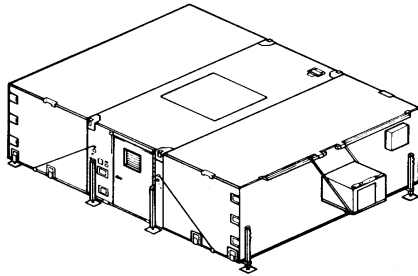


**TECHNICAL MANUAL  
OPERATOR'S AND AVIATION INTERMEDIATE MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)  
FOR**



**SHELTER, SHOP SET, AVIATION  
INTERMEDIATE MAINTENANCE,  
(DIV) ARMAMENT REPAIR, AIR MOBILE,  
SHELTER-MOUNTED  
4933-01-082-1663**

**OCTOBER 1982**

**HEADQUARTERS, DEPARTMENT OF THE ARMY**

<b>PREVENTIVE MAINTENANCE CHECKS AND SERVICES</b>	<b>PAGE 2-1</b>	
<b>ASSEMBLY AND PREPARATION FOR USE</b>	<b>PAGE 2-8</b>	
<b>PREPARATION FOR MOVEMENT</b>	<b>PAGE 2-20</b>	
<b>SERVICE UPON RECEIPT</b>	<b>PAGE 3-2</b>	
<b>TROUBLESHOOTING</b>	<b>PAGE 3-5</b>	
<b>MAINTENANCE INSTRUCTIONS</b>	<b>PAGE 3-9</b>	
<b>MAINTENANCE ALLOCATION CHART</b>	<b>PAGE B-1</b>	
<b>REPAIR PARTS AND SPECIAL TOOLS LIST</b>	<b>PAGE C-1</b>	
<b>ILLUSTRATED LIST OF MANUFACTURED ITEMS</b>	<b>PAGE E-1</b>	

### WARNING

The electrical system contains voltages that are dangerous if contacted. Before connecting or disconnecting power cables, or beginning maintenance on the grounding stud, ensure circuit breaker on power distribution panel connected to power source is in OFF position and then disconnect 120/208V cable assembly from shelter.

Ensure grounding rod is installed and connected before energizing shop set.

Dry cleaning solvent is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. The solvent evaporates quickly and has a drying, possibly damaging, effect on skin.

A minimum of four personnel is required when moving or lifting the environmental control unit (ECU), as each weighs approximately 270 lb (122 kg).

Ventilation fan and mounting panel should be removed from shelter wall prior to removal of fan blackout cover.

Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.

Injury to personnel may result if pressure is not relieved before beginning any maintenance to airhose.

### FIRST AID

For first aid information, refer to FM 21-11.

Change  
No. 1

Operator's and Aviation  
Intermediate Maintenance Manual  
(Including Repair Parts and Special Tools List)  
for

**SHELTER, SHOP SET, AVIATION INTERMEDIATE MAINTENANCE,  
(DIV) ARMAMENT REPAIR, AIR MOBILE, SHELTER-MOUNTED  
4933-01-082-1663**

TM 9-4933-223-13&P, 26 October 1982, is changed as indicated below:

**NOTE**

**New or changed text is indicated by a change bar to the left of the text and the designation "Change 1" next to the page number. New or changed illustrations are indicated by a miniature pointing hand next to the illustration and the designation "Change 1" next to the page number. On pages with the "Change 1" designation but without the change bar or pointing hand, the entire page is new or changed.**

1. Remove old pages and insert new pages as follows:

**Remove Pages**

i and ii  
3-9 and 3-10  
3-21 and 3-22  
3-37 and 3-38  
3-89 and 3-90  
3-109 and 3-110

**Insert Pages**

i and ii  
3-9 and 3-10  
3-21 and 3-22  
3-37 and 3-38  
3-89 and 3-90  
3-109 and 3-110

**Remove Pages**

3-141 and 3-142  
 3-149 and 3-150  
 3-157 and 3-158  
 3-187 and 3-188  
 3-191 and 3-192  
 3-205 thru 3-208  
 3-213 and 3-214  
 3-235 and 3-236  
 3-239 and 3-240  
 3-245 thru 3-248  
 3-251 thru 3-254  
 3-257 and 3-258  
 3-263 and 3-264  
 3-267 and 3-268  
 3-273 thru 3-276  
 3-295 thru 3-298  
 B-9 and B-10  
 C-1 thru C-62  
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 E-3 thru E-14  
 E-17 thru E-34  
 E-37 thru E-40  
 E-43 and E-44

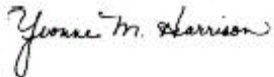
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3-141 and 3-142  
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 3-187 and 3-188  
 3-191 and 3-192  
 3-205 thru 3-208  
 3-213 and 3-214  
 3-235 and 3-236  
 3-239 and 3-240  
 3-245 thru 3-248  
 3-251 thru 3-254  
 3-257 and 3-258  
 3-263 and 3-264  
 3-267 and 3-268  
 3-273 thru 3-276  
 3-295 thru 3-298  
 B-9 and B-10  
 C-1 thru C-62  
 I-1 thru I-14  
 D-1 thru D-4  
 E-3 thru E-14  
 E-17 thru E-34  
 E-37 thru E-40  
 E-43 and E-44

2. File this change sheet in the back of the manual for reference purposes.

By Order of the Secretary of the Army:

DENNIS J. REIMER  
General, United States Army  
Chief of Staff

Official: 

YVONNE M. HARRISON  
Administrative Assistant to the  
Secretary of the Army

00929

**DISTRIBUTION:** To be distributed in accordance with DA Form 12-25-E, block 4988 requirements for TM 9-4933-223-13&P.

**Operator's and Aviation  
Intermediate Maintenance Manual  
(Including Repair Parts and Special Tools List)  
for  
SHELTER, SHOP SET, AVIATION INTERMEDIATE MAINTENANCE,  
(DIV) ARMAMENT REPAIR, AIR MOBILE, SHELTER-MOUNTED  
4933-01-082-1663**

■ **Current as of 2 August 1995 for Appendix C**

**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: Director, Armament and Chemical Acquisition and Logistics Activity, ATTN: AMSTA-AC-MAS, Rock Island, IL 61299-7630. A reply will be furnished direct to you.

		<b>Page</b>
HOW TO USE THIS MANUAL .....		v
CHAPTER	1. INTRODUCTION	
Section	I. General Information .....	1-1
	II. Equipment Description and Data .....	1-4
	III. Principles of Operation .....	1-12
CHAPTER	2. OPERATING INSTRUCTIONS	
Section	I. Preventive Maintenance Checks and Services (PMCS) .....	2-1
	II. Operation Under Usual Conditions .....	2-8

CHAPTER	3.	INTERMEDIATE MAINTENANCE INSTRUCTIONS.....	Page	
Section	I.	Repair Parts, Special Tool-, TMDE, and Support Equipment.....	3-2	
	II.	Service Upon Receipt.....	3-2	
	III.	Troubleshooting.....	3-5	
	IV.	Maintenance Procedures.....	3-9	
	V.	Preparation for Storage or Shipment.....	3-300	
APPENDIX	A	REFERENCES.....	A-1	
	B.	MAINTENANCE ALLOCATION CHART		
Section	I.	Introduction.....	B-1	
	II.	Maintenance Allocation Chart.....	B-5	
	III.	Tool and Test Equipment Requirements.....	B-9	
	IV.	Remarks.....	B-10	
APPENDIX	C	OPERATOR'S AND AVIATION INTERMEDIATE MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST		
Section	I	Introduction.....	C-1	
■	II.	Repair Parts List.....	C-10	
			<b>Illus</b>	
			<b>Page</b>	<b>Figure</b>
Group	00.	Shop Set, Armament AVIM 5911163 and		
	08.	Wire Assembly 12011690-9, Ceiling Outlets.....	C-8	1
	00.	Shop Set, Armament AVIM 5911163 and		
	07.	Wire Assembly 12011690-4, Switchbox and		
	08.	Wire Assembly 12011690-9, Ceiling Outlets.....	C-10	2
	00.	Shop Set, Armament AVIM 5911163, Straps, Cables, and Door Modification Parts.....	C-14	3

00.	Shop Set, Armament &VIM 5911163, Degreaser and Cabinet Mounting Parts.....	C-18	4
00.	Shop Set, Armament AVIM 5911163 and		
04.	Frame Assembly, ECU Stowing 12011669 and		
	0401 Strap, Webbing 12011671 .....	C-22	5
00.	Shop Set, Armament AVIM 5911163, Table Modification Parts for RH and LH Tables .....	C-24	6
00.	Shop Set, Armament AVIM 5911163 and		
14.	File, Work Organizer 7551094.....	C-26	7
00.	Shop Set, Armament AVIM 5911163 and		
11.	Curtain Assembly 7551091, End Curtain and		
12.	Curtain Assembly 7551092, Side Curtain .....	C-28	8
01.	Switchbox and Mounting Bracket 7551735-1, With Toggle Switch.....	C-30	9
02.	Switchbox and Mounting Bracket 7551735-2, Without Toggle Switch .....	C-32	10
03.	Cover Assembly, Blackout, Fan 7551733 .....	C-34	11
05.	Holder Assembly, First Aid Kit 7551436 and		
	0501 Holder Assembly 7551434 and		
	0502 Bracket Assembly 7551435.....	C-36	12
06.	Cable Assembly, Special Purpose, Electrical 12011687 and		
	0601 Connector, Plug, Electrical MS90557C32412S and		
	0602 Connector, Plug 12011688 and		
	0603 Cable Assembly 12011638.....	C-38	13



			Page	Illus Figure
Group	09.	Harness Assembly, Wiring 7551097-1, Switchbox to Distribution Panel and 0901 Wire Assembly 12011690-1 .....	C-42	14
	10.	Harness Assembly, Wiring 7551097-3, Switch to Distribution Ceiling Outlets .....	C-46	15
	13.	Airhose Assembly 7551086 .....	C-46	16
	15.	Cable Assembly, Power, Electrical 72289-100 and 1501 Connector, Plug, Electrical MS90557C32412S, Female and 1502 Connector, Plug, Electrical MS90556C32412P, Male .....	C-48	17
	9999.	Bulk Issue ..... 	C-53	
Section	III.	Special Tools List .....	C-56	18
	IV.	National Stock Number and Part Number Index .....	C-58	
APPENDIX	D	EXPENDABLE SUPPLIES AND MATERIALS LIST		
	Section I.	Introduction .....	D-1	
	Section II.	<u>Expendable Supplies and Materials List</u> .....	D-1	
APPENDIX	E.	<span style="border: 1px solid black; padding: 2px;">ILLUSTRATED LIST OF MANUFACTURED ITEMS</span> .....	E-1	
		ALPHABETICAL INDEX .....	Index 1	

**HOW TO USE THIS MANUAL****MANUAL OVERVIEW**

This manual contains maintenance procedures for the armament repair shop set, including instructions for authorized fabrication of components. Illustrations are provided for the maintenance procedures.

**GENERAL**

- a. All references in this manual are to pages or to another publication.
- b. The designation of left and right is determined by looking inside from the cargo door.
- c. Whenever the male gender is mentioned (i.e., crewman, repairman) in the manual, it also pertains to females.

**INDEXES**

This manual is organized to quickly find the information needed. There are several useful indexes.

- a. Front Cover Index. Is a tabbed index of major functions and appendixes. Keyed to tabbed pages in the manual.
- b. Table of Contents. Lists in order all chapters, sections, and appendixes. Gives page references.
- c. Nomenclature Cross -Reference and List of Abbreviations.

(1) Nomenclature Cross -Reference. Gives an alphabetical list of common names and official nomenclature used in the manual.

(2) List of Abbreviations. Is an alphabetical list of uncommon abbreviations used in the manual.

d. Chapter Indexes. At the beginning of each chapter. List paragraphs in alphabetical order. Reference pages.

e. Symptom Index. Located just before the trouble-shooting table in maintenance chapter 3. Lists in alphabetical order parts of the shop set with possible malfunctions. References pages of the troubleshooting table.

f. Alphabetical Index. Located at the end of the manual. An extensive subject index for everything in the manual. Gives page references.

**MAINTENANCE PROCEDURES**

a. General. The maintenance instructions begin with a summary procedure, followed by detailed procedures for each maintenance task.

b. Summary Procedure. Made up of two parts-- initial setup and list of tasks. Used only when doing maintenance on the entire shop set. (For maintenance of an individual assembly, use the detailed procedures for each maintenance task.)

**MAINTENANCE PROCEDURES (cont.)**

(1) Initial Setup. Is a list of everything needed in order to do the maintenance task:

Test Equipment--Lists all test equipment required to perform the maintenance procedures.

Special Tools--Lists tools needed to perform the maintenance tasks.

Materials/Parts--Lists expendable materials and 100% replaceable parts. Each material or part is followed by a part number. If more than one part is needed, the quantity needed precedes the part number.

Personnel Required--Lists the number of personnel needed and what they will be doing.

References--Lists other publications, appendixes, and maintenance procedures containing necessary information.

Troubleshooting References--Lists malfunctions which can be corrected by following the maintenance procedure.

Equipment Conditions--Lists conditions to be met before starting the procedure. The reference on the left of the condition is a page reference to instructions for setting up the condition. At the end of each condition is a reference to the maintenance procedure to which the condition applies.

(2) List of Tasks. Summarizes in outline form the major tasks involved in the procedure. Gives page references to troubleshooting table and detailed procedures.

c. Detailed Procedures. Contain an initial setup plus step-by-step procedures.

(1) Initial Setup. Gives a list of everything needed in order to perform maintenance on each part of the shop set. See explanation of initial setup above. The only difference in an initial setup for a detailed procedure is that there is no reference under equipment conditions to a maintenance paragraph.

(2) Step -By -Step Procedures. Are illustrated procedures for maintenance authorized in the MAC, appendix B. For replacement of parts, refer to appendix C. Also included in chapter 3 are procedures for:

(a) Service upon receipt of the equipment--page 3-2.

(b) Troubleshooting--page 3-5.

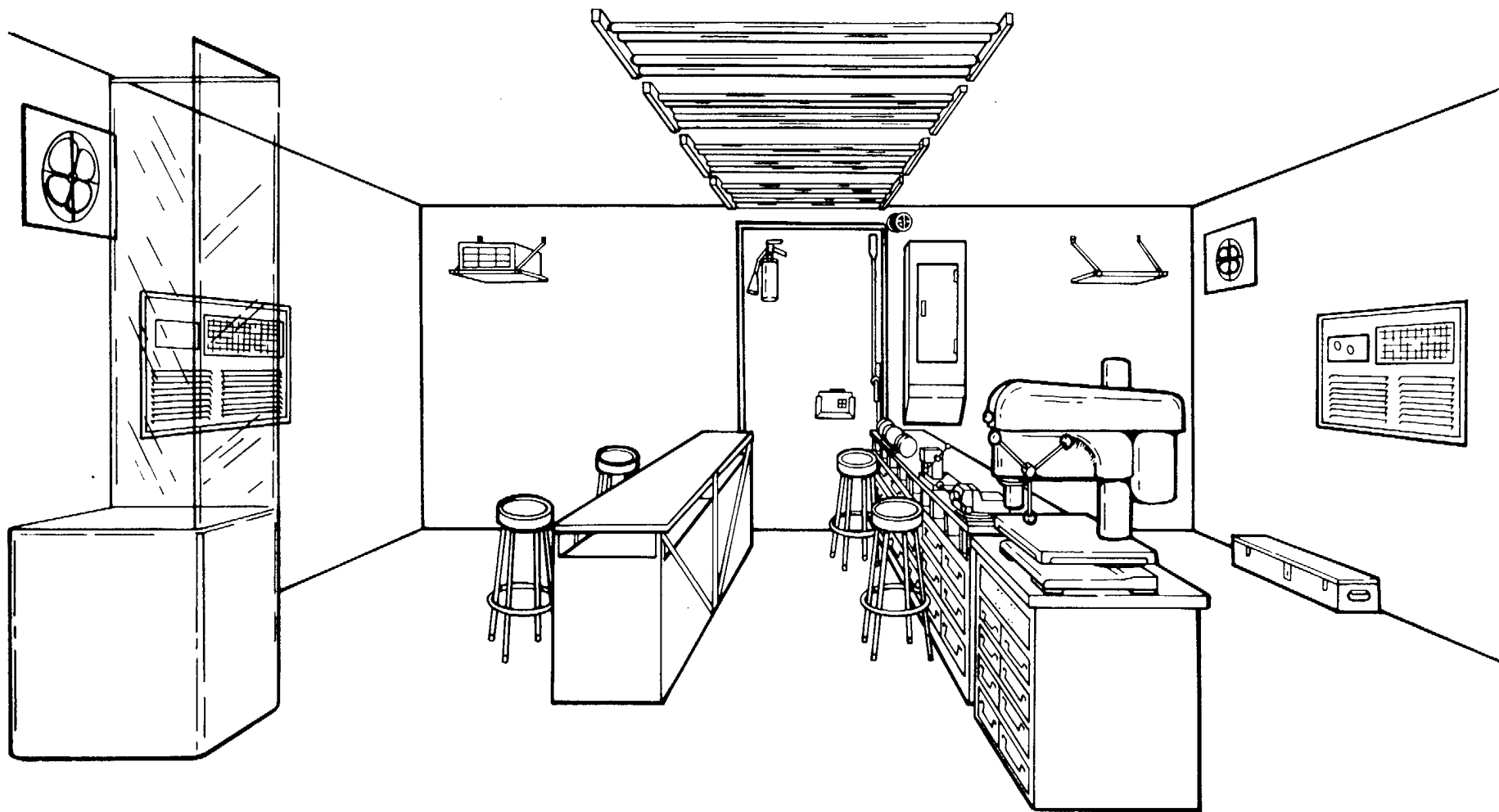
**REPAIR PARTS AND SPECIAL TOOLS LIST**

a. Repair Parts and Special Tools. Designed for operator's and aviation intermediate maintenance and are listed in appendix C.

b. Parts List. Is composed of functional groups, and follows MAC order. Parts in each group are listed in figure and item number sequence.

c. Illustrations. Illustrations and item numbers with repair parts authorized for operator's and aviation intermediate maintenance are in this manual.

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*SHOP SET, AVIM, (DIV) ARMAMENT REPAIR, AIR MOMILE, SHELTER-MOUNTED*

**CHAPTER 1  
INTRODUCTION**

**CHAPTER INDEX**

	Page
Destruction of Army Materiel to Prevent Enemy Use	1-1
Differences Between Models .....	1-9
Equipment Characteristics, Capabilities, and Features .....	1-4
Equipment Data .....	1-10
List of Abbreviations.....	1-3
Location and Description of Major Components.....	1-4

	Page
Maintenance Forms, Records, and Reports.....	1-1
Nomenclature Cross -Reference .....	1-1
Operable Equipment.....	1-12
Preparation for Storage or Shipment.....	1-1
Reporting Equipment Improvement Recommendations (EIR) ..	1-4
Safety, Care, and Handling .....	1-11
Scope .....	1-1

**Section I. GENERAL INFORMATION**

**1-1. SCOPE**

- a. Type of Manual: Operator's and aviation inter-mediate maintenance.
- b. Equipment Name and Part Number: Shelter, shop set, aviation intermediate maintenance, (DIV) armament repair, air mobile, shelter-mounted, part number 5911163.
- c. Purpose-of Equipment: Portable facility (shelter with tools and shop equipment) for maintenance of armament equipment in aviation intermediate maintenance units.

**1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS**

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System (TAMMS).

**1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE**

Refer to TM 750-244-3 and TM 750-244-1-4 for procedures concerning destruction of this materiel.

**1-4 . PREPARATION FOR STORAGE OR SHIPMENTI**

The shop set should be placed in the stowed condition (p 2-20) prior to storage or shipment.

**1-5. NOMENCLATURE CROSS-REFERENCE**

Common Name	Official Nomenclature
Airhose .....	Airhose assembly, nonmetallic
Armament repair shop set .....	Shelter, shop set, aviation intermediate maintenance, (DIV) armament repair, air mobile, shelter-mounted

**1-5. NOMENCLATURE CROSS-REFERENCE (cont)**

Common Name	Official Nomenclature
AVIM sheet metal shop set....	Airmobile sheet metal aviation intermediate maintenance shop set
AVIM tool crib shop set .....	Airmobile tool crib aviation intermediate maintenance shop set
AVIM welding shop set....	Airmobile welding aviation intermediate maintenance shop set
Basic aircraft armament repair tool set....	Basic MOS45J aircraft armament repairman tool set
Black semigloss lacquer..	Lacquer, black, semigloss
Blackout switch .....	Switch, toggle
Blind insert.....	Insert, screw thread
Brace .....	Brace, table, short
Bracket .....	Bracket, shelf
Bulkhead adapter .....	Coupling, pipe
Cable .....	Cable, power, electrical
Cable adapter assembly....	Cable assembly, special purpose, electrical
Cable assembly.....	Cable and conduit assembly, electrical
Clamp .....	Clamp, loop
Conduit .....	Conduit, metal, rigid
Conduit box.....	Conduit outlet
Connector .....	Box connector, electrical
Contact pin (A, B, and C) .....	Pin, contact
Contact pin (G).....	Pin, contact
Contact pin (N).....	Pin, contact
Cover.....	Cover, conduit outlet
Dust cover.....	Cover and guard, electrical
Dust cover.....	Cover and guard, electrical connector
Elbow.....	Elbow, pipe
End clip.....	Clip, end, strap

Common Name	Official Nomenclature
End curtain .....	Plastic sheet
End curtain assembly.....	Curtain assembly
Fan blackout cover ....	Cover assembly, blackout fan
Female connector.....	Connector, plug, electrical
Female coupling assembly.....	Coupling half, quick disconnect (female)
File .....	Cabinet, mail, work organizer
First aid kit holder assembly.....	Holder, first aid kit
Fitting .....	Box connector, electrical
Flexible conduit.....	Conduit, metal, flexible
Forward connector housing.....	Connector, housing, forward
Frame.....	Frame, ECU stowing
Frame.....	Frame, table, base
Frame assembly .....	Frame assembly, ECU stowing
Gland.....	Packing nut, stuffing tube
Gland nut.....	Gland, cable sealing, class L
Gloves .....	Glove, cloth
Grip .....	Grip, cable, woven
Ground socket .....	Socket, contact, ground
Harness assembly.....	Wiring harness, branched
Hose .....	Hose, nonmetallic
Inner cover .....	Cover, blackout fan, inner
Insulation .....	Insulation sleeving, electrical
Light cover.....	Globe, electric light
Long brace.....	Brace, table, long, LH
Long brace.....	Brace, table, long, RH
Loop .....	Loop, strap fastener
Lubricating oil .....	Lubricating oil, semifluid
Male connector .....	Connector, plug, electrical
Male coupling assembly.....	Coupling half, quick disconnect (male)
Miscellaneous spare accessories .....	Accessories, package

Common Name	Official Nomenclature
Mounting bracket.....	Bracket, angle
120/208V Cable assembly .....	Cable assembly, power, electrical
Outer cover .....	Cover, blackout fan, outer
Pad .....	Pad, cushioning
Pin socket .....	Socket, pin, insert
Plastic plug .....	Plug, protective, dust and moisture
Plug connector .....	Connector, plug, electrical
Portable degreaser caution plate .....	Plate, instruction
Portable degreaser mounting frame .....	Frame, degreaser, mounting
Pulling elbow.....	Elbow, electrical conduit
Quick-disconnect female coupling assembly .....	Coupling half, quick disconnect (female)
Quick-disconnect male coupling assembly .....	Coupling half, quick disconnect (male)
Rear connector housing .....	Connector, housing, rear
Receptacle.....	Receptacle, grounding, duplex
Receptacle box .....	Conduit outlet
Removal tool no. 4.....	Connector electrical contact removal tool
Removal tool no. 6.....	Connector electrical contact removal tool
Shelves.....	Shelf, file, work organizer
Short brace .....	Brace, table, short
Side curtain.....	Plastic sheet
Side curtain assembly .....	Curtain assembly
Slide .....	Buckle
Socket (A, B, C, and N).....	Socket, contact
Socket insert .....	Socket, insert
Solder .....	Solder, tin alloy
Sorting file.....	File, work organizer
Spacer .....	Gland, cable sealing, class L

Common Name	Official Nomenclature
Spacer .....	Spacer, gland
Spacer .....	Spacer, plate
Spacer .....	Spacer, sleeve
Storage cabinet mounting frame.....	Frame, cabinet, mounting
Strap.....	Strap, tiedown, electrical components
Strap.....	Webbing, textile
Stud.....	Stud, continuous thread
Supplemental aircraft armament repair tool set.....	Supplemental MOS45J aircraft armament repairman tool set
Support.....	Brace, table, support
Switchbox .....	Conduit outlet
Switchbox and mounting bracket .....	Switchbox and bracket assembly
"T" conduit box .....	Conduit outlet
Tag.....	Tag, instruction
Tape .....	Tape, insulation, electrical
Tiedown strap .....	Strap, tiedown, electrical components
Tiedown strap .....	Strap, webbing
Wall shelving .....	Shelving, panel
Warning plate .....	Plate, instruction
Wire.....	Lead, electrical, black
Wire.....	Wire assembly, electrical
Wire.....	Wire, electrical
Wire rope.....	Lead, electrical

**1-6 LIST OF ABBREVIATIONS**

AVIM .....	Aviation Intermediate Maintenance
DIV .....	Division
ECU.....	Environmental Control Unit
Hz.....	Hertz
RPSTL.....	Repair Parts and Special Tools List
SPAM.....	Shop, Portable, Aircraft Maintenance
TMDTest.....	Measurement, and Diagnostic Equipment



**1-7. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)**

If your shop set 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 your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mail

it to us at Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAO, Rock Island, IL 61299. A reply will be furnished to you.

**Section II. EQUIPMENT DESCRIPTION AND DATA**

**1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES**

a. Characteristics. The armament repair shop set provides a portable, air-transportable facility for repair of aviation armament components.

b. Capabilities and Features.

(1) The shop set is transported with equipment in stowed positions and shelter in folded condition.

(2) A set of hand tools is furnished with the shop set. Refer to SC 4933-95-CL-A21 for a complete listing of items in the set.

(3) The shelter is modified to provide additional electrical outlets.

(4) The shop set is equipped with door switches which automatically turn off interior lights when the doors are opened during blackout conditions. Blackout covers are also provided for the ventilation fans.

(5) An external power source (not furnished with shop set) supplies 120/208-volt, 3-phase, 60-Hz electrical power to the shop set.

(6) A set of miscellaneous spare parts is furnished with the shop set; refer to appendix C, section II.

**1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS**

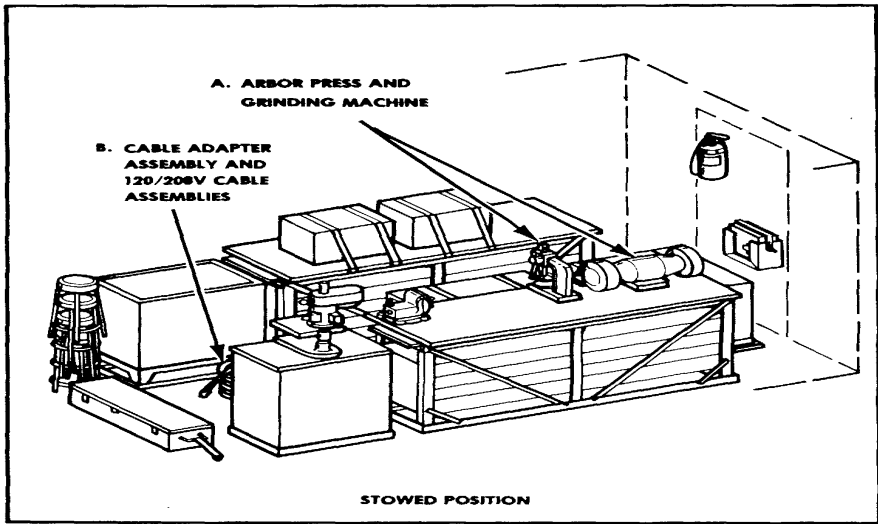
**NOTE**

**The left and right table references mean the two tables seen while standing in the cargo doorway and looking into the shop set at that entrance.**

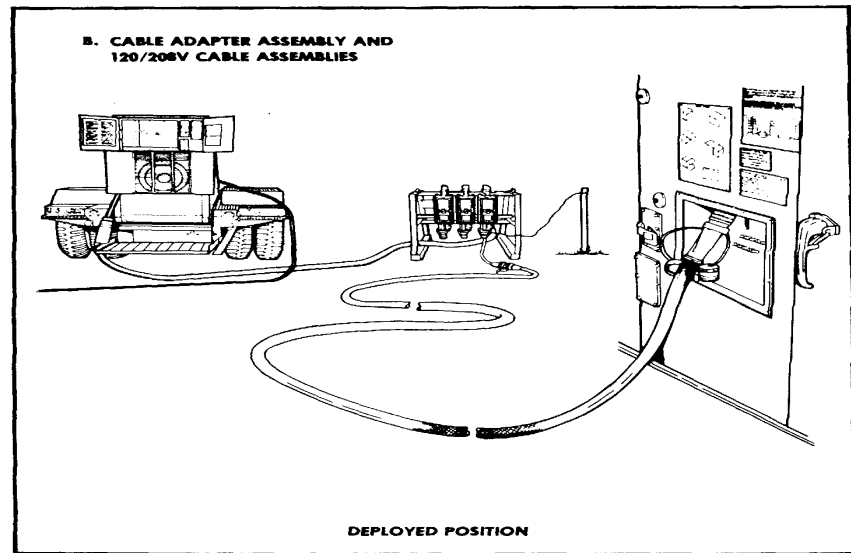
**The ends of the shop set are referred to as the personnel door and cargo door ends.**

**The left and right sides of the shop set are those seen while standing in the cargo doorway and looking into the shop set at that entrance.**

This applies throughout chapter 1.

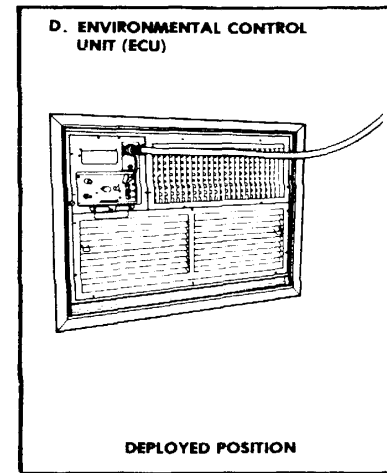
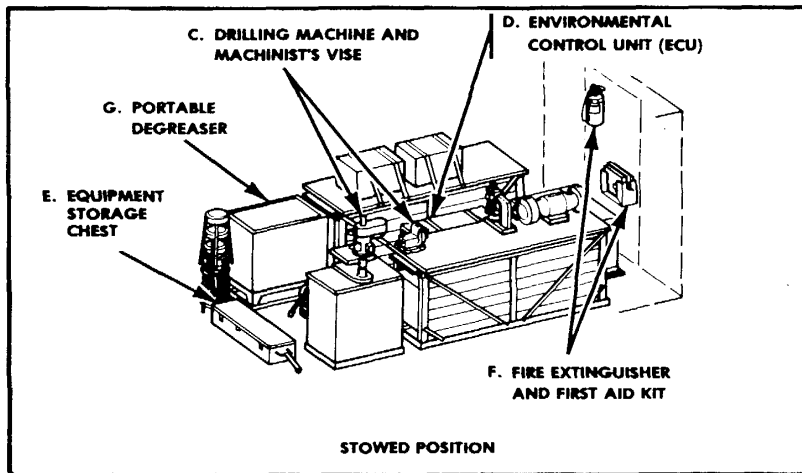
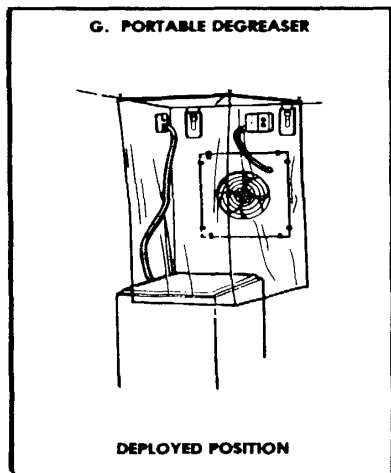


a. Arbor Press and Grinding Machine. The arbor press and grinding machine are permanently attached to the right table. This equipment is used to perform many standard machine shop practices. The arbor press is hand-operated; the grinding machine is motor driven.



b. Cable Adapter Assembly and 120/208V Cable Assemblies. A cable adapter assembly and two 120/208V cable assemblies are furnished to connect the shop set to the power source. The cable adapter assembly is connected to the power distribution panel. Then the 120/208V cable assemblies are connected between the cable adapter assembly and the power input panel on the exterior of the shelter. During stowed conditions, the cable adapter assembly and 120/208V cable assemblies are coiled and strapped to the floor between the ECU and the cargo door.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)



c. Drilling Machine and Machinist's Vise. The drilling machine is permanently attached to the top of the storage cabinet and machinist's vise is permanently attached to the cargo door end of right table. The motor-driven drilling machine is used to drill holes; the machinist's vise is used to hold objects.

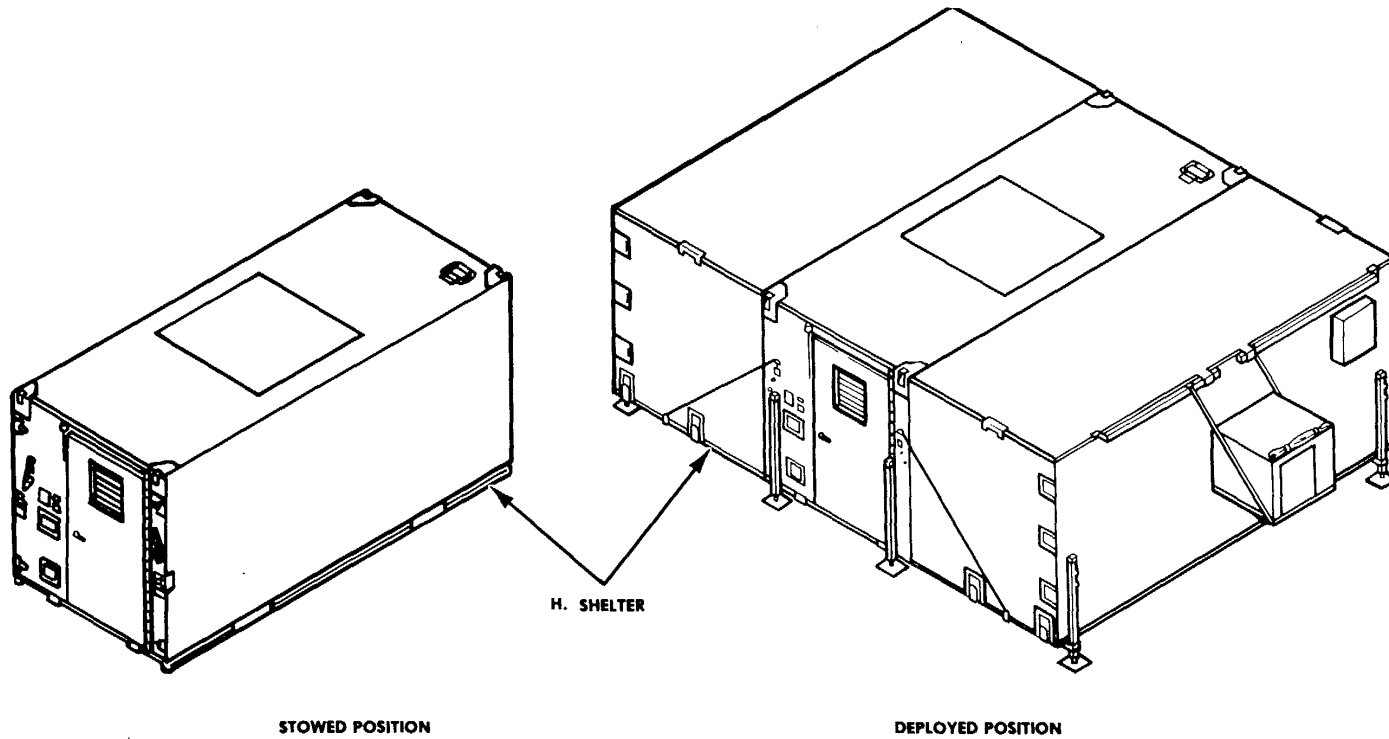
d. Environmental Control Unit (ECU) There are two ECU's which, when stowed, are held in two frame assemblies with straps. The two frame assemblies are bolted to the floor between the two tables. When in operation, the two ECU's are mounted in the walls of the shelter; and the frame assemblies are removed from the floor and stowed. When in operation, the ECU's maintain the temperature and humidity inside the shelter at desired levels.

e. Equipment Storage Chest. The equipment storage

chest (furnished with shelter) is used to store miscellaneous equipment. The equipment storage chest sits on the shelter floor. During stowed conditions it is secured to the floor, just inside the cargo door, with straps and tiedown rings.

f. Fire Extinguisher and First Aid Kit. The fire extinguisher and first aid kit are mounted on the inside of the personnel door.

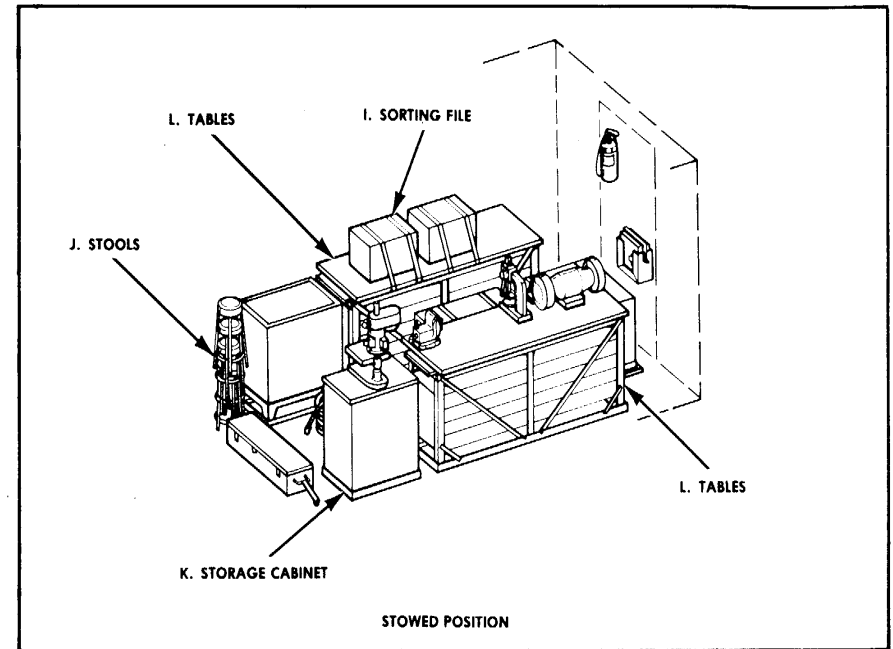
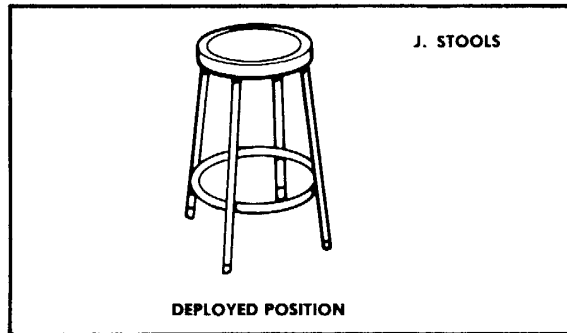
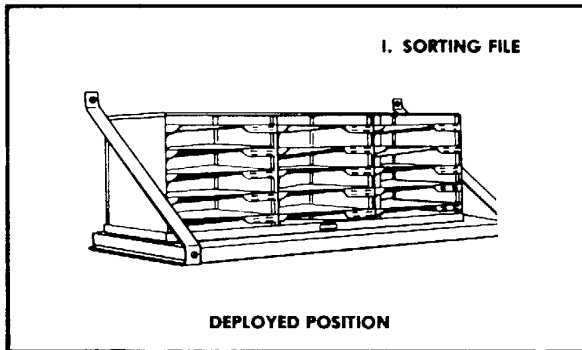
g. Portable Degreaser. The portable degreaser uses a chemical solvent to remove grease and oil from metal parts. When the shop set is in the stowed condition, the portable degreaser is secured to the frame on the floor at the cargo door end of the left table. When in use, the portable degreaser is moved to a curtained area adjacent to the ventilation fan at left side of set.



h. Shelter. The shelter is a SPAM unit modified for the shop set. The shelter end sections are foldable to make the shelter smaller for transporting. The shelter is deployed to full size prior to operation of the shop set. The shelter walls are designed

to allow mounting of two ventilation fans and two ECU's. The shelter has two doors: the cargo door on one side and the personnel door on the opposite side. For further information see TM 10-5410-224-14

**1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)**

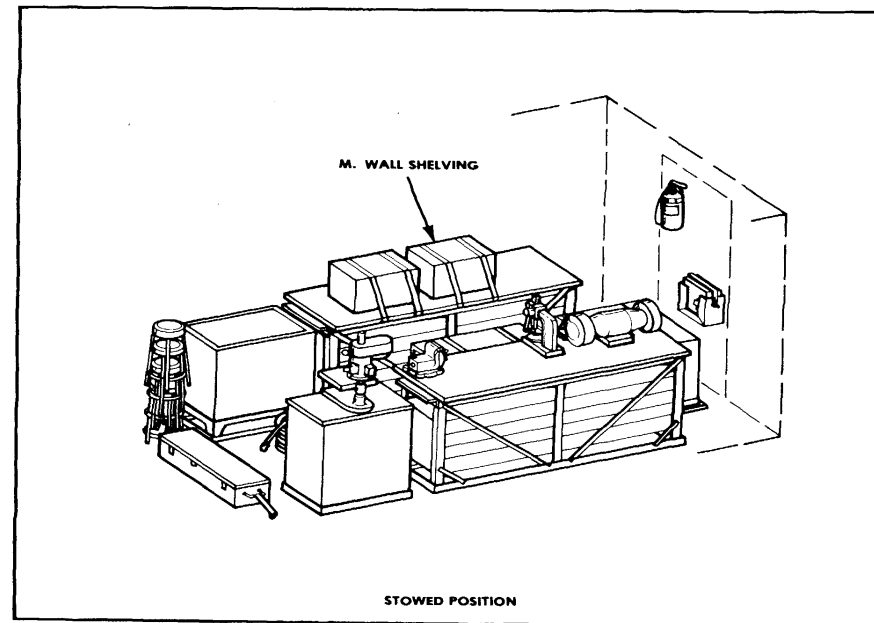
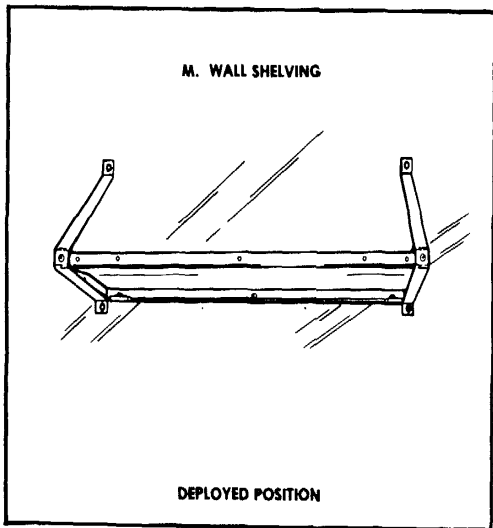


i. Sorting File. The sorting file is a horizontal-type file used to hold manuals and other publications. During stowed conditions, it is strapped to the cargo door end of the left table; during operation, it is placed on a wall shelf.

j. Stools. Four stools are provided for personnel use. When stowed, the stools are stacked and strapped to the floor between the portable degreaser and the cargo door.

k. Storage Cabinet. The storage cabinet is permanently mounted in a frame to the shelter floor at the cargo door end of the right table. The storage cabinet is used to house hand tools and other small pieces of equipment.

l. Tables. Two tables (right and left) are strengthened by the addition of braces. They are then mounted in frames and the table-frame combination secured to the floor. Each table has drawer space for tools and a top surface for working and mounting of other equipment.



m. Wall Shelving. There are four wall shelves, each supported by two brackets. During operation of the shop set, the brackets and wall shelves are secured to the foldout wall panels of the shelter. When the shop set is in the stowed condition, the brackets and wall shelves are strapped to the personnel door end top of the left table.

**1-10. DIFFERENCES BETWEEN MODELS**

There is only one model of the armament repair shop set. This shop set is similar to, but should not be confused with, the fire control repair shop set described in TM 9-4931-374-13&P

**1-11. EQUIPMENT DATA**

Identification Plate ..... Located on personnel panel door  
 Contains:  
 Equipment nomenclature .....  
 Type and designation number  
 Manufacturer's part number,  
 name, and code Contract  
 number Serial number  
 National stock number

Erection Sequence Instruction  
 Plate ..... Located on personnel panel door.  
 Contains sequence and  
 instructions for erection of the  
 expandable shelter.

Exterior Dimensions (Stowed Shelter): ..... Dimension  
 Width ..... 8 ft (2.44 m)  
 Height ..... 7 ft, 11 in. (2.41 m)  
 Length ..... 13 ft, 4 in. (4.06 m)

Exterior Dimensions (Deployed Shelter): ..... Dimension  
 Width ..... 22 ft, 3 in. (6.78 m)  
 Height ..... 7 ft, 11 in. (2.41 m)  
 Length ..... 13 ft, 4 in. (4.06 m)

Interior Dimensions: ..... Dimension  
 Minimum clear height ..... 6 ft, 9 in. (2.06 m)  
 Minimum clear width (stowed mode) ..... 6 ft, 6 in. (1.98 m)

Total Weights: ..... Weight  
 Less payload ..... 4200 lb (1905 kg)  
 With payload (maximum) ..... 7000 lb (3175 kg)

Primary Power Requirements ..... 120/208 Vac, 60 Hz, 3 phase, 5 wire

Environmental Limits:		Limit
Operating temperature .....		-25° F to +125° F (-31.7° C to 51.7° C)
Maximum outer skin temperature		+200° F (93.3° C)
Transportability (Stowed Shelter):	Method	
Air .....		By aircraft, using 463L or MH5.1-1970 cargo handling system, or suspended from a helicopter.
Water .....		By any suitable water vessel.
Rail .....		On a standard railway car as used in the continental United States, in accordance with methods and standards in the loading rules of the Association of American Railroads.
Land .		By truck, flat bed trailer,
forklift or dolly set.		

**1-12. SAFETY, CARE, AND HANDLING**

- a. Specific cautions and warnings are included in this manual for safety purposes. Before performing any maintenance task, be sure all cautions and warnings are understood.
- b. Do not move the shop set without putting it in the stowed condition per page 2-20.
- c. Refer to TM 10-5410-224-14 for proper procedures

for air-lifting the shop set or transporting it by other means.

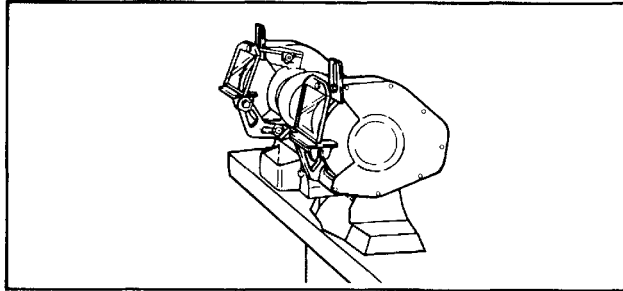
- d. Specific warnings and cautions are contained in the manuals issued with the operable equipment. Before performing any maintenance task or operating the equipment, be sure all warnings and cautions are understood.



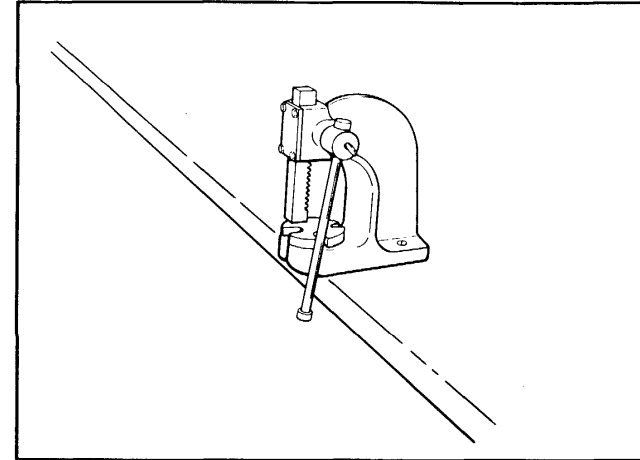
## Section III. PRINCIPLES OF OPERATION

**1-13. OPERABLE EQUIPMENT**

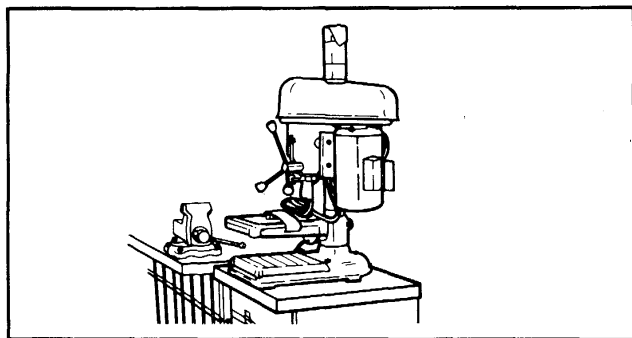
The operable equipment is mounted either on the two tables or shelter floor. This equipment is mainly shop-type equipment used for maintenance or repair of other components.



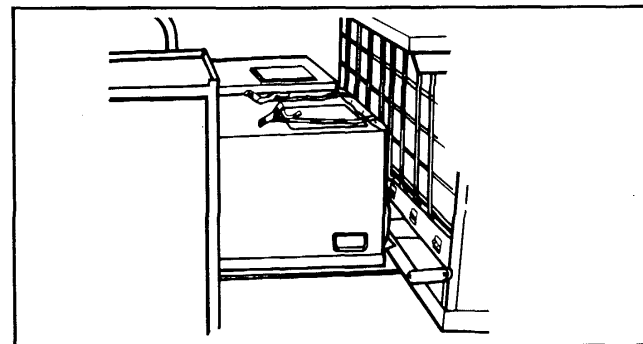
- A GRINDING MACHINE is mounted on right table; it contains a rotating grinding wheel which removes material from parts pressed against the wheel.



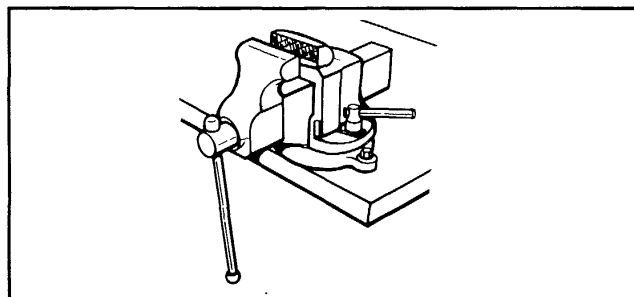
- B ARBOR PRESS is mounted on right table; it has an upper head which can be lowered to exert a large force against a part resting on the lower portion of the press. The arbor press is used for mounting bearings in housings, gears on shafts, and similar operations.



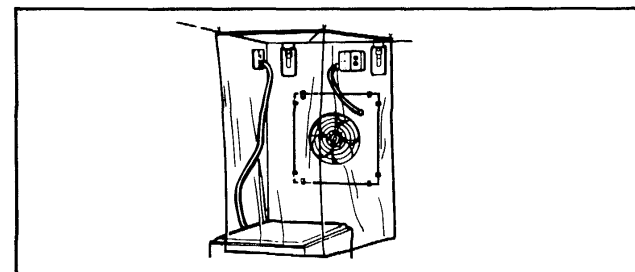
C DRILLING MACHINE is mounted on the storage cabinet. The drilling machine has an upper head which contains replaceable, motor-driven drill. A part is positioned on the base of the drilling machine and the upper head with rotating drill is lowered to make a hole in the part.



E ENVIRONMENTAL CONTROL UNIT (ECU) is stowed on the shelter floor but placed in shelter wall when in use. The two ECU's maintain the temperature and humidity inside the shop set at desired levels.



D MACHINIST'S VISE is mounted on the right table; it has two jaws which can be adjusted to grip objects which are being worked on.



F PORTABLE DEGREASER is stowed next to left table but operated in a curtained area adjacent to ventilation fan to the left side of shop set. The portable degreaser uses a chemical solvent in a tank to remove grease and oil from parts.

**CHAPTER 2  
OPERATING INSTRUCTIONS**

**CHAPTER INDEX**

	Page		Page
Assembly and Preparation for Use .....	2-8	PMCS Procedures .....	2-1
General.....	2-1	Preparation for Movement .....	2-20
Introduction .....	2-8		
Operating Instructions on Decals and Instruction Plates .....	2-32		

**Section I. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)**

**2-1. GENERAL**

a. Before you operate, always keep in mind the cautions and warnings of this manual and the manuals for the shelter and other items of equipment of this shop set which have separate manuals. Perform your before (B) PMCS.

b. While you operate, always keep in mind the cautions and warnings listed in this manual and the manuals for the shelter and other items of equipment of this shop set which have separate maintenance instructions. Perform your during (D) PMCS.

c. After you operate, be sure to perform your after (A) PMCS listed in this manual and the manuals for the shelter and other items of equipment of the shop set which have separate maintenance instructions.

d. Every week, be sure to perform your weekly (W) PMCS listed in this manual and the manuals for the shelter and other items of equipment of the shop set which have separate maintenance instructions.

**2-2. PMCS PROCEDURES**

The table below lists the required checks to be performed by personnel who operate the shop set. The first column contains the item number which shall be used as a source of item numbers for the TM number column on DA Form 2404; the second column contains the PMCS interval; the third column lists the item to be inspected; the fourth column contains the inspection procedures; and the fifth column contains conditions under which the shop set is to be reported not ready.

**2-2. PMCS PROCEDURES (cont)**

Preventive Maintenance Checks and Services

**NOTE**

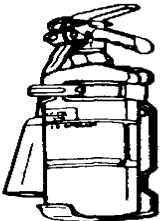
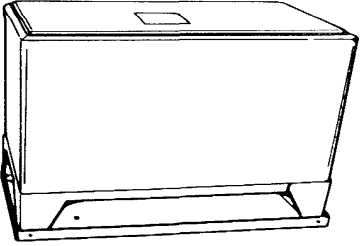
Within designated interval, these checks are to be performed in the order listed.

B-Before

D-During

A-After

W-Weekly

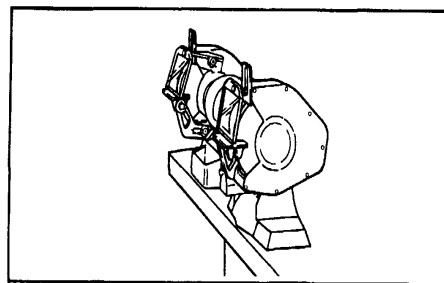
ITEM NO.	INTERVAL				Item to be Inspected	Procedures Check for and have Repaired or Adjusted as Necessary	For Readiness Reporting Equipment will be Reported Not Ready/Available if:
	B	D	A	W			
1	•				Fire Extinguisher	 <p>Check for missing seal and secure mounting.</p> 	

2

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- 
- 

Portable Degreaser

Check for required ventilation if filled with solvent. Ensure that tank is drained if stowed away from ventilation fan.

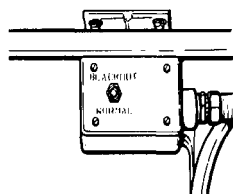


3

- 
- 
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Grinding Machine

Check that guard is in place and grinding wheels are in good condition. There shall be no noise louder than machine operating. Check that electrical cord is not frayed or torn.



4

- 
- 

Blackout Switch

Check that the lights go out when either door is opened while switch is in BLACKOUT position.

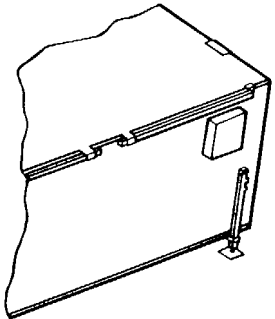
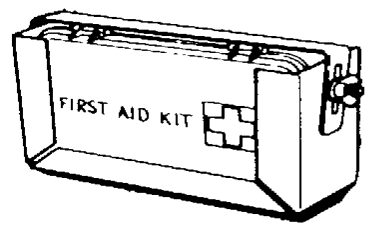
Light stays on in blackout mode.

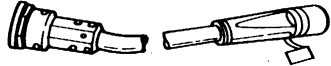
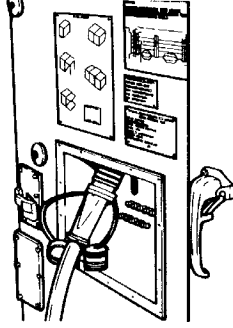
**2-2. PMCS PROCEDURES (cont)**

Preventive Maintenance Checks and Services

**NOTE**

Within designated interval, these checks are to be performed in the order listed.

ITEM NO.	INTERVAL				Item to be Inspected	Procedures Check for and have Repaired or Adjusted as Necessary	For Readiness Reporting Equipment will be Reported Not Ready/Available if:
	B	D	A	W			
5	•	•			Blackout Fan Cover	 <p>During darkness, check that no light is seen around fan while interior lights are on.</p>	Light can be seen through fan housing.
6				•	First Aid Kit	 <p>Check that kit is in place and complete.</p>	

7	•	•		<p>Cable Adapter Assembly</p>	 <p>Check that the 6-in. (15.24-cm) cable with "do not disconnect" tag is in place and that cable adapter assembly is being used according to instructions on warning plate (p 2-33).</p>	<p>Cable adapter assembly is being used incorrectly or is inoperable.</p>
8	•	•		<p>120/208V Cable Assembly</p>	 <p>Check that 120/208V cable assembly is being used according to instructions on the warning plate (p 2-33).</p>	<p>The 120/208V cable assembly is being used incorrectly or is inoperable.</p>



2-2. PMCS PROCEDURES (cont)

Preventive Maintenance Checks and Services (cont)

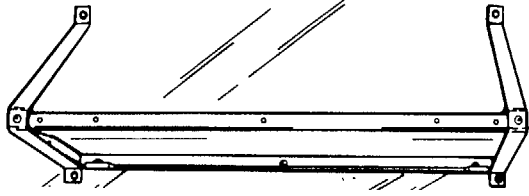
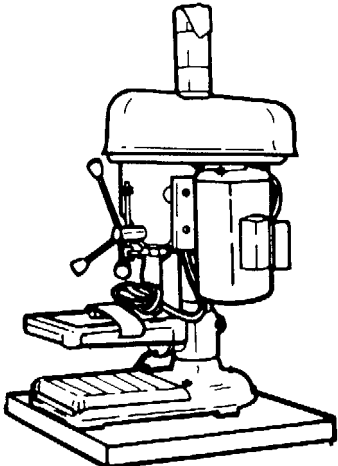
**NOTE**  
 Within designated interval, these checks are to be performed in order listed.

B-Before

D-During

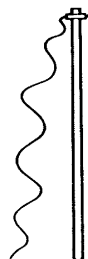
A-After

W-Weekly

Item No.	Interval				Item to be Inspected	Procedures Check for and have Repaired or Adjusted as Necessary	For Readiness Reporting, Equipment will be Reported Not Ready/ Available if:
	B	D	A	W			
9	•	•	•		Wall Shelving   Check that items on wall shelv- ings are in a safe position.  		



10	•			Drilling Machine	Check electrical power card to ensure that it is not frayed or torn and that all safety guards are installed.	
11	•	•	•	Test Equipment	Check for the electrical safety of all test equipment brought into the shop set. Check for proper grounding and that electrical leads are not frayed.	
12	•	•		Grounding Stakes	Check for proper installation and connection to both shelter and cable adapter assembly.	



Section II. OPERATION UNDER USUAL CONDITION

**2-3. INTRODUCTION**

**CAUTION**

Never attempt to move or lift the shop set without first putting it in the stowed condition.

**NOTE**

The left and right table references mean the two tables seen while standing in the cargo doorway and looking into the shop set at that entrance.

The ends of the shop set are referred to as the personnel door and cargo door ends.

The left and right sides of the shop set are those seen while standing in the cargo doorway and looking into the shop set at that entrance.

This applies throughout chapter 2.

a. This chapter gives information and procedures for preparing the armament repair shop set for operation (assembly and preparation for use) and putting the shop set in the stowed condition (p 2-20, preparation for movement).

b. Procedures for lifting the shelter, leveling the shelter, installing/removing ventilation fans and ECU's, deployment of foldout panels, and other operations are contained in TM 10-5410-224-14. Become familiar with these procedures before operating.

c. Detailed operating instructions for hand tools, shop equipment, electrical power source, and other TM 9-4933-223-13&P components furnished with the shop set, or used with it, are contained in manufacturer's instructions or other TM's.

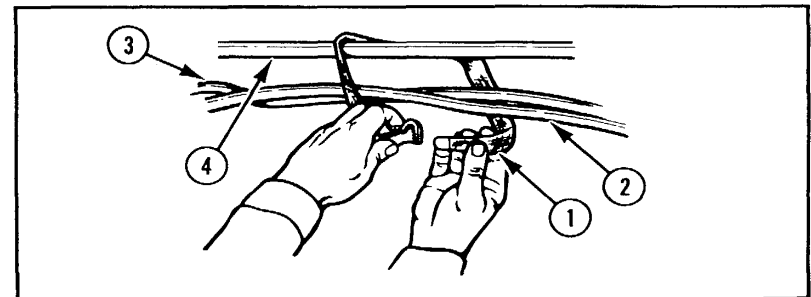
d. For removal/installation instructions and operating instructions for ventilation fans, refer to TM 10-5410-224-14.

e. For removal/installation instructions for ECU's, refer to TM 10-5410-224-14; for operating procedures, refer to TM 5-4120-243-14.

2-4. ASSEMBLY AND PREPARATION FOR USE

**NOTE**

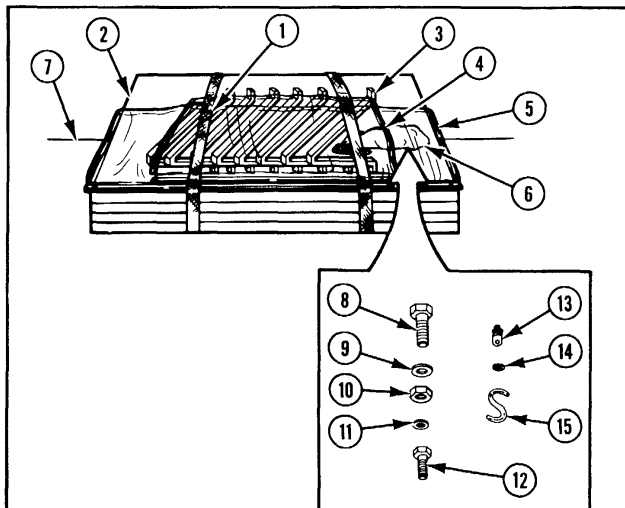
When removing tie down and mounting hardware, ensure all items are stored in the storage chest as they will be used again.



a. Deployment of Shelter.

(1) Remove strap (1) holding coiled electrical cable (2) and air conditioning cable (3) to conduit (4) on wall above personnel door

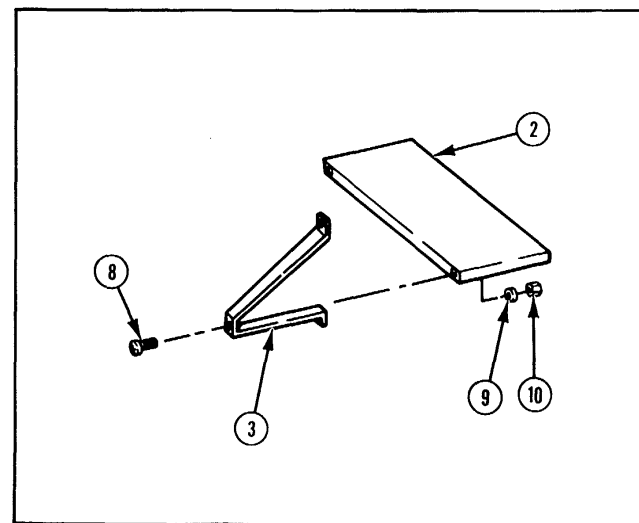
- (2) shelter and deploy foldout panels per TM 10-5410-224-14.
- (3) Remove ventilation fans from ceiling and install in shelter walls per TM 10-5410-22414.
- (4) Refer to TM 10-5410-224-14 and perform any other operations necessary for complete deployment of the shelter.
- (5) Store all mounting hardware in storage chest.



b. Installation of Wall Shelving and Curtain Assemblies.

- (1) Remove two straps (1) that are holding four wall shelves (2), eight brackets (3), curtain assemblies (4 and 5), and bag (6) to personnel door end of left table (7).

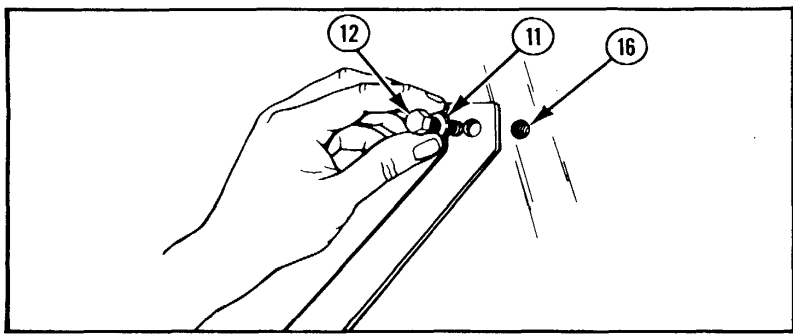
- (2) Remove 8 screws (8), 8 flat washers (9), 8 nuts (10), 16 flat washers (11), 16 screws (12), 3 eye bolts (13), 3 lockwashers (14), and 4 chain hooks (15) from bag (6)



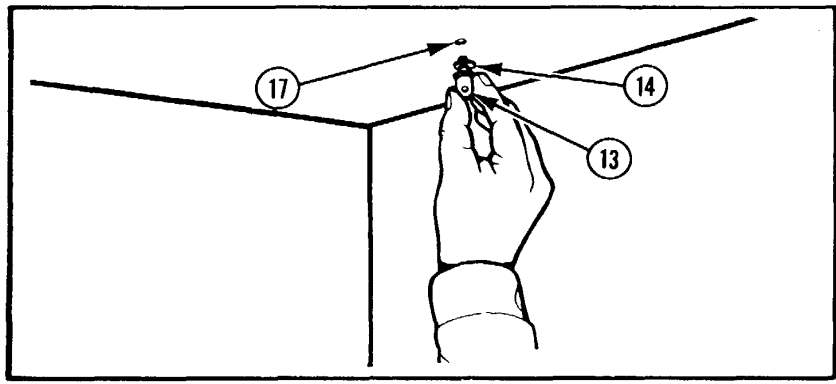
- (3) Install each of the four wall shelvings as follows:

- (a) Attach wall shelves (2) to two brackets (3) using two screws (8), two flat washers (9), and two nuts (10).

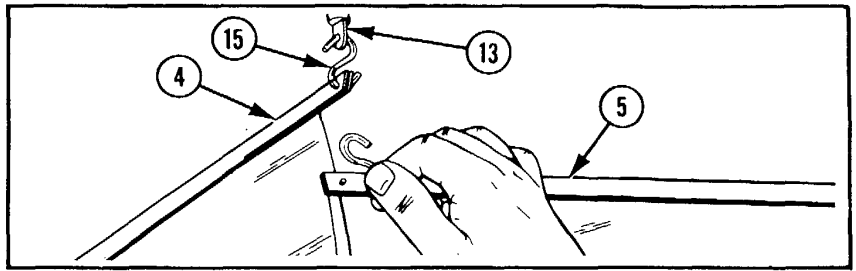
**2-4 ASSEMBLY AND PREPARATION FOR USE (cont)**



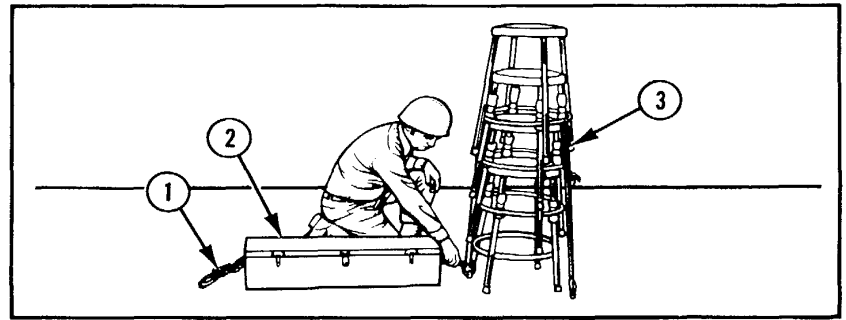
(b) Attach brackets to foldout wall panel by installing four flat washers (11) with four screws (12) into blind inserts (16) in panel.



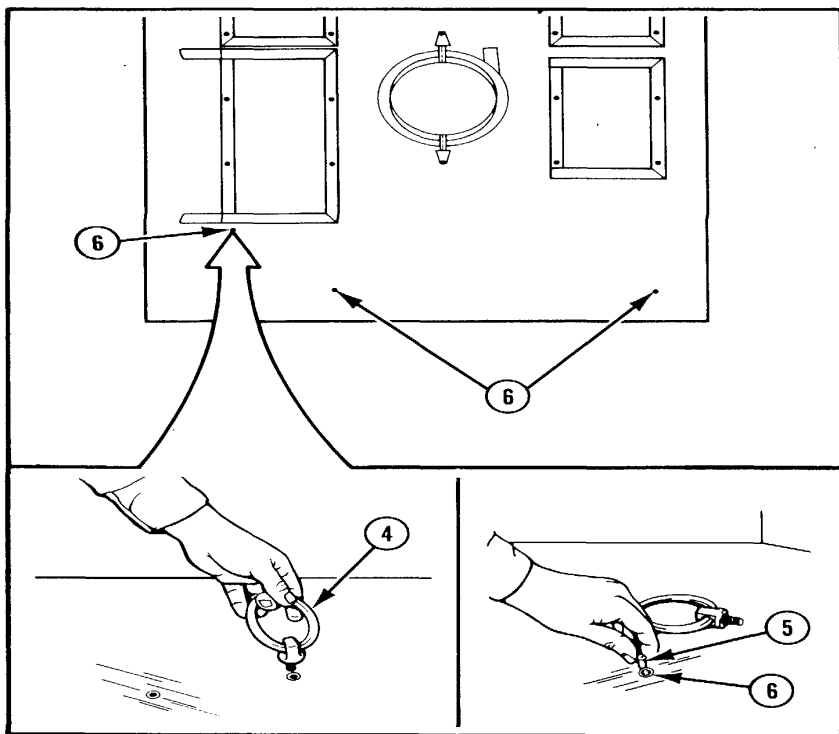
(4) Install three eye bolts (13) with lockwashers (14) into blind inserts (17) located in ceiling near ventilation fan at cargo door end of shop set.



- (5) Install four chain hooks (15) into three eye bolts (13) in ceiling.
- (6) Hang end curtain assembly (4) and side curtain assembly (5) on four chain hooks (15).
- (7) Store all mounting hardware in storage chest.

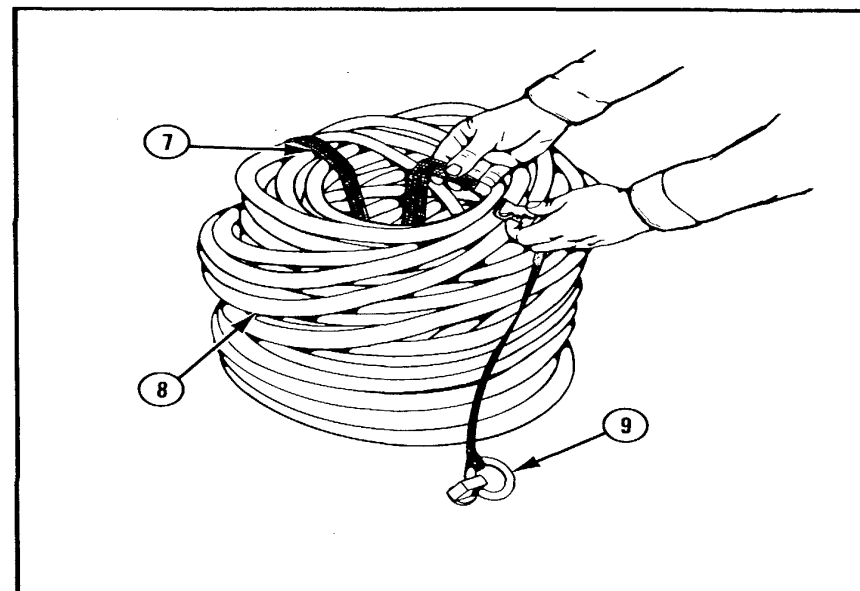


- c. Ready of Equipment Strapped to Floor.
- (1) Remove four straps (1) holding equipment storage chest (2) and four stools (3) in place.



(2) Remove three tiedown rings (4) from shelter floor.

(3) Install three plastic plugs (5) into blind inserts (6) in floor (from which tiedown rings were just removed).



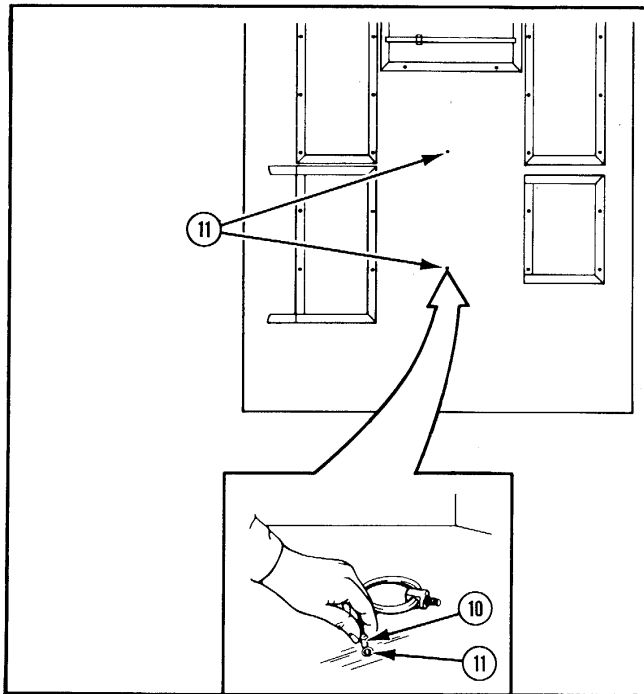
**NOTE**

Coil contains airhose, cable adapter assembly, and two 120/208V cable assemblies.

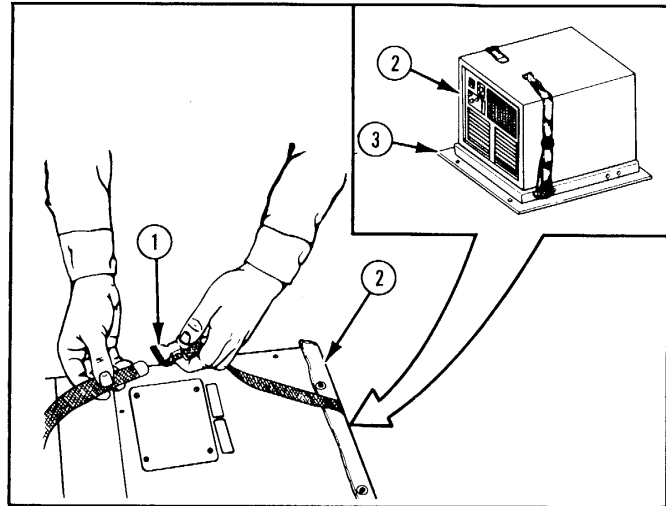
(4) Remove two straps (7) holding coil (8) in place. Place coil outside the shelter.

(5) Remove two tiedown rings (9) from floor.

2-4. ASSEMBLY AND PREPARATION FOR USE (cont)



- (6) Install two plastic plugs (10) into blind inserts (11) in floor (from which tiedown rings were just removed).
- (7) Store all mounting hardware in storage chest.



d. Preparation of Environmental Control Units (ECU) for Operation.

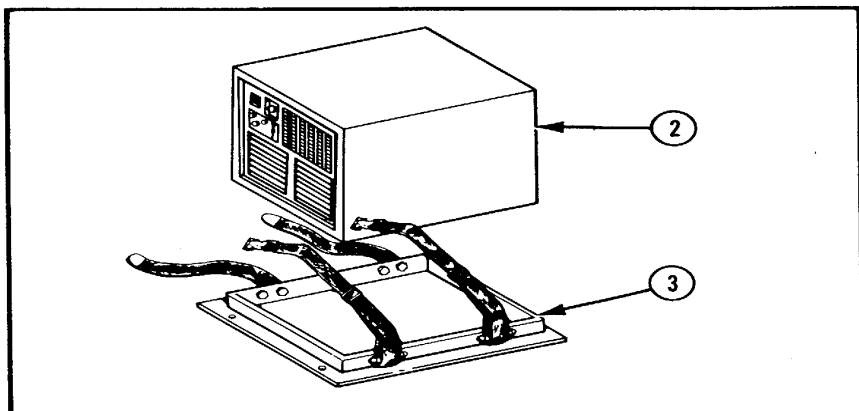
WARNING

A minimum of four personnel is required when moving or lifting the ECU's. (Each weighs approximately 270 lb (122 kg).)

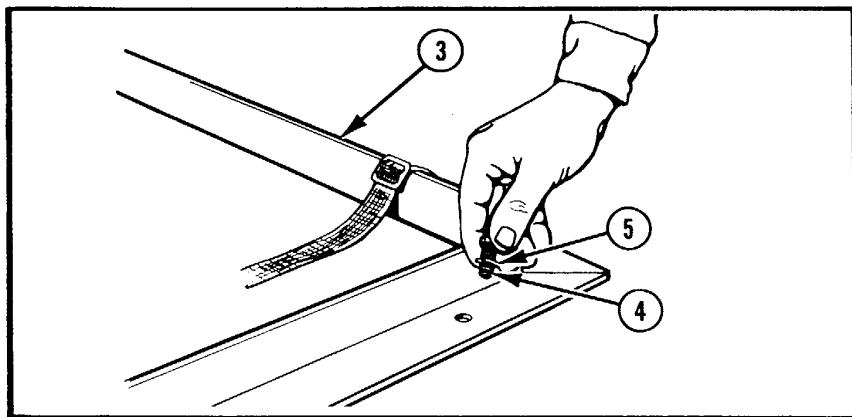
NOTE

There are two ECU's furnished with the shop set. The following instructions pertain to only one ECU.

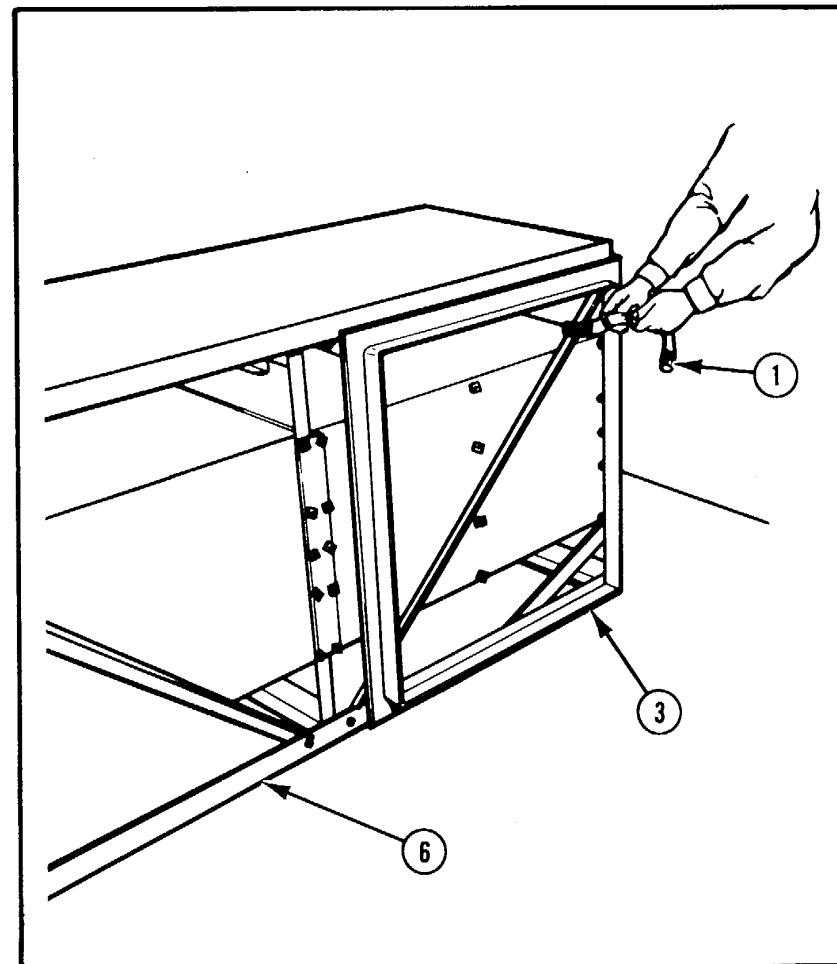
- (1) Remove two straps (1) holding ECU (2) in frame assembly (3)



(2) Lift the ECU (2) out of frame assembly (3) and place temporarily to one side.

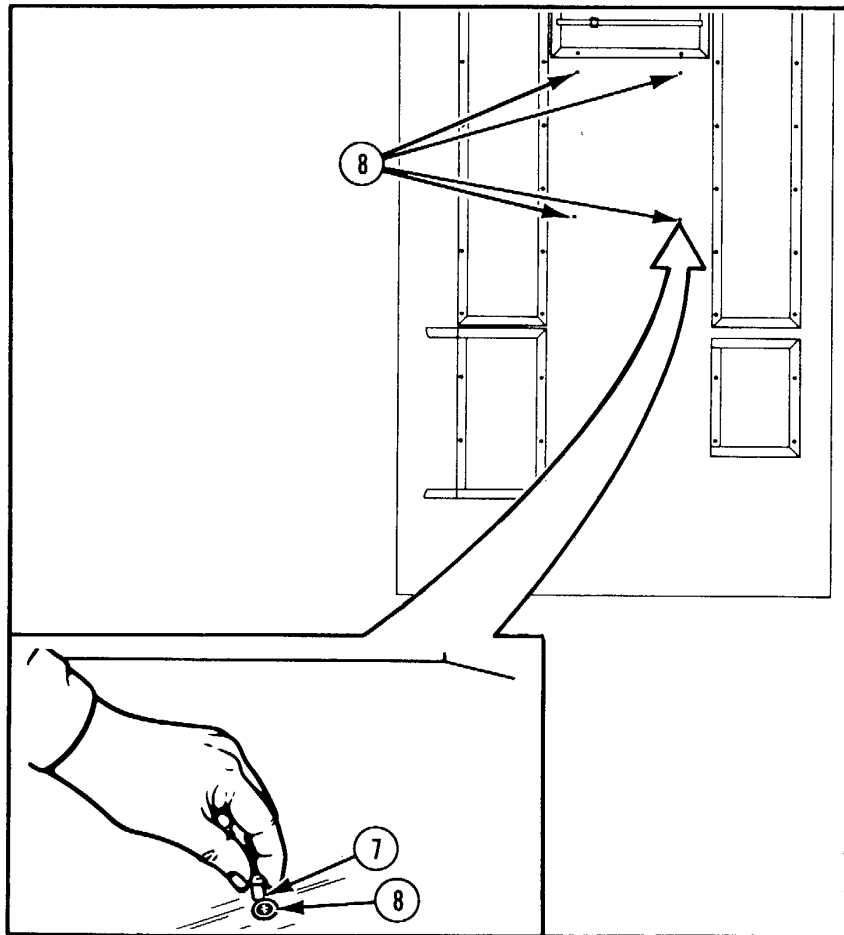


(3) Remove four screws (4) and four lockwashers (5) holding frame assembly (3) to shelter floor.

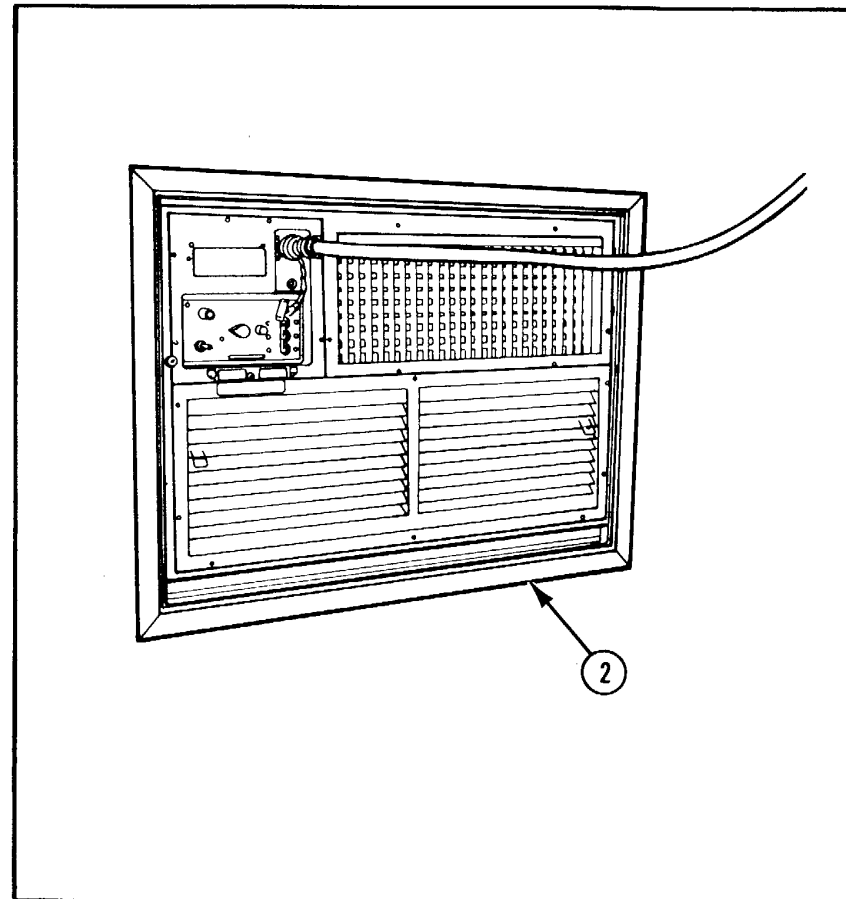


(4) Place frame assembly (3) and mounting hardware on back of the right table (6) and secure in place with two straps (1)

2-4. ASSEMBLY AND PREPARATION FOR USE (cont)



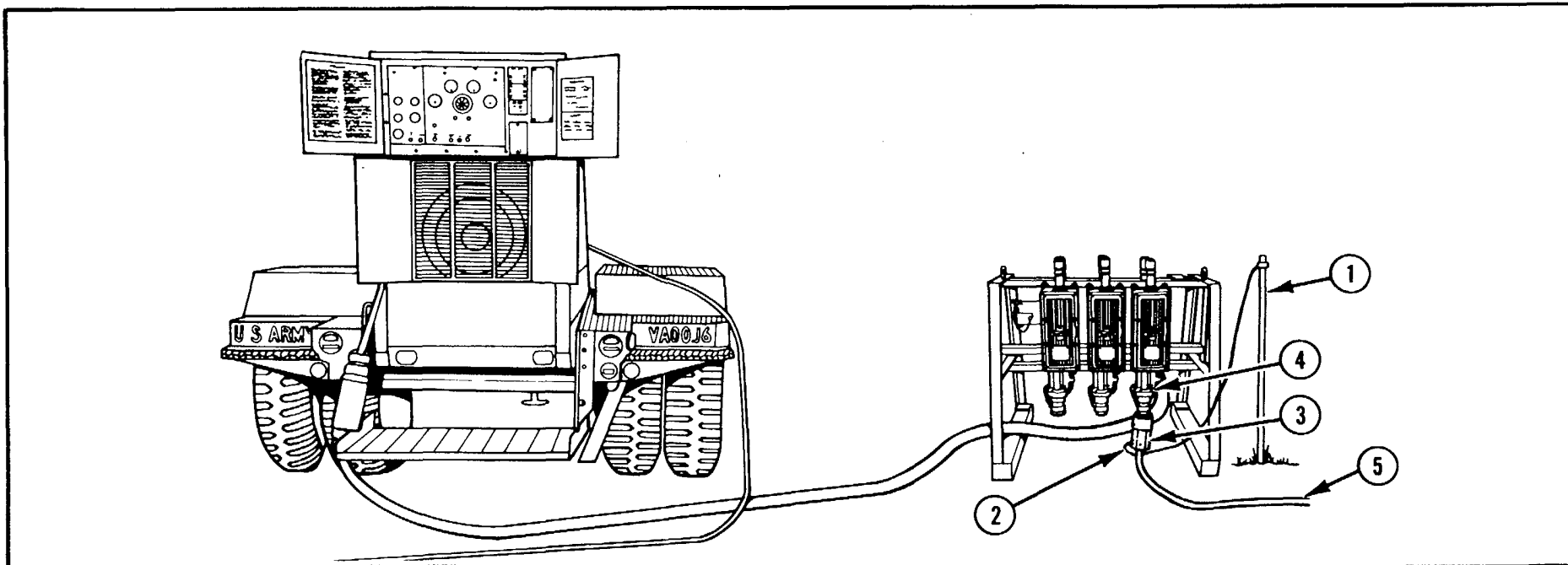
(5) Install four plastic plugs (7) into four blind inserts (8) in shelter floor (from which the four mounting screws were removed).



(6) Install ECII (2) in shelter wall per TM 105410-224-14.

(7) Store all mounting hardware in storage chest.





e. Connection of Shop Set to Power Source.

**WARNING**

The electrical system contains voltages that are dangerous if contacted. Before connecting or disconnecting power cables, ensure circuit breaker on power distribution panel connected to power source is in OFF position.

**CAUTION**

Be sure power source is 120/208-volt, 3phase, 60-Hz.

- (1) Clamp wire of grounding rod (1) to terminal lug (2) of plug connector (3).

- (2) Push grounding rod (1) into the ground near mating connector (4) on power distribution panel.

**NOTE**

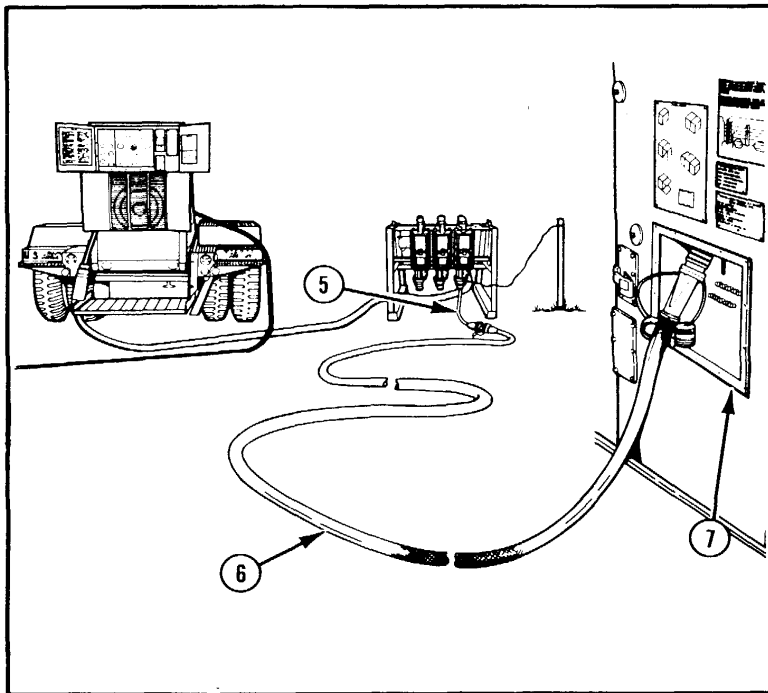
Cable adapter assembly (5) is not needed if power distribution panel is equipped with an MS90555 connector.

- (3) Connect plug connector (3) of cable adapter assembly (5) to mating connector (4) on power distribution panel.

**CAUTION**

Do not remove dust covers from connectors until just prior to assembly with mating connector (4)

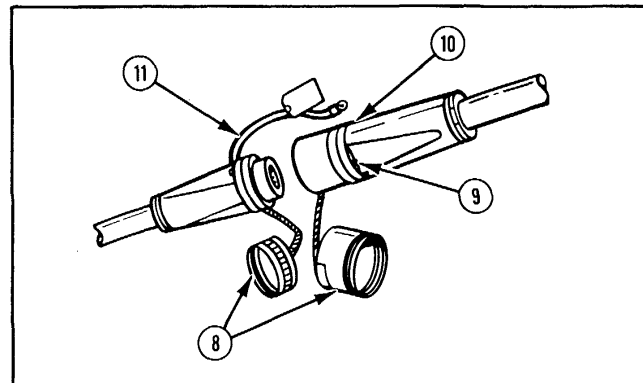
2-4. ASSEMBLY AND PREPARATION FOR USE (cont)



**NOTE**

One or two 120/208V cable assemblies may be used as required.

(4) Lay out two 120/208V cable assemblies (6) between cable adapter assembly (5) and connector J1 of power input panel (7) on the exterior of the shelter (personnel door end).



(5) Remove dust covers (8) from all connectors and join all connectors.

(6) Remove existing screw (9) from male connector (10) of 120/208V cable assembly.

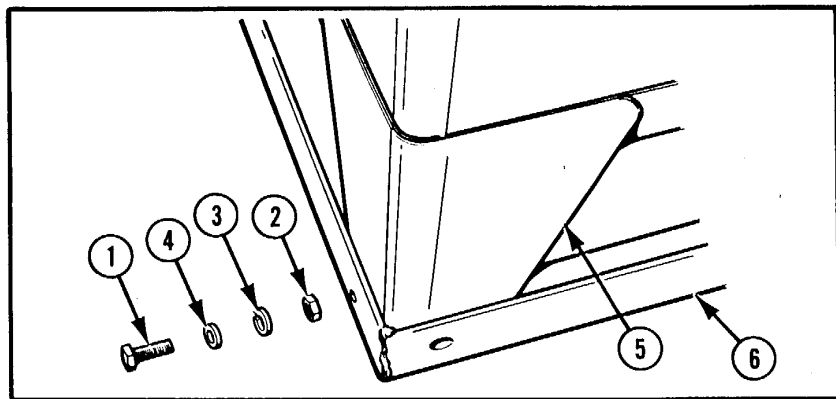
(7) Replace screw (9) using it to attach cable assembly (11) to male connector (10).

(8) Check that all circuit breakers in breaker box to the right of personnel door are in the ON position.

**WARNING**

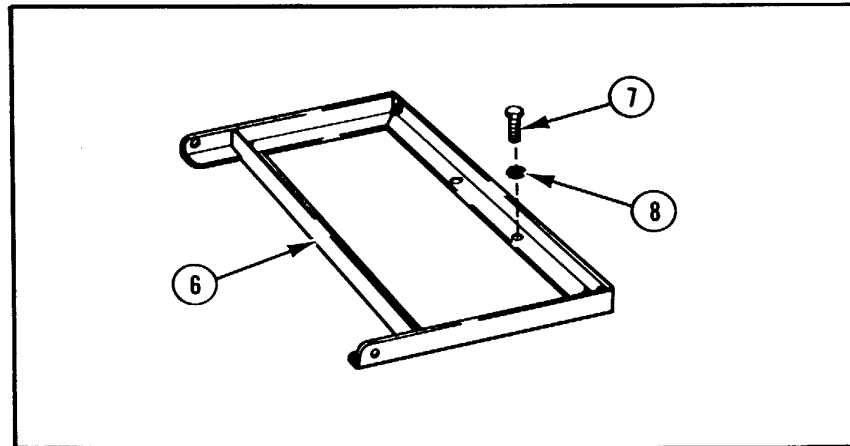
Ensure grounding rod is installed and connected before energizing shop set.

