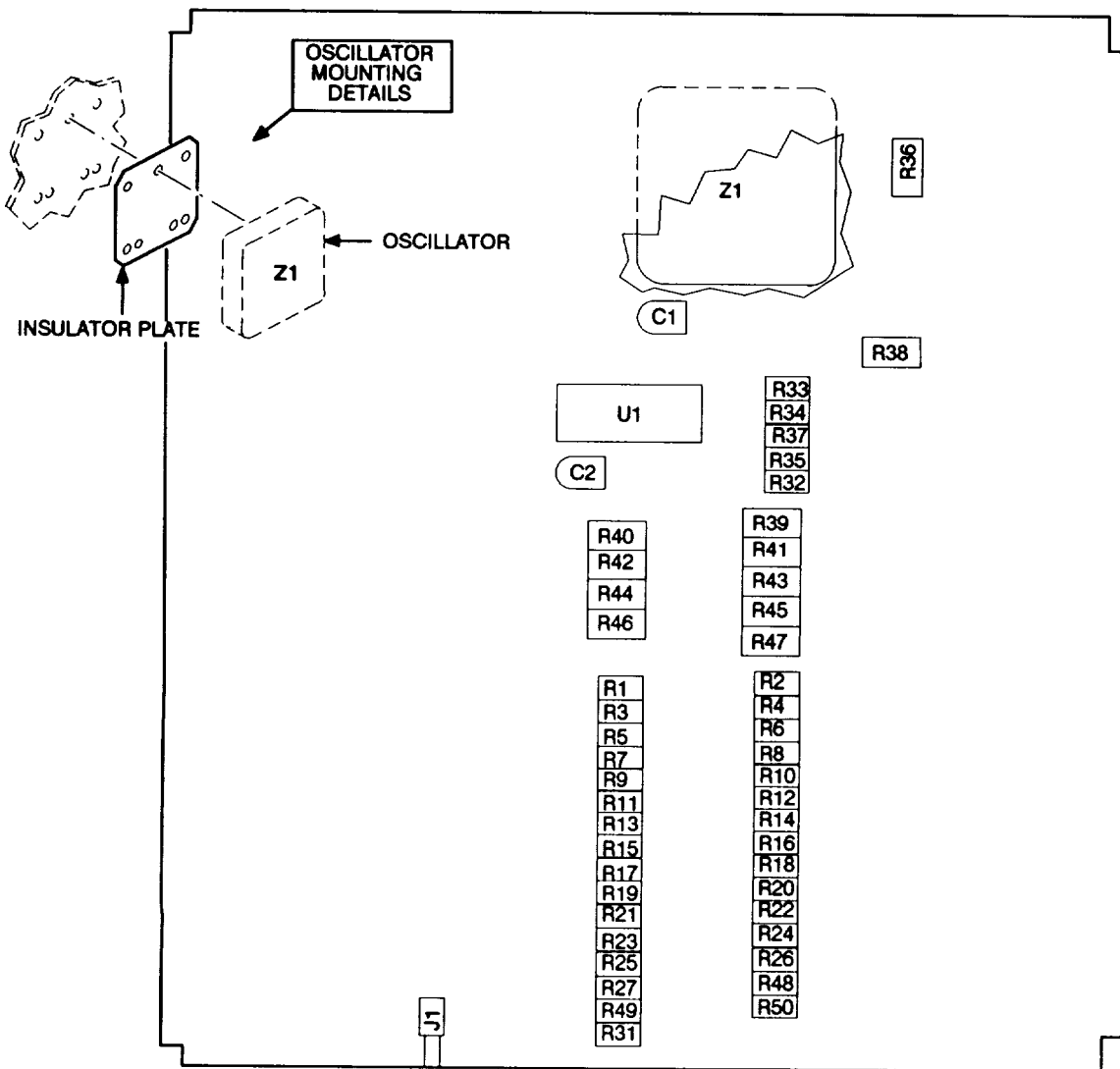
4-44. Maintenance Procedures for CCA-Load Card A. Cont

CAUTION

THE CRYSTAL OSCILLATOR IS AN ELECTROSTATIC SENSITIVE ELECTRONIC DEVICE



EL9RG212



EL9RG213

Figure 4-63. Component Layout of CCA-Load Card A

**Section IX. MAINTENANCE OF J-4825 (TEST ADAPTER C), J-4834/G
(LOAD CARD B) AND J-4833/G (LOAD CARD C).**

This ICD is used with several UUT. Test the section that failed by going to the applicable paragraph and following the instructions. To test the Load Cards, go to the paragraph containing the survey for the load card that failed. Load Card B is also used with test adapter D contained in section X. To verify repair, **PERFORM ALL TPS TESTS**; this will insure that the test adapter or load card will function properly.

The operational steps are the same for all test programs and are listed once.

NOTE

Before testing adapter card B, run the ID-005C survey. Use test program CPIN 11 GSG10 File Number ID005C. If ID-005C fails the survey test during any procedure in this manual, return ID-005C to depot for repair.

4-45. Required Test Accessories for Test Adapter C.

Refer to chart 4-1 on page 4-109 for test accessories required to test this test adapter. Not all accessories are required to test a particular portion of the test adapter. Use only those accessories required to test a specific portion of the test adapter, Refer to TM 11-5820-914-40 as required.

4-46. Test Procedures for Test Adapter C, CCA-Load Card B and CCA-Load Card C.

- a. Turn on test station AN/USM-410(V) 2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and press PROCEED on VDT keyboard.

CAUTION

This UUT contains static sensitive components. Handle in accordance with ESD practices,

NOTE

The intermediate code of this program will require 35 blocks on the removable disk pack (DPØ). Before loading the test program ensure that the DPØ has sufficient space to load the intermediate code. If there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

- d. Load test program.
 - (1) install test program tape that failed in accordance with TM 11-6625-2773-10. Refer to Chart 4-2 on page 4-110 for tape selection.
 - (2) Follow operator instructions on VDT. Enter part number and serial number and read operator instructions on VDT.
- e. Select test.

4-46. Test Procedures for Test Adapter C, CCA-Load Card B and CCA-Load Card C. Cont

Chart 4-1. Required Test Accessories.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP0200030G
(A3013338-1)	File No. A3013338
(A3013360-1)	File No. A3013360
(A3013243-1, A3014176-1 or A3018025-1)	File No. A3013243
(A3014158-1)	File No. A3014158
(A3014140-1 or A3018726-1)	File No. A3014140F
● Test Program Tape	CPIN CP0900030G
(A3018241-1)	File No. A3018241F
● ICD	ID-005C
● CCA-Adapter Card C	A3017847-1
● CCA-Load Card B	A3017839-1
● CCA-Load Card C	A3019205-1
● Extender Card, Electronic-Test Self Test C	A3014349-1
● Accessory Kit A3018639-1 Items:	
Wiring Harness (W1)	A3017868-1
Wiring Harness (W2)	A3019211-1
Cable Assembly, RF (W3)	A3018642-1
Cable Assembly, RF (W5)	A3019037-1
Cable Assembly, RF (W7)	A3140032-1
Cable Assembly, RF (W8)	A3140031-1
Attenuator, 1W, 60 dB (AT4)	M3933/19-17
Attenuator, 10 W, 10 dB (AT1)	A3018544-1
Attenuator, 30 W, 3 dB (AT3)	A3132886-1
Attenuator, 1 W, 10 dB (AT5, AT6)	M3933/19-08
Attenuator, 1 W, 20 dB (AT7)	M3933/19-12
Adapter Assembly (CP3)	A3140054-1
Adapter, Connector (CP2)	A3018791-1
Adapter, Connector (CP4)	A3018688-1
Adapter, Connector (T1)	A3140053-1
● AN/USM-410 Test Accessory Kit B4021292 Items:	
PIU Probe	SM-C-869189
Cable Assembly (W101) (2reqd)	B4021271
Cable Assembly, RF (W102)	B4021272
Cable Assembly, RF (W103) (2 reqd)	B4021273
Cable Assembly, RF (W104) (2 reqd)	B4021274
Probe Active (RF)	SM-C-855100
Adapter, TEE, BNC	UG-274B
● AN/USM-410 Test Accessory Kit B4021295 Items:	
Adapter, N/BNC	UG-201/A
Attenuator, Type N, 10 dB	B4039096-3
Cable Assembly, RF (W108)	B4002577
● AN/USM-410 Test Accessory Item:	
Adapter Connector (2 reqd)	UG-210A/U
50 Ohm Termination	B4039130
Adapter Connector (2 reqd)	B4041032
Adapter, BNC Jack to Jack	UG-914
Adapter, BNC to N	M55339/49-00349
● Alignment Tool Kit	B4008667
● HP-IB Interconnect Cable	10833B
● HP Network Analyzer	3577A
● ENI RF Amplifier	325LA
● HP S-Parameter Test Set	35677A/B

4-46. Test Procedures for Test Adapter C, CCA-Load Card Band CCA-Load Card C. Cont

Chart 4-2. Test Program Tape Selection

MODULE	PART NUMBER	CPIN	TEST NUMBER
Power Supply-Module Assembly	A3013338-1	CP0700030G	A3013338
IF/Demodulator	A3013360-1	CP0700030G	A3013360
CCA-Analog	A3013243-1	CP0200030G	A3013243
	A3014176-1		
	A3018025-1		
CCA-Power Supply	A3014158-1	CP0700030G	A3014158
CCA-Two-Wire interface	A3014140-1	CP0700030G	A3014140F
	A3018726-1	CP0700030G	A3018726F
Impedance Matching Network	A3018241-1	CP0900030G	A3018241F

- f. Enter the appropriate TEST NUMBER from Chart 4-2 and press RETURN on VDT keyboard.
 - (1) Enter part number and serial number.
 - (2) Follow operator instructions on VDT. Enter part number and serial number and read operator instructions on VDT.
- g. Run ATE survey test if desired. If ATE survey fails refer to TM 11-6625-2773-10.
- h. Install ICD ID-005C on J1 of PIU.
- i. Install CCA-adapter card C on ICD ID-005C (figure 4-64 page 4-113).
- j. Select adapter card survey.
- k. Run adapter card survey test.
- l. Install CCA-load card B as required by test program (figure 4-65 page 4-114).
- m. Install CCA-load card C as required by test program (figure 4-66 page 4-115).
- n. Select load card survey,

4-46. Test Procedures for Test Adapter C, CCA-Load Card B and CCA-Load Card C. Cont

-----POWER SUPPLY-MODULE ASSEMBLY-----
 PART NUMBER: A3013338-1
 PROGRAM DATE/REV.: MM/DD/YY/ REV.-
 SERIAL NO. EFFECTIVITY: 001 THRU ****
 MWO EFFECTIVITY: NONE

OR

-----IF/DEMODULATOR-----
 PART NUMBER: A3013360-1
 PROGRAM DATE/REV.: MM/DD/YY REV.-
 SERIAL NO. EFFECTIVITY: 001 THRU ****
 MWO EFFECTIVITY: NONE

OR

-----CCA-ANALOG-----
 PART NUMBER: A3013243-1
 SERIAL NO. EFFECTIVITY: 001 THRU ****
 MWO EFFECTIVITY: NONE

OR

-----CCA-ANALOG-----
 PART NUMBER: A3018025-1
 SERIAL NO. EFFECTIVITY: 001 THRU ****
 MWO EFFECTIVITY: NONE

OR

-----CCA-ANALOG-----
 PART NUMBER: A3014176-1
 SERIAL NO. EFFECTIVITY: 001 THRU ****
 MWO EFFECTIVITY: NONE

4-46. Test Procedures for Test Adapter C, CCA-Load Card B and CCA-Load Card C. Cont

OR

-----CCA-POWER SUPPLY, CONTROL-MONITOR-----	
PART NUMBER:	A3014158-1
PROGRAM DATE/REV.:	DD/MM/YY REV.-
SERIAL NO. EFFECTIVITY:	001 THRU ***
MWO EFFECTIVITY:	NONE

OR

-----CCA-TWO WIRE INTERFACE-----	
PART NUMBER:	A3014140-1
PROGRAM DATE/REV.:	MM/DD/YY REV.-
SERIAL NO. EFFECTIVITY:	001 THRU ****
MWO EFFECTIVITY:	NONE

OR

-----CCA-TWO WIRE INTERFACE-----	
PART NUMBER:	A3018726-1
PROGRAM DATE/REV.:	MM/DD/YY REV.-
SERIAL NO. EFFECTIVITY:	001 THRU ****
MWO EFFECTIVITY:	NONE

OR

-----NETWORK, IMPEDANCE MATCHING-----	
PART NUMBER:	A3018241-1
PROGRAM DATE/REV.:	M/DD/YY REV.-
MWO EFFECTIVITY:	NONE

o. Run Load card survey test.

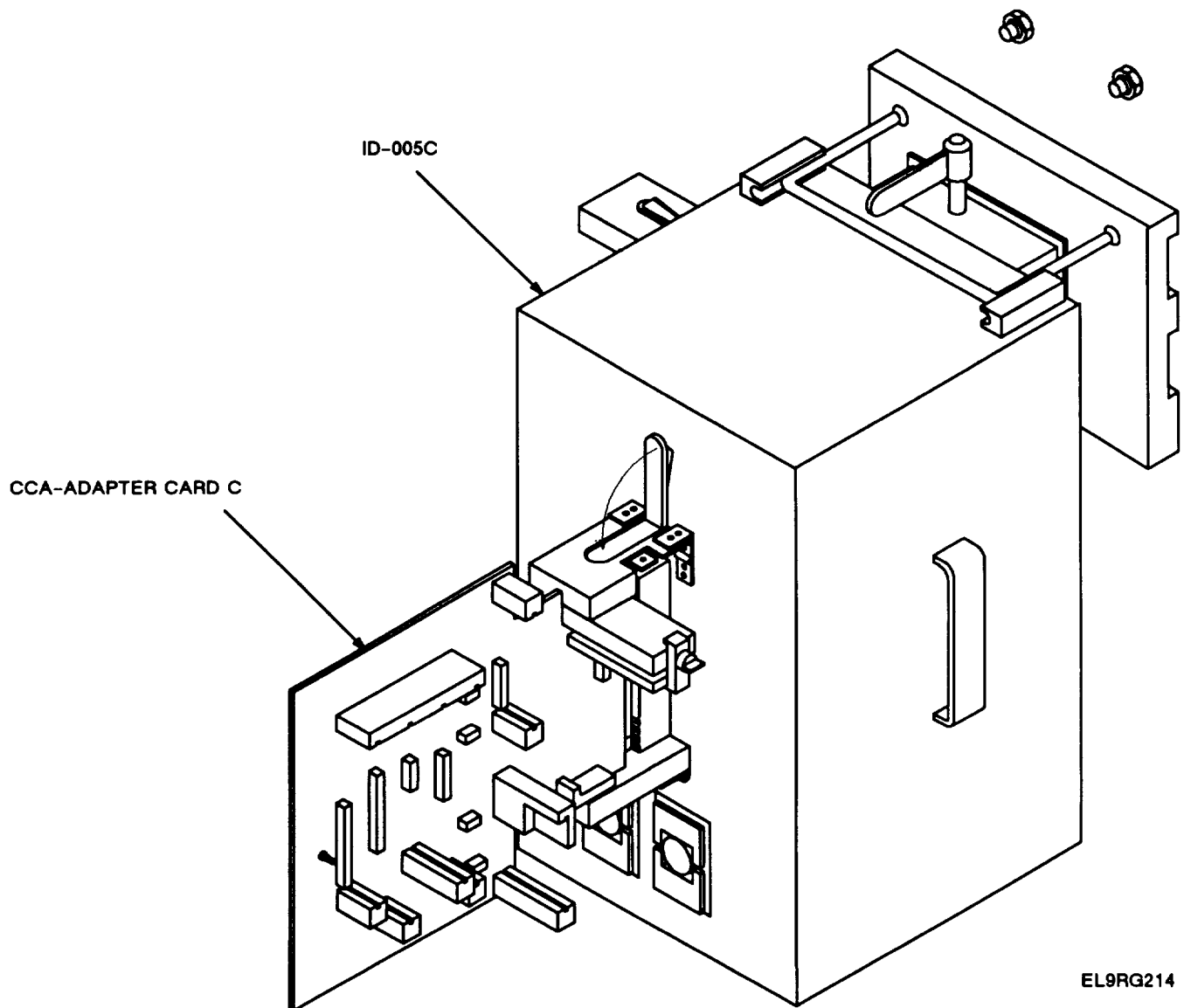
p. After testing, go to:

paragraph 4-47 on page 4-116 for test adapter C maintenance procedures.

paragraph 4-48 on page 4-124 for CCA-load card B maintenance procedures.

paragraph 4-49 on page 4-126 for CCA-load card C maintenance procedures.

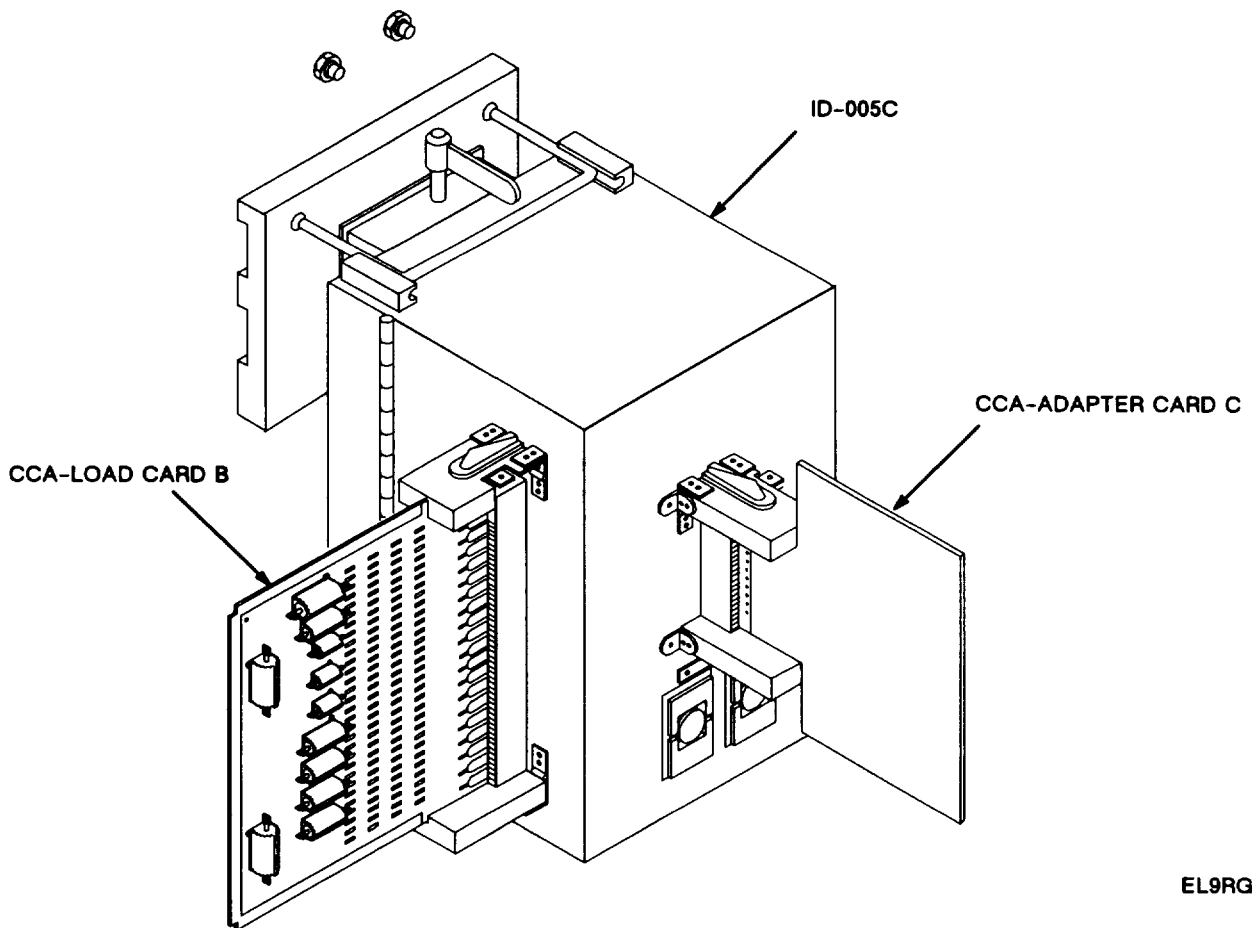
4-46. Test Procedures for Test Adapter C, CCA-Load Card B and CCA-Load Card C. Cont



EL9RG214

Figure 4-64. Installation of CCA-Adapter Card C on ID-005C

4-46. Test Procedures for Test Adapter C, CCA-Load Card B and CCA-Load Card C. Cont



EL9RG215

Figure 4-65. Installation of CCA-Load Card B on ID-005C

4-46. Test Procedures for Test Adapter C, CCA-Load Card B and CCA-Load Card C. Cont

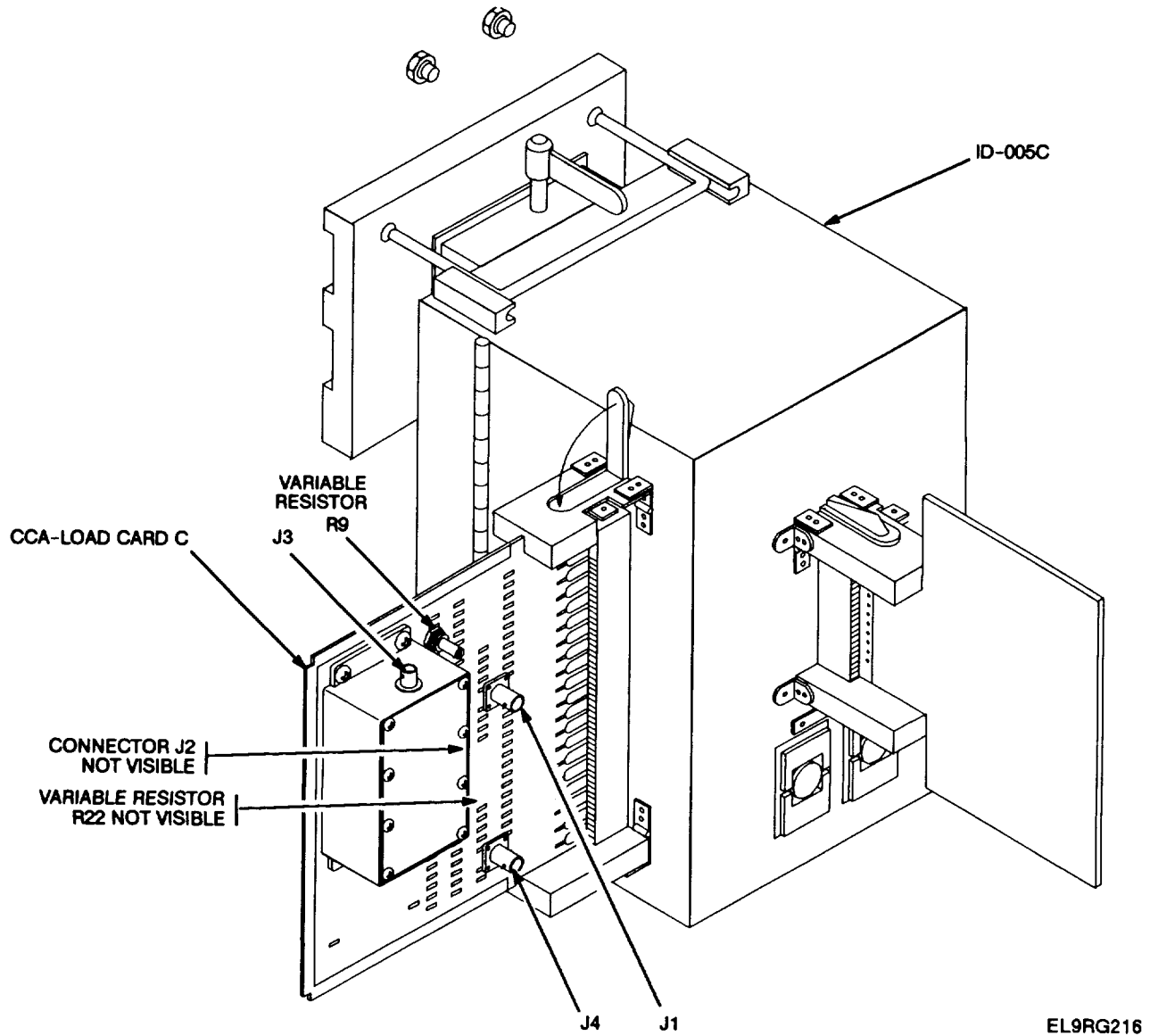


Figure 4-66. Installation of CCA-Load Card C on ID-005C

4-47. Maintenance Procedures for Test Adapter C.

INITIAL SETUP	
TEST EQUIPMENT: Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223) Multimeter AN/USM-486 (6625-01-145-2430)	REFERENCES: TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-24P TB 43-0127
TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-01-610-8177) Solder Repair Center PRC-151 (3439-01-109-8590) Tool, Crimping CCT-UBC-1 (5120-01-061-0903)	PERSONNEL REQUIRED: 1

ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|----|---|---|
| a. | Refer to FO-6 for schematic diagram. | |
| b. | Guide Block Assembly(1) Remove two screws(2), two flat washers, and two lock washers from circuit card.

Replace guide block assembly and secure with two screws(2), two lock washers, and two flat washers. | Refer to figure 4-67 on page 4-117. |
| c. | Locator support(3) Remove four screws(4), four flat washers, and four lock washers from circuit card.

Replace locator support and secure with four screws(4), four flat washers, and four lock washers. | |
| d. | Locator Support(5) Remove two screws(6), two flat washers, and two lock washers from circuit card.

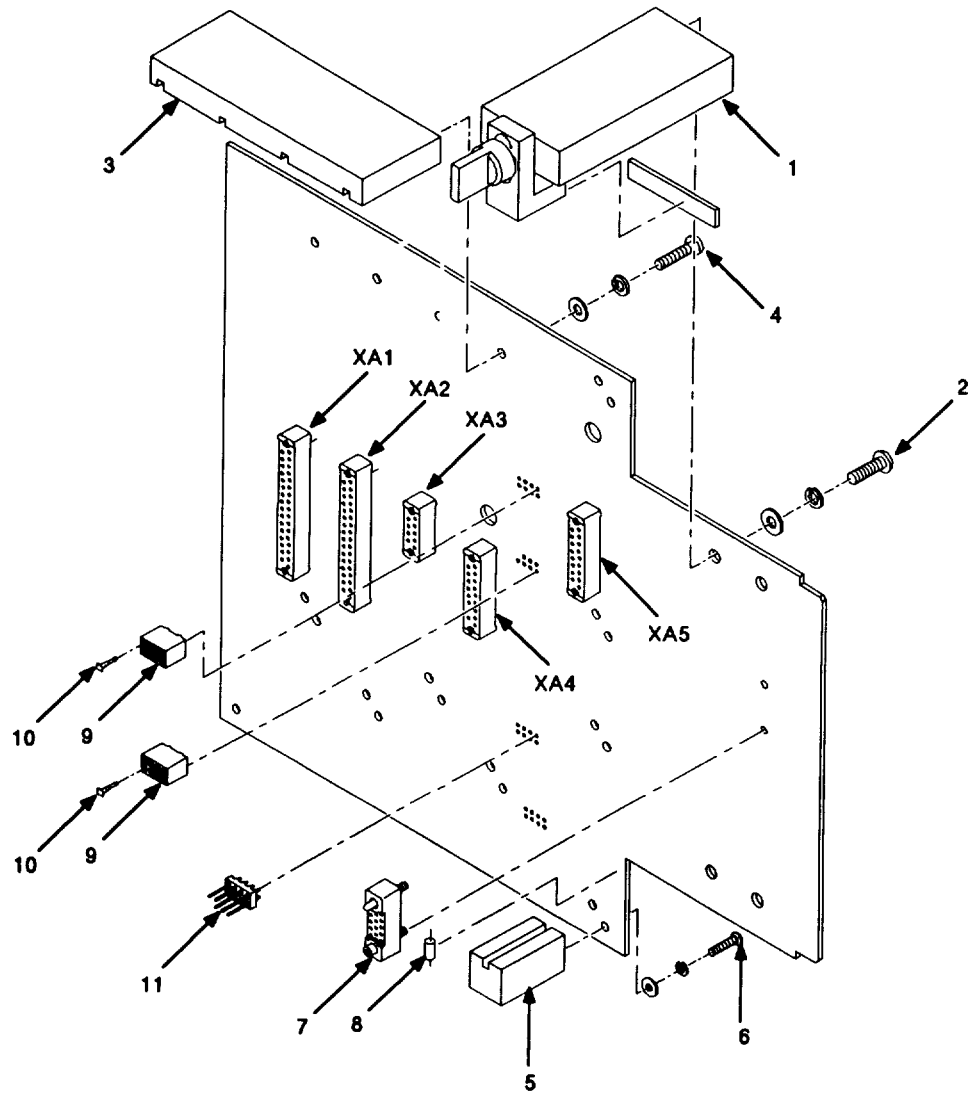
Replace locator support and secure with two screws(6), two lock washers, and two flat washers. | |
| e. | Connector XA6(7) Remove two hex nuts, two fiat washers, and two lock washers from circuit card.

Desolder connector pins.

Replace connector, observing proper orientation, and secure with two hex nuts, two lock washers, and two flat washers. | Note orientation of connector XA6 prior to removal. |
| f. | Resistor R1(8) Solder connector pins.

Replace as required. | |

4-47. Maintenance Procedures for Test Adapter C. Cont



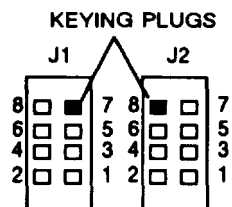
EL9RG217

Figure 4-67. Component Layout of CCA-Test Adapter C

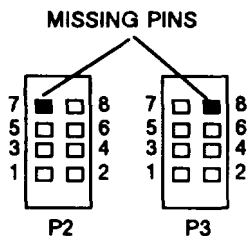
4-47. Maintenance Procedures for Test Adapter C. Cont

ITEM	ACTION	REMARKS
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g. Connectors J1, J2(9)	Unsolder from circuit card. Replace connector. Install keying piugs(10) as shown.	Refer to figure 4-67 on page 4-117.
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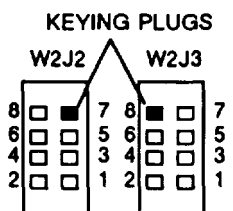


h. Connectors P2, P3(11)	Solder connector pins. Unsolder from circuit card. Replace connector. Remove connector pins as shown.	Refer to figure 4-67 on page 4-117.
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i. Wiring Harness, Branched (W2)	Solder connector pins.	Refer to figure 4-67 on page 4-117.
----------------------------------	------------------------	-------------------------------------

(1) Wires/Pins	Remove pins from connectors at both ends of defective wire. Remove tiedown straps. Replace wire and install pins on ends of wire. Install pins in connectors. Replace tiedown straps.	Refer to figure 4-68 on page 4-119.
(2) Connector J1	Replace as required.	Refer to figure 4-68 on page 4-119.
(3) Connectors J2, J3	Replace connectors as required. Install keying piugs as shown.	Refer to figure 4-68 on page 4-119.



EL9RG220

447. Maintenance Procedures for Test Adapter C. Cont

ITEM	ACTION	REMARKS
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	Install pins into appropriate positions.	
(4) Tiedown strap(1)	Replace as required.	Refer to figure 4-66 on page 4-119. Use item 119, App. C
(5) Tiedown strap(2)	Replace as required.	Refer to figure 4-68 on page 4-119. Use item 262, App. C
(6) Marker Sleeves J1	Replace as required.	Use item 73, App. c
(7) Marker Sleeves W2	Replace as required.	Use item 43, App. C
(8) Identification Marker	Replace as required.	
(9) Wires	Replace as required.	
(10) Wiring Harness (W2)	Wire List.	

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	<u>MARKER</u>
J1-8	J2-1	Violet, item 155, App. C	
J1-12	J2-2	White, item 157, App. C	item 20, App. C
J1-5	J2-3	Yellow, item 152, App. C	
J1-13	J2-4	White, item 157, App. C	item 21, App. C
J1-6	J2-5	Green, item 153, App. C	
J1-14	J2-6	White, item 157, App. C	item 22, App. C
N/C	J2-7		
J1-7	J2-8	Blue, item 154, App. C	
J1-4	J3-1	Orange, item 151, App. C	
J1-1	J3-2	Black, item 148, App. C	
J1-9	J3-3	Gray, item 156, App. C	
J1-2	J3-4	Brown, item 149, App. C	
J1-10	J3-5	White, item 157, App. C	
J1-3	J3-6	Red, item 150, App. C	
J1-11	J3-7	White, item 157, App. C	item 19, App. C
N/C	J3-8		

j. Wiring Harness, Branched (W1)		Refer to figure 4-69 on page 4-121.
(1) Wires/Pins	Remove pins from connectors at both ends of defective wire. Remove tiedown straps. Replace wire and install pins on ends of wire. Install pins In connectors. Replace tiedown straps.	
(2) Connector J1	Replace as required.	
(3) Connectors J2, J3	Replace connectors as required.	
(4) Tiedown straps(1)	Replace as required.	Refer to figure 4-69 on page 4-121. Use item 119, App. C
(5) Tiedown straps(2)	Replace as required.	Refer to figure 4-69 on page 4-121. Use item 262, App. C
(6) Marker Sleeves P1	Remove as required.	Use item 72, App. C
(7) Marker Sleeves W1	Remove as required.	Use item 42, App. C
(8) Identification Marker	Remove as required.	
(9) Wires	Replace as required.	

4-47. Maintenance Procedures for Test Adapter C. Cont

ITEM	ACTION	REMARKS
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(10) Wiring Harness (W1) Wire List

FROM	TO	COLOR/TRACER	MARKER
P1-4	P3-1	Orange, item 151, App. C	
P1-7	P3-2	Blue, item 154, App. C	
P1-13	P3-3	White, item 157, App. C	item 21, App. C
P1-6	P3-4	Green, item 153, App. C	
P1-12	P3-5	White, item 157, App. C	item 20, App. C
P1-5	P3-6	Yellow, item 152, App. C	
P1-11	P3-7	White, item 157, App. C	item 19, App. C
N/C	P3-8		
P1-14	P2-1	White, item 157, App. C	item 22, App. C
P1-10	P2-2	White, item 157, App. C	
P1-3	P2-3	Red, item 150, App. C	
P1-9	P2-4	Gray, item 156, App. C	
P1-2	P2-5	Brown, item 149, App. C	
P1-8	P2-6	Violet, item 155, App. C	
N/C	P2-7		
P1-1	P2-8	Black, item 148, App. C	

NOTE
 THE FIRST COLOR IS THE COLOR OF THE WIRE. A WIDE MARKER IS APPLIED TO WHITE WIRES FOR IDENTIFICATION.

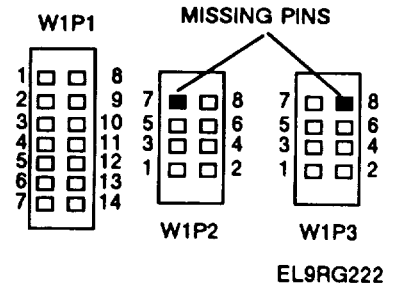
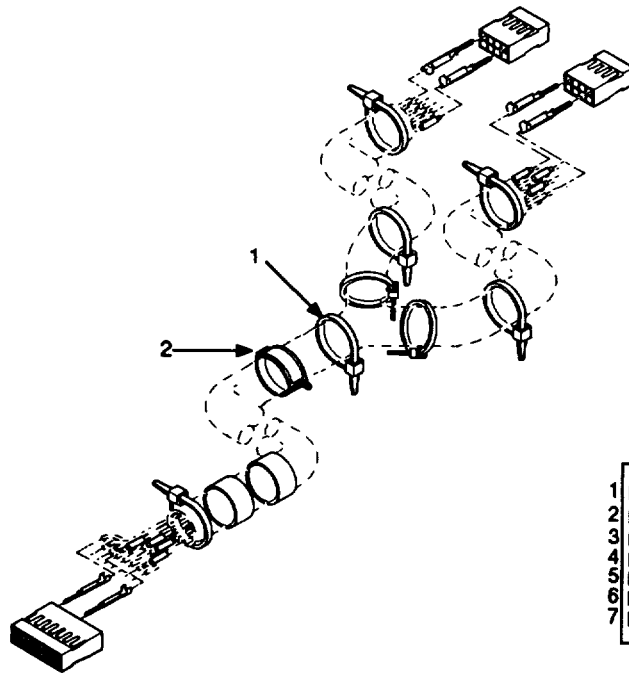
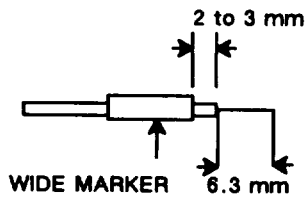
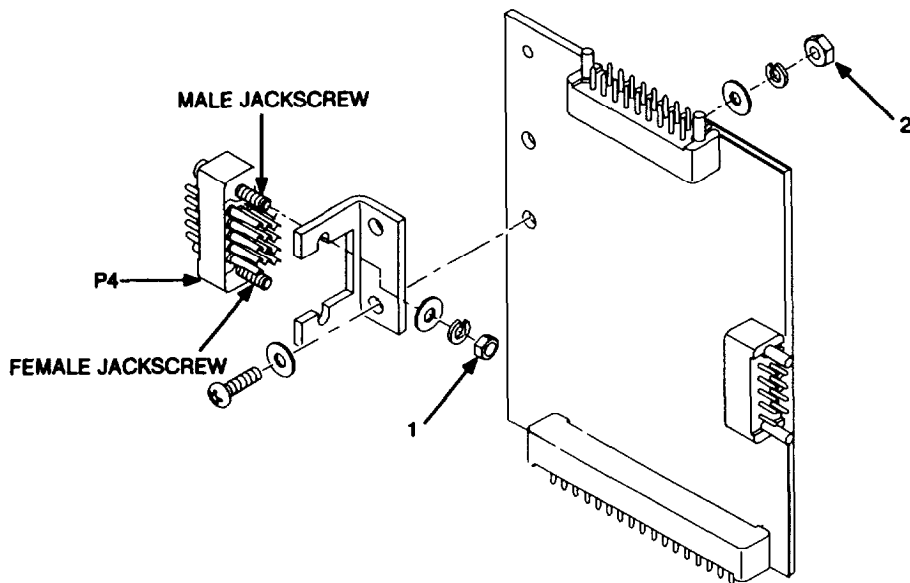


Figure 4-69. Maintenance of Test Adapter C Cable W1

4-47. Maintenance Procedures for Test Adapter C. Cont

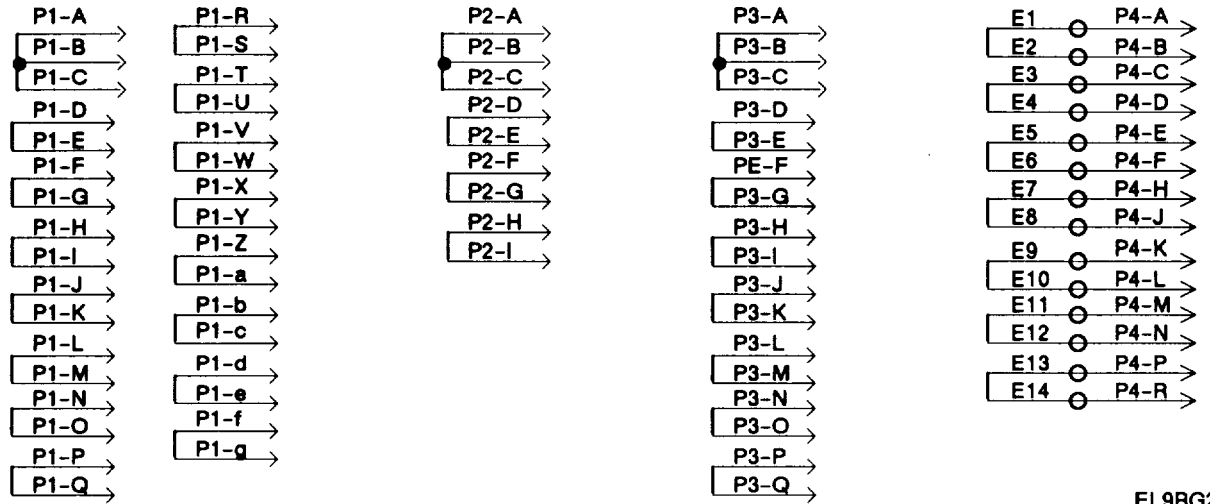
ITEM	ACTION	REMARKS
k. Extender Card,Self - Test C.		
(1) connector P4	Tag wires. Unsolder wires from connector. Remove two hex nuts(1), two lock washers, and two flat washers from angle bracket. Replace connector and secure with two hex nuts(1), two flat washers and two lock washers. Solder wires onto connector. Replace wires as required. Remove tags.	Note orientation of connector prior to removal.
(2) Angle Bracket	Remove connector P4. Remove two screws, four flat washers, two lock washers, and two hex nuts(2). Replace angle bracket and secure with two screws, four flat washers, two lock washers, and two hex nuts(2). Install connector P4.	Refer to step (1) . Refer to step (1) .



EL9RG223

Figure 4-70. Component Layout of Extender Card, Self-Test C

4-47. Maintenance Procedures for Test Adapter C. Cont



EL9RG224

Figure 4-71. Schematic Diagram for Self-Test C Extender Card

4-48. Maintenance Procedures for Load Card B.

ITEM	ACTION	REMARKS
a. CCA-Load Card B	Refer to FO-11 for schematic diagram.	
b. Component replacement procedures.		Refer to figure 4-72 on page 4-125.
(1) Resistors R3, R23-25, R27-31 , R33, R34	Unsolder wires from both ends of resistor. Remove two screws, two flat washers, two lock washers, and two hex nuts from circuit card. Replace defective resistor and secure with two screws, two lock washers, two flat washers, and two hex nuts. Solder wires to ends of resistors.	

CAUTION

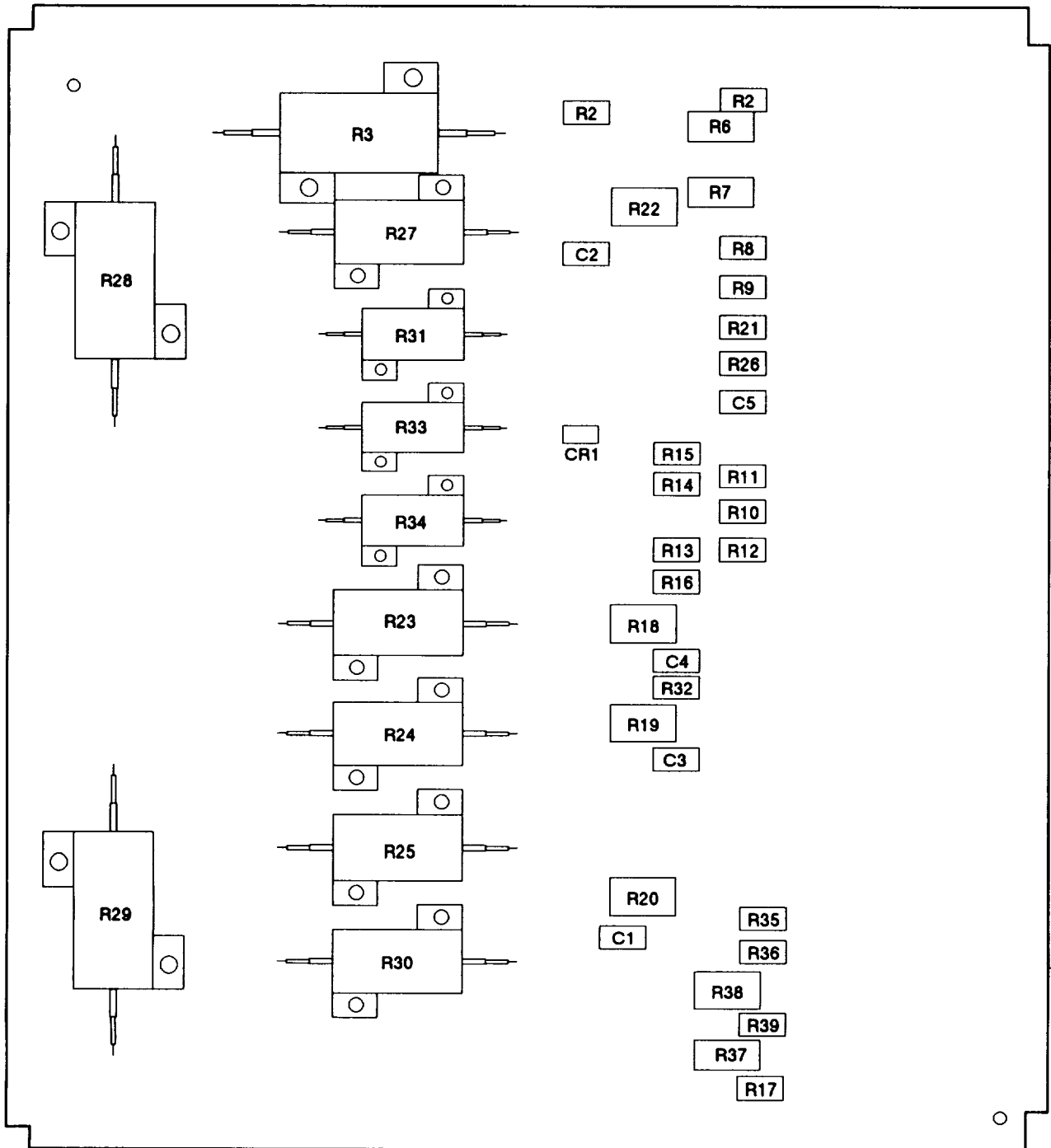
DIODE CR1 IS AN ELECTROSTATIC SENSITIVE ELECTRONIC DEVICE



EL9RG225

(2) Diode CR1	Replace as required.	Ensure polarity is observed as marked on PWB.
(3) All Other Components	Replace as required.	

4-48. Maintenance Procedures for Load Card B. Cont

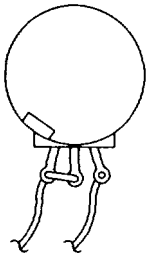


EL9RG226

Figure 4-72. Component Layout of CCa-Load Card B

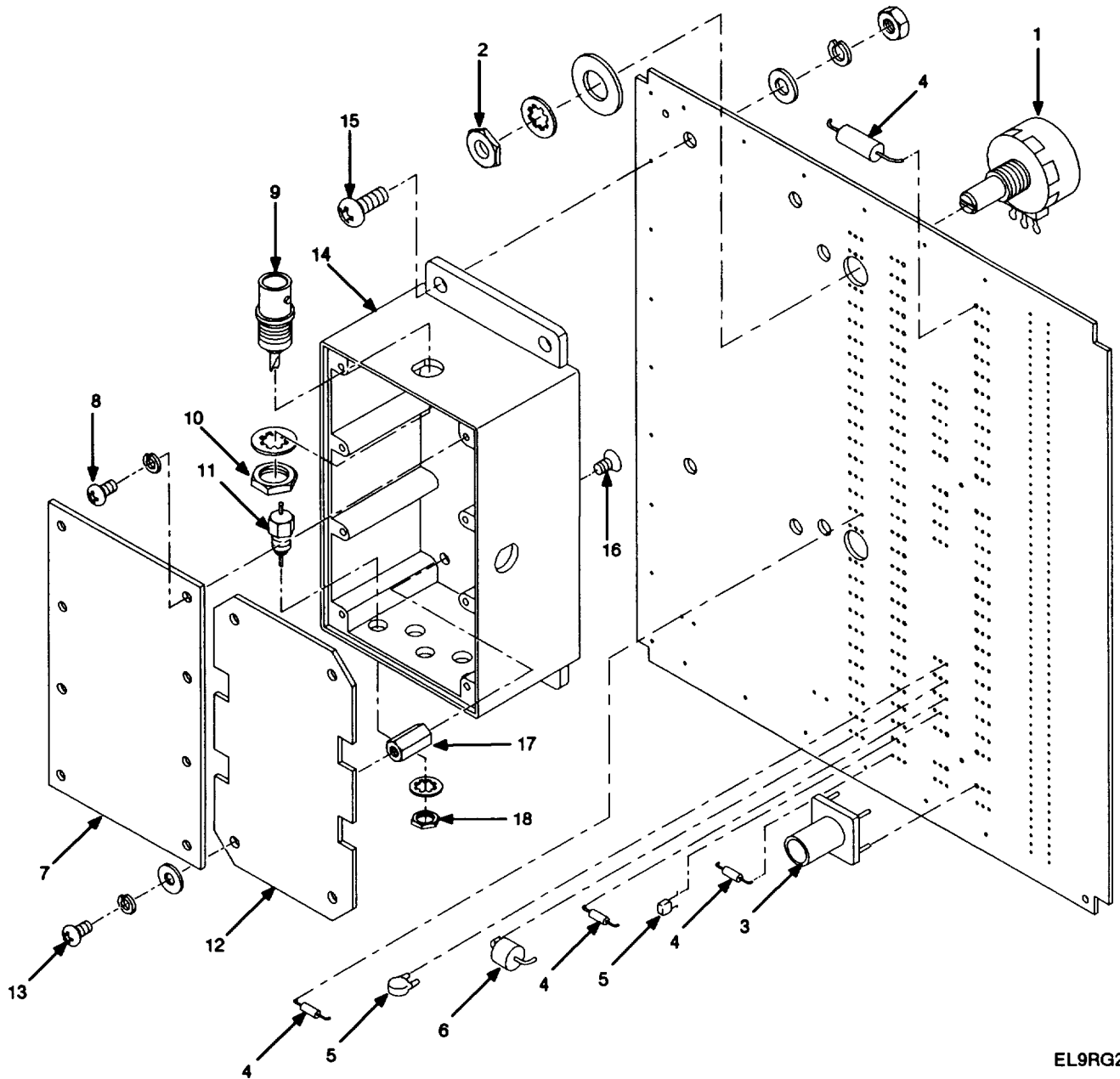
4-49. Maintenance Procedures for Load Card C.

INITIAL SETUP	
TEST EQUIPMENT: Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223) Multimeter AN/USM-486 (6625-01-145-2430)	REFERENCES TM 11 -5820-914-40 TM 11-6625-2773-10 TM 11-6S25-3094-24P TB 43-0127
TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-01-610-8877) Solder Repair Center PRC-151 (3439-01-109-8590)	PERSONNEL REQUIRED: 1

ITEM	ACTION	REMARKS
a. Schematic Diagram	Refer to figure 4-75 on page 4-130.	
(1) Resistors R9, R22(1)	Unsolder two wires from defective resistor. Remove hex nut (2), internal-external tooth lock washer, and flat washer from circuit card. Replace resistor and secure with hex nut, internal/external tooth lock washer, and flat washer. Solder jumper wire across appropriate pins.	Refer to figure 4-73 on page 4-127. Note which pins are jumpered with wire.
		
(2) Connectors J1, J4(3)	Unsolder from circuit board. Replace and solder to circuit board.	
(3) Resistors(4), Capacitors (5) Surge arrestors (6)	Unsolder from circuit board. Replace component. Solder to circuit board.	

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4-49. Maintenance Procedures for Load Card C. Cont



EL9RG228

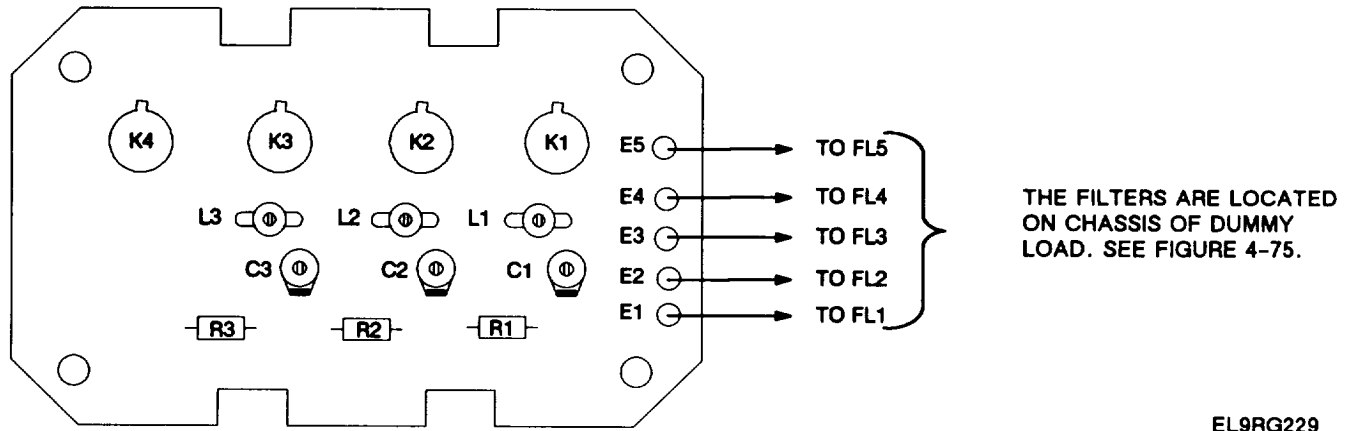
Figure 4-73. Disassembly of Electrical Dummy Load

4-49. Maintenance Procedures for Load Card C. Cont

ITEM	ACTION	REMARKS
b. Dummy Load Assembly		Refer to figure 4-73 on page 4-127.
(1) External wires	Replace as required.	
(2) Cover(7)	Remove eight screws(8), and eight lock washers.	
	Replace cover and secure with eight screws(8) and eight lock washers.	
(3) Connectors J2, J3(9)	Remove cover.	Refer to step (2) .
	Unsolder wires.	Refer to figure 4-73 on page 4-127.
	Remove hex nut (10) and internal external tooth washer.	
	Replace connector and secure with internal/external tooth washer and hex nut (1 O).	
	Install cover.	Refer to step (2) .
	Solder wire to connector.	
(4) Filters FL1 thru FL5(11)	Remove cover.	Refer to step (2) .
	Unsolder all wires from filters.	Refer to figure 4-73 on page 4-127.
	Remove hex nuts(I 8) and internal/external tooth washers.	
	Replace and secure with hex nuts(I 8) and internal/external tooth washers.	
(5) CCA-Dummy Load Card (12)	Remove cover.	Refer to step (2) .
	Remove filters.	Refer to step (4) .
	Remove connectors J2 and J3.	Refer to step (3) .
	Remove four screws(13), four lock washers, and four flat washers and remove circuit board from case.	
	Replace components as required.	Refer to figure 4-76 on page 4-131 for schematic diagram.
	Install circuit board and secure with four screws(13), four lock washers, and four flat washers.	
	Install filters.	Refer to step (4) .
	Install connectors.	Refer to step (3) .
	Install cover.	Refer to step (2) .

4-49. Maintenance Procedures for Load CardC. Cont

ITEM	ACTION	REMARKS
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EL9RG229

figure 4-74. Electrical Dummy Load

(6) Dummy load case(14)	<p>Remove cover.</p> <p>Remove connectors J2 and J3.</p> <p>Remove filters FL1 to FL5.</p> <p>Remove CCA-Dummy load card.</p> <p>Remove four screws (15), four flat washers, four lock washers and four hex nuts.</p> <p>Remove four screws (16) from four standoffs(17).</p> <p>Replace components as required.</p> <p>Install four standoffs(17) and secure with four screws (16).</p> <p>Install case on load card and secure with four screws (15), four flat washers, four lock washers and four hex nuts.</p> <p>Install CCA-Dummy load.</p> <p>Install filters FL1 to FL5.</p> <p>Install connectors J2 and J3.</p> <p>Install cover.</p>	<p>Refer to step (2) .</p> <p>Refer to step (3) .</p> <p>Refer to step (4) .</p> <p>Refer to step (5) .</p> <p>Refer to step (5) .</p> <p>Refer to step (4) .</p> <p>Refer to step (3) .</p> <p>Refer to step (2) .</p>
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4-49. Maintenance Procedures for Load Card C.Cont

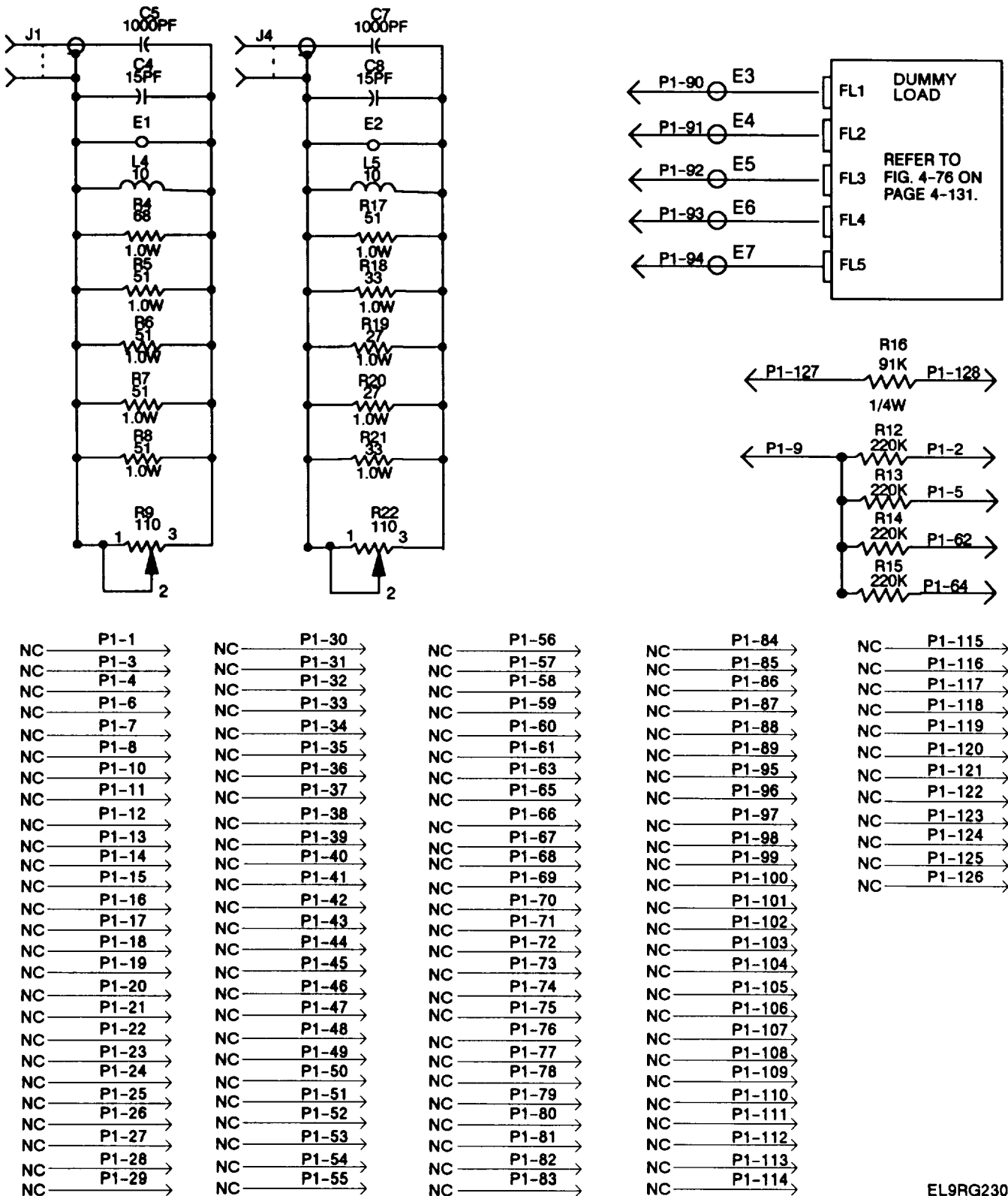


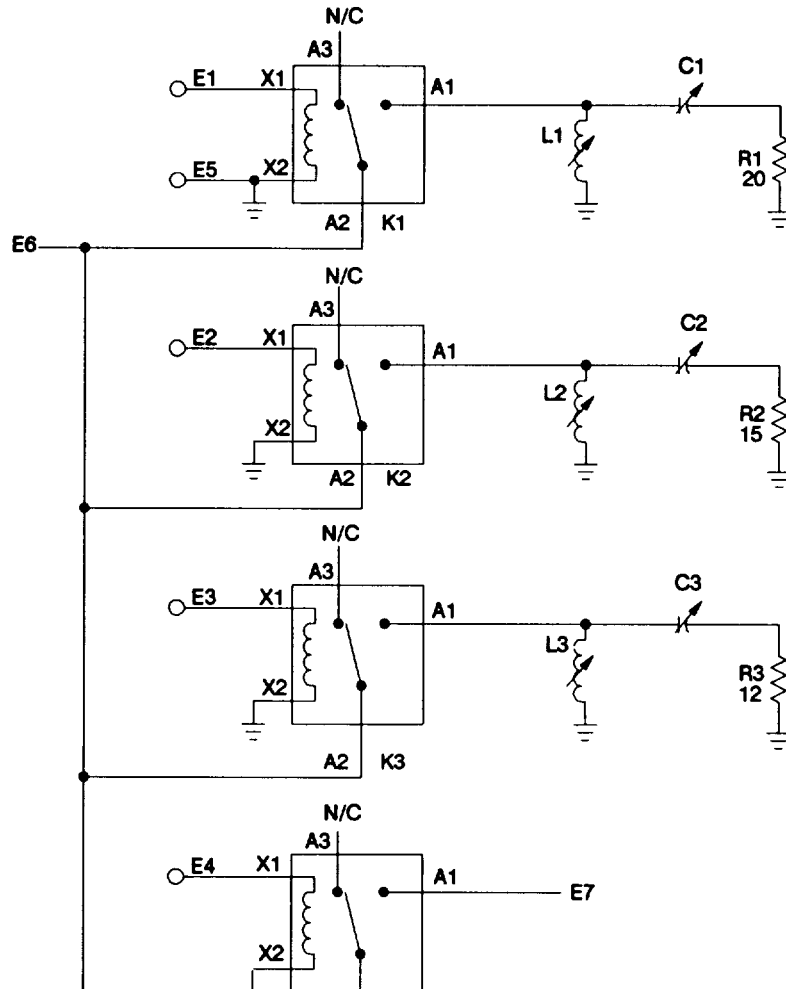
Figure 4-75. Schematic Diagram for CCA-Load Card C

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4-49. Maintenance Procedures for Load Card C. Cont

ITEM	ACTION	REMARKS
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c. Schematic Diagram for CCA-Dummy Load Card.



EL9RG231

Figure 4-76. Schematic Diagram of Dummy Load Card

**Section X. MAINTENANCE OF J-4826/G (CCA-TEST ADAPTER D)
AND J-4834/G (CCA-LOAD CARD B)**

4-50. Required Test Accessories for CCA-Test Adapter D.

This test adapter is used with only one UUT. Test the test adapter by performing the following procedures. To test the load card, perform the test in this section and the test programs with test adapter C contained in Section IX. To verify repair, PERFORM ALL TPS TESTS; this will insure that the test adapter or load card will function properly.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP0300030G
File No.	A3014002
● ICD	ID-005C
● CCA-Adapter Card D	A3014468-1
● CCA-Load Card B	A3017839-1

CAUTION

This UUT contains static sensitive components. Handle in accordance with ESD practices.

4-51. Test Procedures for CCA-Test Adapter D.

NOTE

Before testing CCA-adapter card D, run the ID-005C survey. Use test program CPIN 11 GSG10 File Number ID005C. If ID-005C fails the survey test during any procedure covered in this manual, return ID-005C to depot for repair.

- a. Turn on test station AN/USM-410(V) 2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and press RETURN on VDT keyboard.

NOTE

The intermediate code of this program will require 93 blocks on the removable disk pack (DPØ). Before loading the test program ensure that the DPØ has sufficient space to load the intermediate code. If there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

4-51. Test Procedures for CCA-Test Adapter D. Cont

d. Load test program,

(1) install testprogram tape CPINCP03000WG in accordance with TM 11-6625-2773-10.

(2) Load file on to disk in accordance with TM11-6625-2773-IO.

e. Select test.

NOTE

Two part numbers are served by this test program, The file name for this program is A3014002. The A301 4002-1 board is not currently used.

f. Enter TEST A3014002 and press RETURN on VDT keyboard.

(1) Follow operator instructions on VDT. Enter part number and serial number and read operator instructions on VDT.

(2) Verify that the following information is displayed on the VDT:

```

-----CCA-ONE WATT AUDIO AMPLIFIER-----
PART NUMBER           A3014002-1
PROGRAM DATE/REV.:    MM/DD/YY REV
SERIAL NO. EFFECTIVITY: 001 THRU
MWO EFFECTIVITY:      NONE
    
```

OR

```

-----CCA-ONE WATT AUDIO AMPLIFIER-----
PART NUMBER           A3014195-1
PROGRAM DATE/REV.:    MM/DD/YY REV
SERIAL NO. EFFECTIVITY: 001 THRU
MWO EFFECTIVITY:      NONE
    
```

(3) Press STRT/PROC on the VDT keyboard.

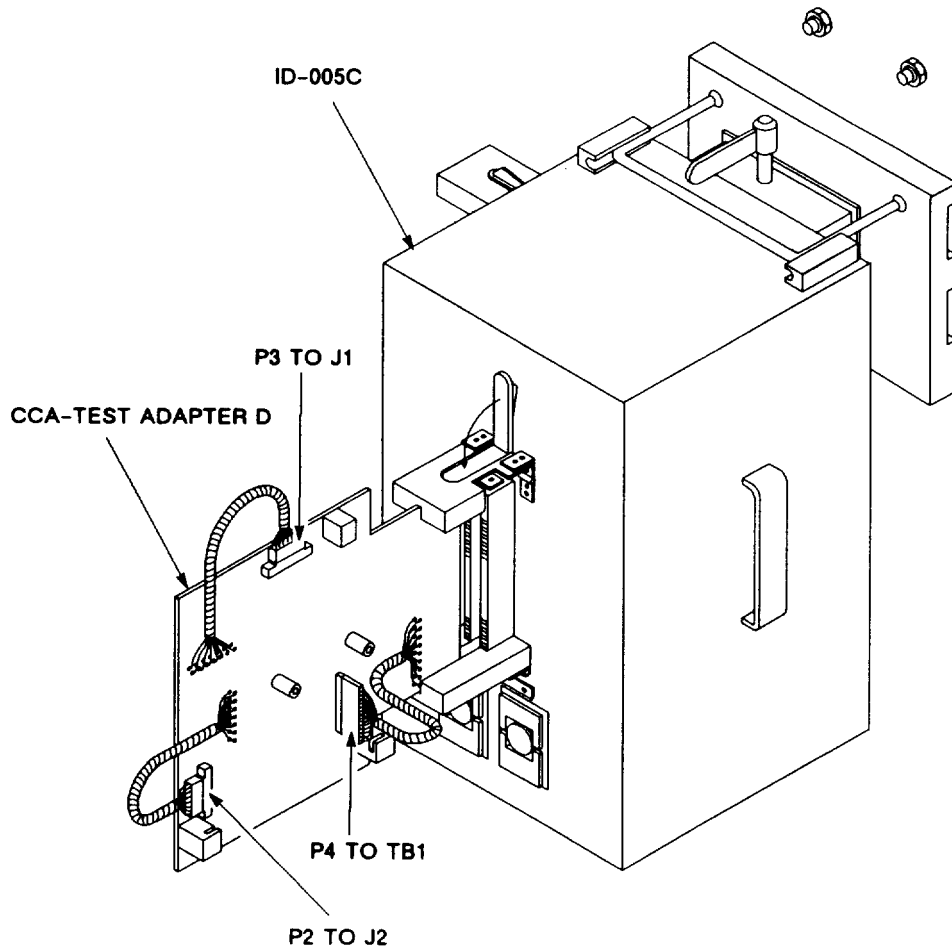
g. Run ATE survey test if desired. If ATE survey fails refer to TM 11-6625-2773-10.

h. Install ICD ID-005C on J1 of PIU.

i. Install CCA-adapter card D on ID-005C. Refer to figure 4-77 on page 4-134.

4-51. Test Procedures for CCA-Test Adapter D. Cont

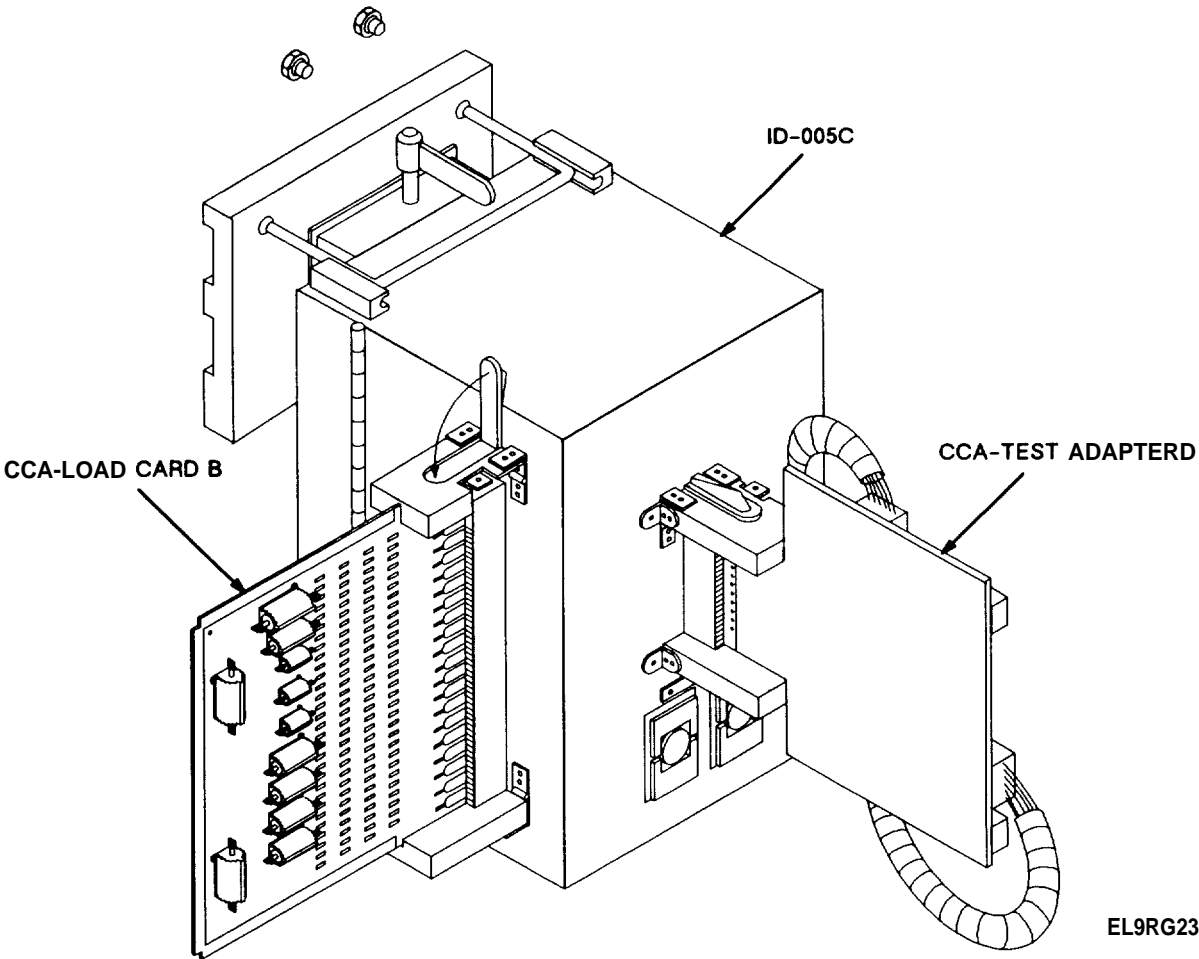
- j. Run adapter card D survey test. If survey test fails refer to paragraph 4-52 on page 4-136.
- k. Install CCA-load card B on ID-005C. Refer to figure 4-78 on page 4-135.
- l. Select load card B survey. If survey fails, go to paragraph 4-48 on page 4-124.
- m. When survey passes, continue with UUT testing.



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Figure 4-77. Installation of CCA-Adapter Card Don ID-005C

4-51. Test Procedures for CCA-Test Adapter D.Cont



EL9RG233

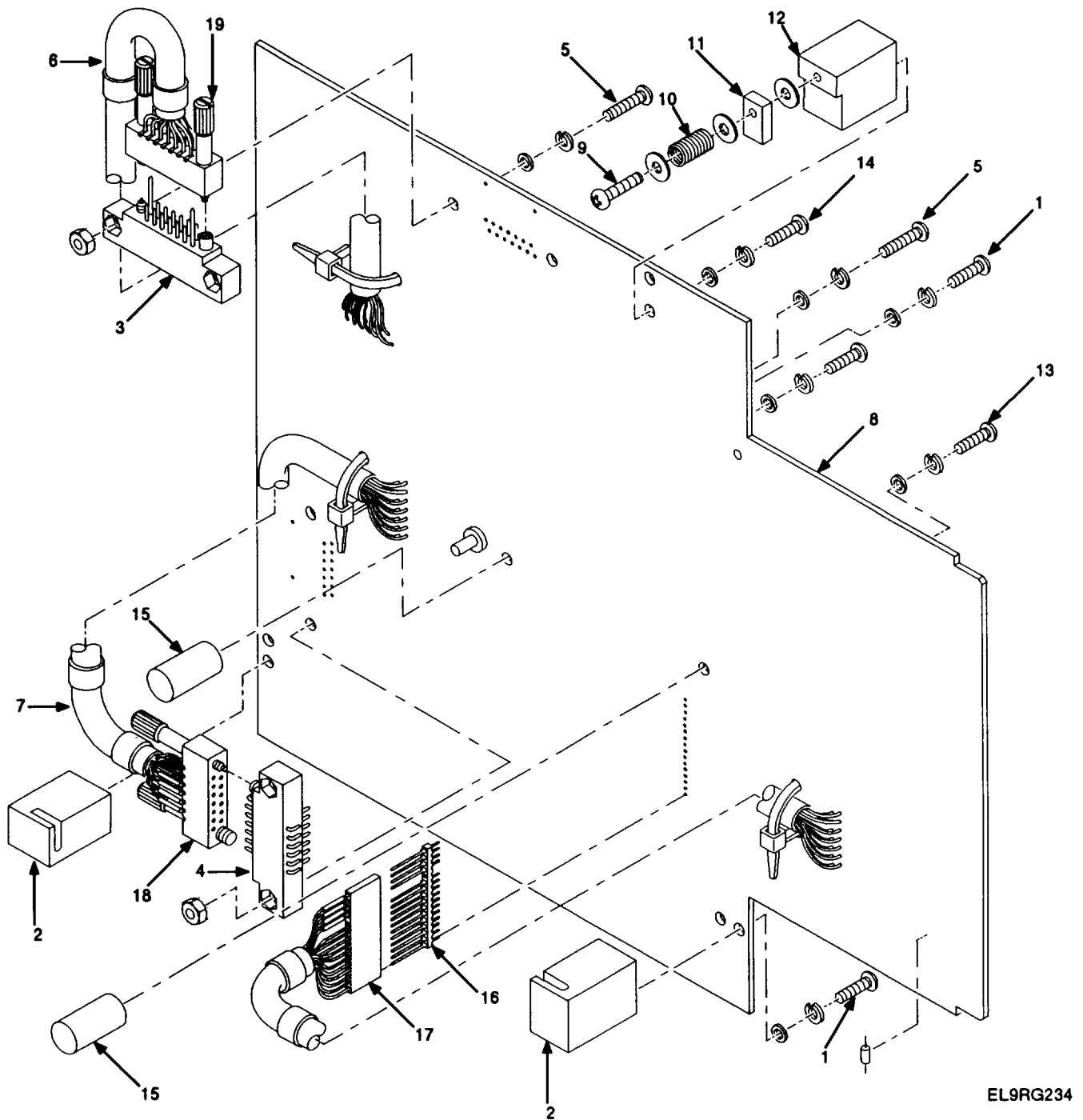
Figure 4-78. Installation of CCA-LoadCard Bon ID-005C

4-52. Maintenance Procedures for CCA-Test Adapter D.

INITIAL SETUP	
TEST EQUIPMENT Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223) Multimeter AN/USM-486 (6625-01-145-2430)	REFERENCES TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-24P TB 43-0127
TOOLS Tool Kit Electronic Equipment TK-105K3 (5180-01-610-6177) Soldier Repair Center PRC-151 (3439-01-109-8590) Tool, Crimping CCT-UBC-1 (5120-01-061-0903)	PERSONNEL REQUIRED: 1

ITEM	ACTION	REMARKS
a. CCA-Test Adapter D	Refer to figure 4-81 on page 4-141 for schematic diagram.	
(1) Electrical cardholders(2)	Remove two screws(1), two lock washers, and two flat washers. Replace electrical card holder and secure with two screws(1), two flat washers, and two lock washers.	Refer to figure 4-79 on page 4-137.
(2) Connectors J1(3), J2(4)	Remove two screws(5), two flat washers, two lock washers, and two nuts. Unsolder from circuit card assembly. Replace connector and secure with two screws (5), two lock washers, two flat washers, and two nuts. Solder to circuit card assembly.	Refer to figure 4-79 on page 4-137. Install Pin 1 to the "Square" pad.
(3) Resistor R1	Replace as required.	

4-52. Maintenance Procedures for CCA-Test Adapter D. Cont



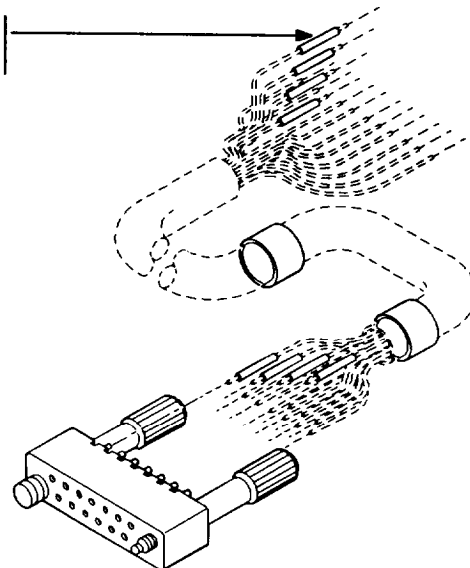
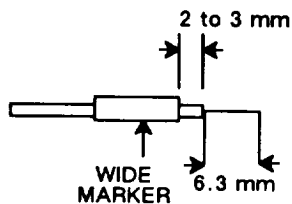
EL9RG234

Figure 4-79. Component Layout of CCA-Test Adapter D

4-52. Maintenance Procedures for CCA-Test Adapter D. Cont

ITEM	ACTION	REMARKS
<p>(4) Holder, Electrical Card, with Retainer(12).</p>	<p>Remove screw(9), three flat washers, spring(10), and retaining plate(11).</p> <p>Remove two screws(14), two flat washers, and two lock washers from circuit card.</p> <p>Replace card holder(12) and secure with two screws (14), two lock washers, and two flat washers.</p> <p>Install screw (9), three flat washers, spring(10), and retaining plate(11) on new card holder.</p>	<p>Refer to figure 4-79 on page 4-137.</p>
<p>(5) Sleeve Spacers(15)</p>	<p>Remove screw(13), lock washer, and flat washer.</p> <p>Replace sleeve spacer(15) and secure with screw(13), lock washer, and flat washer.</p>	<p>Refer to figure 4-79 on page 4-137.</p>
<p>(6) Connector TB1(16)</p>	<p>Unsolder connector TB1 (16) from circuit board(8),</p> <p>Replace connector TB1 (16) and solder to circuit board.</p>	

THE FIRST COLOR IS THE COLOR OF THE WIRE. A WIDE MARKER IS APPLIED TO THE WHITE WIRES FOR IDENTIFICATION



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4-52. Maintenance Procedures for CCA-Test Adapter D. Cont

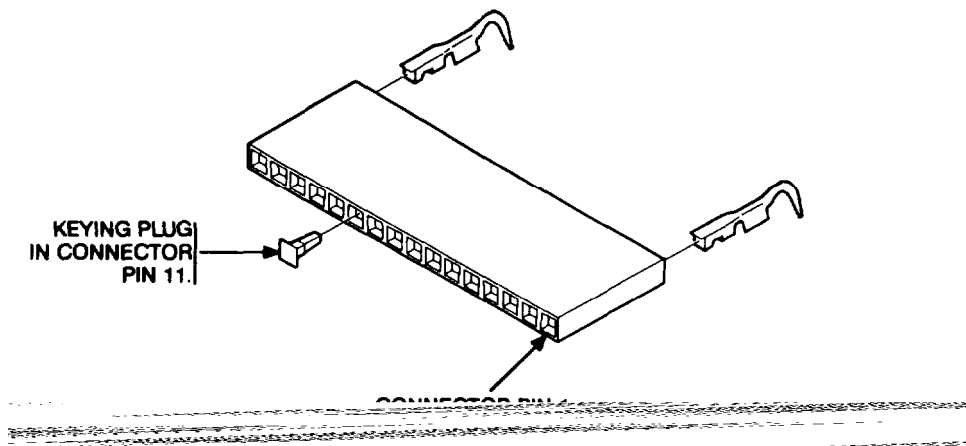
(7) Wire List

Replace wires as required.

<u>FROM</u>	<u>TO</u>	<u>COLOR</u>	<u>MARKER</u>
W1 P3-1	E1	Black, (item 148, App. C)	
W1 P3-2	E2	Brown, (item 149, App. C)	
W1 P3-3	E3	Red, (item 150, App. C)	
W1 P3-4	E4	Orange, (item 151, App. C)	
W1 P3-5	E5	Yellow, (item 152, App. C)	
W1 P3-6	E6	Green, (item 153, App. C)	
W1 P3-7	E7	Blue, (item 154, App. C)	
W1 P3-8	E8	Violet, (item 155, App. C)	
W1 P3-9	E9	Gray, (item 156, App. C)	
W1 P3-10	E10	White, (item 157, App. C)	
W1P3-11	E11	White, (item 157, App. C)	Use item 19, App. C
W1P3-12	E12	White, (item 157, App. C)	Use item 20, App. C
W1P3-13	E13	White, (item 157, App. C)	Use item 21, App. C
W1P3-14	E14	White, (item 157, App. C)	Use item 22, App. C
W2P2-1	E15	Black, (item 148, App. C)	
W2P2-2	E16	Brown, (item 149, App. C)	
W2P2-3	E17	Red, (item 150, App. C)	
W2P2-4	E18	Orange, (item 151, App. C)	
W2P2-5	E19	Yellow, (item 152, App. C)	
W2P2-6	E20	Green, (item 153, App. C)	
W2P2-7	E21	Blue, (item 154, App. C)	
W2P2-8	E22	Violet, (item 155, App. C)	
W2P2-9	E23	Gray, (item 156, App. C)	
W2P2-10	E24	White, (item 157, App. C)	
W2P2-11	E25	White, (item 157, App. C)	Use item 19, App. C
W2P2-12	E26	White, (item 157, App. C)	Use item 20, App. C
W2P2-13	E27	White, (item 157, App. C)	Use item 21, App. C
W2P2-14	E28	White, (item 157, App. C)	Use item 22, App. C
W3P4-1	E29	Black, (item 148, App. C)	
W3P4-2	E30	Brown, (item 149, App. C)	
W3P4-3	E31	Red, (item 150, App. C)	
W3P4-4	E32	Orange, (item 151, App. C)	
W3P4-5	E33	Yellow, (item 152, App. C)	
W3P4-6	E34	Green, (item 153, App. C)	
W3P4-7	E35	Blue, (item 154, App. C)	
W3P4-8	E36	Violet, (item 155, App. C)	
W3P4-9	E37	Gray, (item 156, App. C)	
W3P4-10	E38	White, (item 157, App. C)	
W3P4-11	N/C		
W3P4-12	E40	White, (item 157, App. C)	Use item 19, App. C
W3P4-13	E41	White, (item 157, App. C)	Use item 20, App. C
W3P4-14	E42	White, (item 157, App. C)	Use item 21, App. C
W3P4-15	E43	White, (item 157, App. C)	Use item 22, App. C
W3P4-16	E44	White, (item 157, App. C)	Use item 23, App. C

4-52. Maintenance Procedures for CCA-Test Adapter D. Cent

ITEM	ACTION	REMARKS
b. Spiral Wrap	Replace as required.	Use item 126, App. C
c. Sleeve Marker P2	Replace as required.	Use item 47, App. C
d. Sleeve Marker P3	Replace as required.	Use item 45, App. C
e. Sleeve Marker P4	Replace as required.	Use item 49, App. C
f. Sleeve Marker W1	Replace as required.	Use item 44, App. C
g. Sleeve Marker W2	Replace as required.	Use item 46, App. C
h. Sleeve Marker W3	Replace as required.	Use item 48, App. C
i. Tiedown Straps	Replace as required.	Use item 119, App. C
j. Connector Plug, Electrical P2(18), P3(19)	Tag wires. Unsolder wires (6, 7) from connector. Replace connector and solder wires to connector. Remove tags.	Refer to figure 4-79 on page 4-137.
k. Connector Plug, Electrical P4(17)	Tag wires, Remove pins from defective connector. Remove keying plug. Replace connector. Replace any damaged pins as required. Install pins and keying plug in P4-11. Remove tags.	Refer to figure 4-79 on page 4-137. Refer to figure 4-80.



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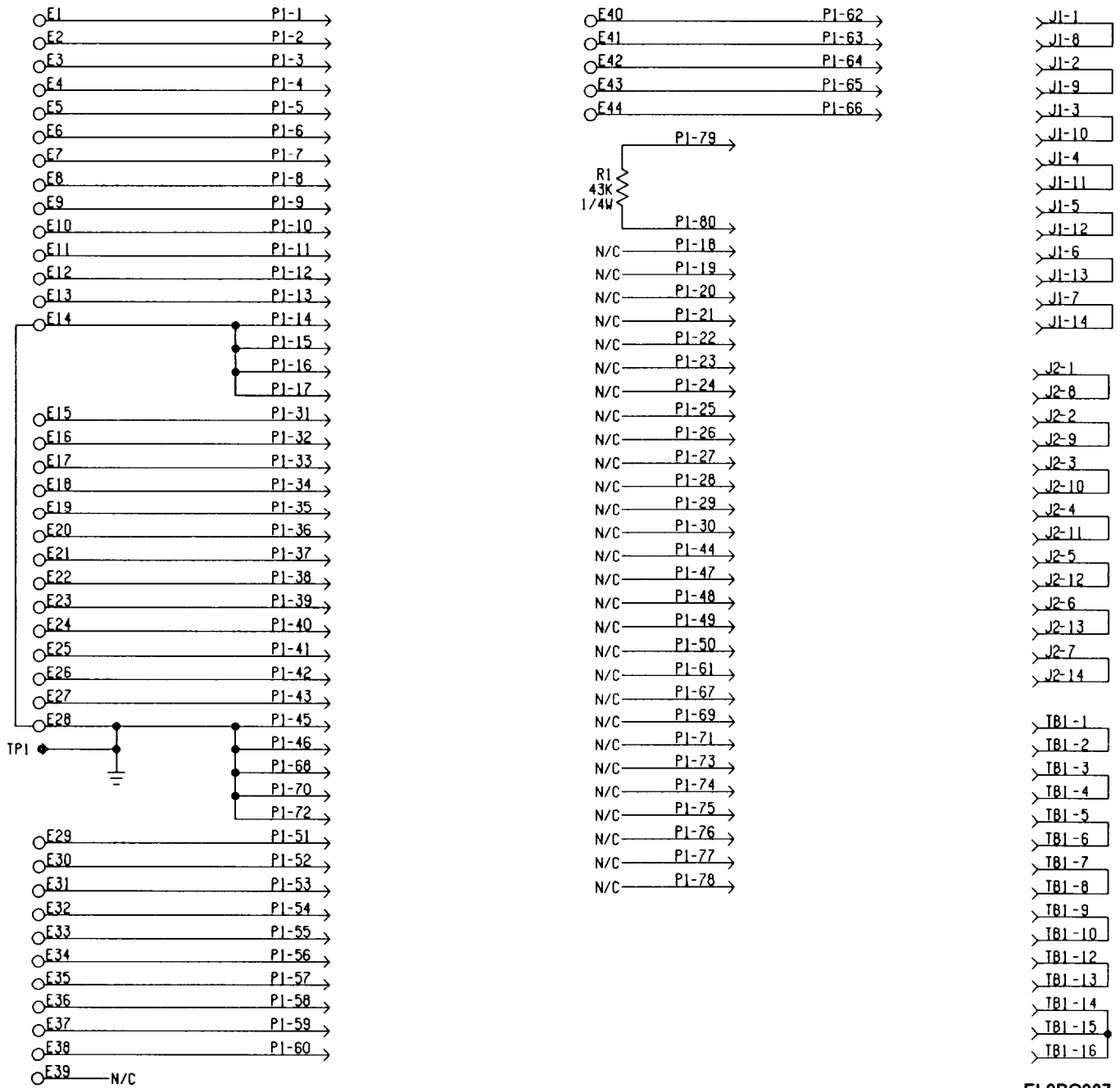
Figure 4-80. Installation of Keying Plug in Connector P4

4-52. Maintenance Procedures for CCA-Test Adapter D. Cont

ITEM	ACTION	REMARKS
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I. Use the following wiring diagram to troubleshoot the CCA-Test Adapter D.

J1, J2, and TB1 should be disconnected,



EL9RG237

Figure 4-81. Schematic Diagram for CCA-Test Adapter D

Section XI. MAINTENANCE OF J-4827/G (TEST ADAPTER E)

4-53. Required Test Accessories for Test Adapter E.

This test adapter is used with only one UUT. Test the test adapter by performing the following procedures.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPINCP0200030G
File No	A3013349
● ICE	ID-005C
● Test Adapter E	A3014508-1
● Self Test Assembly-Test Adapter E	A3017926-1

4-54. Test Procedures for Test Adapter E.

NOTE

Before testing test adapter E, run the ID-005C survey. Use test program CPIN 11 GSGI0 File Number ID005C. If ID-005C fails the survey test during any procedure covered in this manual, return ID-005C to depot for repair.

- a. Turn on test station AN/USM-410(V) 2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and press RETURN on VDT keyboard.

NOTE

The intermediate code of this program will require 53 blocks on the removable disk pack (DPØ). Before loading the test program ensure that the DPØ has sufficient space to load the intermediate code. If there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

4-54. Test Procedures for Test Adapter E. Cont

d. Load test program.

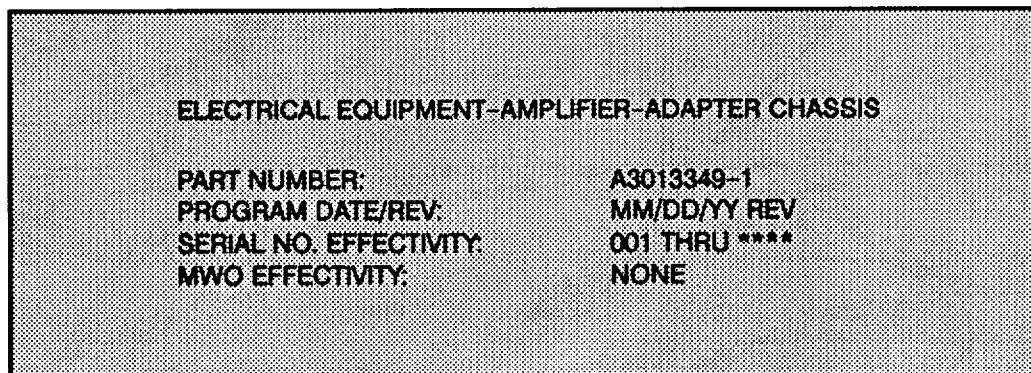
- (1) Install test program tape CPINCP0200030G in accordance with TM 11-6625-2773-10.
- (2) Load file on to disk in accordance with TM 11-6625-2773-10.

e. Select test.

NOTE

Two part numbers are served by this test program. The file name for this program is A3013349.

- (1) Enter TEST A3013349 and press RETURN on VDT keyboard.
- (2) Follow operator instructions on VDT. Enter part number and serial number and read operator instructions on VDT.
- (3) Verify that the following information is displayed on the VDT:



(4) Press STRT/PROC on the VDT keyboard.

f. Run ATE survey test if desired. If ATE survey fails refer to TM 11-6625-2773-10.

g. Install ICD ID-005C on J1 of PIU.

h. Install test adapter E on ID-005C.

i. Run test adapter E survey test. If survey test fails go to paragraph 4-55 on page 4-145.

j. After testing continue with UUT testing.

4-54. Test Procedures for Test Adapter E. Cent

k. Run test adapter E survey test. If survey test fails replace fails photoparagraph 4-55 page 4-145 for component remove and replace instructions.

l. After survey passes, continue with UUT testing.

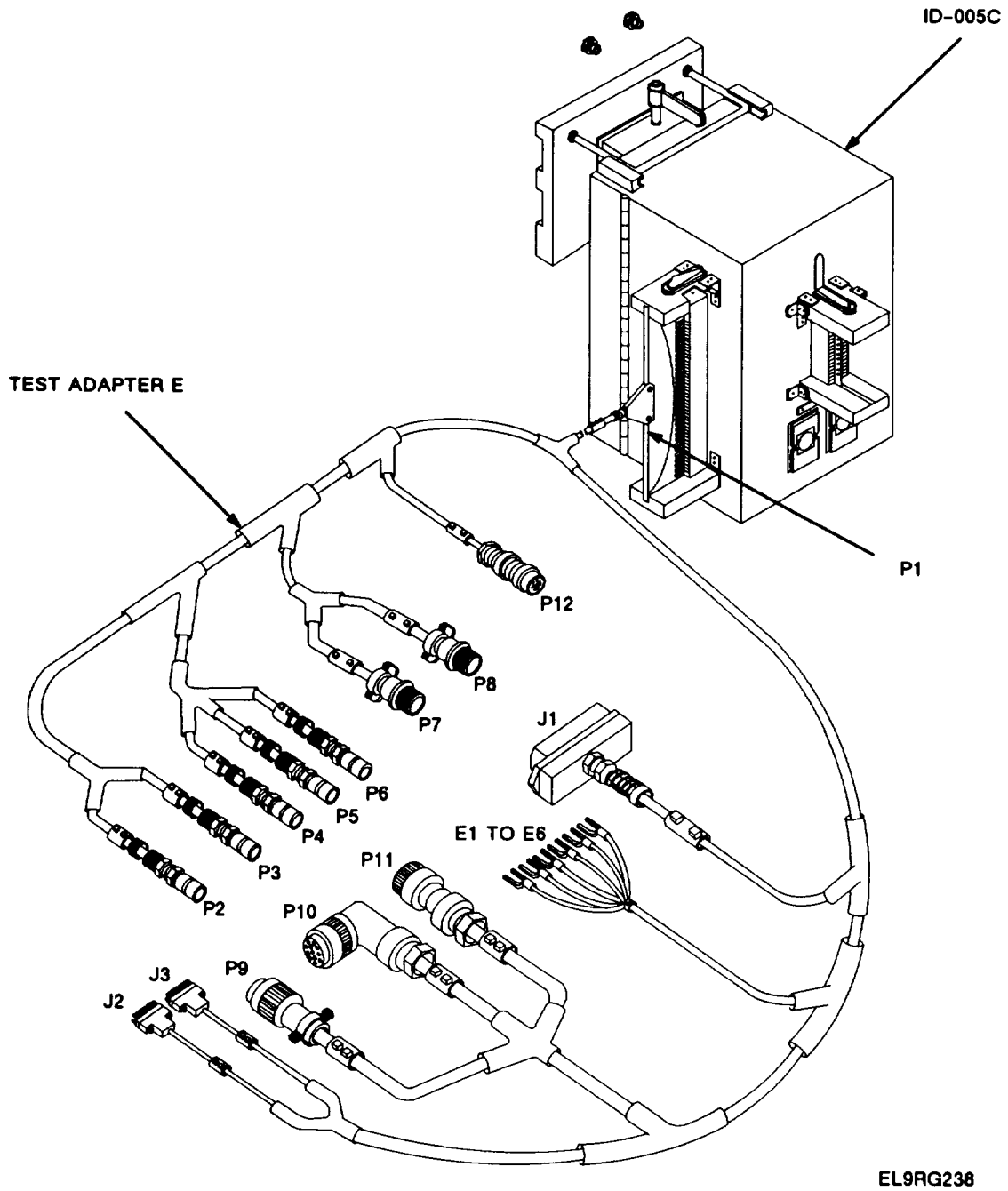


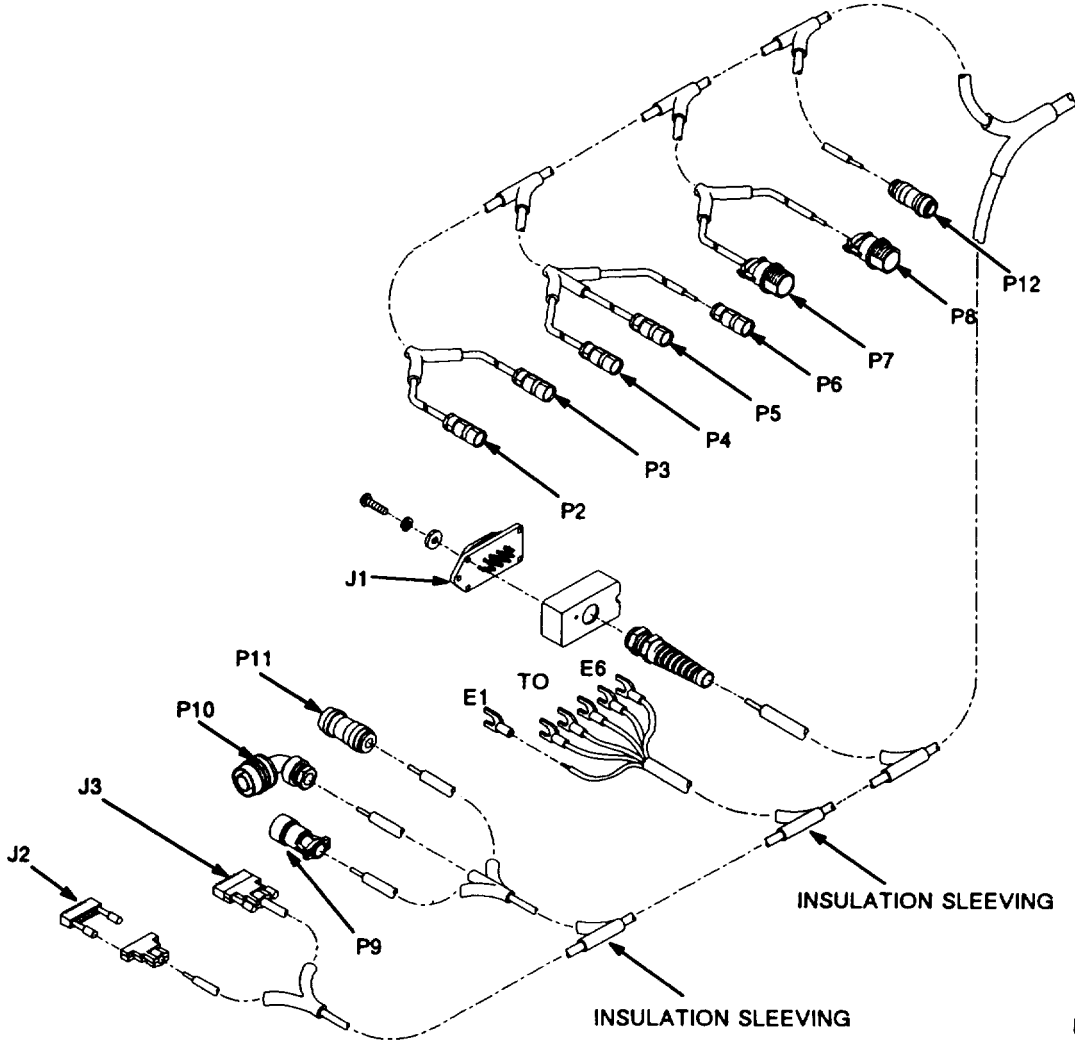
Figure 4-82. Installation of ICD E on ID-005C

4-55. Maintenance Procedures for Test Adapter E.

INITIAL SETUP	
TEST EQUIPMENT	TOOLS
Test station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223)	ToolKitElectronicEquipment TK-100/G (5180-00-602-0029)
Multimeter AN/USM-488 (8625-01-145-2430)	Soldier Repair Centr PRC-151 (3439-01-109-8590)
REFERENCES	Tool, Extractor M524256R20 (5120-00-079-4601)
TM 11-5820-914-40	Tool Extractor M524256R16 (5120-00-079-4602)
TM 11-6825-2773-10	Tool Crimping M22520/1-01 (5120-00-165-3912)
TM 11-8625-3094-24P	Turret Head Assembly M22520/1-02 (5120-00-016-6382)
TB 43-0127	
PERSONNEL REQUIRED: 1	

a. Test Adapter E

Refer to FO-8 for schematic diagram.



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Figure 4-83. Disassembly of Interconnect Device E

4-55. Maintenance Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
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b. Connector J1 (1)

Remove wire protector(2) from backshell(3).

Remove four screws (4) and four lock washers securing backshell(3) to connector(1).

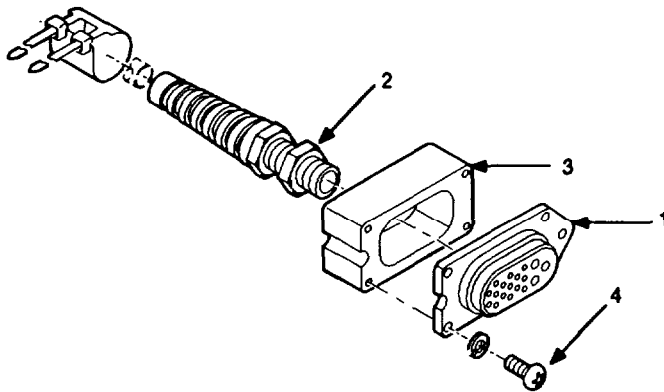
Remove backshell(3) from connector(1).

Unsolder wires from connector pins.

Replace connector(1).

Solder wires to appropriate pins.

Install backshell (3) on connector(1) and secure with four screws (4) and four lock washers.



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Install wire protector(2) on backshell (3).

(1) Spiral tubing

Replace as required.

Use item 122, App. C

(2) Marker, identification J1

Replace as required.

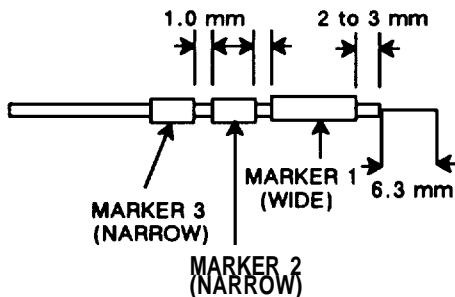
Use item 7, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
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(3) Wires

Replace as required



NOTE
THREE MARKERS ARE USED FOR IDENTIFYING WHITE WIRES. THE FIRST MARKER IS WIDE AND THE REMAINING TWO ARE NARROW.

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<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
J1-A	E1	P1-1	Black	Use item 148, App. C
J1-B	E2	P1-2	Brown	Use item 149, App. C
J1-C	E3	P1-3	Red	Use item 150, App. C
J1-D	E4	P1-5	Orange	Use item 151, App. C
J1-E	E5	P1-6	Yellow	Use item 152, App. C
J1-F	E6	P1-7	Green	Use item 153, App. C
J1-H	E7	P1-8	Blue	Use item 154, App. C
J1-K	E8	P1-9	Violet	Use item 155, App. C
J1-M	E9	P1-10	Gray	Use item 156, App. C
J1-N	E10	P1-11	White	Use item 157, App. C
J1-P	E11	P1-12	White Marker (wide) 1	Use item 157, App. C Use item 19, App. C
J1-S	E12	P1-13	White Marker(wide) 1	Use item 157, App. C Use item 20, App. C
J1-U	E13	P1-14	White Marker(wide) 1	Use item 157, App. C Use item 21, App. C
J1-V	E14	P1-15	White Marker(wide) 1	Use item 157, App. C Use item 22, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
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c. Connector J2, J3

Remove four screws and nuts securing two halves of backshell (1).

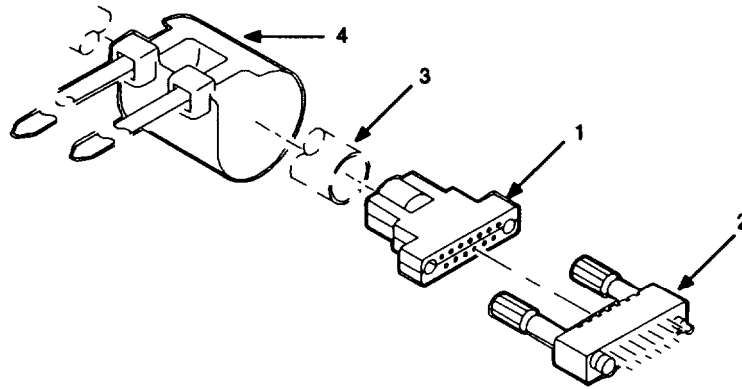
Remove backshell halves from connector(2).

Unsolder wires from connector pins.

Replace connector(2).

Solder wires to connector pins.

Install backshell halves(1) on connector and secure with four screws and four hex nuts.



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(1) Spiral tubing(3)

Replace as required.

Use item 122, App. C

(2) Marker, identification J2(4)

Replace as required,

Use item 17, App. C

(3) Marker, identification J3(4)

Replace as required,

Use item 18, App. C

(4) Wires, connector J2(2)

Replace as required.

(5) Wires, connector J3(2)

Replace as required.

4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
J2-2	E15	P1-16	White Marker (wide) 1	Use item 157, App. C Use item 23, App. C
J2-5	E16	P1-17	White Marker (wide) 1	Use item 157, App. C Use item 24, App. C
J2-6	E17	P1-18	White Marker(wide) 1	Use item 157, App. C Use item 25, App. C
J2-8	E18	P1-19	White Marker(wide) 1	Use item 157, App. C Use item 26, App. C
J2-9	E19	P1-20	White Marker(wide) 1	Use item 157, App. C Use item 27, App. C
J2-10	E20	P1-21	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 19, App. C Use item 29, App. C
J2-11	E21	P1-22	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 19, App. C Use item 30, App. C
J2-12	E22	P1-23	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 19, App. C Use item 31, App. C
J2-13	E23	J2-24	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 19, App. C Use item 32, App. C
J2-14	E24	P1-25	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 19, App. C Use item 33, App. C
J3-1	E25	P1-26	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use, item 19, App. C Use item 34, App. C
J3-2	E26	P1-27	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 19, App. C Use item 35, App. C
J3-3	E27	P1-28	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 19, App. C Use item 36, App. C
J3-4	E28	P1-29	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 20, App. C Use item 30, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
J3-5	E29	P1-30	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 20, App. C Use item 31, App. C
J3-6	E30	P1-31	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 20, App. C Use item 32, App. C
J3-7	E31	P1-32	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 20, App. C Use item 33, App. C
J3-8	E32	P1-33	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 20, App. C Use item 34, App. C
J3-9	E33	P1-34	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 20, App. C Use item 35, App. C
J3-10	E34	P1-35	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 20, App. C Use item 36, App. C
J3-11	E35	P1-36	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 21, App. C Use item 31, App. C
J3-12	E36	P1-37	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 21, App. C Use item 32, App. C
J3-13	E37	P1-38	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 21, App. C Use item 33, App. C
J3-14	E38	P1-39	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 21, App. C Use item 34, App. C

4-55. Test Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
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d. Connectors P2, P3, P4, P5, P6

Loosen stud(1) from adapter nut(2).

Refer to figure 4-83 on page 4-145.

Loosen adapter nut(2) from shell receptacle (4).

Remove insulator(3) from shell receptacle(4).

Remove connector pins from insulator(3).

Unsolder wires from connector pins.

Replace insulator.

Replace marker sleeves as required.

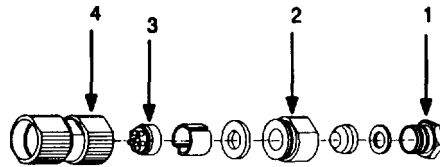
Install all parts of new connector with the exception of the shell receptacle(4).

Solder wires to appropriate new connector pins.

Replace pins insulator(3).

Secure adapter nut (2) to shell receptacle (4).

Secure stud(1) to adapter nut(2).



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(1) Spiral tubing

Replace as required.

Use item 122, App. C

(2) Marker identification P2

Replace as required.

Use item 16, App. C

(3) Marker identification P3

Replace as required.

Use item 15, App. C

(4) Marker identification P4

Replace as required.

Use item 14, App. C

(5) Marker identification P5

Replace as required.

Use item 13, App. C

(6) Marker identification P6

Replace as required.

Use item 12, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
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(7) Wires

Replace as required.

<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P2-A	E56	P1-57	White Marker(wide) 1 Marker(narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 19, App. C Use item 29, App. C Use item 31, App. C
P2-B	E57	P1-58	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 29, App. C Use item 32, App. C
P2-C	E58	P1-59	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 29, App. C Use item 33, App. C
P2-D	E59	P1-60	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 29, App. C Use item 34, App. C
P3-A	E60	P1-61	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 29, App. C Use item 35, App. C
P3-B	E61	P1-62	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 29, App. C Use item 36, App. C
P3-C	E62	P1-63	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 30, App. C Use item 31, App. C
P3-D	E63	P1-64	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 30, App. C Use item 32, App. C
P4-A	E64	P1-65	White Marker(wide) 1 Marker(narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 19, App. C Use item 30, App. C Use item 33, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

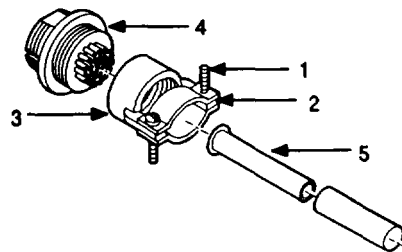
<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P4-B	E65	P1-66	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 30, App. C Use item 34, App. C
P4-C	E66	P1-67	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 30, App. C Use item 35, App. C
P4-D	E67	P1-68	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 30, App. C Use item 36, App. C
P4-F	E68	P1-69	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 31, App. C Use item 32, App. C
P5-A	E69	P1-70	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 31, App. C Use item 33, App. C
P5-B	E70	P1-71	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 31, App. C Use item 34, App. C
P5-C	E71	P1-72	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 31, App. C Use item 35, App. C
P5-D	E72	P1-73	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 31, App. C Use item 36, App. C
P5-F	E73	P1-74	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 32, App. C Use item 33, App. C
P6-A	E74	P1-75	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 32, App. C Use item 34, App. C
P6-B	E75	P1-76	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 2	Use item 157, App. C Use item 19, App. C Use item 32, App. C Use item 35, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P6-C	E76	P1-77	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 32, App. C Use item 36, App. C
P6-D	E77	P1-78	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 33, App. C Use item 34, App. C
P6-E	E78	P1-79	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 21, App. C Use item 34, App. C Use item 35, App. C
P6-F	E79	P1-80	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 33, App. C Use item 35, App. C

4-55. Maintenance Procedures for Test Adapter E. Cent

ITEM	ACTION	REMARKS
e. Connector P7, P8	<p>Remove two screws(1) from cable clamp(2)</p> <p>Unscrew retaining ring (3) from connector body (4).</p> <p>Move spiral wrap (5) out of way.</p> <p>Unsolder wires from connector pins.</p> <p>Replace connector(4).</p> <p>Install marker sleeves as required.</p> <p>Solder wires to connector pins.</p> <p>Screw retaining ring (3) to connector body (4).</p> <p>Install spiral wrap (5) over wires.</p> <p>Tighten two screws(1) on cable clamp(2)</p> <p>Install retaining ring on backshell.</p>	<p>Refer to figure 4-83 on page 4-145.</p>



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(1) Insulation sleeving	Replace as required.	Use item 106, App. C
(2) Spiral tubing	Replace as required.	Use item 122, App. C
(3) Marker identification P7	Replace as required.	Use item 6, App. C
(4) Marker identification P8	Replace as required.	Use item 8, App. C
(5) Wires	Replace as required.	

4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P7-D	E80	P1-81	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 21, App. C Use item 33, App. C Use item 36, App. C
P7-F	E81	P1-82	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 33, App. C Use item 36, App. C
P7-H	E82	P1-83	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 34, App. C Use item 35, App. C
P7-J	E83	P1-84	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 34, App. C Use item 36, App. C
P7-K	E84	P1-85	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 35, App. C Use item 36, App. C
P7-L	E85	P1-86	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 30, App. C Use item 31, App. C
P7-M	E86	P1-87	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use tern 20, App. C Use item 30, App. C Use item 32, App. C
P7-S	E87	P1-88	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C use item 20, App. C Use item 30, App. C Use item 33, App. C
P7-V	E88	P1-89	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 30, App. C Use item 34, App. C
P7-X	E89	P1-90	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 30, App. C Use item 35, App. C
P7-Y	E90	P1-91	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 30, App. C Use item 36, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>P1 E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P7-Z	E91	P1-92	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 31, App. C Use item 32, App. C
P7-a	E92	P1-93	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 31, App. C Use item 33, App. C
P7-d	E93	P1-94	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 31, App. C Use item 34, App. C
P8-A	E94	P1-95	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 31, App. C Use item 35, App. C
P8-C	E95	P1-96	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 31, App. C Use item 36, App. C
P8-D	E96	P1-97	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 32, App. C Use item 33, App. C
P8-F	E97	P1-98	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 32, App. C Use item 34, App. C
P8-G	E98	P1-99	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 32, App. C Use item 35, App. C
P8-H	E99	P1-100	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 32, App. C Use item 36, App. C
P8-J	E100	P1-101	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 33, App. C Use item 34, App. C
P8-K	E101	P1-102	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 33, App. C Use item 35, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

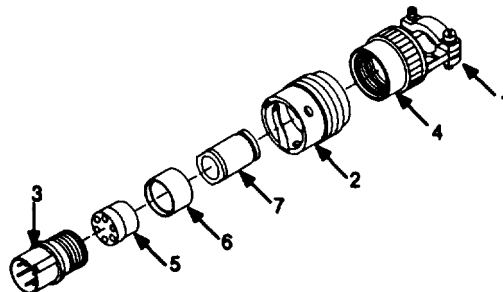
<u>FROM</u>	<u>P1 E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P8-L	E102	P1-103	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 33, App. C Use item 36, App. C
P8-M	E103	P1-104	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 34, App. C Use item 35, App. C
P8-N	E104	P1-105	White Marker(wide) 1 Marker (narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 20, App. C Use item 34, App. C Use item 36, App. C
P8-P	E105	P1-106	White Marker(wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 20, App. C Use item 35, App. C Use item 36, App. C
P8-Q	E106	P1-107	White Marker(wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 21, App. C Use item 31, App. C Use item 32, App. C
P8-R	E107	P1-108	White Marker(wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 21, App. C Use item 31, App. C Use item 33, App. C
P8-S	E108	P1-109	White Marker(wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 21, App. C Use item 31, App. C Use item 34, App. C
P8-T	E109	P1-110	White Marker(wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 21, App. C Use item 31, App. C Use item 35, App. C
P8-V	E110	P1-111	White Marker(wide) 1 Marker (narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 21, App. C Use item 31, App. C Use item 36, App. C
P8-X	E111	P1-112	White Marker(wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 21, App. C Use item 32, App. C Use item 33, App. C
P8-Y	E112	P1-113	White Marker(wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 21, App. C Use item 32, App. C Use item 34, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>P1 E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P8-Z	E113	P1-114	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 21, App. C Use item 32, App. C Use item 35, App. C
P8-a	E114	P1-115	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 21, App. C Use item 32, App. C Use item 36, App. C
P8-d	E115	P1-116	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 21, App. C Use item 33, App. C Use item 34, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
f. Connector P9	<p>Install connector on test assembly connector J2.</p> <p>Loosen two clamp screws (1).</p> <p>Unscrew retaining ring (2) from connector body(3).</p> <p>Unscrew backshell end cap(4) from retaining ring(2).</p> <p>Move backshell end cap(4), retaining ring(2), preformed packing (7), retainer(6) and rubber insulation (5) up wires.</p> <p>Pull wires through backshell to allow enough wire to work with.</p> <p>Remove spacer from connector.</p> <p>Replace connector.</p> <p>Install marker sleeves as required.</p> <p>Install connector pins in connector.</p> <p>Move rubber insulation(5), retainer(6), and preformed packing (7) down wires until snug against connector body (3).</p> <p>Install retaining ring(2) on connector body(3).</p> <p>Install backshell end cap(4) on retaining ring(2).</p> <p>Tighten two clamp screws (1).</p> <p>Remove connector from test assembly connector J2.</p>	



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Figure 4-84. Disassembly of Test Adapter E Connector P9

4-55. Maintenance Procedures for Test Adapter E. Cont

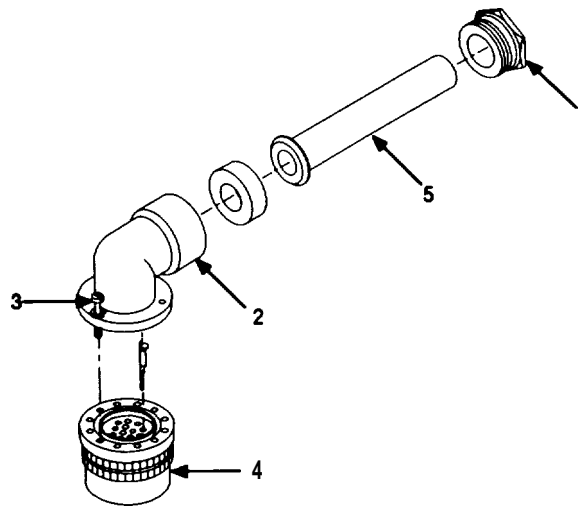
ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|------------------------------|----------------------|----------------------|
| (1) Insulation sleeving | Replace as required. | Use item 106, App. C |
| (2) Spiral tubing | Replace as required. | Use item 122, App. C |
| (3) Marker identification P9 | Replace as required | Use item 10, App. C |
| (4) Wires | Replace as required. | |

<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P9-A	E116	P1-117	White Marker (wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 21, App. C Use item 33, App. C Use item 35, App. C
P8-B	E117	P1-119	White Marker(wide) 1 Marker (narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 21, App. C Use item 34, App. C Use item 36, App. C
P8-C	E118	P1-121	White Marker (wide) 1 Marker(narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 21, App. C Use item 35, App. C Use item 36, App. C
P9-D	E119	P1-123	White Marker (wide) 1 Marker(narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 22, App. C Use item 32, App. C Use item 33, App. C
P8-E	E120	P1-125	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 22, App. C Use item 32, App. C Use item 34, App. C
P8-F	E121	PI-126	White Marker(wide) 1 Marker (narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 22, App.C Use item 32, App. C Use item 35, App. C

4-55. Test Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
9. Connector P10	<p>Loosen retaining nut(1) from 90° backshell (2).</p> <p>Loosen three captive screws(3) securing 90° backshell to connector(4).</p> <p>Remove backshell (2) from connector(4).</p> <p>Unsolder wires from connector pins.</p> <p>Replace connector(4).</p> <p>Replace marker sleeves as required.</p> <p>Install connector with the exception of the connector body and backshell.</p> <p>Solder wires to connector pins.</p> <p>Install 90° backshell (2) on connector.</p> <p>Install three captive screws (3).</p> <p>Install retaining nut (1) on backshell (2).</p>	



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Figure 4-85. Disassembly of Test Adapter E Connectors P10

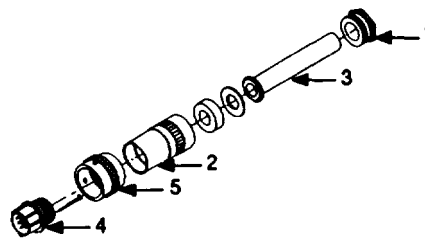
(1) Insulation sleeving	Replace as required.	Use item 106, App. C
(2) Spiral tubing	Replace as required.	Use item 122, App. C
(3) Marker identification P10	Replace as required.	Use item 11, App. C
(4) Wires	Replace as required.	

4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>PI E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P10-A	E15A	P1-16	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 22, App. C Use item 33, App. C Use item 34, App. C
P10-B	E16A	P1-17	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 22, App. C Use item 33, App. C Use item 35, App. C
P10-C	E17A	P1-16	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 22, App. C Use item 33, App. C Use item 36, App. C
P10-D	E18A	P1-19	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 22, App. C Use item 34, App. C Use item 35, App. C
P10-E	E19A	P1-20	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 22, App. C Use item 34, App. C Use item 36, App. C
P10-F	E20A	P1-21	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 22, App. C Use item 35, App. C Use item 36, App. C
P10-H	E21A	P1-22	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 23, App. C Use item 33, App. C Use item 34, App. C
P10-J	E22A	P1-23	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 23, App. C Use item 33, App. C Use item 35, App. C
P10-K	E23A	P1-24	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 23, App. C Use item 33, App. C Use item 36, App. C

4-55. Maintenance Procedures for Test Adapter E.Cont

ITEM	ACTION	REMARKS
h. Connector P11, P12	<p>Install connector on test assembly connector J4.</p> <p>Loosen retaining nut(1) from backshell(2).</p> <p>Slide retaining nut(1) and insulation tubing(3) up wires.</p> <p>Remove backshell (2) from connector body(4) .</p> <p>Remove connector from test assembly.</p> <p>Move connector locking ring (5) up wire.</p> <p>Unsolder wires from connector pins.</p> <p>Replace connector.</p> <p>Replace marker sleeves as required.</p> <p>Install connector.</p> <p>Solder wires to connector pins.</p> <p>Install connector locking ring (5) on connector body(4).</p> <p>Install connector body on test assembly.</p> <p>Install backshell(2) on connector body(4).</p> <p>Install insulation tubing (3) in backshell (2)</p> <p>Install retaining nut (1) on backshell (2).</p> <p>Remove connector from test assembly connector J4.</p>	



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Figure 4-86. Disassembly of Test Adapter E Connectors P11 and P12

4-55. Maintenance Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|-------------------------------|----------------------|----------------------|
| (1) Insulation tubing | Replace as required. | Use item 106, App. C |
| (2) Spiral Tubing | Replace as required. | Use item 122, App. C |
| (3) Marker identification P11 | Replace as required, | Use item 9, App. C |
| (4) Marker identification P12 | Replace as required. | Use item 5, App. C |
| (5) Wires | Replace as required. | |

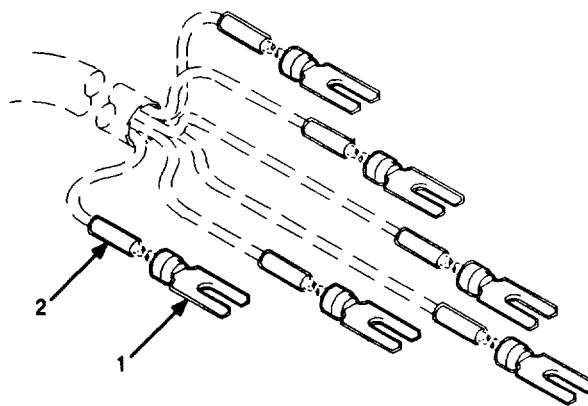
FROM	P1 E-FIELD	TO	COLOR	ITEM TO BE USED
P11-A	E122	P1-128	White Marker (wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 22, App. C Use item 32, App. C Use item 36, App. C
P11-J	E50A	P1-51	White Marker (wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 23, App. C Use item 34, App. C Use item 35, App. C
P11-K	E51A	P1 -52	White Marker(wide) 1 Marker (narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 23, App. C Use item 34, App. C Use item 36, App. C
P11-M	E52A	P1-53	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 23, App. C Use item 35, App. C Use item 36, App. C
P11-N	E53A	P1-54	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 24, App. C Use item 34, App. C Use item 35, App. C
P11-P	E54A	P1-55	White Marker(wide) 1 Marker(narrow) 2 Marker (narrow) 3	Use item 157, App. C Use item 24, App. C Use item 34, App. C Use item 36, App. C
P11-R	E55A	P1-56	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 24, App. C Use item 35, App. C Use item 36, App. C
P12-A	E45	P1-46	White Marker (wide) 1 Marker (narrow) 2	Use item 157, App. C Use item 22, App. C Use item 36, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>P1 E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
P12-B	E46	P1-47	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 23, App. C Use item 33, App. C
P12-C	E47	P1-48	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 23, App. C Use item 34, App. C
P12-D	E48	P1-49	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 23, App. C Use item 35, App. C
P12-F	E49	P1-50	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 23, App. C Use item 36, App. C
P12-J	E50	P1-51	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 24, App. C Use item 34, App. C
P12-K	E51	P1-52	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 24, App. C Use item 35, App. C
P12-M	E52	P1-53	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 24, App. C Use item 36, App. C
P12-N	E53	P1-54	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 25, App. C Use item 35, App. C
P12-P	E54	P1-55	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 25, App. C Use item 36, App. C
P12-R	E55	P1-56	White Marker(wide) 1 Marker(narrow) 2 Marker(narrow) 3	Use item 157, App. C Use item 19, App. C Use item 29, App. C Use item 30, App. C
NC	E123			
NC	E124			
NC	E125			
NC	E126			
NC	E127			
NC	E128			

4-55. Maintenance Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
i. Terminal lugs E1-1 to E1-6(1)	Remove terminal lug (1) from wire. Replace terminal lug (1) and crimp to wire.	Refer to figure 4-83 on page 4-145.
(1) Spiral tubing	Replace as required.	Use item 122, App. C
(2) Tiedown strap	Replace as required.	Use item 278, App. C
(3) Marker identification E1-1 (2)	Replace as required.	Use item 74, App. C
(4) Marker identification E1-2(2)	Replace as required.	Use item 75, App. C
(5) Marker identification E1-3(2)	Replace as required.	Use item 76, App. C
(6) Marker identification E1-4(2)	Replace as required.	Use item 77, App. C
(7) Marker identification E1-5(2)	Replace as required.	Use item 78, App. C
(8) Marker identification E1-6(2)	Replace as required.	Use item 79, App. C
(9) Wires	Replace as required.	



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4-55. Maintenance Procedures for Test Adapter E. Cont

<u>FROM</u>	<u>P1 E-FIELD</u>	<u>TO</u>	<u>COLOR</u>	<u>ITEM TO BE USED</u>
E1-1	E39	P1-40	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 21, App. C Use item 35, App. C
E1-2	E40	P1-41	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 21, App. C Use item 36, App. C
E1-3	E41	P1-42	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 22, App. C Use item 32, App. C
E1-4	E42	P1-43	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 22, App. C Use item 33, App. C
E1-5	E43	P1-44	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 22, App. C Use item 34, App. C
E1-6	E44	P1-45	White Marker(wide) 1 Marker(narrow) 2	Use item 157, App. C Use item 22, App. C Use item 35, App. C

4-55. Maintenance Procedures for Test Adapter E. Cont

ITEM	ACTION	REMARKS
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j. CCA-Extender Card (1)

Remove eight screws (2), eight lock washers, eight flat washers, two tiedown straps(8), electrical cable assembly protectors (5, 6), and cable retainer(7).

Refer to figure 4-87 on page 4-169.

Remove four screws(3), four lock washers, four flat washers and two spacers (4) securing electrical cable assembly protector(5).

Replace defective components as required.

Install eight screws (2), eight lock washers, eight flat washers, electrical cable assembly protectors (5, 6), cable retainer(7), and two tie down straps (8).

Install four screws (3), four lock washers, four flat washers and two spacers(4) securing electrical cable assembly protector(5).

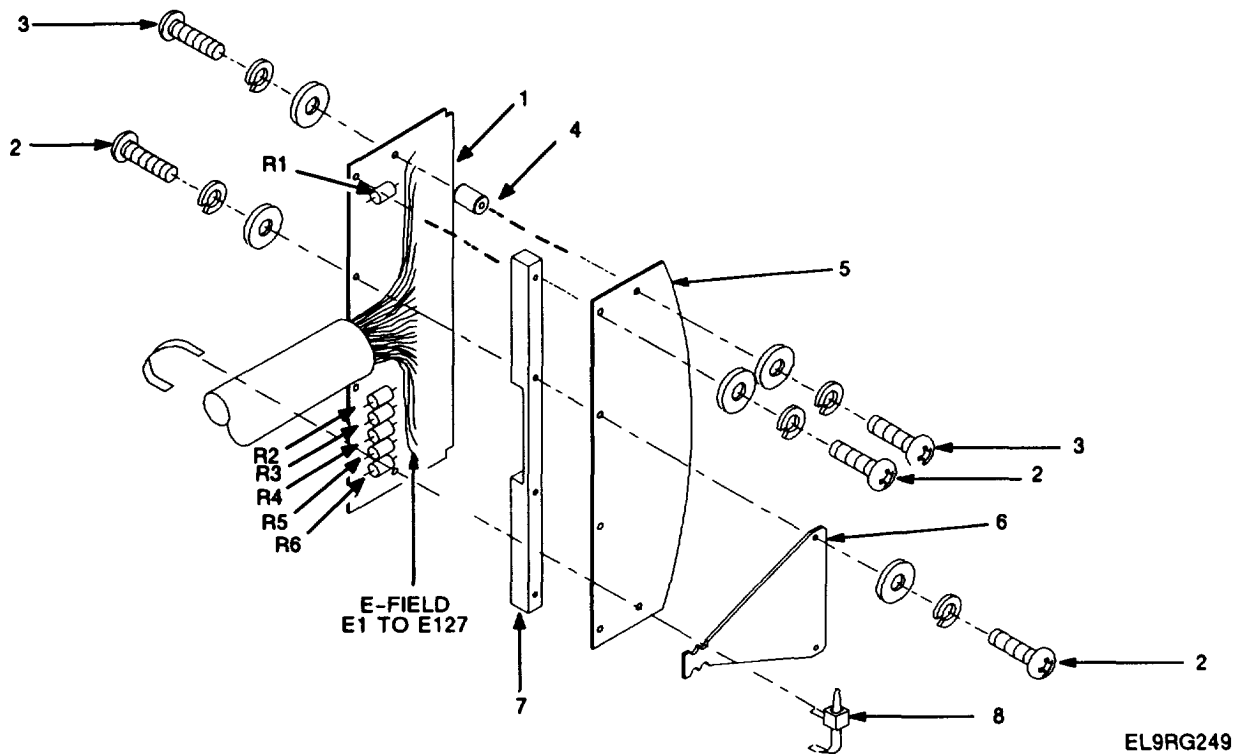
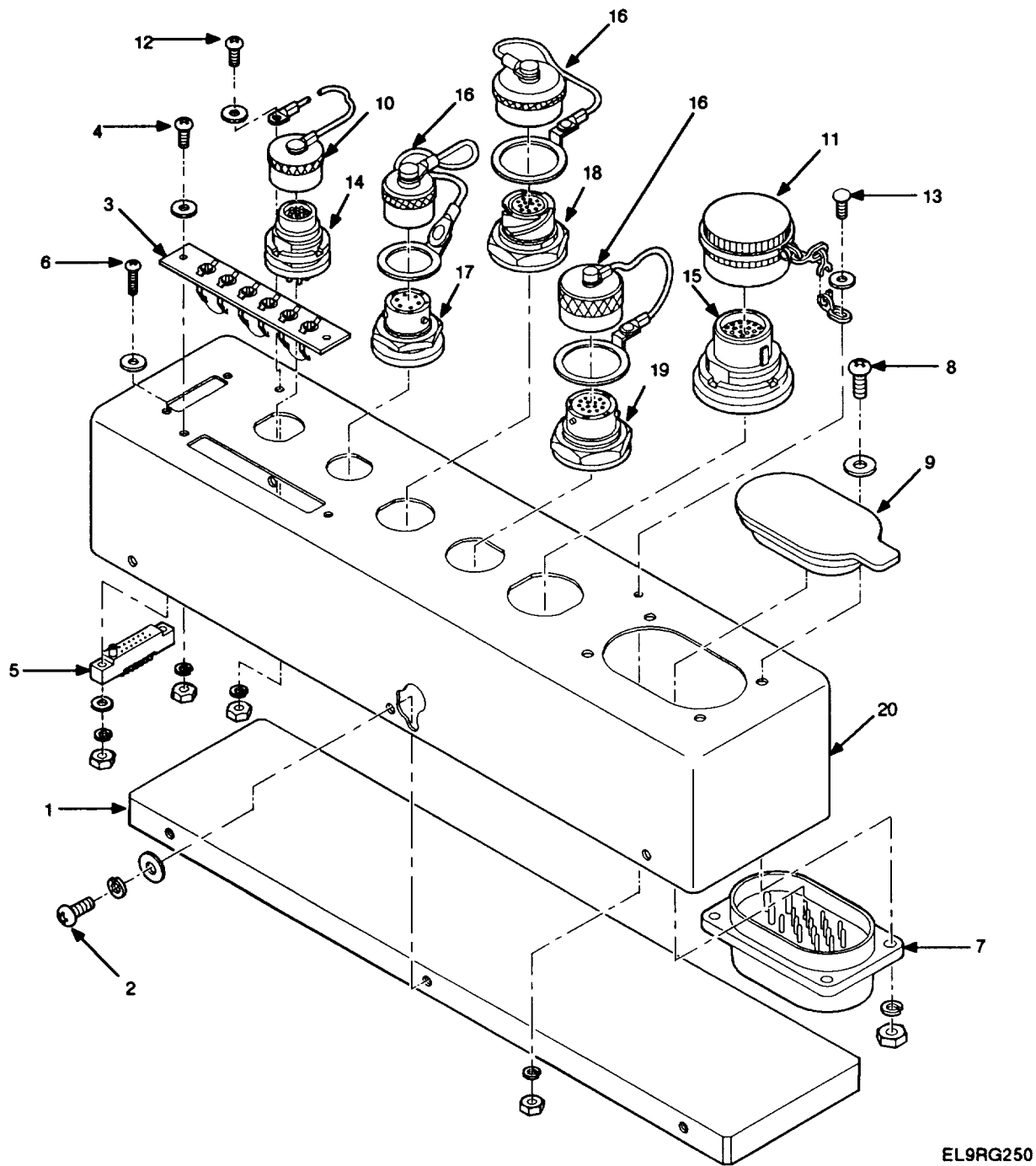


Figure 4-87. Disassembly of CCA-Extender Card E

4-56. Maintenance Procedures for Electrical-Test Connector Assembly.

ITEM	ACTION	REMARKS
a. Support Plate (1)	<p>Remove six screws (2), six flat washers, See figure 4-88 on page 4-171. and six lock washers from support plate.</p> <p>Replace as required and secure with six screws(2), six flat washers, and six lock washers.</p>	
b. Terminal Strip TB1 (5)	<p>Remove support plate.</p> <p>Remove two screws (4), two flat washers, two lock washers, and two hex nuts.</p> <p>Replace and secure with two screws(4), two flat washers, two lock washers, and two hex nuts.</p>	Refer to step a.
c. Dummy Connector P1 (5)	<p>Install support plate.</p> <p>Remove support plate.</p> <p>Remove two screws (6), four flat washers, two lock washers, and two hex nuts.</p> <p>Replace P1 (5) and secure with two screws (6), four flat washers, two lock washers, and two hex nuts.</p>	Refer to step a.
d. Dummy Connector P2 (7)	<p>Install support plate</p> <p>Remove support plate.</p> <p>Remove four screws(8), four flat washers, one cover/guard(9), four lock washers, and four nuts.</p> <p>Replace P2 or cover/guard as required and secure with four screws(8), one cover/guard (9), four flat washers, four lock washers, and four hex nuts.</p>	Refer to step a.
e. Dummy Connector J1 and J5 Cover/Guard (10 and 11)	<p>Install support plate.</p> <p>Remove support plate.</p> <p>Remove screw (12,13), flat washer, lock washer, and hex nut securing cover/guard.</p> <p>Replace cover/guard (10,11) and secure with screw, flat washer, lock washer, and hex nut.</p>	Refer to step a.
	Install support plate.	Refer to step a.

4-56. Maintenance Procedures for Electrical-Test Connector Assembly. Cont



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Figure 4-88. Disassembly of Test Adapter E Connector Assembly.

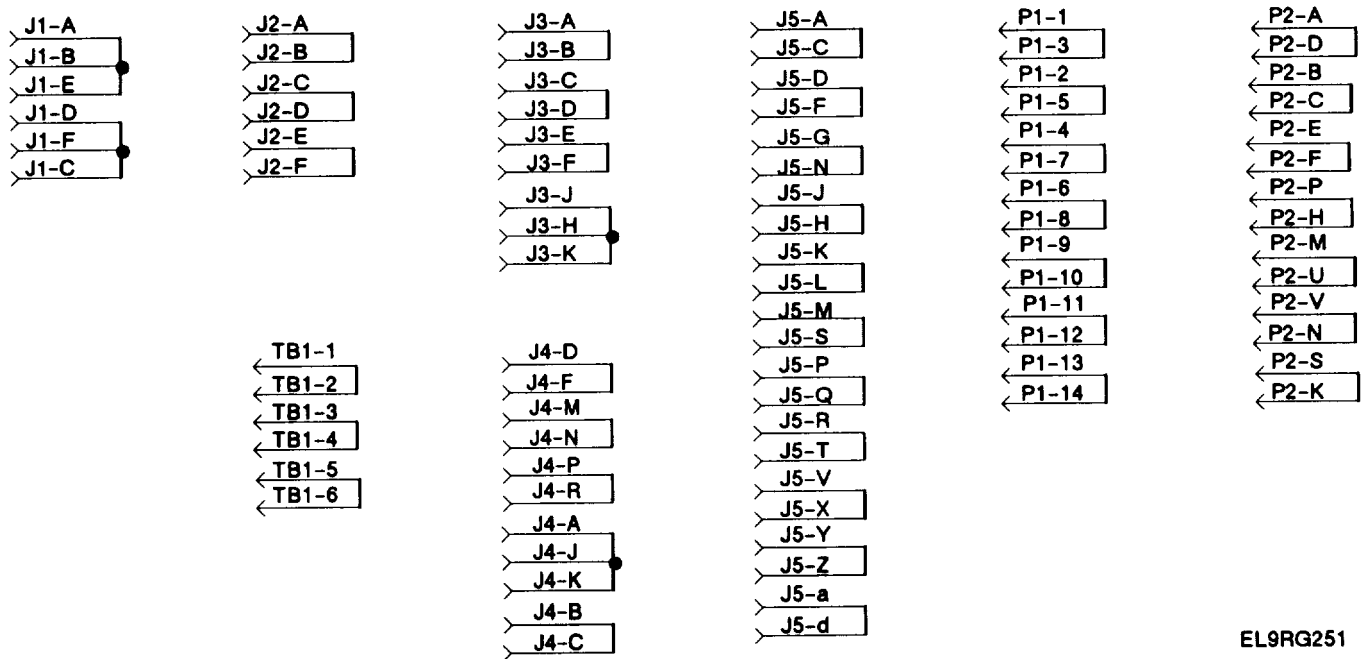
4-56. Maintenance Procedures for Electrical-Test Connector Assembly. Cont

ITEM	ACTION	REMARKS
f. Dummy Connectors J1(13) and J5(14)	Remove support plate.	Refer to step a.
	Remove connector cover/guard from defective connector.	Refer to step e.
	Remove spanner nut from defective connector.	
	Replace connector and secure with nut.	
	Install connector cover/guard on connector.	Refer to step e.
g. Dummy Connector J2, J3, and J4 Cover/Guard (16)	Install support plate.	Refer to step a.
	Remove support plate.	Refer to step a.
	Remove nut securing cover/guard.	
h. Dummy Connectors J2, J3, and J4 (17, 18, 19)	Replace cover/guard and secure with nut.	
	Install support plate.	Refer to step a.
	Remove support plate.	Refer to step a.
	Remove nut from defective connector and cover guard.	
	Replace connector as required.	
i. Connector Case(20)	Install connector cover/guard.	
	Secure connector and cover/guard with nut.	
	Install support plate.	Refer to step a.
	Remove support plate.	Refer to step a.
	Remove terminal strip TB1.	Refer to step b.
	Remove dummy connector P1.	Refer to step c.
	Remove dummy connectors J1 & J5.	Refer to step f.
	Remove dummy connector P2.	Refer to step d.
	Remove dummy connectors J2 - J4.	Refer to step g.
	Remove dummy connectors.	Refer to step h.
Replace connector case as required.		
Install dummy connectors J2 - J4.	Refer to step g.	
Install dummy connector P2.	Refer to step d.	

4-56. Maintenance Procedures for Electrical-Test Connector Assembly. Cont

ITEM	ACTION	REMARKS
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	Install dummy connectors J1 & J5.	Refer to step f.
	Install dummy connector P1.	Refer to step c.
	Install terminal strip TB1.	Refer to step b.
	Install support plate.	Refer to step a.
j. Wires	Replace as required.	
	Use the following schematic diagram to replace wires.	



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Figure 4-89. Schematic Diagram for Electrical-Test Connector Assembly

Section XII. MAINTENANCE OF J-4828/G (TEST ADAPTER F)

4-57. Required Test Accessories for Test Adapter F.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPINCP0300030G
File No	A3013379
File No	A3142064
● Adapter, Test-F A3019038-1 items:	
Wiring Harness, Branched (W1)	A3019040-1
ICD-F	A3019039-1
RF Amplifier	ENI Model 325LA
● AccessoryKitA3018639-1items:	
Cable Assembly, RF(W1)	A3018640-1
CableAssembly, RF (W2)	A3018641-1
CableAssembly,RF (W3)	A3018642-1
Cable Assembly, RF (W4)	A3018643-1
CableAssembly, RF (W5)	A3019037-1
CableAssembly, RF (W6)	A3019037-2
Attenuator, 10W,10 dB (AT2)	A3018544-1
Attenuator, 150W,30dB (AT2)	A3018545-1
Termination, Mismatch 100W	A3018792-1
Adapter, Connector (CP1)	M55339/07-00029
Adapter, Connector (CP2)	A3018791-1
● AN/USM-410Test Accessory Kit B4021292 Items:	
CableAssembly, RF (W101)	B4021271
CableAssembly,RF (W102)	B4021272
Cable Assembly, RF (W103)(2reqd)	B4021273
● AN/USM-410TestAccessoryKitB4021923 Items:	
RF Short BNC Plug	3201-1314-02
● AN/USM-410TestAccessoryKitB4021924 Items:	
Adapter, Connector (2reqd)	64021032
Adapter, BNC, Jack-to-Jack	UG914/U
● AN/USM-410TestAccessoryKit	B4039143
50 OhmTermination	B4039130
● Heat Sink, Electronic Component-Amplifier, RF .	A3013374-1

CAUTION

This UUT contains static sensitive components. Handle in accordance with ESD practices.

4-58. Test Procedures for Test Adapter F.

- a. Turn on test station AN/USM-410(V)2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and press RETURN on VDT keyboard.
- d. Turn on test station AN/USM-41 O(V) 2.
- e. Perform operational procedures in accordance with TM 11-6625-2773-10.
- f. Enter DIR USERAREA1 and press RETURN on VDT keyboard.

NOTE

The intermediate code of this program will require 88 blocks on the removable disk pack (DP \emptyset). Before loading the test program ensure that the DP \emptyset has sufficient space to load the intermediate code. If there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

- g. Load test program.
 - (1) Install test program tape CPIN CP0300030G in accordance with TM 11-6625-2773-10.
 - (2) Load file on to disk in accordance with TM 11-6625-2773-10.
- h. Select test.
 - (1) Enter TEST A3013379 or A3142064 and press RETURN on VDT keyboard.
 - (2) Press STRT/PROC.
 - (3) Verify that the following information is displayed on the VDT:

CASE, AMPLIFIER, RADIO FREQUENCY	
PART NUMBER	A3013379-1
PROGRAM DATE/REV.:	MM/DD/YY REV.-
SERIAL NO. EFFECTIVITY	001 THRU ***
MWO EFFECTIVITY	NONE

4-58. Test Procedures for Test Adapter F. Cont

OR

CASE, AMPLIFIER, RADIO FREQUENCY	
PART NUMBER	A3018432-1
PROGRAM DATE/REV.:	MM/DD/YY REV.-
SERIAL NO. EFFECTIVITY	001 THRU ***
MWO EFFECTIVITY	NONE

OR

CASE, AMPLIFIER, RADIO FREQUENCY	
PART NUMBER	A3142084-1
PROGRAM DATE/REV.:	MM/DD/YY REV.-
SERIAL NO. EFFECTIVITY	001 THRU ***
MWO EFFECTIVITY	NONE

(4) Press STRT/PROC on the VDT keyboard.

i. Run ATE survey test if desired. If ATE survey test fails, refer to TM 11-6625-2773-10.

j. Install test adapter F.

k. Run ICD-F survey test. If survey test fails go to paragraph 4-59 on page 4-177 for component remove and replace instructions.

l. When survey passes, continue with UUT testing.

m. Ancillary Test Equipment.

(1) The RF Amplifier Heatsink is issued as part of your ancillary equipment. If it fails, test and repair in accordance with TM 11-5820-914-40.

(2) The RF Amplifier ENI Model 325LA is issued as part of your ancillary equipment. If it fails return to depot for maintenance.

4-59. Maintenance Procedures for Test Adapter F.

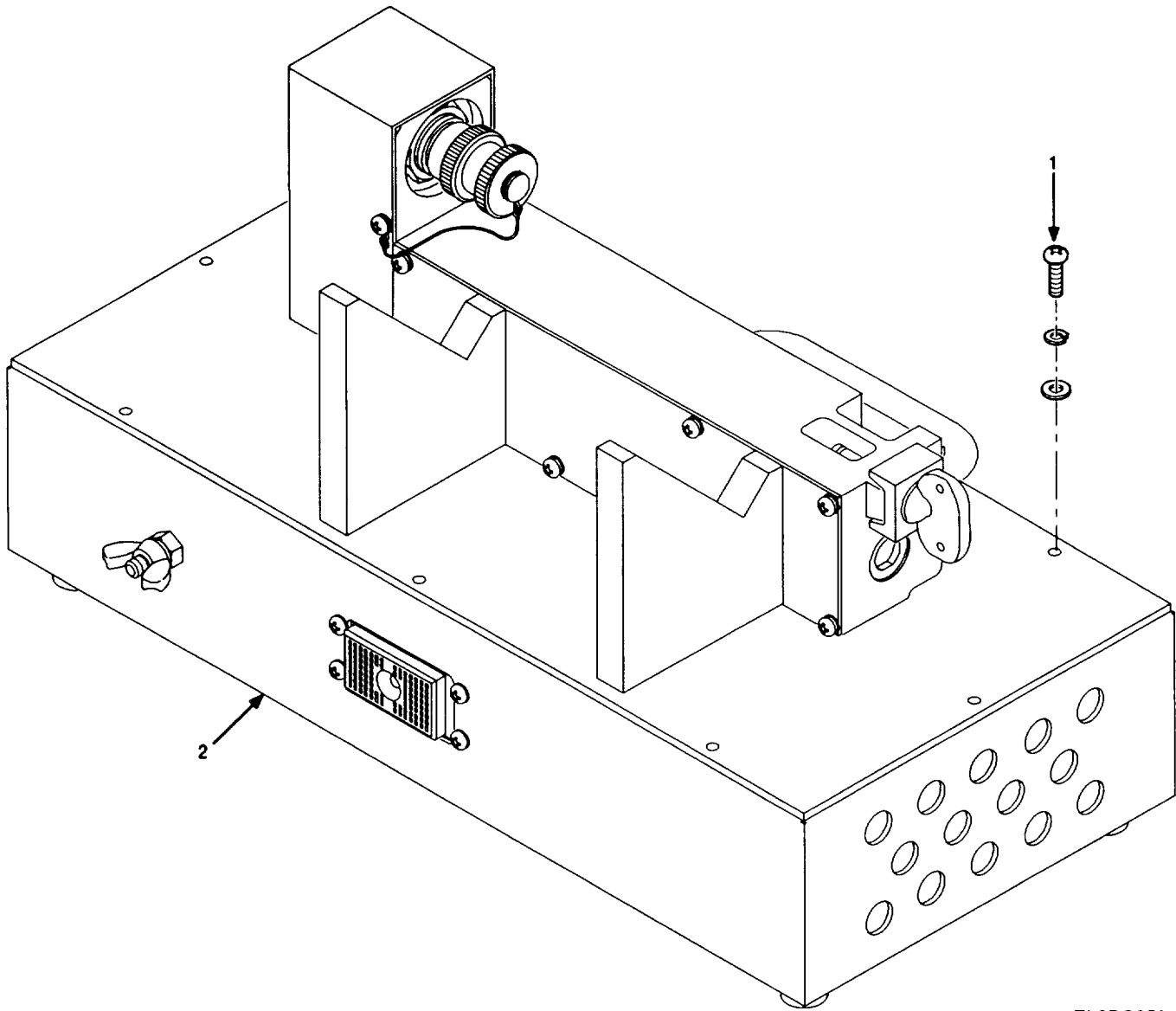
INITIAL SETUP	
TEST EQUIPMENT:	TOOLS:
Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223)	Solder Repair Center PRC-151 (3439-01-109-8590)
Multimeter AN/USM-486 (6625-01-145-2430)	Tool Kit Electronic Equipment TK-101/G (5180-01-064-5178)
REFERENCES:	Maintenance Group OA-9297/GRC (5820-01-270-3936)
TM 11-5820-914-40	Maintenance Group OA-9263A/GRC (5820-01-304-2010)
TM 11-6625-2773-10	Tool, Extract 274-7029-07 (5120-01-230-2603)
TM 11-6625-3094-24P	Tool Extraction MS24256R20 (5120-00-079-4601)
TB 43-0127	Tool, Extraction MS24256R16 (5120-00-165-4602)
PERSONNEL REQUIRED: 1	Tool, Crimping M22520/1-01 (5120-00-165-3912)
	Turret Head Assembly M22520/1-02 (5120-00-016-6382)

NOTE

It is not necessary to disassemble the entire test adapter for repair. Do not remove components unless necessary for replacement or repair.

ITEM	ACTION	REMARKS
a. Refer to FO-9 for schematic diagram.		
b. Hold-Down Fixture	Maintenance instructions are contained in paragraph 4-60 on page 4-179.	
c. Chassis	Maintenance instructions are contained in paragraph 4-61 on page 4-185.	
Top Cover Assembly	Remove eight screws(1), eight lock washers, and eight flat washers from chassis (2).	Refer to figure 4-90 on page 4-178.
	Move hold-down fixture to one side and continue to component replacement instructions.	
Top Cover Assembly	Place hold-down fixture on chassis (2) and secure with eight screws (1), eight lock washers, and eight flat washers.	

4-59. Maintenance Procedures for Test Adapter F. Cont



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Figure 4-90. Removal of ICD-F Top Cover Assembly

4-60. Maintenance of Hold-Down Fixture.

ITEM	ACTION	REMARKS
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a. Access cover

Remove four screws (2), four flat washers, and four lock washers securing access cover and dummy connector plug with lanyard.

Refer to figure 4-91 on page 4-180.

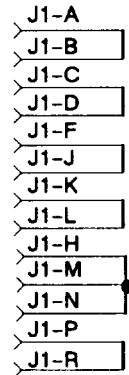
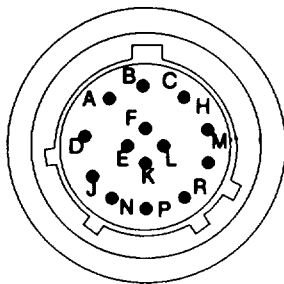
Replace access cover (3).

Install access cover and dummy connector plug and secure with four screws (2), four flat washers, and four lock washers.

b. Dummy Connector Plug Assembly (4)

Remove screw (2), lock washer and flat washer securing dummy connector plug lanyard.

Replace dummy connector plug assembly (4) on connector J1 (8).



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Install screw (2), lock washer, and flat washer to secure lanyard to access cover.

c. Connector J1

Remove access cover.

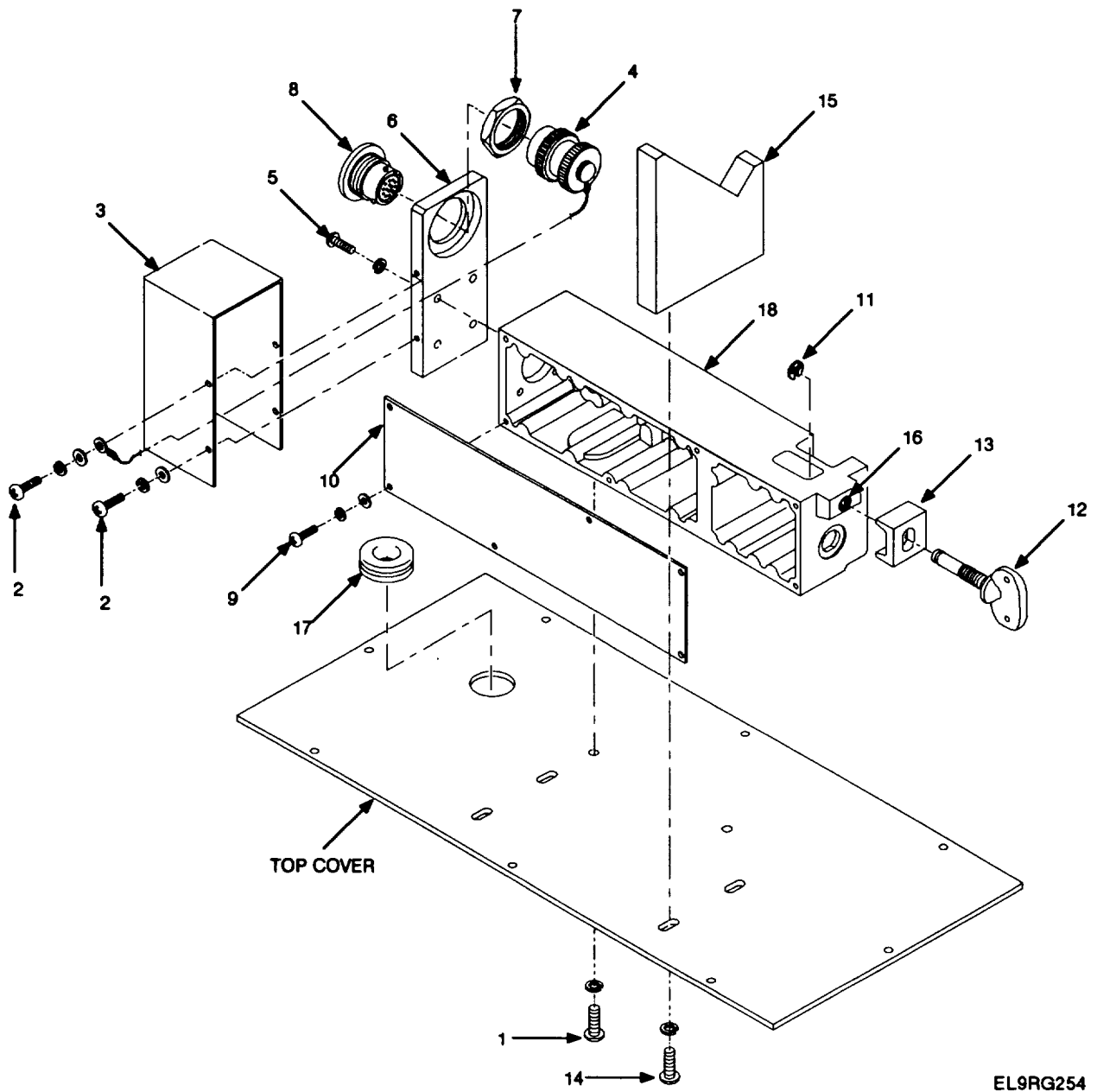
Refer to step a.

NOTE

The socket wrench required to remove hex nut on J1 is located in tool kit TK-1 01. The socket is located in the maintenance group OA-9297/GRC or OA-9263 A/GRC.

Remove hex nut (7) securing connector J1 (8) to end plate (6).

4-60. Maintenance of Hold-Down Fixture. Cont



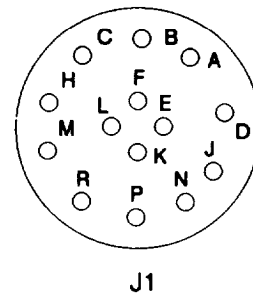
EL9RG254

Figure 4-91. Disassembly of Hold-Down Fixture.

4-60. Maintenance of Hold-Down Fixture. Cont

ITEM	ACTION	REMARKS
	Unsolder wires from connector J1.	
	Replace connector (8) and secure with hex nut (7).	Tighten hex nut hand tight then back off 1/2 to 3/4 of a turn to allow connector to float.
	Solder wires to connector.	
	Install access cover.	Refer to step a.

CONNECTOR J1 WIRING DIAGRAM		
FROM	TO	COLOR
J1-A	J2-C1	BLK
J1-B	J2-C3	BRN
J1-C	J2-C2	WHT/ORN/GRN
J1-D	J2-D5	RED
J1-F	J2-C4	WHT/ORN/YEL
J1-H	J2-L4	ORN
J1-J	J2-D1	YEL
J1-K	J2-D3	GRN
J1-L	J2-D7	BLU
J1-M	J2-A3	VIO
J1-N	J2-A4	GRA
J1-P	J2-A1	WHT
J1-R	J2-A2	WHT/BLK



EL9RG255

Figure 4-92. Pin and Wiring Diagram of Connector J1

d. End plate (6)	Remove four screws (5) and four lock washers securing clamping fixture end plate (6).	Refer to figure 4-91 on page 4-180.
	Remove hex nut (7) securing connector J1 (8) to end plate (6).	
	Replace end plate and secure with four screws (5) and four lock washers.	
	Install connector (8) in end plate and secure with hex nut (7).	

4-60. Maintenance of Hold-Down Fixture. Cont

ITEM	ACTION	REMARKS
e. Thumbscrew (12) or rim clenching clamp (13)	<p>Remove retaining ring (11) and unscrew thumbscrew (12).</p> <p>Remove thumbscrew (12) and rim clenching clamp (13).</p> <p>Replace thumbscrew (12) or clamp (13) as required.</p> <p>Install thumbscrew (12) and rim clenching clamp (13).</p> <p>Install retaining ring (11).</p>	<p>Refer to figure 4-91 on page 4-180.</p> <p>If unable to install thumbscrew, replace threaded screw insert. Refer to step i.</p>
f. Mounting base cover (10)	<p>Remove six screws (9), six lock washers, and six flat washers securing mounting base cover (10).</p> <p>Replace mounting base cover (10) and secure with six screws (9), six lock washers, and six flat washers.</p>	<p>Refer to figure 4-91 on page 4-180.</p>
g. Mounting base (18)	<p>Remove two screws (1) and two lock washers.</p> <p>Remove access cover.</p> <p>Remove end plate with connector J1 in place,</p> <p>Remove thumbscrew and rim clenching clamp.</p> <p>Remove mounting base cover.</p> <p>Replace mounting base and install end plate, access cover, thumbscrew and rim clenching clamp,</p> <p>Install two screws (1) and two lock washers to secure mounting base.</p>	<p>Refer to figure 4-91 on page 4-180.</p> <p>Refer to step a.</p> <p>Refer to step d.</p> <p>Refer to step e.</p> <p>Refer to step f.</p>
h. Support Brackets (15)	<p>Remove two screws (14) and two lock washers securing support bracket.</p> <p>Replace support bracket (15) and secure with two screws (14) and two lock washers.</p>	<p>Refer to figure 4-91 on page 4-180.</p>

4-60. Maintenance of Hold-Down Fixture. Cont

ITEM	ACTION	REMARKS
i. Threaded inserts replacement	Replace threaded insert.	Refer to figure 4-91 on page 4-180.
(1) Threaded insert extractor (1)	Place in hole. Tap extractor to seat in insert.	Refer to figure 4-93 on page 4-184.
	Maintaining steady pressure on extractor, unscrew insert.	
	Remove insert from hole.	
(2) Thread cleaning tap (2)	Select proper size tap (2).	
	Insert and secure in brace (3).	
	Carefully start tap in hole.	
	Screw tap to bottom of hole.	
	Remove tap.	
(3) install threaded insert (5)	Extend threaded shaft beyond end of prewinder one thread longer than insert.	
	Move stop collar to top of tool body and tighten.	
	Retract threaded shaft.	
(4) Prewinder (4) and insert (5)	Loosen stop collar (6) with Allen wrench.	
	Place insert in prewinder tip.	
	Rotate shaft until insert projects beyond the tip one full turn.	
	Place tip in hole.	
	Screw insert into hole until stop collar touches the tool body.	
	Retract prewinder.	
(5) Tang breakoff tool (7)	Place on tang. Break off tang by pressing down on tool.	
	Remove tang breakoff tool	
	Remove broken tang from hole.	
j. Rubber Grommet (17)	Remove access cover.	Refer to step a, and to figure 4-91 on page 4-180.
	Remove connector J1.	Refer to step c.
	Remove and retain dummy connector plug assembly.	

4-60. Maintenance of Hold-Down Fixture. Cont

ITEM	ACTION	REMARKS
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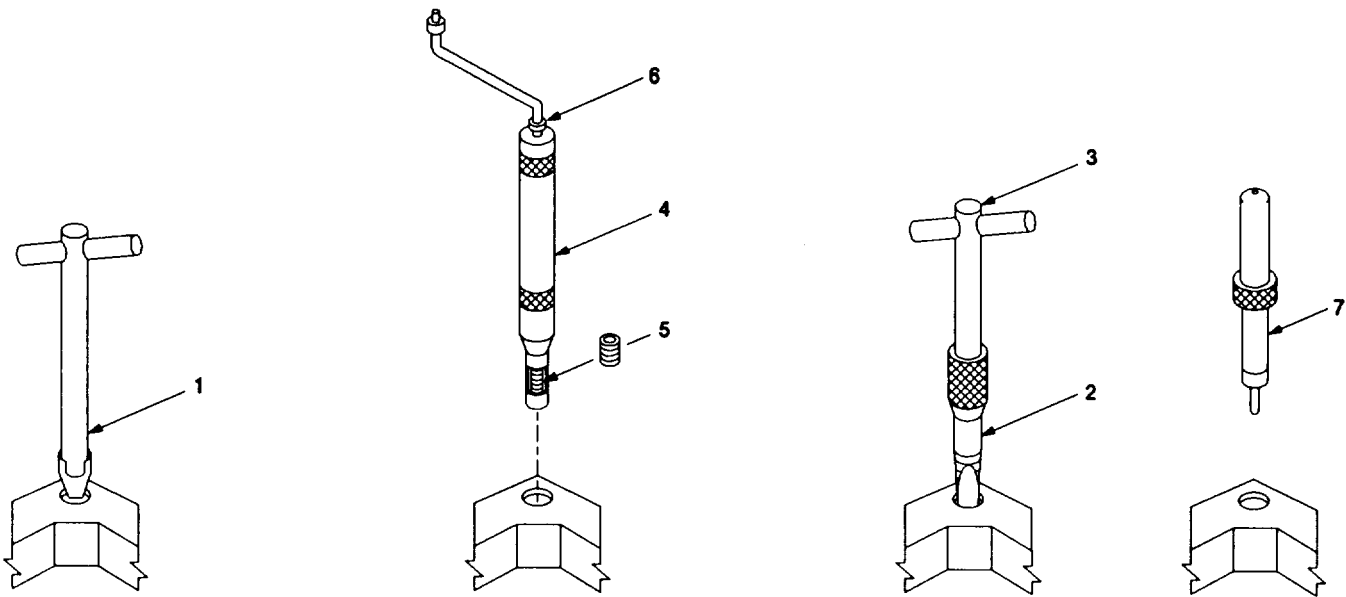
Replace rubber grommet (17), as required.

Install connector J1.

Refer to step c.

Install access cover.

Refer to step a.



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Figure 4-93. Threaded Screw Insert Replacement

4-61. Maintenance of Chassis.

ITEM	ACTION	REMARKS
a. Load card A	<p>Remove four screws (1), three lock washers, one terminal lug, four flat washers, and four electrical posts from load card CCA(2).</p> <p>Loosen jackscrews on connector P1 (3).</p> <p>Remove load card CCA from chassis and set to one side.</p> <p>Install load card CCA on chassis and secure it with four screws (1), three lock washers, one terminal lug, four flat washers, and four electrical posts.</p> <p>Install connector P1 on the load card.</p>	<p>Refer to figure 4-95 on page 4-186.</p>

(1) Resistors R1 thru R21 (4) Replace as required.

Refer to figure 4-94.

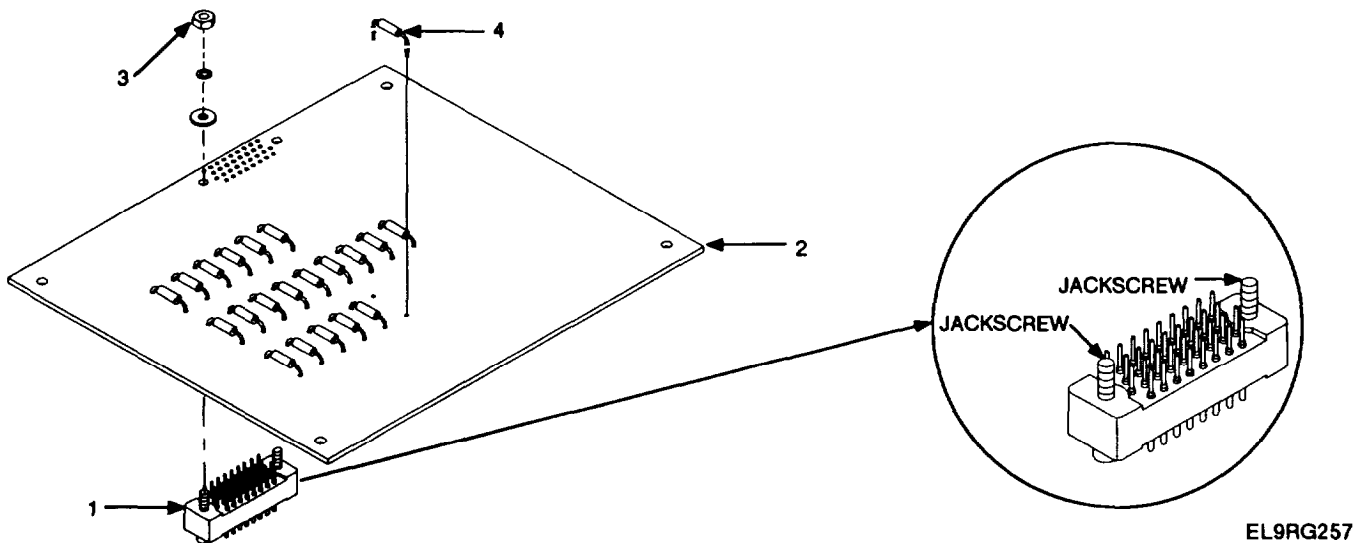


Figure 4-94. Maintenance of Load Card

(2) Connector J1 (1)

Remove two nuts (3), two insulated washers, and two flat washers.

Refer to figure 4-94.

Unsolder from circuit card (2).

Replace and secure with two nuts (3), two insulated washers, and two flat washers.

Solder to circuit card.

4-61. Maintenance of Chassis. Cont

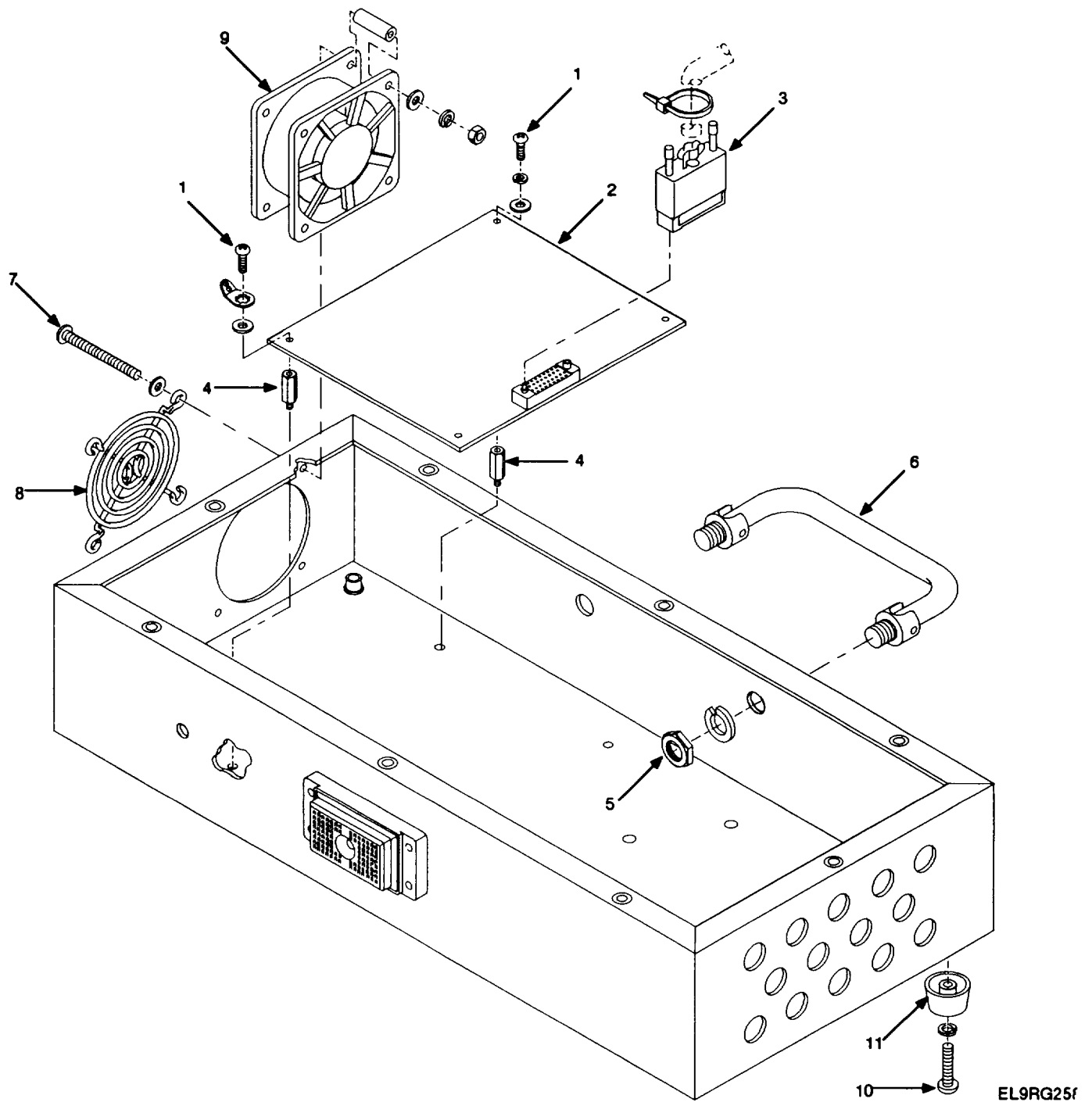
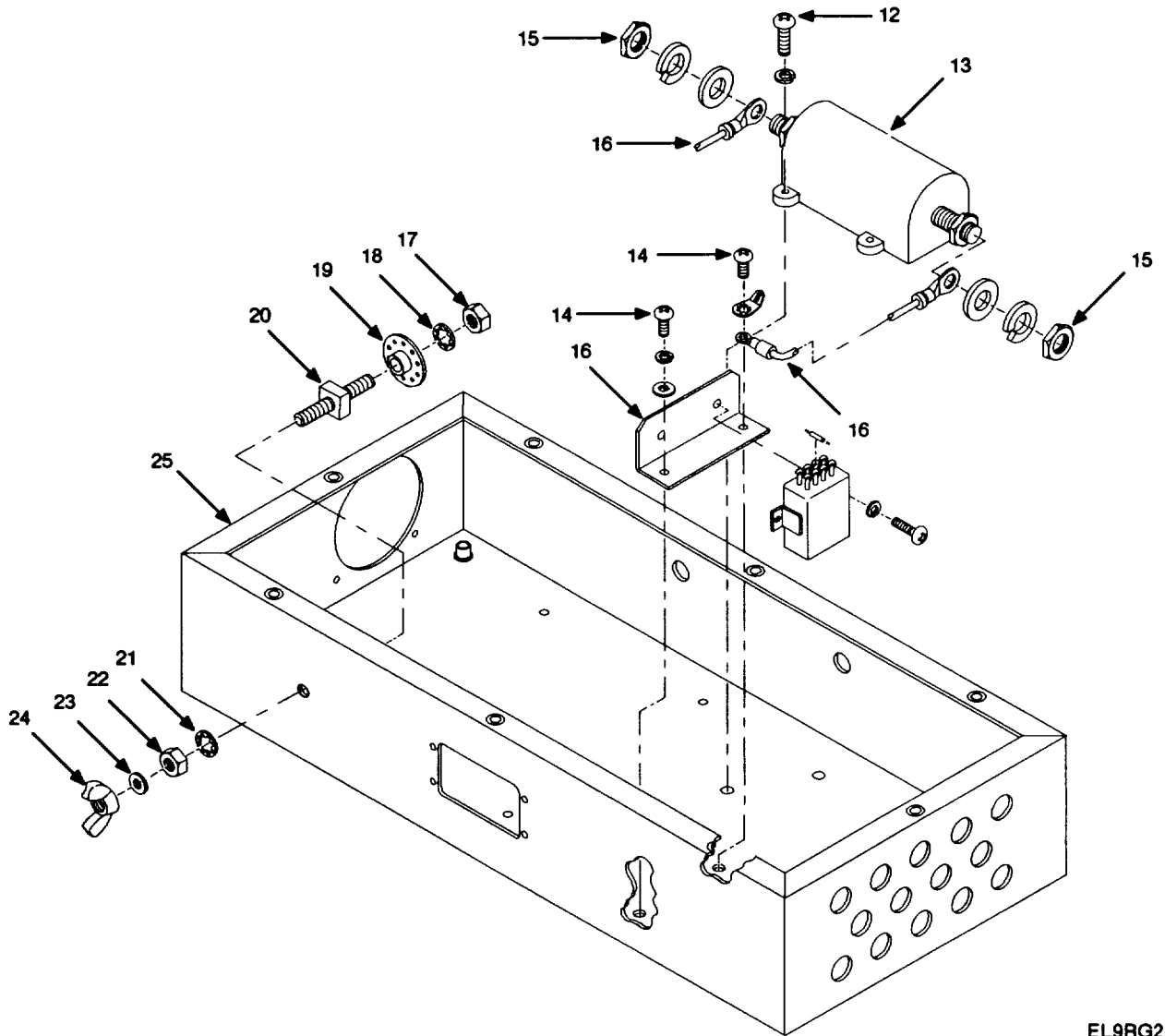


Figure 4-95. Removal of Components from Chassis (Sheet 1 of 2)

4-61. Maintenance of Chassis. Cont



EL9RG259

Figure 4-95. Removal of Components from Chassis (Sheet 2 of 2)

4-61. Maintenance of Chassis. Cont

ITEM	ACTION	REMARKS
b. Handle (6)	<p>Remove two hex nuts (5) and two lock washers from handle (6).</p> <p>Replace handle and secure with two lock washers and two hex nuts (5).</p>	<p>Refer to figure 4-95 on page 4-186.</p>
c. Fan (9)	<p>Remove four screws (7), four spacers, eight flat washers, four lock washers, four hex nuts, and one fan grill (8) from fan (9),</p> <p>Unsolder fan's blue wire from washer (19) on terminal stud (20).</p> <p>Remove pin from connector J2 with fan's red wire attached.</p> <p>Replace fan and install new connector pin.</p> <p>Install pin in connector J2.</p> <p>Solder fan's blue wire to washer (19) on terminal stud (20).</p> <p>Install fan (9) in chassis with four screws (7), one fan grill (8), four spacers, eight flat washers, four lock washers, and four hex nuts.</p>	<p>Refer to figure 4-95 on page 4-186.</p> <p>Refer to figure 4-95 on page 4-186.</p>
d. Rubber feet(n)	<p>Remove four screws (10), four lock washers, and four rubber feet (11) from chassis.</p> <p>Replace rubber feet (11) and secure with four screws (10) and four lock washers.</p>	<p>Refer to figure 4-95 on page 4-186.</p>
e. Resistor R1 (13)	<p>Remove four screws (12) and four lock washers from resistor (13).</p> <p>Remove two hex nuts (15), two lock washers, two flat washers and two wires (16).</p> <p>Replace resistor R1 (13) and secure with four screws (12) and four lock washers.</p> <p>Install two wires (16), two flat washers, two lock washers and two hex nuts (15).</p>	<p>Refer to figure 4-95 on page 4-186.</p>

4-61. Maintenance of Chassis. Cont

ITEM	ACTION	REMARKS
f. Square threaded terminal stud (20)	<p>Remove hex nut (17), internal tooth lock washer (18), and grounding terminal washer (19) from terminal stud (20).</p> <p>Remove wing nut (24), one flat washer (23), one hex nut (22), and one internal tooth lock washer (21).</p> <p>Replace terminal stud (20) and secure with internal tooth lock washer (21), hex nut (22), flat washer (23), and wing nut (24).</p> <p>Install grounding terminal washer (19), one internal tooth lock washer (18), and one hex nut (17).</p>	Refer to figure 4-95 on page 4-186.

4-61. Maintenance of Chassis. Cont

ITEM	ACTION	REMARKS
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g. Relay K1 (4)	Tag wires.	Refer to figure 4-96 on page 4-191.
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CAUTION

THE DIODE IS AN ELECTROSTATIC SENSITIVE ELECTRONIC DEVICE



EL9RG260

Remove two screws (1), one flat washer, one lock washer, and two terminal lugs from relay bracket (2).

Refer to figure 4-96 on page 4-191.

Unsolder wires and diode CR1 (5).

Refer to figure 4-96 on page 4-191.

Remove two screws (3) and two lock washers that secure relay K1 (4) to relay bracket (2).

Replace relay K1 (4) and CR1 (5).

Diode is static sensitive. Use ESD procedures.

Replace relay bracket (2) as required.

Install relay K1 (4) on relay bracket (2) with two screws (3) and two lock washers.

Replace wires as required.

<u>FROM</u>	TO
J2-N8	K1-X1
J2-N1	P1-D

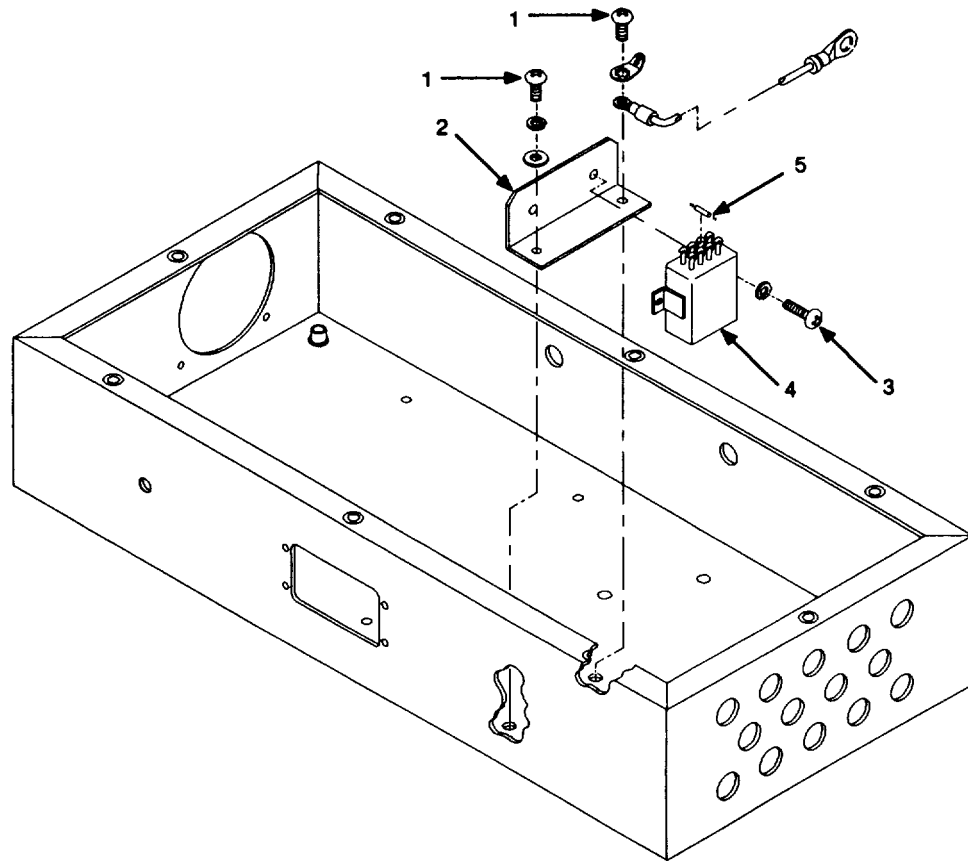
EL9RG261

Solder wires and diode CR1 (5) to appropriate relay K1 (4) terminals.

Install relay bracket (2) and secure with two screws (1), one flat washer, and one lock washer.

Remove wire tags.

4-61. Maintenance of Chassis. Cont



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Figure 4-96. Replacement of Relay K1.

4-61. Maintenance of Chassis. Cont

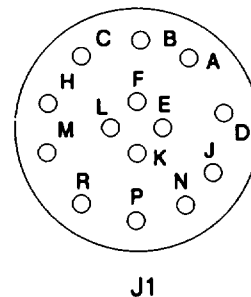
ITEM	ACTION	REMARKS
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h. Internal Wiring Harness

(1) Connector P1 (1)	<p>Loosen two jackscrews (2).</p> <p>Remove from load card (3).</p> <p>Loosen two screws on cable clamp (4).</p> <p>Slide connector cover away from connector and tag wires.</p> <p>Unsolder wires.</p> <p>Replace connector.</p> <p>Solder wires to appropriate connector pins and remove tags.</p> <p>Slide connector cover down over connector.</p> <p>Tighten two clamp screws (4).</p> <p>Install P1 (1) on load card and tighten jackscrews.</p>	<p>Refer to figure 4-97 on page 4-193.</p>
(2) Connector J1 (7)	<p>Remove three screws (5), three lock washers, and three flat washers.</p> <p>Remove one screw (6), lock washer, flat washer, and dummy plug.</p> <p>Unsolder wires from connector J1.</p> <p>Replace wire, solder wires to connector.</p> <p>Install access cover and secure with four screws (5, 6), flat washers, and lockwashers.</p>	<p>Refer to figure 4-97 on page 4-193.</p>

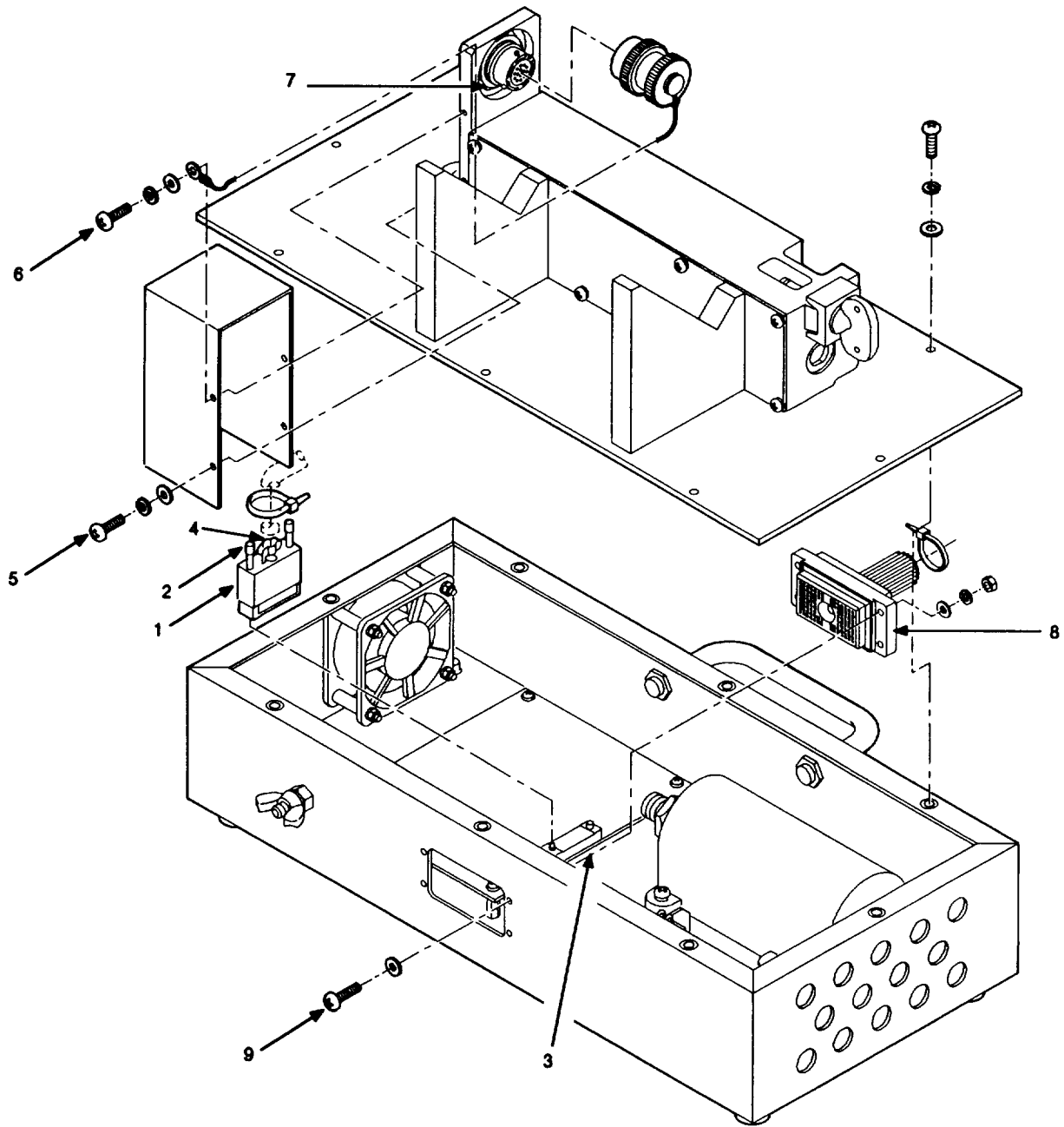
CONNECTOR J1 WIRING DIAGRAM

FROM	TO	COLOR
J1-A	J2-C1	BLK
J1-B	J2-C3	BRN
J1-C	J2-C2	WHT/ORN/GRN
J1-D	J2-D5	RED
J1-F	J2-C4	WHT/ORN/YEL
J1-H	J2-L4	ORN
J1-J	J2-D1	YEL
J1-K	J2-D3	GRN
J1-L	J2-D7	BLU
J1-M	J2-A3	VIO
J1-N	J2-A4	GRA
J1-P	J2-A1	WHT
J1-R	J2-A2	WHT/BLK



J1

4-61. Maintenance of Chassis. Cont



EL9RG264

Figure 4-97. Removal of Internal Wiring Harness

4-61. Maintenance of Chassis. Cont

ITEM	ACTION	REMARKS	
(3) Connector J2 (8)	<p>Remove four screws (9), eight flat washers, four lock washers, and four hex nuts that secure connector J2 (8) to chassis.</p> <p>Remove connector pins and attached wires from defective connector J2 (8).</p> <p>Replace connector (8).</p> <p>Replace wires as required.</p> <p>Install connector pins into appropriate positions in new connector (8).</p> <p>Install connector (8) in chassis with four screws (9), eight flat washers, four lock washers, and four hex nuts.</p>	Refer to figure 4-97 on page 4-193.	
(4) Wire List	Replace wires as required.		
<u>CONNECTION</u>	<u>WIRE/MARKER</u>	<u>CONNECTION</u>	<u>WIRE/MARKER</u>
J2-A1 to J1-P	White, item 157, App. C	J2-C4 to J1-F	White, item 157, App. C
J2-A2 to J1-R	White, item 157, App. C Black, item 19, App. C		Orange, item 22, App. C Yellow, item 32, App. C
J2-A3 to J1-M	Violet, item 155, App. C	J2-C4 to P1 X	White, item 157, App. C
J2-A4 to J1-N	Gray, item 156, APP. C		Red, item 21, App. C
J2-A5 to P1-C	White, item 157, App. C Red, item 21, App. C Orange, item 31, App. C	J2-C5 to P1-E	Gray, item 36, App. C White, item 157, App. C Black, item 19, App. C
J2-A5 to J2-K2	White, item 157, App. C Red, item 21, App. C Yellow, item 32, App. C	J2-C6 to P1-H	Brown, item 29, App. C White, item 157, App. C Black, item 19, App. C
J2-A8 to P1-D	White, item 157, App. C Brown, item 20, App. C Violet, item 35, App. C	J2-C7 to P1-K	Green, item 33, App. C White, item 157, App. C Black, item 19, App. C
J2-A8 to J2-K1	White, item 157, App. C Brown, item 20, App. C Gray, item 36, App. C	J2-D1 to J1-J	Yellow, item 32, App. C
J2-B1 to J2-G1	White, item 157, App. C Red, item 21, App. C	J2-D3 to J1-K	Green, item 153, App. C
J2-C1 to J1-A	Black, item 148, App. C	J2-D5 to J1-D	Red, item 150, App. C
J2-C2 to J1-C	White, item 157, App. C Orange, item 22, App. C Green, item 33, App. C	J2-D7 to J1-L	Blue, item 154, App. C
J2-C3 to J1-B	Brown, item 149, App. C	J2-E1 to P1-M	White, item 157, App. C
		J2-E2 to P1-C	Blue, item 25, App. C Violet, item 35, App. C White, item 157, App. C Brown, item 20, App. C Green, item 33, App. C

Figure 4-98. Internal Wiring Harness Wire List (Sheet 1 of 2)

4-61. Maintenance of Chassis. Cont

<u>CONNECTION</u>	<u>WIRE/MARKER</u>	<u>CONNECTION</u>	<u>WIRE/MARKER</u>
J2-E3 to J2-M2	White, item 157, App. C Black, item 19, App. C Red, item 30, App. C	J2-M3 to P1-J	White, item 157, App. C Black, item 19, App. C Gray, item 36, App. C
J2-E4 to J2-M4	White, item 157, App. C Black, item 19, App. C Violet, item 35, App. C	J2-M3 to J2-E5	White, item 157, App. C Brown, item 20, App. C Red, item 30, App. C
J2-E5 to J2-M3	White, item 157, App. C Brown, item 20, App. C Red, item 30, App. C	J2-M4 to P1-L	White, item 157, App. C Black, item 19, App. C Blue, item 34, App. C
J2-E6 to P1-A	White, item 157, App. C Brown, item 20, App. C Blue, item 34, App. C	J2-M4 to J2-E4	White, item 157, App. C Black, item 19, App. C Violet, item 35, App. C
J2-E7 to P1-Y	White, item 157, App. C Yellow, item 23, App. C Violet, item 35, App. C	J2-M5 to P1-P	White, item 157, App. C Yellow, item 23, App. C Gray, item 36, App. C
J2-G1 to J2-B1	White, item 157, App. C Red, item 21, App. C	J2-M6 to P1-R	White, item 157, App. C Green, item 24, App. C Blue, item 34, App. C
J2-G1 to F1	Red wire from fan	J2-M7 to P1-S	White, item 157, App. C Green, item 24, App. C Violet, item 35, App. C
J2-G2 to E1	White, item 157, App. C orange, item 22, App. C	J2-M8 to P1-T	White, item 157, App. C Green, item 24, App. C Gray, item 36, App. C
J2-K1 to J2-A8	White, item 157, App. C Brown, item 20, App. C Gray, item 36, App. C	J2-N1 to P1-D	White, item 157, App. C Brown, item 20, App. C Orange, item 31, App. C
J2-K2 to J2-A5	White, item 157, App. C Red, item 21, App. C Yellow, item 32, App. C	J2-N4 to K1-B2	White, item 157, App. C Violet, item 26, App. C
J2-K3 to P1-B	White, item 157, App. C Red, item 21, App. C Violet, item 35, App. C	J2-N8 to K1-X1	White, item 157, App. C Gray, item 27, App. C
J2-K4 to P1-E	White, item 157, App. C Red, item 21, App. C Green, item 33, App. C	J2-P3 to P1-U	White, item 157, App. C Orange, item 22, App. C Blue, item 34, App. C
J2-K5 to P1-Z	White, item 157, App. C Red, item 21, App. C Blue, item 34, App. C	J2-P4 to E1	White, item 157, App. C Yellow, item 23, App. C
J2-L4 to J1-H	orange, item 151, App. C	J2-P6 to E1	White, item 157, App. C Green, item 24, App. C
J2-M1 to P1-B	White, item 157, App. C Brown, item 20, App. C Yellow, item 32, App. C	J2-P7 to P1-N	White, item 157, App. C Orange, item 22, App. C Gray, item 36, App. C
J2-M2 to P1-F	White, item 157, App. C Brown, item 20, App. C	J2-P8 to E1	White, item 157, App. C Blue, item 25, App. C
J2-M2 to J2-E3	White, item 157, App. C Black, item 19, App. C Red, item 30, App. C	P1-W to E1	Black, item 148, App. C

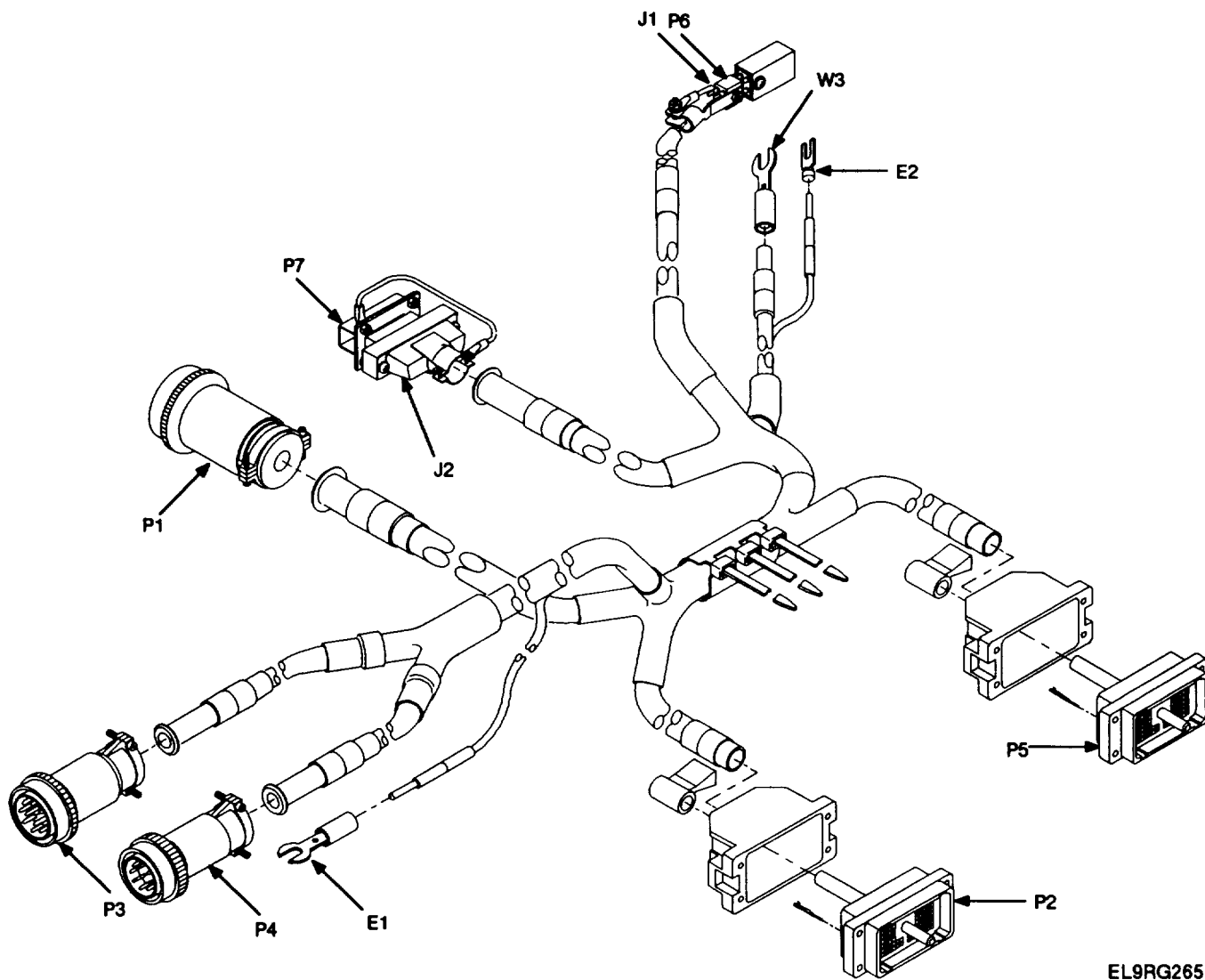
Figure 4-98. Internal Wiring Harness Wire List (Sheet 2 of 2)

4-62. Maintenance Procedures for Branched Wiring Harness W1.

ITEM	ACTION	REMARKS
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a. Branched Wiring
Harness W1

Unsolder wires and replace connectors.



EL9RG265

Figure 4-99. Branched Wiring Harness W1

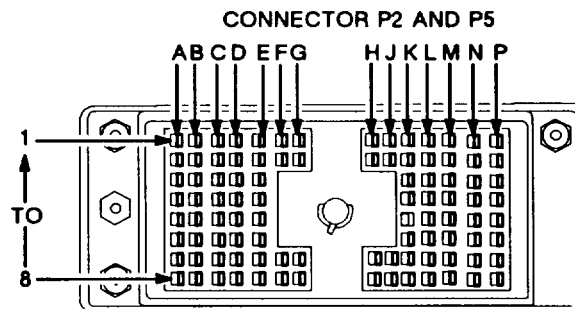
4-62. Maintenance Procedures for Branched Wiring Harness W1. Cont

ITEM		ACTION		REMARKS	
b. Wiring		Replace wires and solder to connectors.			
FROM	TO	COLOR/STRIPE	FROM	TO	COLOR/STRIPE
P2-A1	P5-A1	WHT/RED	J2-17	P5-E1	WHT/BLK/YEL/VIO
P2-A2	P5-A2	WHT/ORN	J2-18	P2-A6	WHT/BRN/RED
P2-A3	P5-A3	WHT/BLK	J2-19	P2-L6	WHT/BRN/ORN
P2-A4	P5-A4	WHT/BRN	J2-20	P2-D2	WHT/BRN/YEL
P2-A5	P5-A5	WHT/YEL/GRN	J2-21	P2-L5	WHT/BRN/GRN
P2-A8	P5-A8	WHT/ORN/BLU	J2-22	P2-B7	WHT/BRN/BLU
P2-B1	P5-B1	WHT/VIO	J2-23	P2-B6	WHT/BRN/VIO
P2-C1	P5-C1	BLK	J2-24	P2-A7	WHT/BRN/GRA
P2-C2	P5-C2	WHT/BLK/BRN/YEI	J2-25	P2-D6	WHT/RED/ORN
P2-C3	P5-C3	BRN			
P2-C3	P2-P5	RED	J1-A	P2-B8	WHT/YEL
P2-C4	P5-C4	WHT/BLK/BRN/RED	J1-C	P5-N4	WHT/BLK/GRN
P2-C5	P5-C5	WHT/RED/GRN	J1-D	P2-C8	WHT/GRN
P2-C6	P5-C6	WHT/ORN/YEL			
P2-C7	P5-C7	WHT/RED/VIO	P1 -H	P5-M5	WHT/BLK/ORN/GRN
P2-D1	P5-D1	VIO	P1 -J	P5-N1	WHT/YEL/BLU
P2-D2	E2	WHT	P1 -P	P5-M6	WHT/BLK/ORN/YEL
P2-D3	P5-D3	GRA	P1 -R	P5-M2	WHT/BLK/BRN/GRA
P2-D5	P5-D5	ORN	P1 -w	P5-M8	WHT/BLU/RED/VIO
P2-D7	P5-D7	WHT	P1 -X	P5-M4	WHT/BLK/RED/ORN
P2-G1	P5-G1	WHT/BLU	P1 -c	P5-M7	WHT/BLU/RED/GRA
P2-G2	P5-G2	WHT/GRA	P1 -d	P5-M3	WHT/BLK/RED/GRN
P2-K1	P5-K1	WHT/ORN/VIO	P1 -f	P4-A	YEL
P2-K2	P5-K2	WHT/YEL/VIO	P1 -k	P5-N8	WHT/BLK/BRN/VIO
P2-K3	P5-K3	WHT/BLU/GRA	P1 -x	P5-M1	WHT/BLK/RED/YEL
P2-K4	P5-K4	WHT/GRN/BLU	P1 -w	P5-E7	WHT/BLK/RED/BLU
P2-K5	P5-K5	WHT/GRN/GRA	P3-E	P5-C4	WHT/BLK/BRN/ORN
P2-L4	P5-L4	BLU	P3-F	E2	WHT/BLK/GRN/VIO
P2-N4	P5-N4	WHT/BLK/YEL			
P2-P3	P5-P3	WHT/BLK/BRN/GRN	P4-A	P5-D5	GRN
P2-P4	P5-P4	WHT/BLK/BRN	P4-F	E2	WHT/BLK/GRN/GRA
P2-P6	P5-P6	WHT/BLK/RED			
P2-P7	P5-P7	WHT/BLK/BRN/BLU	P5-C2	P5- P3	WHT/BLK/BLU/VIO
P2-P8	P5-P8	WHT/BLK/ORN			
			P6-C	P6-D	WHT/BLK/BLU/GRA
			P6-C	P6-A	WHT/BLK/VIO/GRA
J2-1	P5-E3	WHT/BLK/ORN/BLU			
J2-2	P5-E4	WHT/BLK/ORN/VIO	P7-1	P7-3	WHT/BRN/RED/ORN
J2-3	P2-B5	WHT/RED/YEL	P7-2	P7-25	WHT/BRN/RED/YEL
J2-4	P5-E5	WHT/BLK/ORN/GRA	P7-4	P7-24	WHT/BRN/RED/GRN
J2-5	P5-C5	WHT/RED/BLU	P7-5	P7-21	WHT/BRN/RED/BLU
J2-6	P5-E2	WHT/BLK/YEL/GRN	P7-6	P7-23	WHT/BRN/RED/VIO
J2-7	P5-C7	WHT/RED/GRA	P7-7	P7-15	WHT/BRN/RED/GRA
J2-8	P5-C6	WHT/ORN/GRN	P7-8	P7-22	WHT/BRN/ORN/GRN
J2-9	P5-E6	WHT/BLK/YEL/BLU	P7-9	P7-10	WHT/BRN/ORN/BLU
J2-10	P5-K1	WHT/ORN/GRA	P7-11	P7-12	WHT/BRN/ORN/VIO
J2-11	P5-K2	WHT/YEL/GRA	P7-13	P7-14	WHT/BRN/ORN/GRA
J2-12	P5-K4	WHT/GRN/VIO	P7-16	P7-15	WHT/BRN/ORN/YEL
J2-13	P5-K5	WHT/BLU/VIO	P7-17	P7-18	WHT/BRN/YEL/GRN
J2-14	P5-K3	WHT/VIO/GRA	P7-19	P7-20	WHT/BRN/YEL/BLU
J2-15	P2-D4	WHT/BLK/VIO			
J2- 16	P2-D8	WHT/BLK/GRA	E1	E2	WHT/BLK/BLU
			E3	E2	WHT/BLK/GRN/BLU

Figure 4-100. Branched Wiring Harness W1 Wire List

4-62. Maintenance Procedures for Branched Wiring Harness W1. Cont

ITEM	ACTION	REMARKS
c. Connectors P2, P5	<p>Remove four screws and four hex nuts from connector body.</p> <p>Remove one screw from handle.</p> <p>Remove handle.</p> <p>Remove screw and hex nut securing cable clamp (2 parts).</p> <p>Remove cable clamp (2 parts).</p> <p>Remove two halves of connector backshell.</p> <p>Remove pins from defective connector.</p> <p>Replace connector.</p> <p>Replace marker sleeves P2</p> <p>Replace marker sleeves P5</p> <p>Replace marker sleeves W1</p> <p>Install pins in connector</p> <p>Install two halves of connector backshell.</p> <p>Install cable clamp with screw and hex nut.</p> <p>Install handle and secure with screw</p> <p>Install backshell halves to connector and secure with four screws and four hex nuts.</p>	<p>Use item 47, App. C</p> <p>Use item 87, App. C</p> <p>Use item 60, App. C</p>



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4-62. Maintenance Procedures for Branched Wiring Harness W1. Cont

ITEM	ACTION	REMARKS
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d. Terminal Lugs E1, E2, E3 Slide cover up wire.

Unsolder wire from defective terminal lug.

Remove and discard defective terminal lug.

Replace marker sleeves E1. Use item 90, App, C

Replace marker sleeves E2. Use item 91, App, C

Replace marker sleeves E3. Use item 92, App. C

Slide new cover onto wire.

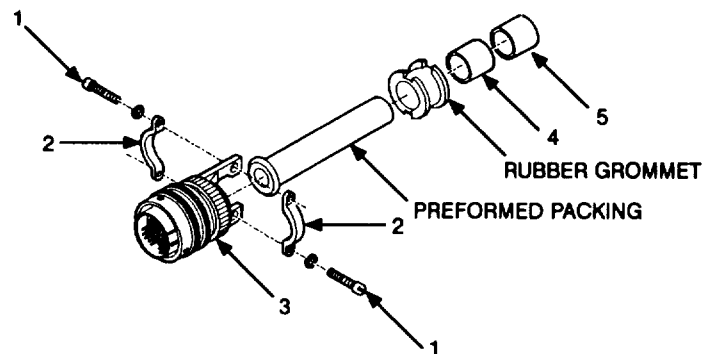
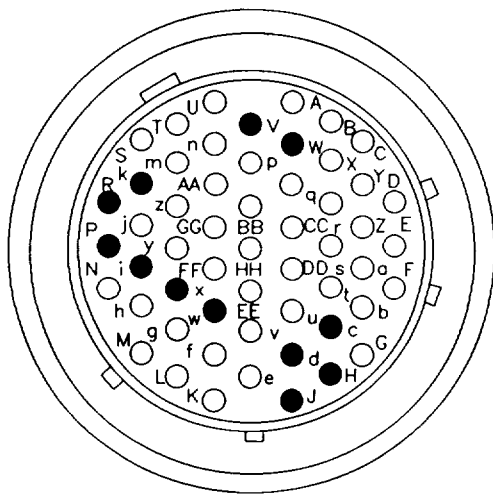
Solder new terminal lug to wire

Slide cover over terminal lug.

e. Connector P1 (3)

Loosen two screws (1) on cable clamp (2).

Slide preformed packing, grommet, and marker sleeves (4, 5) up wires.



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Figure 4-101. Maintenance of Branched Wiring Harness Connector W1P1

Unwrap spiral tubing and tag wires.

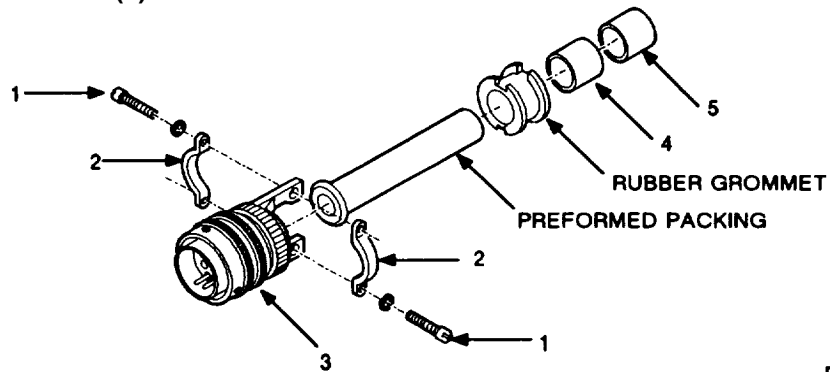
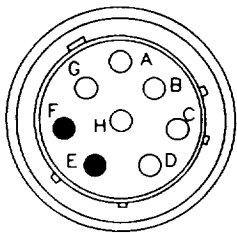
Remove pins from defective connector (3).

Replace connector (3).

Replace marker sleeve P1 (4). Use item 51, App. C

4-62. Maintenance Procedures for Branched Wiring Harness W1. Cont

ITEM	ACTION	REMARKS
	Replace marker sleeve W1 (5). Install pins into appropriate position in new connector body. Rewrap spiral tubing. Slide cable preformed packing, grommet, and marker sleeves down wires. Install clamp (2) and tighten two screws (1).	Use item 50, App. C Use item 126, App. C
f. Connector P3	Loosen two screws (1) on cable clamp (2). Slide cable clamp, preformed packing, grommet, and marker sleeves (4, 5) up wires. Unwrap spiral tubing and tag wires. Remove pins from defective connector (3). Replace connector. Replace marker sleeve P3 (4). Replace marker sleeve W1 (5). Install pins into appropriate position in new connector body. Rewrap spiral tubing. Slide cable clamp (2), preformed packing, grommet, and marker sleeves (4, 5) down wires. Install cable clamp (2) and tighten two screws (1).	Use item 45, App. C Use item 60, App. C Use item 126, App. C

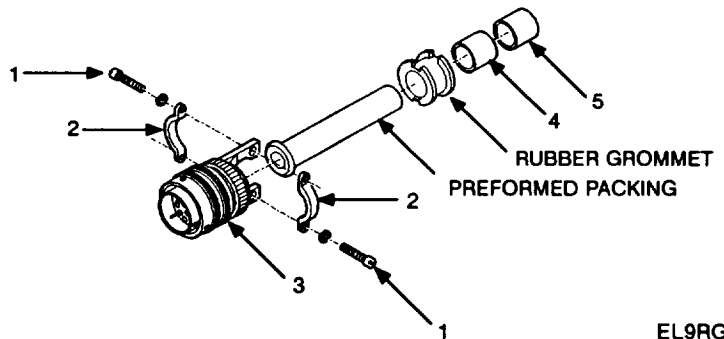
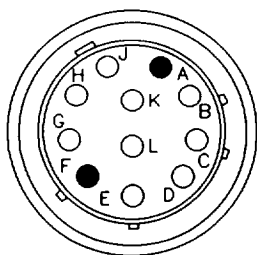


EL9RG268

Figure 4-102. Maintenance of Branched Wiring Harness Connector W1P3

4-62. Maintenance Procedures for Branched Wiring Harness W1. Cont

ITEM	ACTION	REMARKS
g. Connector P4 (3)	<p>Loosen two screws (1) on cable clamp (2).</p> <p>Slide cable clamp, preformed packing, grommet, and marker sleeves (4, 5) up wires.</p> <p>Unwrap spiral tubing and tag wires.</p> <p>Remove pins from defective connector (3).</p> <p>Replace connector (3).</p> <p>Replace marker sleeve P4 (4).</p> <p>Replace marker sleeve W1 (5).</p> <p>Install pins into appropriate position in new connector body.</p> <p>Rewrap spiral tubing.</p> <p>Slide cable clamp, preformed packing grommet, and marker sleeves (4,5) down wires.</p> <p>Install cable clamp (2) and tighten two screws (1).</p>	<p>Use item 93, App. C</p> <p>Use item 60, App. C</p> <p>Use item 126, App. C</p>



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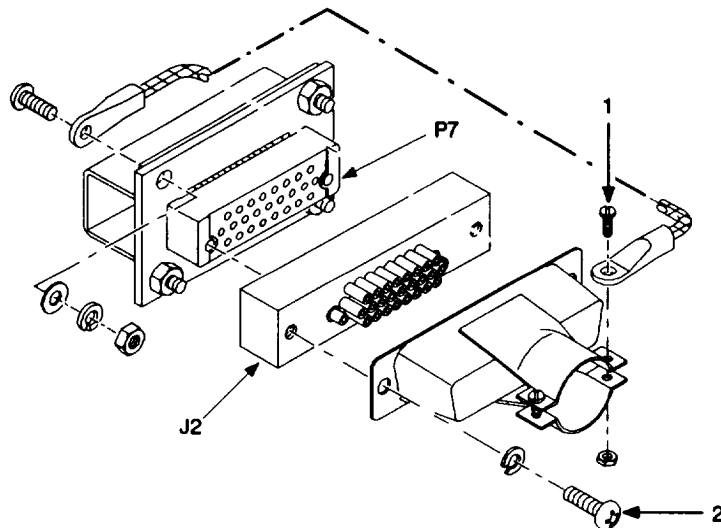
Figure 4-103. Maintenance of Branched Wiring Harness Connector W1P4

4-62. Maintenance Procedures for Branched Wiring Harness W1. Cont

ITEM	ACTION	REMARKS
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h. Dummy Plug
Connector P7

Remove screw (1) and hex nut securing dummy plug connector P7.
Replace dummy connector plug P7.
Secure lanyard with screw (1) and hex nut.



EL9RG270

Figure 4-104. Maintenance of Dummy Plug P7 and Connector J2

i. Connector J2

Remove two screws (2) and lock washers securing cover to J2 connector body.
Remove two screws (1) and two hex nuts from cable clamp.
Unsolder wires.
Remove connector assembly J2.
Replace sleeve marker. Use item 89, App. C
Slide new connector cover up wires.
Solder wires to connector.
Secure cover to connector J2 with two screws (2) and two lock washers.
Secure cable clamp, dummy connector plug P7. and lanyard with two screws (1) and two hex nuts.

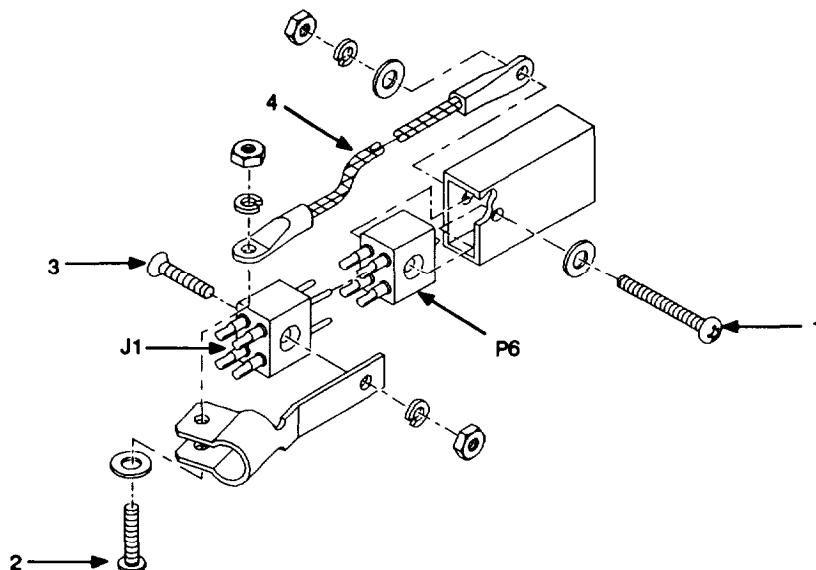
4-62. Maintenance Procedures for Branched Wiring Harness W1. Cont

ITEM	ACTION	REMARKS
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j. Connector Plug P6 and Shell

Remove connector P6 from J1.
Remove screw (1), two flat washers, one lock washer, lanyard (4), and hex nut from connector plug P6.

Refer to figure 4-105.



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Figure 4-105. Maintenance of Connector P6 and J1

Remove connector plug P6 from shell.

Replace shell or P6 as required.

Install connector P6 and shell and secure with one screw (1), two flat washers, one lock washer, one lanyard (4), and one hex nut.

Install P6 onto J1.

k. Lanyard (4)

Remove one screw (2), one flat washer, one lock washer, and one hex nut that secures lanyard (4) to connector J1 cable clamp.

Refer to figure 4-105.

Remove one screw (1), one lock washer, two flat washers, and one hex nut that secures other end of lanyard to connector plug P6.

Replace lanyard.

4-62. Maintenance Procedures for Branched Wiring Harness W1. Cont

ITEM	ACTION	REMARKS
	<p>Install one end of lanyard to connector plug P6 with one screw(1), one lock washer, two flat washers, and one hex nut.</p> <p>Install other end of lanyard to cable clamp on connector J1 with one screw (2), one flat washer, one lock washer, and one hex nut.</p>	
<p>I. Connector J1</p>	<p>Remove connector P6 from connector J1.</p>	<p>Refer to figure 4-105 on page 4-203.</p>
	<p>Remove one screw (3), one lock washer, and one hex nut that secures cable clamp to connector J1.</p>	
	<p>Remove one screw (2), one flat washer, one lock washer, one end of lanyard, and one hex nut from other end of cable clamp.</p>	
	<p>Remove and retain cable clamp and connector plug P6.</p>	
	<p>Unsolder wires.</p>	
	<p>Replace connector J1.</p>	
	<p>Solder wires to appropriate connector J1 pins.</p>	
	<p>Install one end of cable clamp to wires with one screw (2), one fiat washer, one lock washer, one end of lanyard, and one hex nut.</p>	
	<p>Secure other end of cable clamp to connector J1 with one screw (3), one lock washer, and one hex nut.</p>	
<p>m. Tiedown Strap</p>	<p>Replace as required,</p>	<p>Use item 279, App. C</p>
<p>n. Marker Sleeve J1</p>	<p>Replace as required.</p>	<p>Use item 88, App. C</p>
<p>o. Spiral Tubing</p>	<p>Replace as required.</p>	<p>Use item 128, App. C</p>
<p>p. Connector Pins</p>	<p>Replace as required.</p>	
<p>q. Wires</p>	<p>Replace as required.</p>	

**Section Xiii. MAINTENANCE OF J-4830/G
(WIRING HARNESS BRANCHED - TEST ADAPTER G)**

4-63. Required Test Accessories for Test Adapter G.

REQUIRED TEST ACCESSORIES	
● Test Program Tape – RF Heatsink	CPIN CP0200030G
File No.	A3013374A
File No.	A3013374B
● Wiring Harness, Branched, ICD-G	A3014511-1
● RF Amplifier	ENI Model 325LA
● Accessory Kit A3018639-1 Items:	
Cable Assembly, RF (W1)	A3018640-1
Cable Assembly, RF (W2)	A3018641-1
Cable Assembly, RF (W3)	A3018642-1
Cable Assembly, RF (W4)	A3018643-1
Attenuator, 10 W, 10 dB (AT1)	A3018544-1
Attenuator, 150 W, 30 dB (AT2)	A3018545-1
Adapter, Connector (CP1)	M55339/07-00029
● AN/USM-410 Test Accessory Kit B4021292 Items:	
Cable, Assembly, RF (W101)	B4021271
Cable, Assembly, RF (W102)	B4021272
Cable, Assembly, RF (W103)	B4021273
Adapter, Connector (2 reqd)	B4021032

4-64. Test Procedures for Test Adapter G.

- a. Turn on test station AN/USM-410(V)2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and PRESS return on VDT keyboard.

NOTE

The intermediate code of this program will require 40 blocks on the removable disk pack (DPØ). Before loading the test program ensure that the DPØ has sufficient space to load the intermediate code. If there are not enough blocks on the present disk, reformat the disk or obtain anew disk.

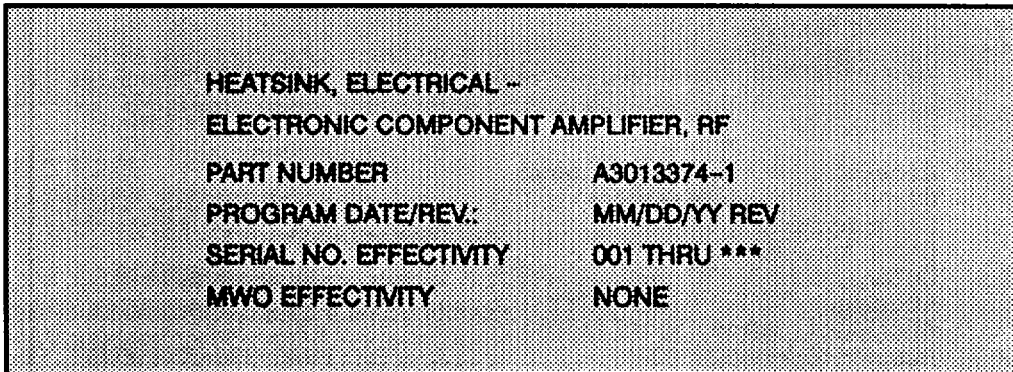
4-64. Test Procedures for Test Adapter G. Cont

d. Load test program.

- (1) Install test program tape CPIN CP0200030G in accordance with TM 11-6625-2773-10.
- (2) Load file onto disk in accordance with TM 11-6625-2773-10.

e. Select test.

- (1) Enter TEST A3013374A or A3013374B and press RETURN on VDT keyboard.
- (2) Verify that the following information is displayed on the VDT:



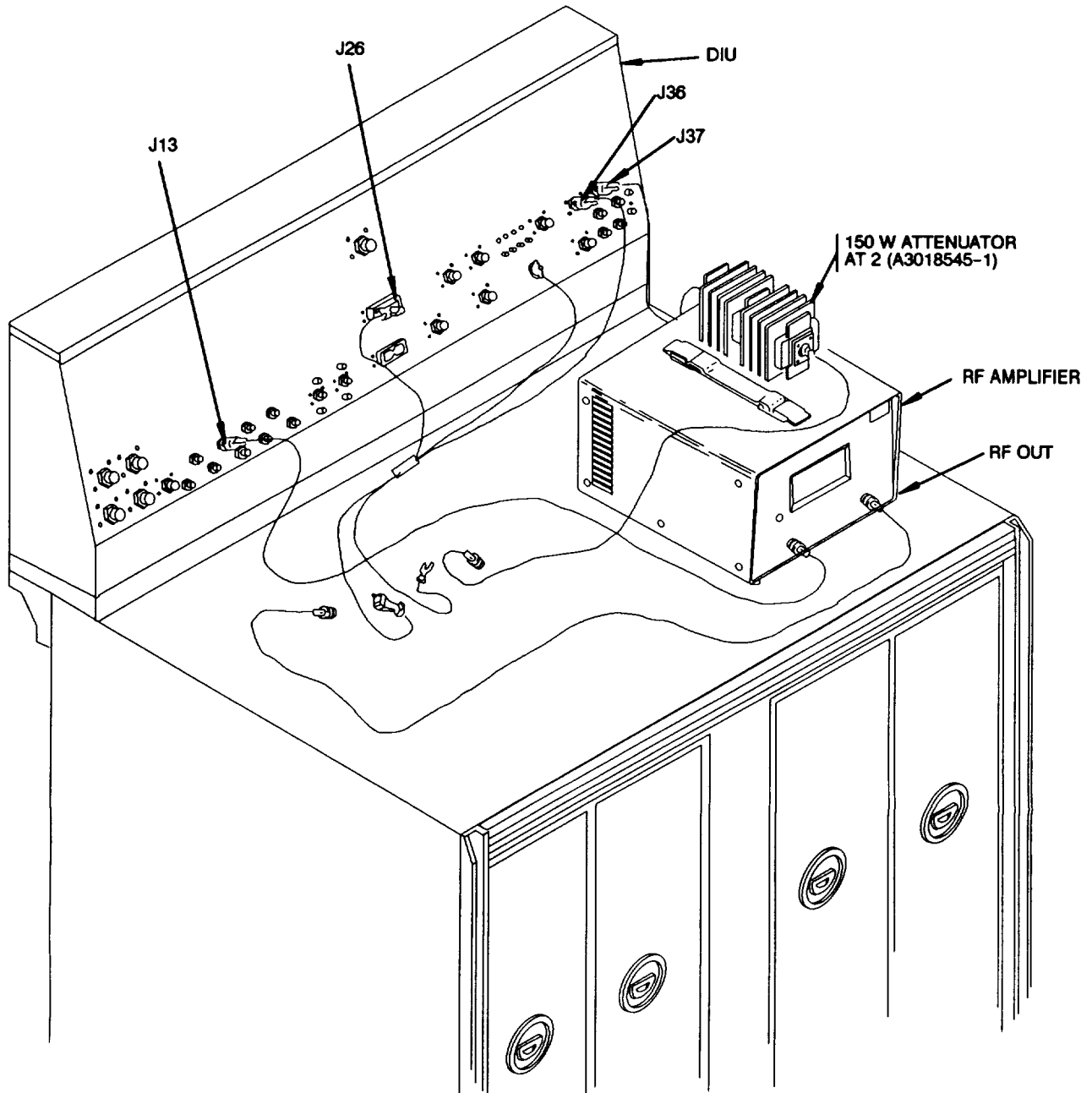
HEATSINK, ELECTRICAL -
ELECTRONIC COMPONENT AMPLIFIER, RF
PART NUMBER A3013374-1
PROGRAM DATE/REV.: MM/DD/YY REV
SERIAL NO. EFFECTIVITY 001 THRU ***
MWO EFFECTIVITY NONE

- (3) Follow operator instructions on VDT. Enter part number and serial number and read operator instructions on VDT.

- (4) Press STRT/PROC on the VDT keyboard.

- f. Run ATE survey test if desired. If ATE survey fails refer to TM 11-6625-2773-10.
- g. Install wiring harness, branched-interface connect device G (See figure 4-106 on page 4-207).
- h. Run wiring harness ICD G survey test. If survey test fails, go to paragraph 4-65 page 4-208.
- i. When survey test passes, continue with UUT testing.

4-64. Test Procedures for Test Adapter G. Cont



EL9RG272

Figure 4-106. Installation of Test Adapter G

4-65. Maintenance Procedures for Test Adapter G.

INITIAL SETUP	
TEST EQUIPMENT: Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223) Multimeter AN/USM-486 (6625-01-145-2430)	REFERENCES: TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-24P TB 43-0127
TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-01-610-8177) Solder Repair Center PRC-151 (3439-01-109-8590) Tool, Extract 274-7029-07 (5120-01-230-2603) Tool, Crimping CCT-UBC-1 (5120-01-061-0903)	PERSONNEL REQUIRED: 1

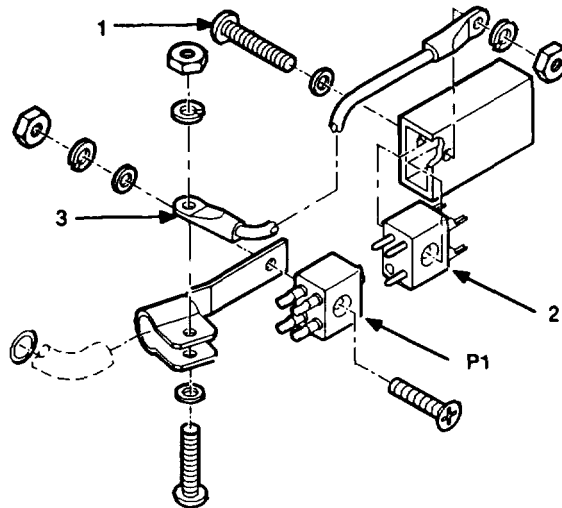
ITEM	ACTION	REMARKS
------	--------	---------

a. Connector Plug J1 (2) Remove screw (1), lock washer, flat washer, lanyard (3), and hex nut from connector plug J1.

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
J1-A	J1-C	Brown, item 149, App. C
J1-A	J1-D	Black, item 148, App. C

EL9RG273

Replace connector plug J1 (2) and shell and secure with screw (1), lock washer, flat washer, lanyard (3), and hex nut.



EL9RG274

Figure 4-107. Disassembly of Test Adapter Connector J1

4-65. Maintenance Procedures for Test Adapter G. Cont

ITEM	ACTION	REMARKS
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Install insulation sleeving on wires.

Solder wires to appropriate connector P1 pins.

Install screw (2), flat washer, lock washer, and hex nut securing cable clamp to connector P1.

Remove screw (1), flat washer, lock washer, and hex nut that secures cable clamp and lanyard to cable.

Connect connector plug J1 to connector P1.

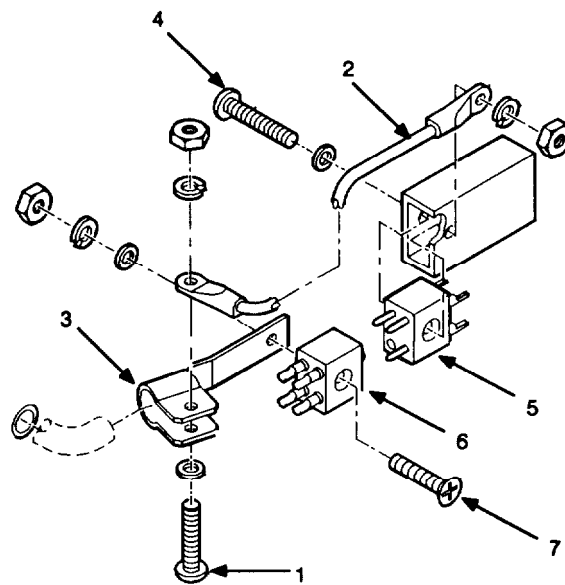
Use the following wire list for troubleshooting.

<u>FROM</u>	TO	<u>COLOR/TRACER</u>
P1-D	P3-P3	Orange, item 151, App. C
P1-C	P3-A1	Green, item 153, App. C
P1-A	P3-D1	Red, item 150, App. C

EL9RG276

4-65. Maintenance Procedures for Test Adapter G. Cont

ITEM	ACTION	REMARKS
c. Lanyard (2)	<p>Remove screw (1), flat washer, lock washer, and hex nut that secures lanyard (2) to connector P1 cable clamp (3).</p> <p>Remove screw (4), flat washer, lock washer, and hex nut securing lanyard to connector plug J1 (5).</p> <p>Replace lanyard (2) and secure to connector plug J1 (5) with screw (4), lock washer, flat washer and hex nut.</p> <p>Secure lanyard to connector P1 (6) cable clamp (3) with screw (1), flat washer, lock washer, and hex nut.</p>	



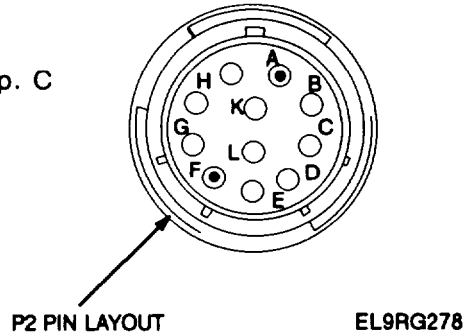
EL9RG277

Figure 4-109. Replacement of Lanyard

4-65. Maintenance Procedures for Test Adapter G. Cont

ITEM	ACTION	REMARKS
d. Connector P2	<p>Loosen two screws on cable clamp.</p> <p>Unscrew backshell from connector body.</p> <p>Slide backshell, cable clamp, and insulation sleeving up wires.</p> <p>Unwrap spiral tubing.</p> <p>Remove pins from defective connector.</p> <p>Replace insulation sleeving as required.</p> <p>Replace marker sleeve P2.</p> <p>Replace connector and install pins into appropriate positions in connector body.</p> <p>Rewrap spiral tubing.</p>	<p>Use item 3, App. C</p> <p>Use item 95, App. C</p> <p>Use item 83, App. C</p>

<u>FROM</u>	TO	<u>COLOR/TRACER</u>
P2-F	E1	White, item 157, App. C Black Marker, item 19, App. C
P2-F	E2	Violet, item 155, App. C
P2-A	P3-A1	Blue, item 154, App. C

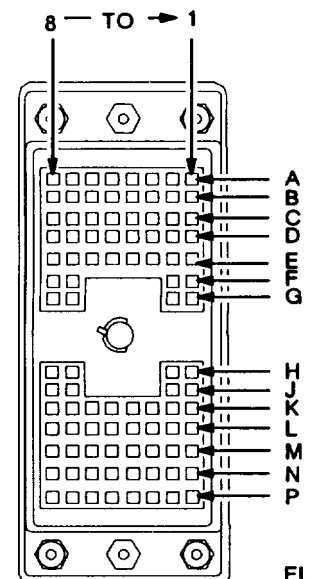


4-65. Maintenance Procedures for Test Adapter G. Cont

ITEM	ACTION	REMARKS
e. Connector P3	<p>Remove four screws and four hex nuts from connector body.</p> <p>Remove screw from handle.</p> <p>Remove handle</p> <p>Remove screw and hex nut securing cable clamp (2 parts).</p> <p>Remove cable clamp.</p> <p>Remove two halves of connector backshell.</p> <p>Remove pins from defective connector.</p> <p>Replace marker sleeve P3.</p> <p>Install pins into appropriate positions in new connector body.</p> <p>Replace connector install two halves of connector backshell.</p>	<p>Use item 81, App. C</p>

FROM	TO	COLOR/TRACER
P3-E3	P3-D3	Black, item 148, App. C
P3-E4	P3-D4	Brown, item 149, App. C
P3-P3	P1-D	Orange, item 151, App. C
P3-A1	P1 -C	Green, item 153, App. C
P3-A1	P2-A	Blue, item 154, App. C
P3-E5	P3-P4	Violet, item 155, App. C
P3-D1	P1-A	Red, item 150, App. C
P3-A8	P3-P3	Yellow, item 152, App. C
P3-P4	E2	Gray, item 156, App. C

CONNECTOR P3 PIN LAYOUT



EL9RG279

4-65. Maintenance Procedures for Test Adapter G. Cont

ITEM	ACTION	REMARKS
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Install cable clamp with screw and hex nut.

Install handle with screw.

Secure backshell halves to connector body with four screws and four hex nuts.

f. Terminal Lug E1, E2

Replace as required.

Use following list to replace wires.

<u>FROM</u>	TO	<u>COLOR/TRACER</u>	
E1	P2-F	White, item 157, App. C Black Marker, item 19, App. C	
E2	P2-F	White, item 157, App. C	
E2	P3-P4	Gray, item 156, App. C	EL9RG280

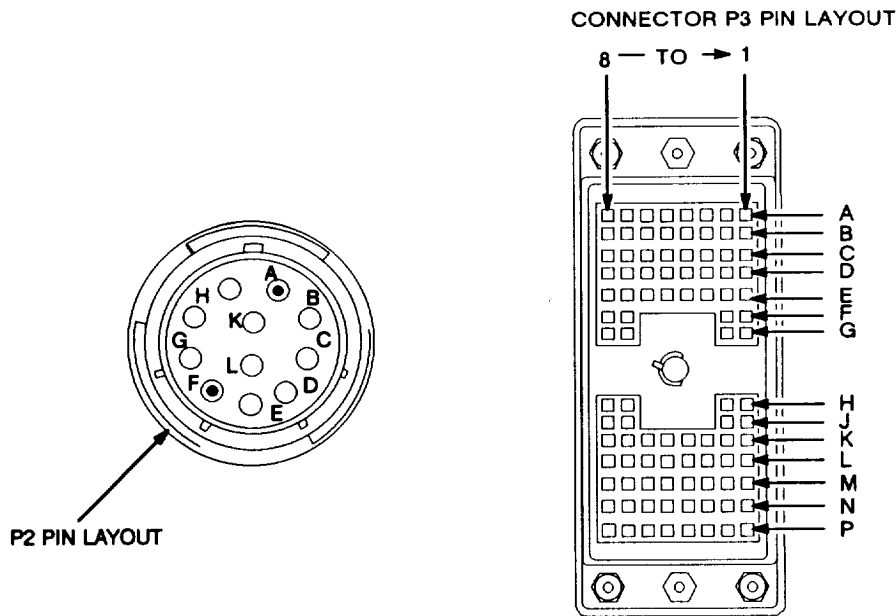
- | | | |
|------------------------|----------------------|----------------------|
| g. Tiedown Strap | Replace as required. | Use item 114, App. C |
| h. Insulation Sleeving | Replace as required. | Use item 106, App. C |
| i. Marker Sleeves E1 | Replace as required. | Use item 84, App. C |
| j. Marker Sleeves E2 | Replace as required. | Use item 85, App. C |
| k. Cable Marker W1 | Replace as required. | Use item 41, App, C |
| l. Spiral Tubing | Replace as required. | Use item 126, App. C |
| m. Spiral Tubing | Replace as required. | Use item 128, App. C |
| n. Connector Pins | Replace as required. | |
| o. Wires | Replace as required. | |

4-65. Maintenance Procedures for Test Adapter G. Cont

ITEM	ACTION	REMARKS
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p. Use the following wire list to replace wires.

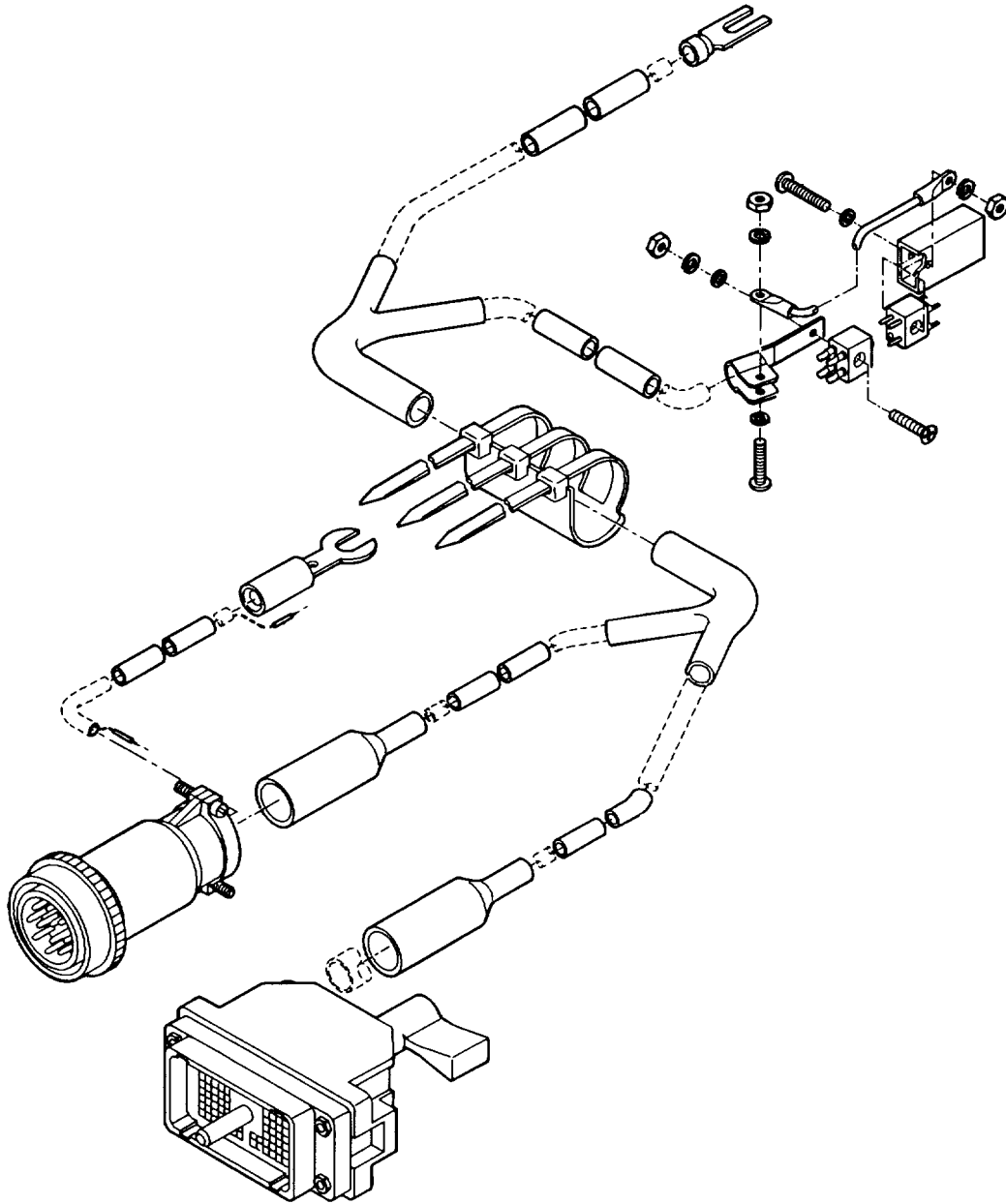
FROM	TO	COLOR/TRACER
J1-A	J1-C	Brown, item 149, App. C
J1-D	J1-A	Black, item 148, App. C
P2-F	E1	White, item 157, App. C Black Marker, item 19, App. C
P2-F	E2	White, item 157, App. C
P3-E3	P3-D3	Black, item 148, App. C
P3-E4	P3-D4	Brown, item 149, App. C
P3-P3	P1-D	orange, item 151, App. C
P3-A1	P1-C	Green, item 153, App. C
P3-A1	P2-A	Blue, item 154, App. C
P3-E5	P3-P4	Violet, item 155, App. C
P3-D1	P1-A	Red, item 150, App. C
P3-A8	P3-P3	Yellow, item 152, App. C
P3-P4	E2	Gray, item 156, App. C



EL9RG281

Figure 4-110. Wiring Diagram of Test Adapter G

4-65. Maintenance Procedures for Test Adapter G. Cont



EL9RG282

Figure 4-111. Wiring Harness Branched W1

Section XIV. MAINTENANCE OF J-4829/G (TEST ADAPTER H)

4-66. Required Test Accessories for Test Adapter H.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP0400030G
File No	A301 3369
File No.	A3018415
● ICD H	A3019208-1
● Cable Assembly, Electrical ICD-H W1	A3019144-1
● Cable Assembly, Electrical ICD-H W2	A3019150-1
● Cable Assembly, Electrical ICD-H W3	A3019151-1
● Cable Assembly, Electrical ICD-H W4	A3019152-1
● Lead, Test-Jumper -ICD-H W5	A3132907-1
● Lead, Test-Jumper -ICD-H W6	A3132907-2
● Lead, Test-Jumper -ICD-H W7	A3132907-3
● Safety Shield	A3167648-1
● Safety Shield	A3167688-1
● Safety Shield	A3167687-1

4-67. Test Procedures for Test Adapter H.

CAUTION

This UUT contains static sensitive components. Handle in accordance with ESD practices.

- a. Turn on test station AN/USM-410(V)2
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and press RETURN on VDT keyboard.

4-67. Test Procedures for Test Adapter H. Cont

NOTE

The intermediate code of this program will require 36 blocks of memory on the removable disk pack (DP \emptyset). Before loading the test program ensure that the DP \emptyset has sufficient space to load the intermediate code. If there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

d. Load test program.

(1) Install a test program tape in accordance with TM 11-6625-2773-10.

- Install CPIN CP0400030G for A3013369-1 and A3016415-1.

(2) Load file onto disk in accordance with TM 11-6625-2773-10.

e. Select test.

(1) Enter TEST A3013369 or A3016415 and press RETURN on VDT keyboard.

(2) Verify that the following information is displayed on the VDT:

```
-----POWER SUPPLY-----AMPLIFIER-----ADAPTER-----  
PART NUMBER:                A3013369-1  
PROGRAM DATE/REV.:          MM/DD/YY REV  
SERIAL NUMBER EFFECTIVITY: 001 THRU ***  
MWO EFFECTIVITY:            NONE
```

OR

```
-----POWER SUPPLY-----AMPLIFIER-----ADAPTER-----  
PART NUMBER:                A3018415-1  
PROGRAM DATE/REV.:          MM/DD/YY REV  
SERIAL NUMBER EFFECTIVITY: 001 THRU ***  
MWO EFFECTIVITY:            NONE
```

4-67. Test Procedures for Test Adapter H. Cont

(3) Follow operator instructions on VDT. Enter part number and serial number and read operator instructions on VDT.

(4) Press STRT/PROC on the VDT keyboard.

f. Run ATE survey test if desired. If ATE survey fails refer to TM 11-6625-2773-10.

g. Install ICD H on DIU (See figure 4-112 on page 4-220).

h. Run ICD survey test. If survey test fails go to paragraph 4-68 on page 4-221.

i. When survey passes, continue with testing UUT.

4-67. Test Procedures for Test Adapter H. Cont

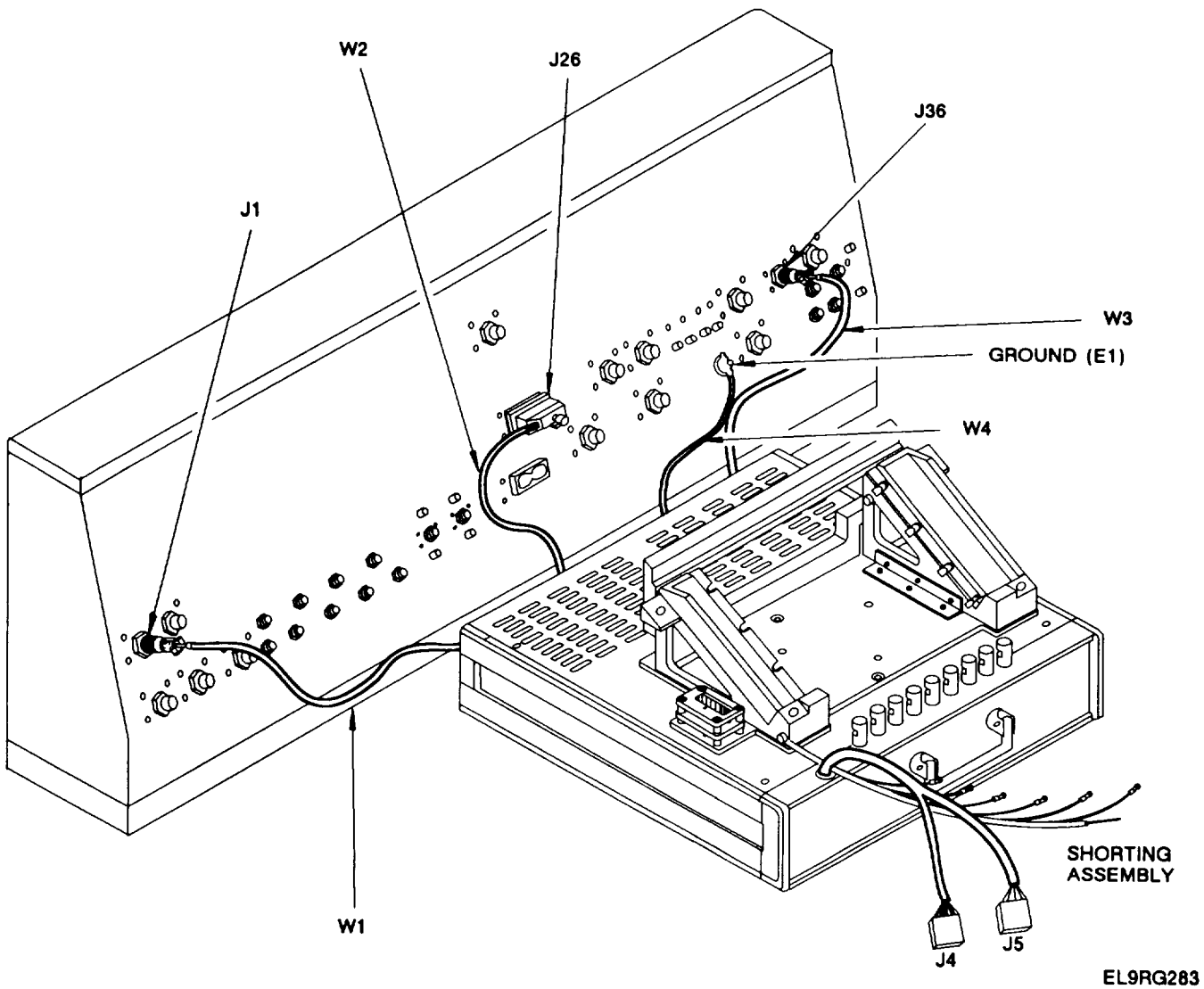


Figure 4-112. Installation of ICD H on DIU

4-68. Maintenance Procedures for Test Adapter H.

INITIAL SETUP	
TEST EQUIPMENT:	TOOLS:
Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223)	Tool Kit Electronic Equipment TK-105/G (5180-01-610-8177)
Multimeter ANWSM-486 6625-01-145-2430)	Solder Repair Center PRC-151 (3439-01-109-6590)
REFERENCES:	Tool, Extraction 274-7029-07 (5120-02-230-2603)
TM 11-5820-914-40	Tool, Extraction MS24256R20 (5120-00-079-4601)
TM 11-6625-2773-10	Tool, Extraction MS24256R16 (5120-00-079-4602)
TM 11-6625-3094-24P	Tool, Crimping M22520/1-01 (5120-00-165-3912)
TB 43-0127	Turret Head Assembly M22520/1-02 (5120-00-016-6382)
PERSONNEL REQUIRED:	
1	

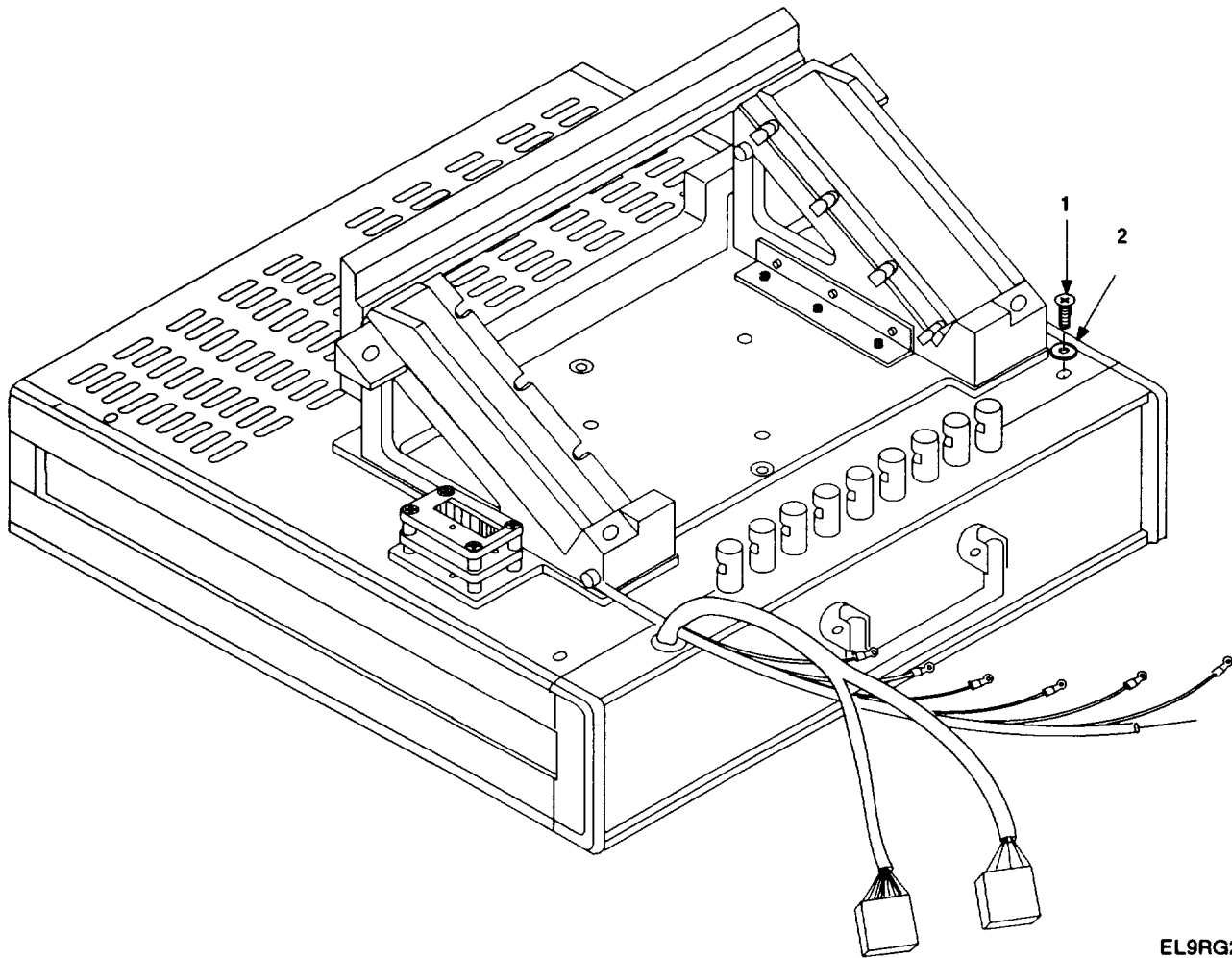
NOTE

It is not necessary to disassemble the entire test adapter for repair. Do not remove components unless necessary for replacement or repair.

ITEM	ACTION	REMARKS
a. Test Adapter H	Refer to FO-16 for schematic diagram.	
(1) Top Cover Assembly	Remove four screws (1) and four nylon washers (2). Move top cover and support assembly to one side and continue to component replacement instructions. Install top cover and support assembly on chassis and secure with four screws (1) and four nylon washers (2).	Refer to figure 4-113 on page 4-222.
(2) Support Bracket Assy.	Refer to paragraph 4-69 on page 4-223.	
(3) Chassis Assy.	Refer to paragraph 4-71 on page 4-234,	

4-68. Maintenance Procedures for Test Adapter H. Cont

ITEM	ACTION	REMARKS
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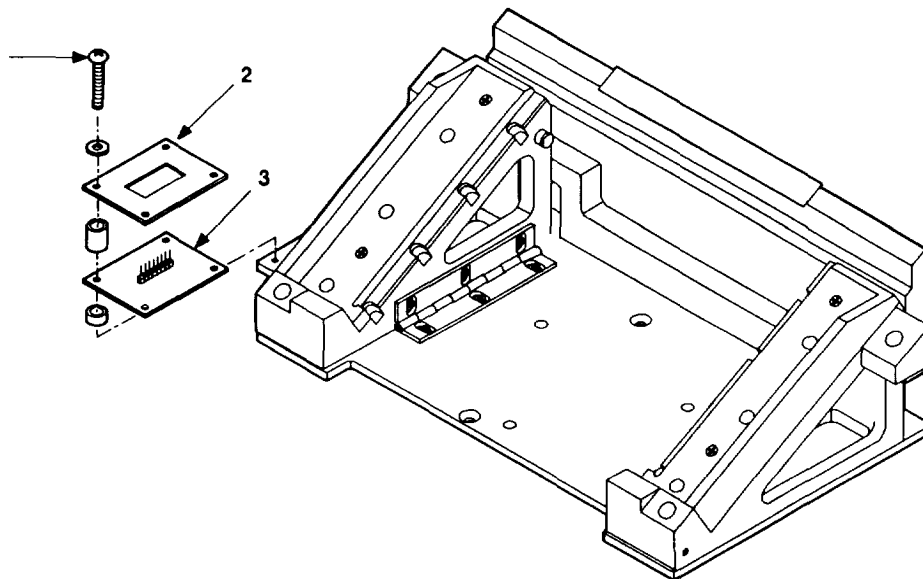


EL9RG284

Figure 4-113. Removal of ICD H Chassis Top with Support Bracket

4-69. Maintenance Procedures for Support Bracket Assembly.