(9) Energize shop set by placing circuit breaker on power distribution panel connected to power source in ON position.

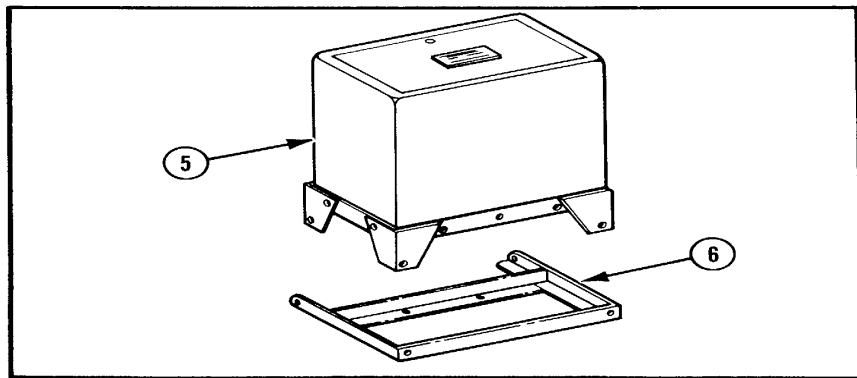


f. Preparation of Portable Degreaser for Operation.

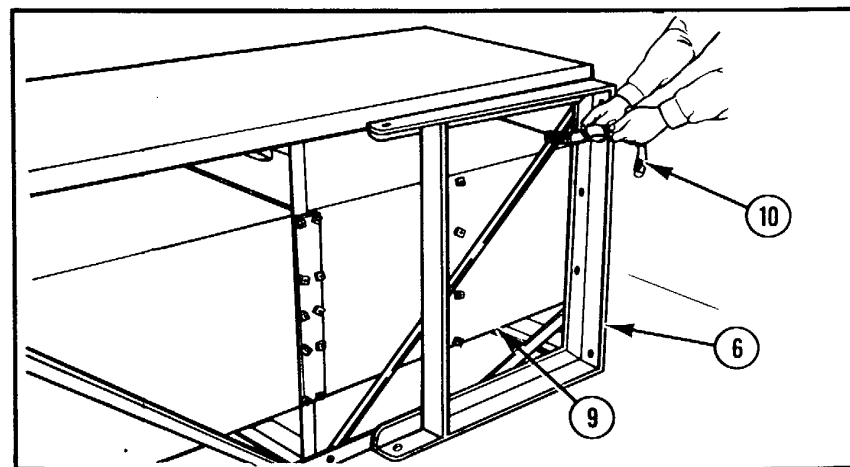
(1) Remove four screws (1), four nuts (2), four lockwashers (3), and four flat washers (4) holding portable degreaser (5) to frame (6).



(3) Remove four screws (7) and four lockwashers (8) holding frame (6) to shelter floor.

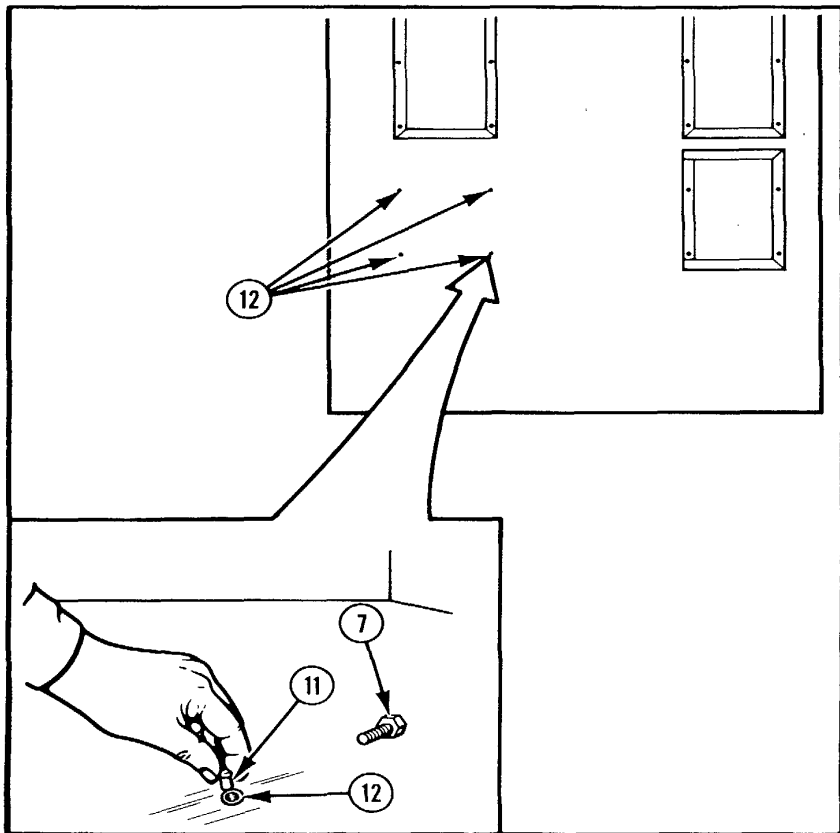


(2) Lift portable degreaser (5) out of frame(6).

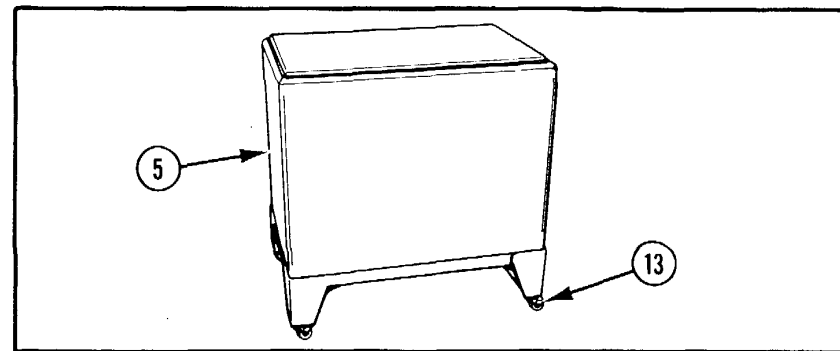


(4) Store frame (6) on back of right table (9) with two straps (10).

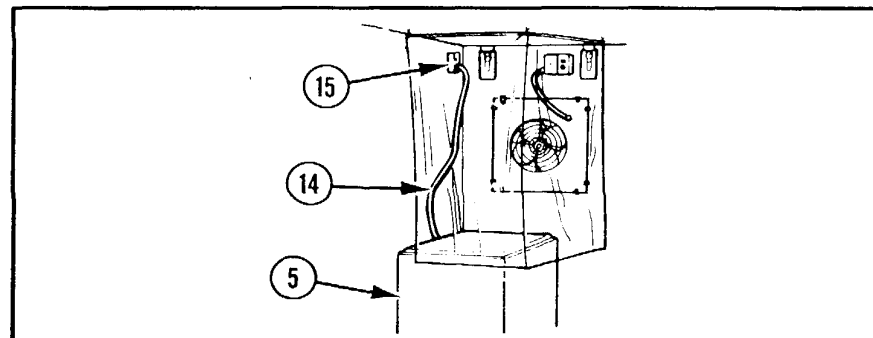
2-4. ASSEMBLY AND PREPARATION FOR USE (cont)



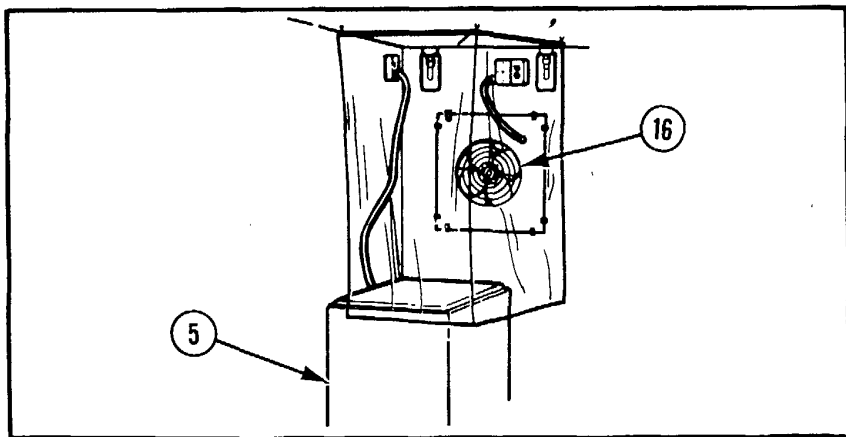
(5) Place four plastic plugs (11) into blind inserts (12) in floor (from which screws (7) were removed).



- (6) Remove four casters (13) from tank of portable degreaser (5).
- (7) Install the four casters (13) on legs of portable degreaser.



- (8) Roll portable degreaser (5) to curtained area adjacent to ventilation fan at left side of shop set.
- (9) Plug power cord (14) of portable degreaser (5) into electrical outlet (15)



**WARNING**

Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact will cause skin irritation, and taking solvent internally will cause vomiting.

(10) Turn on ventilation fan (16).

**CAUTION**

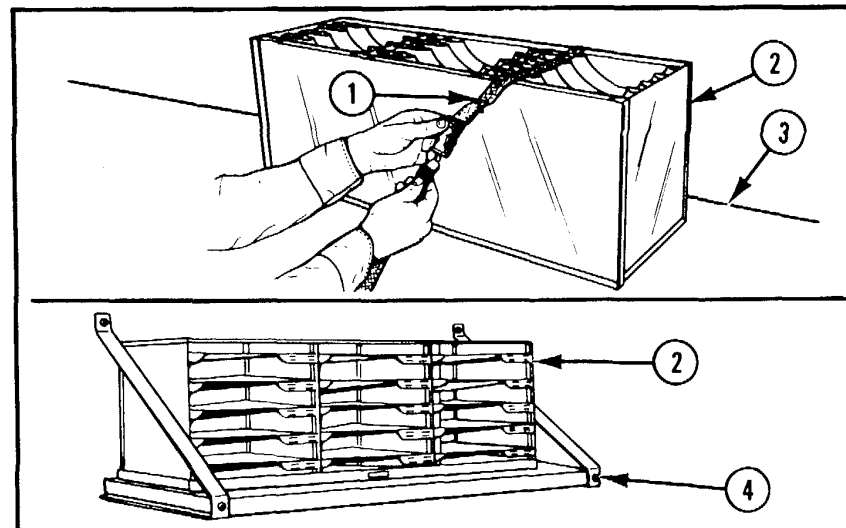
Use only type 1.1.1 trichloroethane solvent.

**NOTE**

Consult manufacturer's instructions on procedures for cleaning of parts in portable degreaser.

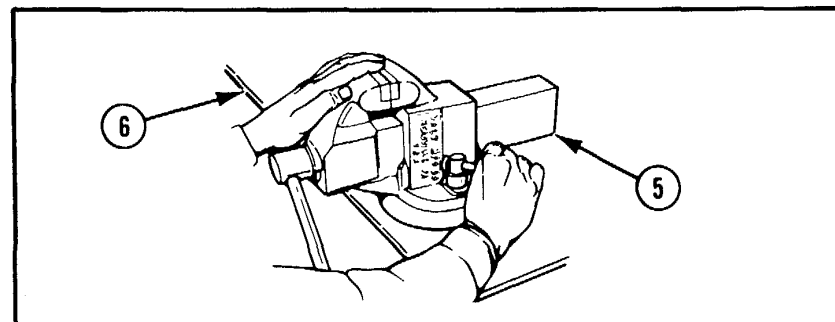
(11) Fill portable degreaser (5) with type 1.1.1 trichloroethane solvent per manufacturer's instructions.

(12) Store all mounting hardware in storage chest.



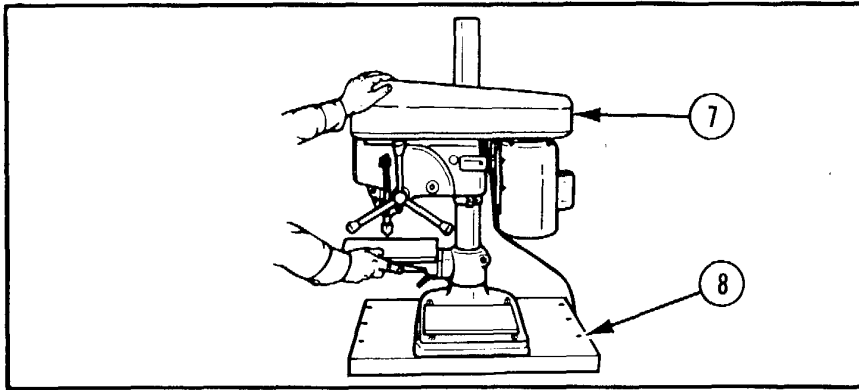
g. Readyng Miscellaneous Equipment.

(1) Remove two straps (1) holding sorting file (2) to the cargo door end of left table (3). Place sorting file on wall shelving (4).

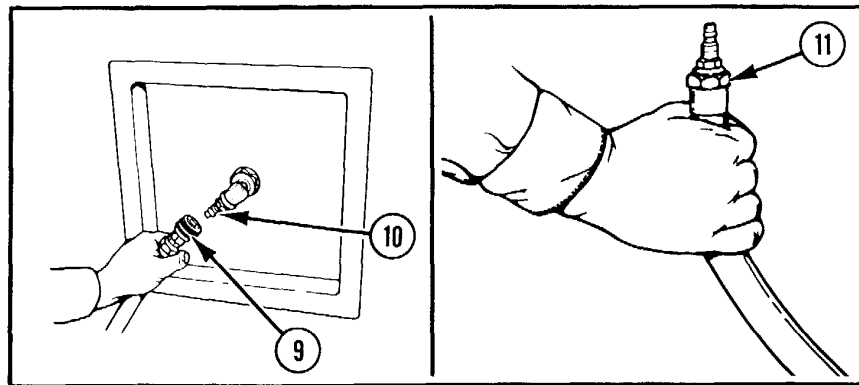


(2) Rotate machinist's vise (5), located on right table (6), 90 degrees counterclockwise to operating position (jaws parallel to table) and tighten.

**2-4 ASSEMBLY AND PREPARATION FOR USE (cont)**

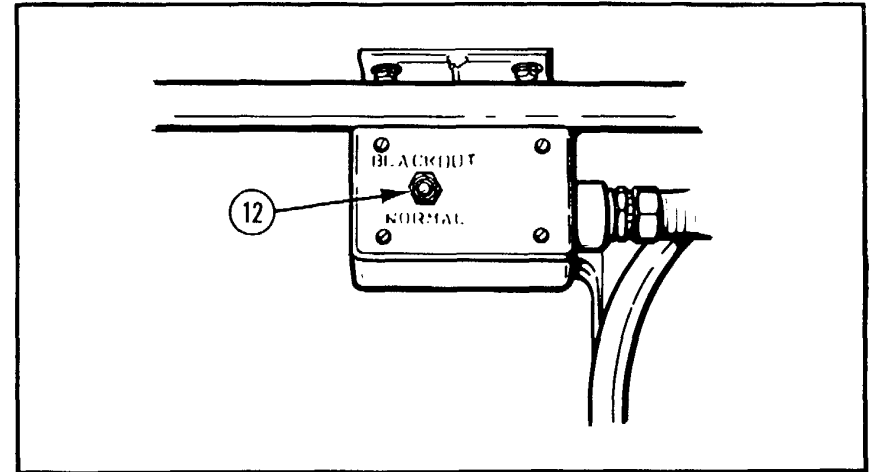


(3) Rotate the head of the drilling machine (7), located on the storage cabinet (8), 90 degrees clockwise to its operating position. Move the head and movable base to operating position and tighten.



(4) Connect quick-disconnect female coupling assembly (9) of airhose to quick-disconnect male coupling assembly (10) on outside shelter wall to the left of the personnel door. Then connect compressed air source to

quick-disconnect male coupling assembly (11) on end of airhose. Compressed air source will be 150 psi (10.55 kg/cm<sup>2</sup>) maximum.

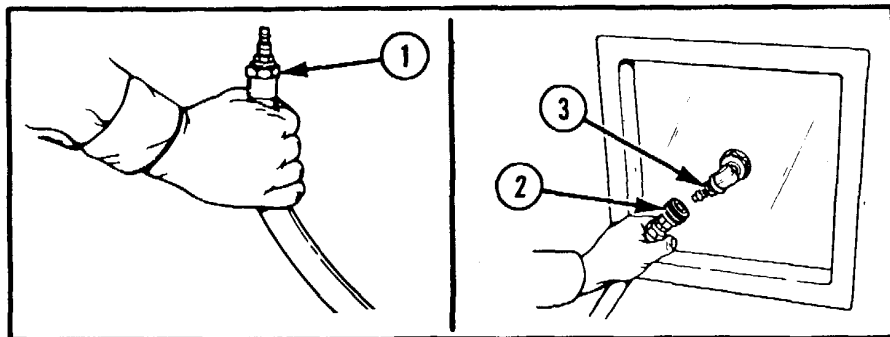


- (5) If blackout conditions exist, turn blackout switch (12) located above personnel door to BLACKOUT position.
- (6) Remove hand tools from storage as required.
- (7) Store all mounting hardware in storage chest.

**2-5. PREPARATION FOR MOVEMENT**

a. Stowing of Miscellaneous Equipment.

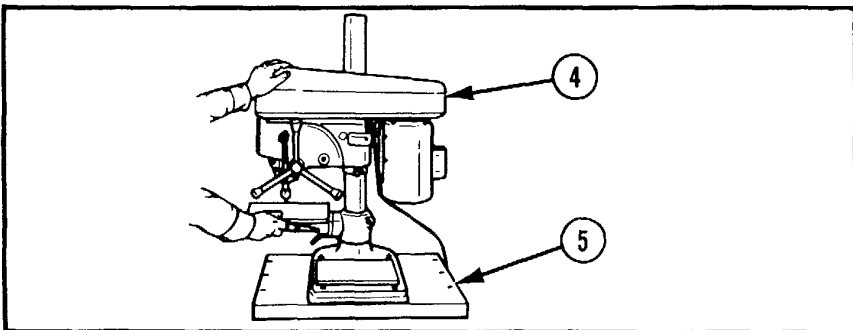
- (1) Store all hand tools in equipment storage chest, tool cabinet, or table drawers.



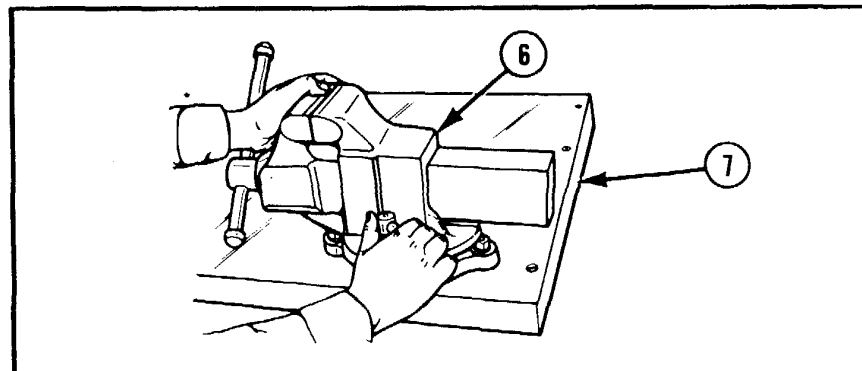
**WARNING**

Injury to personnel may result if pressure is not relieved before beginning any maintenance on airhose.

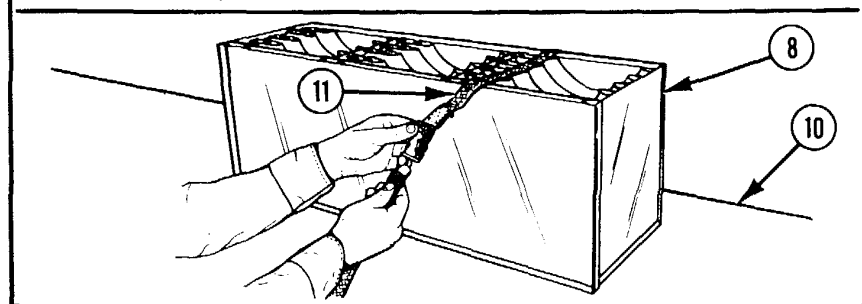
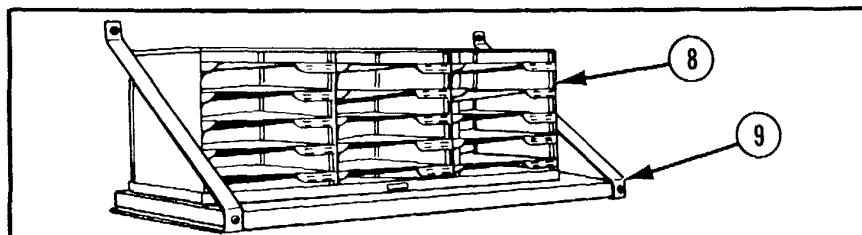
(2) Disconnect compressed air source from quick-disconnect male coupling assembly (1) on end of airhose. Then disconnect quick disconnect female coupling assembly (2) of air hose from quick-disconnect male coupling assembly (3) on exterior shelter wall.



(3) Loosen and lower the head and movable base of the drilling machine (4) on storage cabinet (5) and swing the head and base 90 degrees counterclockwise and tighten.



(4) Rotate machinist's vise (6) located on right table (7) 90 degrees clockwise to stowed position (jaws perpendicular to table) and tighten.



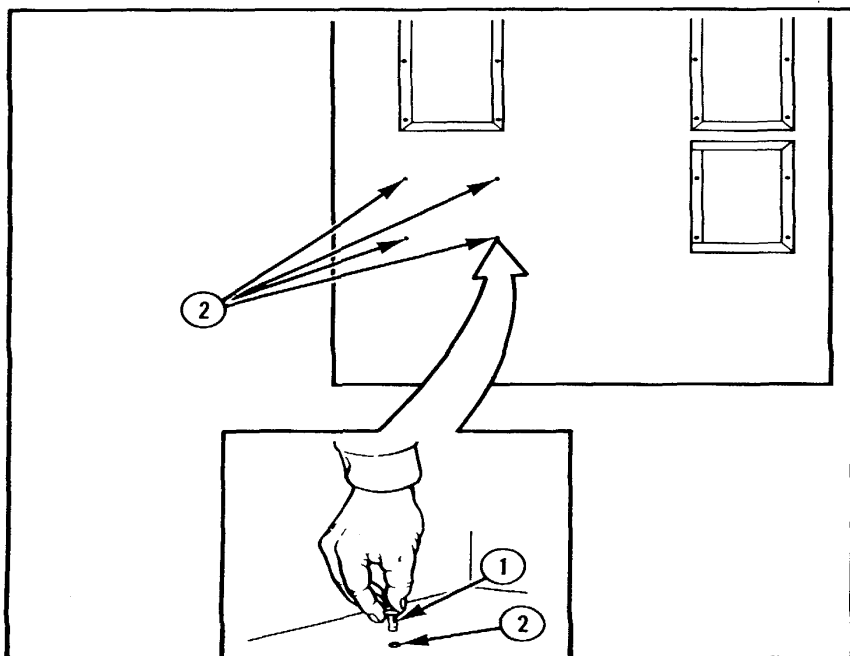
(5) Remove sorting file (8) from wall shelving (9) and place on cargo door end of left table (10) with two straps (11).

2-5 PREPARATION FOR MOVEMENT (cont)

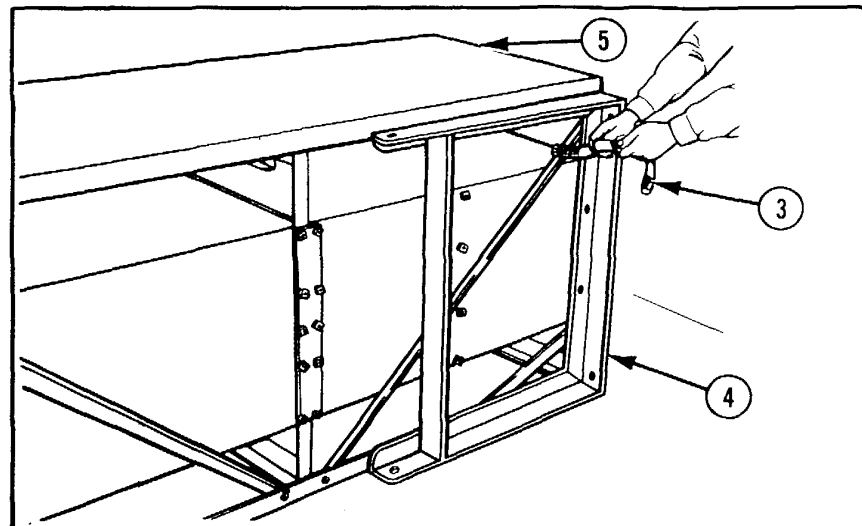
b. Stowing of Portable Degreaser.

**WARNING**

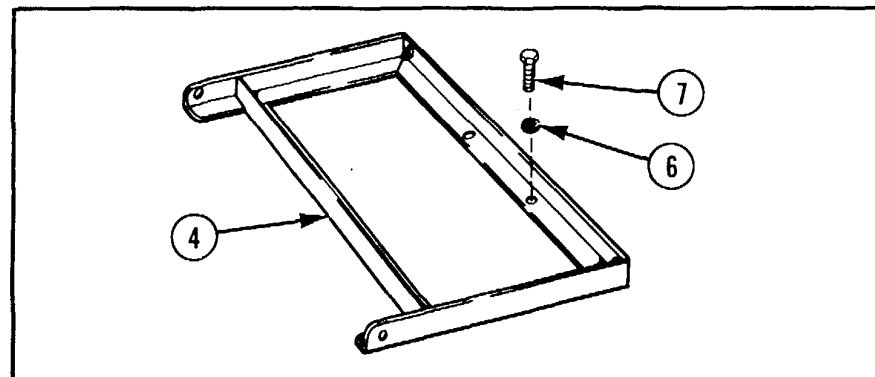
Make sure ventilation fan in curtained area for portable degreaser is on.



(1) Remove four plastic plugs (1) from blind inserts (2) in floor at cargo door end of left table.

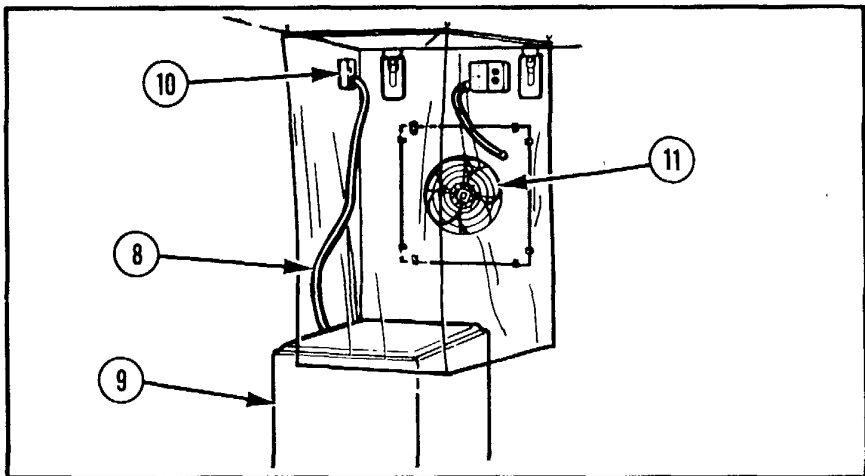


(2) Remove two straps (3) holding frame (4) to back of right table (5).



(3) Position and secure frame (4) to floor with four lockwashers (6) and four screws (7).





(4) Unplug power cord (8) of portable degreaser (9) from electrical outlet (10).

**WARNING**

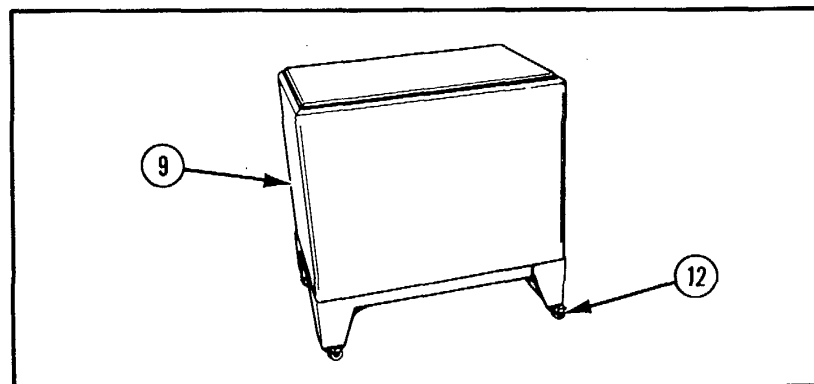
**Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact will cause skin irritation, and taking solvent internally will cause vomiting.**

(5) Drain solvent and accumulated sludge from portable degreaser per manufacturer's instructions.

(6) Dispose of used solvent and sludge per instructions of the division environmentalist.

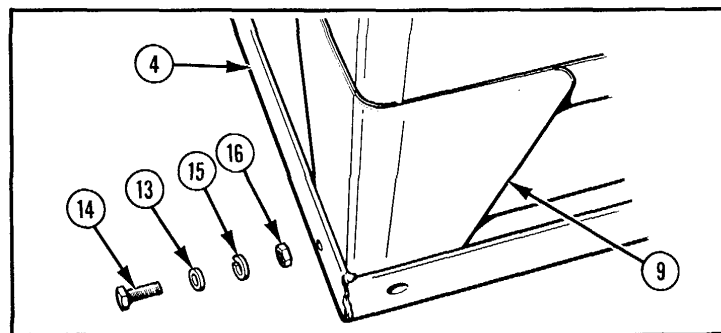
(7) Turn off ventilation fan (11).

(8) Roll portable degreaser (9) from curtained area to vicinity of frame on floor at cargo door end of left table.



(9) Remove four casters (12) from base of portable degreaser (9).

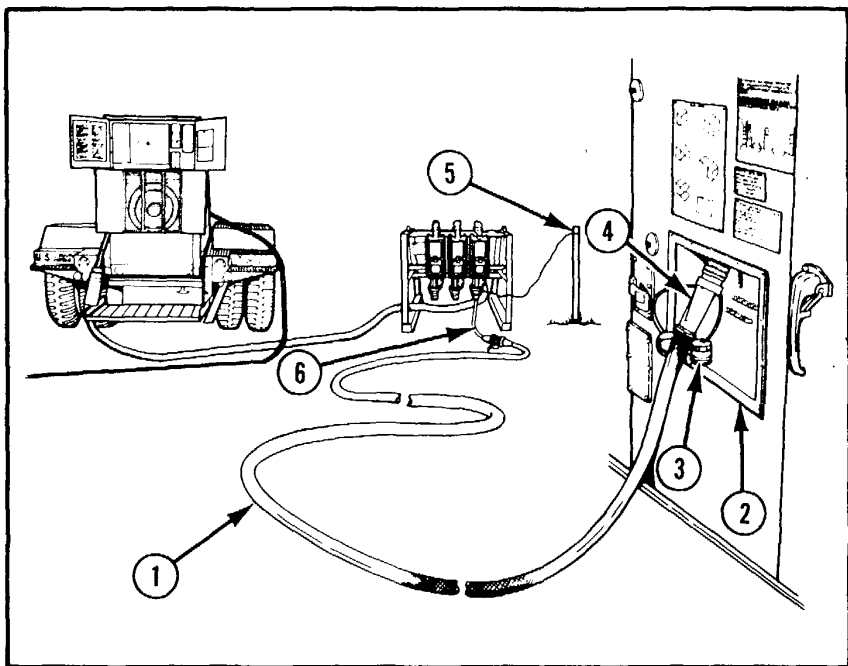
(10) Place four casters (12) inside portable degreaser (9).



(11) Lift portable degreaser (9) into frame (4).

(12) Secure portable degreaser (9) to frame (4) with four flat washers (13), four screws (14), four lockwashers (15), and four nuts (16).

2-5. PREPARATION FOR MOVEMENT (cont)



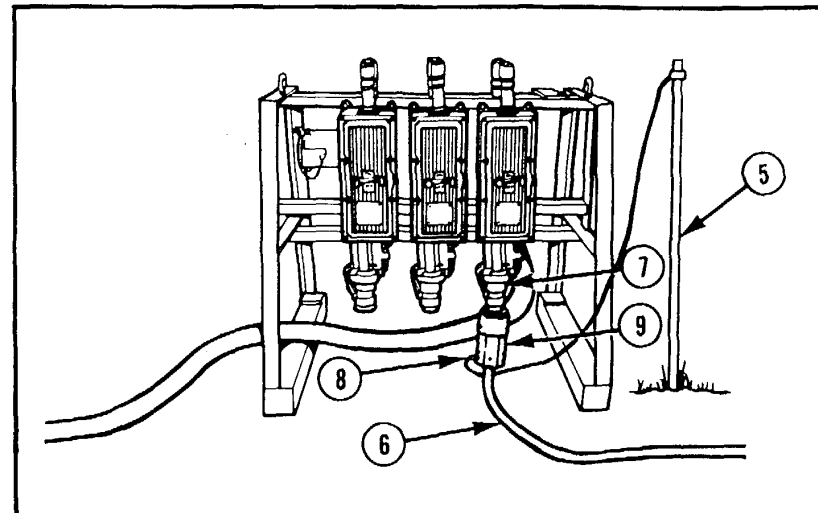
c. Disconnection of Shop Set from Power Source.

**WARNING**

Do not connect or disconnect power cables when shop set is energized.

(1) De-energize shop set by placing circuit breaker on power distribution panel connected to power source in OFF position.

(2) Disconnect connector of 120/208V cable assembly (1) from receptacle J1 on power input panel (2) of shelter. Put dust covers (3) on connectors (4).



(3) Pull grounding rod (5) out of ground.

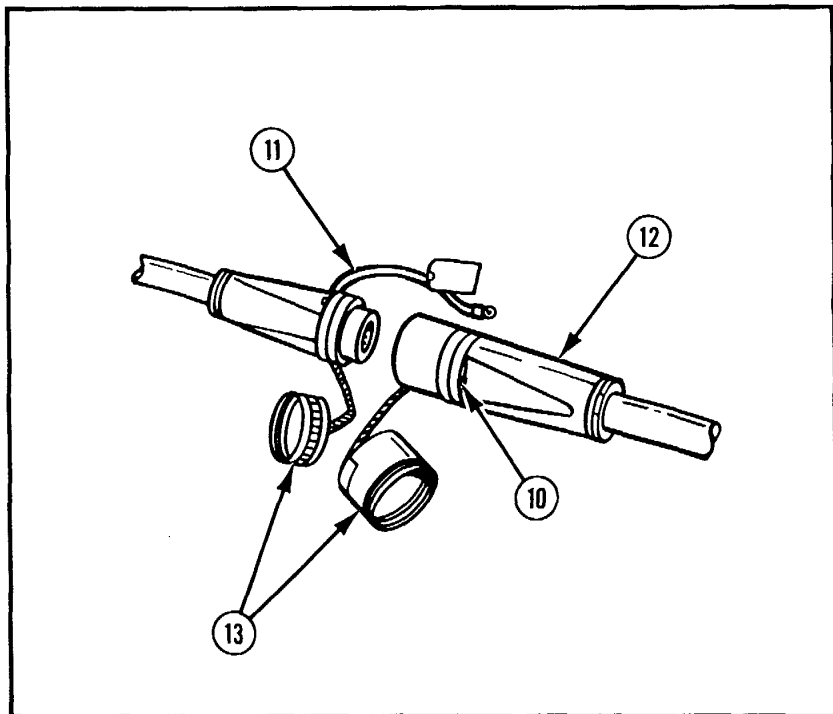
(4) Disconnect cable adapter assembly (6) from mating connector (7) on power distribution panel.

**NOTE**

It is not normally required that grounding rod (5), cable adapter assembly (6), and two 120/208V cable assemblies (1) be disconnected from each other. If disconnection is required, proceed to step (5).

If disconnection is not required, omit steps (5), (6), (7), and (8), and proceed to step (9).

(5) Unclamp wire of grounding rod (5) from terminal lug (8) of plug connector (9).



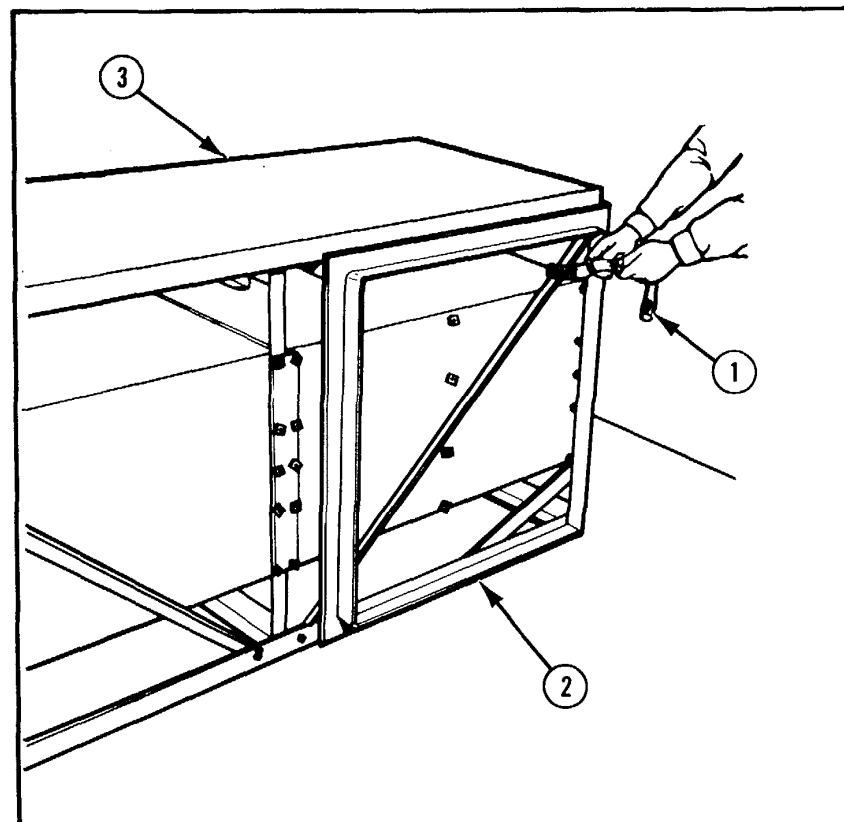
(6) Remove screw (10) and disconnect cable assembly (11) from male connector (12) on 120/208V cable assembly.

(7) Replace screw (10).

(8) Disconnect all connectors.

(9) Install dust covers (13).

(10) Coil 120/208V cable assemblies and cable adapter assembly. Lay on shelter floor in front of tool cabinet.



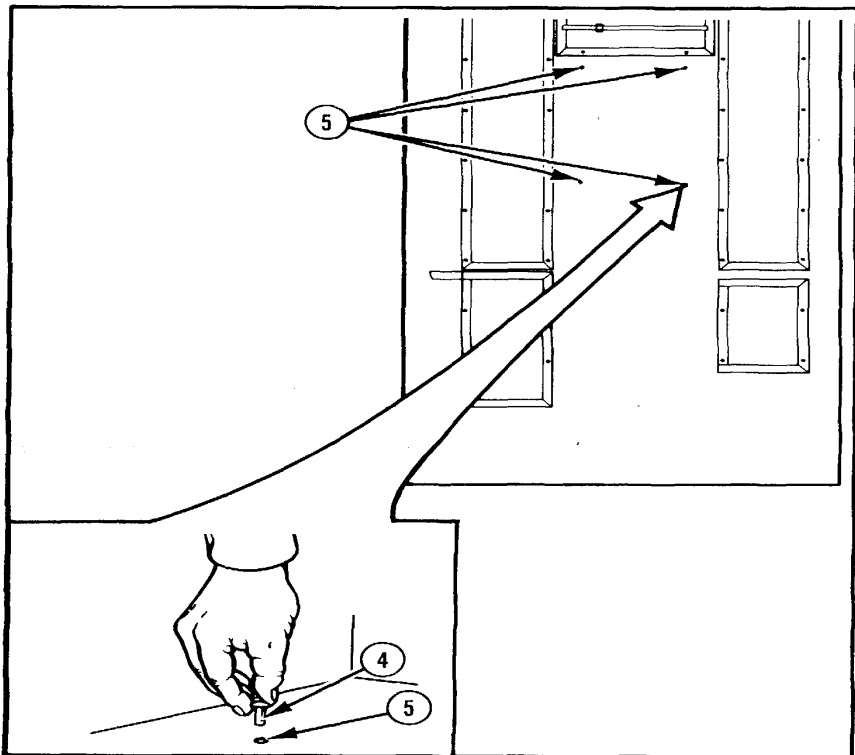
d. Stowing of Environmental Control Units (ECU).

**NOTE**

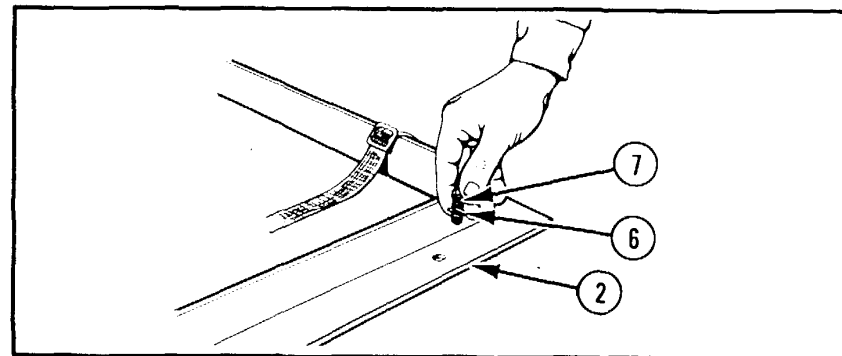
There are two ECU's furnished with the shop set. The following instructions pertain to only one ECU.

(1) Remove two straps (1) holding frame assembly (2) and mounting hardware to back of right table (3).

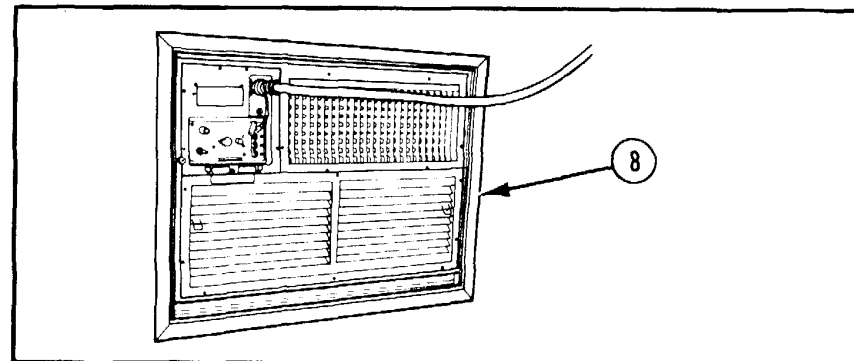
2-5. PREPARATION FOR MOVEMENT (cont)



(2) Remove four plastic plugs (4) from blind inserts (5) in shelter floor (frame assembly mounting holes).

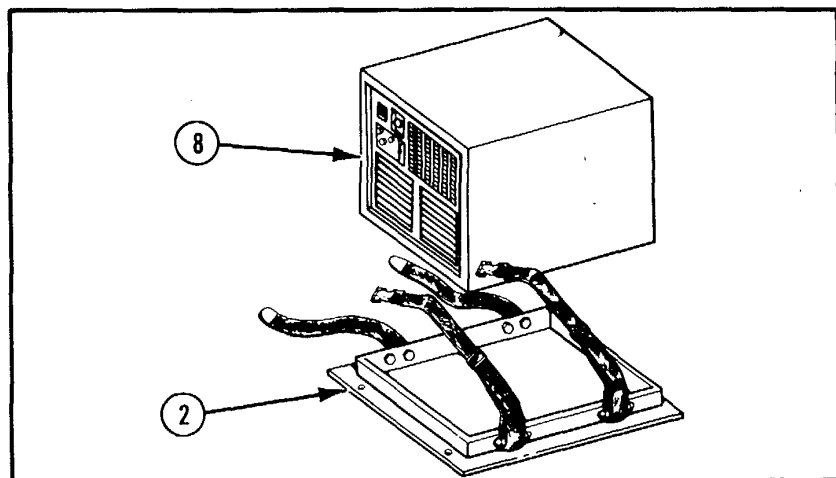


(3) Place frame assembly (2) over mounting holes in shelter floor. Secure with four lockwashers (6) and four screws (7).

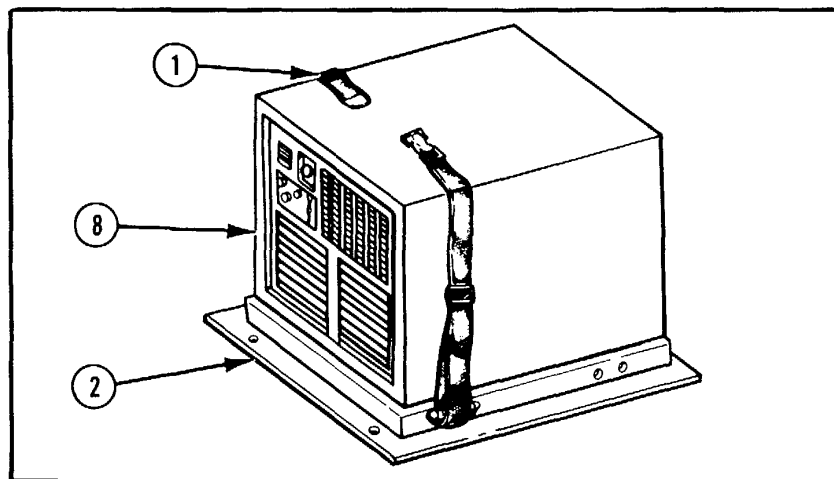


**WARNING**  
 A minimum of four personnel is required when moving or lifting the ECU's. (Each weighs approximately 270 lb (122 kg).)

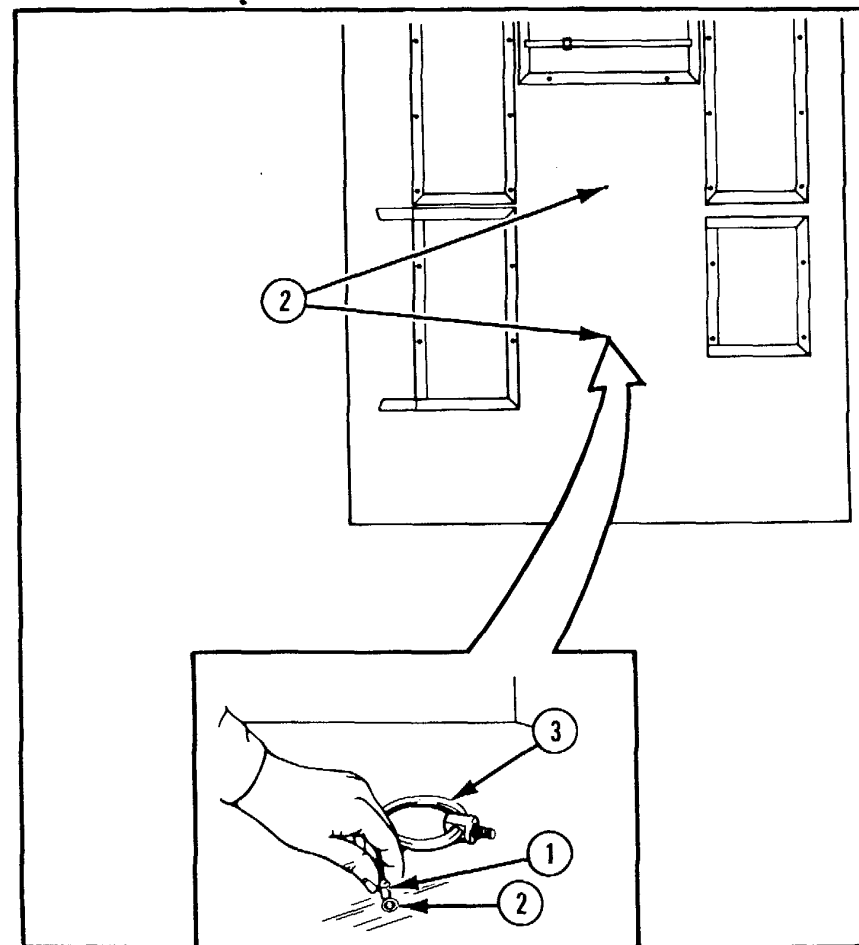
(4) Remove the ECIU (8) from the shelter wall per TM 10-5410-224-14.



(5) Lift the ECU (8) into the frame assembly (2).



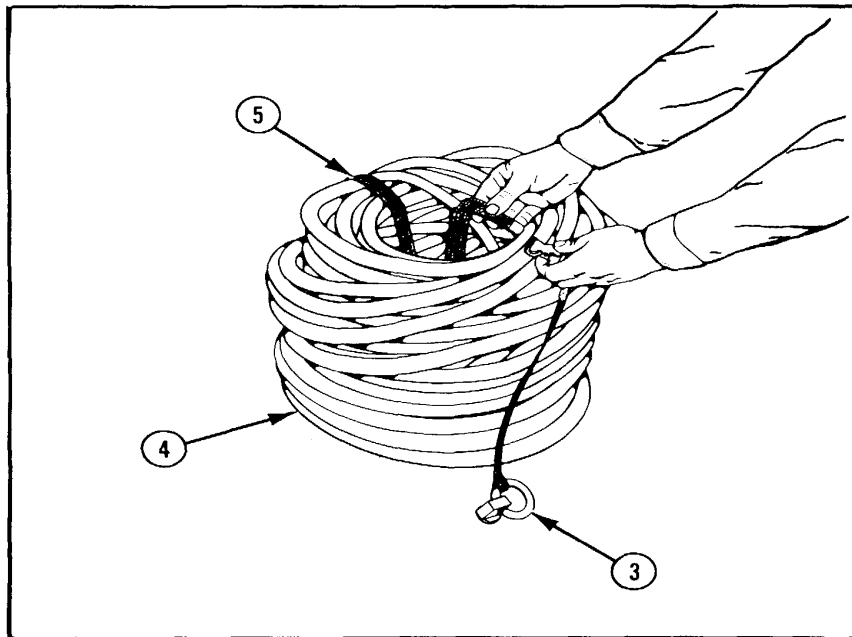
(6) Secure ECU (8) to frame assembly (2) with two straps (1).



e. Stowing of Equipment to Floor.

- (1) Remove two plastic plugs (1) from blind inserts (2) in floor.
- (2) Install two tiedown rings (3) into blind inserts (2).

2-5. PREPARATION FOR MOVEMENT (cont)

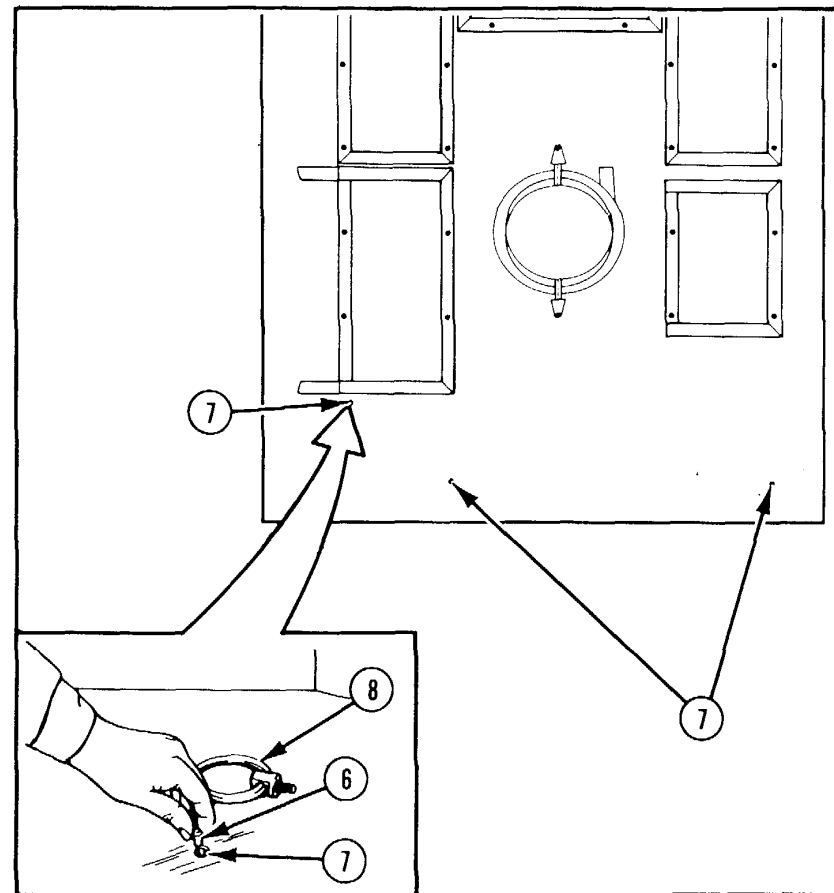


**NOTE**

Coil (4) contains airhose, cable adapter assembly, and two 120/208V cable assemblies coiled together.

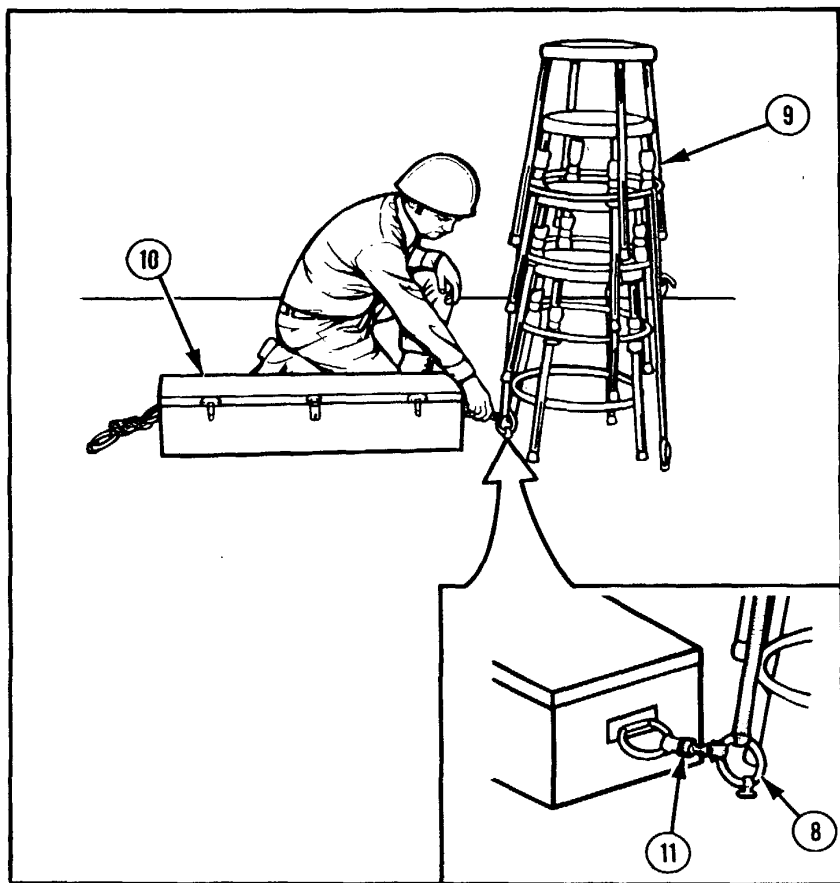
(3) Place coil (4) in between two tiedown rings (3). Coil is between ECU and cargo door.

(4) Tie coil (4) to tiedown rings (3) with two straps (5).



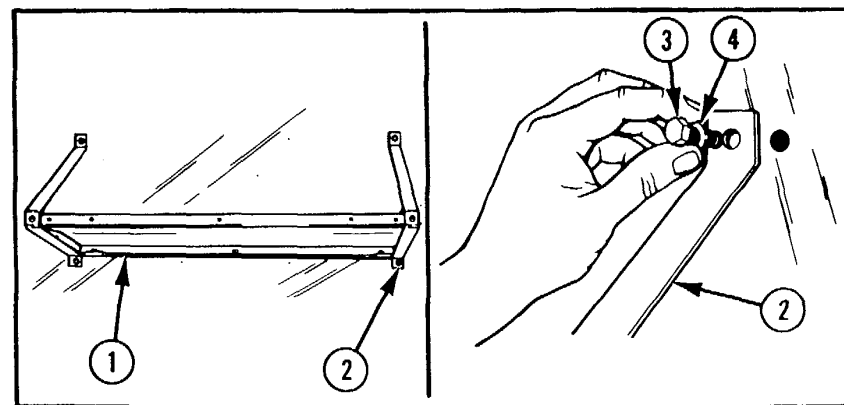
(5) Remove three plastic plugs (6) from blind inserts (7) in floor between coil and cargo door.

(6) Install three tiedown rings (8) into blind inserts (7).



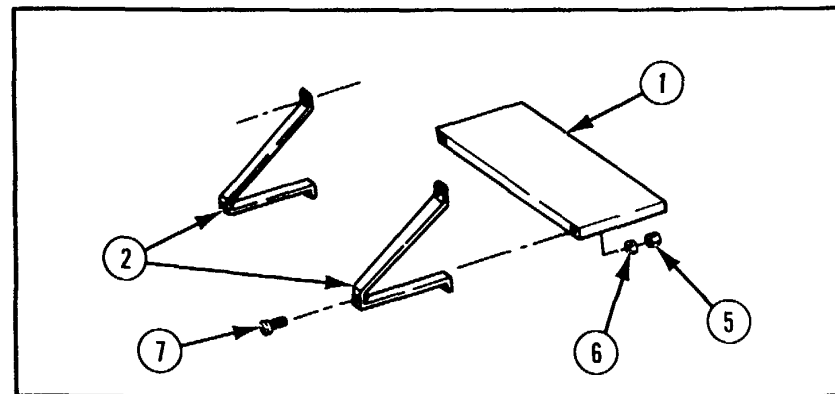
(7) Place four stools (9) and equipment storage chest (10) in between tiedown rings (8).

(8) Secure four stools (9) and equipment storage chest (10) in place by tying to tiedown rings (8) with four straps (11).



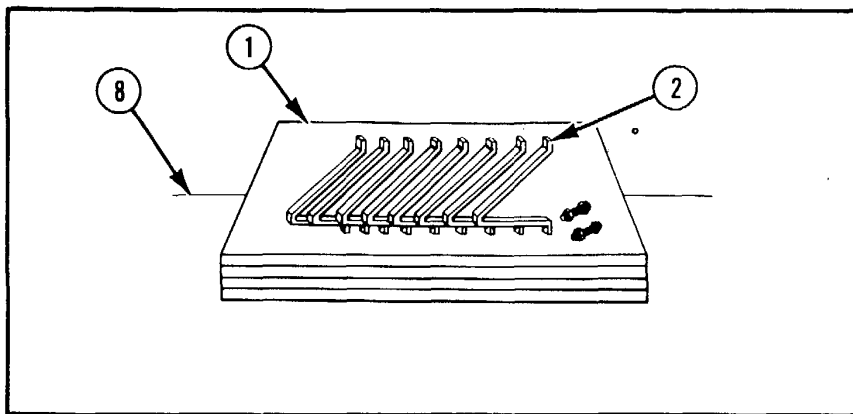
f. Stowing of Wall Shelving and Curtain Assemblies.

(1) Remove each wall shelf (1) with two attached brackets (2) from shelter wall panel by removing four screws (3) and four flat washers (4).

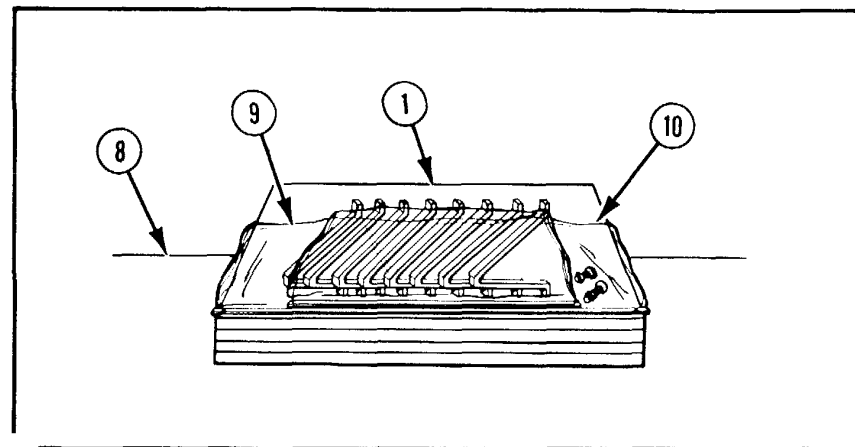


(2) Remove two brackets (2) from each wall shelf (1) by removing two nuts (5), two flat washers (6), and screws (7)

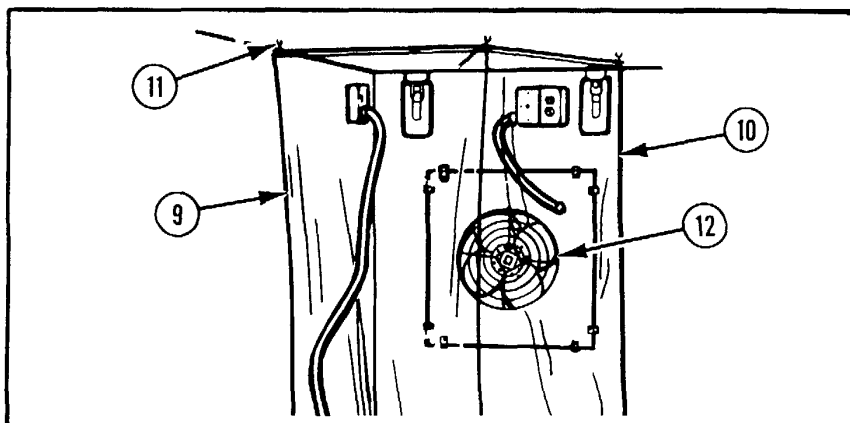
2-5. PREPARATION FOR MOVEMENT (cont)



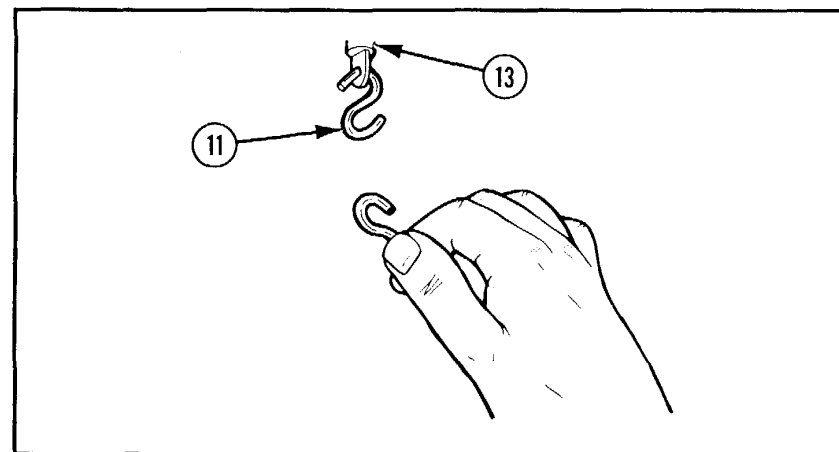
(3) Place wall shelves (1), brackets (2), and mounting hardware at personnel door end of left table (8).



(5) Fold end curtain assembly (9) and side curtain assembly (10) and place on top of wall shelves (1) on left table (8).

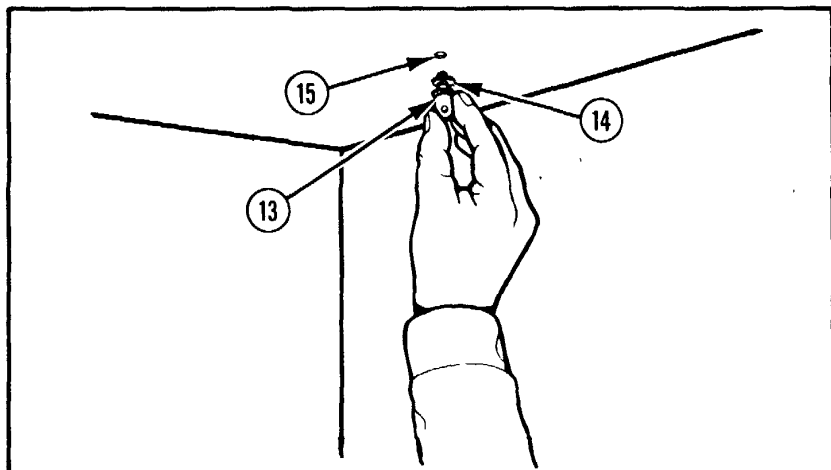


(4) Unhook end curtain assembly (9) and side curtain assembly (10) from four chain hooks (11) hanging from the ceiling near ventilation fan (12) at cargo door end of shop set.

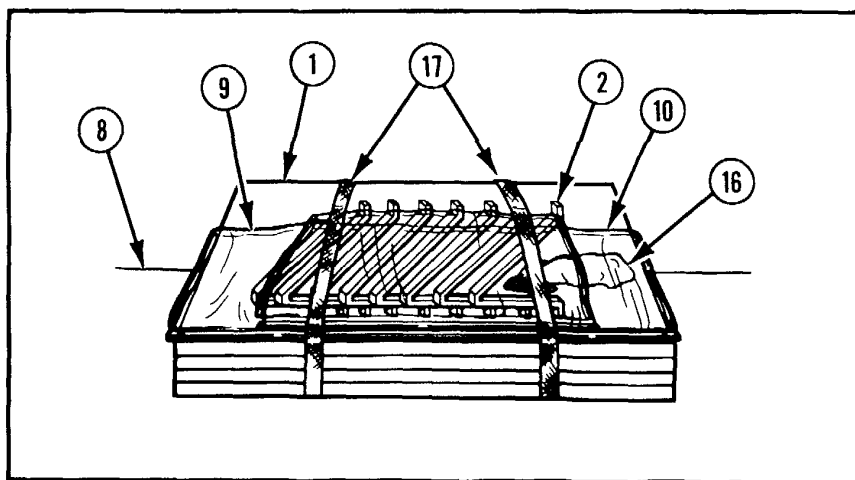


(6) Remove four chain hooks (11) hanging from three eyebolts (13) in ceiling.



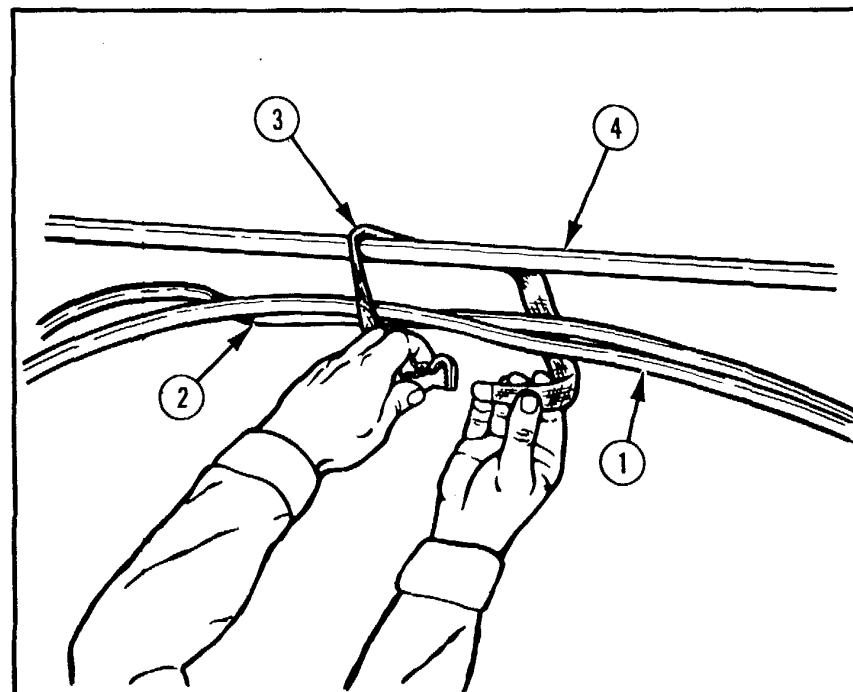


(7) Remove three eyebolts (13) and lockwashers (14) from blind inserts (15) in ceiling.



(8) Place all mounting hardware in bag (16) and put with curtain assemblies (9 and 10) on table.

(9) Secure wall shelves (1), brackets (2), curtain assemblies (9 and 10), and bag (16) to left table (8) with two straps (17).



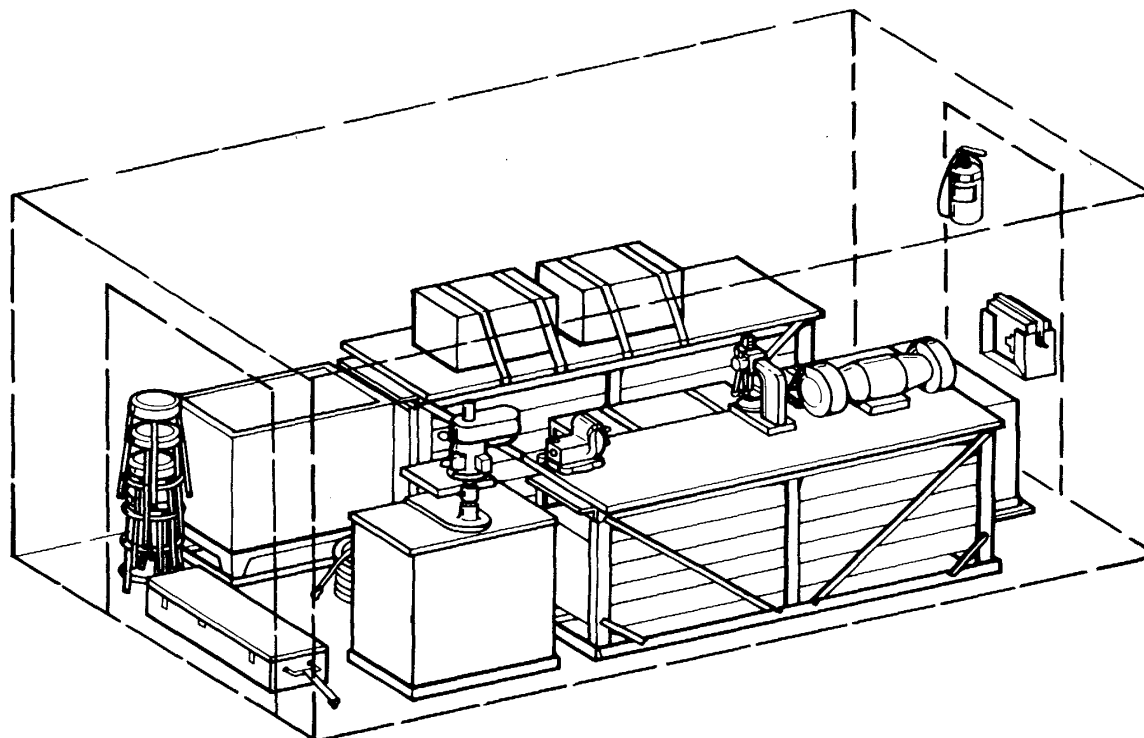
g. Placing Shelter in Stowed Condition.

(1) Stow components of shelter such as ventilation fans, grounding rod, etc, per TM1-1054-224-14.

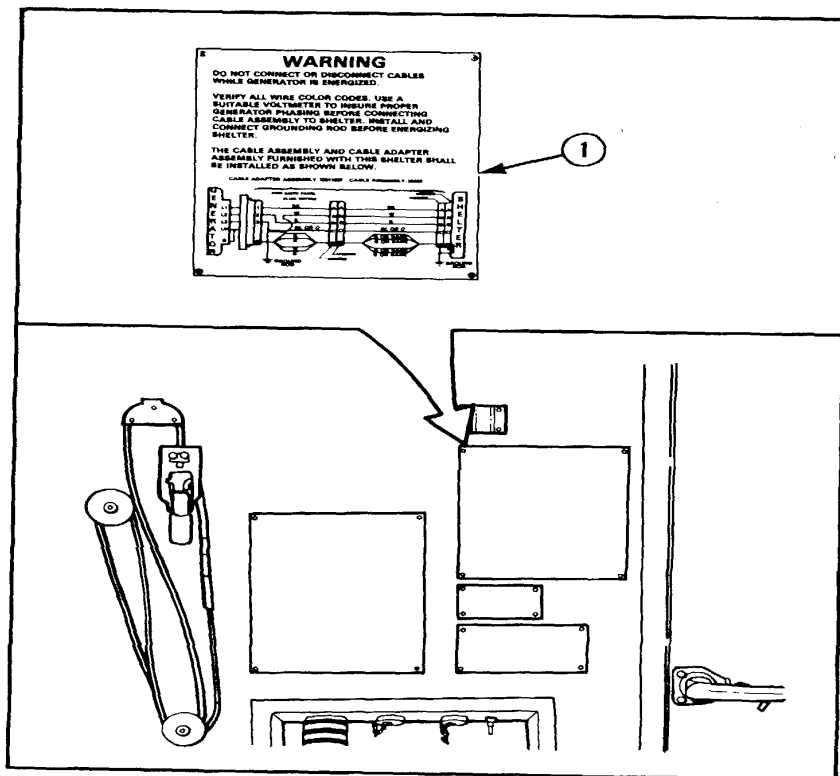
(2) Stow foldout panels of shelter per TM 10-5410-224-14.

(3) Coil electrical cable (1) and air conditioning cable (2) and hang with strap (3) to conduit (4) above personnel door.

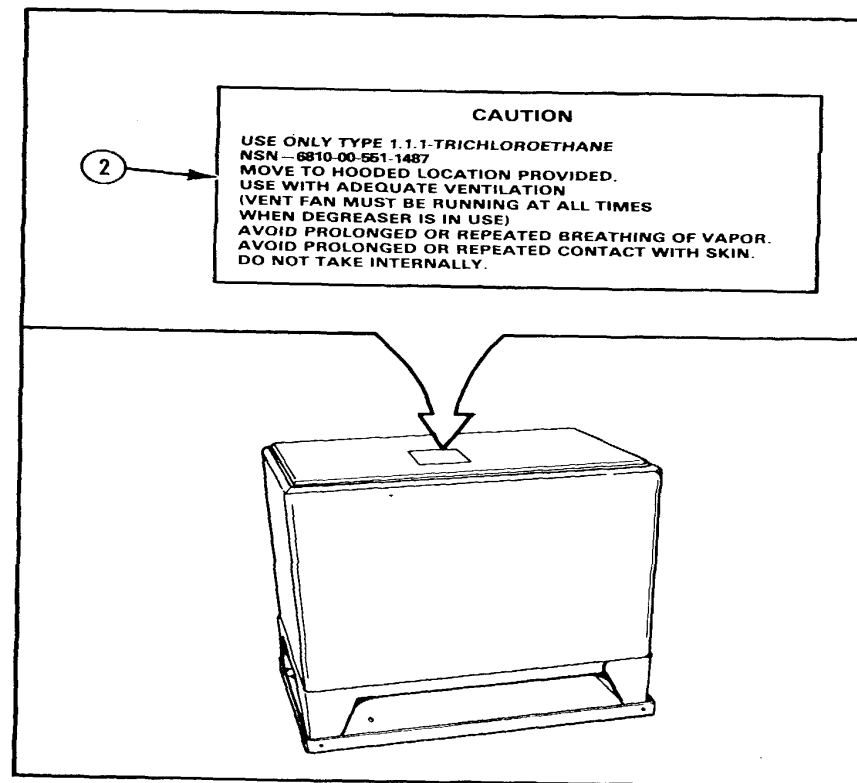
2-6. OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION  
PLATES



SHOP SET, AVIM, (DIV) ARMAMENT REPAIR, AIR MOBILE, SHELTER-MOUNTED (STOWED POSITION)



a. Warning Plate (1). This plate, located on the outside wall to the left of the personnel door, gives instructions and warnings on the electrical cables.



b. Caution Plate (2). This plate, located on the hood of the portable degreaser, provides instructions and warnings on the use of the portable degreaser.

**CHAPTER 3  
INTERMEDIATE MAINTENANCE INSTRUCTIONS**

<b>CHAPTER INDEX</b>	<b>Page</b>		<b>Page</b>
Air hose--Maintenance Instructions.....	3-270	First Aid Kit Holder Assembly—Maintenance Instructions .....	3-200
Cable Adapter Assembly--Cable Assembly- Maintenance Instructions.....	3-240	Installation Instructions.....	3-5
Cable Adapter Assembly--Female Connector- Maintenance Instructions.....	3-236	Service Upon Receipt .....	3-3
Cable Adapter Assembly—Maintenance Instructions.....	3-213	Shop Set--Ceiling Modification-Maintenance Instructions.....	3-141
Cable Adapter Assembly--Plug Connector- Maintenance Instructions.....	3-239	Shop Set--Conduit Installation-Maintenance Instructions.....	3-89
Cable Assembly, 120/208V--Electrical Plug Connector (Female)- Maintenance Instructions.....	3-296	Shop Set--Door Modification-Maintenance Instructions .....	3-149
Cable Assembly, 120/208V--Electrical Plug Connector (Male)--Maintenance Instructions.....	3-298	Shop Set--Electrical Installation-Maintenance Instructions .....	3-38
Cable Assembly, 120/208V--Maintenance Instructions.....	3-276	Shop Set--Grounding Stud- Maintenance Instructions.....	3-86
Checking Unpacked Equipment .....	3-5	Shop Set--Installed Equipment List- Maintenance Instructions.....	3-109
Common Tools and Equipment .....	3-2	Shop Set--Maintenance Instruction .....	3-22
ECU Stowing Frame Assembly—Maintenance Instructions .....	3-192	Shop Set--Miscellaneous Spare Accessories- Maintenance Instructions.....	3-169
ECU Stowing Frame Assembly--Webbing Strap- Maintenance Instructions.....	3-198	Shop Set--Table Modification-Maintenance Instructions.....	3-158
End Curtain Assembly--Maintenance Instructions.....	3-264	Side Curtain Assembly-Maintenance Instructions .....	3-267
Fan Blackout Cover--Maintenance Instructions .....	3-188	Site and Shelter Requirements .....	3-2
First Aid Kit Holder Assembly--Bracket— Maintenance Instructions.....	3-210	Sorting File .....	3-274
First Aid Kit Holder Assembly--Holder Assembly— Maintenance Instructions.....	3-205	Special Tools, TMDE, and Support Equipment .....	3-2
		Storage or Shipment.....	3-300
		Switch box and Mounting Bracket (With Toggle Switch)— Maintenance Instructions.....	3-170
		Switch box and Mounting Bracket (Without Toggle Switch)— Maintenance Instructions.....	3-180
		Troubleshooting Information .....	3-5

	<b>Page</b>
Wire Assembly (Ceiling Outlets)--Maintenance Instructions.....	3-248
Wire Assembly--Maintenance Instructions.....	3-253
Wire Assembly (Switchbox)—Maintenance Instructions .....	3-245

	<b>Page</b>
Wiring Harness Assembly (Switch to Distribution Ceiling Outlets)--Maintenance Instructions .....	3-257
Wiring Harness Assembly (Switchbox to Distribution Panel )—Maintenance Instructions .....	3-251

**Section I. REPAIR PART SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT**

**3-1 COMMON TOOLS AND EQUIPMENT**

For authorized common tools and equipment refer to SC 4933-95-CL-A21.

**3-2 SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT**

No support equipment or TMDE is required for the shop set.

Special tools are listed in appendix C of this manual.

**3-3. REPAIR PARTS**

Repair Parts are listed and illustrated in appendix c of this manual.

**Section II. SERVICE UPON RECEIPT**

**3-4. SITE AND SHELTER REQUIREMENT**

- a. The ground shall be level and firm enough so that leveling jacks on the shelter can properly level the shop set.
- b. A compressed air source must be supplied with a hose capable of connection to the male quick-disconnect

coupling assembly located on the exterior shelter wall to the left of the personnel door.

- c. An electrical power source must be furnished to provide 120/208-volt, 3 phases, 60 Hz electrical power to the shelter.

**3-5. SERVICE UPON RECEIPT—ARMAMENT REPAIR SHOP SET**

LOCATION/	ITEM	ACTION	REMARKS
1. Shop Set	Shelter	Inspect for damage due to shipping.	Refer to TM 10-5410-224-14.
2. Shelter	a. Tables and mounting frames	Inspect for bent or broken parts.	Refer to TM 5-4120-243-14.
	b. Environmental control units and frame assemblies	(1) Check ECU's for shipping damage.  (2) Inspect frame assembly for bent or cracked members.	
	c. Storage cabinet	(1) Check that doors open, close, and latch properly.  (2) Check for secure mounting.	
	d. Stools	Remove any packing material and inspect for damage.	
	e. Hand tools (unmounted components on installed equipment list)	(1) Remove all packing and preservative material.  (2) Check that hand tools are all present and serviceable.  (3) Clean if required.	



**3-5. SERVICE UPON RECEIPT—ARMAMENT REPAIR SHOP SET (cont)**

LOCATION/	ITEM	ACTION	REMARKS
2. Shelter (cont)	f. Portable degreaser and mounting frame	(1) Inspect for bent or broken parts.  (2) Check for secure mounting.	
3. Left Table	a. Sorting file  b. Wall Shelving  c. Curtain assemblies	(1) Remove any packing material and inspect for proper assembly or damage. (2) Clean if required.  Inspect for damaged or missing parts.  (1) Inspect for tears, holes, or missing eyelets.  (2) Inspect to ensure all mounting hardware is present.	
4. Right Table	Grinding machine, arbor press, and machinist's vise	(1) Inspect all items for bent, broken, or missing parts.  (2) Check for secure mounting.	

<p>5. Storage Cabinet</p>	<p>Drilling machine</p>	<p>(1) Inspect for bent, broken, or missing parts.                  (2) Check for secure mounting.</p>	
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**3-6. CHECKING UNPACKED EQUIPMENT**

- a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on SF 364, Report of Discrepancy (ROD).
- b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions of TM 38-750.
- c. Check to see whether the equipment has been modified.

**3-7. INSTALLATION INSTRUCTIONS**

- a. Stowed Components of Shop Set. Refer to chapter 2 for installation instructions for placing stowed components of shop set into operating mode.
- b. Components on Installed Equipment List. Place all items (which are small hand tools or components of hand tools) listed on installed equipment list (SC 4933-95-CL-A21) in storage areas. These areas include table drawers, equipment storage chest, and storage cabinet.

**Section III. TROUBLESHOOTING**

**3-8 TROUBLESHOOTING INFORMATION**

- a. The symptom index can be used as a quick guide to troubleshooting. Common malfunctions are listed in alphabetical order with a page number reference to the

troubleshooting table where a test or inspection and corrective action are provided.





**3-8. TROUBLESHOOTING INFORMATION (cont)**

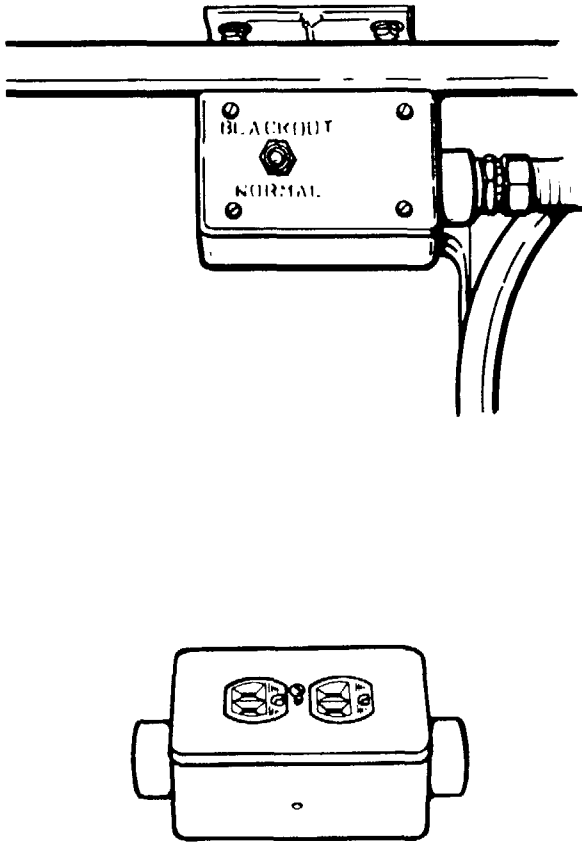
**SYMPTOM INDEX**

	<b>Troubleshooting Procedure (Page)</b>
<b>CABLE ADAPTER ASSEMBLY</b>	
Environmental control units or exhaust fans do not operate correctly .....	3-8
<b>CABLE ASSEMBLY, 120/208V</b>	
Environmental control units or exhaust fans do not operate correctly .....	3-8
<b>CEILING ELECTRICAL OUTLETS</b>	
There is no electrical power at outlets .....	3-7
<b>SHELTER LIGHTS</b>	
Lights fail to come on.....	3-7

b. The troubleshooting table (p 3-7) lists the common malfunctions which you may find during operation or maintenance of the shop set. You should perform the tests/inspections and corrective actions in the order listed.

c. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by a listed corrective action, notify your supervisor.

Table 3-1. Troubleshooting

<p><b>MALFUNCTION</b>  <b>TEST OR INSPECTION</b>  <b>CORRECTIVE ACTION</b></p>	<p><b>LOCATION</b></p>
<p style="text-align: center;">SHELTER LIGHTS</p> <p>1. LIGHTS FAIL TO COME ON.                      Step 1. Check for open doors or blackout switch in BLACKOUT position.                          Close doors or place blackout switch in NORMAL position.                      Step 2. Check for proper operation of door microswitches.                          Align or replace switches as required (p 3-170).</p> <p style="text-align: center;">CEILING ELECTRICAL OUTLETS</p> <p>2. THERE IS NO ELECTRICAL POWER AT OUTLETS.                      Step 1. Check circuit breakers CB6 and CB9.                          Reset circuit breaker.                      Step 2. Check for defective outlets or wiring.                          With power off, repair or replace defective parts (p 3-38).</p>	 <p>The diagram shows two electrical components. The upper component is a rectangular switch mounted on a horizontal surface. It has a sliding handle on top and a label with 'BLACKOUT' and 'NORMAL' positions. The lower component is a rectangular ceiling electrical outlet with two circular ports on top and a small circular indicator on the front face.</p>





Step 2 Check the 120/208V cable assembly for open circuits. With power source off, disconnect cable from circuit and make an ohmmeter check of each phase through the cable assembly from socket connector end to the pin connector end. Repair as required (p 3-276).

**Section IV. MAINTENANCE PROCEDURES**

**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS**

**INITIAL SETUP:**

Test Equipment

- Ohmmeter
- Voltmeter

Special Tools

- Armament repair shop set (SC 4933-95-CL-A21)

- AVIM sheet metal shop set (SC 4920-99-CL-A85)
- AVIM tool crib shop set (SC 4920-99-CL-A86)
- AVIM welding shop set (SC 4920-99-CL-A88)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)
- Removal tool no 4 (MS90562-5)
- Removal tool no 6 (MS90562-6)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

Materials/Parts\*

- Abrasive cloth (item 4, app D)
- Deleted
- Adhesive (item 2, app D)
- Black semigloss lacquer (item 11, app D)
- Dry cleaning solvent (item 6, app D)
- Gloves (item 9, app D)
- Green enamel (item 8, app D)
- Hardener (item 3, app D)
- Lubricating oil (item 13, app D)
- Marking ink (item 17, app D)
- Polishing cloth (item 5, app D)
- Resin (item 3, app D)
- Solder (item 16, app D)
- Tape (item 18, app D)
- Wiping rag (item 15, app D)
- Band (MIL-P-15024/8)
- Blind inserts (12011684)

\*Use parts, as required, according to appendix C.

### 3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)

#### INITIAL SETUP:

##### Materials/Parts \*(cont)

- Blind inserts (12011685)
- Bushings (MS3348-4-6L)
- Caution plate (7551806)
- Compression connector (12011667)
- Contact pin A, B, and C (MS9029/48-320)
- Contact pin G (MS9029/48-318)
- Contact pin N (MS9029/48-321)
- Ground socket (MS9029/49-329)
- Lug terminal (MS25036-111)
- Lug terminal (MS25036-156)
- Preformed packing (MS29513-132)
- Rivet (MS20470A4-6)
- Socket A, B, C, and N (MS90500-5)
- Terminal (MS25036-112)
- Warning plate (12011686)
- Wire (12011690-1)
- Wire (12011690-24)
- Wire (12011690-25)
- Wire (12011690-26)
- Wire (12011690-4)
- Wire (12011690-5)
- Wire (12011690-6)
- Wire (12011690-7)
- Wire (12011690-8)
- Wire (12011690-9)
- Wire rope (MIL-I-83420)

##### Personnel Required:

- Aircraft armament repairmen: 4 Lift the ECU.
- Aircraft armament repairmen: 2 Lift the right and left ends when removing or installing tables.
- Install conduit in ceiling.

##### References

- SC 4933-95-CL-A21
- TM 10-5410-224-14
- TM 43-0139
- TM 5-4120-243-14
- TM 9-237
- Appendix C
- Appendix D
- Appendix E
- 3-39 Wiring diagram.
- 3-59 Wire table.
- 3-40 Schematic diagram.
- 3-109 Shop set--installed equipment list maintenance instructions.
- 3-198 Repair procedures for ECU stowing frame assembly--webbing strap.
- 3-205 Repair procedures for first aid kit holder assembly--holder assembly.
- 3-210 Repair procedures for first aid kit holder assembly--bracket assembly.
- 3-236 Repair procedures for cable adapter assembly--female connector.

\* Use parts, as required, according to appendix C.

- 3-240 Repair procedures for cable adapter assembly--cable assembly.
- 3-213 Reassembly, test, and installation procedures for cable adapter assembly.
- 3-213 Removal and disassembly procedures for cable adapter assembly.
- 3-38 Disassembly and reassembly procedures for shop set--electrical installation.
- 3-253 Repair procedures for wire assembly.
- 3-251 Disassembly and reassembly procedures for wiring harness assembly (switchbox to distribution panel).
- 3-38 Repair procedures for shop set--electrical installation.
- 3-296 Repair procedures for 120/208V cable assembly--electrical plug connector (female).
- 3-298 Repair procedures for 120/208V cable assembly--electrical plug connector (male).
- 3-276 Reassembly, test, and installation procedures for 120/208V cable assembly.
- 3-276 Removal and disassembly procedures for 120/208V cable assembly.

Troubleshooting References

- 3-7 No electrical power at outlets.
- 3-7 Lights fail to come on.
- 3-8 Environmental control units or exhaust fans do not operate correctly.

Equipment Conditions

- 2-24 Shop set must be de-energized (task no 2 and 3).
- 2-24 120/208V cable assembly disconnected at shelter (task no. 2).

- 3-89 Conduit installation installed (task no. 2).
- 3-38 Electrical installation removed (task no. 4 and 6).
- 3-89 Conduit installation removed (task no. 6).
- 2-8 Ventilation fan and mounting panel removed from shelter wall (task no 12).
- 2-12 ECU removed from stowing frame assembly (task no 13 and 14).
- 2-22 Portable degreaser not in use with cover closed (task no 27 and 28).

General Safety Instructions

**WARNING**

De-energize shop set by placing circuit breaker on power distribution panel connected to power source in OFF position and then disconnect 120/208V cable assembly from shelter.

**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation or inflammation.

**WARNING**

Injury to personnel may result if pressure is not relieved before beginning any maintenance on airhose.