ITEM	ACTION	REMARKS
<p>a. Self-Test Assembly</p>	<p>Remove four screws (1), four flat washers, and eight spacers securing insulator (3) and guard (2) to support bracket assembly.</p> <p>Replace components as required and secure insulator (3) and guard (2) to support bracket assembly with four screws (1), four flat washers, and eight spacers.</p>	<p>Refer to figure 4-114.</p>
<p>b. Wiring Harness</p>	<p>Remove screw (1), flat washer, and one internal tooth lock washer that secure the wiring harness (2) to the support bracket assembly.</p> <p>Replace wiring harness (2).</p> <p>Apply sealing compound to screw threads and secure wiring harness (2) with screw (1), flat washer, and internal tooth lock washer.</p>	<p>Refer to figure 4-116 on page 4-227.</p> <p>Use item 109, App. C</p>



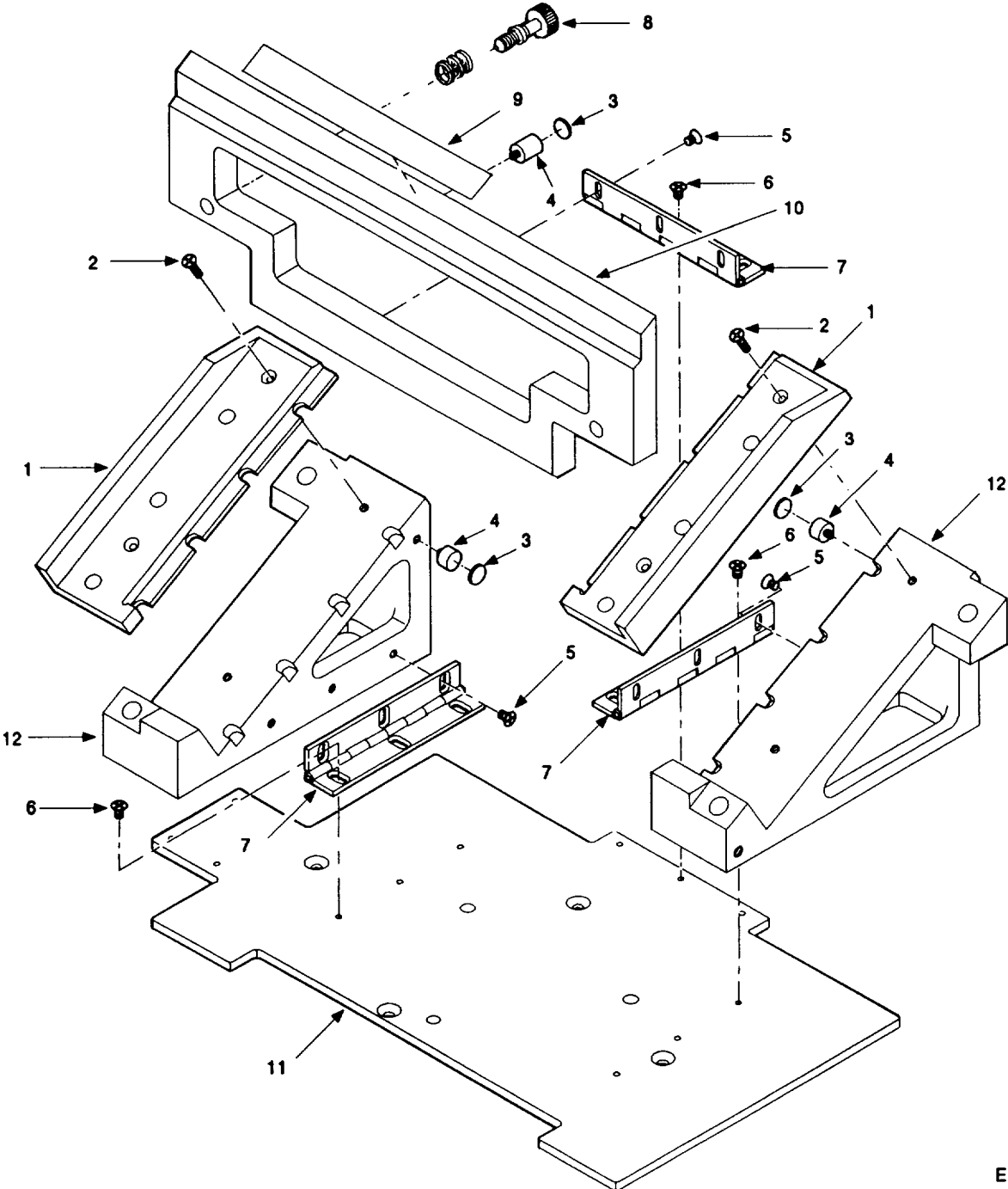
EL9RG285

Figure 4-114. Removal of Self-Test Assembly from Support Bracket Assembly

4-69. Maintenance Procedures for Support Bracket Assembly. Cont

ITEM	ACTION	REMARKS
c. Support Bracket Assembly		
(1) Insulators (1)	Remove two screws (2).	Refer to figure 4-115 on page 4-225.
	Replace insulators and secure with two screws (2).	
(2) Round rubber sections (3)	Replace and secure with epoxy kit.	Refer to figure 4-115 on page 4-225. Use item 96, App. C
(3) Mechanical stops (4)	Replace mechanical stops (4) as required. Replace round rubber section (3)	Refer to figure 4-115 on page 4-225. Refer to step (2).
(4) Hinges (7)	Remove three screws (5) and three screws (6).	Ensure mounting plates (12) are secured in upright position by knurled knobs (8) Refer to figure 4-115 on page 4-225.
	Replace hinge (7) and secure with three screws (5) and three screws (6).	
(5) Mounting plate (left or right) (12)	Loosen knurled knob (8) on T-Plate (10). Remove three screws (5). Remove insulator (1). Remove mechanical stop (4). Replace mounting plate (12) as required ensuring proper alignment and install three screws (5). Install mechanical stop (4). Install insulator (1). Tighten knurled knob (8).	Refer to figure 4-115 on page 4-225. Refer to step (1).
(6) T-Plate (10)	Remove two knurled knobs (8). Remove three screws (5). Remove mechanical stop (4). Replace as required. Install mechanical stop (4). Install T-Plate (10) on bottom mounting plate (11) and secure with three screws (5). Install two knurled knobs (8).	Refer to figure 4-115 on page 4-225. Refer to step (3).
(7) Rubber Strip (9)	Replace and secure with epoxy kit.	Refer to figure 4-115 on page 4-225. Use item 96, App. C

4-69. Maintenance Procedures for Support Bracket Assembly. Cont



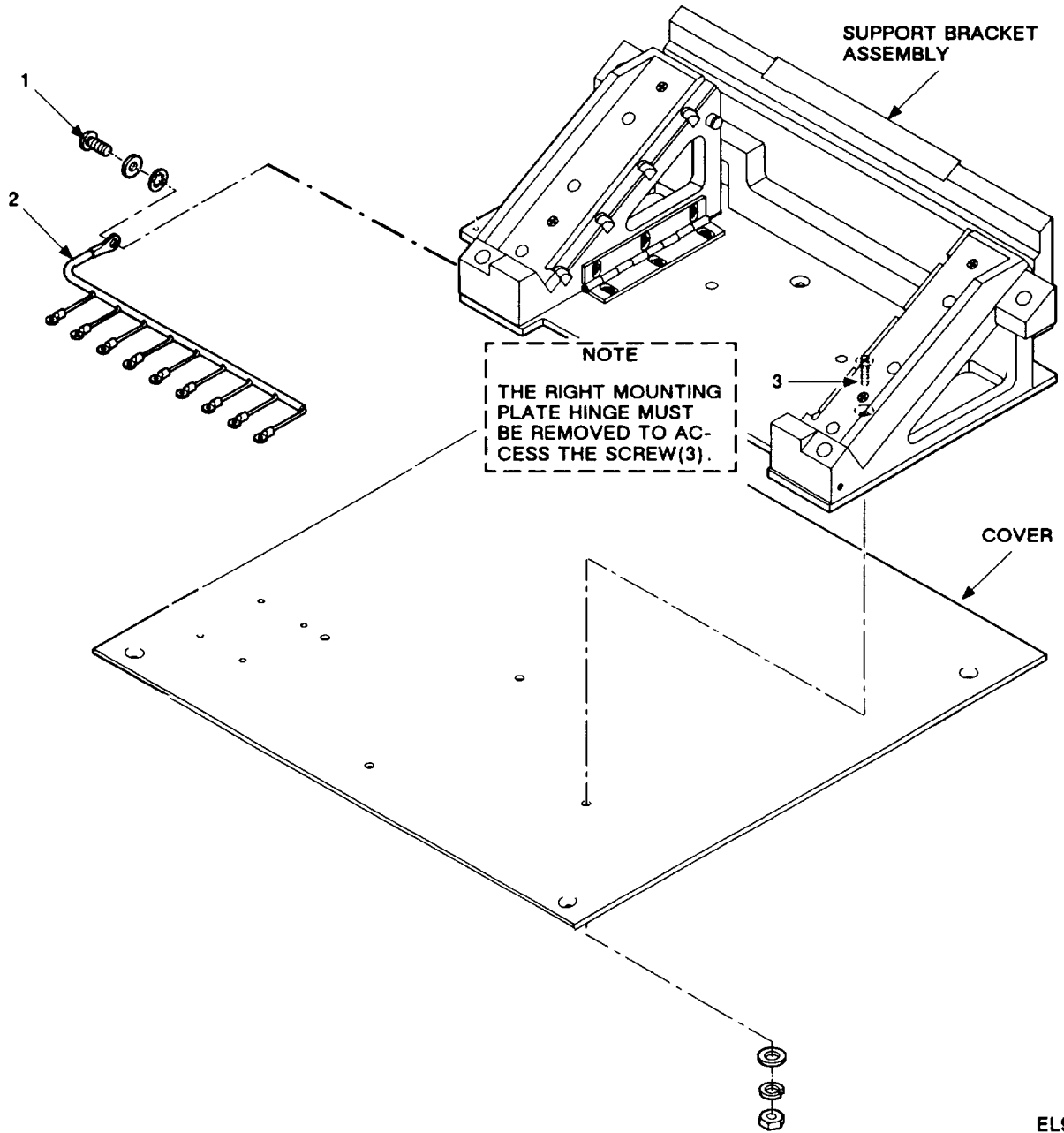
EL9RG286

Figure 4-115. Disassembly of Support Bracket Assembly

4-69. Maintenance Procedures for Support Bracket Assembly. Cont

ITEM	ACTION	REMARKS
(8) Bottom mounting plate (11)	Remove nine screws (6).	Refer to figure 4-115 on page 4-225.
	Remove mounting plates (12), and T-plate (10), with attaching hardware.	Refer to step (5) on page 4-224.
	Remove self-test assembly.	Refer to step a. on page 4-223.
	Remove top cover assembly.	Refer to step a. on page 4-221.
	Remove four screws (3), four flat washers, four lock washers and four hex nuts securing bottom mounting plate (11).	Refer to figure 4-116 on page 4-227.
	Replace bottom mounting plate (11) and secure with four screws (3), four flat washers, four lock washers and four hex nuts.	Refer to figure 4-116 on page 4-227.
	Install top cover assembly.	Refer to step a. on page 4-221,
	Install self test assembly.	Refer to step a. on page 4-223.
	Position mounting plates (12), T-plate (10), and attaching hardware onto bottom mounting plate (11) and secure with nine screws (6).	Refer to step (5) . Refer to step (6) .
	(9) Knurled Knobs (8) and springs.	Replace as required.

4-69. Maintenance Procedures for Support Bracket Assembly. Cont



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Figure 4-116. Removal of Wiring Harness from Support Bracket

4-69. Maintenance Procedures for Support Bracket Assembly. Cont

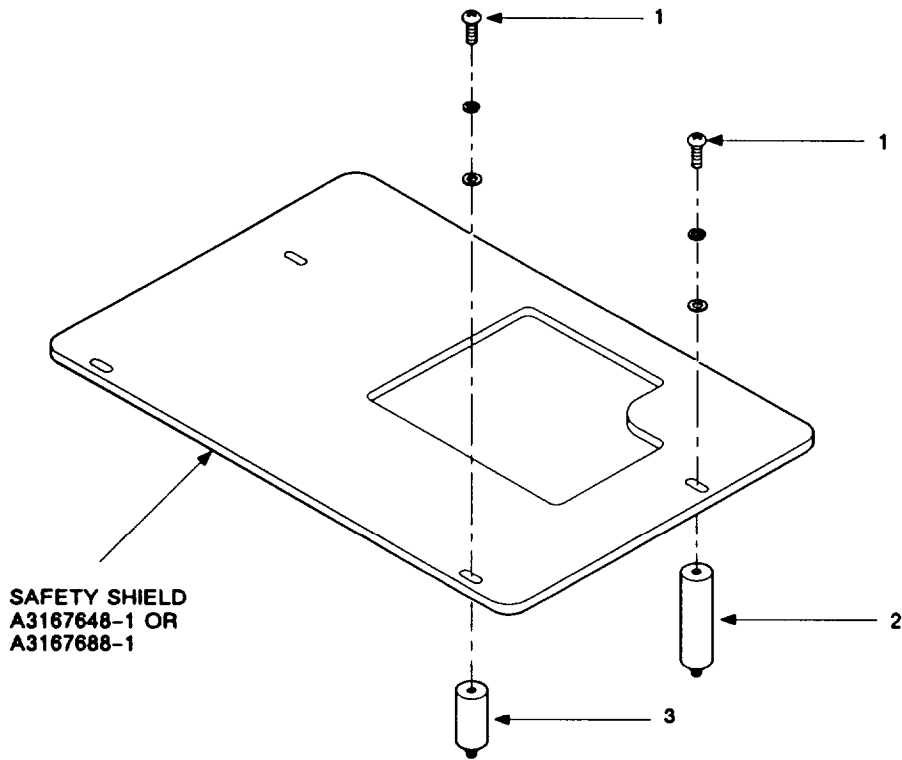
ITEM	ACTION	REMARKS
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d. Safety Shields
 (Part No. A3167648-1
 or A3167688-1)

Remove screws (1), lock washers,
 flat washers, and spacers.

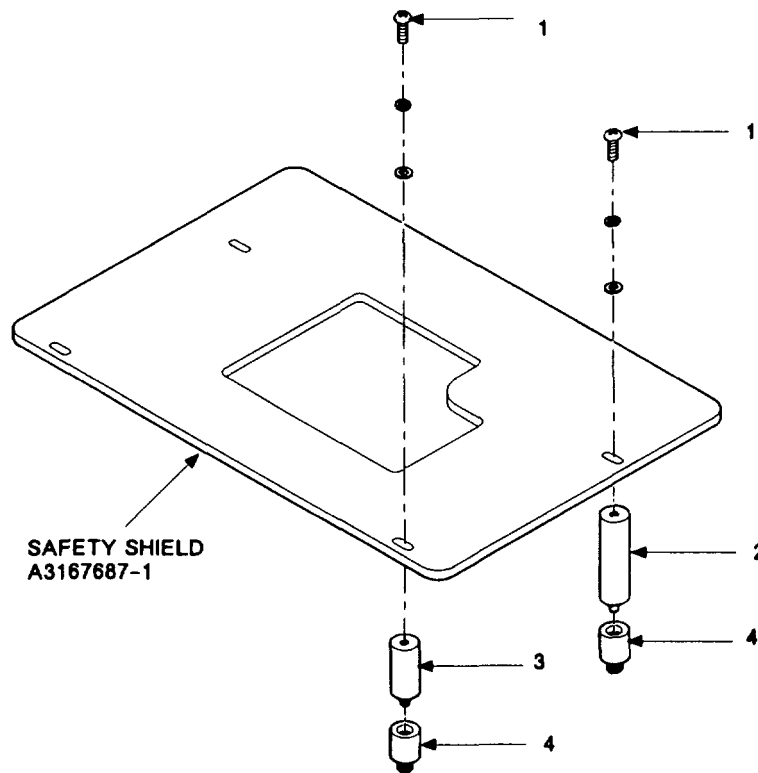
Replace stepped spacers (2,3) and
 secure with screws (1), lock washers,
 and flat washers.
 Ensure proper alignment.

Short stepped spacers (3)
 are located on front edge
 of safety shields.



4-69. Maintenance Procedures for Support Bracket Assembly. Cont

ITEM	ACTION	REMARKS
<p>e. Safety Shield (Part No. A3167667-1)</p>	<p>Remove screws (1) lock washers, flat washers, and spacers.</p> <p>Replace stepped spacers (2,3) and secure with screws (1), lock washers, and flat washers.</p> <p>Ensure proper alignment.</p> <p>Replace stepped spacers (4) as required.</p>	<p>Short stepped spacers (3) are located on front edge of safety shield.</p>



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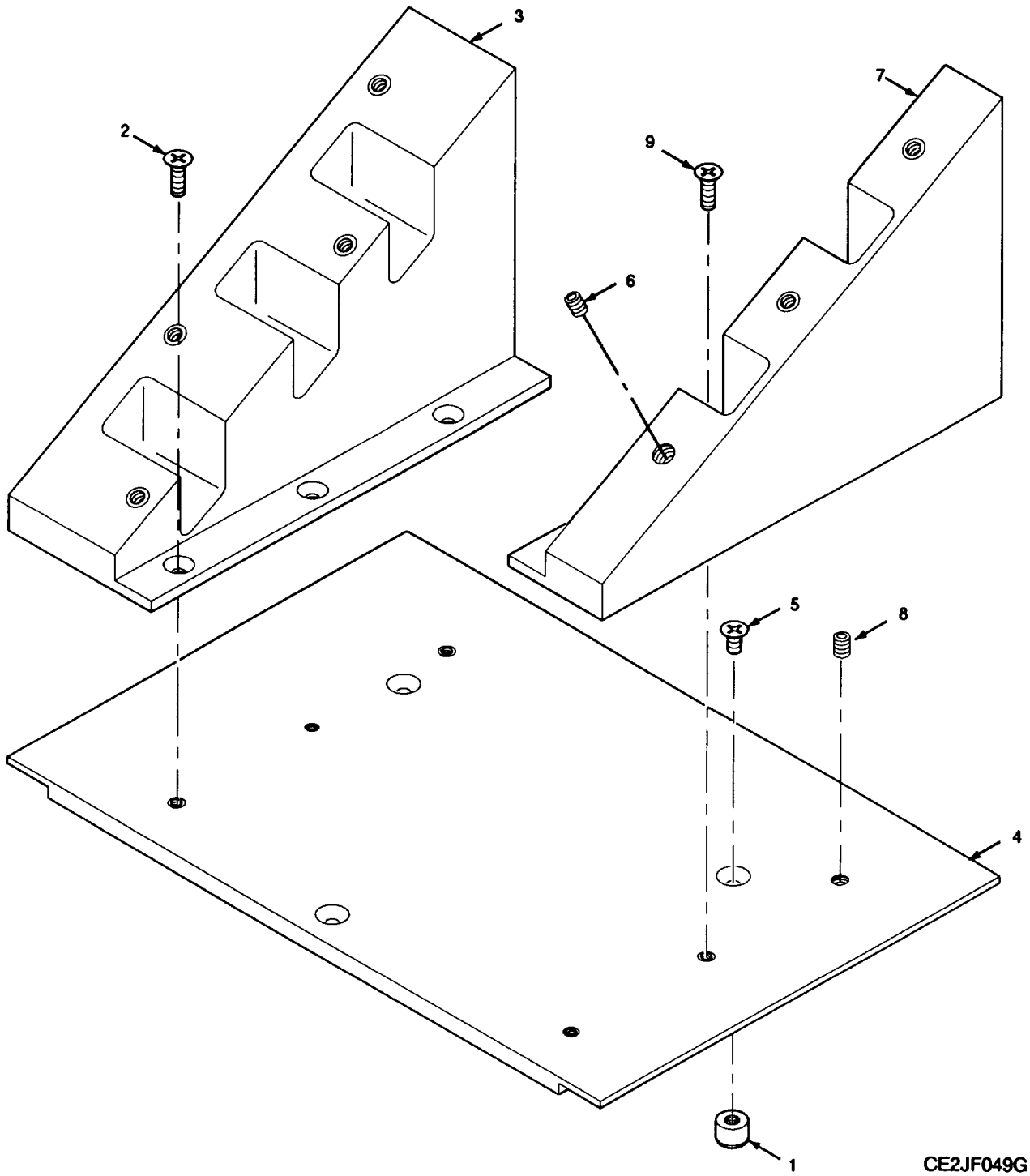
4-70. Maintenance Procedures for Power Supply Adapter.

ITEM	ACTION	REMARKS
a. Straight headless pin (1)	<p>If necessary, remove three machine screws (2) securing left mounting plate (3) to bottom mounting plate (4).</p> <p>Remove machine screw (5) securing straight headless pin (1) to bottom mounting plate (4).</p> <p>Replace straight headless pin (1), securing to bottom mounting plate (4) with machine screw (5).</p> <p>Replace left mounting plate (3), if removed, securing with three machine screws (2).</p>	Refer to figure 4-117 on page 4-232.
b. Threaded inserts (6) (Left and right mounting plates-3, 7)	Replace threaded insert.	Refer to figure 4-118 on page 4-233. Use threaded insert MA3280-154 (M4x1.5).
(1) Threaded insert extractor(l)	<p>Place in hole. Tap extractor to seat in insert.</p> <p>Maintain steady pressure on extractor and unscrew insert.</p> <p>Remove insert from hole.</p>	Use tool 1227-06.
(2) Thread cleaning tap (2)	<p>Select proper size tap.</p> <p>Insert and secure in brace (3).</p> <p>Start carefully in hole. Screw tap to bottom of hole. Unscrew tap.</p>	
(3) Prewinder (4) and insert (5)	<p>Loosen stop collar (6) with Allen wrench.</p> <p>Extend threaded shaft beyond end of prewinder one thread longer than insert.</p> <p>Move stop collar to top of tool body and tighten. Retract threaded shaft.</p> <p>Place insert in prewinder with tang end toward prewinder tip.</p> <p>Rotate shaft until insert projects beyond the tip one full turn.</p> <p>Place tip in hole.</p> <p>Screw insert into hole until stop collar touches the tool body.</p> <p>Retract prewinder.</p>	

4-70. Maintenance Procedures for Power Supply Adapter. Cont

ITEM	ACTION	REMARKS
(4) Tang breakoff tool (7)	<p>Place on tang.</p> <p>Break off tang by pressing down on tool.</p> <p>Remove tang breakoff tool</p> <p>Remove broken tang from hole.</p>	
c. Threaded inserts (8) (Bottom mounting plate)	<p>Remove three machine screws (2) securing left mounting plate (3) to bottom mounting plate (4).</p> <p>Remove three machine screws (9) securing right mounting plate (7) to bottom mounting plate (4).</p> <p>See section b.(1) for threaded screw insert removal and installation procedure.</p>	<p>Use threaded insert MA3330-102 (M3x1)</p>

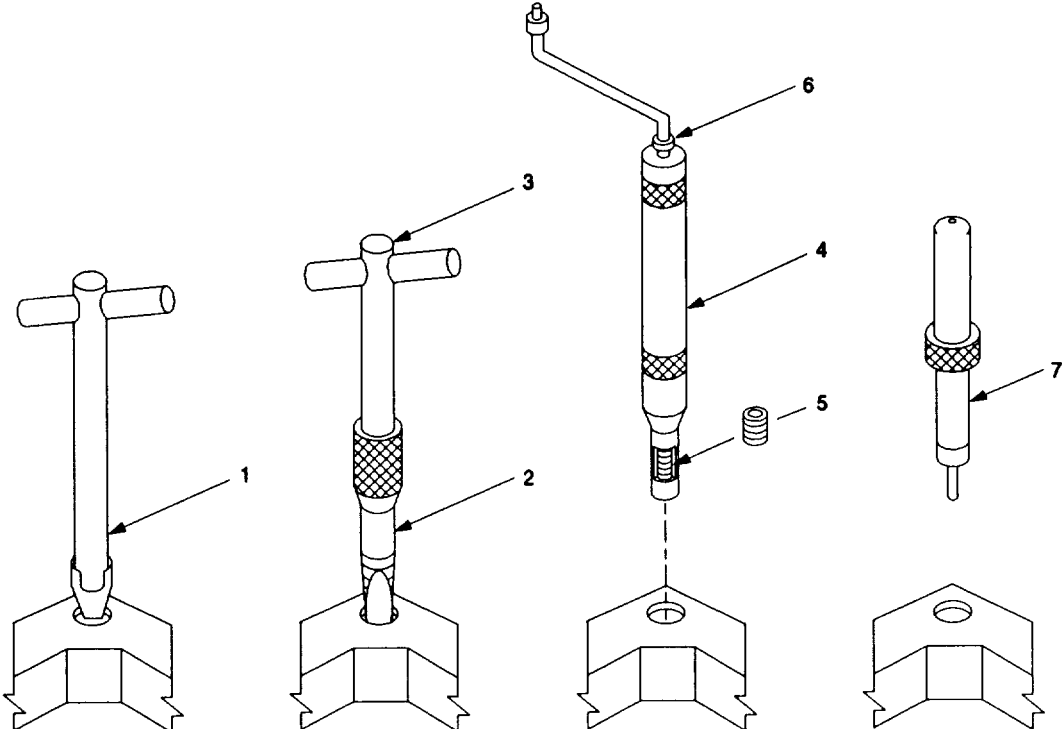
4-70. Maintenance Procedures for Power Supply Adapter. Cont



CE2JF049G

Figure 4-117. Maintenance of Power Supply Adapter

4-70. Maintenance Procedures for Power Supply Adapter. Cont



EL9RG290

Figure 4-118. Threaded Screw insert Replacement

4-71. Maintenance Procedures for ICD-H Chassis Assembly.

ITEM	ACTION	REMARKS
<p>a. Resistors R1 (2), R2 (3) R3 (4) , R4 (5) , R5 (6) R11 (7), R12 (8)</p>	<p>Remove two hex nuts (1), two lock washers, two flat washers, and two screws from defective resistor.</p> <p>Unsolder wires from resistor terminals.</p> <p>Replace resistor and solder wires to resistor terminals.</p> <p>Install resistor with two screws and secure with two hex nuts (1), two lock washers, and two flat washers.</p>	<p>Refer to figure 4-119 on page 4-236.</p>
<p>b. Resistor R6 (9)</p>	<p>Remove two hex nuts (10), two flat washers, two lock washers, and two terminal lugs (11) from resistor R6 terminals.</p> <p>Remove four nuts (12), four lock washers, four washers, and four screws securing resistor to chassis,</p> <p>Replace resistor and secure with four nuts (12), four lock washers, four washers, and four screws securing resistor to chassis.</p> <p>Install two terminal lugs (11) on resistor terminals with two flat washers, two lock washers, and two hex nuts (10).</p>	<p>Refer to figure 4-119 on page 4-236.</p>
<p>c. Resistors R7 (13), R8 (14) R9 (15), R13 (16), R14 (17)</p>	<p>Unsolder defective resistor from support terminal assemblies located on each end of resistors.</p> <p>Replace and solder new resistors to terminal assemblies.</p>	<p>Refer to figure 4-119 on page 4-236.</p>
<p>d. Resistor R10 (18)</p>	<p>Remove two hex nuts (19), two flat washers, two lock washers, and two terminal lugs (20) from resistor R6 terminals,</p> <p>Remove two screws (21), two flat washers, two lock washers, and two hex nuts securing resistor to chassis.</p>	<p>Refer to figure 4-119 on page 4-236.</p>

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont

ITEM	ACTION	REMARKS
	<p>Replace resistor and secure with two screws (21), two flat washers, two lock washers, and two hex nuts.</p> <p>Install two terminal lugs (20) on resistor terminals with two flat washers, two lock washers, and two hex nuts (19).</p>	
e. Resistor support	<p>Remove resistor R7, R8, or R9 bracket.</p> <p>Remove two screws (25), two lock washers, and two flat washers from bottom of bracket.</p> <p>Replace bracket and secure with two screws (25), two flat washers, and two lock washers.</p>	Refer to step c.
	<p>Install resistor.</p>	Refer to step c.
f. Tiewraps	<p>Replace as required.</p>	Use item 116, App. C
g. Tiewrap Holder Pad	<p>Remove tiewrap.</p> <p>Remove screw, two flat washers, lock washer, and hex nut securing holder pad to chassis.</p> <p>Replace pad to chassis and secure with screw, two flat washers, lock washer, and one hex nut.</p>	
	<p>Install new tiewrap.</p>	Use item 116, App. C
h. Terminal Lugs	<p>Replace as required.</p>	
i. Insulated Standoff Terminal (24)	<p>Unsolder resistor lead and wire attached to insulated standoff terminal.</p> <p>Remove screw (23), flat washer, and lock washer from insulated standoff terminal.</p> <p>Replace insulated standoff terminal and secure with screw (23), flat washer, and lock washer.</p> <p>Solder wire and resistor lead to new insulated standoff terminal.</p>	

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont

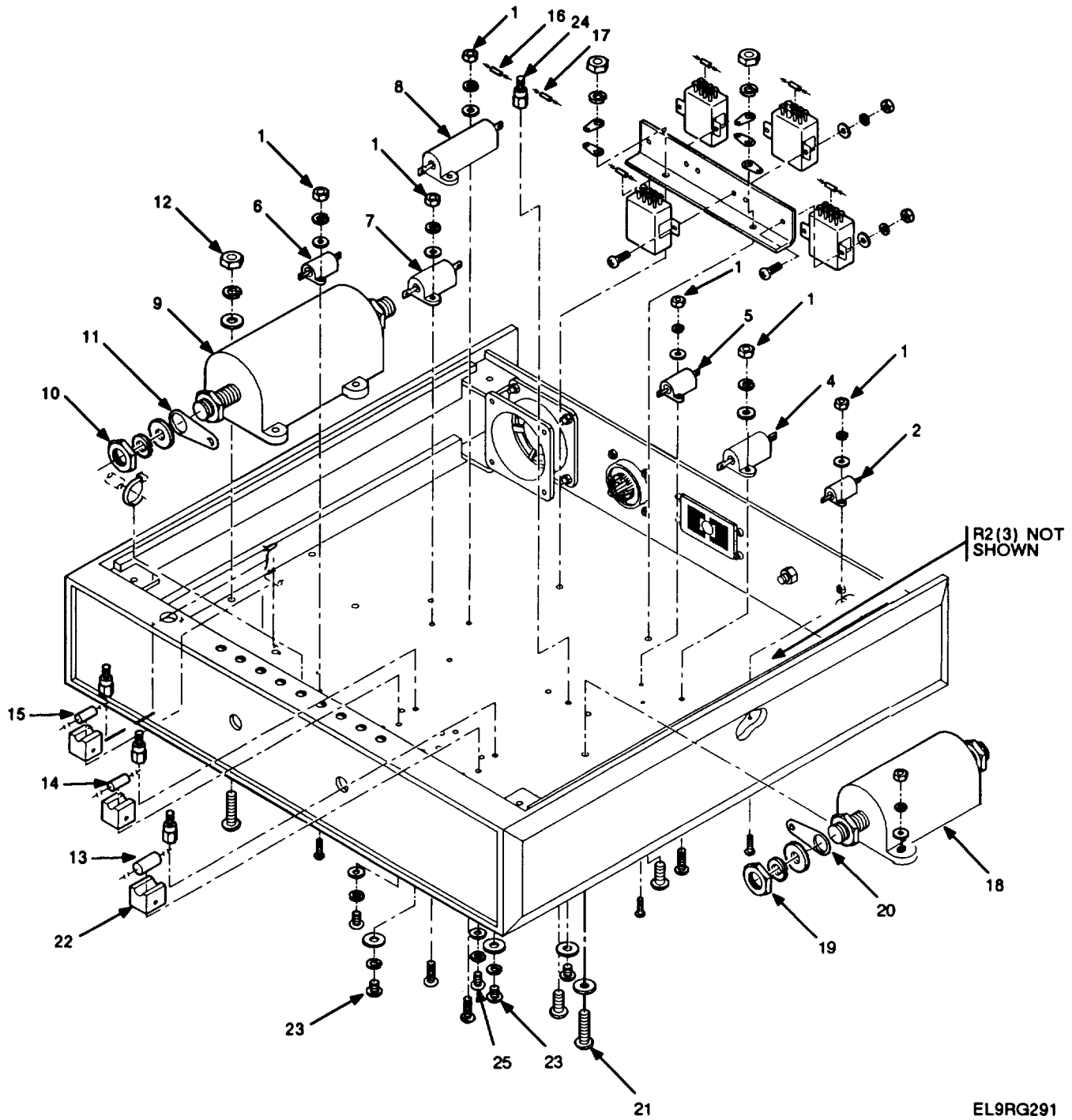
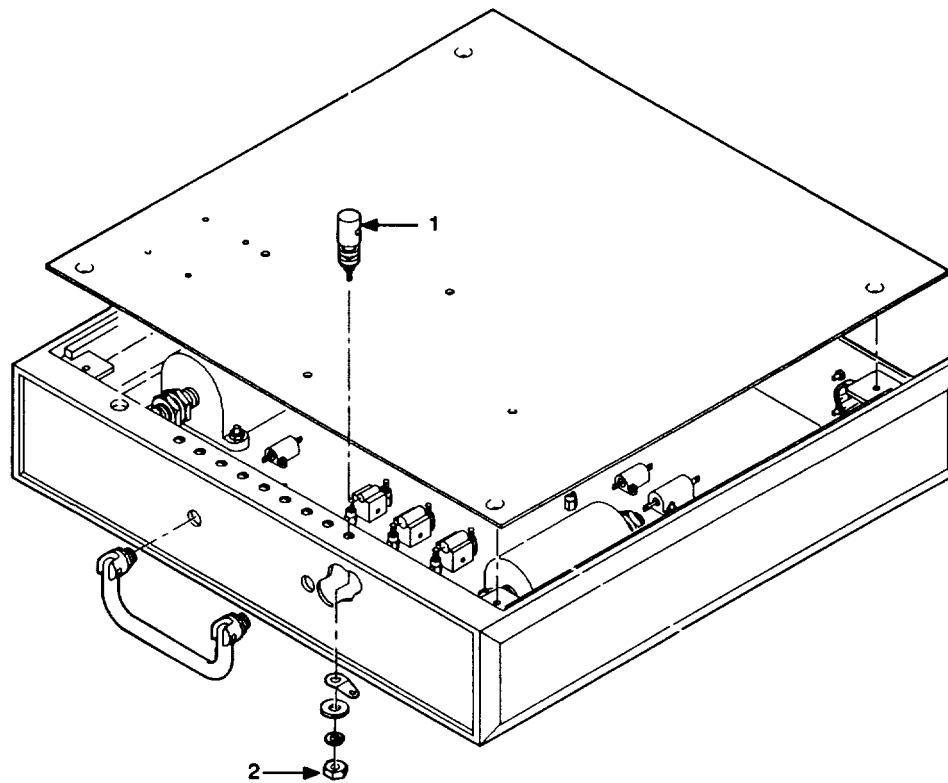


Figure 4-119. Removal of ICD H Internal Components

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cent

ITEM	ACTION	REMARKS
j. Binding Posts E1 - E9(1)	Remove two hex nuts (2), terminal lug, lock washer, and flat washer securing binding post to chassis. Replace binding post and secure with two hex nuts (2), terminal lug, lock washer, and flat washer securing binding post to chassis.	Refer to figure 4-120.

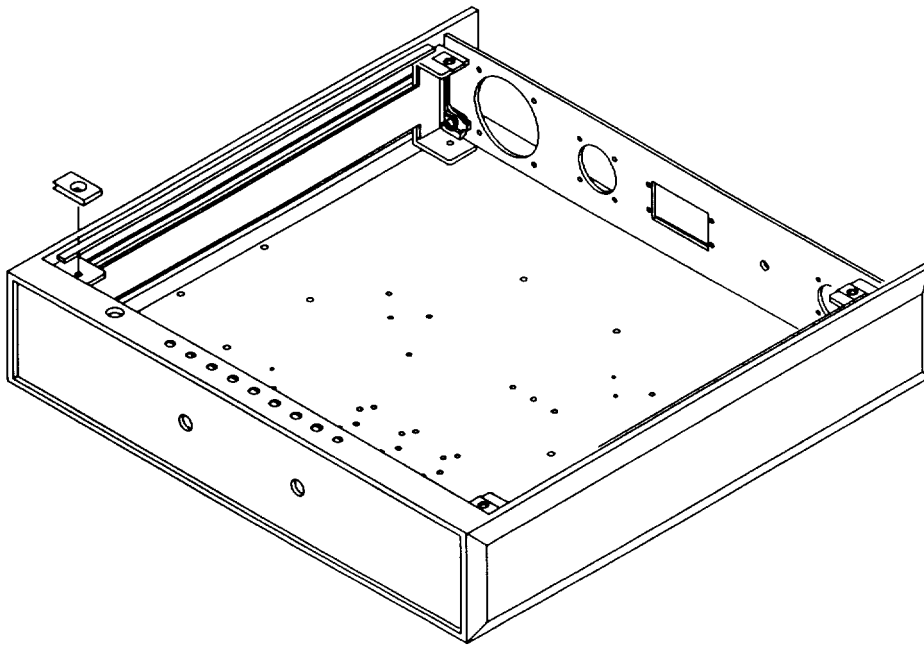


EL9RG292

Figure 4-120. Removal of Binding Posts E1 to E9

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont

ITEM	ACTION	REMARKS
k. Clips, Top cover Retaining	Replace as required.	Refer to figure 4-121.



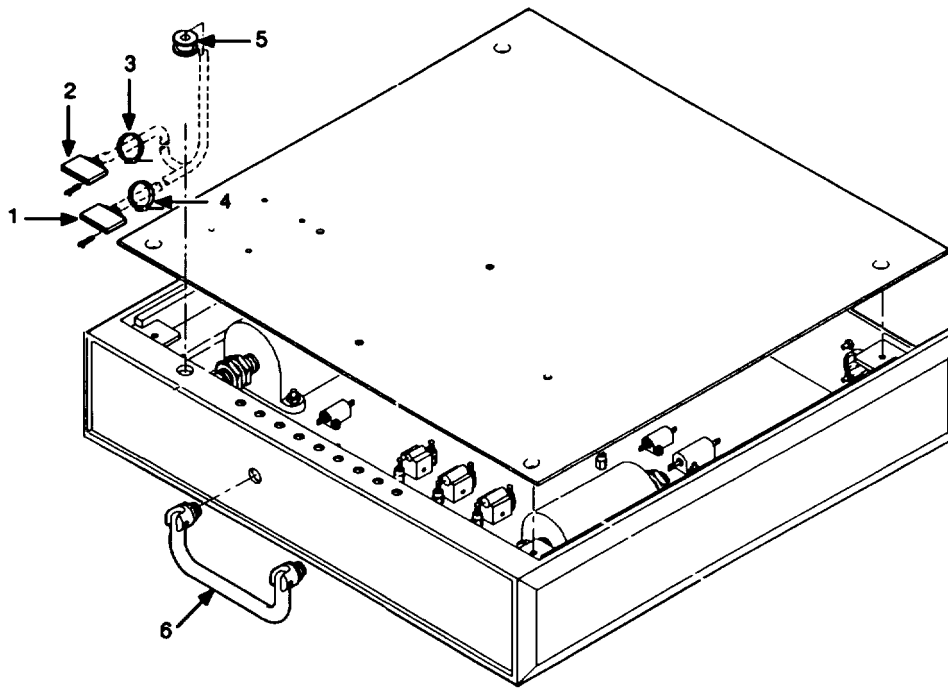
EL9RG293

Figure 4-121. Removal of Top Cover Retaining Clips

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont

ITEM	ACTION	REMARKS
l. Connectors J4 (1), J5(2)	<p>Remove pins and attached wires from connector.</p> <p>Remove and discard defective connector.</p> <p>Install pins into new connector positions.</p>	<p>Refer to figure 4-122 on page 4-240.</p> <p>Refer to wire list on page 4-246.</p>
(1) Tiewrap used as Marker sleeve J4 (3)	<p>Replace as required.</p> <p>Use ink to mark J4 on the tiewrap.</p>	<p>Use item 116, App. C</p> <p>Use item 37, App. C</p>
(2) Tiewrap used as Marker sleeve J5(4)	<p>Replace as required.</p> <p>Use ink to mark J5 on the tiewrap.</p>	<p>Use item 116, App. C</p> <p>Use item 37, App. C</p>
m. Spiral Tubing 1/8 in	<p>Replace as required.</p>	<p>Use item 128, App. C</p>
n. Spiral Tubing 1/4 in	<p>Replace as required.</p>	<p>Use item 126, App. C</p>
o. Connector Pins J4, J5	<p>Replace as required.</p>	<p>Refer to figure 4-122 on page 4-240.</p>
p. Rubber Grommet (5)	<p>Remove tiedown strap markers for both connectors J4 and J5.</p> <p>Remove connectors J4 and J5.</p> <p>Remove and discard defective rubber grommet.</p> <p>Install new tubber grommet.</p> <p>Install new tiedown strap markers (3 and 4) for connectors J4 and J5.</p> <p>Install connectors J4 and J5.</p>	<p>Refer to figure 4-122 on page 4-240.</p>
q. Handle (6)	<p>Remove two hex nuts securing handle to chassis.</p> <p>Replace handle and secure with two hex nuts.</p>	<p>Refer to figure 4-122 on page 4-240.</p>

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont



EL9RG294

Figure 4-122. Maintenance of Connector J4 and J5

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont

ITEM	ACTION	REMARKS
r. Relay K1 thru K4 (1)	<p>Unsolder wires from defective relay.</p> <p>Unsolder diode (3) from relay.</p> <p>Remove two screws (2), two flat washers, two lock washers, and two hex nuts securing relay to relay bracket (5).</p>	Refer to figure 4-123 on page 4-242.

CAUTION

THE DIODES ARE ELECTROSTATIC SENSITIVE ELECTRONIC DEVICES

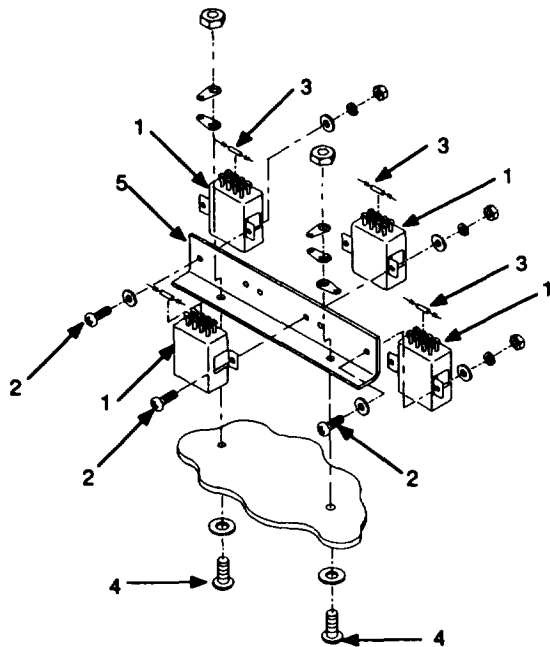


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	<p>Replace diode and relay and solder wires.</p>	
	<p>Secure relay to relay bracket (5) with two screws (2), two flat washers, two lock washers and two hex nuts.</p>	
	<p>Solder wires to appropriate terminals.</p>	Refer to wire list on page 4-246.
s. Diodes CR1 thru CR4(3)	<p>Unsolder diode from relay terminals.</p> <p>Remove and discard defective diode.</p> <p>Solder new diode to relay observing proper polarity.</p>	<p>Refer to figure 4-123 on page 4-242.</p> <p>Note direction orientation of diode.</p>
t. Relay Bracket	<p>Remove four relays(1).</p> <p>Remove two screws (4), two flat washers, five terminal lugs, and two hex nuts.</p> <p>Replace bracket and secure with two screws (4), two flat washers, five terminal lugs, and two hex nuts.</p> <p>Install four relays(1).</p>	<p>Refer to step r.</p> <p>Refer to figure 4-123 on page 4-242.</p>

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont

ITEM	ACTION	REMARKS
<p>u. Terminal Lugs, secured to angle bracket (5)</p>	<p>Remove screw (4), flat washer, all terminal lugs, and hex nut securing one side of angle bracket to chassis.</p> <p>Unsolder defective terminal lug from wire.</p> <p>Replace terminal lug and solder to wire.</p> <p>Install terminal lug and secure with screw(4), flat washer, all terminal lugs, and hex nut to secure one end of angle bracket to chassis.</p>	<p>Refer to figure 4-123.</p>



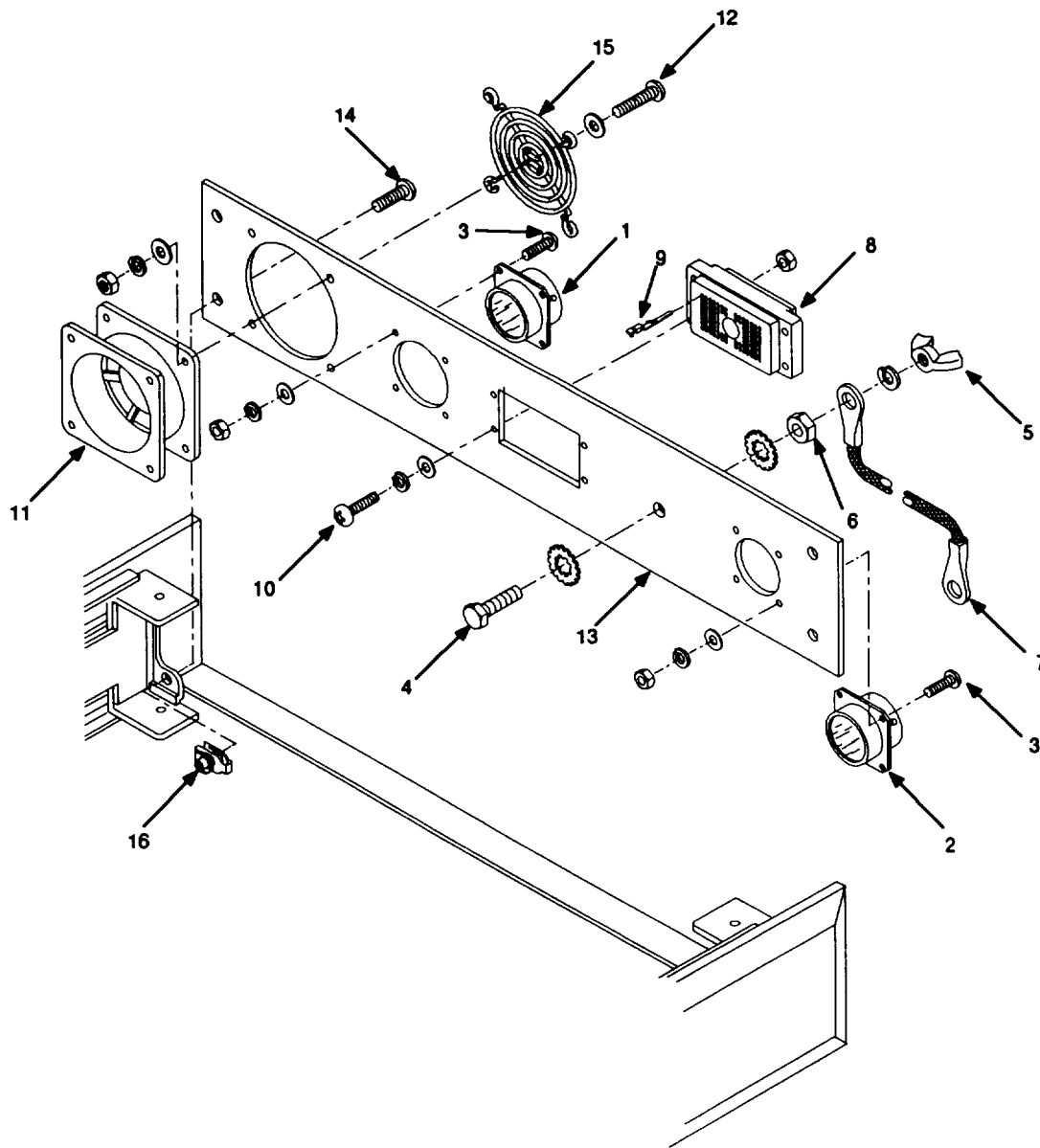
EL9RG296

Figure 4-123. Removal of Relays and Relay Bracket

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont

ITEM	ACTION	REMARKS
<p>v. Connectors J1 (1), J3(2)</p>	<p>Unsolder wires to connector pins.</p> <p>Remove four screws (3), four flat washers, four lock washers, and four hex nuts securing connector to chassis.</p> <p>Remove and discard defective connector.</p> <p>Install new connector with four screws (3), four lock washers, four flat washers, and four hex nuts.</p>	<p>Refer to figure 4-124 on page 4-244.</p>
	<p>Solder wires to appropriate connector pins.</p>	<p>Refer to wire list on page 4-246.</p>
<p>w. Stud, Terminal (Gnd)(4)</p>	<p>Remove wing nut (5) and lock washer securing ground lead to terminal stud.</p> <p>Remove hex nut (6), two external tooth lock washers, and terminal stud from chassis.</p> <p>Replace terminal stud and secure with two external tooth lock washers and hex nut (6).</p> <p>Install ground lead (7) onto terminal stud with one lock washer and one wing nut (5).</p>	<p>Refer to figure 4-124 on page 4-244.</p>
<p>x. Connector J2(8)</p>	<p>Remove pins (9) from connector.</p> <p>Remove four screws (10), four flat washers, four lock washers, and four hex nuts securing connector to chassis.</p> <p>Install new connector and secure with four screws (10), four flat washers, four lock washers, and four hex nuts.</p>	<p>Refer to figure 4-124 on page 4-244.</p>
	<p>Install connector pins (9) in appropriate positions.</p>	<p>Refer to wire list on page 4-246.</p>

4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont



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Figure 4-124. Removal of ICD H Rear Panel Components

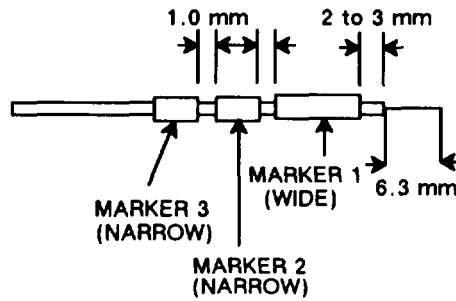
4-71. Maintenance Procedures for ICD-H Chassis Assembly. Cont

ITEM	ACTION	REMARKS
y. Fan B1(11)	Unsolder blue fan wire from terminal lug.	Refer to figure 4-124 on page 4-244.
	Remove connector J2 pin attached to red fan wire.	
	Remove tiedown straps as required.	
	Remove four screws (14) securing chassis rear panel.	
	Remove chassis rear panel (13).	
	Remove four screws, eight flat washers, four lock washers, four hex nuts, and fan guard (15) securing fan to chassis.	
	Replace fan.	
	Replace fan guard as required.	
	Install fan (11) onto chassis with four screws (12), eight flat washers, four lock washers, fan guard (15), and four hex nuts.	
	Install chassis rear panel with four screws (14).	
	Solder blue fan wire to terminal lug on angle bracket.	Refer to wiring list on page 4-246.
	Install new connector pin onto red fan wire.	
	Install red wire into appropriate connector J2 position.	
	Replace tiedown straps.	
z. Clips, Rear Panel Retaining (16)	Replace as required.	Refer to figure 4-124 on page 4-244.

4-72. Maintenance of Wiring Harness and Cables.

ITEM	ACTION	REMARKS
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a. Internal wiring cable Remove cable ties to release wires.
 Replace wires as required.
 Use the following wire list to replace wires.



NOTE
 THREE MARKERS ARE USED FOR IDENTIFYING WHITE WIRES. THE FIRST MARKER IS WIDE AND THE REMAINING TWO ARE NARROW.

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<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIRE/MARKER</u>	<u>ITEM TO BE USED</u>
J1-H	R2	290 mm	Black	Use item 148, App. C
E4	R1	490 mm	Black	Use item 148, App. C
RI	R2	15 mm	Black	Use item 148, App. C
J1-K	GND	230 mm	Brown	Use item 149, App. C
J1-P	R3	260 mm	Red	Use item 150, App. C
E4	R3	520 mm	Red	Use item 150, App. C
J1-S	GND	230 mm	Orange	Use item 151, App. C
J1-W	R4	260 mm	Yellow	Use item 152, App. C
E4	R4	540 mm	Yellow	Use item 152, App. C
J1-Y	GND	230 mm	Green	Use item 153, App. C
J1-C	R7	450 mm	Blue	Use item 154, App. C
J1-C	R8	480 mm	Blue	Use item 154, App. C
E6	R7	120 mm	Blue	Use item 154, App. C
E6	R8	100 mm	Blue	Use item 154, App. C
J1-e	GND	230 mm	Violet	Use item 155, App. C
J1-CC	R14	360 mm	Gray	Use item 156, App. C
E6	R13	260 mm	Gray	Use item 156, App. C
J1-ee	GND	230 mm	White	Use item 157, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIRE/MARKER</u>	<u>ITEM TO BE USED</u>
J1-i	J2-P3	140 mm	White Black (wide)	Use item 157, App. C Use item 19, App. C
J1-k	J2-A6	140 mm	White Brown (wide)	Use item 157, App. C Use item 20, App. C
J1-q	J1-i	30 mm	White Red (wide)	Use item 157, App. C Use item 21, App. C
J1-q	J1-y	30 mm	White Red (wide)	Use item 157, App. C Use item 21, App. C
J1-s	J2-A2	140 mm	White Orange (wide)	Use item 157, App. C Use item 22, App. C
J1-w	J2-B2	140 mm	White Yellow (wide)	Use item 157, App. C Use item 23, App. C
J2-B3	E9	650 mm	White Green (wide)	Use item 157, App. C Use item 24, App. C
J2-B1	R13,14	390 mm	White Blue (wide)	Use item 157, App. C Use item 25, App. C
J2-A7	E6	700 mm	White Violet (wide)	Use item 157, App. C Use item 26, App. C
J2-A1	E4	790 mm	White Gray (wide)	Use item 157, App. C Use item 27, App. C
J2-A4	J2-G1	30 mm	White Black (wide) Brown (narrow)	Use item 157, App. C Use item 19, App. C Use item 29, App. C
J2-G1	K2POS	90 mm	White Black (wide) Red (narrow)	Use item 157, App. C Use item 19, App. C Use item 30, App. C
CR2	K2POS			
CR2	K2Neg			
CR2	GND	50 mm	White Black (wide) Red (narrow)	Use item 157, App. C Use item 19, App. C Use item 30, App. C
R10	K2N0	300 mm	White Black (wide) Orange (narrow)	Use item 157, App. C Use item 19, App. C Use item 31, App. C
R10	GND	180 mm	White Black (wide) Orange (narrow)	Use item 157, App. C Use item 19, App. C Use item 31, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIRE/MARKER</u>	<u>ITEM TO BE USED</u>
K2-C	E2	330 mm	White Black (wide) Yellow (narrow)	Use item 157, App. C Use item 19, App. C Use item 32, App. C
J2-G2	GND	160 mm	White Black (wide) Green (narrow)	Use item 157, App. C Use item 19, App. C Use item 33, App. C
J2-D4	E2	410 mm	White Black (wide) Blue (narrow)	Use item 157, App. C Use item 19, App. C Use item 34, App. C
J2-D1	E3	410 mm	White Black (wide) Violet (narrow)	Use item 157, App. C Use item 19, App. C Use item 35, App. C
J2-A2	K3POS	90 mm	White Black (wide) Gray (narrow)	Use item 157, App. C Use item 19, App. C Use item 36, App. C
CR3	GND	20 mm	White Brown (wide) Red (narrow)	Use item 157, App. C Use item 20, App. C Use item 30, App. C
CR3	K3POS	15 mm		
CR3	K3NEG	15 mm		
K3-C	E3	340 mm	White Brown (wide) Orange (narrow)	Use item 157, App. C Use item 20, App. C Use item 31, App. C
K3-NO	K1-C	150 mm	White Brown (wide) Yellow (narrow)	Use item 157, App. C Use item 20, App. C Use item 32, App. C
J2-A6	K1POS	130 mm	White Brown (wide) Green (narrow)	Use item 157, App. C Use item 20, App. C Use item 33, App. C
CR1	K1POS	15 mm		
CR1	K1NEG	15 mm		
CR1	GND	20 mm	White Brown (wide) Blue (narrow)	Use item 157, App. C Use item 20, App. C Use item 34, App. C
R5	K1NC	225 mm	White Brown (wide) Violet (narrow)	Use item 157, App. C Use item 20, App. C Use item 35, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIRE/MARKER</u>	<u>ITEM TO BE USED</u>
R5	GND	170 mm	White Brown (wide) Violet (narrow)	Use item 157, App. C Use item 20, App. C Use item 35, App. C
R6	K10N	170 mm	White Red (wide) Orange (narrow)	Use item 157, App. C Use item 21, App. C Use item 31, App. C
R6	GND	210 mm	White Red (wide) Orange (narrow)	Use item 157, App. C Use item 21, App. C Use item 31, App. C
CR4	K4POS	15 mm		
CR4	K4NEG	15 mm		
CR4	GND	454 mm	White Red (wide) Yellow (narrow)	Use item 157, App. C Use item 21, App. C Use item 32, App. C
K4-C	E9	430 mm	White Red (wide) Green (narrow)	Use item 157, App. C Use item 21, App. C Use item 33, App. C
R11	K4NO	120 mm	White Red (wide) Blue (narrow)	Use item 157, App. C Use item 21, App. C Use item 34, App. C
R11	R12	60 mm	White Red (wide) Blue (narrow)	Use item 157, App. C Use item 21, App. C Use item 34, App. C
R12	GND	210 mm	White Red (wide) Blue (narrow)	Use item 157, App. C Use item 21, App. C Use item 34, App. C
J2-P5	R9	425 mm	White Red (wide) Violet (narrow)	Use item 157, App. C Use item 21, App. C Use item 35, App. C
R9	E7	130 mm	White Red (wide) Violet (narrow)	Use item 157, App. C Use item 21, App. C Use item 35, App. C
J2-P6	GND	160 mm	White Red (wide) Gray (narrow)	Use item 157, App. C Use item 21, App. C Use item 36, App. C
J2-A3	E7	460 mm	White Orange (wide) Yellow (narrow)	Use item 157, App. C Use item 22, App. C Use item 32, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIRE/MARKER</u>	<u>ITEM TO BE USED</u>
J2-D8	E1	420 mm	White Orange (wide) Green (narrow)	Use item 157, App. C Use item 22, App. C Use item 33, App. C
J2-D8	J3-A	210 mm	White Orange (wide) Blue (narrow)	Use item 157, App. C Use item 22, App. C Use item 34, App. C
J2-A5	E8	840 mm	White Orange (wide) Violet (narrow)	Use item 157, App. C Use item 22, App. C Use item 35, App. C
J2-P7	E8	840 mm	White Orange (wide) Gray (narrow)	Use item 157, App. C Use item 22, App. C Use item 36, App. C
J2-P8	GND	160 mm	White Yellow (wide) Green (narrow)	Use item 157, App. C Use item 23, App. C Use item 33, App. C
FAN POS	J2-P3	180 mm	Red	
FAN NEG	GND	180 mm	Green	
J2-P4	GND	160 mm	White Yellow (wide) Blue (narrow)	Use item 157, App. C Use item 23, App. C Use item 34, App. C
J2-E4	GND	160 mm	White Yellow (wide) Violet (narrow)	Use item 157, App. C Use item 23, App. C Use item 35, App. C
J2-C6	GND	180 mm	White Yellow (wide) Gray (narrow)	Use item 157, App. C Use item 23, App. C Use item 36, App. C
J3-F	GND	30 mm	White Brown (wide) Gray (narrow)	Use item 157, App. C Use item 20, App. C Use item 36, App. C
J2-B2	K4POS	95 mm	White with yellow tracer Yellow (wide)	Use item 162, App. C Use item 23, App. C
J4-1	J2-C2	1210 mm	Black	Use item 148, App. C
J4-2	J2-C3	1210 mm	Brown	Use item 149, App. C
J4-3	J2-C7	1210 mm	Red	Use item 150, App. C
J4-4	J2-B6	1210 mm	Orange	Use item 151, App. C
J4-5	J2-A8	1210 mm	Yellow	Use item 152, App. C
J4-6	J2-B7	1210 mm	Green	Use item 153, App. C
J4-7	J2-C5	1210 mm	Blue	Use item 154, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIRE/MARKER</u>	<u>ITEM TO BE USED</u>
J4-8	J2-C4	1210 mm	Violet	Use item 155, App. C
J5-1	J2-B4	1210 mm	Gray	Use item 156, App. C
J5-2	J2-B5	1210 mm	White	Use item 157, App. C
J5-3	NC	1210 mm	White Black (wide)	Use item 157, App. C Use item 19, App. C
J5-4	NC	1210 mm	White Brown (wide)	Use item 157, App. C Use item 20, App. C
J5-5	J2-B8	1210 mm	White Red (wide)	Use item 157, App. C Use item 21, App. C
J5-6	NC	1210 mm	White Orange (wide)	Use item 157, App. C Use item 22, App. C
J5-7	NC	1210 mm	White Yellow (wide)	Use item 157, App. C Use item 23, App. C
J5-8	J2-C1	1210 mm	White Green (wide)	Use item 157, App. C Use item 24, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

ITEM	ACTION	REMARKS
b. Wiring harness WI		Refer to figure 4-125 on page 4-253.
Connectors P1, P2	<p>Loosen two screws(1) on cable clamp.</p> <p>Unscrew backshell from connector body.</p> <p>Slide backshell, cable clamp, insulation sleeving and marker sleeves up wires.</p> <p>Unwrap spiral tubing.</p> <p>Remove connector pins.</p> <p>Remove and discard defective connector.</p> <p>Replace insulation sleeving or marker sleeves as required.</p> <p>Replace connector,</p> <p>Install pins and attached wires into appropriate connector positions.</p> <p>Rewrap spiral tubing.</p> <p>Slide backshell, cable clamp, insulation sleeving and marker sleeves down wires.</p> <p>Screw backshell onto connector body.</p> <p>Tighten two screws (1) on cable clamp.</p>	Refer to wire list on page 4-254.
Spiral Tubing	Replace as required.	Use item 126, App. C
Connector Pins	Replace as required.	
Insulation Sleeving	Replace as required.	Use item 105, App. C
Marker Sleeves	Replace W1 as required.	Use item 50, App. C
	Replace P1 as required.	Use item 51, App. C
	Replace P2 as required.	Use item 70, App. C
Wires	Replace as required.	Refer to wire list on page 4-254.

4-72. Maintenance of Wiring Harness and Cables. Cont

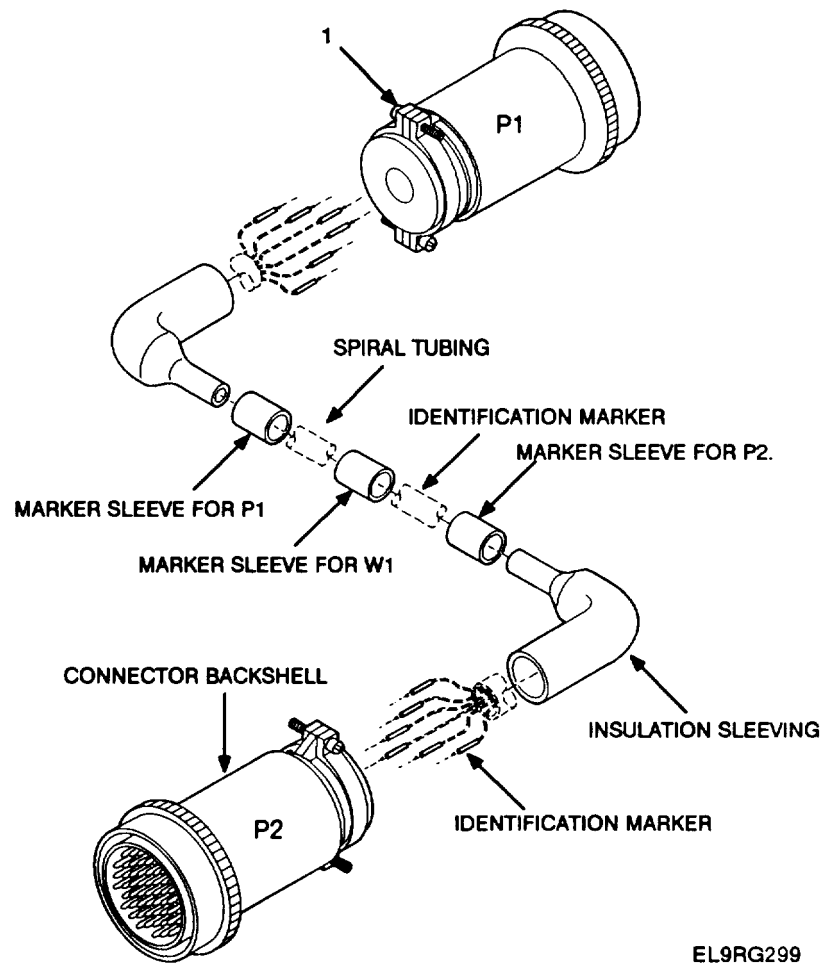
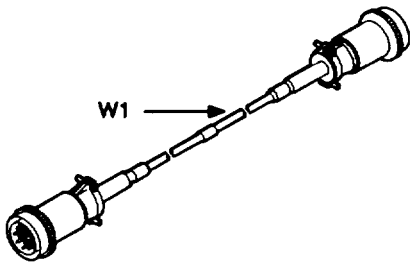


Figure 4-125. Wiring Harness W1 Breakdown

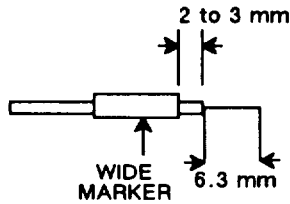
4-72. Maintenance of Wiring Harness and Cables. Cont

ITEM	ACTION	REMARKS
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c. Use the following wire list to replace wires in Cable W1.



NOTE
 THE FIRST COLOR IS THE COLOR OF THE WIRE. A WIDE MARKER IS APPLIED TO WHITE WIRES FOR IDENTIFICATION.

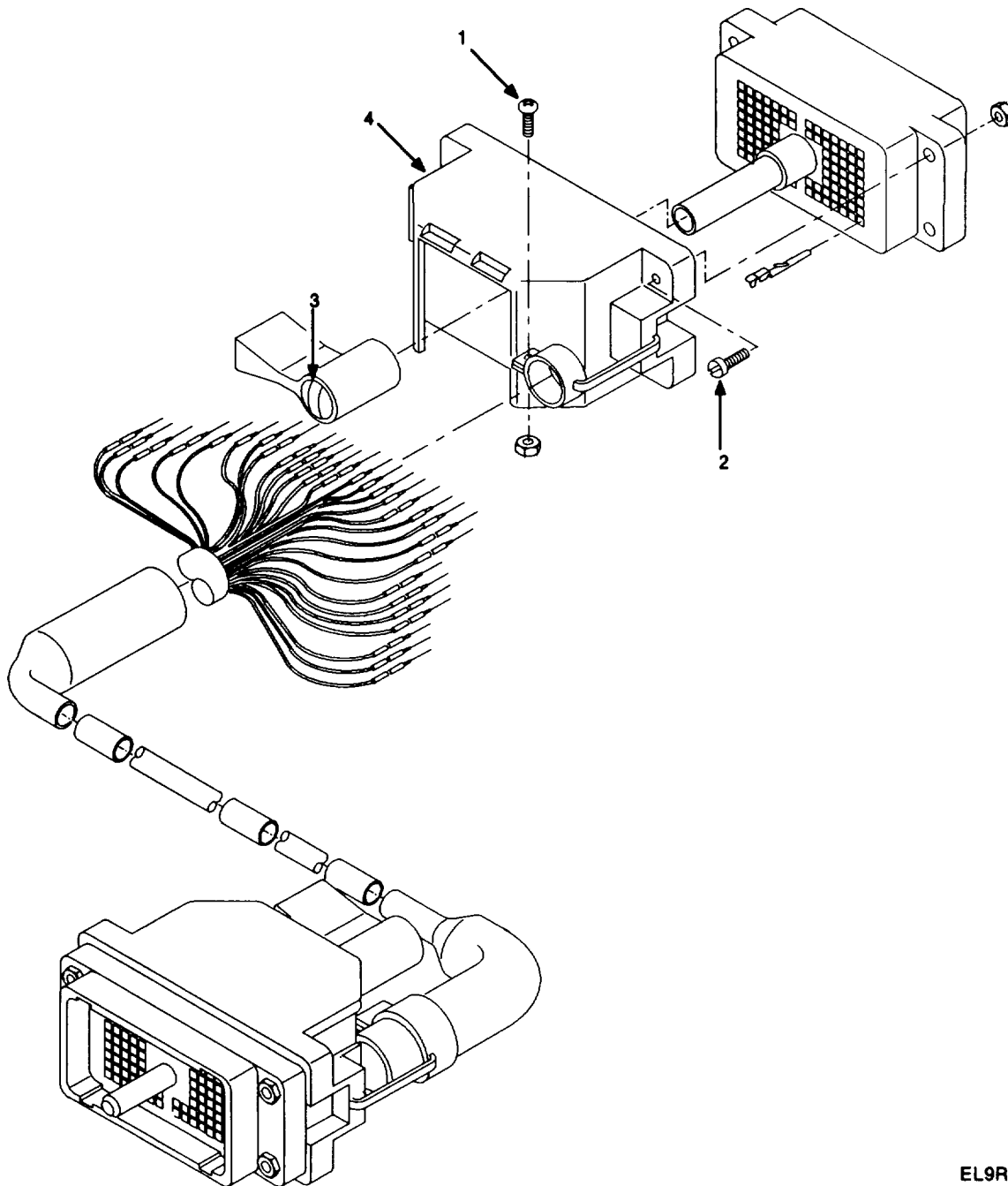


<u>FROM</u>	<u>TO</u>	<u>COLOR</u>	<u>MARKER</u>
P1-H	P2-H	Black, item 148, App. C	
P1-P	P2-P	Brown, item 149, App. C	
P1-w	P2-W	Red, item 150, App. C	
P1-K	P2-K	Orange, item 151, App. C	
P1-S	P2-S	Yellow, item 152, App. C	
P1-Y	P2-Y	Green, item 153, App. C	
P1-i	P2-i	Blue, item 154, App. C	
P1-k	P2-k	Violet, item 155, App. C	
P1-e	P2-e	Gray, item 156, App. C	
P1-C	P2-c	White, item 157, App. C	
P1-q	P2-q	White, item 157, App. C	item 19, App. C
P1-s	P2-s	White, item 157, App. C	item 20, App. C
P1-w	P2-w	White, item 157, App. C	item 21, App. C
P1-y	P2-y	White, item 157, App. C	item 22, App. C
P1-CC	P2-CC	White, item 157, App. C	item 23, App. C
P1-DD	P2-DD	White, item 157, App. C	item 24, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

ITEM	ACTION	REMARKS
d. Wiring harness W2		Refer to figure 4-126 on page 4-256.
(1) Connectors P1, P2	<p>Remove screw (1) and hex nut securing cable clamp.</p> <p>Remove four screws (2) and four hex nuts from connector body.</p> <p>Remove screw (3) from handle.</p> <p>Remove handle,</p> <p>Remove cable clamp.</p> <p>Remove two halves of connector backshell (4).</p> <p>Remove pins from defective connector.</p> <p>Replace connector.</p> <p>Install pins into appropriate positions in new connector body.</p> <p>Assemble cable clamps and secure with screw (1) and hex nut.</p> <p>Secure backshell halves to connector body with four screws (2) and four hex nuts.</p> <p>Replace handle and secure with screw (3).</p>	<p>Refer to wire list on page 4-257.</p>
(2) Spiral Tubing	Replace as required.	Use item 126, App. C
(3) Connector Pins	Replace as required.	
(4) Insulation sleeving	Replace as required.	Use item 105, App. C
(5) Marker Sleeves	<p>Replace W2 as required.</p> <p>Replace P1 as required.</p> <p>Replace P2 as required.</p>	<p>Use item 43, App. C</p> <p>Use item 61, App. C</p> <p>Use item 47, App. C</p>
(6) Wires	Replace as required.	Refer to wire list on page 4-257.

4-72. Maintenance of Wiring Harness and Cables. Cont



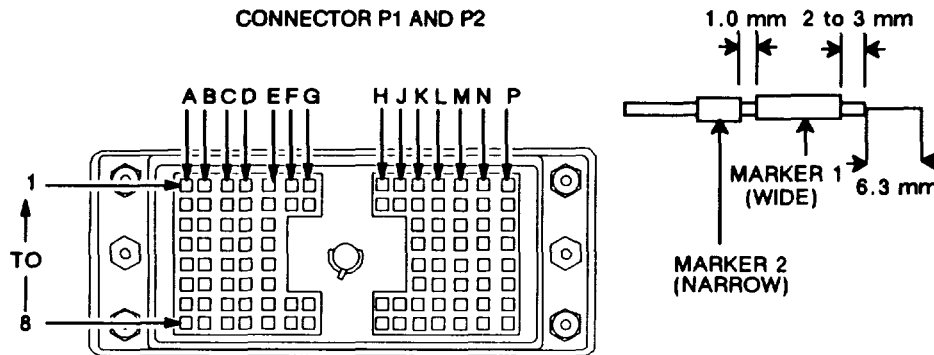
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figure 4-126. Wiring Harness W2 Breakdown

4-72. Maintenance of Wiring Harness and Cables. Cont

ITEM	ACTION	REMARKS
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e. Use the following wire list to replace wires in Cable W2.



NOTE
 TWO MARKERS ARE USED FOR IDENTIFYING WHITE WIRES. THE FIRST MARKER IS WIDE AND THE SECOND ONE IS NARROW. THESE BANDS ARE LOCATED ON BOTH ENDS OF THE WIRE.

EL9RG302

<u>FROM</u>	<u>TO</u>	<u>COLOR</u>	<u>MARKER</u>
P1-A1	P2-A1	Black, item 148, App. C	
P1-A2	P2-A2	White, item 157, App. C	Marker 1, item 27, App. C
P1-A3	P2-A3	Blue, item 154, App. C	
P1-A4	P2-A4	White, item 157, App. C	Marker 1, item 22, App. C
P1-A5	P2-A5	Gray, item 156, App. C	
P1-A6	P2-A6	White, item 157, App. C	
P1-A7	P2-A7	White, item 157, App. C	Marker 1, item 19, App. C Marker 2, item 21, App. C
P1-A8	P2-A8	White, item 157, App. C	Marker 1, item 19, App. C Marker 2, item 24, App. C
P1-B1	P2-B1	White, item 157, App. C	Marker 1, item 19, App. C Marker 2, item 20, App. C
P1-B2	P2-B2	orange, item 151, App. C	
P1-B3	P2-B3	White, item 157, App. C	Marker 1, item 19, App. C Marker 2, item 23, App. C
P1-B4	P2-B4	White, item 157, App. C	Marker 1, item 19, App. C Marker 2, item 25, App. C
P1-B5	P2-B5	White, item 157, App. C	Marker 1, item 19, App. C Marker 2, item 26, App. C
P1-B6	P2-B6	White, item 157, App. C	Marker 1, item 19, App. C Marker 2, item 27, App. C
P1-B7	P2-B7	White, item 157, App. C	Marker 1, item 20, App. C Marker 2, item 21, App. C
P1-B8	P2-B8	White, item 157, App. C	Marker 1, item 20, App. C Marker 2, item 22, App. C
P1-C1	P2-C1	White, item 157, App. C	Marker 1, item 20, App. C Marker 2, item 23, App. C
P1-C2	P2-C2	White, item 157, App. C	Marker 1, item 20, App. C Marker 2, item 24, App. C
P1-C3	P2-C3	White, item 157, App. C	Marker 1, item 20, App. C Marker 2, item 26, App. C
P1-C4	P2-C4	White, item 157, App. C	Marker 1, item 20, App. C Marker 2, item 26, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

ITEM		ACTION	REMARKS
FROM	TO	COLOR	MARKER
P1-C5	P2-C5	White, item 157, App. C	Marker 1, item 20, App. C Marker 2, item 27, App. C
P1-C6	P2-C6	White, item 157, App. C	Marker 1, item 20, App. C
P1-C7	P2-C7	White, item 157, App. C	Marker 1, item 21, App. C Marker 2, item 22, App. C
P1-C8	P2-C8	Not used	
P1-D1	P2-D1	Brown, item 149, App. C	
P1-D2	P2-D2	White, item 157, App. C	Marker 1, item 21, App. C Marker 2, item 23, App. C
P1-D3	P2-D3	Not used	
P1-D4	P2-D4	Green, item 153, App. C	
P1-D5	P2-D5	Not used	
P1-D6	P2-D6	White, item 157, App. C	Marker 1, item 21, App. C Marker 2, item 24, App. C
P1-D7	P2-D7	Not used	
P1-D8	P2-D8	Yellow, item 152, App. C	
P1-E1	P2-E1	Not used	
P1-E2	P2-E2	Not used	
P1-E3	P2-E3	Not used	
P1-E4	P2-E4	White, item 157, App. C	Marker 1, item 23, App. C
P1-E5	P2-E5	Not used	
P1-E6	P2-E6	Not used	
P1-E7	P2-E7	Not used	
P1-E8	P2-E8	Not used	
P1-G1	P2-G1	White, item 157, App. C	Marker 1, item 19, App. C
P1-G2	P2-G2	White, item 157, App. C	Marker 1, item 26, App. C
P1-G3	P2-G3	Not used	
P1-G4	P2-G4	Not used	
P1-G5	P2-G5	Not used	
P1-G6	P2-G6	Not used	
P1-G7	P2-G7	Not used	
P1-G8	P2-G8	Not used	
P1-P1	P2-P1	Not used	
P1-P2	P2-P2	Not used	
P1-P3	P2-P3	Red, item 150, App. C	
P1-P4	P2-P4	White, item 157, App. C	Marker 1, item 21, App. C
P1-P5	P2-P5	Violet, item 155, App. C	
P1-P6	P2-P6	White, item 157, App. C	Marker 1, item 24, App. C
P1-P7	P2-P7	White, item 157, App. C	Marker 1, item 19, App. C Marker 2, item 22, App. C
P1-P8	P8	White, item 157, App. C	Marker 1, item 26, App. C

4-72. Maintenance of Wiring Harness and Cables. Cont

ITEM	ACTION	REMARKS
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f. Wiring harness W3

Refer to figure 4-127 on page 4-260.

(1) Connectors P1, P2

Loosen two screws on cable clamp.
Unscrew backshell from connector body.

Slide backshell, cable clamp, insulation sleeving and marker sleeves up wires.

Unwrap spiral tubing.

Remove connector pins.

Remove and discard defective connector.

Replace insulation sleeving or marker sleeves as required.

Replace connector.

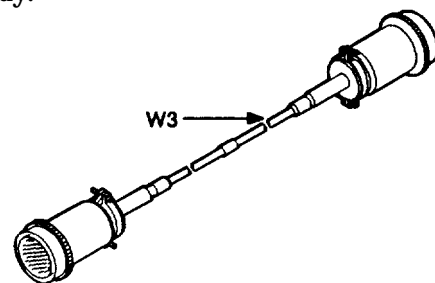
Install pins and attached wires into appropriate connector positions.

Rewrap spiral tubing.

Slide backshell, cable clamp, insulation sleeving and marker sleeves down wires.

Screw backshell onto connector body.

Tighten two screws on cable clamp.



(2) Spiral Tubing

Replace as required

Use item 126, App. C

(3) Connector Pins

Replace as required

(4) Sleeving Insulation

Replace as required.

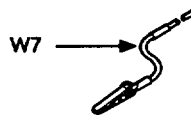
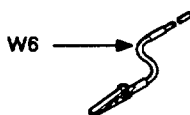
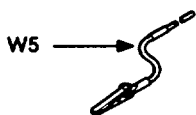
(5) Wires

Replace as required

<u>FROM</u>	<u>TO</u>	<u>COLOR</u>
P1-A	P2-A	Black, item 148, App. C
P1-F	P2-F	Brown, item 149, App. C

g. Lead electrical
W5, 6, 7

Replace as required.



4-72. Maintenance of Wiring Harness and Cables. Cont

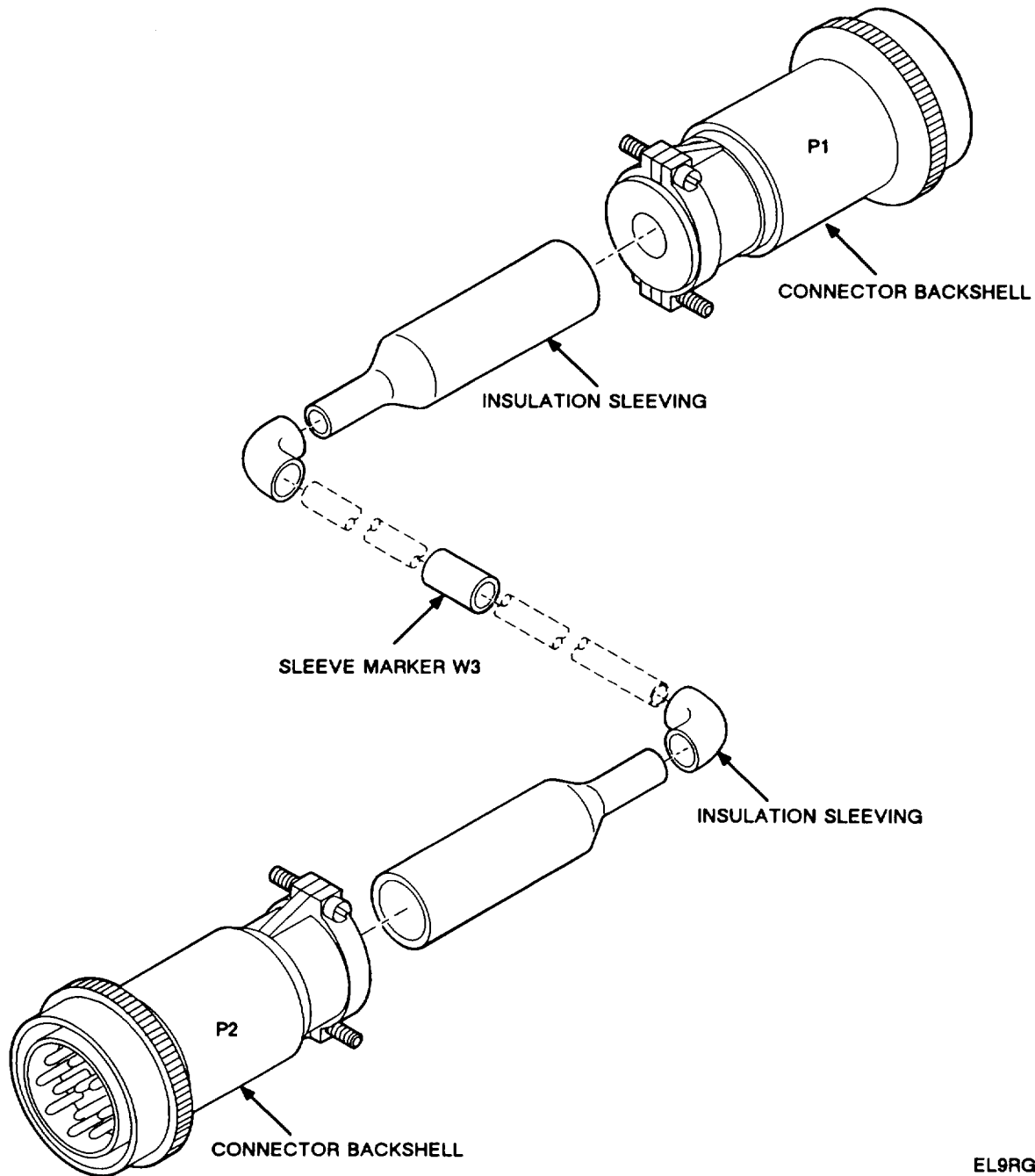


Figure 4-127. Wiring Harness W3 Breakdown

Section XV. MAINTENANCE OF J-4909/G (TEST ADAPTER K)

The following procedure is used to test and troubleshoot the exciter/power amplifier, 1A11, A3018124-1. Test Adapter K belongs to a group of three test adapters. Only test adapter K will be discussed in this technical manual,

4-73. Required Test Accessories for Test Adapter K.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP0800030G
File No	A3018124F
● ICD	ID-005C
● Adapter, Test-I,J,K P/N A3142247-1 Items:	
CCA-Adapter Card K	A3142084-1
Backplane Assy - Self Test-I,J,K	A3142308-1
Cable Assy (W1)	A3132898-1
Cable Assy (W5)	A3014244-1
Cable Assy, RF (W10)	A3014523-2
Cable Assy, SP (W8)	A3018716-1
Cable Assy, RF (W12)	A3014523-4
● Accessory Kit P/N A3018639-1 Items:	
Termination Assy (T1)	A3140053-1
Adapter, Connector (CP2)	A3018791-1
Adapter, Connector (CP4)	A3018688-1
10 dB Attenuator (AT1)	A3018544-1
20 dB Attenuator (AT7)	M3933/19-12
● AN/USM-410 Test Accessory Kit P/N B4021292 Items:	
Cable Assy, RF (W102)	B4021272
● AN/USM-410 Test Accessory Kit P/N B4039143 Items:	
Adapter, Connector (3 required)	UG-201A/U
Adapter, Connector	B4035000
Adapter, Connector (3 required)	B4021032
● AN/USM-410 Test Accessory Kit P/N B4021294 Items:	
Adapter, Connector	UG-491A/U
Adapter, Connector	SM-C-943627
● CCA-Load Card A	A3014493-1

4-74. Test Procedures for Test Adapter K.

NOTE

Before testing any adapter cards, run the ID-005C survey. Use test program CPIN 11GSG10 File Number ID005C. If ID-005C fails the survey test during any procedure in this manual, return ID-005C to depot for repair.

- a. Turn on test station AN/USM-410(V)2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and press RETURN on VDT keyboard.

NOTE

The intermediate code of this program will require 168 blocks on the removable disk pack (DPØ). Before loading the test program ensure that the DPØ has sufficient space to load the intermediate code. If there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

d. Load test program.

- (1) Install test program tape CPIN CP0800030G in accordance with TM 11-6625-2773-10.
- (2) Load file on disk in accordance with TM 11-6625-2773-10.

e. Select test.

- (1) Enter TEST A3018124F and press RETURN on VDT keyboard.
- (2) Verify that the following information is displayed on the VDT:

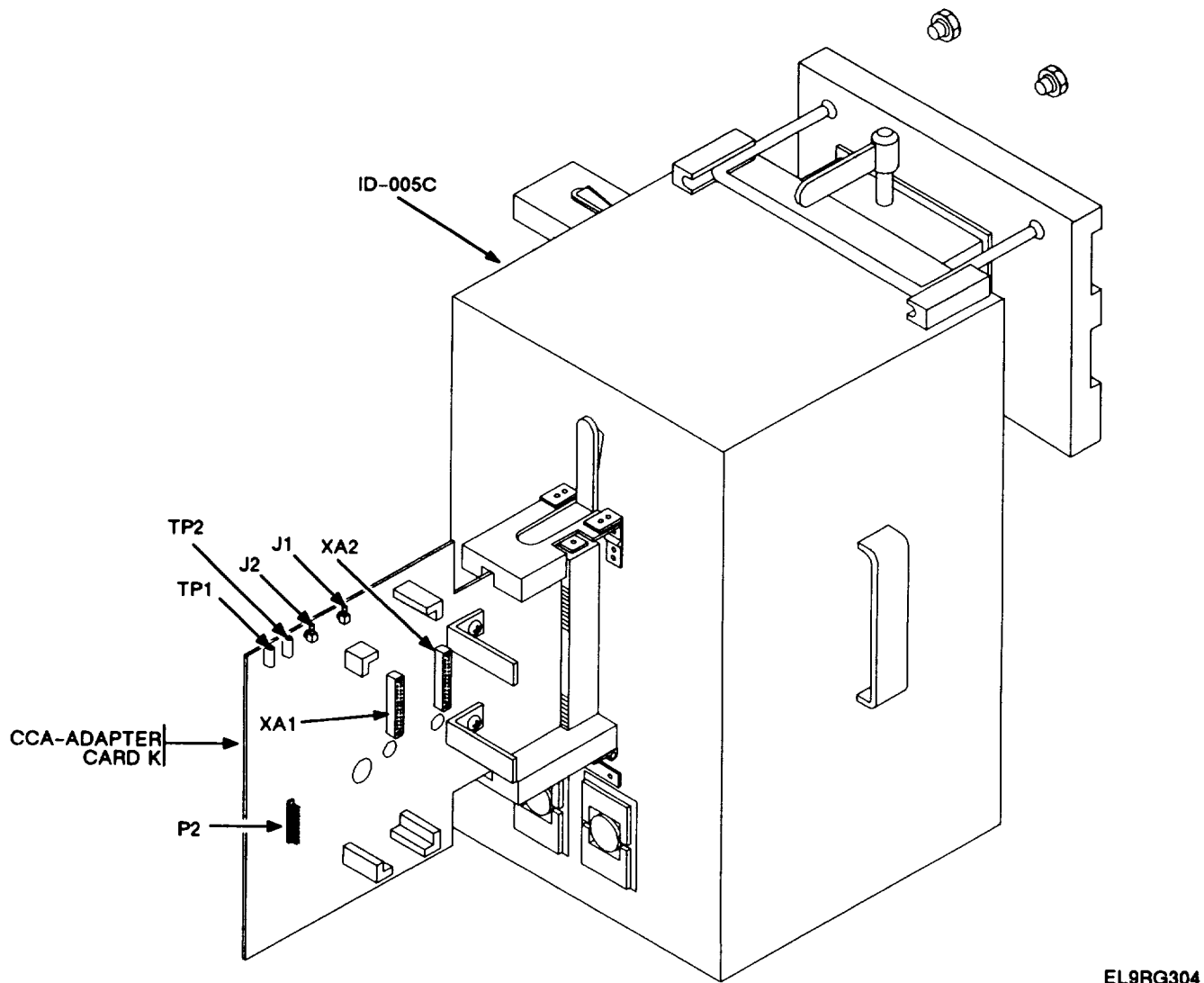
```
----- EXCITER/POWER AMPLIFIER -----  
  
PART NUMBER:           A3018124-1  
PROGRAM DATE:          MM/DD/YY  
SERIAL NO. EFFECTIVITY 001 THRU ***  
MWO EFFECTIVITY        NONE
```

- (3) Press STRT/PROC on the VDT keyboard.

4-74. Test Procedures for Test Adapter K. Cont

- f. Run ATE survey test if desired. If ATE survey fails refer to TM 11-6625-2773-10.**
- g. Install ICD ID-005C on J1 of PIU.**
- h. Install adapter card K on ID-005C (see figure 4-128 on page 4-264).**
- i. Run adapter card survey test. If survey test fails refer to paragraph 4-75 on page 4-265.**
- j. Install load card A on ICD-005C.**
- k. Run load card survey. If survey fails refer to paragraph 4-44 on page 4-106.**
- l. If survey tests pass, continue with UUT testing.**

4-74. Test Procedures for Test Adapter K. Cont



EL9RG304

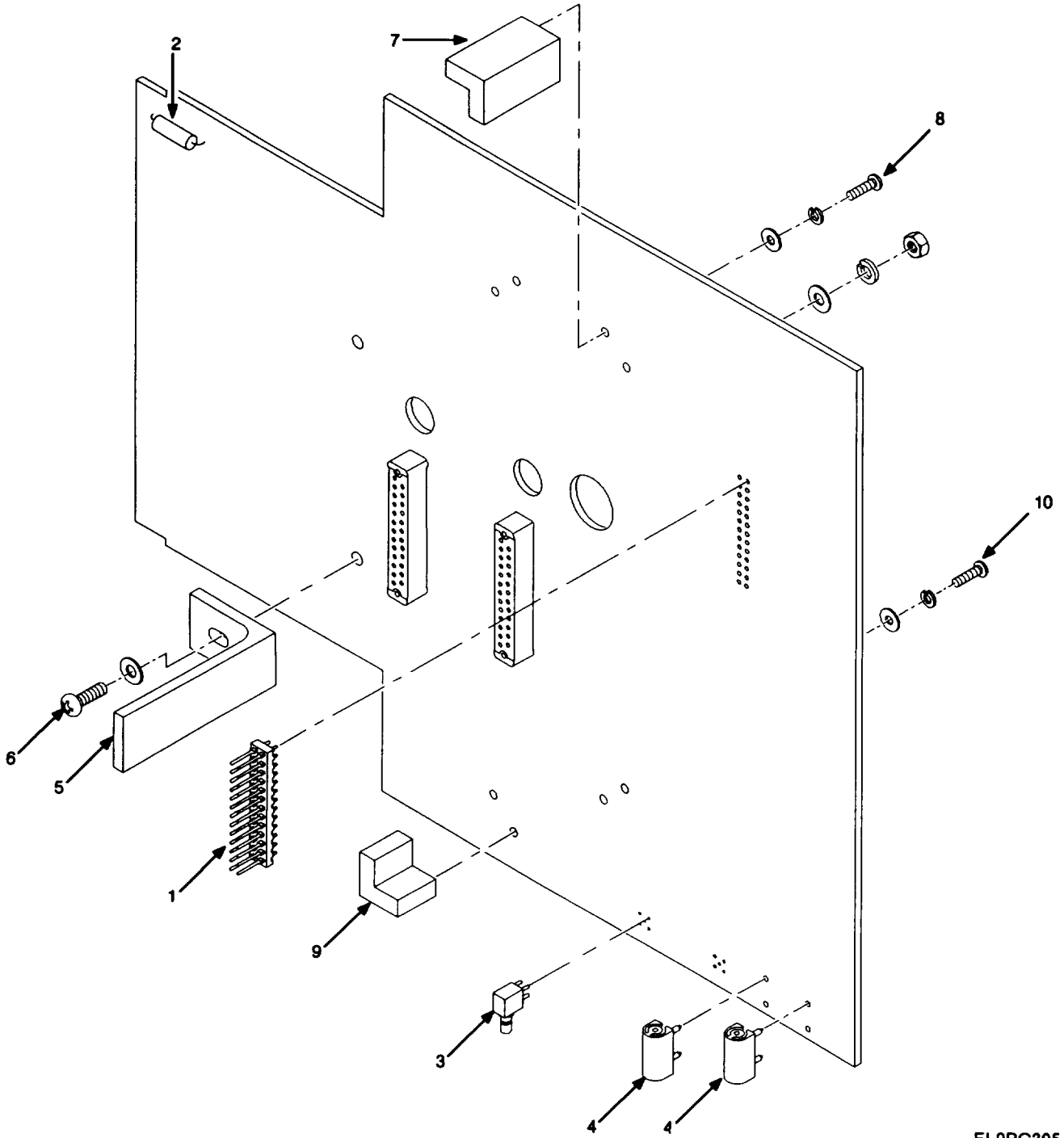
Figure 4-128. Installation of CCA-Adapter Card K on ID-005C

4-75. Maintenance Procedures for Test Adapter K.

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223) Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>REFERENCES: TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-40P TB 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>	<p>TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-01-610-8817) Solder Repair Center PRC-151 (3439-01-109-6590) Tool, Extract 274-7029-07 (5120-02-230-2603) Maintenance Group OA-9297/GRC (5820-01-270-3936) Tool, Extraction MS24256R20 (5120-00-079-4601) Tool Crimping M22520/1-01 Turret Head Assembly M22520/1-02 (5120-00-016-6382)</p>
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ITEM	ACTION	REMARKS
a. CCA-Test Adapter K	Refer to FO-12 for schematic diagram.	
(1) Contact assembly	Desolder contact assembly (1) from circuit card. Replace and solder new P2 to circuit card.	Refer to figure 4-129 on page 4-266. Ensure pin 1 is installed to square pad.
(2) Resistor R1	Desolder resistor (2) from circuit card. Replace and solder to circuit card.	
(3) Connector J1, J2	Desolder connector (3) from circuit card. Replace and solder to circuit card.	
(4) Test points TP1, TP2	Desolder defective test point (4) from circuit card. Replace and solder to circuit card.	
(5) PWB support (5)	Remove screw (6), two flat washers, lock washer, and hex nut securing PWB support.	

4-75. Maintenance Procedures for Test Adapter K. Cont



EL9RG305

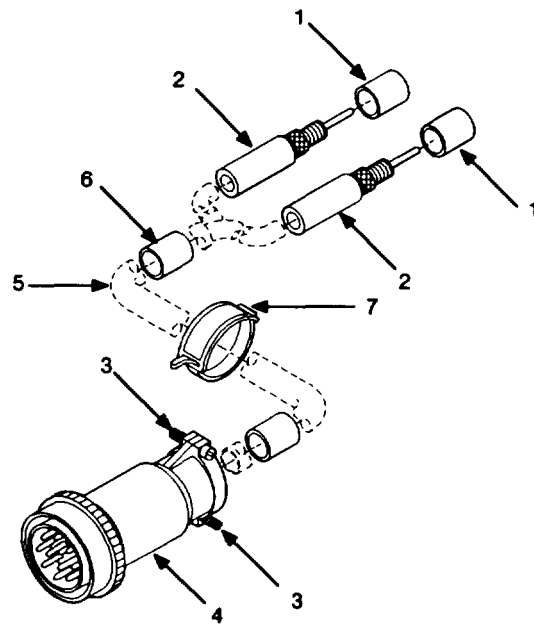
Figure 4-129. Component Layout for CCA-Test Adapter K

4-75. Maintenance Procedures for Test Adapter K. Cont

ITEM	ACTION	REMARKS
	Replace support and secure with screw (6), two flat washers, lock washer, and hex nut.	
(6) Support Guide (7)	Remove two screws (8), two lock washers, and two flat washers securing support guide.	
	Replace support guide with two screws (8), two lock washers, and two flat washers.	
(7) Support Guide (9)	Remove two screws (10), two lock washers, and two flat washers securing support guide (9).	
	Replace support guide with two screws (10), two lock washers, and two flat washers.	
b. Self-Test	Item not repairable.	Refer to TM 11-6625-3094-24P.
c. Cable Maintenance		
(1) RF Cable W8	Item not repairable.	Refer to TM 11-6625-3094-24P.
(2) Electrical lead assembly W5	<p>Unscrew plug tip retainer (1). Remove plug tip (2) from wire.</p> <p>Remove two screws (3) from connector backshell (4).</p> <p>Unscrew backshell (4) from connector body.</p> <p>Remove pins from connector.</p> <p>Replace red wire.</p> <p>Replace black wire.</p> <p>Replace connector and install pins.</p> <p>Install backshell (4) and secure with two screws (3).</p> <p>Replace plug tips (2) on wire and secure with plug tip retainer (1).</p>	<p>Refer to figure 4-130 on page 4-268.</p> <p>Use item 169, App. C</p> <p>Use item 167, App. C</p>

4-75. Maintenance Procedures for Test Adapter K. Cont

ITEM	ACTION	REMARKS
	Replace insulator sleeving (6) as required.	Use item 97, App. C
	Replace marker sleeve P1.	Use item 53, App. C
	Replace marker sleeve P2.	Use item 57, App. C
	Replace marker sleeve P3.	Use item 56, App. C
	Replace marker sleeve W5.	Use item 52, App. C



EL9RG306

Figure 4-130. Maintenance of Test Adapter K Lead Assembly W5

Section XVI. MAINTENANCE OF J-4831/G (TEST ADAPTER ACCESSORY KIT)

There are no repair procedures for items contained in this accessory kit. All repair is done by replacement of the defective component.

Section XVII. MAINTENANCE OF TEST ADAPTER MOUNTING BRACKET.

The following procedures are used to repair mounting brackets used on Test Adapters A6, A7, A8, A9, A10, A11, A12, A13, and A14.

4-76. Replacement of Panel Screw Assembly.

ITEM	ACTION	REMARKS
a. Mounting bracket	Remove from test adapter.	<p>NOTE Refer to individual test adapter sections for removal instructions.</p>

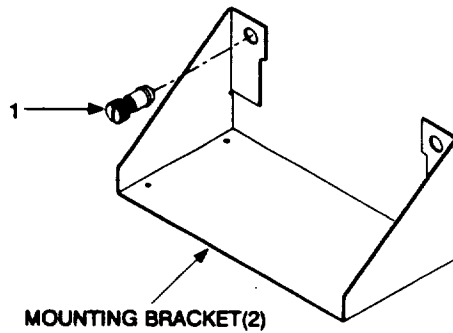


Figure 4-131. Disassembly of Test Adapter Mounting Bracket

b. Stand off Assembly	Replace as follows.	<p>NOTE Refer to individual test adapter sections for removal instructions.</p>
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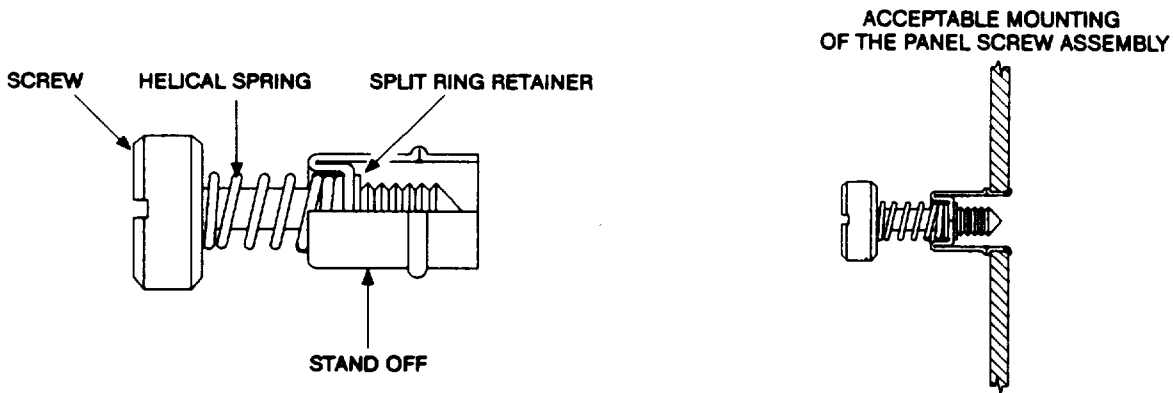


Figure 4-132. Details of Panel Screw Assembly

4-76. Replacement of Panel Screw Assembly. Cont

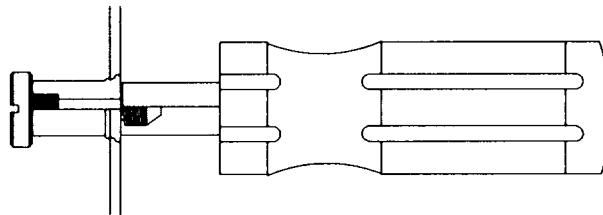
ITEM	ACTION	REMARKS
------	--------	---------

(1) Split ring
retainer

Position retainer tool on screw.

Hold screw head and turn retainer tool until fully threaded on screw and split ring retainer is positioned in end of tool.

Turn retainer tool until split ring retainer is free of screw.



CE0VP102

Figure 4-133. Removal of Split Ring Retainer from Defective Standoff

(2) Screw and
Spring

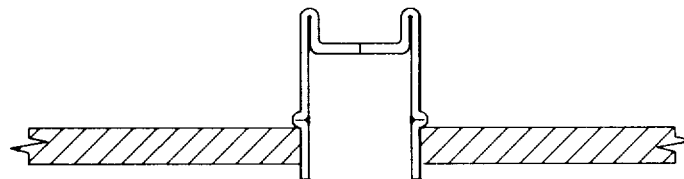
Replace as required.

(3) Stand off

Drill out defective stand off.

Use 7/16 in. drill bit.

Replace stand off and insert in test adapter mounting bracket .



CE0VP103

Figure 4-134. Positioning of Stand Off In Mounting Bracket

4-76. Replacement of Panel Screw Assembly. Cont

ITEM	ACTION	REMARKS
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Place backup tool in a vertical position.
Position stand off in backup tool.

Use a bench vise or other tool to hold the tool upright.

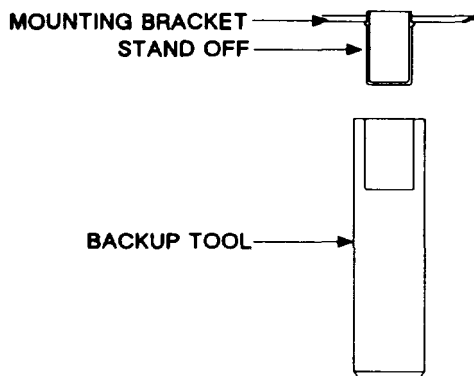
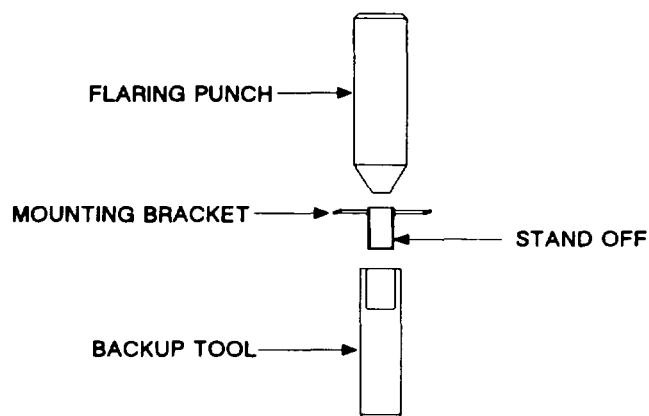


Figure 4-135. Positioning of Stand Off into Backup Tool

Insert flaring punch in top side of the support bracket hole.



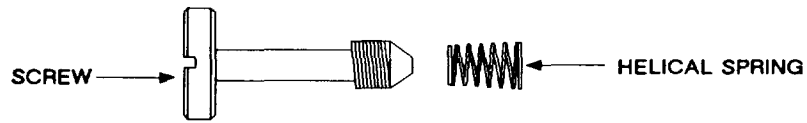
CE0VP105

Figure 4-136. Positioning of Flaring Punch In Stand Off

4-76. Replacement of Panel Screw Assembly. Cont

ITEM	ACTION	REMARKS
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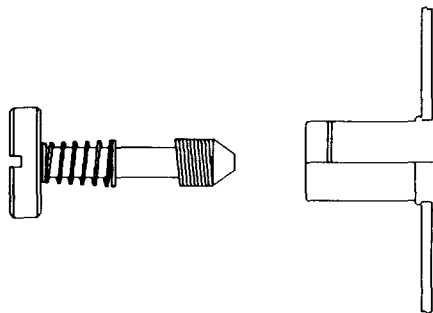
Hit flaring punch with ball peen hammer until standoff insecurely fastened.
 Remove flaring punch and backup tool from stand off.
 Install helical spring on screw.



CE0VP106

figure 4-137. Installation of Spring on Panel Screw

Insert screw into stand off.



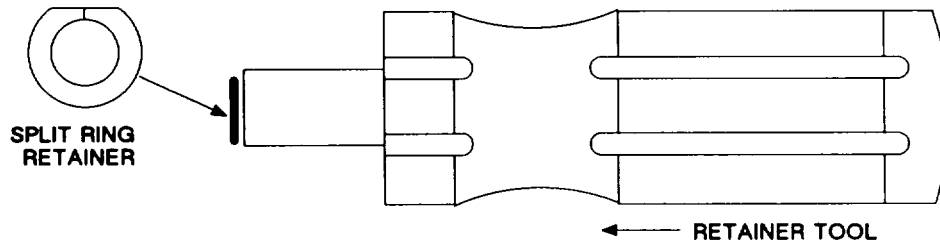
CE0VP107

Figure 4-138. installation of Panel Screw and Spring into Stand Off

4-76. Replacement of Panel Screw Assembly. Cont

ITEM	ACTION	REMARKS
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Place split ring retainer into retainer tool.

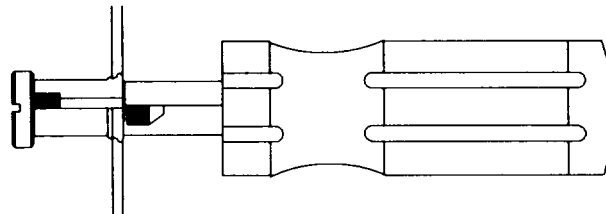


CE0VP108

Figure 4-139. Positioning of Split Ring Retainer In Retainer Tool

Hold screw head and rotate tool until retainer is threaded onto throat of screw.

Remove retainer tool.



CE0VP109

Figure 4-140. Panel Screw Captivation

Section XVII. MAINTENANCE OF J-4951/G (ICDA5)

4-77. Test Procedures for ICD A5.

The following procedure is used to test and troubleshoot ICD A5. This ICD is used to test nine different modules. Nine test programs are required to test this ICD. Install each test program and perform the survey test. The AN/USM-465A will produce a printout of the faulty Park. Replace only the defective parts for a particular section of the test ICD. To verify repair, PERFORM ALL TPS TESTS; this will insure the ICD will function properly.

The operational steps are the same for all test programs and are listed once.

4-78. Maintenance Procedures for ICD A5.

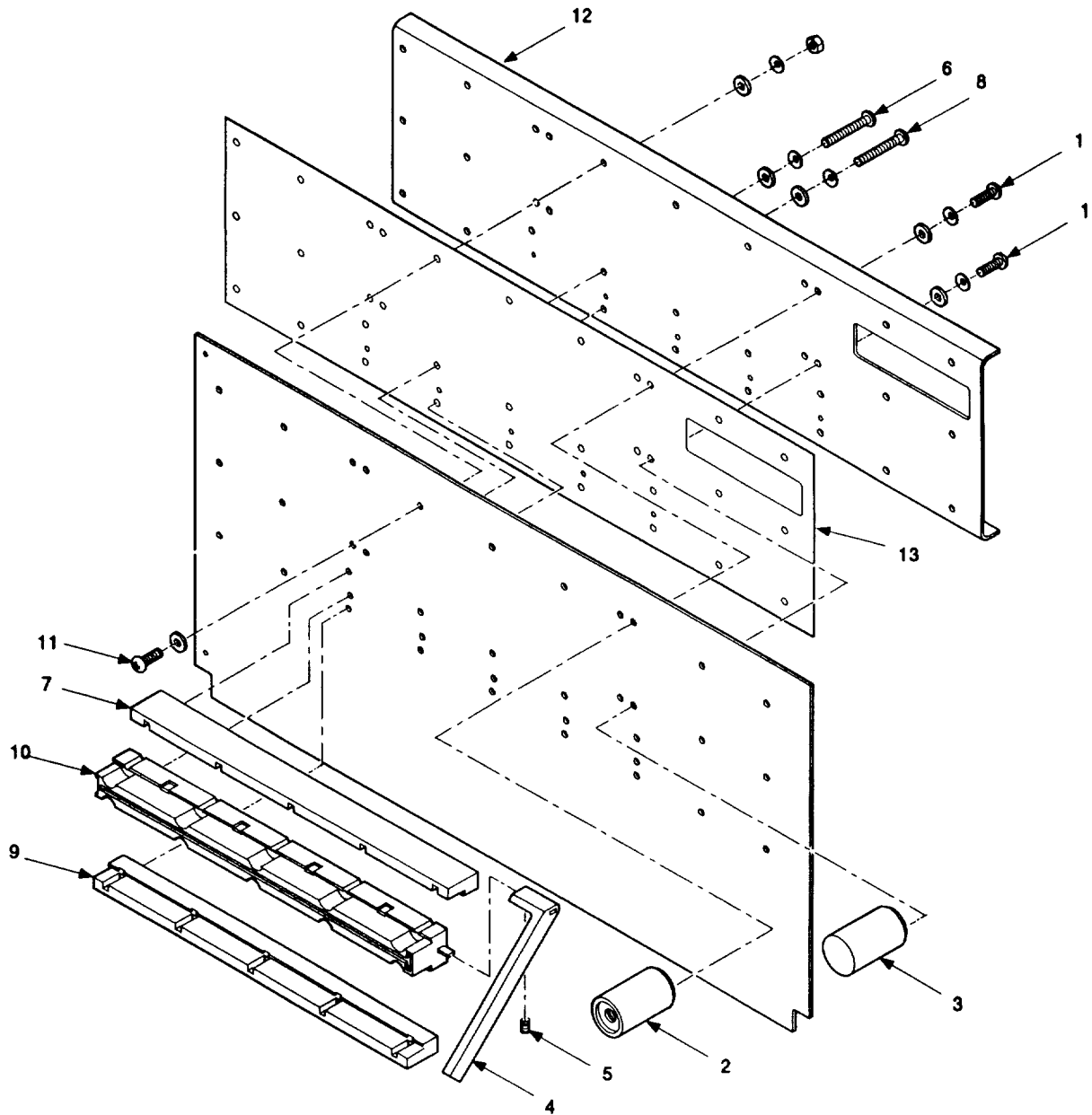
<p>INITIAL SETUP</p> <p>TEST EQUIPMENT: Digital Card Tester AN/USM-465A (6625-01-126-2473) Multimeter AN/USM-488 (6625-01-145-2430)</p> <p>TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-01-610-8817) Solder Repair Center PRC-151 (3439-01-109-8590)</p> <p>REFERENCES TM 11-5820-914-40 TM 11-6625-3038-20 TM 11-6625-3094-40P TB 43-0127</p> <p>PERSONNEL REWIRED: 1</p>
--

ITEM	ACTION	REMARKS
a. Threaded sleeve spacers (2)	Remove two screws(1), two beveled washers, and two flat washers. Replace sleeve spacers (2) and secure with two screws(1), two beveled washers, and two flat washers.	Refer to figure 4-141 on page 4-277.
b. Solid Sleeve spacers (3)	Remove two screws(1), two beveled washers, and two flat washers. Replace sleeve spacers (3) and secure with two screws(1), two beveled washers, and two flat washers.	Refer to figure 4-141 on page 4-277.
c. Manual control handle (4)	Remove set screw (5). Replace handle (4) and secure with set screw (5).	Refer to figure 4-141 on page 4-277.

4-78. Maintenance Procedures for ICD A5. Cont

ITEM	ACTION	REMARKS	
d. Connector J1 (10)	Remove manual control handle.	Refer to step C.	
	Remove top hold down bar (7) by removing five screws (8) five beveled washers, and five flat washers.	Refer to figure 4-141 on page 4-277	
	Remove bottom hold down bar (9) by removing five screws (8), five beveled washers, and five flat washers.	Refer to figure 4-141 on page 4-277	
	Replace connector J1 (10).		
	Replace bottom hold down bar (9) and secure with five screws (8), five beveled washers, and five flat washers.	Refer to figure 4-141 on page 4-277	
	Replace top hold down bar (7) and secure with five screws (6), five beveled washers, and five flat washers.	Refer to figure 4-141 on page 4-277	
	Torque screws to 7.5 ± 1.0 in-lbs.	Refer to figure 4-142 on page 4-278.	
	Install manual control handle.	Refer to step c.	
	e. Reinforcement plate (12)	Remove two threaded sleeve spacers (2).	Refer to step a.
		Remove two solid sleeve spacers (3).	Refer to step b.
Remove manual control handle.		Refer to step C.	
Remove connector J1.		Refer to step d.	
Remove fifteen screws (11), thirty flat washers, fifteen beveled washers, and fifteen hex nuts.		Refer to figure 4-141 on page 4-277	
Replace insulator plate (13), as required.			
Replace reinforcement plate (12) and secure with fifteen screws (11), thirty flat washers, fifteen beveled washers, and fifteen hex nuts.		Refer to figure 4-141 on page 4-277	
Install connector J1.		Refer to step d.	
Install manual control handle.		Refer to step c.	
Install two solid sleeve spacers.		Refer to step b.	
Install two threaded sleeve spacers.	Refer to step a.		

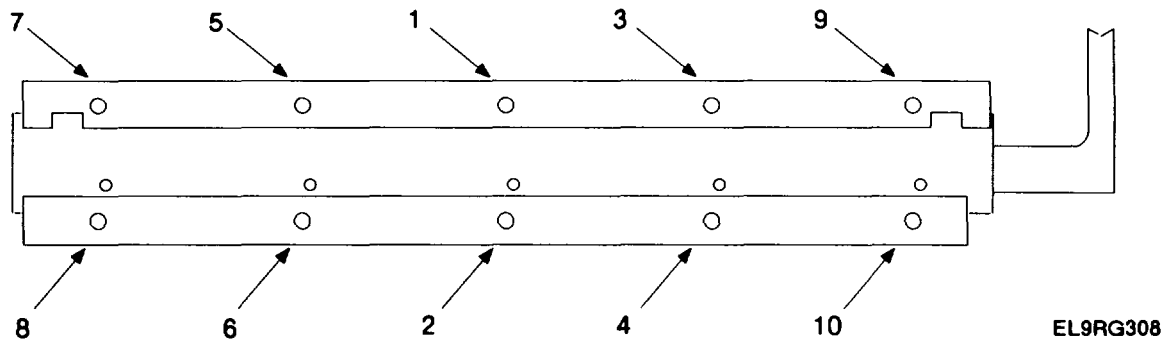
4-78. Maintenance Procedures for ICD A5. Cont



EL9RG307

Figure 4-141. Component Location for J-4951/G (ICD A5)

4-78. Maintenance Procedures for ICD AS. Cont



NOTE
Torque sequence is shown from front view. Screws are installed from rear.

Figure 4-142. Front View of Torquing Sequence for Hold-down Bars

ITEM		ACTION		REMARKS			
f. Traces		Use the following list to troubleshoot the backplane assembly.					
FROM	TO	FROM	TO	FROM	TO	FROM	TO
P1-0	NC	P1-23	J1-23	P1-46	J1-46	P1-69	J1-69
P1-1	J1-1	P1-24	J1-24	P1-47	J1-47	P1-70	J1-70
P1-2	J1-2	P1-25	J1-25	P1-48	J1-48	P1-71	J1-71
P1-3	J1-3	P1-26	J1-26	P1-49	J1-49	P1-72	J1-72
P1-4	J1-4	P1-27	J1-27	P1-50	J1-50	P1-73	J1-73
P1-5	J1-5	P1-28	J1-28	P1-51	J1-51	P1-74	J1-74
P1-6	J1-6	P1-29	J1-29	P1-52	J1-52	P1-75	J1-75
P1-7	J1-7	P1-30	J1-30	P1-53	J1-53	P1-76	J1-76
P1-8	J1-8	P1-31	J1-31	P1-54	J1-54	P1-77	J1-77
P1-9	J1-9	P1-32	J1-32	P1-55	J1-55	P1-78	J1-78
P1-10	J1-10	P1-33	J1-33	P1-56	J1-56	P1-79	J1-79
P1-11	J1-11	P1-34	J1-34	P1-57	J1-57	P1-80	J1-80
P1-12	J1-12	P1-35	J1-35	P1-58	J1-58	P1-81	J1-81
P1-13	J1-13	P1-36	J1-36	P1-59	J1-59	P1-82	J1-82
P1-14	J1-14	P1-37	J1-37	P1-60	J1-60	P1-83	J1-83
P1-15	J1-15	P1-38	J1-38	P1-61	J1-61	P1-84	J1-84
P1-16	J1-16	P1-39	J1-39	P1-62	J1-62	P1-85	J1-85
P1-17	J1-17	P1-40	J1-40	P1-63	J1-63	P1-86	J1-86
P1-18	J1-18	P1-41	J1-41	P1-64	J1-64	P1-87	J1-87
P1-19	J1-19	P1-42	J1-42	P1-65	J1-65	P1-88	J1-88
P1-20	J1-20	P1-43	J1-43	P1-66	J1-66	P1-89	J1-89
P1-21	J1-21	P1-44	J1-44	P1-67	J1-67	P1-90	J1-90
P1-22	J1-22	PI-45	J1-45	P1-68	J1-68	P1-91	J1-91

Figure 4-143. Schematic Diagram of Backplane Assembly (Sheet 1 of 2)

4-78. Maintenance Procedures for ICD A5. Cont

<u>FROM</u>	<u>TO</u>	<u>FROM</u>	<u>TO</u>	<u>FROM</u>	<u>TO</u>	<u>FROM</u>	<u>TO</u>
P1-92	J1-92	P1-130	J1-130	P1-168	J1-168	PS-12	J1-206
P1-93	J1-93	P1-131	J1-131	P1-169	J1-169	PS-13	J1-207
P1-94	J1-94	P1-132	J1-132	P1-170	J1-170	PS-13	J1-208
P1-95	J1-95	P1-133	J1-133	P1-171	J1-171	PS-15	J1-209
P1-96	J1-96	P1-134	J1-134	P1-172	J1-172	N/C	J1-210
P1-97	J1-97	P1-135	J1-135	P1-173	J1-173	N/C	J1-211
P1-98	J1-98	P1-136	J1-136	P1-174	J1-174	N/C	J1-212
P1-99	J1-99	P1-137	J1-137	P1-175	J1-175	N/C	J1-213
P1-100	J1-100	P1-138	J1-138	P1-176	J1-176	N/C	J1-214
P1-101	J1-101	P1-139	J1-139	P1-177	J1-177	N/C	J1-215
P1-102	J1-102	P1-140	J1-140	P1-178	J1-178	N/C	J1-216
P1-103	J1-103	P1-141	J1-141	P1-179	J1-179	N/C	J1-217
P1-104	J1-104	P1-142	J1-142	P1-180	J1-180	N/C	J1-218
P1-105	J1-105	P1-143	J1-143	P1-181	J1-181	N/C	J1-219
P1-106	J1-106	P1-144	J1-144	P1-182	J1-182	N/C	J1-220
P1-107	J1-107	P1-145	J1-145	P1-183	J1-183	N/C	J1-221
P1-108	J1-108	P1-146	J1-146	P1-184	J1-184	N/C	J1-222
P1-109	J1-109	P1-147	J1-147	P1-185	J1-185	N/C	J1-223
P1-110	J1-110	P1-148	J1-148	P1-186	J1-186	N/C	J1-224
P1-111	J1-111	P1-149	J1-149	P1-187	J1-187	N/C	J1-225
P1-112	J1-112	P1-150	J1-150	P1-188	J1-188	N/C	J1-226
P1-113	J1-113	P1-151	J1-151	P1-189	J1-189	N/C	J1-227
P1-114	J1-114	P1-152	J1-152	P1-190	J1-190	N/C	J1-228
P1-115	J1-115	P1-153	J1-153	P1-191	J1-191	N/C	J1-229
PI-116	J1-116	P1-154	J1-154	GND	J1-192	N/C	J1-230
PI-117	J1-117	P1-155	J1-155	GND	J1-193	N/C	J1-231
P1-118	J1-118	P1-156	J1-156	GND	J1-194	N/C	J1-232
P1-119	J1-119	P1-157	J1-157	GND	J1-195	N/C	J1-233
P1-120	J1-120	P1-158	J1-158	PS-10	J1-196	N/C	J1-234
P1-121	J1-121	P1-159	J1-159	PS-10	J1-197	N/C	J1-235
P1-122	J1-122	P1-160	J1-160	PS-10	J1-198	N/C	J1-236
P1-123	J1-123	P1-161	J1-161	PS-10	J1-199	N/C	J1-237
P1-124	J1-124	P1-162	J1-162	PS-11	J1-200	N/C	J1-238
P1-125	J1-125	P1-163	J1-163	PS-11	J1-201	N/C	J1-239
P1-126	J1-126	P1-164	J1-164	PS-14	J1-202	N/C	J1-240
P1-127	J1-127	P1-165	J1-165	PS-12	J1-203		
P1-128	J1-128	P1-166	J1-166	PS-12	J1-204		
P1-129	J1-129	P1-167	J1-167	PS-12	J1-205		

Figure 4-143. Schematic Diagram of Backplane Assembly (Sheet 2 of 2)

Section XIX. MAINTENANCE OF J-4997/G (TEST ADAPTER L)

4-79. Required Test Accessories for Test Adapter L.

The following procedure is used to test and troubleshoot Test Adapter L. This test adapter is used to test four different modules. Four test programs are required to test this test adapter. Install each test program and perform the survey test. The AN/USM-410 will produce a printout of the faulty parts. Replace only the defective parts listed for a particular section of the test adapter. To verify repair, PERFORM ALL TPS TESTS; this will insure the test adapter will function properly.

The operational steps are the same for all test programs and are listed once.

REQUIRED TEST ACCESSORIES	
• Test Program Tape	CPIN CP2900030G
File No.	A3019261
File No.	A3142316F
File No.	A3014414
File No.	A3014408
• ICD	ID-005C
Ž Adapter Card L	A3148160-1
• Load Card L1	A3141067-1
• Load Card L2	A3148070-1
. Self Test Assembly L1	A3148073-1
. Self Test Assembly L2	A3148076-1
. Self Test Assembly L3.	A3148079-1
. Self Test L4	A3148161-1
. Extractor, Electrical Card	A3148245-1
Ž Alignment Tool Kit	B4008667
. Cable Assembly, RF (W103)	B4021273
• AN/USM-410(V)2 Accessory Kit B4021282 Items:	
Cable Assembly, RF (W103)	B4021273
. AN/USM-410(V)2 Accessory Kit B4021293 Items:	
RF Short BNC Plug	3201-1314-02

NOTE

Before testing this adapter card, run the ID-005C survey. Use test program CPIN 11GSG10 File Number ID005C. If ICD-005C fails the survey test during any procedure in this manual, return hardware to depot for repair.

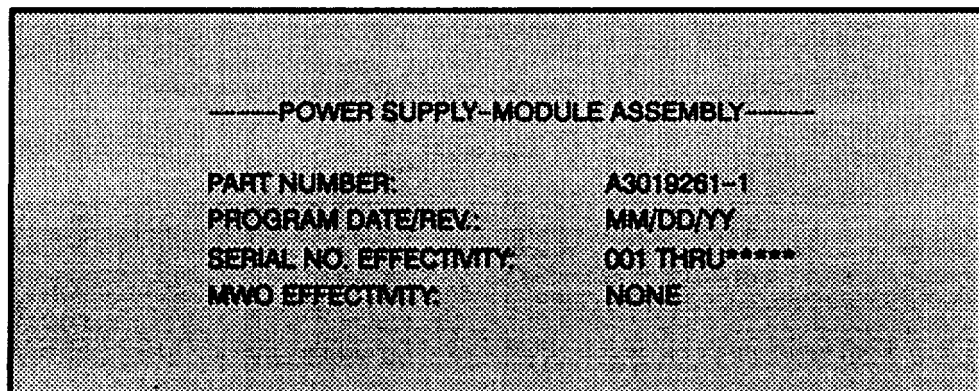
4-80. Test Procedures for Test Adapter L.

- a. Turn on test station AN/USM-410(V)2.
- b. Perform operational procedures in accordance with TM 11-6625-2773-10.
- c. Enter DIR USERAREA1 and press RETURN on VDT keyboard.

NOTE

The intermediate code used in these programs may require up to 254 blocks of memory on the removable disk pack (DPØ). Before loading the test program ensure that the DPØ has sufficient space to load the intermediate code. if there are not enough blocks on the present disk, reformat the disk or obtain a new disk.

- d. Load test program.
 - (1) install test program tape CPIN CP2900030G in accordance with TM 11-6625-2773-10.
 - (2) Load file onto disk in accordance with TM 11-6625-2773-10.
- e. Select test.
 - (1) Enter one of the following: TEST A3019261, A3142316F, A3014414, or A3014408, and press RETURN on VDT keyboard.
 - (2) Press STRT/PROC on the VDT keyboard.
 - (3) Verify that one of the following information amens are displayed on the VDT



4-80. Teat Procedures for Teat Adapter L. Cont

-----CCA-SWITCHING-----

PART NUMBER	A3142316-1
PROGRAM DATE/REV.:	MM/DD/YY REV.
SERIAL NO. EFFECTIVITY	001 THRU ***
MWO EFFECTIVITY	NONE

-----CCA-ICOM POWER SUPPLY-----

PART NUMBER	A3014414-1
PROGRAM DATE/REV.:	MM/DD/YY REV.
SERIAL NO. EFFECTIVITY	001 THRU ***
MWO EFFECTIVITY	NONE

-----ICOM DATA VO-----

PART NUMBER:	A3014406-1
PROGRAM DATE/REV.:	MM/DD/YY
SERIAL NO. EFFECTIVITY:	001 THRU*****
MWO EFFECTIVITY:	NONE

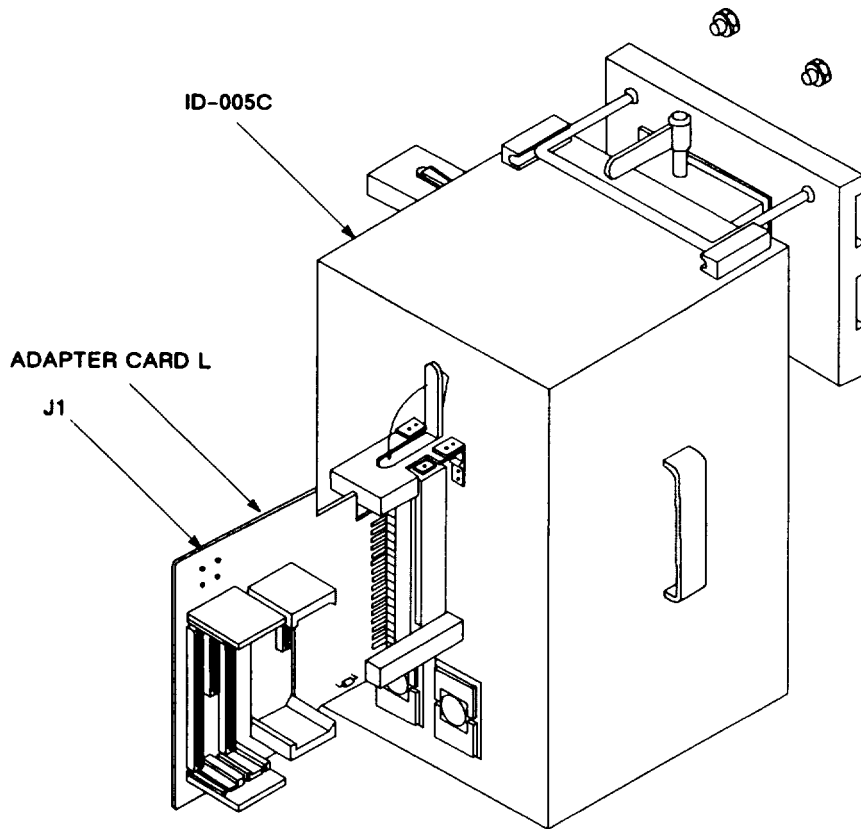
(4) Enter part number and serial number and read operator instructions on VDT. Follow operator instructions on VDT.

(5) Press STRT/PROC on the VDT keyboard.