**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

**LIST OF TASKS**

Task No.	Task	Task Ref (Page)	Troubleshooting Reference No./ (Page)
1	Maintain shop set: a Inspect b Disassemble c Repair d Repair/apply stencils e Reassemble	3-23 3-26 3-29 3-32 3-34	
2	Maintain shop set—electrical installation:  a Inspect b Disassemble c Inspect after disassembly d Repair e Modify f Reassemble g Test	3-38 3-41 3-59 3-59 3-63 3-64 3-86	3-7
3	Maintain shop set--grounding stud: a Disassemble b Inspect c Service d Repair e Reassemble	3-87 3-88 3-88 3-88 3-88	

Task No.	Task	Task Ref (Page)	Troubleshooting Reference No./ (Page)
4	Maintain shop set--conduit installation:  a Inspect b Disassemble c Repair d Modify e Reassemble	3-90 3-90 3-96 3-99 3-101	
5	Maintain shop set--installed equipment list:  a Inspect b Service c Remove d Repair e Modify right table f Modify storage cabinet and portable degreaser. g Install	3-110 3-115 3-119 3-124 3-129 3-132  3-135	
6	Maintain shop set--ceiling modification:  a Inspect b Disassemble c Repair d Modify ceiling e Reassemble	3-142 3-142 3-143 3-144 3-146	
7	Maintain shop set--door modification:  a Disassemble b Inspect c Repair d Modify door e Reassemble	3-150 3-153 3-153 3-154 3-155	



**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

**LIST OF TASKS (cont)**

Task No.	Task	Task Ref (Page)	Troubleshooting Reference No./ (Page)
8	Maintain shop set--table modification:  a Inspect b Remove c Disassemble d Repair e Modify f Reassemble g Install	3-159 3-160 3-161 3-162 3-165 3-167 3-168	
9	Maintain shop set--miscellaneous spare accessories:  a Inspect b Remove c Repair d Install	3-169 3-170 3-170 3-170	
10	Maintain switchbox and mounting bracket (with toggle switch):  a Inspect b Remove/disassemble c Repair d Modify e Reassemble/install. f Adjust microswitch g Test	3-171 3-172 3-174 3-174 3-174 3-178 3-178	3-7

Task No.	Task	Task Ref (Page)	Troubleshooting Reference No./ (Page)
11	Maintain switchbox and mounting bracket (without toggle switch): <ul style="list-style-type: none"> <li>a Inspect</li> <li>b Remove/disassemble</li> <li>c Repair</li> <li>d Modify</li> <li>e Reassemble/install</li> <li>f Adjust microswitch</li> <li>g Test</li> </ul>	3-181 3-181 3-183 3-183 3-184 3-186 3-186	3-7
12	Maintain fan blackout cover: <ul style="list-style-type: none"> <li>a Remove</li> <li>b Inspect</li> <li>c Repair</li> <li>d Install</li> </ul>	3-189 3-190 3-190 3-191	
13	Maintain ECU stowing frame assembly: <ul style="list-style-type: none"> <li>a Inspect</li> <li>b Remove</li> <li>c Disassemble</li> <li>d Repair</li> <li>e Reassemble</li> <li>f Install</li> </ul>	3-193 3-194 3-194 3-195 3-196 3-197	
14	Maintain ECU stowing frame assembly--webbing strap: <ul style="list-style-type: none"> <li>a Inspect</li> <li>b Remove/disassemble</li> <li>c Repair</li> <li>d Reassemble/install</li> </ul>	3-198 3-198 3-199 3-199	

**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

<b>LIST OF TASKS (cont)</b>			
<b>Task No.</b>	<b>Task</b>	<b>Task Ref (Page)</b>	<b>Troubleshooting Reference No./ (Page)</b>
15	Maintain first aid kit holder assembly:  a Remove b Inspect c Disassemble d Repair e Reassemble f Install	3-200 3-201 3-202 3-202 3-203 3-204	
16	Maintain first aid kit holder assembly--holder assembly:  a Remove b Inspect c Disassemble d Repair e Reassemble f Install	3-205 3-206 3-206 3-207 3-207 3-208	
17	Maintain first aid kit holder assembly--bracket assembly:  a Remove b Inspect c Disassemble d Repair e Reassemble f Install	3-210 3-211 3-211 3-211 3-212 3-212	

18	Maintain cable adapter assembly:	3-8
	a Inspect	3-214
	b Service	3-215
	c Remove	3-215
	d Disassemble	3-217
	e Repair	3-221
	f Prepare cable for plug connector	3-224
	g Reassemble	3-226
	h Test	3-234
	i Install	3-235
19	Maintain cable adapter assembly--female connector:	3-8
	a Remove	3-237
	b Inspect	3-237
	c Service	3-237
	d Repair	3-238
	e Install	3-238
20	Maintain cable adapter assembly--plug connector:	3-8
	a Inspect	3-239
	b Service	3-239
	c Remove	3-240
	d Install	3-240
21	Maintain cable adapter assembly--cable assembly:	
	a Inspect	3-241
	b Remove	3-241
	c Disassemble	3-242
	d Repair	3-242
	e Reassemble	3-243
	f Install	3-244

**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

LIST OF TASKS (cont)			
Task No.	Task	Task Ref (Page)	Troubleshooting Reference No./ (Page)
22	Maintain wire assembly (switchbox):  a Remove b Inspect c Disassemble d Repair e Reassemble f Install	       3-246 3-246 3-246 3-247 3-247 3-247	
23	Maintain wire assembly (ceiling outlets):  a Remove b Inspect c Disassemble d Repair e Reassemble f Install	       3-249 3-249 3-249 3-249 3-250 3-250	
24	Maintain wiring harness assembly (switchbox to distribution panel ):  a Remove b Inspect c Disassemble d Repair e Reassemble f Install	       3-252 3-252 3-252 3-252 3-253 3-253	

25	Maintain wire assembly:	
	a Remove	3-254
	b Inspect	3-254
	c Disassemble	3-255
	d Repair	3-255
	e Reassemble	3-256
	f Install	3-256
26	Maintain wiring harness assembly (switch to distribution ceiling outlets):	
	a Remove	3-258
	b Inspect	3-258
	c Disassemble	3-258
	d Repair	3-259
	e Reassemble	3-259
	f Install	3-263
27	Maintain end curtain assembly:	
	a Remove	3-264
	b Inspect	3-265
	c Repair	3-265
	d Reassemble	3-266
	e Install	3-266
28	Maintain side curtain assembly:	
	a Remove	3-268
	b Inspect	3-268
	c Repair	3-269
	d Reassemble	3-270
	e Install	3-270



**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

<b>LIST OF TASKS (cont)</b>			
<b>Task No.</b>	<b>Task</b>	<b>Task Ref (Page)</b>	<b>Troubleshooting Reference No./ (Page)</b>
29	Maintain airhose:  a Remove b Inspect c Disassemble d Repair e Reassemble f Install	3-271 3-271 3-272 3-272 3-273 3-273	
30	Maintain sorting file:  a Inspect b Service c Remove d Disassemble e Repair f Reassemble g Install	3-274 3-274 3-275 3-275 3-275 3-275 3-275	
31	Maintain 120/208V cable assembly:  a Inspect b Remove c Disassemble d Repair e Reassemble f Test g Install	3-277 3-277 3-280 3-284 3-285 3-294 3-294	3-8

32	Maintain 120/208V cable assembly--electrical plug connector (female):	3-296 3-296 3-297 3-297 3-297	3-8
	a Remove b Inspect c Service d Repair e Install		
33	Maintain 120/208V cable assembly--electrical plug connector (male):	3-298 3-298 3-299 3-299 3-300	3-8
	a Remove b Inspect c Service d Repair e Install		

**NOTE**

The left and right table references mean the two tables seen while standing in the cargo doorway and looking into the shop set at that entrance. The ends of the shop set are referred to as the personnel door and cargo door ends. The left and right sides of the shop set are those seen while standing in the cargo doorway and looking into the shop set at that entrance. This applies throughout chapter 3.

Paragraph 3-9 contains instructions for parts called out on the shop set top assembly drawing which are not assemblies. Paragraphs 3-10 thru 3-17 contain maintenance instructions for parts called out on installation or modification drawings. Paragraphs 3-18 thru 3-41 contain maintenance instructions for all the assemblies.

The maintenance instructions are written as if the shop set were in operating mode.





### 3-9. SHOP SET--MAINTENANCE INSTRUCTIONS)

**This task covers:**

- a. Inspection
- b. Disassembly
- c. Repair
- d. Repair/application of stencils
- e. Reassembly

**INITIAL SETUP:**

Special Tools

Armament repair shop set (SC 4933-95-CL-A21)

- AVIM sheet metal shop set (SC 4920-99-CL-A85)
- AVIM tool crib shop set (SC 4920-99-CL-A86)
- AVIM welding shop set (SC 4920-99-CL-A88)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

Materials/Parts

- Black semigloss lacquer (item 11, app D)
- Dry cleaning solvent (item 6, app D)
- Gloves (item 9, app D)
- Caution plate (7551806)
- Warning plate (12011686)

References

- Appendix D
- Appendix E
- TM 9-237

General Safety Instructions

**WARNING**

Injury to personnel may result if pressure is not relieved before beginning any maintenance on airhose.

**WARNING**

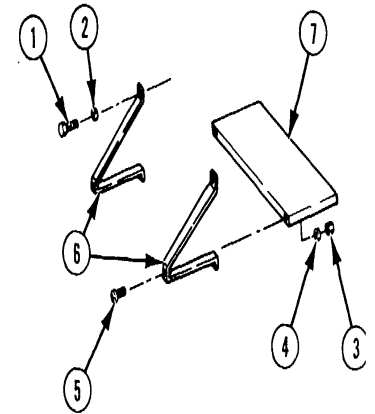
Dry cleaning solvent (SD) is flammable and should not be used near open flame or smoking area. Use only in well-ventilated areas. It evaporates quickly and has drying effect on skin. When used without gloves, it may cause cracks in skin and mild irritation or inflammation.

**INSPECTION**

**NOTE**

Steps 1 thru 3 pertain to one wall shelving. There are four wall shelvings mounted on the shelter walls.

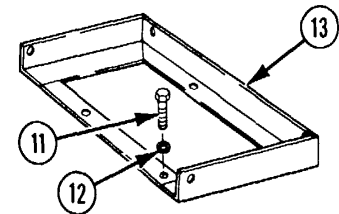
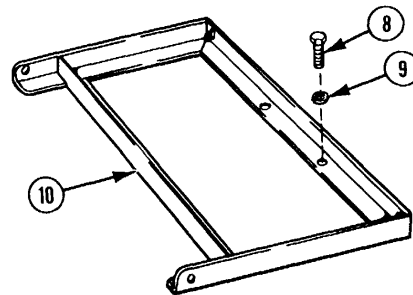
- 1 FOUR SCREWS (1) AND FOUR FLAT WASHERS (2)., Check for missing, damaged, or corroded parts.
- 2 TWO NUTS (3), TWO FLAT WASHERS (4), AND TWO SCREWS (5). Check for missing, damaged, or corroded parts.
- 3 TWO BRACKETS (6) AND WALL SHELF (7). Check for bent or cracked condition.



**NOTE**

Steps 4 thru 7 list parts used to secure the portable degreaser and storage cabinet to the shelter floor.

- 4 FOUR SCREWS (8) AND FOUR LOCKWASHERS (9). Check for missing, damaged, or corroded parts.
- 5 PORTABLE DEGREASER MOUNTING FRAME (10).
  - a Check for bent or broken members.
  - b Check for cracks in welding.



- 6 TWO SCREWS (11) AND TWO LOCKWASHERS (12). Check for missing, damaged, or corroded parts.
- 7 STORAGE CABINET MOUNTING FRAME (13).
  - a Check for bent or broken members.
  - b Check for cracks in welding.

**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

**INSPECTION (cont)**

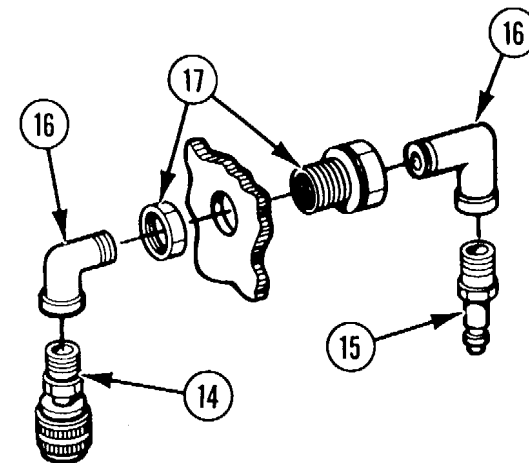
**WARNING**

Injury to personnel may result if pressure is not relieved before beginning any maintenance on airhose.

**NOTE**

Steps 8 and 9 list parts which form airhose connections on the inside and outside of the shelter wall to left of personnel door (viewed from outside).

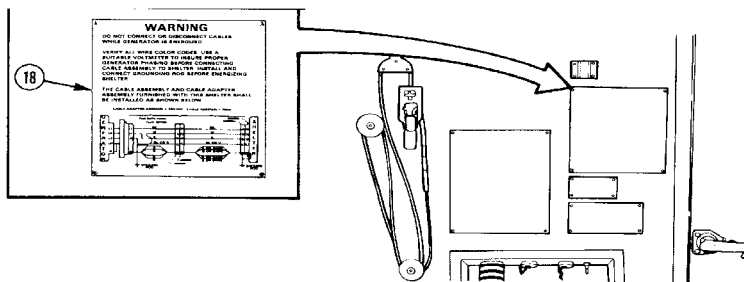
- 8 FEMALE COUPLING ASSEMBLY (14) AND MALE COUPLING ASSEMBLY (15). Check for proper quick-connect/disconnect action with mating coupling assemblies.
- 9 TWO ELBOWS (16) AND BULKHEAD ADAPTER (17) Check for cracked or corroded parts.



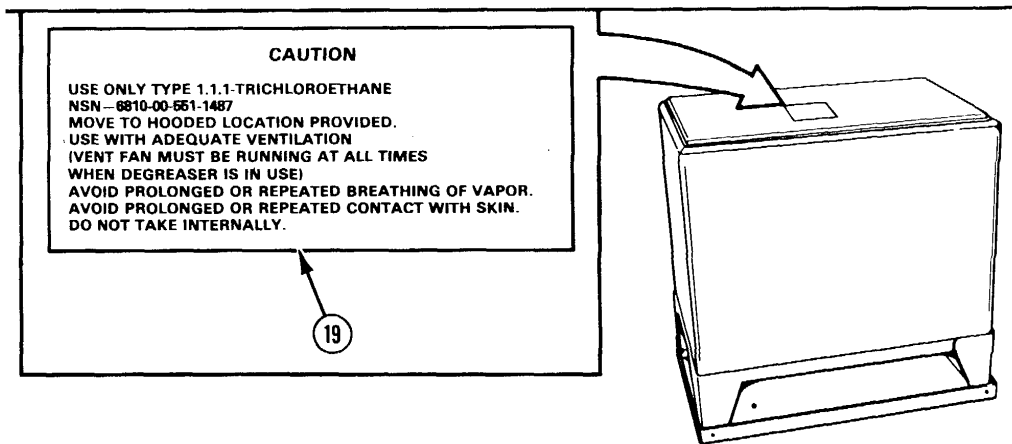
**NOTE**

All remaining detail parts of the shop set are listed in steps 10 thru 14.

- 10 WARNING PLATE (18) Check to ensure it is not missing and is readable (located on outside shelter wall to left of personnel door).



11 CAUTION PLATE (19). Check to ensure it is not missing and is readable (located on hood of portable degreaser).

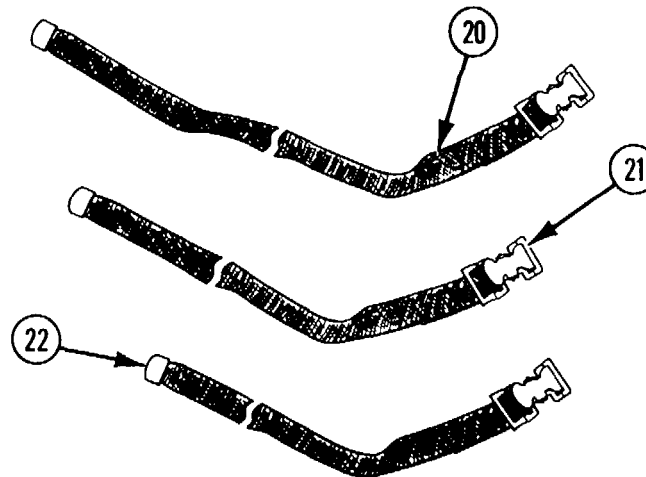


**NOTE**

Three tiedown straps (20) are used to tie the cable coil to the shelter floor, four tiedown straps (21) are used to tie the sorting file and wall shelvings to tables, and four tiedown straps (22) are used to tie stools and equipment storage chest to floor.

12 THREE TIEDOWN STRAPS (20), FOUR TIEDOWN STRAPS (21), AND FOUR TIEDOWN STRAPS (22).

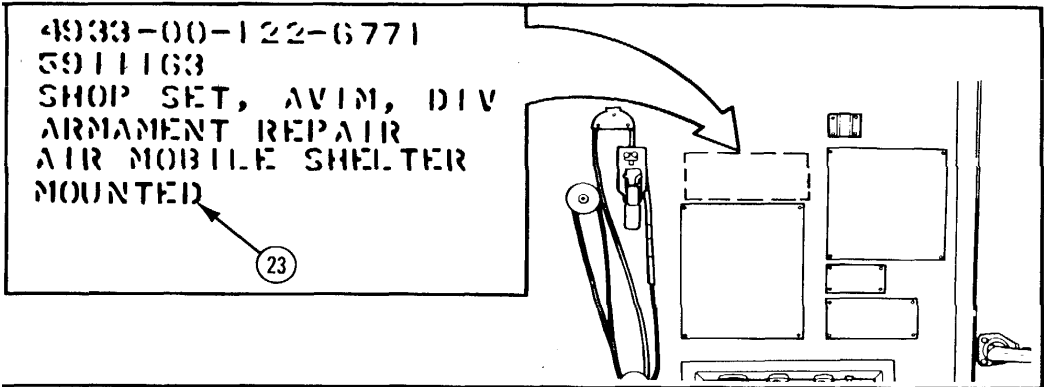
- a Remove from storage.
- b Check for missing, frayed, or broken parts.
- c Return to storage.



**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

**INSPECTION (cont)**

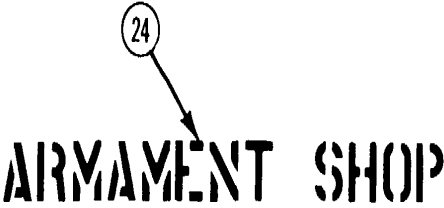
13 STENCIL (23) ON PERSONNEL DOOR END OF SHELTER Check for readability.



The diagram shows a rectangular stencil on a door. The text on the stencil is:  
4933-00-122-6771  
5911163  
SHOP SET, AVIM, DIV  
ARMAMENT REPAIR  
AIR MOBILE SHELTER  
MOUNTED  
A circled number '23' has an arrow pointing to the word 'MOUNTED'. To the right of the stencil is a line drawing of a shelving unit with two shelves and a door handle.

**DISASSEMBLY**

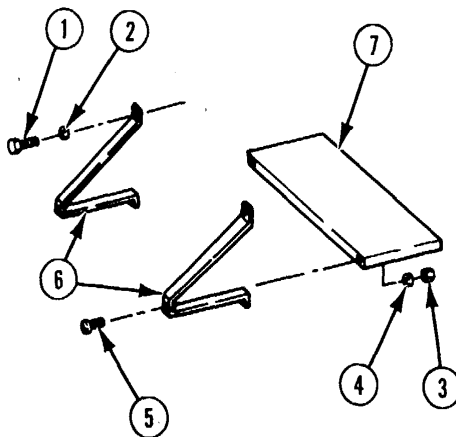
14 TWO STENCILS (24) ON THE TWO DOORS OF SHELTER. Check for readability.



The diagram shows a stencil with the text:  
ARMAMENT SHOP  
A circled number '24' has an arrow pointing to the word 'SHOP'.

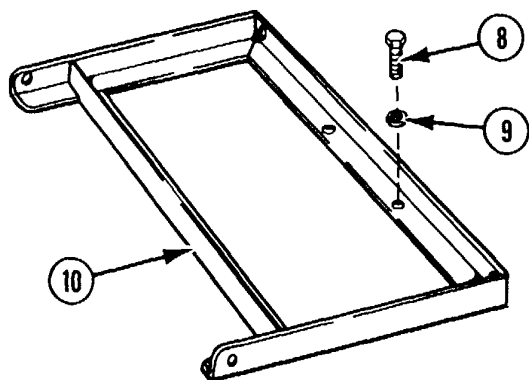
**NOTE**  
Steps 1 thru 4 pertain to disassembly of one wall shelving. There are four wall shelvings mounted on the shelter walls; the other three are disassembled in the same manner.

- 1 FOUR SCREWS (1) AND FOUR FLAT WASHERS (2). Remove and separate.
- 2 TWO NUTS (3) Remove.
- 3 TWO FLAT WASHERS (4) Remove.
- 4 TWO SCREWS (5), TWO BRACKETS (6), AND WALL SHELF (7). Separate.

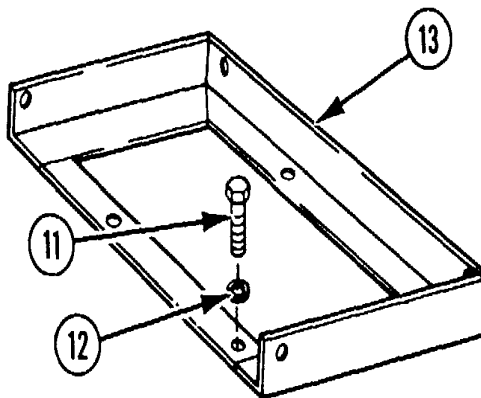


**NOTE**

Steps 5 thru 8 list parts used to secure the portable degreaser and storage cabinet to the shelter floor. The portable degreaser and storage cabinet should already have been removed (p 3- 109).



- 5 FOUR SCREWS (8) AND FOUR LOCKWASHERS (9). Remove and separate.
- 6 PORTABLE DEGREASER MOUNTING FRAME (10). Remove.



- 7 FOUR SCREWS (11) AND FOUR LOCKWASHERS (12). Remove and separate.
- 8 STORAGE CABINET MOUNTING FRAME (13). Remove.

**WARNING**

Injury to personnel may result if pressure is not relieved before beginning any maintenance on airhose.

**NOTE**

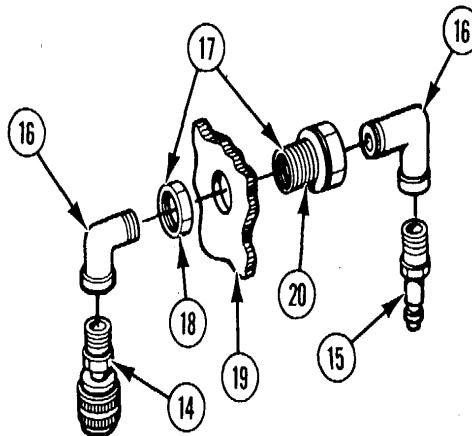
Steps 9 thru 12 list parts which form airhose connections on the inside and outside of shelter wall to left of personnel door (viewed from outside).

All airhoses must be disconnected before disassembling the following parts.

**3-9 SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

- 9 FEMALE COUPLING ASSEMBLY (14). Remove.
- 10 MALE COUPLING ASSEMBLY (15). Remove.
- 11 TWO ELBOWS (16). Remove.
- 12 BULKHEAD ADAPTER (17).
  - a Remove nut (18).
  - b Remove from shelter pan (19).
  - c Replace nut (18) on body (20).



**NOTE**  
Steps 13 thru 15 pertain to remaining detail parts of the shop set.

**WARNING**

DO NOT CONNECT OR DISCONNECT CABLES WHILE GENERATOR IS ENERGIZED.

VERIFY ALL WIRE COLOR CODES. USE A SUITABLE VOLTMETER TO INSURE PROPER GENERATOR PHASING BEFORE CONNECTING CABLE ASSEMBLY TO SHELTER. INSTALL AND CONNECT GROUNDING ROD BEFORE ENERGIZING SHELTER.

THE CABLE ASSEMBLY AND CABLE ADAPTER ASSEMBLY FURNISHED WITH THIS SHELTER SHALL BE INSTALLED AS SHOWN BELOW.

21

13 WARNING PLATE (21). If replacement is necessary, peel off outside shelter wall.

**CAUTION**

USE ONLY TYPE 1.1.1-TRICHLOROETHANE  
NSN - 6810-00-561-1487  
MOVE TO HOODED LOCATION PROVIDED.  
USE WITH ADEQUATE VENTILATION  
(VENT FAN MUST BE RUNNING AT ALL TIMES WHEN DEGREASER IS IN USE)  
AVOID PROLONGED OR REPEATED BREATHING OF VAPOR.  
AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.  
DO NOT TAKE INTERNALLY.

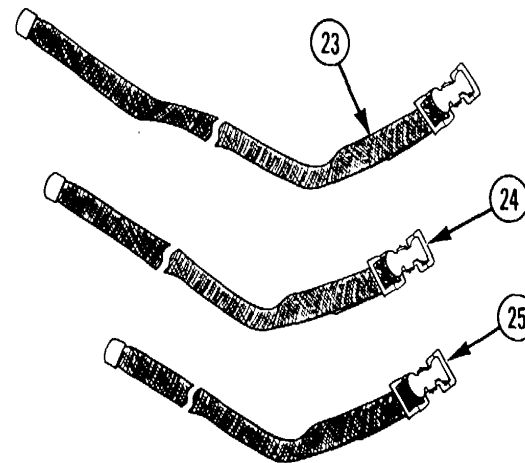
22

14 CAUTION PLATE (22). If replacement is necessary, peel off portable degreaser hood.

**NOTE**

Three tiedown straps (23) are used to tie coiled cable to shelter floor, four tiedown straps (24) are used to tie sorting file and wall shelvings to tables, and four tiedown straps (25) are used to tie the stools and equipment storage chest to floor.

15 THREE TIEDOWN STRAPS (23), FOUR TIEDOWN STRAPS (24), AND FOUR TIEDOWN STRAPS (25). Remove from storage.

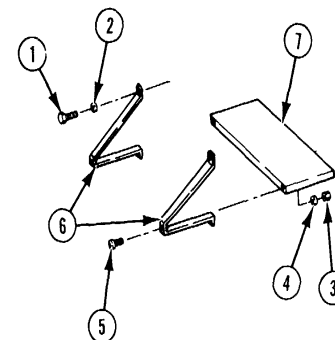


**REPAIR**

**NOTE**

Steps 1 thru 4 pertain to repair of one wall shelving. There are four wall shelvings mounted on the shelter walls; the other three are repaired in the same manner.

- 1 FOUR SCREWS (1) AND FOUR FLAT WASHERS (2) Replace if missing, damaged, or corroded.
- 2 TWO NUTS (3), TWO FLAT WASHERS (4), AND TWO SCREWS (5) Replace if missing, damaged, or corroded.
- 3 TWO BRACKETS (6). Replace by fabrication (fig. 1, app E).
- 4 WALL SHELF (7). Replace if bent or cracked.



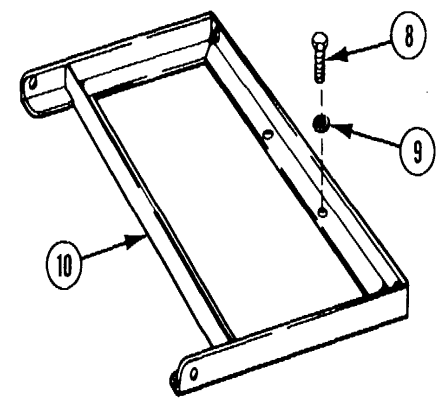


**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

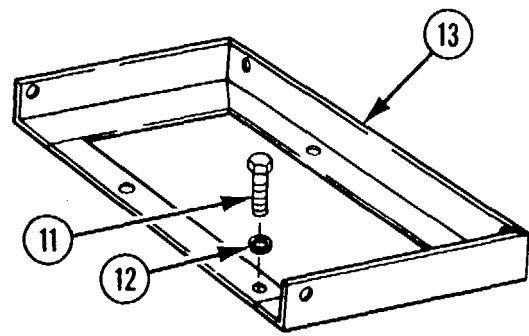
**REPAIR (cont)**

**NOTE**  
**Steps 5 thru 8 list parts used to secure the portable degreaser and storage cabinet in the shelter floor.**

- 5 FOUR SCREWS (8) AND FOUR LOCK-WASHERS (9). Replace if missing, damaged, or corroded.
- 6 PORTABLE DEGREASER MOUNTING FRAME (10).
  - a Reweld any cracked welds.
  - b Replace with new fabricated item (fig. 2, app E) if bent or broken.



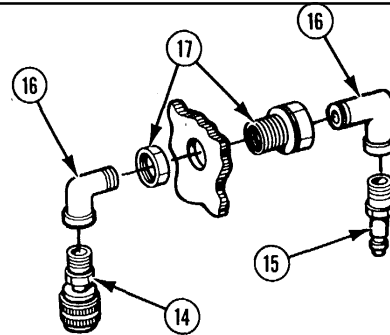
- 7 FOUR SCREWS (11) AND FOUR LOCKWASHERS (12) Replace if missing, damaged, or corroded.
- 8 STORAGE CABINET MOUNTING FRAME (13).
  - a Reweld any cracked welds.
  - b Replace with new fabricated item (fig. 3, app E) if bent or broken.



**NOTE**

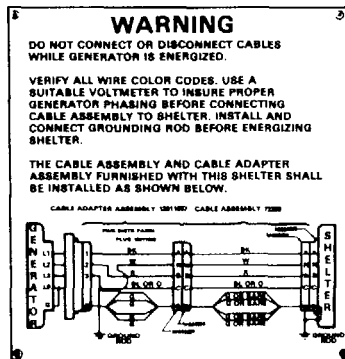
Steps 9 and 10 list parts which form airhose connections on the inside and outside of the shelter wall to left of personnel door (viewed from out- side).

- 9 FEMALE COUPLING ASSEMBLY (14) AND MALE COUPLING ASSEMBLY (15). Replace if there is not proper quick-connect/disconnect action with mating coupling assemblies.
- 10 TWO ELBOWS (16) AND BULKHEAD ADAPTER (17). Replace if cracked or corroded.



**NOTE**

Steps 11 thru 13 pertain to remaining detail parts of the shop set.



- 11 WARNING PLATE (18). Replace with new part if removed or damaged.

- 12 CAUTION PLATE (19). Replace with new part if removed.

**CAUTION**

USE ONLY TYPE 1,1,1-TRICHLOROETHANE  
 NSN - 6810-00-551-1487  
 MOVE TO HOODED LOCATION PROVIDED.  
 USE WITH ADEQUATE VENTILATION  
 (VENT FAN MUST BE RUNNING AT ALL TIMES  
 WHEN DEGREASER IS IN USE)  
 AVOID PROLONGED OR REPEATED BREATHING OF VAPOR.  
 AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.  
 DO NOT TAKE INTERNALLY.

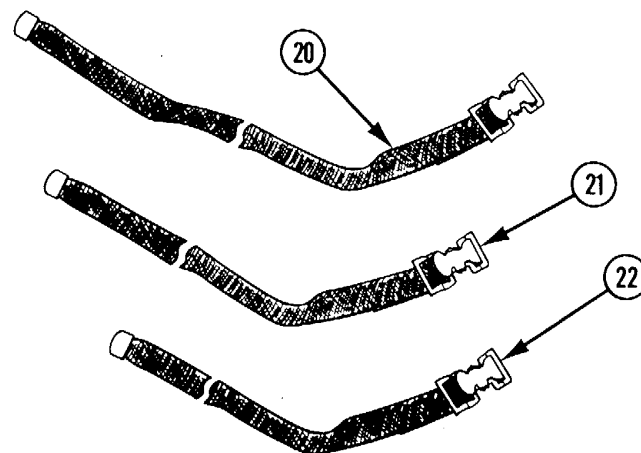
**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

**NOTE**

Three tiedown straps (20) are used to tie cable coil to shelter floor, four tiedown straps (21) are used to tie sorting file and wall shelvings to tables, and four tiedown straps (22) are used to tie the stools and equipment storage chest to floor.

13 THREE TIEDOWN STRAPS (20), FOUR TIEDOWN STRAPS (21), AND FOUR TIEDOWN STRAPS (22). Replace if missing, frayed, or broken.



**REPAIR/APPLICATION OF STENCILS**

**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves (item 9, app D), it may cause cracks in the skin and in some cases mild irritation or inflammation.

**NOTE**

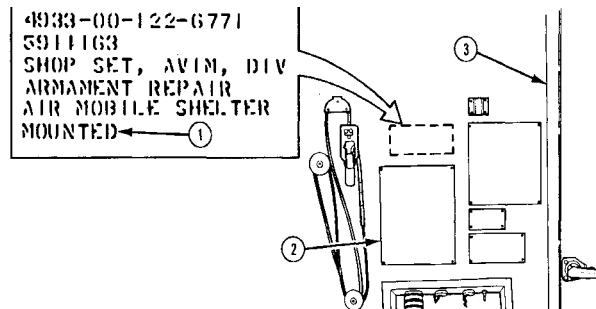
Stencil letters are to be painted using black semi-gloss lacquer (item 11, app D).

**NOTE**

Stencil (1) is located on outside shelter wall above existing data plate (2), to the left of personnel door (3).

**1 STENCIL (1).**

- a. Wipe surface clean with dry cleaning solvent (item 6, app D).
- b. Lettering should be 0.50 to 0.62 in. (1.27 to 1.57 cm) high as illustrated.

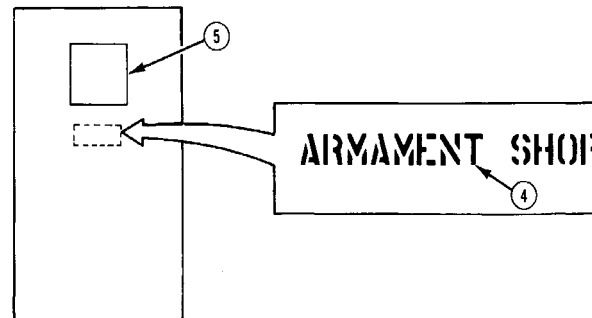


**NOTE**

The two stencils (4) are located 3.00 in. (7.62 cm) below vent (5) on personnel and cargo doors.

**2 TWO STENCILS (4).**

- a. Wipe surface clean with dry cleaning solvent (item 6, app D).
- b. Lettering should be 1.50 to 2.00 in. (3.81 to 5.08 cm) high as illustrated.



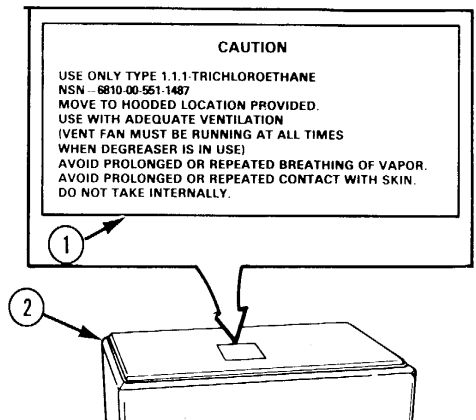
**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY**

**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation or inflammation.

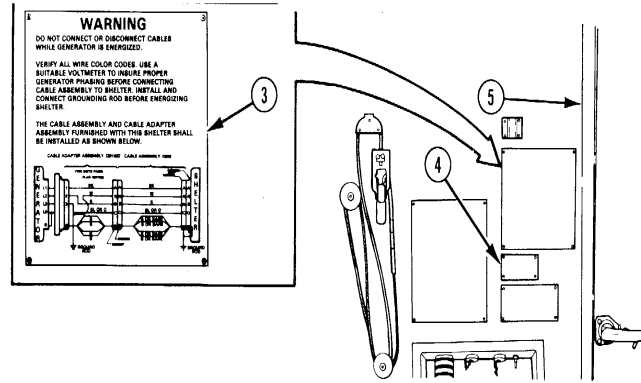
- 1 CAUTION PLATE (1).
  - a. Before installing new plate, clean area with dry cleaning solvent (item 6, app D).
  - b. Remove protective backing.
  - c. Attach to center of hood on portable degreaser (2).



**CAUTION**

USE ONLY TYPE 1.1.1-TRICHLOROETHANE  
 NSN - 6810-00-551-1487  
 MOVE TO HOODED LOCATION PROVIDED.  
 USE WITH ADEQUATE VENTILATION  
 (VENT FAN MUST BE RUNNING AT ALL TIMES  
 WHEN DEGREASER IS IN USE)  
 AVOID PROLONGED OR REPEATED BREATHING OF VAPOR.  
 AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.  
 DO NOT TAKE INTERNALLY.

- 2 WARNING PLATE (3).
  - a. Before installing new plate, clean area with dry cleaning solvent (item 6, app D).
  - b. Remove protective backing
  - c. Apply to outside shelter wall just above existing data plate (4) to left of personnel door (5).



**WARNING**

DO NOT CONNECT OR DISCONNECT CABLES WHILE GENERATOR IS ENERGIZED.

VERIFY ALL WIRE COLOR CODES USE A SUITABLE VOLTMETER TO INSURE PROPER GENERATOR PHASING BEFORE CONNECTING CABLE ASSEMBLY TO SHELTER. INSTALL AND CONNECT GROUNDING ROD BEFORE ENERGIZING SHELTER.

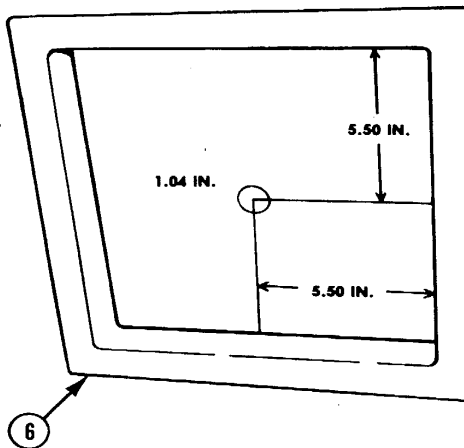
THE CABLE ASSEMBLY AND CABLE ADAPTER ASSEMBLY FURNISHED WITH THIS SHELTER SHALL BE INSTALLED AS SHOWN BELOW.

CABLE ADAPTER ASSEMBLY (SEE CABLE ASSEMBLY 1) 1000

**NOTE**

**Step 3 is performed only once at the time of initial installation.**

- 3 SHELTER PAN (6). Drill a 1.04-in. (2.64-cm)  $\pm 0.01$ -in. (0.03-cm) diameter hole through, 5.50 in. (13.97 cm) to left of right edge and 5.50 in. (13.97 cm) down from top edge (viewed from outside).



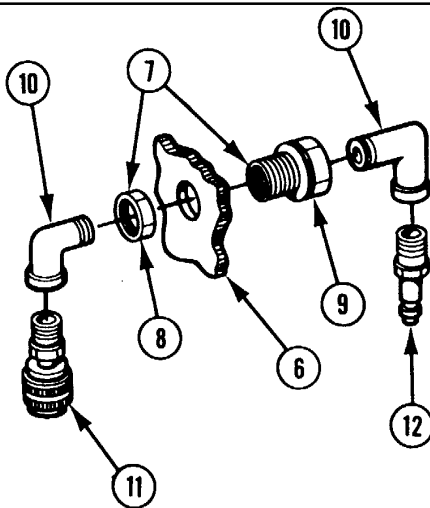
**NOTE**

Steps 4 thru 7 list parts which form airhose connections on the inside and outside of the shelter wall to left of personnel door (viewed from outside).

- 4 BULKHEAD ADAPTER (7)

- a. Remove nut (8) from body (9).
- b. Install body (9) through shelter pan (6) adjacent to personnel door.
- c. Tighten nut (8) on body (9).

- 5 TWO ELBOWS (10). Install on two ends of bulkhead adapter (7).
- 6 FEMALE COUPLING ASSEMBLY (11). Install on inside of shelter.
- 7 MALE COUPLING ASSEMBLY (12). Install on outside of shelter.



**NOTE**

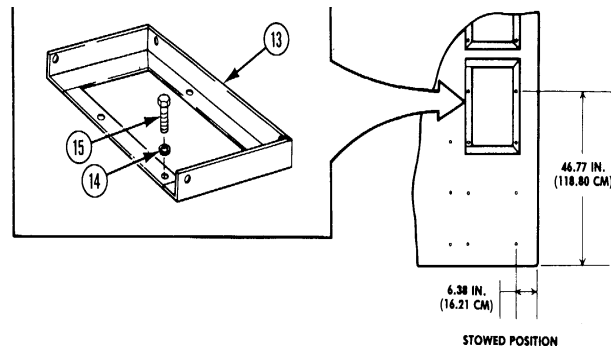
All airhoses may now be connected to the coupling assemblies.

Steps 8 thru 11 list parts used to secure the portable degreaser and storage cabinet to the shelter floor.

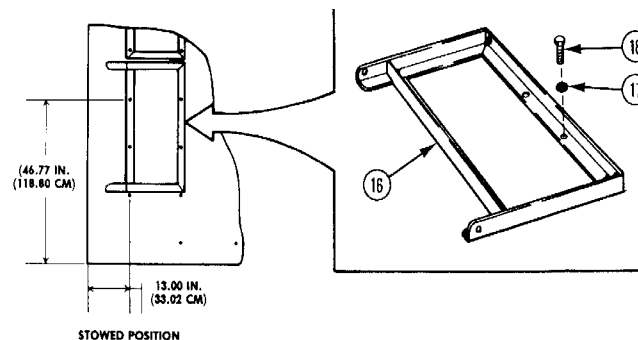
**3-9. SHOP SET--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont) I**

- 8 STORAGE CABINET MOUNTING FRAME (13). Place on floor at cargo door end of right table as illustrated.
- 9 FOUR LOCKWASHERS (14) AND FOUR SCREWS (15). Install.



- 10 PORTABLE DEGREASER MOUNTING FRAME (16). Place on floor at cargo door end of left table as illustrated.
- 11 FOUR LOCKWASHERS (17) AND FOUR SCREWS (18). Install.



**NOTE**

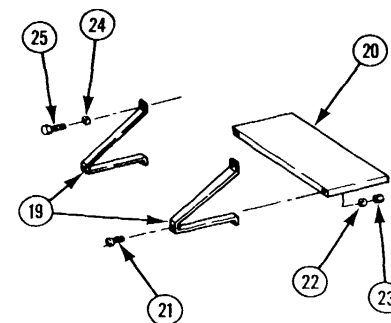
Steps 12 thru 15 pertain to reassembly of one wall shelving. There are four wall shelvings mounted on the shelter walls; the other three are reassembled in the same manner.

12 TWO BRACKETS (19) AND WALL SHELF (20). Position together.

13 TWO SCREWS (21), TWO FLAT WASHERS (22), AND TWO NUTS (23). Install on wall shelf (20) and bracket (19).

14 TWO BRACKETS (19). Hold in position so that holes line up with blind inserts in shelter wall.

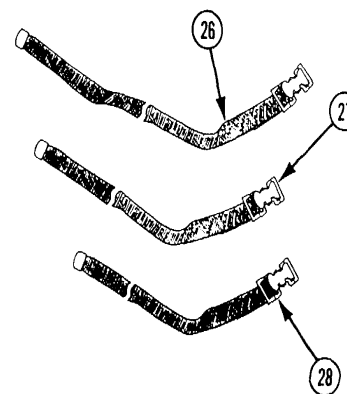
15 FOUR FLAT WASHERS (24) AND FOUR SCREWS (25). Install in shelter wall.



**NOTE**

Three tiedown straps (26) are used to tie the cable coil to the shelter floor, four tiedown straps (27) are used to tie the sorting file and wall shelvings to tables, and four tiedown straps (28) are used to tie stools and equipment storage chest to floor.

16 THREE TIEDOWN STRAPS (26), FOUR TIEDOWN STRAPS (27), R AND FOUR TIEDOWN STRAPS (28). Place in storage.





**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- a. Inspection
- b. Disassembly
- c. Inspection after disassembly
- d. Repair
- e. Modification
- f. Reassembly
- g. Test

**INITIAL SETUP**

Test Equipment  
 Ohmmeter  
 Voltmeter

Special Tools  
 Armament repair shop set (SC 4933-95-CL-A21)  
 AVIM tool crib shop set (SC 4920-99-CL-A86)  
 Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

Material s/Parts  
 Tape (item 18, app D)  
 Lug terminal (MS25036-111)  
 Lug terminal (MS25036-156)  
 References  
 Appendix C  
 Appendix D  
 Appendix E

3-40 Schematic diagram.  
 3-59 Wire table.  
 3-39 Wiring diagram.

Troubleshooting Reference  
 3-7 No electrical power at outlets.

Equipment Conditions  
 2-24 Shop set de-energized.  
 2-24 120/208V cable assembly disconnected at shelter.  
 3-89 Conduit installation installed.

General Safety Instructions

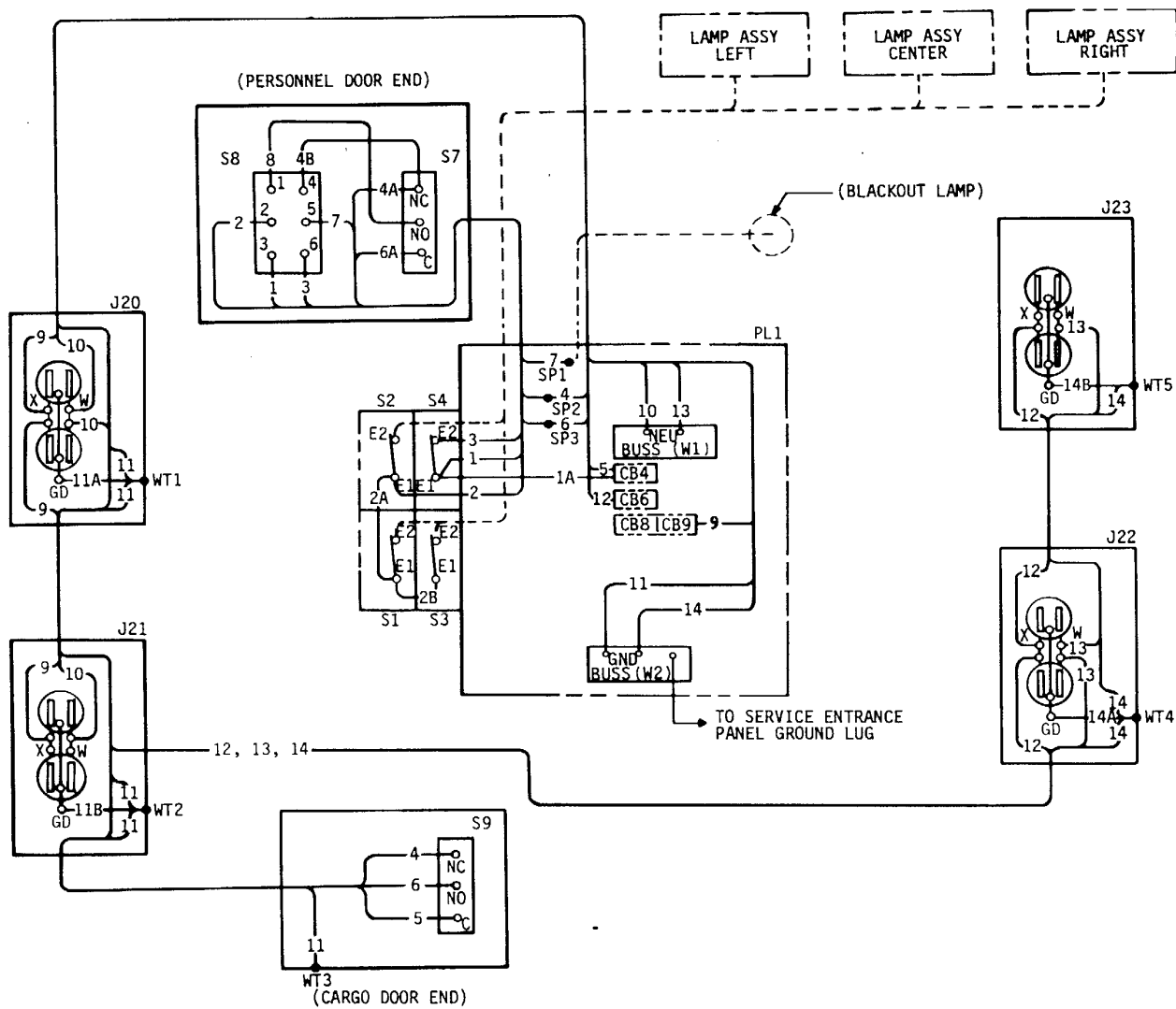
**WARNING**

De-energize shop set by placing circuit breaker on power distribution panel connected to power source in OFF position and then disconnect 120/208V cable assembly from shelter.

**INSPECTION**

With covers removed, check for loose or broken connections. Then check with a suitable ohmmeter for continuity. Circuitry details *may* be found on the wiring diagram (fig. 3-1) and the schematic diagram (fig. 3-2).

Visually check all external electrical components for condition and security of installation.



**NOTE**  
 This diagram indicates the configuration of affected wiring after application of electrical modifications.  
 Dashed lines indicate existing wires.

Figure 3-1. Wiring diagram.

3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)

INSPECTION (cont)

NOTE

Switches S7 and S9 are in NC position when doors are open.

Blackout override switch S7 and door switch S8 are mounted in the same enclosure above the personnel door.

Door switch S9 is mounted

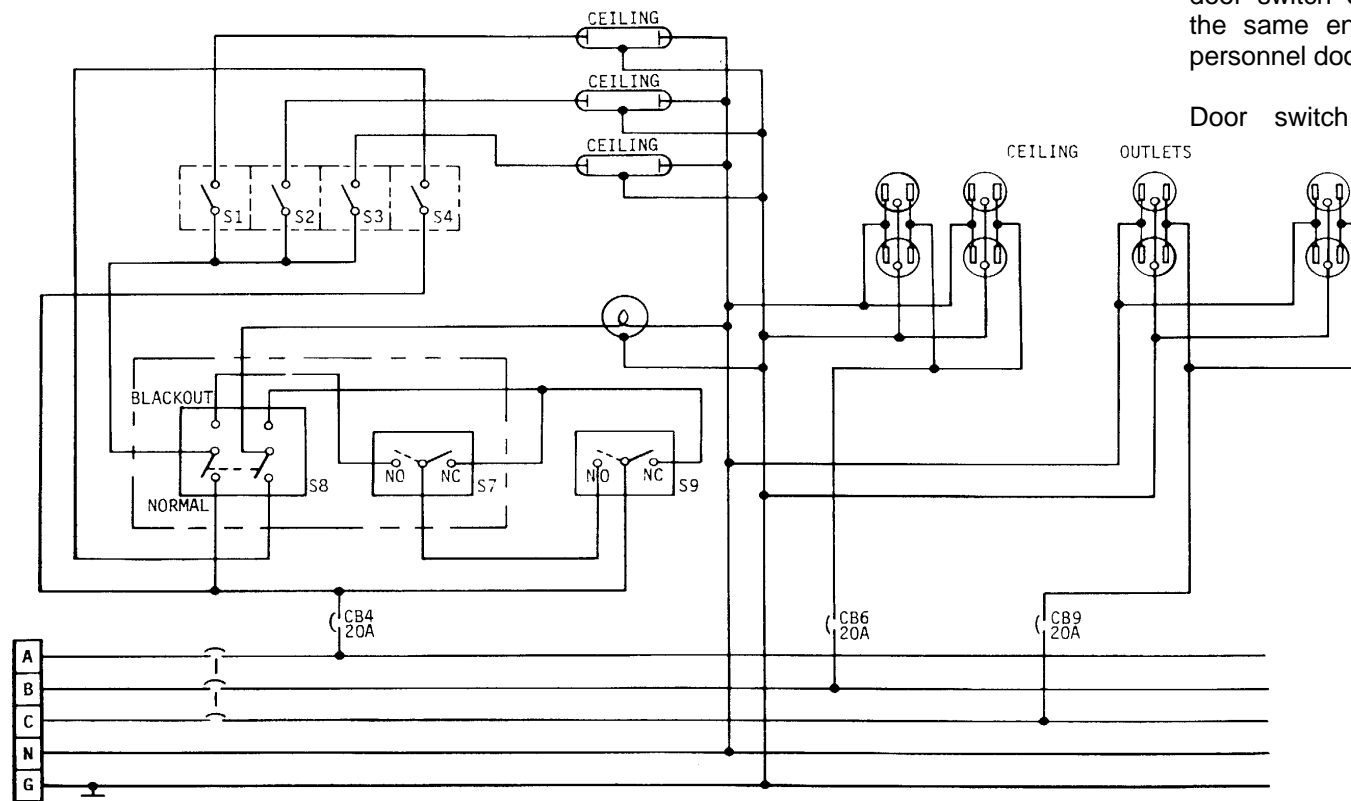


Figure 3-2. Schematic diagram.

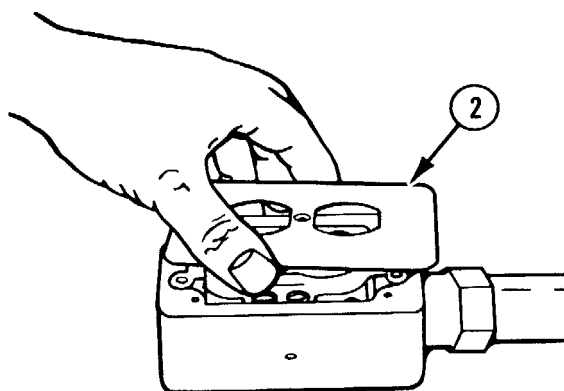
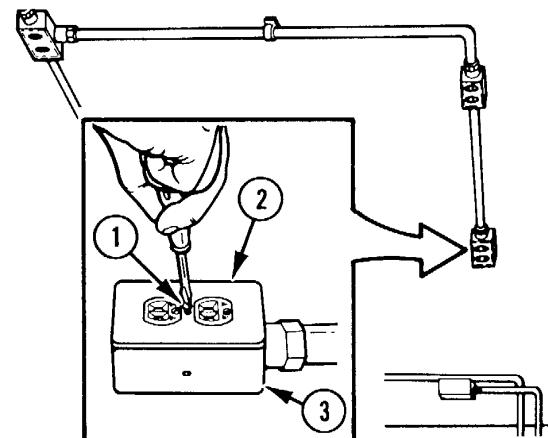
**DISASSEMBLY**

**NOTE**

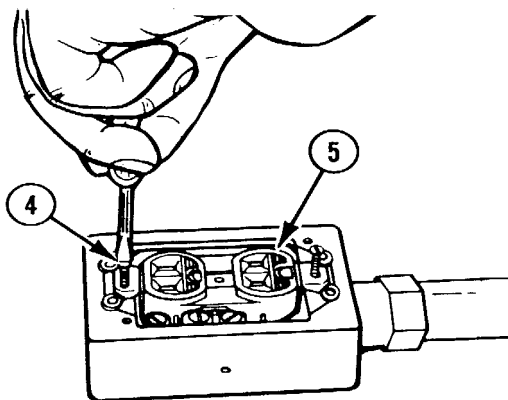
For identification purposes at disassembly, tag all wires with wire number and terminal connection locations.

For clarity, wires not mentioned in the text are not shown.

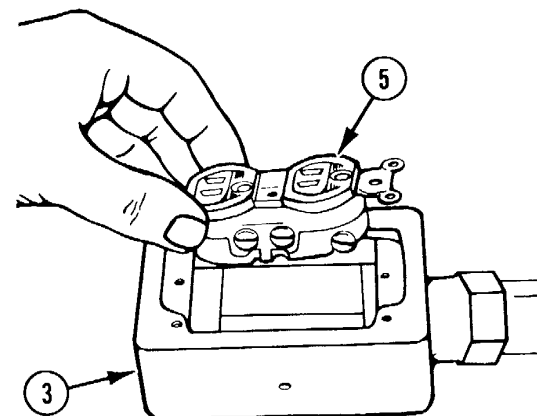
- 1 SCREW (1). Remove from cover (2) of receptacle box J23 (3).



- 2 COVER (2). Remove.



- 3 TWO SCREWS (4). Remove from receptacle (5).

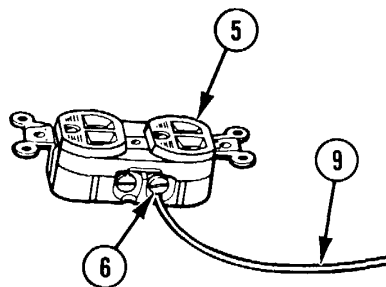


- 4 RECEPTACLE (5). Pull out of receptacle box J23 (3).

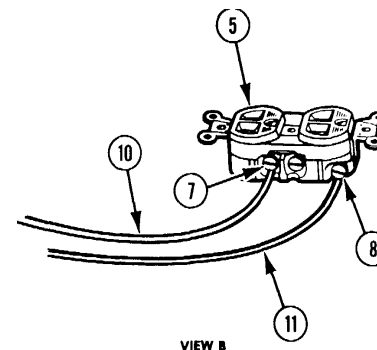
**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont) I**

**DISASSEMBLY (cont)**

- 5 BRASS SCREW (6), SILVER SCREW (7), AND GROUND SCREW (8). Loosen.
- 6 RED WIRE (9), WHITE WIRE (10), AND GREEN WIRE (11). Disconnect.
- 7 RECEPTACLE (5). Remove.

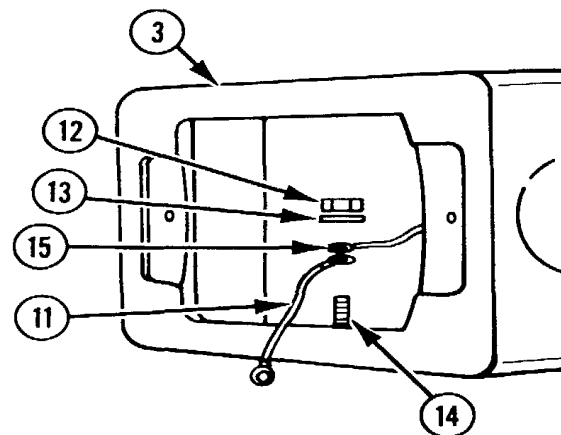


VIEW A

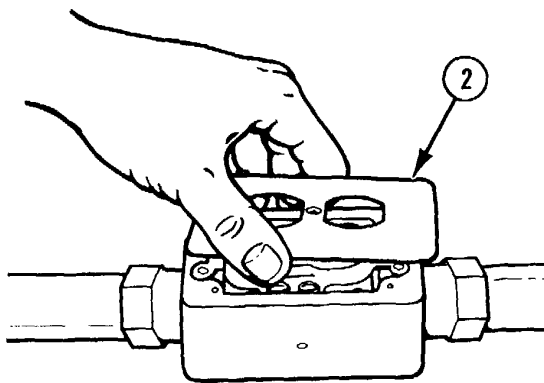
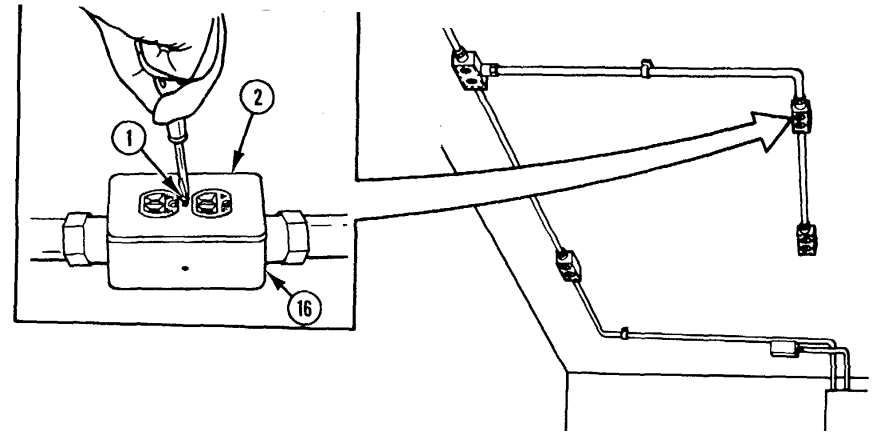


VIEW B

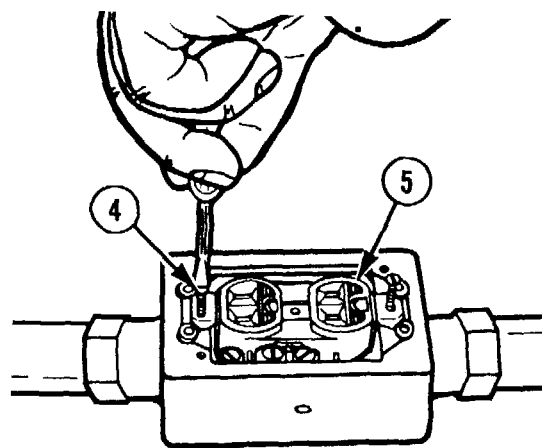
- 8 NUT (12) AND WASHER (13). Remove from screw (14) in receptacle box J23 (3).
- 9 GREEN WIRE (11) AND GREEN WIRE (15). Disconnect.
- 10 GREEN WIRE (11). Remove.
- 11 WASHER (13) AND NUT (12). Reinstall on screw (14).



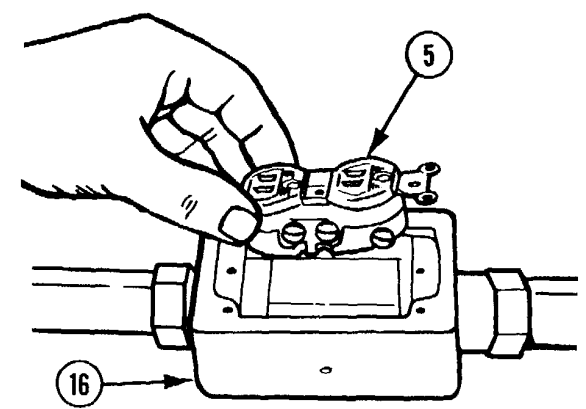
12 SCREW (1). Remove from cover (2) of conduit box J22 (16).



13 COVER (2). Remove.



14 TWO SCREWS (4). Remove from receptacle (5).



15 RECEPTACLE (5). Pull out of conduit box J22 (16).

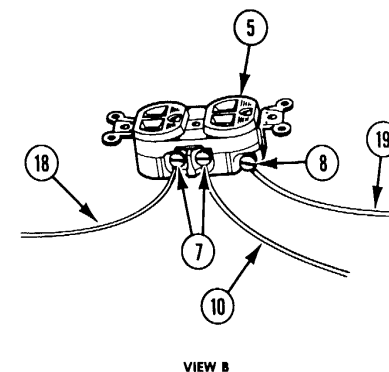
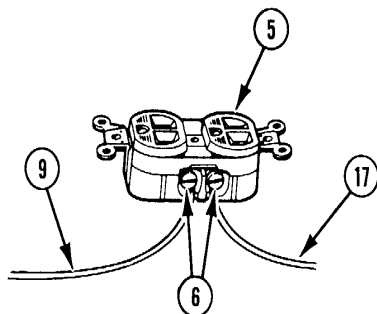
**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

16 TWO BRASS SCREWS (6), TWO SILVER SCREWS (7), AND GROUND SCREW (8). Loosen.

17 RED WIRE (9), RED WIRE (17), WHITE WIRE (10), WHITE WIRE (18), AND GREEN WIRE (19). Disconnect.

18 RECEPTACLE (5). Remove.

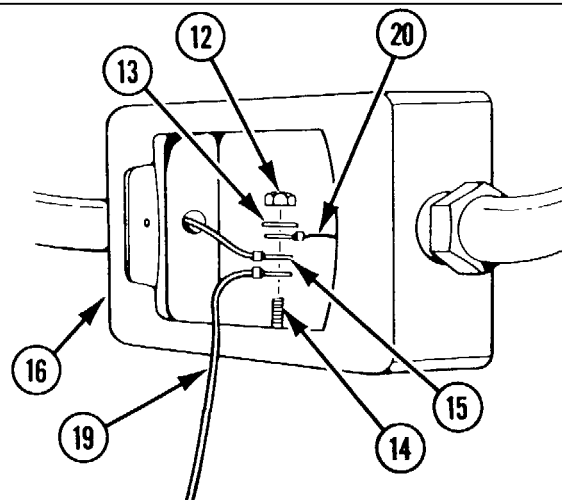


19 NUT (12) AND WASHER (13). Remove from screw (14) in conduit box J22 (16).

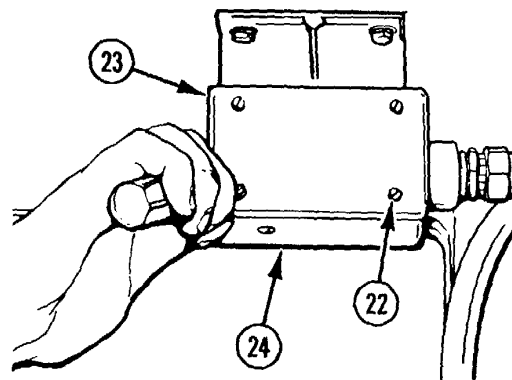
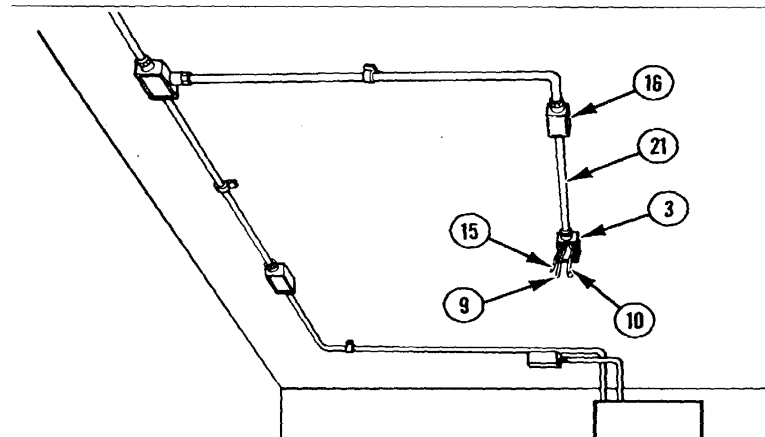
20 GREEN WIRE (20), GREEN WIRE (15), AND GREEN WIRE (19). Disconnect.

21 GREEN WIRE (19). Remove.

22 WASHER (13) AND NUT (12). Reinstall on screw (14).



23 GREEN WIRE (15), RED WIRE (9), AND WHITE WIRE (10). Remove from conduit (21) between receptacle box J23 (3) and conduit box J22 (16).



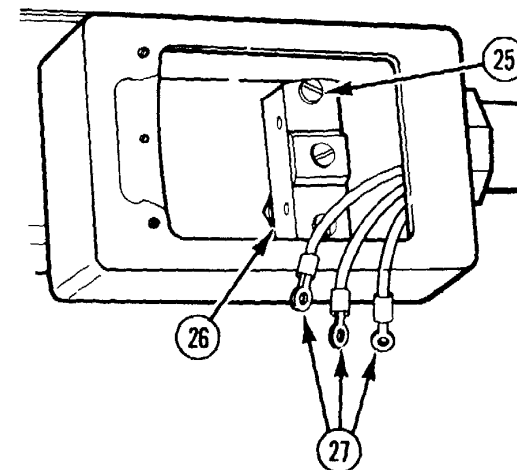
24 FOUR SCREWS (22). Remove from cover (23) of switchbox S9 (24).

25 COVER (23). Remove.

26. THREE SCREWS (25). remove from microswitch S9 (26).

27 THREE BLUE WIRES (27). Disconnect.

28 THREE SCREWS (25). Reinstall in microswitch S9 (26).





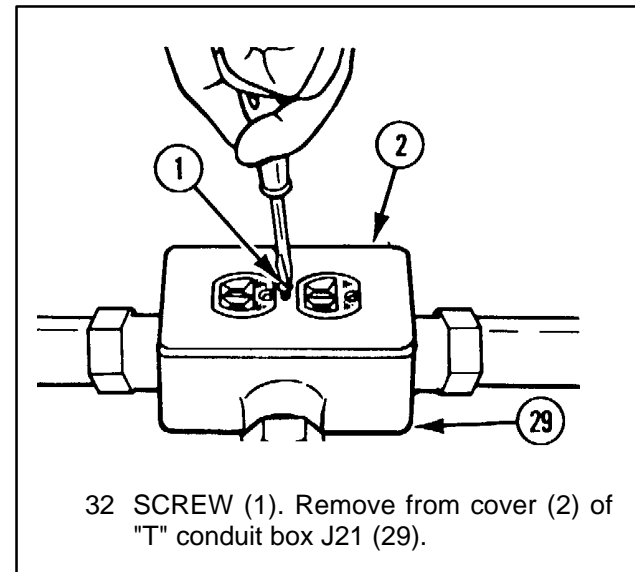
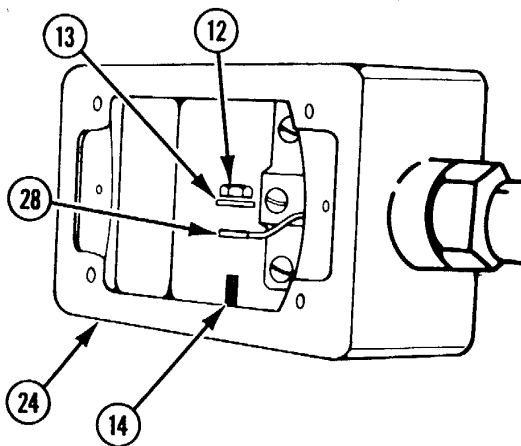
**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

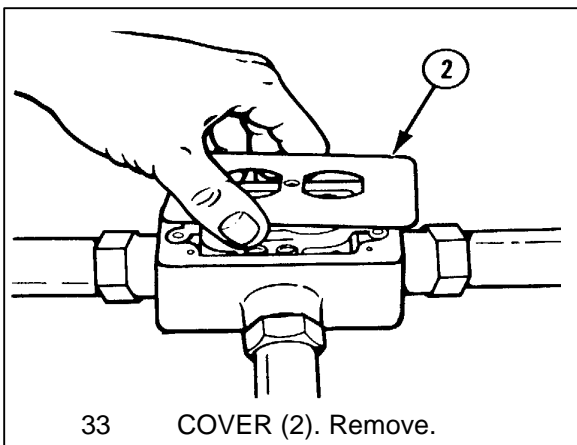
29 NUT (12) AND WASHER (13). Remove from screw (14) in switchbox S9 (24).

30 GREEN WIRE (28). Disconnect.

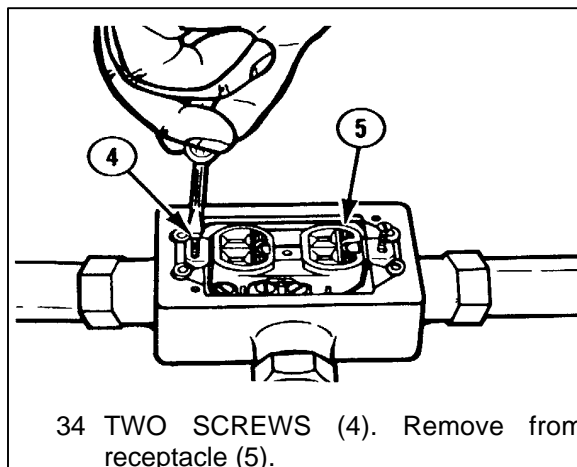
31 WASHER (13) AND NUT (12). Reinstall on screw (14).



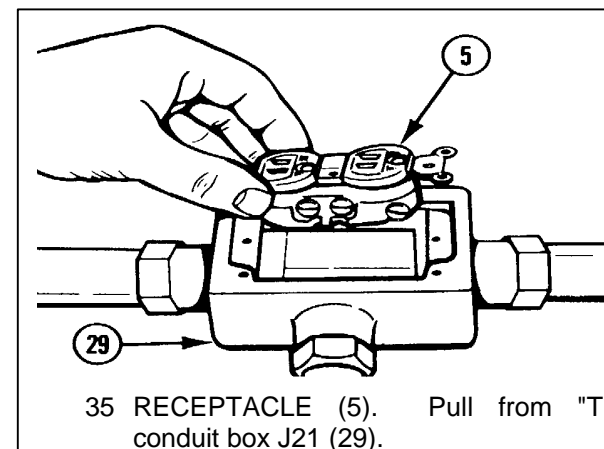
32 SCREW (1). Remove from cover (2) of "T" conduit box J21 (29).



33 COVER (2). Remove.



34 TWO SCREWS (4). Remove from receptacle (5).

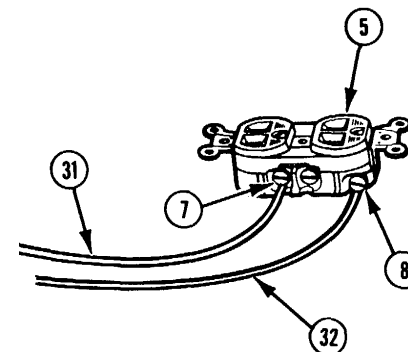
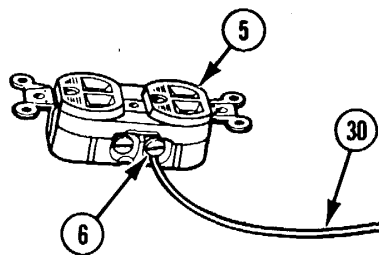


35 RECEPTACLE (5). Pull from "T" conduit box J21 (29).

36 BRASS SCREW (6), SILVER SCREW (7), AND GROUND SCREW (8). Loosen.

37 BLACK WIRE (30), WHITE WIRE (31), AND GREEN WIRE (32). Disconnect.

38 RECEPTACLE (5). Remove.

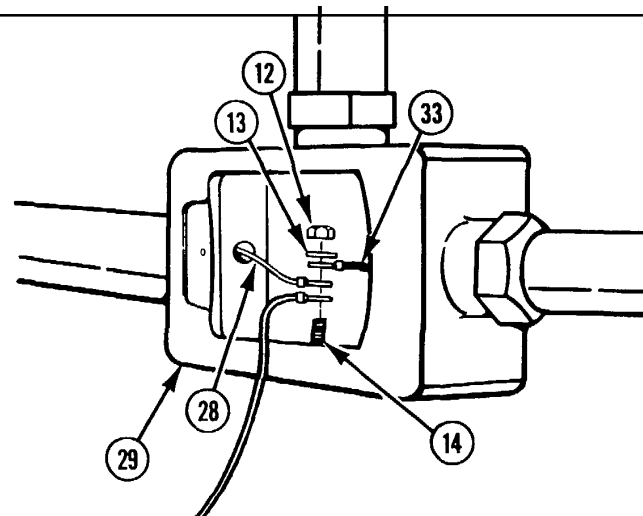


39 NUT (12) AND WASHER (13). Remove from screw (14) in "T" conduit box J21 (29).

40 GREEN WIRE (33), GREEN WIRE (28), AND GREEN WIRE (32). Disconnect.

41 GREEN WIRE (32). Remove.

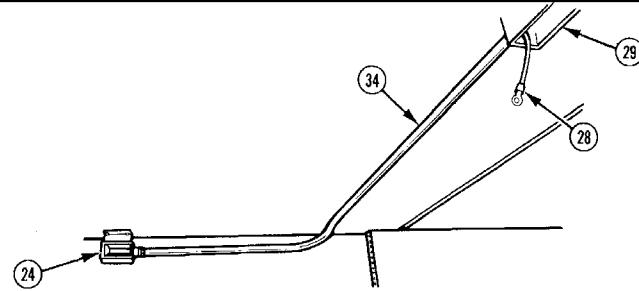
42 WASHER (13) AND NUT (12). Reinstall on screw (14).



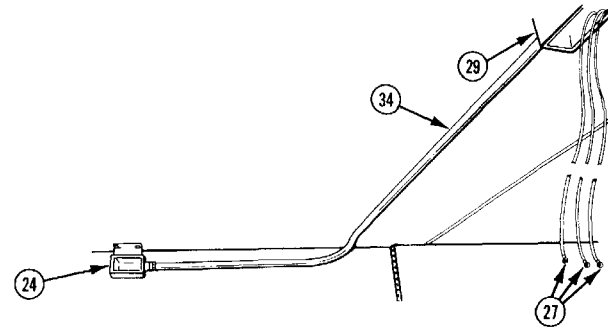
**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

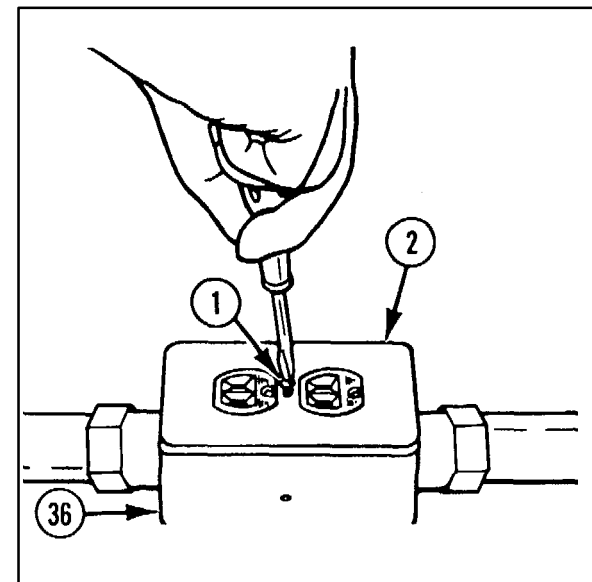
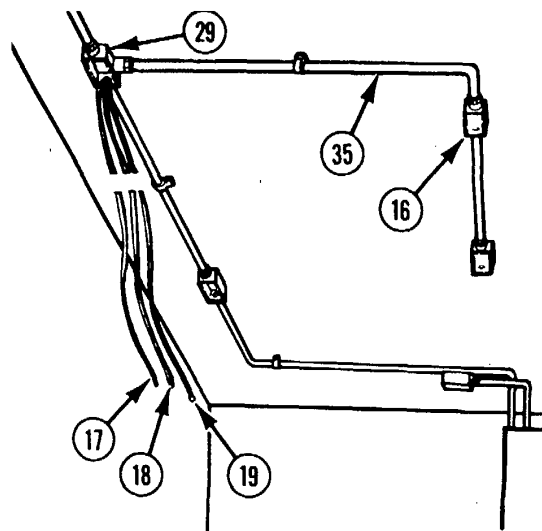
43 GREEN WIRE (28). Remove from conduit (34) between switchbox S9 (24) and "T" conduit box J21 (29).



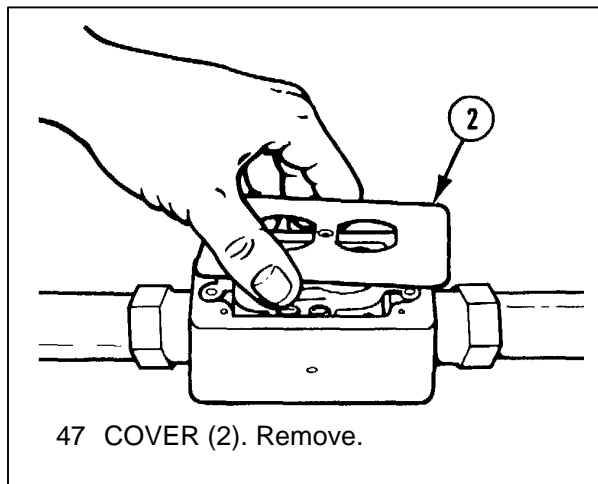
44 THREE BLUE WIRES (27). Pull through conduit (34) from switchbox S9 (24) to "T" conduit box J21 (29).



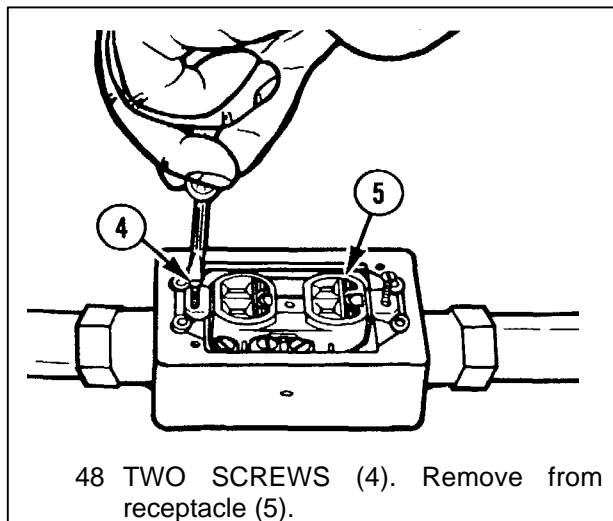
45 RED WIRE (17), WHITE WIRE (18), AND GREEN WIRE (19). Pull through conduit (35) from conduit box J22 (16) to "T" conduit box J21 (29).



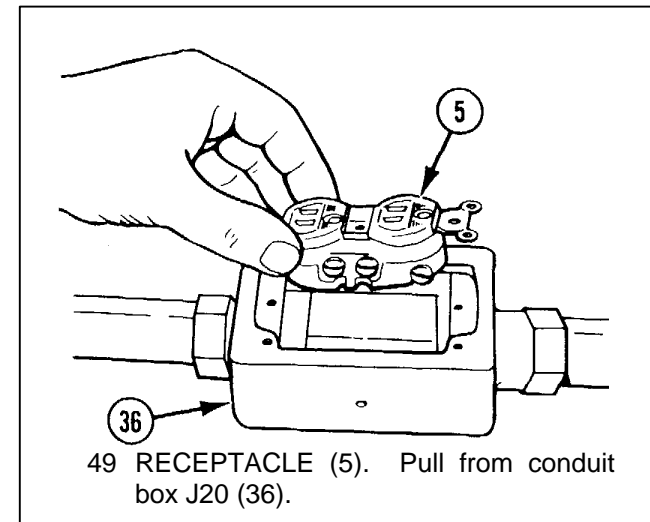
46 SCREW (1). Remove from cover (2) of conduit box J20 (36).



47 COVER (2). Remove.



48 TWO SCREWS (4). Remove from receptacle (5).



49 RECEPTACLE (5). Pull from conduit box J20 (36).

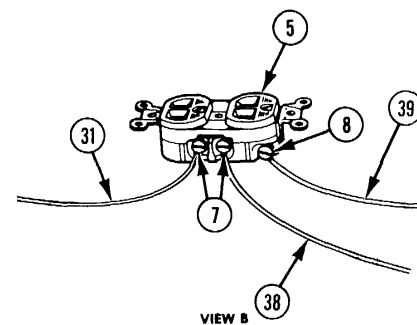
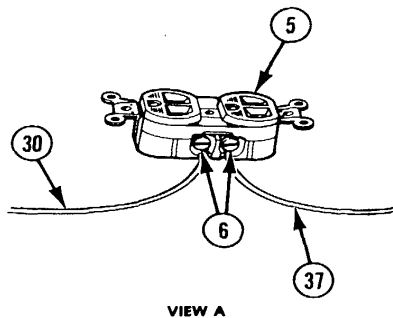
**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

50 TWO BRASS SCREWS (6), TWO SILVER SCREWS (7), AND GROUND SCREW (8). Loosen.

51 BLACK WIRE (30), BLACK WIRE (37), WHITE WIRE (31), WHITE WIRE (38), AND GREEN WIRE (39). Disconnect.

52 RECEPTACLE (5). Remove.

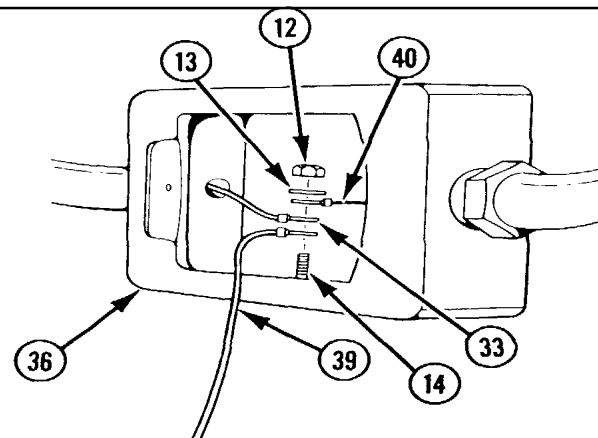


53 NUT (12) AND WASHER (13). Remove from screw (14) in conduit box J20 (36).

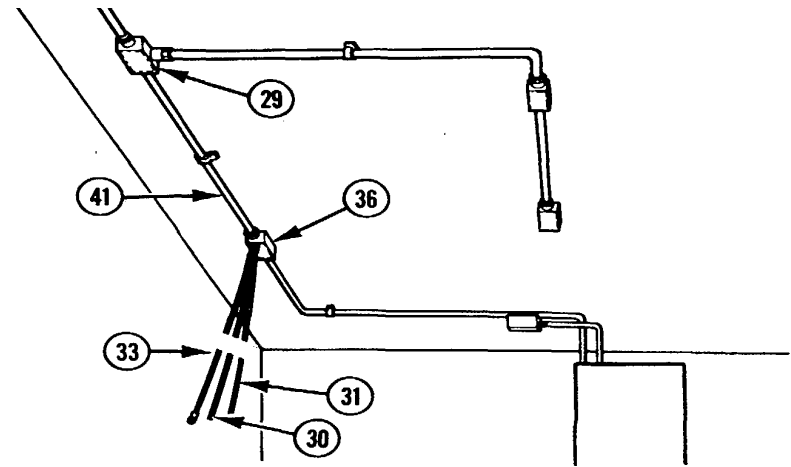
54 GREEN WIRE (40), GREEN WIRE (33), AND GREEN WIRE (39). Disconnect.

55 GREEN WIRE (39). Remove.

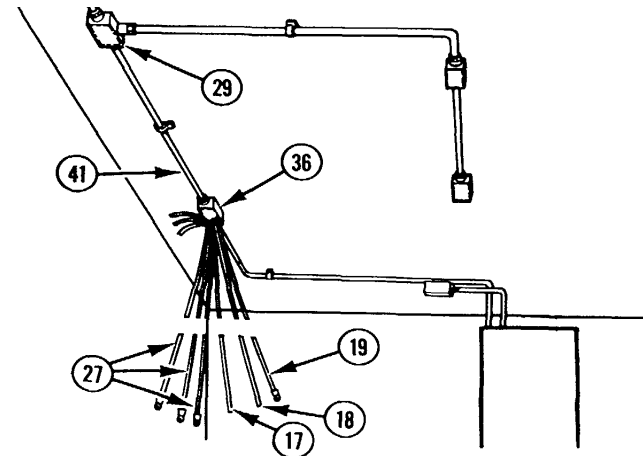
56 WASHER (13) AND NUT (12). Reinstall on screw (14).



57 GREEN WIRE (33), BLACK WIRE (30), AND WHITE WIRE (31). Remove from conduit (41) between "T" conduit box J21 (29) and conduit box J20 (36).

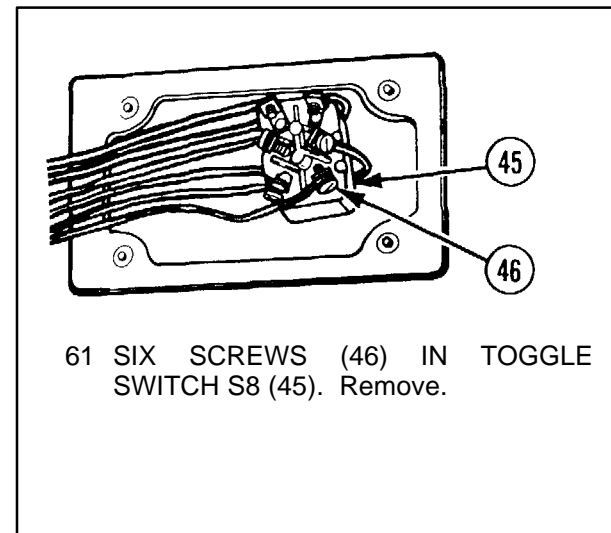
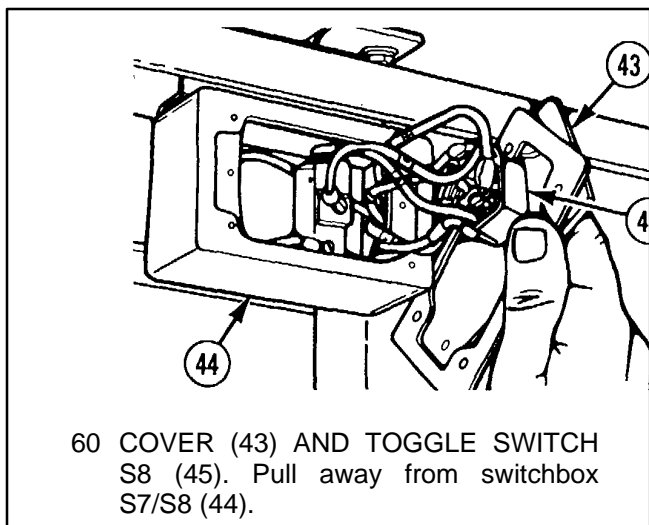
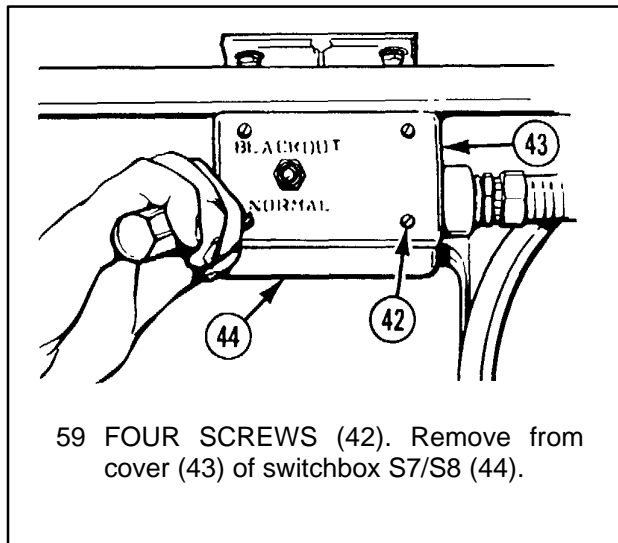


58 THREE BLUE WIRES (27), RED WIRE (17), WHITE WIRE (18), AND GREEN WIRE (19). Pull through conduit (41) from "T" conduit box J21 (29) to conduit box J20 (36).

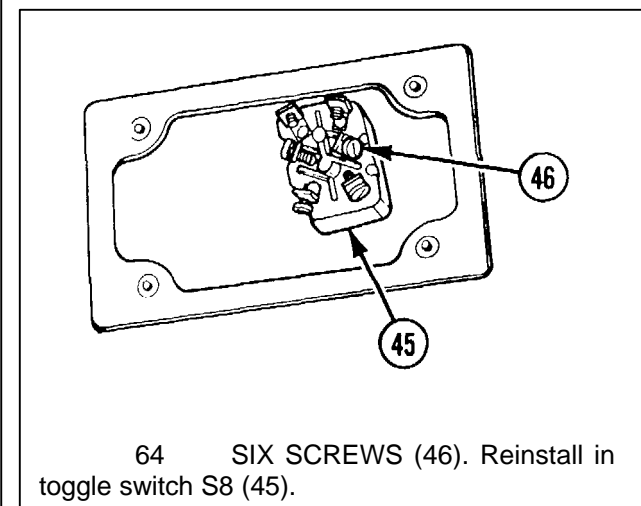
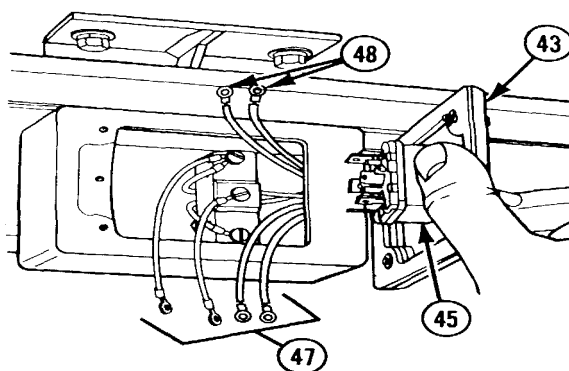


3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)



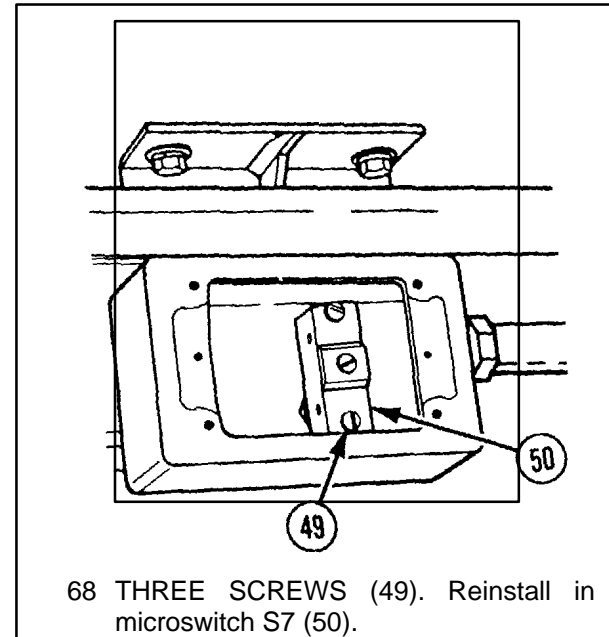
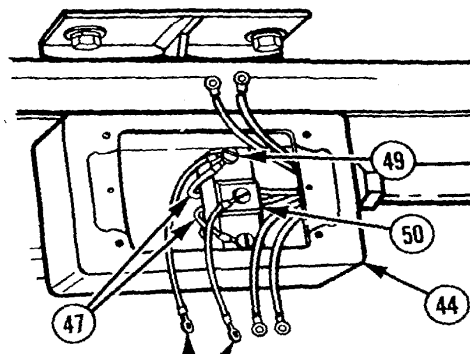
- 62 FOUR BLACK WIRES (47) AND TWO BLACK WIRES (48). Disconnect.
- 63 COVER (43) AND TOGGLE SWITCH S8 (45). Remove.



65 THREE SCREWS (49) IN MICROSWITCH S7 (50). Remove.

66 TWO BLACK WIRES (47) AND TWO BLACK WIRES (48). Disconnect.

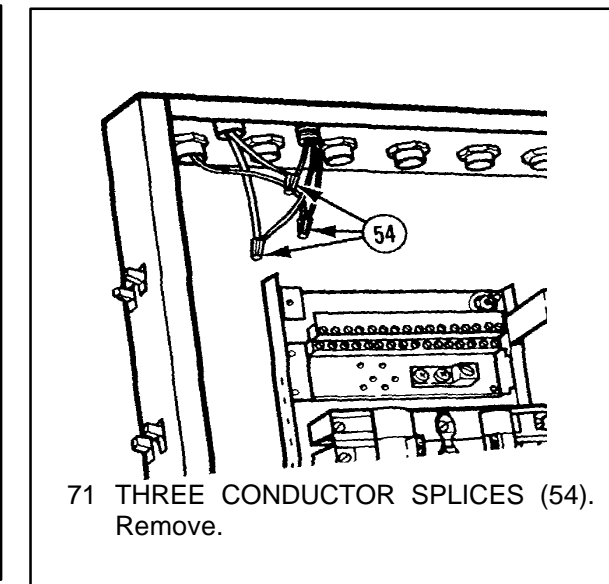
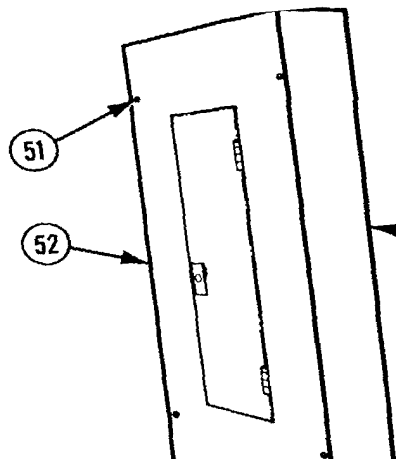
67 TWO BLACK WIRES (48). Remove from switchbox S7/S8 (44).



68 THREE SCREWS (49). Reinstall in microswitch S7 (50).

69 FOUR SCREWS (51). Remove from front panel (52) of circuit breaker panel box PL1 (53).

70 FRONT PANEL (52). Remove.



71 THREE CONDUCTOR SPLICES (54). Remove.

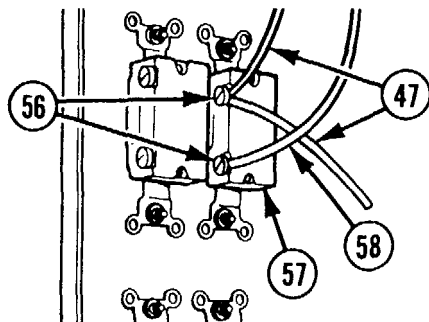
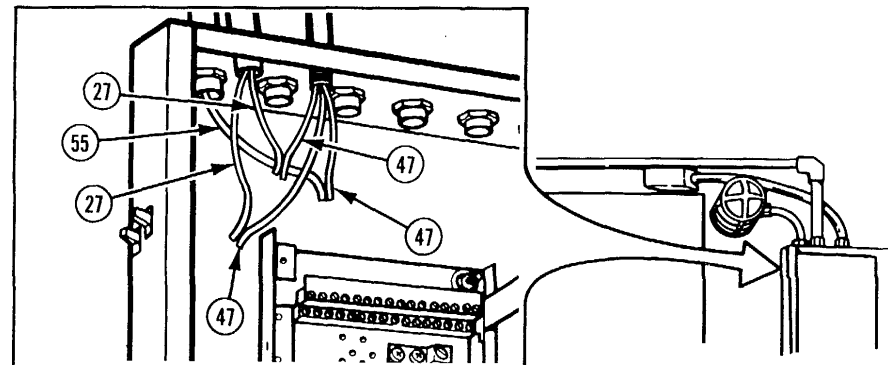


**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

72 THREE BLACK WIRES (47).

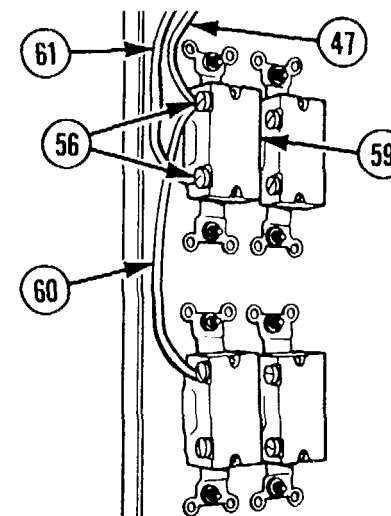
- a. Disconnect black wire (47) from black wire (55) of blackout lamp.
- b. Disconnect black wire (47) from blue wire (27).
- c. Disconnect black wire (47) from blue wire (27).



- 73 TWO TERMINAL SCREWS (56). Loosen in switch S4 (57).
- 74 TWO BLACK WIRES (47) AND BLACK WIRE (58). Disconnect.

75 TWO TERMINAL SCREWS (56). Loosen in switch S2 (59).

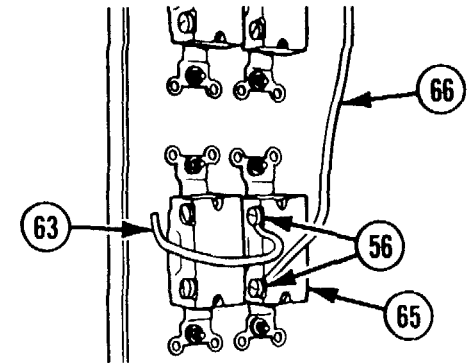
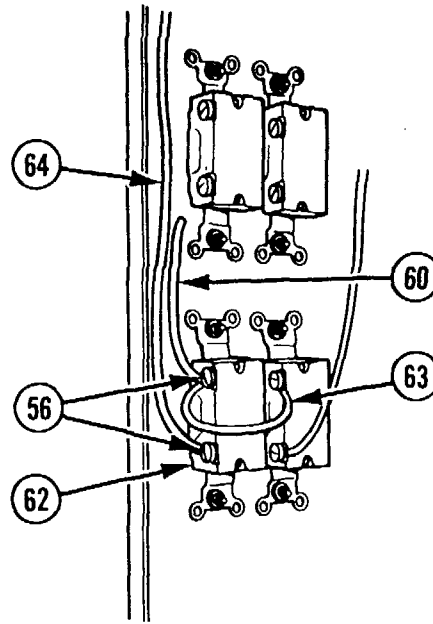
76 BLACK WIRE (47), BLACK WIRE (60), AND RED WIRE (61) FROM CENTER LAMP ASSEMBLY. Disconnect.



77 TWO TERMINAL SCREWS (56).  
Loosen in switch S1 (62).

78 BLACK WIRE (60), BLACK WIRE (63),  
AND BLACK WIRE (64) FROM RIGHT  
LAMP ASSEMBLY. Disconnect.

79 BLACK WIRE (60). Remove.

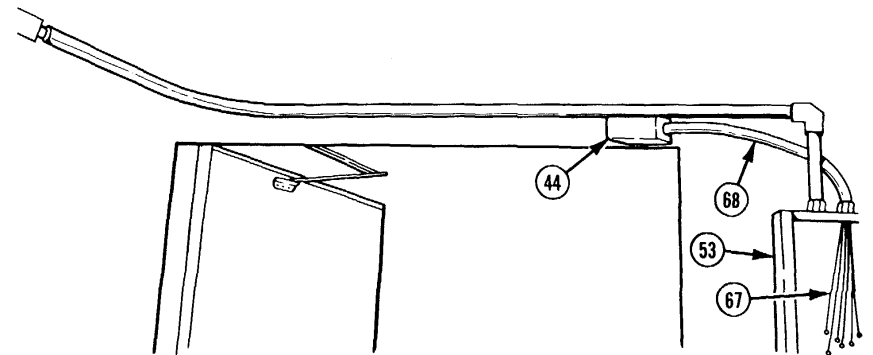


80 TWO TERMINAL SCREWS (56).  
Loosen in switch S3 (65).

81 BLACK WIRE (63) AND BLUE WIRE  
(66) FROM LEFT LAMP ASSEMBLY.  
Disconnect.

82 BLACK WIRE (63). Remove.

83 HARNESS ASSEMBLY (67). Remove from flexible conduit (68)  
between switchbox S7/S8 (44) and circuit breaker panel box PL1  
(53).

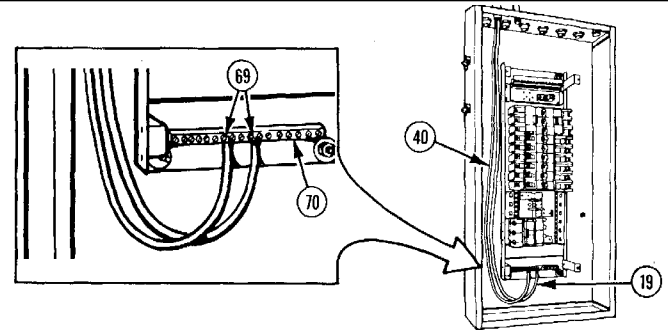


**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

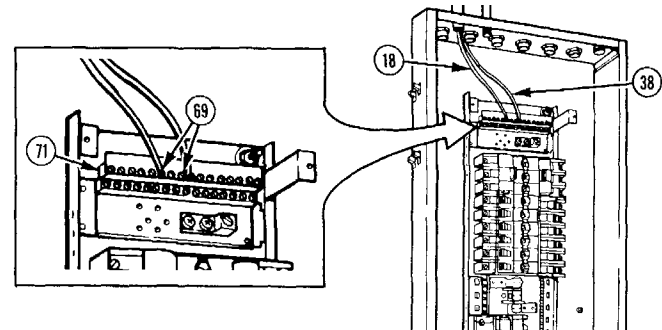
84 TWO TERMINAL SCREWS (69) IN GROUND BUSS W2 (70).  
Loosen.

85 GREEN WIRE (40) AND GREEN WIRE (19). Disconnect.



86 TWO TERMINAL SCREWS (69) IN NEUTRAL BUSS W1 (71).  
Loosen.

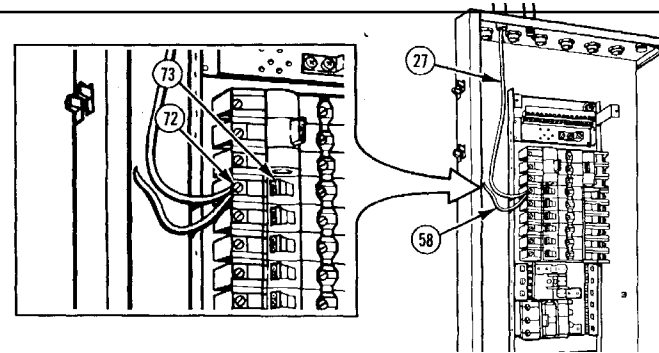
87 WHITE WIRE (38) AND WHITE WIRE (18). Disconnect.



88 TERMINAL SCREW (72) IN CIRCUIT BREAKER CB4 (73). Loosen.

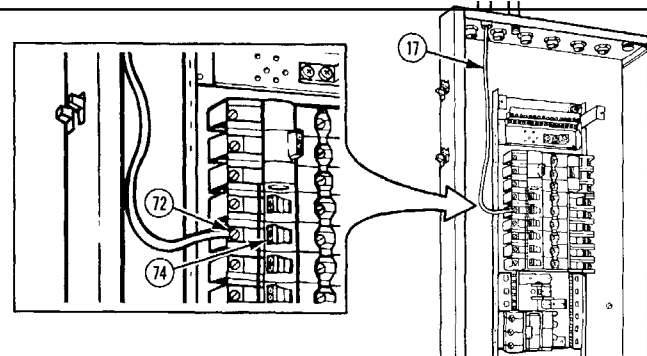
89 BLUE WIRE (27) AND BLACK WIRE (58). Disconnect.

90 BLACK WIRE (58). Remove.



91 TERMINAL SCREW (72) IN CIRCUIT BREAKER CB6 (74). Loosen.

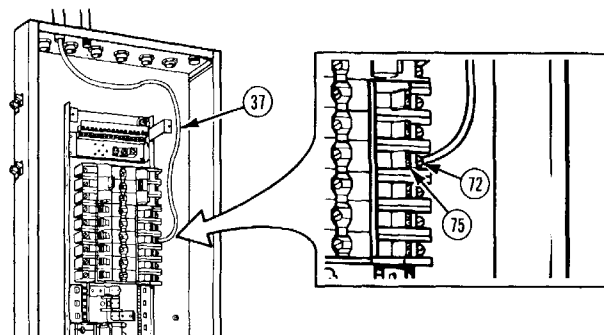
92 RED WIRE (17). Disconnect.



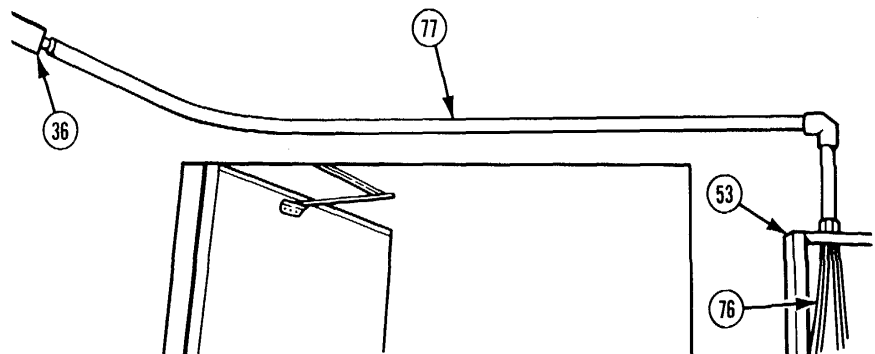
3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)

- 93 TERMINAL SCREW (72) IN CIRCUIT BREAKER CB9 (75). Loosen.
- 94 BLACK WIRE (37). Disconnect.



- 95 HARNESS ASSEMBLY (76). Remove from conduit (77) between conduit box J20 (36) and circuit breaker panel box PL1 (53).



**INSPECTION AFTER DISASSEMBLY**

**REPAIR**

Inspect all wires, switches, circuit breakers, and receptacles for missing parts, worn insulation, corrosion, and broken or damaged parts.

**NOTE**  
**Sections of wires 9 thru 19 may be replaced with a like item. Refer to wire table below and appendix E.**

- 1 WIRE. Replace by fabrication (fig. 4, app E).
- 2 LUG TERMINALS. Replace as required (app C).
- 3 INSULATION. Repair by applying tape (item 18, app D) as applicable.

Table 3-2. Wire Table

*Wire No	Color	Length	Termination		Part No	Terminals	Qty	Notes
			From	To				
1	Black	30 in. (76.20 cm)	S8-3	S4-E1	12011690-1	MS25036-111	1	Stranded
1A	Black	10 in. (25.40 cm)	S4-E1	PL1-CB4	12011690-2			Stranded
2	Black	30 in. (76.20 cm)	S8-2	S2-E1	12011690-1	MS25036-111	1	Stranded
2A	Black	6 in. (15.24 cm)	S2-E1	S1-E1	12011690-3			Stranded

\*All wire is no. 12 AWG, type THWN, solid copper, single conductor, except as noted. All insulation is stripped back 0.5 in. (1.27 cm) from each end.

**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

Table 3-2. Wire Table (cont)

*Wire No	Color	Length	Termination		Part No	Terminals	Qty	Notes
			From	To				
2B	Black	6 in. (15.24 cm)	S1-E1	S3-E1	12011690-3	Stranded		
3	Black	30 in. (76.20 cm)	S8-6	S4-E2	12011690-1	MS25036-111	1	Stranded
4	Blue	264 in. (670.00 cm)	S9-NC	PL1-SP2	12011690-5			
4A	Black	30 in. (76.20 cm)	PL1-SP2	S7-NC	12011690-1	MS25036-111	1	Stranded
4B	Black	4 in. (10.16 cm)	S7-NC	S8-4	12011690-4	MS25036-111	2	Stranded
5	Blue	264 in. (670.00 cm)	S9-C	PL1-CB4	12011690-5			
6	Blue	264 in. (670.00 cm)	S9-NO	PL1-SP3	12011690-5			
6A	Black	30 in. (76.20 cm)	PL1-SP3	S7-C	12011690-1	MS25036-111	1	Stranded
7	Black	30 in. (76.20 cm)	S8-5	PL1-SP1	12011690-1	MS25036-111	1	Stranded
8	Black	4 in. (10.16 cm)	S8-1	S7-NO	12011690-4	MS25036-111	2	Stranded
9	Black	192 in. (487.68 cm)	PL1-CB9	J20-X J21-X	12011690-6			
<b>Section</b> 9	Black	130 in. (330.20 cm)	PLI-CB9	J20-X	12011690-6			

Section 9	Black	62 in.	(157.48 cm)	J20-X	J21-X	12011690-6		
10	White	192 in.	(487.68 cm)	PL1-W1	J21-W J20-W	12011690-7		
Section 10	White	130 in.	(330.20 cm)	PL1-W1	J20-W	12011690-7		
Section 10	White	62 in.	(157.48 cm)	J20-W	J21-W	12011690-7		
11	Green	264 in.	(670.00 cm)	PL1-W2	S9-WT3 J21-WT2 J20-WT1	12011690-8		
Section 11	Green	112 in.	(284.48 cm)	PL1-W2	J20-WT1	12011690-8	MS25036-156	1
Section 11	Green	62 in.	(157.48 cm)	J20-WT1	J21-WT2	12011690-8	MS25036-156	1
Section 11	Green	90 in.	(228.60 cm)	J21-WT2	S9-WT3	12011690-8	MS25036-156	2
11A	Green	4 in.	(10.16 cm)	J20-GD	J20-WT1	12011690-9	MS25036-156	1
11B	Green	4 in.	(10.16 cm)	J21-GD	J21-WT2	12011690-9	MS25036-156	1
12	Red	276 in.	(701.04 cm)	PL1-CB6	J20, J21 J22, J23	12011690-24		
Section 12	Red	239 in.	(607.06 cm)	PL1-CB6	J20, J21 J22	12011690-24		

\*All wire is no. 12 AWG, type THWN, solid copper, single conductor, except as noted. All insulation is stripped back 0.5 in. (1.27 cm) from each end.



**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

Table 3-2. Wire Table (cont)

*Wire No.	Color	Length	Termination		Part No.	Terminals	Qty	Notes
			From	To				
Section 12	Red	37 in. (93.98 cm)	J22	J23	12011690-24			
13	White	276 in. (701.04 cm)	PL1-NEU BUSS W1	J20, J21 J22, J23	12011690-25			
Section 13	White	239 in. (607.06 cm)	PL1-NEU BUSS W1	J20, J21 J22	12011690-25			
Section 13	White	37 in. (93.98 cm)	J22	J23	12011690-25			
14	Green	276 in. (701.04 cm)	PL1-GROUND BUSS W2	J20, J21 J22, J23	12011690-26			
14A	Green	4 in. (10.16 cm)	J22-GD	J22-WT4	12011690-9	MS25036-111	1	
14B	Green	4 in. (10.16 cm)	J23-GD	J23-WT5	12011690-9	MS25036-111	1	
Section 14	Green	239 in. (607.06 cm)	PL1-GROUND BUSS W2	J20, J21 J22	12011690-26	MS25036-156	1	
Section 14	Green	37 in. (93.98 cm)	J22	J23	12011690-26	MS25036-156	2	

\*All wire is no. 12 AWG, type THWN, solid copper, single conductor, except as noted. All insulation is stripped back 0.5 in. (1.27 cm) from each end.

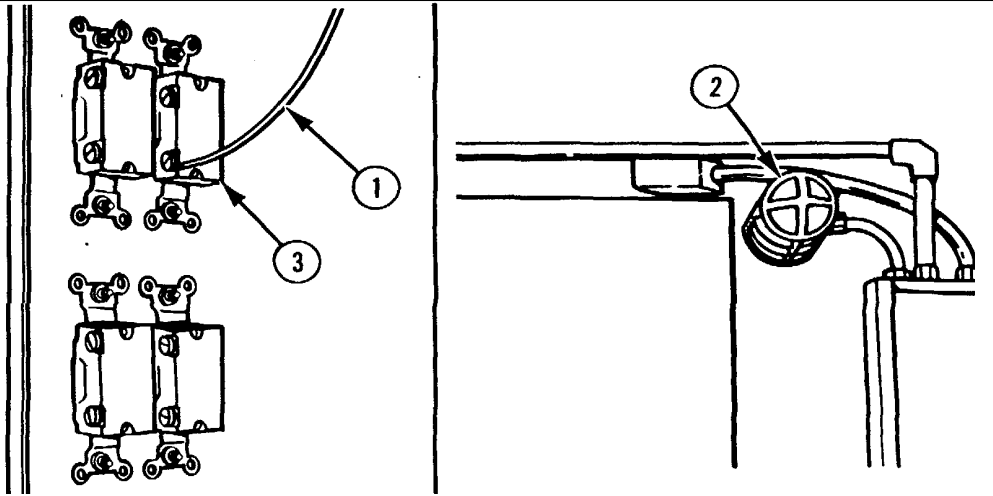
**MODIFICATION**

**NOTE**

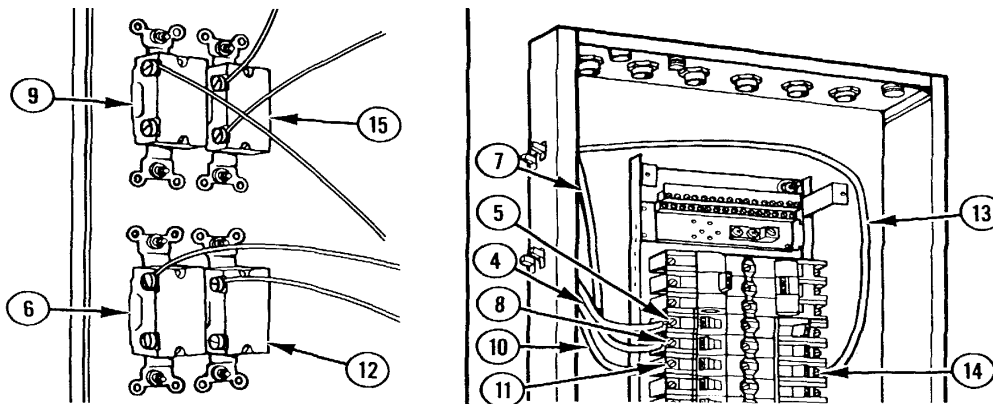
Modification of the electrical installation is required only when installing wiring in a new shelter which has not previously been modified. The modification is performed inside the circuit breaker panel box PL1.

For clarity, wires not mentioned in the text are not shown.

1. BLACK WIRE (1) FROM BLACKOUT LAMP (2). Disconnect from switch S4(3).



2. WIRE (4) FROM CIRCUIT BREAKER CB4 (5) TO SWITCH S1 (6). Remove.
3. WIRE (7) FROM CIRCUIT BREAKER CB6 (8) TO SWITCH S2 (9). Remove.
4. WIRE (10) FROM CIRCUIT BREAKER CB8 (11) TO SWITCH S3 (12). Remove.
5. WIRE (13) FROM CIRCUIT BREAKER CB9 (14) TO SWITCH S4 (15). Remove.



**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY**

**NOTE**

Before reassembling the electrical installation, check the wiring diagram (fig. 3-1), schematic diagram (fig. 3-2), and the wire table (3-2).

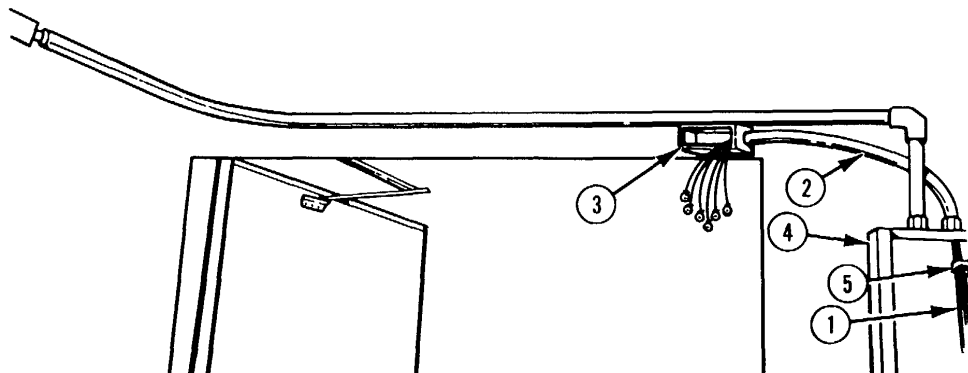
Perform the procedure in step 1, using harness assembly with ends of six wires taped together, ensuring the ends with lug terminals are left in switchbox S7/S8.

**NOTE**

For clarity, wires not mentioned in the text are not shown.

**1. HARNESS ASSEMBLY (1).**

- a. Pull through flexible conduit (2) from switchbox S7/S8 (3) to circuit breaker panel box PL1 (4).
- b. Remove tape (item 18, app D) (5).



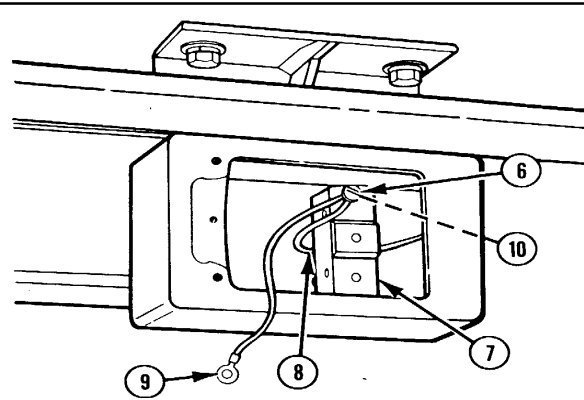
2. THREE TERMINAL SCREWS (6). Remove from microswitch S7 (7).

NOTE

Two black wires no. 8 and no. 4B will be installed at connections.

3. BLACK WIRE NO. 4A (8) AND BLACK WIRE NO. 4B (9).

- a. Connect to terminal no. NC (10).
- b. Reinstall terminal screw (6).

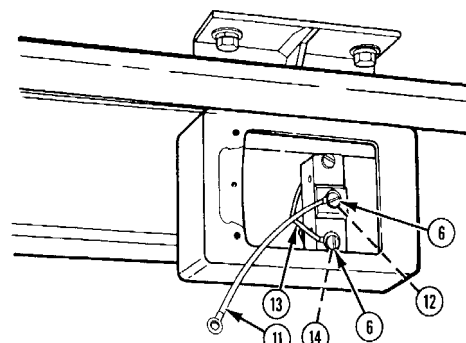


4. BLACK WIRE NO. 8 (11).

- a. Connect to terminal no. NO (12).
- b. Reinstall terminal screw (6).

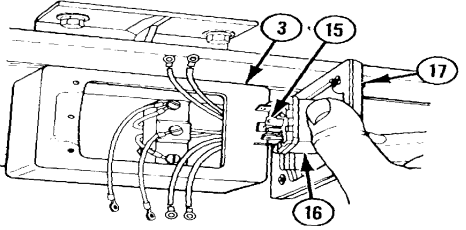
5. BLACK WIRE NO. 6A (13).

- a. Connect to terminal no. C (14).
- b. Reinstall terminal screw (6).



**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**



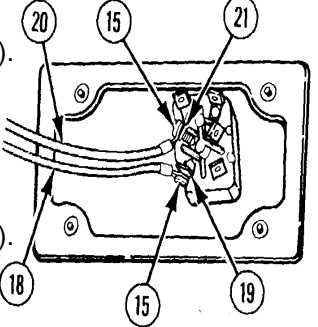
6. SIX TERMINAL SCREWS (15). Remove from toggle switch S8 (16) in cover (17) of switchbox S7/S8(3).

7. BLACK WIRE NO. 1 (18).

- Connect to terminal no. 3 (19).
- Reinstall terminal screw (15).

8. BLACK WIRE NO. 2 (20).

- Connect to terminal no. 2 (21).
- Reinstall terminal screw (15).

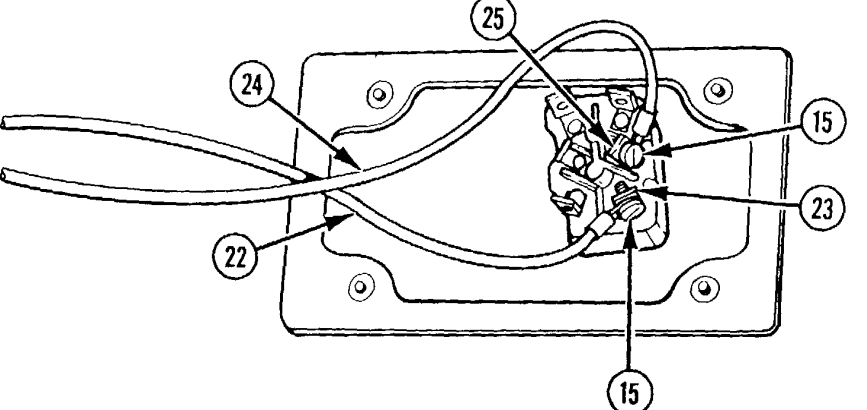


9. BLACK WIRE NO. 3 (22).

- Connect to terminal no. 6 (23).
- Reinstall terminal screw (15).

10. BLACK WIRE NO. 7 (24).

- Connect to terminal no. 5 (25).
- Reinstall terminal screw (15).

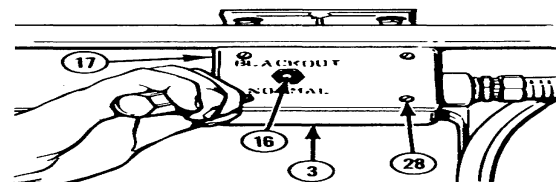
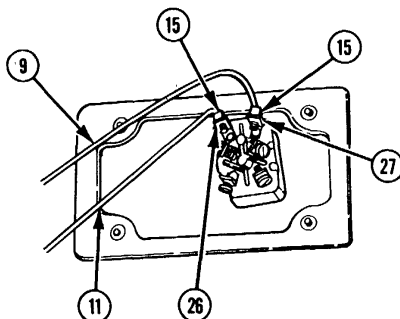


11 BLACK WIRE NO. 8 (11).

- a. Connect to terminal no. 1 (26).
- b. Reinstall terminal screw (15).

12 BLACK WIRE NO. 4B (9).

- a. Connect to terminal no. 4 (27).
- b. Reinstall terminal screw (15).



13 COVER (17) WITH TOGGLE SWITCH S8 (16).

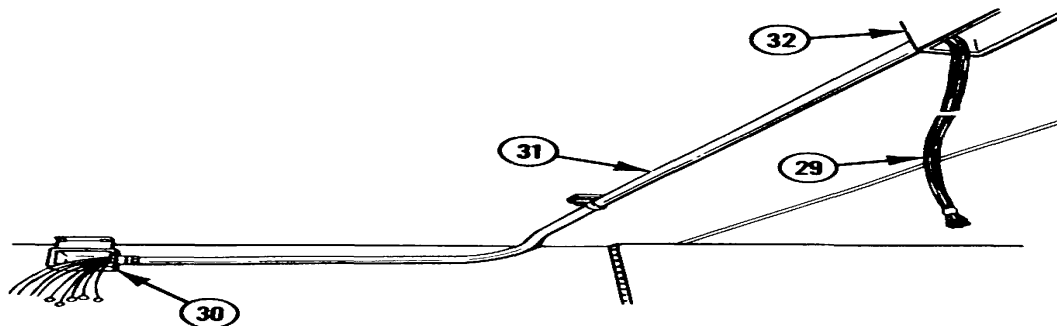
- a. Place on switchbox S7/S8 (3).
- b. Install four screws (28).

**NOTE**

Perform the procedure in step 14, using harness assembly with ends of nine wires taped together.

14. HARNESS ASSEMBLY (29).

- a. Pull from switchbox S9 (30) through conduit (31) into "T" conduit box J21 (32).

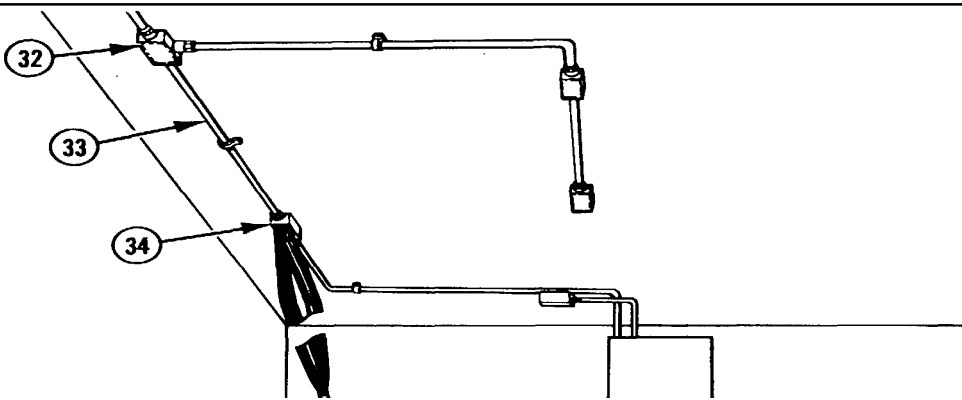


**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

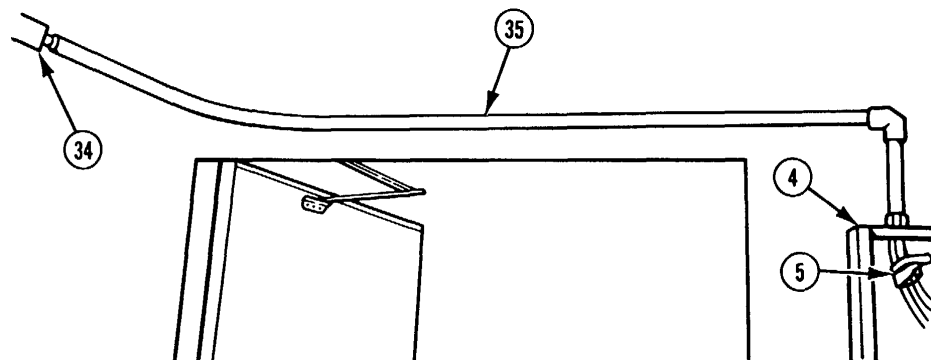
**REASSEMBLY (cont)**

14 HARNESS ASSEMBLY. (cont)

- b. Pull from "T" conduit box J21 (32) through conduit (33) into conduit box J20 (34).

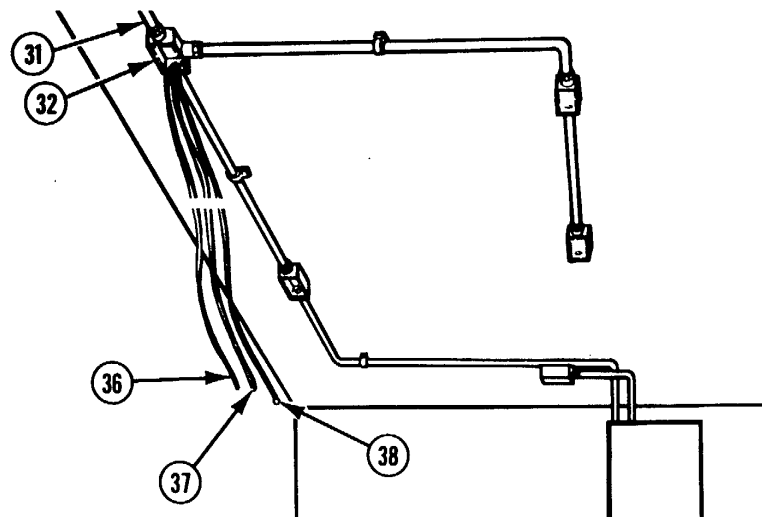


- c. Pull from conduit box J20 (34) through conduit (35) into circuit breaker panel box PL1 (4).
- d. Leave approximately 24 in. (60.96 cm) in circuit breaker panel box PL1 (4).
- e. Remove all tape (item 18, app D) (5).

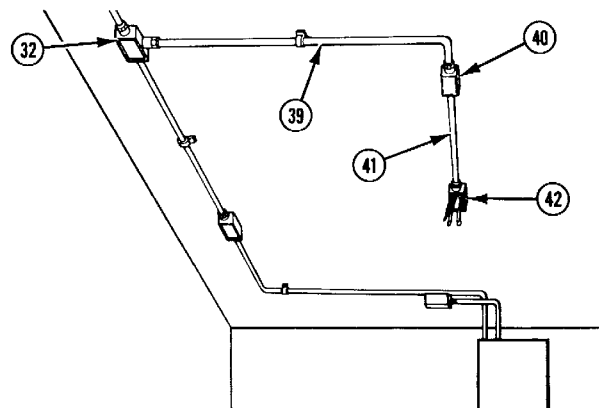


15 RED WIRE NO. 12 (36), WHITE WIRE NO. 13 (37), AND GREEN WIRE NO. 14 (38).

- a. Pull completely out of conduit (31) into "T" conduit box J21 (32).



- b. Pull from "T" conduit box J21 (32) through conduit (39) into conduit box J22 (40).
- c. Pull from conduit box J22 (40) through conduit (41) into receptacle box J23 (42).





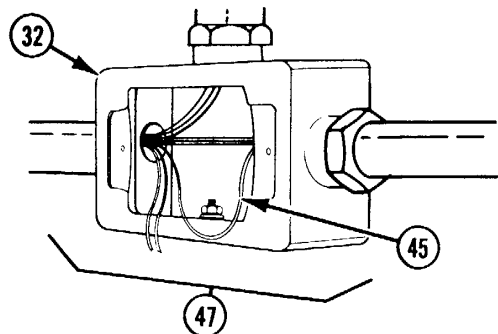
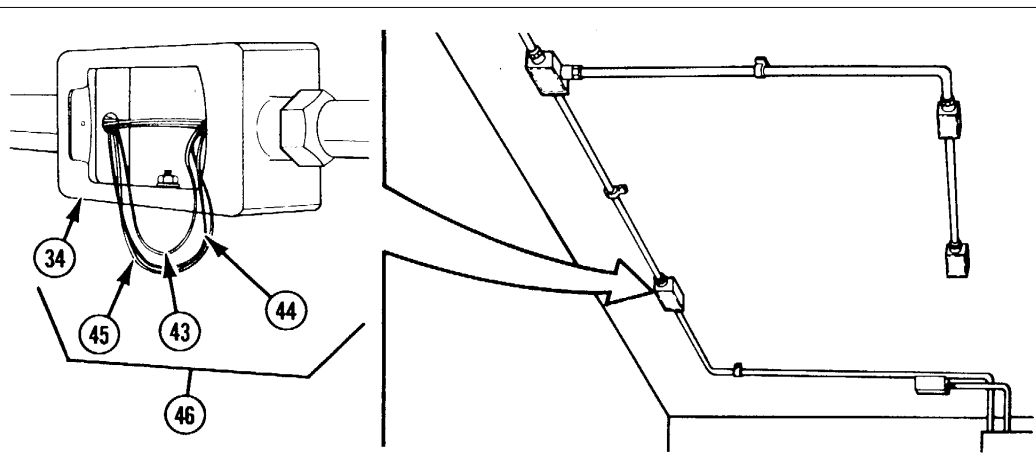
**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

**NOTE**

The following five procedures pertain to wires no. 9, no. 10, and no. 11 if initial installation or replacement of complete harness assembly is required.

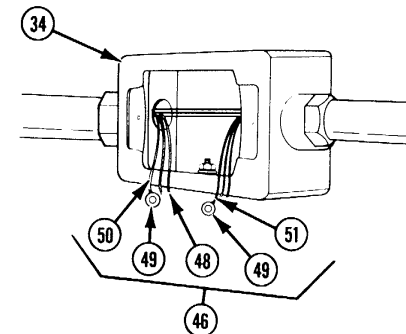
16 BLACK WIRE NO. 9 (43), WHITE WIRE NO. 10 (44), AND GREEN WIRE NO. 11 (45) IN CONDUIT BOX J20 (34). Form 6-in. (15.24-cm) service loop (46).



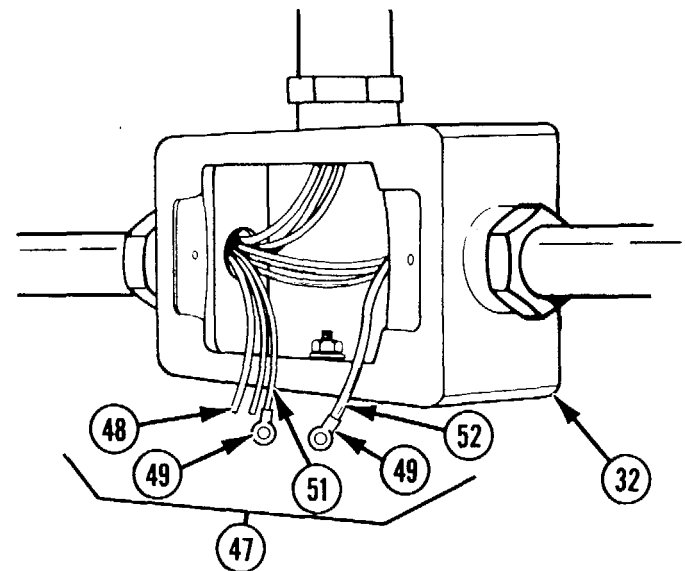
17 GREEN WIRE NO. 11 (45) IN "T" CONDUIT BOX J21 (32). Form 6-in. (15.24-cm) service loop (47).

18 SERVICE LOOP (46) IN CONDUIT BOX J20 (34).

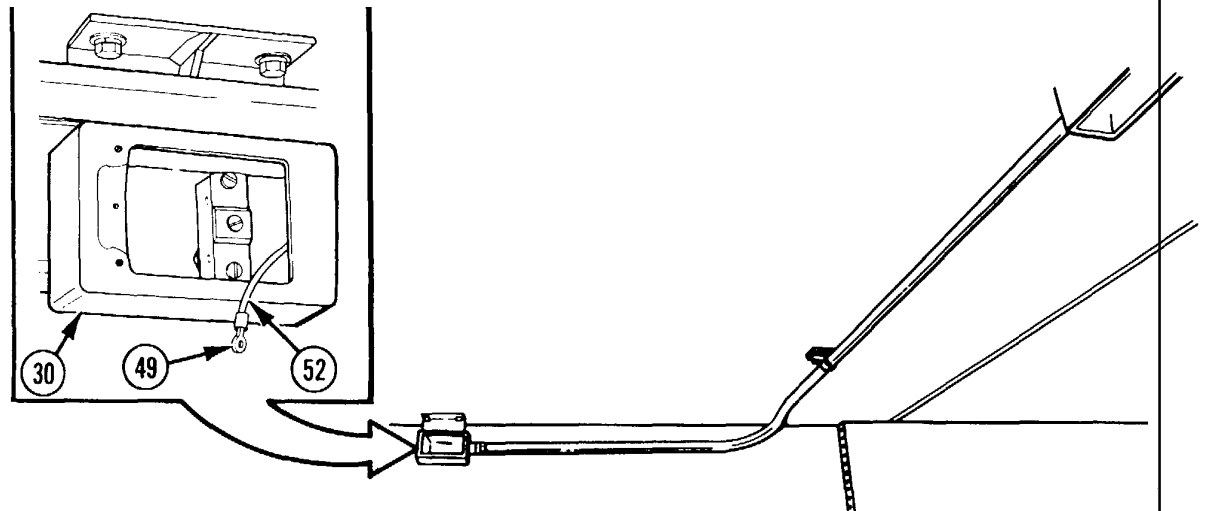
- a. Cut in center.
- b. Strip insulation (48) back 0.5 in. (1.27 cm) from ends on all cut wires.
- c. Install two lug terminals (49) on green wire no. 11 (50) and green wire no. 11 (51).



- 19 SERVICE LOOP (47) IN "T" CONDUIT BOX J21 (32).
- a. Cut in center.
  - b. Strip insulation (48) back 0.5 in. (1.27 cm) from ends on cut wires.
  - c. Install two lug terminals (49) on green wire no. 11 (51) and green wire no. 11 (52).



- 20 GREEN WIRE NO. 11 (52) IN SWITCH-BOX S9-(30). Install lug terminal (49).



**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

**NOTE**  
 The following procedures pertain to wires no. 4, no. 5, and no. 6 if initial installation or replacement of complete harness assembly is required.

21 THREE LUG TERMINALS (49). Install on blue wire no. 4 (53), blue wire no. 5 (54), and blue wire no. 6 (55) in switchbox S9 (30).

The diagram shows a rectangular switchbox labeled 30. Three blue wires, labeled 53, 54, and 55, enter from the left. Each wire is connected to one of three lug terminals labeled 49. The terminals are mounted on a vertical plate inside the box.

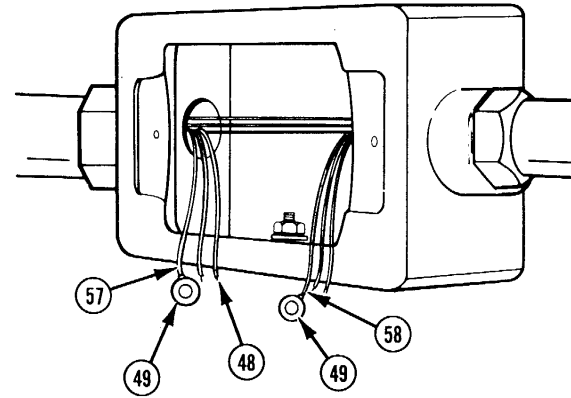
**NOTE**  
 The following two procedures pertain to wires no. 12, no. 13, and no. 14 if initial installation or replacement of complete harness assembly is required.

22 RED WIRE NO. 12 (36), WHITE WIRE NO. 13 (37), AND GREEN WIRE NO. 14 (38) IN CONDUIT BOX J22 (40).

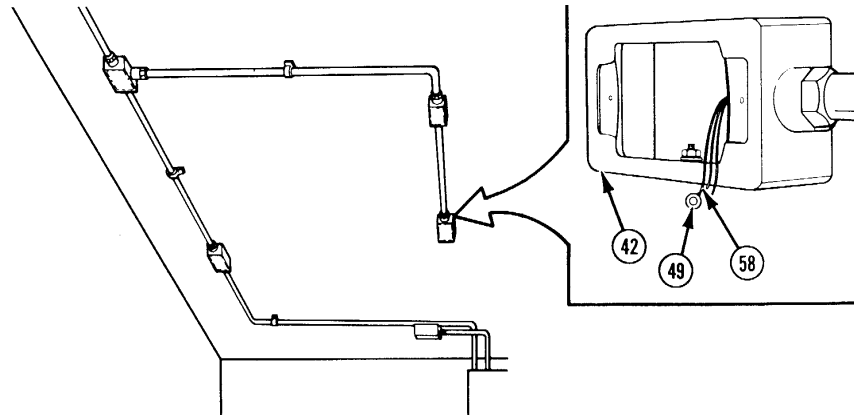
a. Form 6-in. (15.24-cm) service loop (56).

The diagram shows a conduit box labeled 40. Three wires, labeled 36 (red), 37 (white), and 38 (green), enter from the left. They are looped back and connected to a terminal block inside the box. A service loop labeled 56 is formed by the wires, extending downwards and then back up into the box.

- b. Cut in center.
- c. Strip insulation (48) back 0.5 in. (1.27 cm) from ends on all cut wires.
- d. Install two lug terminals (49) on green wire no. 14 (57) and green wire no. 14 (58).

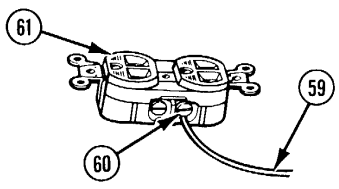


23 GREEN WIRE NO. 14 (58).  
Install lug terminal (49) in  
receptacle box J23 (42).



**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**



24 RED WIRE NO. 12 (59) IN RECEPTACLE BOX J23.

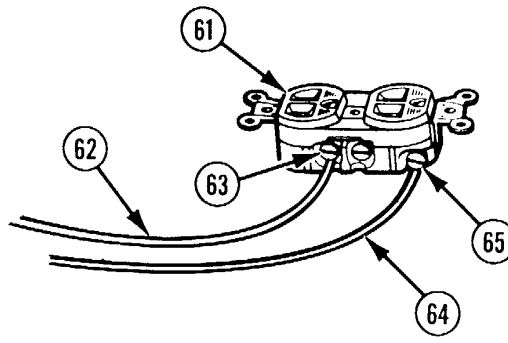
- Connect brass screw (60) of receptacle (61).
- Tighten brass screw (60).

25 WHITE WIRE NO. 13 (62) IN RECEPTACLE BOX J23.

- Connect to silver screw (63) of receptacle (61).
- Tighten silver screw (63).

26 GREEN WIRE NO. 14B (64).

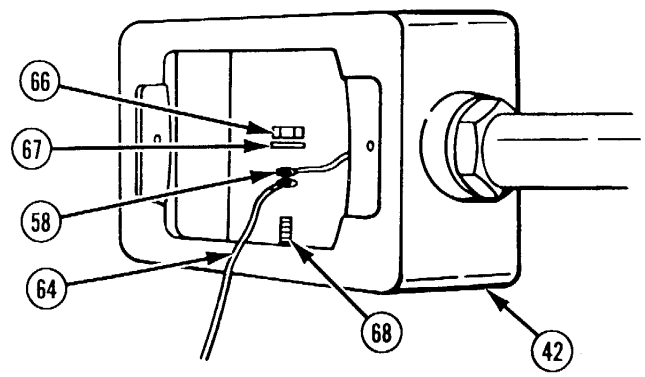
- Install in receptacle box J23.
- Connect to ground screw (65) of receptacle (61).
- Tighten ground screw (65).

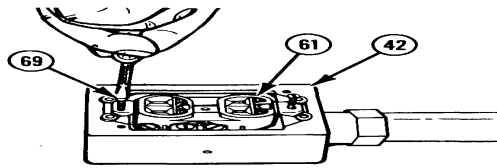


27 NUT (66) AND WASHER (67). Remove from screw (68) in receptacle box J23 (42).

28 GREEN WIRE NO. 14B (64) AND GREEN WIRE NO. 14 (58).

- Install on screw (68).
- Reinstall washer (67) and nut (66).



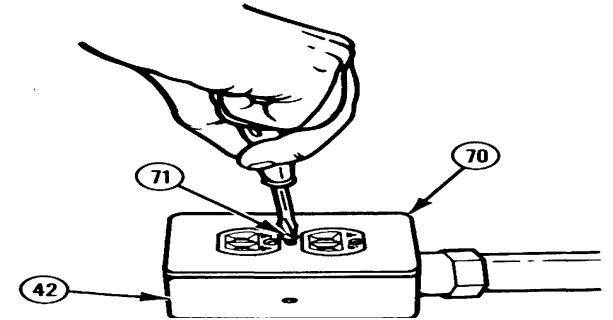


29 RECEPTACLE (61).

- a. Install in receptacle box J23 (42).
- b. Install two screws (69).

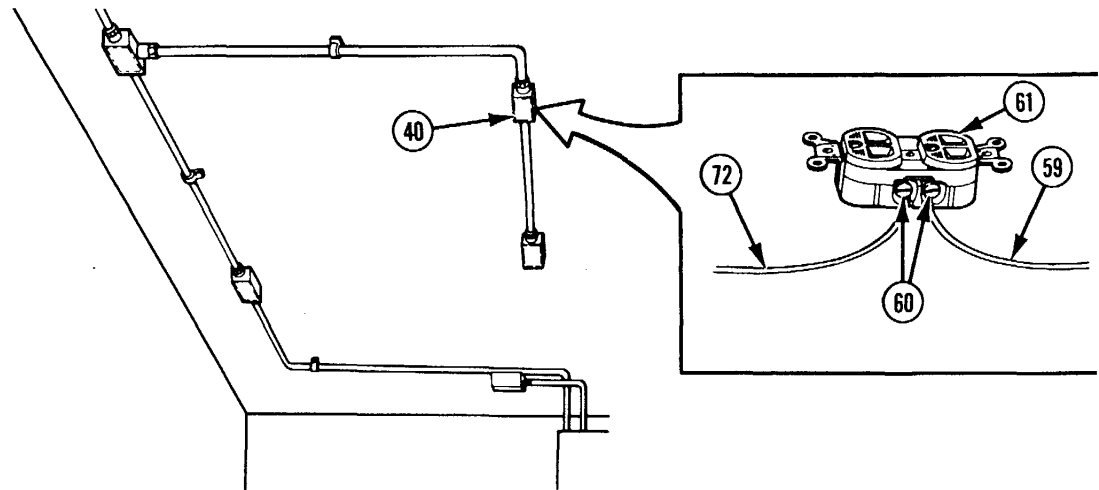
30 COVER (70).

- a. Position on receptacle box J23 (42).
- b. Install screw (71).



31 RED WIRE NO. 12 (59) AND RED WIRE NO. 12 (72) IN CONDUIT BOX J22 (40).

- a. Connect to two brass screws (60) of receptacle (61).
- b. Tighten brass screws (60).



**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

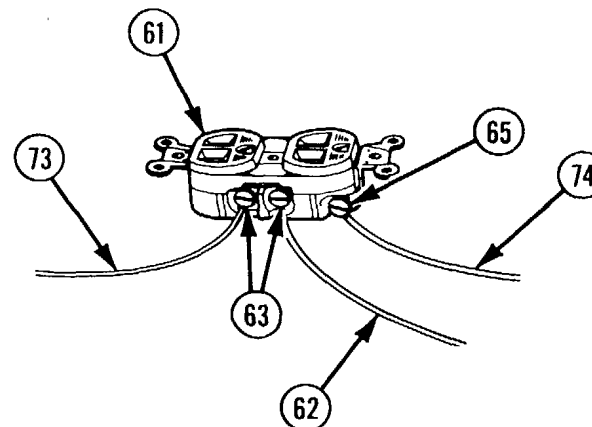
**REASSEMBLY (cont)**

32 WHITE WIRE NO. 13 (62) AND WHITE WIRE NO. 13 (73) IN CONDUIT BOX J22.

- a. Connect to two silver screws (63) of receptacle (61).
- b. Tighten silver screws (63).

33 GREEN WIRE NO. 14A (74).

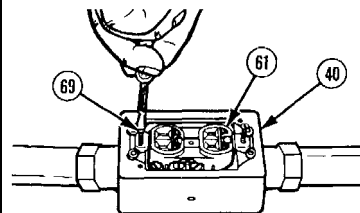
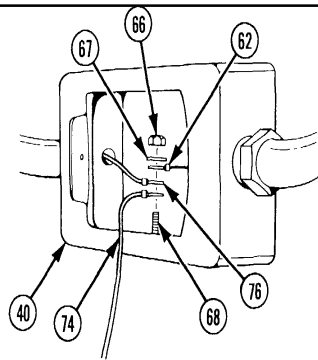
- a. Install in conduit box J22.
- b. Connect to ground screw (65) of receptacle (61).
- c. Tighten ground screw (65).



34 NUT (66) AND WASHER (67). Remove from screw (68) in conduit box J22 (40).

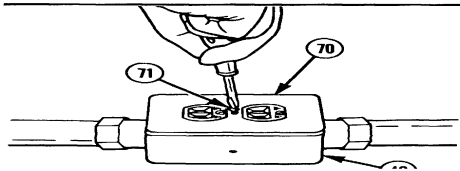
35 GREEN WIRE NO. 14A (74), GREEN WIRE NO. 14 (76), AND GREEN WIRE NO. 14 (62).

- a. Install on screw (68).
- b. Reinstall washer (67) and nut (66).



36. RECPTACLE (61).

- a. Install in conduit box J22 (40).
- b. Install two screws (69).



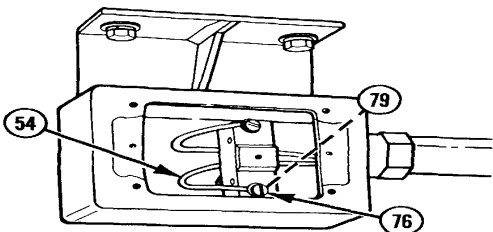
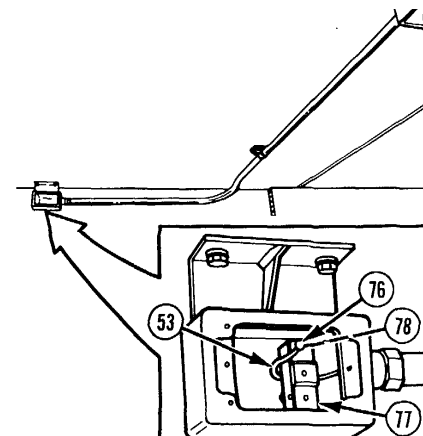
37. COVER (70).

- a. Position on conduit box J22 (40).
- b. Install screw (71)

38 THREE TERMINAL SCREWS (76).  
Remove from microswitch S9 (77).

39 BLUE WIRE NO. 4 (53).

- a. Connect on terminal no. NC (78).
- b. Reinstall screw (76).

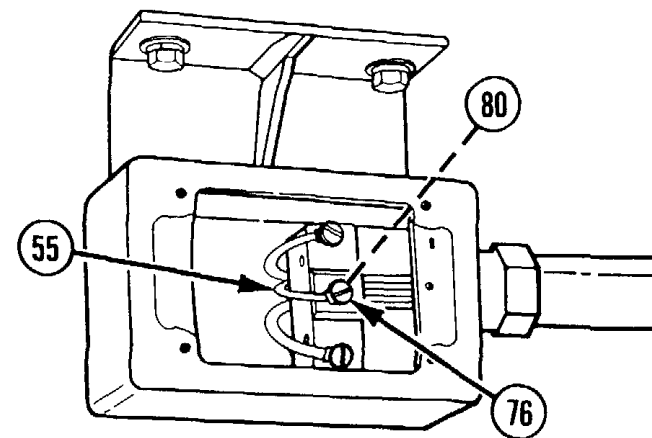


40 BLUE WIRE NO. 5 (54).

- a. Connect on terminal no. C (79)
- b. Reinstall screw (76).

41 BLUE WIRE NO. 6 (55).

- a. Connect on terminal no. NO (80).
- b. Reinstall screw (76).





**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

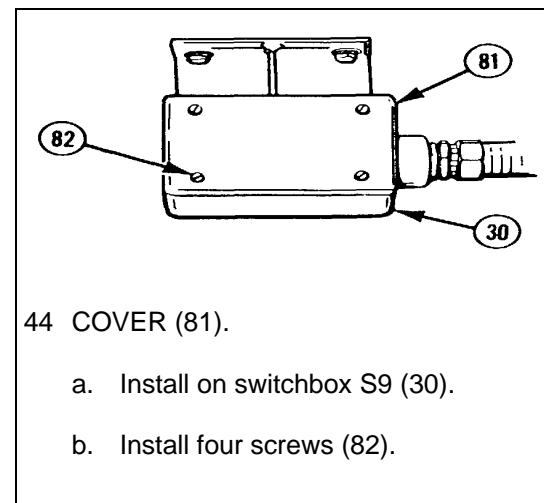
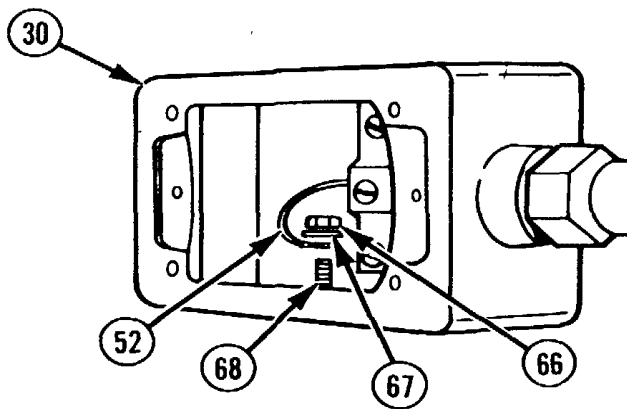
**REASSEMBLY (cont)**

42 NUT (66) AND WASHER (67). Remove from screw (68) in switchbox S9 (30).

43 GREEN WIRE NO. 11 (52).

- a. Install on screw (68).
- b. Reinstall washer (67) and nut (66).

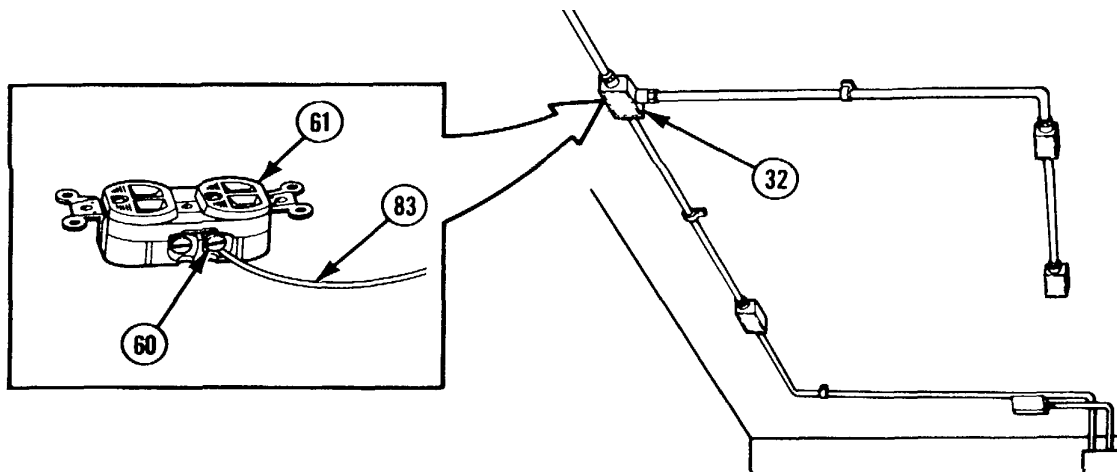
45 BLACK WIRE NO. 9 (83) IN "T" CONDUIT BOX J21 (32).



44 COVER (81).

- a. Install on switchbox S9 (30).
- b. Install four screws (82).

- a. Connect to brass screw (60) of receptacle (61).
- b. Tighten brass screw (60).

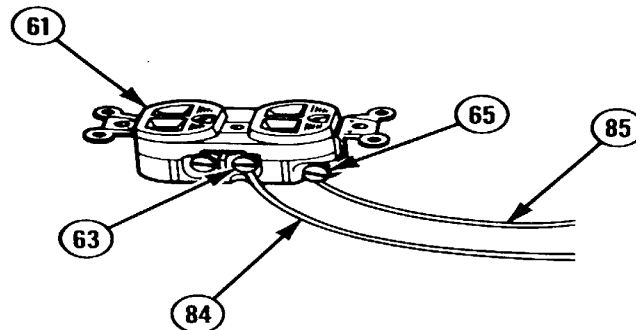


46 WHITE WIRE NO. 10 (84) IN "T" CONDUIT BOX J21.

- a. Connect to silver screw (63) of receptacle (61).
- b. Tighten silver screw (63).

47 GREEN WIRE NO. 11B (85).

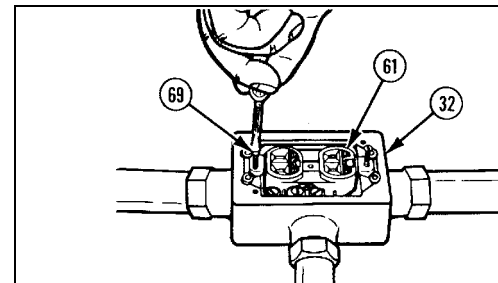
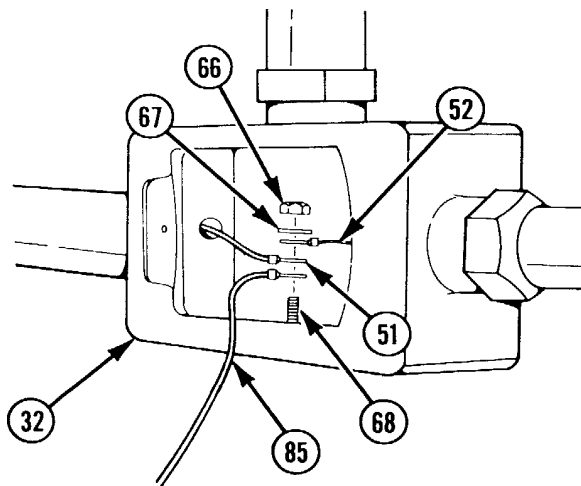
- a. Install in "T" conduit box J21.
- b. Connect to ground screw (65) of receptacle (61).
- c. Tighten ground screw (65).



48 NUT (66) AND WASHER (67). Remove from screw (68) in "T" conduit box J21 (32).

49 GREEN WIRE NO. 11B (85), GREEN WIRE NO. 11 (51), AND GREEN WIRE NO. 11 (52). Install on screw (68).

50 WASHER (67) AND NUT (66). Reinstall on screw (68).

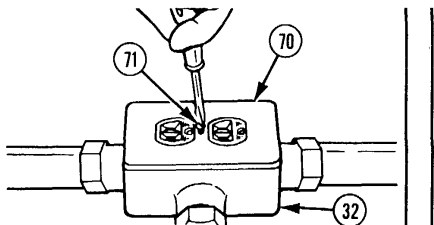


51 RECEPTACLE (61).

- a. Install in "T" conduit box J21 (32).
- b. Install two screws (69).

**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

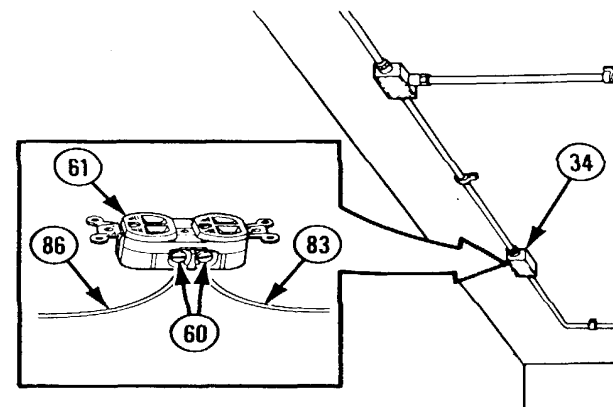
**REASSEMBLY (cont)**



52. COVER (70).
- a. Position on "T" conduit box J21 (32).
  - b. Install screw (71).

53 BLACK WIRE NO. 9 (83) AND BLACK WIRE NO. 9 (86) IN CONDUIT BOX J20 (34).

- a. Connect to two brass screws (60) of receptacle (61).
- b. Tighten brass screws (60).

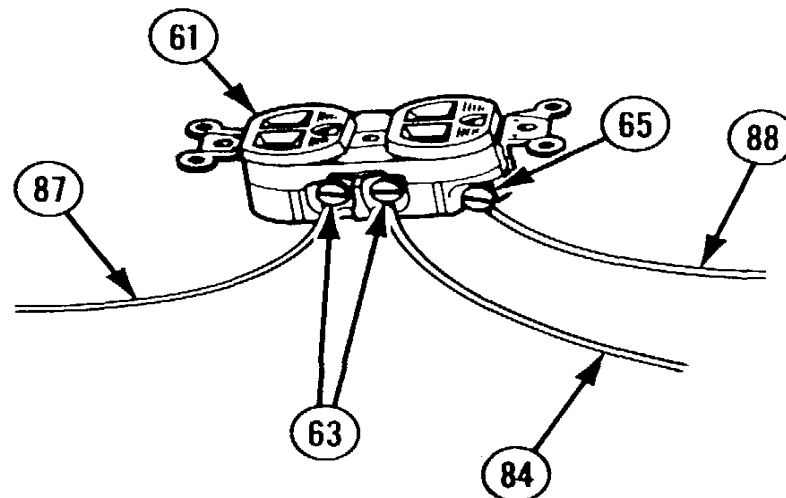


54 WHITE WIRE NO. 10 (84) AND WHITE WIRE NO. 10 (87) IN CONDUIT BOX J20.

- a. Connect to two silver screws (63) of receptacle (61).
- b. Tighten silver screws (63).

55 GREEN WIRE NO. 11A (88).

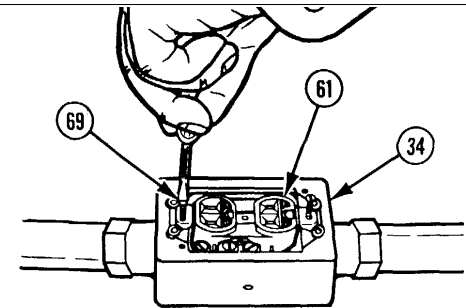
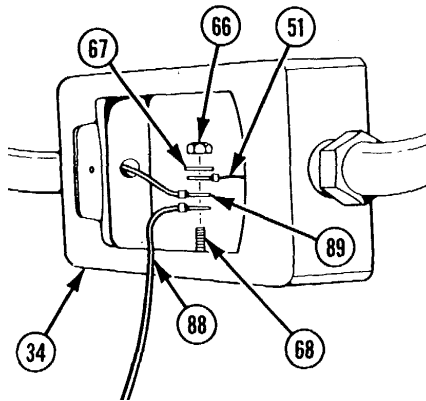
- a. Install in conduit box J20.
- b. Connect to ground screw (65) of receptacle (61).
- c. Tighten ground screw (65).



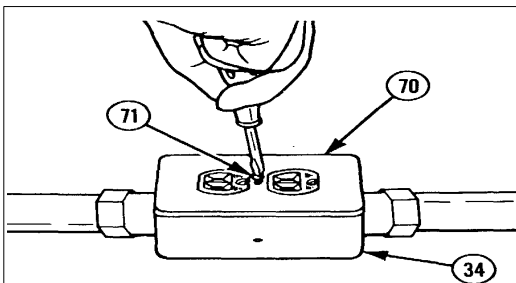
56 NUT (66) AND WASHER (67). Remove from screw (68) in conduit box J20 (34).

57 GREEN WIRE NO. 11A (88), GREEN WIRE NO. 11 (89), AND GREEN WIRE NO. 11 (51). Install on screw (68).

58 WASHER (67) AND NUT (66). Reinstall on screw (68).



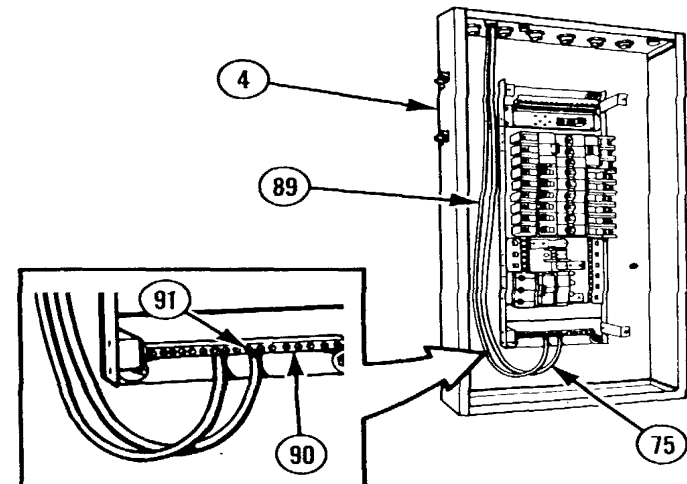
59. RECEPTACLE (61).  
 a. Install in conduit box J20 (34).  
 b. Install two screws (69).



60 COVER (70).  
 a. Position on conduit box J20 (34).  
 b. Install screw (71).

61 GROUND BUSS W2 (90) IN CIRCUIT BREAKER PANEL BOX PL1 (4).

- a. Connect two green wires no. 11 (89) and no. 14 (75).
- b. Tighten two terminal screws (91).

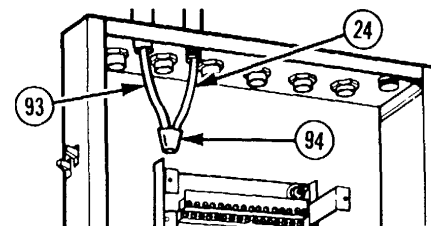
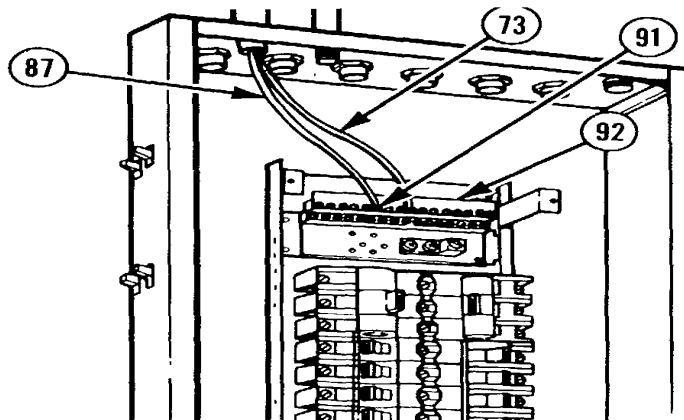


**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

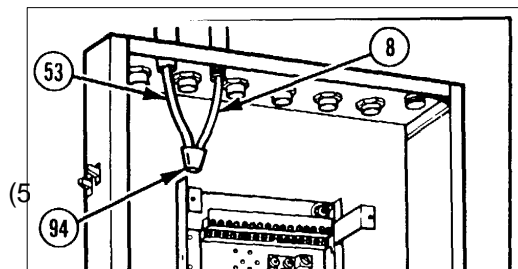
**REASSEMBLY (cont)**

62 NEUTRAL BUSS W1 (92).

- a. Connect two white wires no. 10 (87) and no. 13 (73)
- b. Tighten two terminal screws (91).



63. BLACK WIRE NO. 7 (24).
- a. Connect to black wire (93) of blackout lamp.
  - b. Install conductor splice (94).

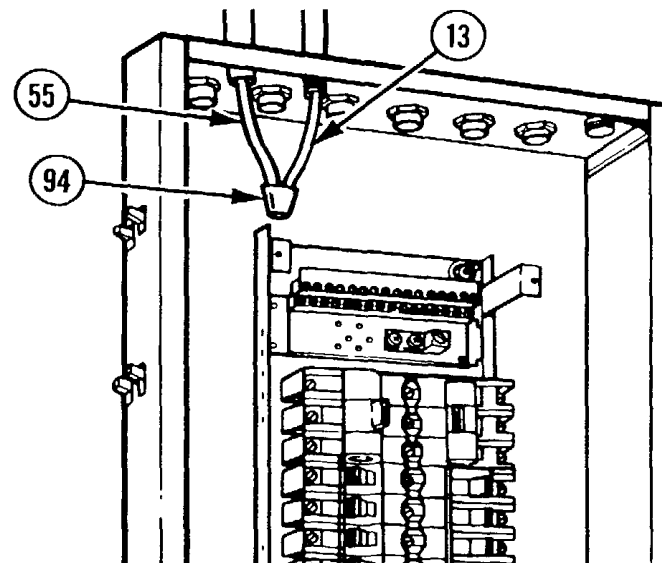


64 BLACK WIRE NO. 4A (8).

- a. Connect to blue wire no. 4 (53).
- b. Install conductor splice (94).

65 BLACK WIRE NO. 6A (13).

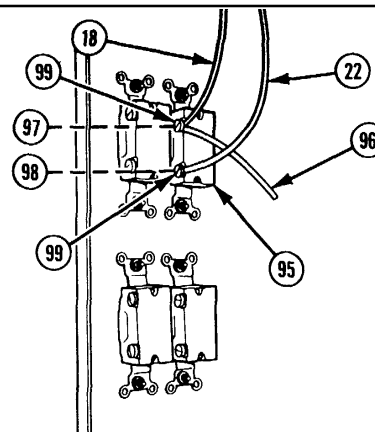
- a. Connect to blue wire no. 6
- b. Install conductor splice (94).



**NOTE**  
 Three black wires no. 1A, no. 2A, and no. 2B will be installed at connection.

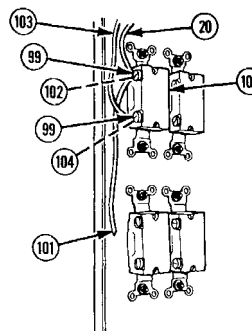
66 SWITCH S4 (95).

- a. Connect black wire no. 1 (18) and black wire no. 1A (96) to terminal E1 (97).
- b. Connect black wire no. 3 (22) to terminal E2 (98).
- c. Tighten two terminal screws (99).



67 SWITCH S2 (100).

- a. Connect black wire no. 2 (20) and black wire no. 2A (101) to terminal E1 (102).
- b. Connect red wire (103) of center lamp assembly to terminal E2 (104).
- c. Tighten two terminal screws (99).

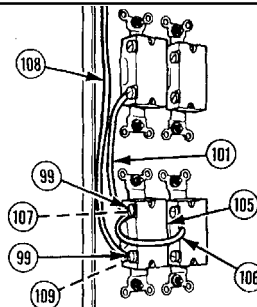


**13-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

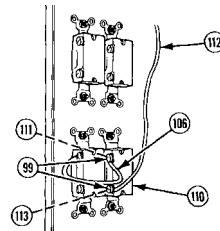
**68 SWITCH S1 (105).**

- a. Connect black wire no. 2A (101) and black wire no. 2B (106) to terminal EI (107).
- b. Connect black wire (108) of right lamp assembly to terminal E2 (109).
- c. Tighten two terminal screws (99).



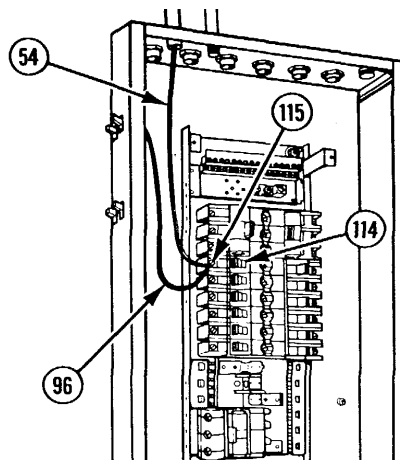
**69 SWITCH S3 (110).**

- a. Connect black wire no. 2B (106) to terminal EI (111).
- b. Connect blue wire (112) of left lamp assembly to terminal E2 (113).
- c. Tighten two terminal screws (99).



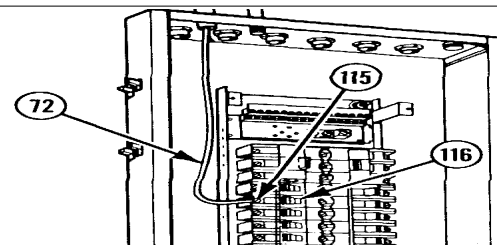
70 CIRCUIT BREAKER CB4 (114) .

- a. Connect blue wire no. 5 (54) and black wire no. 1A (96).
- b. Tighten terminal screw (115).



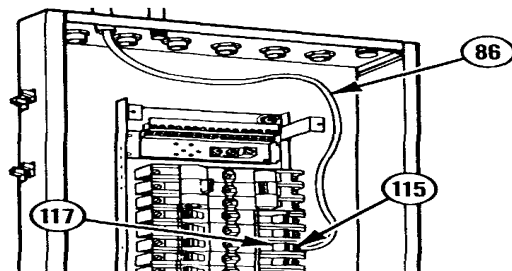
71 CIRCUIT BREAKER CB6(116).

- a. Connect red wire no. 12 (72).
- b. Tighten terminal screw (115).



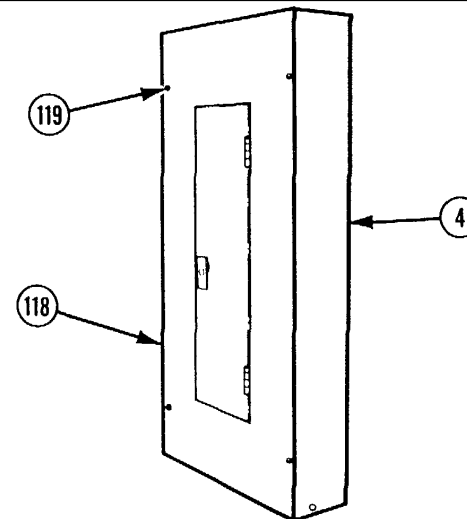
72 CIRCUIT BREAKER CB9 (117).

- a. Connect black wire no. 9 (86).
- b. Tighten terminal screw (115).



73 FRONT PANEL (118) .

- a. Position on circuit breaker panel box PL1 (4).
- b. Install four screws (119).





**3-10. SHOP SET--ELECTRICAL INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**TEST**

1 With shop set de-energized and power cable disconnected, test the entire electrical installation for open and short circuits with a suitable ohmmeter.

**WARNING**  
Before energizing shop set, ensure grounding rods are properly installed and connected at the power distribution panel and at shelter.

2 Connect power cable and energize power source.

3 Test the entire electrical installation for proper installation with a suitable voltmeter.

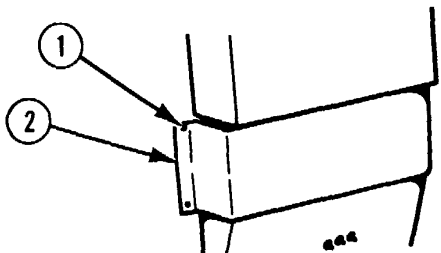
**3-11. SHOP SET--GROUNDING STUD--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

a. Disassembly	d. Repair
b. Inspection	e. Reassembly
c. Service	

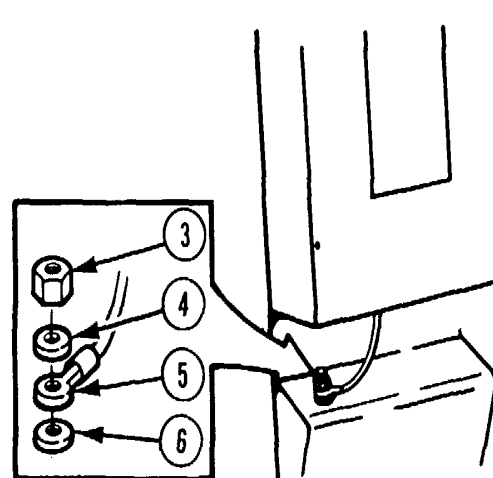
<p><b>INITIAL SETUP</b></p> <p><b>Special Tools</b> Armament repair shop set (SC 4933-95-CL-A21)</p> <p><b>Material s/Parts</b> Abrasive cloth (item 4, app D)</p> <p><b>References</b> Appendix C Appendix D</p> <p><b>Equipment Conditions</b> 2-24 Shop set must be de-energized.</p>	<p style="text-align: center;"><b>General Safety Instructions</b></p> <p style="text-align: center;"><b>WARNING</b> Before beginning maintenance on the grounding stud, de-energize the shop set by placing circuit breaker on power distribution panel connected to the power source in OFF position and then disconnect 120/208V cable assembly from shelter.</p>
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DISASSEMBLY



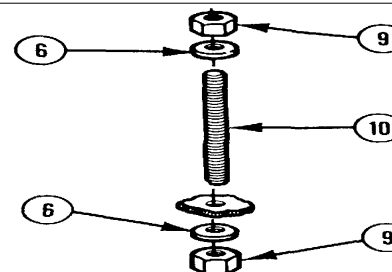
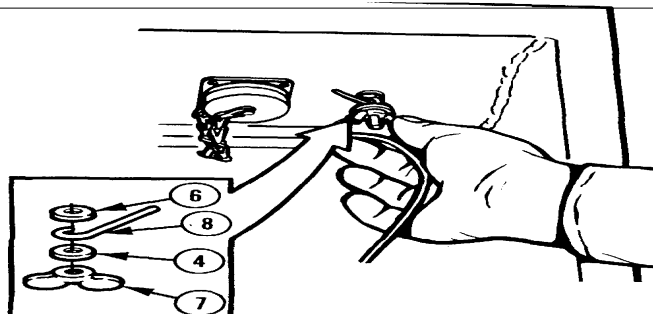
- 1 FOUR SCREWS (1). Remove.
- 2 DUST COVER (2). Remove.

- 3 NUT (3). Remove.
- 4 LOCKWASHER (4), GROUND WIRE LUG TERMINAL (5), AND FLAT WASHER (6). Remove.



- 5 WINGNUT (7). Remove.

- 6 LOCKWASHER (4), GROUND WIRE (8), AND FLAT WASHER (6). Remove.



- 7. TWO NUTS (9) AND TWO FLAT WASHERS (6). Remove.

- 8. STUD (10). Remove.

13-11. SHOP SET--GROUNDING STUD--MAINTENANCE INSTRUCTIONS (cont)

**INSPECTION**

Inspect all parts for rust, corrosion, or other defects.

**NOTE**

The grounding stud, mounted through the power input panel, is used to connect a grounding rod on the exterior of the shelter for grounding the shop set electrical system and the shelter itself.

**SERVICE**

Clean any rusted or corroded parts with an abrasive cloth (item 4, app D).

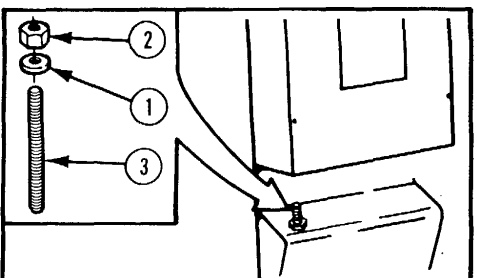
**REPAIR**

Replace any parts that are broken, cracked, or otherwise damaged in any way that would prevent good electrical contact (app C).

**NOTE**

For initial installation only, remove grounding stud furnished with shelter and then proceed with reassembly steps 1 thru 5.

**REASSEMBLY**

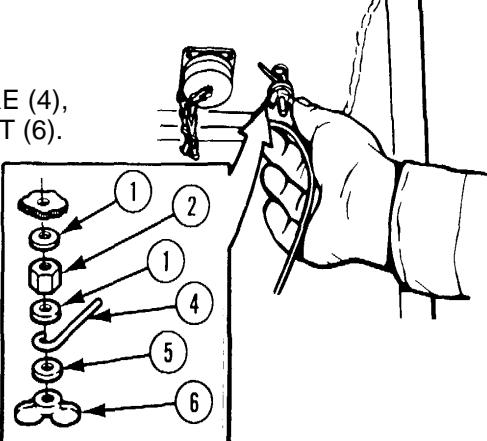


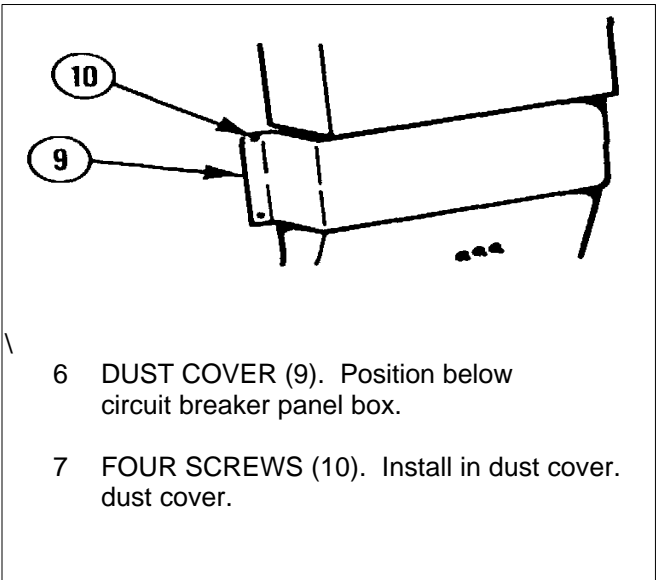
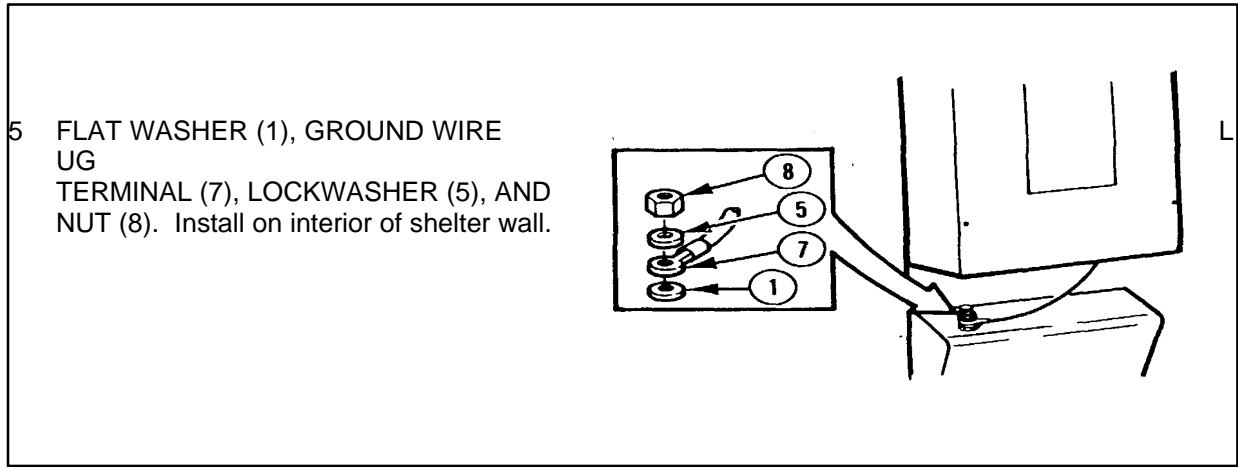
1 FLAT WASHER (1) AND NUT (2). Install on stud (3).

2 STUD (3). Install.

3 FLAT WASHER (1) AND NUT (2). Install.

4 FLAT WASHER (1), GROUND WIRE (4), LOCKWASHER (5), AND WINGNUT (6). Install on exterior of shelter wall.





**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- a. Inspection
- b. Disassembly
- c. Repair
- d. Modification
- e. Reassembly

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**INITIAL SETUP**

<p><b>Special Tools</b></p> <ul style="list-style-type: none"> <li>Armament repair shop set (SC 4933-95-CL-A21)</li> <li>AVIM tool crib shop set (SC 4920-99-CL-A86)</li> <li>Basic aircraft armament repair tool set (SC 5180-95-CL-B09)</li> </ul> <p><b>Material s/Parts</b></p> <ul style="list-style-type: none"> <li>Tape (item 18, app D)</li> </ul>	<p><b>Personnel Required:</b> 2</p> <ul style="list-style-type: none"> <li>Aircraft armament repairmen</li> </ul> <p><b>References</b></p> <ul style="list-style-type: none"> <li>Appendix C</li> <li>Appendix D</li> <li>Appendix E</li> </ul> <p><b>Equipment Condition</b></p> <ul style="list-style-type: none"> <li>3-38 Electrical installation removed.</li> </ul>	<p>Disassemble/reassemble conduit in ceiling.</p>
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**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**INSPECTION**

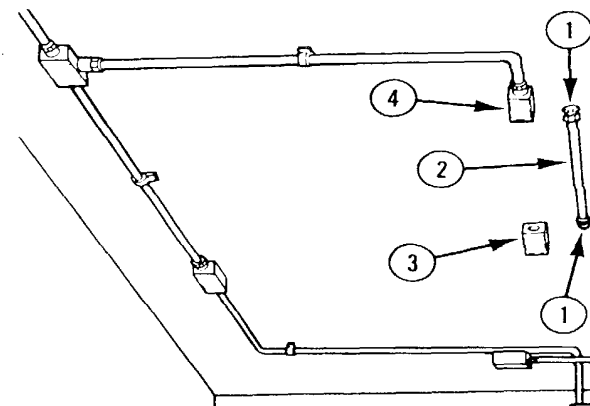
**CONDUIT, CONDUIT BOXES, AND CLAMPS.**

- a. Inspect for breaks, cracks, dents, or missing parts.
- b. Check that all parts are securely mounted.

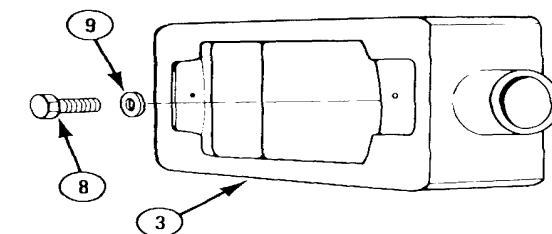
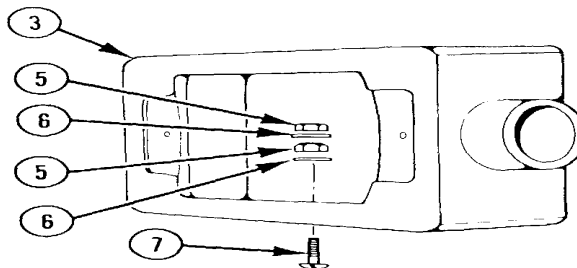
**DISASSEMBLY**

**1. TWO FITTINGS (1) ON CONDUIT (2).**

- a. Loosen from receptacle box J23 (3) and conduit box J22 (4).
- b. Remove.

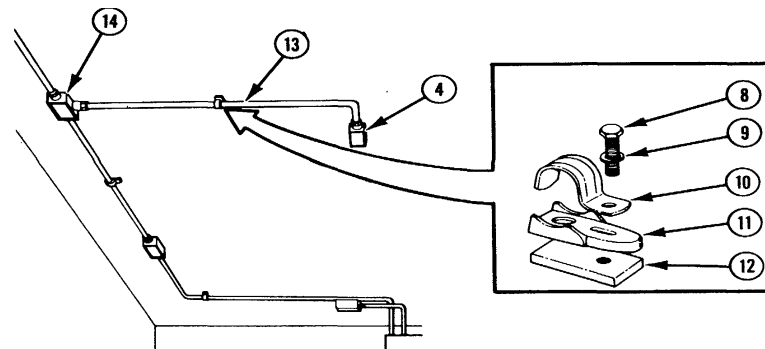


**2 NUT (5), LOCKWASHER (6), NUT (5), LOCKWASHER (6), AND SCREW (7). Remove from receptacle box J23 (3).**

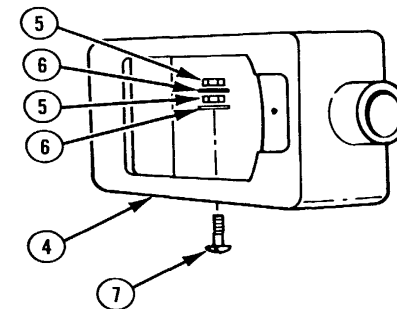
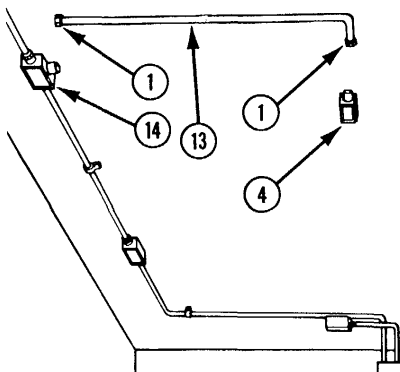


**3 SCREW (8), FLAT WASHER (9), AND RECEPTACLE BOX J23 (3). Remove.**

- 4 SCREW (8), FLAT WASHER (9), CLAMP (10), CLAMP BACK (11), AND SPACER (12). Remove from conduit (13) between conduit box J22 (4) and "T" conduit box J21 (14).



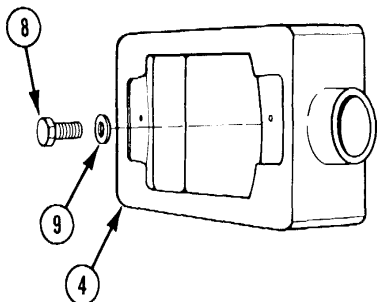
- 5 TWO FITTINGS (1) ON CONDUIT (13),
- Loosen from conduit box J22 (4) and "T" conduit box J21 (14).
  - Remove.



- 6 NUT (5), LOCKWASHER (6), NUT (5), LOCKWASHER (6), AND SCREW (7). Remove from conduit box J22 (4).

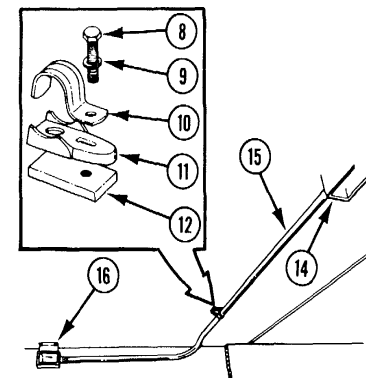
**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**



7 SCREW (8), FLAT WASHER (9), AND CONDUIT BOX J22 (4). Remove.

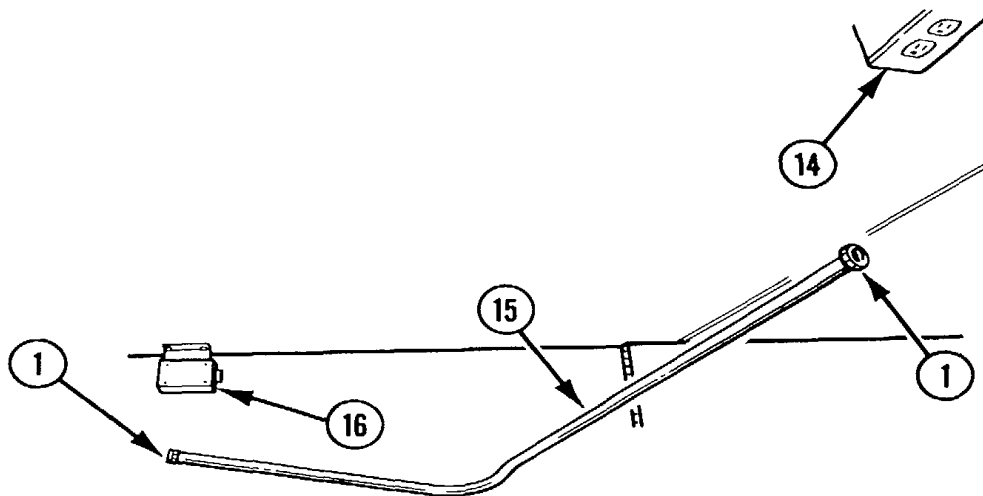
8 SCREW (8), FLAT WASHER (9), CLAMP (10), CLAMP BACK (11), AND SPACER (12). Remove from conduit (15) between switchbox S9 (16) and "T" conduit box J21 (14).



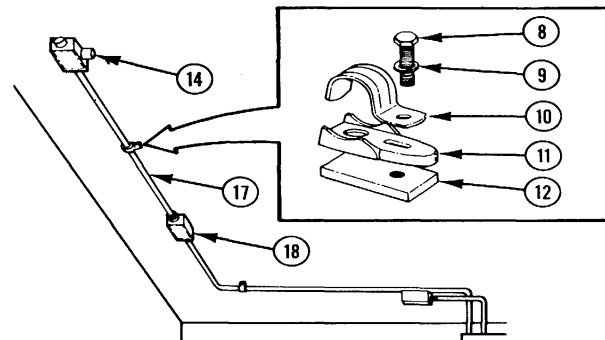
9 TWO FITTINGS (1) ON CONDUIT (15).

- a. Loosen from "T" conduit box J21 (14) and switchbox S9 (16).
- b. Remove.

1

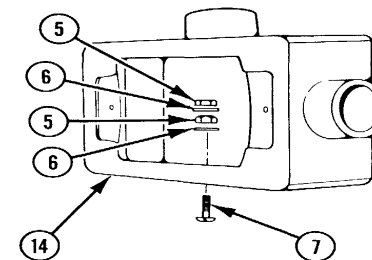
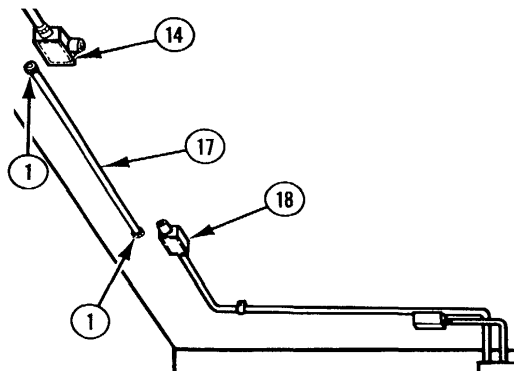


10 SCREW (8), FLAT WASHER (9), CLAMP (10), CLAMP BACK (11), AND SPACER (12). Remove from conduit (17) between "T" conduit box J21 (14) and conduit box J20 (18).



11 TWO FITTINGS (1) ON CONDUIT (17).

- a. Loosen from "T" conduit box J21 (14) and conduit box J20 (18).
- b. Remove.