4-80. Test Procedures for Test Adapter L. Cont

- f. Run ATE survey test if desired. If ATE survey fails refer to TM 11-6625-2773-10.**
- g. Install ICD ID-005C on J1 of PIU.**
- h. Install adapter card L on ID-005C (See figure 4-144 on page 4-284).**
- f. Run adapter card survey test. If survey test fails refer to paragraph 4-81 on page 4-287.**
- j. Install load card L1 on ID-005C (See figure 4-145 on page 4-285) or load card L2 on ID-005C (See figure 4-146 on page 4-286) as required by test program.**
- k. Select load card survey.**
- /. If load card survey fails, go to one of the following paragraphs:**
 - (1) For maintenance of load card L1, go to paragraph 4-82 on page 4-292.**
 - (2) For maintenance of load card L2, go to paragraph 4-83 on page 4-294.**

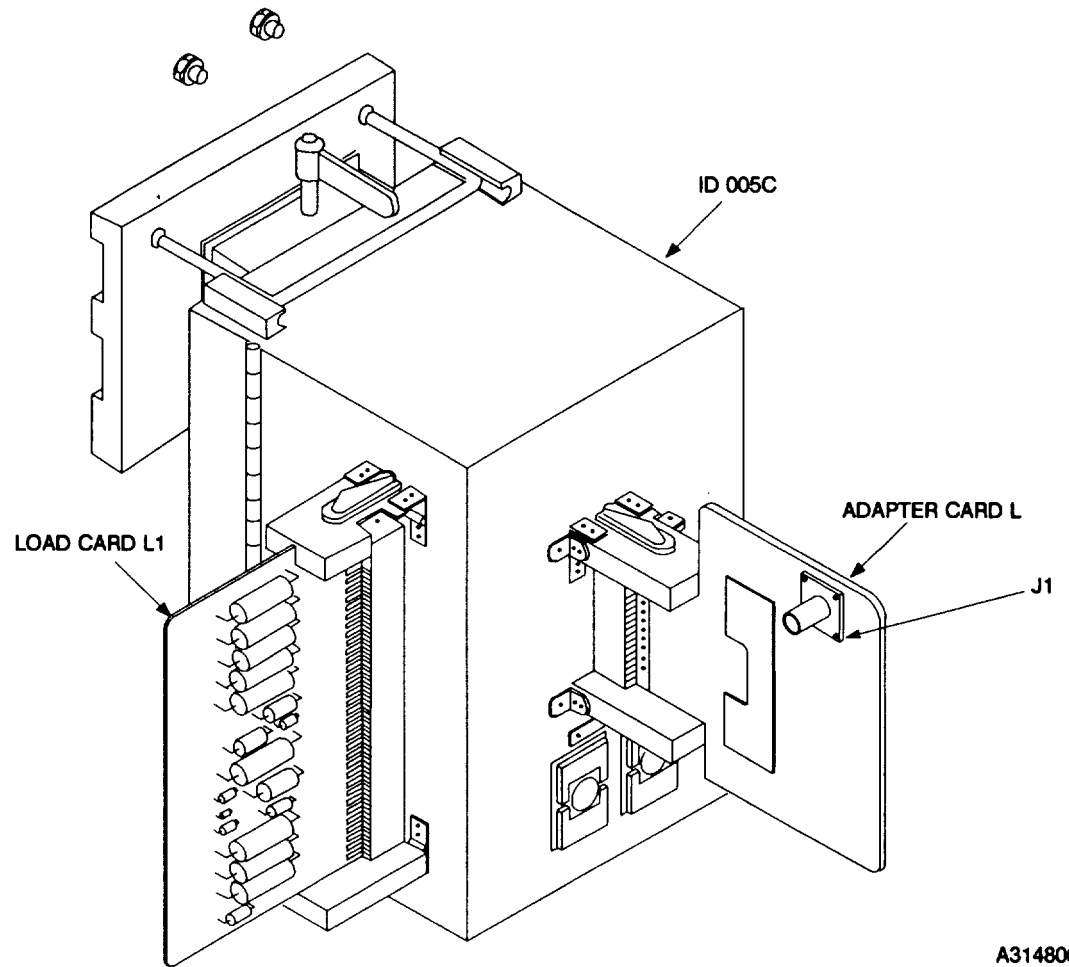
4-80. Test Procedures for Test Adapter L. Cont



EL9RG309

Figure 4-144. Installation of Adapter Card L for ICOM Power Supply

4-80. Test Procedures for Test Adapter L. Cont

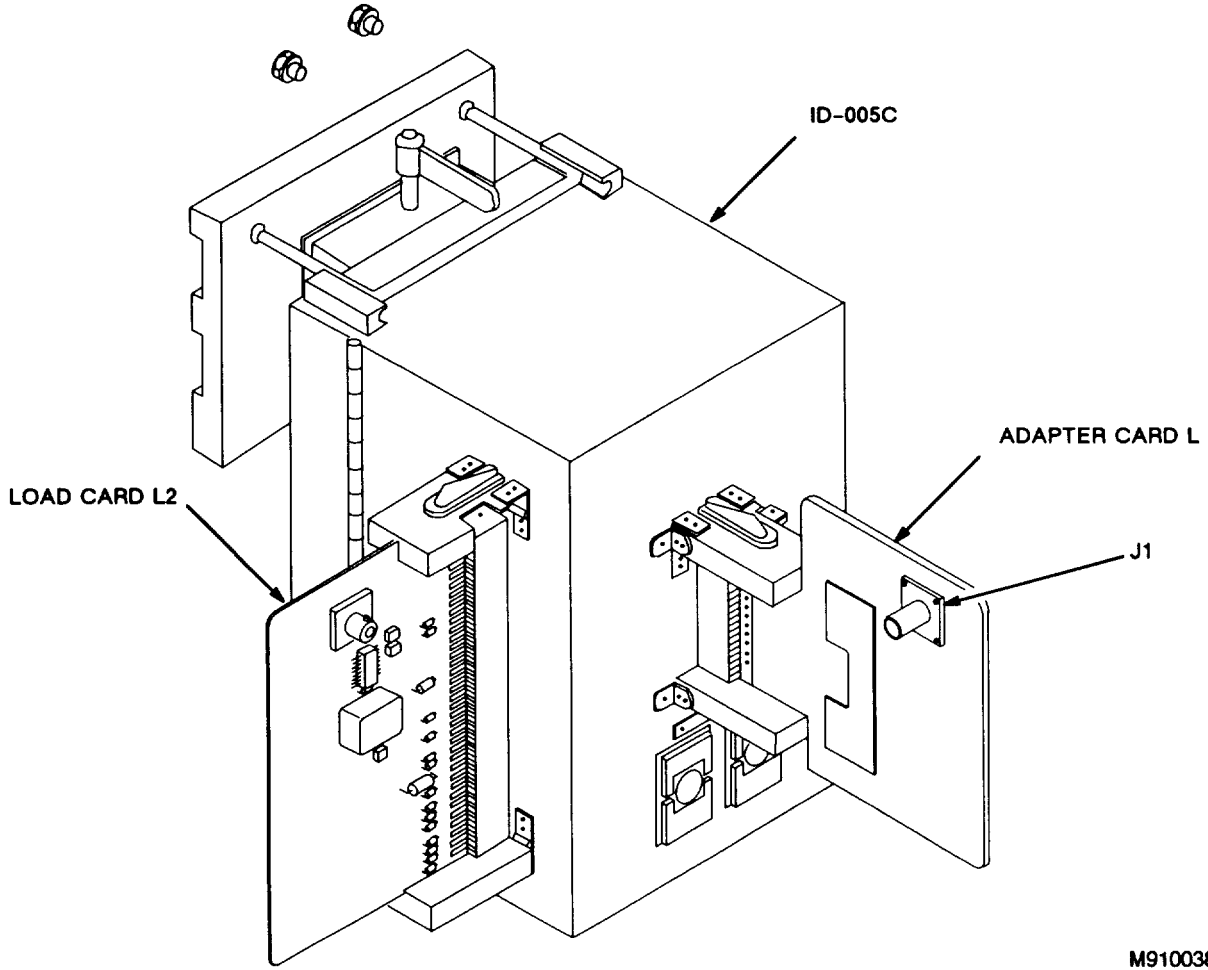


A3148067

Figure 4-145. Installation of Load Card L1 for Power Supply

4-80. Test Procedures for Test Adapter L. Cont

NOTE:
CHECK FOR RF CABLE CONNECTION BETWEEN
LOAD CARD L2 AND ADAPTER CARD L



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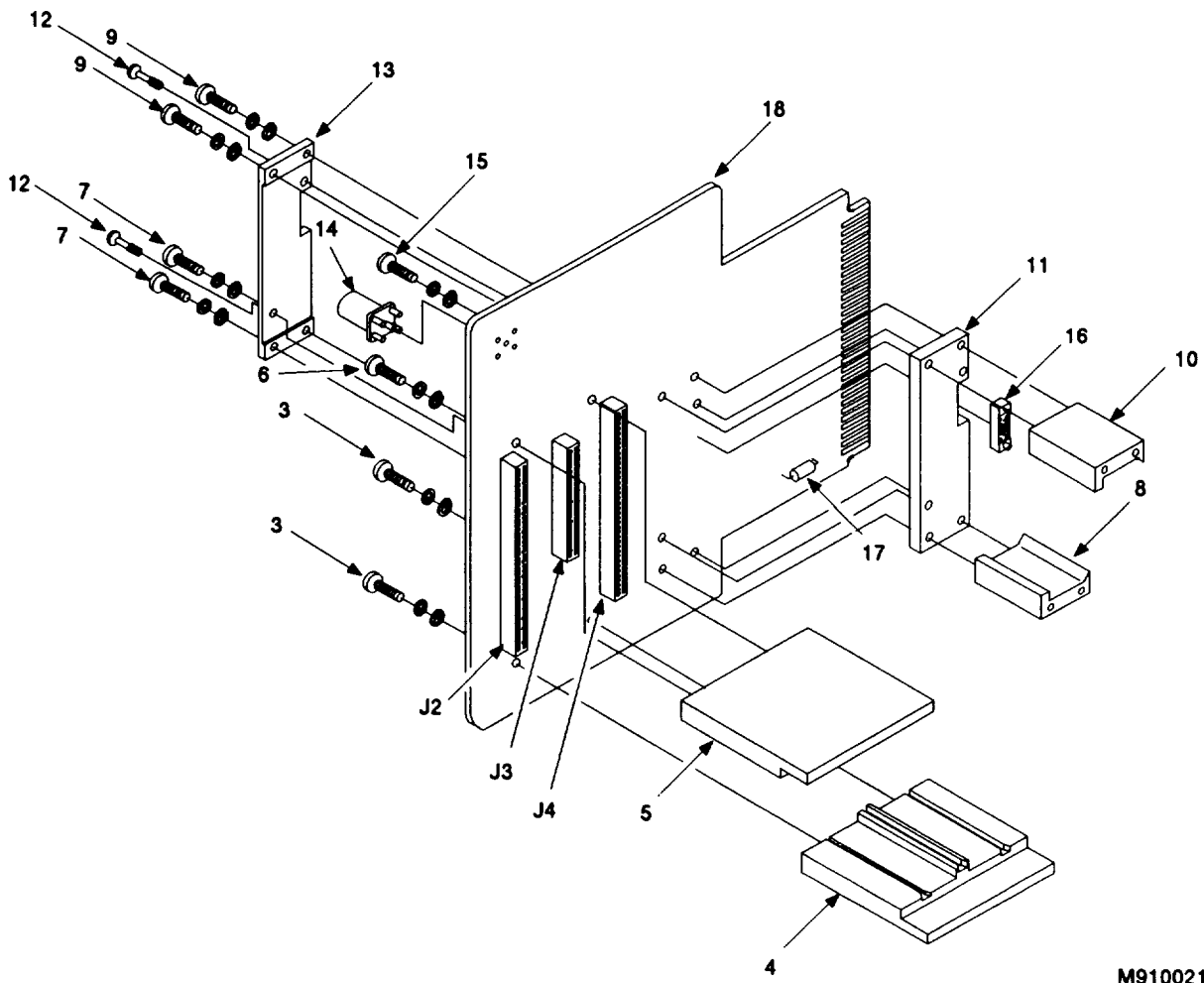
Figure 4-146. Installation of Load Card L2 for ICOM Power Supply

4-81. Maintenance Procedures for Test Adapter L.

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT Test Station, Electronic Equipment, Analog AN/USM-410 (6625-01-069-4223) Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-01-610-8817) Solder Repair Center PRC-151 (3439-01-109-6590)</p> <p>REFERENCES TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-40P TB 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>
--

ITEM	ACTION	REMARKS
a. Electrical card holder (4)	<p>Remove two screws (3), two lock washers, and two flat washers.</p> <p>Replace and secure with two screws (3), two lock washers, and two flat washers.</p>	Refer to figure 4-147 on page 4-288.
b. Electrical card holder (5)	<p>Remove two screws (6), two lock washers, and two flat washers.</p> <p>Replace as and secure with two screws (6), two lock washers, and two flat washers.</p>	
c. Power supply electrical connector guide (8)	<p>Remove two screws (7), two lock washers, and two flat washers,</p> <p>Replace and secure with two screws (7), two lock washers, and two flat washers.</p>	
d. Power supply electrical connector guide (10)	<p>Remove two screws (9), two lock washers, and two flat washers.</p> <p>Replace and secure with two screws (9), two lock washers, and two flat washers.</p>	

4-81. Maintenance Procedures for Test Adapter L. Cont



M910021

Figure 4-147. Component Layout for Test Adapter L

4-81. Maintenance Procedures for Test Adapter L. Cont

ITEM	ACTION	REMARKS
e. Power supply spacer plate (11)	Remove connector guide (8).	Refer to step c.
	Remove connector guide (10).	Refer to step d.
	Replace power supply spacer guide(11).	
	install power supply electrical connector guide (10).	Refer to step d.
f. Captive screws (12)	Install power supply electrical connector guide (8).	Refer to step c.
	Unscrew from power supply mounting bracket (13).	
g. Power supply mounting bracket (13)	Replace and screw into power supply mounting bracket (13).	
	Remove power supply spacer plate.	Refer to step e.
h. Connector J1 (14)	Remove captive screws.	Refer to step f.
	Replace power supply mounting bracket.	
	Install power supply spacer plate.	Refer to step e.
i. Connector J5 (16)	Install captive screws.	Refer to step f.
	Unsolder from circuit card assembly.	
j. Resistor R1 (17)	Replace and solder to circuit card assembly,	
	Remove two nuts, two lock washers, and two flat washers.	
	Unsolder from circuit card assembly.	
j. Resistor R1 (17)	Replace connector and secure with two nuts, two lock washers, and two flat washers.	
	Solder connector to circuit card assembly.	

4-81. Maintenance Procedures for Test Adapter L. Cont

ITEM	ACTION	REMARKS
k. Circuit card Assembly	Remove electrical card holder (4).	Refer to step a.
	Remove electrical card holder (5).	Refer to step b.
	Remove power supply electrical connector guide (8),	Refer to step c.
	Remove power supply electrical connector guide (10).	Refer to step d.
	Remove power supply spacer plate(11).	Refer to step e.
	Remove power supply mounting bracket (13).	Refer to step g.
	Remove connector J1 (14).	Refer to step h.
	Remove connector J5 (16).	Refer to step i.
	Remove Resistor R1 (17).	Refer to step j.
	Replace circuit card assembly (18).	NOTE Replace CCA if connector J2, J3, or J4 is faulty.
	Install Resistor RI (1 7).	Refer to step j.
	Install connector J5 (16).	Refer to step i.
	Install connector J1 (14).	Refer to step h.
	Install power supply mounting bracket (13).	Refer to step g.
	Install power supply spacer plate(11).	Refer to step e.
	Install power supply electrical connector guide (10).	Refer to step d.
	Install power supply electrical connector guide (8).	Refer to step c.
	Install electrical card holder (5).	Refer to step b.
Install electrical card holder (4).	Refer to step a.	
l. Traces	Use the following schematic to troubleshoot Test Adapter L.	

4-81. Maintenance Procedures for Test Adapter L. Cont

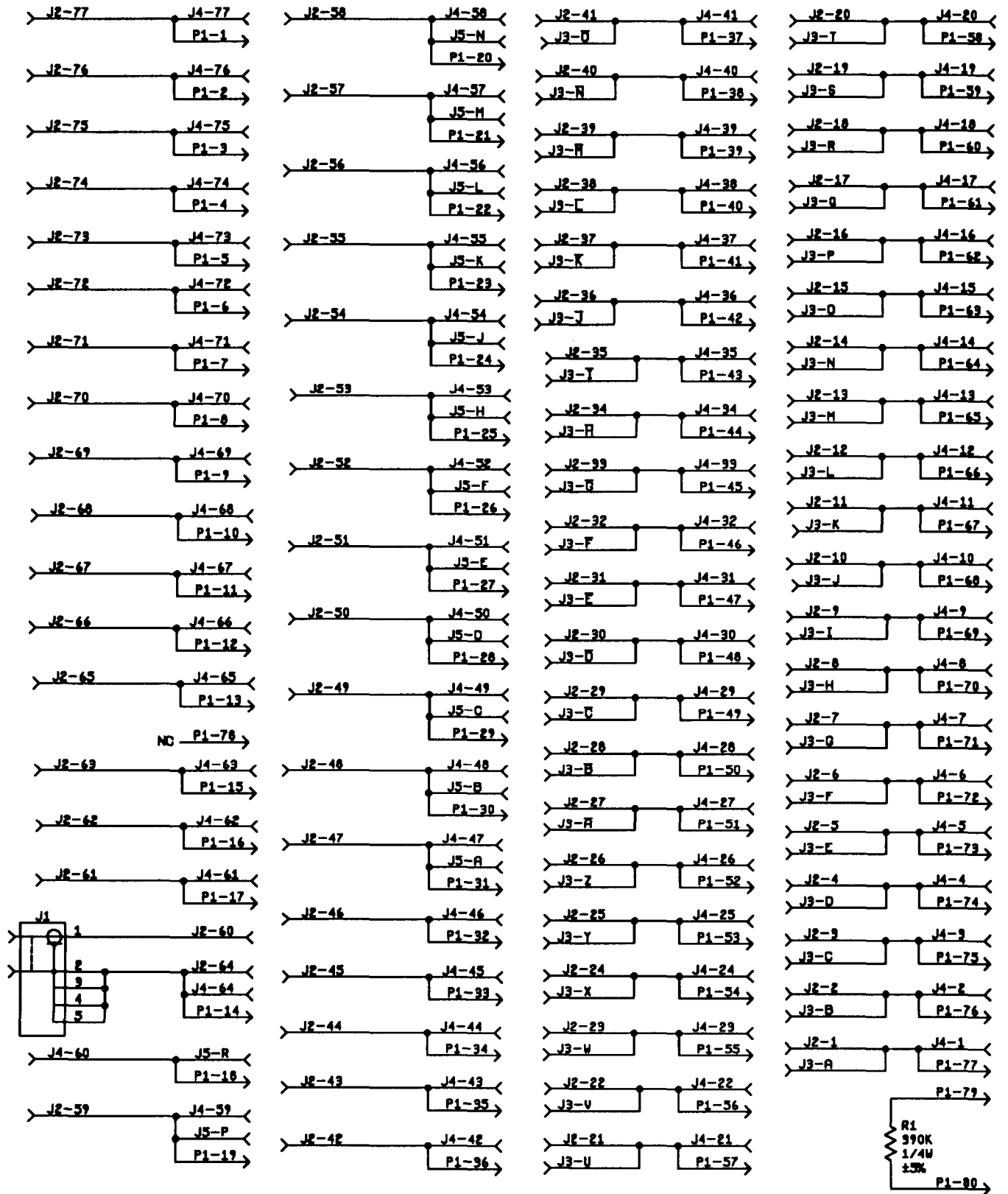
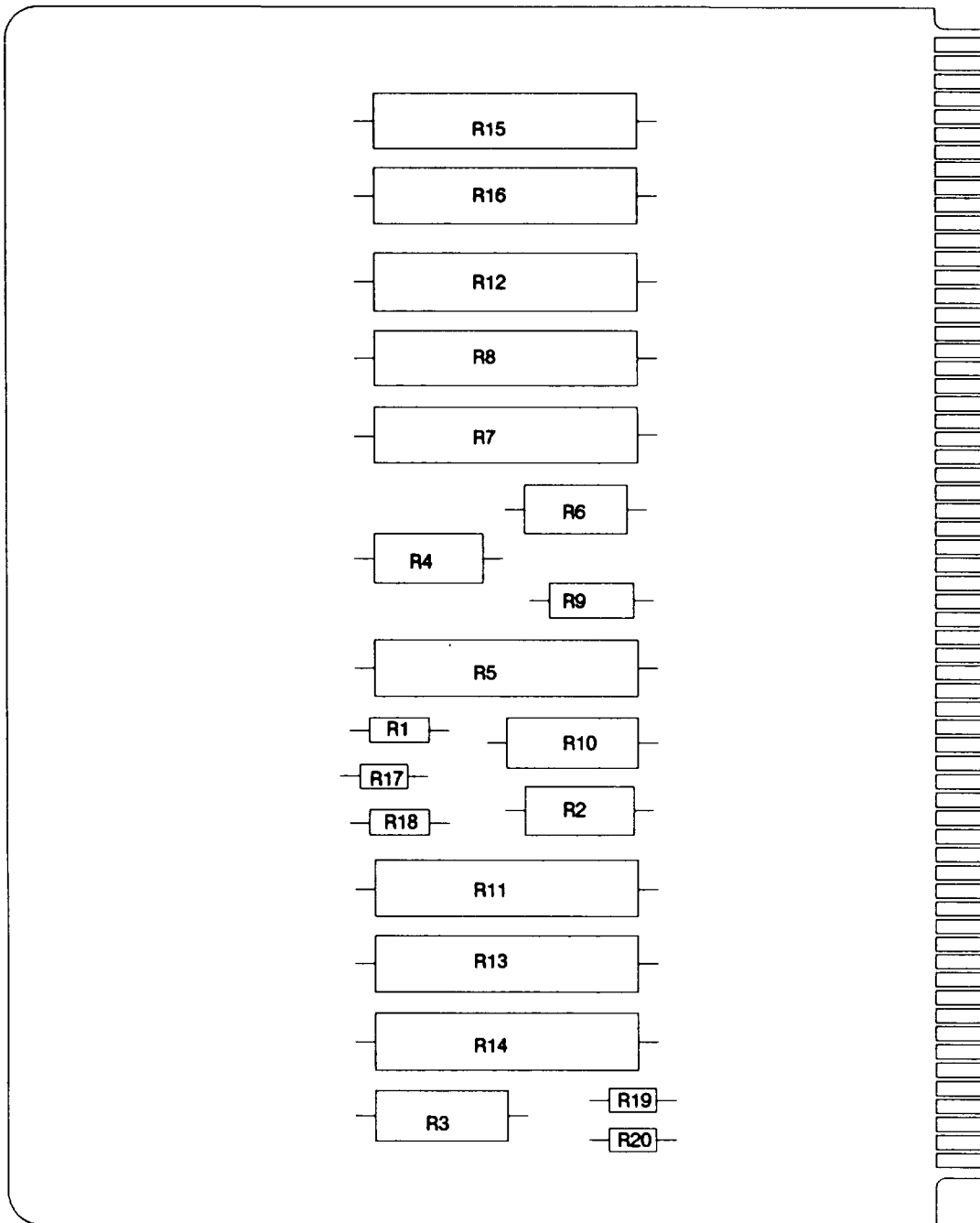


Figure 4-148. Schematic Diagram for Test Adapter L

4-82. Maintenance Procedures for Load Card L1.

ITEM	ACTION	REMARKS
a. CCA-Load Card L1	Replace components as required.	



EL9RG310

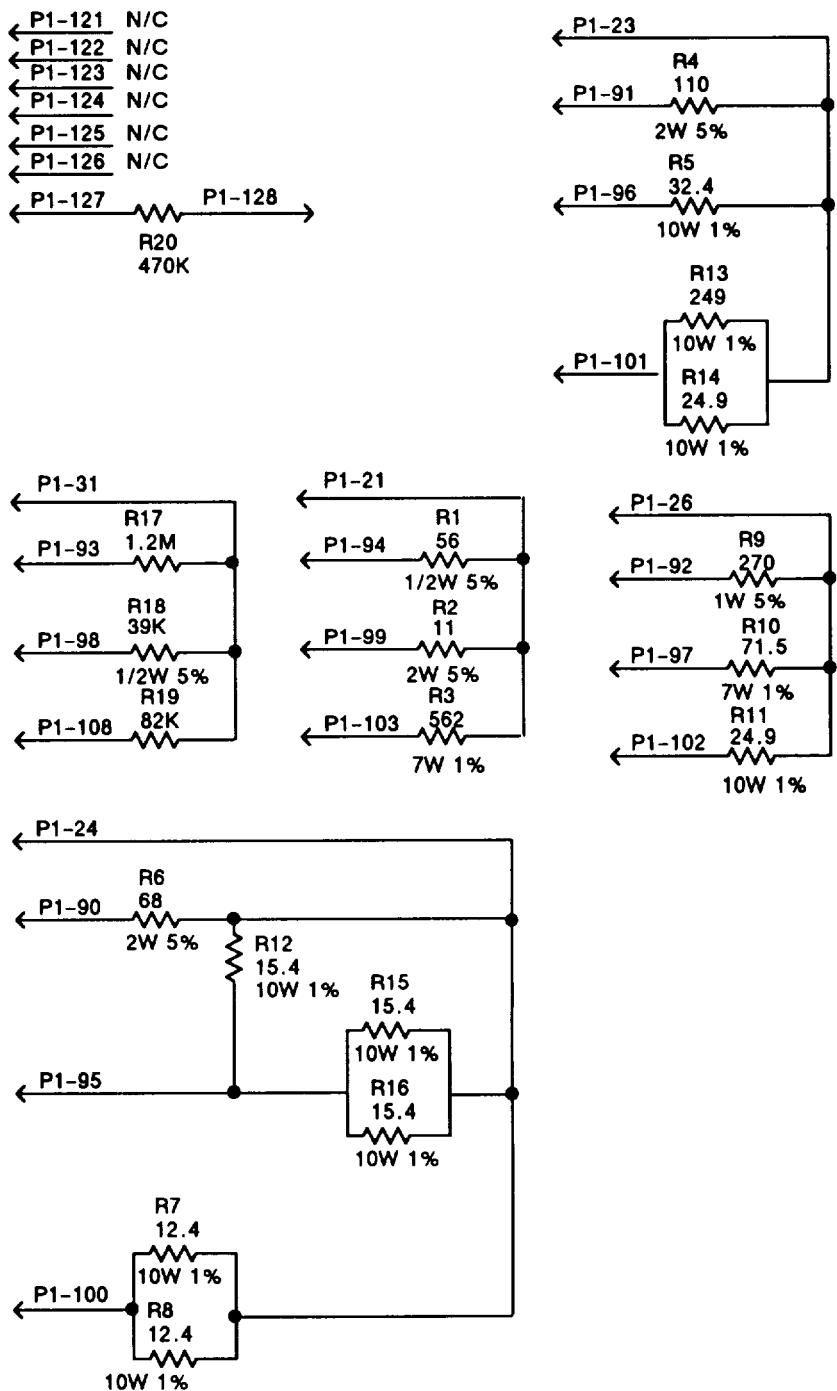
Figure 4-149. Maintenance of Load Card L1

4-82. Maintenance Procedures for Load Card L1. Cont

b. Traces

Use the following schematic to troubleshoot the load card.

← P1-1	N/C	← P1-56	N/C
← P1-2	N/C	← P1-57	N/C
← P1-3	N/C	← P1-58	N/C
← P1-4	N/C	← P1-59	N/C
← P1-5	N/C	← P1-60	N/C
← P1-6	N/C	← P1-61	N/C
← P1-7	N/C	← P1-62	N/C
← P1-8	N/C	← P1-63	N/C
← P1-9	N/C	← P1-64	N/C
← P1-10	N/C	← P1-65	N/C
← P1-11	N/C	← P1-66	N/C
← P1-12	N/C	← P1-67	N/C
← P1-13	N/C	← P1-68	N/C
← P1-14	N/C	← P1-69	N/C
← P1-15	N/C	← P1-70	N/C
← P1-16	N/C	← P1-71	N/C
← P1-17	N/C	← P1-72	N/C
← P1-18	N/C	← P1-73	N/C
← P1-19	N/C	← P1-74	N/C
← P1-20	N/C	← P1-75	N/C
← P1-22	N/C	← P1-76	N/C
← P1-25	N/C	← P1-77	N/C
← P1-27	N/C	← P1-78	N/C
← P1-28	N/C	← P1-79	N/C
← P1-29	N/C	← P1-80	N/C
← P1-30	N/C	← P1-81	N/C
← P1-32	N/C	← P1-82	N/C
← P1-33	N/C	← P1-83	N/C
← P1-34	N/C	← P1-84	N/C
← P1-35	N/C	← P1-85	N/C
← P1-36	N/C	← P1-86	N/C
← P1-37	N/C	← P1-87	N/C
← P1-38	N/C	← P1-88	N/C
← P1-39	N/C	← P1-89	N/C
← P1-40	N/C	← P1-104	N/C
← P1-41	N/C	← P1-105	N/C
← P1-42	N/C	← P1-106	N/C
← P1-43	N/C	← P1-107	N/C
← P1-44	N/C	← P1-109	N/C
← P1-45	N/C	← P1-110	N/C
← P1-46	N/C	← P1-111	N/C
← P1-47	N/C	← P1-112	N/C
← P1-48	N/C	← P1-113	N/C
← P1-49	N/C	← P1-114	N/C
← P1-50	N/C	← P1-115	N/C
← P1-51	N/C	← P1-116	N/C
← P1-52	N/C	← P1-117	N/C
← P1-53	N/C	← P1-118	N/C
← P1-54	N/C	← P1-119	N/C
← P1-55	N/C	← P1-120	N/C



EL9RG311

Figure 4-150. Schematic Diagram for Load Card L1

4-83. Maintenance Procedures for Load Card L2.

ITEM	ACTION	REMARKS
a. CCA-Load Card L2	Replace components as required.	Refer to figure 4-151 on page 4-295.
b. Resistor R18	Apply electrical insulating enamel after replacement or adjustment.	Use item 181, App. C.
c. Schematic diagram	Refer to FO-13.	

4-83. Maintenance Procedures for Load Card L2. Cont

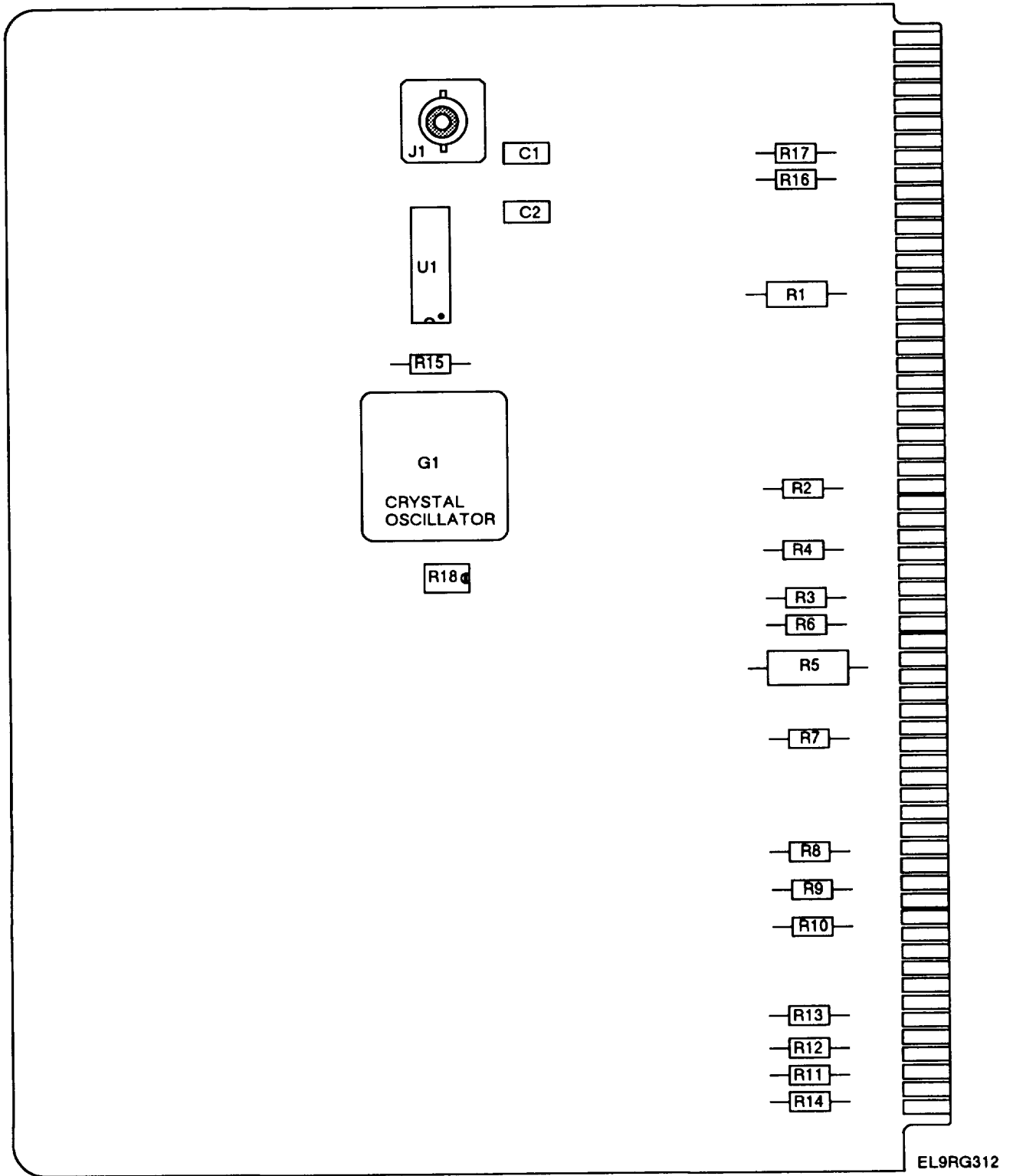
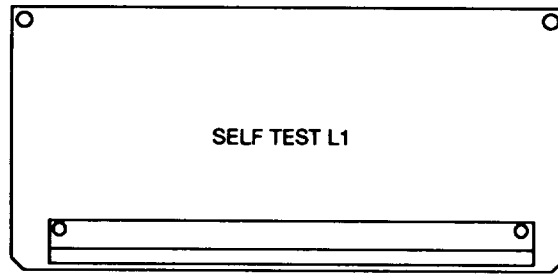


Figure 4-151. Component Layout of Load Card L2

4-64. Electronic Test-Self Test L1 Extender Card. (Self Test Assembly L1)

ITEM	ACTION	REMARKS
a. Circuit Card Assembly	Replace as required.	Refer to TM 11-6625-3094-24P.

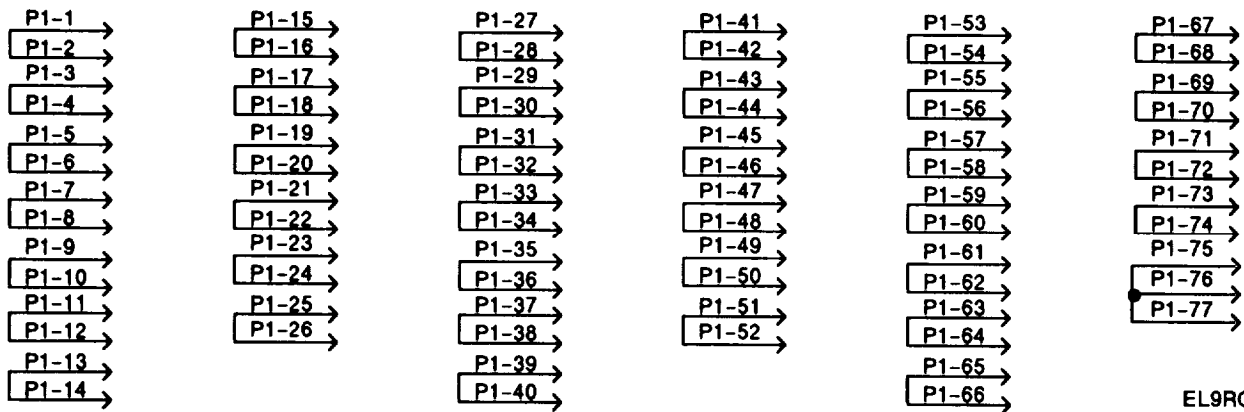


EL9RG313

Figure 4-152, Illustration of Self Test Assembly L1

b. Traces.

Use the following schematic to troubleshoot the extender card.

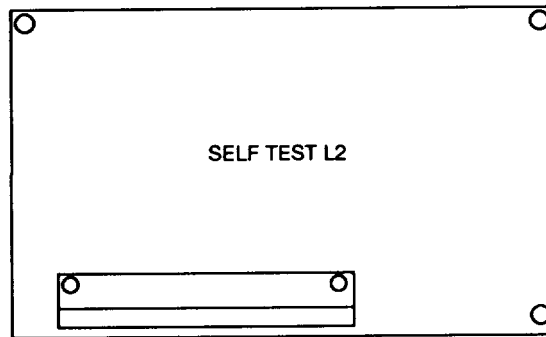


EL9RG314

Figure 4-153. Schematic Diagram for Electric Test-Self Test L1 Extender Card

4-85. Electronic Test-Self Test L2 Extender Card. (Self Test Assembly L2)

ITEM	ACTION	REMARKS
a. Circuit Card Assembly	Replace as required.	Refer to TM 11-6625-3094-24P.



EL9RG315

Figure 4-154. Illustration of Self Test Assembly L2

b. Traces.

Use the following schematic to troubleshoot the extender card.

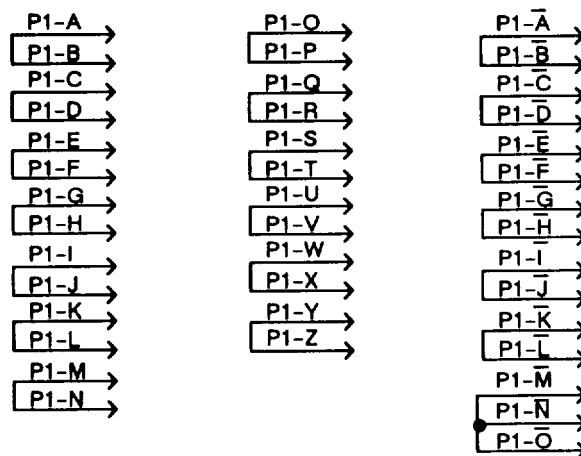
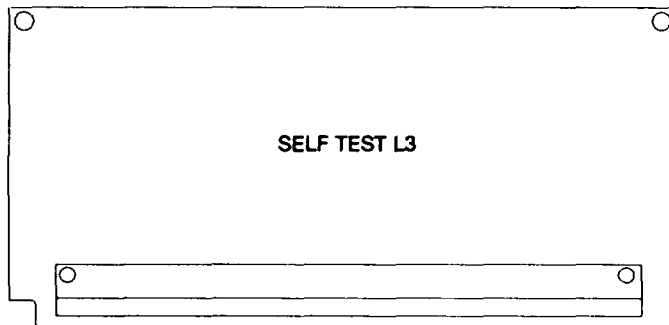


Figure 4-155. Schematic Diagram for Electric Test-Self Test L2 Extender Card

4-86. Electronic Test-Self Test L3 Extender Card. (Self Test Assembly L3)

ITEM	ACTION	REMARKS
a. Circuit Card Assembly	Replace as required.	Refer to TM 11-6625-3094-24P.

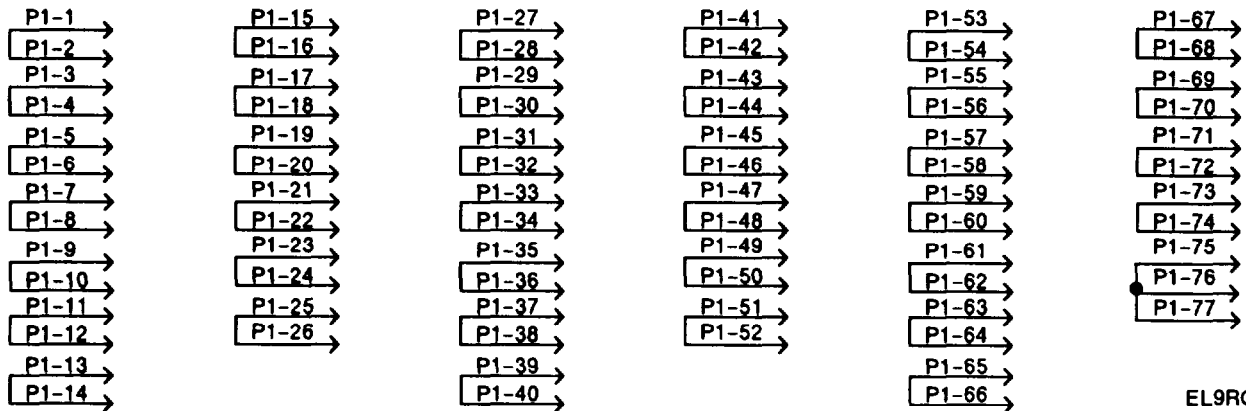


EL9RG317

Figure 4-156. Illustration of Self Test Assembly L3

b. Traces.

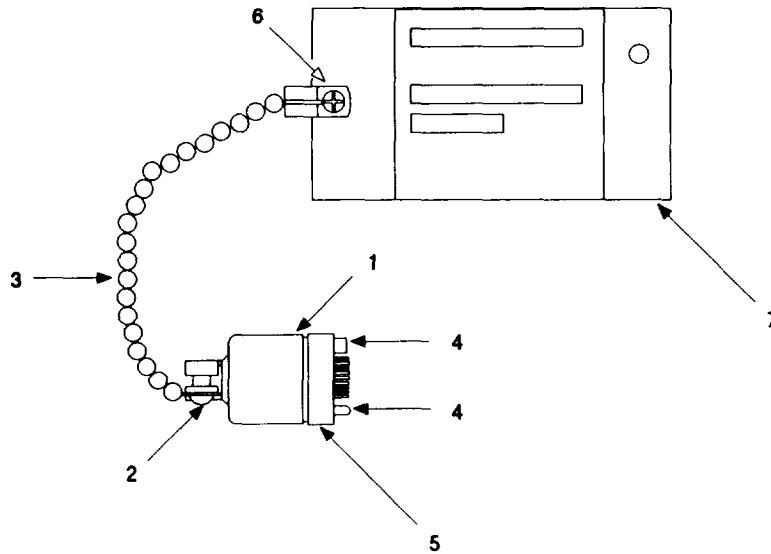
Use the following schematic to troubleshoot the extender card.



EL9RG318

Figure 4-157. Schematic Diagram for Electric Test-Self Test L3 Extender Card

4-87. Maintenance of Dummy Connector Plug-Self Test L4.



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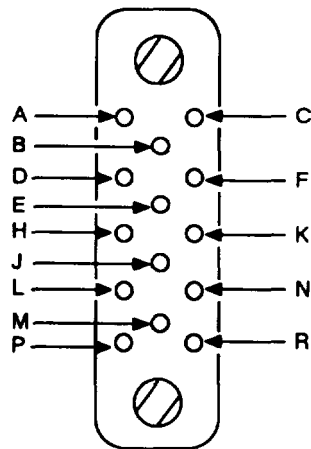
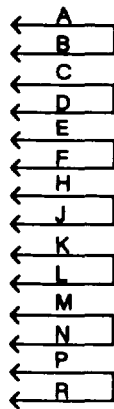
Figure 4-158. Maintenance of Dummy Connector Plug-Self Test L4

ITEM	ACTION	REMARKS
a. Connector Assembly(1) Repair	<p>Remove the screw (2) that secures chain assembly (3) to connector backshell (1).</p> <p>Remove two jackscrews (4) from connector assembly receptacle (5).</p> <p>Remove connector receptacle (5) from connector backshell (1).</p> <p>Troubleshoot plug wires,</p> <p>Unsolder and replace damaged connecting wires and insulation, as required.</p>	<p>Refer to figure 4-158.</p> <p>Refer to figure 4-159 on page 4-300.</p>
NOTE		
<p>If connector is not repairable, obtain replacement connector and solder new wire connectors.</p>		
<p>Secure connector body to connector backshell with two jackscrews.</p>		
NOTE		
<p>Female jackscrew to be oriented closest to pin A.</p>		
<p>Secure chain assembly (3) to backshell cable clamp with screw (2).</p>		

4-87. Maintenance of Dummy Connector Plug-Self Test L4. Cont

ITEM	ACTION	REMARKS
b. Chain Assembly (3) Repair	Remove the screw (2) that secures chain assembly (3) to connector backshell (1). Remove screw (6), lock washer, and hex nut securing damaged chain assembly to retainer plate (7). Secure replacement chain assembly to retainer plate with screw, lock washer, and hex nut. Secure chain assembly to backshell cable clamp of connector assembly with screw.	Refer to figure 4-158,
c. Retainer Clip Plate	Remove screw (6), lock washer, and nut. Secure chain assembly to replacement retainer plate with screw, lock washer, and hex nut.	
d. Wires	Use the schematic to troubleshoot the connector.	

SCHEMATIC

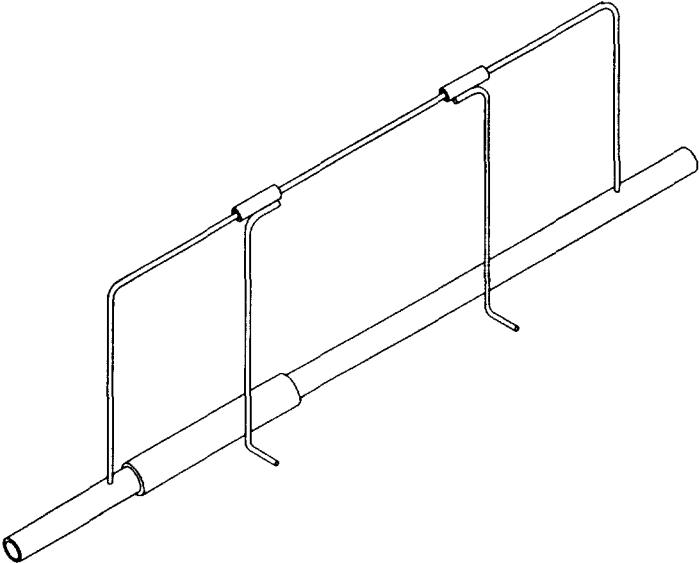


EL9RG319

Figure 4-159. Schematic Diagram and Pin Location of Dummy Connector Plug-Self Test L4

4-88. Maintenance of Electrical Card Extractor.

ITEM	ACTION	REMARKS
a. Extractor	Replace as required.	



M9100222

Figure 4-160. Illustration of Electrical Card Extractor

Section XX. MAINTENANCE OF J-4998/G (TEST ADAPTER A6)

The following procedure is used to perform diagnostic testing of test adapter A6 used to test Electronic Components Assembly-Fill Routing, 1A15, A3018890-1.

4-89. Required Test Accessories for Test Adapter A6.

The following test accessories are used to perform testing of the test adapter A6.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP2700030G
File No	A3018890F
● Test Adapter A6	A3148049-1
● ICD A5	B4041573-2
● 77 Pin Shorting Card	A3148087-2
● Cable Assy A6W1	A3148213-1
● Cable Assy A6W2	A3148214-1

4-90. Test Procedures for Test Adapter A6.

- a. Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

c. Load test program.

- (1) Install test program tape CPIN CP2700030G in digital card tester in accordance with TM 11-6625-3038-10,
- (2) Enter LOAD Ø, then press EXECUTE.
- (3) When READY appears on the display, type RUN and press EXECUTE.

4-90. Test Procedures for Test Adapter A6. Cont

(4) Verify that the following information is printed:

```
>ENTER THE LAST FOUR
>DIGITS OF THE UUT
>P/N A301???-1
>PRESS EXECUTE
```

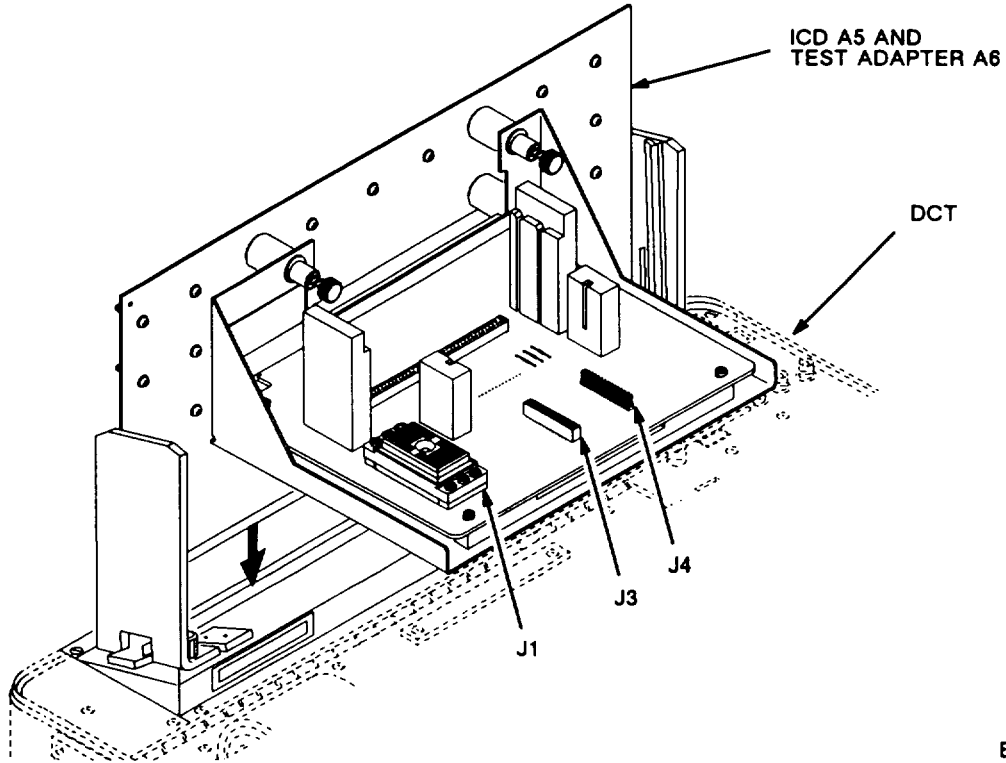
THEN

```
>PRINT PROGRAM NOTES?
>ENTER Y=YES, N=NO
>PRESS EXECUTE.
```

(5) Follow operator actions as instructed by program.

- d. Run ATE survey test if desired, (If survey test fails, refer to TM 11-6625-3038-20.)
- e. Install Test Adapter A6 and ICD A5 on digital card tester (see figure 4-161 on page 4-304).
- f. Run ICD survey test.
- g. After testing do one of the following:
 - (1) If the test adapter passes the survey, exit the program by pressing the ATTN key.
 - (2) If the test adapter fails the survey go to paragraph 4-91 on page 4-305.

4-90. Test Procedures for Test Adapter A6. Cont



EL9RG320

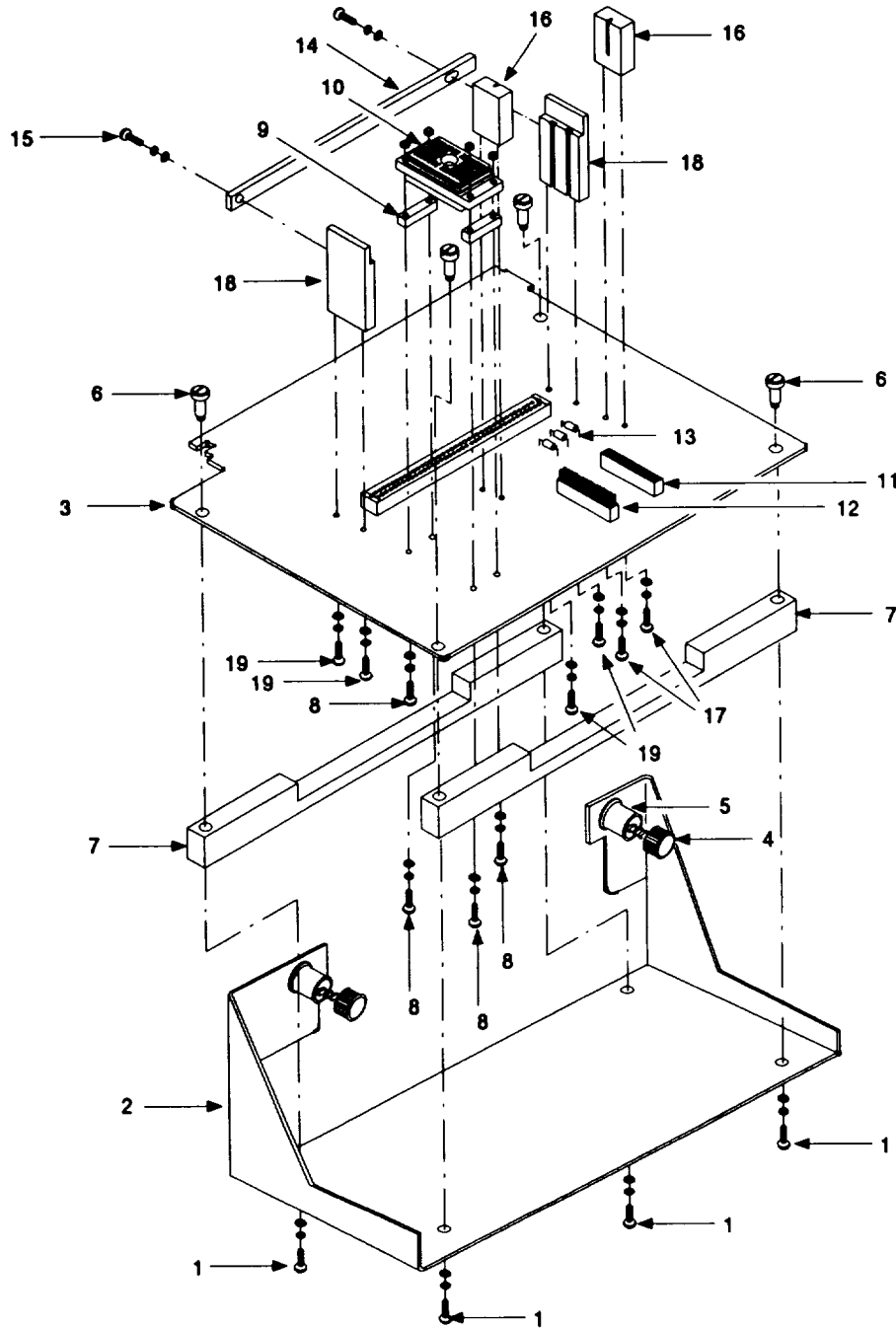
Figure 4-161. Installation of ICD A5 with Test Adapter A6 on DCT

4-91. Maintenance Procedures for ECA-Test Adapter A6A1.

INITIAL SETUP	
TEST EQUIPMENT	TOOLS:
Digital Card Tester AN/USM-465A (6625-01-126-2473)	Tool Kit Electronic Equipment TK-105/G (5160-01-610-6617)
Multimeter AN/USM-486 (6625-01-145-2430)	Solder Repair Center PRC-151 (3439-01-109-8590)
REFERENCES	
TM 11-5820-914-40	
TM 11-6625-2773-10	
TM 11-6625-3094-40P	
TB 43-0127	
PERSONNEL REWIRED: 1	

ITEM	ACTION	REMARKS
a. Mounting Bracket (2)	Remove four screws(1), four flat washers, and four lock washers.	Refer to figure 4-162 on page 4-306.
	Remove mounting bracket (2).	
	Remove and replace panel screw assembly (4,5).	Refer to Section XVII on page 4-270.
b. Spacebars	Replace mounting bracket (2) on CCA (3) using four screws(1), four lock washers, and four flat washers.	Refer to step a.
	Remove mounting bracket.	
	Remove two screws (6).	
c. Connector J1 (10)	Replace spacer bar (7) and secure with two screws (6).	Refer to step a.
	Replace mounting bracket,	
	Remove mounting bracket,	Refer to step a.
	Remove four screws (8), four flat washers, four lock washers, two spacer plates (9), and four hex nuts from connector (10).	
Unsolder and replace contacts as required.		
	Replace connector (10) as required.	

4-91. Maintenance Procedures for ECA-Test Adapter A6A1. Cont



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Figure 4-162. Maintenance of Test Adapter A6

4-91. Maintenance Procedures for ECA-Test Adapter A6A1. Cont

ITEM	ACTION	REMARKS
d. Connector J3,4 (11 ,12)	<p>Install connector (10) on CCA (3) and secure with four screws (8), four flat washers, four lock washers, two spacer plates (9), and hex nuts.</p> <p>Replace mounting bracket.</p> <p>Remove mounting bracket.</p> <p>Unsolder connector from CCA.</p>	<p>Refer to step a.</p> <p>Refer to step a.</p> <p>Refer to figure 4-162 on page 4-306.</p>
e. Diodes (13)	<p>Replace connector J3 (11) or J4 (12) and solder to CCA.</p> <p>Replace mounting bracket.</p> <p>Remove mounting bracket.</p> <p>Unsolder and replace as necessary.</p>	<p>Refer to step a.</p> <p>Refer to step a.</p>
f. Flat Mounting Plate (14)	<p>Replace mounting bracket.</p> <p>Remove mounting bracket.</p> <p>Remove two screws (15), two lock washers and two flat washers and flat mounting plate (14).</p> <p>Replace flat mounting plate (14) and secure with two screws (15), two lock washers and two flat washers.</p>	<p>Refer to step a.</p> <p>Refer to step a,</p> <p>Refer to figure 4-162 on page 4-306.</p>
g. Electrical Card Holder (16)	<p>Replace mounting bracket,</p> <p>Remove mounting bracket.</p> <p>Remove two screws (17), two lock washers, and two flat washers.</p> <p>Replace electrical card holder (16) and secure with two screws (17), two lock washers, and two flat washers.</p>	<p>Refer to step a.</p> <p>Refer to step a.</p> <p>Refer to figure 4-162 on page 4-306,</p>
h. Electrical Card Holder (18)	<p>Replace mounting bracket.</p> <p>Remove mounting bracket,</p> <p>Remove screw (15), lock washer, and flat washer securing flat mounting plate (14) to card holder and two screws (19), two lock washers and two flat washers.</p> <p>Redate card holder (18) and secure with two screws (19), two lock washers, and two flat washers.</p> <p>Install screw (15), lock washer, and flat washer to secure flat mounting plate (14) to card holder.</p> <p>Replace mounting bracket.</p>	<p>Refer to step a.</p> <p>Refer to step a.</p> <p>Refer to figure 4-162 on page 4-306.</p> <p>Refer to step a.</p>

4-91. Maintenance Procedures for ECA-Test Adapter A6A1. Cont

ITEM	ACTION	REMARKS
------	--------	---------

i. Traces

Use the following schematic for troubleshooting test adapter A6.

← P1-61	N/C	← P1-213	N/C
← P1-64	N/C	← P1-214	N/C
← P1-65	N/C	← P1-215	N/C
← P1-68	N/C	← P1-216	N/C
← P1-69	N/C	← P1-217	N/C
← P1-72	N/C	← P1-218	N/C
← P1-73	N/C	← P1-219	N/C
← P1-75	N/C	← P1-220	N/C
← P1-76	N/C	← P1-221	N/C
← P1-77	N/C	← P1-222	N/C
← P1-78	N/C	← P1-223	N/C
← P1-183	N/C	← P1-224	N/C
← P1-184	N/C	← P1-225	N/C
← P1-185	N/C	← P1-226	N/C
← P1-186	N/C	← P1-227	N/C
← P1-187	N/C	← P1-228	N/C
← P1-193	N/C	← P1-229	N/C
← P1-194	N/C	← P1-230	N/C
← P1-195	N/C	← P1-231	N/C
← P1-197	N/C	← P1-232	N/C
← P1-198	N/C	← P1-233	N/C
← P1-199	N/C	← P1-234	N/C
← P1-201	N/C	← P1-235	N/C
← P1-204	N/C	← P1-236	N/C
← P1-205	N/C	← P1-237	N/C
← P1-206	N/C	← P1-238	N/C
← P1-207	N/C	← P1-239	N/C
← P1-208	N/C	← P1-240	N/C
← P1-209	N/C		
← P1-210	N/C		
← P1-211	N/C		
← P1-212	N/C		

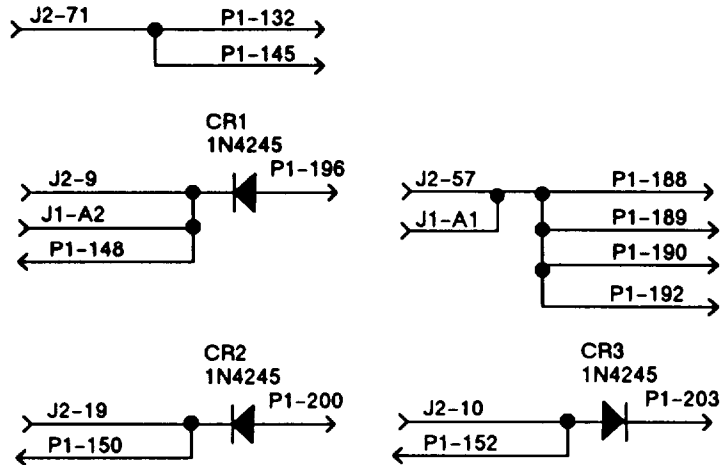


Figure 4-163. Schematic Diagram of Test Adapter A6 (Sheet 1 of 2)

4-91. Maintenance Procedures for ECA-Test Adapter A6A1. Cont

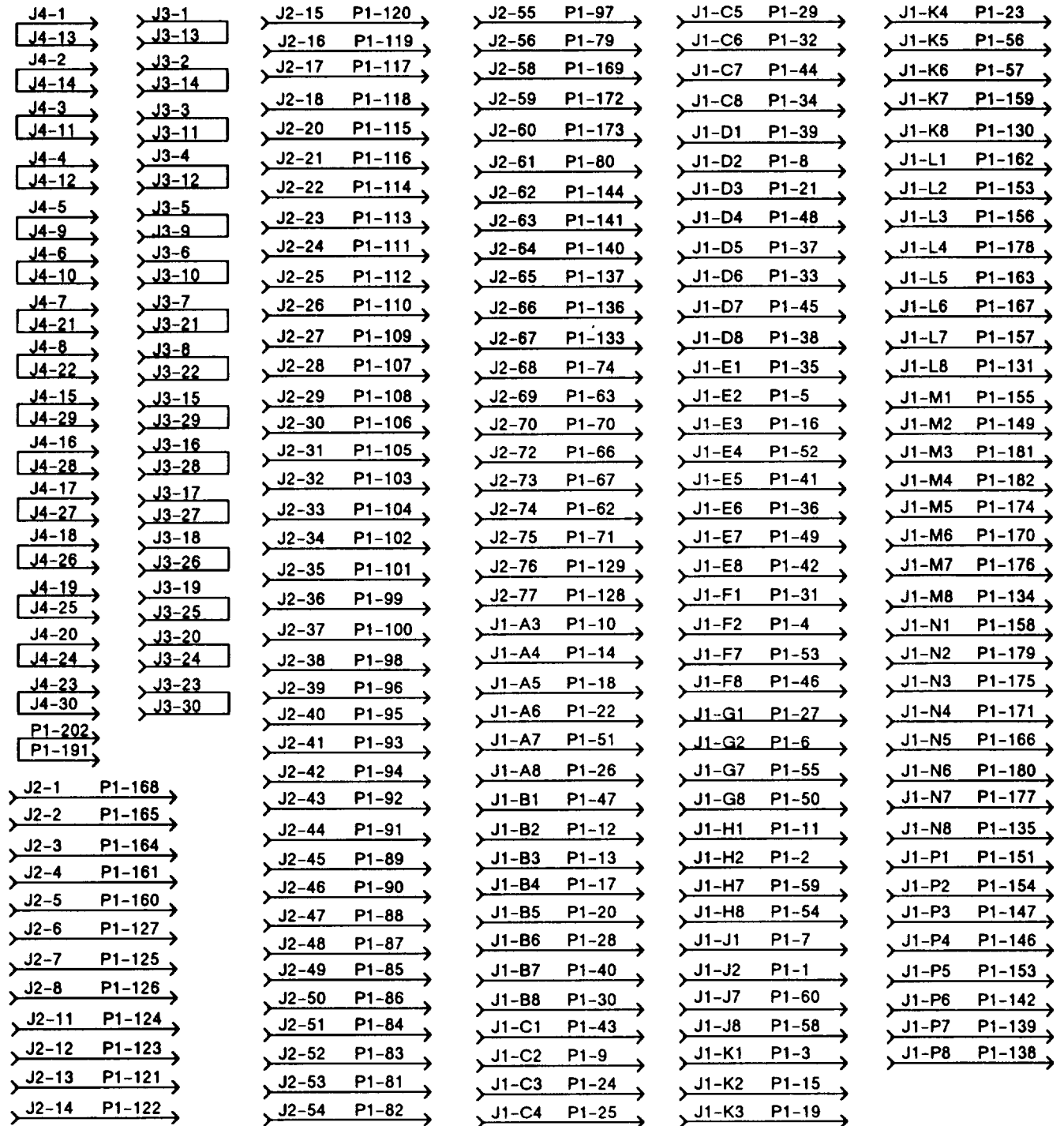


Figure 4-163. Schematic Diagram of Test Adapter A6 (Sheet 2 of 2)

4-92. Maintenance Procedures for Connector Assembly P1. Cont

ITEM	ACTION	REMARKS
	<p>Install two halves of connector backshell (6).</p> <p>Secure backshell halves to connector and secure with four screws and four hex nuts.</p> <p>Install cable clamp with screw and hex nut.</p> <p>Install handle and secure with screw.</p>	

4-93. Maintenance Procedures for Cable Assembly A6W1.

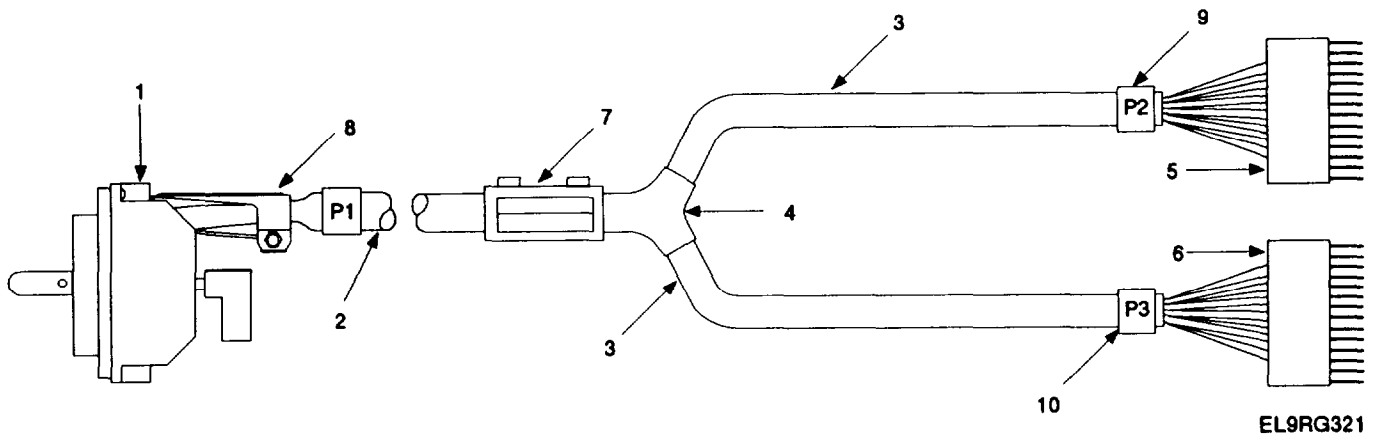


Figure 4-165. Maintenance of Cable A6W1

ITEM	ACTION	REMARKS
a. Connector P1 (1)	Refer to paragraph 4-92 a. on page 4-310.	
b. Insulation sleeving (2, 3,4) and connectors P2 (5) and P3 (6)	<p>Remove tiedown strap (7), as required.</p> <p>Remove connector P1 (1), as required.</p> <p>Remove connectors P2 (5) and P3 (6), as required.</p>	<p>Refer to figure 4-165.</p> <p>Refer to paragraph 4-92 a.</p>
	<p>NOTE</p> <p>Connectors are removed by lifting each pin connector locking tab and pulling out all pins. Tag all wires.</p>	

4-93. Maintenance Procedures for Cable Assembly A6W1. Cont

ITEM	ACTION	REMARKS
	Replace 5/8 inch insulation sleeving (2), as required.	Use item 178, App. C
	Replace 1/2 inch insulation sleeving (3), as required.	Use item 179, App. C
	Replace "Y" style insulation sleeving (4), as required.	Use item 102, App. C
	Replace cable marker sleeve (8) for P1(1).	Use item 51, App. C
	Replace cable marker sleeve (9) for P2 (5).	Use item 47, App. C
	Replace cable marker sleeve (10) for P3 (6).	Use item 45, App. C
	Install connectors P2 (5) and P3 (6),	
NOTE		
Connectors are installed by inserting pins until seated and locked in place by tabs. Remove all wire tags.		
	Install connector P1 (1).	Refer to paragraph 4-92 a.
	Install tie down strap (7).	Use item 263, App. C
	Identify connector pins with the following pin layouts.	
c. Wires	Replace as required.	
	Use the following pin list for troubleshooting.	

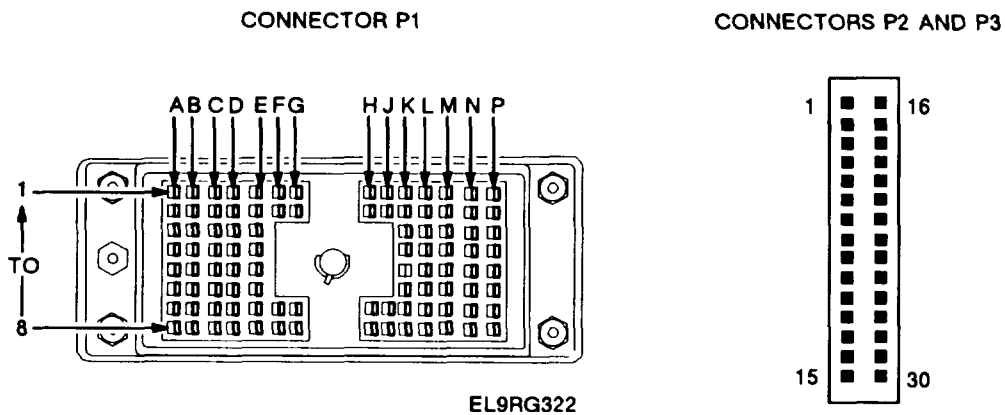


Figure 4-166. Branched Wiring Harness A6W1 Connector Pin Locations

4-93. Maintenance Procedures for Cable Assembly A6W1. Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-A1	N/C		
P1-A2	N/C		
P1-A3	P2-1	Black	Use item 148, App. C.
P1-A4	P2-2	Brown	Use item 149, App. C.
P1-A5	P2-3	Red	Use item 150, App. C.
P1-A6	P2-4	Orange	Use item 151, App. C.
P1-A7	P2-5	Yellow	Use item 152, App. C.
P1-A8	P2-6	Green	Use item 153, App. C.
P1-B1	P2-7	Blue	Use item 154, App. C.
P1-B2	P2-8	Violet	Use item 155, App. C.
P1-B3	P2-9	Gray	Use item 156, App. C.
P1-B4	P2-10	White	Use item 157, App. C.
P1-B5	P2-11	White/Black	Use item 158, App. C.
P1-B6	P2-12	White/Brown	Use item 159, App. C.
P1-B7	P2-13	White/Red	Use item 160, App. C.
P1-B8	P2-14	White/Orange	Use item 161, App. C.
P1-C1	P2-15	White/Yellow	Use item 162, App. C.
P1-C2	P2-16	White/Green	Use item 163, App. C.
P1-C3	P2-17	White/Blue	Use item 164, App. C.
P1-C4	P2-18	White/Violet	Use item 165, App. C.
P1-C5	P2-19	White/Gray	Use item 166, App. C.
P1-C6	P2-20	White/Black/Brown	Use item 182, App. C.
P1-C7	P2-21	White/Black/Red	Use item 183, App. C.
P1-C8	P2-22	White/Black/Orange	Use item 184, App. C.
P1-D1	P2-23	White/Black/Yellow	Use item 185, App. C.
P1-D2	P2-24	White/Black/Green	Use item 186, App. C.
P1-D3	P2-25	White/Black/Blue	Use item 187, App. C.
P1-D4	P2-26	White/Black/Violet	Use item 188, App. C.
P1-D5	P2-27	White/Black/Gray	Use item 189, App. C.
P1-D6	P2-28	White/Brown/Red	Use item 190, App. C.
P1-D7	P2-29	White/Brown/Orange	Use item 191, App. C.
P1-D8	P2-30	White/Brown/Yellow	Use item 192, App. C.
P1-E1	P3-1	White/Brown/Green	Use item 193, App. C.
P1-E2	P3-2	White/Brown/Blue	Use item 194, App. C.
P1-E3	P3-3	White/Brown/Violet	Use item 195, App. C.
P1-E4	P3-4	White/Brown/Gray	Use item 196, App. C.
P1-E5	P3-5	White/Red/Orange	Use item 197, App. C.
P1-E6	P3-6	White/Red/Yellow	Use item 198, App. C.
P1-E7	P3-7	White/Red/Green	Use item 199, App. C.
P1-E8	P3-8	White/Red/Blue	Use item 200, App. C.
P1-F1	P3-9	White/Red/Violet	Use item 201, App. C.
P1-F2	P3-10	White/Red/Gray	Use item 202, App. C.
P1-F7	P3-11	White/Orange/Yellow	Use item 203, App. C.
P1-F8	P3-12	White/Orange/Green	Use item 204, App. C.
P1-G1	P3-13	White/Orange/Blue	Use item 205, App. C.
P1-G2	P3-14	White/Orange/Violet	Use item 206, App. C.
P1-G7	P3-15	White/Orange/Gray	Use item 207, App. C.
P1-G8	P3-16	White/Yellow/Green	Use item 208, App. C.
P1-H1	P3-17	White/Yellow/Blue	Use item 209, App. C.
P1-H2	P3-18	White/Yellow/Violet	Use item 210, App. C.
P1-H7	P3-19	White/Yellow/Gray	Use item 211, App. C.
P1-H8	P3-20	White/Green/Blue	Use item 212, App. C.
P1-J1	P3-21	White/Green/Violet	Use item 213, App. C.

4-93. Maintenance Procedures for Cable Assembly A6W1. Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-J2	P3-22	White/Green/Gray	Use item 214, App. C.
P1-J7	P3-23	White/Blue/Violet	Use item 215, App. C.
P1-J8	P3-24	White/Blue/Gray	Use item 216, App. C.
P1-K1	P3-25	White/Black/Brown/Red	Use item 217, App. C.
P1-K2	P3-26	White/Black/Brown/Orange	Use item 218, App. C.
P1-K3	P3-27	White/Black/Brown/Yellow	Use item 219, App. C.
P1-K4	P3-28	White/Black/Brown/Green	Use item 220, App. C.
P1-K5	P3-29	White/Black/Brown/Blue	Use item 221, App. C.
P1-K6	P3-30	White/Black/Brown/Violet	Use item 222, App. C.
P1-K7	N/C		
P1-K8	N/C		
P1-L1	N/C		
P1-L2	N/C		
P1-L3	N/C		
P1-L4	N/C		
P1-L5	N/C		
P1-L6	N/C		
P1-L7	N/C		
P1-L8	N/C		
P1-M1	N/C		
P1-M2	N/C		
P1-M3	N/C		
P1-M4	N/C		
P1-M5	N/C		
P1-M6	N/C		
P1-M7	N/C		
P1-M8	N/C		
P1-N1	N/C		
P1-N2	N/C		
P1-N3	N/C		
P1-N4	N/C		
P1-N5	N/C		
P1-N6	N/C		
P1-N7	N/C		
P1-N8	N/C		
P1-P1	N/C		
P1-P2	N/C		
P1-P3	N/C		
P1-P4	N/C		
P1-P5	N/C		
P1-P6	N/C		
P1-P7	N/C		
P1-P8	N/C		

4-94. Maintenance Procedures for Cable Assembly A6W2.

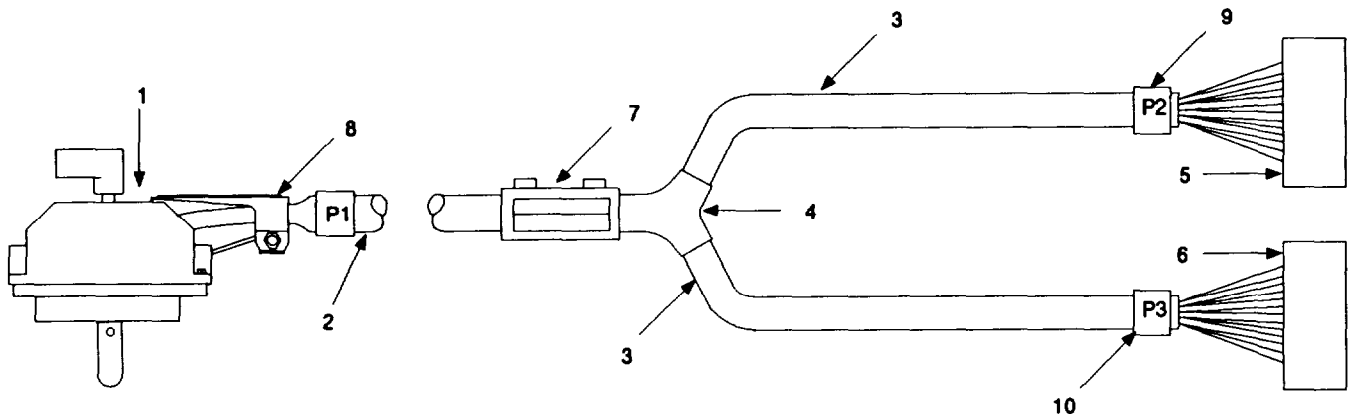


Figure 4-167. Maintenance of Cable A6W2

ITEM	ACTION	REMARKS
------	--------	---------

a. Connector P1 (1)

Refer to paragraph 4-92 a. on page 4-310.

b. insulation sleeving (2,3,4) and connectors P2 (5) and P3 (6)

Remove tiedown strap (7), as required.

Refer to figure 4-167.

Remove connector P1 (1), as required,
Remove connectors P2 (5) and P3 (6), as required.

Refer to paragraph 4-92 a.

NOTE

Connectors are removed by lifting each pin connector locking tab and pulling out all pins. Tag all wires.

Replace 5/8 inch insulation sieving, as required.

Use item 178, App. C

Replace 1/2 inch insulation sleeving (3), as required.

Use item 179, App. C

Replace "Y" style insulation sleeving (4), as required.

Use item 102, App. C

Replace cable marker sleeve (8) for P1 (1).

Use item 51, App. C

Replace cable marker sleeve (9) for P2 (5).

Use item 47, App. C

Replace cable marker sleeve (10) for P3 (6).

Use item 45, App. C

4-94. Maintenance Procedures for Cable Assembly A6W2. Cont

ITEM	ACTION	REMARKS
------	--------	---------

Install connectors P2 (5) and P3 (6).

NOTE

Connectors are installed by inserting pins until seated and locked in place by tabs. Remove all wire tags.

Install connector P1 (1).

Refer to paragraph 4-92 a.

Install tie down strap (7).

Use item 263, App. C

c. Wires

Replace as required.

Use the following pin list for troubleshooting.

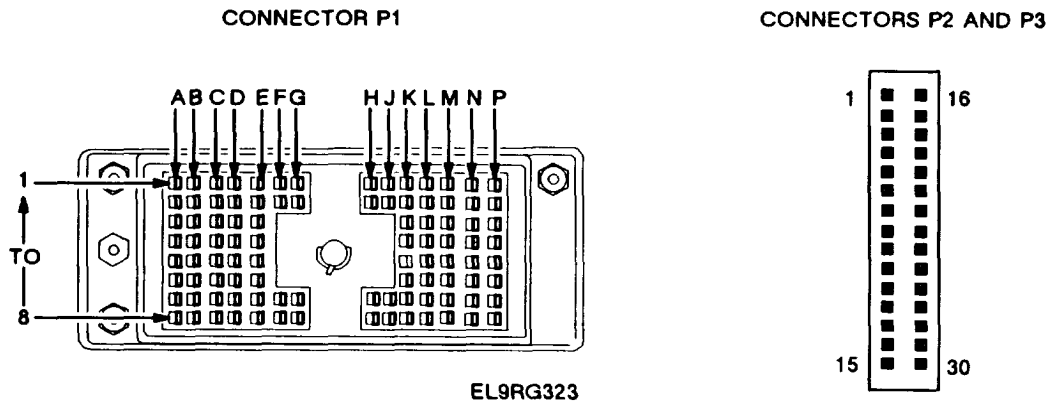


Figure 4-168. Branched Wiring Harness A6W1 Connector Pin Locations

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-A1	P2-1	Black	Use item 148, App. C.
P1-A2	P2-13	Brown	Use item 149, App. C.
P1-A3	P2-3	Red	Use item 150, App. C.
P1-A4	P2-4	Orange	Use item 151, App. C.
P1-A5	P2-5	Yellow	Use item 152, App. C.
P1-A6	P2-6	Green	Use item 153, App. C.
P1-A7	P2-7	Blue	Use item 154, App. C.
P1-A8	P2-8	Violet	Use item 155, App. C.
P1-B1	P2-9	Gray	Use item 156, App. C.
P1-B2	P2-10	White	Use item 157, App. C.
P1-B3	P2-11	White/Black	Use item 158, App. C.
P1-B4	P2-12	White/Brown	Use item 159, App. C.
P1-B5	P2-2	White/Red	Use item 160, App. C.
P1-B6	P2-14	White/Orange	Use item 161, App. C.

4-94. Maintenance Procedures for Cable Assembly A6W2. Cont

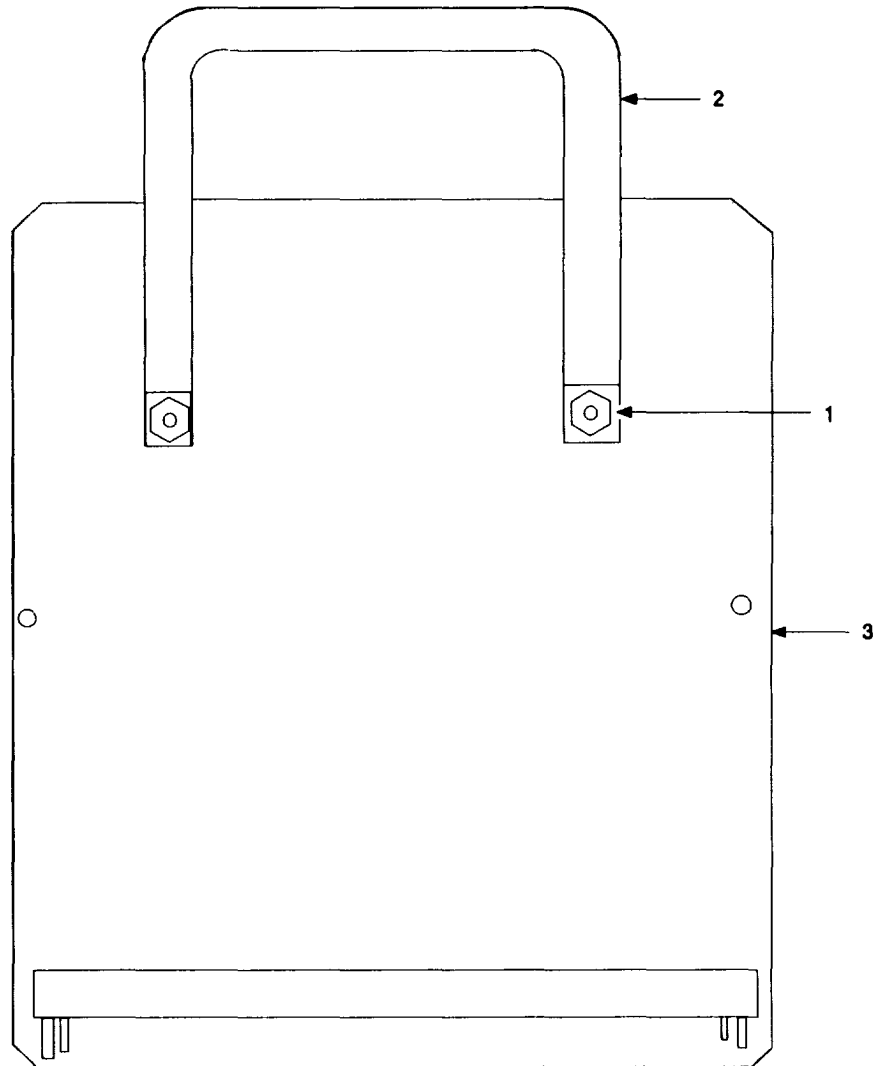
<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-B7	P2-15	White/Yellow	Use item 162, App. C.
P1-B8	P2-16	White/Green	Use item 163, App. C.
P1-C1	P2-17	White/Blue	Use item 164, App. C.
P1-C2	P2-18	White/Violet	Use item 165, App. C.
P1-C3	P2-19	White/Gray	Use item 166, App. C.
P1-C4	P2-20	White/Black/Brown	Use item 182, App. C.
P1-C5	P2-21	White/Black/Red	Use item 183, App. C.
P1-C6	P2-22	White/Black/Orange	Use item 164, App. C.
P1-C7	P2-23	White/Black/Yellow	Use item 185, App. C.
P1-C8	P2-24	White/Black/Green	Use item 186, App. C.
P1-D1	P2-25	White/Black/Blue	Use item 187, App. C.
P1-D2	P2-26	White/Black/Violet	Use item 188, App. C.
P1-D3	P2-27	White/Black/Gray	Use item 189, App. C.
P1-D4	P2-28	White/Brown/Red	Use item 190, App. C.
P1-D5	P2-29	White/Brown/Orange	Use item 191, App. C.
P1-D6	P2-30	White/Brown/Yellow	Use item 192, App. C.
P1-D7	P3-1	White/Brown/Green	Use item 193, App. C.
P1-D8	P3-2	White/Brown/Blue	Use item 194, App. C.
P1-E1	P3-3	White/Brown/Violet	Use item 195, App. C.
P1-E2	P3-4	White/Brown/Gray	Use item 196, App. C.
P1-E3	P3-5	White/Red/Orange	Use item 197, App. C.
P1-E4	P3-6	White/Red/Yellow	Use item 198, App. C.
P1-E5	P3-7	White/Red/Green	Use item 199, App. C.
P1-E6	P3-8	White/Red/Blue	Use item 200, App. C.
P1-E7	P3-9	White/Red/Violet	Use item 201, App. C.
P1-E8	P3-10	White/Red/Gray	Use item 202, App. C.
P1-F1	P3-11	White/Orange/Yellow	Use item 203, App. C.
P1-F2	P3-12	White/Orange/Green	Use item 204, App. C.
P1-F7	P3-13	White/Orange/Blue	Use item 205, App. C.
P1-F8	P3-14	White/Orange/Violet	Use item 206, App. C.
P1-G1	P3-15	White/Orange/Gray	Use item 207, App. C.
P1-G2	P3-16	White/Yellow/Green	Use item 208, App. C.
P1-G7	P3-17	White/Yellow/Blue	Use item 209, App. C.
P1-G8	P3-18	White/Yellow/Violet	Use item 210, App. C.
P1-H1	P3-19	White/Yellow/Gray	Use item 211, App. C.
P1-H2	P3-20	White/Green/Blue	Use item 212, App. C.
P1-H7	P3-21	White/Green/Violet	Use item 213, App. C.
P1-H8	P3-22	White/Green/Gray	Use item 214, App. C.
P1-J1	P3-23	White/Blue/Violet	Use item 215, App. C.
P1-J2	P3-24	White/Blue/Gray	Use item 216, App. C.
P1-J7	P3-25	White/Black/Brown/Red	Use item 217, App. C.
P1-J8	P3-26	White/Black/Brown/Orange	Use item 218, App. C.
P1-K1	P3-27	White/Black/Brown/Yellow	Use item 219, App. C.
P1-K2	P3-28	White/Black/Brown/Green	Use item 220, App. C.
P1-K3	P3-29	White/Black/Brown/Blue	Use item 221, App. C.
P1-K4	P3-30	White/Black/Brown/Violet	Use item 222, App. C.
P1-K5	N/C		
P1-K6	N/C		
P1-K7	N/C		
P1-K8	N/C		
P1-L1	N/C		
P1-L2	N/C		

4-94. Maintenance Procedures for Cable Assembly A6W2. Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-L3	N/C	
P1-L4	N/C	
P1-L5	N/C	
P1-L6	N/C	
P1-L7	N/C	
P1-L8	N/C	
P1-M1	N/C	
P1-M2	N/C	
P1-M3	N/C	
P1-M4	N/C	
P1-M5	N/C	
P1-M6	N/C	
P1-M7	N/C	
P1-M8	N/C	
P1-N1	N/C	
P1-N2	N/C	
P1-N3	N/C	
P1-N4	N/C	
P1-N5	N/C	
P1-N6	N/C	
P1-N7	N/C	
P1-N8	N/C	
P1-P1	N/C	
P1-P2	N/C	
P1-P3	N/C	
P1-P4	N/C	
P1-P5	N/C	
P1-P6	N/C	
P1-P7	N/C	
P1-P8	N/C	

4-95. 77 Pin Electronic Test Extender Card A6A2

- a. 77 Pin Extender Card (3) **Remove two screws (1), four flat washers, two lock washers, and two nuts.**
Replace handle (2) and secure with two screws, four flat washers, two lock washers, and two nuts.



EL9RG324

Figure 4-169, Maintenance of 77 Pin Electronic Test Extender Card

4-95. 77 Pin Electronic Test Extender Card A6A2. Cont

b. Traces

Use the following schematic to troubleshoot the 77-pin Electronic Test Extender Card.

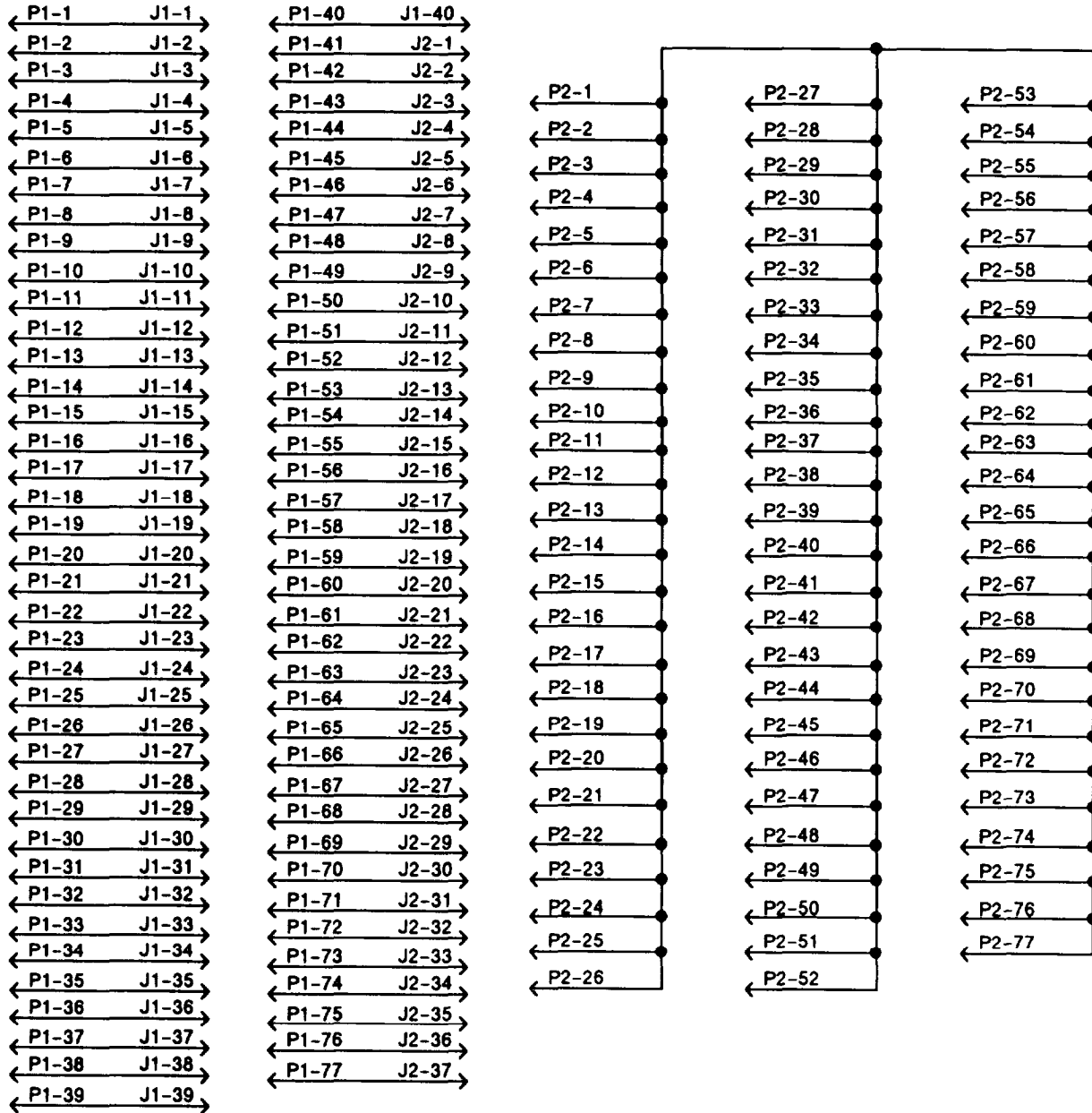


Figure 4-170. Schematic Diagram of 77 Pin Test Extender Card

Section XXI. MAINTENANCE OF J4999/G (TEST ADAPTER A7)

The following procedure is used to perform diagnostic testing of test adapter A7 used to test remote I/O, 1A2, A3142337-1 and CCA-ICOM Control, 1A13, A3142334-1.

4-96. Required Test Accessories for Test Adapter A7.

The following test accessories are used to perform testing of the test adapter A7.

REQUIRED TEST ACCESSORIES	
• Test Program Tape	CPIN CP2400030G
File No.	A3142337
• Test Program Tape	CPIN CP2500030G
File No.	A3142334
• ICD-A5	B4041573-2
• Test Adapter A7	A3148050-1
• 41 Pin Shorting Card	A3148096-2
• 77 Pin Shorting Card	A3148087-2

4-97. Test Procedures for Test Adapter A7.

- a. Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

- c. Load test program.
 - (1) Install test program tape CPIN CP2400030G In digital card tester in accordance with TM 11-6625-3038-10.
 - (2) Install test program tape CPIN CP2500030G in digital card tester in accordance with TM 11-6625-3038-10.
 - (3) Enter LOAD Ø, then press EXECUTE.
 - (4) When READY appears on the display, type RUN and press EXECUTE.

4-97. Teat Procedures for Teat Adapter A7. Cont

(5) Verify that the following information is printed:

```
> ENTER THE LAST FOUR  
> DIGITS OF THE UUT  
> P/N - 314????-1  
> PRESS EXECUTE
```

THEN

```
> PRINT PROGRAM NOTES?  
> ENTER Y= YES, N= NO  
> PRESS EXECUTE
```

(6) Follow operator actions as instructed by program.

d Run ATE survey test if desired. (If survey test fails, refer to TM 11-6625-3038-20.)

e. Install Test Adapter A7 and ICD A5 on digital card tester (see figure 4-171 on page 4-323).

f. Run ICD survey test if desired. (If survey test fails, refer to paragraph 4-98 on page 4-324.)

g. Verify that the following information is printed:

```
> UUT A3142337-1  
> S/N XXXXXXXXXXX  
> DATE  
> MM DD YY
```

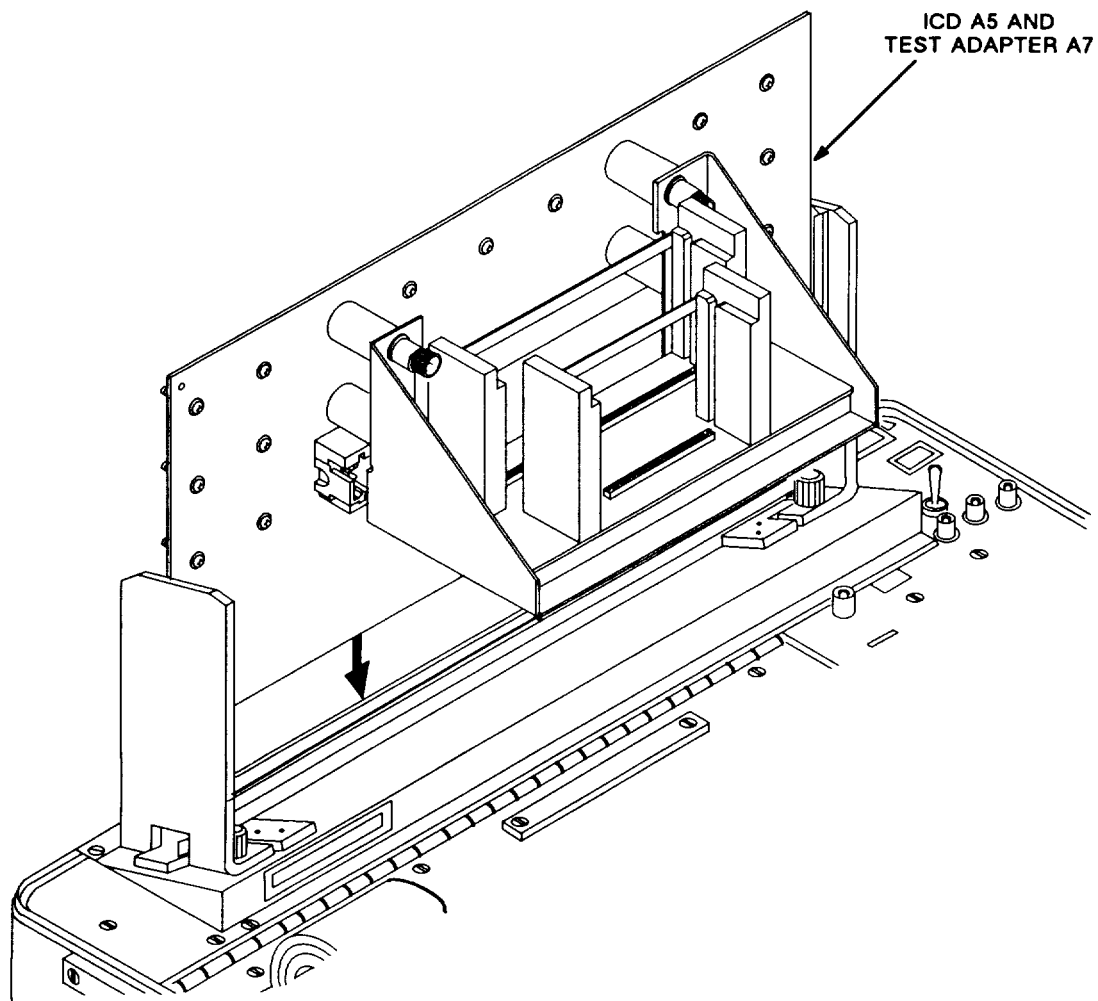
or

```
> UUT A3142334-1  
> S/N XXXXXXXXXXX  
> DATE  
> MM DD YY
```

4-97. Test Procedures for Test Adapter A7. Cont

h. After testing do one of the following:

- (1) If the ICD passes the survey test exit the program by pressing the ATTN key.**
- (2) If the ICD fails the survey test go to paragraph 4-98 on page 4-324.**



EL9RG325

Figure 4-171. Installation of Test Adapter A7 and ICD A5 on Digital Card Tester

4-98. Maintenance Procedures for ECA-Test Adapter A7A1.

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT Digital Card Tester AN/USM-465A (6625-01-126-2473) Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-01-610-8817) Solder Repair Center PRC-151 (3439-01-109-8590)</p> <p>REFERENCES. TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-40P TB 43-0127</p> <p>PERSONNEL REWIRED: 1</p>
--

ITEM	ACTION	REMARKS
a. Mounting Bracket (2)	<p>Remove four screws(1), four flat washers, and four lock washers.</p> <p>Remove mounting bracket (2).</p> <p>Remove and replace panel screw assembly (3).</p> <p>Replace mounting bracket (2) using four screws(1), four flat washers, and four lock washers.</p>	<p>Refer to figure 4-172 on page 4-325.</p> <p>Refer to Section XVII on page 4-270.</p>
b. Long flat mounting plate (4)	<p>Remove two screws (5), two lock washers, and two flat washers.</p> <p>Replace flat mounting plate (4) and secure with two screws (5), two lock washers, and two flat washers.</p>	
c. Rear electrical card holder (6)	<p>Remove mounting bracket.</p> <p>Remove two screws (7), two lock washers, two flat washers, and screw (5), lock washer, and flat washer securing long flat mounting plate (4) to card holder (6).</p> <p>Replace electrical card holder (6) and secure with two screws (7), two lock washers, and two flat washers.</p>	<p>Refer to step a.</p>

4-98. Maintenance Procedures for ECA-Test Adapter A7A1. Cont

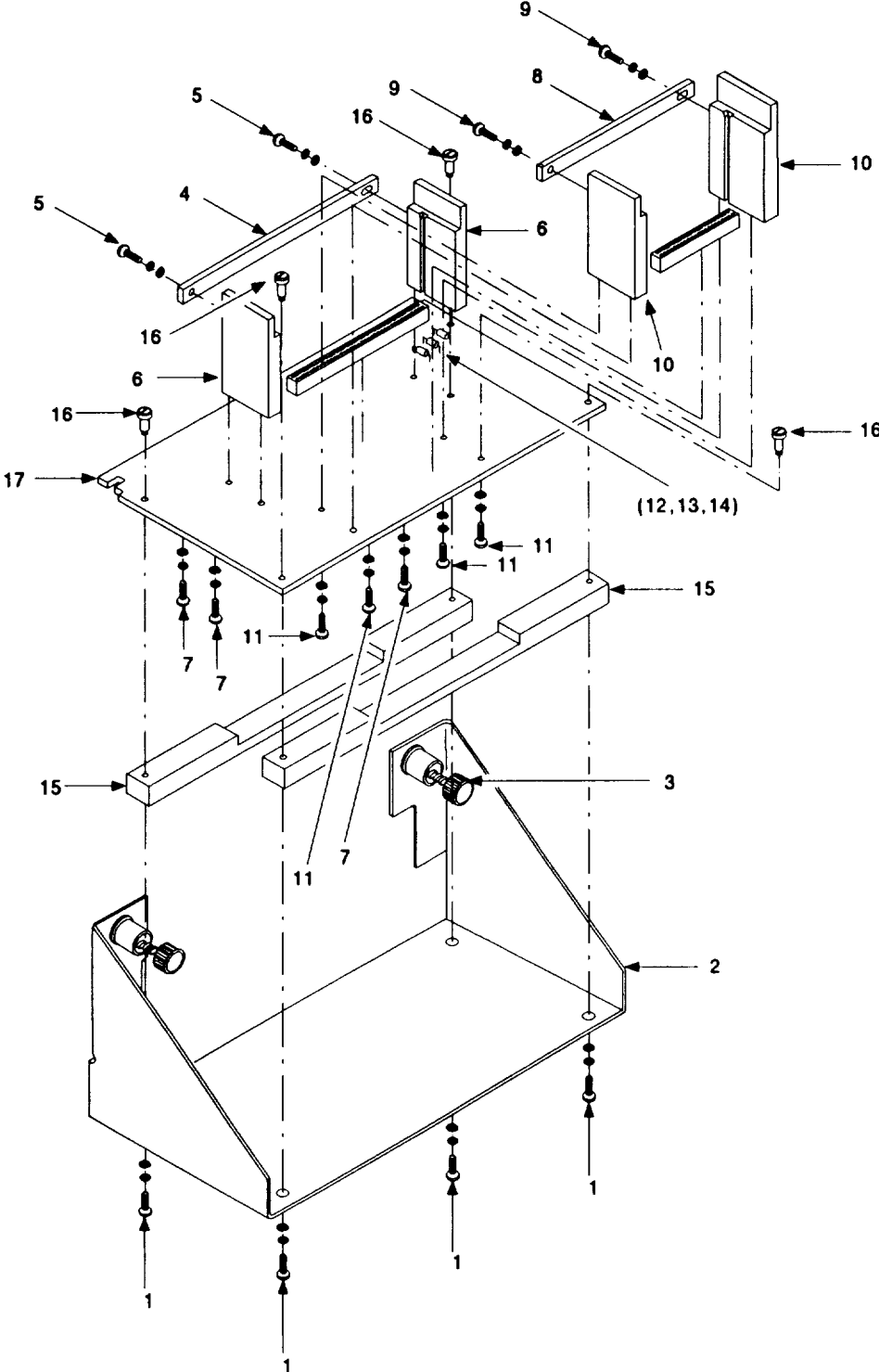


Figure 4-172. Component Layout for Test Adapter A7

M910031

4-98. Maintenance Procedures for ECA-Test Adapter A7A1. Cont

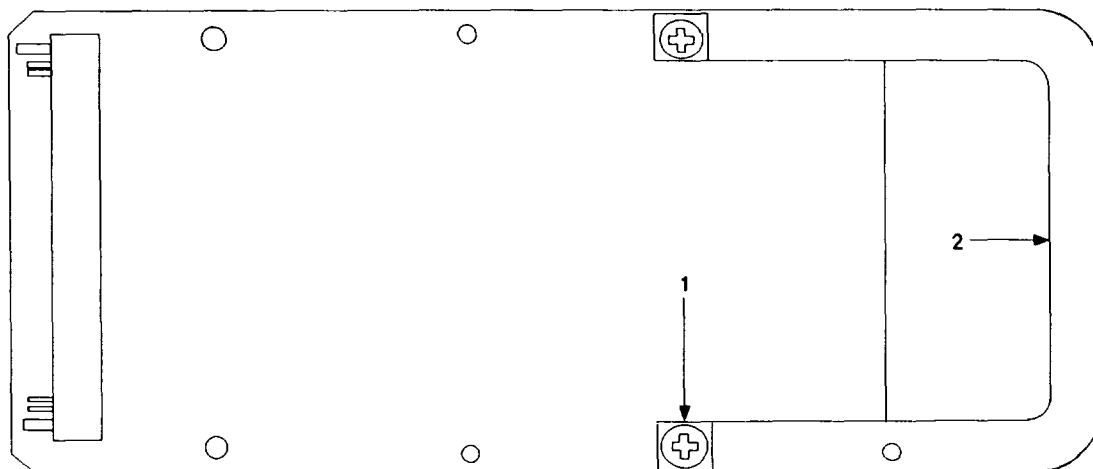
ITEM	ACTION	REMARKS
d. Short flat mounting plate (8)	Replace screw(5), lock washer, and flat washer securing long flat mounting plate (4) to card holder(6).	Refer to step a.
	Replace mounting bracket (2).	Refer to step a.
	Remove long flat mounting plate (4).	Refer to step b.
	Remove two screws (9), two lock washers, and two flat washers.	
	Replace short flat mounting plate (8) and secure with two screws (9), two lock washers, and two flat washers.	
e. Front electrical card holder(10)	Replace long flat mounting plate (4).	Refer to step b.
	Remove mounting bracket (2).	Refer to step a.
	Remove two screws(11), two lock washers, two flat washers, and screw (9), lock washer, and flat washer securing short flat mounting plate (8) to card holder (10).	
	Replace electrical card holder(10) and secure with two screws (11), two lock washers, and two flat washers.	
	Replace screw (9), lock washer, and flat washer securing short flat mounting plate (8) to card holder (10),	
f. Diodes(12,13,14)	Replace mounting bracket (2).	Refer to step a.
	Remove mounting bracket (2).	Refer to step a.
	Unsolder and replace diodes (12,13,14) as needed.	
g. Bar spacers(15)	Replace mounting bracket (2).	Refer to step a.
	Remove mounting bracket (2).	Refer to step a.
	Remove four screws(16).	
	Replace bar spacer as required and secure with four screws(16).	
h. Circuit card assembly(17)	Replace mounting bracket (2).	Refer to step a.
	Remove mounting bracket (2).	Refer to step a.
	Remove long flat mounting plate (4).	Refer to step b.

4-98. Maintenance Procedures for ECA-Test Adapter A7A1. Cont

ITEM	ACTION	REMARKS
	Remove rear electrical card holders (6).	Refer to step c.
	Remove short flat mounting plate (8).	Refer to step d.
	Remove front electrical card holder(10).	Refer to step e.
	Remove bar spacers.	Refer to step g.
	Unsolder diodes.	Refer to step f,
	Replace assembly.	
	Install diodes(12,13, 14).	Refer to step f.
	Install bar spacers(15).	Refer to step g.
	Install front electrical card holders(10).	Refer to step e.
	Install short flat mounting plate (8).	Refer to step d.
	Install rear electrical card holders (6).	Refer to step c.
	Install long flat mounting plate (4).	Refer to step b.
	Install mounting bracket (2).	Refer to step a.
i. Traces	Refer to FO-14.	

4-99. Maintenance of Electronic Test-41 Pin Extender Card.

ITEM	ACTION	REMARKS
a. Handle(2)	Remove two screws(1), two lock washers, two flat washers and two nuts. Replace circuit card as required. Replace handle (2) and secure with two screws (1), two lock washers, two flat washers and two nuts.	Refer to figure 4-173 below.



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Figure 4-173. Component Layout of Electronic Test-41 Pin Extender Card

4-99. Maintenance of Electronic Test-41 Pin Extender Card. Cont

b. Traces

Refer to following schematic diagram to troubleshoot the 41 pin extender card.

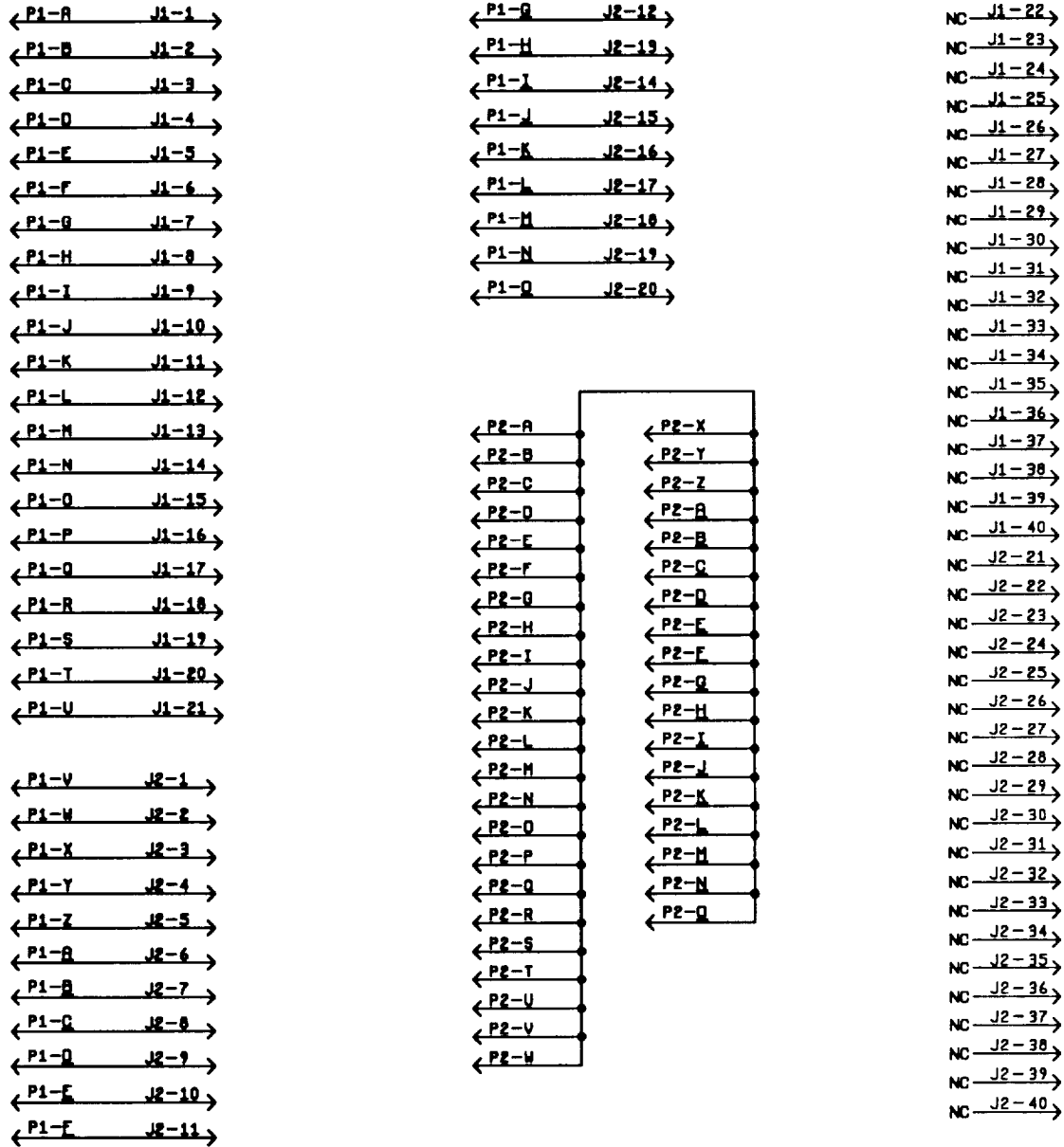


Figure 4-174. Schematic Diagram of 41 Pin Extender Card

4-100. Maintenance of Electronic Test-77 Pin Extender Card.

Refer to paragraph 4-95 on page 4-319 for maintenance instructions.

Section XXII. MAINTENANCE OF J-6000/G (TEST ADAPTER A8)

The following procedure is used to perform diagnostic testing of test adapter A8 used to test ECCM Control 1A5, A3019053-1.

4-101. Required Test Accessories for Test Adapter A8.

The following test accessories are used to perform testing of the test adapter A8.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP2600030G
File No.	A3019053F
● ICD A5	B4041573-2
● Test Adapter A8	A3148051-1
● 41 Pin Extender Card	A3148257-1
● 33 Pin Shorting Card	A3148100-2

4-102. Test Procedures for Test Adapter A8.

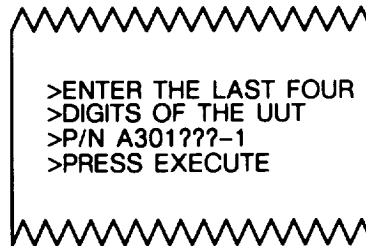
- a. Turn on digital card test set AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10,

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

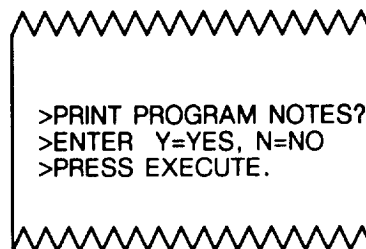
- c. Load test program.
 - (1) Install test program tape CPIN CP2600030G in digital card test set in accordance with TM 11-6625-3038-10.
 - (2) Enter LOAD 0, then press EXECUTE.
 - (3) When READY appears on the display, type RUN and press EXECUTE.
 - (4) Verify that the following information is printed:

4-102. Test Procedures for Test Adapter A8. Cont



```
>ENTER THE LAST FOUR  
>DIGITS OF THE UUT  
>P/N A301???-1  
>PRESS EXECUTE
```

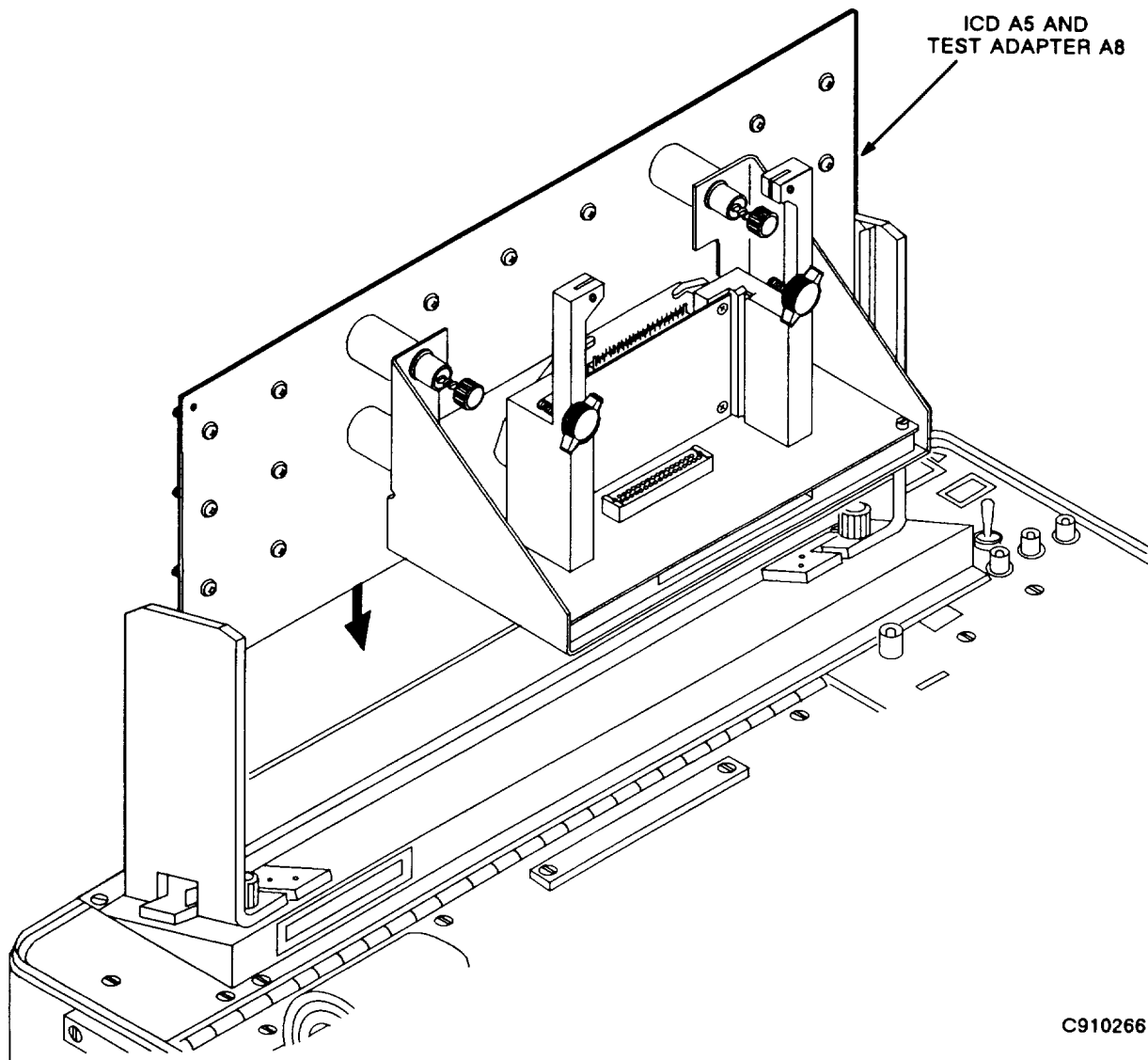
THEN



```
>PRINT PROGRAM NOTES?  
>ENTER Y=YES, N=NO  
>PRESS EXECUTE.
```

- (5) Follow operator actions as instructed by program.
- d. Run ATE survey test if desired. (If survey test fails, refer to TM 11-6625-3038-20.)
 - e. Install Test Adapter A8 and ICD A5 on digital card tester (see figure 4-175 on page 4-332).
 - f. Run ICD survey test.
 - g. After testing do one of the following:
 - (1) If the test adapter passes the survey, exit the program by pressing the ATTN key.
 - (2) If the test adapter fails the survey go to paragraph 4-103 on page 4-333.

4-102. Test Procedures for Test Adapter A8. Cont



C910266

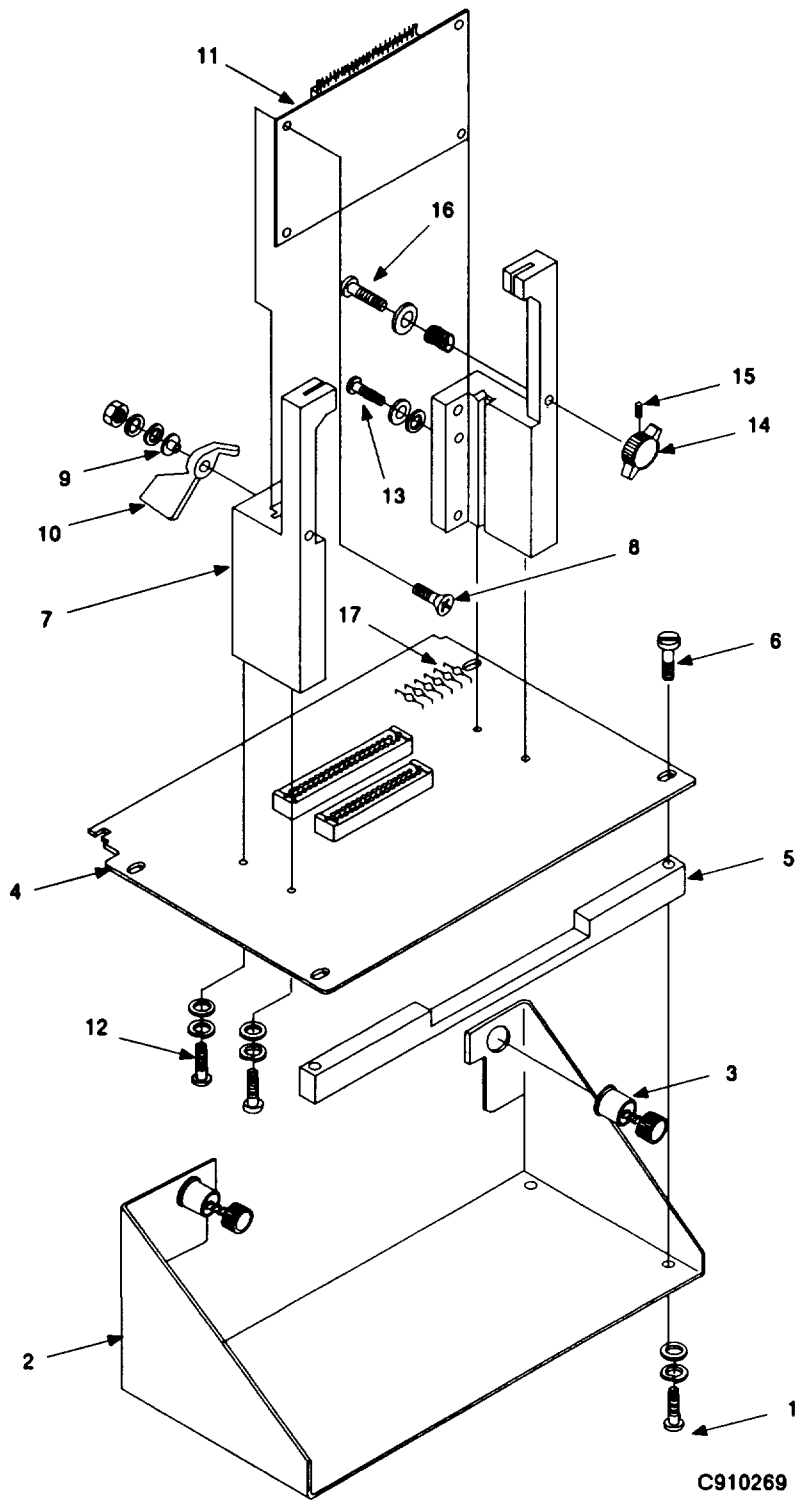
figure 4-175. Installation of Test Adapter A8 and ICD A5 on DCT

4-103. Maintenance Procedures for ECA-Test Adapter A8.

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT</p> <p>Digital Card Tester AN/USM-465A (6625-01-126-2473)</p> <p>Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>REFERENCES</p> <p>TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-40P TB 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>	<p>TOOLS:</p> <p>Tool Kit Electronic Equipment TK-105/G (5180-01-610-8817)</p> <p>Solder Repair Center PRC-151 (3439-01-109-8590)</p>
--	---

ITEM	ACTION	REMARKS
a. Mounting Bracket(2)	Remove four screws(1), four flat washers, and four lock washers, Remove mounting bracket. Remove and replace panel screw assembly (3). Replace mounting bracket(2) on CCA(4) using four screws(1), four lock washers, and four flat washers.	Refer to figure 4-176 on page 4-334. Refer to Section XVII on page 4-270.
b. Spacebars	Remove mounting bracket, Remove two screws (6). Replace spacer bar(5) and secure with two screws(6). Replace mounting bracket.	Refer to step a.
c. Electrical Card Holders(7)	Remove mounting bracket. Remove two screws(8), two lock washers, and two flat washers, one sleeve flanged bushing(9), one electrical card ejector, and two hex nuts securing ECCM backplane assembly(11) to card holder. Remove two screws (12), two lock washers, and two flat washers,	Refer to step a. Refer to step a.

4-103. Maintenance Procedures for ECA-Test Adapter A8. Cont



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Figure 4-176. Maintenance of Teat Adapter A8

4-103. Maintenance Procedures for ECA-Test Adapter A8. Cont

ITEM	ACTION	REMARKS
	<p>Remove two stop screws (13), two lock washers, and two flat washers.</p> <p>Replace two stop screws(13), two lock washers, and two flat washers on new electrical card holder.</p> <p>Replace electrical card holder and install two screws (12), two lock washers, and two flat washers securing replacement card holder to CCA.</p> <p>Replace two screws(8), two lock washers, and two flat washers, one sleeve flanged bushing (9), one electrical card ejector (10), and two hex nuts securing ECCM backplane assembly(11) to card holder.</p> <p>Replace mounting bracket.</p>	<p>Do not tighten screws until ECCM backplane assembly has been installed.</p> <p>Refer to step a.</p>
<p>d. Backplane Assembly-ECCM Extender(11)</p>	<p>Remove four screws (8), four lock washers, four flat washers, two sleeve flanged bushings(9), two electrical card ejectors(10), and four hex nuts securing ECCM backplane assembly(11) to card holders.</p>	
	<p>Remove ECCM backplane assembly by pulling up to remove it from connector on CCA.</p> <p>Replace ECCM backplane assembly by pushing down to install in connector on CCA.</p> <p>Replace four screws (8), four lock washers, four flat washers, two sleeve flanged bushings (9), two electrical card ejectors (10), and four hex nuts securing ECCM backplane assembly(11) to card holders.</p>	<p>Refer to step j, page 4-339 for traces.</p>
<p>e. Electrical Card Ejector(10)</p>	<p>Remove screw(8), lock washer, flat washer, sleeve flanged bushing (9), and hex nut securing electrical card ejector to card assembly.</p> <p>Replace electrical card ejector, securing with screw (8), lock washer, flat washer, sleeve flanged bushing(9), and hex nut.</p>	

4-103. Maintenance Procedures for ECA-Test Adapter A8. Cont

ITEM	ACTION	REMARKS
f. Knob (14)	Remove set screw(15), screw(16), flat washer, and spring securing knob (14) to card holder. Replace knob and secure to card holder with set screw(15), screw (16), flat washer, and spring.	Compress spring to 8 ± 1 mm prior to securing set screw.
g. Diodes and Resistor(17)	Remove mounting bracket, Unsolder from CCA. Replace and solder to circuit card assembly.	Refer to step a. Refer to figure 4-176 on page 4-334.
h. CCA-Test Adapter A8(4)	Replace mounting bracket. Remove mounting bracket. Remove spacer bars. Remove card holders. Remove diodes and resistor. Replace CCA. Install diodes and resistor and solder to CCA. Replace card holders, Replace spacer bars. Replace mounting bracket,	Refer to step a. Refer to step a. Refer to step b. Refer to step c. Refer to step g, Refer to step g. Refer to step c. Refer to step b. Refer to step a.

4-103. Maintenance Procedures for ECA-Test Adapter A8. Cont

ITEM	ACTION	REMARKS
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i. Traces

Use the following schematic for trouble-shooting test adapter A8.