12 NUT (5), LOCKWASHER (6), NUT (5), LOCKWASHER (6), AND SCREW (7). Remove from "T" conduit box J21 (14).



**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

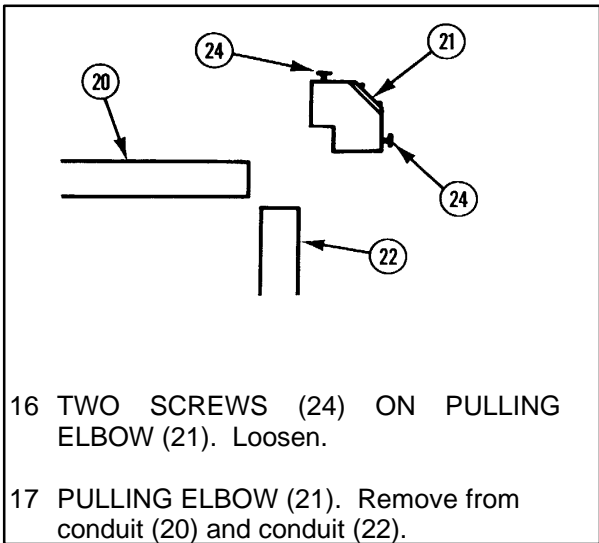
**DISASSEMBLY (cont)**

13 SCREW (8), FLAT WASHER (9), "T" CONDUIT BOX J21 (14), AND SPACER (19). Remove.

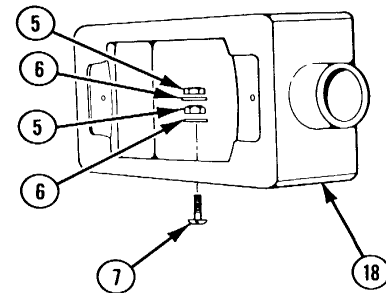
14 SCREW (8), FLAT WASHER (9), CLAMP (10), CLAMP BACK (11), AND SPACER (12). Remove from conduit (20) between conduit box J20 (18) and pulling elbow (21).

15 TWO FITTINGS (1) ON CONDUIT (20) AND CONDUIT (22).

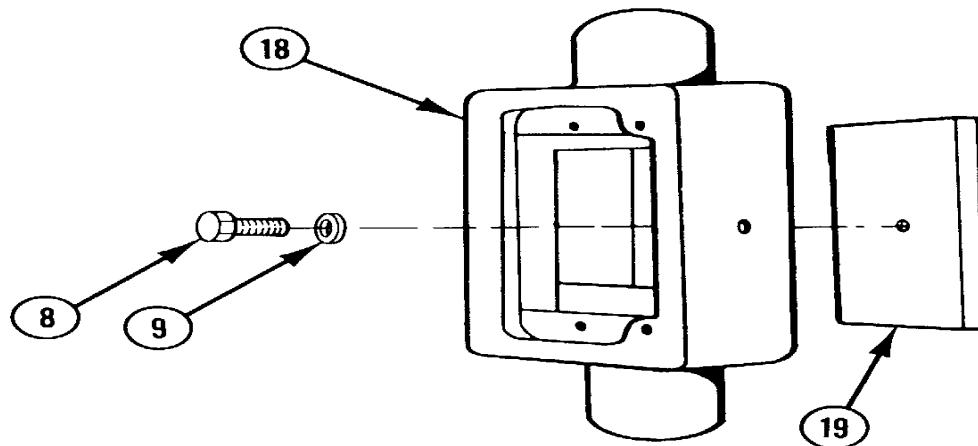
- Loosen from conduit box J20 (18) and circuit breaker panel box PL1 (23).
- Remove.



18 NUT (5), LOCKWASHER (6), NUT (5), LOCKWASHER (6), AND SCREW (7). Remove from conduit box J20 (18).



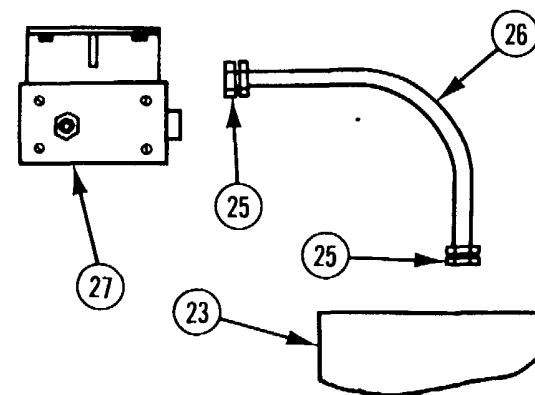
19 SCREW (8), FLAT WASHER (9), CONDUIT BOX J20 (18), AND SPACER (19). Remove.



**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

- 20 TWO CONNECTORS (25) ON FLEXIBLE CONDUIT (26).
- a. Loosen between switchbox S7/S8 (27) and circuit break panel box PL1 (23).
  - b. Remove.



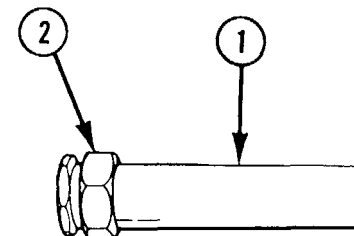
**REPAIR**

**NOTE**  
 Newly installed connectors and fittings may be loose, and should be secured in place with tape (item 18, app D) until installed in conduit boxes.

Repair is by replacement of authorized parts (app C).

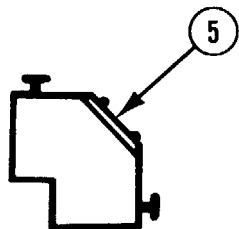
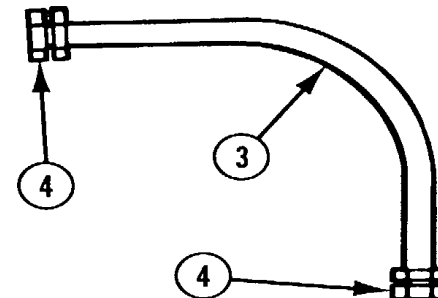
- 1 CONDUIT (1) WITH FITTING (2).

  - a. Remove fitting (2).
  - b. Replace conduit (1), if needed, by fabrication (fig. 5 and 6, app E).
  - c. Replace and install fitting (2) as required.

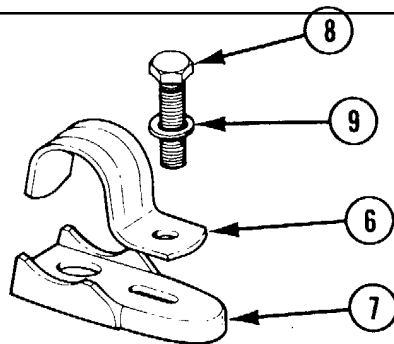


2 FLEXIBLE CONDUIT (3) WITH CONNECTORS (4).

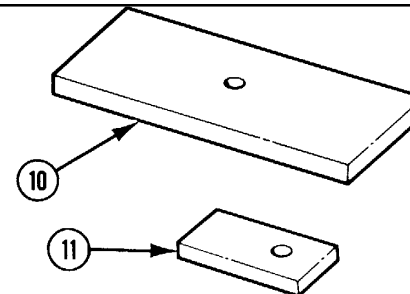
- a. Remove connectors (4).
- b. Replace flexible conduit (3), if needed, by fabrication (fig. 7, app E).
- c. Replace and install connectors (4) as required.



3 PULLING ELBOW (5). Repair by replacement.



4 CLAMP (6), CLAMP BACK (7), SCREW (8), AND FLAT WASHER (9). Repair by replacement.

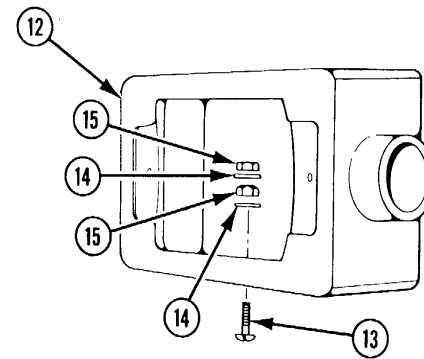


5 SPACER (10) AND SPACER (11). Replace, if needed, by fabrication (fig. 8, app E).

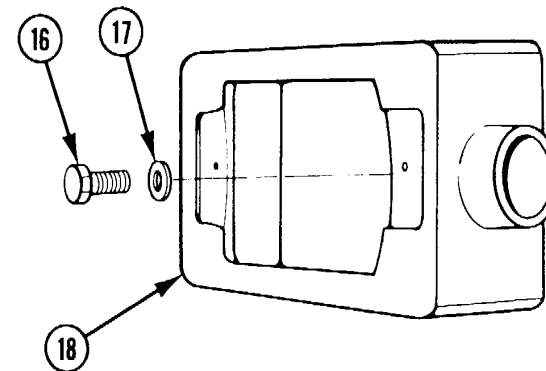
**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

- 6 CONDUIT BOX (12). Repair by replacement.
- 7 SCREW (13), LOCKWASHERS (14), AND NUTS (15). Repair by replacement.

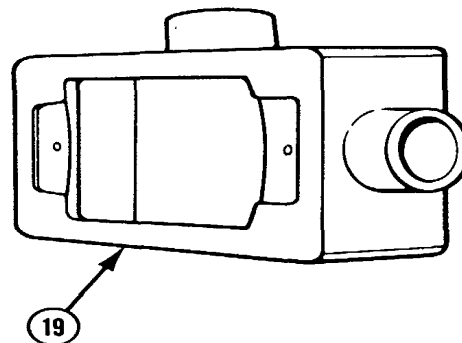


- 8 SCREW (16) AND LOCKWASHER (17). Repair by replacement.
- 9 RECEPTACLE BOX (18). Repair by replacement.



MODIFICATION

10 "T" CONDUIT BOX (19). Repair by replacement.

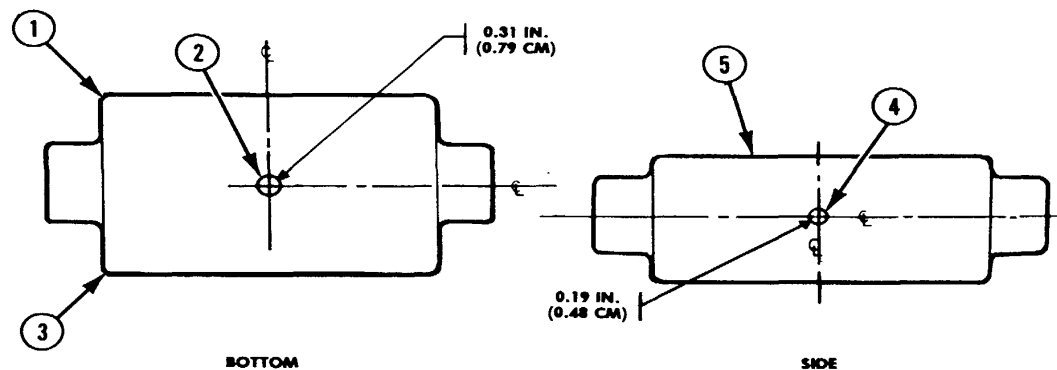


NOTE

Steps 1 thru 4 below are necessary only when the listed parts have been replaced with new parts or at the time of initial installation.

1 CONDUIT BOXES J22 AND J20 (1).

- a. Drill one 0.31-in. (0.79-cm) hole (2) in the bottom (3) as illustrated.
- b. Drill one 0.19-in. (0.48-cm) hole (4) in the side (5) as illustrated.

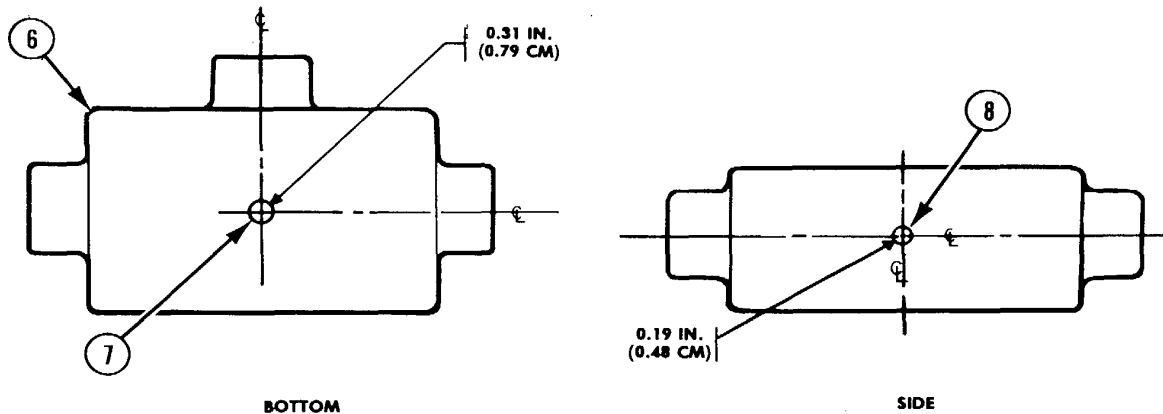


**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**MODIFICATION (cont)**

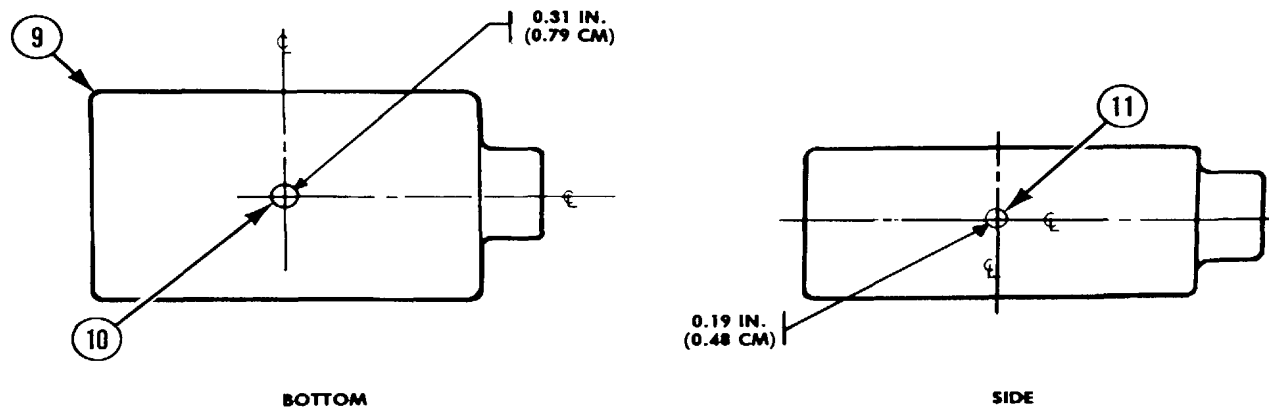
**2 "T" CONDUIT BOX J21 (6).**

- a. Drill one 0.31-in. (0.79-an) hole (7) in the bottom as illustrated.
- b. Drill one 0.19-in. (0.48-cm) hole (8) in the side as illustrated.



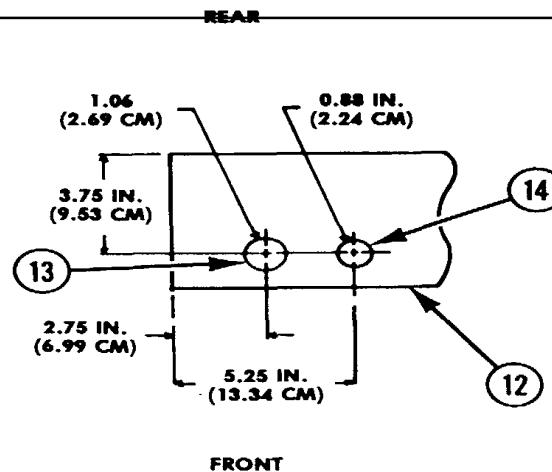
**3 RECEPTACLE BOX J23 (9).**

- a. Drill one 0.31-in. (0.79-cm) hole (10) in the bottom as illustrated.
- b. Drill one 0.19-in. (0.48-cm) hole (11) in the side as illustrated.



4 CIRCUIT BREAKER PANEL BOX PL1 (12).

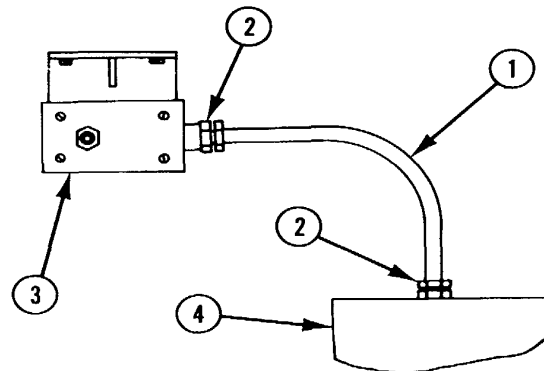
- a. Drill one 1.06-in. (2.69-cm) hole (13) in the top front as illustrated.
- b. Drill one 0.88-in. (2.24-cm) hole (14) in the top front as illustrated.



REASSEMBLY

1 FLEXIBLE CONDUIT (1) WITH CONNECTORS (2).

- a. Install in between switchbox S7/S8 (3) and circuit breaker panel box PL1 (4).
- b. Tighten connectors (2).

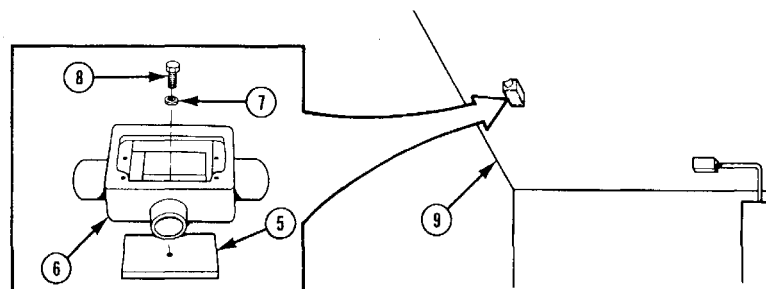




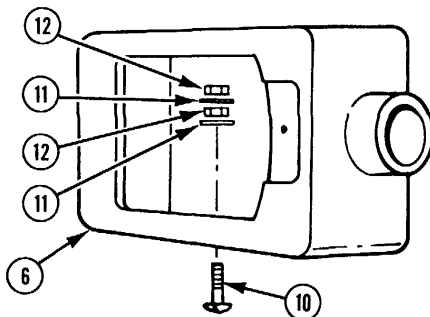
**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

2 SPACER (5), CONDUIT BOX J20 (6),  
FLAT WASHER (7), AND SCREW (8).  
Install in ceiling (9).

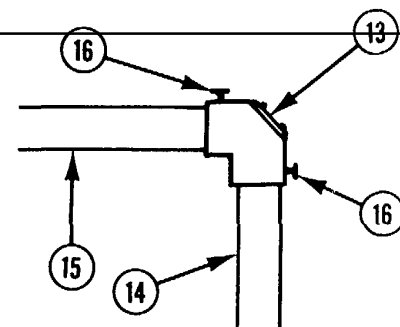


3 SCREW (10), LOCKWASHER (11), NUT  
(12), LOCKWASHER (11), AND NUT (12).  
Install in conduit box J20 (6).

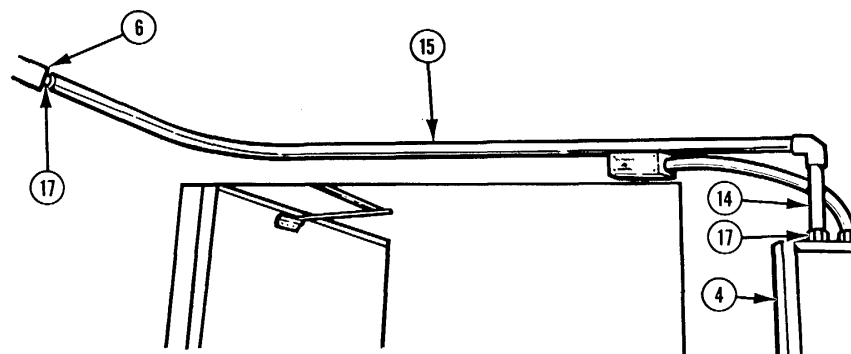


4 PULLING ELBOW (13).

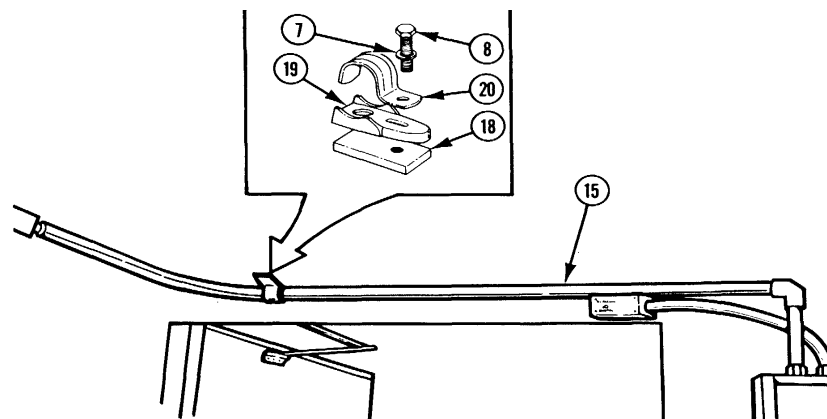
- a. Install on conduit (14) and conduit (15).
- b. Tighten two screws (16).



- 5 CONDUIT (14) WITH FITTING (17).  
Install in circuit breaker panel box  
PL1 (4).
- 6 CONDUIT (15) WITH FITTING (1) Install  
in conduit box J20 (6).
- 7 TWO FITTINGS (17). Tighten.



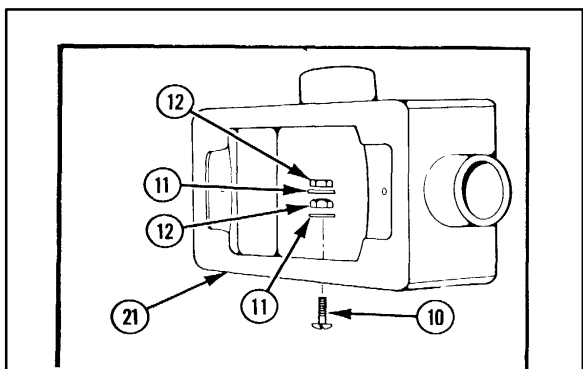
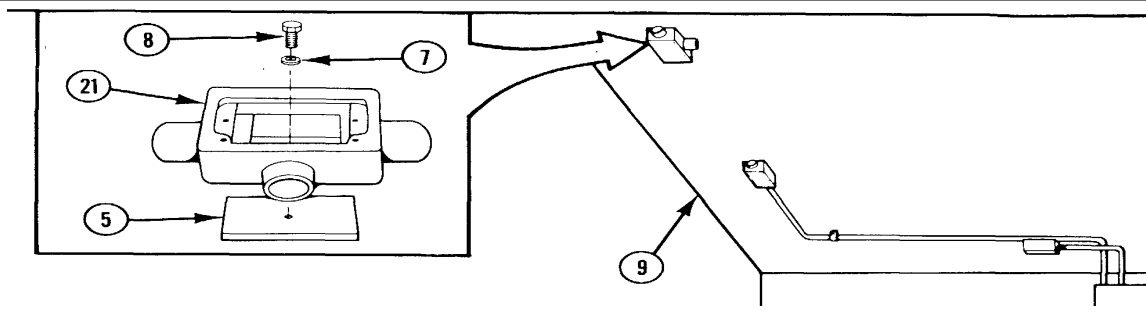
- 8 SPACER (18), CLAMP BACK (19), CLAMP (20),  
FLAT WASHER (7), AND SCREW (8).  
Install in ceiling on conduit (15).



**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

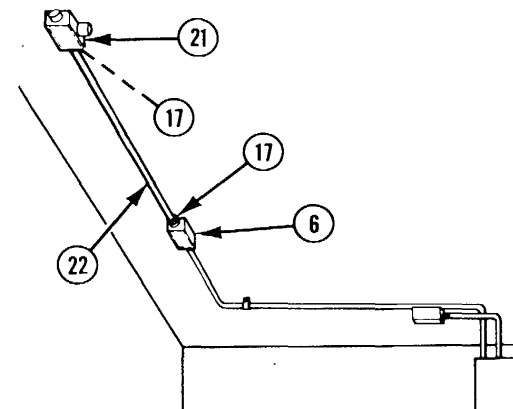
9 SPACER (5), "T" CONDUIT BOX J21 (21), FLAT WASHER (7), AND SCREW (8). Install in ceiling (9).



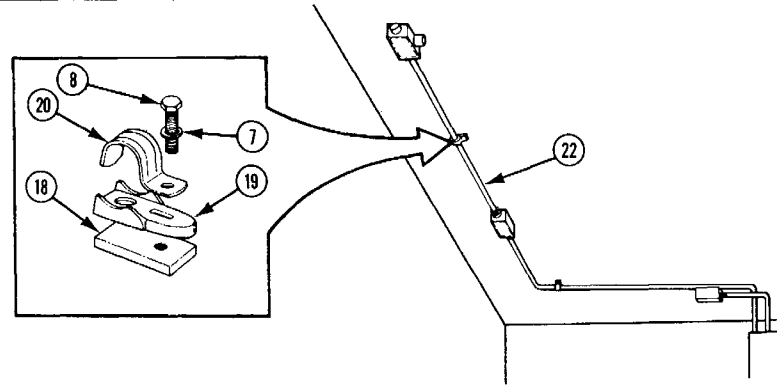
10 SCREW (10), LOCKWASHER (11), NUT (12), LOCKWASHER (11), AND NUT (12). Install in "T" conduit box J21 (21).

11 CONDUIT (22) WITH FITTINGS (17).

- a. Install in between "T" conduit box J21 (21) and conduit box J20 (6).
- b. Tighten fittings (17).

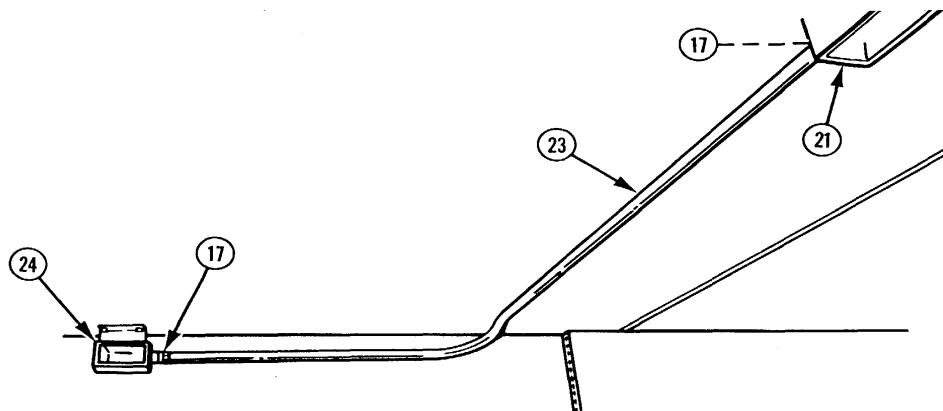


12 SPACER (18), CLAMP BACK (19), CLAMP (20), FLAT WASHER (7), AND SCREW (8). Install in ceiling on conduit (22).



13 CONDUIT (23) WITH FITTINGS (17).

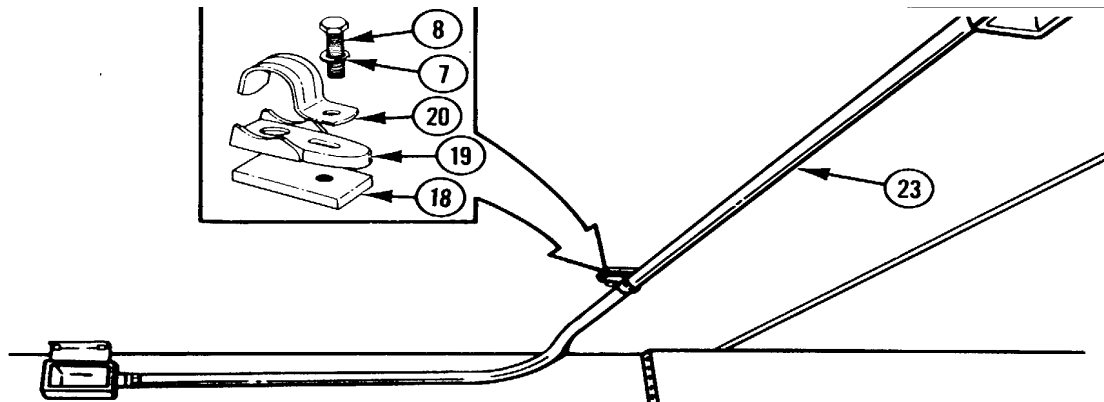
- a. Install in between "T" conduit box J21 (21) and switchbox S9 (24).
- b. Tighten fittings (17).



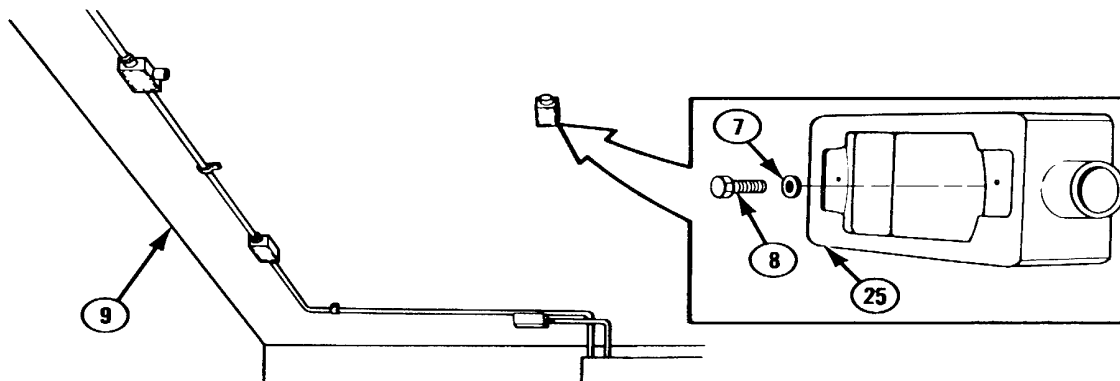
**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

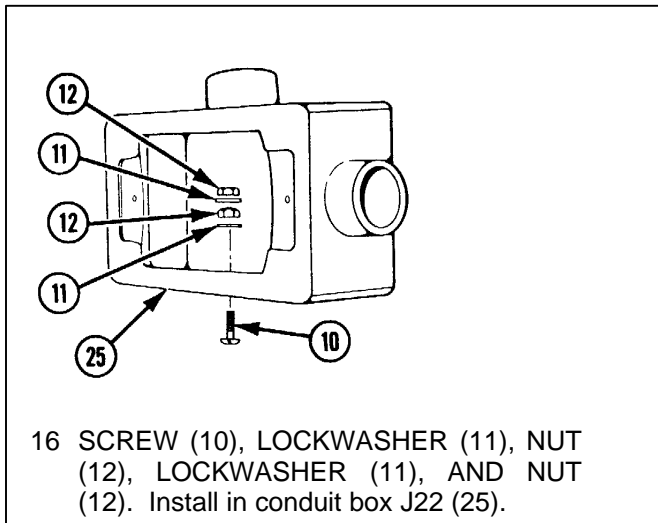
**REASSEMBLY (cont)**

14 SPACER (18), CLAMP BACK (19), CLAMP (20), FLAT WASHER (7), AND SCREW (8). Install in ceiling on conduit (23).

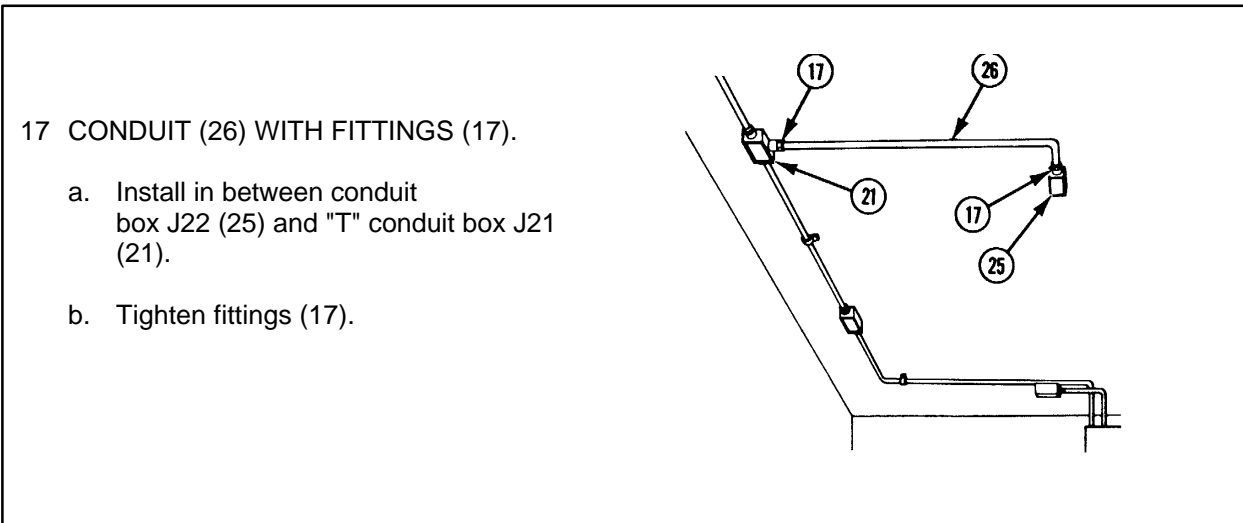


15 CONDUIT BOX J22 (25), FLAT WASHER (7), AND SCREW (8). Install in ceiling (9).



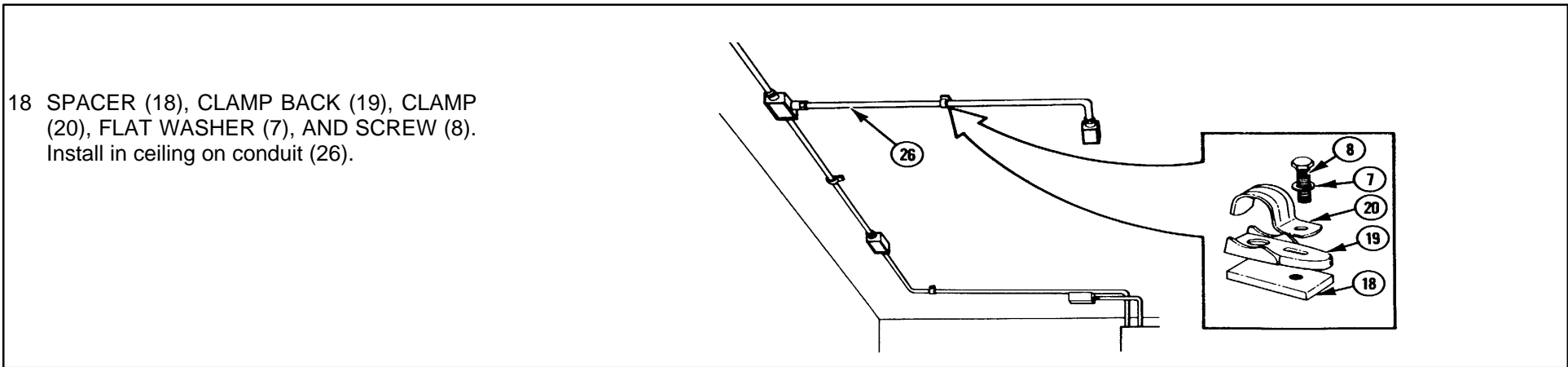


16 SCREW (10), LOCKWASHER (11), NUT (12), LOCKWASHER (11), AND NUT (12). Install in conduit box J22 (25).



17 CONDUIT (26) WITH FITTINGS (17).

- a. Install in between conduit box J22 (25) and "T" conduit box J21 (21).
- b. Tighten fittings (17).

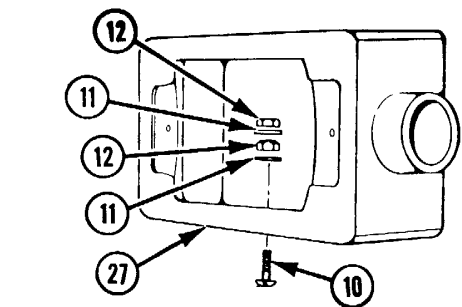
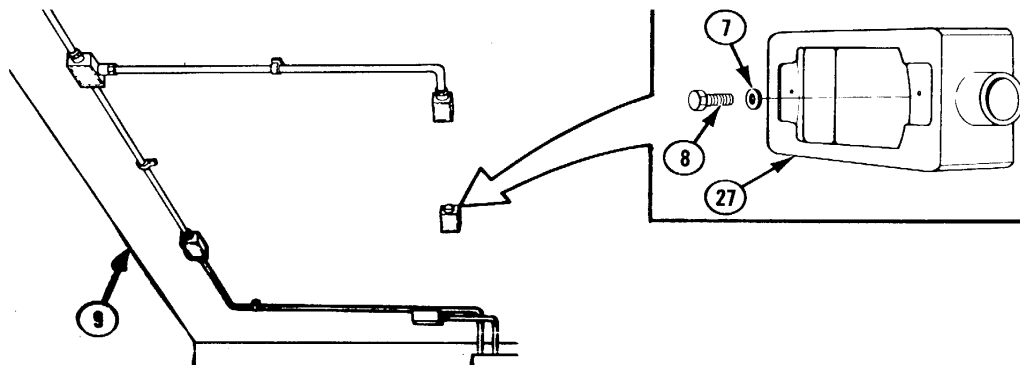


18 SPACER (18), CLAMP BACK (19), CLAMP (20), FLAT WASHER (7), AND SCREW (8). Install in ceiling on conduit (26).

**3-12. SHOP SET--CONDUIT INSTALLATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

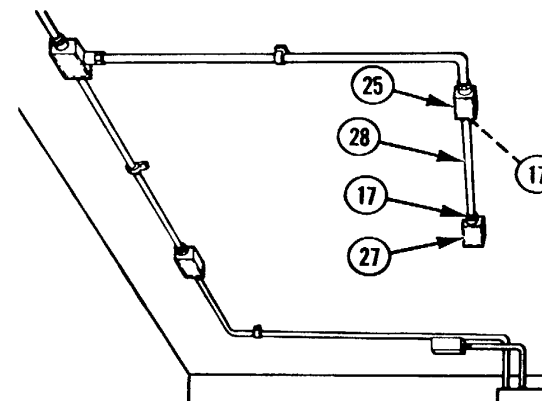
19 RECEPTACLE BOX J23 (27), FLAT WASHER (7), AND SCREW (8). Install in ceiling (9).



20 SCREW (10), LOCKWASHER (11), NUT (12), LOCKWASHER (11), AND NUT (12). Install in receptacle box J23 (27).

21 CONDUIT (28) WITH FITTINGS (17).

- a. Install in between conduit box J22 (25) and receptacle box J23 (27).
- b. Tighten fittings (17).



**3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:

- a. Inspection
- b. Service
- c. Removal
- d. Repair
- e. Modification of right table
- f. Modification of storage cabinet and portable degreaser
- g. Installation

INITIAL SETUP

Special Tools

- Armament repair shop set (SC 4933-95-CL-A21)
- AVIM sheet metal shop set (SC 4920-99-CL-A85)
- AVIM tool crib shop set (SC 4920-99-CL-A86)
- AVIM welding shop set (SC 4920-99-CL-A88)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

References

- Appendix D
- SC 4933-95-CL-A21
- TM 10-5410-224-14
- TM 5-4120-243-14
- TM 9-237

Materials/Parts

- Abrasive cloth (item 4, app D)
- Lubricating oil (item 13, app D)
- Polishing cloth (item 5, app D)

Personnel required: 4

- Aircraft armament Lift the ECU. repairmen

**NOTE**

**Maintenance procedures for the two tables, which are parts of the installed equipment list, are contained in paragraph 3-16.**

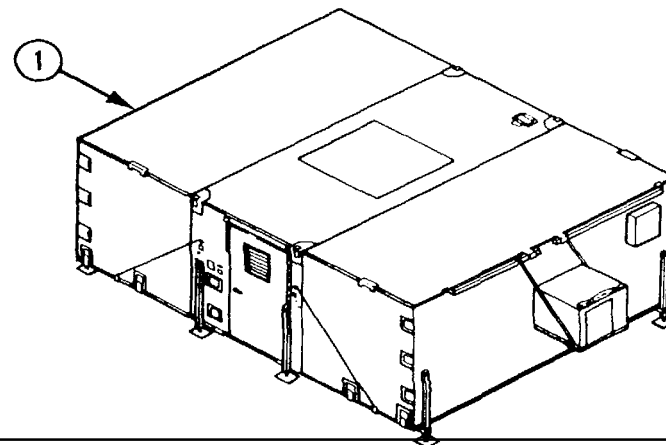


**3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)**

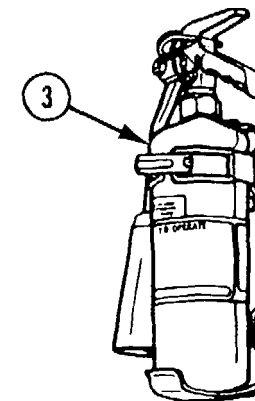
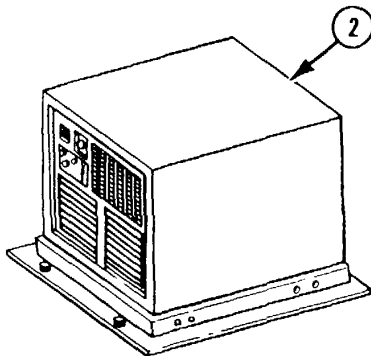
**INSPECTION**

**1 SHELTER (1).**

- a. Check for cleanness.
- b. Inspect for structural damage and for any missing or damaged paint.
- c. For other inspection procedures, refer to TM 10-5410-224-14.



**2 TWO ECU'S (2). Refer to TM 5- 4120-243-14 for inspection procedures.**

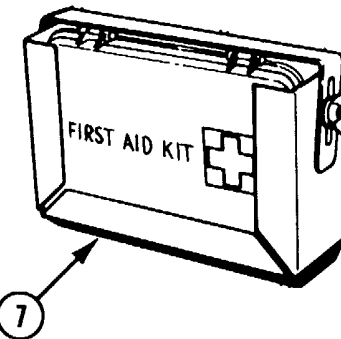
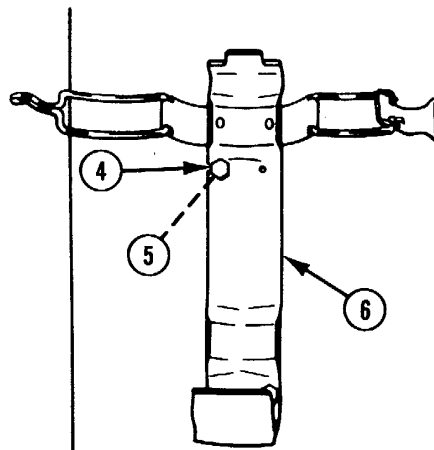


**3 FIRE EXTINGUISHER (3). Check for missing seal.**

**NOTE**

Parts (4 thru 6) are used to secure the fire extinguisher to the inside of the personnel door.

- 4 TWO SCREWS (4) AND TWO LOCK-WASHERS (5). Check for missing, damaged, or corroded parts.
- 5 BRACKET (6). Check for bent or broken parts.



- 6 FIRST AID KIT (7). Check to ensure contents are complete.

- 7 FOUR STOOLS (8). Check for missing, bent, or broken parts.



- 8 ALL HANDTOOLS.
  - a. Check for broken, bent, or damaged parts.
  - b. Check for corrosion.
  - c. Check to ensure that any items with movable parts work properly.
  - d. For a complete listing of all handtools included in the installed equipment list, refer to SC 4933-95-CL-A21.

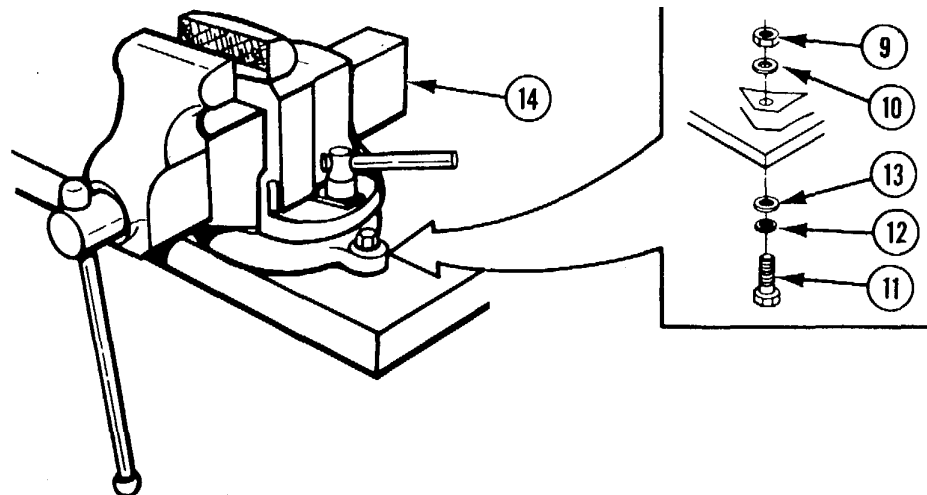
**3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)**

**INSPECTION (cont)**

**NOTE**

Parts (9 thru 13) are used to secure the machinist's vise to the right table.

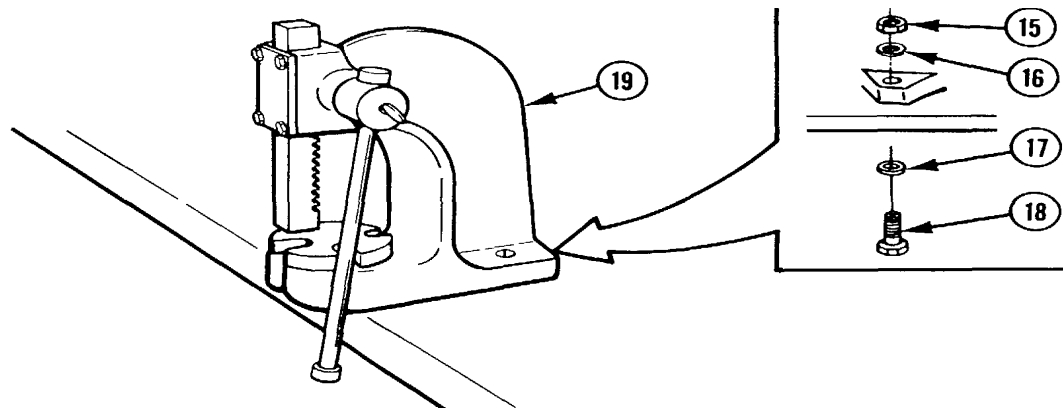
- 9 FOUR NUTS (9), FOUR FLAT WASHERS (10), FOUR SCREWS (11), FOUR LOCKWASHERS (12), AND FOUR FLAT WASHERS (13). Check for missing damaged, or corroded parts.
- 10 MACHINIST'S VISE (14). Check for damaged or corroded parts.



**NOTE**

Parts (15 thru 18) are used to secure the arbor press to the right table.

- 11 TWO NUTS (15), TWO LOCKWASHERS (16), TWO FLAT WASHERS (17), AND TWO SCREWS (18). Check for missing, damaged, or corroded parts.
- 12 ARBOR PRESS (19). Check for bent, broken, or corroded parts.



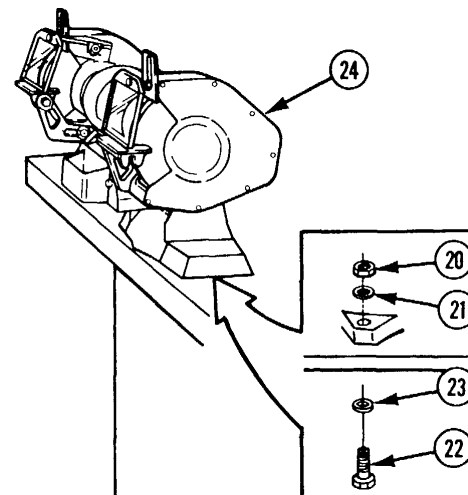
**NOTE**

Parts (20 thru 23) are used to secure the grinding machine to the right table.

13 TWO NUTS (20), TWO LOCKWASHERS (21), TWO SCREWS (22), AND TWO FLAT WASHERS (23). Check for missing, damaged, or corroded parts.

14 GRINDING MACHINE (24).

- a. Check for bent, broken, or corroded parts.
- b. Check to ensure grinding machine is not worn or damaged.
- c. Check to ensure electrical cord is not frayed or damaged.
- d. Check to ensure grinding machine operates when turned on.



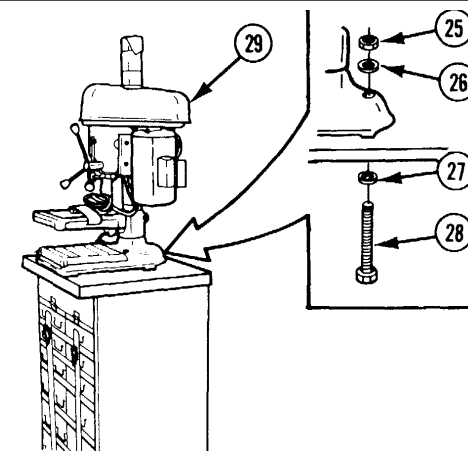
**NOTE**

Parts (25 thru 28) are used to secure drilling machine to storage cabinet.

15 THREE NUTS (25), THREE LOCKWASHERS (26), THREE FLAT WASHERS (27), AND THREE BOLTS (28). Check for missing, damaged, or corroded parts.

16 DRILLING MACHINE (29).

- a. Check for bent, broken, or corroded parts.
- b. Check to ensure electrical cord is not frayed or damaged.
- c. Check to ensure drilling machine operates when turned on.

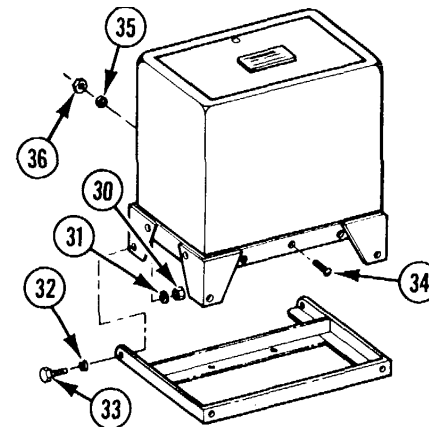


**3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)**

**INSPECTION (cont)**

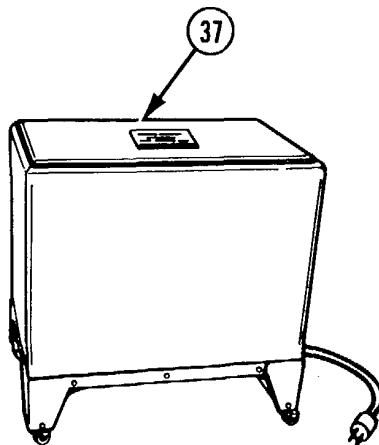
**NOTE**  
Parts (30 thru 33) are used to secure the portable degreaser in its mounting frame. Parts (34 thru 36) are used to hold the two sections (tank and mounting legs) of the portable degreaser together.

- 17 FOUR NUTS (30), FOUR LOCKWASHERS (31), FOUR FLAT WASHERS (32), AND FOUR SCREWS (33). Check for missing, damaged, or corroded parts.
- 18 TEN SCREWS (34), TEN LOCKWASHERS (35), AND TEN NUTS (36). Check for missing, damaged, or corroded parts.



19 PORTABLE DEGREASER (37).

- a. Check for bent, broken, or corroded parts.
- b. Check for cracks in welding.
- c. Check to ensure electrical cord is not frayed or damaged.
- d. Check to ensure pump operates when turned on.

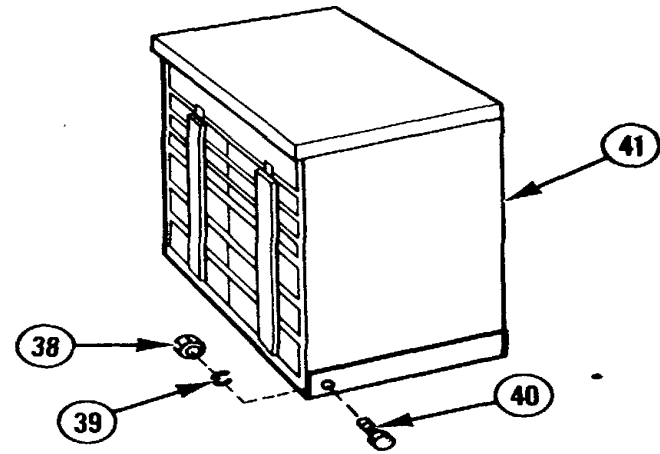


**NOTE**  
Parts (38 thru 40) are used to secure the storage cabinet to its mounting frame.

20 FOUR NUTS (38), FOUR LOCKWASHERS (39), AND FOUR SCREWS (40). Check for missing, damaged, or corroded parts.

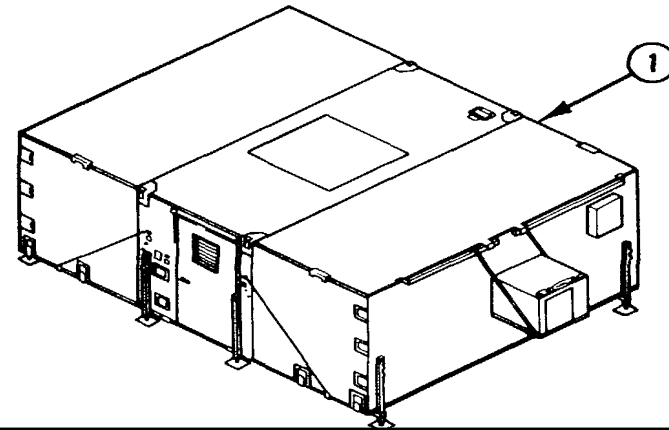
21 STORAGE CABINET (41).

- a. Check for bent, broken, or corroded parts.
- b. Check for cracks in welding.



SERVICE

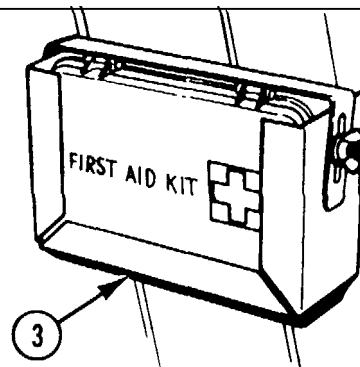
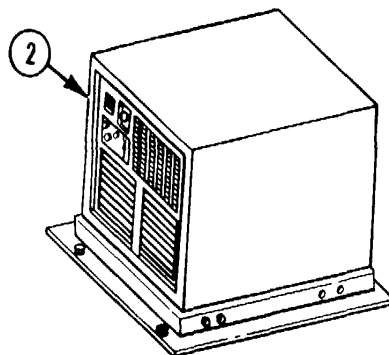
1 SHELTER (1). Refer to TM 10-5410-224-14 for service operations.



3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

SERVICE (cont)

2 TWO ECU's (2). Refer to TM 5- 4120-243-14 for service operations.



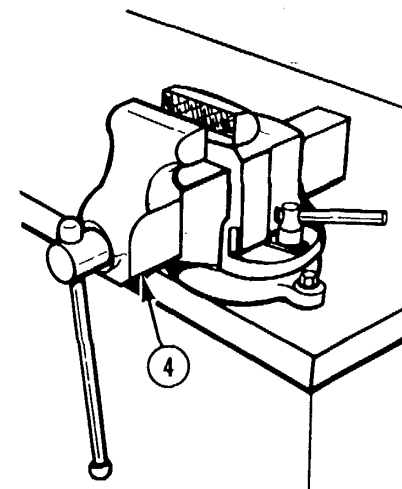
3 FIRST AID KIT (3). Replace any missing items.

4 ALL HANDTOOLS.

- a. Remove corrosion from unpainted metal surfaces with abrasive cloth (item 4, app D).
- b. Use polishing cloth (item 5, app D) to wipe off dirt.
- c. Apply a light coat of lubricating oil (item 13, app D) to all unpainted metal surfaces.
- d. Apply lubricating oil (item 13, app D) to joints and moving parts, if required.

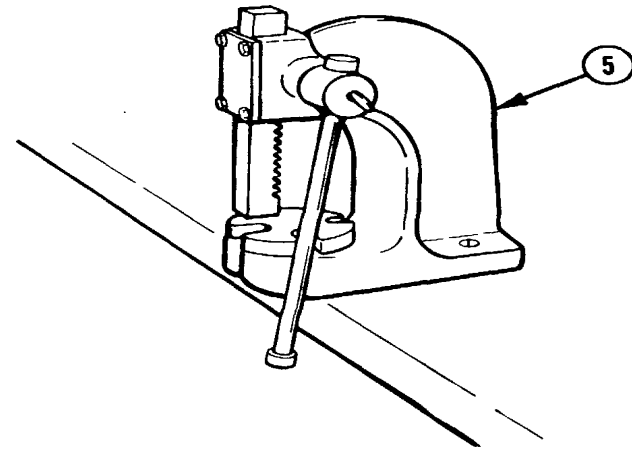
5 MACHINIST'S VISE (4).

- a. Remove corrosion from unpainted metal surfaces with abrasive cloth (item 4, app D).
- b. Apply a light coat of lubricating oil (item 13, app D) to all unpainted metal surfaces.
- c. Refer to vendor supplied information for other service operations.



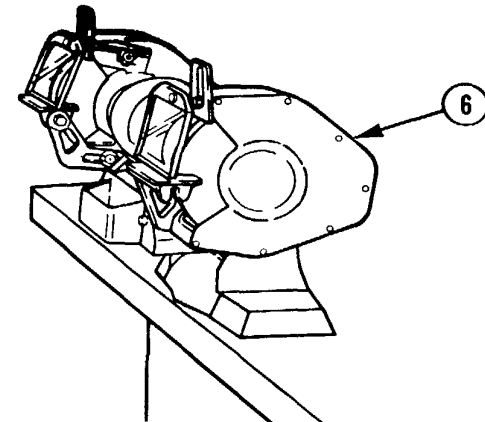
6 ARBOR PRESS (5).

- a. Remove corrosion from unpainted metal surfaces with abrasive cloth (item 4, app D).
- b. Apply a light coat of lubricating oil (item 13, app D) to unpainted metal surfaces.
- c. Refer to vendor supplied information for other service operations.



7 GRINDING MACHINE (6).

- a. Remove corrosion from unpainted metal surfaces with abrasive cloth (item 4, app D).
- b. Apply a light coat of lubricating oil (item 13, app D) to unpainted metal surfaces.
- c. Refer to vendor supplied information for other service operations.



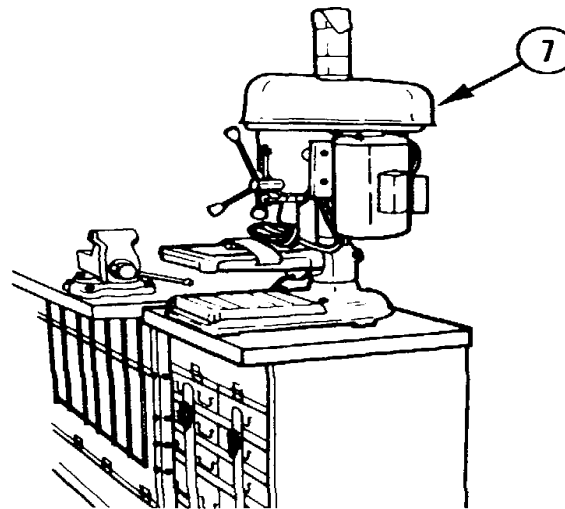


**3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)**

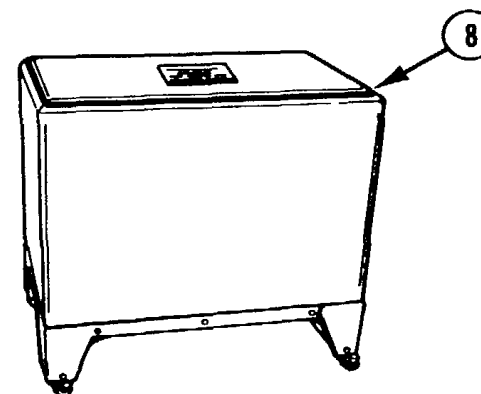
SERVICE (cont)

**8 DRILLING MACHINE (7).**

- a. Remove corrosion from unpainted metal surfaces with abrasive cloth (item 4, app D).
- b. Apply a light coat of lubricating oil (item 13, app D) to unpainted metal surfaces.
- c. Refer to vendor supplied information for other service operations.

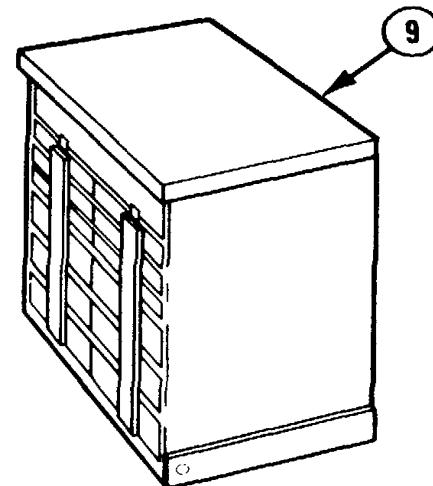
**9 PORTABLE DEGREASER (8).**

- a. Clean off any dirt or sludge with polishing cloth (item 5, app D).
- b. Refer to vendor supplied information for other service operations.



10 STORAGE CABINET (9).

- a. Clean off dirt with polishing cloth (item 5, app D).
- b. Refer to vendor supplied information for other service operations.



REMOVAL

**NOTE**

Steps 1 and 2 pertain to removal of the ECU from its stowing frame assembly.

Steps 1 and 2 also pertain to removal of only one ECU and must be repeated for the second unit.

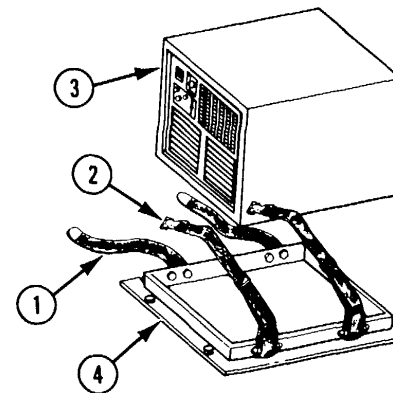
For removal procedures of ECU from shelter, refer to TM 10-5410-224-14.

- 1 TWO STRAPS (1) AND TWO STRAPS WITH BUCKLES (2). Unbuckle.

**WARNING**

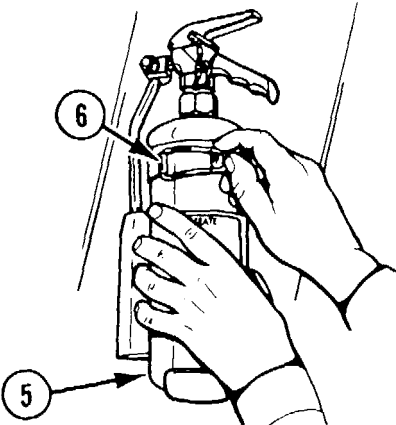
The ECU weighs approximately 270 lb (122 kg) and requires a minimum of four personnel when lifting.

- 2 ECU (3). Lift out of frame assembly (4).



**3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)**

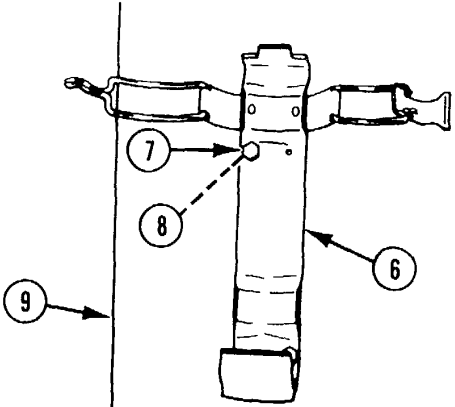
**REMOVAL (cont)**



3 FIRE EXTINGUISHER (5). Remove from bracket (6).

4 TWO SCREWS (7) AND TWO LOCK-WASHERS (8). Remove.

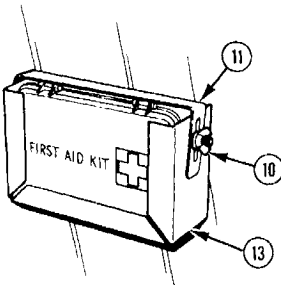
5 BRACKET (6). Remove from inside of personnel door (9).



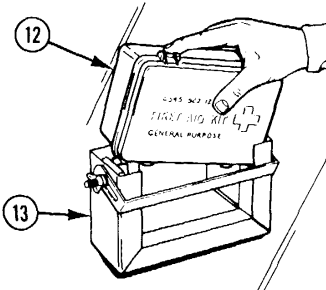
**NOTE**  
Parts (10, 11, and 13) are part of the first aid kit holder assembly.

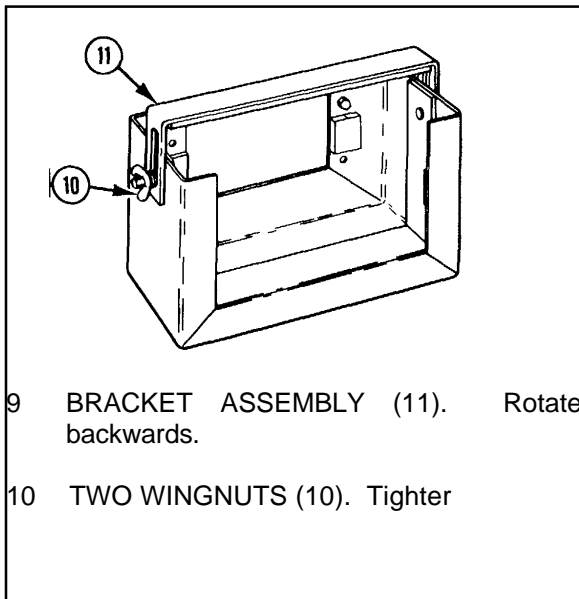
6 TWO WINGNUTS (10). Loosen.

7 BRACKET ASSEMBLY (11). Lift and rotate forward.

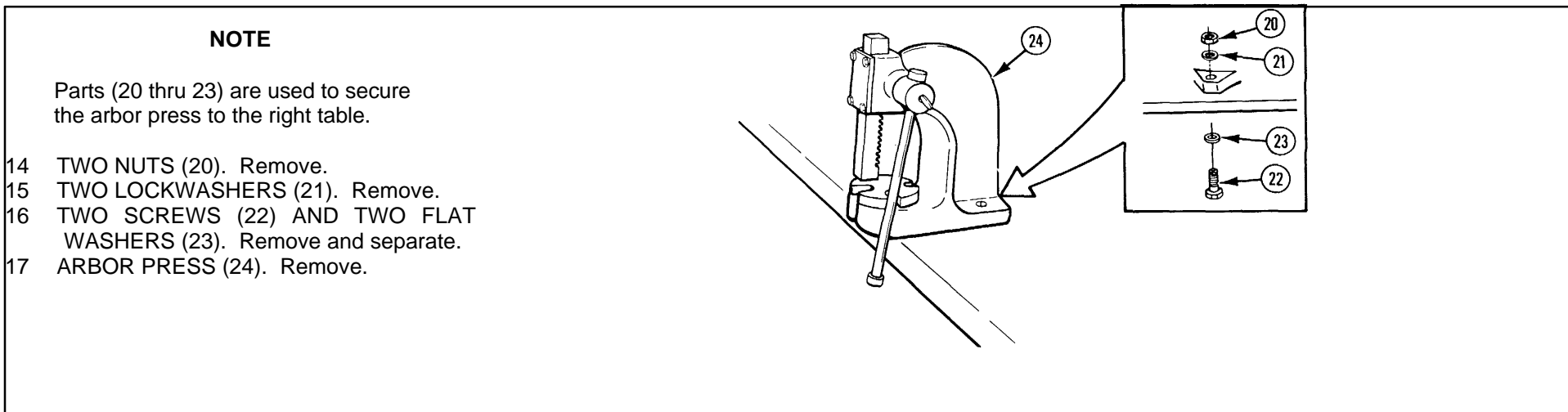
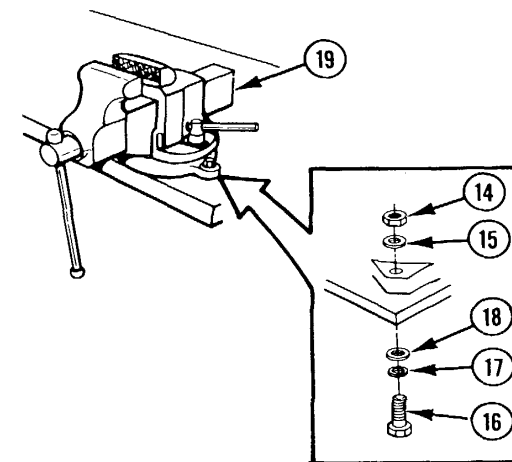


8 FIRST AID KIT (12). Remove from holder assembly (13).





- NOTE**  
Parts (14 thru 18) are used to secure the machinist's vise to right table.
- 11 FOUR NUT (14) AND FOUR FLAT WASHERS (15). Remove.
  - 12 FOUR SCREWS (16). FOUR LOCKWASHERS (17), AND FOUR FLAT WASHERS (18). Remove and separate.
  - 13 MACHINIST'S VISE (19). Remove.



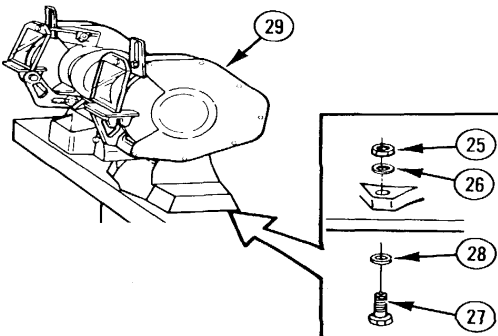
3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

REMOVAL (cont)

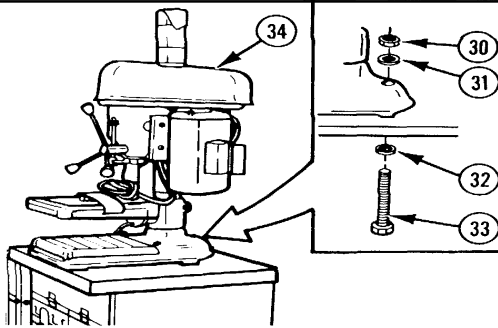
**NOTE**  
 Parts (25 thru 28) are used to secure the grinding machine to the right table.

**NOTE**  
 Parts (30 thru 33) are used to secure the drilling machine to the storage cabinet.

18 TWO NUTS (25). Remove.  
 19 TWO LOCKWASHERS (26). Remove.  
 20 TWO SCREWS (27) AND TWO FLAT WASHERS (28). Remove and separate.  
 21 GRINDING MACHINE (29). Remove.

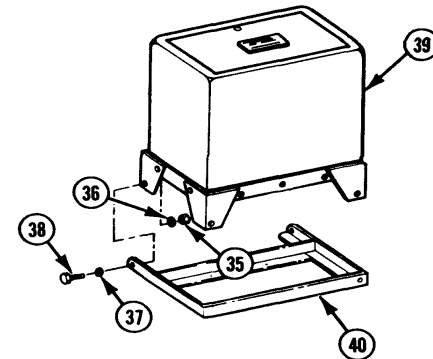


22 THREE NUTS (30), THREE LOCKWASHERS (31), AND THREE FLAT WASHERS (32). Remove.  
 23 THREE BOLTS (33). Remove.  
 24 DRILLING MACHINE (34). Remove.



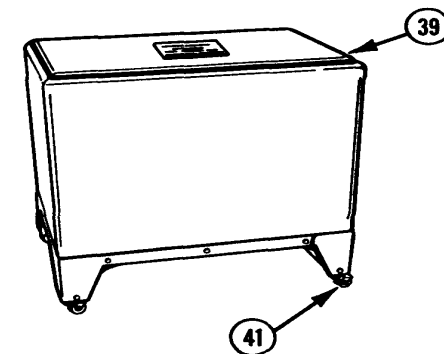
**NOTE**  
 Parts (35 thru 38) are used to secure the portable degreaser to the mounting frame.

- 25 FOUR NUTS (35). Remove.
- 26 FOUR LOCKWASHERS (36) AND FOUR FLAT WASHERS (37). Remove.
- 27 FOUR SCREWS (38). Remove.



**WARNING**  
 After performing step 29 the portable degreaser will not be ready for operation. Refer to paragraph 2-17 for operating procedures.

- 28 PORTABLE DEGREASER (39). Lift out of portable degreaser mounting frame (40).
- 29 FOUR CASTERS (41).
  - a. Remove from inside tank of portable degreaser (39).
  - b. Install on base of portable degreaser (39)

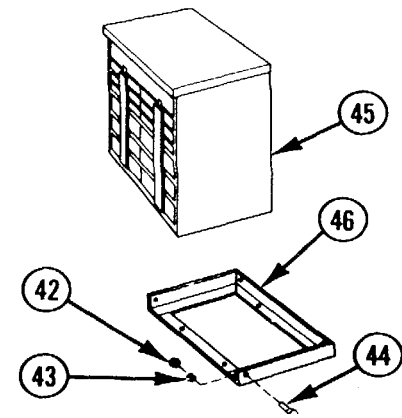


13-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

REMOVAL (cont)

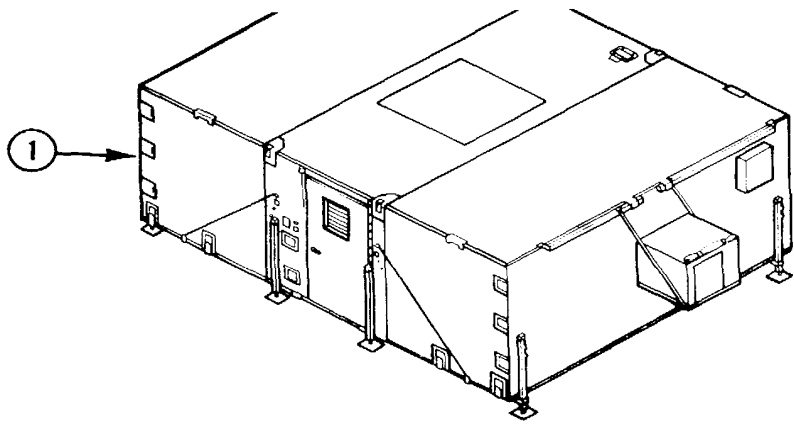
**NOTE**  
Parts (42 thru 44) are used to secure the storage cabinet to the mounting frame.

- 30 FOUR NUTS (42). Remove.
- 31 FOUR LOCKWASHERS (43). Remove.
- 32 FOUR SCREWS (44). Remove.
- 33 STORAGE CABINET (45). Lift out of storage cabinet mounting frame (46).



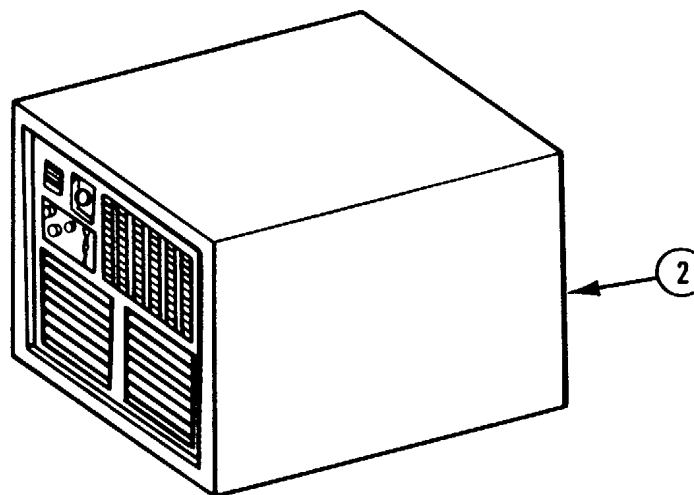
REPAIR

- 1 SHELTER (1).
  - a. Refer to TM 10-5410-224-14 for repair procedures.
  - b. Refer to SC 4933-95-CL-A21 for replacement if not repairable.



2

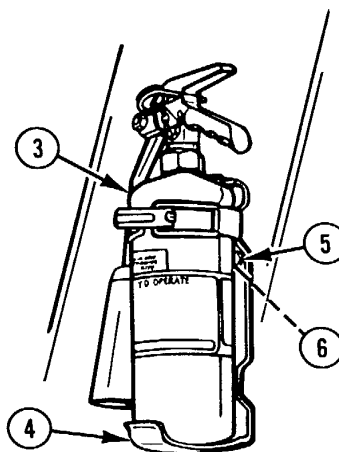
- TWO ECU's (2).
- a. Refer to TM 5-4120-243-14 for repair procedures.
- b. Refer to SC 4933-95-CL-A21 for replacement if not repairable.



3

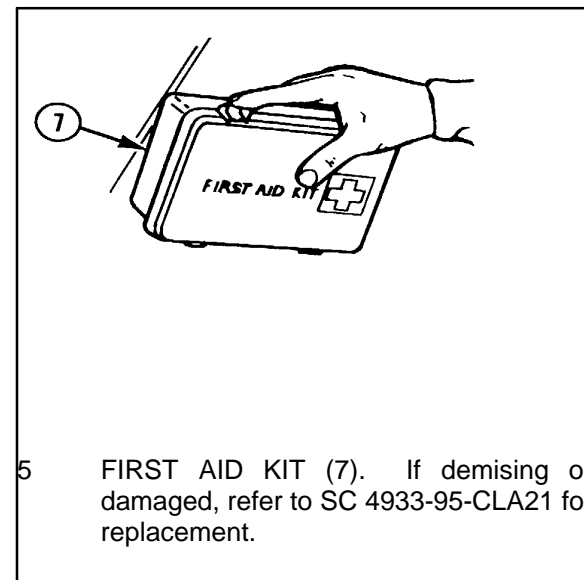
FIRE EXTINGUISHER (3) AND BRACKET (4).

- a. Repair bracket by rewelding or straightening as required.
- b. Refer to SC 4933-95-CL-A21 for replacement if not repairable. (The bracket is supplied with the fire extinguisher.)



4

TWO SCREWS (5) AND TWO LOCKWASHERS (6). Replace if missing, damaged, or corroded



5

FIRST AID KIT (7). If demising or damaged, refer to SC 4933-95-CLA21 for replacement.



13-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS(cont)

REPAIR (cont)

6 ALL HANDTOOLS. Refer to SC 493395-CL-A21 for replacement if any parts are damaged.

7 FOUR STOOLS (8).

- a. Repair any broken parts cracked welds by rewelding.
- b. Straighten bent parts.
- c. If not repairable, refer to SC 4933-95-CL-A21 for replacement.

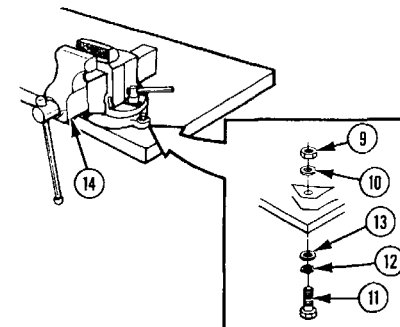


**NOTE**  
Parts (9 thru 13) are used to secure the machinist's vise to the right table.

8 FOUR NUTS (9), FOUR FLAT WASHERS (10), FOUR SCREWS (11), FOUR LOCKWASHERS (12), AND FOUR FLAT WASHERS(13). Replace if missing, damaged, or corroded.

9 MACHNIST'S VISE (14).

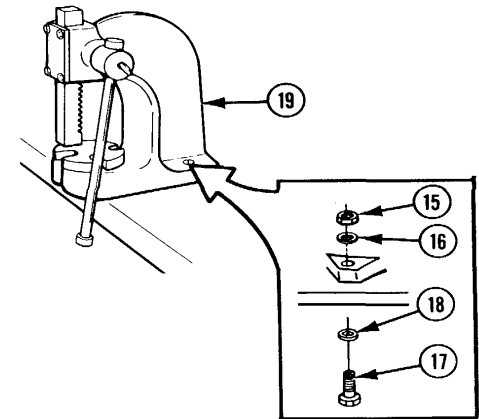
- a. Refer to vendor supplied information for repair procedures.
- b. Refer to SC 4933-95-CL-A21 for replacement if not repairable.



**NOTE**

Parts (15 thru 18) are used to secure the arbor press to the right table.

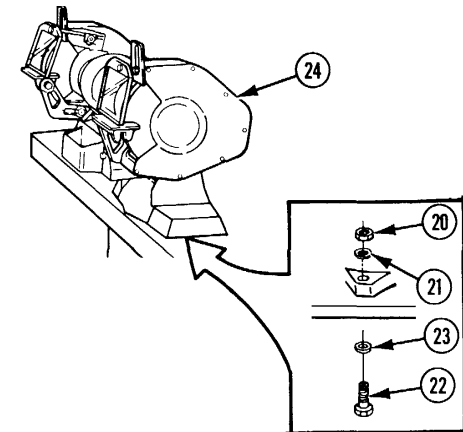
- 10 TWO NUTS (15), TWO LOCKWASHERS (16), TWO SCREWS (17), AND TWO FLAT WASHERS (18). Replace if missing, damaged, or corroded.
- 11 ARBOR PRESS (19).
- a. Repair any bent or cracked parts by rewelding or straightening.
  - b. Refer to vendor supplied information for other repair procedures.
  - c. Refer to SC 4933-95-CL-A21 for replacement if not repairable.



**NOTE**

Parts (20 thru 23) are used to secure the grinding machine to the right table.

- 12 TWO NUTS (20), TWO LOCKWASHERS (21), TWO SCREWS (22), AND TWO FLAT WASHERS (23). Replace if missing, damaged, or corroded.
- 13 GRINDING MACHINE (24).
- a. Repair any bent or cracked parts by straightening or rewelding.
  - b. Refer to vendor supplied information for grinding wheel and other repair procedures.
  - c. Refer to SC 4933-95-CL-A21 for replacement if not repairable.



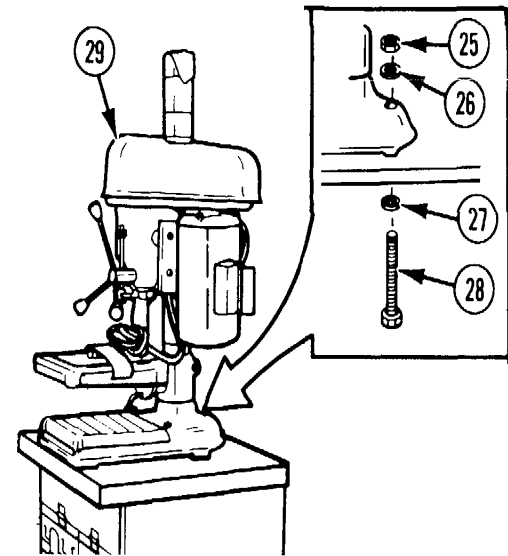
3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

REPAIR (cont)

**NOTE**

Parts (25 thru 28) are used to secure drilling machine to storage cabinet.

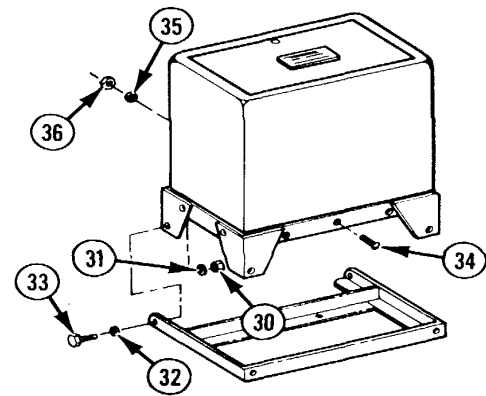
- 14 THREE NUTS (25), THREE LOCKWASHERS, (26), THREE FLAT WASHERS (27), AND THREE BOLTS (28). Replace if missing, damaged, or corroded.
- 15 DRILLING MACHINE (29).
  - a. Repair any bent or cracked parts by rewelding or straightening.
  - b. Refer to vendor supplied information for other repair procedures.
  - c. Refer to SC 4933-95-CL-A21 for replacement if not repairable.



**NOTE**

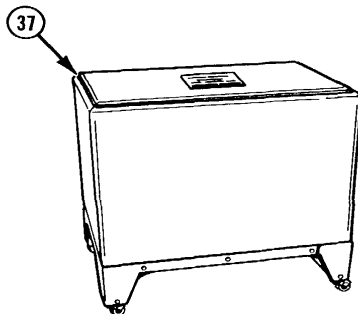
Parts (30 thru 33) are used to secure the portable degreaser in its mounting frame. Parts (34 thru 36) are used to hold the two sections (tank and mounting legs) of the portable degreaser.

- 16 FOUR NUTS (30), FOUR LOCKWASHERS (31), FOUR FLAT WASHERS (32), AND FOUR SCREWS (33). Replace if missing, damaged, or corroded.
- 17 TEN SCREWS (34), TEN LOCKWASHERS (35), AND TEN NUTS (36). Replace if missing, damaged, or corrode.



18 PORTABLE DEGREASER (37).

- a. Repair any bent metal parts or cracks by rewelding or straightening.
- b. Refer to vendor supplied information for other repair procedures.
- c. Refer to SC 4933-95-CL-A21 for replacement if not repairable.



**NOTE**

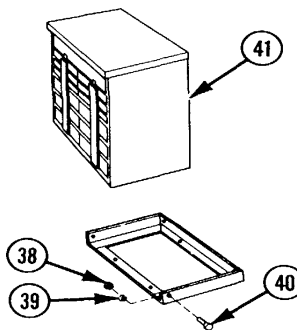
Parts (38 thru 40) are used to secure the storage cabinet to its mounting frame.

**MODIFICATION OF RIGHT TABLE**

- 19 FOUR NUTS (38), FOUR LOCKWASHERS (39), AND FOUR SCREWS (40). Replace if missing, damaged, or corroded.

20 STORAGE CABINET (41).

- a. Repair any bent metal parts or cracks by rewelding or straightening.
- b. Refer to vendor supplied information for other repair procedures.
- c. Refer to SC 4933-95-CL-A21 for replacement if not repairable.



**NOTE**

Steps 1 thru 12 are used only for initial installation or when the table has been replaced with a new item.

The table is purchased from various manufacturers and there may be slight variations.

The designation of left and right tables is determined by looking into the shop set from the cargo door.

13-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

MODIFICATION OF RIGHT TABLE (cont)

1 MACHINIST'S VISE (1). Position on right table(2) as follows: The front edge of machinist's vise should be flush with front edge of table and center line of vise 7.50 in. (19.05 cm) from cargo door end of table.

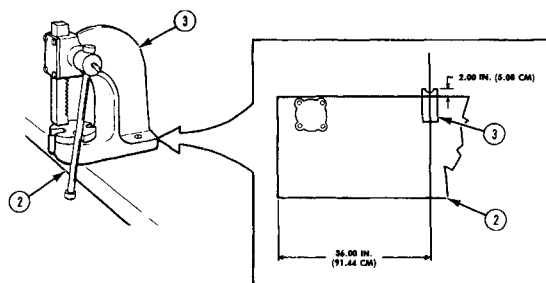
2 RIGHT TABLE (2). Mark location of mounting holes using machinist's vise (1) as a template.

3 MACHINIST'S VISE (1). Remove.

4 RIGHT TABLE (2). Drill four 0.50-in. (1.27-cm) diameter holes through top at marked locations.

5

ARBOR PRESS (3). Position on right table (2) as follows: The front edge of Harbor press should be extended 2.00 in. ( 5.08 cm) over front edge of table and center line of arbor press 36.00 in. (91.44 cm) from cargo door end of table.



6

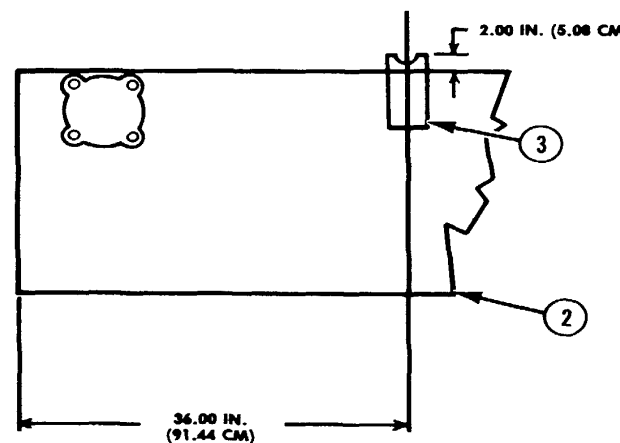
RIGHT TABLE (2). Mark location of mounting holes using arbor press (3) as a template.

7

ARBOR PRESS (3). Remove.

8

RIGHT TABLE (2). Drill two 0.50in. (1.27-cm) diameter holes through top at marked locations.



13-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

MODIFICATION OF RIGHT TABLE (cont)

9 GRINDING MACHINE (4). Position on right table as follows: The front edge of grinding machine base should be flush with the front edge of table (within  $\pm 0.50$  in. (1.27 cm)); the outside edge of the left grinding wheel should be flush with the personnel door end of the table (within  $\pm 0.50$  in. (1.27 cm)).

MODIFICATION OF STORAGE CABINET AND PORTABLE DEGREASER

10 RIGHT TABLE (2). Mark location of mounting holes using grinding machine (4) as a template.

11 GRINDING MACHINE (4). Remove.

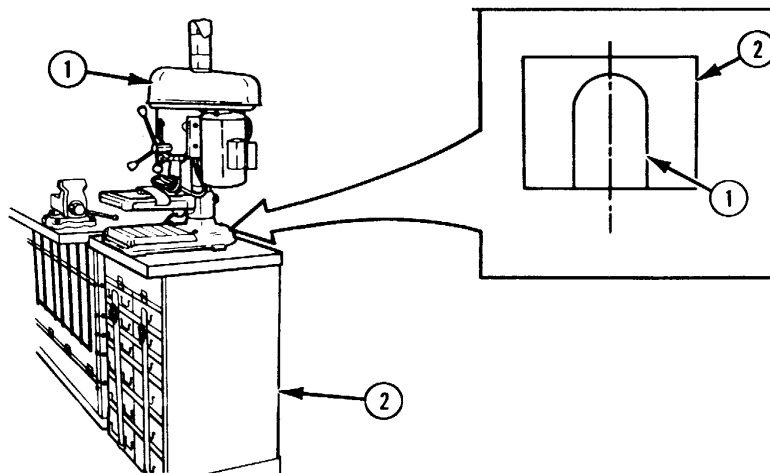
12 RIGHT TABLE (2). Drill two 0.50in. (1.27-cm) diameter holes through top at marked locations.

**NOTE**

Steps 1 thru 13 are used only for initial installation or when the storage cabinet and/or portable degreaser have been replaced with new items.

1

DRILLING MACHINE (1). Position on storage cabinet (2) as follows: The front of drilling machine base must be flush with front edge of storage cabinet and the drilling machine must be centered between the left and right sides of storage cabinet.



2

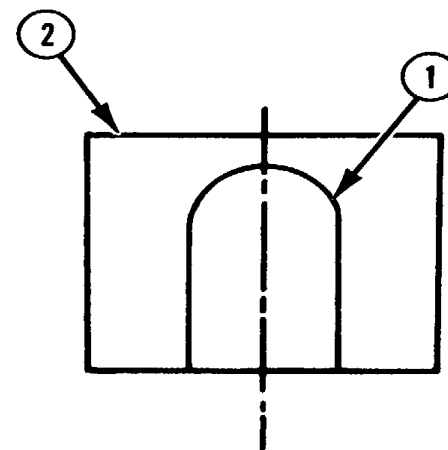
STORAGE CABINET (2). Mark location of mounting holes using drilling machine (1) as a template.

3

DRILLING MACHINE (1). Remove.

4

STORAGE CABINET (2). Drill 0.375-in. (0.953-cm) diameter holes through top at marked locations.



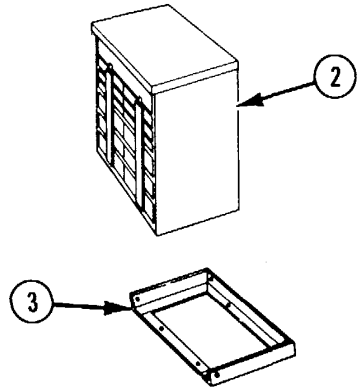


3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

MODIFICATION OF STORAGE CABINET AND PORTABLE DEGREASER (cont)

5 STORAGE CABINET (2).

- a. Place in mounting frame (3).
- b. Mark locations (two in storage cabinet back, one in left side, and one in right side) of mounting holes using mounting frame (3) as a template.
- c. Remove storage cabinet from mounting frame (3).
- d. Drill four 0.438-in. (1.113cm) diameter holes at marked locations.



**NOTE**

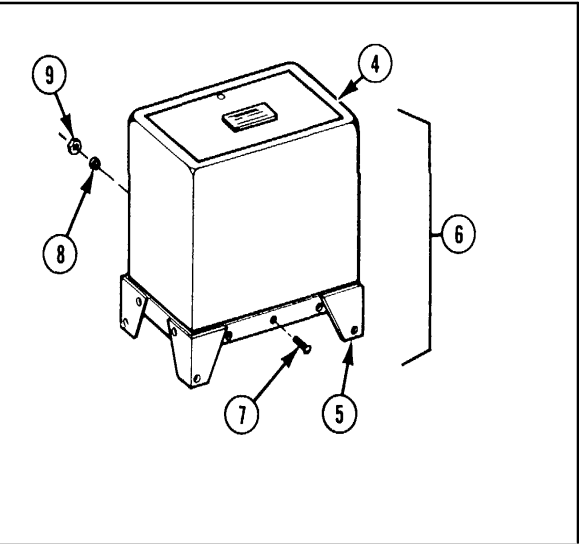
When new, portable degreaser comes in two sections, the tank section and mounting legs section. Steps 6 thru 10 are instructions for permanently attaching these two sections together.

6 TANK SECTION (4) AND MOUNTING LEGS SECTION (5). Assemble to form portable degreaser (6).

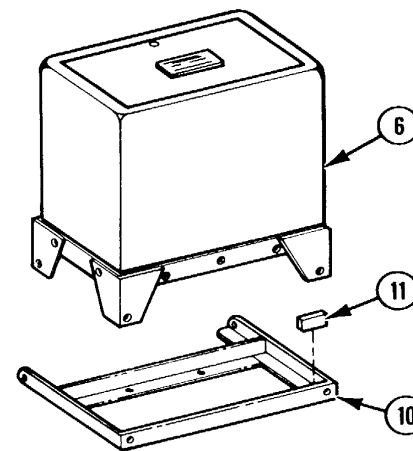
**CAUTION**  
Do not pierce tank when drilling through flange.

7 PORTABLE DEGREASER (6). Drill ten 0.250-in. (0.635- cm) diameter holes through flange (two holes in each end, three holes in front, and three holes in back) as illustrated.

8 TEN SCREWS (7), TEN LOCKWASHERS (8), AND TEN NUTS (9). Install.

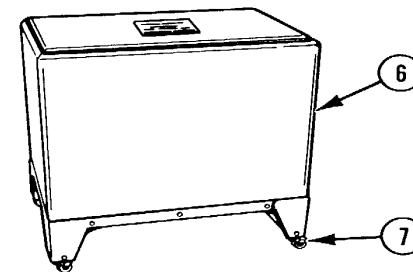
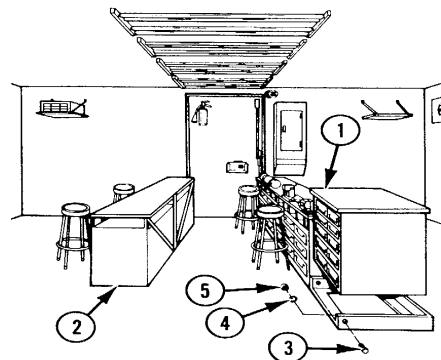


- 9 PORTABLE DEGREASER (6). Position in mounting frame (10).
- 10 SHIM (0.250-IN. (0.635-CM) THICK) (11). Place between front of portable degreaser (6) and front angle of mounting frame (10).
- 11 PORTABLE DEGREASER (6). Mark location (two in front, one on left side, and one on right side) of mounting holes using mounting frame (10) as a template.
- 12 SHIM (0.250-IN. (0.635-CM) THICK) (11). Remove.
- 13 PORTABLE DEGREASER (6).
  - a. Remove from mounting frame (10).
  - b. Drill four 0.50-in. (1.27-cm) diameter holes (two in front, one on left side, and one on right side) at marked locations



**INSTALLATION**

- 1 STORAGE CABINET (1). Install in mounting frame with front facing the left table (2).
- 2 FOUR SCREWS (3), FOUR LOCKWASHERS (4), AND FOUR NUTS (5). Install.