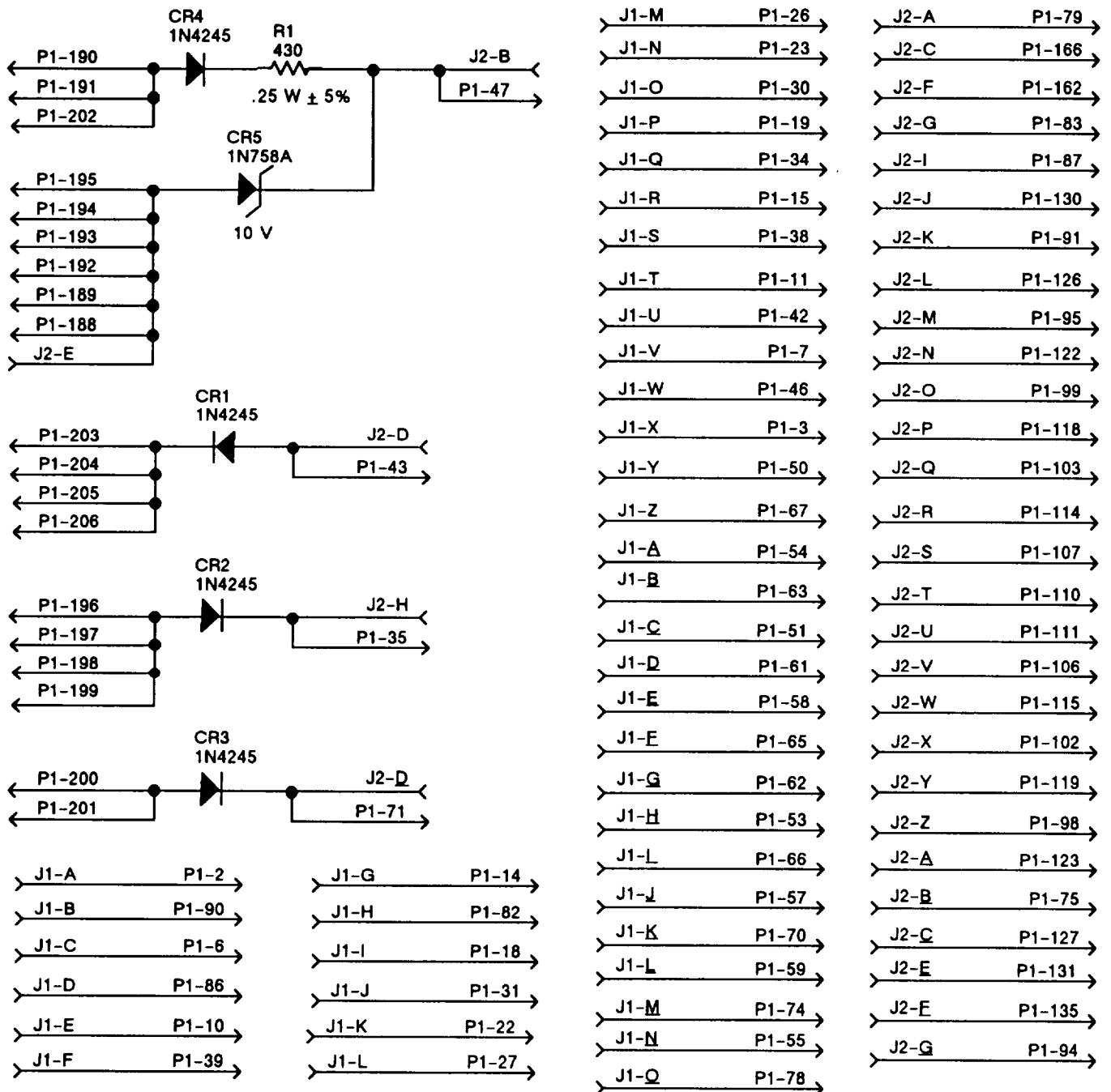


Figure 4-177. Schematic Diagram of Test Adapter A8(Sheet 1 of 2)

4-103. Maintenance Procedures for ECA-Test Adapter A8. Cont

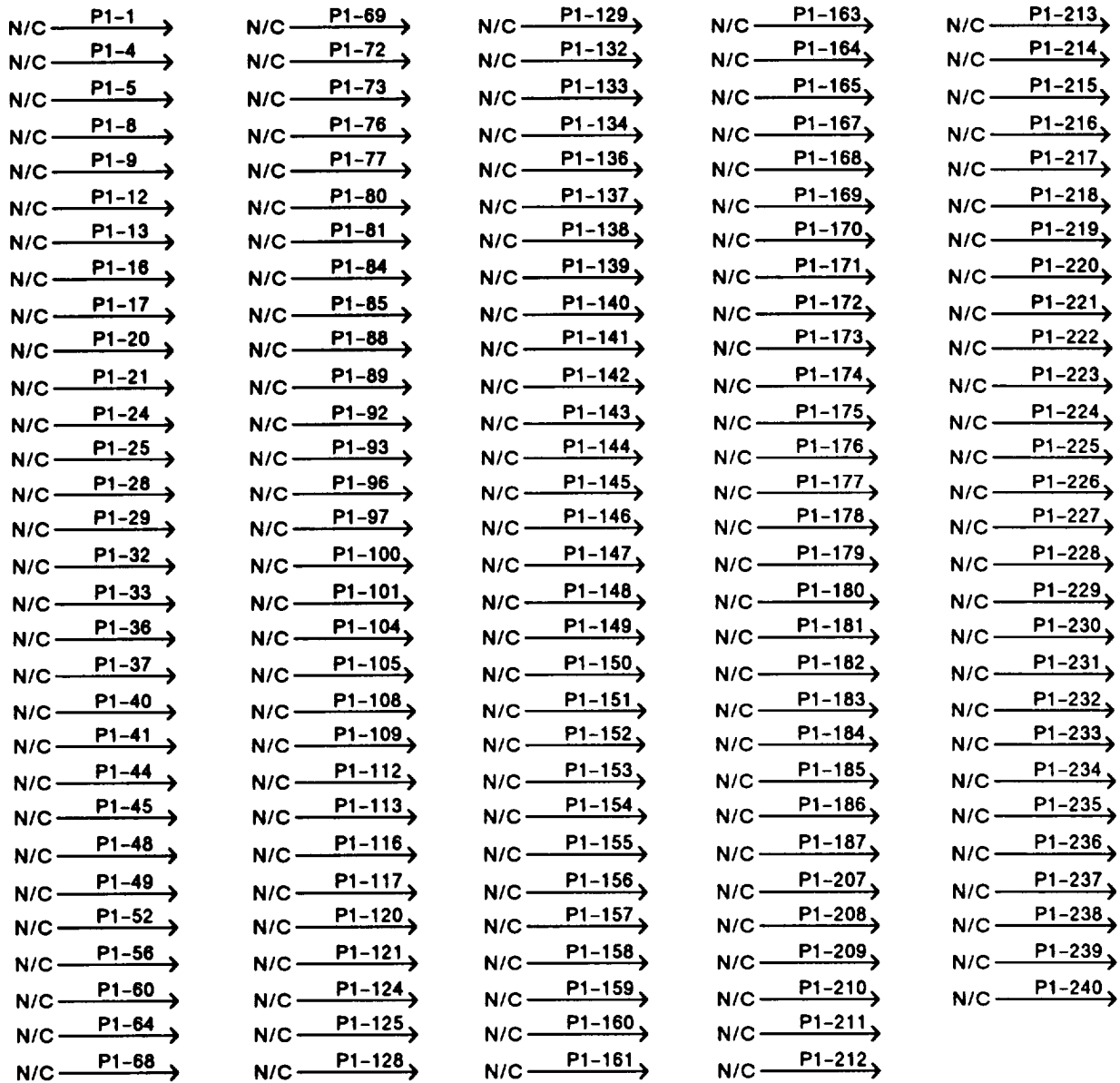


Figure 4-177. Schematic Diagram of Teat Adapter A8 (Sheet 2 of 2)

4-103. Maintenance Procedures for ECA-Test Adapter A8. Cont

j. Traces

Use the following schematic for troubleshooting Backplane Assembly.

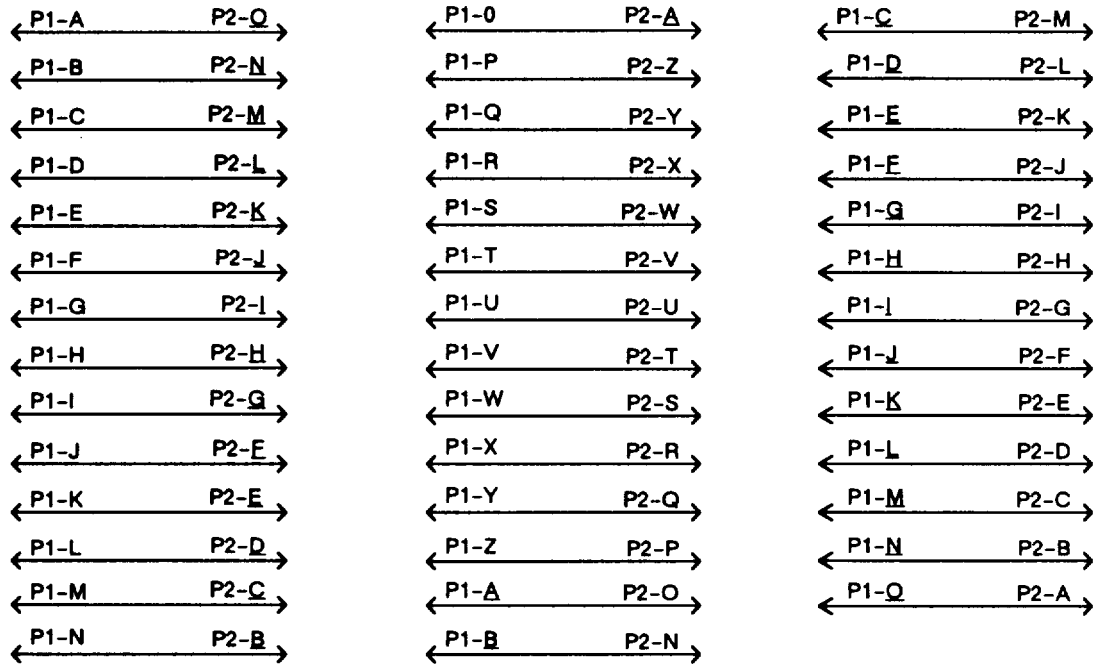


Figure 4-178. Schematic Diagram of Backplane Assembly

4-104. Maintenance of Electronic Test Extender Card-41 Pin, A3148257, (A8A3).

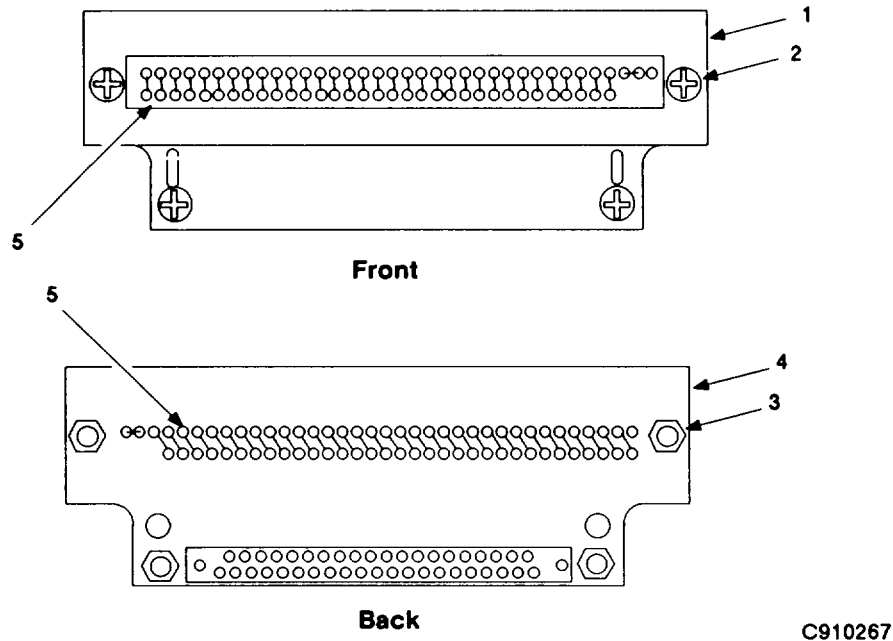
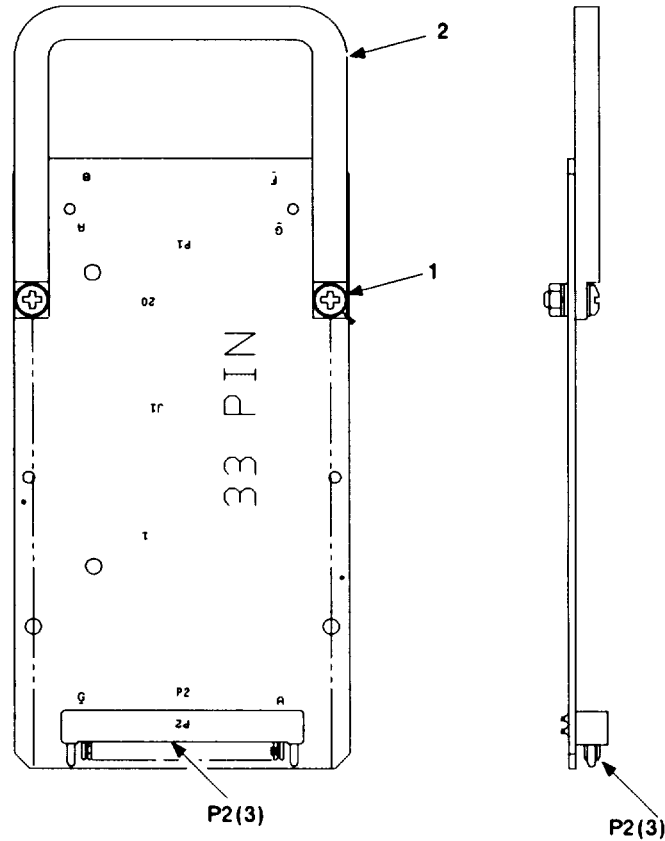


Figure 4-179. Electronic Test Extender Card-41 Pin Connector Component Layout

ITEM	ACTION	REMARKS
a. Connector Retainer(1)	Remove four screws (2), four flat washers, and four hex nuts (3) securing connector retainer to printed wiring board (4). Replace connector retainer(1), and secure to printed wiring board(4) with four screws (2), four flat washers, and four hex nuts(3).	Refer to figure 4-179.
b. Printed Wiring Board (4)	Remove connector retainer. Solder wires (5) connecting traces on new printed wiring board(4). Replace connector retainer.	Refer to step a. See step d. Refer to step a.
c. Wires (5)	Repair wiring as needed.	

4-105. Maintenance of Electronic Test Extender Card-33 Pin, A3148100-2, (A8A2).



A3148100-2

EL9RG327

Figure 4-181. Electronic Test Extender Card-33 Pin Connector Component Layout

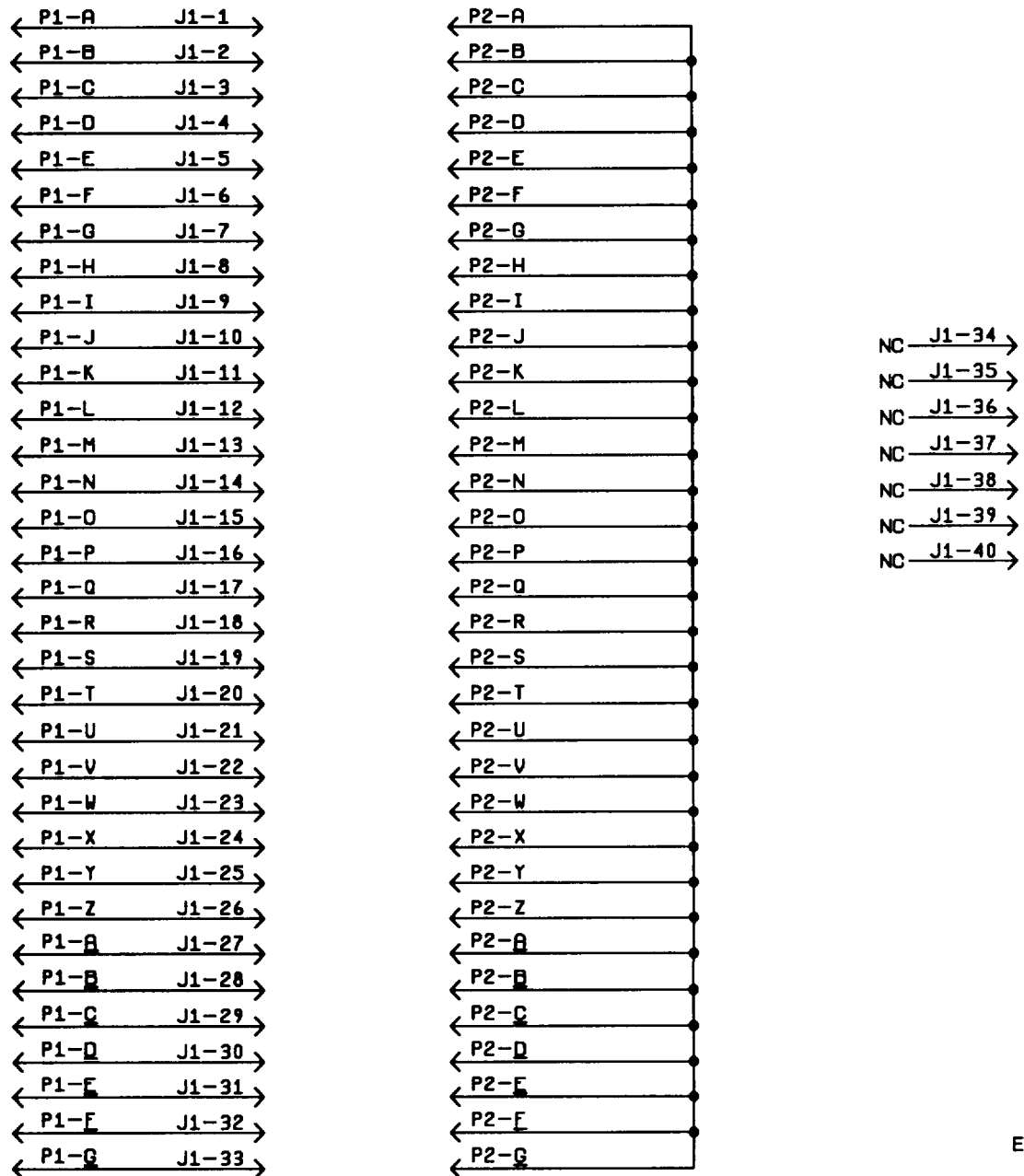
ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|--------------|---|--|
| a. Handle(2) | <p>Remove two screws (1), four flat washers, two lock washers, and two hex nuts.</p> <p>Replace handle securing with two screws (1), four flat washers, two lock washers, and two hex nuts.</p> | |
|--------------|---|--|

4-105. Maintenance of Electronic Test Extender Card-33 Pin, A3148100-2 (A8A2). Cont

ITEM	ACTION	REMARKS
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b. Traces Use the following schematic for troubleshooting the 33-pin test extender card.



EL9RG328

Figure 4-182. Schematic Diagram of Electronic Test Extender Cards-33 Pin

Section XXIII. MAINTENANCE OF J-6001/G (TEST ADAPTER A9)

The following procedure is used to perform diagnostic testing of test adapter A9 used to test Electronic Components Assembly-CCA Fill Device, 10A1, A3142305-1.

4-106. Required Test Accessories for Test Adapter A9.

The following test accessories are used to perform testing of test adapter A9.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP2800030G
File No	A3142305
● Test Adapter A9	A3148052-1
● ICD A5	B4041573-2
● Cable Assy A9W1	A3148099-1
● Electrical Lead (A9W2)	A3148253-1

4-107. Test Procedures for Test Adapter A9.

- a. Turn on digital card test set AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

- c. Load test program.
 - (1) Install test program tape CPIN CP2800030G in digital card tester in accordance with TM 11-6625-3038-10.
 - (2) Enter LOAD \emptyset , then press EXECUTE.
 - (3) When READY appears on display, type RUN and press EXECUTE.
 - (4) Verify that the following information imprinted:

4-107. Test Procedures for Test Adapter A9. Cont

```
>ENTER THE LAST FOUR  
>DIGITS OF THE UUT  
>P/N A314???-1  
>PRESS EXECUTE
```

THEN

```
>PRINT PROGRAM NOTES?  
>ENTER Y=YES, N=NO  
>PRESS EXECUTE.
```

- (5) Follow operator actions as instructed by program.
- d. Run ATE survey test if desired, (If survey test fails, refer to TM 11-6625-3038-20.)
 - e. Install Test Adapter A9 and ICD A5 on digital card test set (see figure 4-183 on page 4-346).
 - f. Run ICD survey test.
 - g. After testing do one of the following:
 - (1) If test adapter passes survey, exit program by pressing the ATTN key.
 - (2) If test adapter fails survey go to paragraph 4-108 on page 4-347.

4-107. Test Procedures for Test Adapter A9. Cont

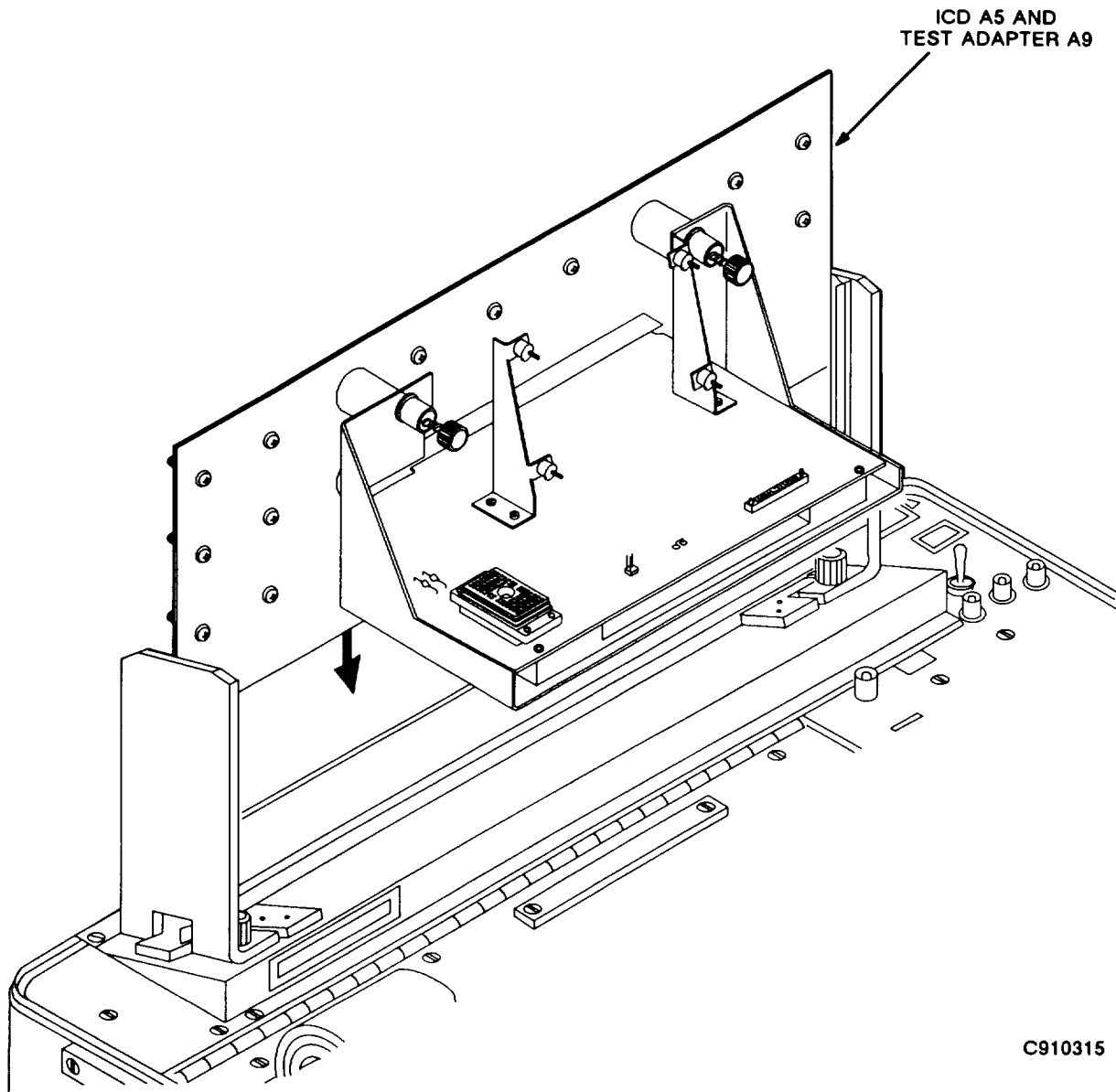


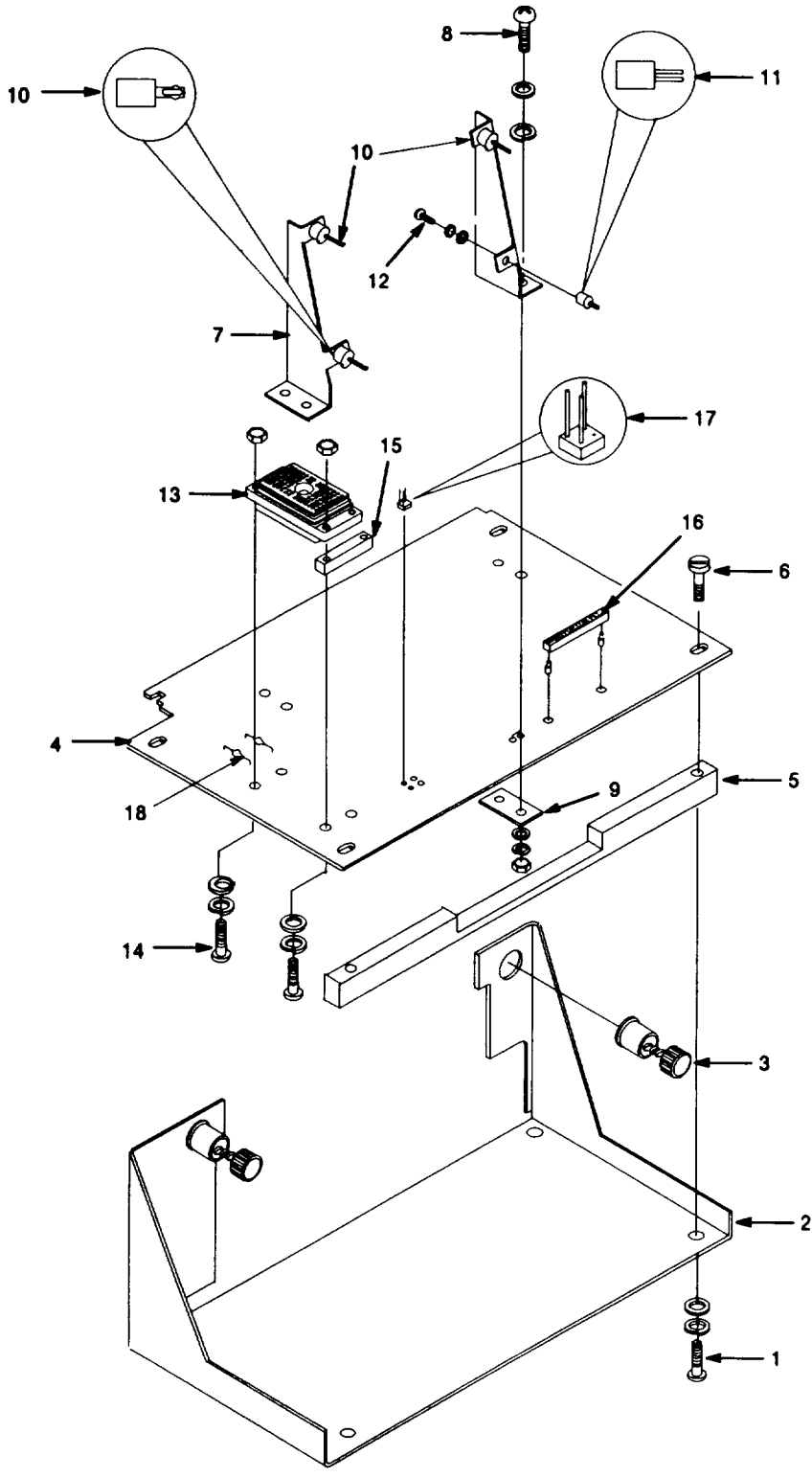
figure 4-183. Installation of Test Adapter A9 and ICD A5 on DCT

4-108. Maintenance Procedures for ECA-Test Adapter A9A1.

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT:</p> <p>Digital Card Tester AN/USM-465A (6625-01-126-2473)</p> <p>Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>REFERENCES</p> <p>TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-40P T8 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>	<p>TOOLS:</p> <p>Tool Kit Electronic Equipment TK-105/G (5180-01-610-8817)</p> <p>Solder Repair Center PRC-151 (3439-01-109-8590)</p>
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ITEM	ACTION	REMARKS
a. Mounting Bracket(2)	Remove four screws(1), four flat washers, and four lock washers. Remove mounting bracket(2). Remove and replace panel screw assembly (3). Replace mounting bracket(2) on CCA(4) using four screws(1), four lock washers, and four flat washers,	Refer to figure 4-184 on page 4-348. Refer to Section XVII on page 4-270.
b. Space bars (5)	Remove mounting bracket. Remove two screws (6). Replace spacer bar(5) and secure with two screws(6). Replace mounting bracket.	Refer to step a.
c. Electrical Card Holders(7)	Remove mounting bracket. Remove two screws(8), insulator spacer(9), two lock washers, four flat washers, and two hex nuts securing card holder(7) to CCA (4). Install replacement card holder using two screws(8), insulator spacer(9), two lock washers, four flat washers, and two hex nuts. Replace mounting bracket.	Refer to step a, Refer to step a.

4-108. Maintenance Procedures for ECA-Test Adapter A9A1. Cont



C910316

Figure 4-184. Maintenance of Test Adapter A9

4-108. Maintenance Procedures for ECA-Test Adapter A9A1. Cont

ITEM	ACTION	REMARKS
d. Standoff Insulators(10,11)	Remove screw(12) lock washer, and flat washer securing standoff insulator(10,11) to card holder(7). Replace standoff insulators, and secure to card holder with screw(12), lock washer, and flat washer.	
e. Connector J1(13)	Remove mounting bracket. Remove four screws(14), four lock washers, four flat washers and four hex nuts. Remove two spacers (15). Replace spacers as required. Unsolder connector J1(13), Replace contacts, as required. Replace connector.	Refer to step a.
f. Connector J2(16)	Install connector on CCA(4) with two spacers(15), four screws (14), four lock washers, four flat washers and four hex nuts. Solder connector to CCA. Replace mounting bracket. Remove mounting bracket. Unsolder connector J2(16) from CCA. Solder replacement connector J2(16) to CCA.	Refer to step a. Refer to step a.
g. Connector J3(17)	Replace mounting bracket. Remove mounting bracket. Unsolder J3(17) from CCA. Cut pin 3 from replacement plug. Solder replacement J3(17) to CCA(4).	Refer to step a. Refer to step a. Refer to figure 4-184 on page 4-348.
h. Diode CR1 and Resistor R1(18)	Replace mounting bracket, Remove mounting bracket. Unsolder diode or resistor from CCA (4). Replace component and solder to CCA. Install mounting bracket.	Refer to step a. Refer to step a. Refer to step a.

4-108. Maintenance Procedures for ECA-Test Adapter A9A1. Cont

ITEM	ACTION	REMARKS
i. CCA-Test Adapter A9	Remove mounting bracket (2).	Refer to step a.
	Remove spacer bars (5).	Refer to step b.
	Remove electrical card holders (7).	Refer to step c.
	Remove connector J1(13).	Refer to step e.
	Remove J2(16).	Refer to step f.
	Remove connector J3(17).	Refer to step g.
	Remove diode CR1 and resistor R1(18).	Refer to step h.
	Replace CCA.	
	Install diode CR1 and resistor R1 and solder to CCA.	Refer to step h.
	Install connector J3.	Refer to step g.
	Install connector J2.	Refer to step f.
	Install connector J1.	Refer to step e.
	Install electrical card holders.	Refer to step c.
	Install spacer bars.	Refer to step b.
	Install mounting bracket.	Refer to step a.

4-108. Maintenance Procedures for ECA-Test Adapter A9A1. Cont

ITEM	ACTION	REMARKS
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j. Traces

Use the following schematic for trouble-shooting test adapter A9.

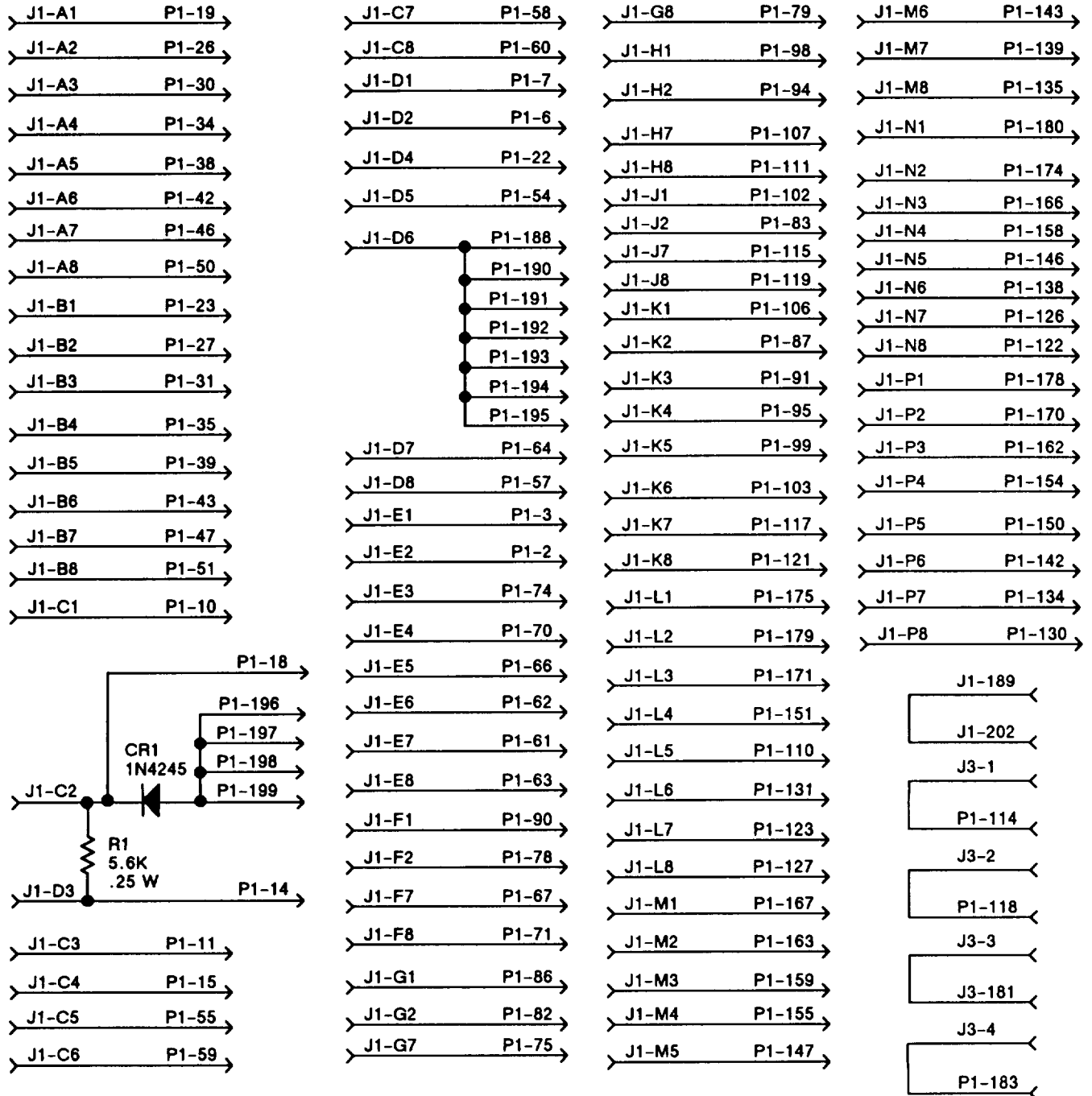


Figure 4-185. Schematic Diagram of Test Adapter A9 (Page 1 of 2)

4-108. Maintenance Procedures for ECA-Test Adapter A9A1. Cont

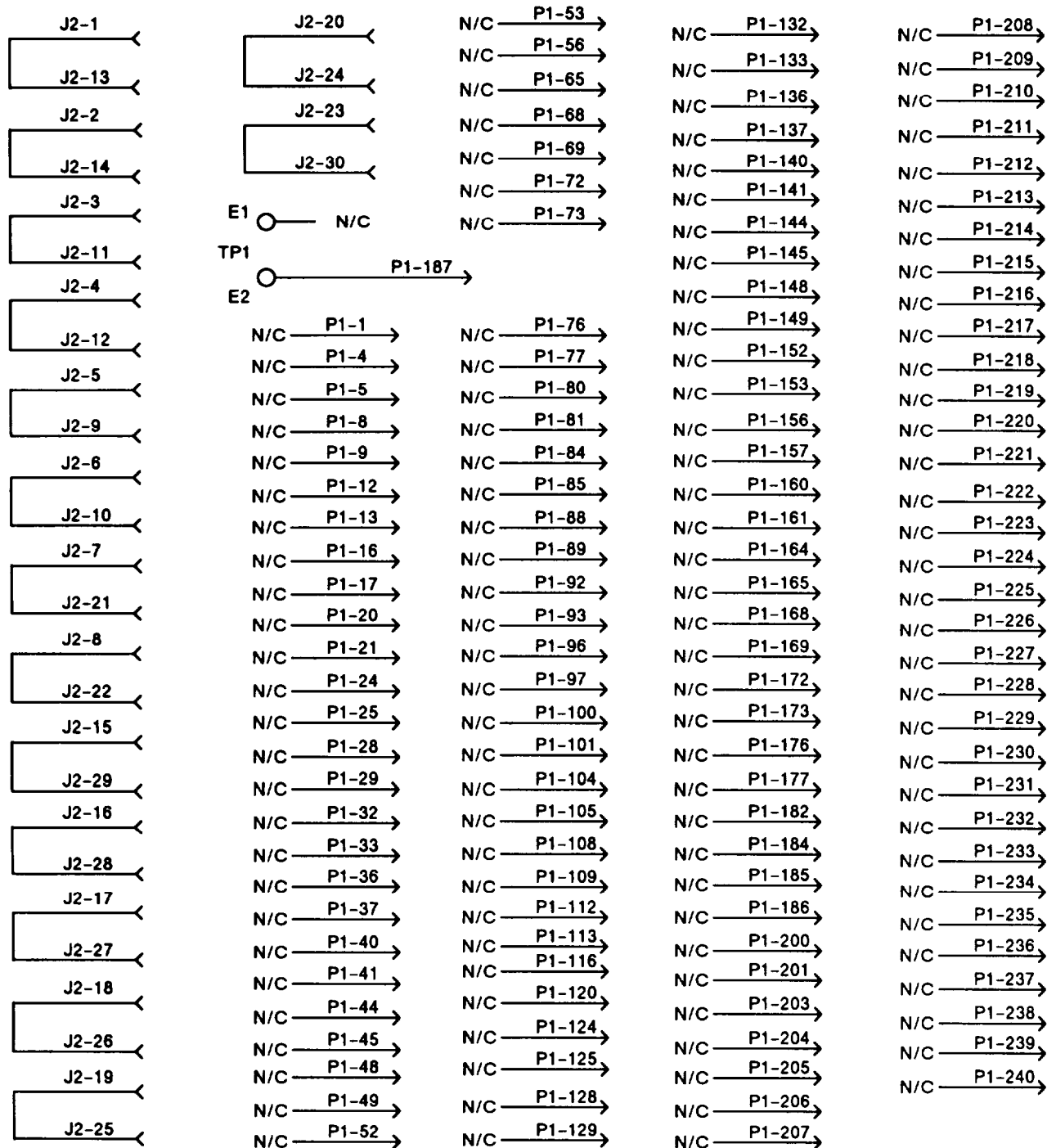


Figure 4-185. Schematic Diagram of Test Adapter A9 (Page 2 of 2)

4-109. Maintenance of Branched Wiring Harness, A3148099 (A9W1).

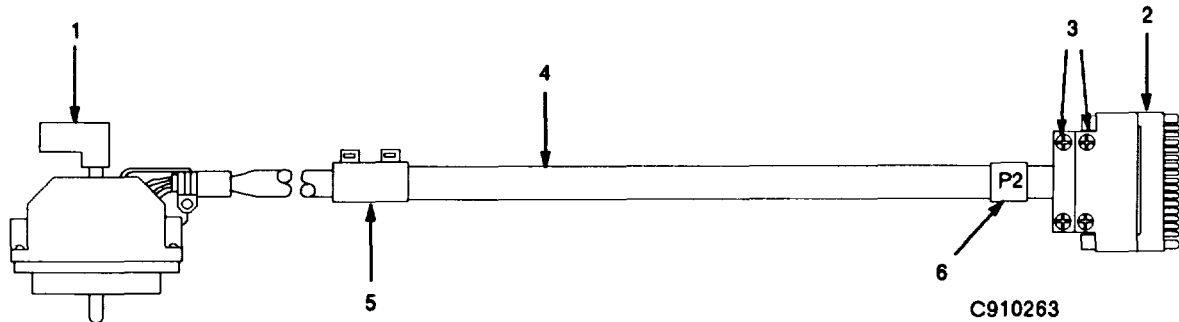
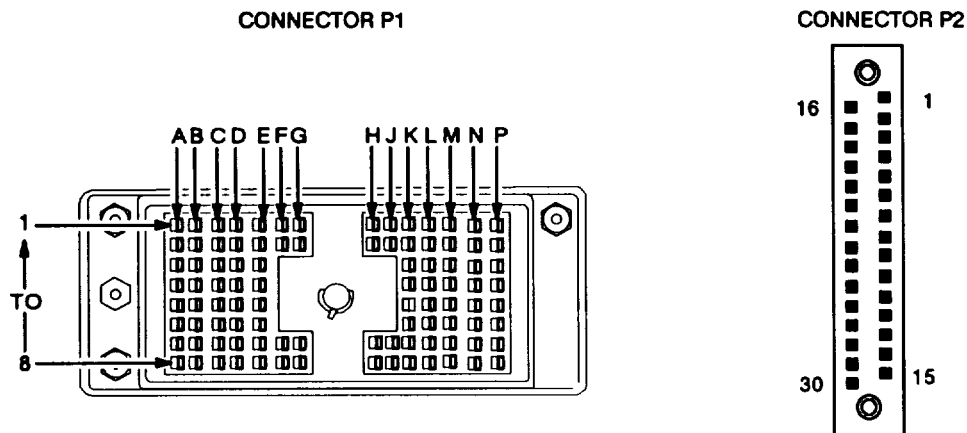


Figure 4-186. Maintenance of Cable A9W1

ITEM	ACTION	REMARKS
a. Connector P1(1)	Replace connector P1(1).	Refer to paragraph 4-92 on page 4-310.
<p>NOTE</p> <p>Perform the following repairs only as required.</p>		
b. 30-Pin Connector P2 (2)	<p>Remove four screws(3) and hex nuts on cable clamp and remove cable clamp.</p> <p>Troubleshoot plug wires.</p> <p>Unsolder and replace damaged connecting wires, as required.</p> <p>Install backshell cable clamp and tighten four screws (3) and hex nuts on cable clamp.</p>	Refer to step d.
<p>NOTE</p> <p>If connector is not repairable, obtain replacement connector and solder replacement wire connections.</p>		
c. Insulation Sleeving (4)	<p>Remove tiedown strap(5).</p> <p>Remove connector P1(1).</p> <p>Remove connector P2 (2).</p> <p>Remove cable marker(6).</p> <p>Replace 1/2 inch insulation(4).</p> <p>Replace cable marker P2(6).</p> <p>Replace connector P2(2).</p> <p>Replace connector P1(1).</p> <p>Replace tiedown strap(5)</p>	<p>Refer to figure 4-186.</p> <p>Refer to paragraph 4-92 on page 4-310.</p> <p>Refer to step b.</p> <p>Use item 179, App. C</p> <p>See item 47, App. C</p> <p>Refer to step b.</p> <p>Refer to paragraph 4-92 on page 4-310.</p> <p>See item 263, App. C</p>

4-109. Maintenance of Branched Wiring Harness, A3146099 (A9W1). Cont

ITEM	ACTION	REMARKS
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EL9RG329

Figure 4-187. Branched Wiring Harness A9W1 Connector Pin Locations

d. Wires

Replace as required.

Use the following wire chart for troubleshooting.

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-A1	P2-1	Black	Use item 148, App. C
P1-A2	P2-2	Brown	Use item 149, App. C
P1-A3	P2-3	Red	Use item 150, App. C
P1-A4	P2-4	Orange	Use item 151, App. C
P1-A5	P2-5	Yellow	Use item 152, App. C
P1-A6	P2-6	Green	Use item 153, App. C
P1-A7	P2-7	Blue	Use item 154, App. C
P1-A8	P2-8	Violet o	Use item 155, App. C
P1-B1	P2-9	Gray	Use item 156. App. C
P1-B2	P2-10	White	Use item 157, App. C
P1-B3	P2-11	White/Black	Use item 158, App. C
P1-84	P2-12	White/Brown	Use item 159, App. C
P1-B5	P2-13	White/Red	Use item 160, App. C
P1-B6	P2-14	White/Orange	Use item 161, App. C
P1-B7	P2-15	White/Yellow	Use item 162, App. C

4-109. Maintenance of Branched Wiring Harness, A3148099 (A9W1). Cont

<u>FROM</u>	<u>T O</u>	<u>COLOR/TRACER</u>
P1-B8	P2-16	White/Green Use item 163, App, C
P1-C1	P2-17	White/Blue Use item 164, App. C
P1-C2	P2-18	White/Violet Use item 165, App. C
P1-C3	P2-19	White/Gray Use item 166, App. C
P1-C4	P2-20	White/Black/Brown Use item 182, App. C
P1-C5	P2-21	White/Black/Red Use item 183, App, C
P1-C6	P2-22	White/Black/Orange Use item 184, App. C
P1-C7	P2-23	White/Black/Yellow Use item 185, App, C
P1-C8	P2-24	White/Black/Green Use item 186, App. C
P1-D1	P2-25	White/Black/Blue Use item 187, App. C
P1-D2	P2-26	White/Black/Violet Use item 188, App. C
P1-D3	P2-27	White/Black/Gray Use item 189, App, C
P1-D4	P2-28	White/Brown/Red Use item 190, App, C
P1-D5	P2-29	White/Brown/Orange Use item 191, App. C
P1-D6	P2-30	White/Brown/Yellow Use item 192, App. C
P1-D7	N/C	
P1-D8	N/C	
P1-E1	N/C	
P1-E2	N/C	
P1-E3	N/C	
P1-E4	N/C	
P1-E5	N/C	
P1-E6	N/C	
P1-E7	N/C	
P1-E8	N/C	
P1-F1	N/C	
P1-F2	N/C	
P1-F7	N/C	
P1-F8	N/C	
P1-G1	N/C	
P1-G2	N/C	
P1-G7	N/C	
P1-G8	N/C	
P1-H1	N/C	
P1-H2	N/C	
P1-H7	N/C	

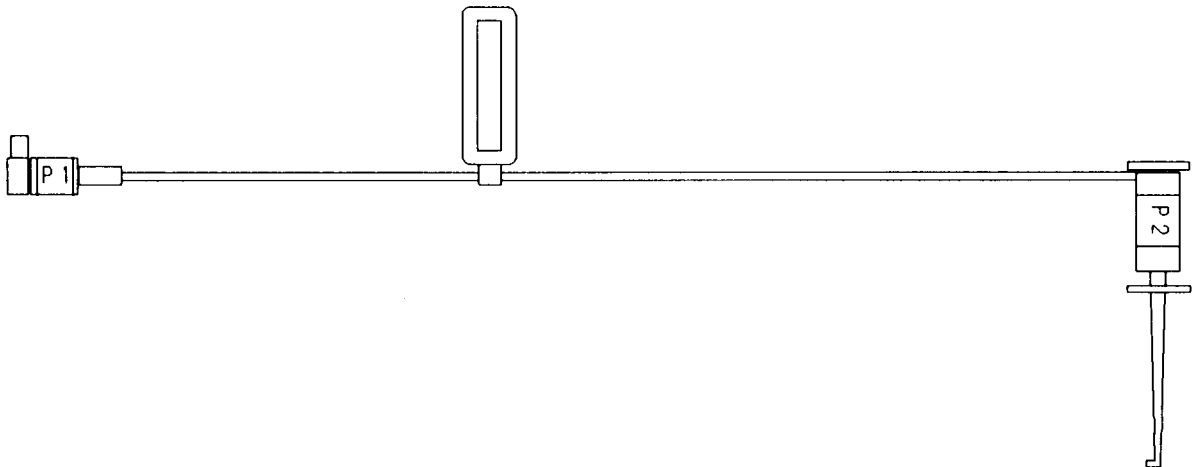
4-109. Maintenance of Branched Wiring Harness, A3148099 (A9W1). Cont

<u>FROM</u>	<u>T O</u>	<u>COLOR/TRACER</u>
P1 -H8	N/C	
P1-J1	N/C	
P1-J2	N/C	
P1-J7	N/C	
P1-J8	N/C	
P1-K1	N/C	
P1-K2	N/C	
P1-K3	N/C	
P1-K4	N/C	
P1-K5	N/C	
P1-K6	N/C	
P1-K7	N/C	
P1-K8	N/C	
P1-L1	N/C	
P1-L2	N/C	
P1-L3	N/C	
P1-L4	N/C	
P1-L5	N/C	
P1-L6	N/C	
P1-L7	N/C	
P1-L8	N/C	
P1-M1	N/C	
P1-M2	N/C	
P1-M3	N/C	
P1-M4	N/C	
P1-M5	N/C	
P1-M6	N/C	
P1-M7	N/C	
P1-M8	N/C	
P1-N1	N/C	
P1-N2	N/C	
P1-N3	N/C	
P1-N4	N/C	
P1-N5	N/C	
P1-N6	N/C	
P1-N7	N/C	

4-109. Maintenance of Branched Wiring Harness, A3148099 (A9W1). Cont

FROM	TO	COLOR/TRACER
P1-N8	N/C	
P1-P1	N/C	
P1-P2	N/C	
P1-P3	N/C	
P1-P4	N/C	
P1-P5	N/C	
P1-P6	N/C	
P1-P7	N/C	
P1-P8	N/C	

4-110. Maintenance of Electrical Lead, A3148253.



C910264

Figure 4-188. Maintenance of Electrical Lead

ITEM	ACTION	REMARKS
a. Electrical Lead	Replace as needed.	

Section XXIV. MAINTENANCE OF J-6002/G (TEST ADAPTER A10)

The following procedure is used to perform diagnostic testing of test adapter A10 used to test Electronic Components Assembly-Control, 1A4, A3148179.

4-111. Required Test Accessories for Test Adapter A10.

The following test accessories are used to perform testing of the test adapter A10.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP2300030G
File No.	A3148179F
● Test Adapter A10	A3148053-1
● ICD A5	B4041573-2
● 61 Pin Shorting Card	A3148092-2
● Cable Assy A10W1	A3148095-1

4-112. Test Procedures for Test Adapter A10.

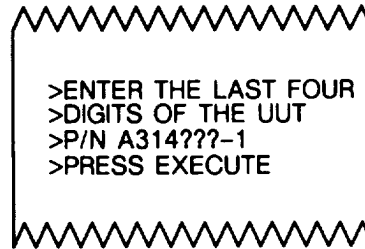
- a. Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11 -6625-3038-10.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

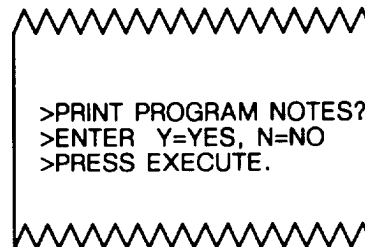
- c. Load test program.
 - (1) Install test program tape CPIN CP2300030G in digital card tester in accordance with TM 11-6625-3038-10.
 - (2) Enter LOAD \emptyset , then press EXECUTE.
 - (3) When READY appears on the display, type RUN and press EXECUTE.
 - (4) Verify that the following information is printed:

4-112. Test Procedures for Test Adapter A10. Cont



```
>ENTER THE LAST FOUR  
>DIGITS OF THE UUT  
>P/N A314???-1  
>PRESS EXECUTE
```

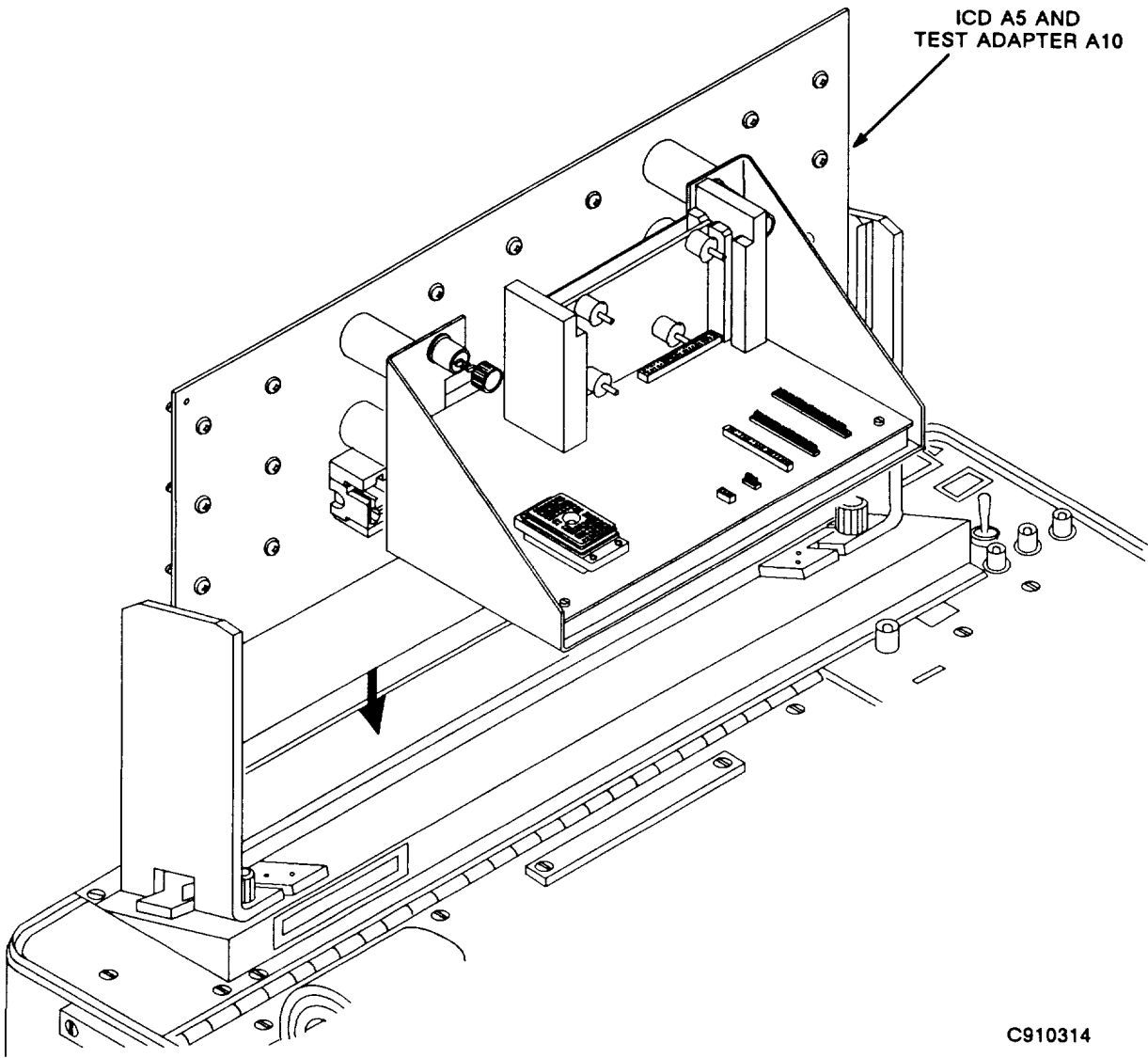
THEN



```
>PRINT PROGRAM NOTES?  
>ENTER Y=YES, N=NO  
>PRESS EXECUTE.
```

- (5) Follow operator actions as instructed by program.
- d. Run ATE survey test if desired. (If survey test fails, refer to TM 11-6625-3038-20.)
 - e. Install Test Adapter A10 and ICD A5 on digital card test set (see figure 4-189 on page 4-360).
 - f. Run ICD survey test.
 - g. After testing do one of the following:
 - (1) If the test adapter passes the survey, exit the program by pressing the ATTN key.
 - (2) If the test adapter fails the survey go to paragraph 4-113 on page 4-361.

4-112. Test Procedures for Test Adapter A10. Cont



C910314

Figure 4-189. Installation of Test Adapter A10 and ICD A5 on DCT

4-113. Maintenance Procedures for ECA-Test Adapter A10A1.

<p>INITIAL SETUP</p> <p>TEST EQUIPMENT Digital Card Tester AN/USM-465A (6625-01-126-2473) Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>TOOLS: Tool Kit Electronic Equipment TK-105/G (5160-01-610-8817) Solder Repair Center PRC-151 (3439-01-109-8590)</p> <p>REFERENCES TM 11-5620-914-40 TM 11-6625-2773-10 TM 11-6625-3094-40P TB 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>
--

ITEM	ACTION	REMARKS
a. Mounting Bracket(2)	Remove four screws(1), four flat washers, and four lock washers. Remove mounting bracket(2). Remove and replace panel screw assembly (3). Replace mounting bracket(2) on CCA(4) using four screws(1), four lockwashers, and four flat washers.	Refer to figure 4-190 on page 4-364. Refer to Section XVII on page 4-270.
b. Space bars (5)	Remove mounting bracket. Remove two screws (6). Replace spacer bar(5) and secure with two screws(6). Replace mounting bracket.	Refer to step a. Refer to step a.
c. Flat mounting plate(7)	Remove two screws(8), two lock washers, and two flat washers. Replace flat mounting plate(7) and secure with two screws(8), two lock washers, and two flat washers.	
d. Insulator Spacers (11)	Remove mounting plate(9). Remove screw(12), lockwasher, and flat washer.	

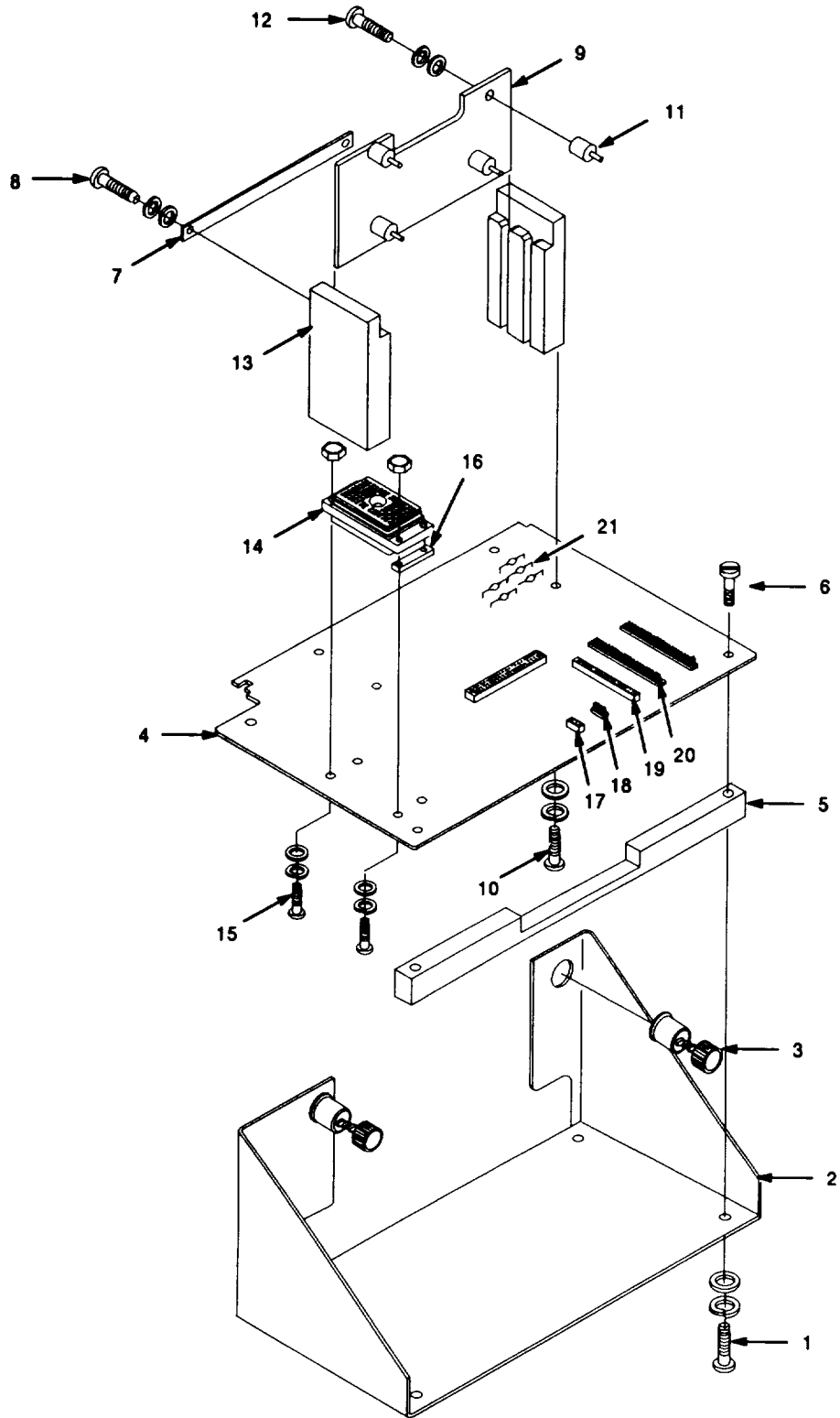
4-113. Maintenance Procedures for ECA-Test Adapter A10A1. Cont

ITEM	ACTION	REMARKS
	Replace insulator spacer(11) and secure to mounting plate with screw(12), lock washer, and flat washer.	
	Replace mounting plate (9).	
e. Electrical card holder (13)	Remove mounting bracket.	Refer to step a.
	Remove two screws (10), two lock washers, two flat washers, and screw (8), lockwasher, and flat washer securing flat mounting plate(7) to card holder(13).	
	Replace electrical card holder(13) and secure with two screws(10), two lock washers, and two flat washers.	
	Replace screw(8), lock washer, and flat washer securing flat mounting plate (7) to card holder(13).	
f. Connector J1(14)	Replace mounting bracket.	Refer to step a.
	Remove mounting bracket,	Refer to step a.
	Remove four screws (15), four lock washers, four flat washers and four hex nuts.	
	Remove two spacers (16).	
	Unsolder connector J1(14).	
	Replace connector pins, as required.	
	Replace connector.	
	Install connector on CCA(4) with two spacers(16, four screws (15), four lock washers, four flat washers and four hex nuts.	
	Solder connector to CCA.	
	Replace mounting bracket.	Refer to step a.
g. Connectors J6(17), J7(18), J4(19), and J3(20).	Remove mounting bracket.	Refer to step a,
	Unsolder connector from CCA(4).	
	Solder replacement connector to CCA.	
	Replace mounting bracket.	Refer to step a.

4-113. Maintenance Procedures for ECA-Test Adapter A10A1. Cont

ITEM	ACTION	REMARKS
h. Diodes CR1, CR2, CR3, CR4, and Resistor R1(21)	Unsolder from CCA. Solder replacement diode or resistor onto CCA.	
i. CCA-Test Adapter A10(4)	Remove mounting plate (9). Remove mounting bracket (2). Remove spacer bars (5). Remove flat mounting plate(7). Remove electrical card holders (13). Remove connector J1(14). Remove connectors J6(17), J7(18), J4(19), and J3(20). Remove diodes and resistor (21). Replace CCA(4). Install diodes and resistor and solder to CCA. Replace connectors J6, J7, J4, and J3. Replace connector J1. Replace electrical card holders. Replace flat mounting plate. Replace spacer bars. Replace mounting bracket. Replace mounting plate.	Refer to step a. Refer to step b. Refer to step c. Refer to step e. Refer to step f. Refer to step g. Refer to step h. Refer to step h. Refer to step g. Refer to step f. Refer to step e. Refer to step c. Refer to step b. Refer to step a.

4-113. Maintenance Procedures for ECA-Test Adapter A10A1. Cont



C910317

Figure 4-190. Maintenance of Test Adapter A10

4-113. Maintenance Procedures for ECA-Test Adapter A10A1. Cont

ITEM	ACTION	REMARKS
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j. Traces

Use the following schematic for trouble-shooting test adapter A10.

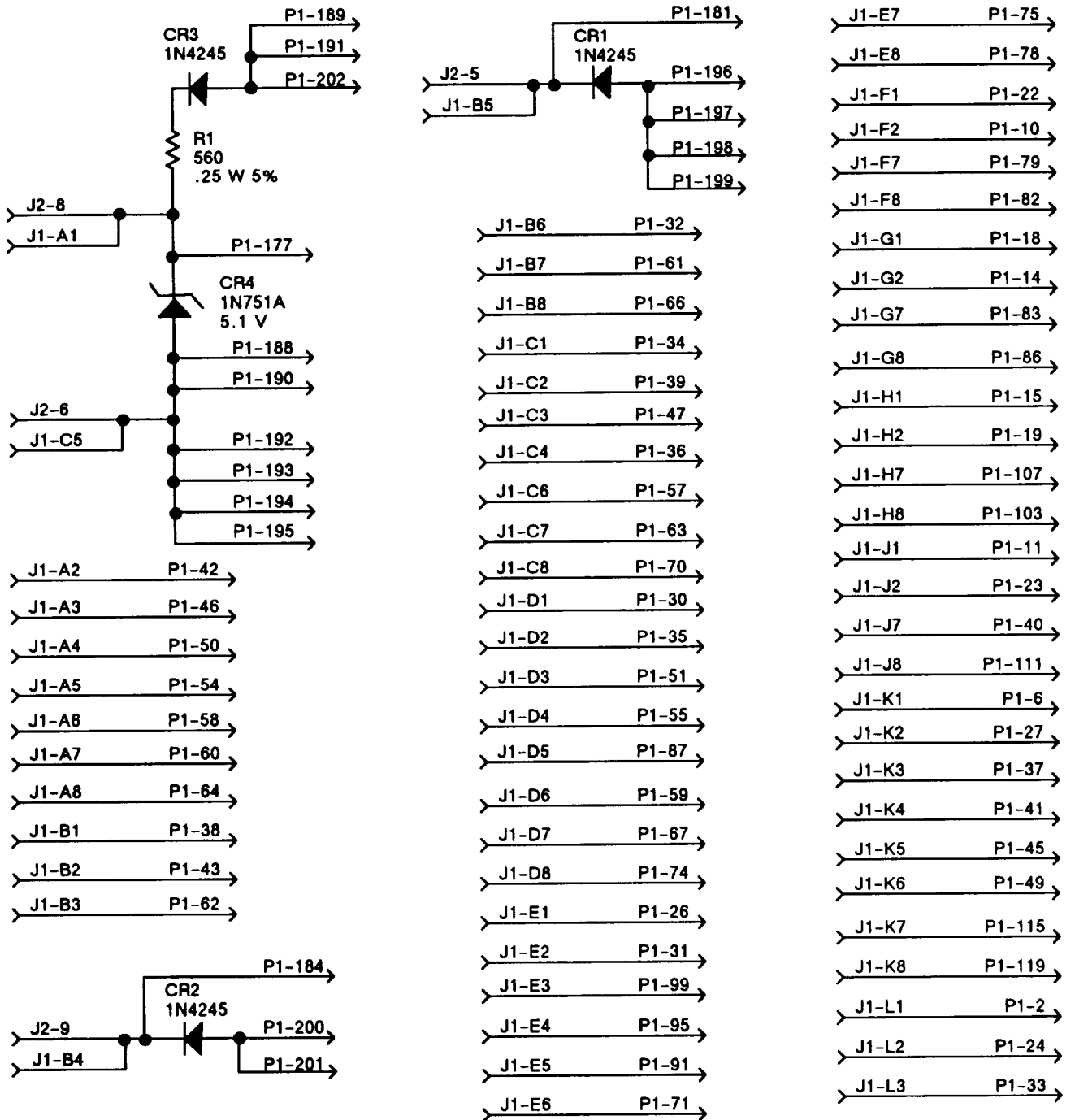


Figure 4-191. Schematic Diagram of Test Adapter A10 (Sheet 1 of 3)

4-113. Maintenance Procedures for ECA-Test Adapter A10A1. Cont

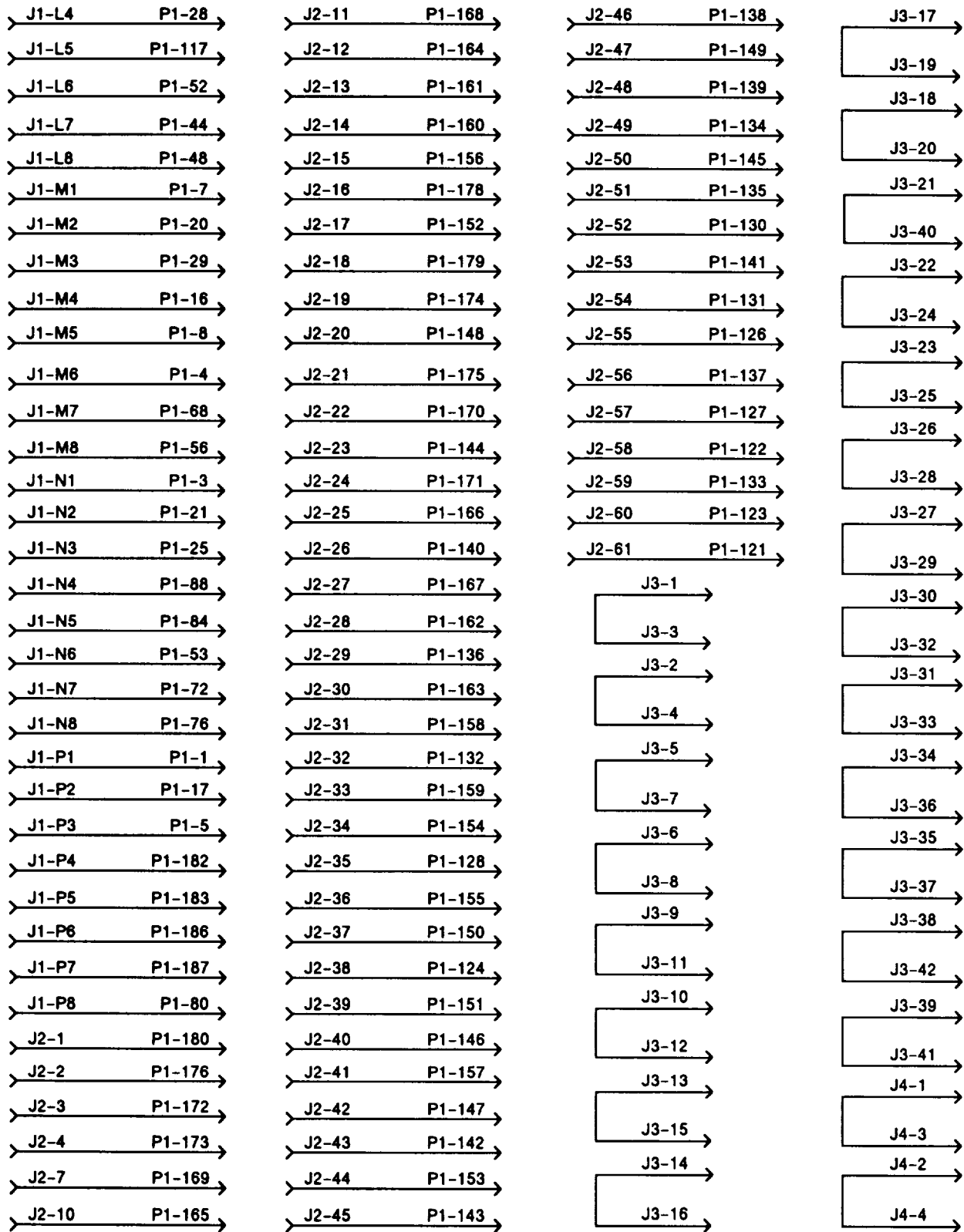


Figure 4-191. Schematic Diagram of Test Adapter A10 (Sheet 2 of 3)

4-113. Maintenance Procedures for ECA-Test Adapter A10A1. Cont

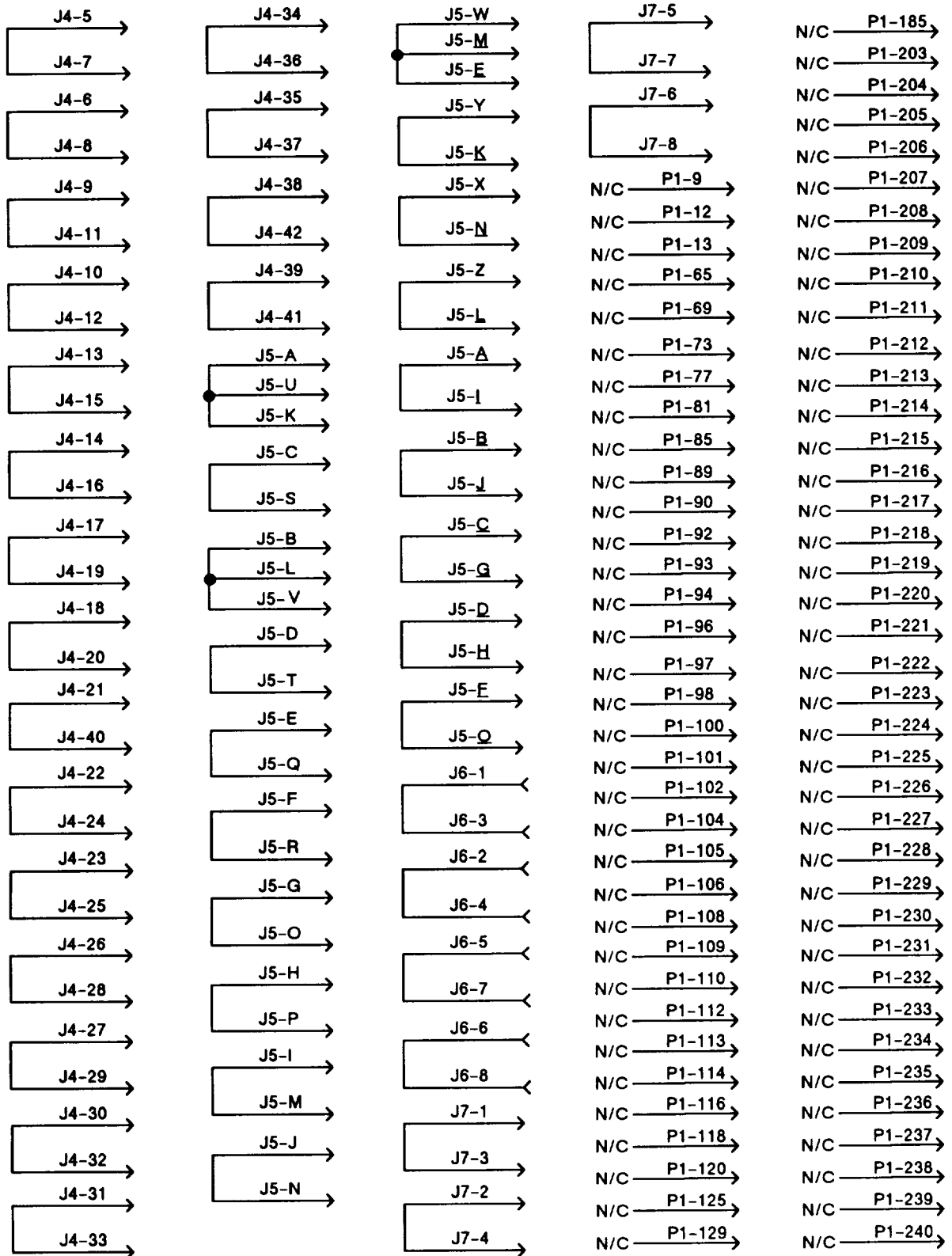
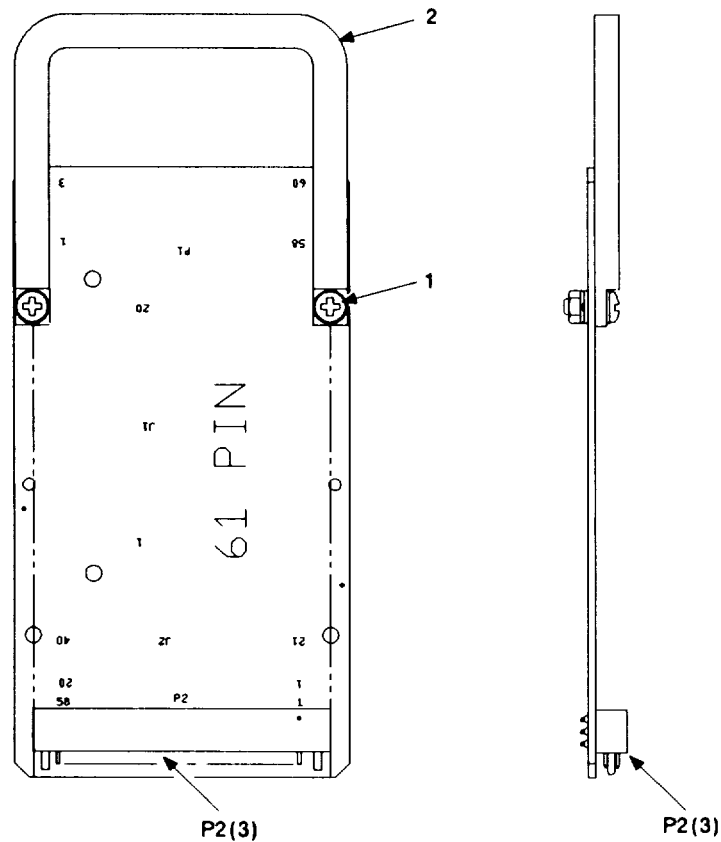


Figure 4-191. Schematic Diagram of Test Adapter A10 (Sheet 3 of 3)

4-114. Maintenance of Electronic Test Extender Card-61 Pin, A3148092-2 (A10A2).

ITEM	ACTION	REMARKS
a. Handle(2)	<p>Remove two screws(1), four flat washers, two lock washers, and two hex nuts.</p> <p>Replace handle (2) and secure with two screws (1), four flat washers, two lock washers, and two hex nuts.</p>	
b. Connector P2(3)	<p>Unsolder connector from extender card.</p> <p>Replace connector and solder to extender card.</p>	



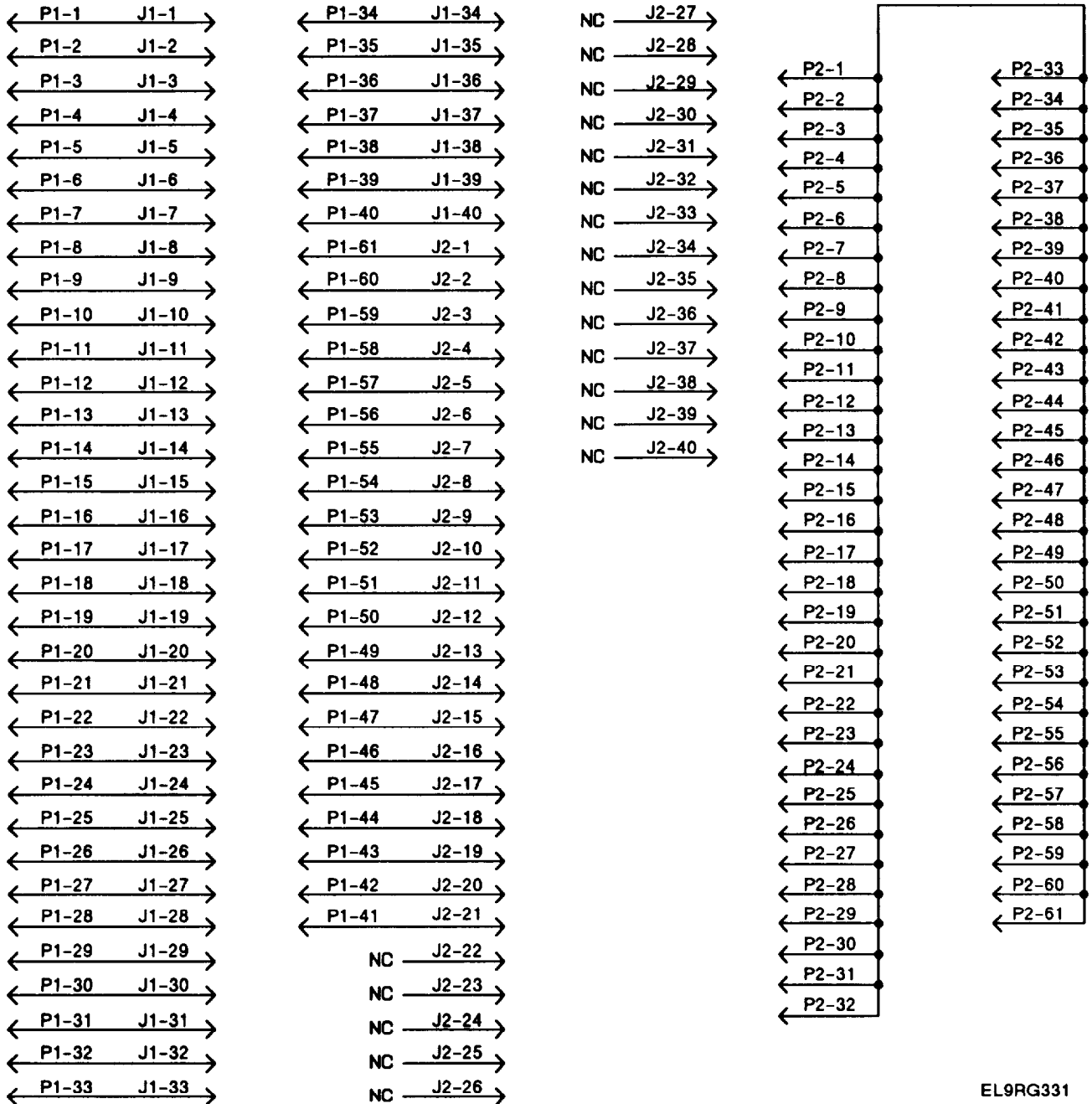
EL9RG330

Figure 4-192. Electronic Test Extender Card-61 Pin Connector Component Layout

4-114. Maintenance of Electronic Test Extender Cards-61 Pin, A3148092-2 (A102). Cont

ITEM	ACTION	REMARKS
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c. Traces



EL9RG331

Figure 4-193. Schematic Diagram of Electronic Test Extender Cards-61 Pin

4-115. Maintenance of Branched Wiring Harness, A3148095 (A10W1)

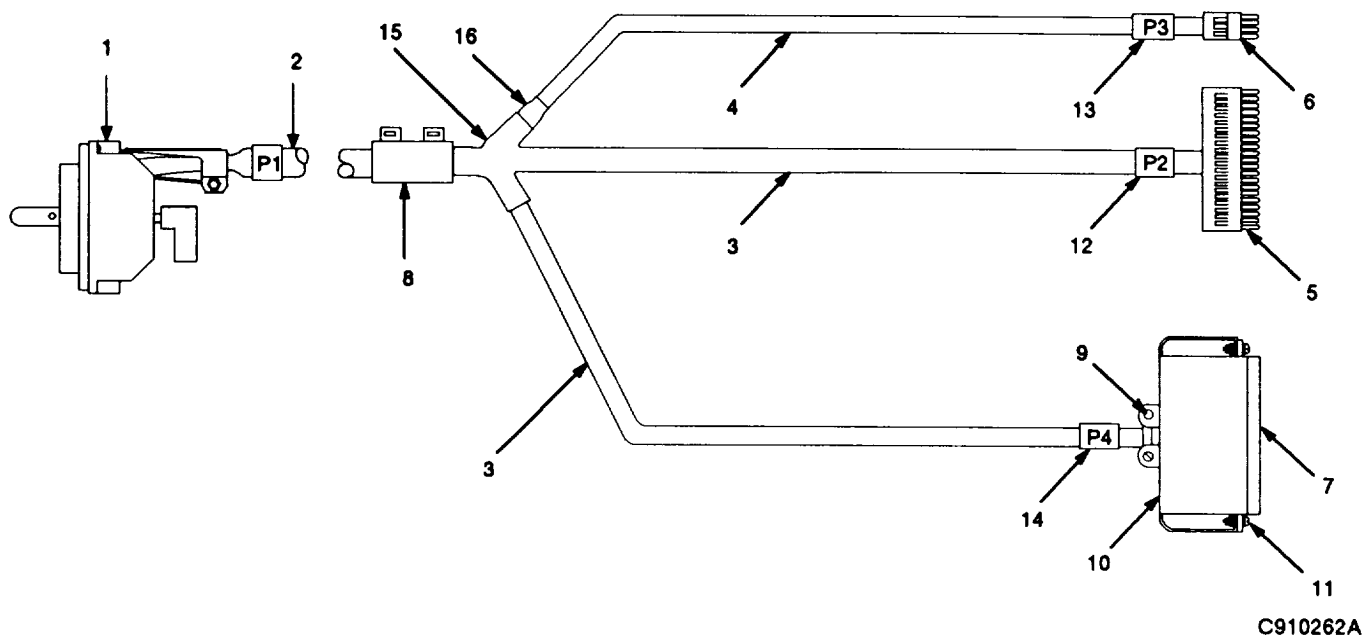


Figure 4-194. Maintenance of Cable A10W1

ITEM	ACTION	REMARKS
a. Connector P1(1)	Replace connector P1(1).	Refer to paragraph 4-92 on page 4-310.
<p>NOTE</p> <p>Perform the following repairs only as required.</p>		
b. Insulation Sleeving (2,3,4), and Connectors P2(5), P3(6), and P4(7)	<p>Remove tiedown strap(8)</p> <p>Remove connector P1(1).</p> <p>Remove connectors P2(5) and P3(6).</p>	<p>See figure 4-194.</p> <p>Refer to paragraph 4-92 on page 4-310.</p>
<p>NOTE</p> <p>Remove pins from connector by lifting each pin connector locking tab and pulling out all pins. Tag all wires.</p>		
<p>Remove two screws(9) holding cable clamp connector cover(10) of connector P4(7).</p>		

4-115. Maintenance of Branched Wiring Harness, A3148095 (A10W1). Cont

ITEM	ACTION	REMARKS
	Remove two screws(11), two lock washers, and four flat washers securing connector to backshell.	
	Remove wires from connector(7) by removing heat shrink insulation sleeving from crimp contacts and resoldering crimp contacts from connector pins.	NOTE Crimp contacts that are resoldered must be replaced,
	Remove cable marker sleeves(12,13,14).	
	Repair wires.	
	Replace damaged pins.	
	Replace heat shrink sleeving on contacts.	
	Replace three branch style insulation(15).	Use item 264, App. C
	Replace insulation sleeving reducer(16).	Use item 265, App. C
	Replace 3/4 inch insulation(2).	Use item 266, App. C
	Replace 1/2 inch insulation(3).	Use item 179, App. C
	Replace No. 2 insulation(4).	Use item 267, App. C
	Install connector P1(1).	Refer to paragraph 4-92 on page 4-310.
	Replace cable marker P2(12).	See item 47, App. C
	Replace cable marker P3(13).	See item 71, App. C
	Replace cable marker P4 (14).	See item 93, App. C
	Replace damaged connectors, Replace pins in connectors P2(5), P3(6), and P4(7).	
	Replace two screws (11), two lock washers, and four flat washers, securing connector to connector cover.	
	Tighten two screws(9) holding cable clamp connector cover (10) of connector P4(7).	
	Replace tiedown strap(8).	See item 263, App. C

4-115. Maintenance of Branched Wiring Harness, A3146095 (A10W1). Cont

ITEM	ACTION	REMARKS
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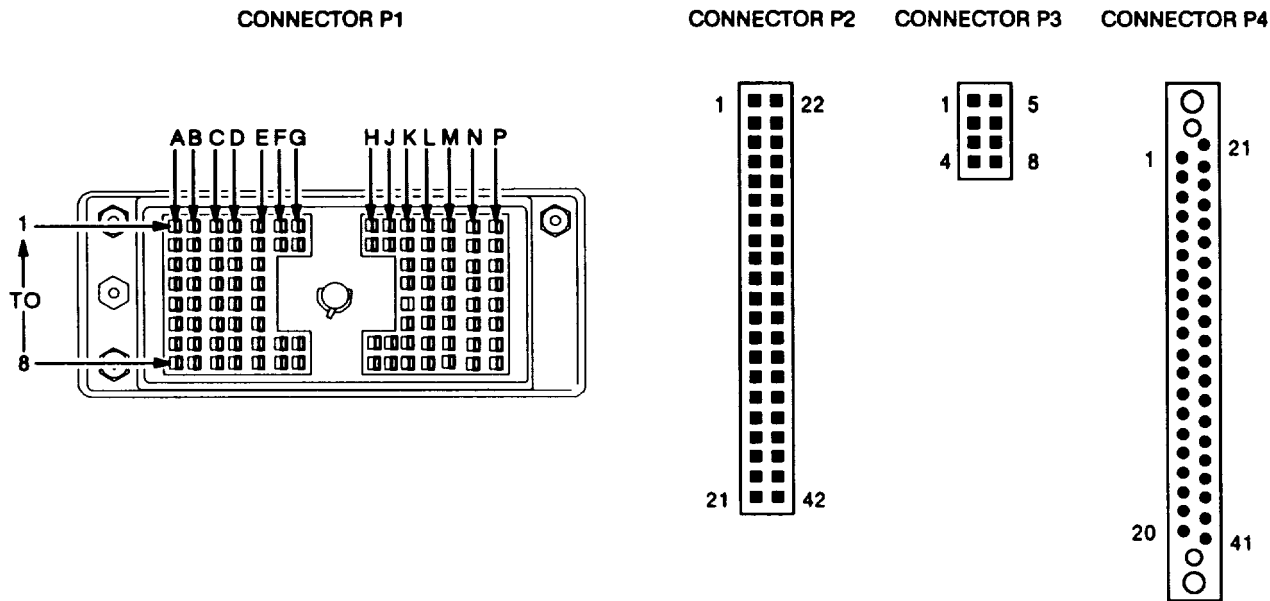


Figure 4-195. Branched Wiring Harness A10W1 Connector Pin Locations

- c. Wires Replace as required.
Use the following wire chart for troubleshooting.

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-A1	P2-1	N/C
P1-A2	P2-2	Brown, Use item 149, App. C
P1-A3	P2-3	Red Use item 150, App. C
P1-A4	P2-4	Orange Use item 151, App. C
P1-A5	P2-5	Yellow Use item 152, App. C
P1-A6	P2-6	Green Use item 153, App. C
P1-A7	P2-7	Blue Use item 154, App. C
P1-A8	P2-8	Violet Use item 155, App. C
P1-B1	P2-9	Gray Use item 156, App. C
P1-B2	P2-10	White Use item 157, App. C
P1-B3	P2-11	White/Black Use item 158, App. C
P1-64	P2-12	White/Brown Use item 159, App. C
P1-B5	P2-13	White/Red Use item 160, App. C

4-115. Maintenance of Branched Wiring Harness, A3148095 (A10W1). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-B6	P2-14	White/Orange	Use item 161, App. C
P1-B7	P2-15	White/Yellow	Use item 162, App. C
P1-B8	P2-16	White/Green	Use item 163, App. C
P1-C1	P2-17	White/Blue	Use item 164, App. C
P1-C2	P2-18	White/Violet.	Use item 165, App. C
P1-C3	P2-19	White/Gray	Use item 166, App. C
P1-C4	P2-20	White/Black/Brown	Use item 182, App. C
P1-C5	P2-21	White/Black/Red	Use item 183, App. C
P1-C6	P2-22	White/Black/Orange	Use item 184, App. C
P1-C7	P2-23	White/Black/Yellow.	Use item 185, App. C
P1-C8	P2-24	White/Black/Green	Use item 186, App. C
P1-D1	P2-25	White/Black/Blue	Use item 187, App. C
P1-D2	P2-26	White/Black/Violet	Use item 188, App. C
P1-D3	P2-27	White/Black/Gray	Use item 189, App. C
P1-D4	P2-28	White/Brown/Red	Use item 190, App. C
P1-D5	P2-29	White/Brown/Orange	Use item 191, App. C
P1-D6	P2-30	White/Brown/Yellow	Use item 192, App. C
P1-D7	P2-31	White/Brown/Green	Use item 193, App. C
P1-D8	P2-32	White/Brown/Blue	Use item 194, App. C
P1-E1	P2-33	White/Brown/Violet	Use item 195, App. C
P1-E2	P2-34	White/Brown/Gray	Use item 196, App. C
P1-E3	P2-35	White/Red/Orange.	Use item 197, App. C
P1-E4	P2-36	White/Red/Yellow	Use item 198, App. C
P1-E5	P2-37	White/Red/Green	Use item 199, App. C
P1-E6	P2-38	White/Red/Blue	Use tem 200, App. C
P1-E7	P2-39	White/Red/Violet	Use tem 201, App. C
P1-E8	P2-40	White/Red/Gray.	Use item 202, App. C
P1-F1	P2-41	White/Orange/Yellow.	Use item 203, App. C
P1-F2	P2-42	White/Orange/Green	Use item 204, App. C
P1-F7	P4-A	White/Orange/Blue	Use item 205, App. C
P1-F8	P4-B	White/Orange/Violet	Use item 206, App. C
P1-G1	P4-C	White/Orange/Gray	Use item 207, App. C
P1-G2	P4-D	White/Yellow/Green	Use item 208, App. C
P1-G7	P4-E	White/Yellow/Blue	Use item 209, App. C
P1-G8	P4-F	White/Yellow/Violet.	Use item 210, App. C
P1-H1	P4-G	White/Yellow/Gray.	Use item 211, App. C

4-115. Maintenance of Branched Wiring Harness, A3148095 (A10W1). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-H2	P4-H	White/Green/Blue Use item 212, App. C
P1-H7	P4-I	White/Green/Violet Use item 213, App. C
P1-H8	P4-J	White/Green/Gray Use item 214, App. C
P1-J1	P4-K	White/Blue/Violet Use item 215, App. C
P1-J2	P4-L	White/Blue/Gray Use item 216, App. C
P1-J7	P4-M	White/Black/Brown/Red Use item 217, App. C
P1-J8	P4-N	White/Black/Brown/Orange Use item 218, App. C
P1-K1	P4-O	White/Black/Brown/Yellow Use item 219, App. C
P1-K2	P4-P	White/Black/Brown/Green Use item 220, App. C
P1-K3	P4-Q	White/Black/Brown/Blue Use item 221, App. C
P1-K4	P4-R	White/Black/Brown/Violet Use item 222, App. C
P1-K5	P4-S	White/Black/Brown/Gray Use item 227, App. C
P1-K6	P4-T	White/Black/Red/Orange Use item 228, App. C
P1-K7	P4-U	White/Black/Red/Yellow Use item 229, App. C
P1-K8	P4-V	White/Black/Red/Green Use item 230, App. C
P1-L1	P4-W	White/Black/Red/Blue Use item 231, App. C
P1-L2	P4-X	White/Black/Red/Violet Use item 232, App. C
P1-L3	P4-Y	White/Black/Red/Gray Use item 233, App. C
P1-L4	P4-Z	White/Black/Orange/Yellow Use item 234, App. C
P1-L5	P4-a	White/Black/Orange/Green Use item 235, App. C
P1-L6	P4-b	White/Black/Orange/Blue Use item 236, App. C
P1-L7	P4-c	White/Black/Orange/Violet Use item 237, App. C
P1-L8	P4-d	White/Black/Orange/Gray Use item 238, App. C
P1-M1	P4-e	White/Black/Yellow/Green Use item 239, App. C
P1-M2	P4-f	White/Black/Yellow/Blue Use item 240, App. C
P1-M3	P4-g	White/Black/Yellow/Violet Use item 241, App. C
P1-M4	P4-h	White/Black/Yellow/Gray Use item 242, App. C
P1-M5	P4-i	White/Black/Green/Blue Use item 243, App. C
P1-M6	P4-j	White/Black/Green/Violet Use item 244, App. C
P1-M7	P4-k	White/Black/Green/Gray Use item 245, App. C
P1-M8	P4-l	White/Black/Blue/Violet Use item 246, App. C
P1-N1	P4-m	White/Black/Blue/Gray Use item 247, App. C
P1-N2	P4-n	White/Black/Violet/Gray Use item 248, App. C
P1-N3	P4-o	White/Brown/Red/Orange Use item 249, App. C
P1-N4	P3-1	White/Brown/Red/Yellow Use item 250, App. C
P1-N5	P3-2	White/Brown/Red/Green Use item 251, App. C

4-115. Maintenance of Branched Wiring Harness, A3148095 (A10W1). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-N6	P3-3	White/Brown/Red/Blue Use item 252, App. C
P1-N7	P3-4	White/Brown/Red/Violet Use item 253, App. C
P1-N8	P3-5	White/Brown/Red/Gray Use item 254, App. C
P1-P1	P3-6	White/Brown/Orange/Yellow Use item 255, App. C
P1-P2	P3-7	White/Brown/Orange/Green Use item 256, App. C
P1 -P3	P3-8	White/Brown/Orange/Blue USe item 257, App. C
P1-P4	P2-1	Black Use item 148, App. C
P1 -P5	N/C	
P1-P6	N/C	
P1 -P7	N/C	
P1 -P8	N/C	

Section XXV. MAINTENANCE OF J-6003/G (TEST ADAPTER A12)

The following procedure is used to perform diagnostic testing of test adapter A12 used to test CCA-Display, 1A17A1A1, A3142328-1.

4-116. Required Test Accessories for Test Adapter A12.

The following test accessories are used to perform testing of the test adapter A12.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP2100030G
File No	A3142328F
● ICD A5	B4041573-2
● Test Adapter A12	A3148055-1
● 34 Pin Shorting Plug	A3148155-1

4-117. Test Procedures for Test Adapter A12.

- a. Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

- c. Load test program.
 - (1) Install test program tape CPIN CP2100030G in digital card test set in accordance with TM 11-6625-3038-10.
 - (2) Enter LOAD Ø, then press EXECUTE.
 - (3) When READY appears on the display, type RUN and press EXECUTE.

4-117. Test Procedures for Test Adapter A12. Cont

(4) Verify that the following information is printed:

```
>ENTER THE LAST FOUR  
>DIGITS OF THE UUT  
>P/N A314???-1  
>PRESS EXECUTE
```

THEN

```
>PRINT PROGRAM NOTES?  
>ENTER Y=YES, N=NO  
>PRESS EXECUTE.
```

(5) Follow operator actions as instructed by program.

- d. Run ATE survey test if desired. (If survey test fails, refer to TM 11-6625-3038-20.)
- e. Install Test Adapter A12 and ICD A5 on digital card tester (see figure 4-196 on page 4-378).
- f. Run ICD survey test.
- g. After testing do one of the following:
 - (1) If test adapter passes survey, exit program by pressing the ATTN key.
 - (2) If test adapter fails survey go to paragraph 4-118 on page 4-379.

4-117. Test Procedures for Test Adapter A12. Cont

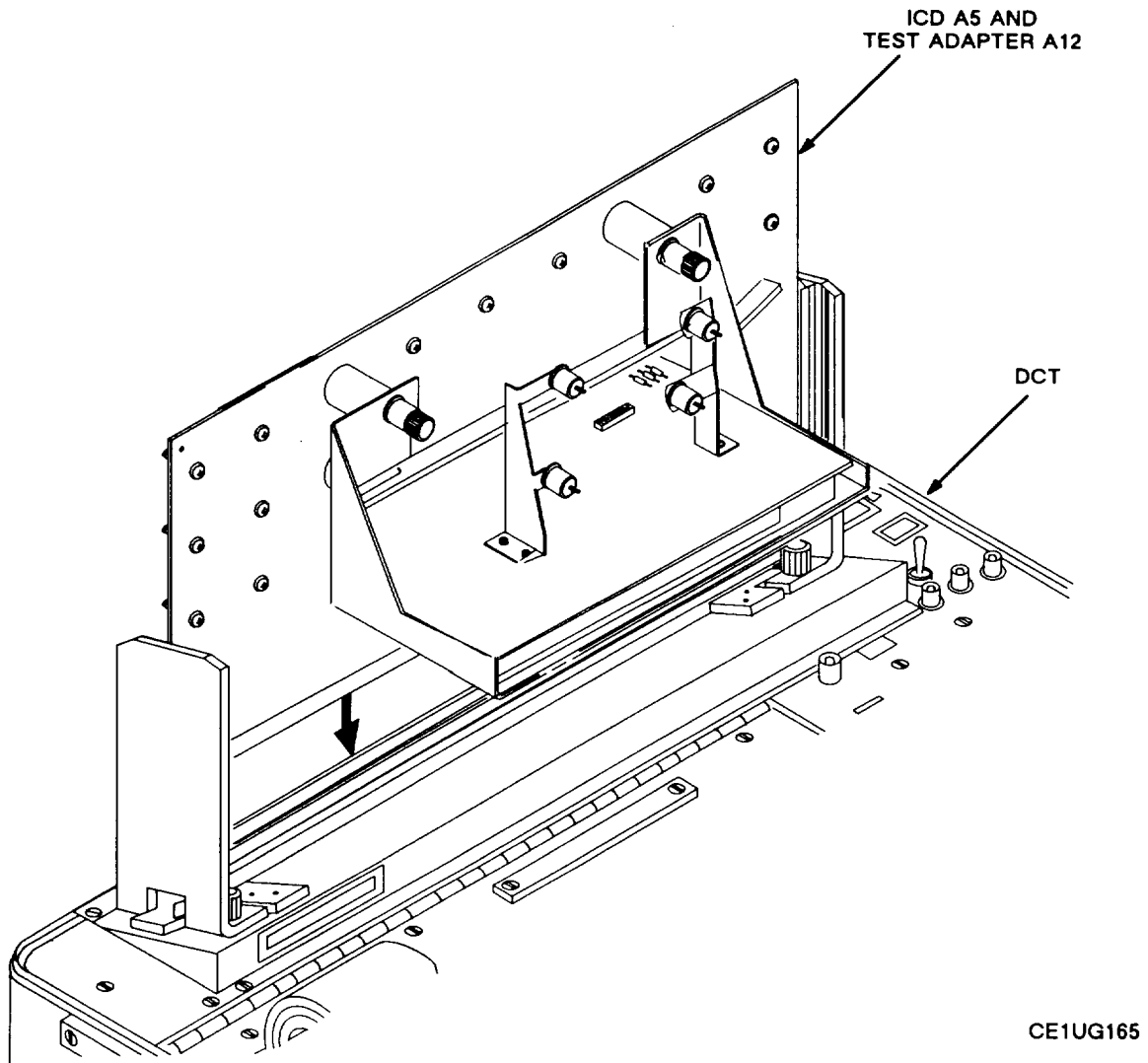


Figure 4-196. Installation ICD A5 with Test Adapter A12 on DCT

4-118. Maintenance Procedures for ECA-Test Adapter A12A1.

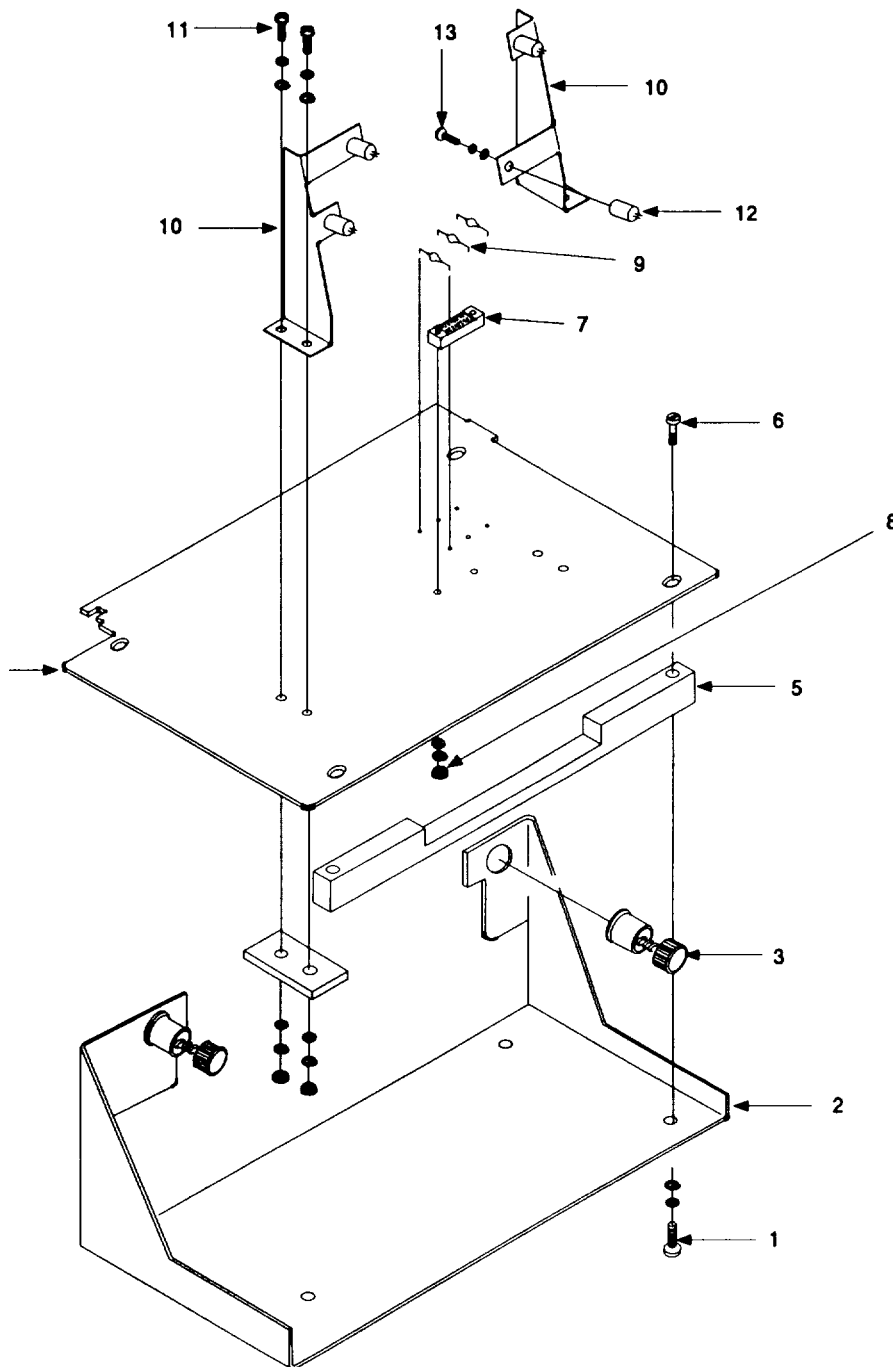
<p>INITIAL SETUP</p> <p>TEST EQUIPMENT: Digital Card Teeter AN/USM-465A (6625-01-126-2473) Multimeter AN/USM-486 (6625-01-145-2430)</p> <p>TOOLS: Tool Kit Electronic Equipment TK-105/G (5180-01-610-6817) Solder Repair Center PRC-151 (3439-01-109-8590)</p> <p>REFERENCES TM 11-5820-914-40 TM 11-6625-2773-10 TM 11-6625-3094-40P TB 43-0127</p> <p>PERSONNEL REQUIRED: 1</p>

ITEM	ACTION	REMARKS
a. Mounting Bracket (2)	Remove four screws (1), four flat washers, and four lock washers. Remove mounting bracket (2). Remove and replace panel screw assembly (3). Replace mounting bracket on CCA (4) using four screws, four flat washers, and four lock washers.	Refer to figure 4-197 on page 4-381. Refer to section XVII on page 4-270.
b. Space bar	Remove mounting bracket. Remove two screws (6). Replace spacer bar (5) and secure with two screws (6). Replace mounting bracket.	Refer to step a.
c. Connector J1 (7)	Remove mounting bracket. Remove two hex nuts (8), two lock washers, and two flat washers from connector (7). Unsolder 34 contacts from CCA (4). Remove connector. Obtain replacement connector (7).	Refer to step a. Refer to step a.

4-118. Maintenance Procedures for ECA-Test Adapter A12A1. Cont

ITEM	ACTION	REMARKS
d. Diodes (9)	Install new connector on CCA and secure with two lock washers, two flat washers, and two hex nuts. Solder 34 contacts to CCA. Replace mounting bracket. Remove mounting bracket. Unsolder defective diode from CCA.	Refer to step a. Refer to step a. Refer to figure 4-197 on page 4-381.
e. Electrical Card Holders (10)	Replace diode and solder to circuit card assembly. Replace mounting bracket. Remove mounting bracket. Remove two screws (11), two lock washers, four flat washers, two hex nuts, and insulator spacer. Replace card holder (10) and insulator spacer and secure with two screws (11), two lock washers, four flat washers, and two hex nuts.	Refer to step a. Refer to step a. Refer to figure 4-197 on page 4-381.
f. Insulator Spacers (12)	Replace mounting bracket. Remove screw (13), lock washer, and flat washer. Replace insulator spacer (12) and secure to card holder with screw (13), lock washer, and flat washer.	Refer to step a.

4-118. Maintenance Procedures for ECA-Test Adapter A12A1. Cont



EL9RG333

Figure 4-197. Maintenance of Test Adapter A12

4-118. Maintenance Procedures for ECA-Test Adapter A12A1. Cont

ITEM	ACTION	REMARKS
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g. Traces

Use the following schematic to troubleshoot test adapter A12.

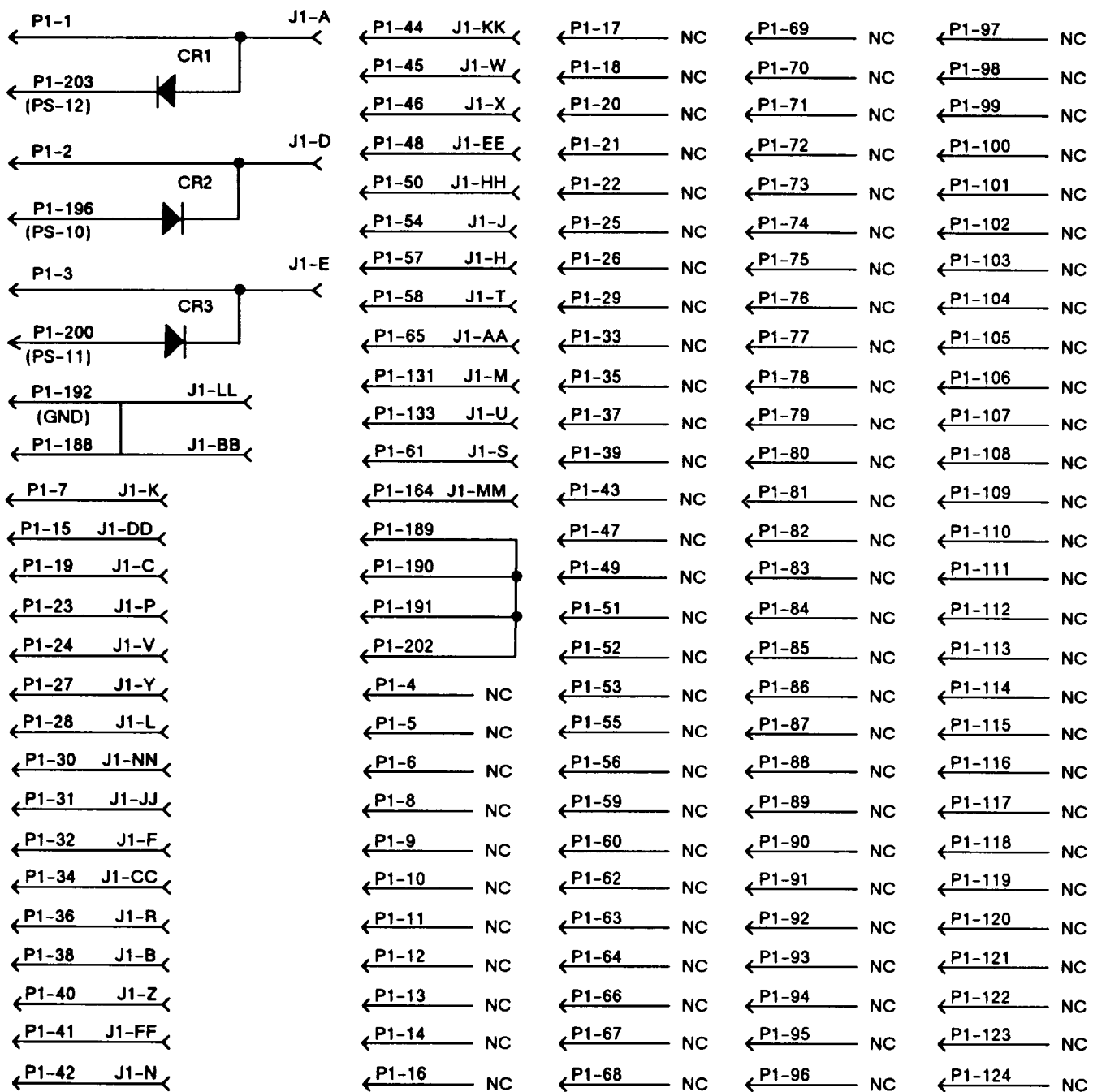


Figure 4-198. Schematic Diagram of Test Adapter A12 (Sheet 1 of 2)

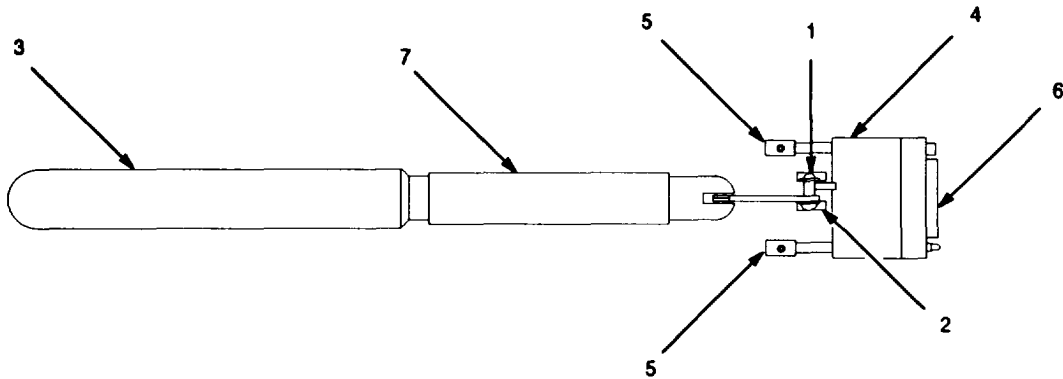
4-118. Maintenance Procedures for ECA-Test Adapter A12A1. Cont

← P1-125 NC	← P1-148 NC	← P1-170 NC	← P1-197 NC	← P1-221
← P1-126 NC	← P1-149 NC	← P1-171 NC	← P1-198 NC	← P1-222
← P1-127 NC	← P1-150 NC	← P1-172 NC	← P1-199 NC	← P1-223
← P1-128 NC	← P1-151 NC	← P1-173 NC	← P1-201 NC	← P1-224
← P1-129 NC	← P1-152 NC	← P1-174 NC	← P1-204 NC	← P1-225
← P1-130 NC	← P1-153 NC	← P1-175 NC	← P1-205 NC	← P1-226
← P1-132 NC	← P1-154 NC	← P1-176 NC	← P1-206 NC	← P1-227
← P1-134 NC	← P1-155 NC	← P1-177 NC	← P1-207 NC	← P1-228
← P1-135 NC	← P1-156 NC	← P1-178 NC	← P1-208 NC	← P1-229
← P1-136 NC	← P1-157 NC	← P1-179 NC	← P1-209 NC	← P1-230
← P1-137 NC	← P1-158 NC	← P1-180 NC	← P1-210 NC	← P1-231
← P1-138 NC	← P1-159 NC	← P1-181 NC	← P1-211 NC	← P1-232
← P1-139 NC	← P1-160 NC	← P1-182 NC	← P1-212 NC	← P1-233
← P1-140 NC	← P1-161 NC	← P1-183 NC	← P1-213 NC	← P1-234
← P1-141 NC	← P1-162 NC	← P1-184 NC	← P1-214 NC	← P1-235
← P1-142 NC	← P1-163 NC	← P1-185 NC	← P1-215 NC	← P1-236
← P1-143 NC	← P1-165 NC	← P1-186 NC	← P1-216 NC	← P1-237
← P1-144 NC	← P1-166 NC	← P1-187 NC	← P1-217 NC	← P1-238
← P1-145 NC	← P1-167 NC	← P1-193 NC	← P1-218 NC	← P1-239
← P1-146 NC	← P1-168 NC	← P1-194 NC	← P1-219 NC	← P1-240
← P1-147 NC	← P1-169 NC	← P1-195 NC	← P1-220 NC	

Figure 4-198. Schematic Diagram of Test Adapter A12 (Sheet 2 of 2)

4-119. Maintenance Procedures for Shorting Plugs.

ITEM	ACTION	REMARKS
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C910214

Figure 4-199. Maintenance of Shorting Plug

a. Connector Assembly Replacement

Remove two screws (1) and two halves of cable clamp (2) securing handle(3) to connector shield (4).

Remove two set screws holding jackscrew knobs (5) and remove jackscrews from connector shield (4).

Disassemble pin base (6) from connector shield.

Troubleshoot plug wires.

Refer to figure 4-199.

4-119. Maintenance Procedures for Shorting Plugs. Cont

ITEM	ACTION	REMARKS
------	--------	---------

Unsolder and replace damaged connecting wires, as required.

NOTE

If connector is not repairable, obtain replacement connector and solder new wire connections.

Install pin base (6) in connector shield (4) with two jackscrews.

Secure jackscrew knobs (5) by tightening set screws.

Secure handle (3) and cable clamp (2) to connector shield with two screws.

b. Handle Assembly Replacement

Remove two screws (1) securing handle (3) to connector shield and two halves of cable clamp (2).

Remove and discard damaged handle assembly.

Obtain replacement identification marker (7) and place on replacement handle.

Secure handle and cable clamp to connector shield with two screws.

4-120. Maintenance Procedures for 34 Pin Shorting Plug.

ITEM	ACTION	REMARKS
a. 34 Pin Connector Assembly Replacement		Refer to paragraph 4-119 on page 4-384.
b. Handle Assembly Replacement		Refer to paragraph 4-119 on page 4-304.
c. Wires	Use the following schematic for troubleshooting the 34-pin shorting plug.	

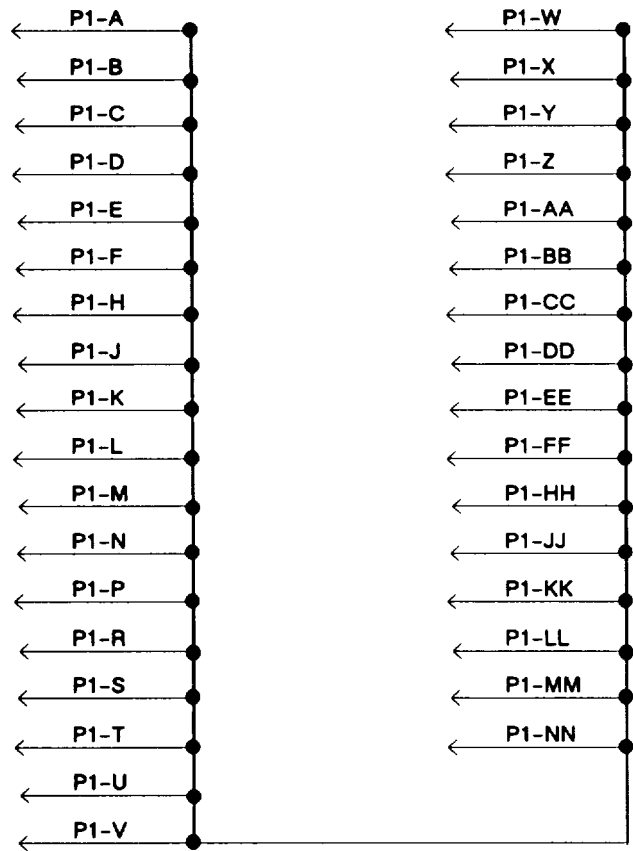


Figure 4-200. Schematic Diagram of 34 Pin Shorting Plug

Section XXVI. MAINTENANCE INSTRUCTIONS FOR J-6004/G (TEST ADAPTER A13)

The following procedure is used to perform diagnostic testing of test adapter A13 used to test the Chassis, Electrical Equipment-Receiver-Transmitter Subassembly (1A17A2) A3148159-1. This adapter is also used with J-6097/G, test adapter A16, to test the Chassis, Electrical Equipment-Control, Receiver-Transmitter Subassembly (19A13A2) A3167954-1.

4-121. Required Test Accessories for Test Adapter A13.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP2200030G
File No.	A3148159F
● ICD-A5	B4041573-2
● Test Adapter A13	A3148056-1
77 Pin Shorting Card	A3148087-2 (4 ea.)
61 Pin Shorting Card	A3148092-2 (2 ea.)
41 Pin Shorting Card	A3148096-2 (2 ea.)
33 Pin Shorting Card	A3148100-2 (2 ea.)
25 Pin Shorting Card	A3148104-2
17 Pin Shorting Card	A3148108-2 (3 ea.)
9 Pin Shorting Card	A3148112-2
34 Pin Shorting Plug	A3148155-1 (2 ea.)
29 Pin Shorting Plug	A3148156-1
27 Pin Shorting Plug	A3148157-1
14 Pin Shorting Plug	A3148158-1
Wiring Harness, Branched A13W1 with	A3148150-1
77 Pin Circuit Card	A3148087-1
Wiring Harness, Branched A13W2 with	A3148151-1
33 Pin Circuit Card	A3148100-1
61 Pin Circuit Card	A3148092-1
Wiring Harness, Branched A13W3 with	A3148152-1
25 Pin Circuit Card	A3148104-1
41 Pin Circuit Card	A3148096-1
Wiring Harness, Branched A13W4 with	A3148154-1
9 Pin Circuit Card	A3148112-1
17 Pin Circuit Card	A3148108-1

4-122. Test Procedures for Test Adapter A13.

- a. Turn on digital card tester AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3038-10.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

c. Load test program.

- (1) Install test program tape CPIN CP2200030G in digital card tester in accordance with TM 11-6625-3033-10.
- (2) Enter LOAD Ø, then press EXECUTE.
- (3) When READY appears on the display, type RUN and press EXECUTE.
- (4) verify that the following information is printed:

```
> ENTER THE LAST FOUR  
> DIGITS OF THE UUT  
> P/N - A313????-1  
> P/N - A314????-1  
> PRESS EXECUTE
```

THEN

```
> PRINT PROGRAM NOTES?  
> ENTER Y= YES, N= NO,  
> PRESS EXECUTE
```

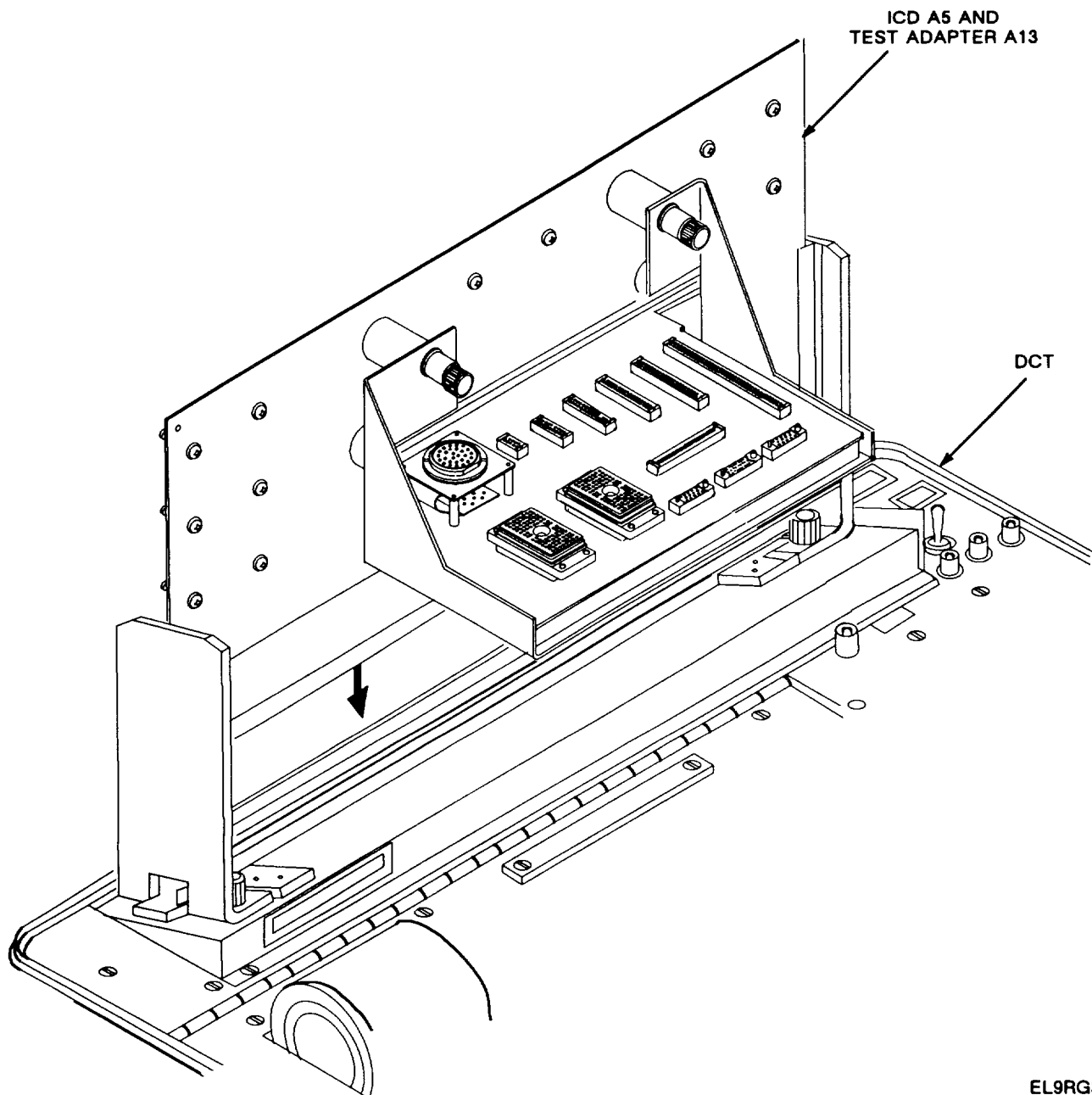
- (5) Follow operator instructions as indicated by program.
- d. Run ATE survey test if desired. (If survey test fails, refer to TM 11-6625-3038-20.)
 - e. Install Test Adapter A13 and ICD A5 on digital card tester (See figure 4-201 on page 4-389).

CAUTION

When performing tests with the Test Adapter A13, you must support the underside of the test adapter when installing and removing connectors to avoid damage to the test adapter or the ICD.

4-122. Test Procedures for Test Adapter A13. Cont

- f. Run ICD survey test if desired. Self -test requires that ICD cables be mated with connectors on the ICD backplane (See figures 4-202 and 4-203). Refer to paragraph 4-123 on page 4-392 if the ICD fails survey test.
- g. When test adapter passes continue with UUT testing.