- 3 PORTABLE DEGREASER (6)
  - a. Remove four casters (7) and put in tank.

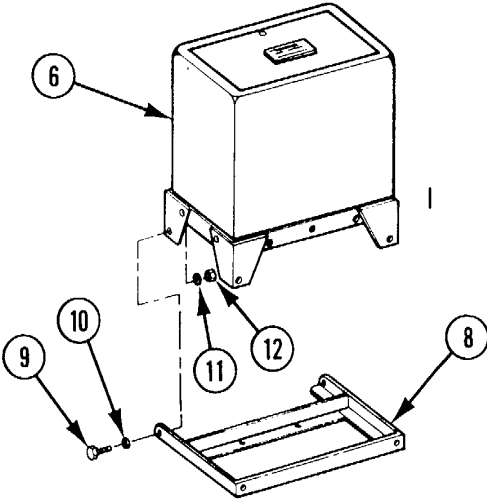
3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

INSTALLATION (cont)

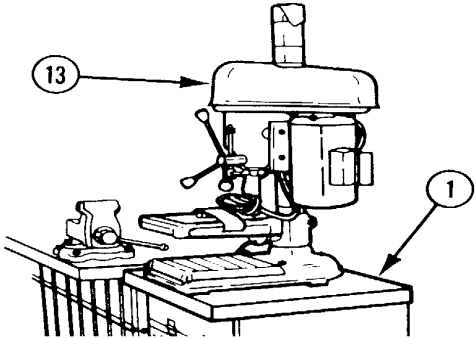
3 PORTABLE DEGREASER (6). (cont)

b. Install in mounting frame (8).

4 FOUR SCREWS (9), FOUR FLAT WASHERS (10), FOUR LOCKWASHERS (11), AND FOUR NUTS (12). Install.



).

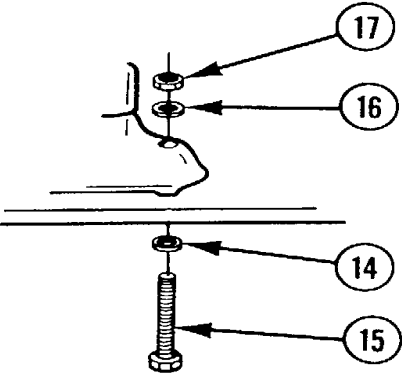
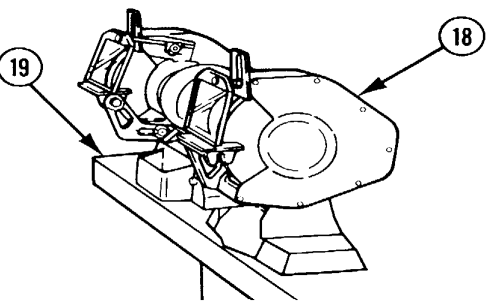


5 DRILLING MACHINE (13). Place over mounting holes in top of storage cabinet (1).

6 THREE FLAT WASHERS (14) AND THREE BOLTS (15). Install.

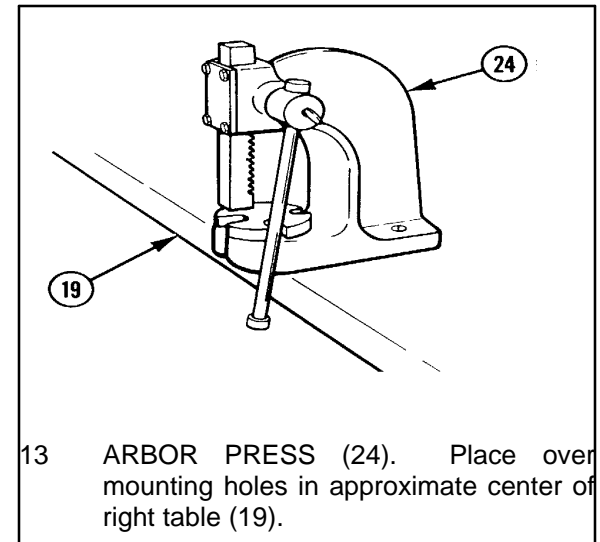
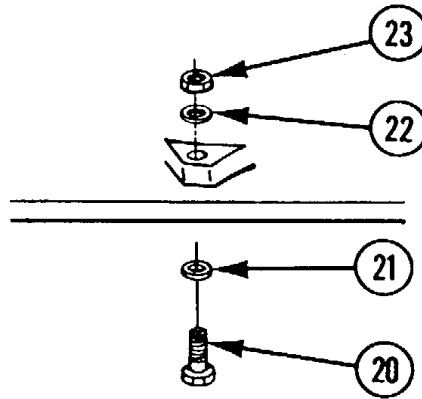
7 THREE LOCKWASHERS (16). Install.

8 THREE NUTS (17). Install.

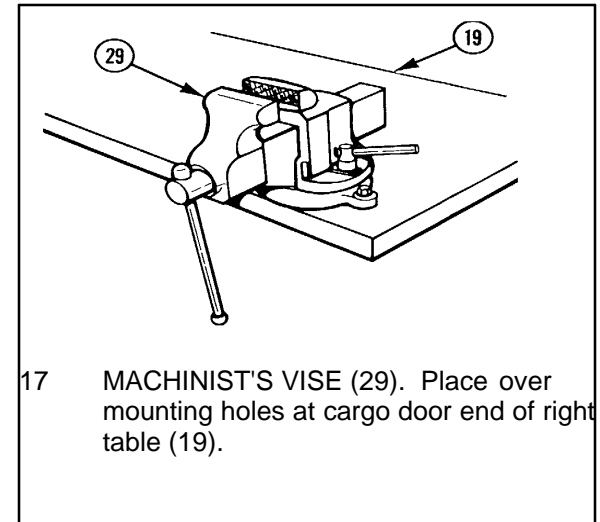
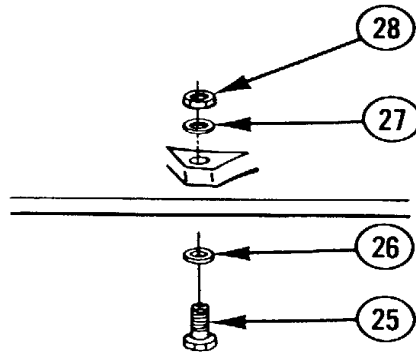
9 GRINDING MACHINE (18). Place over mounting holes at personnel door end of right table (19).

- 10 TWO SCREWS (20) AND TWO FLAT WASHERS (21). Assemble, and install from under side of table top.
- 11 TWO LOCKWASHERS (22). Install.
- 12 TWO NUTS (23). Install.



- 13 ARBOR PRESS (24). Place over mounting holes in approximate center of right table (19).

- 14 TWO SCREWS (25) AND TWO FLAT WASHERS (26). Assemble, and install from under side of table top.
- 15 TWO LOCKWASHERS (27). Install.
- 16 TWO NUTS (28). Install.

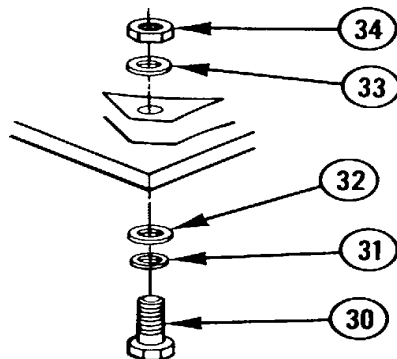


- 17 MACHINIST'S VISE (29). Place over mounting holes at cargo door end of right table (19).

13-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

INSTALLATION (cont)

- 18 FOUR SCREWS (30), FOUR LOCKWASHERS (31), AND FOUR FLAT WASHERS (32). Assemble, and install from under side of table top.
- 19 FOUR FLAT WASHERS (33). Install.
- 20 FOUR NUTS (34). Install.

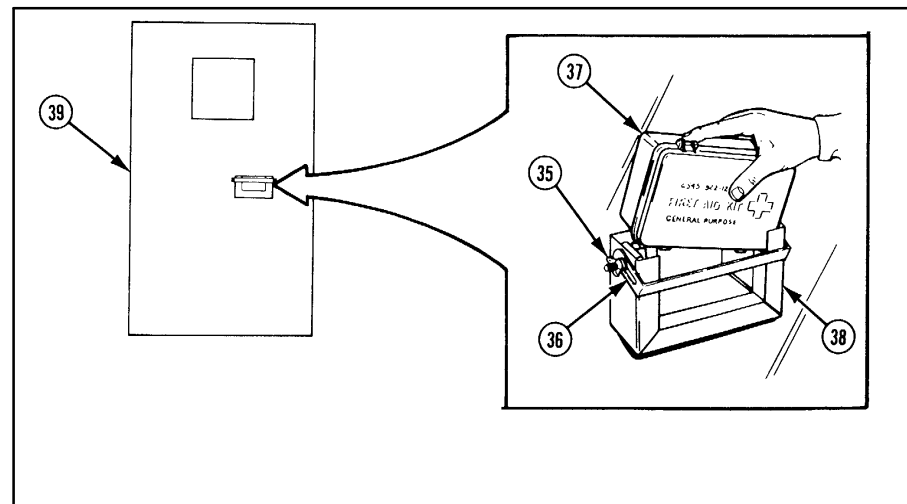


- 21 ALL HAND TOOLS. Place in proper storage areas (table drawers, cabinets, etc).

**NOTE**

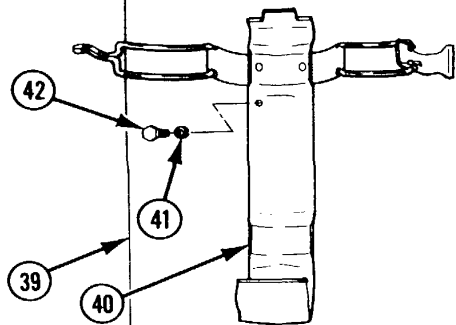
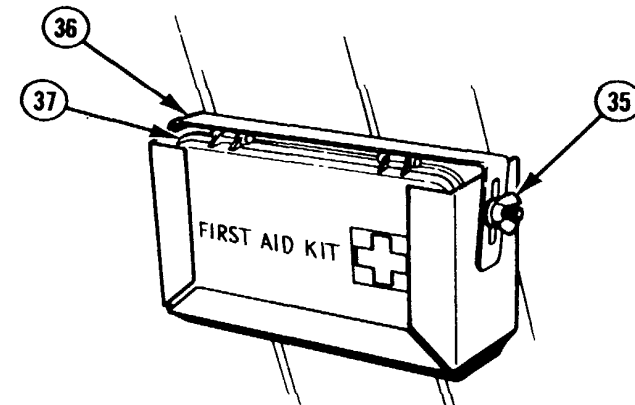
Parts (35, 36, and 38) are on the first aid kit holder assembly which is mounted on the inside of the personnel door.

- 22 TWO WINGNUTS (35). Loosen.
- 23 BRACKET ASSEMBLY (36). rotate forward.
- 24 FIRST AID KIT (37). Install in older assembly (38) mounted on personnel door (39).



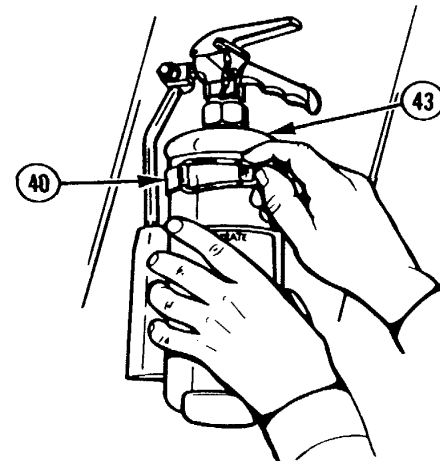
25 BRACKET ASSEMBLY (36). Rotate backwards and push down on first aid kit (37).

26 TWO WINGNUTS (35). Tighten.



27 BRACKET (40), TWO LOCKWASHERS (41), AND TWO SCREWS (42). Assemble and install on inside of personnel door (39).

28 FIRE EXTINGUISHER (43). Install on bracket (40)



3-13. SHOP SET--INSTALLED EQUIPMENT LIST--MAINTENANCE INSTRUCTIONS (cont)

INSTALLATION (cont)

**WARNING**

The ECU weighs approximately 270 LB (122 kg); a minimum of four personnel is required when moving or lifting.

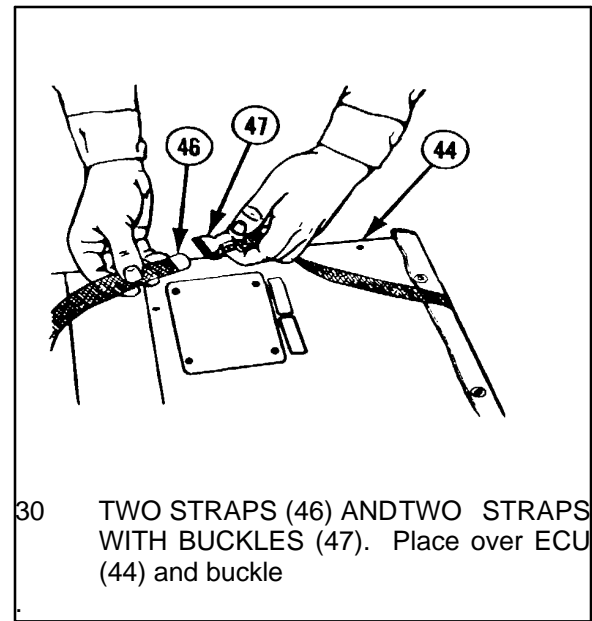
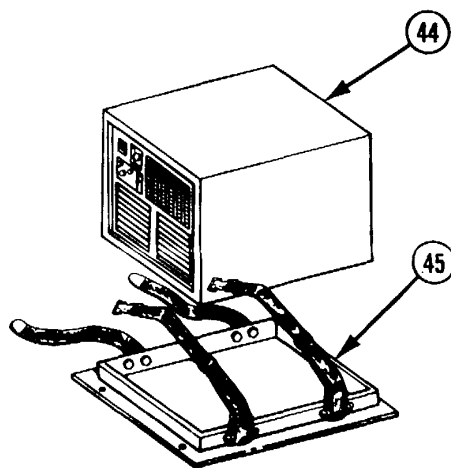
**NOTE**

Steps 29 and 30 pertain to installation of the ECU into its stowing frame assembly.

Steps 29 and 30 also pertain to only one ECU and must be repeated for the second unit.

For installation procedures of ECU into shelter, refer to TM 10-5410-224-14.

29 ECU (44). Install into frame assembly (45) on shelter floor between the tables.



30 TWO STRAPS (46) AND TWO STRAPS WITH BUCKLES (47). Place over ECU (44) and buckle

13-14. SHOP SET--CEILING MODIFICATION--MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

a. Inspection	d. Modification of ceiling
b. Disassembly	e. Reassembly
c. Repair	

INITIAL SETUP

Special Tools

- Armament repair shop set (SC 4933-95-CL-A21)
- AVIM tool crib shop set (SC 4920-99-CL-A86)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

Equipment Conditions

- 3-89 Conduit installation removed.
- 3-38 electrical installation removed.

General Safety Instructions

**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near open flame or in a smoking area. Use only in well ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation.

Materials/Parts

- Dry cleaning solvent (item 6, app d)
- Gloves (item 9, app d)
- Hardener (item 3, app D)
- Resin (item 3, app D)
- Wiping rag (item 15, app D)
- Blind inserts (2) (12011684)
- Blind insert (9) (12011685)

Reference

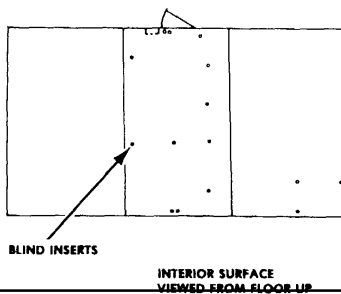
- Appendix D



**3-14. SHOP SET--CEILING MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

**INSPECTION**

FIFTEEN BLIND INSERTS. Check for missing or loose parts.

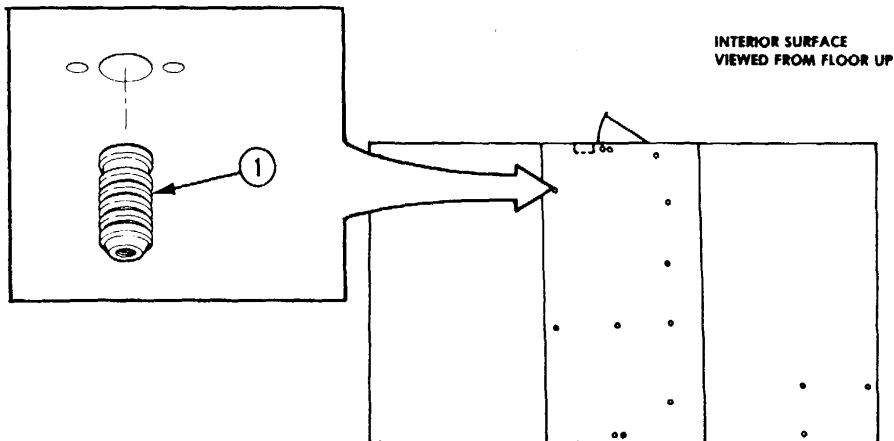


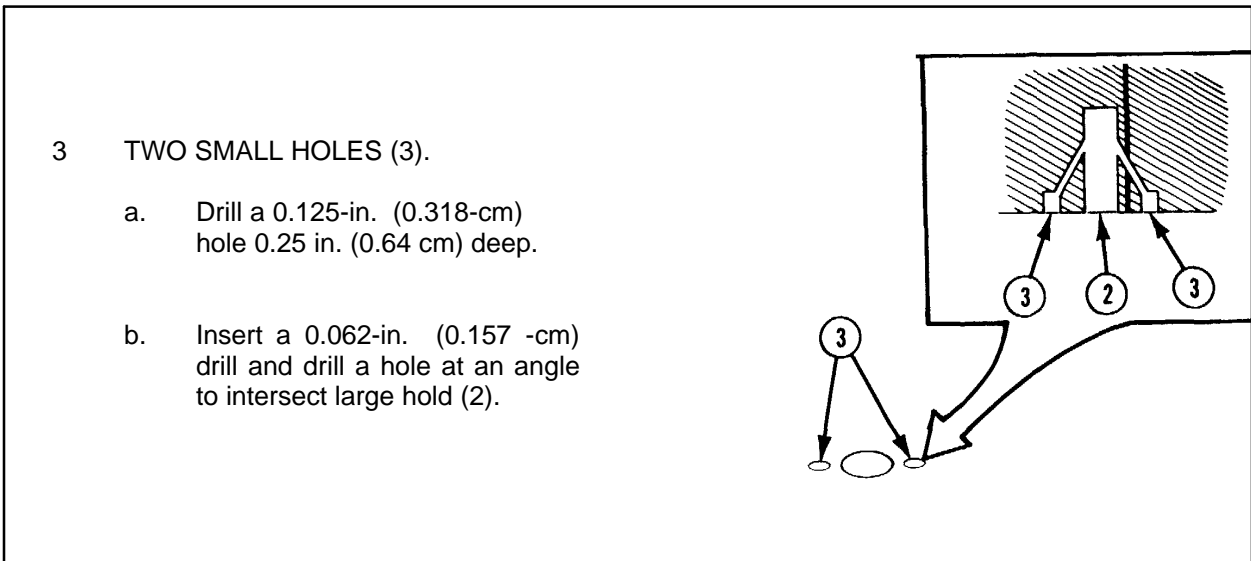
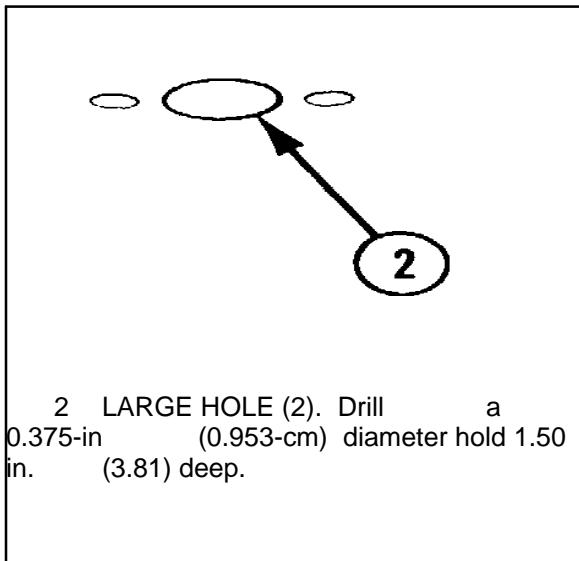
**DISASSEMBLY**

**NOTE**

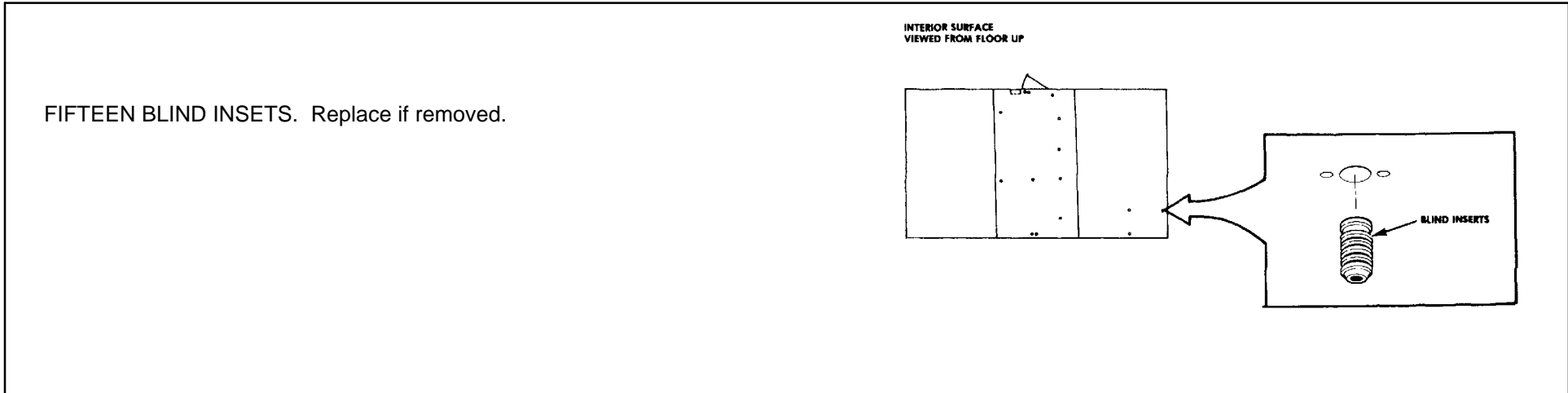
Each blind insert is removed from a large hole which has two small holes on each side of it. These three holes must be drilled clear of cured adhesive as described in steps 2 and 3 below. This procedure pertains to each blind insert removed.

1 FIFTEEN BLIND INSERTS (1). If replacement is required, remove by drilling out with a 0.344-in. (0.874-cm) diameter drill.





REPAIR



13-14. SHOP SET--CEILING MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)

MODIFICATION OF CEILING

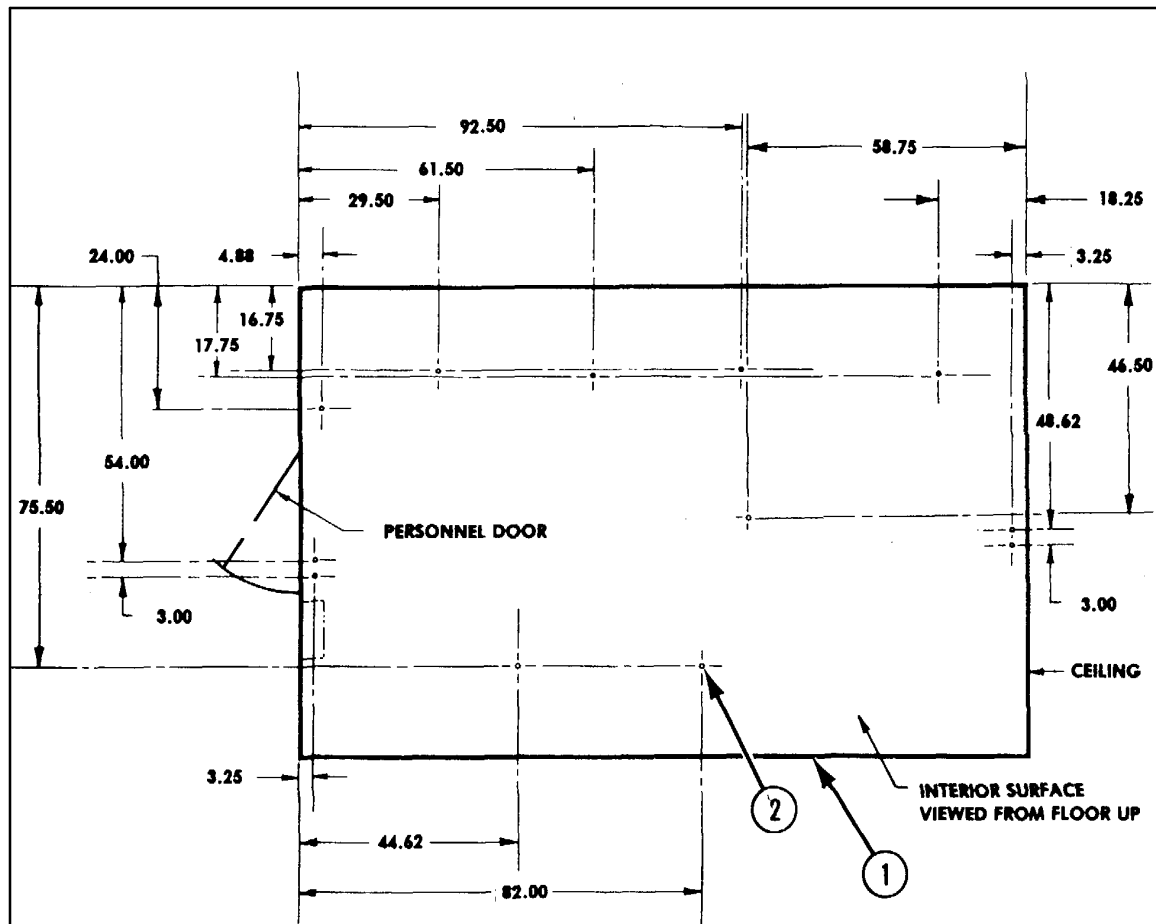
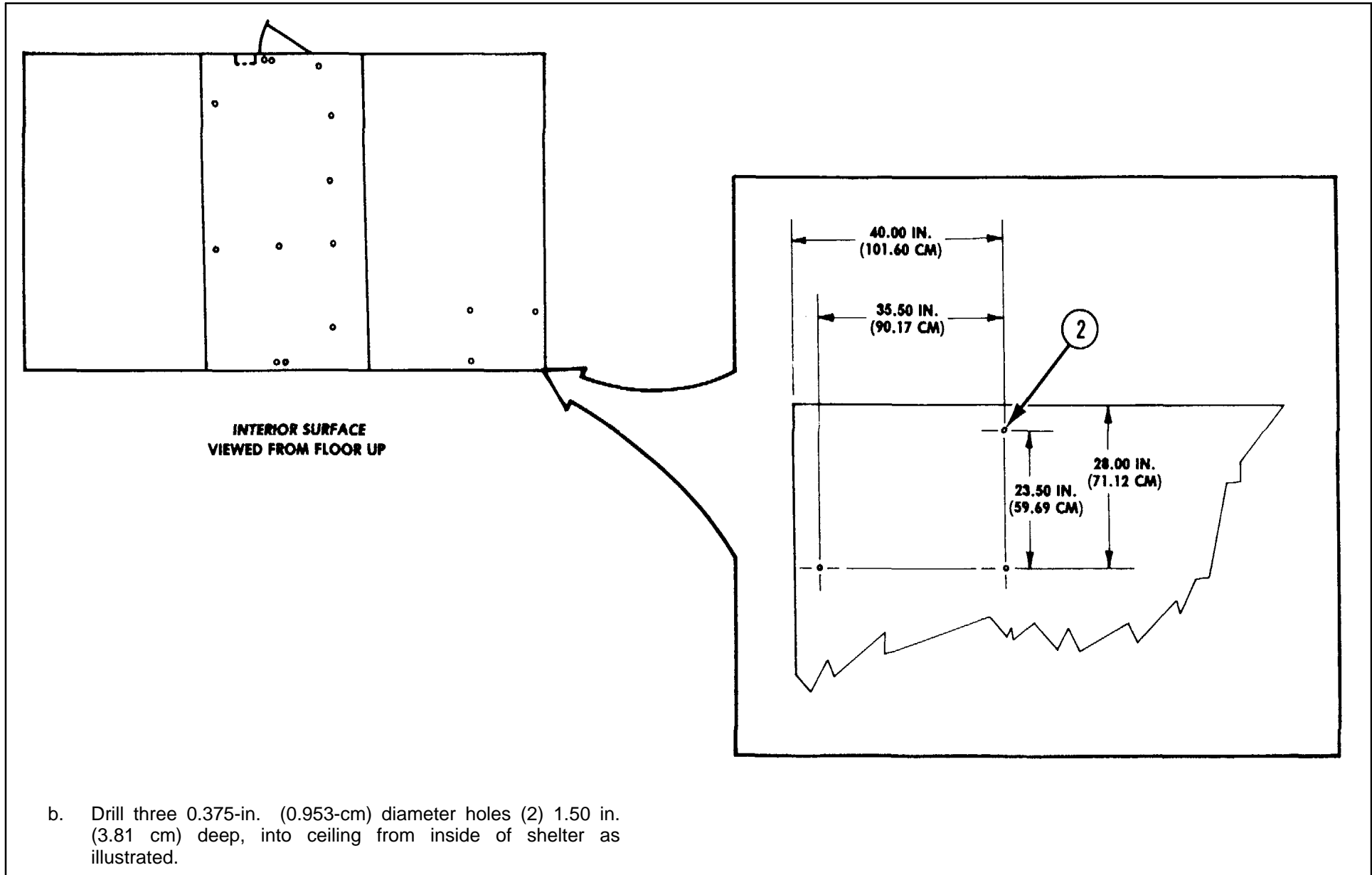


Table 3-3. Ceiling Modification Conversion Table

IN.	CM
4.88	12.40
29.50	74.93
61.50	156.21
92.50	234.95
58.75	149.23
18.25	46.36
3.25	8.26
48.62	123.49
46.50	118.11
3.00	7.62
75.50	191.77
54.00	137.16
24.00	69.96
17.75	45.09
16.75	42.55
44.62	113.33
82.00	208.28
40.00	101.60
35.50	90.17
23.50	59.69
28.00	71.12

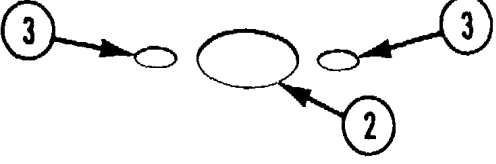
1 CEILING (1).

- a. Drill twelve 0.375-in. (0.953-cm) diameter holes (2) 1.50 in. (3.81 cm) deep, into ceiling from inside of shelter as illustrated.



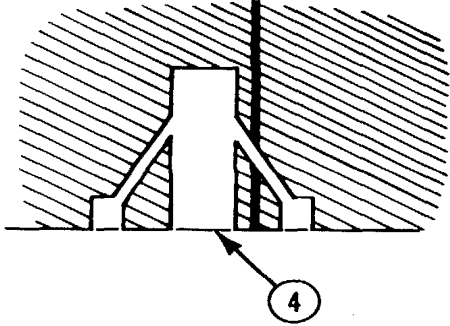
13-14. SHOP SET--CEILING MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)

MODIFICATION OF CEILING (cont)



1 CEILING.(cont)  
 c. Drill thirty 0.125-in.diameter holes (3) through inside skin of ceiling, one on each side of the fifteen (0.375-in.) diameter holes (2) as illustrated.

2 HONEYCOMB CELL WALL (4). Cut through if it falls between 0.375-in. (0.953-cm) diameter holes and 0.125-in. (0.318-cm) diameter holes



REASSEMBLY

**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near open flame or in a smoking area. Use only in well ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation.

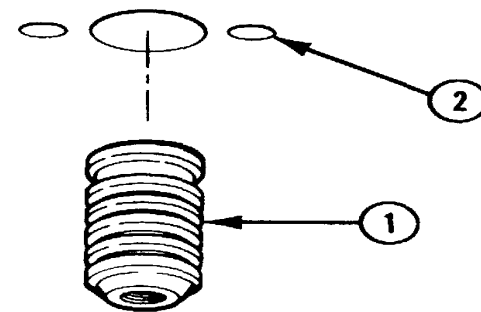
**CAUTION**

Clean blind inserts just prior to installation and handle only when wearing gloves (item 9, app D).

**NOTE**

Steps 1 thru 3 pertain to only one blind insert. Repeat procedures as required for additional blind inserts.

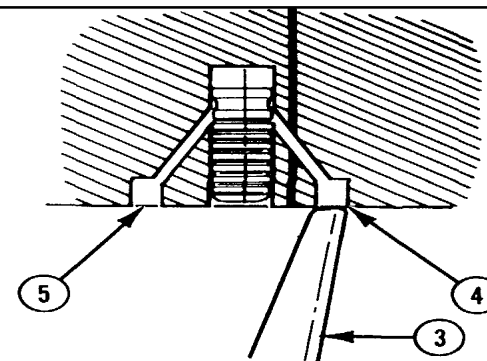
- 1 BLIND INSERT (1).
- a. Clean with a wiping rag (item 15, app D) dipped in dry cleaning solvent (item 6, app D).
  - b. Install on hydraulic gun.
  - c. Insert in 0.375-in. (0.953-cm) diameter hole (2) and set with hydraulic gun. (See page 3-144 for location of all blind inserts.)



**NOTE**

Adhesive is a mixture of resin (item 3, app D) and hardener (item 3, app D); mix according to vendor supplied information.

- 2 CAULK GUN (3).
- a. Fill with adhesive.
  - b. insert into one 0.125-in. (0.318-cm) diameter hole (4).
  - c. Release adhesive until it flows from the other 0.125-in. diameter hole (5).



3-14. SHOP SET--CEILING MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

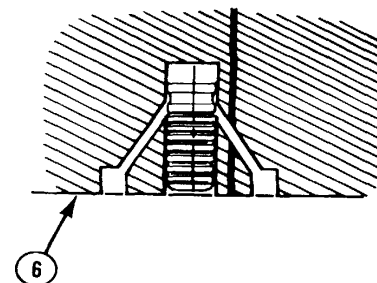
**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near open flame or in a smoking area. Use only in well ventilated areas. This solvent evaporates quickly and has a drying affect on the skin. When used without gloves, it may cause cracks on the skin and in some cases mild irritation.

**CAUTION**

After preferring step 3 allow some time for adhesive to set before using blind inserts.

3 CEILING (6). Wipe off excess adhesive with a wiping rag (item 15, app D) dipped in dry cleaning solvent (item 6, app D).



3-15. SHOP SET--DOOR MODIFICATION--MAINTENANCE INSTRUCTIONS

- THIS TASK COVERS:
- |                |                         |
|----------------|-------------------------|
| a. Disassembly | d. Modification of door |
| b. Inspection  | e. Reassembly           |
| c. Repair      |                         |

INITIAL SETUP

Special Tools

- Armament repair shop set (SC 4933-95-CL-A21)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

Materials/Parts

- Dry cleaning solvent (item 6, app D)
- Gloves (item 9, app D)
- Hardener (item 3, app D)
- Resin (item 3, app D)
- Wiping rag (item 15, app D)
- Blind inserts (4) (12011685)

References

- Appendix D
- 3-109 Shop set--installed equipment list maintenance instructions.

General Safety Instructions

**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well ventilated areas. This solvent evaporates quickly and has a drying effect on skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation.

**NOTE**

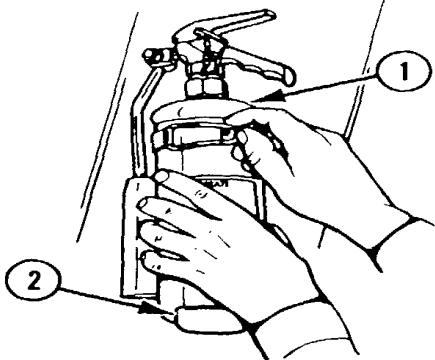
**The fire extinguisher and its mounting bracket, and the first aid kit are part of the installed equipment list. Refer to paragraph 3-13, page 3-109, for maintenance procedures.**



3-15. SHOP SET--DOOR MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY

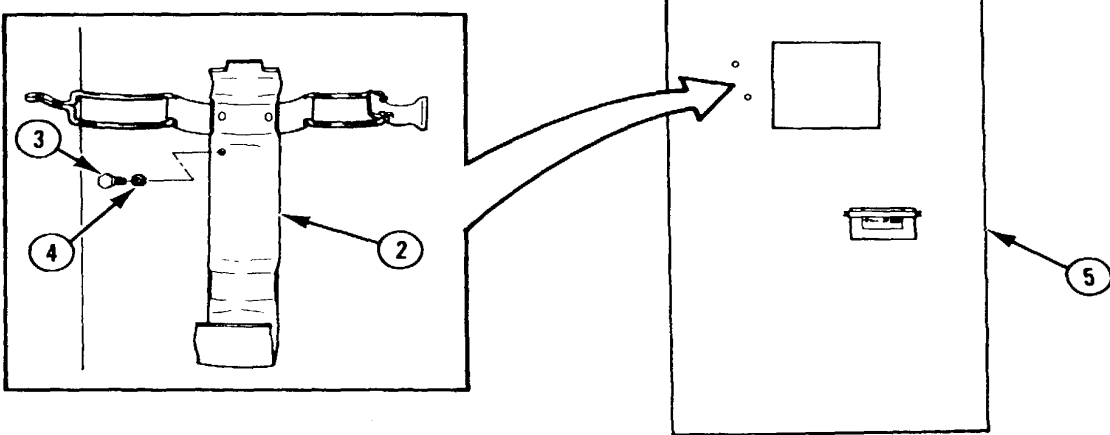
1. FIRE EXTINGUISHER (1). Remove from bracket (2).



The diagram shows a pair of hands holding a fire extinguisher. The extinguisher is labeled with a circled '1'. It is being held against a bracket, which is labeled with a circled '2'. The hands are positioned to lift the extinguisher away from the bracket.

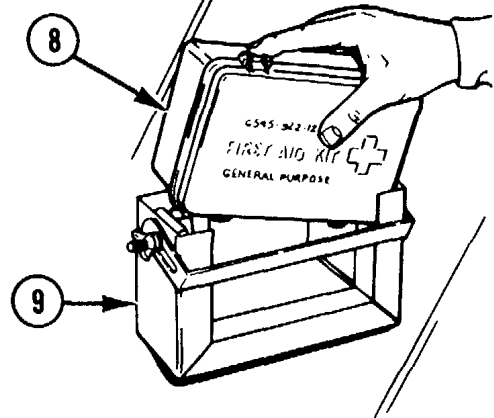
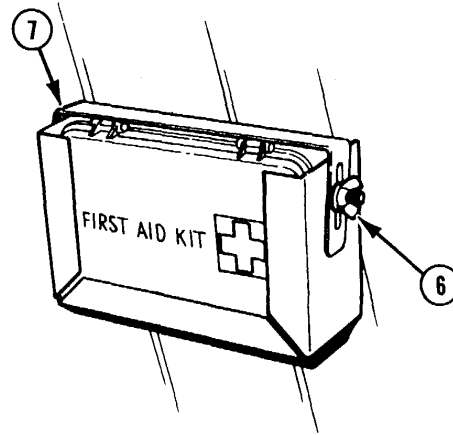
2. TWO SCREWS (3) AND TWO LOCKWASHERS (4). Remove.

3. BRACKET (2). Remove from personnel door (5).



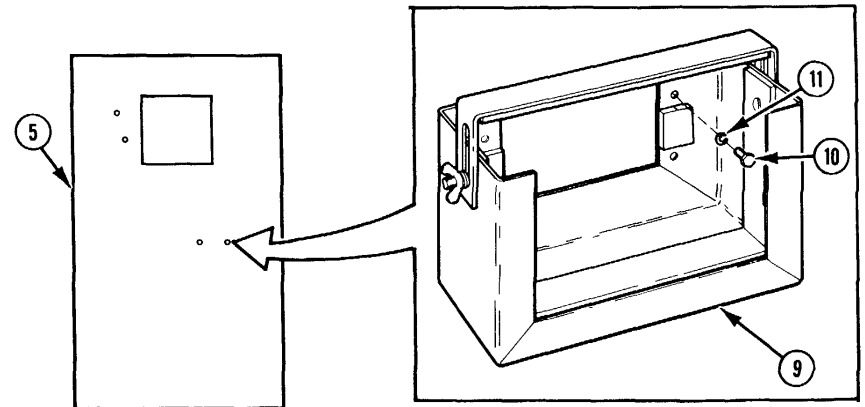
The diagram consists of two parts. On the left, a vertical bracket (2) is shown with two screws (3) and two lockwashers (4) attached to its top. On the right, a rectangular personnel door (5) is shown with a square cutout and a small rectangular component below it. An arrow points from the bracket (2) to the door (5), indicating its removal from the door.

- 4 TWO WINGNUTS (6). Loosen from first aid kit bracket assembly (7).
- 5 FIRST AID KIT BRACKET ASSEMBLY (7). Lift up and rotate forward.



- 6 FIRST AID KIT (8). Remove from first aid kit holder assembly (9).

- 7 TWO SCREWS (10) AND TWO LOCK- WASHERS (11). Remove.
- 8 FIRST AID KIT HOLDER ASSEMBLY (9). Remove from inside of personnel door (5).



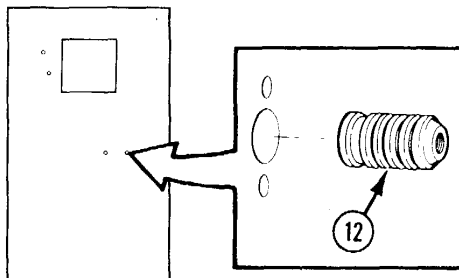
**13-15. SHOP SET--DOOR MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

**CAUTION**

Do not remove blind inserts unless necessary for replacement.

- 9 **FOUR BLIND INSERTS (12).** Remove by drilling out with a 0.375-in. (0.953-cm) diameter drill.



**NOTE**

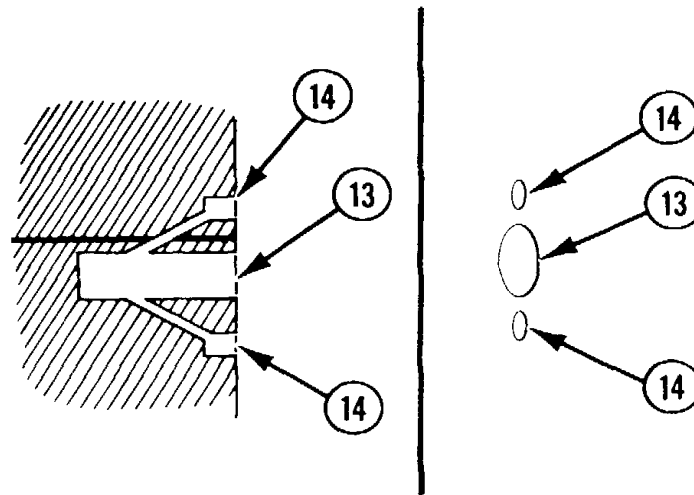
Each blind insert is installed in a large hole which has two small holes on each side of it. These three holes must be drilled clear of cured adhesive as described in steps 10 and 11 below.

This procedure pertains to each blind insert to be removed.

- 10 **LARGE HOLE (13).** Drill a 0.391-in. (0.993-cm) diameter hole 1.50 in. (3.81 cm) deep.

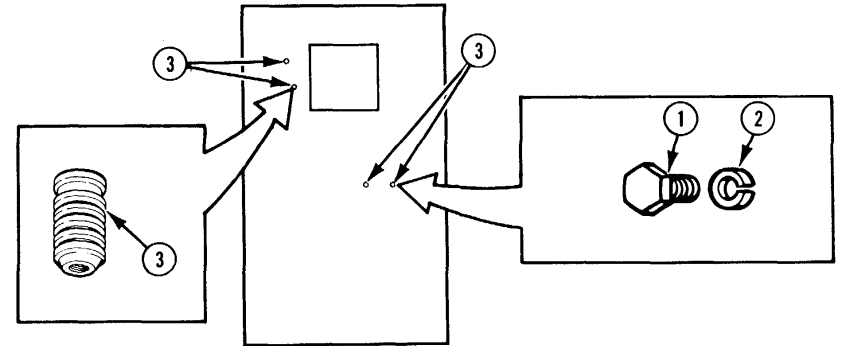
- 11 **TWO SMALL HOLES (14).**

- a. Drill a 0.125-in. (0.318-cm) diameter hole 0.25 in. (0.64 cm) deep.
- b. Insert a 0.062-in. (0.157-cm) diameter drill and drill a hole at an angle to intersect the large hole (13).



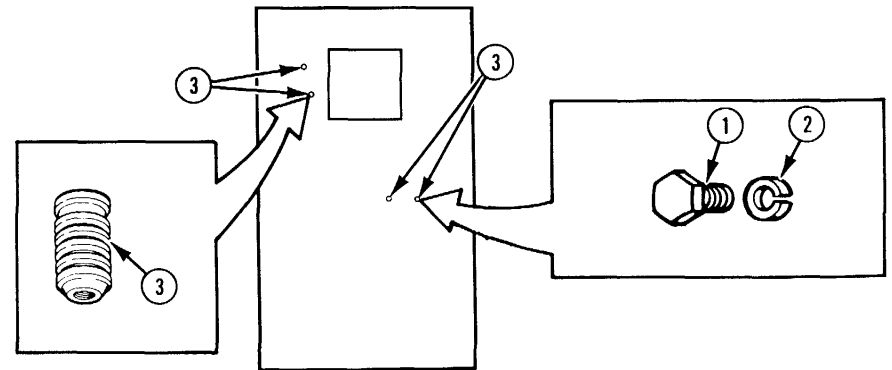
**INSPECTION**

- 1 FOUR SCREWS (1) and FOUR LOCKWASHERS (2). Check for missing, damaged, or corroded parts.
- 2 FOUR BLIND INSERTS (3). Check for missing or loose parts.



**REPAIR**

- 1 FOUR SCREWS (1) AND FOUR LOCK-WASHERS (2). Replace if missing, damaged, or corroded.
- 2 FOUR BLIND INSERTS (3). Replace with new item if removed.



**13-15. SHOP SET--DOOR MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

**MODIFICATION OF DOOR**

**NOTE**

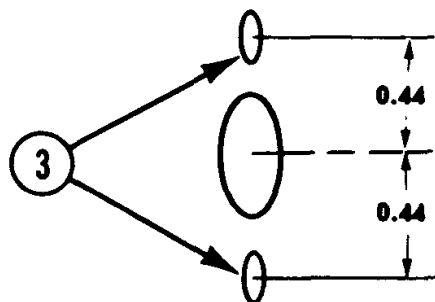
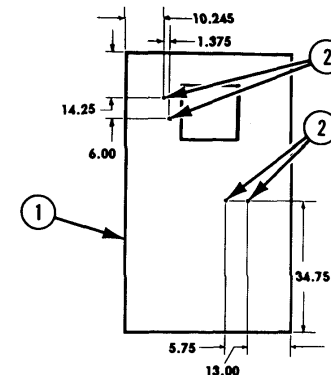
Steps 1 and 2 are used only for initial installation if the shelter or personnel door are replaced with new parts.

**1 PERSONNEL DOOR (1).**

- a. Drill four 0.391-in. (0.993- cm) diameter holes (2) 1.50 in. (3.81 cm) deep in interior surface located per dimensions as illustrated.

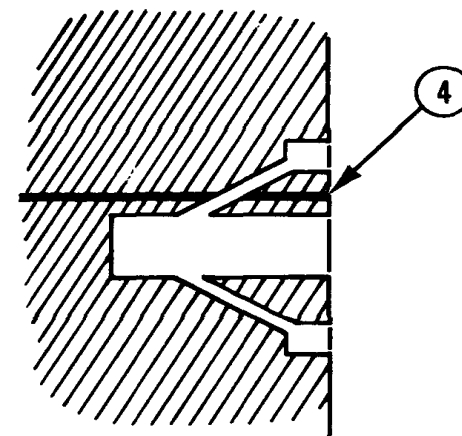
Table 3-4. Door Modification Conversion Table

IN.	CM	IN.	CM
10.245	26.02	34.75	88.27
1.375	3.493	5.75	14.61
14.25	36.20	13.00	33.02
6.00	15.24	0.44	1.12



- b. Drill two 0.125-in. (0.318-cm) diameter holes (3) through inside skin on each side of each 0.391-in. (0.993-cm) diameter hole as illustrated.

- 2 HONEYCOMB CELL WALL (4). Cut through if it falls between 0.391-in. (0.993-cm) diameter hole and either 0.125-in. (0.318-cm) diameter holes.



**REASSEMBLY**

**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation.

**CAUTION**

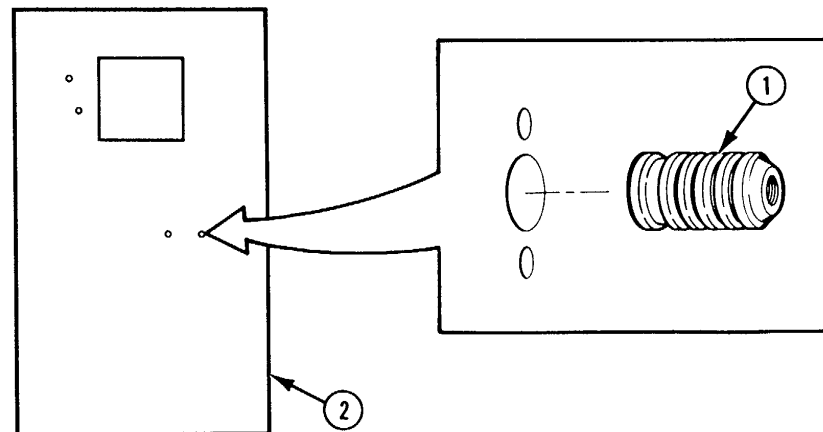
Clean blind inserts just prior to installation and handle only when wearing gloves (item 9, app D).

**NOTE**

Steps 1 thru 11 pertain to only one blind insert. Repeat procedures as necessary for additional blind inserts.

**1 BLIND INSERT (1).**

- a. Clean with wiping rag (item 15, app D) dipped in dry cleaning solvent (item 6, app D).
- b. Install on inside surface of personnel door (2) using hydraulic gun.



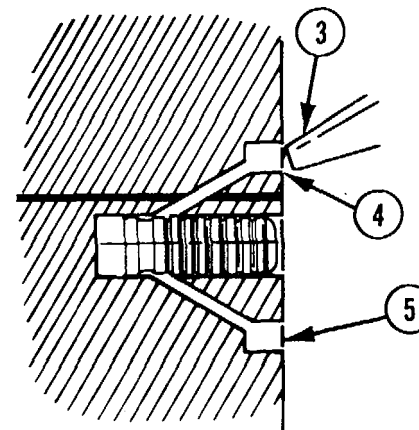
**3-15. SHOP SET--DOOR MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

**NOTE**

Adhesive is a mixture of resin (item 3, app D), and hardener (item 3, app D); mix according to vendor supplied information.

- 2 CAULK GUN (3).
  - a. Fill with adhesive.
  - b. Insert into one 0.125-in. (0.318-cm) diameter hole (4).
  - c. Release adhesive until it flows from the other 0.125-in. (0.318-cm) diameter hole (5).



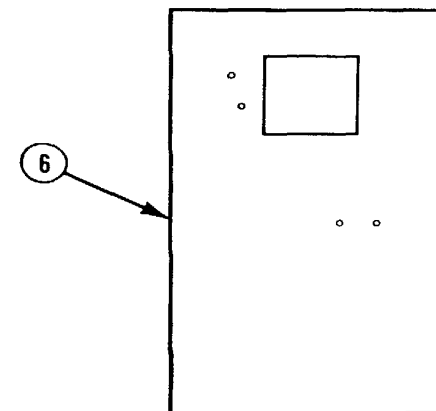
**WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation.

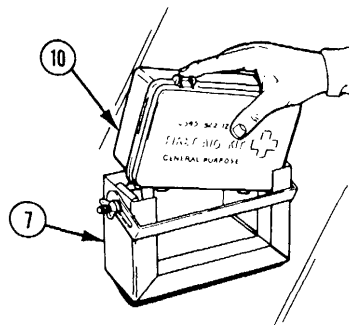
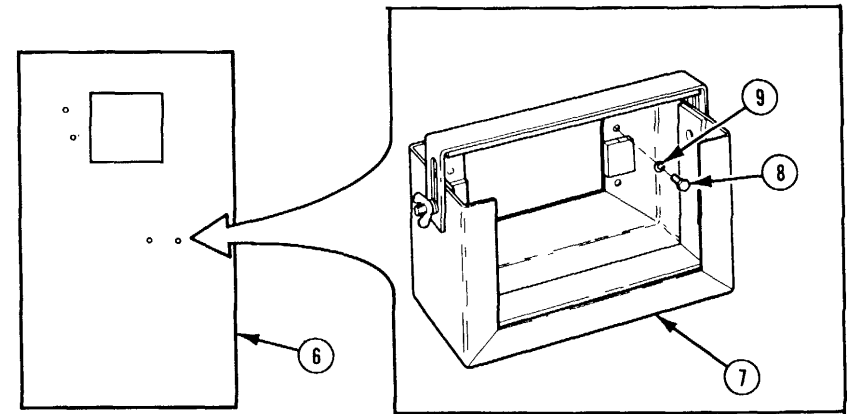
**CAUTION**

After performing step 3 allow time for adhesive to set before using blind inserts.

- 3 PERSONNEL DOOR (6). Wipe off excess adhesive with a wiping rag (item 15, app D) dipped in dry cleaning solvent (item 6, app D).

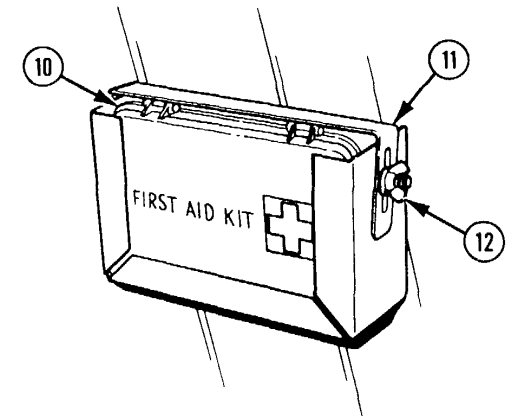


- 4 FIRST AID KIT HOLDER ASSEMBLY (7). Position over mounting holes on inside of personnel door (6).
- 5 TWO SCREWS (8) AND TWO LOCK-WASHERS (9). Assemble and install.



- 6 FIRST AID KIT (10). Install in first aid kit holder assembly (7).

- 7 FIRST AID KIT BRACKET ASSEMBLY (11). Rotate backward and press down on first aid kit (10). 8 TWO WINGNUTS (12). Tighten.

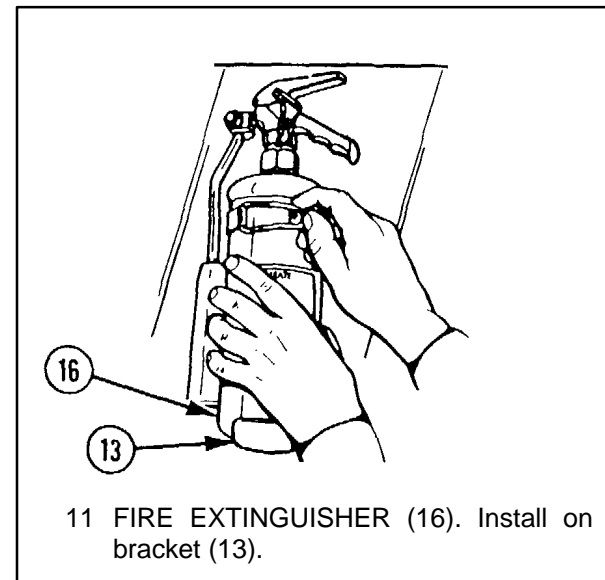
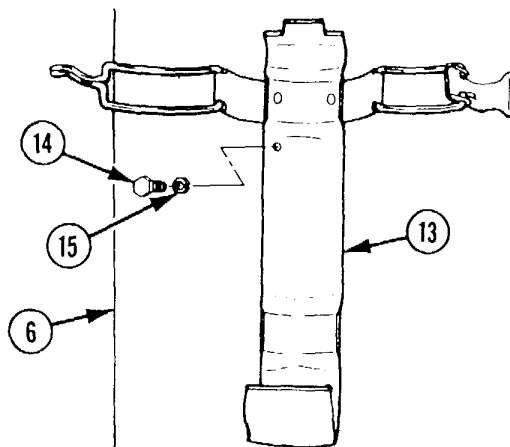




**13-15. SHOP SET--DOOR MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

- 9 BRACKET (13). Position over fire extinguisher mounting holes on inside of personnel door (6).
- 10 TWO SCREWS (14) AND TWO LOCK-WASHERS (15). Assemble and install.



11 FIRE EXTINGUISHER (16). Install on bracket (13).

**3-16. SHOP SET--TABLE MODIFICATION--MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:

- |                |                 |
|----------------|-----------------|
| a. Inspection  | e. Modification |
| b. Removal     | f. Reassembly   |
| c. Disassembly | g. Installation |
| d. Repair      |                 |

**INITIAL SETUP**

- Special Tools
  - Armament repair shop set (SC 4933-95-CL-A21)
  - AVIM sheet metal shop set (SC 4920-99-CL-A85)

- AVIM welding shop set (SC 4920-99-CL-A88)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

Personnel Required: 2  
 Aircraft armament repairmen Lift right and left ends when removing or installing table.

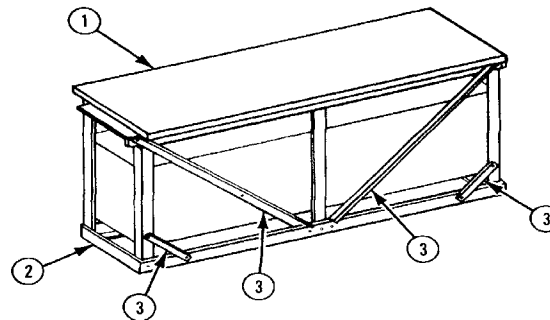
References  
 Appendix E  
 SC 4933-95-CL-A21  
 TM 9-237

**NOTE**  
 There are two tables in the shop set. They are the same except that the right table is modified to mount the arbor press, grinding machine, and machinist's vise. Maintenance procedures are given for only one table and must be repeated for the second table. The tables are supplied by various manufacturers and there may be slight variations.

**INSPECTION**

TABLE (1), FRAME (2), AND BRACES (3).

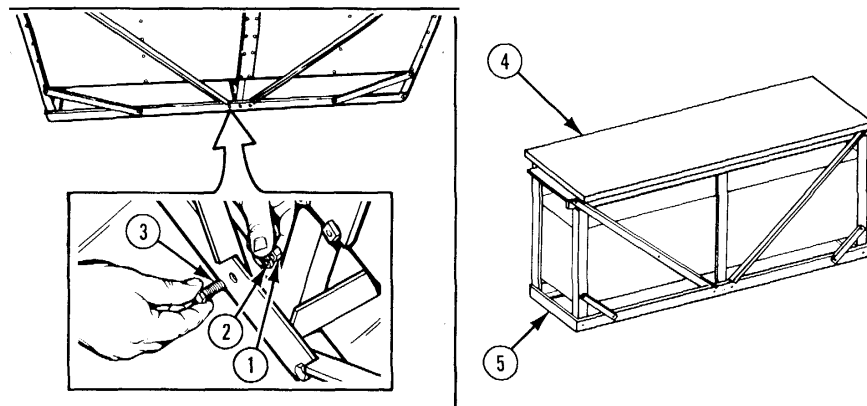
- a. Inspect for missing, damaged, or corroded hardware.
- b. Thoroughly inspect table legs, frames, and braces paying special attention to weld points for corroded, damaged, or missing parts.



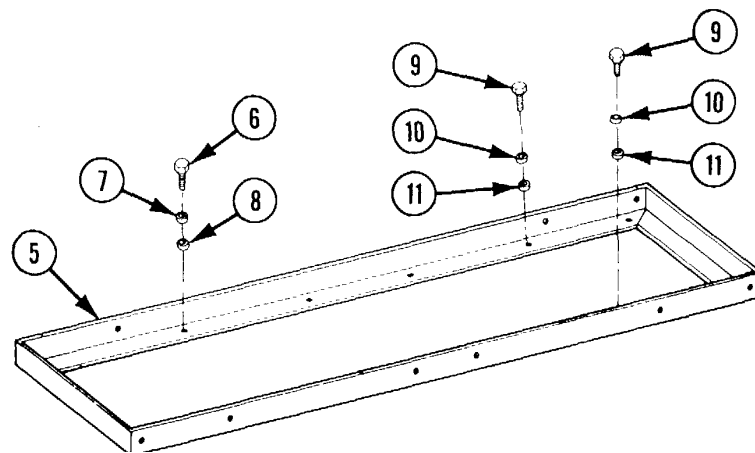
**3-16. SHOP SET--TABLE MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL**

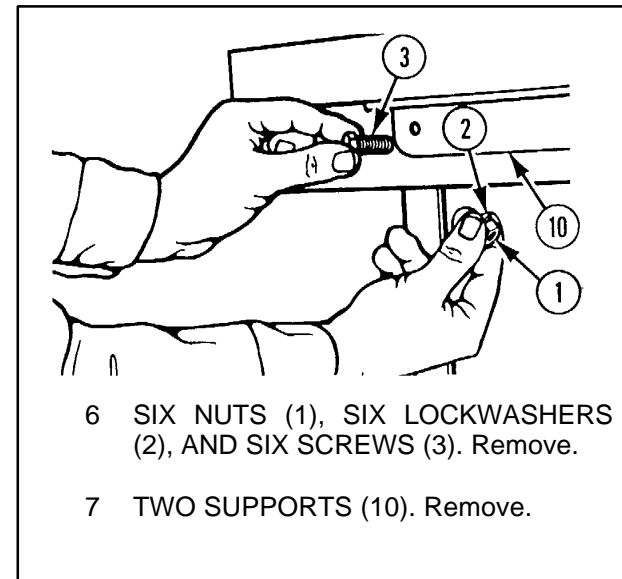
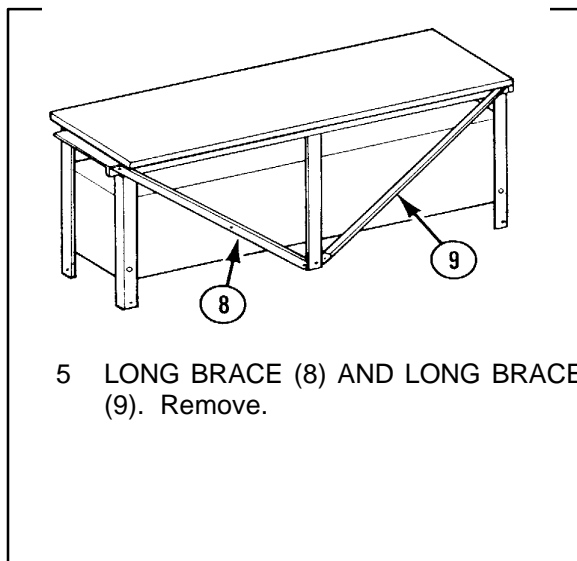
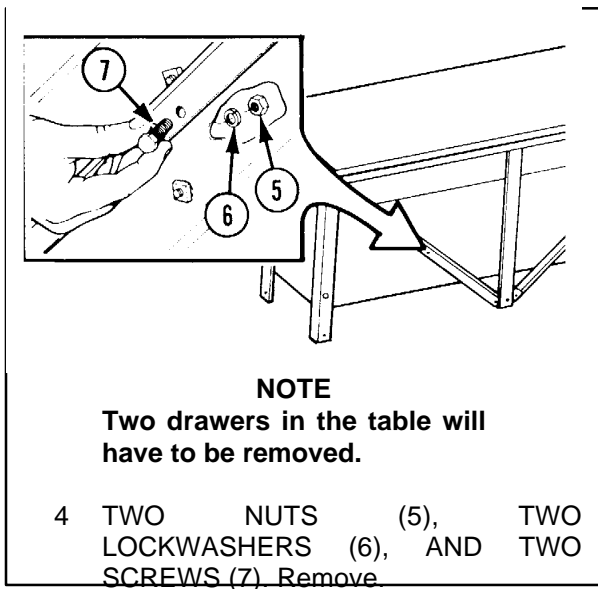
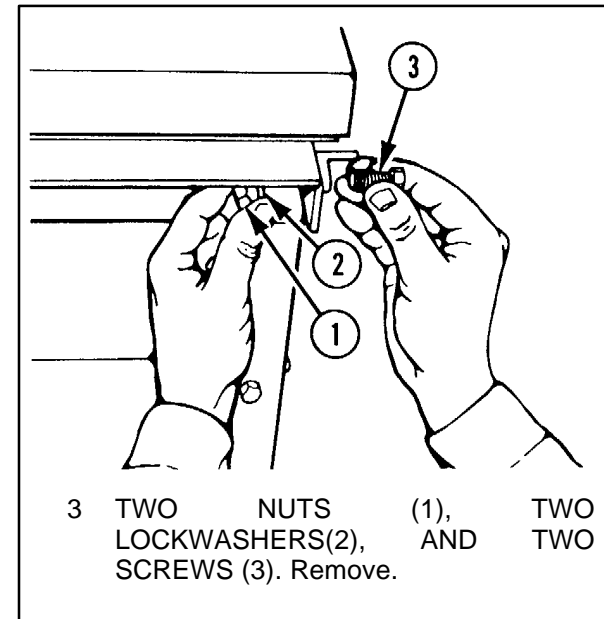
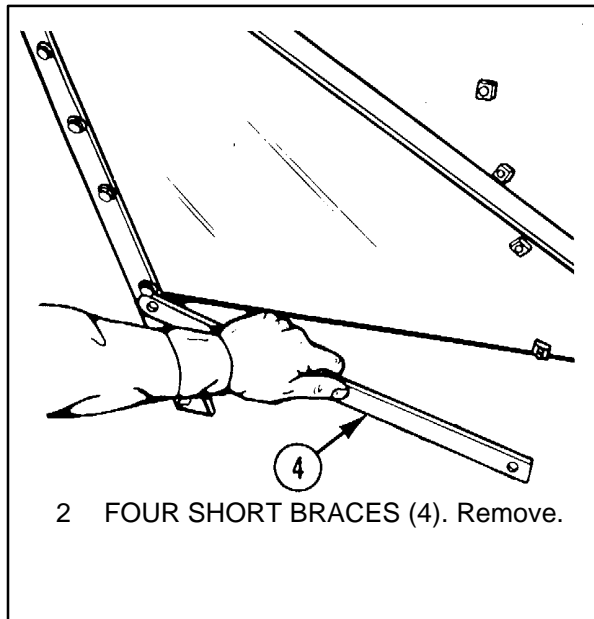
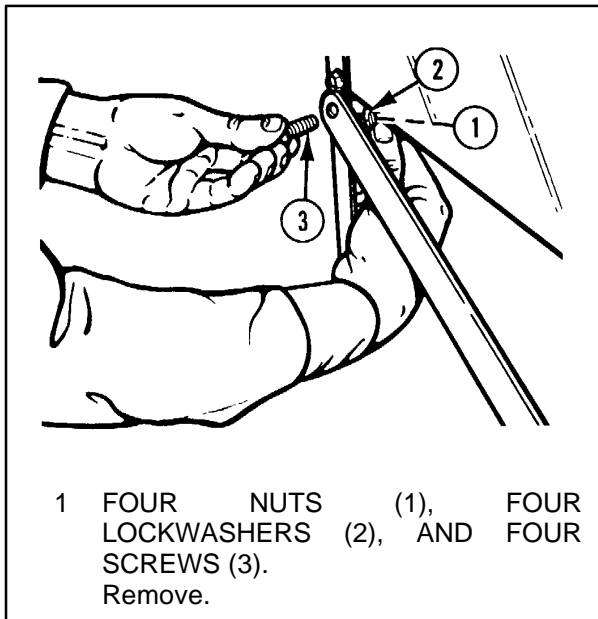
- 1 TWELVE NUTS (1), TWELVE LOCK-WASHERS (2), AND TWELVE SCREWS (3). Remove.
- 2 TABLE (4). Remove from frame (5).



- 3 TEN 1-1/4-IN. (3.18-CM) SCREWS (6), TEN LOCKWASHERS (7), AND TEN FLAT WASHERS (8). Remove.
- 4 TWO 1-1/2-IN. (3.81-CM) SCREWS (9), TWO LOCKWASHERS (10), AND TWO FLAT WASHERS (11). Remove.
- 5 FRAME (5). Remove from floor.



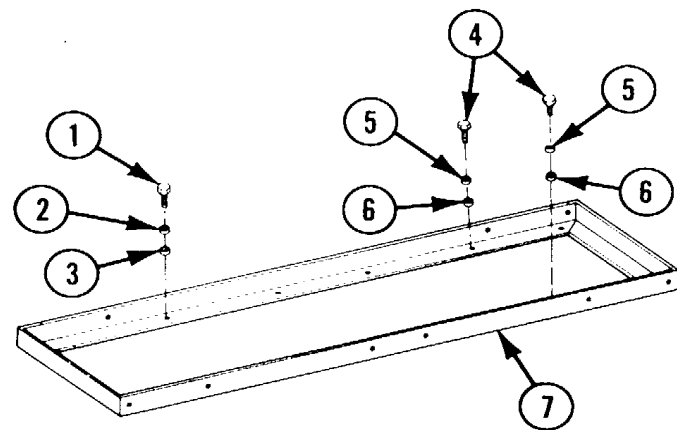
**DISASSEMBLY**



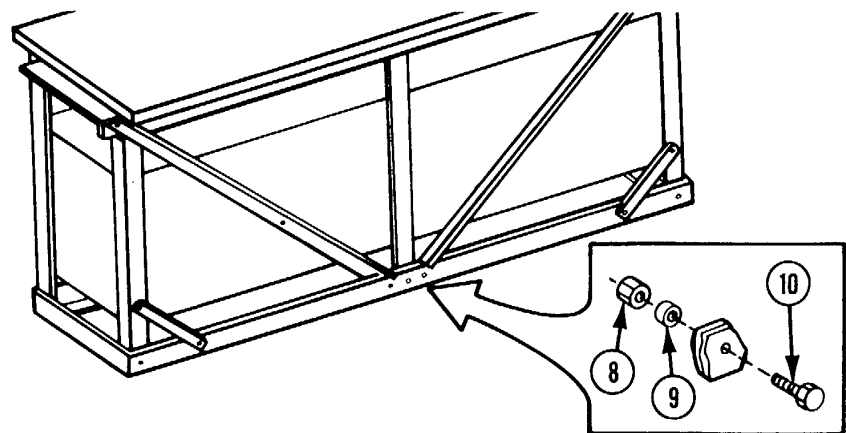
**3-16. SHOP SET--TABLE MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR**

- 1 TEN 1-1/4-IN. (3.18-CM) SCREWS (1), TEN LOCKWASHERS (2), AND TEN FLAT WASHERS (3). Replace if missing, damaged, or corroded.
- 2 TWO 1-1/2-IN. (3.81-CM) SCREWS (4), TWO LOCKWASHERS (5), AND TWO FLAT WASHERS (6). Replace if missing, damaged, or corroded.
- 3 FRAME (7).
  - a. Straighten bent parts.
  - b. Weld cracked or broken parts.
  - c. Replace frame (7), if needed, by fabrication (fig. 9, app E).

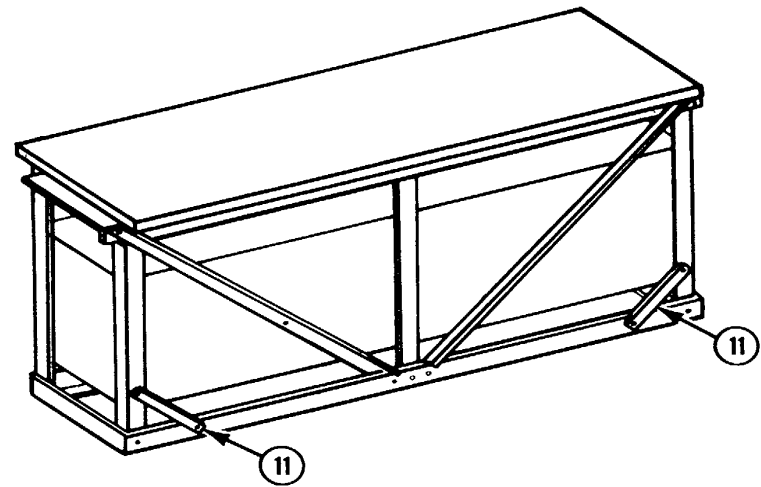


- 4 TWENTY-FOUR NUTS (8), TWENTY-FOUR LOCKWASHERS (9), AND TWENTY-FOUR SCREWS (10). Replace if missing, damaged, or corroded.

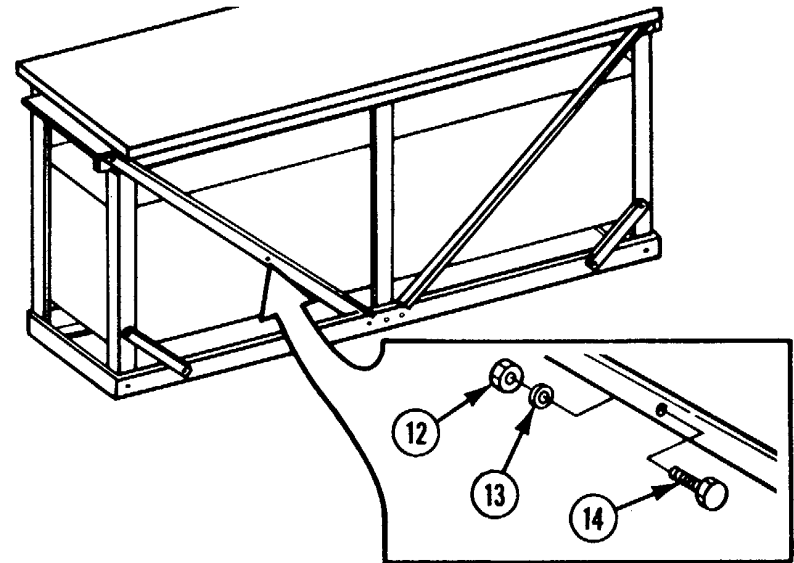


5 FOUR SHORT BRACES (11).

- a. Straighten bent parts.
- b. Weld cracked or broken parts.
- c. Replace short braces (11), if needed, by fabrication (fig. 10, app E).



6 TWO NUTS (12), TWO LOCKWASHERS (13), AND TWO SCREWS (14). Replace if missing, damaged, or corroded.

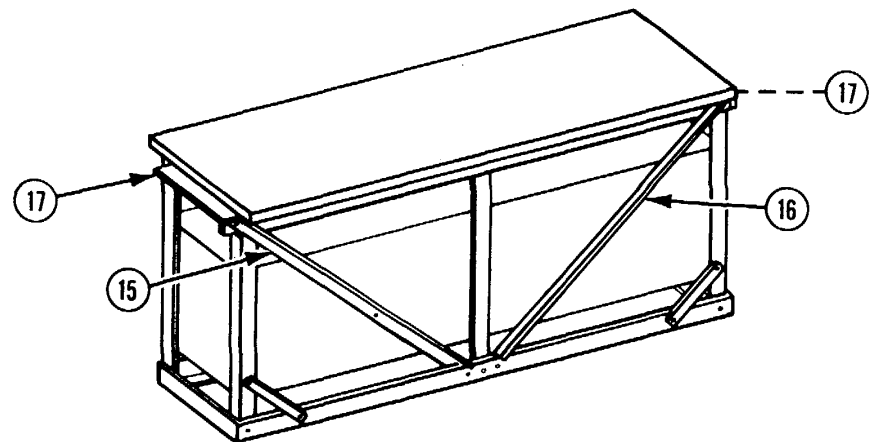


**3-16. SHOP SET--TABLE MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

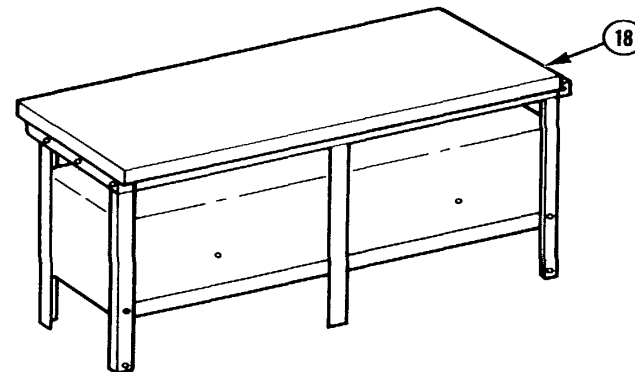
7 LONG BRACE (15), LONG BRACE (16), AND TWO SUPPORTS (17).

- a. Straighten bent parts.
- b. Weld cracked or broken parts.
- c. Replace, if needed, by fabrication (fig. 11, 12, and 13, app E).



8 TABLE (18).

- a. Straighten bent parts.
- b. Weld cracked or broken parts.
- c. Refer to SC 4933-95-CL-A21 for replacement if not repairable.

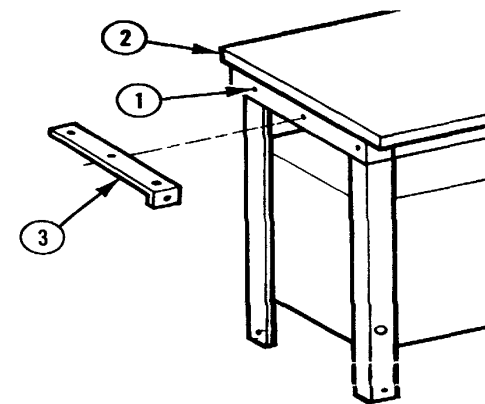


**MODIFICATION**

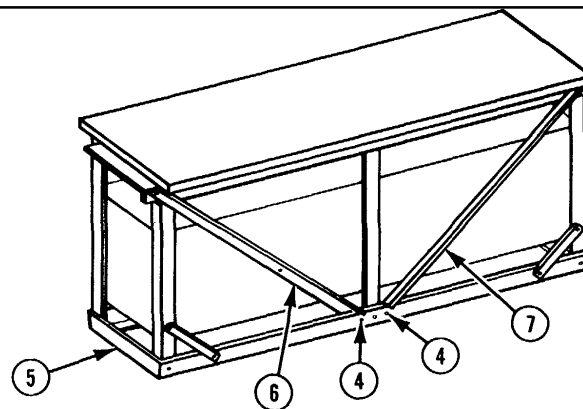
**NOTE**

Modification procedures are used only for initial installation or when the table has been replaced with a new unit. Install table in frame before starting modification procedures.

- 1 SIX 0.406-IN. (1.031-CM) DIAMETER HOLES (1). Drill in table (2) using supports (3) placed flush with back of table as templates.



- 2 TWO 0.406-IN. (1.031-CM) DIAMETER HOLES (4). Drill in frame (5) using long brace (6) and long brace (7) as templates.



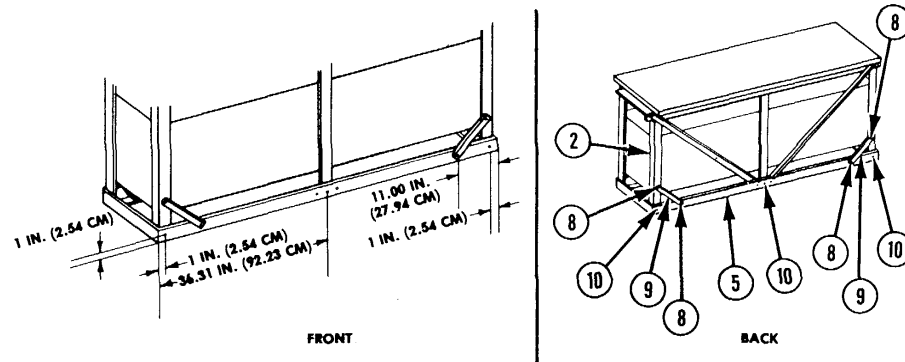


**3-16. SHOP SET--TABLE MODIFICATION--MAINTENANCE INSTRUCTIONS (cont)**

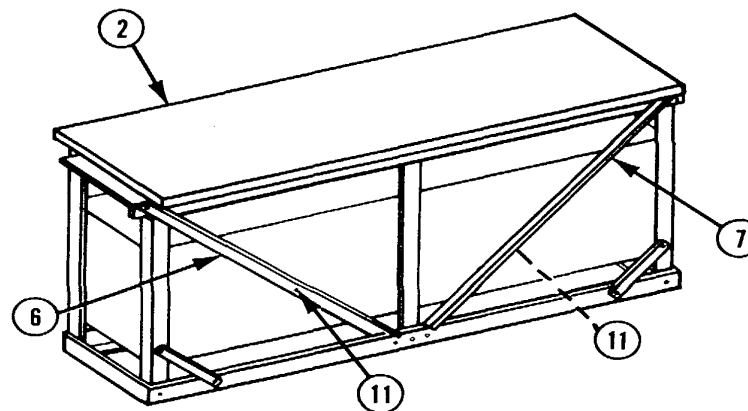
**MODIFICATION (cont)**

**3 FOURTEEN 0.406-IN. (1.031-CM) DIAMETER HOLES.**

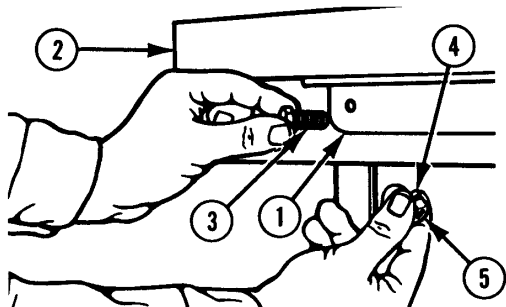
- a. Drill eight holes (8) in table (2) and frame (5) using four short braces (9) as templates.
- b. Drill six holes (10) in table (2) and frame (5) as illustrated.



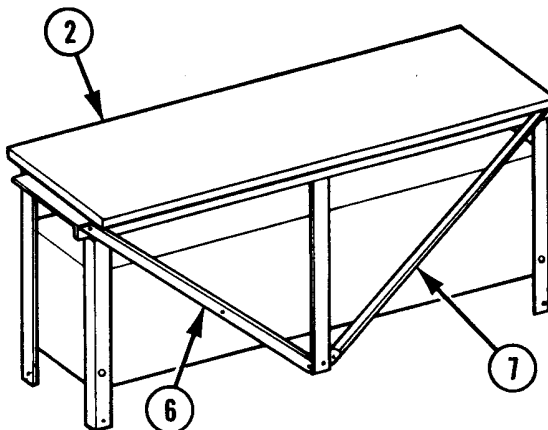
**4 TWO 0.281-IN. (0.714-CM) DIAMETER HOLES (11). Drill in table (2) using long brace (6) and long brace (7) as templates.**



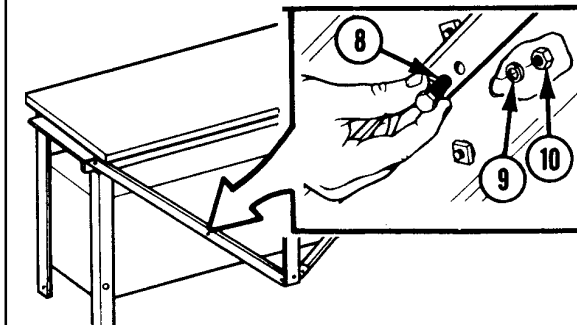
**REASSEMBLY**



- 1 TWO SUPPORTS (1). Position flush with back of table (2).
- 2 SIX SCREWS (3), SIX LOCKWASHERS (4), AND SIX NUTS (5). Install.



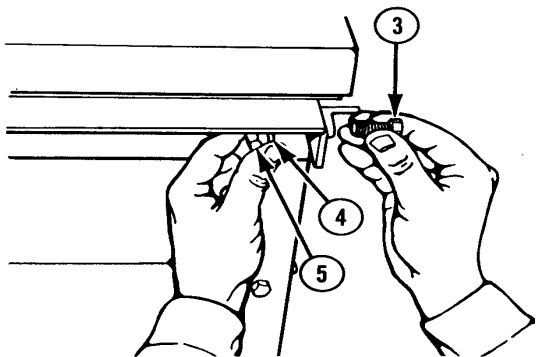
- 3 LONG BRACE (6) AND LONG BRACE (7). Position on table (2).



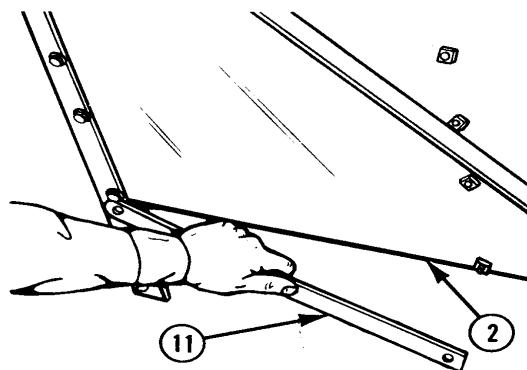
**NOTE**

Two drawers in the table will have to be removed.

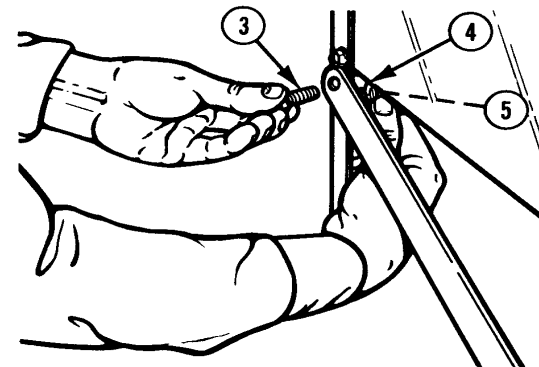
- 4 TWO SCREWS (8), TWO LOCKWASHERS (9), AND TWO NUTS (10). Install.



- 5. TWO SCREWS (3), TWO LOCKWASHERS (4), AND TWO NUTS (5). Install.



- 6 FOUR SHORT BRACES (11). Position on table (2).

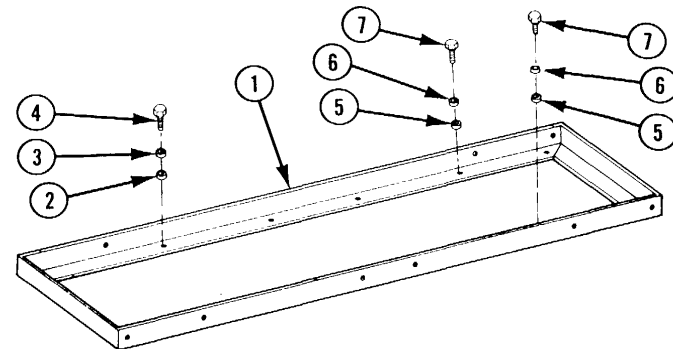


- 7 FOUR SCREWS (3), FOUR LOCKWASHERS (4), AND FOUR NUTS (5). Install.

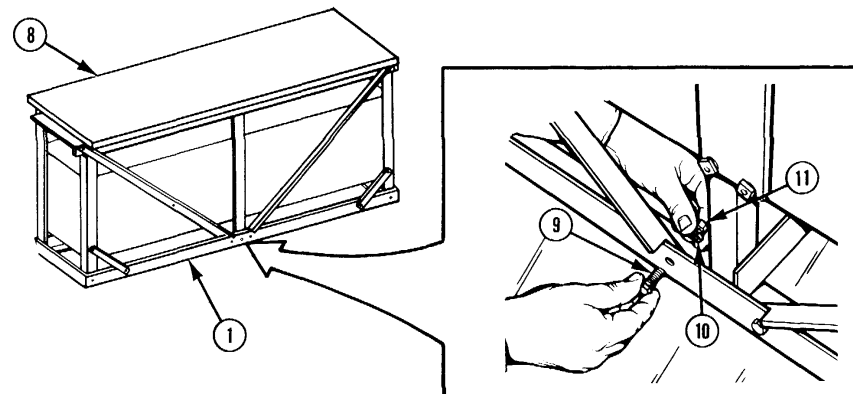
**13-16. SHOP SET--TABLE MODIFICATION--MAINTENANCE INSTRUCTIONS (cont).**

**INSTALLATION**

- 1 FRAME (1). Aline holes with holes in floor.
- 2 TEN FLAT WASHERS (2), TEN LOCK-WASHERS (3), AND TEN 1-1/4-IN. (3.18-CM) SCREWS (4). Install.
- 3 TWO FLAT WASHERS (5), TWO LOCK-WASHERS (6), AND TWO 1-1/2-IN. (3.81-CM) SCREWS (7). Install.



- 4 TABLE (8). Install in frame (1).
- 5 TWELVE SCREWS (9), TWELVE LOCK-WASHERS (10), AND TWELVE NUTS (11). Install.



**3-17. SHOP SET--MISCELLANEOUS SPARE ACCESSORIES--MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:

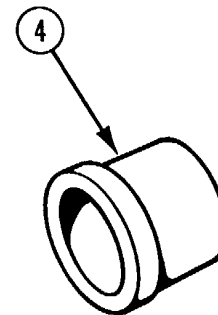
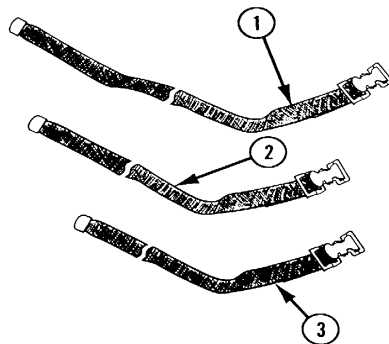
- |               |                 |
|---------------|-----------------|
| a. Inspection | c. Repair       |
| b. Removal    | d. Installation |

INITIAL SETUP

Special Tools  
 Armament repair shop set (SC 4933-95-CL-A21)

**INSPECTION**

- 1 TWELVE 12-IN. (30.48-CM) WEBBING STRAPS (1), SIX 66-IN. (167.64-CM) WEBBING STRAPS (2), AND SIX 110-IN. (279.40-CM) WEBBING STRAPS (3). Check for missing, frayed, or cut conditions.



- 2 TWENTY FOUR PLASTIC PLUGS (4). Check for missing, cracked, or broken parts.

**SHOP SET--MISCELLANEOUS SPARE ACCESSORIES--MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL**

**REPAIR**

**INSTALLATION**

ALL PARTS. Remove from storage areas.

ALL PARTS. Replace if missing or damaged.

ALL PARTS. Place in proper storage area (table drawers, storage cabinet, or equipment storage chest).

**3-18. SWITCHBOX AND MOUNTING BRACKET (WITH TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- a. Inspection
- b. Removal/disassembly
- c. Repair
- d. Modification
- e. Reassembly/installation
- f. Adjustment of microswitch
- g. Test

**INITIAL SETUP**

Special Tools  
 Armament repair shop set (SC 4933-95-CL-A21)

Material s/Parts  
 Black semigloss lacquer (item 11, app D)

References  
 Appendix C  
 Appendix D

Troubleshooting Reference  
 3-7 Lights fail to come on.

General Safety Instructions

**WARNING**

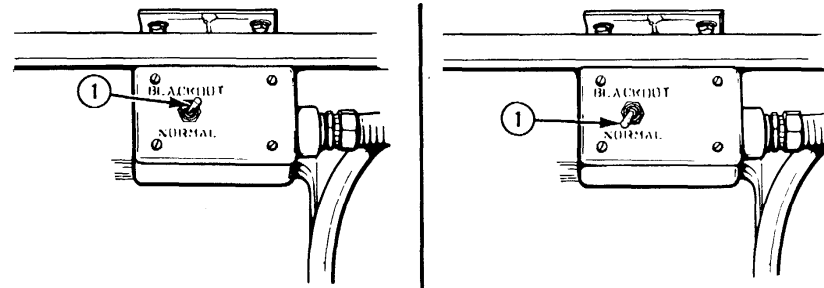
The shop set contains voltages which are dangerous if contacted. Before performing any maintenance on the switchbox, place circuit breaker CB4 in the OFF position

**INSPECTION**

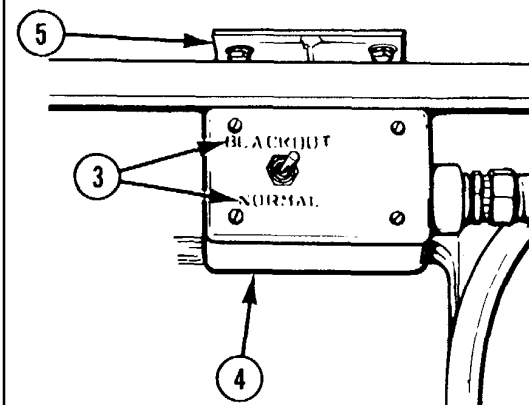
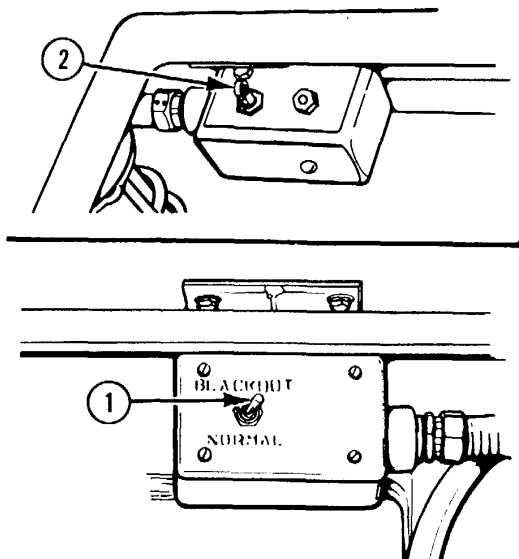
**NOTE**

The switchbox with the toggle switch is located above the personnel door. 1 TOGGLE SWITCH (1). Inspect for proper operation in BLACKOUT and NORMAL positions.

- 1 TOGGLE SWITCH (1). Inspect for proper operation in BLACKOUT and NORMAL positions.



- 2 MICROSWITCH (2). Inspect for proper operation when toggle switch (1) is in BLACKOUT position.



- 3 STENCIL MARKINGS (3). Inspect for readability.
- 4 SWITCHBOX (4) AND MOUNTING BRACKET (5). Inspect for secure mounting and loose or missing parts.