EL9RG334

Figure 4-201. Installation of Test Adapter A13 with ICD A5 on DCT

4-122. Test Procedures for Test Adapter A13. Cont

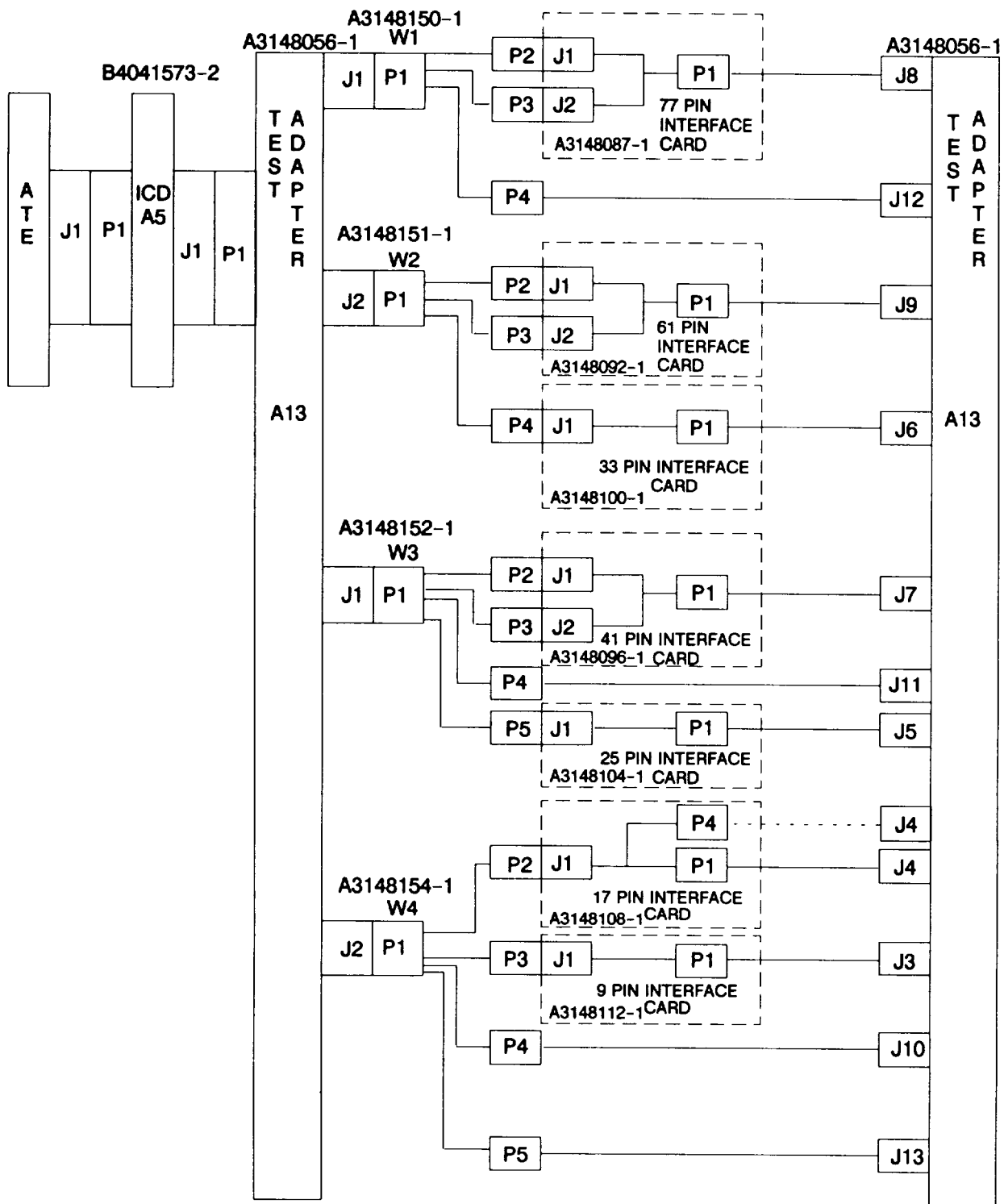


Figure 4-202. Self-Test Cable Installation Diagram

EL9RG335

4-122. Test Procedures for Test Adapter A13. Cont

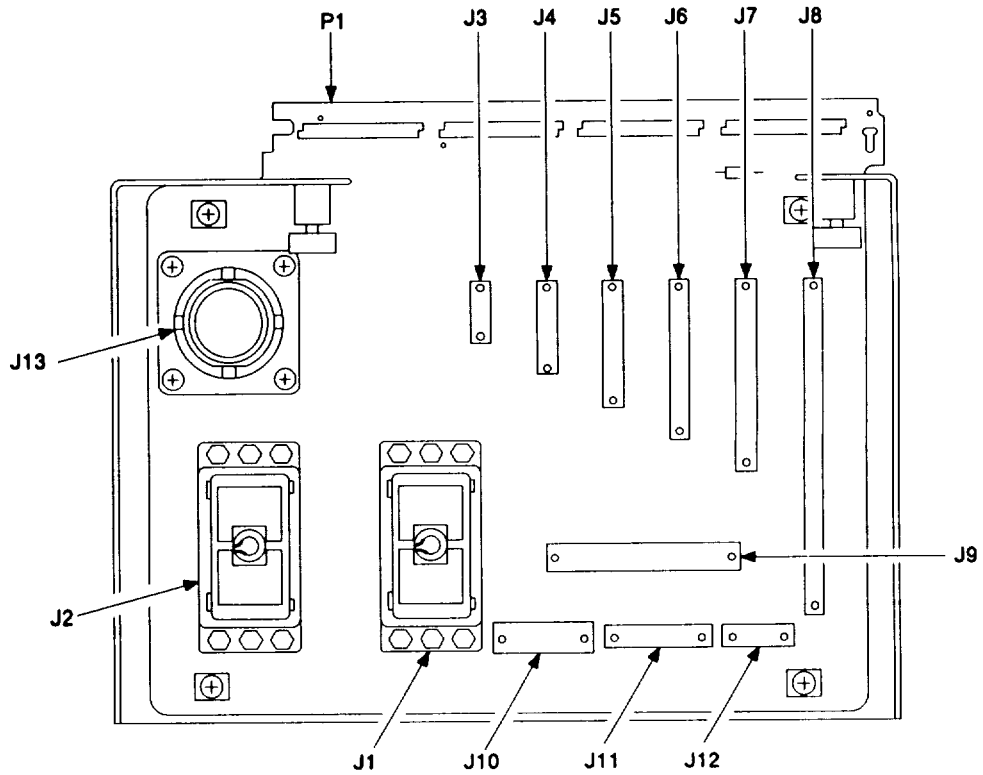


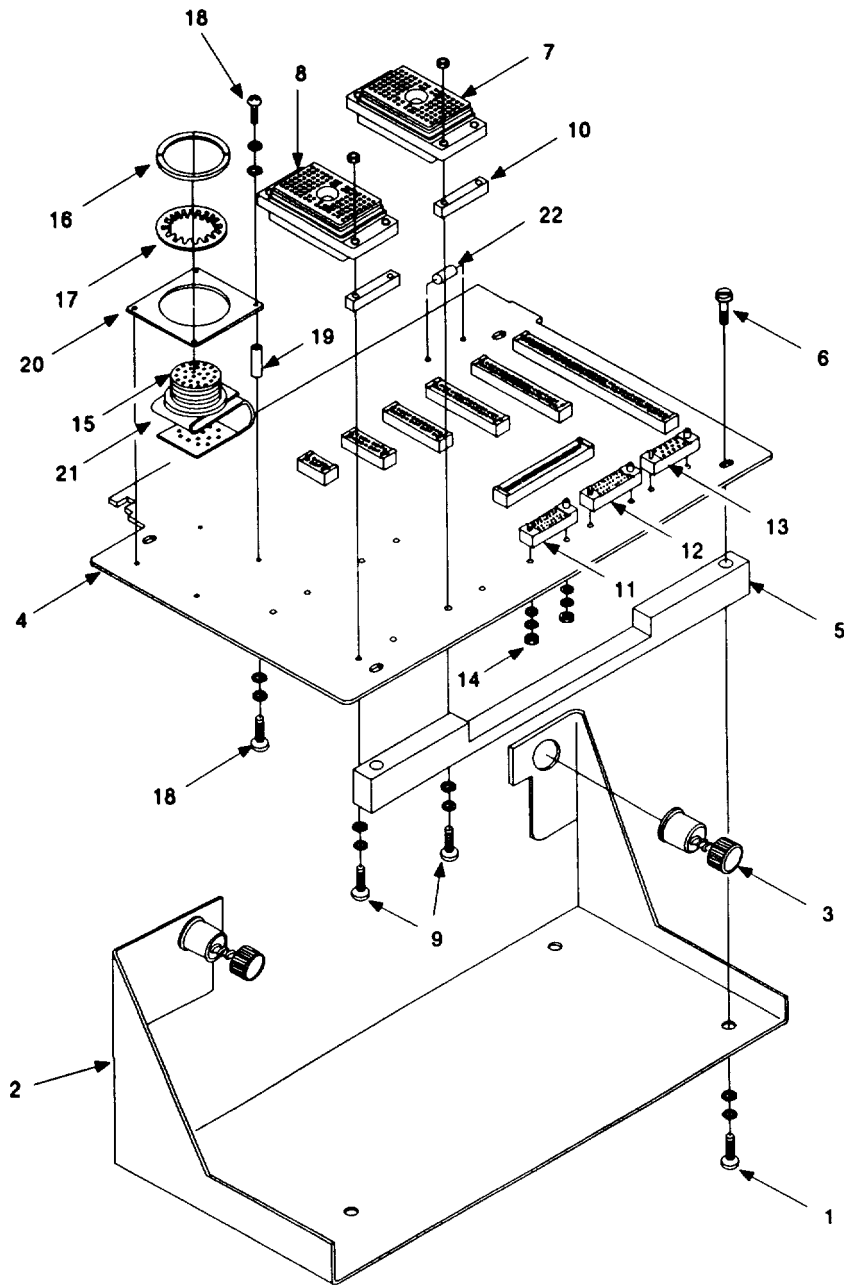
Figure 4-203. Test Adapter A13 Connector Layout for Testing

4-123. Maintenance Procedures for ECA-Test Adapter A13A1.

INITIAL SETUP	
TEST EQUIPMENT	TOOLS
Digital Card Tester AN/USM-465A (6625-01-126-2473)	Tool Kit Electronic Equipment TK-105/G (5160-01-610-6817)
Multimeter AN/USM-486 (6625-01-145-2430)	Solder Repair Center PRC-151 (3439-01-109-8590)
REFERENCES:	
TM 11-5820-914-40	
TM 11-6625-2773-10	
TM 11-6625-3094-40P	
TB 43-0127	
PERSONNEL REQUIRED:	

ITEM	ACTION	REMARKS
a.	Refer to FO-15 for schematic diagram of test adapter.	
b.	Mounting bracket (2) Remove four screws (1), four lock washers, and four flat washers. Remove mounting bracket (2). Remove and replace panel screw assembly (3). Replace mounting bracket on CCA (4) and secure with four screws (1), four lock washers, and four flat washers.	Refer to figure 4-204 on page 4-393. Refer to Section XVII on page 4-270.
c.	Spacebars Remove mounting bracket. Remove two screws (6). Replace spacer bar (5) and secure with two screws (6). Replace mounting bracket.	Refer to step b. Refer to step b.
d.	Connector J1 (7) or J2 (8) Remove mounting bracket. Remove four screws(9), four lock washers, four flat washers and four hex nuts. Remove two spacers (10). Replace spacers as required. Unsolder connector J1 (7) or J2 (8). Replace connector.	Refer to step b.

4-123. Maintenance Procedures for ECA-Test Adapter A13A1. Cont



C910218

Figure 4-204. Component Location for ECA-Test Adapter A13A1

4-123. Maintenance Procedures for ECA-Test Adapter A13A1. Cont

ITEM	ACTION	REMARKS
e. Connector J10 (11), J11 (12), and J12 (13)	Install two spacers and secure with four screws (9), four lock washers, four flat washers and four hex nuts.	
	Solder connector to CCA.	
	Replace mounting bracket.	Refer to step b.
	Remove mounting bracket.	Refer to step b.
f. Connector J13 (15)	Remove two lock washers, two flat washers, and two nuts (14).	
	Unsolder connector from CCA.	
	Replace connector and secure with two lock washers, two flat washers, and two nuts (14).	
	Solder connector to CCA.	
	Replace mounting bracket.	Refer to step b.
	Remove mounting bracket.	Refer to step b.
	Remove spanner nut (16) and internal-tooth washer (17).	
	Remove eight screws (18), eight lock washers, eight flat washers, four standoffs (19), and mounting plate (20).	
	Unsolder flex cable (21) from CCA (4).	
	Replace connector (15) and solder flex cable (21) to CCA (4).	
Reinstall connector (15) in mounting plate (20).		
Secure mounting plate (20) to CCA (4) with eight screws (18) through four standoffs (19), eight lock washers, and eight flat washers.		
Secure connector (15) to mounting plate (20) with spanner nut (16) and internal-toothed washer (17).		
g. Flex cable A13A1W1 (21)	Replace mounting bracket.	Refer to step b.
	Remove connector J13 (15).	Refer to step f.

4-123. Maintenance Procedures for ECA-Test Adapter A13A1. Cont

ITEM	ACTION	REMARKS
h. Diode CR1 (22)	Unsolder flex cable (21) from connector J13 (15). Replace flex cable (21) and solder to connector J13 (15). Replace connector J13 (15). Remove mounting bracket. Unsolder diode from circuit card. Replace diode CR1 (22) and solder to circuit card.	Refer to step f. Refer to step b.
i. ECA-Test Adapter A13	Install mounting bracket. Remove mounting bracket (2). Remove spacer bars (5). Remove connectors J1 (7) and J2 (8) Remove connectors J10 (11), J11 (12), and J12 (13). Remove connector J13 (15). Remove diode CR1 (22). Replace circuit card assembly. Install diode CR1 and solder to circuit card assembly. Install connector J13. Install connectors J10, J11, and J12. Install connector J1 and J2. Install spacer bars. Install mounting bracket.	Refer to step b. Refer to step b. Refer to step c. Refer to step d. Refer to step e. Refer to step f. Refer to step h. Refer to step h. Refer to step f. Refer to step e. Refer to step d. Refer to step c. Refer to step b.

4-124. Maintenance of Electronic Test Extender Cards-77 Pin, A3148087-1, -2 (A13A2).

ITEM	ACTION	REMARKS
------	--------	---------

NOTE

Electronic test extender card A3148087-2(A13A2) does not have connector J1, J2, or P1 installed. DO NOT install these connectors on test extender cards marked A3148087-2.

- | | |
|---------------|---|
| a. Handle (2) | <p>Remove two screws (1), four flat washers, two lock washers, and two hex nuts.</p> <p>Replace handle (2) and secure with two screws (1), four flat washers, two lock washers, and two hex nuts.</p> |
|---------------|---|

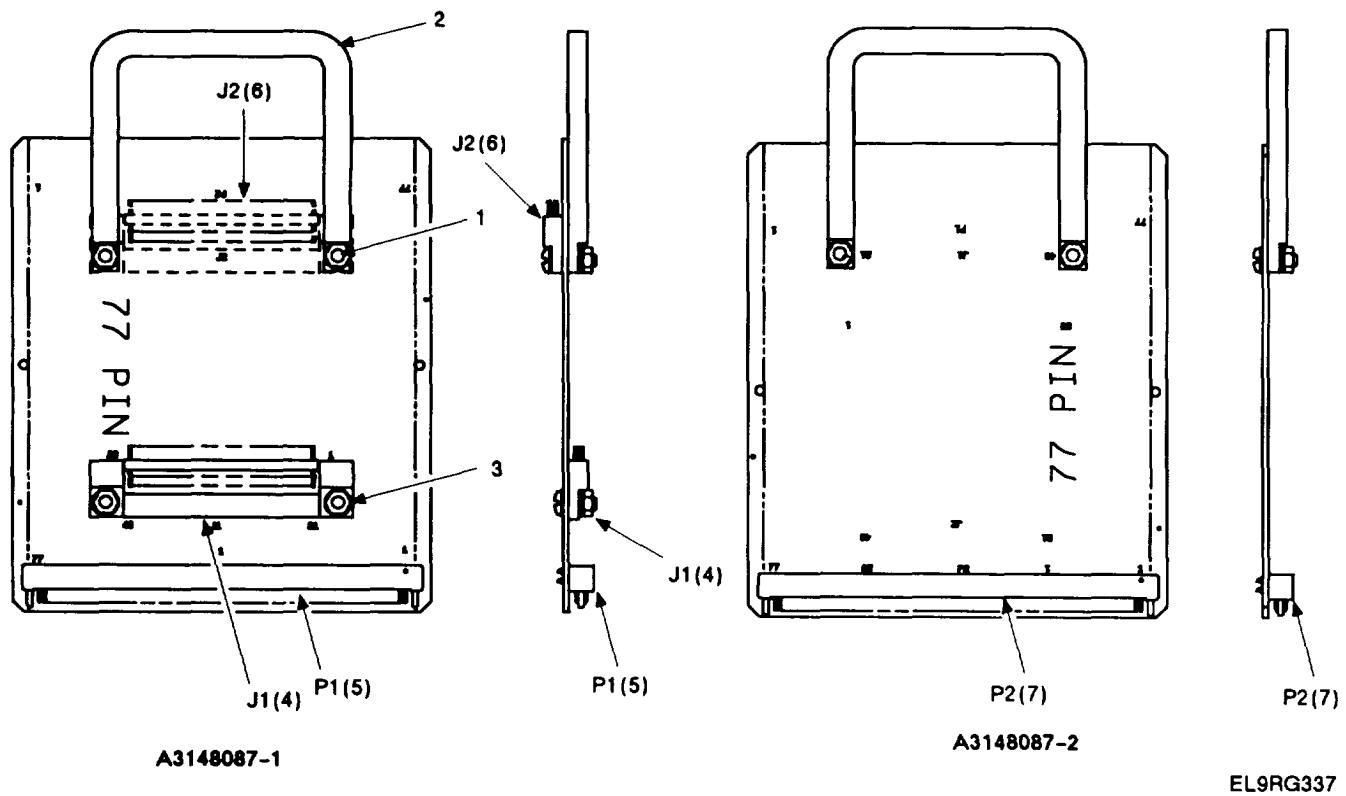


Figure 4-205. Electronic Test Extender Cards-77 Pin Connector Component Layout

4-124. Maintenance of Electronic Test Extender Cards-77 Pin, A3148087-1, -2 (A13A2). Cont

ITEM	ACTION	REMARKS
b. Connector J1 (4)	Unsolder connector from extender card. Replace connector J1 (4). Solder connector to extender card.	
c. Connector J2 (6)	Unsolder connector from extender card. Replace connector. Solder connector to extender card.	
d. Connector P1 (5), P2 (7)	These connectors are not replaceable.	
e. Traces	Troubleshoot the 77-pin electronic test extender card.	Refer to paragraph 4-95. b on page 4-319,

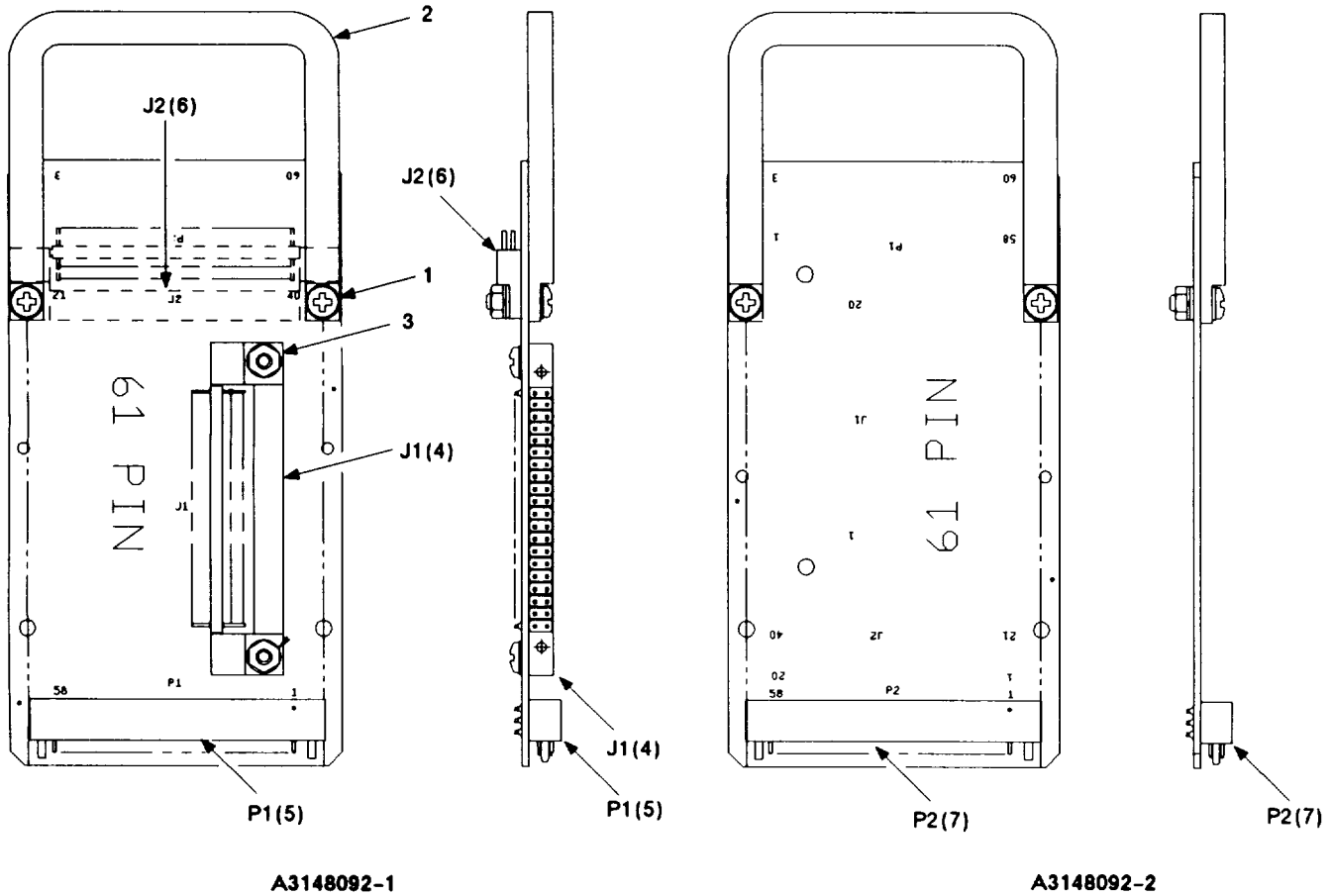
4-125. Maintenance of Electronic Test Extender Cards-61 Pin, A3148092-1, -2 (A13A3).

ITEM	ACTION	REMARKS
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NOTE

Electronic test extender card A3146092-2(A13A3) does not have connector J1, J2, or P1 installed. DO NOT install these connectors on test extender cards marked A3148092-2.

- | | | |
|---------------|---|---|
| a. Handle (2) | Remove two screws (1), four flat washers, two lock washers, and two hex nuts. | Replace handle (2) and secure with two screws (1), four flat washers, two lock washers, and two hex nuts, |
|---------------|---|---|



EL9RG338

Figure 4-206. Electronic Test Extender Cards-61 Pin Connector Component Layout

4-125. Maintenance of Electronic Test Extender Cards-61 Pin, A3148092-1, -2 (A13A3). Cont

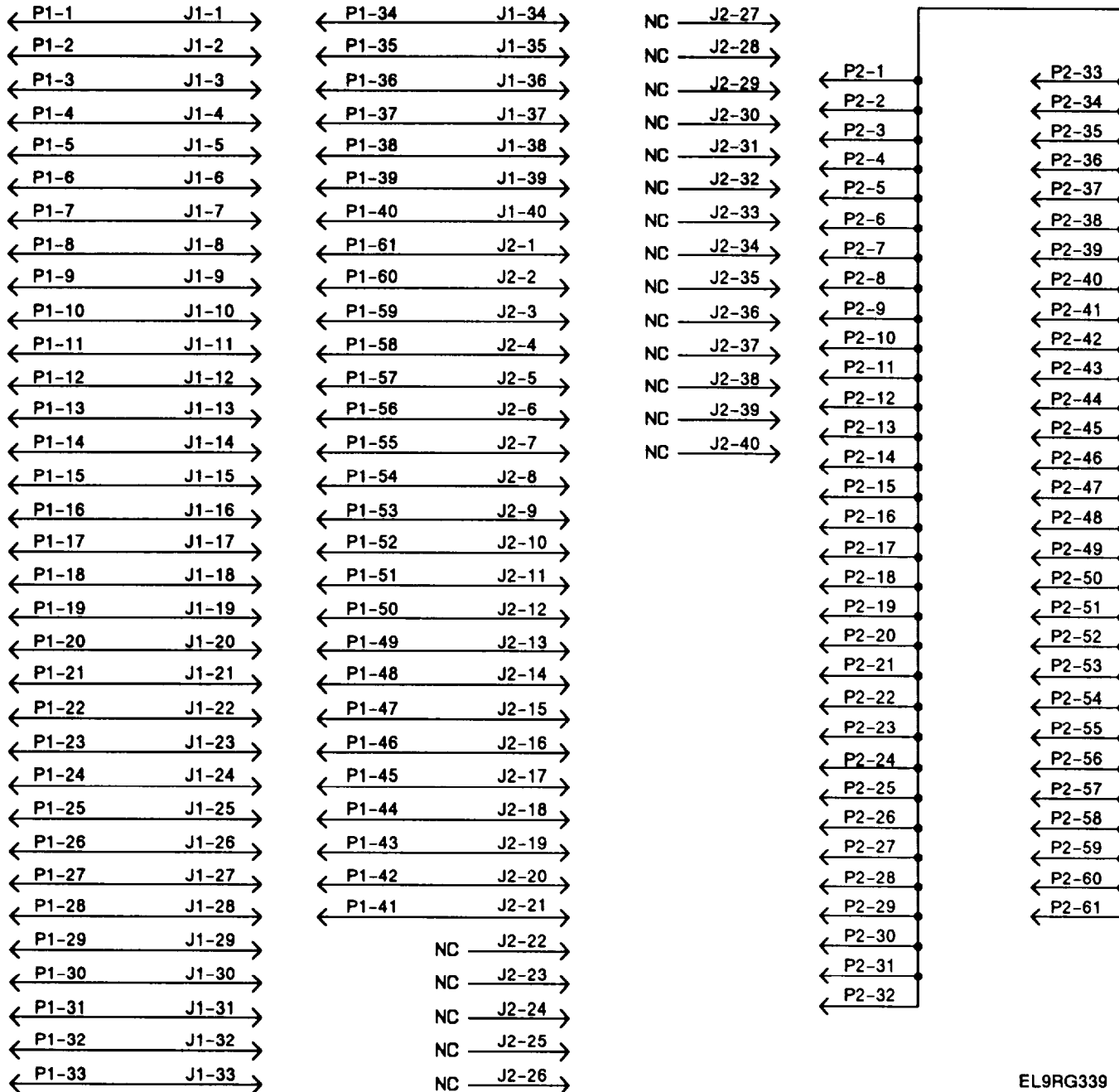
ITEM	ACTION	REMARKS
b. Connector J1 (4)	Unsolder connector from extender card. Replace connector J1 (4). Solder connector to extender card.	
c. Connector J2 (6)	Unsolder connector from extender card. Replace connector. Solder connector to extender card.	
d. Connector P1 (5), P2 (7)	These connectors are not replaceable.	

4-125. Maintenance of Electronic Test Extender Cards-61 Pin, A3148092-1, -2 (A13A3). Cont

ITEM	ACTION	REMARKS
------	--------	---------

e. Traces

Use the following schematic for troubleshooting a 61-pin test extender card.



EL9RG339

Figure 4-207. Schematic Diagram of Electronic Test Extender Cards-61 Pin

4-126. Maintenance of Electronic Test Extender Cards-41 Pin, A3148096-1, -2 (A13A4).

ITEM	ACTION	REMARKS
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NOTE

Electronic test extender card A3148096-2(A13A4) does not have connector J1, J2, or P1 installed. DO NOT install these connectors on test extender cards marked A3148096-2.

- a. Handle (2) Remove two screws (1), four flat washers, two lock washers, and two hex nuts. Replace handle (2) and secure with two screws (1), four flat washers, two lock washers, and two hex nuts.

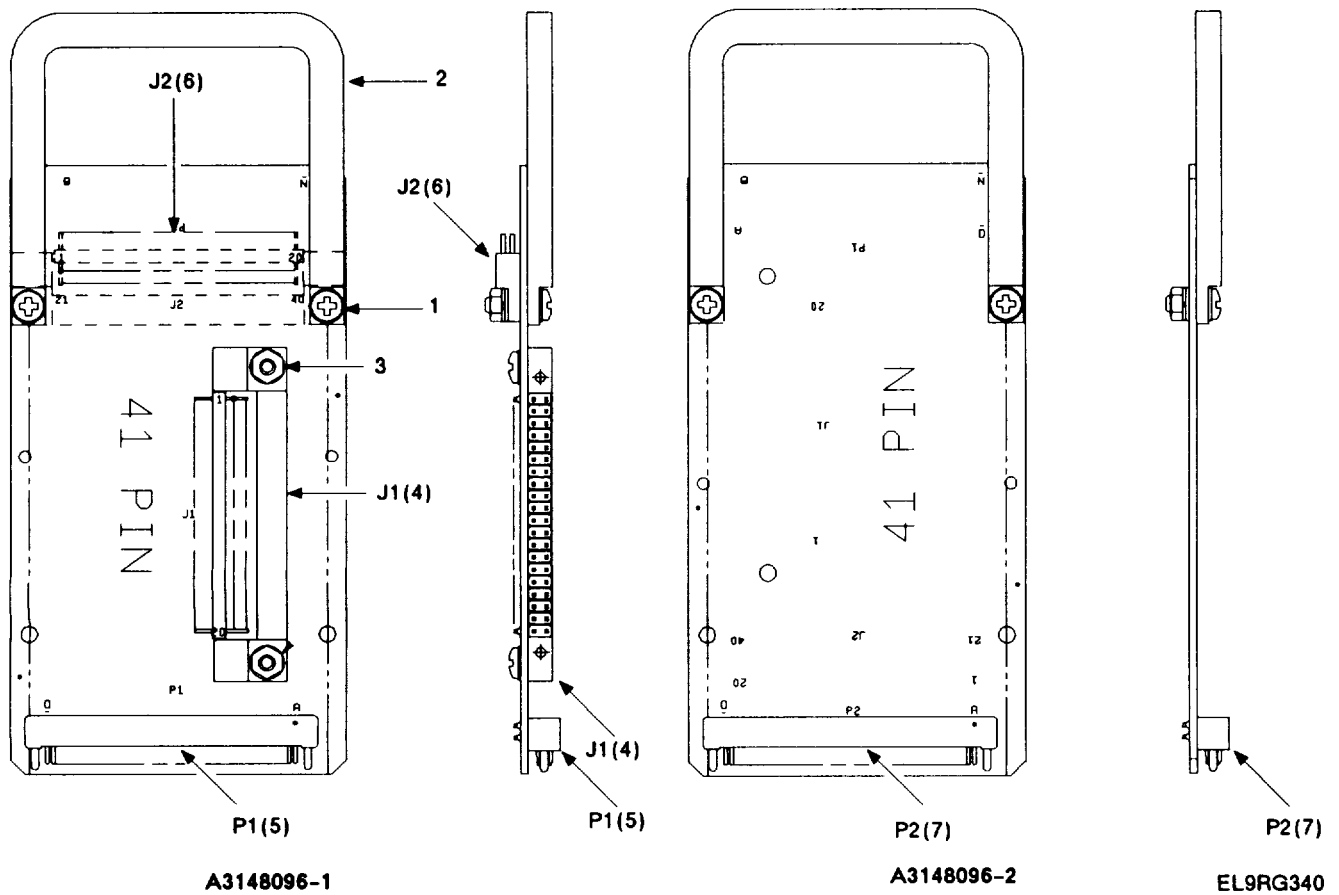


Figure 4-208. Electronic Test Extender Cards-41 Pin Connector Component Layout

4-126. Maintenance of Electronic Test Extender Cards-41 Pin, A3148096-1, -2 (A13A4). Cont

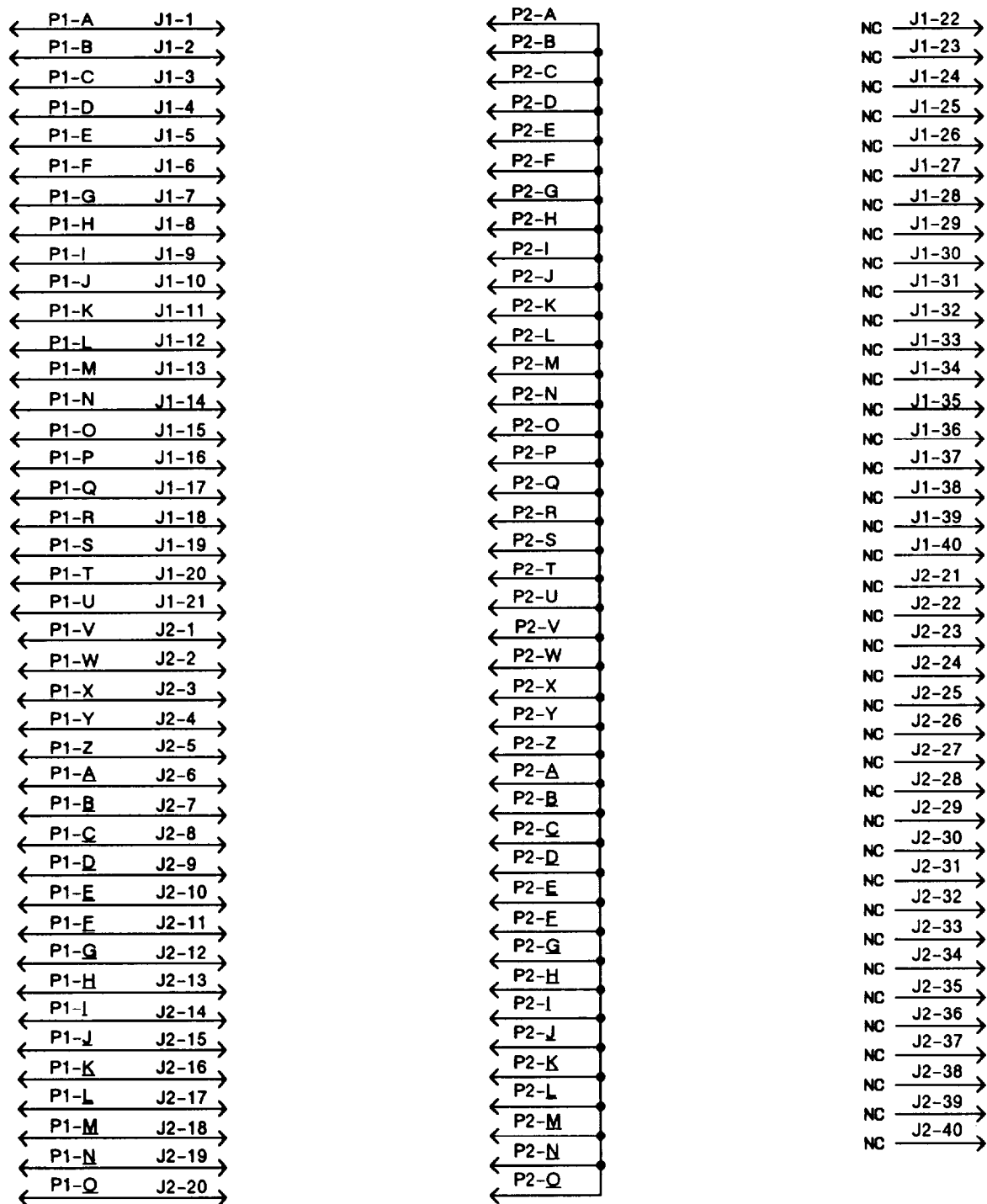
ITEM	ACTION	REMARKS
b. Connector J1 (4)	Unsolder connector from extender card. Replace connector J1 (4). Solder connector to extender card.	
c. Connector J2 (6)	Unsolder connector from extender card. Replace connector. Solder connector to extender card.	
d. Connector P1 (5), P2 (7)	These connectors are not replaceable.	

4-126. Maintenance of Electronic Test Extender Cards-41 Pin, A3148096-1, -2 (A13A4). Cont

ITEM	ACTION	REMARKS
------	--------	---------

e. Traces

Use the following schematic for troubleshooting a 41-pin test extender card.



EL9RG341

Figure 4-209. Schematic Diagram of Electronic Extender Cards-41 Pin

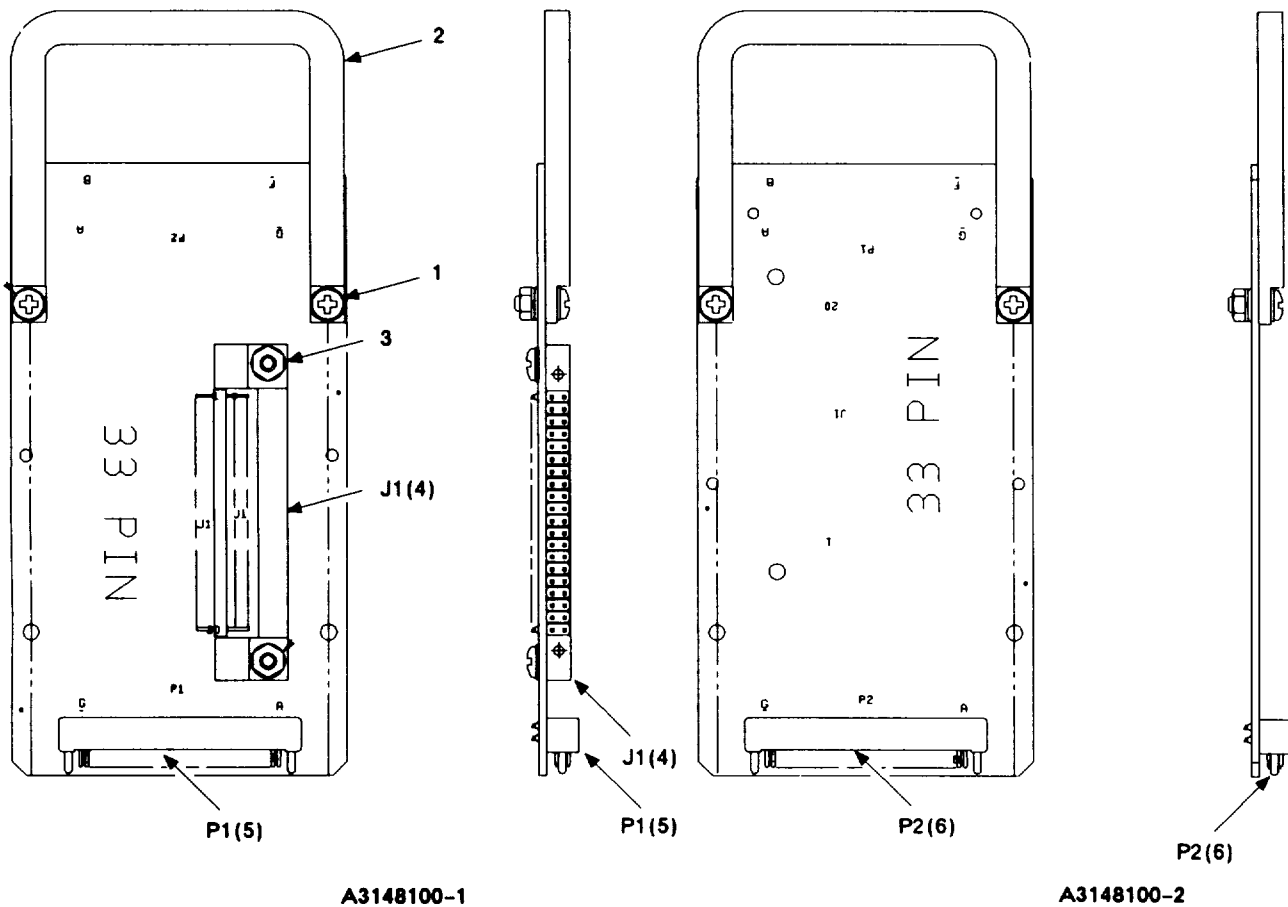
4-127. Maintenance of Electronic Test Extender Cards-33 Pin, A3148100-1, -2 (A13A5).

ITEM	ACTION	REMARKS
------	--------	---------

NOTE

Electronic test extender card A3148100-2(A13A5) does not have connector J1, or P1 installed. DO NOT install these connectors on test extender cards marked A3148100-2.

- a. Handle (2) Remove two screws(1), four flat washers, two lock washers, and two hex nuts.
 Replace handle (2) and secure with two screws (1), four flat washers, two lock washers, and two hex nuts.



EL9RG342

Figure 4-210. Electronic Test Extender Cards-33 Pin Connector Component Layout

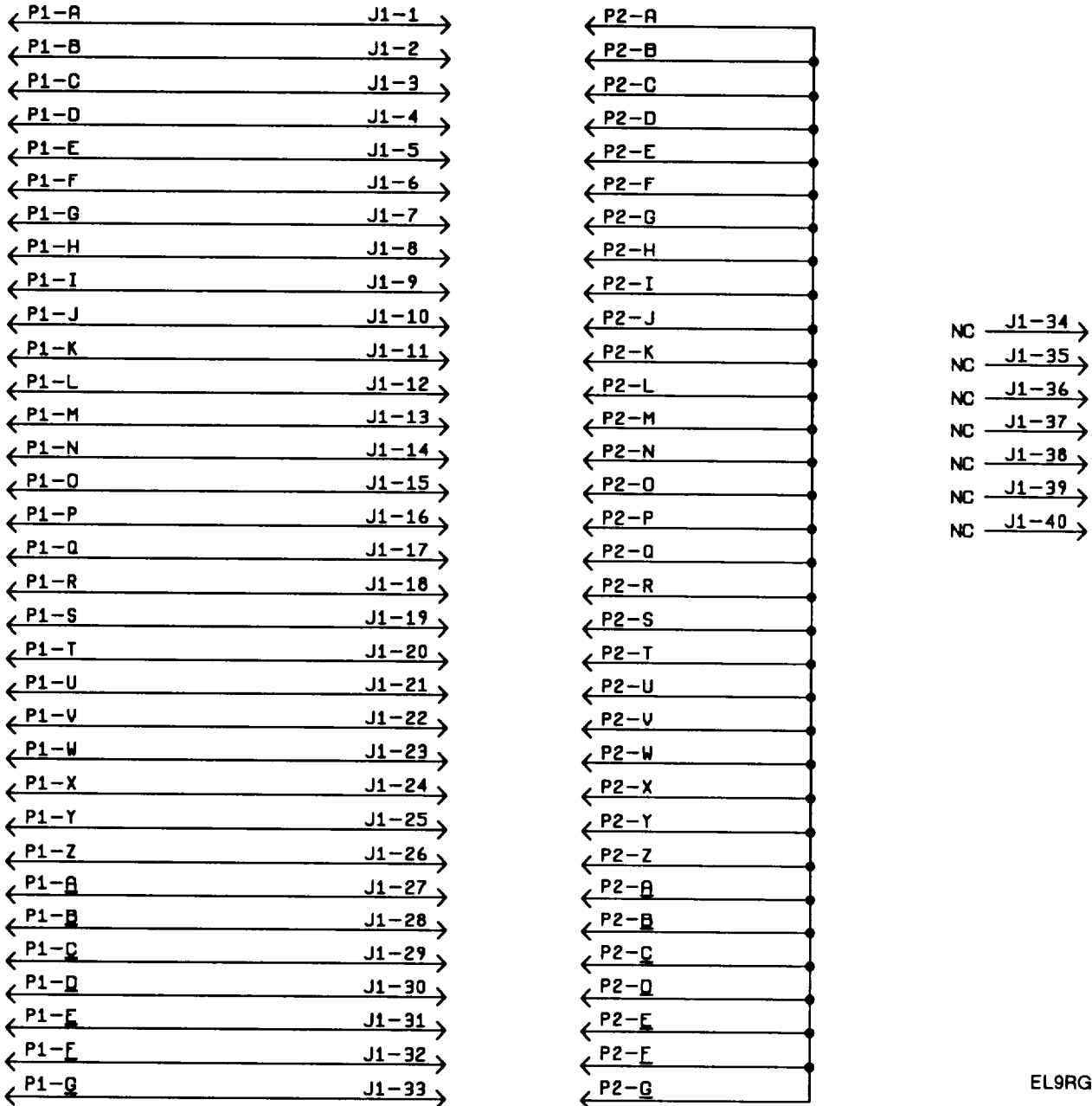
4-127. Maintenance of Electronic Test Extender Cards-33 Pin, A3148100-1, -2 (A13A5). Cont

ITEM	ACTION	REMARKS
b. Connector J1 (4)	Unsolder connector from extender card. Replace connector J1 (4). Solder connector to extender card.	
c. Connector P1 (5), P2 (6)	These connectors are not replaceable.	

4-127. Maintenance of Electronic Test Extender Cards-33 Pin, A3148100-1, -2 (A13A5). Cont

ITEM	ACTION	REMARKS
------	--------	---------

d. Traces Use the following schematic for troubleshooting a 33-pin test extender card.



EL9RG343

Figure 4-211. Schematic Diagram of Electronic Test Extender Cards-33 Pin

4-128. Maintenance of Electronic Test Extender Cards-25 Pin, A3148104-1, -2 (A13A6).

ITEM	ACTION	REMARKS
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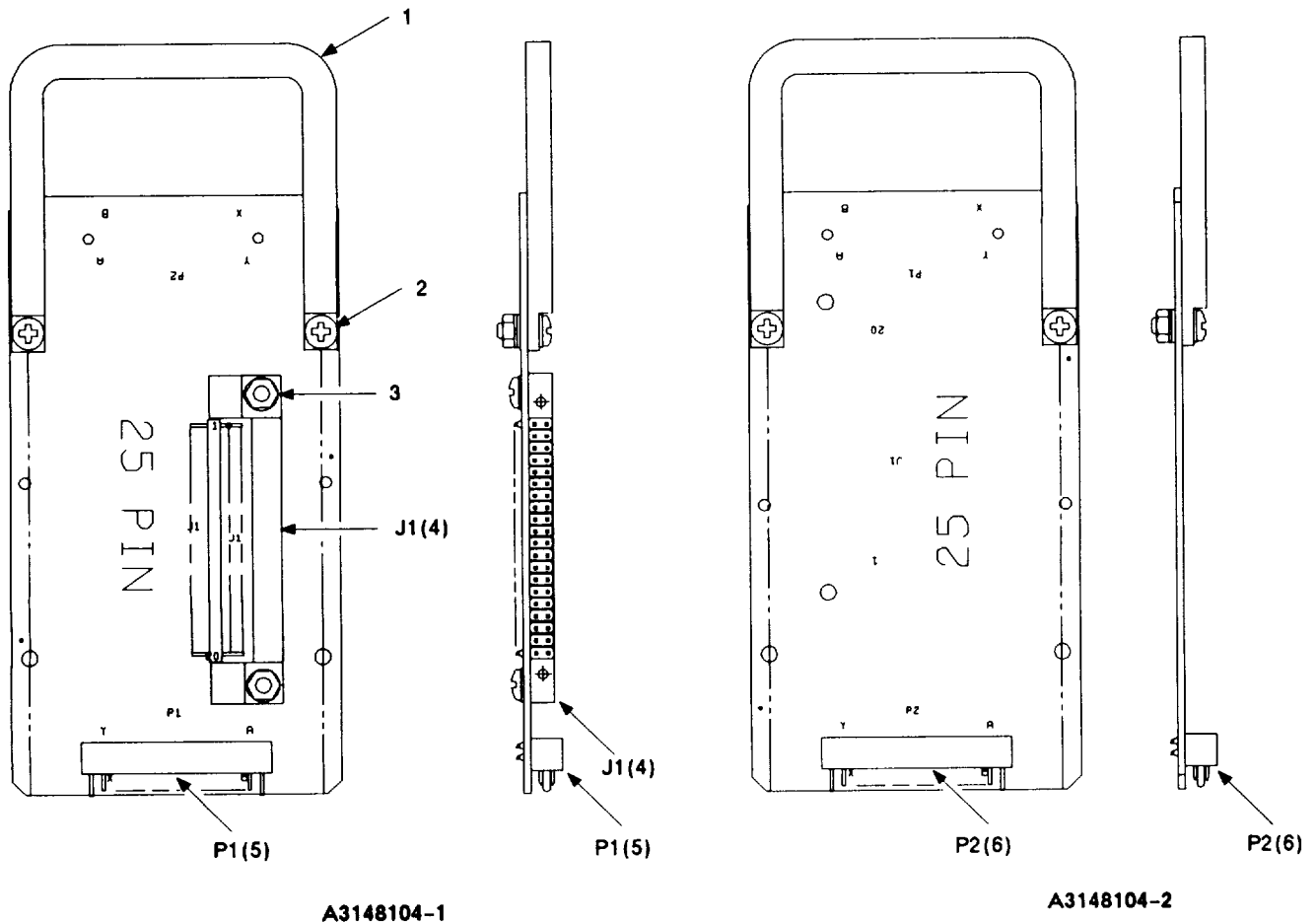
NOTE

Electronic test extender card A3148104-2(A13A6) does not have connector J1 or P1 installed. DO NOT install these connectors on test extender cards marked A3148104-2.

a. Handle (1)

Remove two screws(2), four flat washers, two lock washers, and two hex nuts.

Replace handle (1) and secure with two screws (2), four flat washers, two lock washers and two hex nuts.



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Figure 4-212. Electronic Test Extender Cards-25 Pin Connector Component Layout

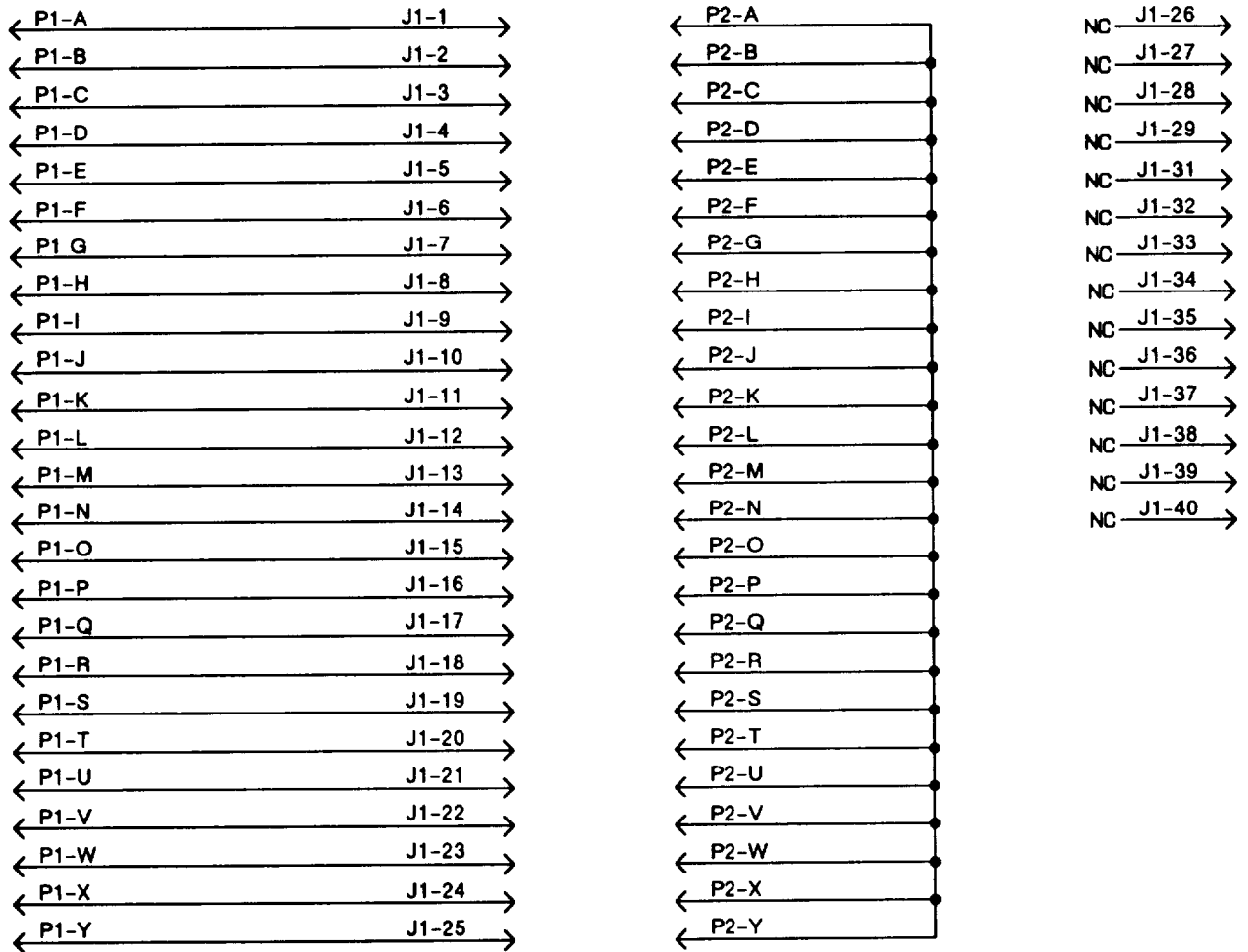
4-128. Maintenance of Electronic Test Extender Cards-25 Pin, A3148104-1, -2 (A13A6). Cont

ITEM	ACTION	REMARKS
b. Connector J1 (4)	Unsolder connector from extender card. Replace connector J1 (4). Solder connector to extender card.	
c. Connector P1 (5), P2 (6)	These connectors are not replaceable.	

4-128. Maintenance of Electronic Test Extender Cards-25 Pin, A3148104-1, -2 (A13A6). Cont

ITEM	ACTION	REMARKS
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d. Traces Use the following schematic for troubleshooting a 25-pin test extender card.



EL9RG345

Figure 4-213. Schematic Diagram of Electronic Test Extender Cards-25 Pin

4-129. Maintenance of Electronic Test Extender Cards-17 Pin, A3148108-1, -2 (A13A7).

ITEM	ACTION	REMARKS
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NOTE

Electronic test extender card A3148108-2(A13A7) does not have connectors J1 or P1 installed. DO NOT install these connectors on test extender cards marked A3148108-2.

- a. Handle (2) Remove two screws (1), four flat washers, two lock washers, and two hex nuts. Replace handle (2) and secure with two screws (1), four flat washers, two lock washers, and two hex nuts.

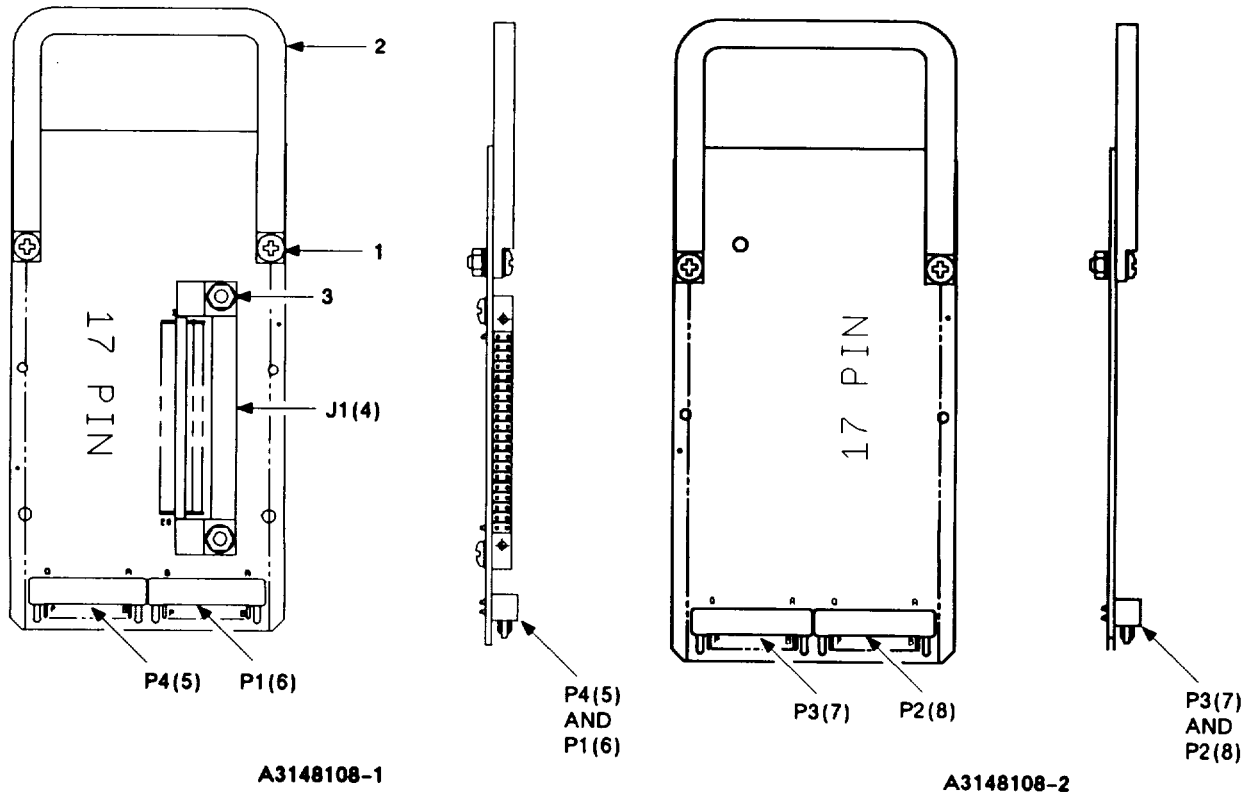


Figure 4-214. Electronic Test Extender Cards-17 Pin Connector Component Layout

4-129. Maintenance of Electronic Test Extender Cards-17 Pin, A3148108-1, -2 (A13A7). Cont

ITEM	ACTION	REMARKS
b. Connector J1 (4)	Unsolder connector from extender card. Replace connector J1(4). Solder connector to extender card.	
c. Connector P1 (6), P2 (8), P3 (7) , P4 (5)	These connectors are not replaceable.	

4-129. Maintenance of Electronic Test Extender Cards-17 Pin, A3148108-1, -2 (A13A7). Cont

ITEM	ACTION	REMARKS
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d. Traces

Use the following schematic for troubleshooting a 17-pin test extender card.

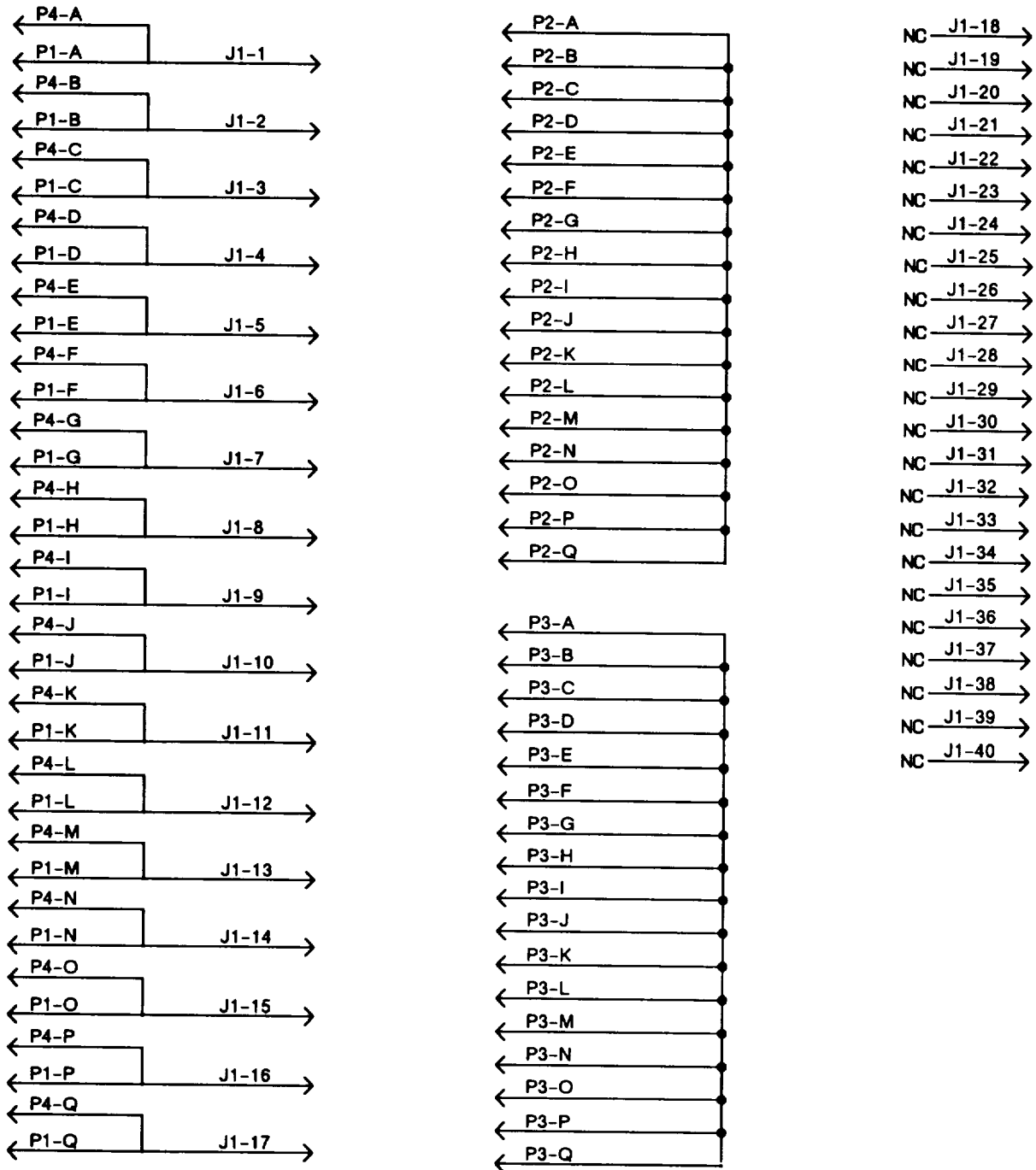


Figure 4-215. Schematic Diagram of Electronic Test Extender Cards-17 Pin

4-130. Maintenance of Electronic Test Extender Cards-9 Pin, A3148112-1, -2 (A13A8).

ITEM	ACTION	REMARKS
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NOTE

Electronic test extender card A3148112-2(A13A8) does not have connector J1 or P1 installed. DO NOT install these connectors on test extender cards marked A3148112-2.

- a. Handle (1) Remove two screws (2), four flat washers, two lock washers, and two hex nuts. Replace handle (1) and secure with two screws (2), four flat washers, two lock washers, and two hex nuts.

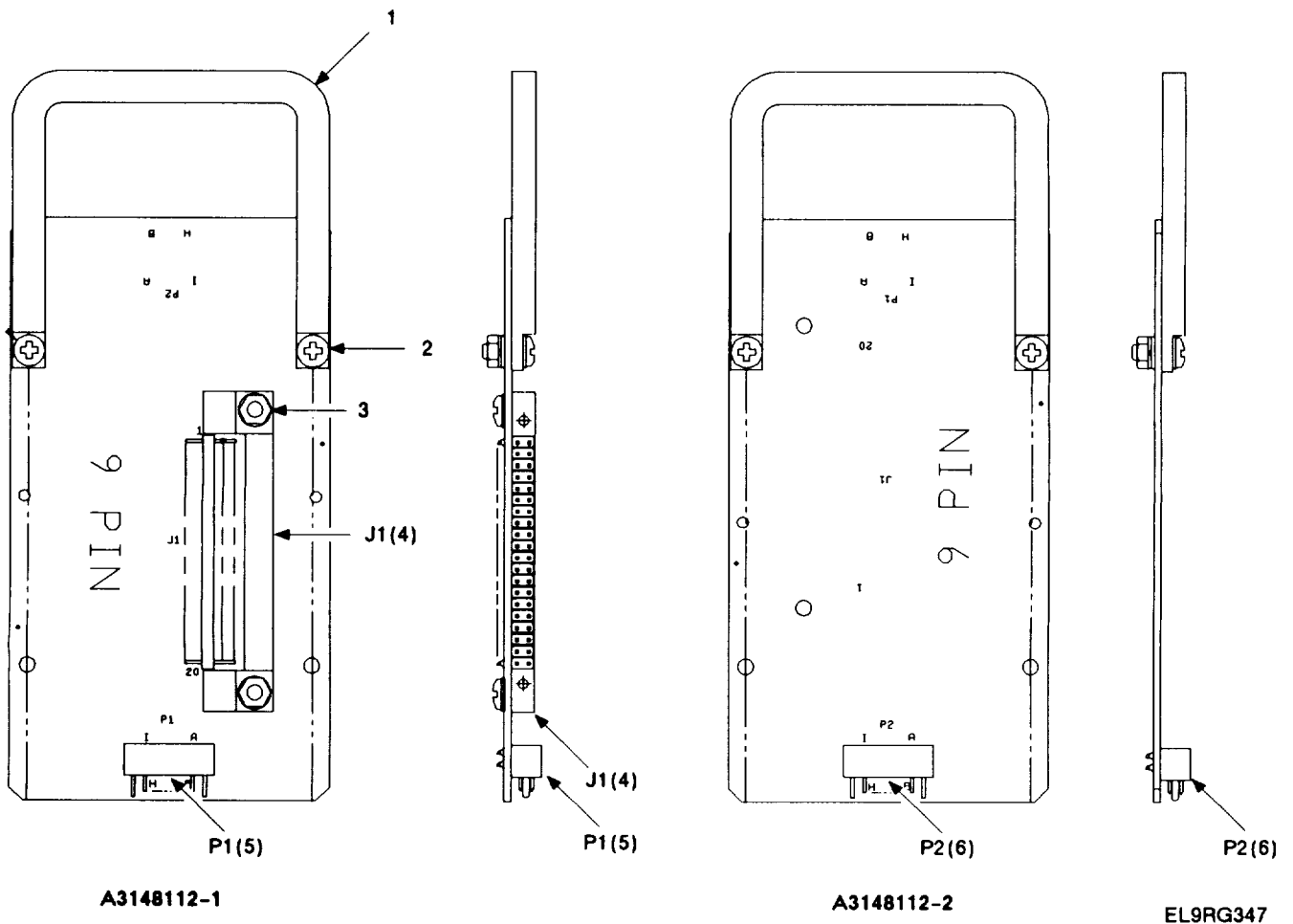
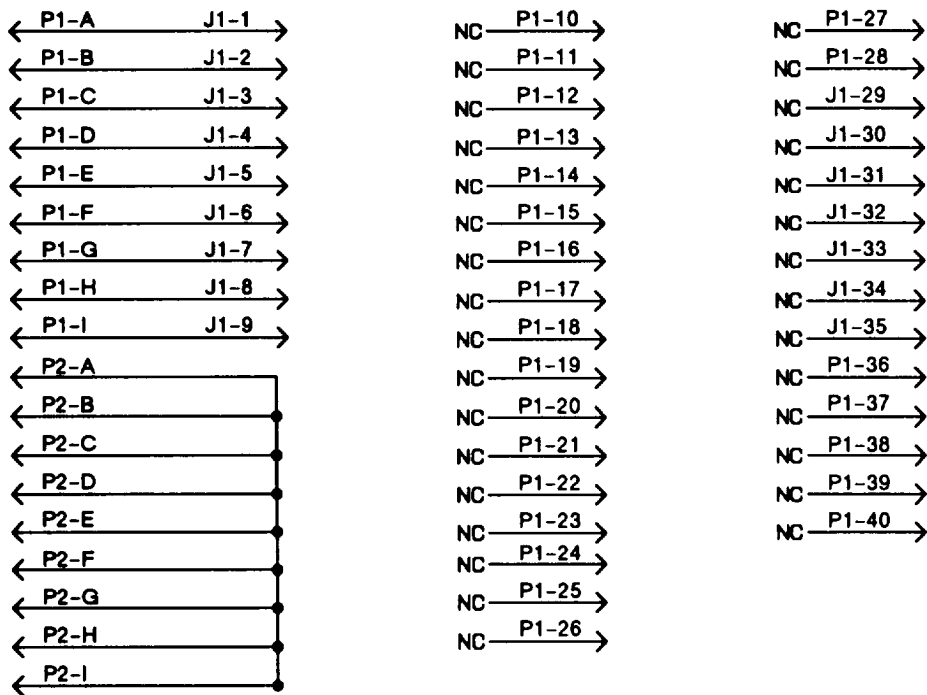


Figure 4-216. Electronic Test Extender Cards-9 Pin Connector Component Layout

4-130. Maintenance of Electronic Test Extender Cards-9 Pin, A3148112-1, -2 (A13A8). Cont

ITEM	ACTION	REMARKS
b. Connector J1 (4)	Unsolder connector from extender card. Replace connector J1 (4). Solder connector to extender card.	
c. Connector P1 (5) ,P2 (6)	These connectors are not replaceable.	
d. Traces	Use the following schematic for troubleshooting a 9-pin test extender card.	



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Figure 4-217. Schematic Diagram for Electronic Extender Cards-9 Pin

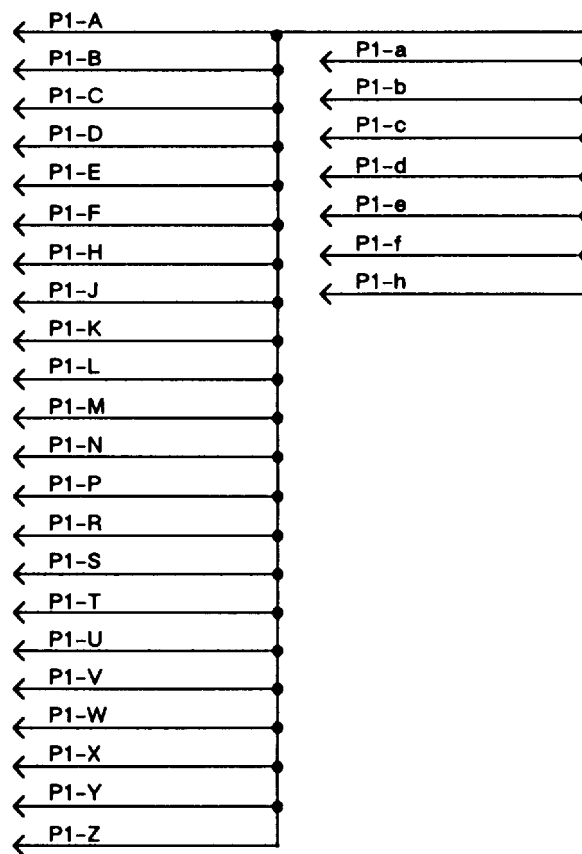
4-131. Maintenance of Dummy Connector Plug-29 Pin, A3148156-1.

- a. 29-Pin Connector Assembly Replacement
- b. Handle Assembly Replacement
- c. Wires

Refer to paragraph 4-119 on page 4-384.

Refer to paragraph 4-119 on page 4-384.

Use the following schematic for troubleshooting the 29-pin shorting plug.



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Figure 4-218. Schematic Diagram for Dummy Connector Plug-29 Pin

4-132. Maintenance of Dummy Connector Plug-27 Pin, A3148157-1.

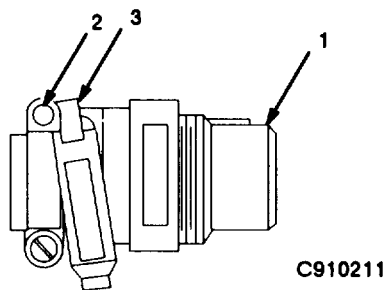


Figure 4-219. Maintenance of 27 Pin Dummy Connector Plug

ITEM	ACTION	REMARKS
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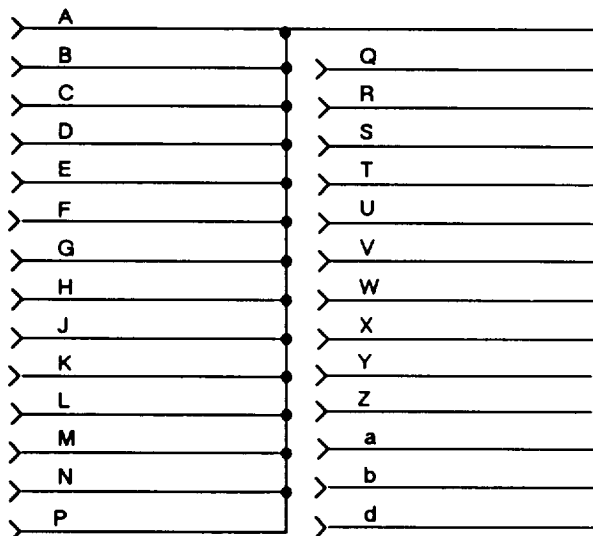
- | | | |
|--|---|--|
| a. Connector Receptacle (1)
Replacement | Unscrew cable clamp (2) from connector receptacle (1).
Troubleshoot connecting wires.
Unsolder and replace damaged connecting wires, as required. | |
|--|---|--|

NOTE

If connector is not repairable, obtain replacement connector and solder new wire connections.

Reassemble connector clamp and connector receptacle.

- | | | |
|---------------------------------------|---|----------------------|
| b. Connector Clamp (2)
Replacement | Unscrew connector clamp (2) from connector receptacle (1).
Replace connector clamp and reassemble to connector receptacle. | |
| c. Tiedown Strap(3) | Replace as required. | Use item 262, App. C |
| d. Wires | | |



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Figure 4-220. Schematic Diagram for Dummy Connector Plug-27 Pin

4-133. Maintenance of Dummy Connector Plug-14 Pin, A3148158-1.

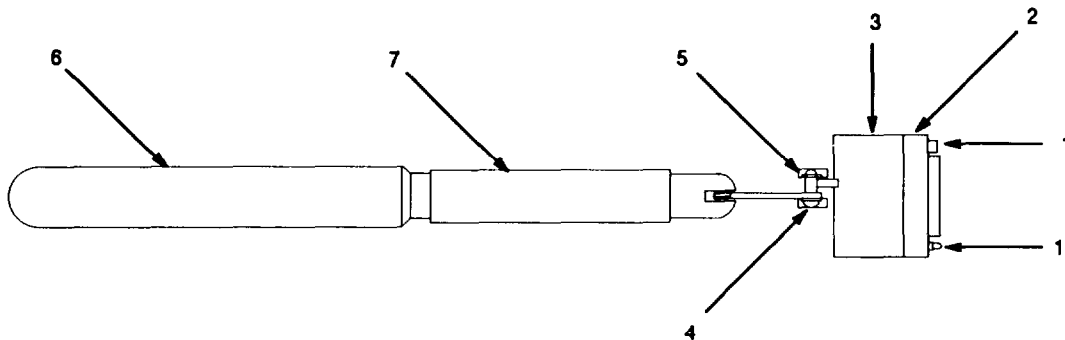
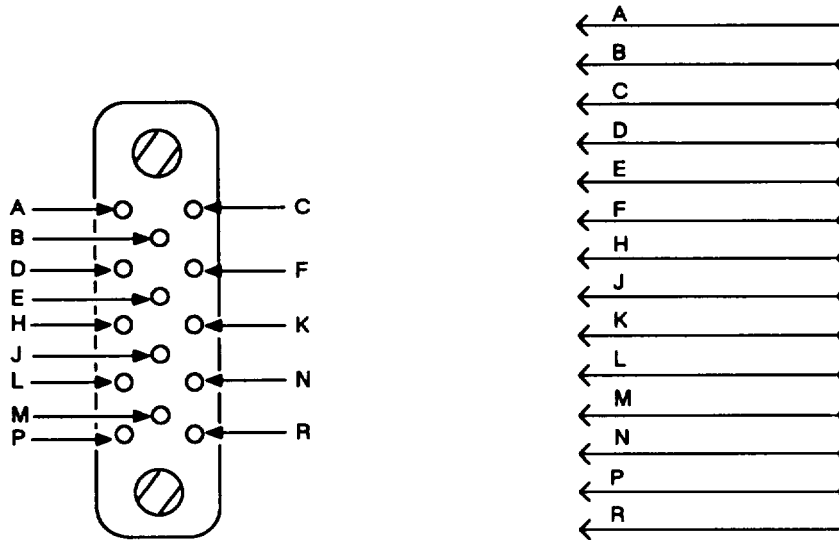


Figure 4-221. Components of 14 Pin Dummy Connector Plug

ITEM	ACTION	REMARKS
a. 14-Pin Connector Assembly Replacement	Remove two jackscrews (1) securing pin base (2) to connector shield (3). Troubleshoot plug wires. Unsolder and replace damaged connecting wires, as required.	Refer to figure 4-221. Refer to step c.
NOTE		
If connector is not repairable, obtain replacement connector and solder new wire connections.		
b. Handle Assembly Replacement	Install pin base (2) in connector shield (3) and secure with jackscrews (1). Remove two screws (4) and two halves of cable clamp (5) securing handle to connector shield (3). Remove and discard damaged handle assembly (6). Obtain replacement identification marker (7) and place on replacement handle. Secure handle and cable clamp to connector shield with two screws.	

4-133. Maintenance of Dummy Connector Plug-14 Pin, A3148158-1. Cont

c. Wires



EL9RG351

Figure 4-222. Connector Pin Layout and Schematic Diagram for Dummy Connector Plug-14 Pin

4-134. Maintenance of Branched Wiring Harness, A3148150-1 (A13W1).

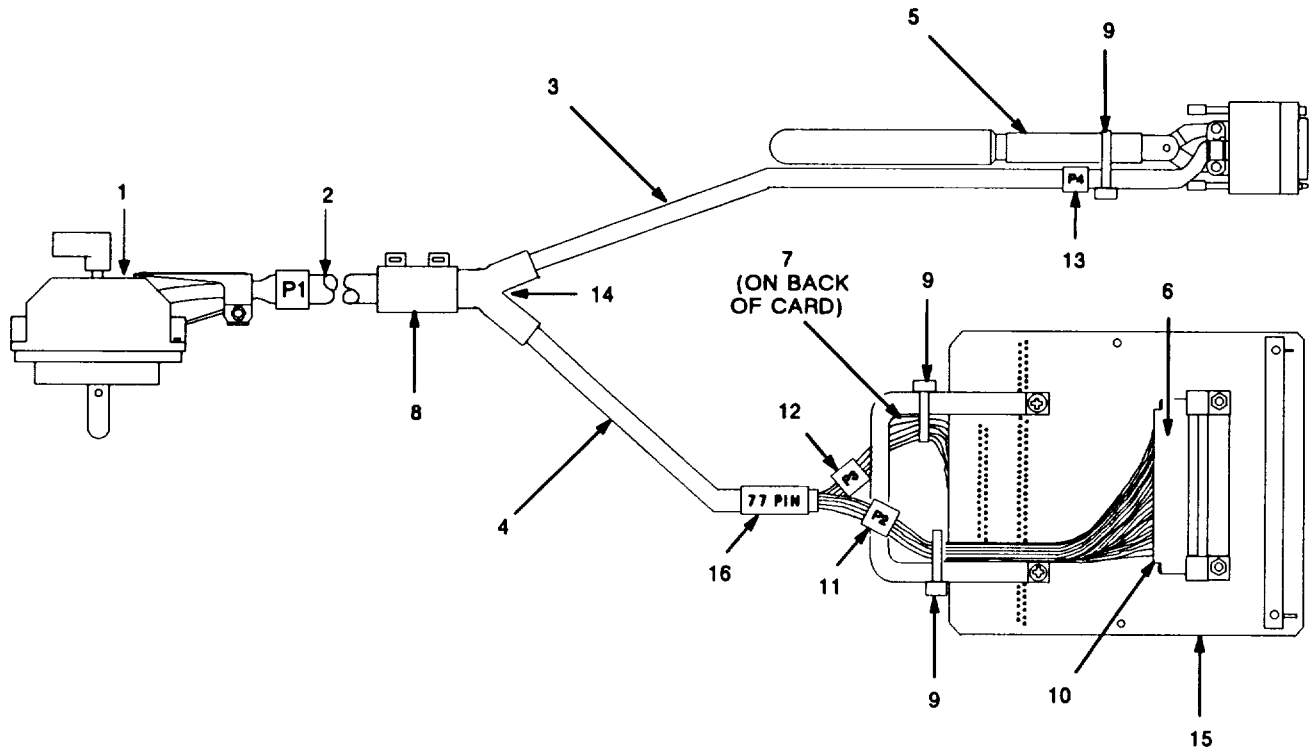


Figure 4-223. Maintenance of Cable A13W1

ITEM	ACTION	REMARKS
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a. Connector P1 (1)	Replace connector P1 (1).	Refer to paragraph 4-92 on page 4-310.
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NOTE

Perform the following repairs only as required.

b. Insulation Sleeving (2, 3, 4), 14-Pin Connector Assembly (5), and Connectors P2 (6) and P3 (7) (on back of 77 pin card)	Remove tiedown straps (8, 9). Remove connector P1 (1). Remove connectors P2 (6) and P3 (7) (on back of 77 pin card).	See figure 4-223. Refer to paragraph 4-92 on page 4-310.
--	--	---

NOTE

Connectors are removed from jacks by removing two screws (10), two lock washers, and two flat washers. Pins are removed by lifting each pin connector locking tab and pulling out all pins.

4-134. Maintenance of Branched Wiring Harness, A3148150-1 (A13W1). Cont

ITEM	ACTION	REMARKS
	Remove 14-pin cable assembly (5).	Refer to paragraph 4-119 on page 4-384.
	Remove cable marker sleeves (11,12,13,16).	
	Repair wires.	Refer to step c.
	Replace 3/4 inch insulation (2).	Use item 266, App. C
	Replace 5/8 inch insulation (3).	Use item 178, App. C
	Replace 3/8 inch insulation (4).	Use item 225, App. C
	Replace "Y" style insulation (14).	Use item 102, App. C
	Replace damaged connector.	
	Install pins in new connector.	Refer to figure 4-224 on page 4-421.
	Repair 14-pin connector assembly (5), using wiring schematic in step c.	Refer to paragraph 4-133 on page 4-417.
	Repair 77-pin test extender card (15), using wiring schematic in step c.	Refer to paragraph 4-124, page 4-396.
	Replace cable marker P2 (11).	See item 47, App. C
	Replace cable marker P3 (12).	See item 45, App. C
	Replace cable marker P4 (13).	See item 224 , App. C
	Replace cable marker 77 PIN (16).	See item 271, App. C
	Replace connectors P2 (6) and P3 (7) (on back of card) in jacks on 77-pin test extender card (15), using two screws (10), two lock washers, and two flat washers.	
	Replace 14-pin connector assembly (5).	Refer to paragraph 4-119 on page 4-384.
	Replace tiedown strap(8).	See item 263, App. C
	Replace tiedown straps(9).	See item 120, App. C

4-134. Maintenance of Branched Wiring Harness, A3148150-1 (A13W1). Cont

<u>FROM</u>	<u>To</u>	<u>COLOR/TRACER</u>	
P1-B6	P2-14	White/Orange	Use item 161, App. C
P1-B7	P2-15	White/Yellow	Use item 162, App. C
P1-B8	P2-16	White/Green	Use item 163, App. C
P1-C1	P2-17	White/Blue	Use item 164, App. C
P1-C2	P2-18	White/Violet	Use item 165, App. C
P1-C3	P2-19	White/Gray	Use item 166, App. C
P1-C4	P2-20	White/Black/Brown	Use item 182, App. C
P1-C5	P2-21	White/Black/Red	Use item 183, App. C
P1-C6	P2-22	White/Black/Orange..	Use item 184, App. C
P1-C7	P2-23	White/Black/Yellow	Use item 185, App. C
P1-C8	P2-24	White/Black/Green	Use item 186, App. C
P1-D1	P2-25	White/Black/Blue	Use item 187, App. C
P1-D2	P2-26	White/Black/Violet	Use item 188, App. C
P1-D3	P2-27	White/Black/Gray	Use item 189, App. C
P1-D4	P2-28	White/Brown/Red	Use item 190, App. C
P1-D5	P2-29	White/Brown/Orange	Use item 191, App. C
P1-D6	P2-30	White/Brown/Yellow	Use item 192, App. C
P1-D7	P2-31	White/Brown/Green	Use item 193, App. C
P1-D8	P2-32	White/Brown/Blue	Use item 194, App. C
P1-E1	P2-33	White/Brown/Violet	Use item 195, App. C
P1-E2	P2-34	White/Brown/Gray..,	Use item 196, App. C
P1-E3	P2-35	White/Red/Orange	Use item 197, App. C
P1-E4	P2-36	White/Red/Yellow,	Use item 198, App. C
P1-E5	P2-37	White/Red/Green,	Use item 199, App. C
P1-E6	P2-38	White/Red/Blue	Use item 200, App. C
P1-E7	P2-39	White/Red/Violet	Use item 201, App. C
P1-E8	P2-40	White/Red/Gray	Use item 202, App. C
P1-F1	P3-1	White/Orange/Yellow	Use item 203, App. C
P1-F2	P3-2	White/Orange/Green.	Use item 204, App. C
P1-F7	P3-3	White/Orange/Blue	Use item 205, App. C
P1-F8	P3-4	White/Orange/Violet	Use item 206, App. C
P1-G1	P3-5	White/Orange/Gray,	Use item 207, App. C
P1-G2	P3-6	White/Yellow/Green	Use item 208, App. C
P1-G7	P3-7	White/Yellow/Blue	Use item 209, App. C
P1-G8	P3-8	White/Yellow/Violet	Use item 210, App. C

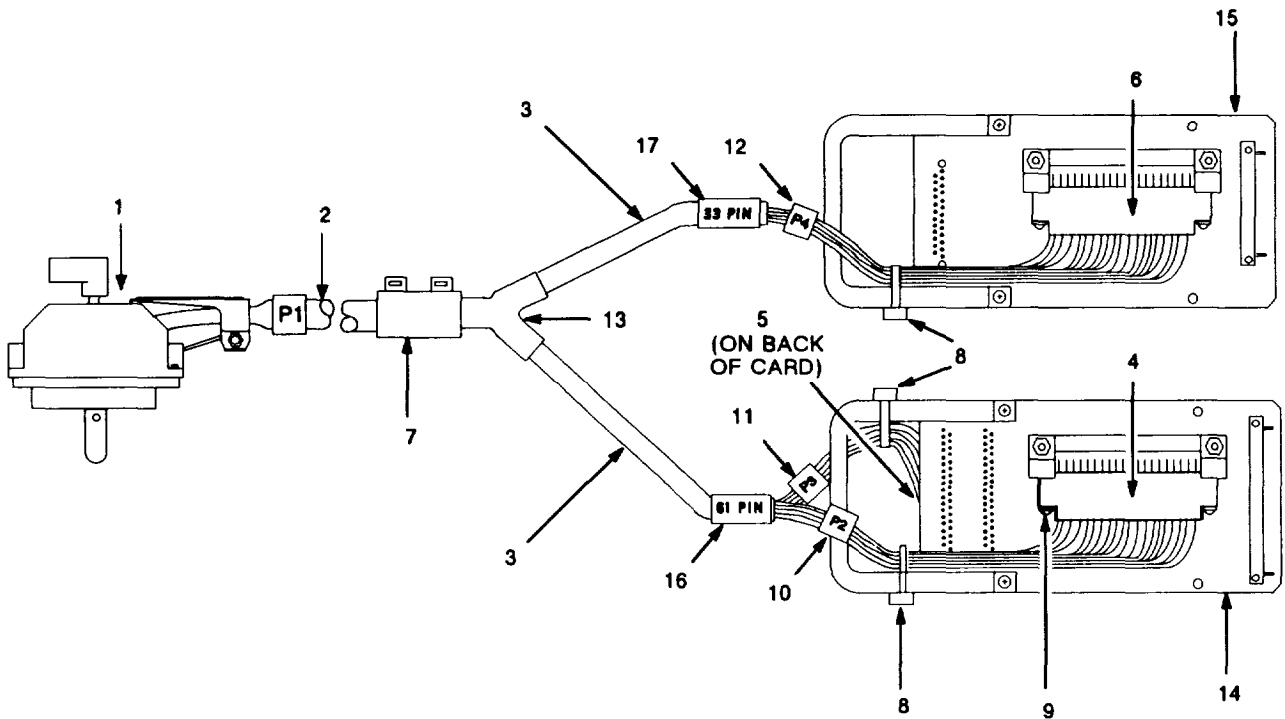
4-134. Maintenance of Branched Wiring Harness, A3148150-1 (A13W1). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-H1	P3-9	White/Yellow/Gray	Use item 211, App. C
P1-H2	P3-10	White/Green/Blue	Use item 212, APP. C
P1-H7	P3-11	White/Green/Violet	Use item 213, App. C
P1-H8	P3-12	White/Green/Gray	Use item 214, App. C
P1-J1	P3-13	White/Blue/Violet	Use item 215, App. C
P1-J2	P3-14	White/Blue/Gray	Use item 216, App. C
P1-J7	P3-15	White/Black/Brown/Red	Use item 217, App. C
P1-J8	P3-16	White/Black/Brown/Orange	Use item 218, App. C
P1-K1	P3-17	White/Black/Brown/Yellow	Use item 219, App. C
P1-K2	P3-18	White/Black/Brown/Green	Use item 220, App. C
P1-K3	P3-19	White/Black/Brown/Blue	Use item 221, App. C
P1-K4	P3-20	White/Black/Brown/Violet	Use item 222, App. C
P1-K5	P3-21	White/Black/Brown/Gray	Use item 227, App. C
P1-K6	P3-22	White/Black/Red/Orange	Use item 228, App. C
P1-K7	P3-23	White/Black/Red/Yellow	Use item 229, App. C
P1-K8	P3-24	White/Black/Red/Green	Use item 230, App. C
P1-L1	P3-25	White/Black/Red/Blue	Use item 231, App. C
P1-L2	P3-26	White/Black/Red/Violet	Use item 232, App. C
P1-L3	P3-27	White/Black/Red/Gray	Use item 233, App. C
P1-L4	P3-28	White/Black/Orange/Yellow	Use item 234, App. C
P1-L5	P3-29	White/Black/Orange/Green	Use item 235, App. C
P1-L6	P3-30	White/Black/Orange/Blue	Use item 236, App. C
P1-L7	P3-31	White/Black/Orange/Violet	Use item 237, App. C
P1-L8	P3-32	White/Black/Orange/Gray	Use item 238, App. C
P1-M1	P3-33	White/Black/Yellow/Green	Use item 239, App. C
P1-M2	P3-34	White/Black/Yellow/Blue	Use item 240, App. C
P1-M3	P3-35	White/Black/Yellow/Violet	Use item 241, App. C
P1-M4	P3-36	White/Black/Yellow/Gray	Use item 242, App. C
P1-M5	P3-37	White/Black/Green/Blue	Use item 243, App. C
N/C	P3-38		
N/C	P3-39		
N/C	P3-40		
P1-M6	P4-1	White/Black/Green/Violet	Use item 244, App. C
P1-M7	P4-2	White/Black/Green/Gray	Use item 245, App. C
P1-M8	P4-3	White/Black/Blue/Violet	Use item 246, App. C

4-134. Maintenance of Branched Wiring Harness, A3148150-1 (A13W1). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-N1	P4-4	White/Black/Blue/Gray	Use item 247, App. C
P1-N2	P4-5	White/Black/Violet/Gray	Use item 248, App. C
P1-N3	P4-6	White/Brown/Red/Orange	Use item 249, App. C
P1-N4	P4-7	White/Brown/Red/Yellow	Use item 250, App. C
P1-N5	P4-8	White/Brown/Red/Green	Use item 251, App. C
P1-N6	P4-9	White/Brown/Red/Blue	Use item 252, App. C
P1-N7	P4-10	White/Brown/Red/Violet	Use item 253, App. C
P1-N8	P4-11	White/Brown/Red/Gray	Use item 254, App. C
P1-P1	P4-12	White/Brown/Orange/Yellow	Use item 255, App. C
P1-P2	P4-13	White/Brown/Orange/Green	Use item 256, App. C
P1-P3	P4-14	White/Brown/Orange/Blue	Use item 257, App. C
P1-P4	N/C		
P1-P5	N/C		
P1-P6	N/C		
P1-P7	N/C		
P1-P8	N/C		

4-135. Maintenance of Branched Wiring Harness, A3148151-1 (A13W2).



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Figure 4-225. Maintenance of Cable A13W2

ITEM	ACTION	REMARKS
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- | | | |
|--------------------|--------------------------|--|
| a. Connector P1(1) | Replace connector P1(1). | Refer to paragraph 4-92 on page 4-310. |
|--------------------|--------------------------|--|

NOTE

Perform the following repairs only as required.

- | | | |
|---|--|---|
| b. Insulation Sleeving (2,3), and Connectors P2(4), P3(5) (on the back of the card), and P4 (6) | Remove tiedown straps (7,8).
Remove connector P1(1).
Remove connectors P2(4), P3 (5) (on back of 61-pin card), and P4(6) . | See figure 4-225.
Refer to paragraph 4-92 on page 4-310, |
|---|--|---|

NOTE

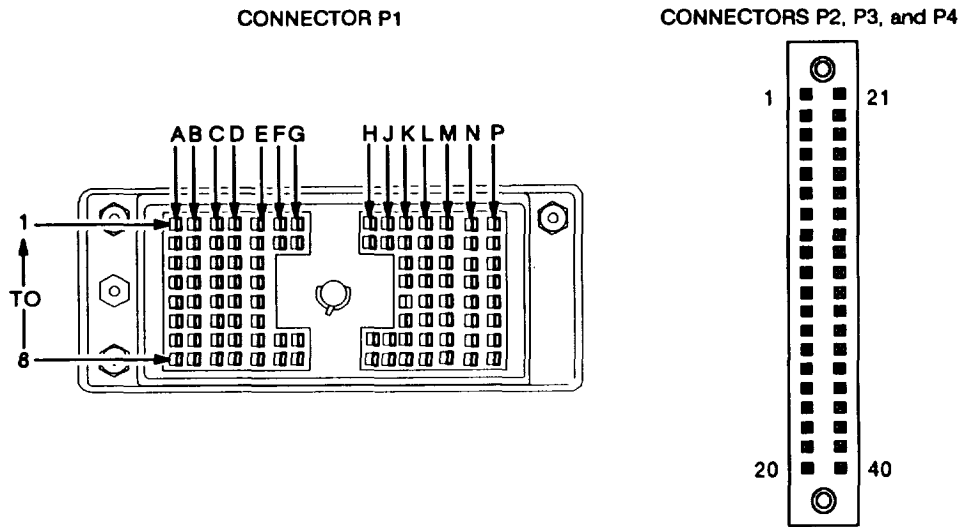
Connectors are removed from jacks by removing two screws (9), two lock washers, and two flat washers. Pins are removed by lifting each pin connector locking tab and pulling out all pins.

4-135. Maintenance of Branched Wiring Harness, A3148151-1 (A13W2). Cont

ITEM	ACTION	REMARKS
	Remove cable marker sleeves(10,11,12,16,17).	
	Repair wires.	Refer to step c.
	Replace 3/4 inch insulation (2).	Use item 266, App. C
	Replace 5/8 inch insulation (3).	Use item 178, App. C
	Replace "Y" style insulation (13).	Use item 102, App. C
	Replace damaged connector.	
	Install pins in new connector.	Refer to figure 4-226 on page 4-427.
	Repair 61-pin test extender card (14).	Refer to paragraph 4-125, page 4-398.
	Repair 33-pin test extender card (15).	Refer to paragraph 4-127, page 4-404.
	Replace cable marker P2 (10).	See item 47, App. C
	Replace cable marker P3 (11).	See item 71, App. C
	Replace cable marker P4 (12).	See item 224, App. C
	Replace cable marker 61 PIN (16).	See item 272, App. C
	Replace cable marker 33 PIN (17).	See item 274, App. C
	Replace connectors P2 (4) and P3 (5) (on back of card) in jacks on 61-pin test extender card (14), using two screws (9), two lock washers, and two flat washers.	
	Replace connector P4 (6) in jacks on 31-pin test extender card (15), using two screws (9), two lock washers, and two flat washers.	
	Replace tiedown strap (7).	See item 263, App. C
	Replace tiedown straps (8).	See item 120, App. C

4-135. Maintenance of Branched Wiring Harness, A3148151-1 (A13W2). Cont

ITEM	ACTION	REMARKS
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EL9RG353

Figure 4-226. Branched Wiring Harness A13W1 Connector Pin Locations

c. Wires

Replace as required.

Use the following wire chart for troubleshooting.

<u>FROM</u>	<u>TO</u>	COLOR/TRACER
P1-A1	P2-1	Black Use item 148, App. C
P1-A2	P2-2	Brown Use item 149, App. C
P1-A3	P2-3	Red Use item 150, App. C
P1-A4	P2-4	Orange Use item 151, App. C
P1-A5	P2-5	Yellow Use item 152, App. C
P1-A6	P2-6	Green Use item 153, App. C
P1-A7	P2-7	Blue Use item 154, App. C
P1-A8	P2-8	Violet Use item 155, APP. C
P1-B1	P2-9	Gray Use item 156, App. C
P1-B2	P2-10	White Use item 157, App. C
P1-B3	P2-11	White/Black Use item 158, App. C
P1-B4	P2-12	White/Brown..., Use item 159, App. C
P1-B5	P2-13	White/Red Use item 160, App. C
P1-B6	P2-14	White/Orange Use item 161, APP. C
P1-B7	P2-15	White/Yellow..., Use item 162, App. C

4-135. Maintenance of Branched Wiring Harness, A3148151-1 (A13W2). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-B8	P2-16	White/Green	Use item 163, App. C
P1-C1	P2-17	White/Blue	Use item 164, App. C
P1-C2	P2-18	White/Violet	Use item 165, App. C
P1-C3	P2-19	White/Gray	Use item 166, App. C
P1-C4	P2-20	White/Black/Brown.,	Use item 182, App. C
P1-C5	P2-21	White/Black/Red	Use item 183, App. C
P1-C6	P2-22	White/Black/Orange.,	Use item 184, App. C
P1-C7	P2-23	White/Black/Yellow	Use item 185, App. C
P1-C8	P2-24	White/Black/Green.	Use item 186, App. C
P1-D1	P2-25	White/Black/Blue	Use item 187, App. C
P1-D2	P2-26	White/Black/Violet	Use item 188, App. C
P1-D3	P2-27	White/Black/Gray	Use item 189, App. C
P1-D4	P2-28	White/Brown/Red	Use item 190, App. C
P1-D5	P2-29	White/Brown/Orange	Use item 191, App. C
P1-D6	P2-30	White/Brown/Yellow.	Use item 192, App. C
P1-D7	P2-31	White/Brown/Green	Use item 193, App. C
P1-D8	P2-32	White/Brown/Blue	Use item 194, App. C
P1-E1	P2-33	White/Brown/Violet	Use item 195, App. C
P1-E2	P2-34	White/Brown/Gray	Use item 196, App. C
P1-E3	P2-35	White/Red/Orange.	Use item 197, App. C
P1-E4	P2-36	White/Red/Yellow.	Use item 198, App. C
P1-E5	P2-37	White/Red/Green.	Use item 199, App. C
P1-E6	P2-38	White/Red/Blue	Use item 200, App. C
P1-E7	P2-39	White/Red/Violet	Use item 201, App. C
P1-E8	P2-40	White/Red/Gray	Use item 202, App. C
P1-F1	P3-1	White/Orange/Yellow	Use item 203, App. C
P1-F2	P3-2	White/Orange/Green	Use item 204, App. C
P1-F7	P3-3	White/Orange/Blue	Use item 205, App. C
P1-F8	P3-4	White/Orange/Violet	Use item 206, App. C
P1-G1	P3-5	White/Orange/Gray	Use item 207, App. C
P1-G2	P3-6	White/Yellow/Green	Use item 208, App. C
P1-G7	P3-7	White/Yellow/Blue	Use item 209, App. C
P1-G8	P3-8	White/Yellow/Violet	Use item 210, App. C
P1-H1	P3-9	White/Yellow/Gray.	Use item 211, App. C
P1-H2	P3-10	White/Green/Blue	Use item 212, App. C
P1-H7	P3-11	White/Green/Violet	Use item 213, App. C

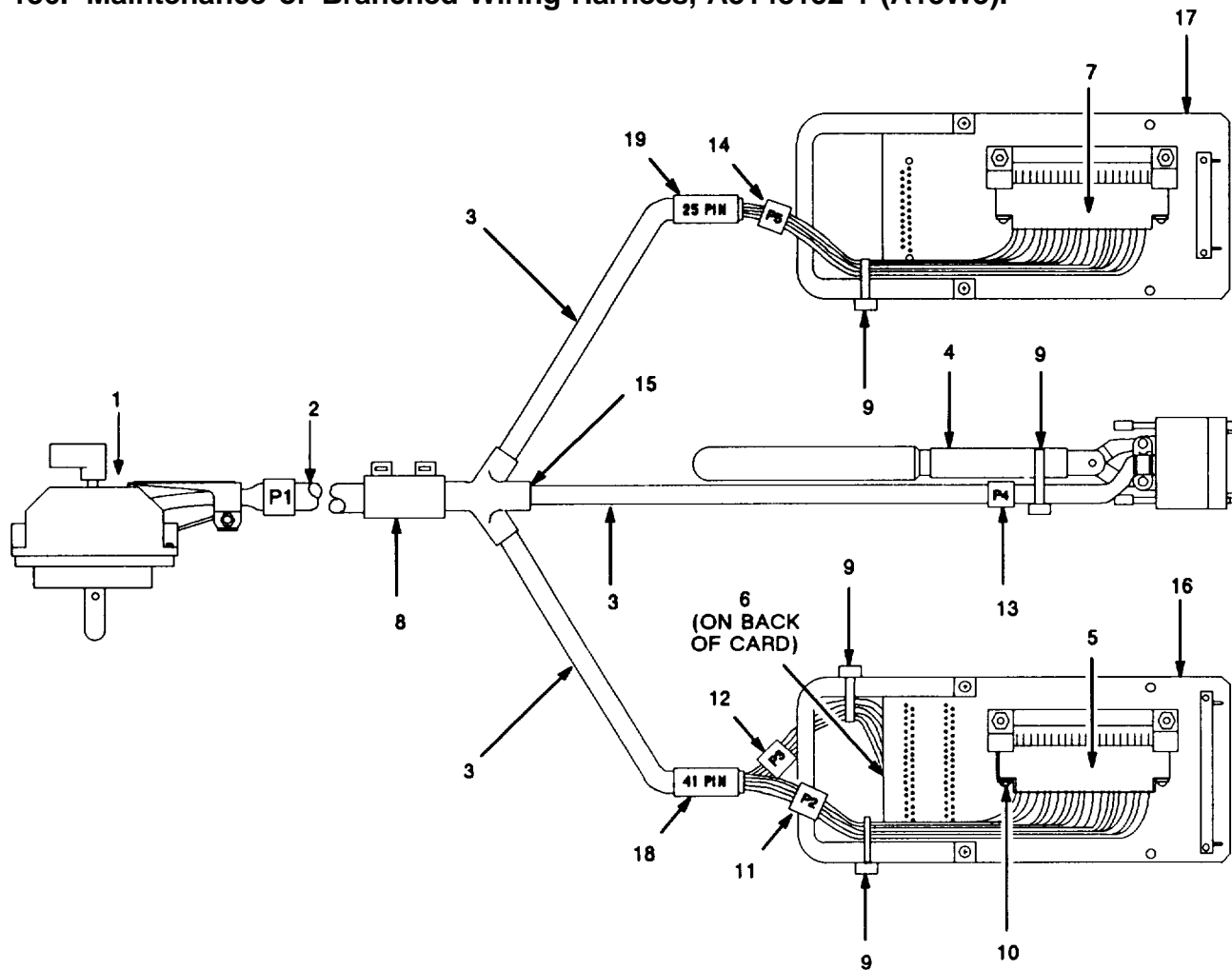
4-135. Maintenance of Branched Wiring Harness, A3148151-1 (A13W2). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-H8	P3-12	White/Green/Gray Use item 214, App.C
P1-J1	P3-13	White/Blue/Violet Use item 215, App. C
P1-J2	P3-14	White/Blue/Gray. Use item 216, App. C
P1-J7	P3-15	White/Black/Brown/Red Use item 217, App. C
P1 -J8	P3-16	White/Black/Brown/Orange Use item 218, App. C
P1-K1	P3-17	White/Black/Brown/Yellow Use item 219, App. C
P1-K2	P3-18	White/Black/Brown/Green Use item 220, App. C
P1-K3	P3-19	White/Black/Brown/Blue Use item 221, App. C
P1-K4	P3-20	White/Black/Brown/Violet Use item 222, App. C
P1-K5	P3-21	White/Black/Brown/Gray Use item 227, App. C
N/C	P3-22	
N/C	P3-23	
N/C	P3-24	
N/C	P3-25	
N/C	P3-26	
N/C	P3-27	
N/C	P3-28	
N/C	P3-29	
N/C	P3-30	
N/C	P3-31	
N/C	P3-32	
N/C	P3-33	
N/C	P3-34	
N/C	P3-35	
N/C	P3-36	
N/C	P3-37	
N/C	P3-38	
N/C	P3-39	
N/C	P3-40	
P1-K6	P4-1	White/Black/Red/Orange Use item 228, App. C
P1-K7	P4-2	White/Black/Red/Yellow Use item 229, App. C
P1-K8	P4-3	White/Black/Red/Green Use item 230, App. C
P1-L1	P4-4	White/Black/Red/Blue Use item 231, App. C
P1-L2	P4-5	White/Black/Red/Violet Use item 232, App. C
P1-L3	P4-6	White/Black/Red/Gray Use item 233, App. C
P1-L4	P4-7	White/Black/Orange/Yellow Use item 234, App. C

4-135. Maintenance of Branched Wiring Harness, A3146151-1 (A13W2). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-L5	P4-8	White/Black/Orange/Green Use item 235, App. C
P1-L6	P4-9	White/Black/Orange/Blue Use item 236, App. C
P1-L7	P4-10	White/Black/Orange/Violet Use item 237, App. C
P1-L8	P4-11	White/Black/Orange/Gray Use item 238, App. C
P1-M1	P4-12	White/Black/Yellow/Green Use item 239, App. C
P1-M2	P4-13	White/Black/Yellow/Blue Use item 240, App. C
P1-M3	P4-14	White/Black/Yellow/Violet Use item 241, App. C
P1-M4	P4-15	White/Black/Yellow/Gray Use item 242, App. C
P1-M5	P4-16	White/Black/Green/Blue Use item 243, App. C
P1-M6	P4-17	White/Black/Green/Violet Use item 244, App. C
P1-M7	P4-18	White/Black/Green/Gray Use item 245, App. C
P1-M8	P4-19	White/Black/Blue/Violet Use item 246, App. C
P1-N1	P4-20	White/Black/Blue/Gray. Use item 247, App. C
P1-N2	P4-21	White/Black/Violet/Gray Use item 248, App. C
P1-N3	P4-22	White/Brown/Red/Orange Use item 249, App. C
P1-N4	P4-23	White/Brown/Red/Yellow Use item 250, App. C
P1-N5	P4-24	White/Brown/Red/Green Use item 251, App. C
P1-N6	P4-25	White/Brown/Red/Blue Use item 252, App. C
P1-N7	P4-26	White/Brown/Red/Violet Use item 253, App. C
P1-N8	P4-27	White/Brown/Red/Gray Use item 254, App. C
P1-P1	P4-28	White/Brown/Orange/Yellow Use item 255, App. C
P1-P2	P4-29	White/Brown/Orange/Green Use item 256, App. C
P1-P3	P4-30	White/Brown/Orange/Blue Use item 257, App. C
P1-P4	P4-31	White/Brown/Orange/Violet Use item 258, App. C
P1-P5	P4-32	White/Brown/Orange/Gray Use item 259, App. C
P1-P6	P4-33	White/Brown/Yellow/Green Use item 260, App. C
P1-P7	N/C	
P1-P8	N/C	
N/C	P4-34	
N/C	P4-35	
N/C	P4-36	
N/C	P4-37	
N/C	P4-38	
N/C	P4-39	
N/C	P4-40	

4-136. Maintenance of Branched Wiring Harness, A3148152-1 (A13W3).



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Figure 4-227. Maintenance of Cable A13W3

ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|--------------------|--------------------------|--|
| a. Connector P1(1) | Replace connector P1(1). | Refer to paragraph 4-92 on page 4-310. |
|--------------------|--------------------------|--|

NOTE

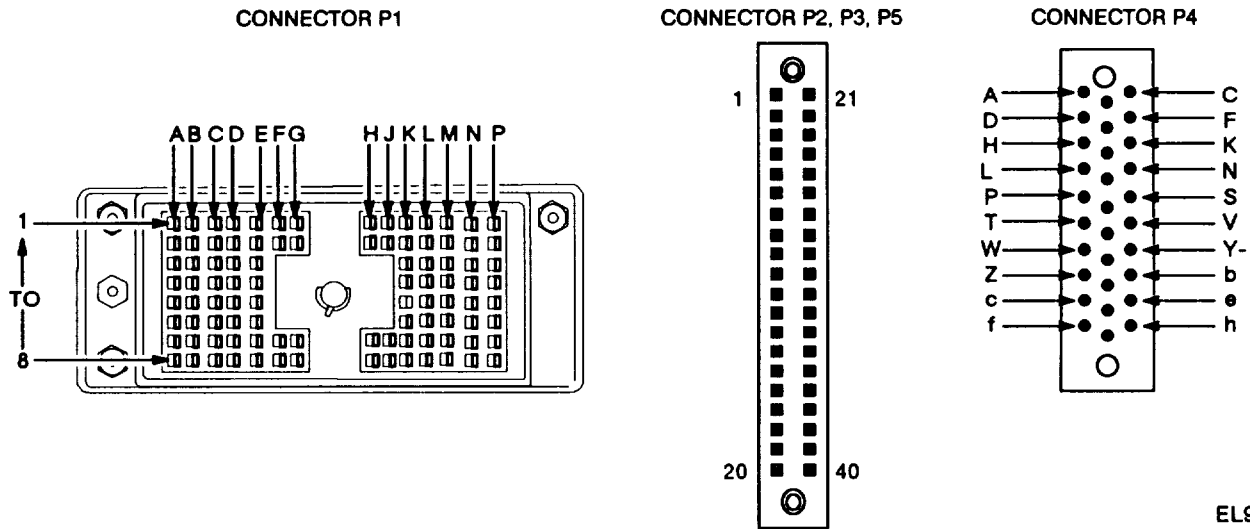
Perform the following repairs only as required.

- | | | |
|--|--|---|
| b. Insulation Sleeving (2,3), 29-Pin Connector Assembly(4), Connectors P2(5), P3(6) (on back of 41 pin test extender card), and P5(7). | Remove tie-down straps (8,9).
Remove connector P1(1). | See figure 4-227.
Refer to paragraph 4-92 on page 4-310. |
|--|--|---|

4-136. Maintenance of Branched Wiring Harness, A3148152-1 (A13W3). Cont

ITEM	ACTION	REMARKS
	Remove connectors P2(5), P3(6) (on back of 41-pin card), and P5(7).	
	NOTE	
	Connectors are removed from jacks by removing two screws (10), two lock washers, and two flat washers. Pins are removed by lifting each pin connector locking tab and pulling out all pins.	
	Remove 29-pin connector assembly (4).	
	Remove cable marker sleeves (11, 12, 13, 14, 18, 19).	
	Repair wires.	Refer to step c,
	Replace 3/4 inch insulation (2).	Use item 266, App. C
	Replace 5/8 inch insulation (3).	Use item 178, App. C
	Replace three branch style insulation (15).	Use item 264, App. C
	Replace damaged connector. Install pins in new connector,	Refer to figure 4-228 on page 4-433.
	Repair 29-pin connector assembly (4).	Refer to paragraph 4-119 on page 4-384.
	Repair 41-pin test extender card (16),	Refer to paragraph 4-126 on page 4-401,
	Repair 25-pin test extender card (17).	Refer to paragraph 4-128 on page 4-407.
	Replace cable marker P2 (11).	See item 70, App. C
	Replace cable marker P3 (12).	See item 71, App. C
	Replace cable marker P4 (13).	See item 93, App. C
	Replace cable marker P5 (14).	See item 270, App. C
	Replace cable marker 41 PIN (18).	See item 273, App. C
	Replace cable marker 25 PIN (19).	See item 275, App. C
	Replace connectors P2 (5) and P3 (6) (on back of card) in jacks on 41-pin test extender card (16), and P5(7) in jack on 25-pin test extender card using two screws (10), two lock washers, and two flat washers.	
	Replace 29-pin connector assembly (4).	
	Replace tiedown strap (8).	See item 263, App. C
	Replace tiedown straps (9).	See item 120, App. C

4-136. Maintenance of Branched Wiring Harness, A3148152-1 (A13W3). Cont



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Figure 4-228. Branched Wiring Harness A13W3 Connector Pin Locations

- c. Wires Replace as required.
Use the following wire chart for troubleshooting.

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-A1	P2-1	Black	Use item 148, App. C
P1-A2	P2-2	Brown	Use item 149, App. C
P1-A3	P2-3	Red	Use item 150, App. C
P1-A4	P2-4	Orange	Use item 151, App. C
P1-A5	P2-5	Yellow	Use item 152, App. C
P1-A6	P2-6	Green	Use item 153, App. C
P1-A7	P2-7	Blue	Use item 154, App. C
P1-A8	P2-8	Violet	Use item 155, App. C
P1-B1	P2-9	Gray	Use item 156, App. C
P1-B2	P2-10	White	Use item 157, App. C
P1-B3	P2-11	White/Black	Use item 158, App. C
P1-B4	P2-12	White/Brown	Use item 159, App. C
P1-B5	P2-13	White/Red	Use item 160, App. C
P1-B6	P2-14	White/Orange	Use item 161, App. C
P1-B7	P2-15	White/Yellow	Use item 162, App. C
P1-B8	P2-16	White/Green	Use item 163, App. C
P1-C1	P2-17	White/Blue	Use item 164, App. C

4-136. Maintenance of Branched Wiring Harness, A3148152-1 (A13W3). Cont

FROM	TO	<u>COLOR/TRACER</u>	
P1-C2	P2-18	White/Violet	Use item 165, App. C
P1-C3	P2-19	White/Gray	Use item 166, App. C
P1-C4	P2-20	White/Black/Brown	Use item 182, App. C
P1-C5	P2-21	White/Black/Red	Use item 183, App. C
N/C	P2-22		
N/C	P2-23		
N/C	P2-24		
N/C	P2-25		
N/C	P2-26		
N/C	P2-27		
N/C	P2-28		
N/C	P2-29		
N/C	P2-30		
N/C	P2-31		
N/C	P2-32		
N/C	P2-33		
N/C	P2-34		
N/C	P2-35		
N/C	P2-36		
N/C	P2-37		
N/C	P2-38		
N/C	P2-39		
N/C	P2-40		
P1-C6	P3-1	White/Black/Orange	Use item 184, App. C
P1-C7	P3-2	White/Black/Yellow	Use item 185, App. C
P1-C8	P3-3	White/Black/Green.	Use item 186, App. C
P1-D1	P3-4	White/Black/Blue	Use item 187, App. C
P1-D2	P3-5	White/Black/Violet	Use item 188, App. C
P1-D3	P3-6	White/Black/Gray.	Use item 189, App. C
P1-D4	P3-7	White/Brown/Red	Use item 190, App. C
P1-D5	P3-8	White/Brown/Orange	Use item 191, App. C
P1-D6	P3-9	White/Brown/Yellow.	Use item 192, App. C
P1-D7	P3-10	White/Brown/Green	Use item 193, App. C
P1-D8	P3-11	White/Brown/Blue	Use item 194, App. C
P1-E1	P3-12	White/Brown/Violet	Use item 195, App. C

4-136. Maintenance of Branched Wiring Harness, A3148152-1 (A13W3). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-E2	P3-13	White/Brown/Gray Use item 196, App. C
P1-E3	P3-14	White/Red/Orange Use item 197, App. C
P1-E4	P3-15	White/Red/Yellow Use item 198, App. C
P1-E5	P3-16	White/Red/Green Use item 199, App. C
P1-E6	P3-17	White/Red/Blue Use item 200, App. C
P1-E7	P3-18	White/Red/Violet Use item 201, App. C
P1-E8	P3-19	White/Red/Gray Use item 202, App. C
P1-F1	P3-20	White/Orange/Yellow Use item 203, App. C
N/C	P3-21	
N/C	P3-22	
N/C	P3-23	
N/C	P3-24	
N/C	P3-25	
N/C	P3-26	
N/C	P3-27	
N/C	P3-28	
N/C	P3-29	
N/C	P3-30	
N/C	P3-31	
N/C	P3-32	
N/C	P3-33	
N/C	P3-34	
N/C	P3-35	
N/C	P3-36	
N/C	P3-37	
N/C	P3-38	
N/C	P3-39	
N/C	P3-40	
P1-F2	P5-1	White/Orange/Green Use item 204, App. C
P1-F7	P5-2	White/Orange/Blue Use item 205, App. C
P1-F8	P5-3	White/Orange/Violet Use item 206, App. C
P1-G1	P5-4	White/Orange/Gray Use item 207, App. C
P1-G2	P5-5	White/Yellow/Green Use item 208, App. C
P1-G7	P5-6	White/Yellow/Blue Use item 209, App. C
P1-G8	P5-7	White/Yellow/Violet Use item 210, App. C
Pi-Hi	P5-8	White/Yellow/Gray Use item 211, App. C
P1-H2	P5-9	White/Green/Blue Use item 212, App. C
P1-H7	P5-10	White/Green/Violet Use item 213, App. C

4-136. Maintenance of Branched Wiring Harness, A3148152-1 (A13W3). Cont

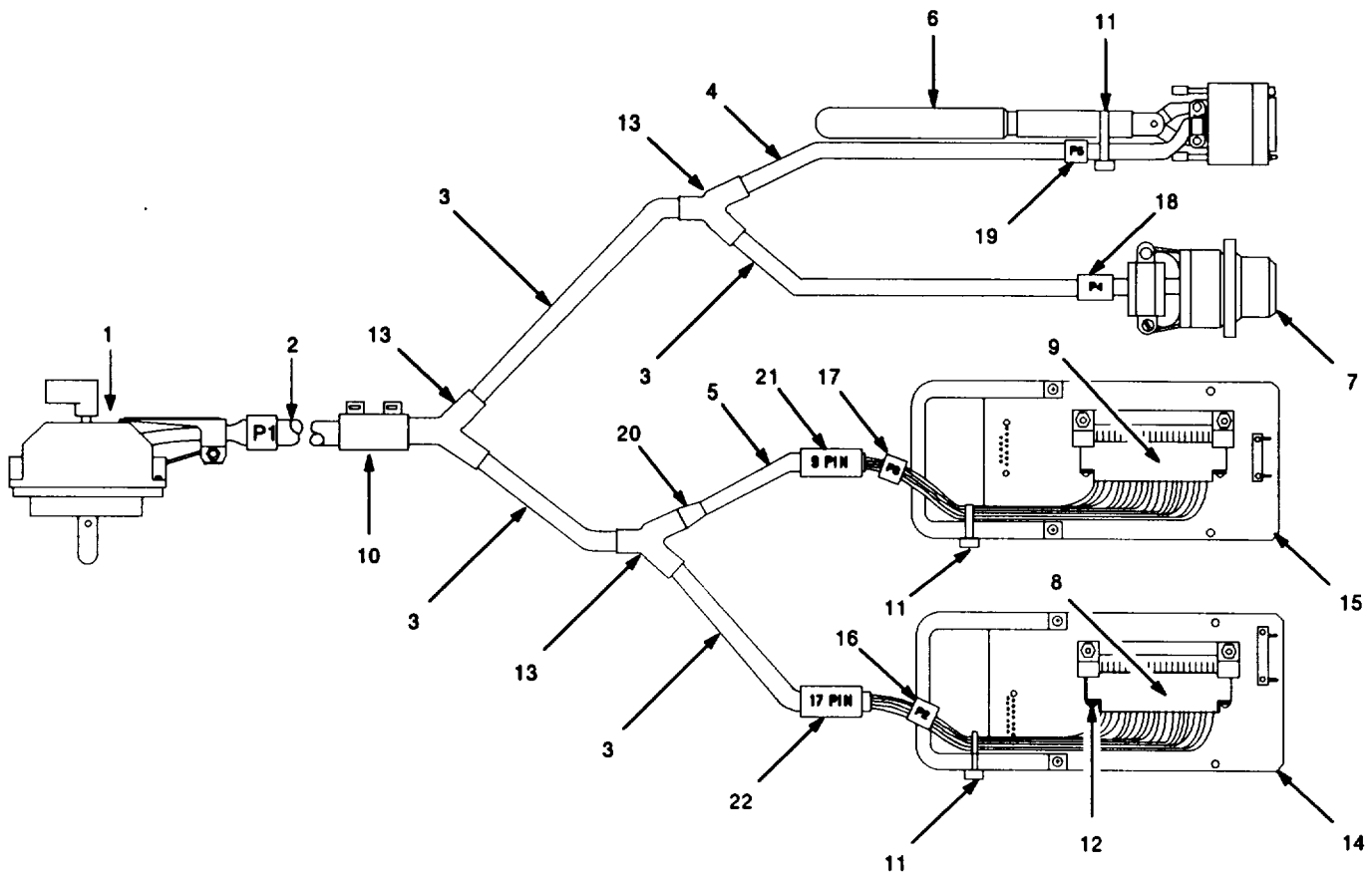
<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-H8	P5-11	White/Green/Gray Use item 214, App. C
P1-J1	P5-12	White/Blue/Violet Use item 215, App. C
P1-J2	P5-13	White/Blue/Gray., Use item 216, App. C
P1-J7	P5-14	White/Black/Brown/Red Use item 217, App. C
P1-J8	P5-15	White/Black/Brown/Orange Use item 218, App. C
P1-K1	P5-16	White/Black/Brown/Yellow Use item 219, App. C
P1-K2	P5-17	White/Black/Brown/Green Use item 220, App. C
P1-K3	P5-18	White/Black/Brown/Blue Use item 221, App. C
P1-K4	P5-19	White/Black/Brown/Violet Use item 222, App. C
P1-K5	P5-20	White/Black/Brown/Gray Use item 227, App. C
P1-K6	P5-21	White/Black/Red/Orange Use item 228, App. C
P1-K7	P5-22	White/Black/Red/Yellow Use item 229, App. C
P1-K8	P5-23	White/Black/Red/Green Use item 230, App. C
P1-L1	P5-24	White/Black/Red/Blue Use item 231, App. C
P1-L2	P5-25	White/Black/Red/Violet Use item 232, App. C
N/C	P5-26	
N/C	P5-27	
N/C	P5-28	
N/C	P5-29	
N/C	P5-30	
N/C	P5-31	
N/C	P5-32	
N/C	P5-33	
N/C	P5-34	
N/C	P5-35	
N/C	P5-36	
N/C	P5-37	
N/C	P5-38	
N/C	P5-39	
N/C	P5-40	
P1-L3	P4-A	White/Black/Red/Gray Use item 233, App. C
P1-L4	P4-B	White/Black/Orange/Yellow., Use item 234, App. C
P1-L5	P4-C	White/Black/Orange/Green Use item 235, App. C
P1-L6	P4-D	White/Black/Orange/Blue Use item 236, App. C
P1-L7	P4-E	White/Black/Orange/Violet Use item 237, App. C
P1-L8	P4-F	White/Black/Orange/Gray Use item 238, App. C

4-136. Maintenance of Branched Wiring Harness, A3148152-1 (A13W3). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-M1	P4-H	White/Black/Yellow/Green Use item 239, App. C
P1-M2	P4-J	White/Black/Yellow/Blue Use item 240, App. C
P1-M3	P4-K	White/Black/Yellow/Violet Use item 241, App. C
P1-M4	P4-L	White/Black/Yellow/Gray Use item 242, App. C
P1-M5	P4-M	White/Black/Green/Blue Use item 243, App. C
P1-M6	P4-N	White/Black/Green/Violet Use item 244, App. C
P1-M7	P4-P	White/Black/Green/Gray Use item 245, App. C
P1-M8	P4-R	White/Black/Blue/Violet Use item 246, App. C
P1-N1	P4-S	White/Black/Blue/Gray Use item 247, App. C
P1-N2	P4-T	White/Black/Violet/Gray Use item 248, App. C
P1-N3	P4-U	White/Brown/Red/Orange Use item 249, App. C
P1-N4	P4-V	White/Brown/Red/Yellow Use item 250, App. C
P1-N5	P4-W	White/Brown/Red/Green Use item 251, App. C
P1-N6	P4-X	White/Brown/Red/Blue Use item 252, App. C
P1-N7	P4-Y	White/Brown/Red/Violet Use item 253, App. C
P1-N8	P4-Z	White/Brown/Red/Gray Use item 254, App. C
P1-P1	P4-A**	White/Brown/Orange/Yellow.. . . . Use item 255, App. C
P1-P2	P4-B**	White/Brown/Orange/Green Use item 256, App. C
P1-P3	P4-C**	White/Brown/Orange/Blue Use item 257, App. C
P1-P4	P4-D**	White/Brown/Orange/Violet Use item 258, App. C
P1-P5	P4-E**	White/Brown/Orange/Gray Use item 259, App. C
P1-P6	P4-F**	White/Brown/Yellow/Green Use item 260, App. C
P1-P7	P4-H**	White/Brown/Yellow/Blue Use item 261, App. C
P1-P8	N/C	

** denotes lowercase letters.

4-137. Maintenance of Branched Wiring Harness, A3148154-1 (A13W4).



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Figure 4-229. Maintenance of Cable A13W4

ITEM	ACTION	REMARKS
------	--------	---------

- | | | |
|--------------------|--------------------------|--|
| a. Connector P1(1) | Replace connector P1(1). | Refer to paragraph 4-92 on page 4-310. |
|--------------------|--------------------------|--|

NOTE

Perform the following repairs only as required.

- | | | |
|---|--|---|
| b. Insulation Sleeving (2,3,4,5), 34-Pin Connector Assembly (6), 27-pin plug (7), P2 (8), and P3 (9). | Remove tiedown straps (10, 11)
Remove connector P1 (1).
Remove connectors P2 (8) and P3 (9). | See figure 4-229.
Refer to paragraph 4-92 on page 4-310. |
|---|--|---|

4-137. Maintenance of Branched Wiring Harness, A3148154-1 (A13W4). Cont

ITEM	ACTION	REMARKS
------	--------	---------

NOTE

Connectors are removed from jacks by removing two screws (12), two lockwashers, and two flat washers. Pins are removed by lifting each pin connector locking tab and pulling out all pins.

Remove 34-pin connector assembly (6).

Remove 27-pin plug (7).

Remove cable marker sleeves
(16, 17, 18, 19, 21, 22).

Repair wires.

Refer to step c.

Replace "Y" style insulation (13).

Use item 102, App. C

Replace insulation reducer.

Use item 105, App. C

Replace 3/4 inch insulation (2).

Use item 266, App. C

Replace 3/8 inch insulation (3).

Use item 225, App. C

Replace 1/2 inch insulation (4).

Use item 179, App. C

Replace 5/8 inch insulation (23).

Use item 178, App. C

Replace No. 2 insulation (5).

Use item 267, App. C

Replace damaged connector.

Install pins in new connector.

Refer to figure 4-230
on page 4-440.

Repair 17-pin test extender
card (14).

Refer to paragraph 4-129
on page 4-410.

Repair 9-pin test extender
card (15).

Refer to paragraph 4-130,
page 4-413.

Replace cable marker P2 (16).

See item 268, App. C

Replace cable marker P3 (17).

See item 269, App. C

Replace cable marker P4 (18).

See item 93, App. C

Replace cable marker P5 (19).

See item 87, App. C

Replace cable marker sleeve
9 PIN (21).

See item 277, App. C

Replace cable marker sleeve
17 PIN (22).

See item 276, App. C

Replace connectors P2 (8) in
jacks on 17-pin test extender
card (14) and P3 (9) in jacks on
9-pin test extender card (15),
using two screws (12), two lock
washers, and two flat washers.

See figure 4-223.

Replace 34-pin connector assembly (6).

Replace 27-pin plug (7).

Replace tiedown strap (10).

See item 263, App. C

Replace tiedown straps (11).

See item 120, App. C

4-137. Maintenance of Branched Wiring Harness, A3148154-1 (A13W4). Cont

ITEM	ACTION	REMARKS
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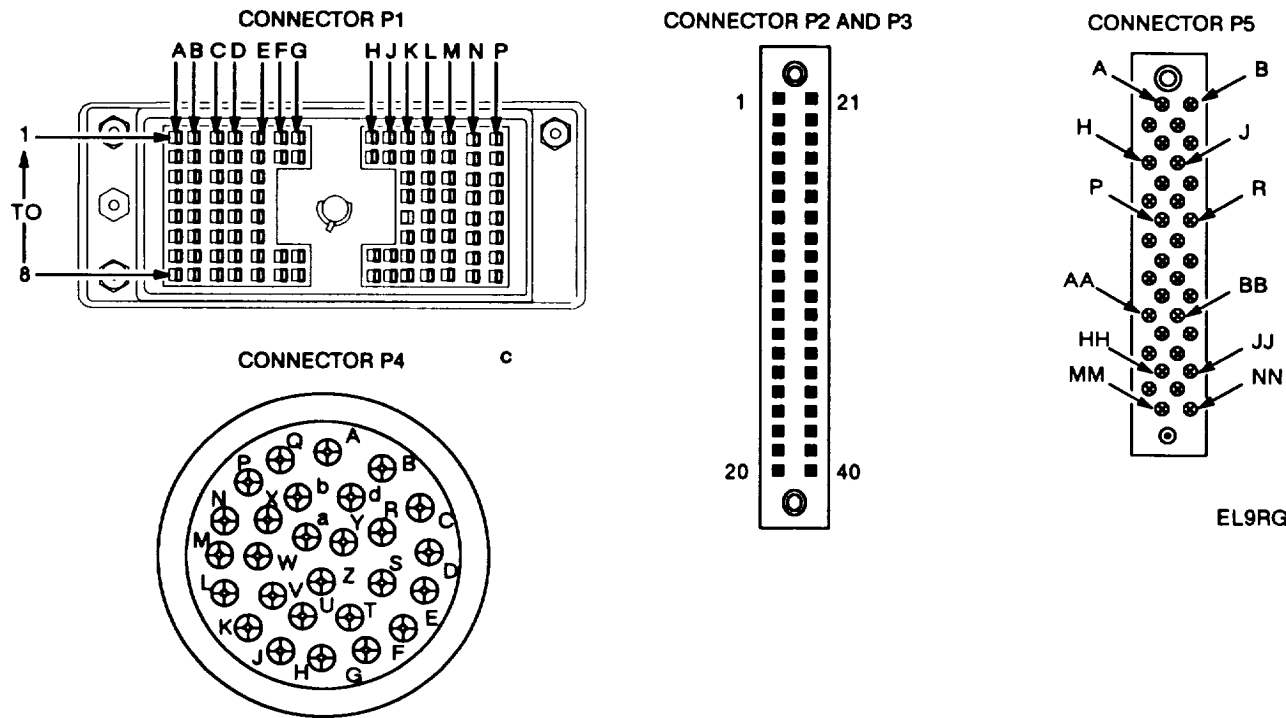


Figure 4-230. Branched Wiring Harness A13W4 Connector Pin Locations

- c. Wires Replace as required.
Use the following wire chart for troubleshooting.

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>	
P1-A1	P2-1	Black	Use item 148, App. C
P1-A2	P2-2	Brown	Use item 149, App. C
P1-A3	P2-3	Red	Use item 150, App. C
P1-A4	P2-4	Orange	Use item 151, App. C
P1-A5	P2-5	Yellow,	Use item 152, App. C
P1-A6	P2-6	Green	Use item 153, App. C
P1-A7	P2-7	Blue,	Use item 154, App. C
P1-A8	P2-8	Violet	Use item 155, App. C

4-137. Maintenance of Branched Wiring Harness, A3148154-1 (A13W4). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-B1	P2-9	Gray Use item 156, App. C
P1-B2	P2-10	White Use item 157, App. C
P1-B3	P2-11	White/Black Use item 158, App. C
P1-B4	P2-12	White/Brown Use item 159, App. C
P1-B5	P2-13	White/Red Use item 160, App. C
P1-B6	P2-14	White/Orange Use item 161, App. C
P1-B7	P2-15	White/Yellow Use item 162, App. C
P1-B8	P2-16	White/Green Use item 163, App. C
P1-C1	P2-17	White/Blue Use item 164, App. C
N/C	P2-18	
N/C	P2-19	
N/C	P2-20	
N/C	P2-21	
N/C	P2-22	
N/C	P2-23	
N/C	P2-24	
N/C	P2-25	
N/C	P2-26	
N/C	P2-27	
N/C	P2-28	
N/C	P2-29	
N/C	P2-30	
N/C	P2-31	
N/C	P2-32	
N/C	P2-33	
N/C	P2-34	
N/C	P2-35	
N/C	P2-36	
N/C	P2-37	
N/C	P2-38	
N/C	P2-39	
N/C	P2-40	
P1-C2	P3-1	White/Violet Use item 165, App. C
P1-C3	P3-2	White/Gray Use item 166, App. C
P1-C4	P3-3	White/Black/Brown Use item 182, App. C
P1-C5	P3-4	White/Black/Red Use item 183, App. C

4-137. Maintenance of Branched Wiring Harness, A3146154-1 (A13W4). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-C6	P3-5	White/Black/Orange Use item 184, App. C
P1-C7	P3-6	White/Black/Yellow Use item 185, App. C
P1-C8	P3-7	White/Black/Green Use item 186, App. C
P1-D1	P3-8	White/Black/Blue Use item 187, App. C
P1-02	P3-9	White/Black/Violet. Use item 188, App. C
N/C	P3-10	
N/C	P3-11	
N/C	P3-12	
N/C	P3-13	
N/C	P3-14	
N/C	P3-15	
N/C	P3-16	
N/C	P3-17	
N/C	P3-18	
N/C	P3-19	
N/C	P3-20	
N/C	P3-21	
N/C	P3-22	
N/C	P3-23	
N/C	P3-24	
N/C	P3-25	
N/C	P3-26	
N/C	P3-27	
N/C	P3-28	
N/C	P3-29	
N/C	P3-30	
N/C	P3-31	
N/C	P3-32	
N/C	P3-33	
N/C	P3-34	
N/C	P3-35	
N/C	P3-36	
N/C	P3-37	
N/C	P3-38	
N/C	P3-39	
N/C	P3-40	

4-137. Maintenance of Branched Wiring Harness, A3148154-1 (A13W4). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-D3	P5-A	White/Black/Gray Use item 189, App. C
P1-D4	P5-B	White/Brown/Red Use item 190, App. C
P1-D5	P5-C	White/Brown/Orange Use item 191, App. C
P1-D6	P5-D	White/Brown/Yellow Use item 192, App. C
P1-D7	P5-E	White/Brown/Green Use item 193, App. C
P1-D8	P5-F	White/Brown/Blue, Use item 194, App. C
P1-E1	P5-H	White/Brown/Violet Use item 195, App. C
P1-E2	P5-J	White/Brown/Gray., Use item 196, App. C
P1-E3	P5-K	White/Red/Orange Use item 197, App. C
P1-E4	P5-L	White/Red/Yellow Use item 198, App. C
P1-E5	P5-M	White/Red/Green Use item 199, App. C
P1-E6	P5-N	White/Red/Blue., Use item 200, App. C
P1-E7	P5-P	White/Red/Violet Use item 201, App. C
P1-E8	P5-R	White/Red/Gray Use item 202, App. C
P1-F1	P5-S	White/Orange/Yellow Use item 203, App. C
P1-F2	P5-T	White/Orange/Green Use item 204, App. C
P1-F7	P5-U	White/Orange/Blue Use item 205, App. C
P1-F8	P5-V	White/Orange/Violet Use item 206, App. C
P1-G1	P5-W	White/Orange/Gray Use item 207, App. C
P1-G2	P5-X	White/Yellow/Green Use item 208, App. C
P1-G7	P5-Y	White/Yellow/Blue Use item 209, App. C
P1-G8	P5-Z	White/Yellow/Violet Use item 210, App. C
P1-H1	P5-AA	White/Yellow/Gray Use item 211, App. C
P1-H2	P5-BB	White/Green/Blue. Use item 212, App. C
P1-H7	P5-CC	White/Green/Violet..., Use item 213, App. C
P1-H8	P5-DD	White/Green/Gray Use item 214, App. C
P1-J1	P5-EE	White/Blue/Violet Use item 215, App. C
P1-J2	P5-FF	White/Blue/Gray Use item 216, App. C
P1-J7	P5-HH	White/Black/Brown/Red Use item 217, App. C
P1-J8	P5-JJ	White/Black/Brown/Orange Use item 218, App. C
P1-K1	P5-KK	White/Black/Brown/Yellow Use item 219, App. C
P1-K2	P5-LL	White/Black/Brown/Green Use item 220, App. C
P1-K3	P5-MM	White/Black/Brown/Blue Use item 221, App. C
P1-K4	P5-NN	White/Black/Brown/Violet Use item 222, App. C

4-137. Maintenance of Branched Wiring Harness, A3148154-1 (A13W4). Cont

<u>FROM</u>	<u>TO</u>	<u>COLOR/TRACER</u>
P1-K5	P4-A	White/Black/Brown/Gray Use item 227, App. C
P1-K6	P4-B	White/Black/Red/Orange Use item 228, App. C
P1-K7	P4-C	White/Black/Red/Yellow Use item 229, App. C
P1-K8	P4-D	White/Black/Red/Green Use item 230, App. C
P1-L1	P4-E	White/Black/Red/Blue Use item 231, App. C
P1-L2	P4-F	White/Black/Red/Violet Use item 232, App. C
P1-L3	P4-G	White/Black/Red/Gray Use item 233, App. C
P1-L4	P4-H	White/Black/Orange/Yellow Use item 234, App. C
P1-L5	P4-J	White/Black/Orange/Green Use item 235, App. C
P1-L6	P4-K	White/Black/Orange/Blue Use item 236, App. C
P1-L7	P4-L	White/Black/Orange/Violet Use item 237, App. C
P1-L8	P4-M	White/Black/Orange/Gray Use item 238, App. C
P1-M1	P4-N	White/Black/Yellow/Green Use item 239, App. C
P1-M2	P4-P	White/Black/Yellow/Blue Use item 240, App. C
P1-M3	P4-Q	White/Black/Yellow/Violet Use item 241, App. C
P1-M4	P4-R	White/Black/Yellow/Gray Use item 242, App. C
P1-M5	P4-S	White/Black/Green/Blue Use item 243, App. C
P1-M6	P4-T	White/Black/Green/Violet Use item 244, App. C
P1-M7	P4-U	White/Black/Green/Gray Use item 245, App. C
P1-M8	P4-V	White/Black/Blue/Violet Use item 246, App. C
P1-N1	P4-W	White/Black/Blue/Gray Use item 247, App. C
P1-N2	P4-X	White/Black/Violet/Gray Use item 248, App. C
P1-N3	P4-Y	White/Brown/Red/Orange Use item 249, App. C
P1-N4	P4-Z	White/Brown/Red/Yellow Use item 250, App. C
P1-N5	P4-A**	White/Brown/Red/Green Use item 251, App. C
P1-N6	P4-B**	White/Brown/Red/Blue Use item 252, App. C
P1-N7	P4-D**	White/Brown/Red/Violet Use item 253, App. C
P1-N8	N/C	
P1-P1	N/C	
P1-P2	N/C	
P1-P3	N/C	
P1-P4	N/C	
P1-P5	N/C	
P1-P6	N/C	
P1-P7	N/C	
P1-P8	N/C	** denotes lower case letter.

Section XXVII. MAINTENANCE INSTRUCTIONS FOR J-6098/G (TEST ADAPTER A14)

The following procedure is used to perform diagnostic testing of test adapter AI 4 used to test the SRCU Control, A3167969-1.

4-138. Required Test Accessories for Test Adapter A14.

REQUIRED TEST ACCESSORIES	
● Test Program Tape	CPIN CP3300030G
File No.	A3167969
● ICD-A5	B4041573-2
● Test Adapter A14	A3190861-1
Shorting Card-77 Pin	A3148087-2
Cable Assembly A14W1	A3190917-1
● DMM Probe (From AN/USM-465A)	6010-003-A

4-139. Test Procedures for Test Adapter A14.

- a. Turn on digital card test set AN/USM-465A.
- b. Perform operational procedures in accordance with TM 11-6625-3036-10.

NOTE

This program requires AN/USM-465A software version 2.0 be installed.

- c. Load test program.
 - (1) Install test program tape CPIN CP3300030G in digital card tester in accordance with TM 11-6625-3036-10.
 - (2) Enter LOAD 0, then press EXECUTE.
 - (3) When READY appears on display, type RUN and press EXECUTE.
 - (4) Verify that the following information is printed:

4-139. Test Procedures for Test Adapter A14. Cont

```
> ENTER THE LAST FOUR  
> DIGITS OF THE UUT  
> P/N A3167969-1  
> PRESS EXECUTE
```

THEN

```
> PRINT PROGRAM NOTES?  
> ENTER Y=YES, N=NO  
> PRESS EXECUTE.
```

(5) Follow operator actions as instructed by program.

d Run ATE survey test if desired (if survey test fails, refer to TM 11-6625-3038-20).

e. Install Test Adapter A14 and ICD A5 on digital card test set (see figure 4-231 on page 4-447).

f. Run ICD survey test.

g. After testing do one of me following

(1) If test adapter passes survey, exit program by pressing the ATTN key.

(2) If test adapter fails sway go to paragraph 4-140 on page 4-448.

4-139. Test Procedures for Test Adapter A14. Cont

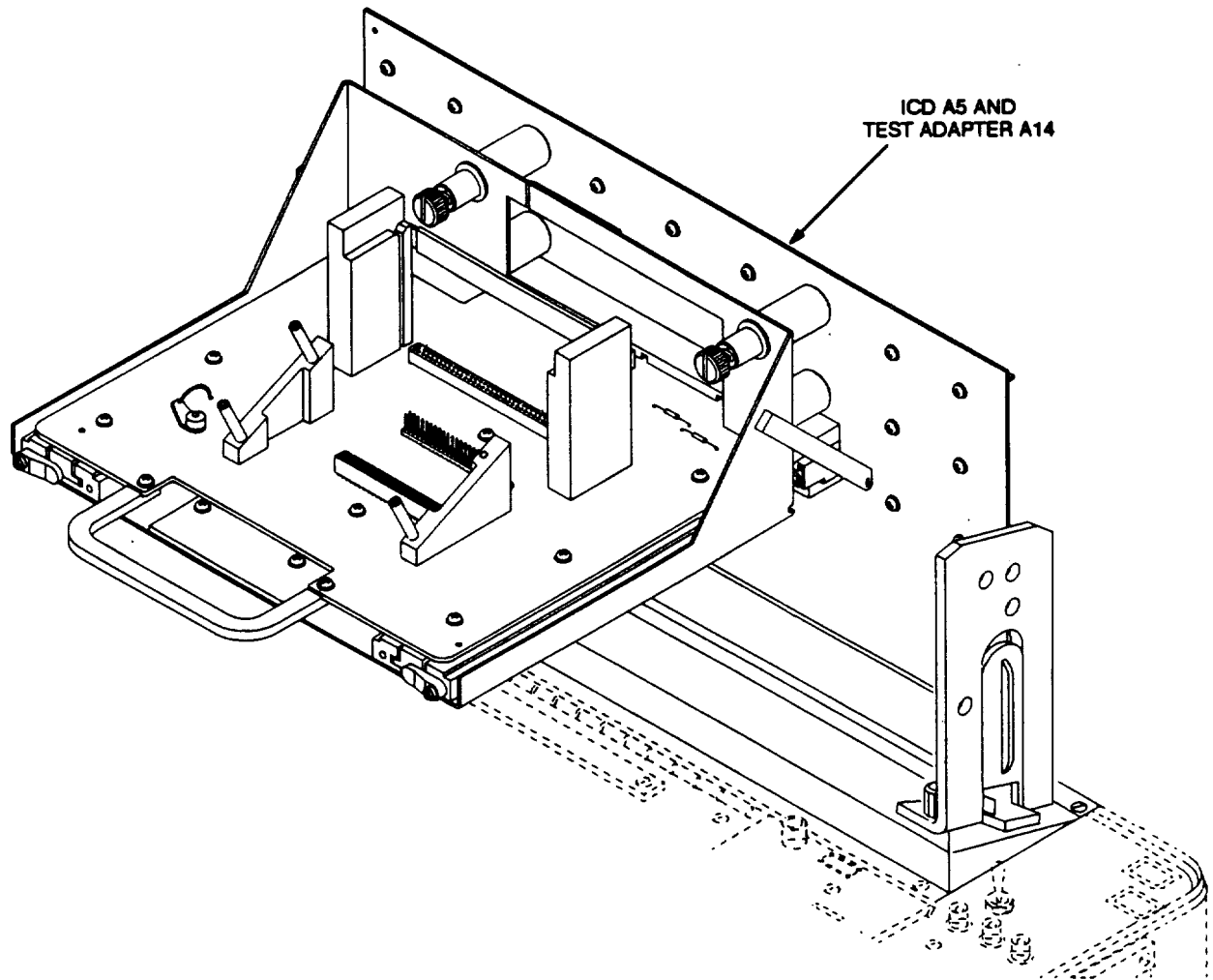


Figure 4-231. Installation of Test Adapter A14 and ICD A5 on DCT

4-140. Maintenance Procedures for Test Adapter A14.

The following equipment is needed to maintain and repair test adapter A14.

INITIAL SETUP	
TEST EQUIPMENT	TOOLS
Digital Card Tester	Tool Kit Electronic Equipment
ANA/USM-465A (6625-01-126-2473)	TK-105/G (5180-01-610-8817)
Multimeter	Solder Repair Center
AN/USM-486 (6625-01-145-2430)	PRC-151 (3439-01-109-8590)
REFERENCES	
TM 11-5820-914-40	
TM 11-6625-2773-10	
TM 11-6625-3094-40P	
TB 43-0127	
PERSONNEL REQUIRED: 1	

4-141. Maintenance Procedures for Test Adapter A14 Support Bracket.

The following procedures are used to maintain and repair the Test Adapter A14 support bracket.

ITEM	ACTION	REMARKS
Support bracket(4)	<p>Turn two stops(7) securing adapter card(1) to bracket and slide out to remove.</p> <p>Remove six screws(6) and six flat washers securing each guide(9) to bracket.</p> <p>Remove four screws, four lock washers, eight flat washers, and four hex nuts securing support strip(2) to bracket.</p> <p>Replace support bracket and install two panel screw assemblies, as required.</p> <p>Replace support strip(2) and secure to bracket using four screws(5), four lock washers, eight flat washers, and four hex nuts.</p> <p>Replace guides(9) and secure each to bracket with six screws(6) and six flat washers.</p> <p>Slide adapter card(1) into guides(9) and turn two stops(7) to secure to bracket(4).</p>	<p>Refer to figure 4-232 on page 4-449.</p> <p>Refer to Section XVII on page 4-270.</p>
b. Support strip(2)	<p>Remove adapter card.</p> <p>Remove support Strip.</p> <p>Replace support strip.</p> <p>Replace adapter card.</p>	<p>Refer to step a.</p> <p>Refer to step a.</p> <p>Refer to step a.</p> <p>Refer to step a.</p>

4-141. Maintenance Procedures for Test Adapter A14 Support Bracket. Cont

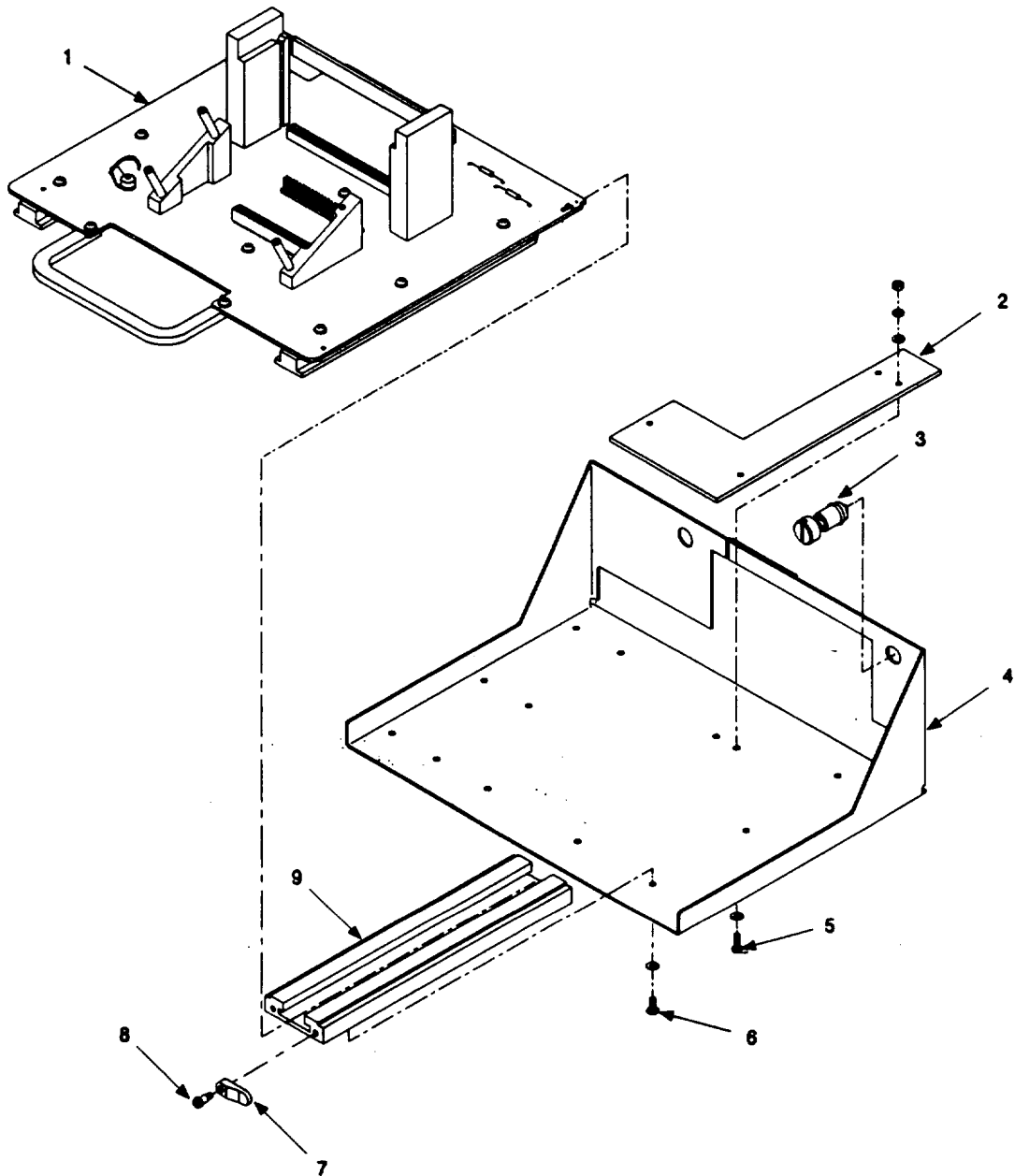


Figure 4-232. Disassembly of Test Adapter A14

4-141. Maintenance Procedures for Test Adapter A14 Support Bracket. Cont

ITEM	ACTION	REMARKS
c. Guides(9)	Remove adapter card. Remove wide. Remove screw(8) securing stop(7) to guide(9). Obtain replacement guide. Install stop on guide with screw. Replace guide on bracket. Replace adapter card.	Refer to step a. Refer to step a. Refer to step a. Refer to step a.
d. Stops(7)	Remove screw(8) securing stop to guide(9). Replace stop(7) and secure to guide With screw(8).	

4-142. Maintenance Procedures for Test Adapter A14 Electronic Components Assembly (ECA) - A14A1.

The following procedures are used to maintain and repair the Test Adapter A14 ECA.

ITEM	ACTION	REMARKS
a. Electrical card holder - left (2)	Remove screw(4), lock washer and flat washer securing flat mounting plate(3) to electrical card holder. Remove two Screws, two lock washers, and two flat washers securing electric card holder to CCA(8). Replace card holder. Secure electric card holder(2) to CCA(8), using two screws(14), two lock washers, and two flat washers. Secure flat mounting plate(3) to electrical card holder using screw(4), lock washer and flat washer.	See figure 4-233 on page 4-451.
b. Electrical card holder - right (8)	Remove screw(4), lock washer and flat washer securing flat mounting plate(3) to electrical card holder. Remove two screws(11), two lock washers, and two flat washers securing electric card holder to CCA(8). Replace card holder.	

4-142. Maintenance Procedures for Test Adapter A14 Electronic Components Assembly (ECA) - A14A1. Cont

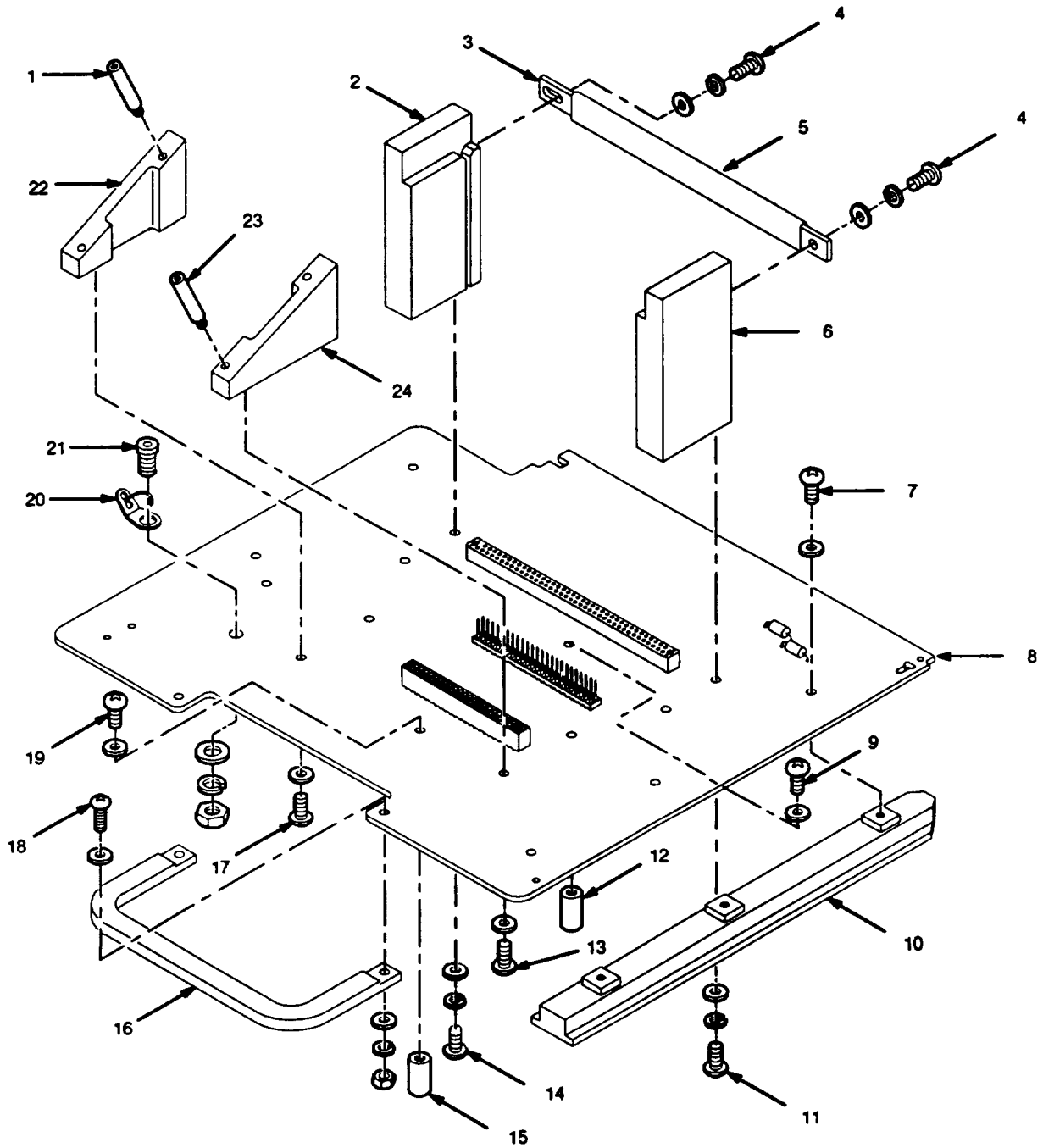


Figure 4-233. Test Adapter A14 ECA Disassembly

4-142. Maintenance Procedures for Test Adapter A14 Electronic Components Assembly (ECA) - A14A1. Cont

ITEM	ACTION	REMARKS
c. Angle card holder-left(22)	<p>Secure electric card holder to CCA(8), using two screws(11), two lock washers, and two flat washers.</p> <p>Secure flat mounting plate(3) to electrical card holder using screw(4), lock washer and flat washer.</p> <p>Remove two threaded posts(1) from left angle card holder.</p> <p>Remove two screws(17) and two flat washers securing left angle card holder to CCA(8).</p> <p>Replace angle card holder.</p> <p>Secure angle card holder to CCA using two screws(17) and two flat washers.</p> <p>Install two threaded posts(1) on angle card holder.</p>	
d. Angle card holder-right(24)	<p>Remove threaded post(23) from right angle card holder.</p> <p>Remove two screws(13) and two flat washers securing right angle card holder to CCA(8).</p> <p>Replace angle card holder.</p> <p>Secure angle card holder to CCA using two screws(13) and two flat washers.</p> <p>Install threaded post(23) on angle card holder.</p>	
e. T-Slot block assembly (right assembly shown)	<p>Remove three screws(7) and three flat washers securing T-slot block assembly to CCA(8).</p> <p>Replace T-slot block assembly.</p> <p>Secure T-slot block assembly to CCA(8) with three screws(7) and three fiat washers.</p>	
f. Flat mounting plate(3)	<p>Remove two screws(4), two flat washers, and two lock washers securing flat mounting plate to electrical card holders(2 and 6).</p> <p>Replace flat mounting plate.</p> <p>Install insulation sleeving(5) on flat mounting plate.</p> <p>Secure fiat mounting plate to electrical card holders(2 and 6) with two screws(4), two flat washers, and two lock washers.</p>	<p>Use item 281, App. C</p>
g. Insulation Sleeving(5)	<p>Replace as needed.</p>	<p>Use item 281, App. C</p>

4-142. Maintenance Procedures for Test Adapter A14 Electronic Components Assembly (ECA) - A14A1. Cont

ITEM	ACTION	REMARKS
h. Handle(16)	<p>Remove two screws(18), four flat washers, two lock washers, and two nuts securing handle(16) to CCA(8).</p> <p>Replace handle and secure to CCA(8) with two screws(18), four flat washers, two lock washers, and two nuts.</p>	
i. Electrical posts(12 or 15)	<p>Remove screw(9 or 19) and flat washer securing electrical post(12 or 15) to CCA(8).</p> <p>Replace electrical post(12 or 15) and secure to CCA(8) with screw(9 or 19) and flat washer.</p>	
j. Threaded post(1 and 23)	<p>Unscrew threaded post from angle card holder.</p> <p>Replace post.</p> <p>Screw post into angle card holder.</p>	
k. Miniature banana jack(21)	<p>Unsolder wire between terminal lug(20) and E1 on CCA(8).</p> <p>Remove nut, lock washer, and flat washer securing miniature banana jack(21) and terminal lug(20) to CCA(8).</p> <p>Obtain new jack and attaching hardware.</p> <p>Place terminal lug(20) on jack(21) and secure jack to CCA(8) using flat washer, lock washer, and nut.</p> <p>Replace wire and solder between terminal lug(20) and E1 on CCA(8).</p>	<p>See figures 4-233 on page 4-451 and 4-234 on page 4-454.</p> <p>Use item 148, App. C</p>
l. Connector P2(4) or J2(5)	<p>Unsolder connector contacts from CCA(1).</p> <p>Remove connector from CCA.</p> <p>Replace connector.</p> <p>Install connector on CCA and solder connector contacts to CCA.</p>	<p>See figure 4-234 on page 4-454.</p>
m. Diode CR1(3) or CR2(2)	<p>Unsolder diode contacts from CCA(1).</p> <p>Remove diode from CCA.</p> <p>Replace diode.</p> <p>Solder diode onto CCA.</p>	
n. Traces	<p>Refer to FO-17.</p>	

4-142. Maintenance Procedures for Test Adapter A14 Electronic Components Assembly (ECA) - A14A1. Cont

ITEM	ACTION	REMARKS
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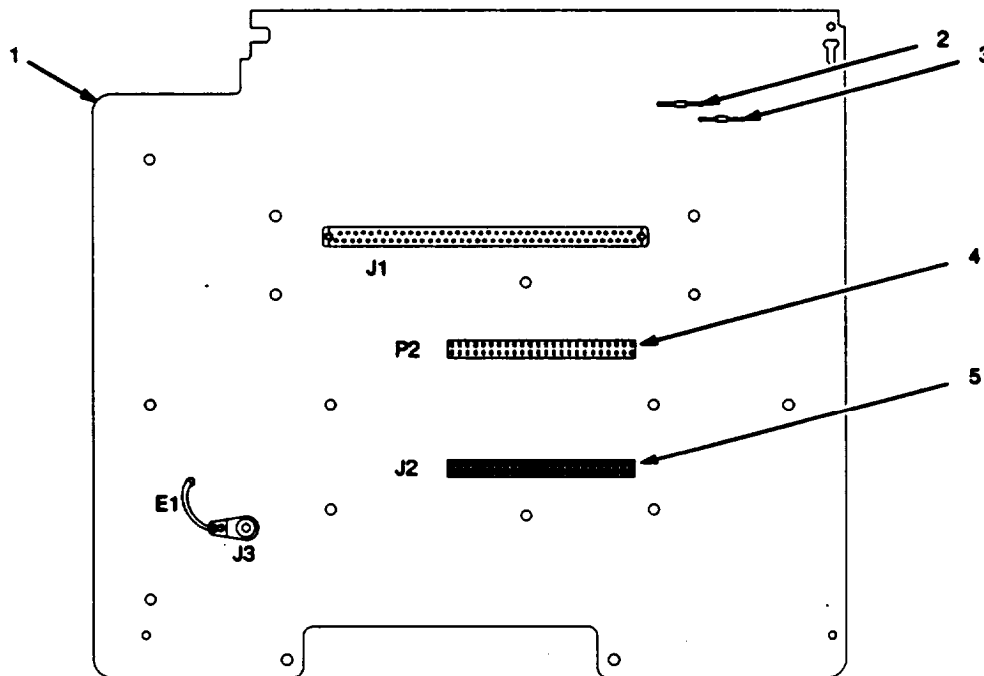


Figure 4-234. Component Layout of Test Adapter A14 Circuit Card Assembly.

4-143. Maintenance of Shorting Card-77 Pin, A3148087-2 (A14A2).

ITEM	ACTION	REMARKS
a. Handle(2)	<p>Remove two screws(1), four flat washers, two lock washers, and two hex nuts.</p> <p>Replace handle(2) and secure with two screws(1), four flat washers, two lock washers, and two hex nuts.</p>	
b. Traces	<p>Troubleshoot the 77-pin shorting card.</p>	<p>Refer to paragraph 4-95.b on page 4-320.</p>

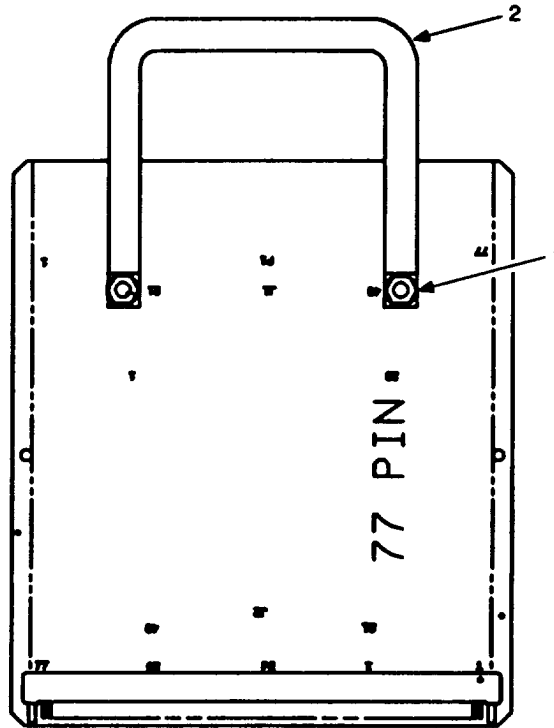


Figure 4-235. Shorting Card-77 Pin Connector Component Layout

4-144. Maintenance of Cable Assembly, SP, Elec-Y-Ribbon, A3190917-1 (A14W1).

ITEM	ACTION	REMARKS
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a. Cable Assembly, SP, Elec-Y-Ribbon

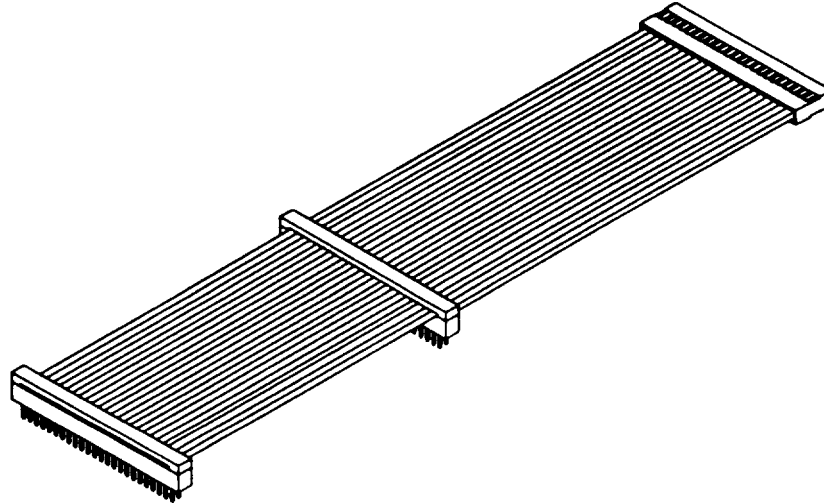


Figure 4-236. Maintenance of Cable Assembly, SP, Elec-Y-Ribbon (A14W1).

b. Traces

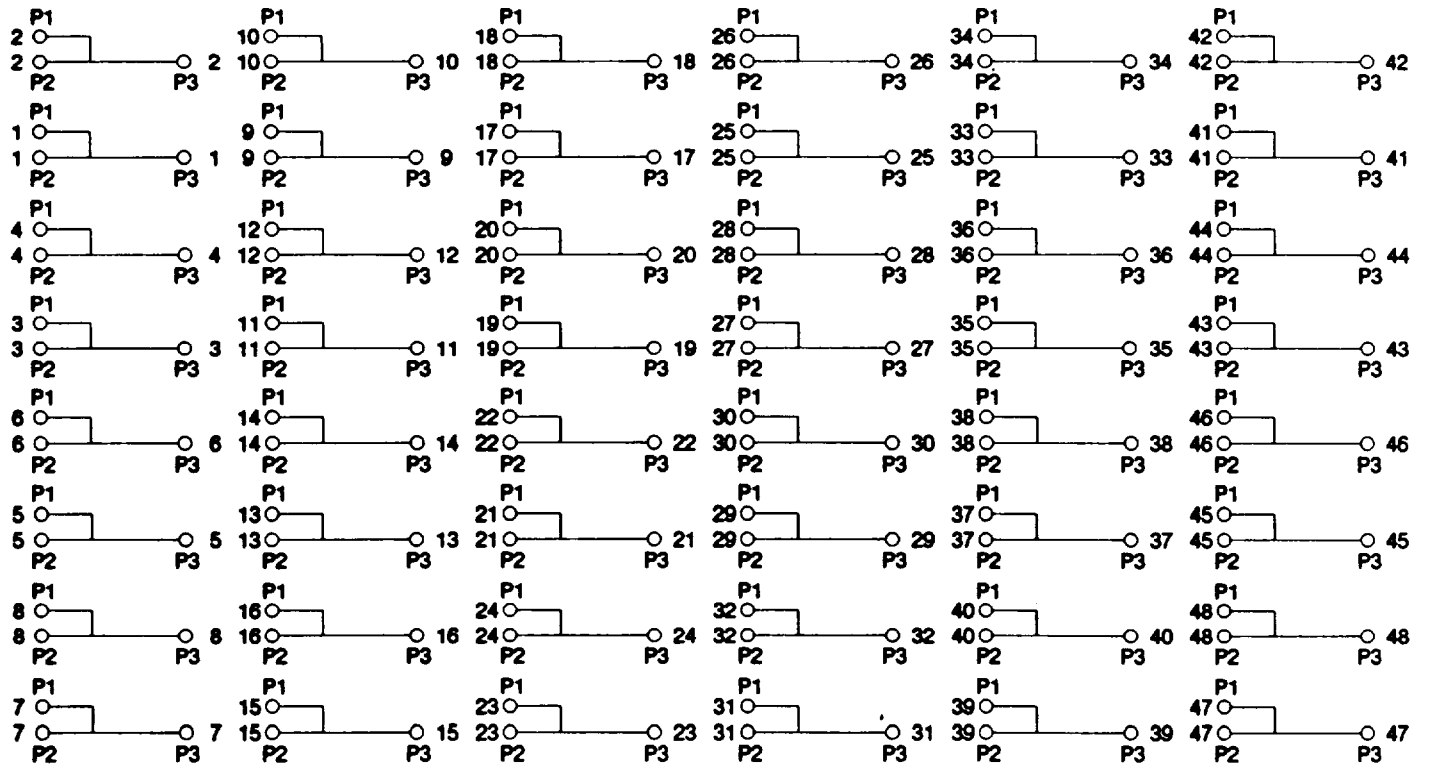


Figure 4-237. Schematic Diagram of Cable Assembly A14W1.

Section XXVIII. MAINTENANCE INSTRUCTIONS FOR J-6097/G (TEST ADAPTER A16)

This adapter is used with J-6004/G, test adapter A13, to test the Chassis, Electrical Equipment-Control, Receiver-Transmitter Subassembly (19A13A2) A3167954-1, This adapter consists of a 33-pin shorting card and a 61-pin shorting card which are identical to cards which are part of test adapter A13. See maintenance instructions for test adapter A13 in section XXVI on page 4-387 for procedures for testing A16.

4-145. Required Test Accessories for Test Adapter A16.

See accessories used to conduct tests on test adapter A13 in paragraph 4-121 on page 4-387.

4-146. Test Procedures for Test Adapter A16.

See test procedures for test adapter A13 in paragraph 4-122 on page 4-388.

4-147. Maintenance of Shorting Card-33 Pin, A3148100-2 (A16A1).

See maintenance procedures for electronic test extender card-33 pin in paragraph 4-127 on page 4-404.

4-148. Maintenance of Shorting Card-61 Pin, A3148092-2 (A16A2).

See maintenance procedures for electronic test extender card-61 pin in paragraph 4-125 on page 4-398.

APPENDIX A REFERENCES

SCOPE

This appendix lists all forms, field manuals, technical manuals, and miscellaneous publication references in this manual,

FORMS

DA Form 2028	Recommended Changes to Publications and Blank Forms,
DA Form 2028-2	Recommended Changes to Equipment Technical Publications.
SF 361	Transportation Discrepancy Report (TDR).
SF 364	Report of Discrepancy
SF 368	Product Quality Deficiency Report (ROD).

TECHNICAL MANUAL

TM 11-5820-890-10-1	Department of the Army Technical Manual: Radio Sets AN/PRC-119A, AN/VRC-87A, AN/VRC-87C, AN/VRC-88A, AN/VRC-88C, AN/VRC-89A, AN/VRC-90A, AN/VRC-91A, and AN/VRC-92A.
TM 11-5820-890-0 - 2	Department of the Army Technical Manual (Pocket Size): Radio Sets AN/PRC-119A, AN/VRC-87A, AN/VRC-87C, AN/VRC-88A, AN/VRC-88C, AN/VRC-89A, AN/VRC-90A, AN/VRC-91A, and AN/VRC-92A.
TM 11-5820-890-0 - 3	Department of the Army Technical Manual: Radio Sets AN/PRC-119, AN/VRC-87, AN/VRC-87D, AN/VRC-88, AN/VRC-88D, AN/VRC-89, AN/VRC-90, AN/VRC-91, and AN/VRC-92,
TM 11-5820-890-10-4	Department of the Army Technical Manual (Pocket Size): Radio Sets AN/PRC-119, AN/VRC-87, AN/VRC-87D, AN/VRC-88, AN/VRC-88D, AN/VRC-89, AN/VRC-90, AN/VRC-91, and AN/VRC-92.
TM 11-5820-890-20-1	Department of the Army Unit Maintenance Technical Manual: Radio Sets AN/PRC-119A, AN/VRC-87A, AN/VRC-87C, AN/VRC-88A, AN/VRC-88C, AN/VRC-89A, AN/VRC-90A, AN/VRC-91A, and AN/VRC-92A.
TM 11-5820-890-20-2	Department of the Army Unit Maintenance Technical Manual: Radio Sets AN/PRC-119, AN/VRC-87, AN/VRC-87D, AN/VRC-88, AN/VRC-88D, AN/VRC-89, AN/VRC-90, AN/VRC-91, and AN/VRC-92.
TM 11-5820-890-30-1	Department of the Army Direct Support Maintenance Technical Manual: Radio Sets AN/PRC-119A, AN/VRC-87A, AN/VRC-87C, AN/VRC-88A, AN/VRC-88C, AN/VRC-89A, AN/VRC-90A, AN/VRC-91A, and AN/VRC-92A.
TM 11-5820-890-30-3	Department of the Army Direct Support Maintenance Technical Manual: Radio Sets AN/PRC-119, AN/VRC-87, AN/VRC-87D, AN/VRC-88, AN/VRC-88D, AN/VRC-89, AN/VRC-90, AN/VRC-91, and AN/VRC-92.

REFERENCES Continued

TECHNICAL MANUAL

Continued

- TM 11-5820-890-30-4 Department of the Army Direct Support Maintenance Technical Manual: Radio Sets AN/PRC-119, AN/VRC-87, AN/VRC-88, AN/VRC-89, AN/VRC-90, AN/VRC-91, and AN/VRC-92.
- TM 11-5820-914-40 Department of the Army General Support Maintenance Technical Manual: Radio Sets AN/PRC-119, AN/PRC-119A, AN/VRC-87, AN/VRC-87A, AN/VRC-87C, AN/VRC-87D, AN/VRC-88, AN/VRC-88A, AN/VRC-88C, AN/VRC-88D, AN/VRC-89, AN/VRC-89A, AN/VRC-90, AN/VRC-90A, AN/VRC-91, AN/VRC-91A, AN/VRC-92, and AN/VRC-92A.
- TM 11-5820-890-20P Department of the Army Unit Maintenance Repair Parts and Special Tools Lists: Radio Sets AN/PRC-119, AN/PRC-119A, AN/VRC-87, AN/VRC-87A, AN/VRC-87C, AN/VRC-87D, AN/VRC-88, AN/VRC-88A, AN/VRC-88C, AN/VRC-88D, AN/VRC-89, AN/VRC-89A, AN/VRC-90, AN/VRC-90A, AN/VRC-91, AN/VRC-91A, AN/VRC-92, and AN/VRC-92A.
- TM 11-5820-890-30P-1 Department of the Army Unit and Direct Support Maintenance Repair Parts and Special Tools Lists: Radio Sets AN/PRC-119, AN/PRC-119A, AN/VRC-87, AN/VRC-87A, AN/VRC-87C, AN/VRC-87D, AN/VRC-88, AN/VRC-88A, AN/VRC-88C, AN/VRC-88D, AN/VRC-89, AN/VRC-89A, AN/VRC-90, AN/VRC-90A, AN/VRC-91, AN/VRC-91A, AN/VRC-92, and AN/VRC-92A.
- TM 11-5820-914-40P Department of the Army General Support Maintenance Repair Parts and Special Tools Lists: Radio Sets AN/PRC-119, AN/PRC-119A, AN/VRC-87, AN/VRC-87A, AN/VRC-87C, AN/VRC-87D, AN/VRC-88, AN/VRC-88A, AN/VRC-88C, AN/VRC-88D, AN/VRC-89, AN/VRC-89A, AN/VRC-90, AN/VRC-90A, AN/VRC-91, AN/VRC-91A, AN/VRC-92, and AN/VRC-92A.
- TM 11-6625-2773-10 Operators Manual Test Station, Electronic Equipment AN/USM-410(V)2 (NSN 6625-01-069-4223)
- TM 11-6625-2773-30-1 Direct Support Maintenance Manual Test Station Electronic Equipment AN/USM-410(V) 2 (NSN 6625-01-069-4223)
- TM 11-6625-3038-10 Operators Manual Test Set, Digital Card Tester AN/USM-465A (NSN 6625-01-126-2473)
- TM 11-6625-3038-20 Organizational Maintenance Manual Test Set, Digital Card Tester AN/USM-465A (NSN 6625-01-126-2473)
- TM 750-244-2 Procedure for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

MISCELLANEOUS PUBLICATIONS

AMDF	(AR 708-1) IAW ackaging Segment of AMDF by NSN.
AR 735-244-2	Reporting of Item and Packaging Discrepancies.
DA Pam 25-30	Consolidated Index of Army Publications and Blank Forms.
FM 21-11	Artificial Respiration.
DA Pam 738-750	The Army Maintenance Management System (TAMMS).
MIL-HDBK-263	Electrostatic Discharge Control Handbook for Protection of Electrical and Electronic Parts, Assemblies, and Equipment (Excluding Electrically Initiated Explosive Devices) Metric.
SB 11-624	Warning Notice for Vehicles in Which Radios are Mounted.
TB 43-0127	Maintenance and Repair of Printed Circuit Boards and Printed Circuit Boards.
TB 43-0128	CECOM Test Program Set (TPS) Index.
DMWR 11-5800-214	Depot Maintenance Work Requirement for Communications Electronic Equipment.

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section 1. INTRODUCTION

B-1. GENERAL

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

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

B-2. MAINTENANCE FUNCTIONS

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

b. *Test.* To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics with established standards through examination; e.g., by sight, sound, or feel,

c. *Service.* Operations required periodically to keep an item in proper operating condition; i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

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

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

g. *Remove/Install.* To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of enplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. *Replace.* To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the third position code of the SMR code.

i. *Repair.* The application of maintenance services¹, including fault location/troubleshooting², removal/installation, and disassembly/assembly³ procedures, and maintenance actions⁴ to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

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

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

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II

a. *Column 1, Group Number.* Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00".

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

c. *Column 3, Maintenance Function.* Column 3 lists the functions to be performed on the item listed in Column 2, (For detailed explanation of these functions, see paragraph 2.)

d. *Column 4, Maintenance Level.* Column 4 specifies the level of maintenance authorized to perform the function listed in Column 3 by listing a work time figure in the appropriate subcolumn (s). This figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work time figures will be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

- C Operator or crew
- O Unit Maintenance
- F Direct Support Maintenance
- H General Support Maintenance
- D Depot Maintenance

¹ Services - inspect, test, service, adjust, aline, calibrate, and/or replace.

² Fault locate/troubleshoot - the process of investigating and detecting the cause of equipment malfunction; the act of isolating a fault within a system or unit under test (UUT).

³ Disassemble/assemble - encompasses the step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least componency identified as maintenance significant; (i.e., assigned an SMR code) for the level of maintenance under consideration.

⁴ Actions - welding, grinding, riveting, straightening, facing, remachining, and/or resurfacing.

e. *Column 5, Tools and Equipment.* Column 5 specifies, by code, those common tool sets (not individual 100 Is) and special tools, TMDE, and support equipment required to perform the designated function. The codes are identified in Section III.

f. *Column 6, Remarks.* This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III

a. *Column 1, Reference Code.* The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.

b. *Column 2, Maintenance Level.* The lowest level of maintenance authorized to use the tool or test equipment.

c. *Column 3, Nomenclature.* Name or identification of the tool or test equipment.

d. *Column 4, National Stock Number.* The national stock number of the tool or test equipment.

e. *Column 5, Tool Number.* The manufacturer's part number.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV

a. *Column 1, Reference Code.* The code recorded in Column 6, Section II.

b. *Column 2, Remarks.* This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
00	SINGARS-V Radio Set Group								
42	Adapter Set, Test for AN/USM-410								
4201	Adapter, Test A (J-4823/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1		1,2	A
420101	CCA-Adapter Card A (A1) (A3014512-1)	Repair				0.3		4,5, 8-10	B
420103	Cable Assembly, Special Purpose, Electrical (W1) (A3014520-1)	Repair				0.3		4-6	
420104	Cable Assembly, Radio Frequency (W2) (A3014521-2)	Repair				0.3		3,20	
420105	Cable Assembly, Radio Frequency (W3) (A3014521-3)	Repair				0.3		3,20	
420106	Cable Assembly, Radio Frequency (W4) (A3014521-4)	Repair				0.3		3,20	
4202	Adapter, Test C (J-4825/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1		1,2	A
420201	CCA - Adapter Card C (A1) (A3017847-1)	Repair				0.1		3-5	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
420202	Extender Card, Electronic Test - Self Test C (A2) (A3014349-1)	Repair				0.3		3-5	
420203	Wiring Harness, Adapter Card C (W1) (A3017868-1)	Repair				0.3		3,5,6	█
420204	Wiring Harness, Adapter Card C (W2) (A3019211-1)	Repair				0.3		3,5,6	█
4203	CCA-Adapter Card D (J-4826/G)	Inspect Test Replace Repair				0.1 0.2 0.1 0.1		1,2 3-6	A
420301	Wiring Harness, Adapter Card D (W1) (A3014483-1)	Repair				0.3		4,5	
420302	Wiring Harness, Adapter Card D (W2) (A3142126-1)	Repair				0.3		4,5	█
420303	Wiring Harness, Adapter Card D (W3) (A3014481-1)	Repair				0.3		4,5	█
4204	Adapter, Test E (J-4827/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.3		1,2 4,5,16	A
420401	Connector Assy, Electrical - Self Test E (A3017926-1)	Repair				0.3		4,5,16	█

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
420402	CCA-Extender Card E (A3017850-1)	Repair				0.3		4,5	
4205	Adapter, Test F (J-4828/G)	Inspect Test Replace Repair				0.1 0.2 0.1 0.1		1	
420501	Wiring Harness, Branched - Interface Connect Device F (W1) (A3019040-1)	Repair				0.3		4,5,7,8	
420502	Interface Connect Device F (A3019039-1)	Repair				0.2		3-5,7,8	
42050201	Clamping Fixture (A3019256-1)	Repair				0.2		5,8-10	B
4205020101	Mounting Base, Clamping Fixture, Assembly of (A3019138-1)	Repair				0.1		9,10	B
42050202	Chassis, Electrical Equipment (A3019124-1)	Repair				0.3		4,5,8	
4205020201	CCA-Load Card (A3019094-1)	Repair				0.3		4,7	
4206	Wiring Harness, Branched - Interface Connect Device G (J-4830/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1		1 3-5,7	
4207	Adapter, Test H (J-4829/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1		1	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
420701	Cable Assy, Elec, Interface Connect Device H (W1) (A3019144-1)	Repair				0.3		3-5	
420702	Cable Assy, Elec, Interface Connect Device H (W2) (A3019150-1)	Repair				0.3		3-5,7	
420703	Cable Assy, Elec, Interface Connect Device H (W3) (A3019151-1)	Repair				0.3		3-5	
420704	Lead, Electrical - Interface Connect Device H (W4) (A3019152-1)	Repair				0.1		16	
420705	Interface Connect Device H (A3019208-1)	Repair				0.3		3-5,7	
42070501	Support Base Assembly (A3167641-1)	Repair				0.1		3	
42070502	Case, ICD H (A3140028-1)	Repair				0.1		3	
420706	Lead, Test - Jumper Interface Connect Device H (W5) (A3132907-1)	Repair				0.1		16	
420707	Lead, Test - Jumper Interface Connect Device H (W6) (A3132907-2)	Repair				0.1		16	

**Section II MAINTENANCE ALLOCATION CHART
FOR
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(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
420708	Lead, Test - Jumper Interface Connect Device H (W7) (A3132907-3)	Repair				0.1		16	
420709	Shield, Safety, Laboratory - Assembly (A3167687-1)	Repair				0.1		3	
420710	Shield, Safety, Laboratory - Assembly (A3167688-1)	Repair				0.1		3	
420711	Shield, Safety, Laboratory - Assembly (A3167648-1)	Repair				0.1		3	
420712	Adapter, Power Supply (A3167753-1)	Repair				0.1		3	
42071201	Plate, Mounting (A3167756-1)	Repair				0.1		9,10	B
42071202	Plate, Mounting (A3167755-1)	Repair				0.1		9,10	B
42071203	Plate, Mounting (A3167754-1)	Repair				0.1		9,10	B
420713	Shield, Safety, Laboratory - Assembly (A3167758-1)	Repair				0.1		3	
4208	Accessory Kit, Test Adapter Set (J-4831/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.3		11-14 3-5	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
4209	CCA-Load Card A (J-4832/G)	Inspect Test Replace Repair				0.1 0.2 0.1 0.3		1,2 4,5	A
4210	CCA-Load Card B (J-4834/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.3		1,2 4,5	A
4211	CCA-Load Card C (J-4833/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.3		1,2, 11-13 4,5	A
421101	Dummy Load, Electrical (A3147852-1)	Repair				0.3		3-5	
42110101	CCA-Dummy Load Card (A3132901-1)	Repair				0.3		3-5	
4212	Adapter, Test B (J-4824/G)	Inspect Test Replace Repair				0.1 0.2 0.1 0.1		1,2	A
421201	CCA-Adapter Card B (A1) (A3014453-1)	Repair				0.3		3-5	
42120101	Printed Wiring Board, Adapter Card B, Assy of- (A3014454-1)	Repair				0.1		4,5	
4213	Adapter, Test - I, J, K (J-4909/G)	Inspect Test Replace Repair				0.1 0.2 0.1 0.1		1,2	A
421301	CCA-Adapter Card I (A3142086-1)	Repair					0.3	3-5	

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(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
421302	CCA-Adapter Card J (A3142156-1)	Repair					0.3	3-5	
421303	CCA-Adapter Card K (A3142084-1)	Repair				0.3		3-5	
421304	Backplane Assy Self Test I, J, K (A3142308-1)	Repair				0.3		3-5	
421305	Lead Assy - Electrical (W5) (A3014244-1)	Repair					0.3	3-5	
421306	Cable Assy, Special Purpose- Electrical - ICD J (W6) (A3142165-1)	Repair					0.3	4,5	
421307	Lead Assy, Electrical (W7) (A3014525-1)	Repair					0.3	3-5	
4214	Adapter, Test L (J-4997/G)	Inspect Test Replace Repair				0.1 0.2 0.1 0.1		1,2	A
421401	Electronic Components Assembly-Adapter Card L (A1) (A3018160-1)	Repair				0.2		3-5	
42140101	CCA-Adapter Card L (A1A1) (A3148064-1)	Repair				0.3		3-5	
421402	CCA-Load Card L1 (A1A2) (A3148067-1)	Repair				0.3		3-5	

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(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
421403	CCA-Load Card L2 (A1A3) (A3148070-1)	Repair				0.3		3-5	
43	Adapter Set, Test for AN/USM-465A								
4301	Adapter Test - Interface Connect Device D (A4) (J-4819/G)	Inspect Test Replace Repair				0.1 0.2 0.1 0.1		15	
430101	CCA-Interface Connect Device D (A4A1) (A3014476-1)	Repair				0.4		3-5	
43010101	Wiring Harness - System Connector (A4A1W1) (A3017881-1)	Repair				0.3		3-5	
43010102	Wiring Harness - COMSEC Connector (A4A1W2) A3017884-1)	Repair				0.3		3-5	
43010103	Wiring Harness, Diagnostic Connector (A4A1W5) (A3017883-1)	Repair				0.3		3-5	
43010104	Cable Assy, Special Purpose Elec - Jumper, Audio/Fill, Data/Fill (A3017863-1)	Repair				0.3		3-5	

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(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
430102	Backplane Assy - Jumper Remote I/O (A4A2) (A3014261-1)	Repair				0.3		4,5	
430103	Jumper Assy - Power Supply, RT (A4A3) (A3014264-1)	Repair				0.3		3-5	
430104	Backplane Assy - Interface Control I/O (A4A9) (A3014284-1)	Repair				0.3		3-5	
430105	Backplane Assy - Interface, Switching (A4A10) (A3014287-1)	Repair				0.3		3-5	
430106	Backplane Assy - Interface, Audio Control (A4A11) (A3014290-1)	Repair				0.3		3-5	
430107	Backplane Assy - Interface, Data Rate Adapter (A4A12) (A3014293-1)	Repair				0.3		3-5	
430108	Accessory Kit, Test Adapter ICD D (A3132852-1)	Repair				0.1			
4302	Adapter, Test - Interface Connect Device A (A1) (J-4821/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1		15	
430201	Interface Connect Device A (A1A1) (A3142091-1)	Repair				0.3		3-5	

**Section II MAINTENANCE ALLOCATION CHART
FOR
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(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
43020101	Backplane Assy - Bracket Board, 77 Pin (A1A1A1) (A3014328-1)	Repair				0.3		3-5	
43020102	Backplane Assy- Bracket Board 33 Pin (A1A1A2) (A3014346-1)	Repair				0.3		3-5	
43020103	CCA-Interface Connect Device A (A1A1A3) (A3018092-1)	Repair				0.2		3-5	
43020104	Latch Support Assembly (A3140060-1)	Repair				0.1		3	
43020105	Latch Support Assembly (A3147831-1)	Repair				0.1		3	
430202	Cable Assy, Sp Elec - Test Interface (A1W1) (A3018160-1)	Repair				0.1		3-5	
43020201	Backplane Assy - Cable Interface - 41 Pin (A1W1A1) (A3014340-1)	Repair				0.3		3-5	
430203	Cable Assy, Sp Elec - Test Interface (A1W2) (A3018159-1)	Repair					0.1	3-5	
43020301	Backplane Assy - Cable Interface - 30 Pin (A1W2A1) (A3014331-1)	Repair					0.3	3-5	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGGARS ICD'S**

(1) GROUP NO,	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
43020302	Backplane Assy- Cable Interface - 33 Pin (A1W2A2) (A3014337-1)	Repair					0.3	3-5	
4303	Adapter, Test- Interface Connect Device B (A2) (J-4822/G)	inspect Test Replace Repair				0.1 0.1 0.1 0.1		15	
430301	Interface Connect Device B (A2A1) (A3142072-1)	Repair				0.3		3-5	
43030101	Backplane Assy- Bracket Board - 61 Pin (A2A1A1) (A3014322-1)	Repair				0.3		3-5	
43030102	Backplane Assy - Bracket Board - 41 Pin (A2A1A2) (A3014325-1)	Repair				0.3		3-5	
43030103	CCA-interface Connect Device B (A2A1A3) (A3018093-1)	Repair				0.2		4,5	
430302	Cable Assy, Sp Purpose Elec, 50 Conductor (A2W1) (A301 7804-1)	Repair				0.1		5	
43030201	Backplane Assy Cable Interface No. 1 - 41 Pin (A2W1A1) (A3014315-1)	Repair				0.3		3-5	

**Section II MAINTENANCE ALLOCATION CHART
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(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H			
43030202	Backplane Assy - Cable Interface, No. 2-41 Pin (A2W1A2) (A3014354-1)	Repair				0.3		3-5	
4304	AdapterTest- Interface Connec Device C (A3) (J-4820/G)	nspect Test Replace Repair				0.1 0.1 0.1 0.1		15	
43040	CCA-Interface Connect Device C (A3A1) (A3014490-1)	Repair				0.3		4,5,7, 9,10	B
43040101	Wiring Harness Branched - Audio Connector, (A3A1W1) (A3017885-1)	Repair				0.3		3-5	
430402	Backplane Assy - Interface, Micro- Controller (A3A2) (A3014303-1)					0.3		3-5	
430403	Backplane Assy - Interface Decoder/Timer (A3A3) (A3014306-1)	Repair				0.3		3-5	
430404	Backplane Assy - Interface, Analog (A3A4) (A3014309-1)	Repair				0.3		3-5	
430405	Backplane Assy - Interface, Power supply (A3A5) (A3014312-1)	Repair				0.3		3-5	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
4305	CCA-Interconnec Device A5 (J-4951/G)	Inspect Replace Repair				0.1 0.1 0.2	3		
4306	Adapter, Test A6 (J-4998/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1	15		
430601	Electronic Components Assembly - Test Adapter A6 (A1) (A3148201-1)	Repair				0.3	3		
43060101	CCA-Test Adapter A6 (A1A1) (A3148202-1)	Repair				0.3	3-5		
43060102	Bracket, Modified Test Adapter (A3148118-1)	Repair				0.1	16-19		
430602	Extender Card, Electronic Test - 77 Pin (A2) (A3148087-2)	Repair				0.2	3-5		
430603	Wiring Harness, Branched (W1) (A3148213-1)	Repair				0.3	3-5,7		
430604	Wiring Harness, Branched (W2) (A3148214-1)	Repair				0.3	3-5,7		
4307	Adapter Test A7 (J-4999/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1	15		

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
430701	Electronic Component Assembly-Test Adapter A7 (A1) (A3148184-1)	Repair				0.3		3-5	
43070101	CCA-Test Adapter A7 (A1A1) (A3148181-1)	Repair				0.2		3-5	
43070102	Bracket, Mounting - Test Adapter (A3148180-1)	Repair				0.1		16-19	
430702	Extender Card, Electronic Test - 77 Pin (A2) (A3148087-2)	Repair				0.2		3-5	
430703	Extender Card, Electronic Test - 41 Pin (A3) (A3148096-2)	Repair				0.2		3-5	
4308	Adapter, Test A8 (J-6000/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1		15	
430801	Electronic Component Assembly - Test Adapter A8 (A1) (A3148215-1)	Repair				0.3		3	
43080101	CCA-Test Adapter A8 (A1A1) (A3148174-1)	Repair				0.2		3-5	
43080102	Bracket, Modified - Test Adapter (A3148118-1)	Repair				0.1		16-19	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
430802	Extender Card, Electronic Test - 33 Pin (A2) (A3148100-2)	Repair				0.2		3	
430803	Extender Card, Electronic Test - 41 Pin (A3) (A3148257-1)	Repair				0.2		3-5	
4309	Adapter, Test A9 (J-6001/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1		15	
430901	Electronic Component Assembly - Test Adapter A9 (A1) (A3148177-1)	Repair				0.3		3	
43090101	CCA-Test Adapter A9 (A1A1) (A3148168-1)	Repair				0.3		3-5,7	
43090102	Bracket, Mounting Test Adapter (A3148118-3)	Repair				0.2		16-19	
430902	Wiring Harness, Branched (W1) (A3148099-1)	Repair				0.3		3-5,7	
4310	Adapter, Test A10 (J-6002/G)	Inspect Test Replace Repair				0.1 0.2 0.1 0.1		15	
431001	Electronic Component Assembly (A1) (A3148090-1)	Repair				0.3		3	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
43100101	CCA-Test Adapter A10 (A1A1) (A3148171-1)	Repair				0.2		3-5	[REDACTED]
43100102	Bracket, Mounting Test Adapter (A3148118-1)	Repair				0.2		16-19	
43100103	Plate, Mounting (A3148054-1)	Repair				0.2		3	
431002	Extender Card Assembly - Self Test I/O (A2) (A3148092-2)	Repair				0.2		3-5	
431003	Wiring Harness, Branched (W1) (A3148095-1)	Repair				0.3		3-5,7	
431004	Wiring Harness, Branched (W2) (A3148212-1)	Repair					0.3	3-5,7	
4311	Adapter, Test A12 (J-6003/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1		15	
431101	Electronic Component Assembly - Test Adapter (A12) (A3148138-1)	Repair				0.3		3	
43110101	CCA-Test Adapter A12 (A1A1) (A3148115-1)	Repair				0.3		3-5,7	
43110102	Bracket, Modified Test Adapter (A3148118-2)	Repair				0.1		16-19	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
431102	Dummy Connector Plug - 34 Pin (A3148155-1)	Repair				0.2		3-5	
4312	Adapter, Test A13 (J-6004/G)	Inspect Test Replace Repair				0.1 0.5 0.1 0.1		15	
431201	Electronic Component Assembly- Test Adapter A13 (A1) (A3148139-1)	Repair				0.3		3,9	
43120101	CCA - Test Adapter A13 (A1A1) (A3148083-1)	Repair				0.3		3-5,7,9	
43120102	Bracket, Modified Test Adapter (A3148118-1)	Repair				0.1		16-19	
431202	Extender Card, Electronic Test - 77 Pin (A2-A5) (A3148087-2)	Repair				0.2		3-5	
431203	Extender Card, Electronic Test - 61 Pin (A6-A7) (A3148092-2)	Repair				0.2		3-5	
431204	Extender Card, Electronic Test - 41 Pin (A8-A9) (A3148096-2)	Repair				0.2		3-5	
431205	Extender Card, Electronic Test - 33 Pin (A10-A11) (A3148100-2)	Repair				0.2		3-5	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
431206	Extender Card, Electronic Test - 25 Pin (A12) (A3148104-2)	Repair				0.2		3-5	
431207	Extender Card, Electronic Test - 17 Pin (A13-A15) (A31 481 08-2)	Repair				0.2		3-5	
431208	Extender Card, Electronic Test - 9 Pin (A16) (A3148112-2)	Repair				0.2		3-5	
431209	Dummy Connector, Plug -34 Pin (A3148155-1)	Repair				0.2		3-5	
431210	Dummy Connector, Plug -29 Pin (A3148156-1)	Repair				0.2		3-5	
431211	Dummy Connector, Plug -27 Pin (A3148157-1)	Repair				0.2		3-5	
431212	Dummy Connector, Plug - 14 Pin (A3148158-1)	Repair				0.2		3-5	
431213	Wiring Harness, Branched (W1) (A3148150-1)	Repair				0.3		3-7	
43121301	Extender Card, Electronic Test - 77 Pin (W1A1) (A3148087-1)	Repair				0.3		3-5	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
431214	Wiring Harness, Branched (W2) (A3148151-1)	Repair				0.3		3-7	
43121401	Extender Card, Electronic Test - 61 Pin (W2A1) (A3148092-1)	Repair				0.2		3-5	
43121402	Extender Card, Electronic Test - 33 Pin (W2A2) (A3148100-1)	Repair				0.2		3-5	
431215	Wiring Harness, Branched (W3) (A3148152-1)	Repair				0.3		3-7	
43121501	Extender Card, Electronic Test - 41 Pin (W3A1) (A3148096-1)	Repair				0.2		3-5	
43121502	Extender Card, Electronic Test - 25 Pin (W3A2) (A3148104-1)	Repair				0.2		3-5	
431216	Wiring Harness, Branched (W4) (A3148154-1)	Repair				0.3		3-7	
43121601	Extender Card, Electronic Test - 17 Pin (W4A1) (A3148108-1)	Repair				0.2		3-5	
43121602	Extender Card, Electronic Test - 9 Pin (W4A2) (A3148112-1)	Repair				0.2		3-5	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS	
			C	O	F	H	D			
4313	Adapter, Test All (J-6090/G)	Inspect Test Replace Repair						0.1 0.1 0.1 0.1	15	
431301	Electronic Component Assembly (A1) (A3168029-1)	Repair						0.3	3-4	
43130101	CCA - Test Adapter All (A1A1) (A3167993-1)	Repair						0.2	3-5	
43130102	CCA - Extender Card 2 (A1A2) (A31 68007-1)	Repair						0.2	3-5	
43130103	Plate, Mounting- Translating Table - Assy (A1A3) (A3168001-1)	Repair						0.2	3-5	
4313010301	CCA, Extender Card 1 (A1A3A1) (A31 68003-1)	Repair						0.2	3-5	
431302	CCA, Extender Card 3 (A2) (A3168093-1)	Repair						0.2	3-5	
431303	Extender Card, Electronic Test - 33 Pin (A3) (A3148100-2)	Repair						0.2	3	
431304	Extender Card, Electronic Test - 61 Pin (A4) (A3148092-2)	Repair						0.2	3	
431305	Bracket, Angle - Assy of (A3168016-1)	Repair						0.2	3, 16-19	

**Section II MAINTENANCE ALLOCATION CHART
FOR
GROUND SINGARS ICD'S**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
4314	Adapter, Test A14 (J-6098/G)	Inspect Test Replace Repair				0.1 0.1 0.1 0.1	15		
431401	Electronic Components Assembly (A1) (A3190862-1)	Repair				0.3	3		
43140101	CCA -Test Adapter A14 (A1A1) (A3190858-1)	Repair				0.2	3-5		
431402	Extender Card Electronic Test - 77 Pin (A2) (A3148087-2)	Repair				0.2	3-5		
431403	Bracket, Angle Assembly (A3168016-1)	Repair				0.2	3,16-19		
4315	Adapter, Test A16 (J-6097/G)	Inspect Test Replace Repair				0.1 0.5 0.1 0.1	15		
431501	Extender Card Electronic Test - 33 Pin (A1) (A31481 00-2)	Repair				0.2	3-5		
431502	Extender Card Electronic Test - 77 Pin (A2) (A3148087-2)	Repair				0.2	3-5		

**Section III TOOL AND TEST EQUIPMENT REQUIREMENTS
FOR
GROUND SINGGARS ICD'S**

(1)	(2)	(3)		(4)	(5)
TOOL OR TEST EQUIP. REF. CODE	MAINT. CATEGORY	NOMENCLATURE		NATIONAL/ NATO STOCK NO.	TOOL NO.
1	H,D	Test Station, Electronic Equipment, Analog	AN/USM-410	6625-01-069-4423	
2	H,D	AN/USM-410 ICD	ID-005/C		
3	H,D	Tool Kit (1), Electronic System	TK-105/G	5180-00-610-8177	
4	H,D	Solder Repair Center	PRC-151	3439-01-109-8590	
5	H,D	Multimeter	AN/USM-486	6625-01-145-2430	
6	H	Tool, Crimp	CCT-UBC-1	5120-01-061-0903	
7	H	Tool, Extract	274-7029-07	5120-01-230-2603	
8	H	Tool Kit, Electronic	TK-101/G Issue 6	5180-00-064-5178	
9	H	Maintenance Group	OA-9297/GRC	5820-01-270-3936	
10	H	Maintenance Group	OA-9263A/GRC	5820-01-340-2010	
11	H	Network Analyzer	HP-3577A	6625-01-193-3073	
12	H	Test Set, Radio Frequency Power	HP-35677A/B	6625-01-257-5604	
13	H	Cable Assembly, Special Purpose, Electrical	HP10833B	5995-01-107-7366	
14	H	Amplifier, Radio Frequency	325LA	6625-01-264-5552	
15	H,D	Digital Test Set	AN/USM-465A	6625-01-126-2473	
16	H,D	Tool Kit, Electronic	TK-100/G	5180-00-605-0079	
17	H	Retaining Ring Tool	29-53-101-10	5120-01-185-1606	
18	H	Flaring Punch	90-2824-11	5120-00-751-9799	
19	H	Backup Tool	90-2825-11	5120-01-177-4945	
20	H,D	Die, Crimping Tool	Y196	5120-00-133-0534	

Section IV REMARKS

(1) REFERENCE CODE	(2) REMARKS
A	In order to test and fault locate the AN/USM-410 ICD ID-005C must be used.
B	The Maintenance Group to be used is determined by the theater operations. In Korea, use OA-9263A; other locations use OA-9297.

APPENDIX C

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

SECTION 1. INTRODUCTION

C-1. Scope

This appendix lists expendable supplies and materials you will need to maintain the interface connecting devices. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

C-2. Explanation of Columns

- a. *Column 1-Item Number.* This number is assigned to the entry in the listing and is referenced in the narrative to identify the material (e. g., "Use cleaning compound, item 5, App C).
- b. *Column 2-Level.* This column identifies the lowest level of maintenance that requires the listed item.
 - C--Operator/Crew
 - O--Unit Maintenance
 - F--Direct Support Maintenance
 - H--General Support Maintenance
- c. *Column 3-National Stock Number.* Indicates the National Stock Number assigned to the item: use it to request or requisition the item,
- d. *Column 4-Description.* Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Commercial and Government Entity Code (CAGEC) in parentheses followed by the part number.
- e. *Column 5-Unit of Measure (U/M).* Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirement.

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NO,	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
1	H	6810-00-753-4993	Isopropyl Alcohol, Technical (81348) TT1735	AR
2	H	6515-00-905-1473	Applicator Disposable (81348) GG-A-616	AR
3	H	5120-00-915-4587	Connector Pin Insertion/Extraction Tool (77820) 10-538988-20	EA
4	H		Identification Marker W1 (80063) A3018088-1	AR
5	H		Identification Marker P12 (80063) A3018088-2	AR
6	H		Identification Marker P7 (80063) A3018088-3	AR
7	H		Identification Marker J1 (80063) A3018088-4	AR
8	H		Identification Marker P8 (80063) A3018088-5	AR
9	H		Identification Marker P11 (80063) A3018088-6	AR
10	H		Identification Marker P9 (80063) A3018088-7	AR
11	H		Identification Marker P10 (80063) A3018088-8	AR
12	H		Identification Marker P6 (80063) A3018088-9	AR
13	H		Identification Marker P5 (80063) A3018088-10	AR
14	H		Identification Marker P4 (80063) A3018088-11	AR
15	H		Identification Marker P3 (80063) A3018088-12	AR
16	H		Identification Marker P2 (80063) A3018088-13	AR
17	H		Identification Marker J2 (80063) A3018088-14	AR
18	H		Identification Marker J3 (80063) A3018088- 15	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
19	H		Identification Marker, Black, Wide (80063) TWM-COL-BK3/4 IN	AR
20	H		Identification Marker, Brown, Wide (80063) TWM-COL-BR 3/4 IN	AR
21	H		Identification Marker, Red, Wide (80063) TWM-COL-RD 3/4 IN	AR
22	H		Identification Marker, Orange, Wide (80063) TWM-COL-OR 3/4 IN	AR
23	H		Identification Marker, Yellow, Wide (80063) TWM-COL-YL 3/4 IN	AR
24	H		Identification Marker, Green, Wide (80063) TWM-COL-LG 3/4 IN	AR
25	H		Identification Marker, Blue, Wide (80063) TWM-COL-LB 3/4 IN	AR
26	H		Identification Marker, Violet, Wide (80063) TWM-COL-PL 3/4 IN	AR
27	H		Identification Marker, Gray, Wide (80063) TWM-COL-GY 3/4 IN	AR
28	H		Identification Marker, Black, Narrow (80063) A3018638-1	AR
29	H		Identification Marker, Brown, Narrow (80063) A3018638-2	AR
30	H		Identification Marker, Red, Narrow (80063) A3018638-3	AR
31	H		Identification Marker, Orange, Narrow (80063) A3018638-4	AR
32	H		Identification Marker, Yellow, Narrow (80063) A3018638-5	AR
33	H		Identification Marker, Green, Narrow (80063) A3018638-6	AR
34	H		Identification Marker, Blue, Narrow (80063) A3018638-7	AR
35	H		Identification Marker, Violet, Narrow (80063) A3018638-8	AR
36	H		Identification Marker, Gray, Narrow (80063) A3018638-9	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
37	H	7510-01-122-1182	Ink, Permanent (23250)CK13	AR
38	H		Cable Marker Sleeve P1 (80063) A3013739-1	AR
39	H		Cable Marker Sleeve W1 (80063) A3013739-85	AR
40	H		Cable Marker Sleeve W7P1 (80063) A3013739-99	AR
41	H		Cable Marker Sleeve W1 (80063) A3013739-119	AR
42	H		Cable Marker Sleeve W1 (80063) A3013739-127	AR
43	H		Cable Marker Sleeve W2 (80063) A3013739-130	AR
44	H		Cable Marker Sleeve W1 (80063) A3013739-139	AR
45	H		Cable Marker Sleeve P3 (80063) A3013739-140	AR
46	H		Cable Marker Sleeve W2 (80063) A3013739-141	AR
47	H		Cable Marker Sleeve P2 (80063) A3013739-142	AR
48	H		Cable Marker Sleeve W3 (80063) A3013739-143	AR
49	H		Cable Marker Sleeve P4 (80063) A3013739-144	AR
50	H		Cable Marker Sleeve W1 (80063) A3013739-145	AR
51	H		Cable Marker Sleeve P1 (80063) A3013739-146	AR
52	H		Cable Marker Sleeve W5 (80063) A3013739-158	AR
53	H		Cable Marker Sleeve P1 (80063) A3013739-159	AR
54	H		Cable Marker Sleeve W4 (80063) A3013739-160	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
55	H		Cable Marker Sleeve P1 (80063) A3013739-161	AR
56	H		Cable Marker Sleeve P3 (80063) A3013739-169	AR
57	H		Cable Marker Sleeve P2 (80063) A3013739-170	AR
58	H		Cable Marker Sleeve P1 (80063) A3013739-177	AR
59	H		Cable Marker Sleeve P2 (80063) A3013739-178	AR
60	H		Cable Marker Sleeve W1 (80063) A3013739-179	AR
61	H		Cable Marker Sleeve P1 (80063) A3013739-180	AR
62	H		Cable Marker Sleeve P1 (80063) A3013739-181	AR
63	H		Cable Marker Sleeve W3 (80063) A3013739-182	AR
64	H		Cable Marker Sleeve W2 (80063) A3013739-183	AR
65	H		Cable Marker Sleeve P1 (80063) A3013739-184	AR
66	H		Cable Marker Sleeve W5 (80063) A3013739-185	AR
67	H		Cable Marker Sleeve P1 (80063) A3013739-186	AR
68	H		Cable Marker Sleeve W1 (80063) A3013739-187	AR
69	H		Cable Marker Sleeve P1 (80063) A3013739-188	AR
70	H		Cable Marker Sleeve P20 (80063) A3013739-189	AR
71	H		Cable Marker Sleeve P3 (80063) A3013739-190	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
72	H		Cable Marker Sleeve P1 (80063) A3013739-195	AR
73	H		Cable Marker Sleeve J1 (80063) A3013739-196	AR
74	H		Cable Marker Sleeve E1 (80063) A3013739-199	AR
75	H		Cable Marker Sleeve E2 (80063) A3013739-200	AR
76	H		Cable Marker Sleeve E3 (80063) A3013739-201	AR
77	H		Cable Marker Sleeve E4 (80063) A3013739-202	AR
78	H		Cable Marker Sleeve E5 (80063) A3013739-203	AR
79	H		Cable Marker Sleeve E6 (80063) A3013739-204	AR
80	H		Cable Marker Sleeve, W13 (80063) A3013739-205	AR
81	H		Cable Marker Sleeve P3 (80063) A3013739-206	AR
82	H		Cable Marker Sleeve P1 (80063) A3013739-207	AR
83	H		Cable Marker Sleeve P2 (80063) A3013739-208	AR
84	H		Cable Marker Sleeve E1 (80063) A3013739-209	AR
85	H		Cable Marker Sleeve E2 (80063) A3013739-210	AR
86	H		Cable Marker Sleeve E3 (80063) A3013739-227	AR
87	H		Cable Marker Sleeve P5 (80063) A3013739-228	AR
88	H		Cable Marker Sleeve J1 (80063) A3013739-229	AR
89	H		Cable Marker Sleeve J2 (80063) A3013739-230	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
90	H		Cable Marker Sleeve E1 (80063) A3013739-231	AR
91	H		Cable Marker Sleeve E2 (80063) A3013739-232	AR
92	H		Cable Marker Sleeve E3 (80063) A3013739-233	AR
93	H		Cable Marker Sleeve P4 (80063) A3013739-240	AR
94	H	8305-00-222-2433	Cheesecloth (81348) CCC-C-440-TY1C1	AR
95	H	5970-00-052-3297	Electrical Insulation Sleeving (81349) MIL-1-23053/5	AR
96	H	8040-00-777-0631	Epoxy Kit (04347) 1C	AR
97	H	5970-00-983-8089	Heat Shrinkable Electrical Insulating Sleeve (81349) M23053/5-104-8	AR
98	H	5970-00-088-2975	Heat Shrinkable Electrical Insulating Sleeve (81349) M23053/5-104-9	AR
99	H	5970-00-983-8091	Heat Shrinkable Electrical Insulating Sleeve (81349) M23053/5-106-8	AR
100	H	5970-00-740-2971	Heat Shrinkable Electrical Insulating Sleeve (81349) M23053/5-107-9	AR
101	H	5970-00-983-8099	Heat Shrinkable Electrical Insulating Sleeve (81349) M23053/5-109-8	AR
102	H		"Y" Style Insulation Sleeving (80063) A3013046-1	AR
103	H		Insulation Sleeving (80063) A3013046-2	AR
104	H		Insulation Sleeving (80063) A3013046-3	AR
105	H		Insulation Sleeving (80063) A3013046-4	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
106	H	5970-00-812-2967	Insulating Sleeving (80063) M23053/5-108-0	AR
107	H	5970-00-660-9741	Insulation, Sleeving, Flexible (80063) B7444-1-1-15C	AR
108	H		Sealing Compound TYPE II Grade A	AR
109	H		Sealing Compound TYPE II Grade H	AR
110	H	3439-01-012-3281	Solder (81348) SN60WRMAP3	AR
111	H	3439-01-182-3633	Solder (81348) SN63WRMAP2	AR
112	H	5365-00-294-0544	Spacer, Sleeve (80205) NAS43DD1-8	AR
113	H	5365-00-684-5979	Spacer, Sleeve (80205) NAS43DD1-20	AR
114	H		Strap, Tiedown, Conpts (80063) A3018435-1	AR
115	H	5975-00-419-9812	Strap, Tiedown, Electrical (96906) MS3367-3-9C	AR
116	H	5975-00-074-2072	Strap, Tiedown, Electrical (96906) MS3367-1-9B	AR
117	H	5975-00-074-2072	Strap, Tiedown, Electrical (96906) MS3367-1-9D	AR
118	H	5975-00-168-7979	Strap, Tiedown, Electrical (96906) MS3367-4-1	AR
119	H	5975-00-727-5153	Strap, Tiedown, Electrical (96906) MS3367-4-9	AR
120	H	5975-00-111-3208	Strap, Tiedown, Electrical (96906) MS3367-5-9	AR
121	H		Tricloroethane	AR
122	H	9330-01-328-4018	Tubing, Plastic, Spiral Wrap (81349) B47287-I-1/4	AR
123	H		Tubing, Plastic, Spiral Wrap (81349) B47287-I-1/2	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
124	H		Tubing, Plastic, Spiral Wrap (81 349) B47287-I-3/8	AR
125	H		Tubing, Plastic, Spiral Wrap (81 349) B47287-I-3/4	AR
126	H		Tubing, Plastic, Spiral Wrap (80063) A3013139-1, 1/4 in	AR
127	H		Tubing, Plastic, Spiral Wrap (80063) A3013139-2	AR
128	H		Tubing, Plastic, Spiral Wrap (80063) A3013139-3, 1/8 in	AR
129	H	6145-00-844-2814	Wire, Electrical, White, 26 gage AWG (81348) M16878/4BDE9	AR
130	H	6145-00-059-5602	Wire, Electrical, Black, 19 strands 24 gage (81348) M16878/4BEE0	AR
131	H	6145-00-450-6068	Wire, Electrical, Brown, 19 strands 24 gage (81 348) M16878/4BEE1	AR
132	H	6145-00-059-5603	Wire, Electrical, Red, 19 strands 24 gage (81348) M16878/4BEE2	AR
133	H	6145-00-445-6456	Wire, Electrical, Orange, 19 strands 24 gage (81348) M16878/4BEE3	AR
134	H	6145-00-059-5604	Wire, Electrical, Yellow, 19 strands 24 gage (81348) M16878/4BEE4	AR
135	H	6145-00-267-9466	Wire, Electrical, Green, 19 strands 24 gage (81348) M16878/4BEE5	AR
136	H	6145-00-226-6718	Wire, Electrical, Blue, 19 strands 24 gage (81348) M16878/4BEE6	AR
137	H	6145-00-226-6721	Wire, Electrical, Violet, 19 strands 24 gage (81348) M16878/4BEE7	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) TEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
138	H	6145-01-331-4779	Wire, Electrical, Gray, 19 strands 24 gage (81348) M16878/4BEE8	AR
139	H	6145-00-808-4849	Wire, Electrical, White, 19 strands 24 gage (81348) M16878/4BEE9	AR
140	H	6145-00-435-2308	Wire, Electrical, White/Brown, 19 strands 24 gage (81348) M16878/4BEE91	AR
141	H	6145-00-756-2859	Wire, Electrical, White/Red, 19 strands 24 gage (81348) M16878/4BEE92	AR
142	H	6145-00-435-2307	Wire, Electrical, White/Orange, 19 strands 24 gage (81348) M16878/4BEE93	AR
143	H	6145-00-445-6435	Wire, Electrical, White/Yellow, 19 strands 24 gage (81348) M16878/4BEE94	AR
144	H	6145-00-452-4122	Wire, Electrical, White/Green, 19 strands 24 gage (81348) M16878/4BEE95	AR
145	H	6145-00-452-3876	Wire, Electrical, White/Blue, 19 strands 24 gage (81348) M16878/4BEE96	AR
146	H	6145-00-450-6401	Wire, Electrical, White/Violet, 19 strands 24 gage (81348) M16878/4BEE97	AR
147	H		Wire, Electrical, White/Gray, 19 strands 24 gage (81348) M16878/4BEE98	AR
148	H	6145-00-062-6683	Wire, Electrical, Black, 19 strands 22 gage (81348) M16878/4BFE0	AR
149	H	6145-00-817-3609	Wire, Electrical, Brown, 19 strands 22 gage (81348) M16878/4BFE1	AR
150	H	6145-00-062-6685	Wire, Electrical, Red, 19 strands 22 gage (81348) M16878/4BFE2	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) TEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
151	H	6145-00-062-6684	Wire, Electrical, Orange, 19 strands 22 gage (81348) M16878/4BFE3	AR
152	H	6145-00-062-6682	Wire, Electrical, Yellow, 19 strands 22 gage (81348) M16878/4BFE4	AR
153	H	6145-00-080-378	Wire, Electrical, Green, 19 strands 22 gage (81348) M16878/4BFE5	AR
154	H	6145-00-062-669	Wire, Electrical, Blue, 19 strands 22 gage (81348) M16878/4BFE6	AR
155	H	6145-00-062-3701	Wire, Electrical, Violet, 19 strands 22 gage (81348) M16878/4BFE7	AR
156	H	6145-00-062-6680	Wire, Electrical, Gray, 19 strands 22 gage (81348) M16878/4BFE8	AR
157	H	6145-00-062-5700	Wire, Electrical, White, 19 strands 22 gage (81348) M16878/4BFE9	AR
158	H	6145-00-059-5613	Wire, Electrical, White/Black, 19 strands 22 gage (81348) M16878/4BFE90	AR
159	H	6145-00-809-9207	Wire, Electrical, White/Brown, 19 strands 22 gage (81348) M16878/4BFE91	AR
160	H	6145-01-046-2154	Wire, Electrical, White/Red, 19 strands 22 gage (81348) M16878/4BFE92	AR
161	H	6145-00-347-1032	Wire, Electrical, White/Orange, 19 strands 22 gage (81348) M16878/4BFE93	AR
162	H	6145-00-080-3774	Wire, Electrical, White/Yellow, 19 strands 22 gage (81348) M16878/4BFE94	AR
163	H	6145-00-614-4065	Wire, Electrical, White/Green, 19 strands 22 gage (81348) M16878/4BFE95	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) TEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
164	H	6145-00-080-3777	Wire, Electrical, White/Blue, 19 strands 22 gage (81348) M16878/4BFE96	AR
165	H	6145-00-104-5269	Wire, Electrical, White/Violet, 19 strands 22 gage (81348) M16878/4BFE97	AR
166	H	6145-00-809-9215	Wire, Electrical, White/Gray, 19 strands 22 gage (81348) M16878/4BFE98	AR
167	H	6145-00-062-6686	Wire, Electrical, Black, 19 strands 20 gage (81348) M16878/4BGE0	AR
168	H	6145-00-062-5698	Wire, Electrical, Brown, 19 strands 20 gage (81348) M16878/4BGE1	AR
169	H	6145-00-062-5699	Wire, Electrical, Red, 19 strands 20 gage (81348) M16878/4BGE2	AR
170	H	6145-00-062-6687	Wire, Electrical, Orange, 19 strands 20 gage (81348) M16878/4BGE3	AR
171	H	6145-00-813-1738	Wire, Electrical, Black, 19 strands 18 gage (81348) M16878/4BHE0	AR
172	H	6145-00-727-0021	Wire, Electrical, Red, 19 strands 18 gage (81348) M16878/4BHE2	AR
173	H	6145-00-727-0026	Wire, Electrical, Yellow, 19 strands 18 gage (81348) M16878/4BHE4	AR
174	H	6145-00-347-1171	Wire, Electrical, Black, 19 strands 16 gage (81348) M16878/4BJE0	AR
175	H	6145-00-553-8517	Wire, Electrical, Red, 19 strands 16 gage (81348) M16878/4BJE1	AR
176	H	6145-00-839-7432	Wire Electrical, Copper (81348) QQW343S20S1T	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
177	H	6145-00-160-4775	Wire Electrical, Copper (81348) QQW343S22S1T	AR
178	H	5970-01-282-5856	Sleeving, Electrical, 5/8 IN (81349) M3190/06-26-9	AR
179	H	5970-01-282-5855	Sleeving, Electrical, 1/2 IN (81349) M3190/06-25-9	AR
180	H		Epoxy Coating Kit (80063) A3013076-1	AR
181	H	8010-00-133-5706	Electrical Insulating Enamel (81349) MIL-E-22118	AR
182	H	6145-00-890-5394	Wire, Electrical, White/Black/Brown, 19 strands 22 gage (81348) M16878/4BFE901	AR
183	H	6145-00-809-9220	Wire, Electrical, White/Black/Red, 19 strands 22 gage (81348) M16878/4BFE902	AR
184	H	6145-00-809-9221	Wire, Electrical, White/Black/Orange, 19 strands 22 gage (81348) M16878/4BFE903	AR
185	H	6145-00-057-7093	Wire, Electrical, White/Black/Yellow, 19 strands 22 gage (81348) M16878/4BFE904	AR
186	H	6145-00-452-4258	Wire, Electrical, White/Black/Green, 19 strands 22 gage (81348) M16878/4BFE905	AR
187	H	6145-00-452-9501	Wire, Electrical, White/Black/Blue, 19 strands 22 gage (81348) M16878/4BFE906	AR
188	H	6145-00-809-9525	Wire, Electrical, White/Black/Violet, 19 strands 22 gage (81348) M16878/4BFE907	AR
189	H	6145-00-089-6561	Wire, Electrical, White/Black/Gray, 19 strands 22 gage (81348) M16878/4BFE908	AR
190	H	6145-00-005-0929	Wire, Electrical, White/Brown/Red, 19 strands 22 gage (81348) M16878/4BFE912	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
191	H	6145-00-005-8311	Wire, Electrical, White/Brown/Orange, 19 strands 22 gage (81348) M16878/4BFE913	AR
192	H		Wire, Electrical, White/Brown/Yellow, 19 strands 22 gage (81348) M16878/4BFE914	AR
193	H	6145-01-170-4657	Wire, Electrical, White/Brown/Green, 19 strands 22 gage (81348) M16878/4BFE915	AR
194	H	6145-00-890-5393	Wire, Electrical, White/Brown/Blue, 19 strands 22 gage (81348) M16878/4BFE916	AR
195	H	6145-01-186-5585	Wire, Electrical, White/Brown/Violet, 19 strands 22 gage (81348) M16878/4BFE917	AR
196	H		Wire, Electrical, White/Brown/Gray, 19 strands 22 gage (81348) M16878/4BFE918	AR
197	H		Wire, Electrical, White/Red/Orange, 19 strands 22 gage (81348) M16878/4BFE923	AR
198	H	6145-00-809-9191	Wire, Electrical, White/Red/Yellow, 19 strands 22 gage (81348) M16878/4BFE924	AR
199	H	6145-00-809-9192	Wire, Electrical, White/Red/Green, 19 strands 22 gage (81348) M16878/4BFE925	AR
200	H	6145-00-003-4186	Wire, Electrical, White/Red/Blue, 19 strands 22 gage (81348) M16878/4BFE926	AR
201	H	6145-00-186-5586	Wire, Electrical, White/Red/Violet, 19 strands 22 gage (81348) M16878/4BFE927	AR
202	H	6145-01-219-7309	Wire, Electrical, White/Red/Gray, 19 strands 22 gage (81348) M16878/4BFE928	AR
203	H	6145-00-809-9532	Wire, Electrical, White/Orange/Yellow, 19 strands 22 gage (81348) M16878/4BFE934	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
204	H	6145-00-315-0332	Wire, Electrical, White/Orange/Green, 19 strands 22 gage (81348) M16878/4BFE935	AR
205	H		Wire, Electrical, White/Orange/Blue, 19 strands 22 gage (81348) M16878/4BFE936	AR
206	H	6145-01-186-5587	Wire, Electrical, White/Orange/Violet, 19 strands 22 gage (81348) M16878/4BFE937	AR
207	H	6145-00-275-4026	Wire, Electrical, White/Orange/Gray, 19 strands 22 gage (81348) M16878/4BFE938	AR
208	H	6145-01-219-7310	Wire, Electrical, White/Yellow/Green, 19 strands 22 gage (81348) M16878/4BFE945	AR
209	H	6145-00-809-9195	Wire, Electrical, White/Yellow/Blue, 19 strands 22 gage (81348) M16878/4BFE946	AR
210	H	6145-00-264-0239	Wire, Electrical, White/Yellow/Violet, 19 strands 22 gage (81348) M16878/4BFE947	AR
211	H	6145-00-809-9196	Wire, Electrical, White/Yellow/Gray, 19 strands 22 gage (81348) M16878/4BFE948	AR
212	H	6145-01-186-5588	Wire, Electrical, White/Green/Blue, 19 strands 22 gage (81348) M16878/4BFE956	AR
213	H	6145-01-186-5589	Wire, Electrical, White/Green/Violet, 19 strands 22 gage (81348) M16878/4BFE957	AR
214	H	6145-01-220-0885	Wire, Electrical, White/Green/Gray, 19 strands 22 gage (81348) M16878/4BFE958	AR
215	H	6145-01-169-9651	Wire, Electrical, White/Blue/Violet, 19 strands 22 gage (81348) M16878/4BFE967	AR
216	H	6145-01-219-7311	Wire, Electrical, White/Blue/Gray, 19 strands 22 gage (81348) M16878/4BFE968	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) TEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
217	H		Wire, Electrical, 19 strands 22 gage, White/Black/Brown/Red (81 348) M16878/4BFE9012	AR
218	H		Wire, Electrical, 19 strands 22 gage, White/Black/Brown/Orange (81348) MI 6878/4 BFE9013	AR
219	H		Wire, Electrical, 19 strands 22 gage, White/Black/Brown/Yellow (81348) M16878/4 BFE9014	AR
220	H		Wire, Electrical, 19 strands 22 gage, White/Black/Brown/Green (81 348) M16878/4BFE9015	AR
221	H		Wire, Electrical, 19 strands 22 gage, White/Black/Brown/Blue (81 348) M16878/4BFE9016	AR
222	H		Wire, Electrical, 19 strands 22 gage, White/Black/Brown/Violet (81 348) M16878/4BFE9017	AR
223	H	5975-00-419-9812	Strap, Tiedown, Elect Components (9690-6) MS3368-3-9C	EA
224	H		Cable Marker Sleeve P4 (80063) A3013739-221	EA
225	H		Sleeving, Electrical, 3/8 in. (81 349) M3190/06-23-9	EA
226	H	5970-01-280-2262	Sleeving, Electrical, 1 in. (81349) M3190/06-29-9	EA
227	H		Wire, Electrical, 19 strands 22 gage, White/Black/Brown/Gray (81348) M16878/4BFE9018	AR
228	H		Wire, Electrical, 19 strands 22 gage, White/Black/Red/Orange (81348) M16878/4BFE9023	AR
229	H		Wire, Electrical, 19 strands 22 gage, White/Black/Red/Yellow (81348) M16878/4BFE9024	AR
230	H		Wire, Electrical, 19 strands 22 gage, White/Black/Red/Green (81348) M16878/4BFE9025	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
231	H		Wire, Electrical, 19 strands 22 gage, White/Black/Red/Blue (81 348) M16878/4 BFE9026	AR
232	H		Wire, Electrical, 19 strands 22 gage, White/Black/Red/Violet (81 348) M16878/4 BFE9027	AR
233	H		Wire, Electrical, 19 strands 22 gage, White/Black/Red/Gray (81 348) M16878/4 BFE9028	AR
234	H		Wire, Electrical, 19 strands 22 gage, White/Black/Orange/Yellow (81 348) M16878/4 BFE9034	AR
235	H		Wire, Electrical, 19 strands 22 gage, White/Black/Orange/Green (81348) M16878/4BFE9035	AR
236	H		Wire, Electrical, 19 strands 22 gage, White/Black/Orange/Blue (81348) M16878/4BFE9036	AR
237	H		Wire, Electrical, 19 strands 22 gage, White/Black/Orange/Violet (81348) M16878/4BFE9037	AR
238	H		Wire, Electrical, 19 strands 22 gage, White/Black/Orange/Gray (81 348) M16878/4 BFE9038	AR
239	H		Wire, Electrical, 19 strands 22 gage, White/Black/Yellow/Green (81348) M16878/4BFE9045	AR
240	H		Wire, Electrical, 19 strands 22 gage, White/Black/Yellow/Blue (81348) M16878/4BFE9046	AR
241	H		Wire, Electrical, 19 strands 22 gage, White/Black/Yellow/Violet (81348) M16878/4BFE9047	AR
242	H		Wire, Electrical, 19 strands 22 gage, White/Black/Yellow/Gray (81348) M16878/4BFE9048	AR
243	H		Wire, Electrical, 19 strands 22 gage, White/Black/Green/Blue (81348) M16878/4BFE9056	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
244	H		Wire, Electrical, 19 strands 22 gage, White/Black/Green/Violet (81348) M16878/4BFE9057	AR
245	H		Wire, Electrical, 19 strands 22 gage, White/Black/Green/Gray (81348) M16878/4BFE9058	AR
246	H		Wire, Electrical, 19 strands 22 gage, White/Black/Blue/Violet (81 348) M16878/4BFE9067	AR
247	H		Wire, Electrical, 19 strands 22 gage, White/Black/Blue/Gray (81348) M16878/4 BFE9068	AR
248	H		Wire, Electrical, 19 strands 22 gage, White/Black/Violet/Gray (81348) M16878/4BFE9078	AR
249	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Red/Orange (81348) M16878/4BFE9123	AR
250	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Red/Yellow (81348) M16878/4BFE9124	AR
251	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Red/Green (81348) M16878/4BFE9125	AR
252	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Red/Blue (81348) M16878/4BFE9126	AR
253	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Red/Violet (81348) M16878/4BFE9127	AR
254	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Red/Gray (81348) M16878/4BFE9128	AR
255	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Orange/Yellow (81348) M16878/4BFE9134	AR
256	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Orange/Green (81348) M16878/4BFE9135	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
257	H	5975-00-419-9812	Wire, Electrical, 19 strands 22 gage, White/Brown/Orange/Blue (81348) M16878/4BFE9136	AR
258	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Orange/Violet (81348) M16878/4BFE9137	AR
259	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Orange/Gray (81348) M16878/4BFE9138	AR
260	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Yellow/Green (81348) M16878/4BFE9145	AR
261	H		Wire, Electrical, 19 strands 22 gage, White/Brown/Yellow/Blue (81348) M16878/4BFE9146	AR
262	H		Strap, Tiedown, Elec. Components (81349) MS3368-1-9B	EA
263	H		Strap, Tiedown, Elec. Components (96906) MS3368-3-9C	EA
264	H		Insulation Sleeving (80063) A3013046-7	AR
265	H		Insulation Sleeving (80063) A3013046-4	AR
266	H		Insulation Sleeving, Elec - 3/4 in. dia. (81349) M3190/06-27-9	AR
267	H		Insulation Sleeving, Elec - No. 2 dia. (81349) M3190/06-20-9	AR
268	H		Cable Marker Sleeve P2 (80063) A3013739-133	AR
269	H		Cable Marker Sleeve P3 (80063) A3013739-172	AR
270	H		Cable Marker Sleeve P5 (80063) A3013739-222	AR
271	H		Cable Marker Sleeve 77 PIN (80063) A3013739-244	AR
272	H		Cable Marker Sleeve 61 PIN (80063) A3013739-245	AR

Section II EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST. CONT

(1) ITEM NO.	(2) LEVEL	(3) NSN	(4) DESCRIPTION (CAGEC) PART NUMBER	(5) U/M
273	H		Cable Marker Sleeve 41 PIN (80063) A3013739-246	AR
274	H		Cable Marker Sleeve 33 PIN (80063) A3013739-247	AR
275	H		Cable Marker Sleeve 25 PIN (80063) A3013739-248	AR
276	H		Cable Marker Sleeve 17 PIN (80063) A301 3739-249	AR
277	H		Cable Marker Sleeve 9 PIN (80063) A3013739-250	AR
278	H	5975-00-727-5153	Strap, Tiedown, Electrical (96906) MS3367-4-9B	AR
279	H		Strap, Tiedown, Electrical (96906) MS3368-4-9D	AR
280	H		Mounting Pad, Electrical - Electronic Component (80063) A3013110-1	AR
281	H	5970-00-740-2971	Heat Shrinkable Electrical Insulating Sleeve (81349) M23053/5-107-0	AR

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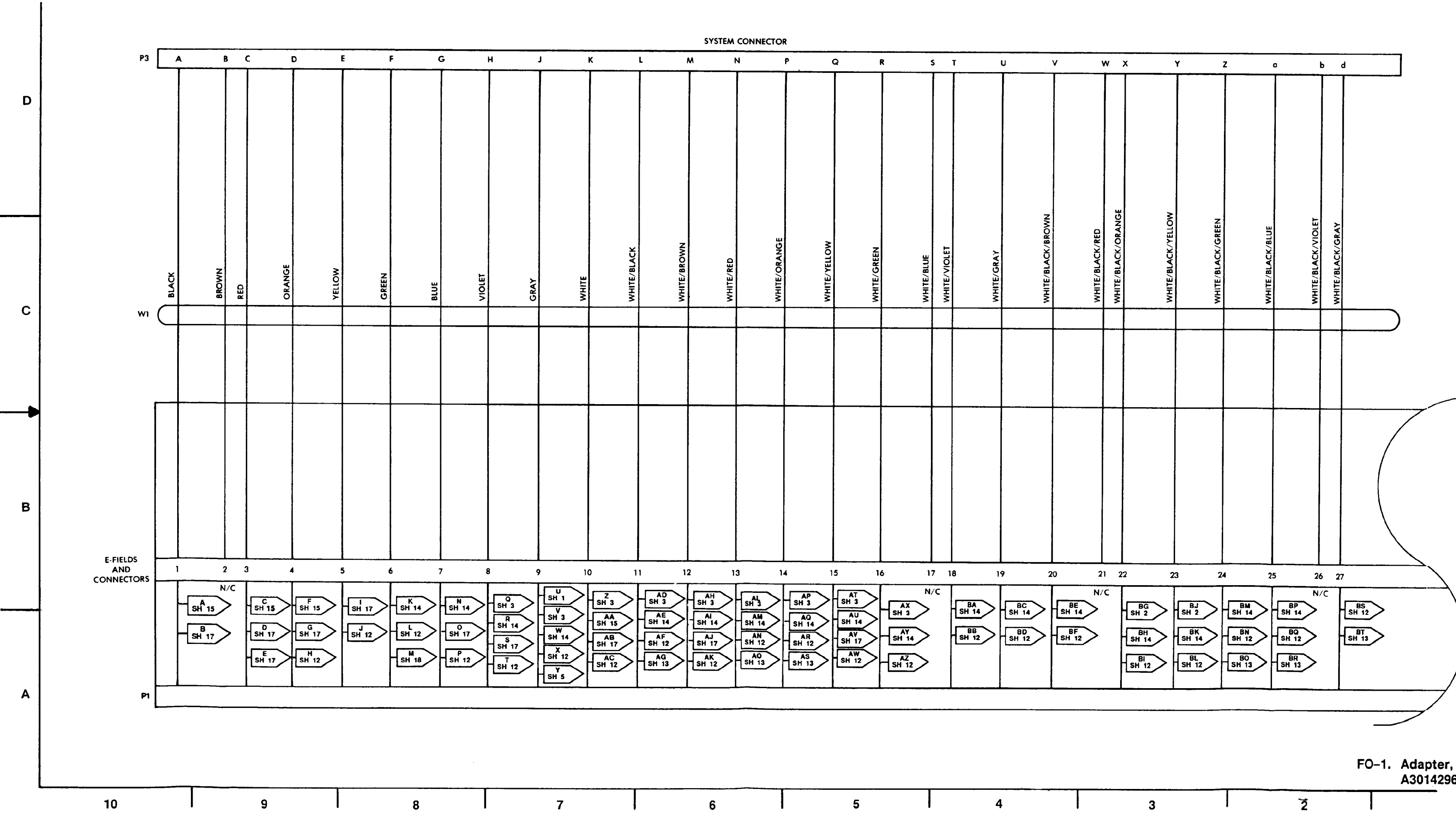
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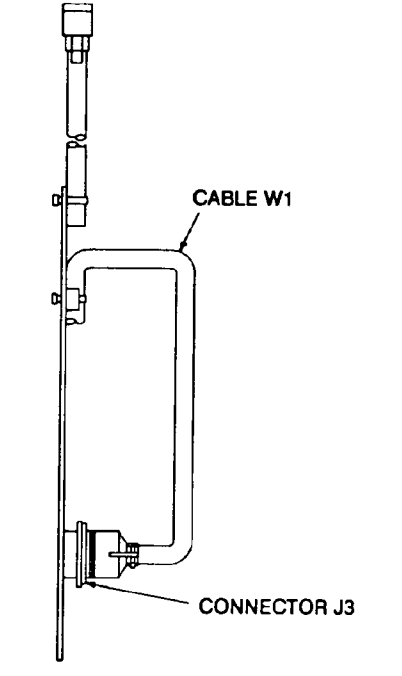
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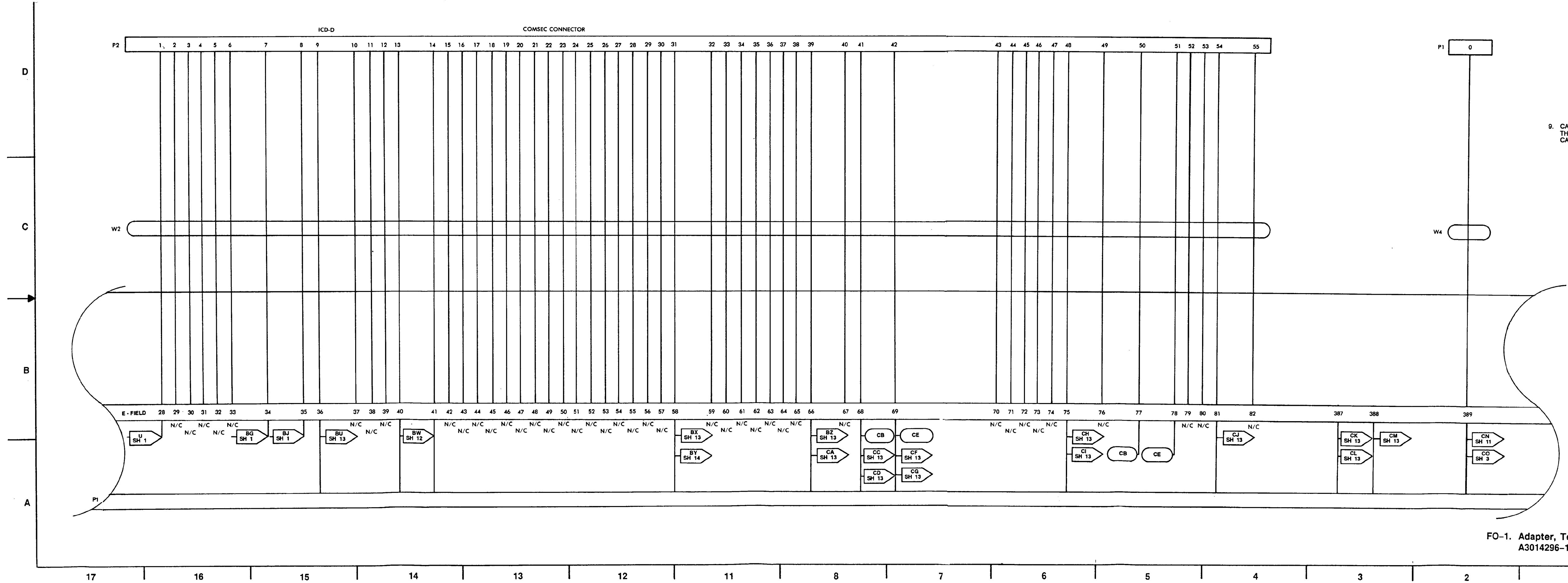
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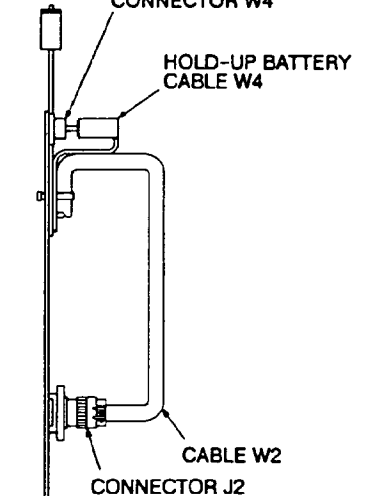
- NOTES:
1. RESISTANCE VALUES ARE IN OHMS.
 2. CAPACITANCE VALUES ARE IN MICROFARADS.
 3. TEXT WITHIN OFF SHEET SYMBOL [] INDICATES SHEET NUMBER OF CONTINUING SIGNAL LINE.
 4. TRACES TO E281, E283, E284, E285, E286, E287, E288, E289, E290, E291, E292, E293, E294, E295, E296, E297, E298, E299, E301, E302, E345, E247, E348, E349, E350, E351, AND E352 ARE NOT CONNECTED.
 5. CONNECTOR J2 PINS: 2, 3, 4, 5, 6, 10, 11, 12, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38, 40, 43, 44, 45, 46, 47, 49, 52, 53, AND 55 ARE NOT CONNECTED.
 6. CONNECTOR J5, PINS 7, 39, 47, 43, AND 45 ARE NOT CONNECTED.
 7. DURING THE ICD SURVEY THE ATE WILL NOTIFY YOU OF OPENS OR SHORTS ON THE EDGE CONNECTOR. AS AN EXAMPLE: THE ATE MAY REPORT THAT CONNECTOR P1, PIN 123 IS SHORTED TO ADJACENT PINS. YOU WILL BE REQUIRED TO USE AN OHMMETER TO LOCATE THE SHORT ON EITHER THE CIRCUIT CARD ASSEMBLY, THE E-FIELD, CABLES, OR INTERFACES OF THE SELF-TEST CONNECTOR. DIAGRAMS OF THE SELF-TEST INTRA-CONNECTION WILL BE SHOWN TO AID YOU IN THE TROUBLESHOOTING OF THE ENTIRE CIRCUIT FROM ONE EDGE CONNECTOR PIN TO THE NEXT.
 8. CABLE W1 IS SHOWN ON THIS PAGE. USE THE FOLLOWING ILLUSTRATION TO IDENTIFY THE SELF-TEST CONNECTOR.



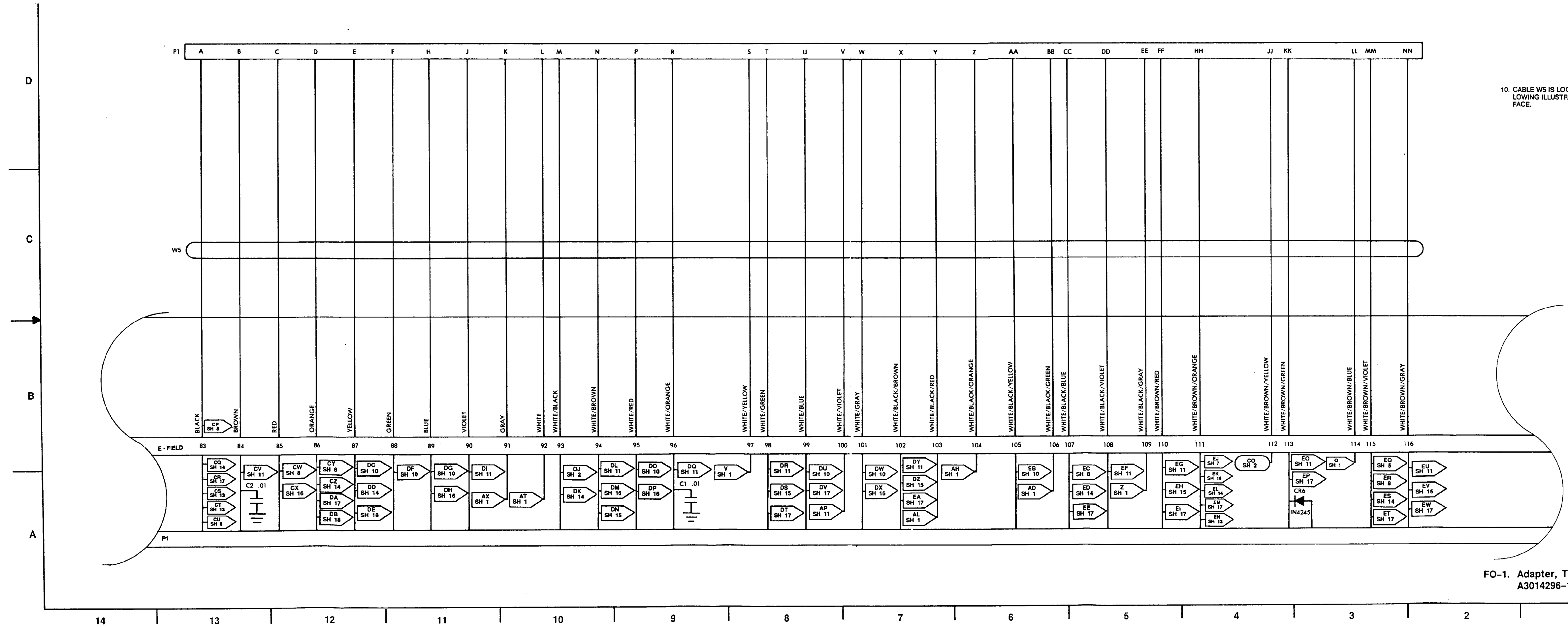
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 1 of 18)



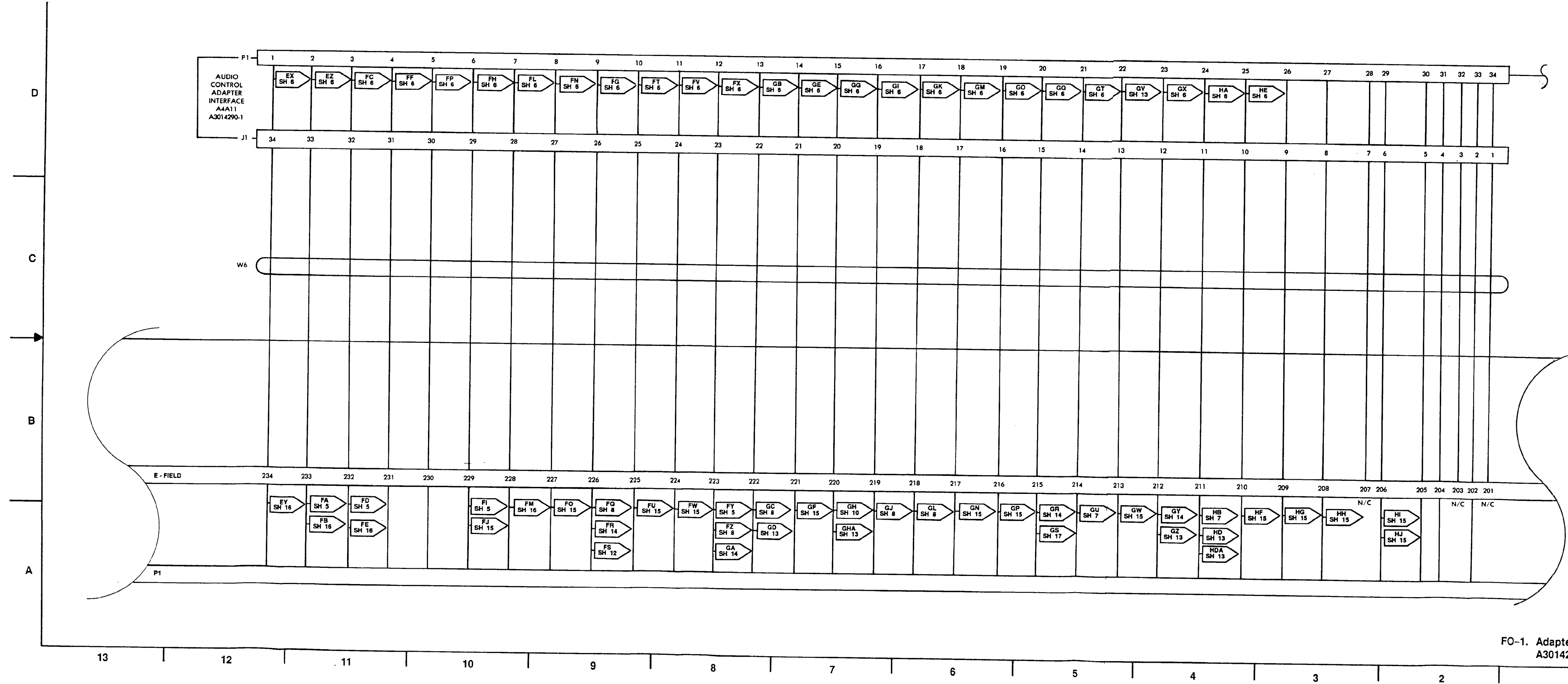
NOTES
 9. CABLES W2 AND W4 ARE SHOWN ON THIS PAGE. USE THE FOLLOWING ILLUSTRATIONS TO INSTALL THE CABLE FOR TROUBLESHOOTING THE INTERFACE.



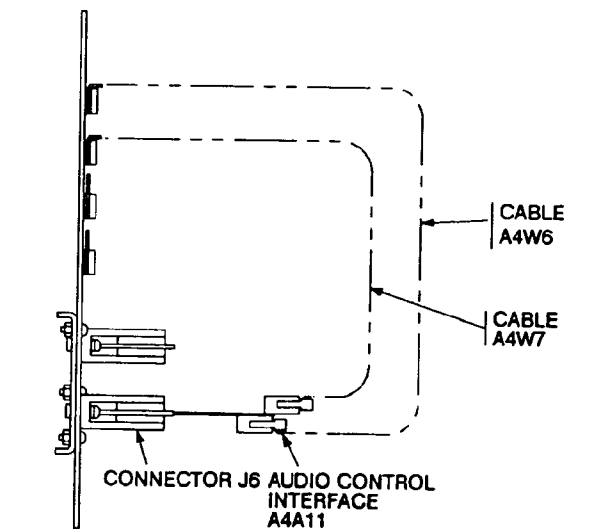
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 2 of 18)



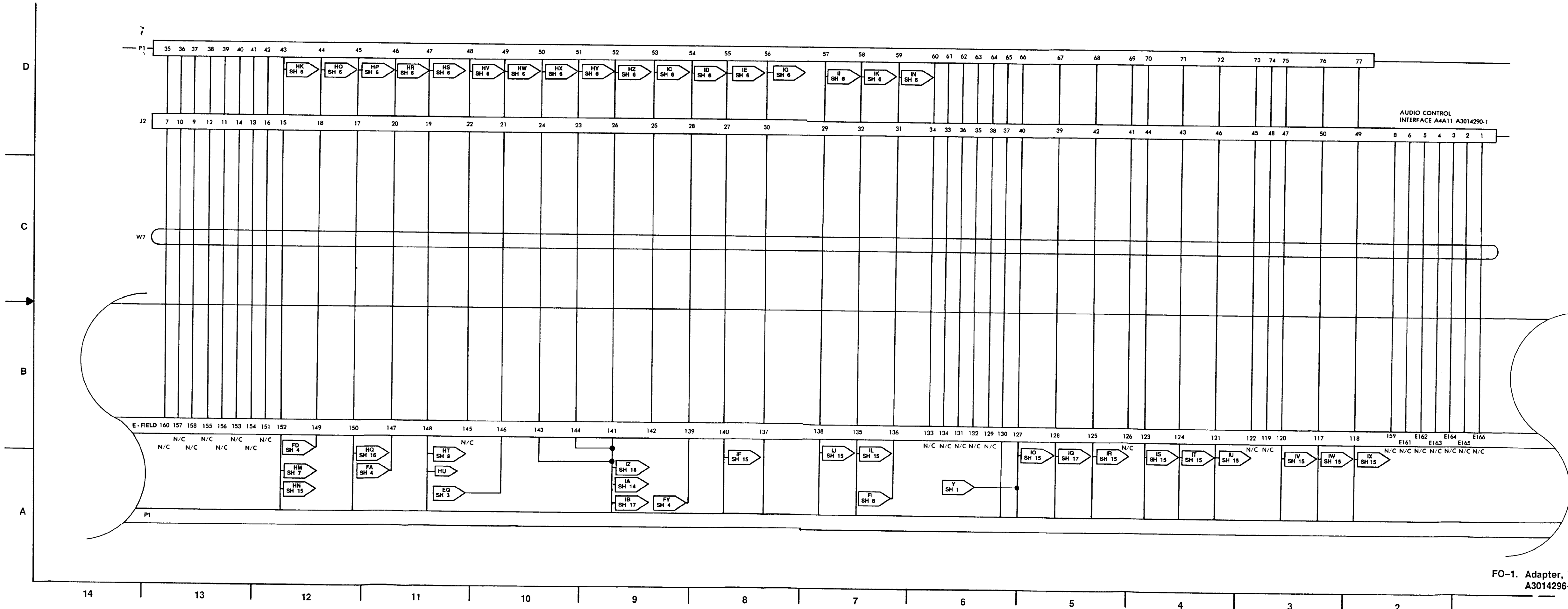
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 3 of 18)



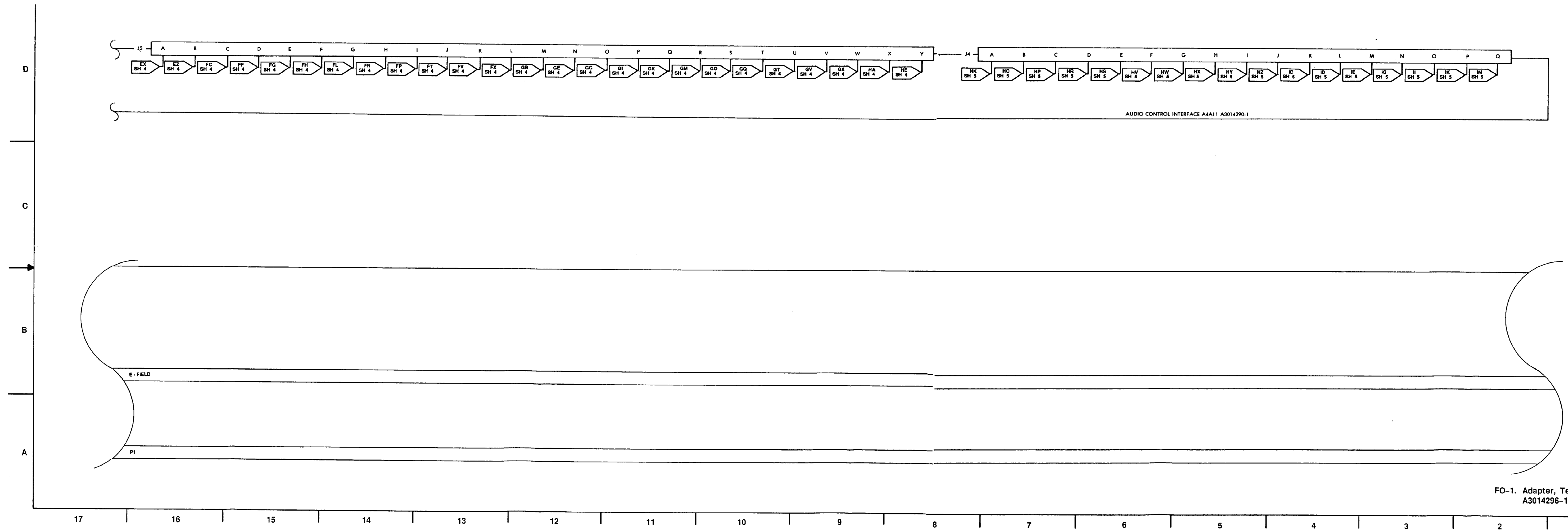
NOTES
 11. CABLE W6 AND W7 CONNECT TO AUDIO CONTROL ADAPTER INTERFACE A4A11. USE THE FOLLOWING ILLUSTRATION TO TROUBLESHOOT THE CABLE ASSEMBLY.



FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 4 of 18)

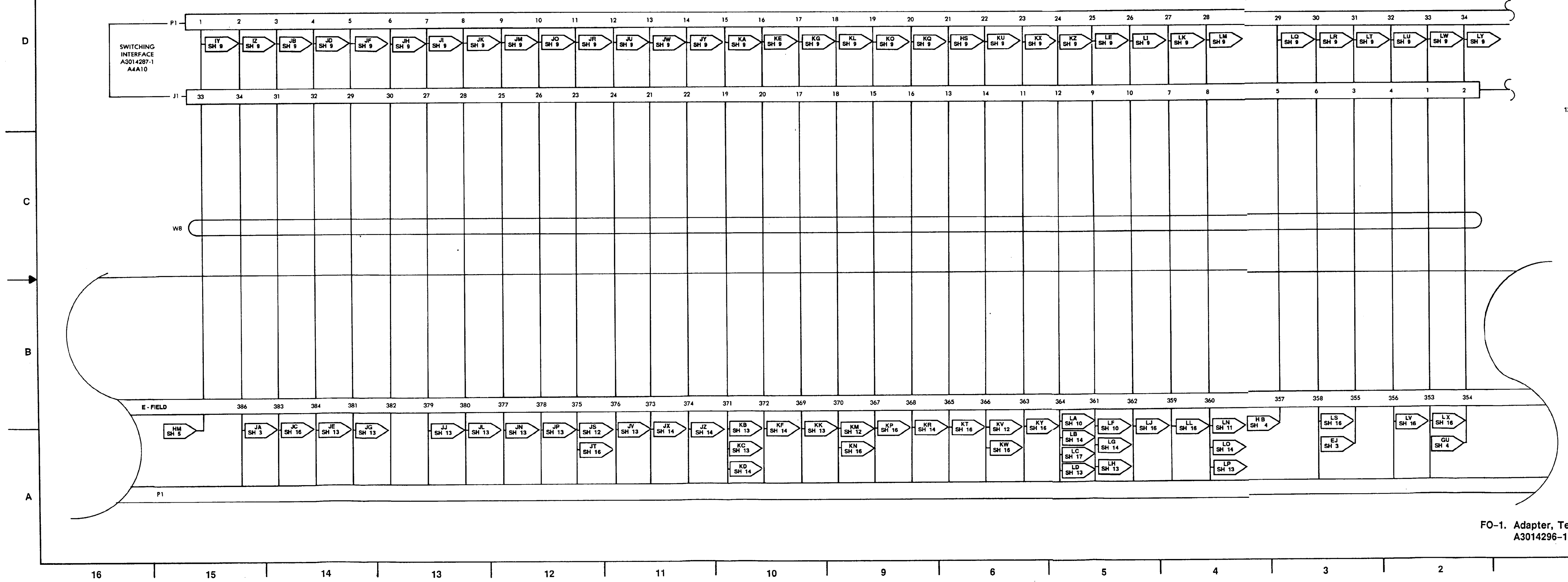


FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 5 of 18)

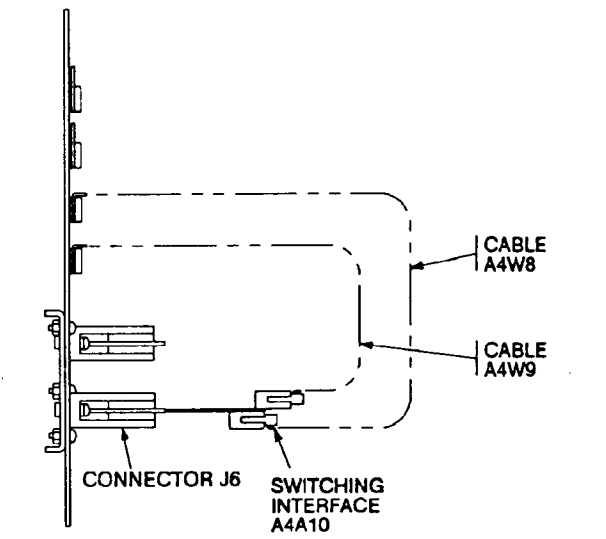


AUDIO CONTROL INTERFACE A4A11 A3014290-1

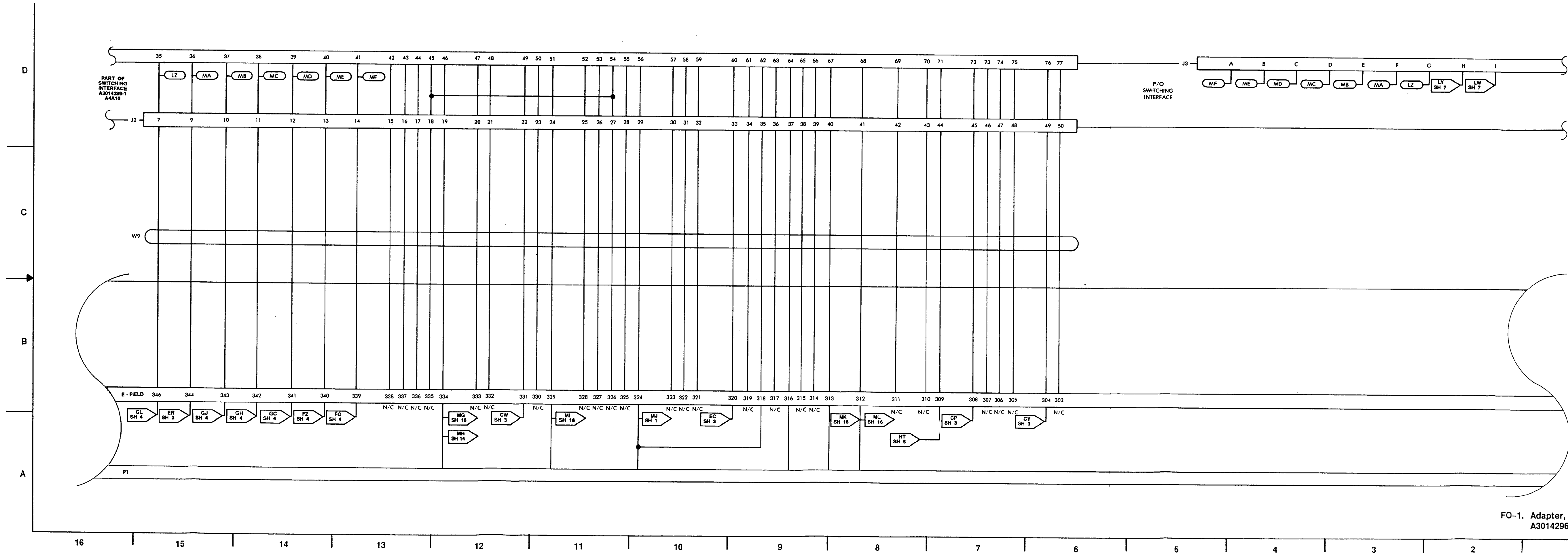
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 6 of 18)



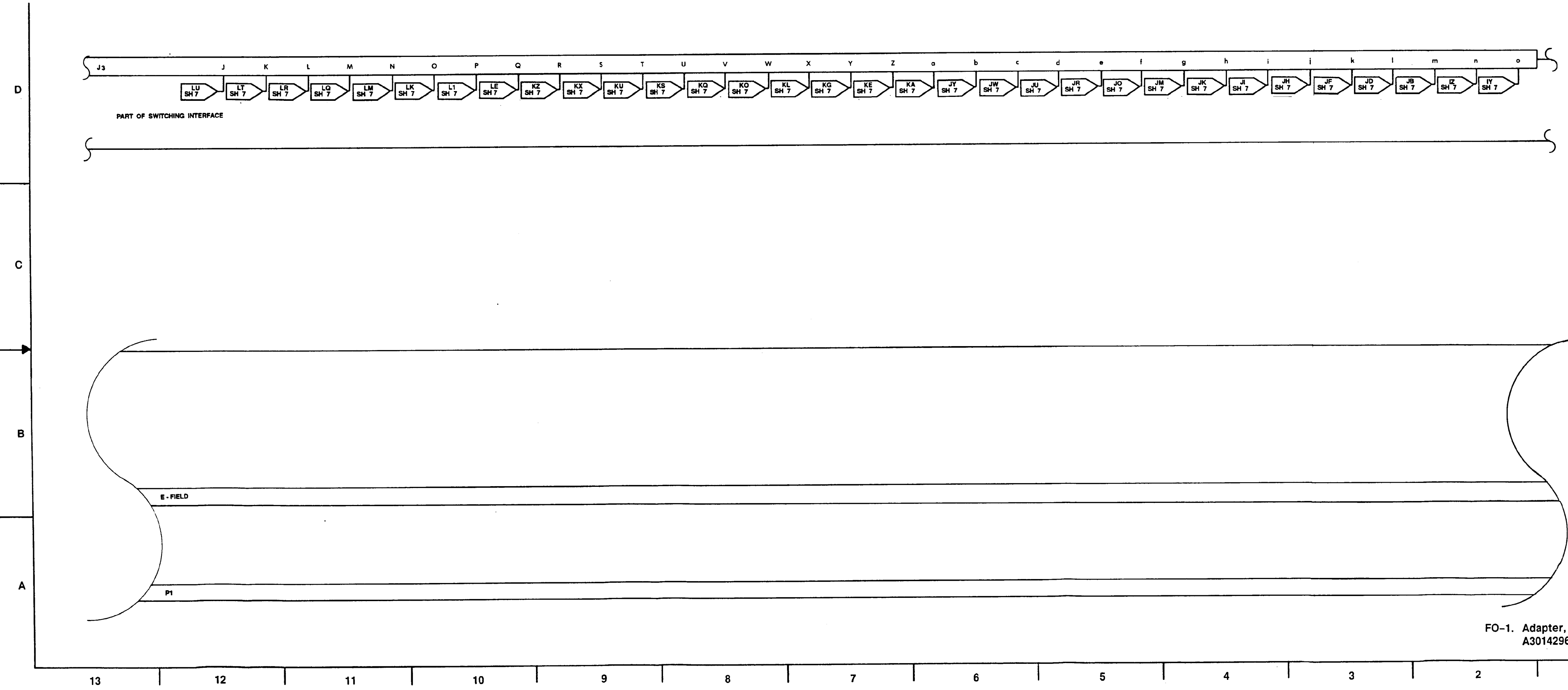
NOTES
 12. CABLE W8 AND W9 CONNECT TO SWITCHING INTER-
 FACE A4A10. USE THE FOLLOWING ILLUSTRATION TO
 TROUBLESHOOT THE CABLE ASSEMBLY.