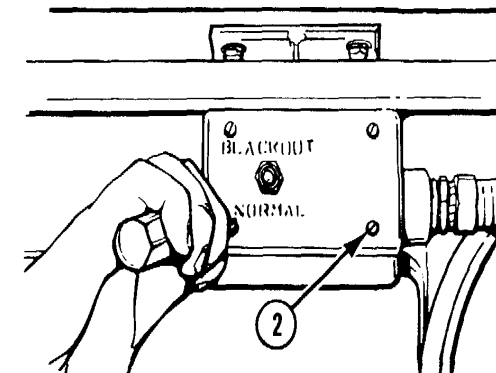
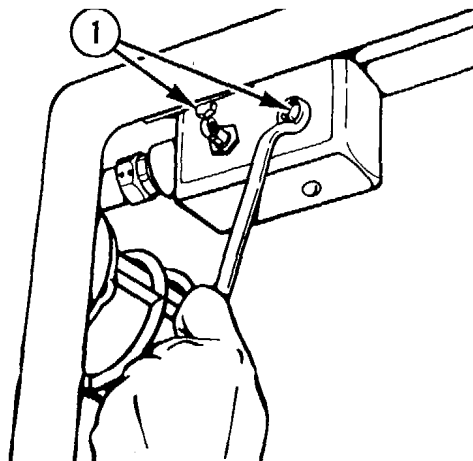
13-18. SWITCHBOX AND MOUNTING BRACKET (WITH TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS (cont)

REMOVAL/DISASSEMBLY

**NOTE**

For clarity, wires not mentioned in the text are not shown.

- 1 TWO HEX HEAD CAPSCREWS (1). Remove.



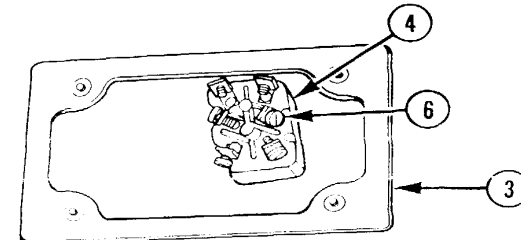
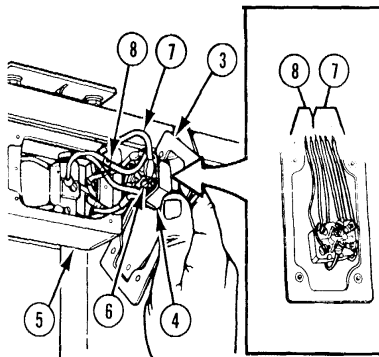
- 2 FOUR SCREWS (2). Remove.

- 3 COVER (3) WITH TOGGLE SWITCH (4). Pull away from switchbox (5).

- 4 SIX TERMINAL SCREWS (6). Remove.

**NOTE**

Tag all wires for identification before disconnecting.



- 5 FOUR WIRES (7) AND TWO WIRES (8). Disconnect.
- 6 COVER (3) WITH TOGGLE SWITCH (4). Remove.
- 7 SIX TERMINAL SCREWS (6). Reinstall.

**NOTE**  
The hex nut (9) is a component of the toggle switch (4).

8 HEX NUT (9). Remove from cover (3) with toggle switch (4).

9 COVER (3) AND TOGGLE SWITCH (4). Separate.

10 THREE TERMINAL SCREWS (10). Remove.

11 TWO WIRES (7) AND TWO WIRES (8). Disconnect.

12 TWO WIRES (8). Remove.

13 THREE TERMINAL SCREWS (10). Reinstall.

14 HEX NUT (11) AND WASHER (12). Remove.

15 MICROSWITCH (13). Remove.

16 SWITCHBOX (5).

a. Loosen connector (14).  
b. Pull from six wires (7).

17 MOUNTING BRACKET (15).

a. Remove two hex head capscrews (16) and two flat washers (17).  
b. Remove.



**13-18. SWITCHBOX AND MOUNTING BRACKET (WITH TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR**

**NOTE**

The hex nut is a component of the toggle switch.

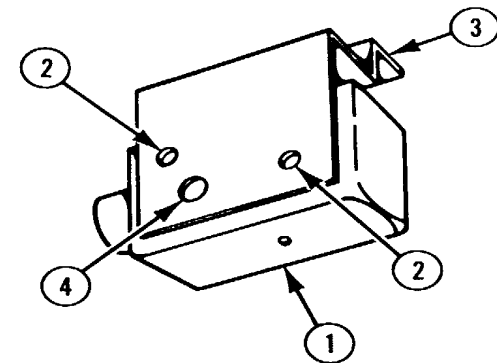
Repair is by replacement of authorized parts (app C) as required.

**MODIFICATION**

**NOTE**

Modification of the switchbox may be necessary when the switchbox is replaced by a new one.

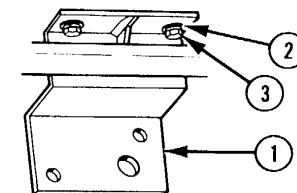
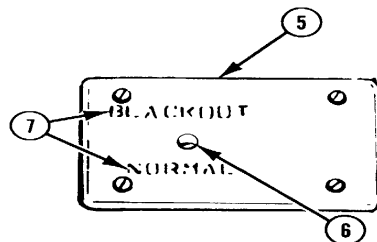
- 1 SWITCHBOX (1).
  - a. On the back, drill two 0.25-in. (0.64-cm) holes (2), using the mounting bracket (3) as a template.
  - b. On the back, drill one 0.53-in. (1.35-cm) hole (4), using the mounting bracket (3) as a template.



**REASSEMBLY/INSTALLATION**

2 COVER (5).

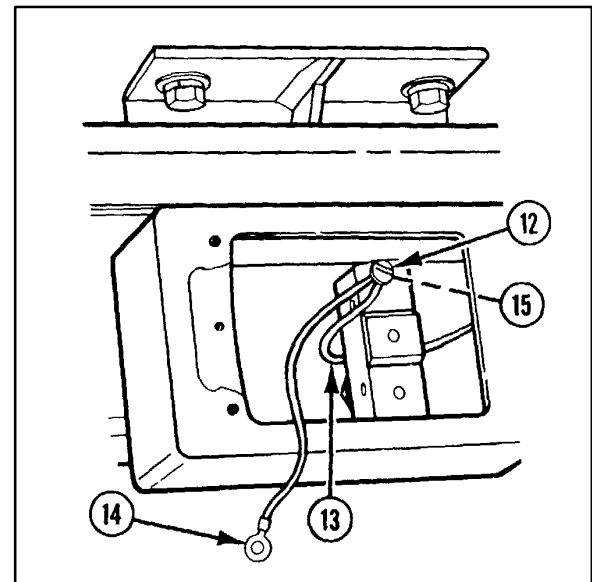
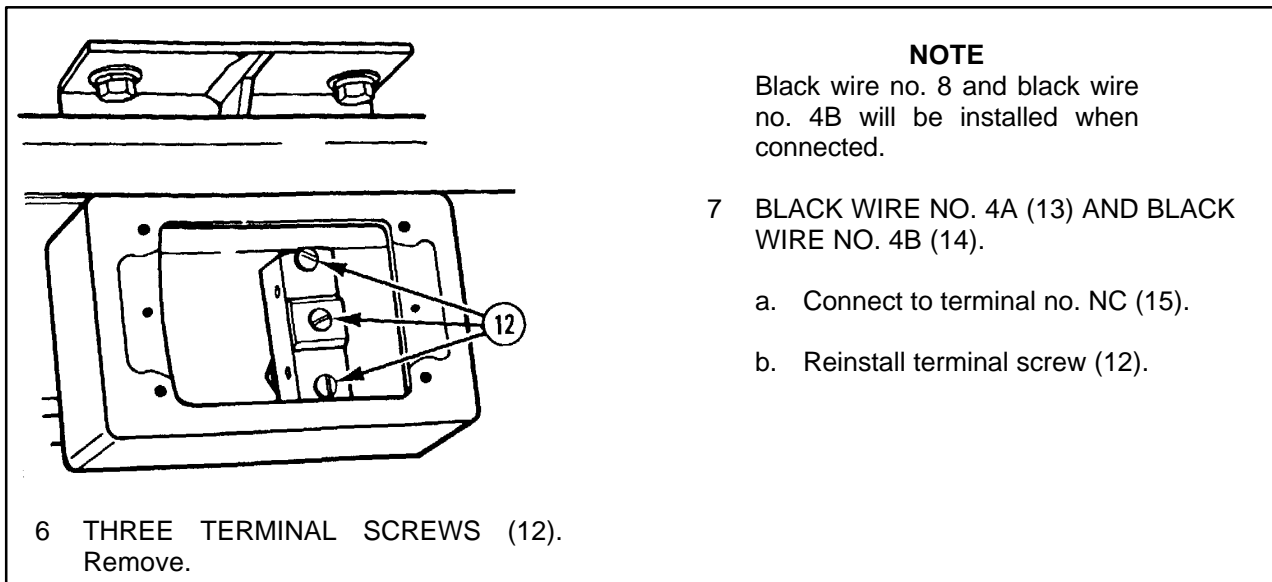
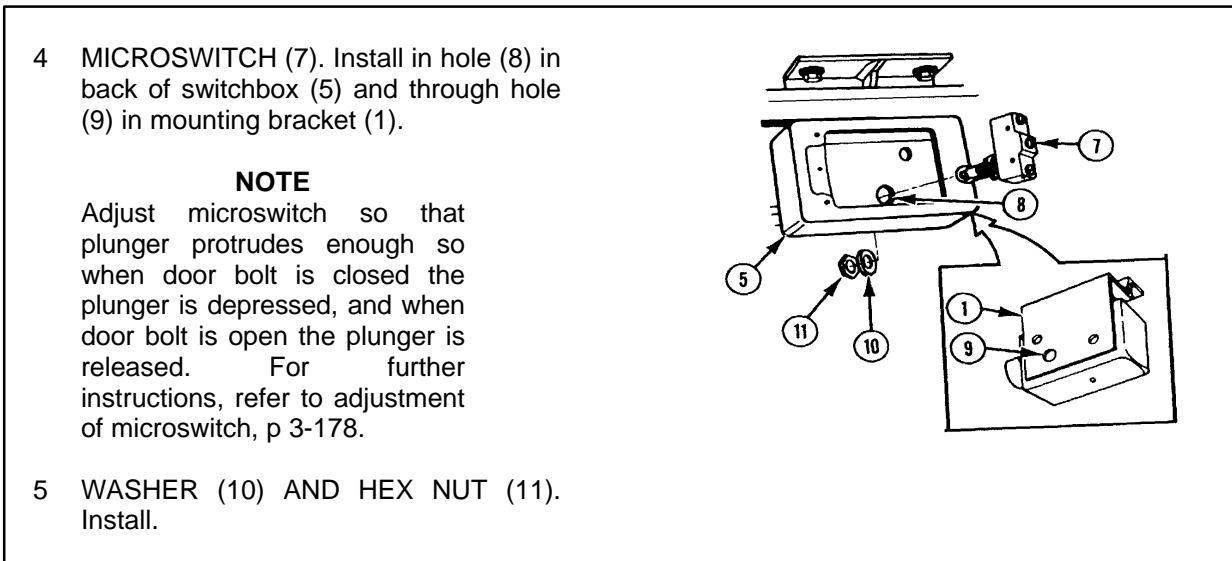
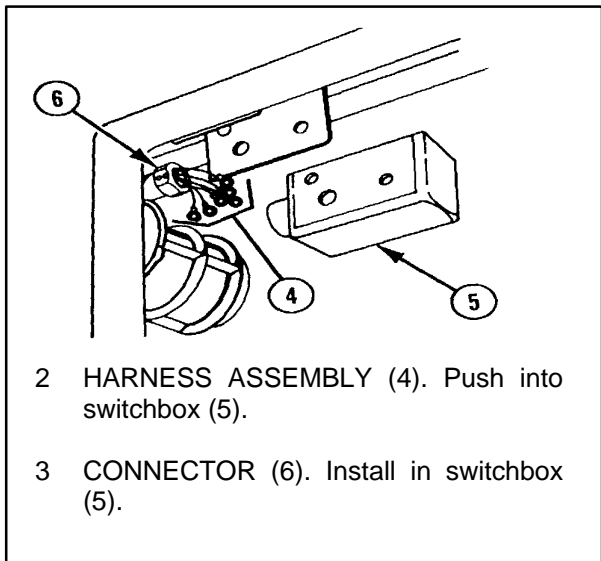
- a. Drill one 0.47-in. (1.19-cm) hole (6) as illustrated.
- b. Stencil black lettering (7) in 0.25-in. (0.64-cm) letters using black semigloss lacquer (item 11, app D) as illustrated.



**NOTE**

For clarity, wires not mentioned in the text are not shown.

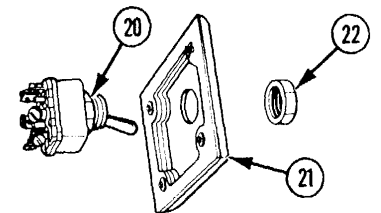
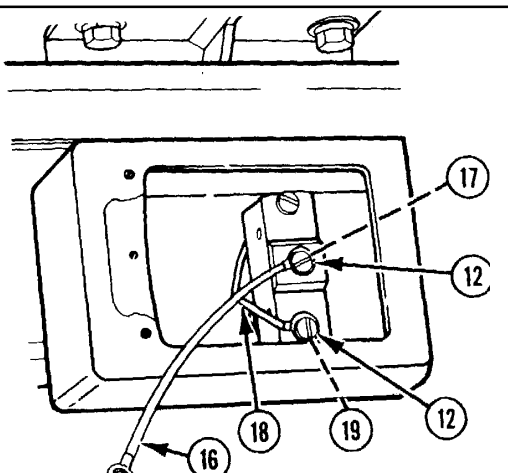
- 1 MOUNTING BRACKET (1). Install two flat washers (2) and two hex head cap screws (3).



**13-18. SWITCHBOX AND MOUNTING BRACKET (WITH TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY/INSTALLATION (cont)**

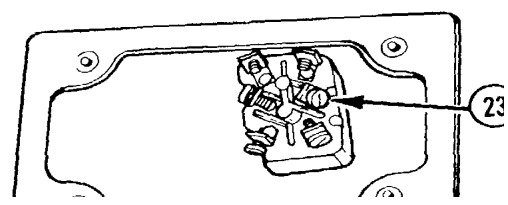
- 8 BLACK WIRE NO. 8 (16).
  - a. Connect to terminal no. NO (17).
  - b. Reinstall terminal screw (12).
- 9 BLACK WIRE NO. 6A (18).
  - a. Connect to terminal no. C (19).
  - b. Reinstall terminal screw (12).



**NOTE**

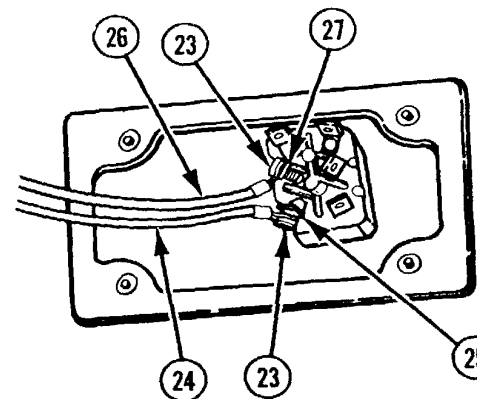
The hex nut is a component of the toggle switch.

- 10 TOGGLE SWITCH (20).
  - a. Install in cover (21).
  - b. Install hex nut (22).

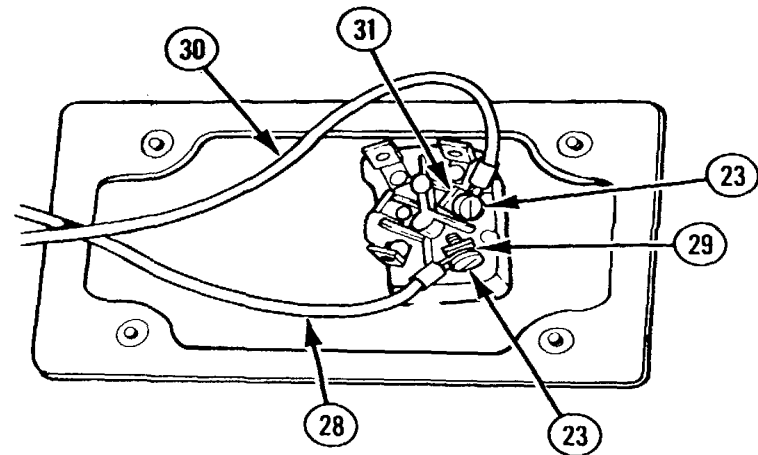


- 11 SIX TERMINAL SCREWS (23).  
Remove.

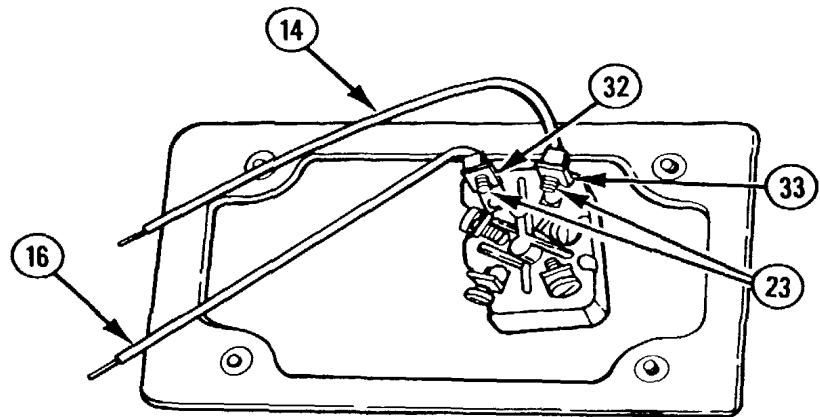
- 12 BLACK WIRE NO. 1 (24).
  - a. Connect to terminal no. 3 (25).
  - b. Reinstall terminal screw (23).
- 13 BLACK WIRE NO. 2 (26).
  - a. Connect to terminal no. 2 (27).
  - B Reinstall terminal screw (23).



- 14 BLACK WIRE NO. 3 (28).
  - a. Connect to terminal no. 6 (29).
  - b. Reinstall terminal screw (23).
- 15 BLACK WIRE NO. 7 (30).
  - a. Connect to terminal no. 5 (31).
  - b. Reinstall terminal screw (23).



- 16 BLACK WIRE NO. 8 (16).
  - 17 BLACK WIRE NO. 4B (14).
- a. Connect to terminal no. 1(32).
  - b. Reinstall terminal screw (23).
- a. Connect to terminal no. 4 (33).
  - b. Reinstall terminal screw (23).

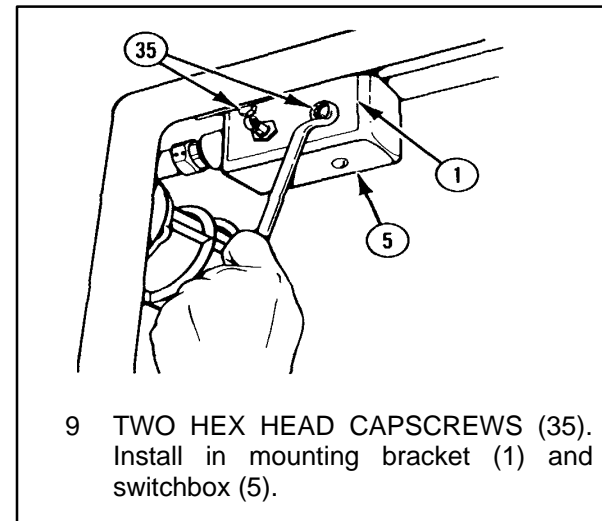
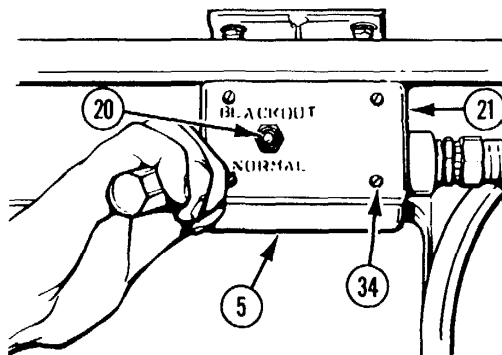


**13-18. SWITCHBOX AND MOUNTING BRACKET (WITH TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY/INSTALLATION (cont)**

18 COVER (21) WITH TOGGLE SWITCH (20).

- a. Install on switchbox (5).
- b. Install four screws (34).



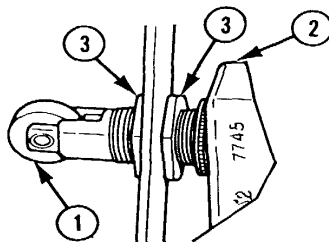
9 TWO HEX HEAD CAPSCREWS (35). Install in mounting bracket (1) and switchbox (5).

**ADJUSTMENT OF MICROSWITCH**

**NOTE**

Adjusting two hex nuts inward moves plunger forward, adjusting outward moves plunger backwards.

PLUNGER (1) OF MICROSWITCH (2).  
Adjust two hex nuts (3).



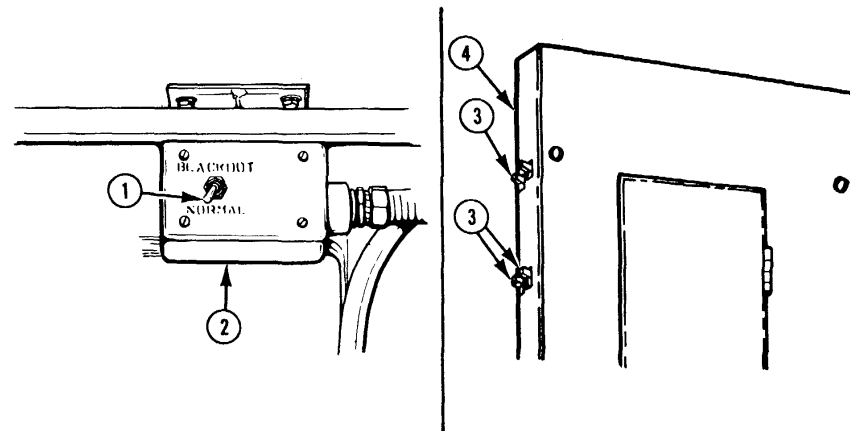
**TEST**

1 PERSONNEL DOOR AND CARGO DOOR.  
Close.

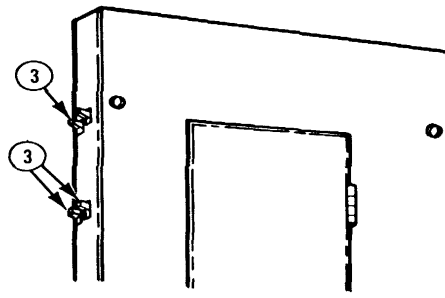
**NOTE**

Blackout switch (1) is located on switchbox (2) above personnel door. The three switches (S1, S2, and S3) (3) are located on the circuit breaker panel box (4) to the right of the personnel door.

2 BLACKOUT SWITCH (1). Turn to NORMAL position.



3 THREE SWITCHES (S1, S2, AND S3) (3). Turn to ON position. Lights should come on.

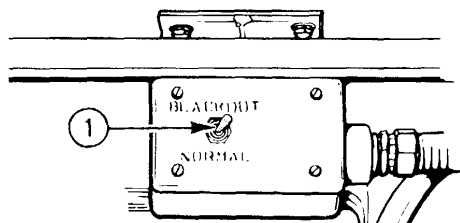


4 PERSONNEL DOOR.

- a. Open. Lights should stay on.
- b. Close.

**3-18. SWITCHBOX AND MOUNTING BRACKET (WITH TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS (cont)**

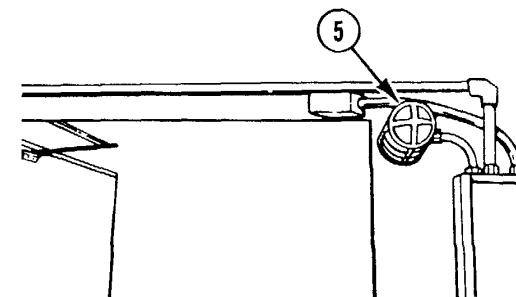
**TEST (cont)**



5 BLACKOUT SWITCH (1). Turn to BLACKOUT position. Lights should stay on.

6 PERSONNEL DOOR.

- a. Open. Lights should go off and blackout light (5) over personnel door should come on.
- b. Close.



**13-19. SWITCHBOX AND MOUNTING BRACKET (WITHOUT TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- a. Inspection
- b. Removal/disassembly
- c. Repair
- d. Modification
- e. Reassembly/installation
- f. Adjustment of microswitch
- g. Test

**INITIAL SETUP**

Special Tools  
Armament repair shop set (SC 4933-95-CL-A21)

Reference  
Appendix C

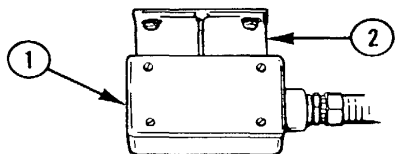
Troubleshooting Reference  
3-7 Lights fail to come on

General Safety Instructions

**WARNING**

The shop set contains voltages which are dangerous if contacted  
Before performing any maintenance on the switchbox, place circuit breaker CB4 in the OFF position.

**INSPECTION**

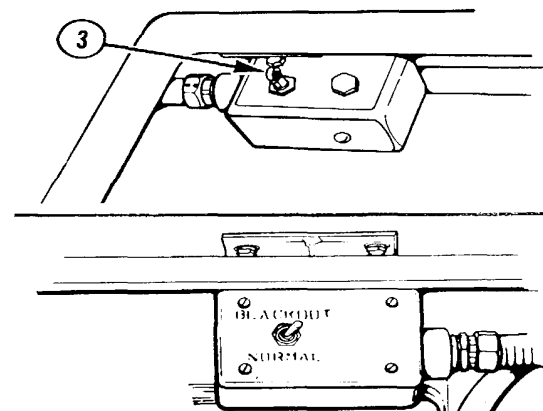


**NOTE**

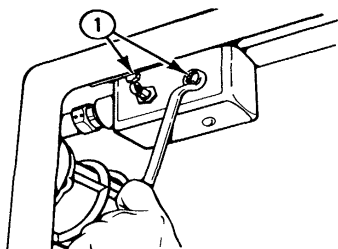
The switchbox without the toggle switch is located above the cargo door.

- 1 SWITCHBOX (1) AND MOUNTING BRACKET (2). Inspect for secure mounting and loose or missing parts.

- 2 MICROSWITCH (3). Inspect for proper operation when in blackout mode.

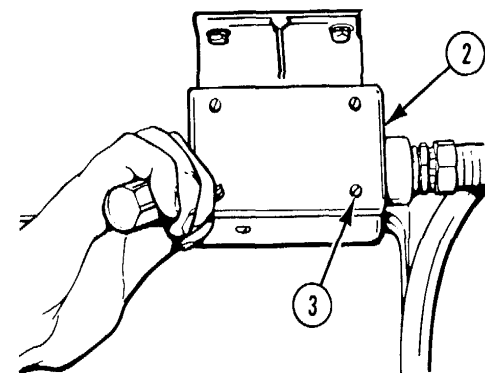


**REMOVAL/DISASSEMBLY**



- 1 TWO HEX HEAD CAPSCREWS (1). Remove.

- 2 COVER (2).
  - a. Remove four screws (3).
  - b. Remove.





**3-19. SWITCHBOX AND MOUNTING BRACKET (WITHOUT TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL/DISASSEMBLY (cont)**

**NOTE**

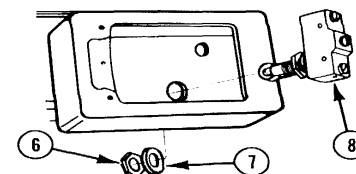
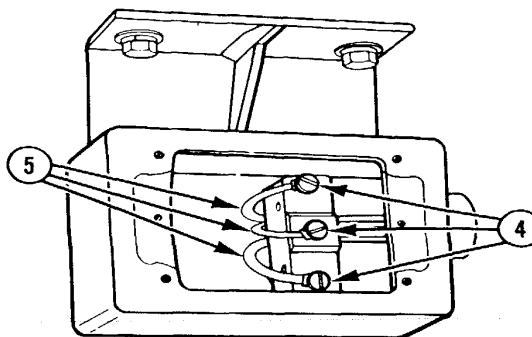
For clarity, wires not mentioned in the text are not shown.

- 3 THREE TERMINAL SCREWS (4).  
Remove.

**NOTE**

Tag all wires for identification before disconnecting.

- 4 THREE BLUE WIRES (5). Remove.
- 5 THREE TERMINAL SCREWS (4).  
Reinstall.



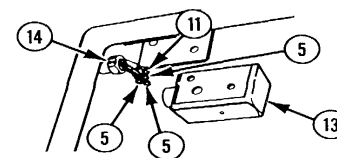
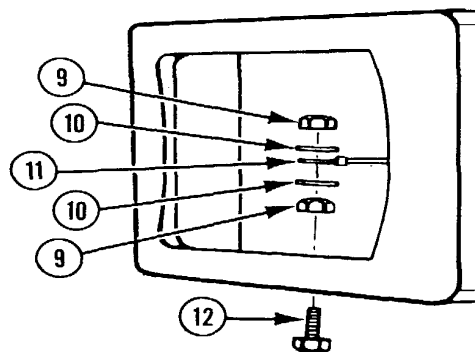
- 6 HEX NUT (6) AND WASHER (7).  
Remove.
- 7 MICROSWITCH (8). Remove.

- 8 NUT (9) AND LOCKWASHER (10).  
Remove.

- 9 GREEN WIRE (11). Disconnect.

- 10 LOCKWASHER (10) AND NUT (9).  
Remove.

- 11 SCREW (12). Remove.

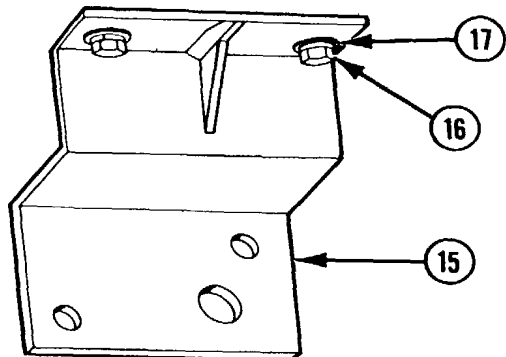


- 12 SWITCHBOX (13).

- a. Loosen connector (14).
- b. Pull away from three blue wires (5) and green wire (11).

**REPAIR**

- 13 MOUNTING BRACKET (15).
- a. Remove two hex head capscrews (16) and two flat washers (17).
  - b. Remove.

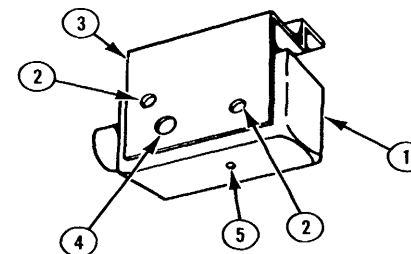


Repair is by replacement of authorized parts (app C) as required.

**MODIFICATION**

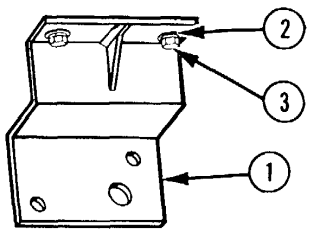
**NOTE**  
Modification of the switchbox may be necessary when the switchbox is replaced by a new one.

- SWITCHBOX (1).
- a. On the back, drill two 0.25 in. (0.64-cm) holes (2), using the mounting bracket (3) as a template.
  - b. On the back, drill one 0.53 in. (1.35-cm) hole (4), using the mounting bracket (3) as a template.
  - c. On the side, drill one 0.19 in. (0.48-cm) hole (5) as illustrated.



**3-19. SWITCHBOX AND MOUNTING BRACKET (WITHOUT TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY/INSTALLATION**

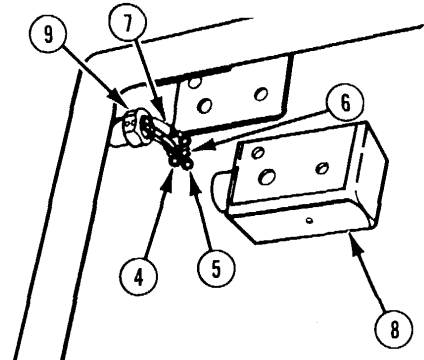


1 MOUNTING BRACKET (1). Install two flat washers (2) and two hex head capscrews (3).

**NOTE**  
For clarity, wires not mentioned in text are not shown.

2 BLUE WIRE NO. 4 (4), BLUE WIRE NO. 5 (5), BLUE WIRE NO. 6 (6), AND GREEN WIRE NO. 11 (7). Push into switchbox (8).

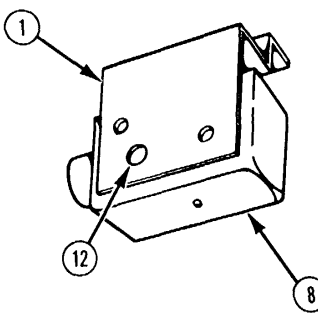
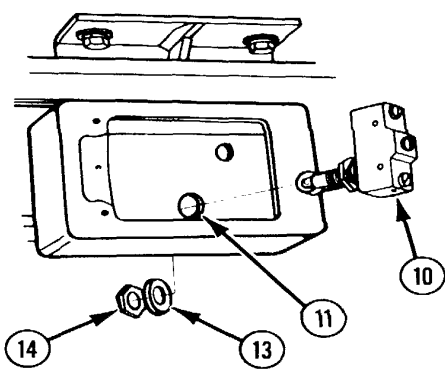
3 CONNECTOR (9). Install in switchbox (8).

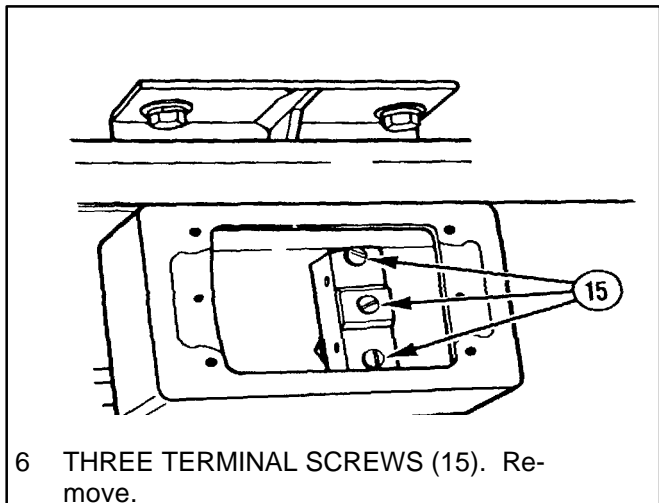


4 MICROSWITCH (10). Install in hole (11) in back of switchbox (8) and through hole (12) in mounting bracket (1).

**NOTE**  
Adjust microswitch so that plunger protrudes enough so when door bolt is closed the plunger is depressed, and when door bolt is open the plunger is released. For further instructions, refer to adjustment of microswitch, p 3-186.

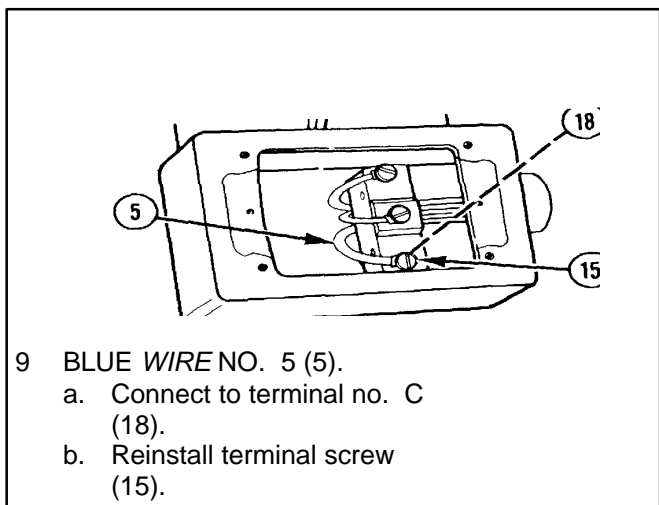
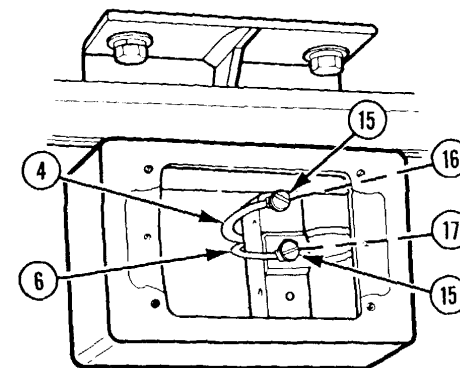
5 WASHER (13) AND HEX , NUT (14). Install.



6 THREE TERMINAL SCREWS (15). Remove.

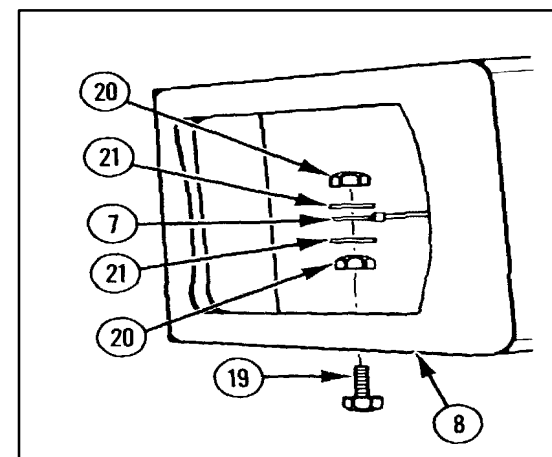
- 7 BLUE WIRE NO. 4 (4).
  - a. Connect to terminal no. NC (16).
  - b. Reinstall terminal screw (15).
- 8 BLUE WIRE NO. 6 (6).
  - a. Connect to terminal no. NO (17).
  - b. Reinstall terminal screw (15).



9 BLUE WIRE NO. 5 (5).
 

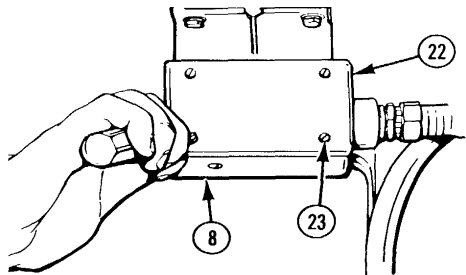
- a. Connect to terminal no. C (18).
- b. Reinstall terminal screw (15).

- 10 SCREW (19). Install in switchbox (8).
- 11 NUT (20) AND LOCKWASHER (21). Install on screw (19).
- 12 GREEN WIRE NO. 11 (7). Connect.
- 13 LOCKWASHER (21) AND NUT (20). Install on screw (19).



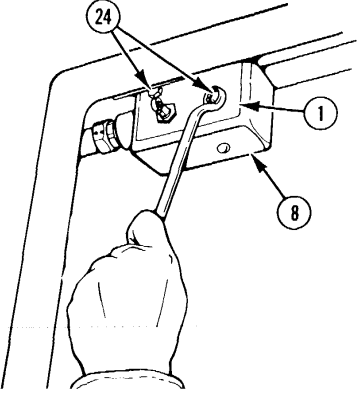
**13-19. SWITCHBOX AND MOUNTING BRACKET (WITHOUT TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS(cont)**

**REASSEMBLY/INSTALLATION (cont)**



14 COVER (22).

- a. Install on switchbox (8) .
- b. Install four screws (23).

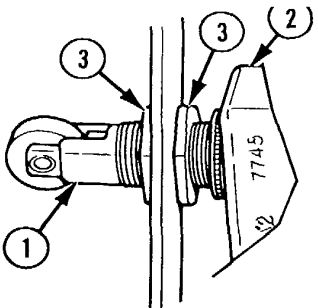


15 TWO HEX HEAD CAPSCREWS (24).  
Install in mounting bracket (1) and switchbox (8).

**ADJUSTMENT OF MICROSWITCH**

**NOTE**  
Adjusting two hex nuts inward moves plunger forward, adjusting outward moves plunger backwards.

PLUNGER (1) OF MICROSWITCH (2) .  
Adjust two hex nuts (3).



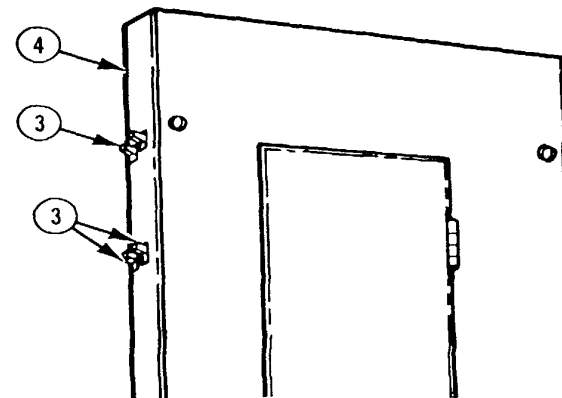
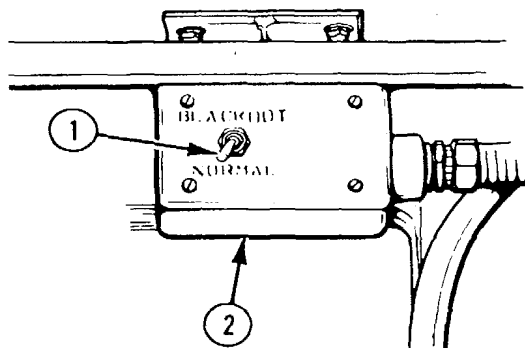
**TEST**

1 PERSONNEL DOOR AND CARGO DOOR.  
Close.

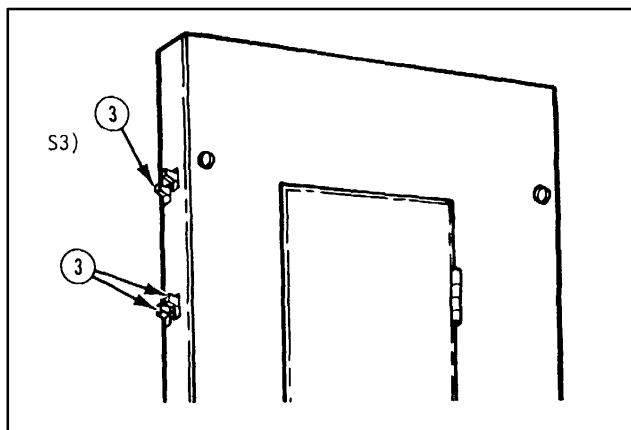
NOTE

Blackout switch (1) is located on switchbox (2) above personnel door. The three switches (S1, S2, and S3) (3) are located on the circuit breaker panel box (4) to the right of the personnel door.

2 BLACKOUT SWITCH (1). Turn to NORMAL position.



3 THREE SWITCHES (S1, S2, AND S3) (3). Turn to ON position. Lights should come on.

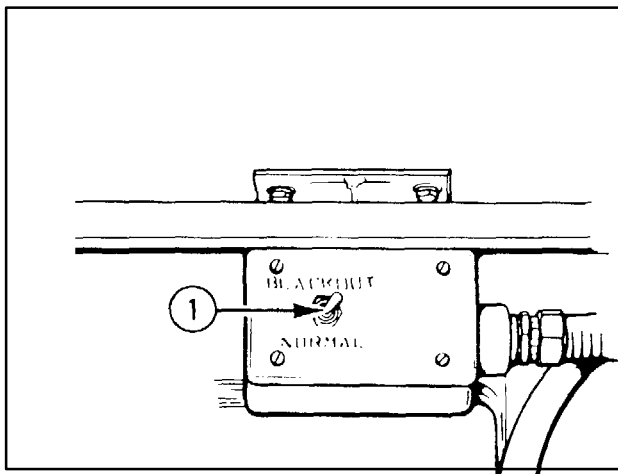


4 CARGO DOOR.

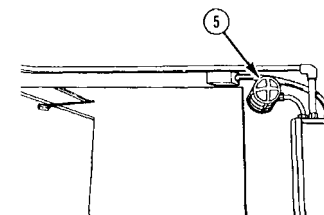
- a. Open. Lights should stay on.
- b. Close.

**3-19. SWITCHBOX AND MOUNTING BRACKET (WITHOUT TOGGLE SWITCH)--MAINTENANCE INSTRUCTIONS (cont)**

**TEST (cont)**



- 6 CARGO DOOR.
  - a. Open. Lights should go off and blackout light (5) over personnel door should come on.
  - b. Close.



- 5 BLACKOUT SWITCH (1). Turn to BLACKOUT position. Lights should stay on.

**3-20. FAN BLACKOUT COVER--MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:

- a. Removal
- b. Inspection
- c. Repair
- d. Installation

INITIAL SETUP

Special Tools

- Armament repair shop set (SC 4933-95-CL-A21)
- AVIM sheet metal shop set (SC 4920-99-CL-A85)**
- AVIM welding shop set (SC 4920-99-CL-A88)**
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)**

References

- Appendix D
- Appendix E
- TM 10-5410-224-14
- TM 43-0139
- TM 9-237

Materials/Parts

- Black semigloss lacquer (item 11, app D)
- Green enamel (item 8, app D)

Equipment Condition

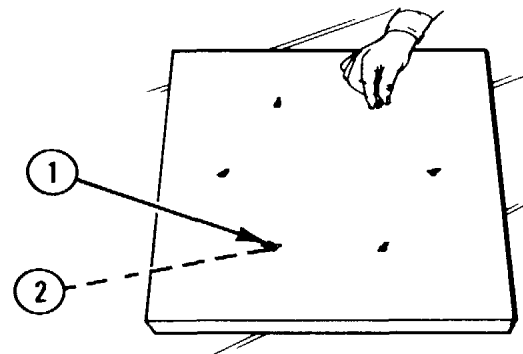
- 2-8 Ventilation fan and mounting panel removed from shelter wall.

**REMOVAL**

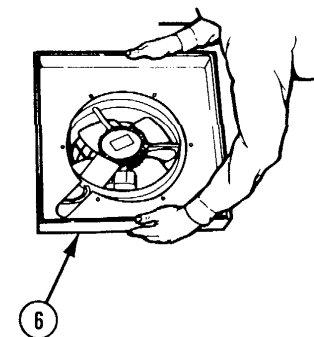
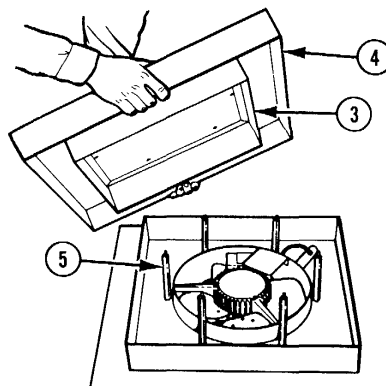
**WARNING**

Ventilation fan and mounting panel should be removed from shelter wall prior to removal of fan blackout cover, refer to TM 10-5410-224-14 for instructions. Mounting panel should be placed in horizontal position with fan blackout cover up.

- 1 SIX WINGNUTS (1). Remove.
- 2 SIX WASHERS (2). Remove.



- 3 BAFFLE (3), OUTER COVER (4), AND SIX SPACERS (5). Remove.

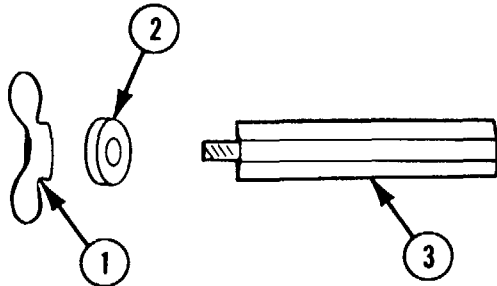


- 4 INNER COVER (6). Remove.



**3-20. FAN BLACKOUT COVER--MAINTENANCE INSTRUCTIONS (cont)**

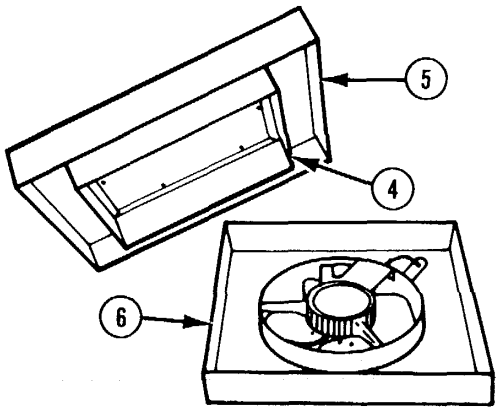
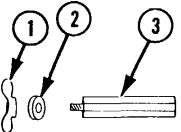
**INSPECTION**



1 SIX WINGNUTS (1), SIX WASHERS (2), AND SIX SPACERS (3). Check for damaged or missing parts.

2 BAFFLE (4), OUTER COVER (5), AND INNER COVER (6).

- Check for dents or similar damage.
- Check for any cracked welds.
- Check for chipped or missing paint.

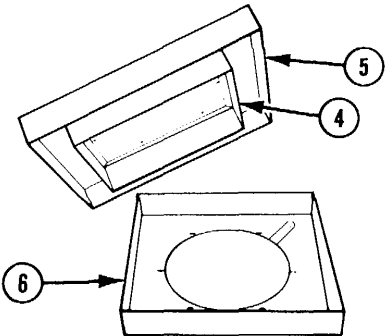



1 SIX WINGNUTS (1) AND SIX WASHERS (2). Replace if damaged or missing (app C).

2 SIX SPACERS (3). Replace, if needed, with new fabricated items (fig. 14, app E).

3 BAFFLE (4), OUTER COVER (5), AND INNER COVER (6).

- Remove any small dents or deformations with a hammer.



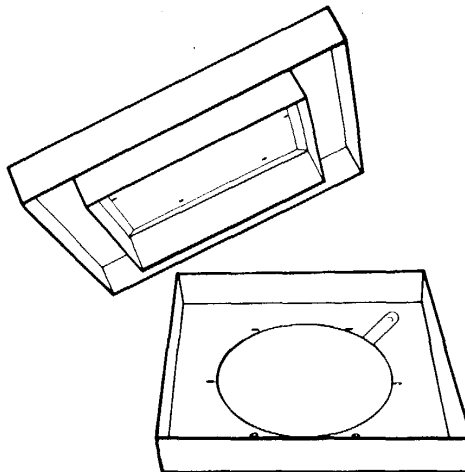
**INSTALLATION**

- b. Reweld any cracked welds.
- c. Touch up, as required, any interior surfaces with black semigloss lacquer (item 11, app D). Touch up, as required, any exterior surfaces with green enamel (item 8, app D).

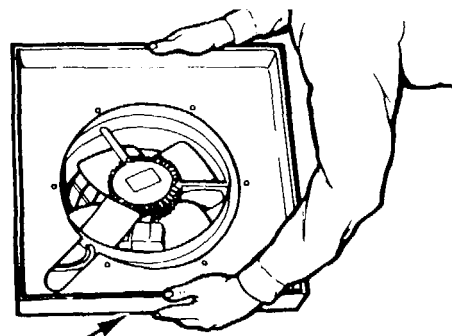
**NOTE**

If either baffle or outer cover are replaced, they must be rewelded to each other.

- d. If not repairable, replace with new fabricated items (fig. 15, 16, and 17, app E).



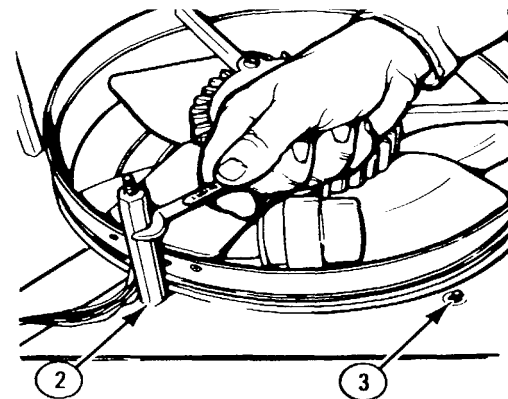
**WARNING**  
 Ventilation fan and mounting panel should be removed from shelter wall prior to installation of fan blackout cover. Refer to TM 10-5410-224- 14 for instructions. Mounting panel should be placed in horizontal position with mounting screws vertical.



1

1 INNER COVER (1). Install.

- 2 SIX SPACERS (2). Screw onto six existing mounting screws (3) holding ventilation fan to mounting panel.

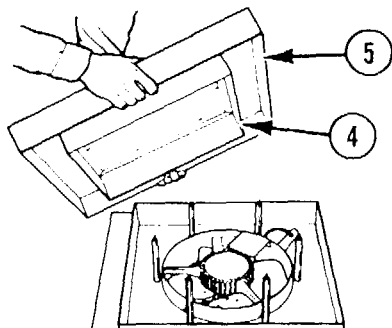


2

3

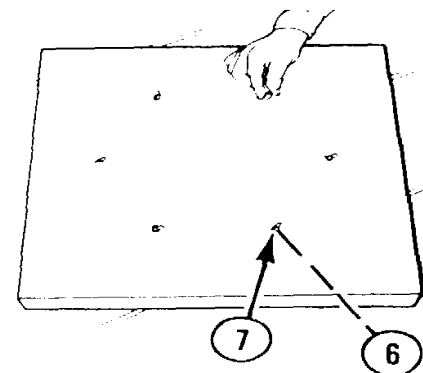
**3-20. FAN BLACKOUT COVER—MAINTENANCE INSTRUCTIONS (cont)**

**INSTALLATION (cont)**



3 BAFFLE (4) AND OUTER COVER (5).  
Install.

- 4 SIX WASHERS (6). Install.
- 5 SIX WINGNUTS (7). Install.



**3-21. ECU STOWING FRAME ASSEMBLY--MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:

- |                |                 |                 |
|----------------|-----------------|-----------------|
| a. Inspection  | d. Repair       | d. Repair       |
| b. Removal     | e. Reassembly   | e. Reassembly   |
| c. Disassembly | f. Installation | f. Installation |

INITIAL SETUP

Special Tools

- AVIM sheet metal shop set (SC 4920-99-CL-A85)
- AVIM welding shop set (SC 4920-99-CL-A88)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

References

- TM 10-5410-224-14
- TM 9-237
- 3-198 Repair procedures for ECU stowing frame assembly--webbing strap.

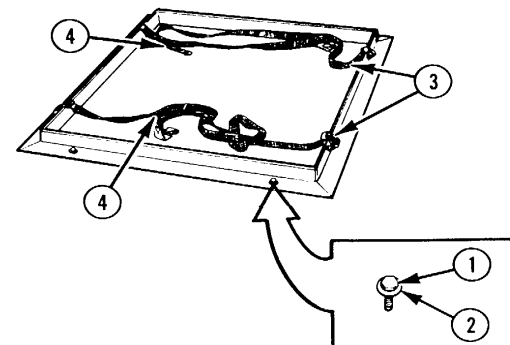
Equipment Condition

- 2-12 ECU removed from stowing frame assembly.

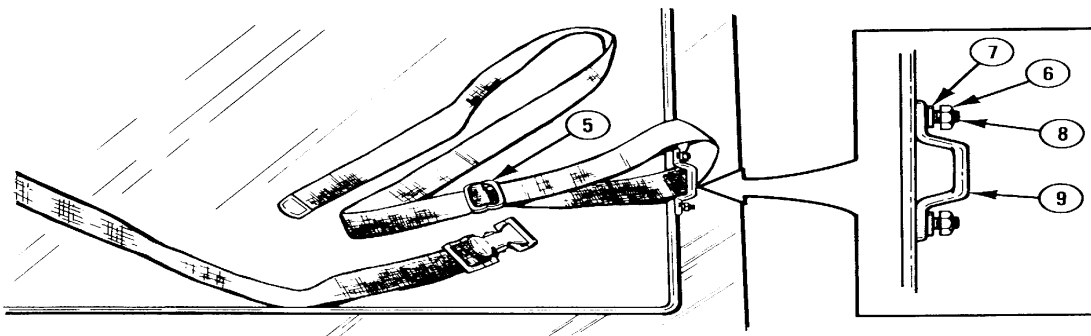
**INSPECTION**

**NOTE**  
 There are two ECU stowing frame assemblies mounted on the shelter floor between the two tables. The following procedures pertain to only one ECU stowing frame assembly.

- 1 FOUR SCREWS (1) AND FOUR LOCK-WASHERS (2). Check for missing, damaged, or corroded parts.
- 2 TWO STRAPS (3) AND TWO STRAPS (4).
  - a. Check for damaged end clips or buckles.
  - b. Check for frayed or torn webbing.



- 3 FOUR SLIDES (5). Check for bent or broken parts.
- 4 EIGHT NUTS (6), EIGHT LOCKWASHERS (7), AND EIGHT SCREWS (8). Check for missing, damaged, or corroded parts.
- 5 FOUR LOOPS (9). Check for bent or broken parts.



**3-21. ECU STOWING FRAME ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

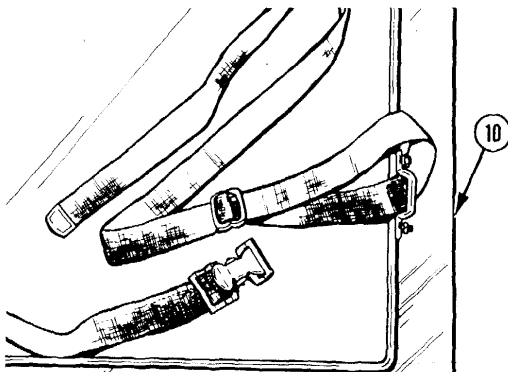
**INSPECTION (cont)**

6 FRAME (10).

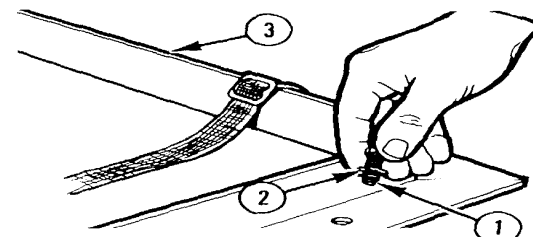
- a. Check for bent or broken parts.
- b. Check for cracked welds.

**NOTE**

Instructions for the removal/installation of the ECU are contained in TM 10-5410-224-14.



**REMOVAL**

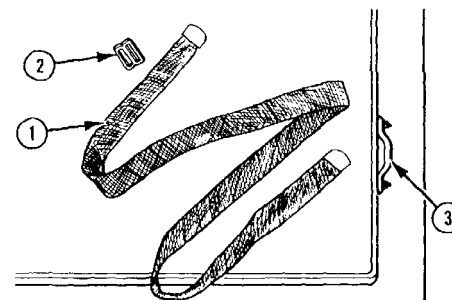


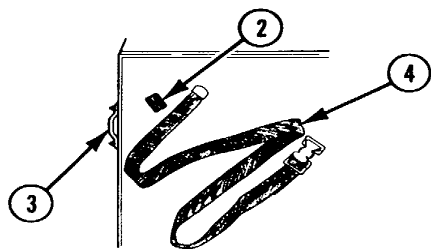
- 1 FOUR SCREWS (1). Remove.
- 2 FOUR LOCKWASHERS (2). Remove.
- 3 FRAME ASSEMBLY (3). Remove.

**DISASSEMBLY**

1 TWO STRAPS (1) AND TWO SLIDES (2).

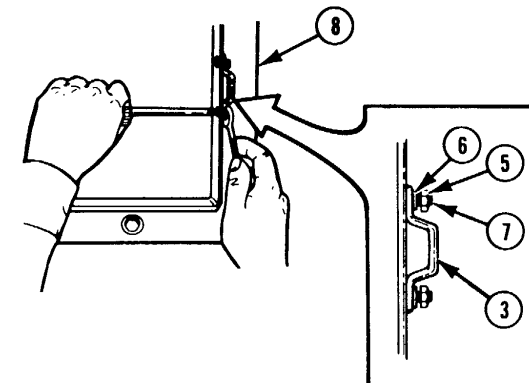
- a. Loosen and remove straps from two loops (3).
- b. Separate.



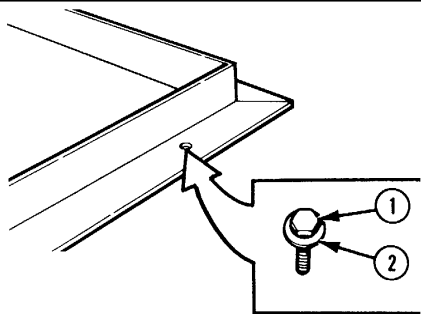


- 2 TWO STRAPS (4) AND TWO SLIDES (2).
- a. Loosen and remove from two loops (3).
- b. Separate.

- 3 EIGHT NUTS (5). Remove.
- 4 EIGHT LOCKWASHERS (6). Remove.
- 5 EIGHT SCREWS (7) AND FOUR LOOPS (3).
- a. Remove from frame (8).
- b. Separate.

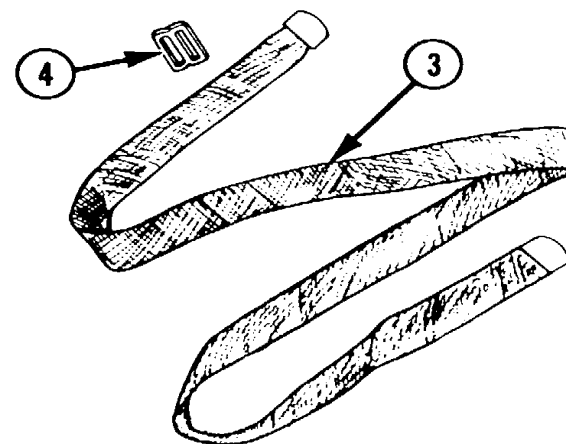


**REPAIR**



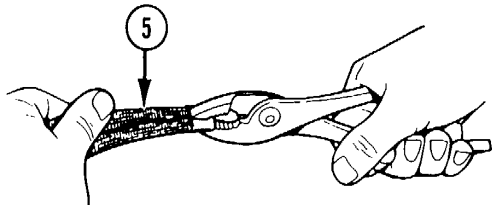
- 1 FOUR SCREWS (1) AND FOUR LOCKWASHERS (2). Replace if missing, damaged, or corroded.

- 2 TWO STRAPS (3).
- a. Replace, if not repairable, with new fabricated items (fig. 18, app E).
- b. Refer to paragraph 3-22, page 3-198, for repair procedures.
- 3 FOUR SLIDES (4). Replace if bent or broken.



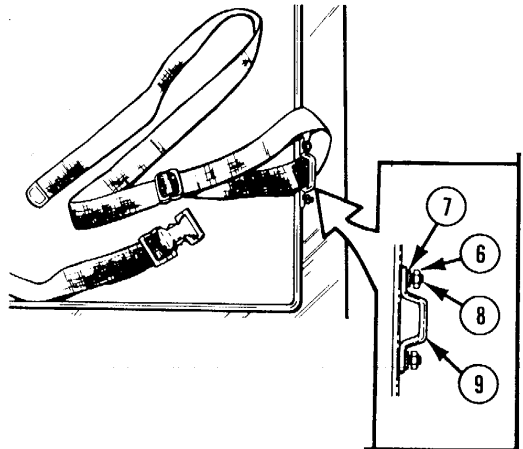
**3-21. ECU STOWING FRAME ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**



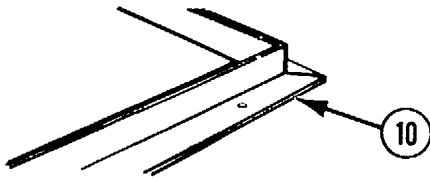
4 TWO STRAPS (5).

- a. Tighten end clip if loose.
- b. Replace if buckle is damaged.
- c. Replace if webbing is frayed, worn, or broken.



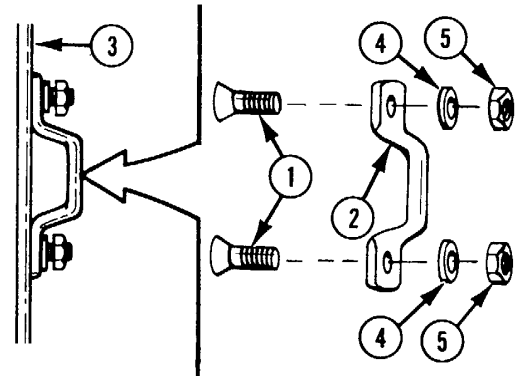
- 5 EIGHT NUTS (6), EIGHT LOCKWASHERS (7), AND EIGHT SCREWS (8). Replace if missing, damaged, or corroded.
- 6 FOUR LOOPS (9). Replace if bent or broken.

**REASSEMBLY**

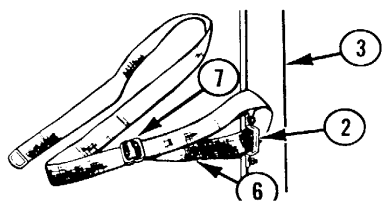


7 FRAME (10).

- a. Reweld any cracked welds.
- b. Replace, if not repairable, with new fabricated item (fig. 19, app E).

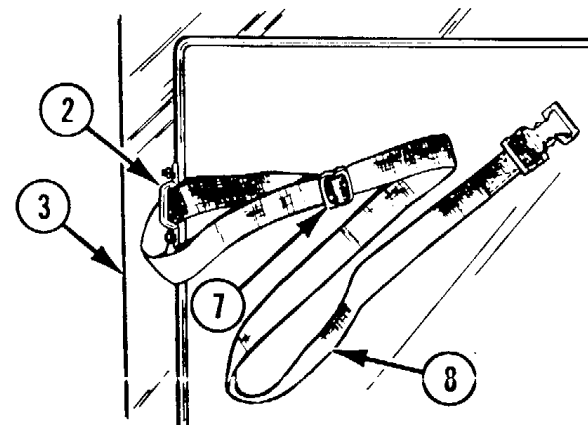


- 1 EIGHT SCREWS (1) AND FOUR LOOPS (2).
  - a. Assemble.
  - b. Place in position on frame (3).
- 2 EIGHT LOCKWASHERS (4). Install.
- 3 EIGHT NUTS (5). Install.

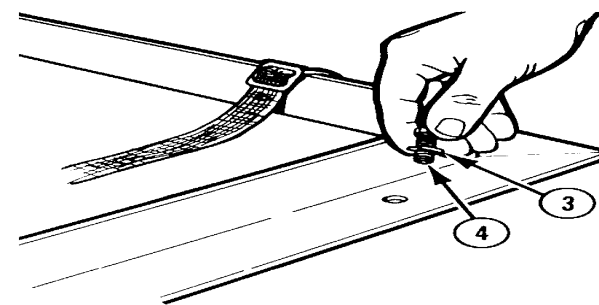
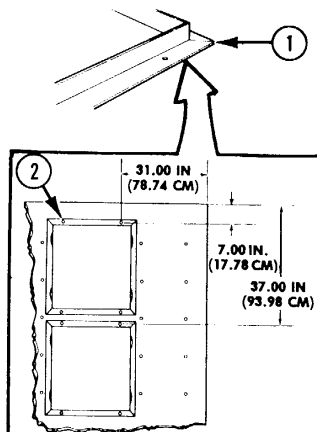


- 4 TWO STRAPS (6) AND TWO SLIDES (7).
- Assemble.
  - Install through two loops (2) on one side of frame (3).

- 5 TWO STRAPS (8) AND TWO SLIDES (7).
- Assemble.
  - Install through two loops (2) on other side of frame (3).



- 1 FRAME ASSEMBLY (1). Place on shelter floor and align mounting holes with blind inserts (2) in floor as illustrated.



- 2 FOUR LOCKWASHERS (3) AND FOUR SCREWS (4). Install.



**3-22. ECU STOWING FRAME ASSEMBLY--WEBBING STRAP--MAINTENANCE INSTRUCTIONS**

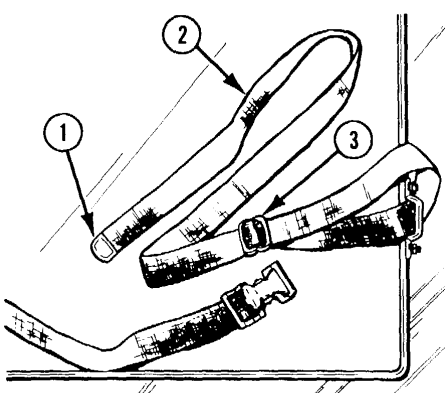
THIS TASK COVERS:	
a. Inspection b. Removal/disassembly	c. Repair d. Reassembly/installation
INITIAL SETUP	Equipment Conditions 2-12 ECU removed from stowing frame assembly.
Special Tools Armament repair shop set (SC 4933-95-CL-A21)	<b>NOTE</b> There are two webbing straps for each ECU stowing frame assembly. The following procedures pertain to only one webbing strap and must be repeated for the second webbing strap.
References Appendix C Appendix E	

**INSPECTION**

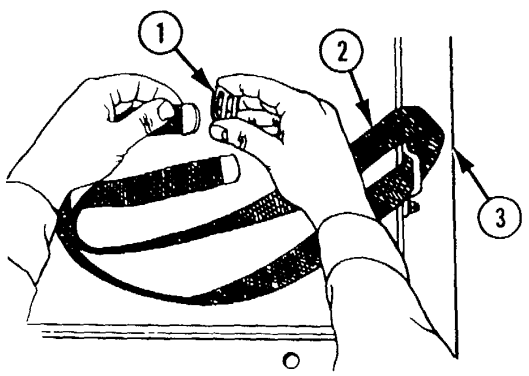
1 TWO END CLIPS (1). Check to ensure they are not missing or loose.

2 STRAP (2). Check for frayed, worn, or broken condition.

3 SLIDE (3). Check to ensure it is not missing or broken.



**REMOVAL/DISASSEMBLY**



1 SLIDE (1). Remove.

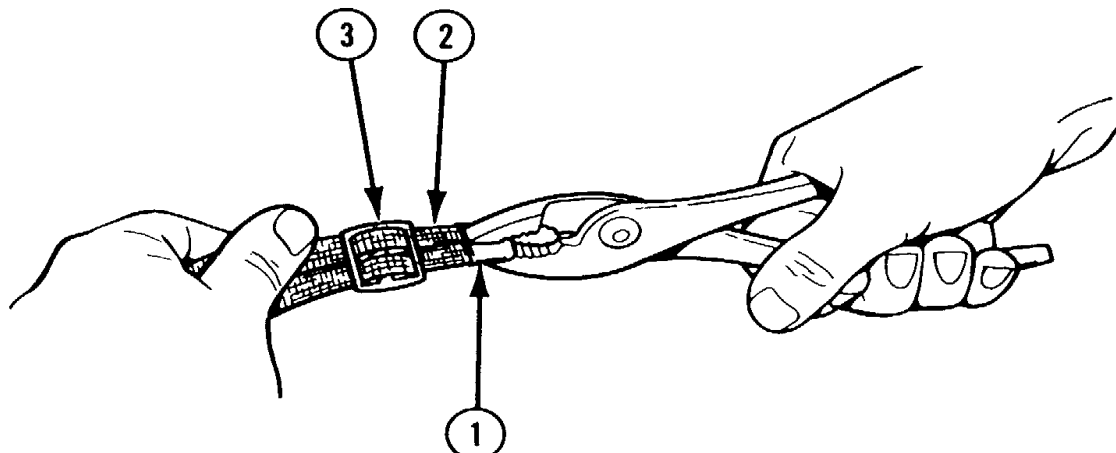
2 WEBBING STRAP (2). Remove from ECU stowing frame assembly (3).

**REPAIR**

**CAUTION**

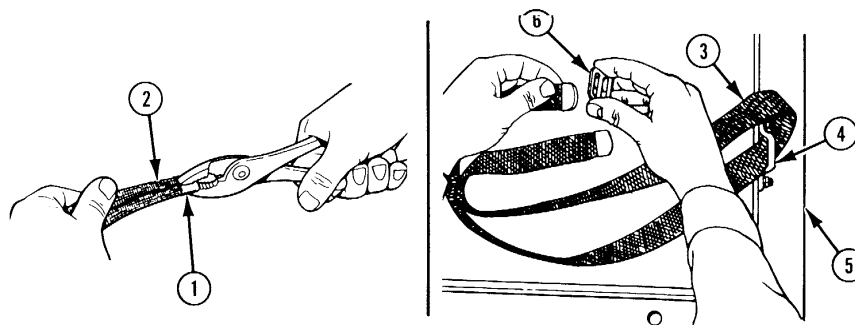
Do not remove end clips unless necessary for replacement.

- 1 TWO END CLIPS (1).
  - a. Reclamp if loose.
  - b. Replace if missing or damaged (app C).
- 2 STRAP (2). Replace with new item (fig. 18, app E) if frayed, worn, or broken.
- 3 SLIDE (3). Replace if missing or damaged (app C).



**REASSEMBLY/INSTALLATION**

- 1 TWO END CLIPS (1) AND STRAP (2). Assemble by clamping one end clip on each end of strap.
- 2 WEBBING STRAP (3). Install through loop (4) on ECU stowing frame assembly (5).
- 3 SLIDE (6). Install.



**3-23. FIRST AID KIT HOLDER ASSEMBLY--MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:

- |                |                 |                 |
|----------------|-----------------|-----------------|
| a. Removal     | d. Repair       | d. Repair       |
| b. Inspection  | e. Reassembly   | e. Reassembly   |
| c. Disassembly | f. Installation | f. Installation |

INITIAL SETUP

Special Tools

Armament repair shop set (SC 4933-95-CL-A21)

3-210

Repair procedures for first aid kit holder assembly--bracket assembly--maintenance instructions.

References

3-205 Repair procedures for first aid kit holder assembly--holder assembly--maintenance instructions.

**REMOVAL**

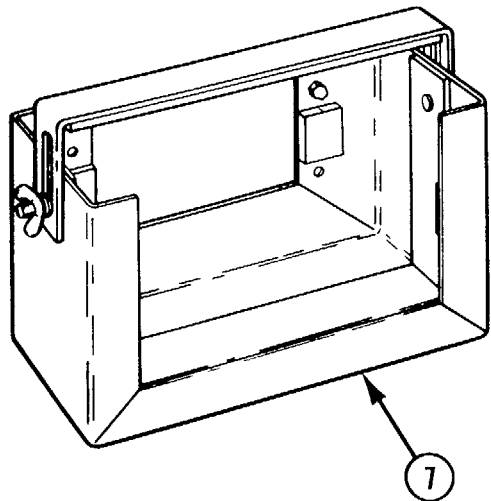
1 TWO WINGNUTS (1). Loosen.

2 BRACKET ASSEMBLY (2). Pull up and rotate forward.

3 FIRST AID KIT (3). Remove from holder assembly (4).

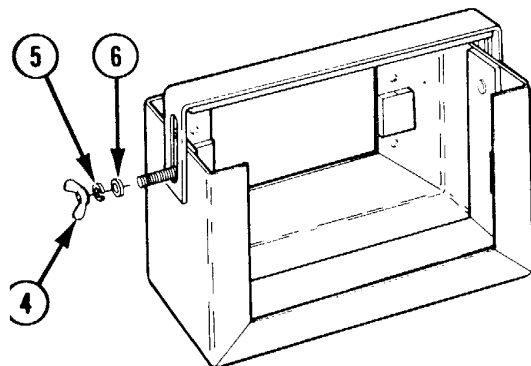
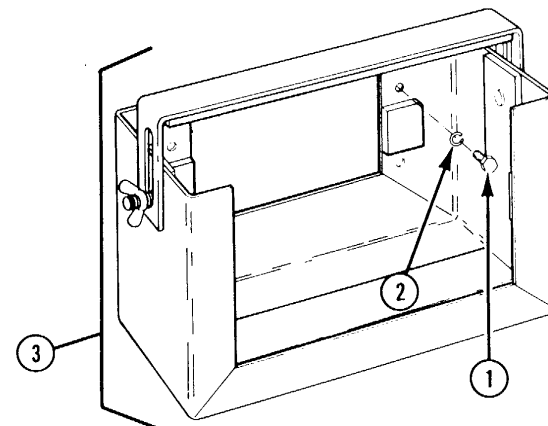
4 TWO SCREWS (5) AND TWO LOCK-WASHERS (6). Remove.

**INSPECTION**



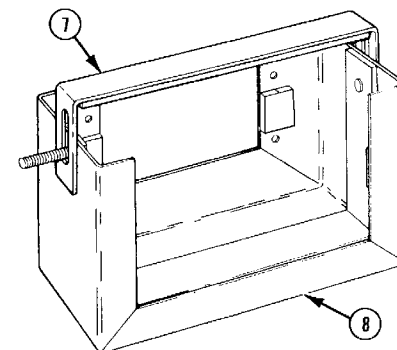
5 FIRST AID KIT HOLDER ASSEMBLY (7). Remove.

- 1 TWO SCREWS (1) AND TWO LOCK-WASHERS (2). Check for missing, damaged, or corroded condition.
- 2 FIRST AID KIT HOLDER ASSEMBLY (3). Check to ensure it is not missing.



3 TWO WINGNUTS (4), TWO LOCKWASHERS (5), AND TWO FLAT WASHERS (6). Check for missing, damaged, or corroded parts.

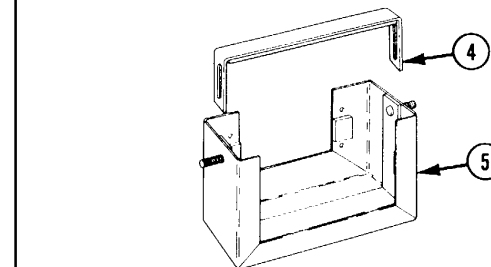
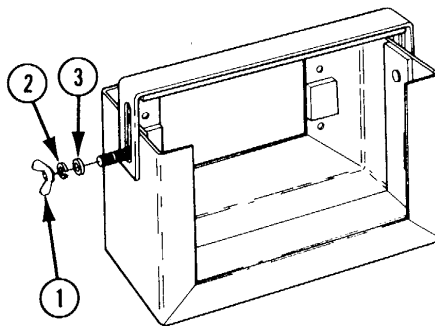
- 4 BRACKET ASSEMBLY (7).
  - a. Check for bent or broken metal parts.
  - b. Check for missing or damaged pads.
- 5 HOLDER ASSEMBLY (8).
  - a. Check for bent or broken metal parts.
  - b. Check for missing or damaged pads.



**3-23. FIRST AID KIT HOLDER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY**

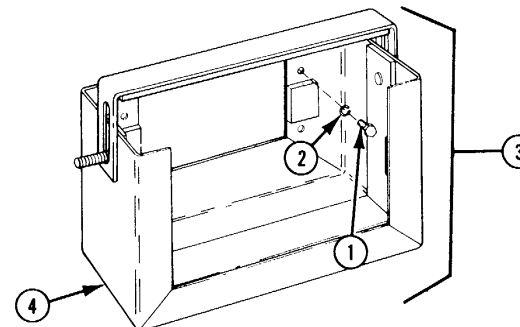
- 1 TWO WINGNUTS (1). Remove.
- 2 TWO LOCKWASHERS (2) AND TWO FLAT WASHERS (3). Remove.



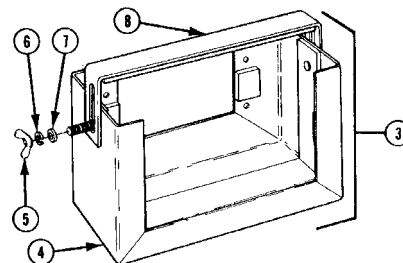
- 3 BRACKET ASSEMBLY (4) AND HOLDER ASSEMBLY (5). Separate.

**REPAIR**

- 1 TWO SCREWS (1) AND TWO LOCKWASHERS (2). Replace if missing, damaged, or corroded.
- 2 FIRST AID KIT HOLDER ASSEMBLY (3).
  - a. Replace if missing.
  - b. Replace if metal parts of holder assembly (4) are damaged.

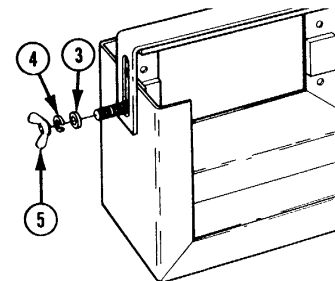
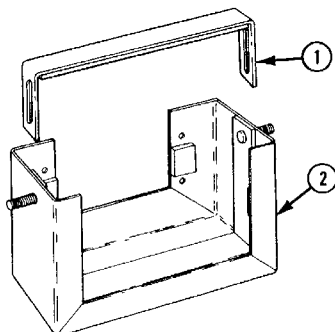


- 3 TWO WINGNUTS (5), TWO LOCKWASHERS (6), AND TWO FLAT WASHERS (7). Replace if missing, damaged, or corroded.
- 4 BRACKET ASSEMBLY (8). Refer to paragraph 3-25, page 3-210, for repair procedures.
- 5 HOLDER ASSEMBLY (4).
  - a. Refer to paragraph 3-24, page 3-205, for repair procedures.
  - b. If not repairable, replace entire first aid kit holder assembly (3).



**REASSEMBLY**

- 1 BRACKET ASSEMBLY (1) AND HOLDER ASSEMBLY (2). Assemble.



- 2 TWO FLAT WASHERS (3). Install.
- 3 TWO LOCKWASHERS (4). Install.
- 4 TWO WINGNUTS (5). Install.

**3-23. FIRST AID KIT HOLDER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**INSTALLATION**

1 FIRST AID KIT HOLDER ASSEMBLY (1). Position over mounting holes on interior of personnel door (2).

The diagram shows a rectangular metal holder assembly (1) with a central opening. To its left is a vertical rectangular panel representing the interior of a personnel door (2), which has two small circular mounting holes. An arrow points from the holder assembly towards the door, indicating its placement.

2 TWO SCREWS (3) AND TWO LOCK-WASHERS (4). Assemble and install.

The diagram shows the holder assembly from a side perspective. Two screws (3) and two lock-washers (4) are being inserted into the top edge of the assembly to secure it to the door.

3 FIRST AID KIT (5). Install in first aid kit holder assembly (1).

The diagram shows a rectangular first aid kit (5) with a cross symbol on its front. It is being placed into the holder assembly (1), which is mounted on a door (1).

4 BRACKET ASSEMBLY (6). Rotate backwards and push down against first aid kit (5).

5 TWO WINGNUTS (7). Tighten.

The diagram shows the bracket assembly (6) being pushed down against the top of the first aid kit (5). Two wingnuts (7) are being tightened to secure the bracket to the holder assembly.

**3-24. FIRST AID KIT HOLDER ASSEMBLY--HOLDER ASSEMBLY--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- |                |                 |
|----------------|-----------------|
| a. Removal     | d. Repair       |
| b. Inspection  | e. Reassembly   |
| c. Disassembly | f. Installation |

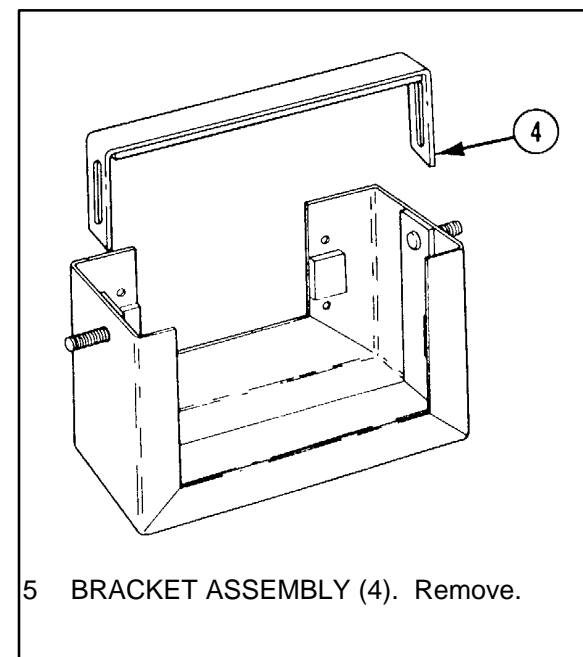
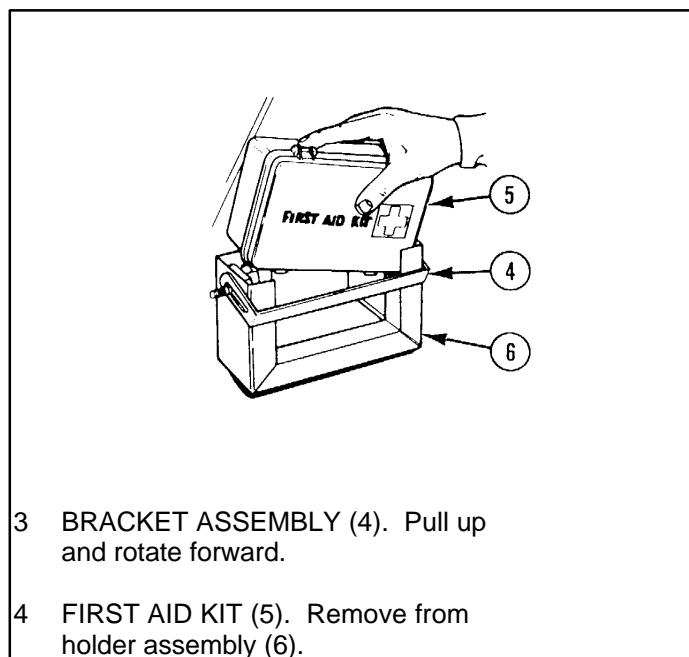
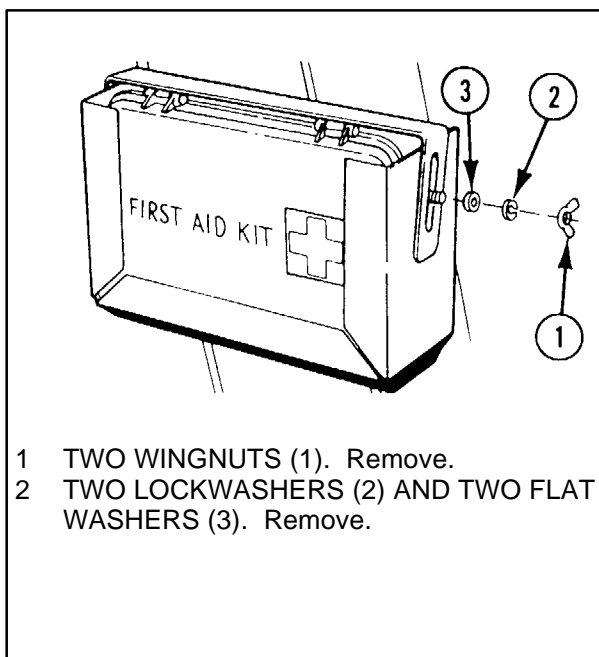
**INITIAL SETUP**

**Special Tools**  
Armament repair shop set (SC 4933-95-CL-A21)

**References**  
Appendix D  
Appendix E

**Materials/Parts**  
Adhesive (item 2, app D)

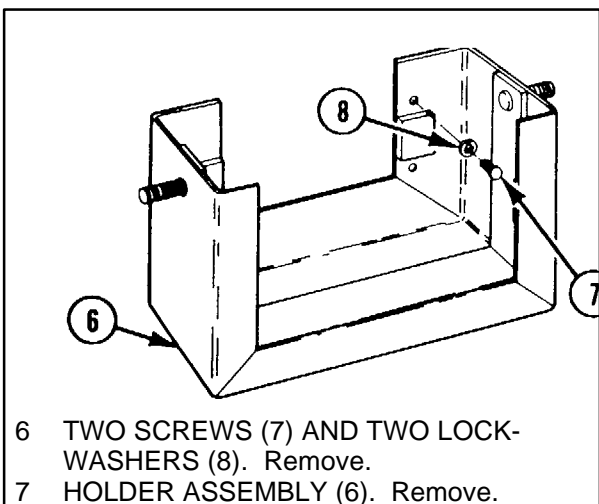
**REMOVAL**



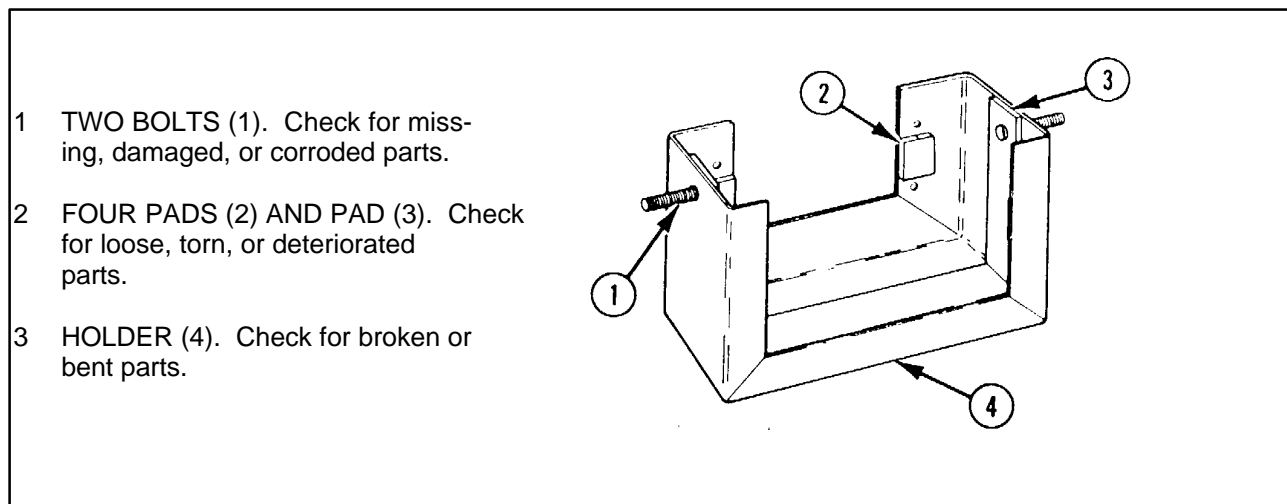


**3-24. FIRST AID KIT HOLDER ASSEMBLY--HOLDER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

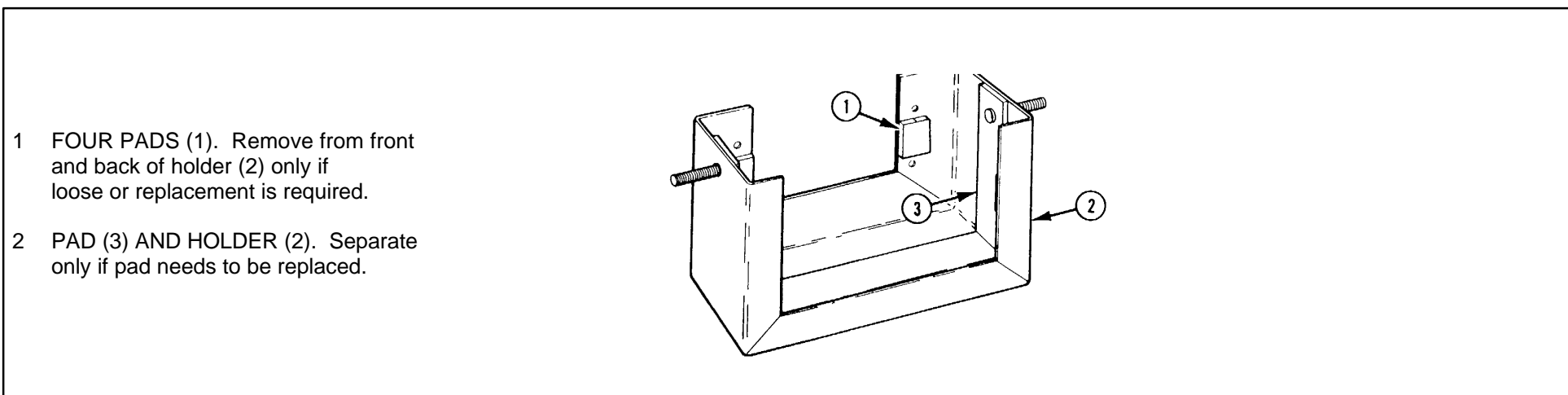
**REMOVAL (cont)**



**INSPECTION**

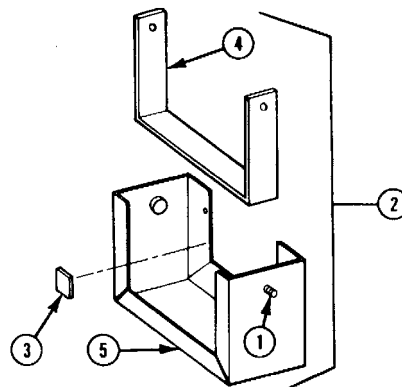


**DISASSEMBLY**



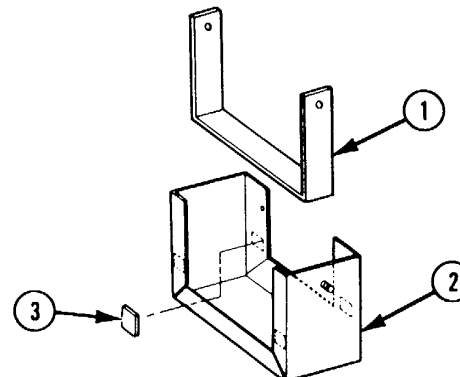
**REPAIR**

- 1 TWO BOLTS (1). If missing, damaged, or corroded, replace entire holder assembly (2).
- 2 FOUR PADS (3) AND PAD (4). Replace, if torn or deteriorated, with new items (fig. 20, app E).
- 3 HOLDER (5).
  - a. Straighten bent parts.
  - b. If not repairable, replace entire first aid kit holder assembly.



**REASSEMBLY**

- 1 PAD (1) AND HOLDER (2). Secure together using adhesive (item 2, app D). Pad should be applied to sides and bottom of holder, centered between the front and back.
- 2 FOUR PADS (3). Secure two pads to front of holder (2) and two pads to back of holder with adhesive (item 2, app D).
- 3 PAD (1). Cut two 0.28-in. (0.71-cm) diameter holes (one through each side) to match bolt holes in sides of holder (2).



**3-24. FIRST AID KIT HOLDER ASSEMBLY--HOLDER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**INSTALLATION**

1 HOLDER ASSEMBLY (1). Position over mounting holes on inside of personnel door (2).

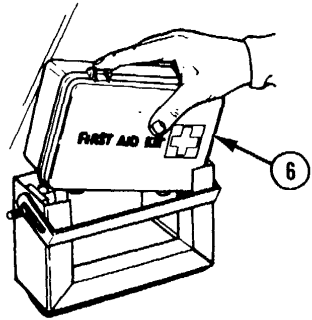
The diagram shows a rectangular holder assembly (1) with a vertical back panel and a horizontal base. It has a small rectangular opening on the front. An arrow points from the assembly to a door (2) which has a fire extinguisher icon and a square mounting hole. Another arrow points from the door to the assembly, indicating its placement.

2 TWO SCREWS (3) AND TWO LOCK-WASHERS (4). Assemble and install.

The diagram shows the holder assembly from a side perspective. Two screws (3) are being inserted into the back panel, and two lock-washers (4) are being placed over the screws to secure the assembly.

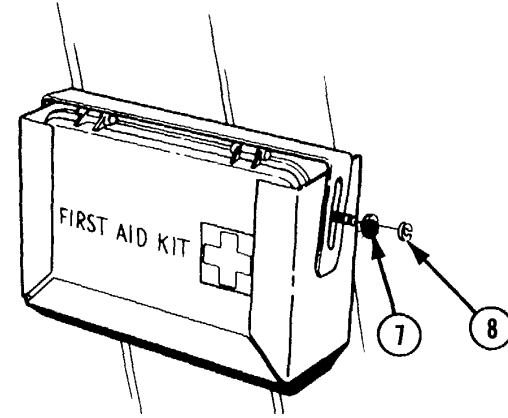
3 BRACKET ASSEMBLY (5). Install on holder assembly (1).