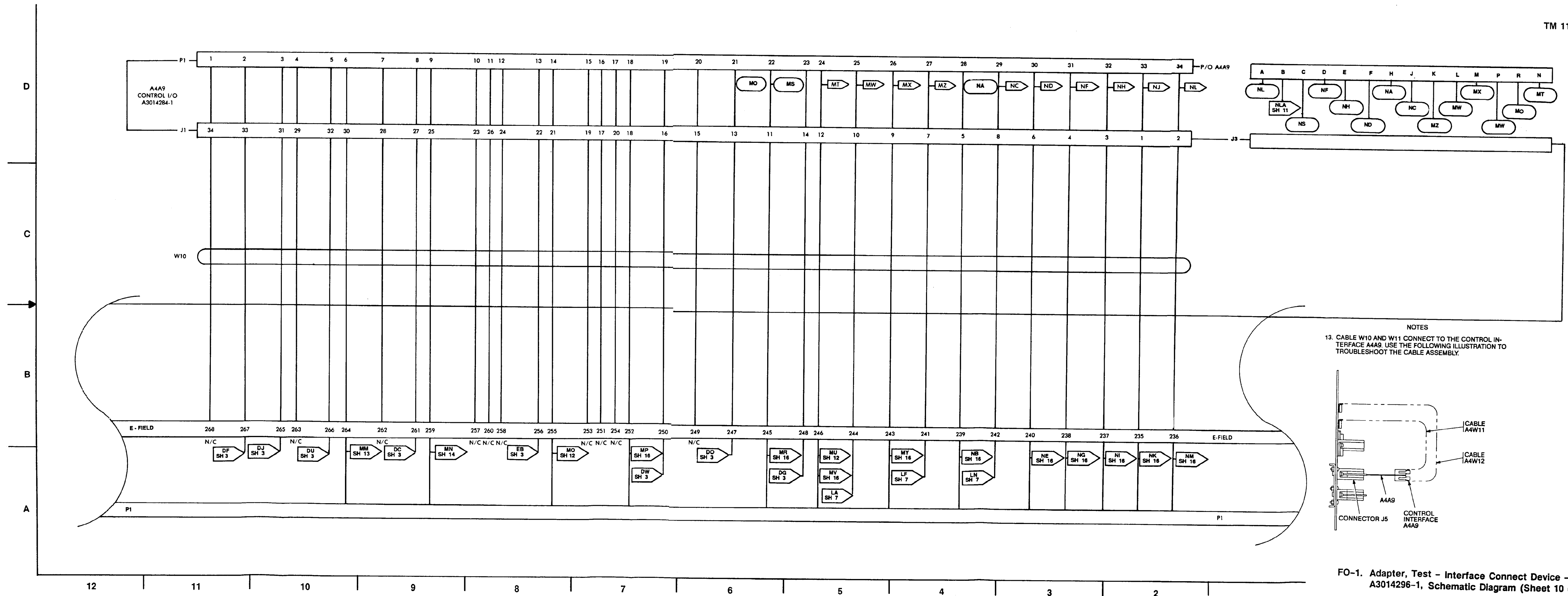
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G,
 A3014296-1, Schematic Diagram (Sheet 7 of 18)



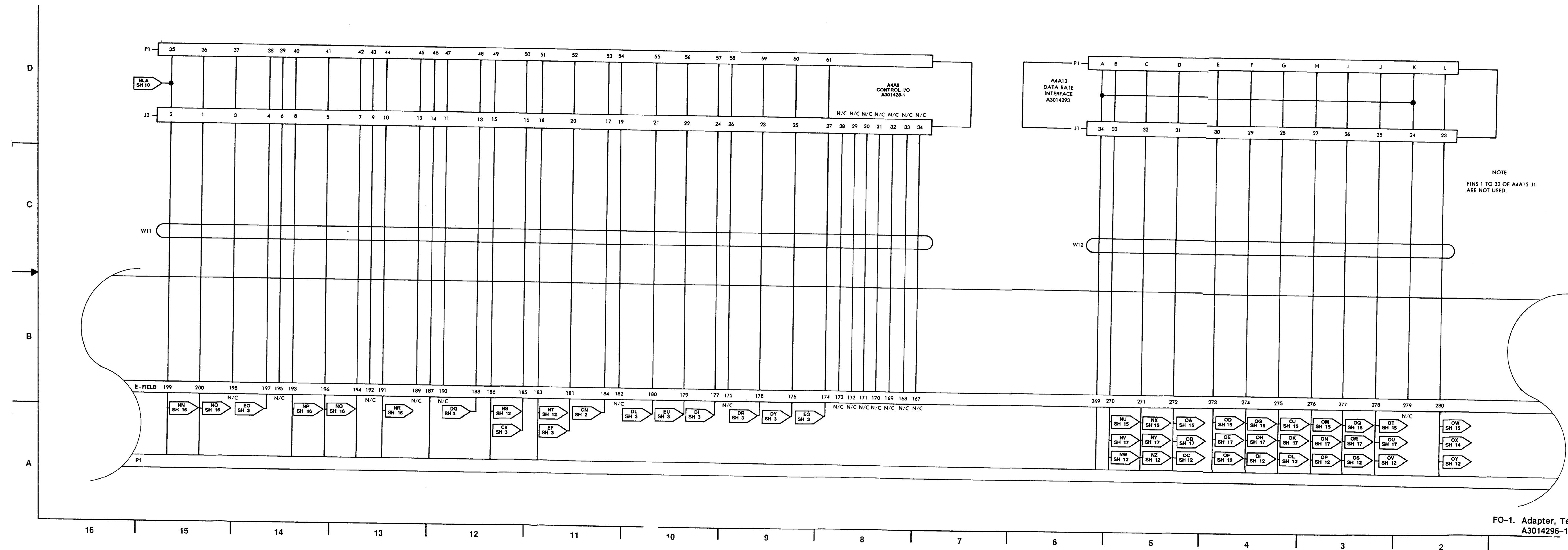
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 8 of 18)



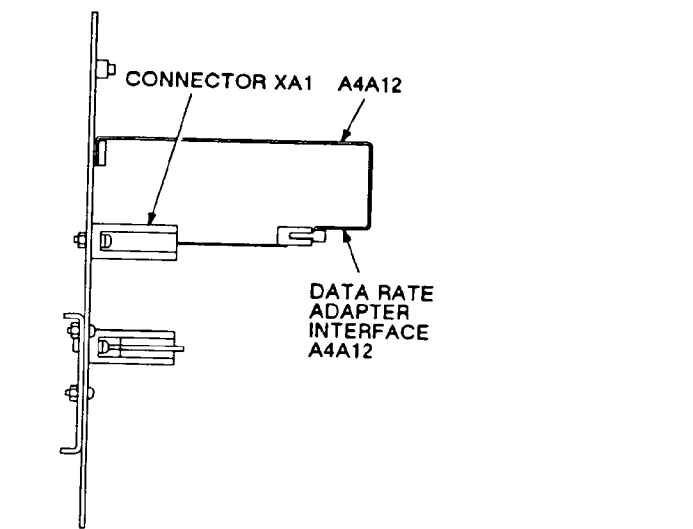
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 9 of 18)



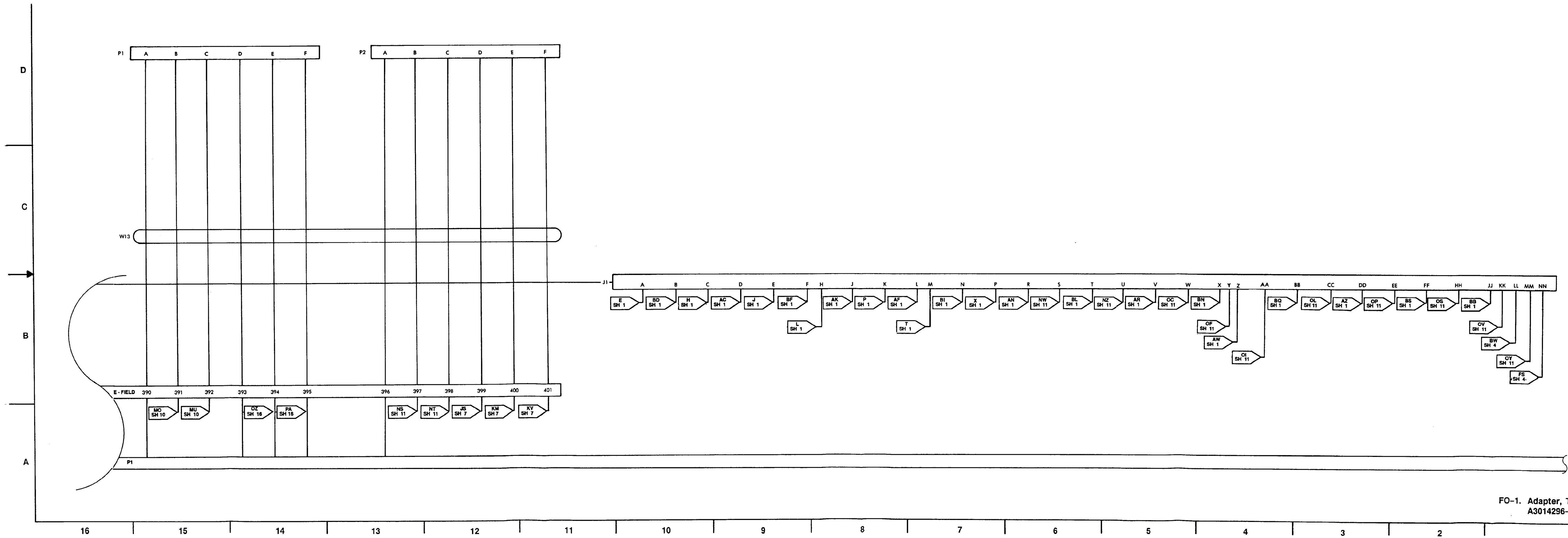
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 10 of 18)



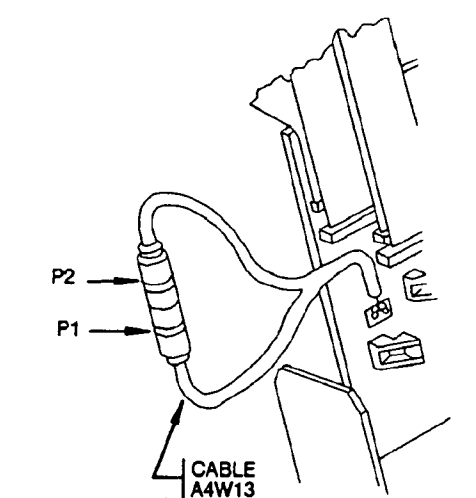
NOTES
 14. CABLE W12 IS CONNECTED TO THE DATA RATE ADAPTER A4A12. USE THE FOLLOWING ILLUSTRATION TO TROUBLESHOOT THE CABLE ASSEMBLY.



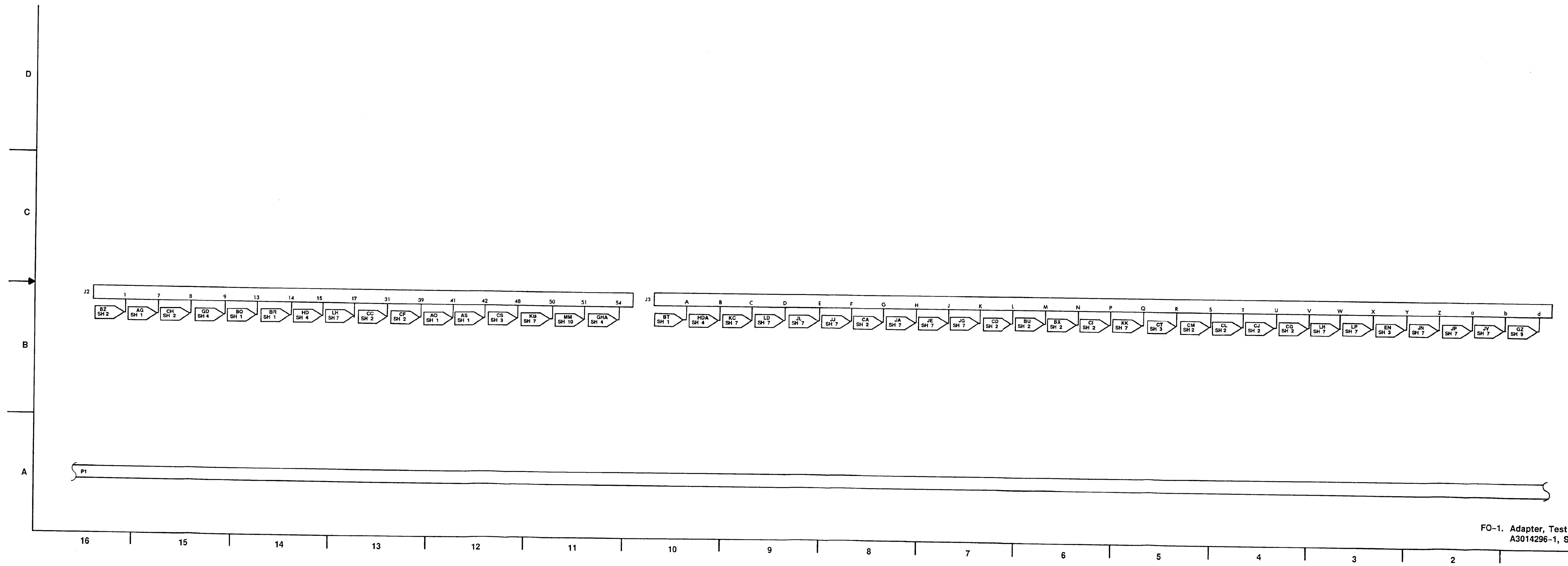
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 11 of 18)



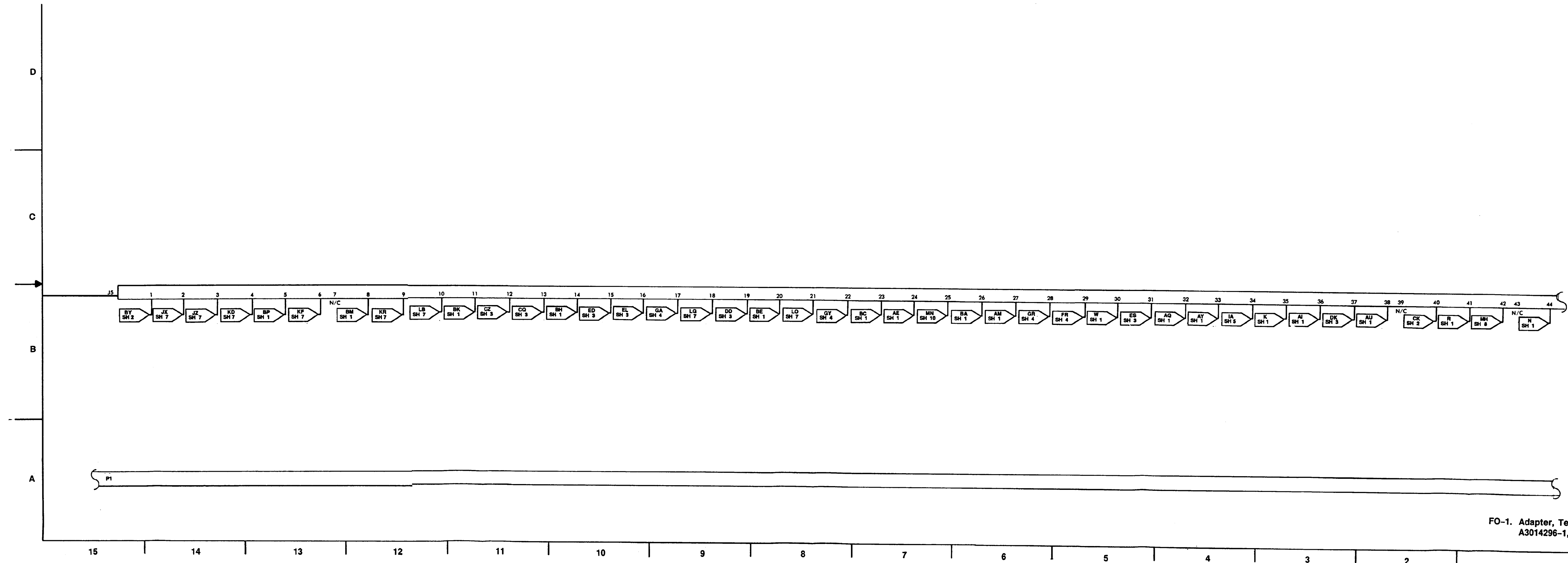
NOTES:
 15. BRANCHED CABLE W13 HAS TWO CONNECTORS P1 AND P2 WHICH ARE CONNECTED TOGETHER FOR SELF-TEST. USE THE FOLLOWING ILLUSTRATION TO TROUBLESHOOT THE CABLE ASSEMBLY.



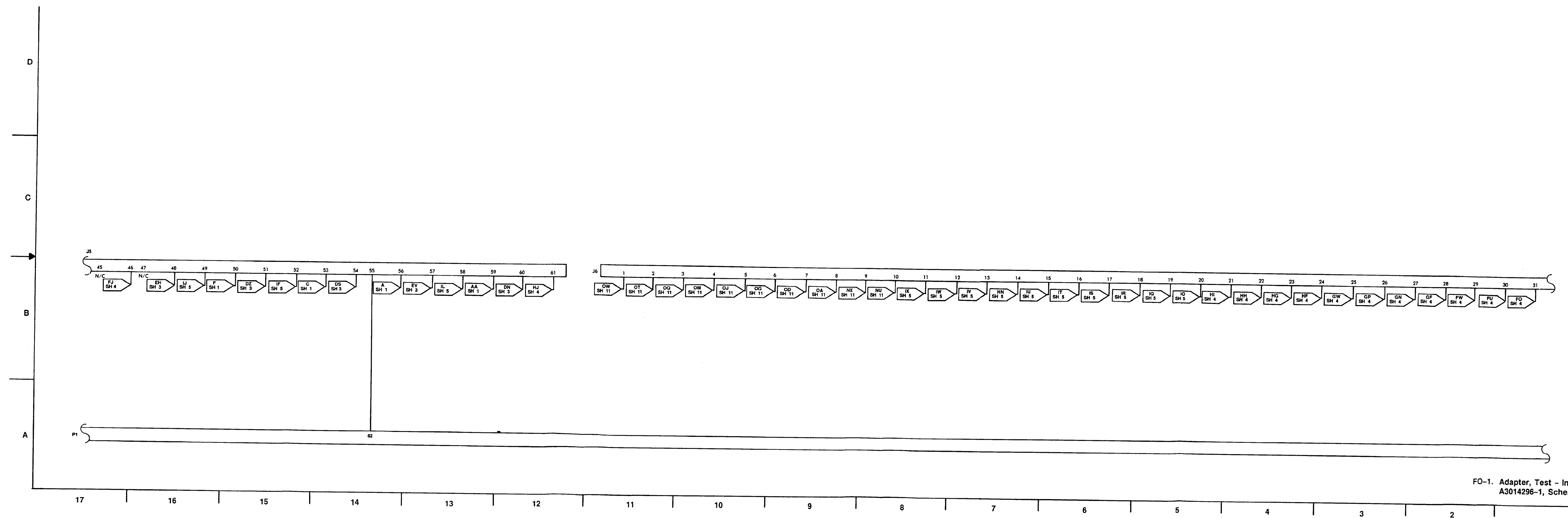
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 12 of 18)



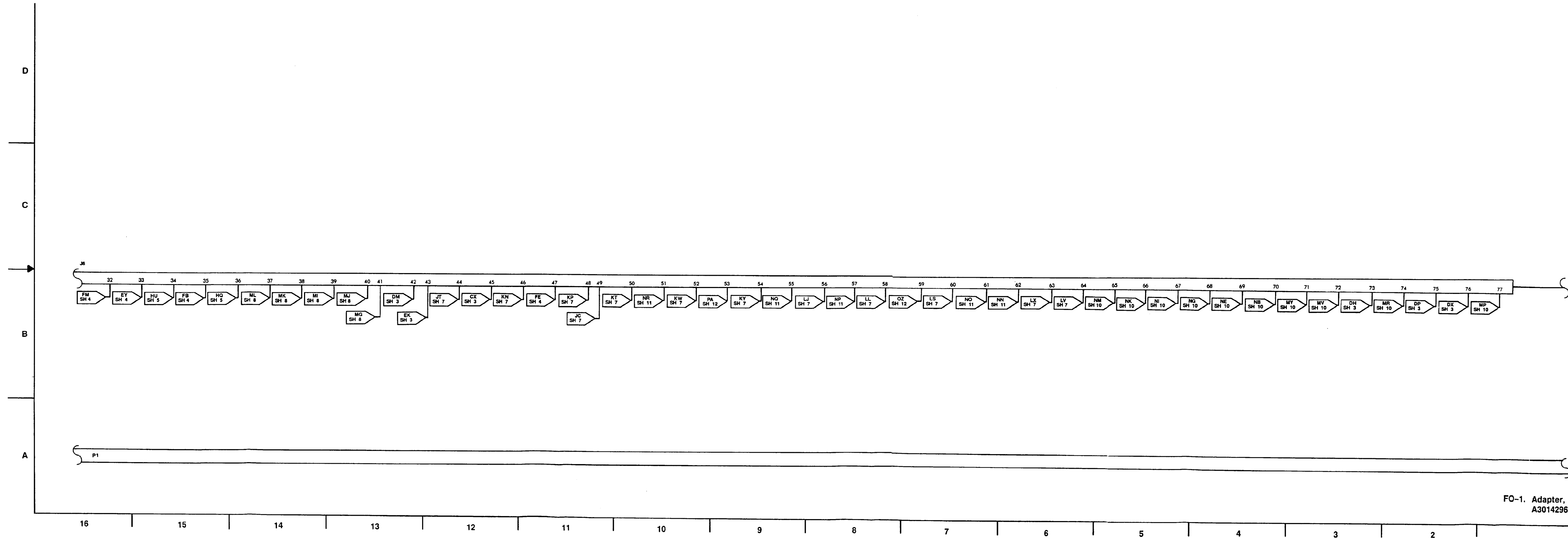
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 13 of 18)



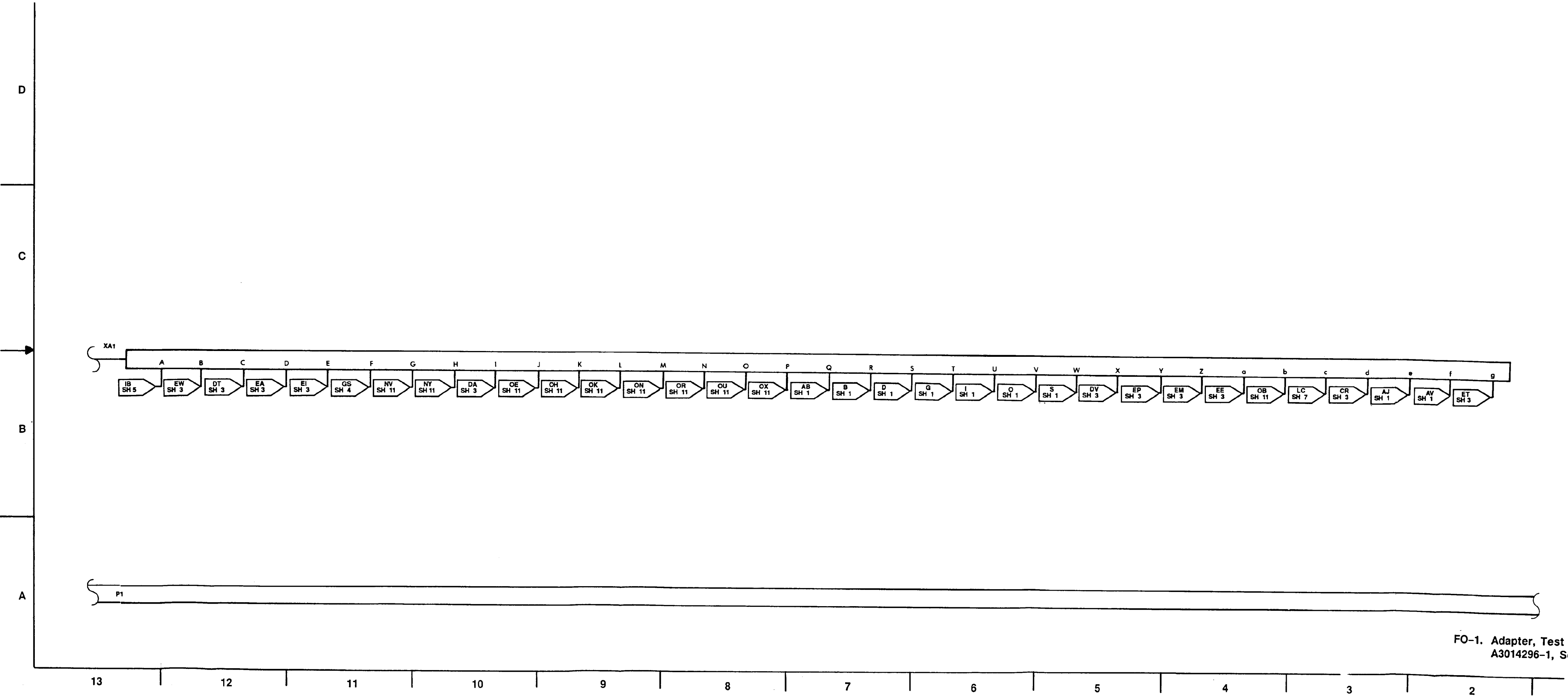
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 14 of 18)



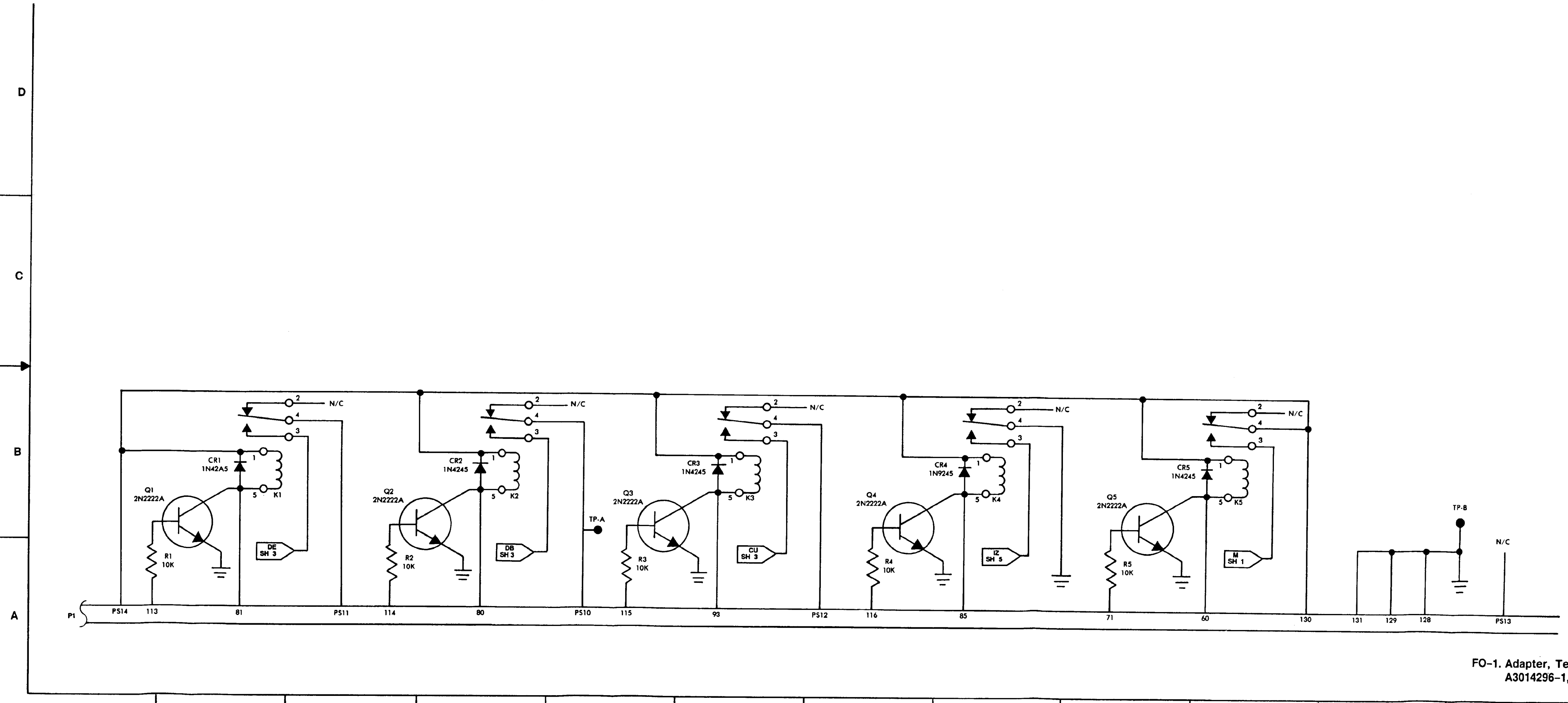
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 15 of 18)



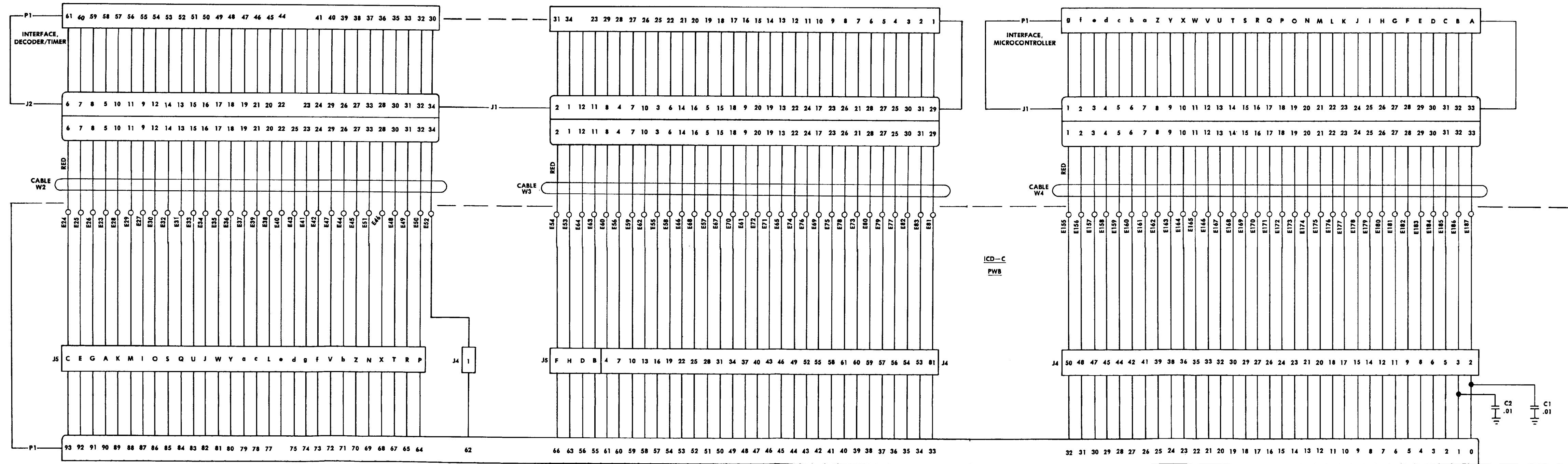
FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 16 of 18)



FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 17 of 18)

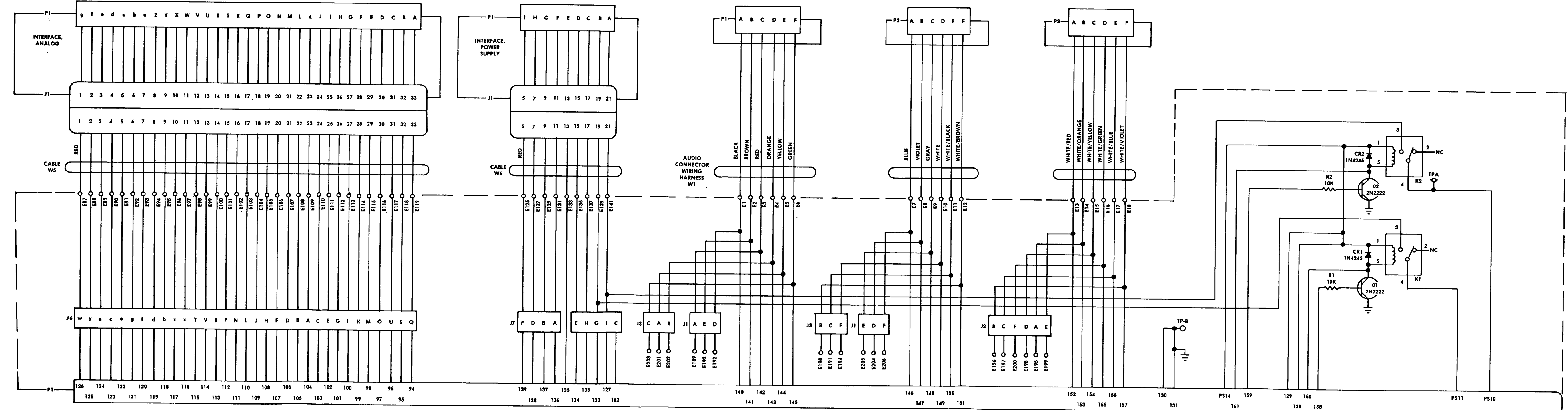


FO-1. Adapter, Test - Interface Connect Device - D, J-4819/G, A3014296-1, Schematic Diagram (Sheet 18 of 18)

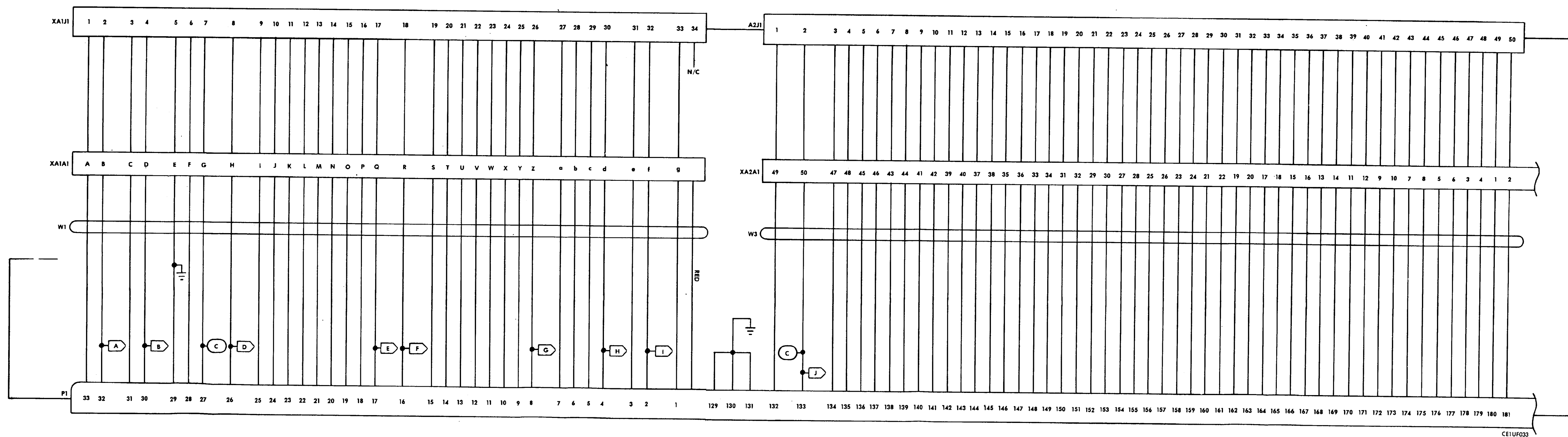


- NOTES
1. RESISTANCE VALUES ARE IN OHMS.
 2. CAPACITANCE VALUES ARE IN MICROFARADS.

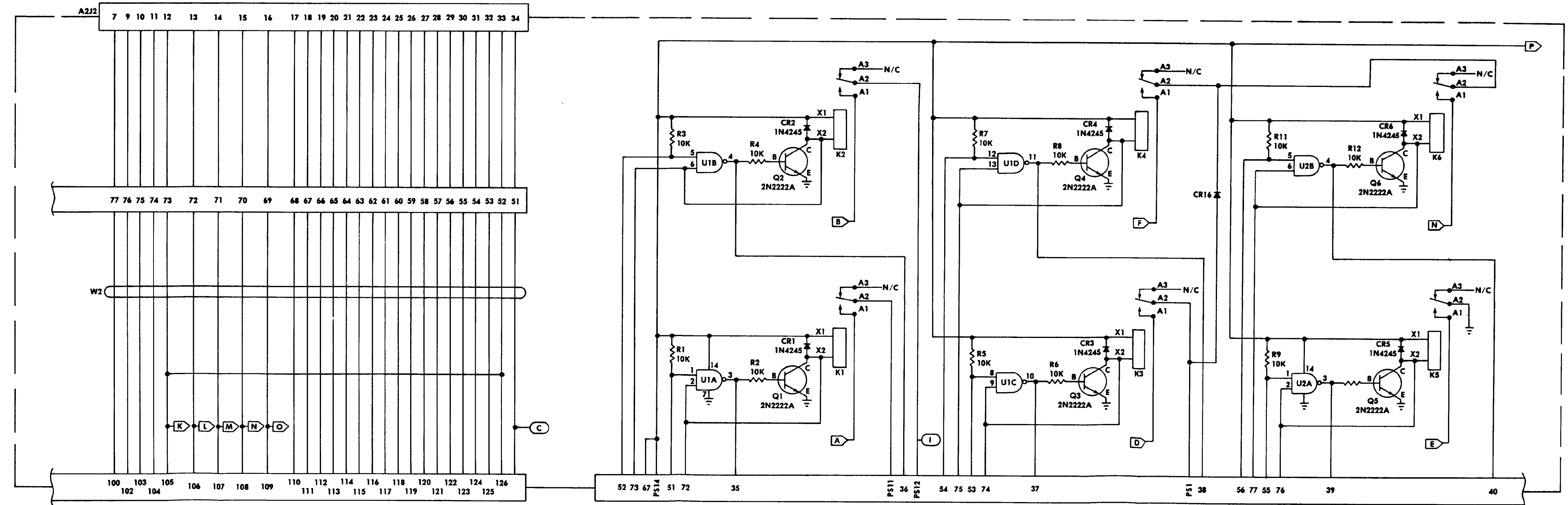
FO-2. Adapter, Test - Interface Connect Device - C, J-4820/G, A3014255-1, Schematic Diagram (Sheet 1 of 2)



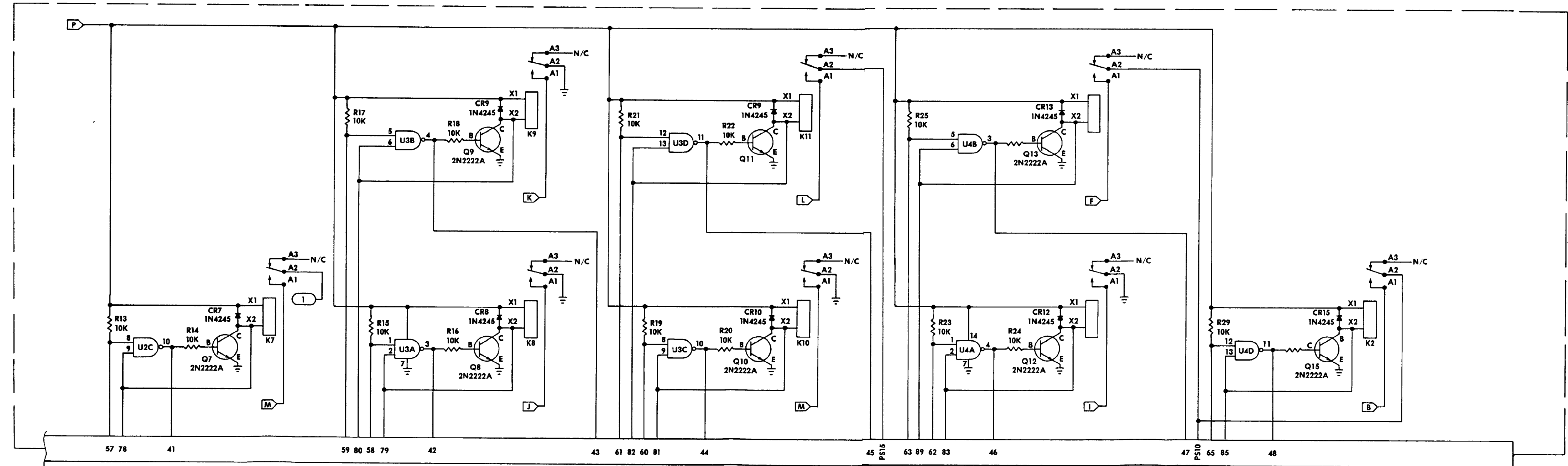
FO-2. Adapter, Test - Interface Connect Device - C, J-4820/G, A3014255-1, Schematic Diagram (Sheet 2 of 2)



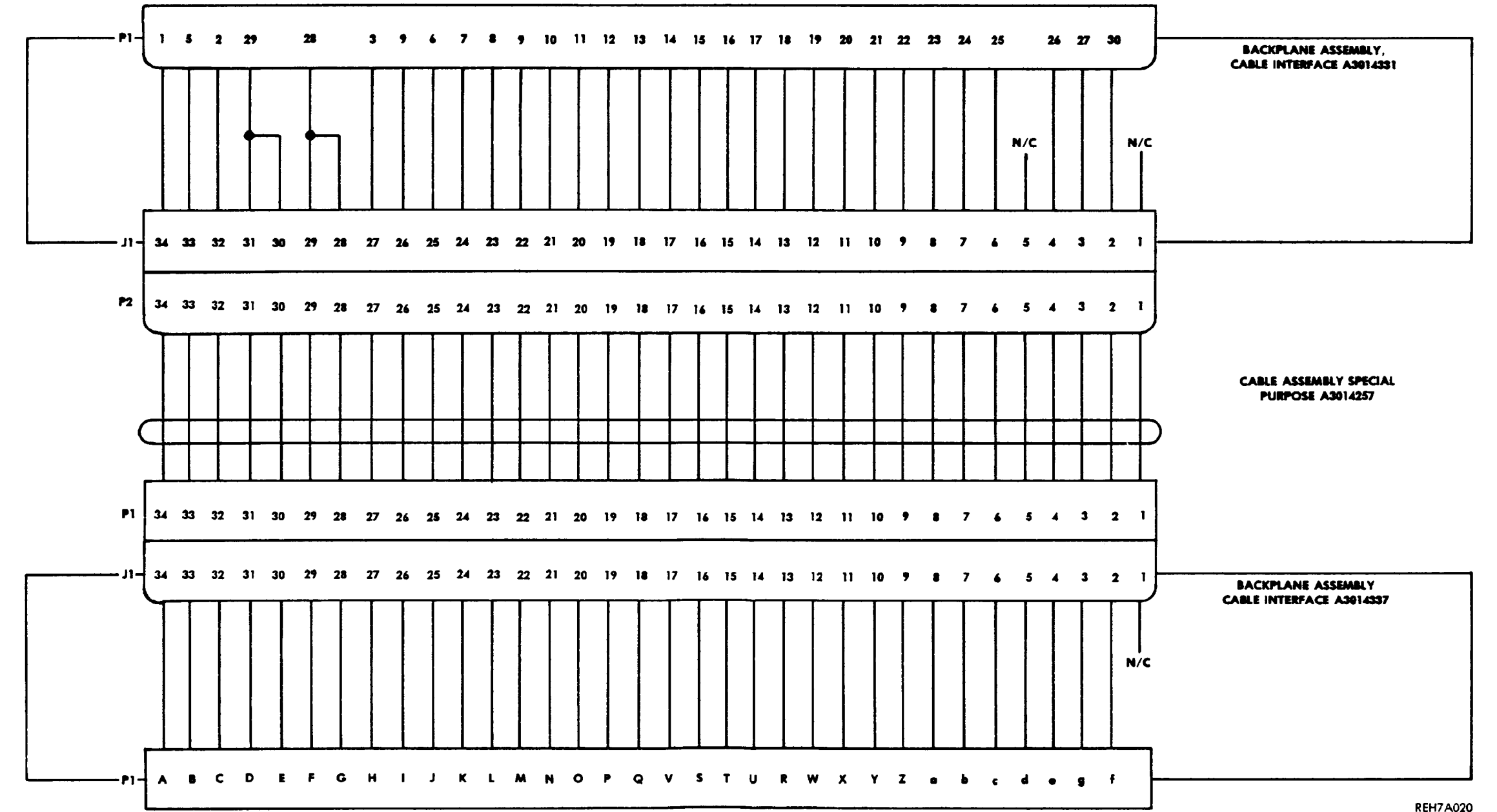
CE1UF033



FO-3. Adapter, Test - Interface Connect Device - A, J-4821/G, A3014256-1, Schematic Diagram (Sheet 2 of 5)

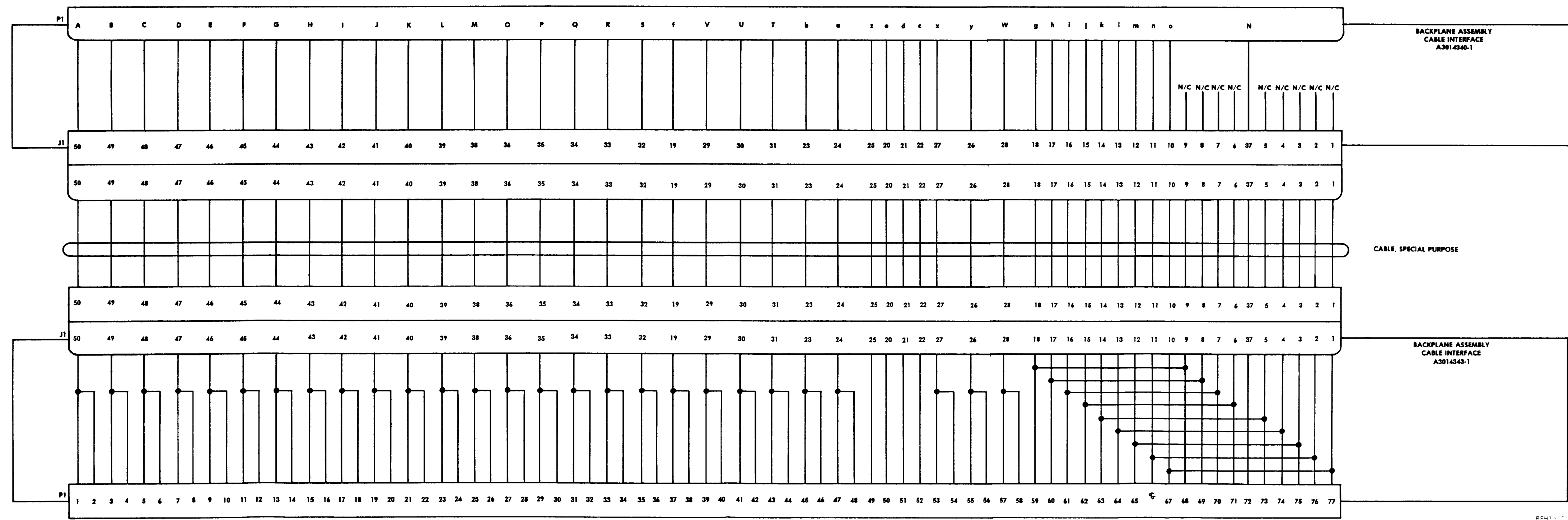


FO-3. Adapter, Test - Interface Connect Device - A, J-4821/G, A3014256-1, Schematic Diagram (Sheet 3 of 5)

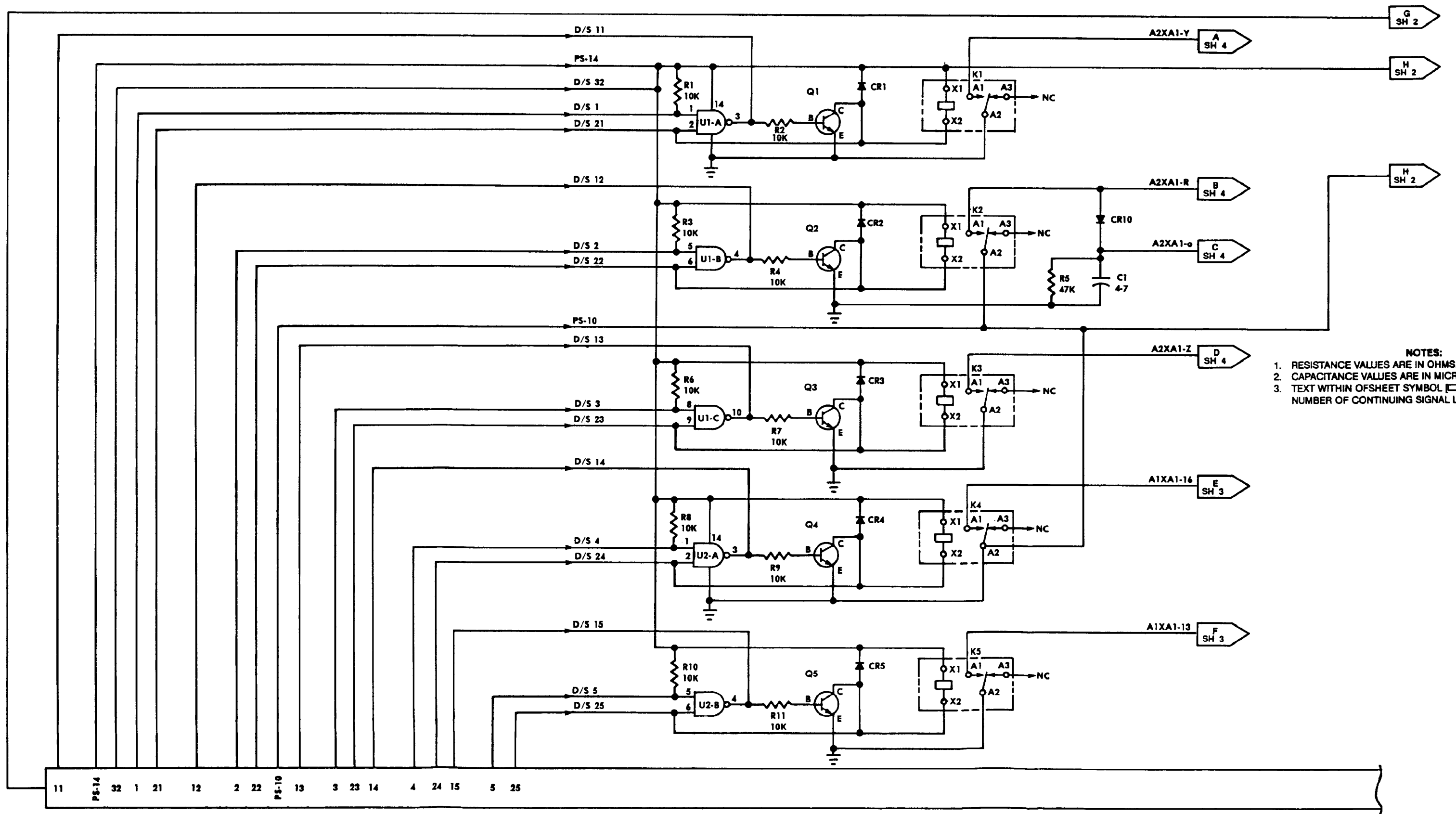


REH7A020

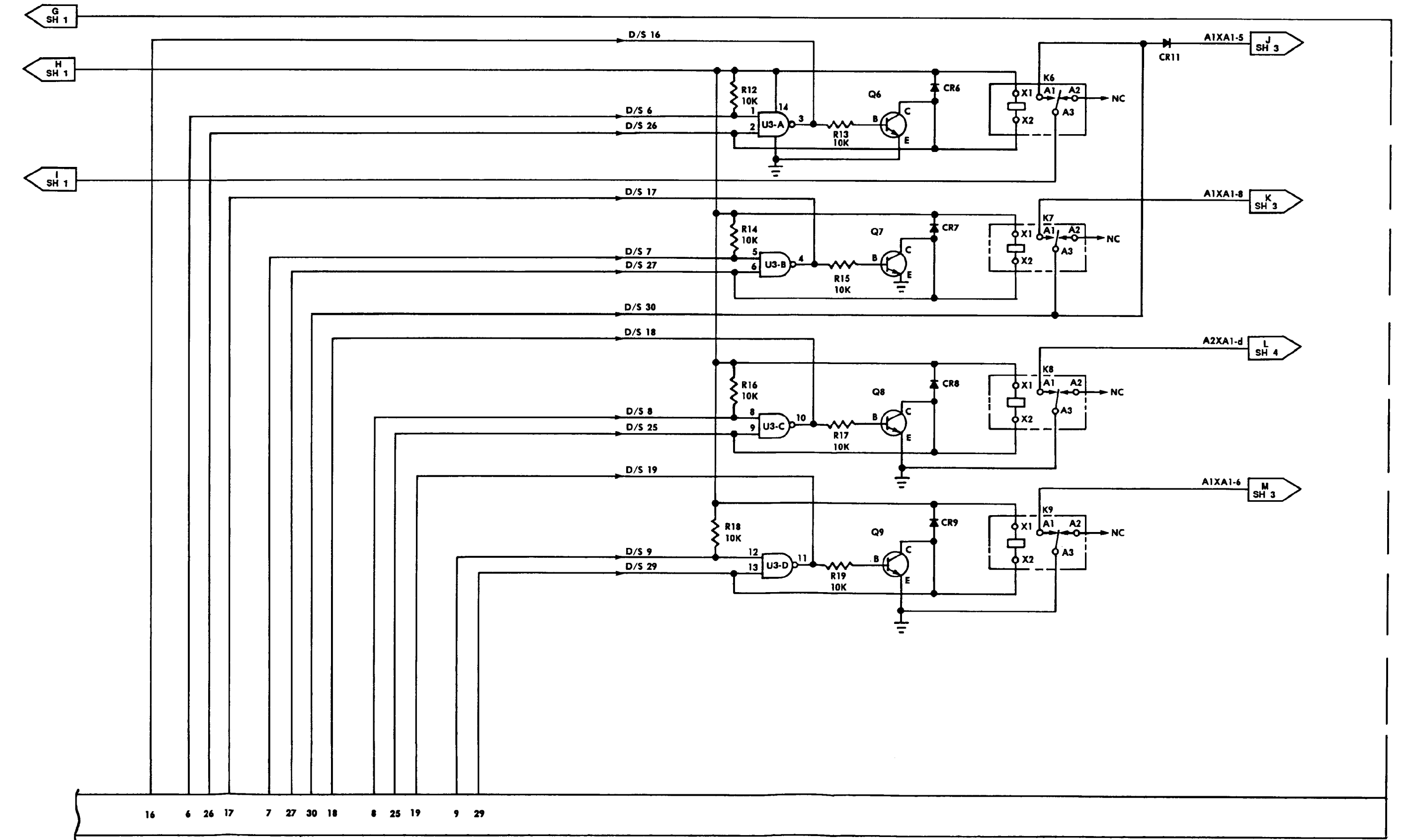
FO-3. Adapter, Test - Interface Connect Device - A, J-4821/G, A3014256-1, Schematic Diagram (Sheet 4 of 5)



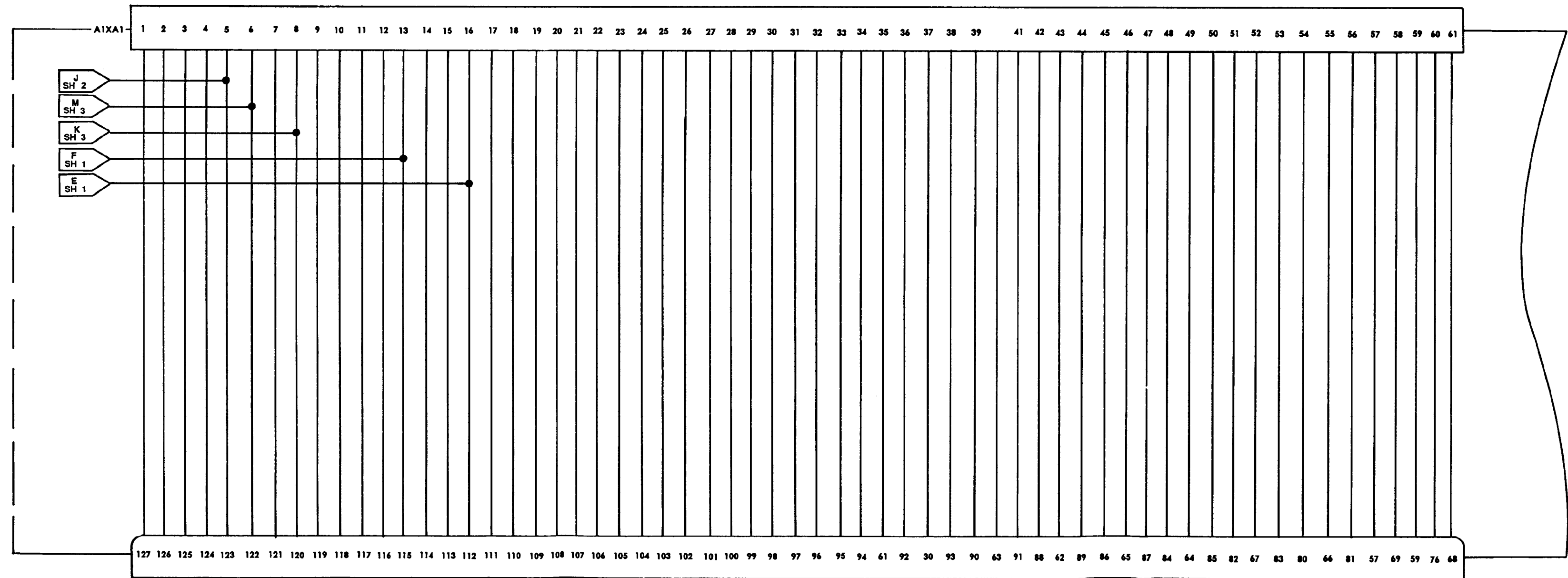
FO-3. Adapter, Test - Interface Connect Device - A, J-4821/G, A3014256-1, Schematic Diagram (Sheet 5 of 5)



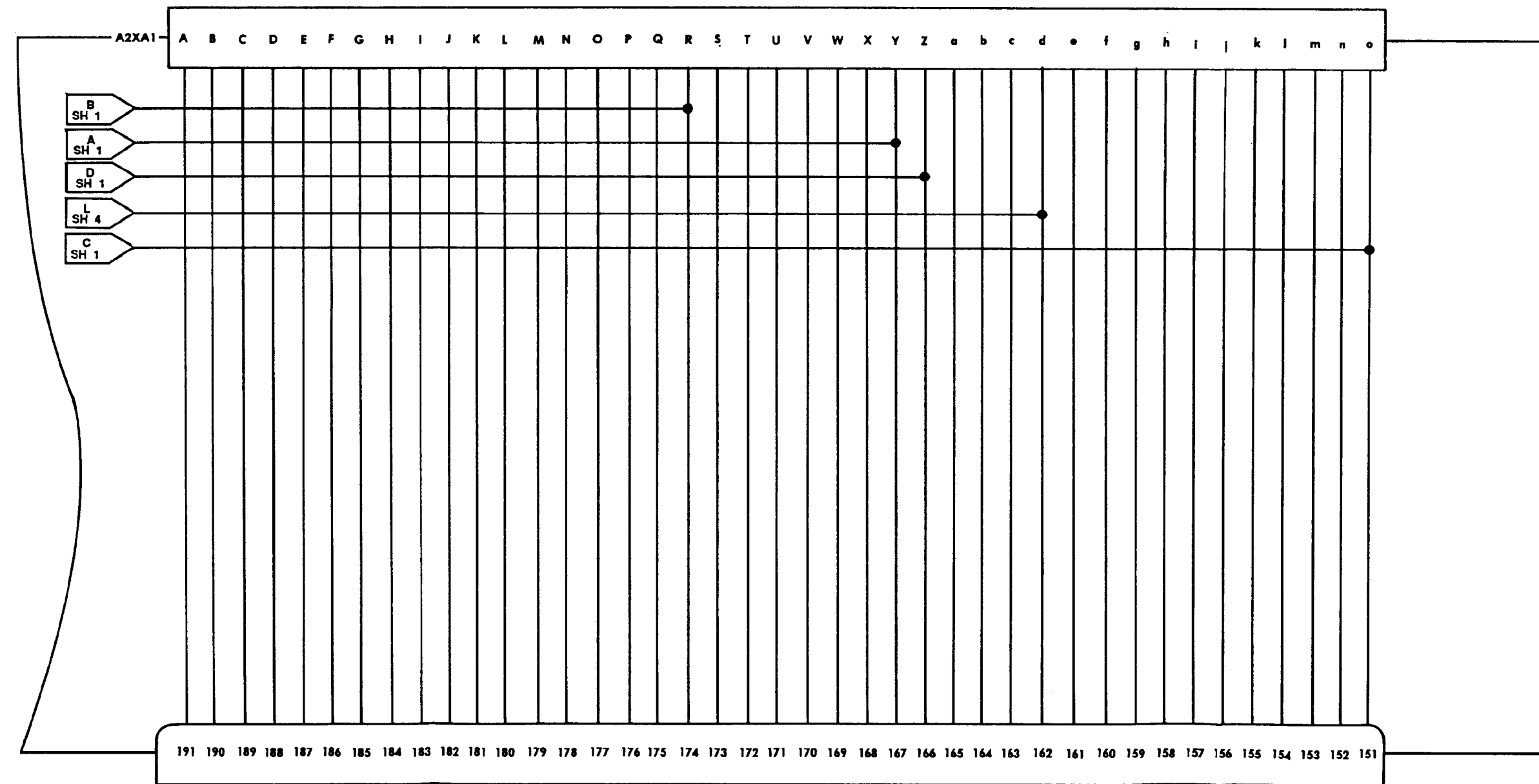
- NOTES:
1. RESISTANCE VALUES ARE IN OHMS.
 2. CAPACITANCE VALUES ARE IN MICROFARADS.
 3. TEXT WITHIN OF SHEET SYMBOL [] INDICATES SHEET NUMBER OF CONTINUING SIGNAL LINE.



FO-4. Adapter, Test - Interface Connect Device - B, J-4822/G, A3014302-1, Schematic Diagram (Sheet 2 of 5)
FP-53 / (FP-54 blank)

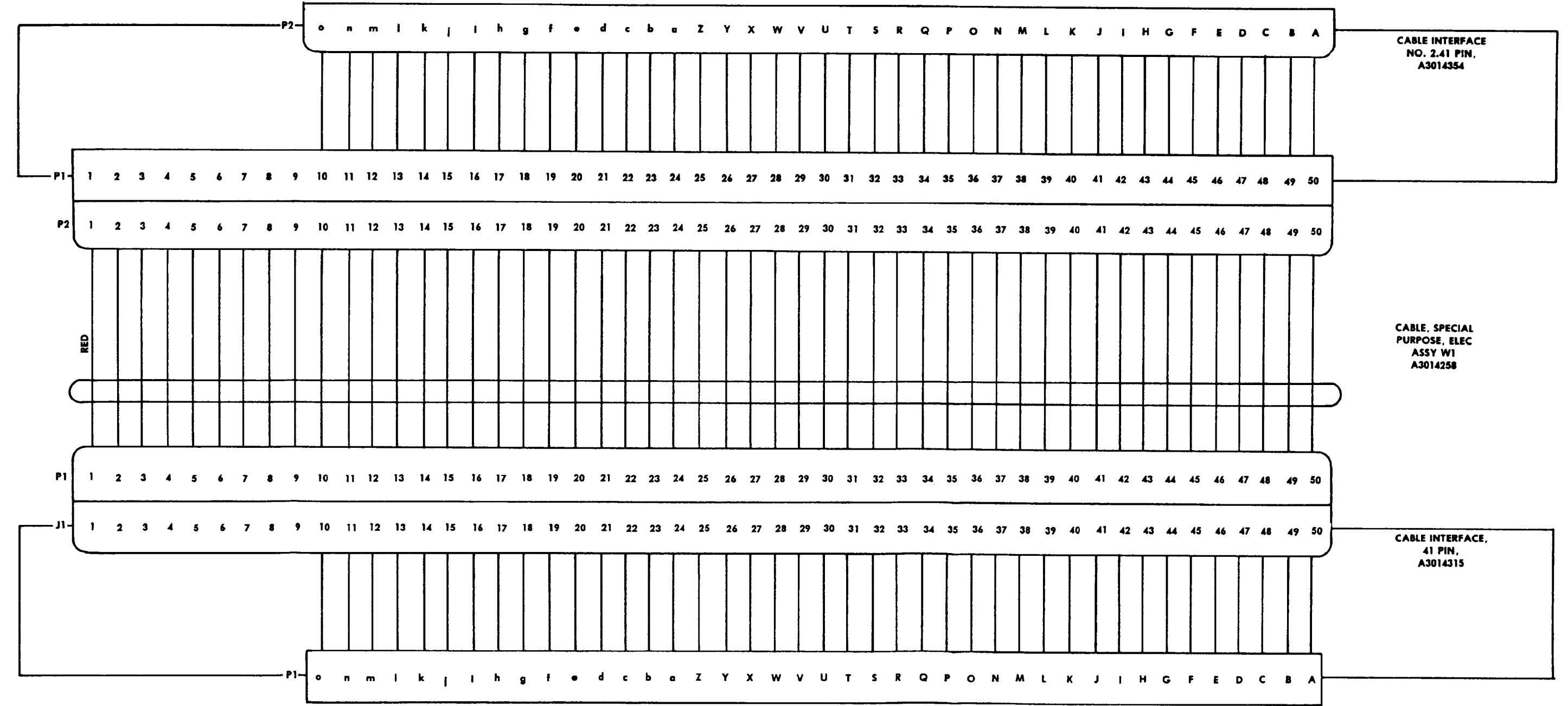


FO-4. Adapter, Test - Interface Connect Device - B, J-4822/G, A3014302-1, Schematic Diagram (Sheet 3 of 5)

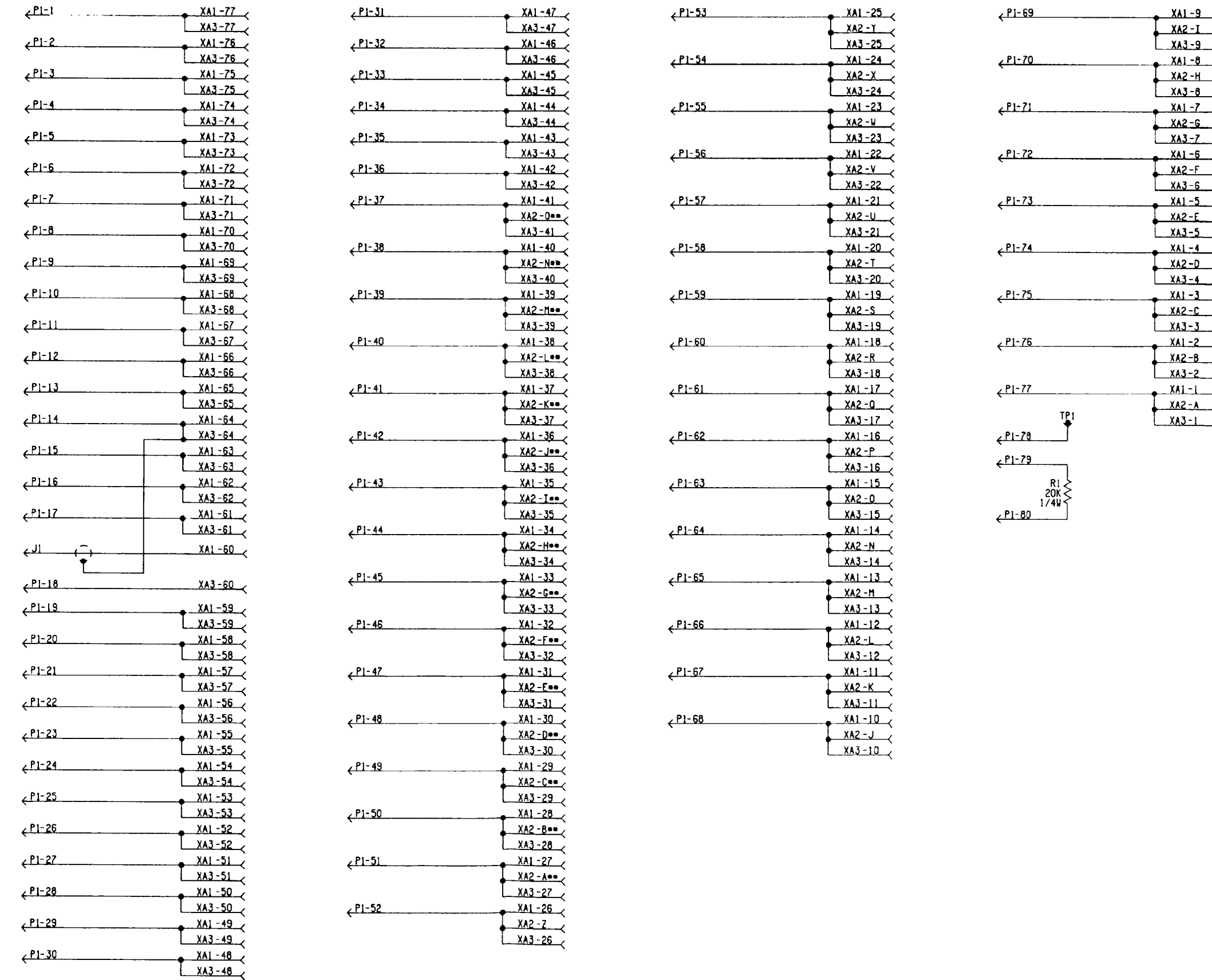


NOTE
 THE FOLLOWING DRIVER SENSOR PIN
 ARE NOT CONNECTED.
 D/S 0
 D/S 10
 D/S 20
 D/S 31
 D/S 33 THROUGH 39
 D/S 51 THROUGH 59
 D/S 70 THROUGH 75
 D/S 77
 D/S 132 THROUGH 150

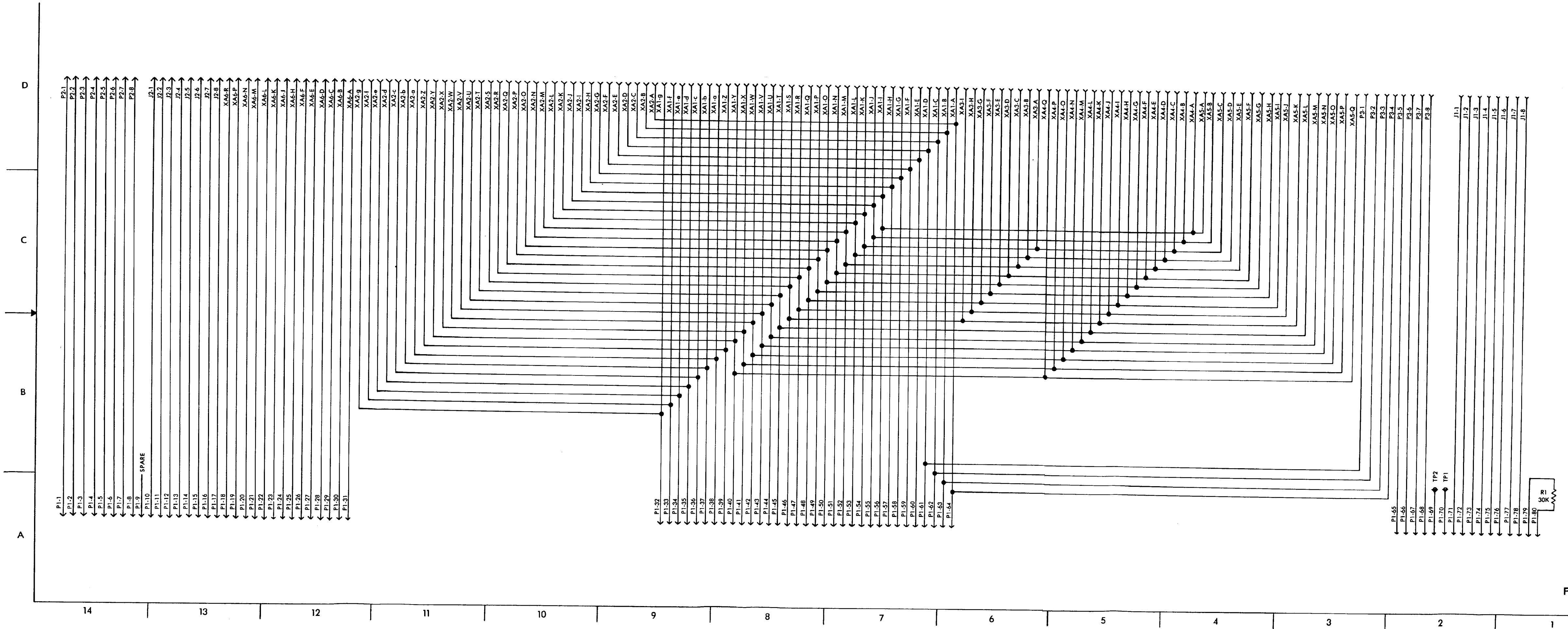
FO-4. Adapter, Test - Interface Connect Device - B, J-4822/G,
 A3014302-1, Schematic Diagram (Sheet 4 of 5)



FO-4. Adapter, Test - Interface Connect Device - B, J-4822/G, A3014302-1, Schematic Diagram (Sheet 5 of 5)

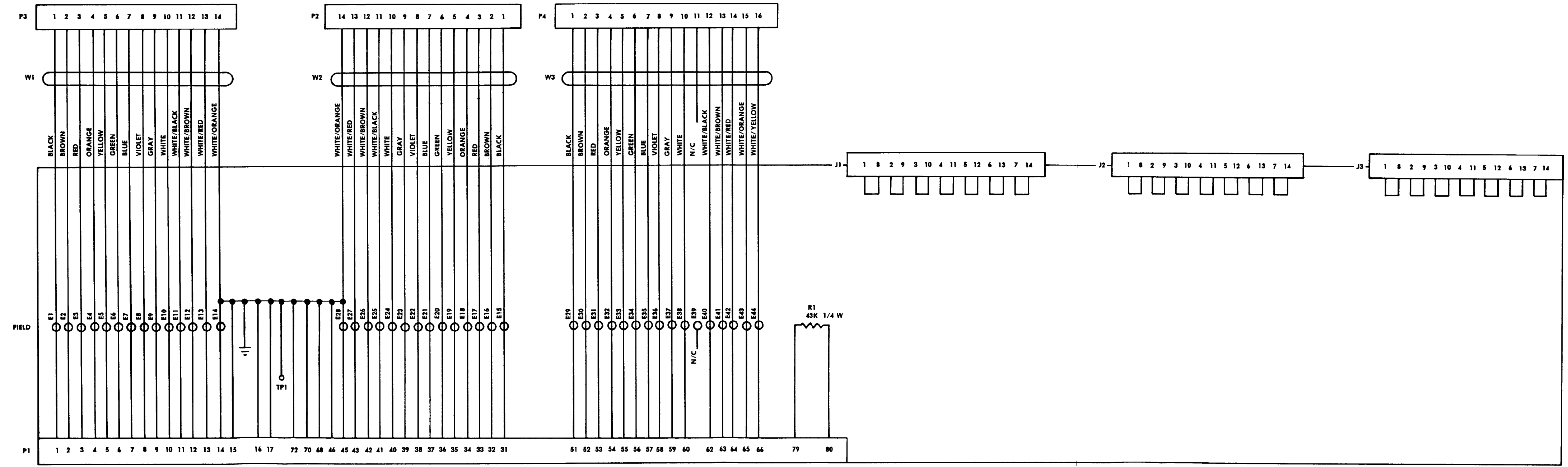


- NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIAGRAM CONFORMS TO ANSI Y32.2, 1975
 2. DOUBLE ASTERISK (**) FOLLOWING LETTER INDICATES LETTER IS LOWER CASE.



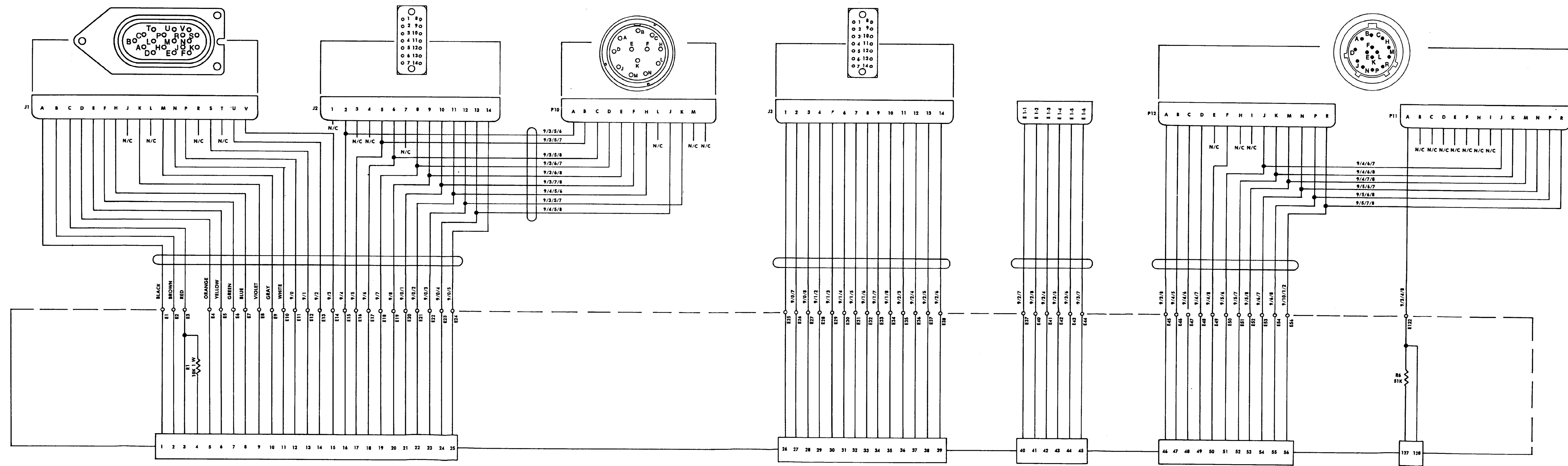
NOTES:
 UNLESS OTHERWISE SPECIFIED:
 1. RESISTANCE VALUES ARE IN OHMS.

FO-6. Adapter, Test - C, J-4825/G. A3019036-1, Schematic Diagram



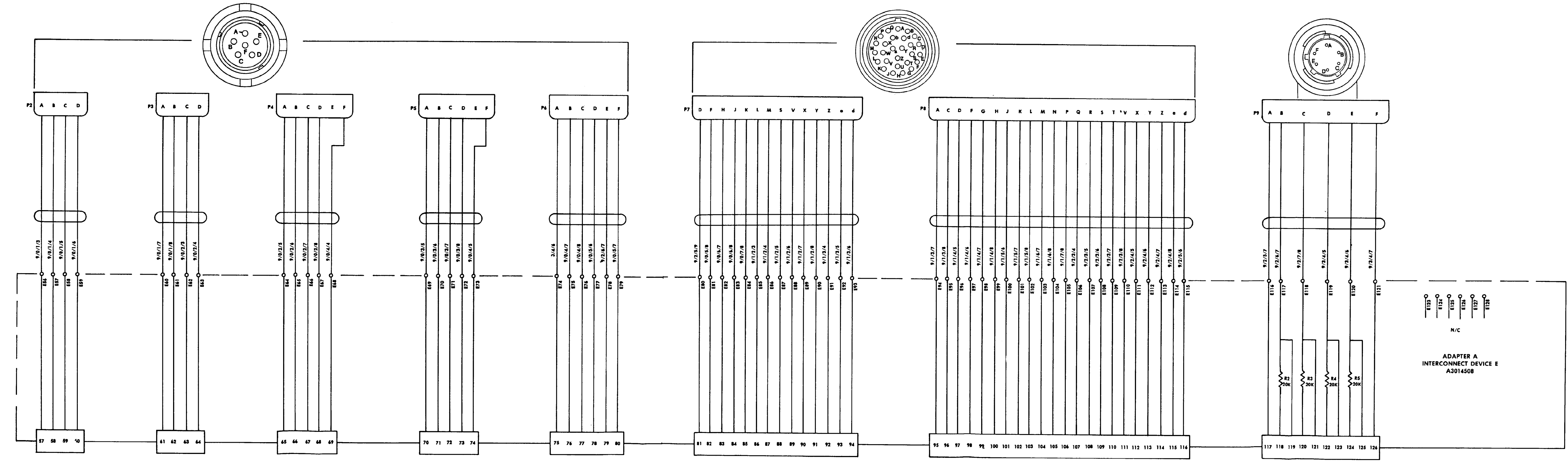
- NOTES:
 1. RESISTANCE VALUES ARE IN OHMS.
 2. CAPACITANCE VALUES ARE IN MICROFARADS.

FO-7. CCA-Adapter Card D, J-4826/G, A3014468-1, Schematic Diagram (Sheet 1 of 1)

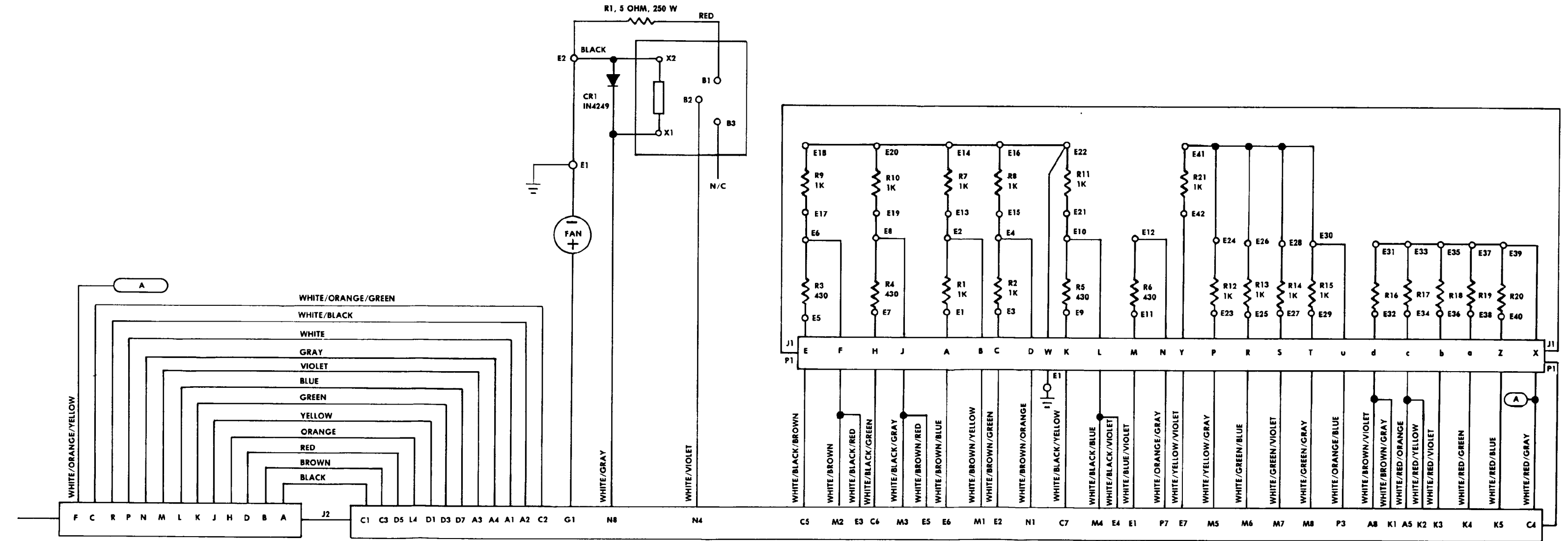


- NOTE
- THE WIRES SOLDERED FROM E11 TO E122 WILL HAVE THREE OR FOUR COLORED BANDS ATTACHED. THE FIRST TWO WILL BE 1/4 IN WIDE AND THE SECOND TWO WILL BE 1/8 IN WIDE. USE THE FOLLOWING COLOR CODE TO IDENTIFY EACH WIRE:
- | | |
|--------|---|
| BLACK | 0 |
| BROWN | 1 |
| RED | 2 |
| ORANGE | 3 |
| YELLOW | 4 |
| GREEN | 5 |
| BLUE | 6 |
| VIOLET | 7 |
| GRAY | 8 |
| WHITE | 9 |
- UNLESS OTHERWISE SPECIFIED, THE RESISTANCE VALUES ARE IN OHMS, 1/4 W, ±5%.

FO-8. Adapter, Test - E, J-4827/G, A3014508-1, Schematic Diagram (Sheet 1 of 2)



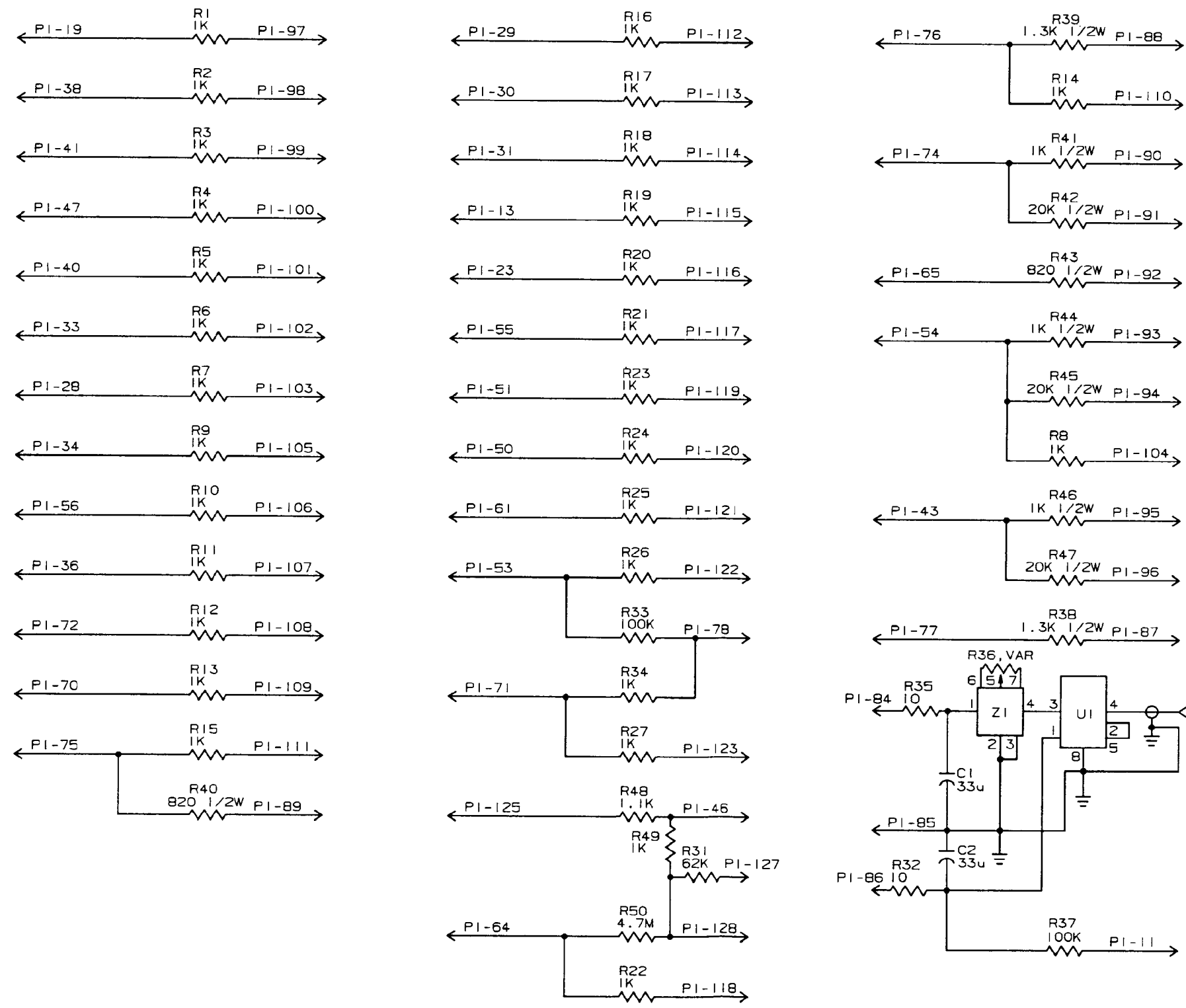
FO-8. Adapter, Test - E, J-4827/G, A3014508-1, Schematic Diagram (Sheet 2 of 2)



- NOTES:
 1. RESISTANCE VALUES ARE IN OHMS.
 2. CAPACITANCE VALUES ARE IN MICROFARADS.

FO-9. Adapter, Test - F, J-4828/G, A3019038-1, Schematic Diagram (Sheet 1 of 1)

FP-71 / (FP-72 blank)



← PI-1	NC	← PI-39	NC
← PI-2	NC	← PI-42	NC
← PI-3	NC	← PI-44	NC
← PI-4	NC	← PI-45	NC
← PI-5	NC	← PI-48	NC
← PI-6	NC	← PI-49	NC
← PI-7	NC	← PI-52	NC
← PI-8	NC	← PI-57	NC
← PI-9	NC	← PI-58	NC
← PI-10	NC	← PI-59	NC
← PI-12	NC	← PI-60	NC
← PI-14	NC	← PI-62	NC
← PI-15	NC	← PI-63	NC
← PI-16	NC	← PI-66	NC
← PI-17	NC	← PI-67	NC
← PI-20	NC	← PI-68	NC
← PI-21	NC	← PI-69	NC
← PI-22	NC	← PI-73	NC
← PI-24	NC	← PI-79	NC
← PI-25	NC	← PI-80	NC
← PI-26	NC	← PI-81	NC
← PI-27	NC	← PI-82	NC
← PI-32	NC	← PI-83	NC
← PI-35	NC	← PI-124	NC
← PI-37	NC	← PI-126	NC

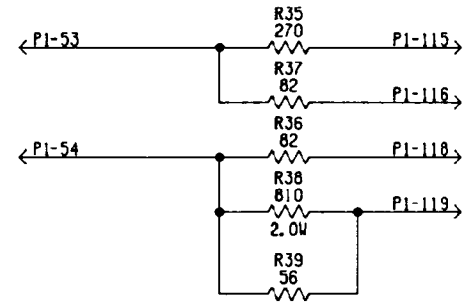
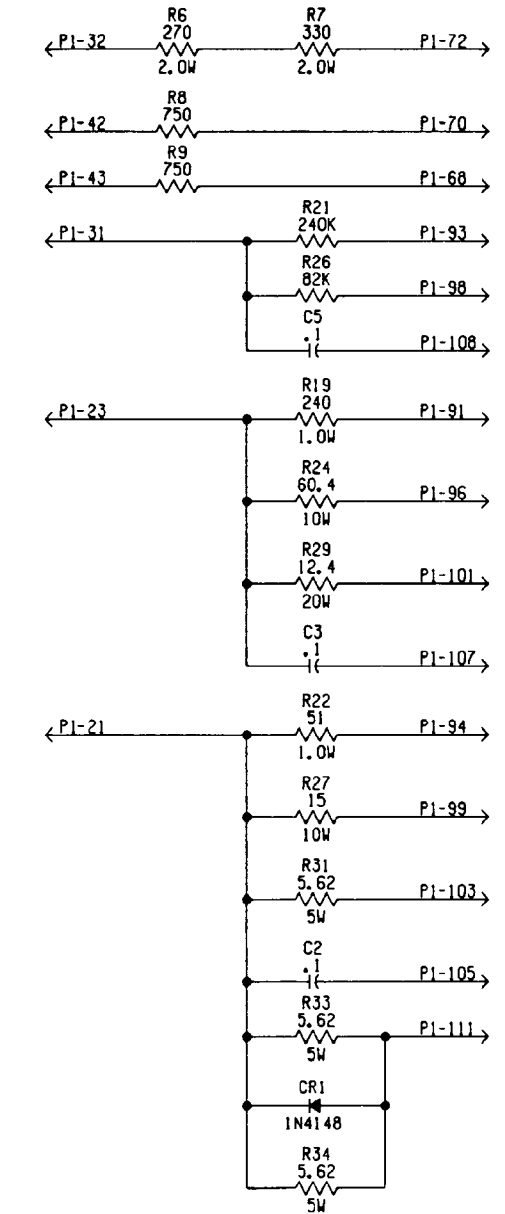
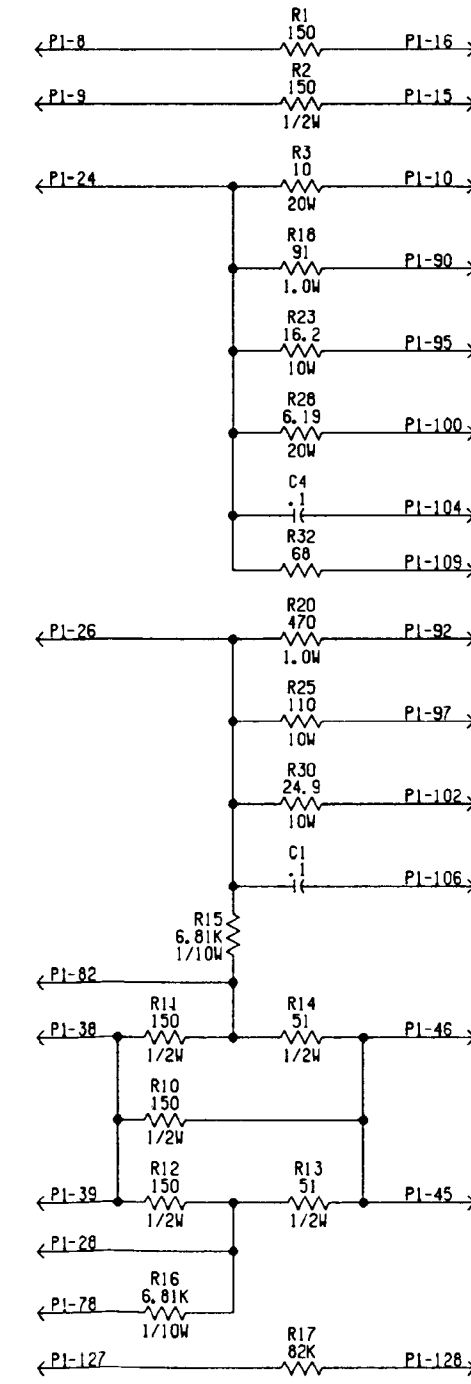
HIGHEST REFERENCE DESIGNATION		
C2	J1	P1
R50	U1	Z1
REFERENCE DESIGNATION NOT USED		

NOTES:

- PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER AND SUBASSEMBLY DESIGNATION.
- UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 1/8W. CAPACITANCE VALUES ARE IN MICROFARADS.

NOTES:
UNLESS OTHERWISE SPECIFIED:

- PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER AND SUBASSEMBLY DESIGNATIONS.
- RESISTANCE VALUES ARE IN OHMS, 1/4W CAPACITANCE VALUES ARE IN MICROFARADS.

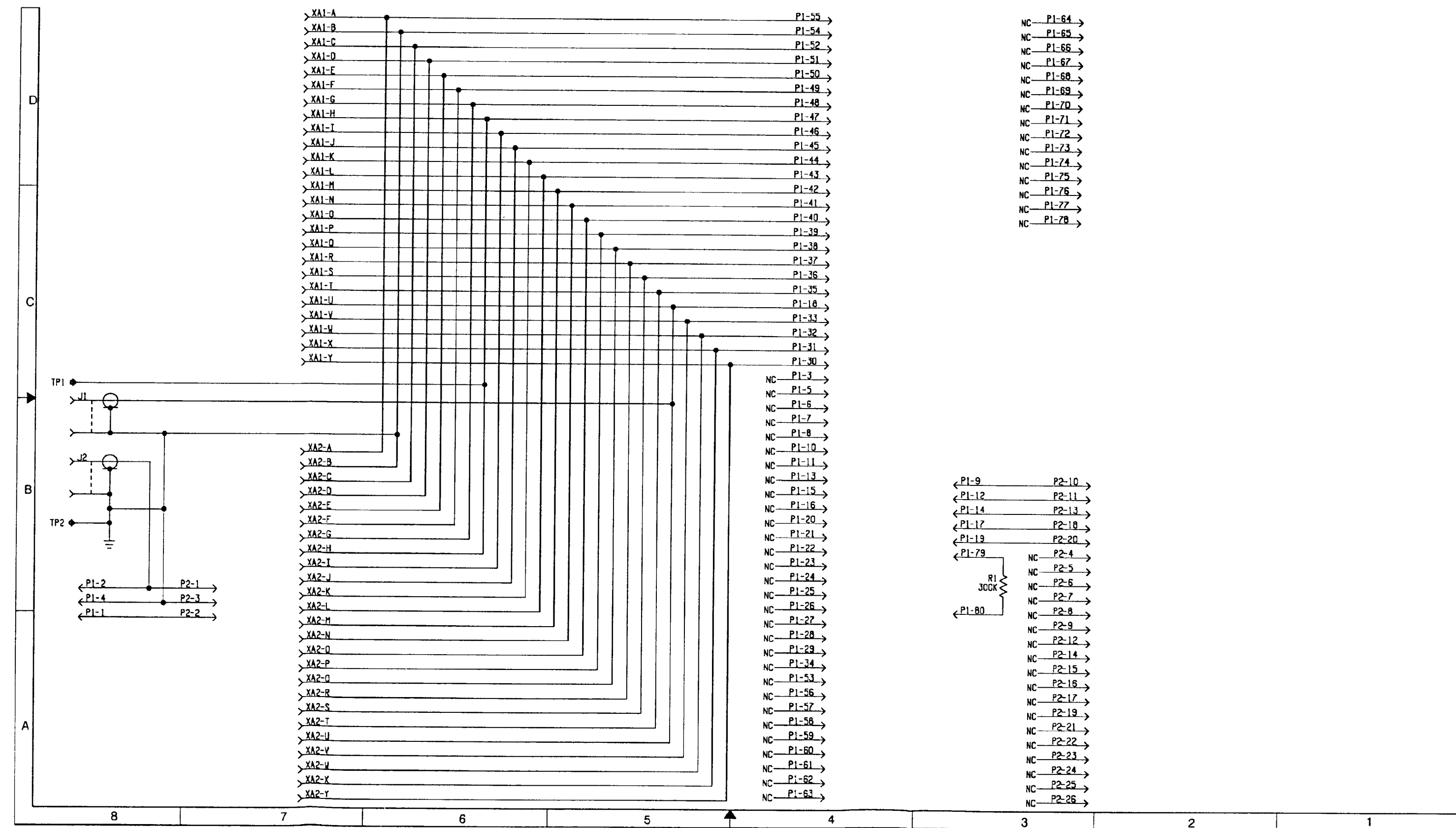


P1-1	NC	P1-41	NC	P1-76	NC
P1-2	NC	P1-44	NC	P1-77	NC
P1-3	NC	P1-47	NC	P1-79	NC
P1-4	NC	P1-48	NC	P1-80	NC
P1-5	NC	P1-49	NC	P1-81	NC
P1-6	NC	P1-50	NC	P1-83	NC
P1-7	NC	P1-51	NC	P1-84	NC
P1-11	NC	P1-52	NC	P1-85	NC
P1-12	NC	P1-55	NC	P1-86	NC
P1-13	NC	P1-56	NC	P1-87	NC
P1-14	NC	P1-57	NC	P1-88	NC
P1-17	NC	P1-58	NC	P1-89	NC
P1-18	NC	P1-59	NC	P1-110	NC
P1-19	NC	P1-60	NC	P1-112	NC
P1-20	NC	P1-61	NC	P1-113	NC
P1-22	NC	P1-62	NC	P1-114	NC
P1-25	NC	P1-63	NC	P1-117	NC
P1-27	NC	P1-64	NC	P1-120	NC
P1-29	NC	P1-65	NC	P1-121	NC
P1-30	NC	P1-66	NC	P1-122	NC
P1-33	NC	P1-67	NC	P1-123	NC
P1-34	NC	P1-69	NC	P1-124	NC
P1-35	NC	P1-71	NC	P1-125	NC
P1-36	NC	P1-73	NC	P1-126	NC
P1-37	NC	P1-74	NC		
P1-40	NC	P1-75	NC		

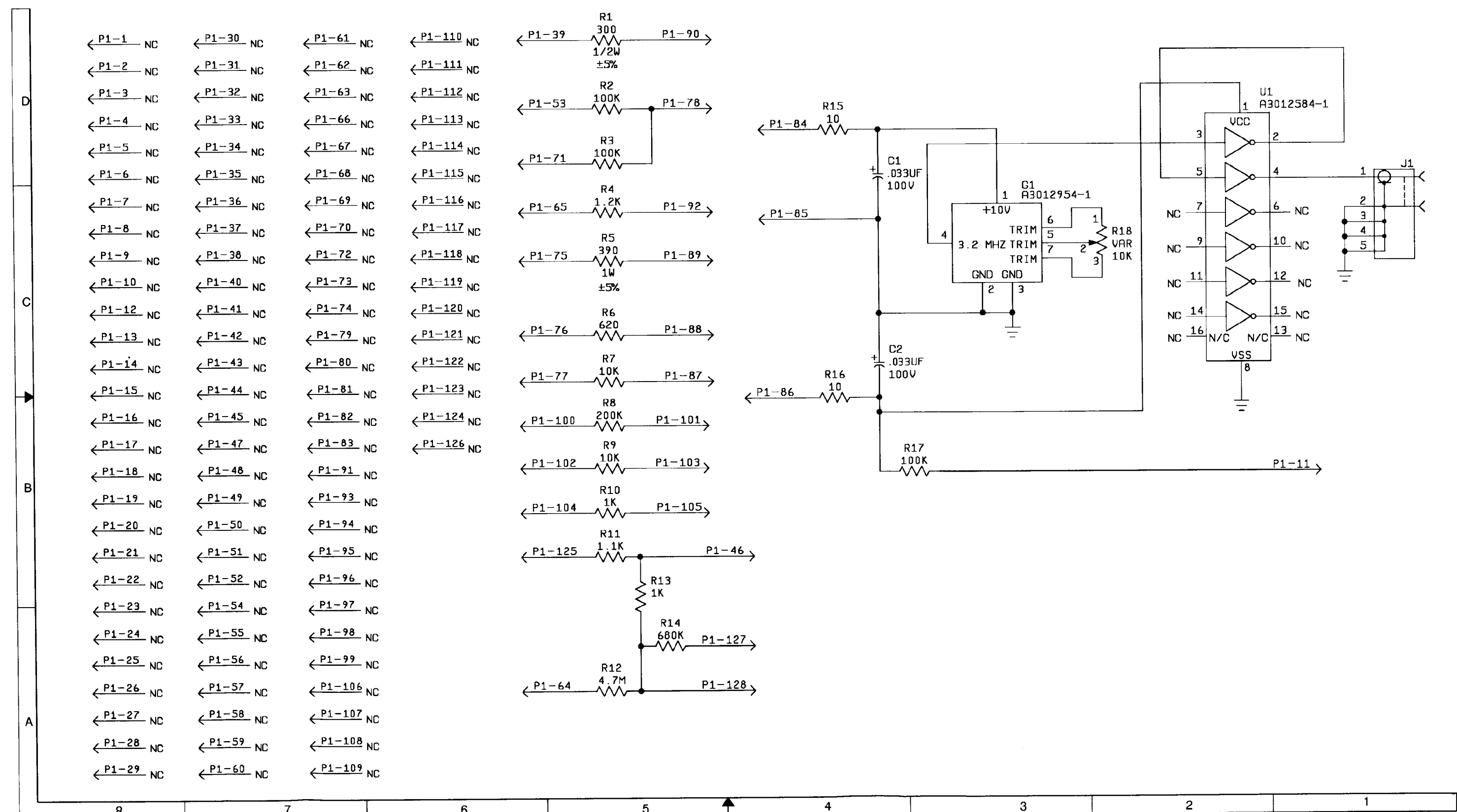
HIGHEST REFERENCE DESIGNATIONS	C5	CR1	P1
REFERENCE DESIGNATIONS NOT USED			

- NOTES:
1. RESISTANCE VALUES ARE IN OHMS.
2. CAPACITANCE VALUES ARE IN MICROFARADS.

FO-11. CCA - Load Card B, J-4834/G, A3017841-1, Schematic Diagram (Sheet 1 of 1)

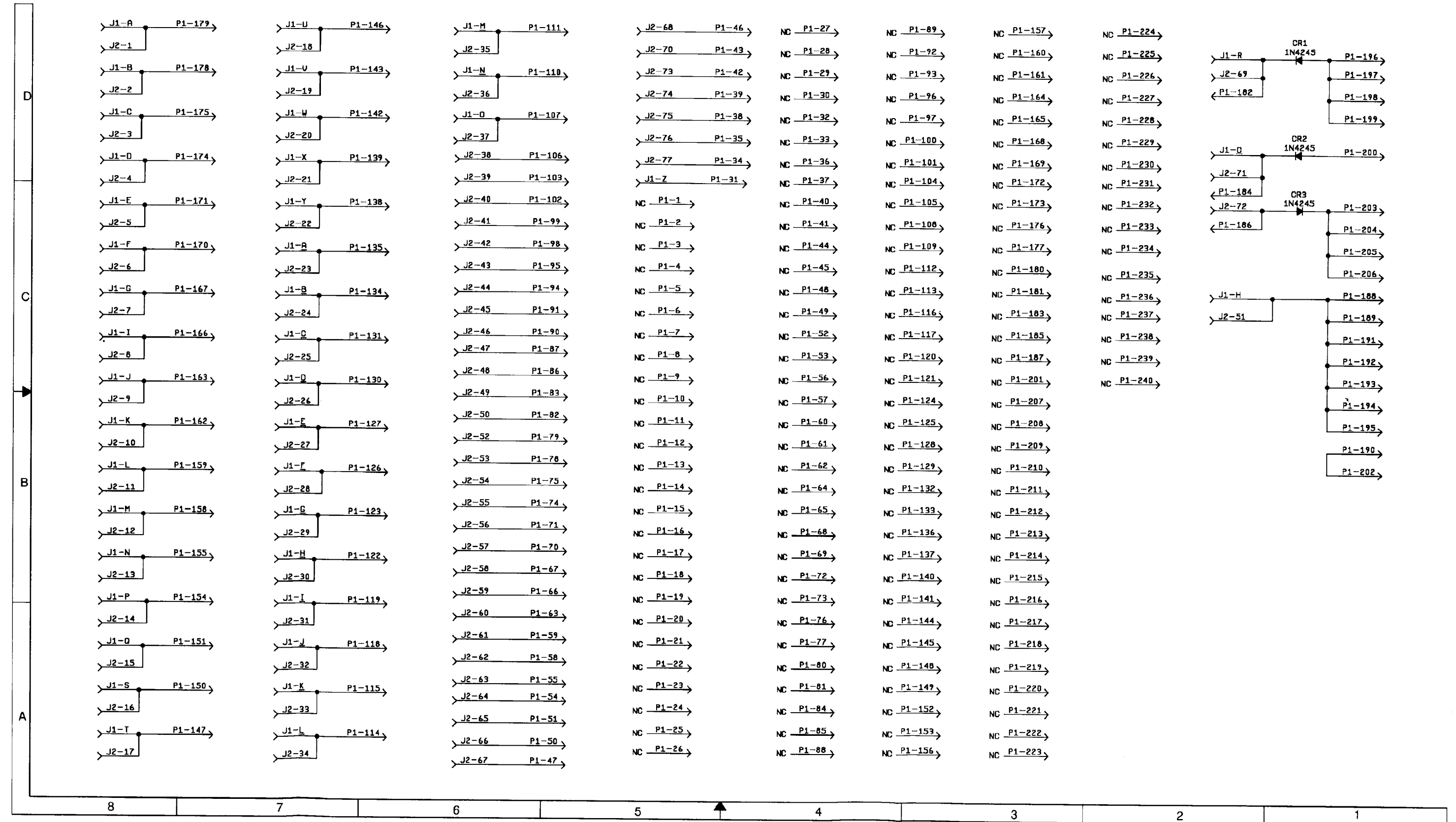


FO-12. Test Adapter K, A3142084-1, Schematic Diagram FP-77/(FP-78 blank)

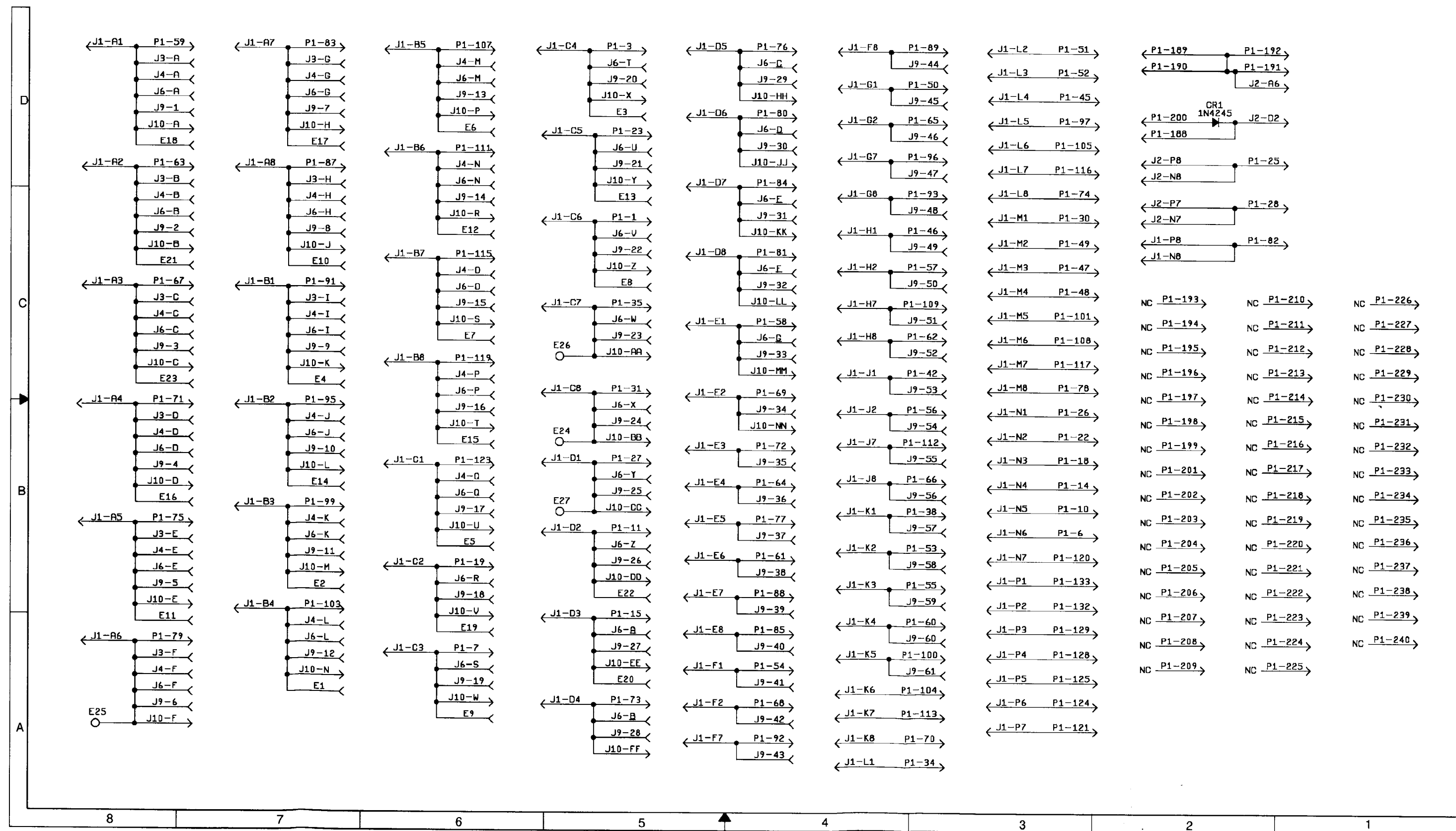


FO-13. Load Card L2, A3148072-1, Schematic Diagram

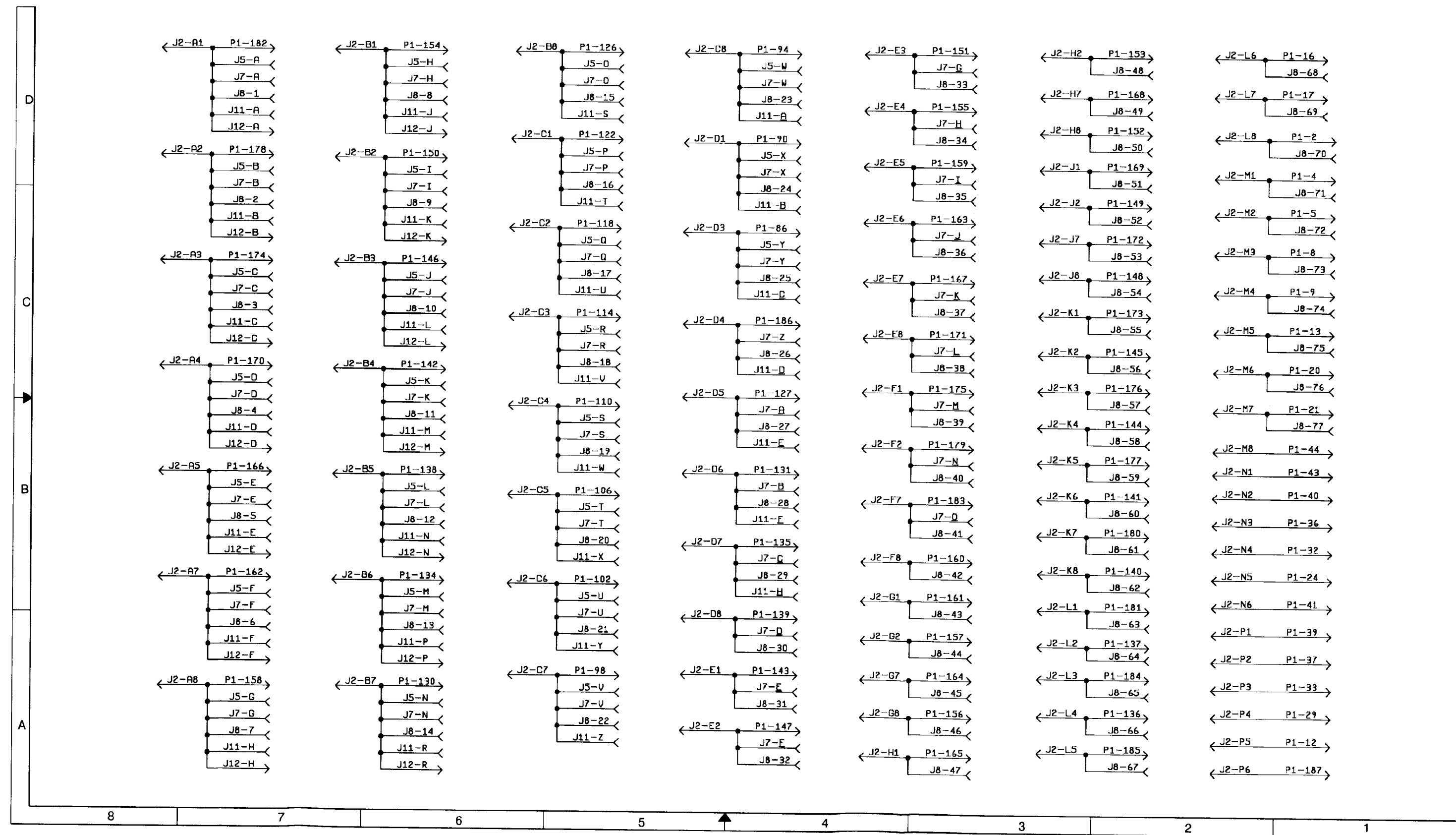
FP-79/(FP-80 blank)

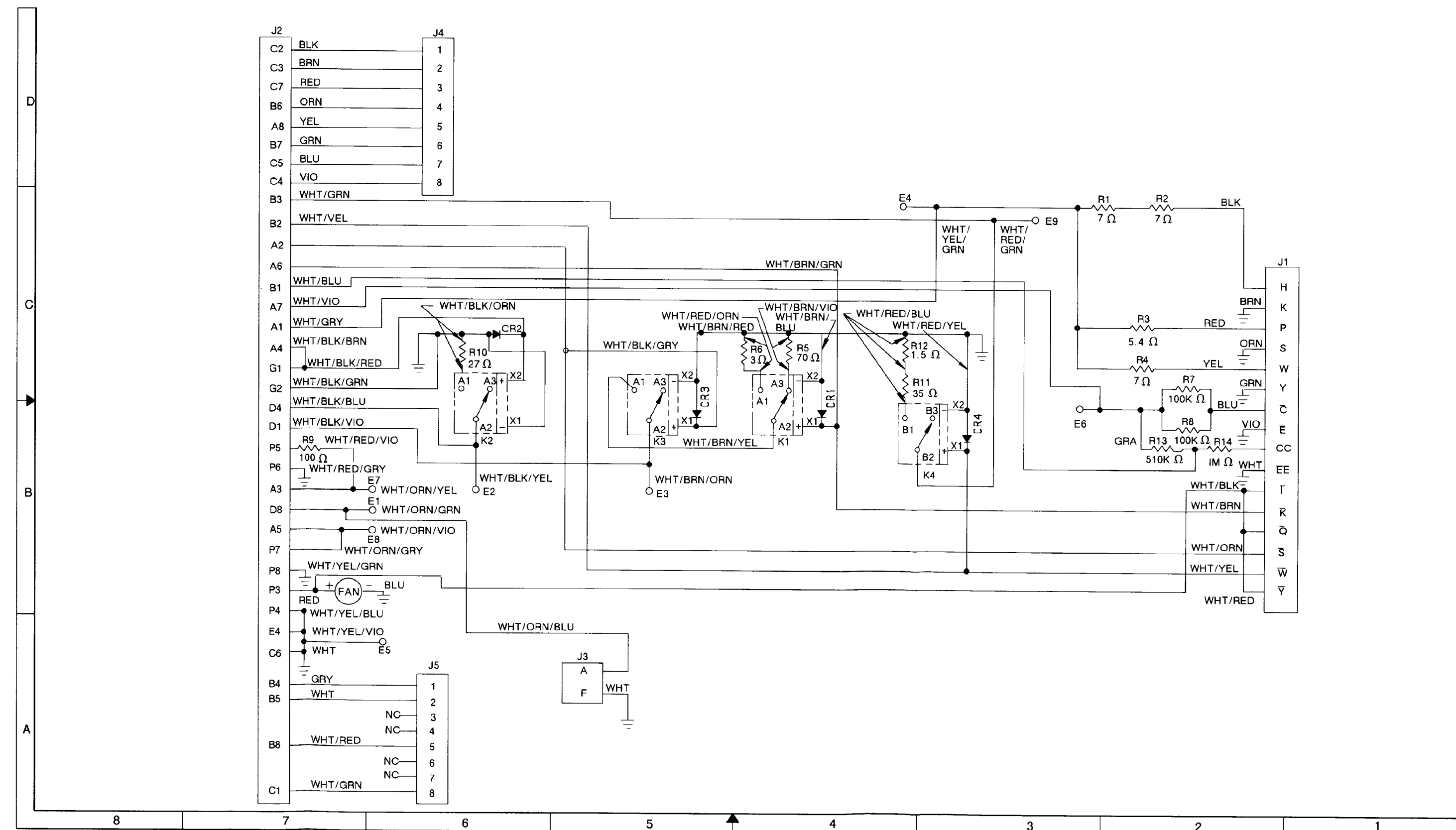


FO-14. Adapter, Test-A7, J-4999/G, A3148050-1, Schematic Diagram



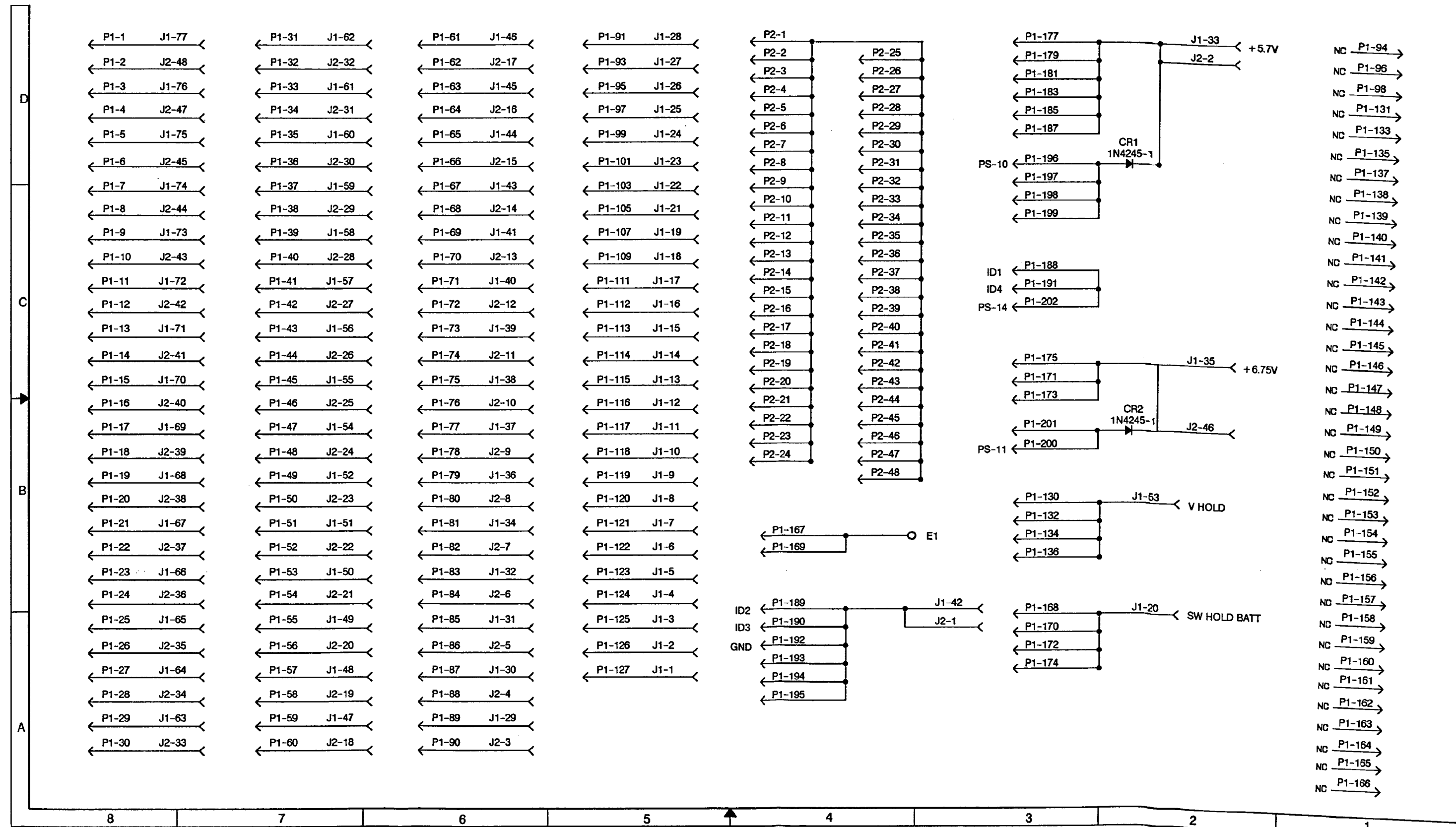
FO-15. Adapter, Test-A13, J-6004/G, A3148056-1, Schematic Diagram (Sheet 1 of 2)





FO-16. Adapter, Test-H, J-4829/G, A3019208-1, Schematic Diagram

FP-87/(FP-88 blank)



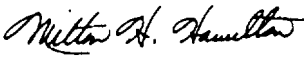
FO-17. Adapter, Test-A14, J-6098/G, A3190861-1, Schematic Diagram

Change 1 FP-89/(FP-90 blank)

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:


MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

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BE EXACT PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO	
2-25	2-28			<p>Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°.</p> <p>REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate in hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.</p>
3-10	3-3		3-1	<p>Item 5, Functional Column. Change "2 dB" to "3 dB".</p> <p>REASON: The adjustment procedure for the TRANS POWER FAULT indicator calls for a 3 dB (500 watts) adjustment to light the TRANS POWER FAULT indicator.</p>
5-6	5-8			<p>Add new step f.1 to read, "Replace cover plate removed in step f.1 above."</p> <p>REASON: To replace the cover plate.</p>
		FO-3		<p>Zone C 3. On J1-2, change "+24 VDC" to "+5 VDC".</p> <p>REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.</p>

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