The diagram shows the holder assembly (1) with a bracket assembly (5) being attached to its top edge. The bracket assembly consists of a horizontal bar with a vertical support on one end.



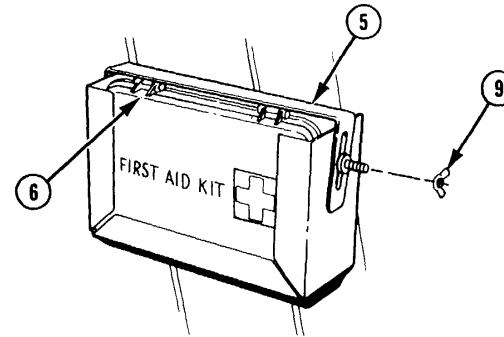
4 FIRST AID KIT (6). Install.

- 5 TWO FLAT WASHERS (7). Install.
- 6 TWO LOCKWASHERS (8). Install.



7 BRACKET ASSEMBLY (5). Rotate backwards and push down on first aid kit (6).

8 TWO WINGNUTS (9). Install.



**3-25. FIRST AID KIT HOLDER ASSEMBLY--BRACKET ASSEMBLY--MAINTENANCE INSTRUCTIONS**

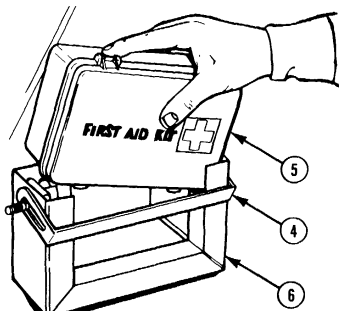
THIS TASK COVERS:

a. Removal	d. Repair
b. Inspection	e. Reassembly
c. Disassembly	f. Installation

INITIAL SETUP

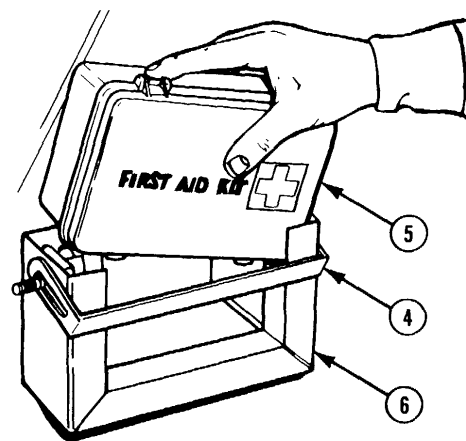
<p>Special Tools Armament repair shop set (SC 4933-95-CL-A21)</p> <p>Material s/Parts Adhesive (item 2, app D)</p>	<p>References Appendix D Appendix E</p>
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**REMOVAL**



1 TWO WINGNUTS (1). Remove.

2 TWO LOCKWASHERS (2) AND TWO FLAT WASHERS (3). Remove.

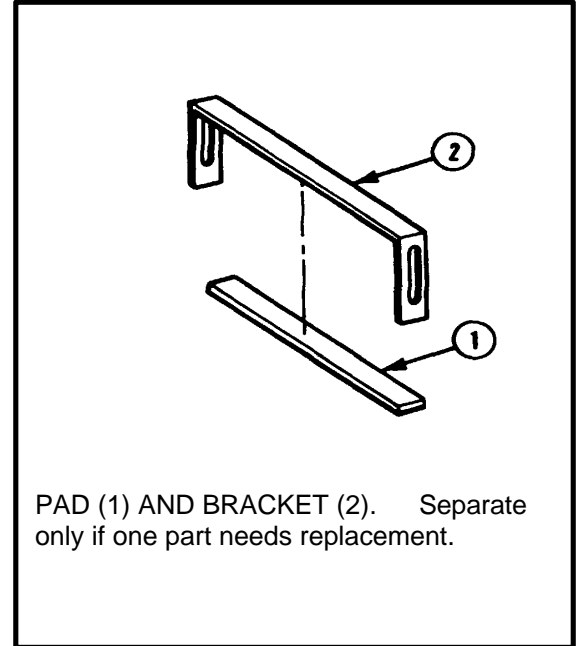
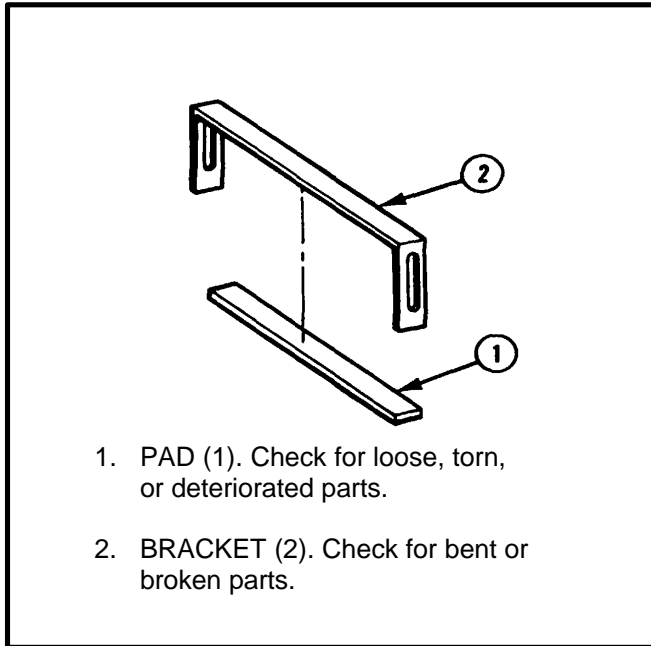
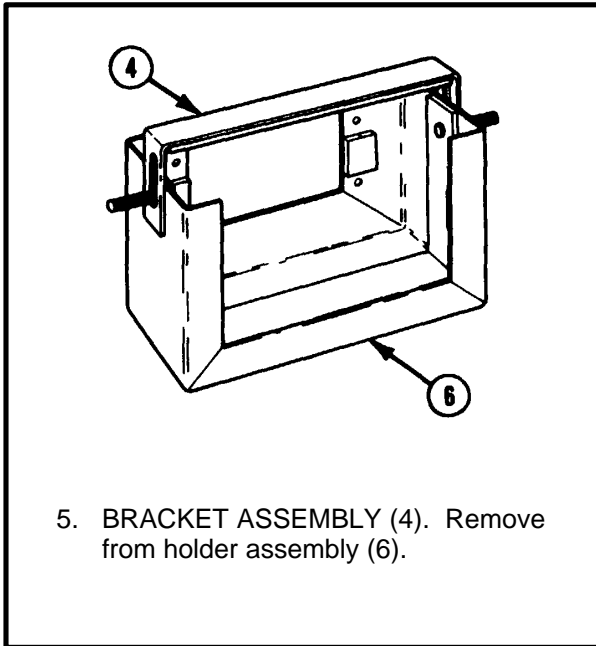


3 BRACKET ASSEMBLY (4). Pull up and rotate forward.

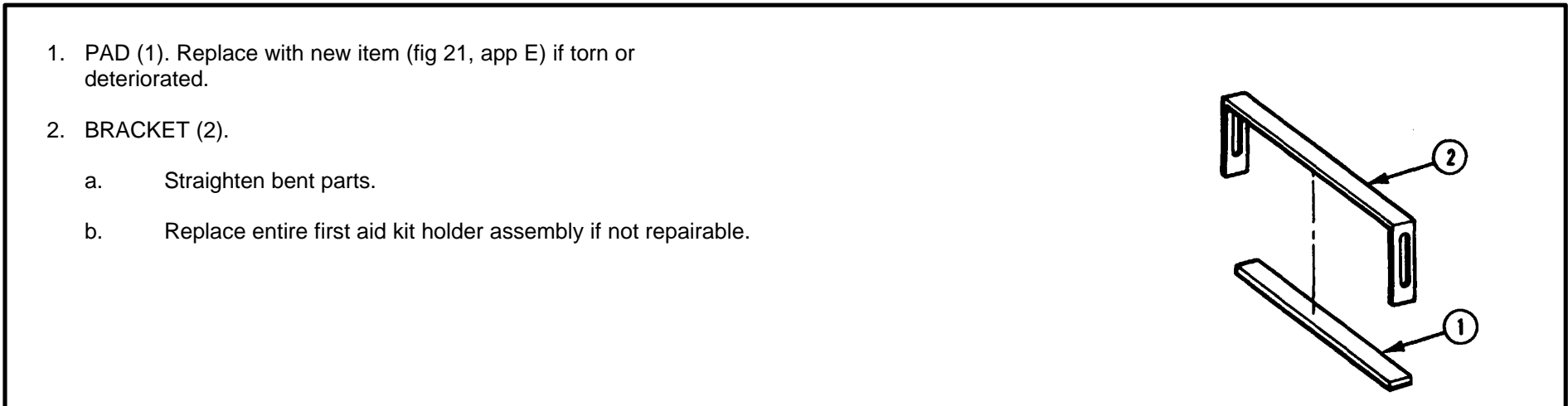
4 FIRST AID KIT (5). Remove from holder assembly (6).

**INSPECTION**

**DISASSEMBLY**

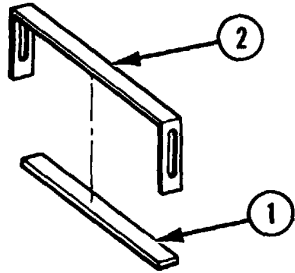


**REPAIR**



**3-25. FIRST AID KIT HOLDER ASSEMBLY—BRACKET ASSEMBLY—MAINTENANCE INSTRUCTIONS (Cont)**

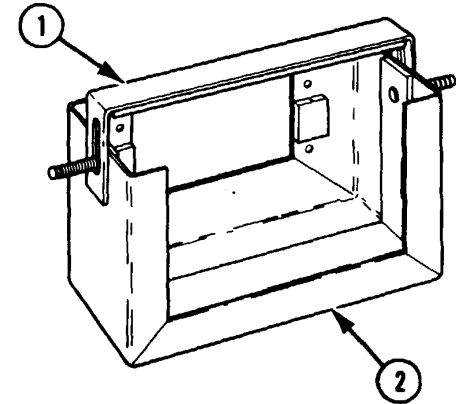
**REASSEMBLY**



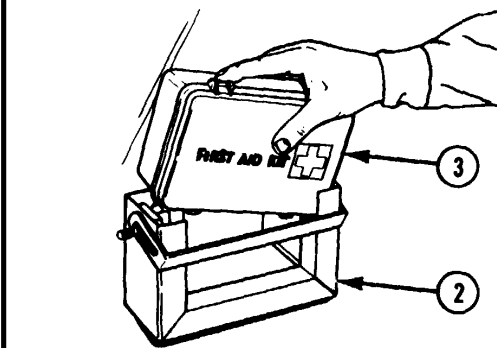
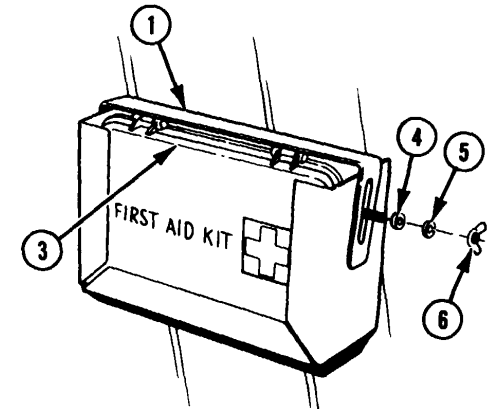
PAD (1) AND BRACKET (2). Secure together using adhesive (item 2, app D). Pad should be centered on top inside surface of bracket.

**INSTALLATION**

1. BRACKET ASSEMBLY (1). Position on holder assembly (2).



3. BRACKET ASSEMBLY (1). Rotate backwards and push down against first aid kit (3).
4. TWO FLAT WASHERS (4). Install.
5. TWO LOCKWASHERS (5). Install.
6. TWO WINGNUTS (6). Install.



- 2.. FIRST AID KIT (3) Install in holder assembly (2).

**3-26. CABLE ADAPTER ASSEMBLY—MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- a. Inspection
- b. Service
- c. Removal
- d. Disassembly
- e. Repair
- f. Preparation of cable for plug connector
- g. Reassembly
- h. Test
- i. Installation

**INITIAL SETUP:**

Test Equipment  
Ohmmeter

Special Tools

- Armament repair shop set (SC 4933-39-CL-A21)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)
- Removal tool no. 4 (MS90562-5)
- Removal tool no. 6 (MS90562-6)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

Materials/Parts

- Abrasive cloth (item 4, app D)
- Marking ink (item 17, app D)
- Polishing cloth (item 5, app D)
- Solder (item 16, app D)
- Band (MIL-I-23053/5)
- Bushings (4) (MS3348-4-6L)
- Compression connector (12011667)
- Preformed packing (MS29513-132)

References

- Appendix C
- Appendix D
- Appendix E
- 3-236 Repair procedures for cable adapter assembly—female connector.
- 3-213 Repair procedures for cable adapter assembly—cable assembly.

Troubleshooting References

- 3-8 Environmental control units or exhaust fans do not operate correctly.

**NOTE**

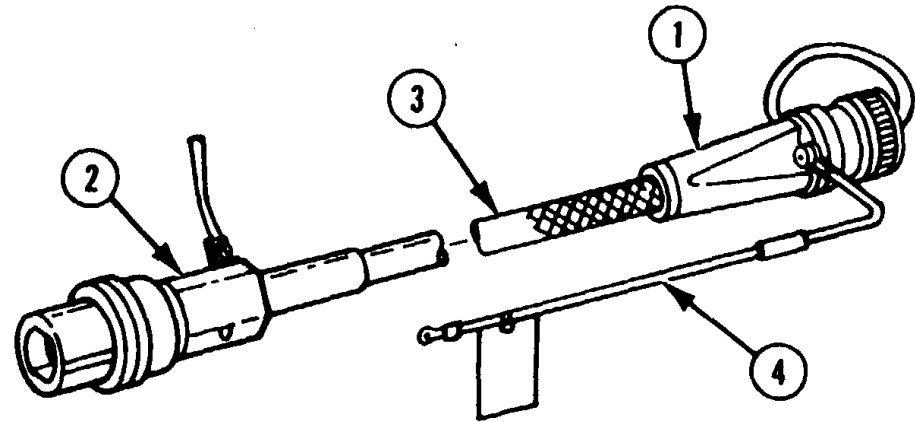
The cable adapter assembly is used to adapt the 120/208V cable assembly to the power source. Power distribution panels having an MS90555 mating connector do not require a cable adapter assembly.



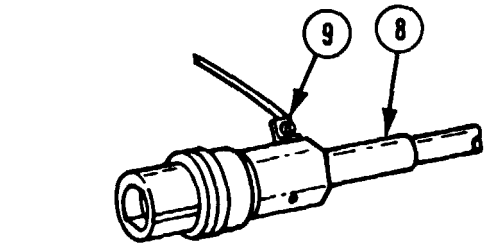
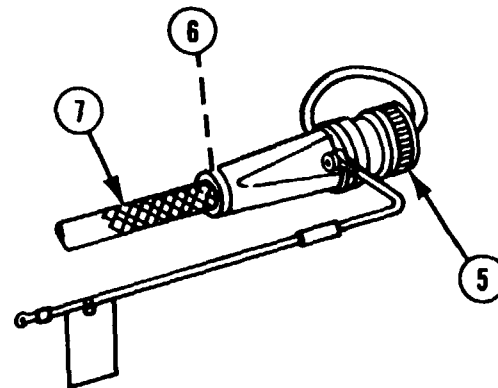
**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**INSPECTION**

1. FEMALE CONNECTOR (1) AND PLUG CONNECTOR (2). Check for bent or broken parts.
2. CABLE (3).
  - a. Check for worn, cracked, or cut insulation.
  - b. Check for cut or broken wires.
3. CABLE ASSEMBLY (4). Check for missing or broken parts.

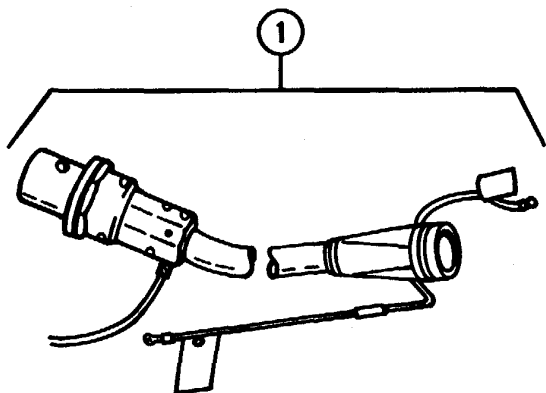


4. DUST COVER (5). Check for bent or broken parts.
5. GLAND (6). Check for any deformed or deteriorated parts.
6. GRIP (7). Check for broken parts.



7. BAND (8). Check for missing or hard to read parts.
8. TERMINAL LUG (9). Check for missing or broken parts.

**SERVICE**

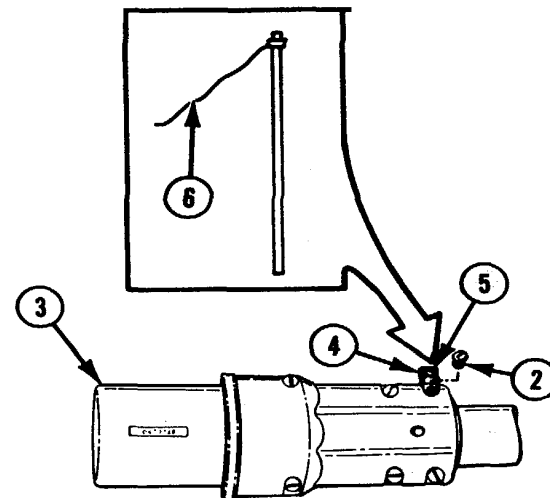


1. CABLE ADAPTER ASSEMBLY (1).  
Remove dirt with a polishing cloth (item 5, app D)

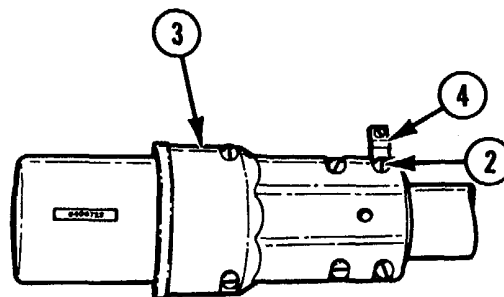
**WARNING**

Do not remove or install the grounding rod when shop set is energized.

2. SCREW (2). Remove from plug connector (3).
3. TERMINAL LUG (4).
  - a. Loosen screw (5) and remove grounding rod wire (6).
  - b. Clean all parts with abrasive cloth (item 4, app D).
  - c. Reinstall grounding rod wire (6) and tighten screw (5).



4. TERMINAL LUG (4) AND SCREW (2)
  - a. Assemble.
  - b. Reinstall on plug connector (3).



**REMOVAL**

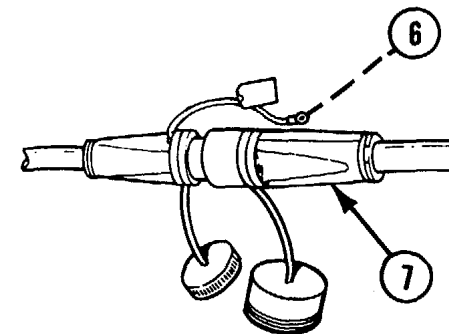
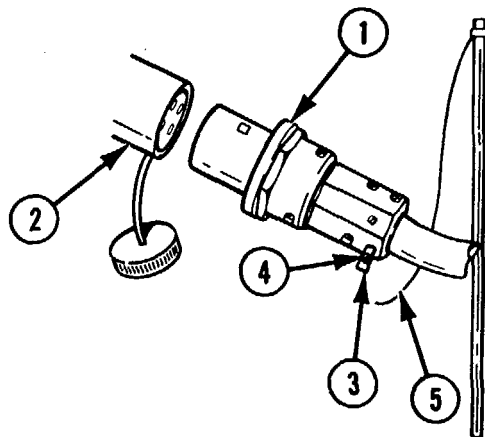
**WARNING**

De-energize shop set by placing circuit breaker on power distribution panel connected to power source in OFF position and then disconnect 120/208V cable assembly from shelter.

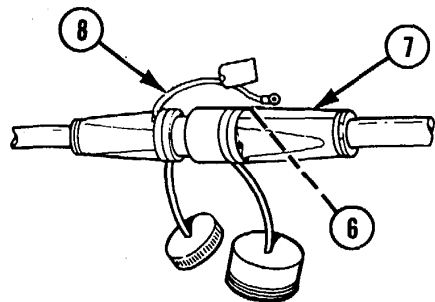
3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

**REMOVAL (cont)**

1. PLUG CONNECTOR (1). Disconnect from mating connector (2) of power distribution panel.
2. TERMINAL LUG (3). Loosen screw (4).
3. GROUNDING ROD WIRE (5). Remove from terminal lug (3).



4. SCREW (6). Remove from electrical plug connector (male) (7) on 120/208V cable assembly.

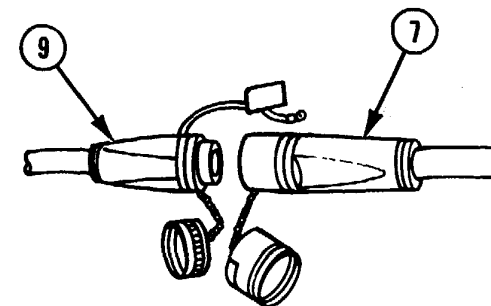


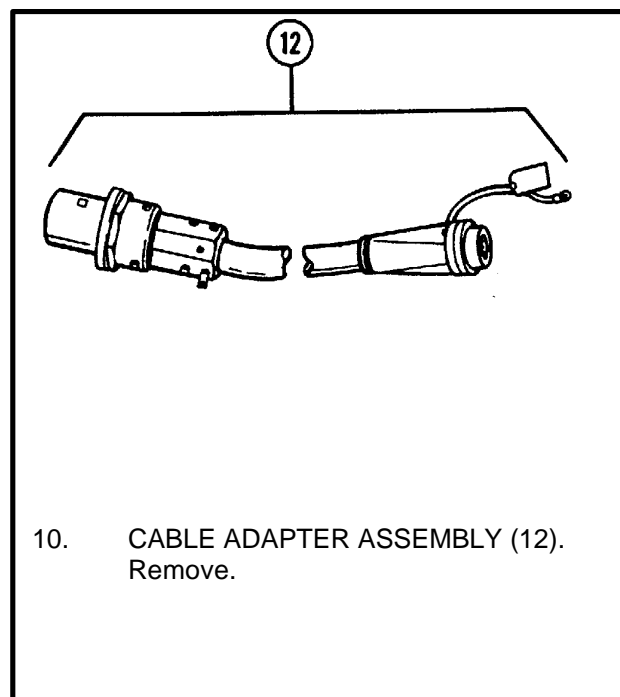
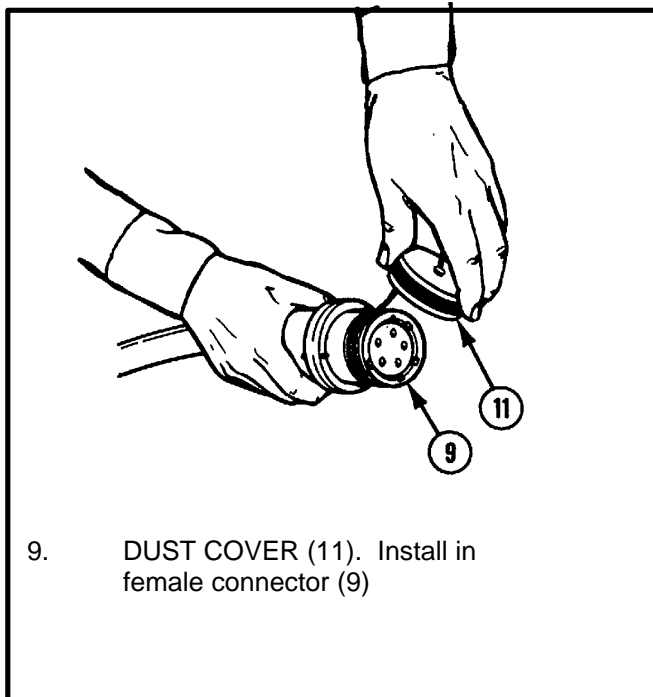
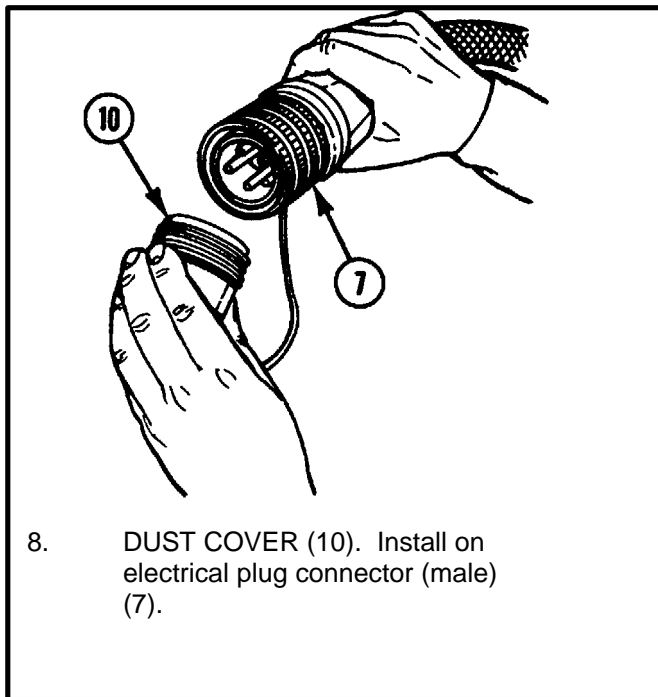
5. CABLE ASSEMBLY (8). Free one end from screw (6).
6. SCREW (6). Replace on electrical plug connector (male) (7).

**CAUTION**

Install dust covers on connectors immediately after disconnection to protect against dirt, dust, etc.

7. FEMALE CONNECTOR (9). Disconnect from electrical plug connector (male) (7) on 120/ 208V cable assembly.





**DISASSEMBLY**

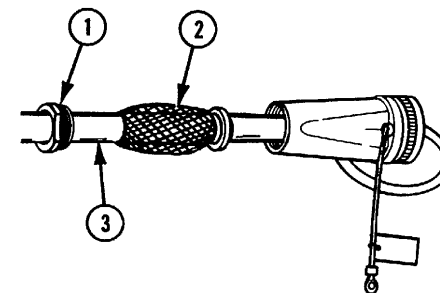
**CAUTION**

The gland nut has left-hand threads and must be loosened by turning in the opposite direction from that used to loosen standard right-hand threaded nuts.

**NOTE**

Steps 1 thru 10 pertain to disassembly of the female connector and cable assembly.

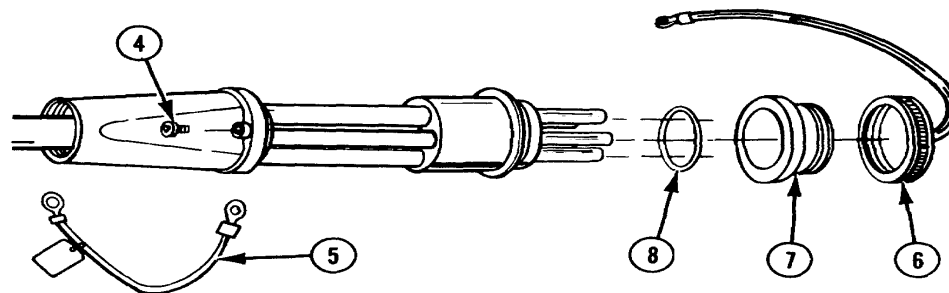
1. GLAND NUT (1). Loosen.
2. GRIP (2). Push weave together.
3. GLAND NUT (1) AND GRIP (2). Slide back over cable (3).



**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

- 4. THREE SCREWS (4). Remove.
- 5. CABLE ASSEMBLY (5), DUST COVER (6), AND FORWARD CONNECTOR HOUSING (7). Remove.
- 6. PREFORMED PACKING (8). Remove.



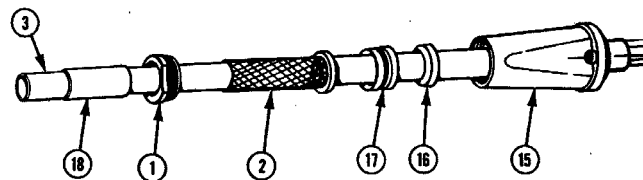
7. GROUND SOCKET (9).

- a. Use removal tool no. 6 (10) to release from socket insert (11).
- b. Remove from cable (3) by cutting.

8. FOUR SOCKETS (A, B, C, AND N) (12) AND FOUR BUSHINGS (13).

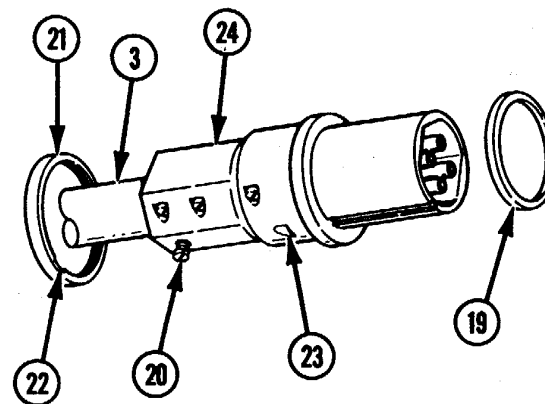
- a. Use removal tool no. 4 (14) to release from socket insert (11).
- b. Remove from cable (3) by cutting.

9. REAR CONNECTOR HOUSING (15), SPACER (16), GLAND (17), GRIP (2), AND GLAND NUT (1). Remove.
10. BAND (18). Remove from cable (3) by cutting.



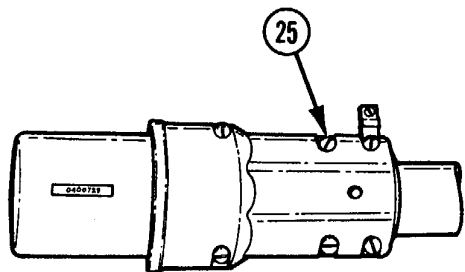
**NOTE**  
**Steps 11 thru 23 pertain to disassembly of the plug connector.**

11. GASKET (19). Remove.
12. TWO CABLE CLAMP SCREWS (20). Loosen.
13. CLAMPING NUT (21).
  - a. Rotate until notch (22) in nut is alined with boss (23) on lower half of body (24).
  - b. Slide back over cable (3).



**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

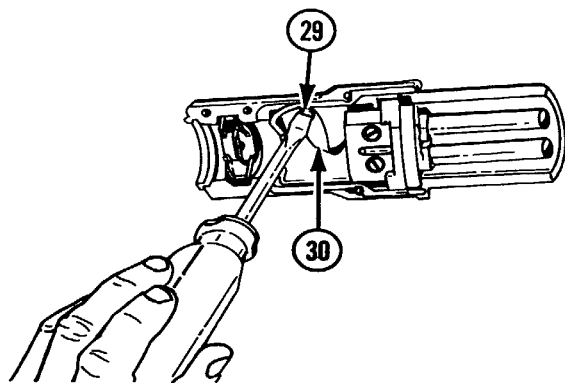
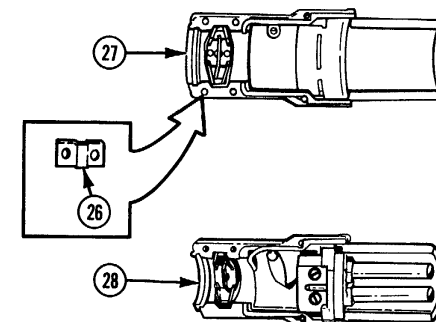


14. SIX SCREWS (25). Remove.

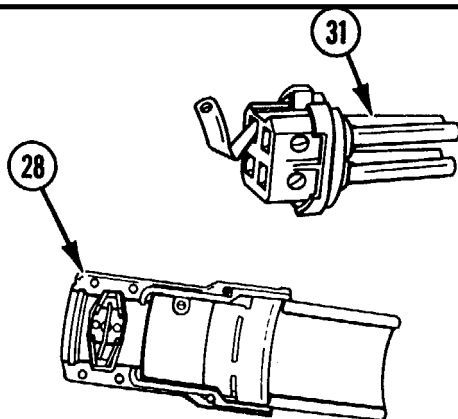
**NOTE**

Wires and cable shown removed in steps 15, 16, and 17 for clarity.

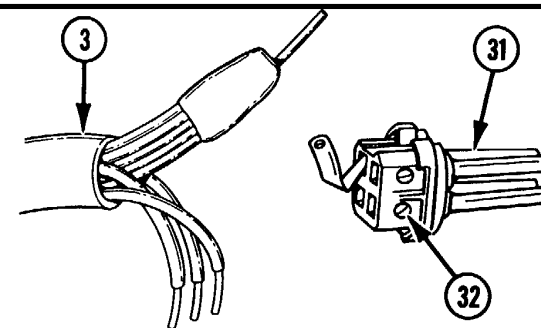
15. TERMINAL LUG (26) AND UPPER HALF OF BODY (27). Remove from lower half of body (28) and separate.



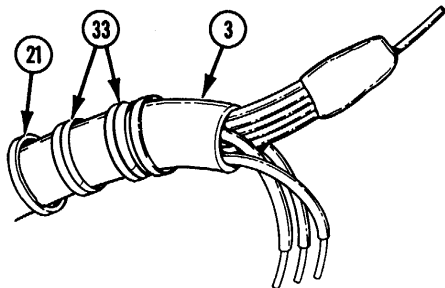
16. SCREW (29). Remove from ground strap (30).



17. LOWER HALF OF BODY (28). Remove from insulator assembly (31).



18. FOUR PRESSURE CONTACT SCREWS (32). Loosen.  
 19. INSULATOR ASSEMBLY (31). Remove from cable (3).

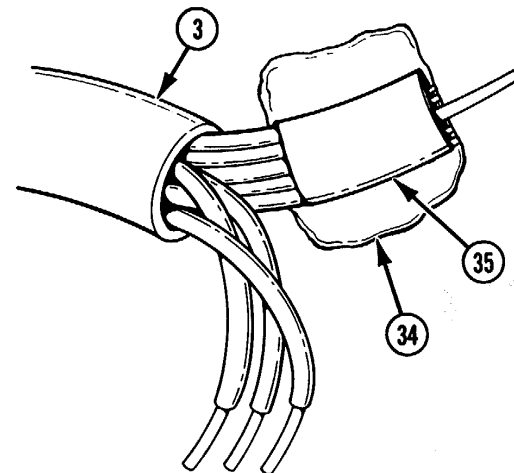


- 20. TWO CABLE SEAL BUSHINGS (33). Remove from cable (3).
- 21. CLAMPING NUT (21). Remove from cable (3).

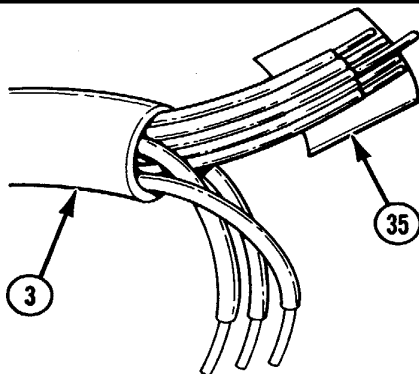
**NOTE**

Insulation (34) and compression connector (35) are to be removed from cable (3) only if replacement is required.

- 22. INSULATION (34). Remove from cable (3) by cutting.

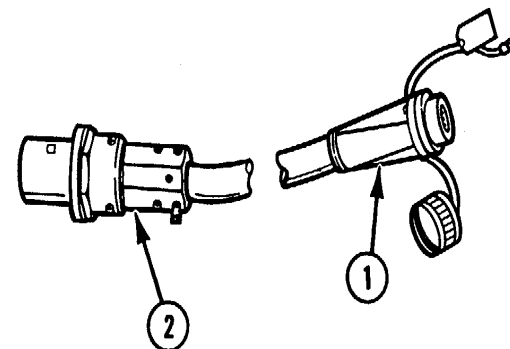


**REPAIR**



- 23. COMPRESSION CONNECTOR (35). Remove from cable (3) by cutting.

- 1. FEMALE CONNECTOR (1).
  - a. Replace with a new item if not repairable.
  - b. Refer to paragraph 3-27, page 3-236, for repair procedures.
- 2. PLUG CONNECTOR (2). Replace if any part is damaged.

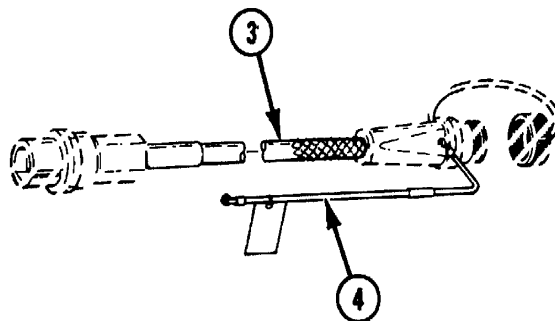




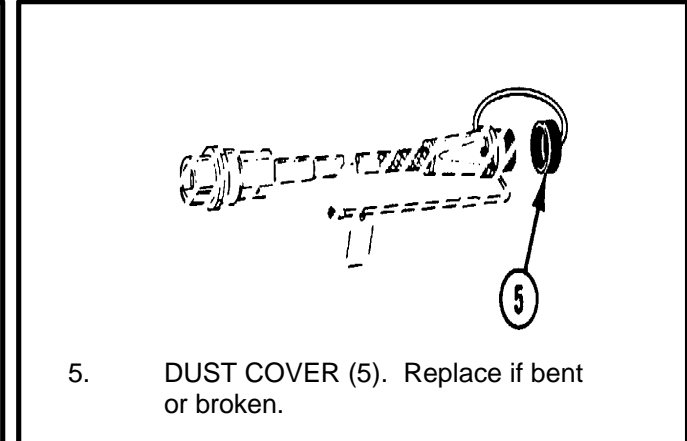
**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

- 3. CABLE (3).
  - a. If ends of insulation or wires are damaged, repair by shortening slightly.
  - b. If not repairable, replace with a 2-ft (0.610-m) long piece of cable (fig. 22, app E).

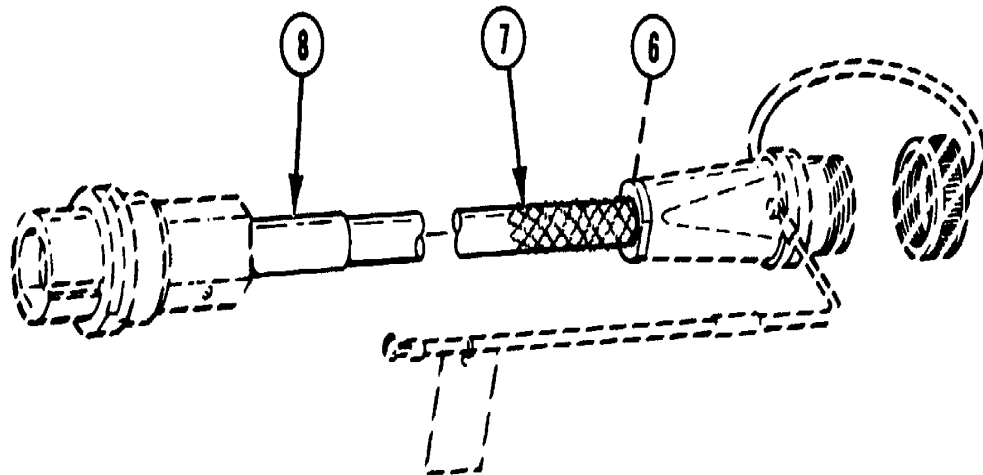


- 4. CABLE ASSEMBLY (4). Refer to paragraph 3-29, page 3-213, for repair procedures.

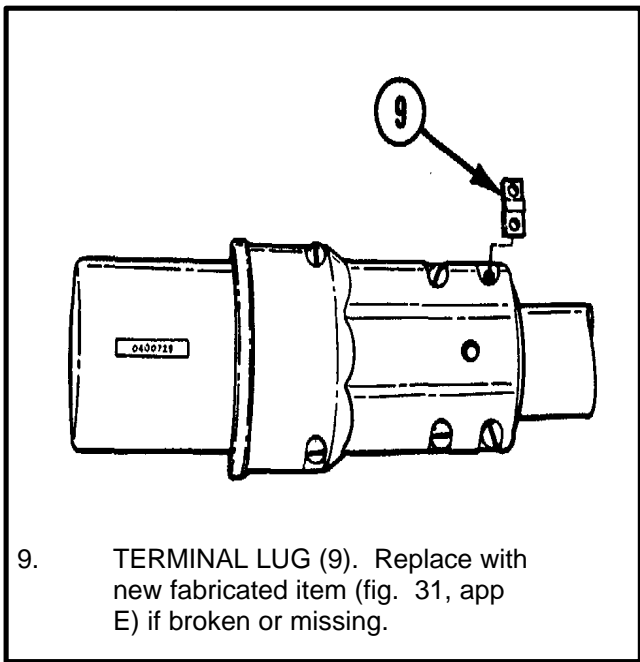


- 5. DUST COVER (5). Replace if bent or broken.

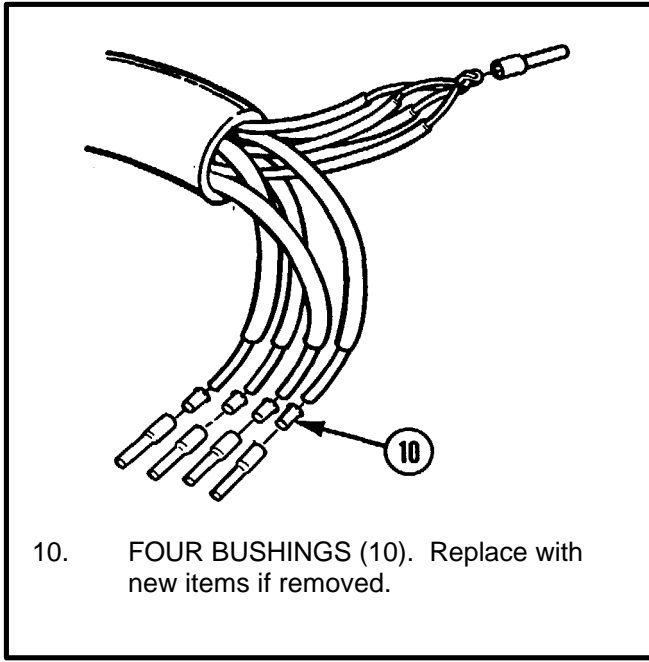
- 6. GLAND (6). Replace if deformed or deteriorated.
- 7. GRIP (7). Replace if broken.
- 8. BAND (8).



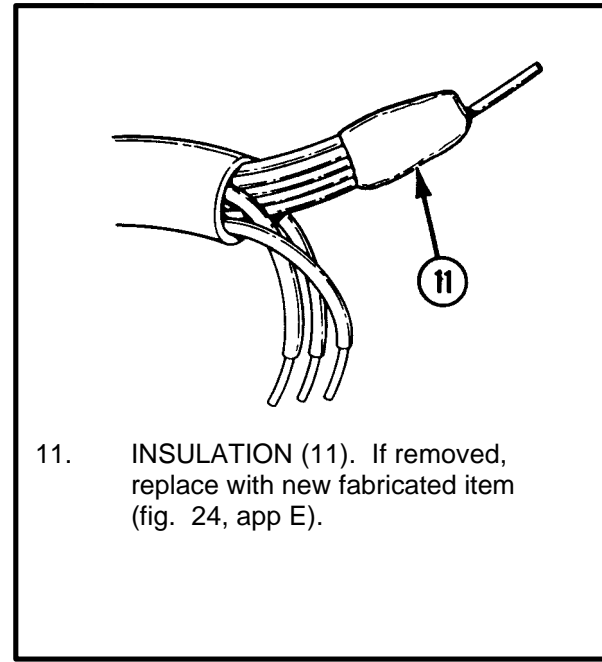
- a. Clearly mark any hard to read parts with black letters 0.31-in. (0.79-cm) high, using marking ink (item 17, app D), to read as follows: CABLE ADAPTER ASSY PART NO. 12011687.
- b. If not repairable, replace with a new fabricated item (fig. 23, app E).



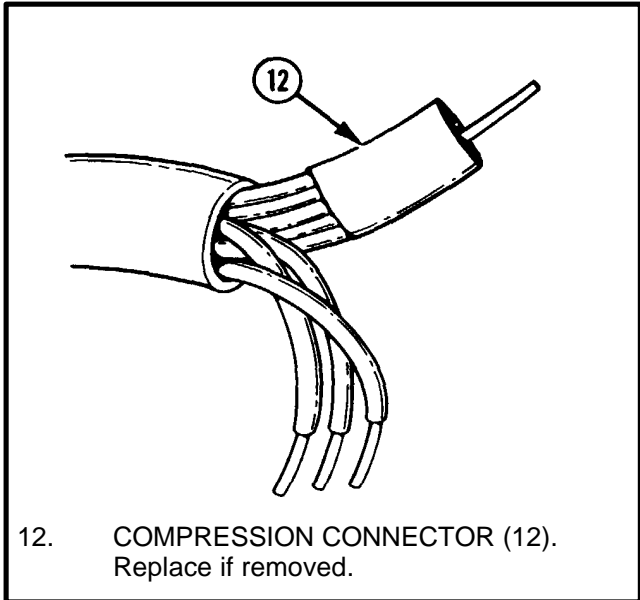
9. TERMINAL LUG (9). Replace with new fabricated item (fig. 31, app E) if broken or missing.



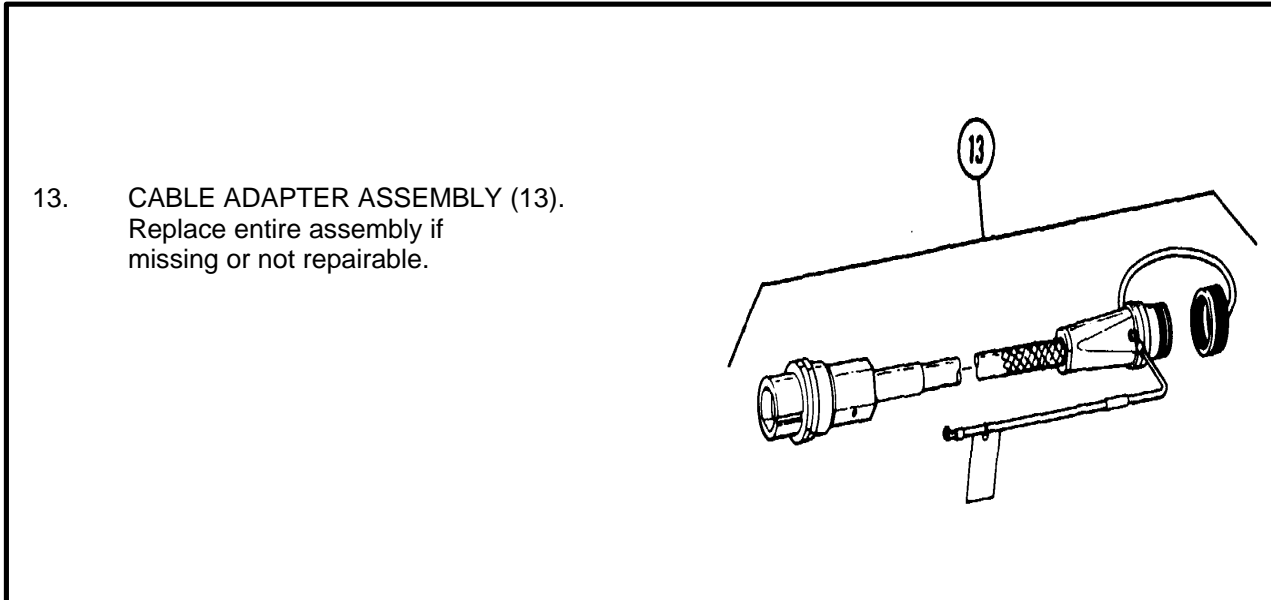
10. FOUR BUSHINGS (10). Replace with new items if removed.



11. INSULATION (11). If removed, replace with new fabricated item (fig. 24, app E).



12. COMPRESSION CONNECTOR (12). Replace if removed.



13. CABLE ADAPTER ASSEMBLY (13). Replace entire assembly if missing or not repairable.

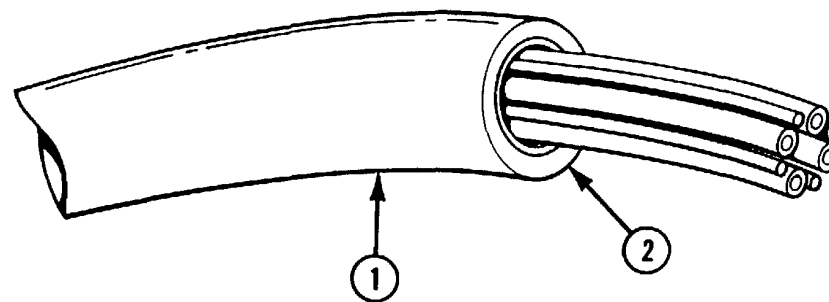
**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**PREPARATION OF CABLE FOR PLUG CONNECTOR**

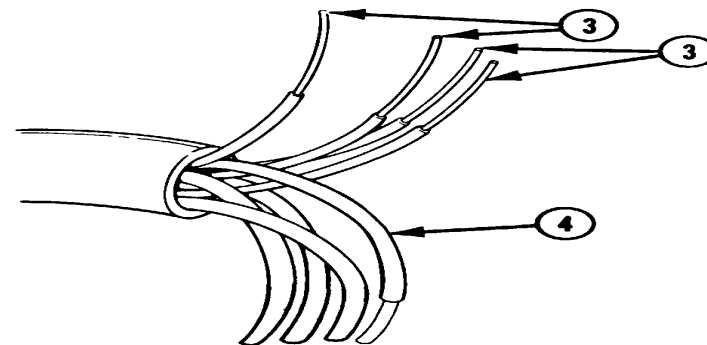
**NOTE**

The following procedure is used only for initial assembly or when the cable, insulation, or compression connector has been replaced with a new item.

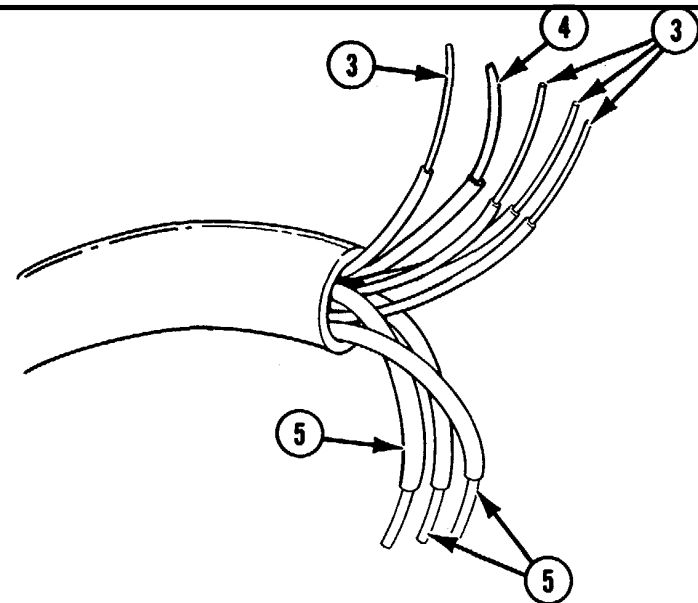
1. CABLE (1).
  - a. Cut ends square.
  - b. Remove 3 in. (7.62 cm) of jacket (2) from end.



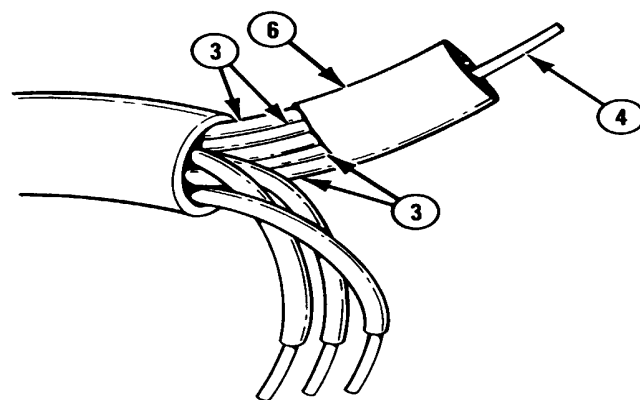
2. FOUR GREEN WIRES (3).
  - a. Remove 1.50 in. (3.81 cm) of insulation.
  - b. Twist exposed end of wire.
3. WHITE WIRE (4).
  - a. Remove 1.50 in. (3.81 cm) of insulation.
  - b. Twist exposed end of wire.



4. THREE (RED, BLACK, AND BLUE OR ORANGE) WIRES (5).
  - a. Remove 0.625 in. (1.59 cm) of insulation.
  - b. Twist exposed end of wire.
5. FOUR GREEN WIRES (3).
  - a. Bring to white wire (4).
  - b. Line up ends of wires.



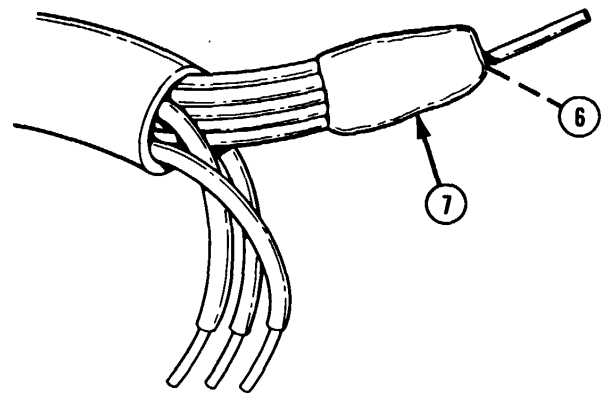
6. COMPRESSION CONNECTOR (6).
  - a. Install over four green wires (3) and white wire (4) with 0.625 in. (1.59 cm) of white wire protruding from compression connector.
  - b. Solder in place using solder (item 16, app D).



**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**PREPARATION OF CABLE FOR PLUG CONNECTOR (cont)**

- 7 INSULATION (7).  
 a. Slip over compression connector (6).  
 b. Shrink in place using heat gun.



**REASSEMBLY**

**NOTE**

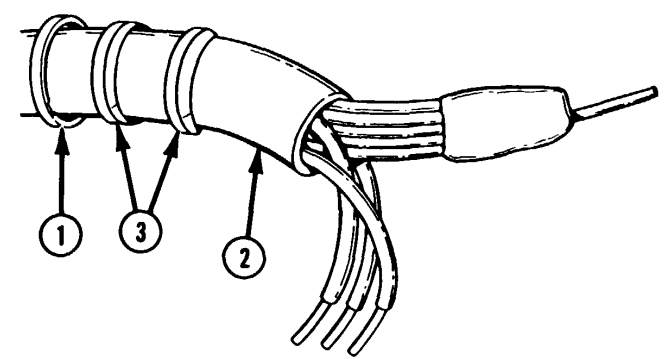
Steps 1 thru 17 pertain to assembly of the plug connector.

1. CLAMPING NUT (1). Install on cable (2).

**CAUTION**

Cable seal bushings must fit snugly on cable (2).

2. TWO CABLE SEAL BUSHINGS (3). Install on cable (2).



**NOTE**

White wire (4) is soldered into compression connector (5) along with four green wires (6).

3. WHITE WIRE (4) AND THREE (RED, BLACK, AND BLUE OR ORANGE) WIRES (7). Install in four contact recesses (8) of insulator assembly (9) according to table 3-5.
4. FOUR PRESSURE CONTACT SCREWS (10). Tighten.

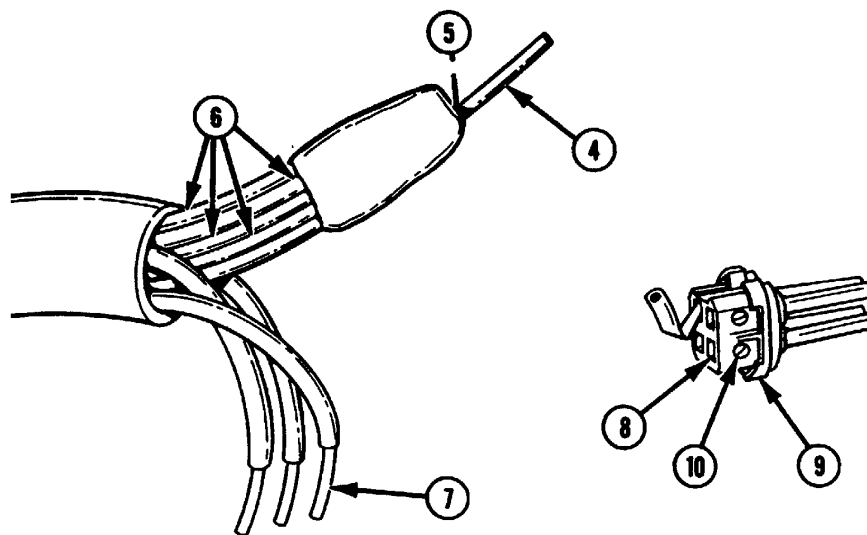
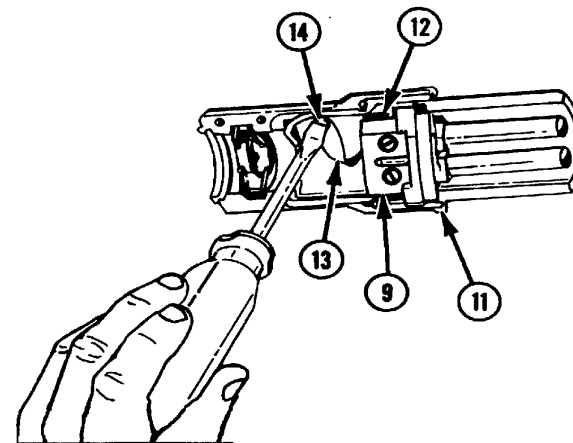


Table 3-5. Wire Polarity

**NOTE**  
Use this table to get correct polarity on wires.

Contact Recess Designation	Wire Color
1	Black
2	Red
3	Blue or Orange
4	White

5. INSULATOR ASSEMBLY (9). Install in lower half of body (11) with wide notch (12) to left (viewed from cable side).
6. GROUND STRAP (13). Position over tapped hole in lower half of body (11).
7. SCREW (14). Install.

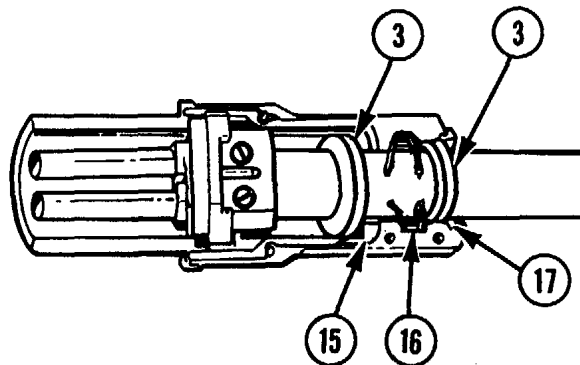


**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

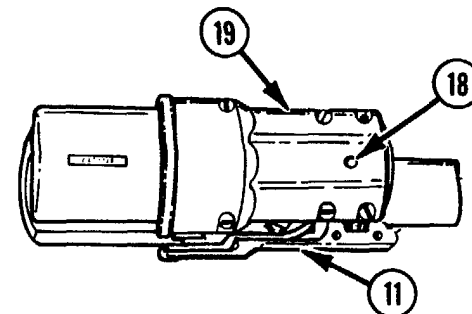
8. TWO CABLE SEAL BUSHINGS (3).

- a. Adjust one bushing until it sits on land (15) in front of cable clamp (16).
- b. Adjust other bushing until it sits on land (17) in back of cable clamp (16).



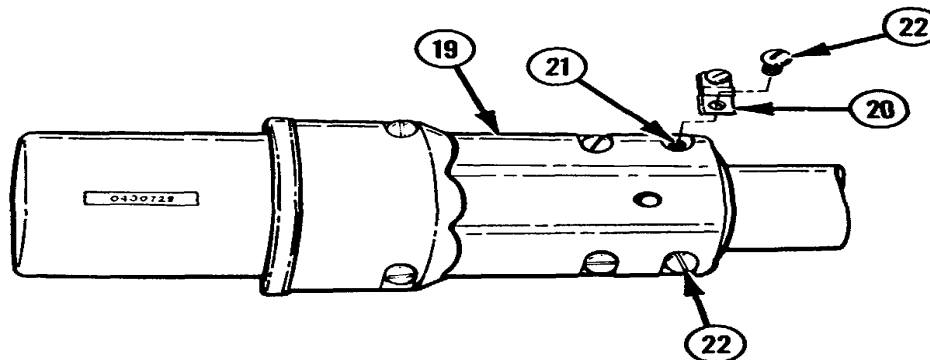
9. TWO CABLE CLAMP SCREWS (18).  
Loosen.

10. UPPER HALF OF BODY (19).  
Assemble over lower half of body (11).



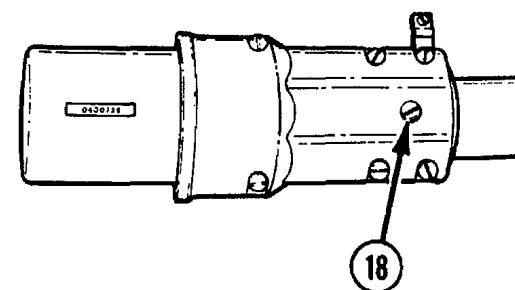
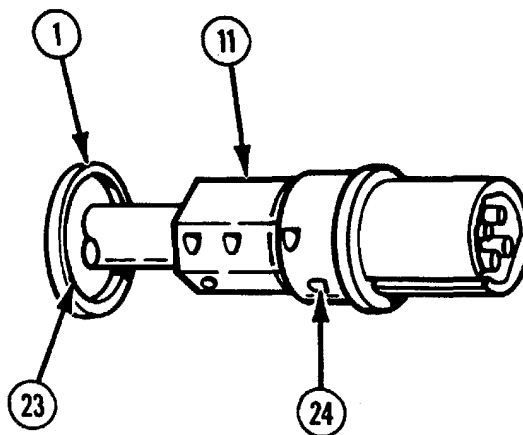
11. TERMINAL LUG (20). Install over one screw hole (21) in upper half of body (19).

12. SIX SCREWS (22).  
a. Install in upper half of body (19).  
b. Tighten.

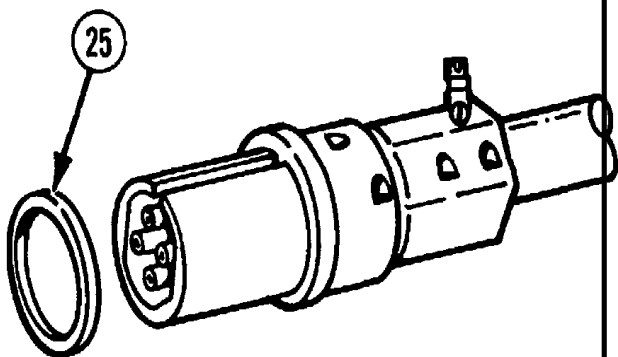


13. CLAMPING NUT (1).

- a. Rotate until notch (23) is aligned with boss (24) on lower half of body (11).
- b. Push into position by sliding over boss (24).



14. TWO CABLE CLAMP SCREWS (18).  
Tighten evenly.

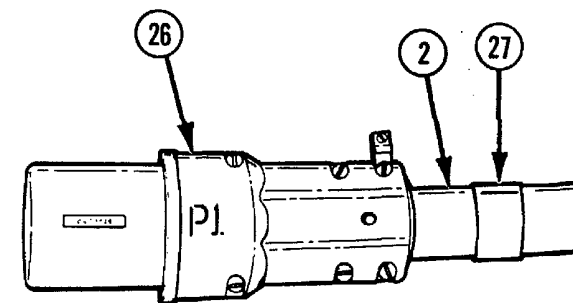


15. GASKET (25). Install.

16. PLUG CONNECTOR (26). Mark designation "P1" on exterior using marking ink (item 17, app D).

17. BAND (27).

- a. Slip on cable (2).
- b. Position at rear of plug connector (26) and shrink in place using heat gun.





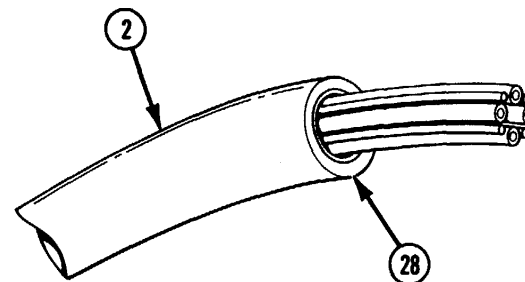
**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

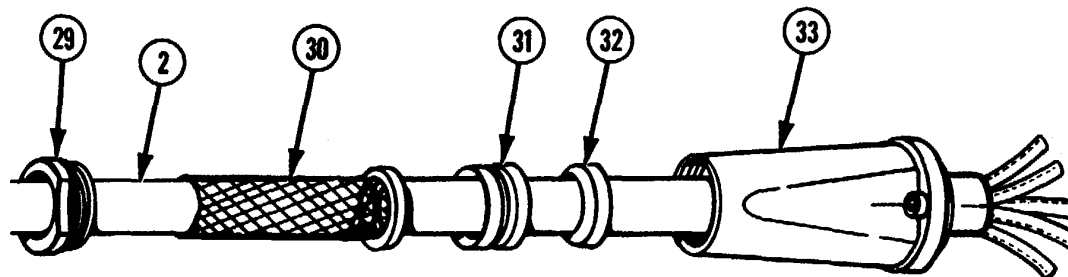
**NOTE**

Steps 18 thru 39 pertain to assembly of the female connector and cable assembly.

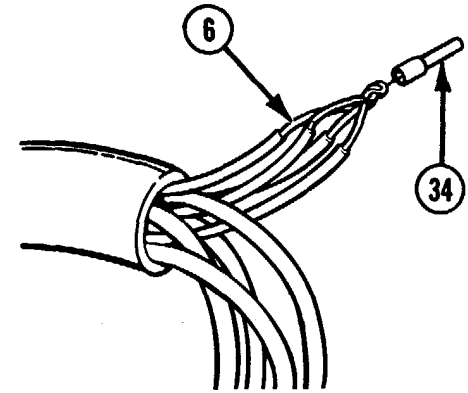
18. CABLE (2).
  - a. Cut end square.
  - b. Remove outer jacket (28) for 4.25 in. (10.80 cm) from each end.



19. GLAND NUT (29). Slip on cable (2).
20. GRIP (30). Slip on cable (2).
21. GLAND (31). Slip on cable (2).
22. SPACER (32). Slip on cable (2).
23. REAR CONNECTOR HOUSING (33). Slip on cable (2).

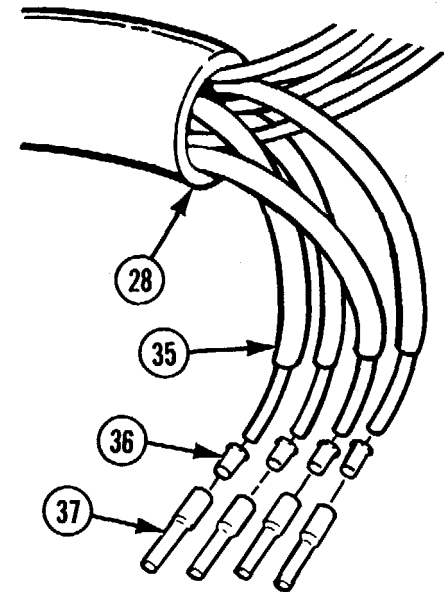


24. FOUR GREEN WIRES (6).
- a. Remove insulation for 1.50 in. (3.81 cm) from end.
  - b. Bring three of the green wires to the green wire between the red wire and blue or orange wire; twist the ends of all four green wires together.
  - c. Cut twisted ends 0.75 in. (1.91 cm) from insulation.



25. GROUND SOCKET (34).
- a. Slip on twisted ends of four green wires (6).
  - b. Solder in place using solder (item 16, app D).

26. FOUR WIRES (WHITE, BLACK, RED, AND BLUE OR ORANGE) (35).
- a. Cut cable outer jacket (28) so wires protrude 3.25 in. (8.26 cm).
  - b. Remove 0.75 in. (1.91 cm) of insulation from end of wires.
  - c. Twist individual ends.



27. FOUR BUSHINGS (36).
- a. Slip on four wires (35).
  - b. Solder in place using solder (item 16, app D).
28. FOUR SOCKETS (37).
- a. Slip over four bushings (36).
  - b. Solder in place using solder (item 16, app D).

**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

29. GROUND SOCKET (34) AND FOUR SOCKETS (37). Install in socket insert (38) according to table 3-6.

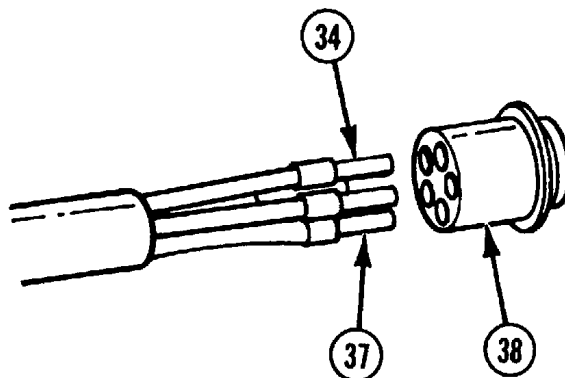
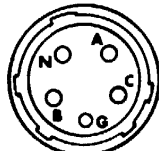


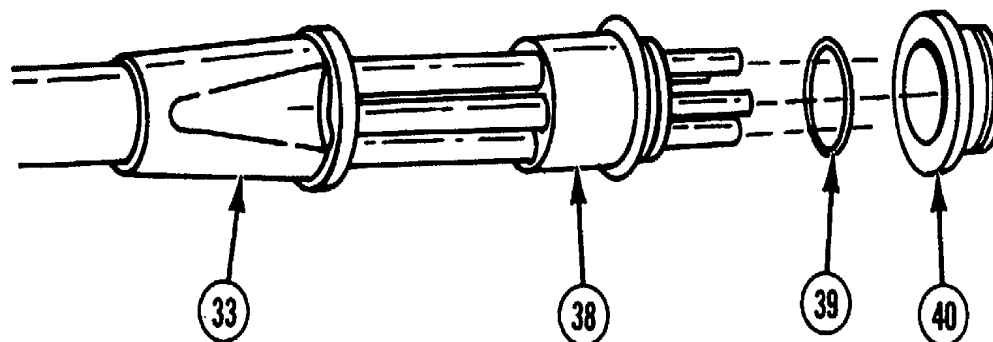
Table 3-6. Female Connector Socket Position

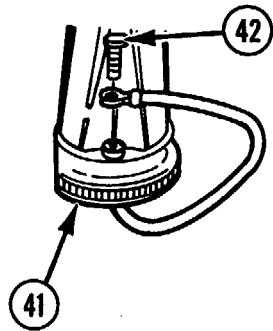
NOTE  
Use the following information to obtain correct wire polarity.

Wire Color	Socket Insert Designation
Black	A
Red	B
Blue or Orange	C
White	N
Green	G

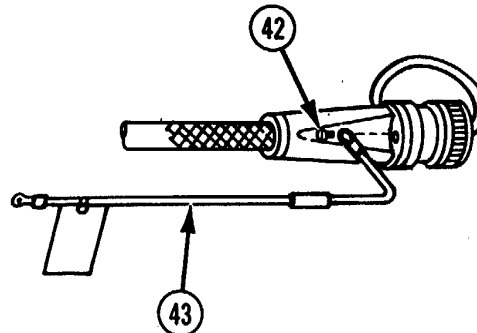


30. SOCKET INSERT (38) AND REAR CONNECTOR HOUSING (33). Assemble.
31. PREFORMED PACKING (39). Install.
32. FORWARD CONNECTOR HOUSING (40). Install.

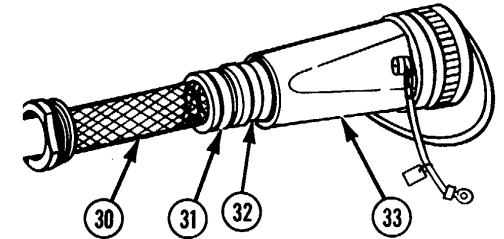




33. DUST COVER (41) AND SCREW (42). Assemble.



34. CABLE ASSEMBLY (43) AND SCREW (42). Assemble.



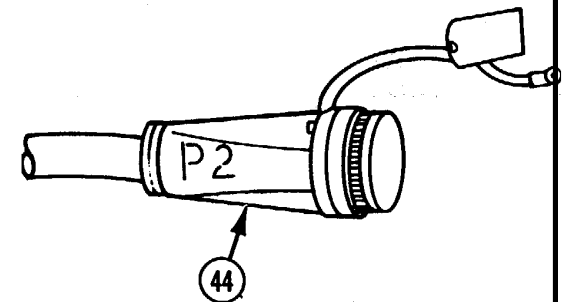
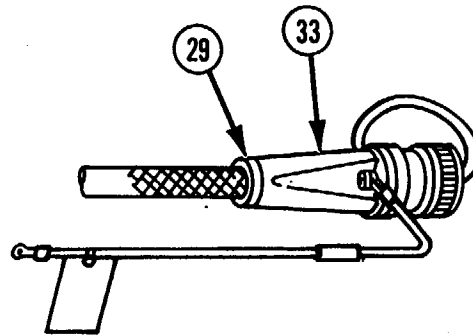
- 35. THREE SCREWS (42). Install.
- 36. SPACER (32) AND GLAND (31). Slide into position at rear of rear connector housing (33).
- 37. GRIP (30). Push into position.

- 38. GLAND NUT (29).
  - a. Slide toward rear connector housing (33).

**CAUTION**

Gland nut has left-hand threads and should be tightened by turning in opposite direction from that used to tighten standard right-hand threaded nuts.

- b. Tighten to a torque level of 35 to 40 lb-ft (47.25 to 54 N-m).
- c. Retorque to same level after using approximately 12 hours.



- 39. FEMALE CONNECTOR (44). Mark designation "P2" on exterior using marking ink (item 17, app D).

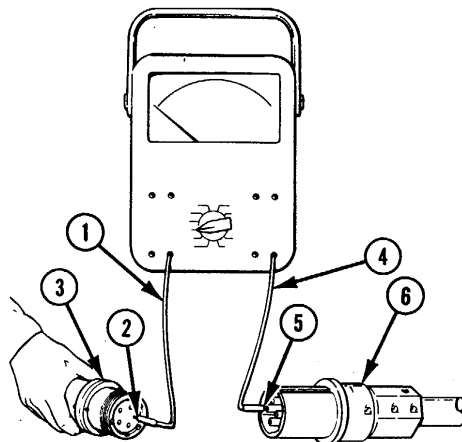
**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**TEST**

**NOTE**

Correct wiring of the cable adapter assembly should be checked with an ohmmeter (electrical continuity test).

1. OHMMETER LEAD NO. 1 (1). Place on a contact (2) on female connector (3).
2. OHMMETER LEAD NO. 2 (4). Place on appropriate contact (5) on plug connector (6) according to table 3-7.

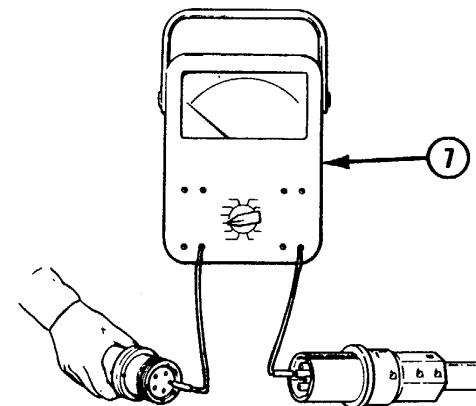


**NOTE**  
Use this table to place leads on correct contacts.

Lead no. 1 on contact on female connector		Lead no. 2 on contact on plug connector
	A	1
	B	2
	C	3
	G	4
	N	4



3. OHMMETER (7). Should read approximately zero for each of the five readings (on contact combinations).

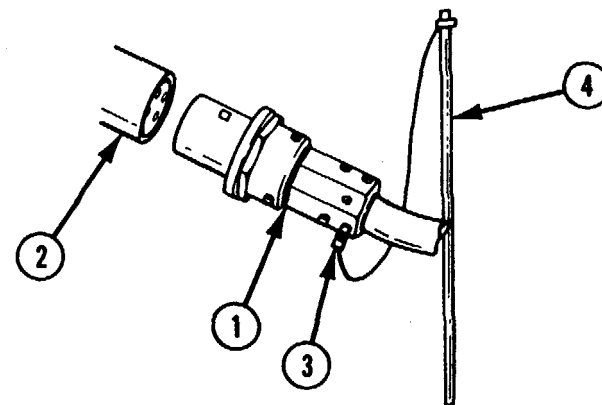


**INSTALLATION**

**WARNING**

Do not connect or disconnect cable adapter assembly when shop set is energized.

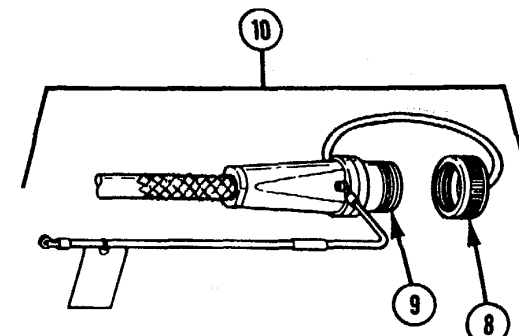
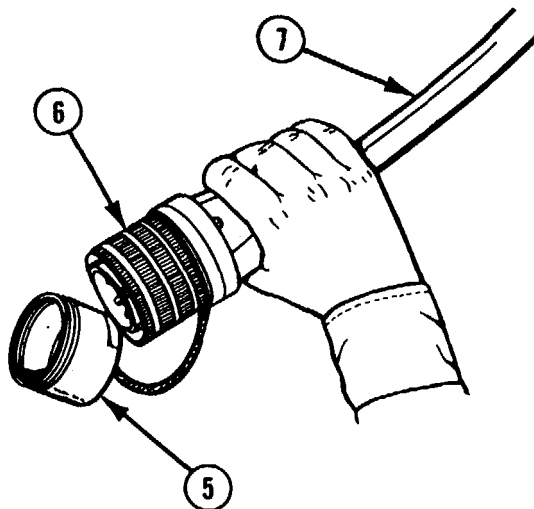
1. PLUG CONNECTOR (1). Install on mating connector (2) of power distribution panel.
2. TERMINAL LUG (3).
  - a. Attach wire of grounding rod (4).
  - b. Tighten.
3. GROUNDING ROD (4). Push into ground near plug connector (1).



**CAUTION**

Remove dust covers just prior to connection to protect connectors from dirt, dust, etc.

4. DUST COVER (5). Remove from electrical plug connector (male) (6) on 120/208V cable assembly (7).

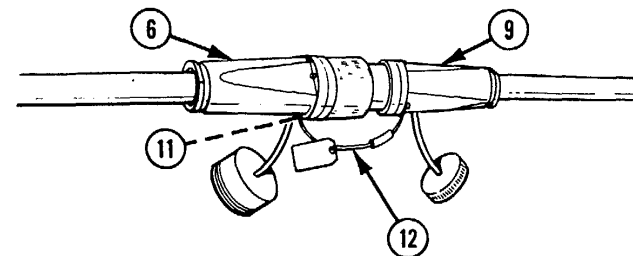


5. DUST COVER (8). Remove from female connector (9) on cable adapter assembly (10).

**3-26. CABLE ADAPTER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**INSTALLATION (cont)**

- 6. ELECTRICAL PLUG CONNECTOR (MALE) (6) AND FEMALE CONNECTOR (9). Plug together.
- 7. SCREW (11).
  - a. Remove from electrical plug connector (male) (6) of 120/208V cable assembly.
  - b. Assemble through one end of cable assembly (12).
  - c. Reinstall in electrical plug connector (male) (6).



**3-27. CABLE ADAPTER ASSEMBLY--FEMALE CONNECTOR--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- a. Removal
- b. Inspection
- c. Service
- d. Repair
- e. Installation

**INITIAL SETUP**

Test Equipment

Ohmmeter

Special Tools

Armament repair shop set (SC 4933-95-CL-A21)

Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

Removal tool no. 4 (MS90562-5)

Removal tool no. 6 (MS90562-6)

Supplemental aircraft armament repair tool set

(SC 5180-95-CL-B10)

(SC 5180-95-CL-B10)

Materials/Parts

Polishing cloth (item 5, app D)

Solder (item 16, app D)

Bushings (4) (MS3348-4-6L)

Ground socket (M39029/49-329)

Preformed packing (MS29513-132)

Sockets (A, B, C, and N) (4) (M39029/49-331)

References

Appendix D

3-213 Reassembly, test, and installation instructions for cable adapter assembly.

3-213 Removal and disassembly procedures for cable adapter assembly.

Troubleshooting Reference

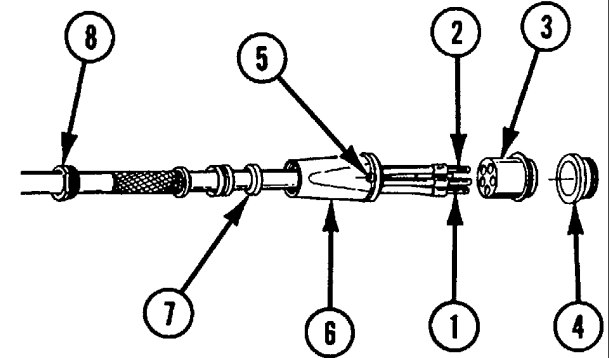
3-8 Environmental control units or exhaust fans do not operate correctly.

**REMOVAL**

Refer to removal and disassembly procedures paragraph 3-26, page 3-213, for the cable adapter assembly.

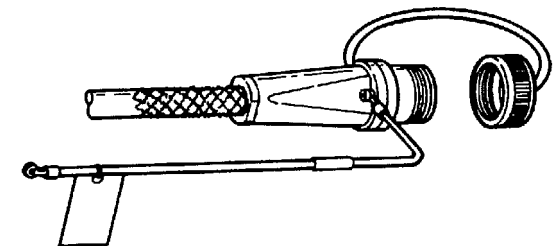
**INSPECTION**

1. GROUND SOCKET (1) AND FOUR SOCKETS (A, B, C, AND N) (2). Check for damaged or corroded parts.
2. SOCKET INSERT (3), FORWARD CONNECTOR HOUSING (4), THREE SCREWS (5), REAR CONNECTOR HOUSING (6), SPACER (7), AND GLAND NUT (8). Check for bent or broken parts.



**SERVICE**

FEMALE CONNECTOR. Remove dirt with a polishing cloth (item 5, app D).



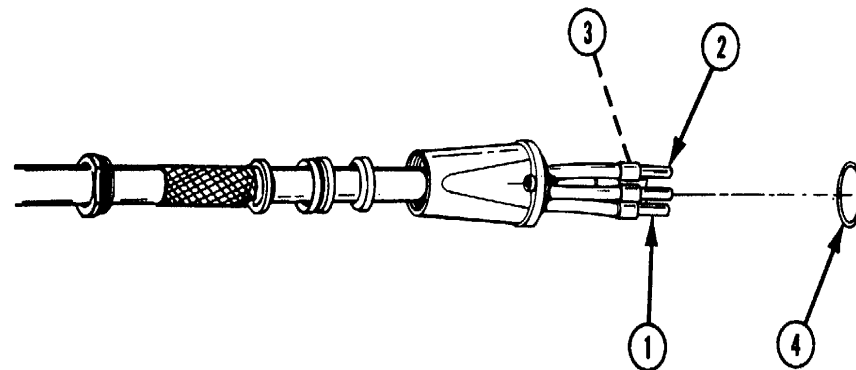
FEMALE CONNECTOR



**3-27. CABLE ADAPTER ASSEMBLY—FEMALE CONNECTOR—MAINTENANCE INSTRUCTION (cont)**

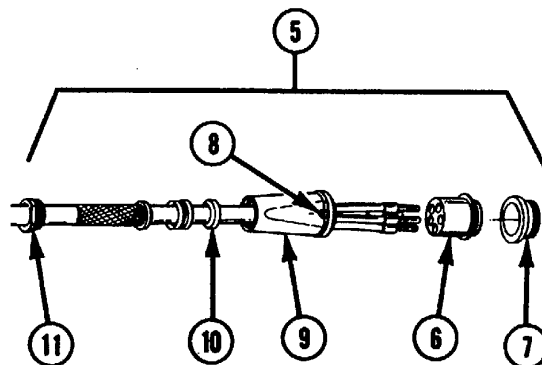
**REPAIR**

1. GROUND SOCKET (1), FOUR SOCKETS (A, B, C, AND N) (2), FOUR BUSHINGS (3), AND PREFORMED PACKING (4). Replace with new parts if removed.



**INSTALLATION**

2. FEMALE CONNECTOR(5). Replace with a new item if any of the following parts are damaged: socket insert (6), forward connector housing (7), three screws (8), rear connector housing (9), spacer (10), and gland nut(11).



Refer to reassembly, test and installation procedures paragraph 3-26, page 3-213, for cable adapter assembly.

**3-28. CABLE ADAPTER ASSEMBLY—PLUG CONNECTOR—MAINTENANCE INSTRUCTONS**

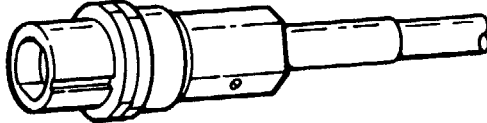
**THIS TASK COVERS:**

<p>a. <b>Inspection</b></p> <p>b. <b>Service</b></p>	<p>c. <b>Removal</b></p> <p>d. <b>Installation</b></p>
--	--

**INITIAL SETUP**

<p><b>Test Equipment</b> Ohmmeter</p> <p><b>Special Tools</b> Armament repair shop set (SC 4933-95-CL-A21) Basic aircraft armament repair tool set (SC 5180-95-CL-B09) Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)</p> <p><b>Materials-Parts</b> Abrasive cloth (item 4, app D) Polishing cloth (item 5, app D)</p>	<p><b>References</b> Appendix D 3-213 Reassembly, test and installation procedures for cable adapter assembly. 3-213 Removal and disassembly procedures for cable adapter assembly.</p> <p>3-8 Troubleshooting Reference Environmental control units or exhaust fans do not operate correctly.</p>
--	--

**INSPECTION**



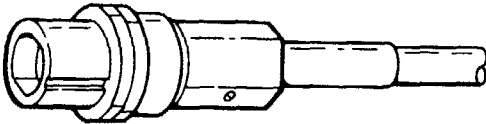
**PLUG CONNECTOR**

PLUG CONNECTOR. Check for bent, broken, or corroded parts.

**SERVICE**

PLUG CONNECTOR.

- a. Remove dirt with polishing cloth (item 5, app D).
- b. Remove corrosion with abrasive cloth (item 4, app D).



**PLUG CONNECTOR**

**3-28. CABLE ADAPTER ASSEMBLY—PLUG CONNECTOR—MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL**

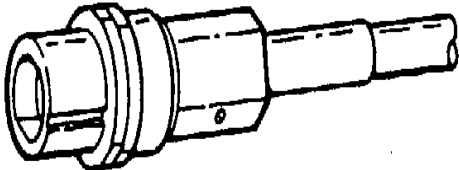
Refer to removal and disassembly procedures paragraph 3-26, page 3-213, for the cable adapter assembly.

**INSTALLATION**

**NOTE**

Replace entire assembly with new item if any part of plug connector is damaged.

Refer to reassembly, test, and installation procedures paragraph 3-26, page 3-213, for the cable adapter assembly.



**PLUG CONNECTOR**

**3-29. CABLE ADAPTER ASSEMBLY—CABLE ASSEMBLY—MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>a. Inspection</li> <li>b. Removal</li> <li>c. Disassembly</li> </ul> | <ul style="list-style-type: none"> <li>d. Repair</li> <li>e. Reassembly</li> <li>f. Installation</li> </ul> |
|---|---|

**INITIAL SETUP**

**Special Tools**

- Armament repair shop set (SC 4933-95-CL-A21)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

**References**

- Appendix D
- Appendix E

**Materials/Parts**

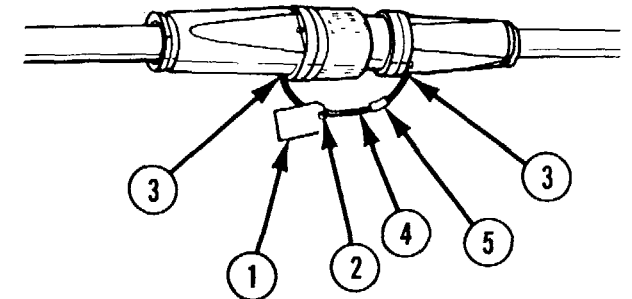
- Marking ink (item 17, app D)
- Terminals (2) (MS25036-112)

**NOTE**

The cable assembly is used to mechanically attach the cable adapter assembly to the 120/208V cable assembly. The purpose of the cable assembly is to discourage the electrical disconnection of the cable adapter assembly from the 120/208V cable assembly.

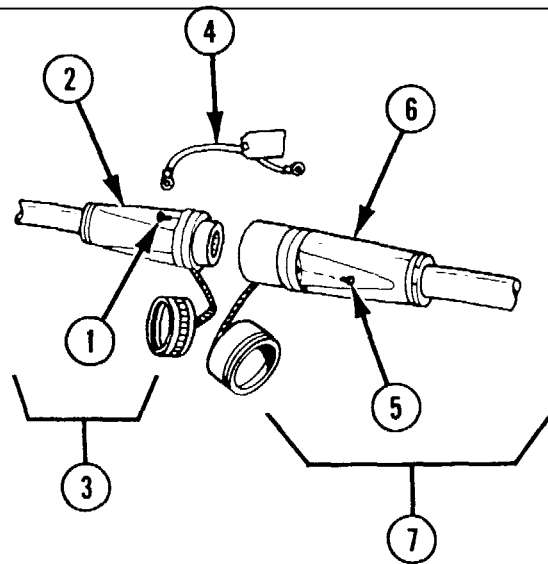
**INSPECTION**

- 1 TAG (1). Check to ensure it is not missing and is readable.
- 2 STRAP (2). Check to see if missing or damaged.
- 3 TWO TERMINALS (3). Check for missing or broken parts.
- 4 WIRE ROPE (4). Check for broken or worn parts.
- 5 BAND (5). Check to ensure it is not missing and is readable.

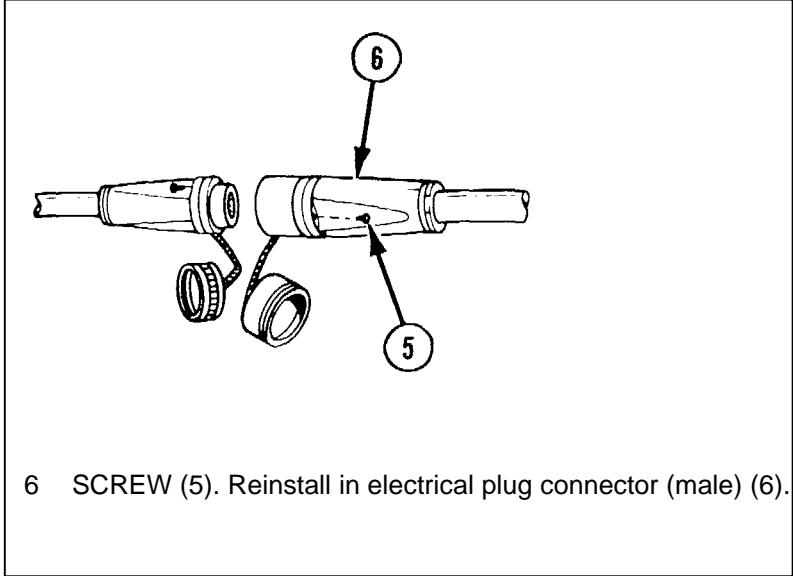


**REMOVAL**

- 1 SCREW (1). Remove from female connector (2) on cable adapter assembly (3).
- 2 CABLE ASSEMBLY (4). Remove one end from screw (1).
- 3 SCREW (1). Reinstall in female connector (2).
- 4 SCREW (5). Remove from electrical plug connector (male) (6) on 120/208V cable assembly (7).
- 5 CABLE ASSEMBLY (4). Remove one end from screw (5).



- 6 SCREW (5). Reinstall in electrical plug connector (male) (6).



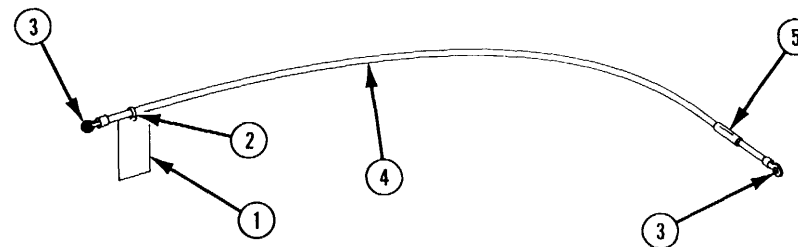
13-29. CABLE ADAPTER ASSEMBLY--CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY

TAG (1) AND STRAP (2). Remove and separate.

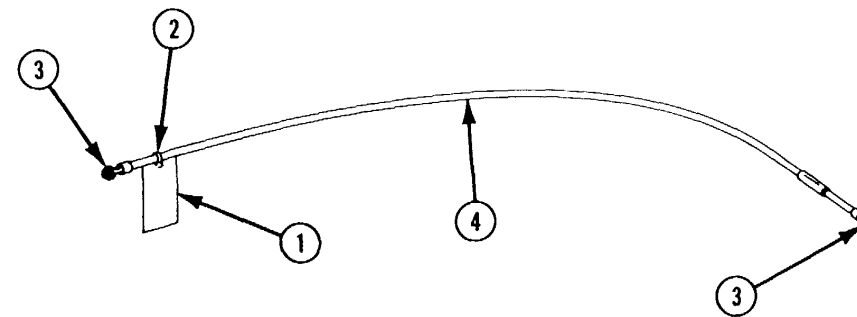
**NOTE**

The two terminals (3), wire rope (4) or band (5) cannot be salvaged through disassembly. If any of these parts are damaged, all parts must be replaced.



REPAIR

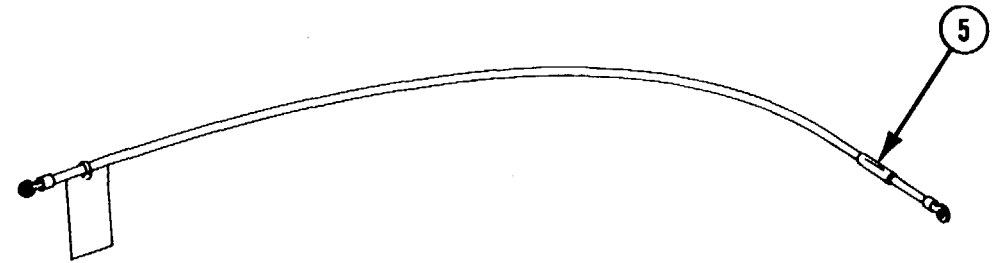
- 1 TAG (1). Replace if missing or is not readable.
- 2 STRAP (2). Replace if worn or broken.
- 3 TWO TERMINALS (3). Replace if missing or broken.
- 4 WIRE ROPE (4). Replace if worn or broken with new fabricated item (fig. 25, app E).



5 BAND (5).

a. Use marking ink (item 17, app D) to inscribe PART NO. 12011638 on any hard to read items.  
(Letters should be approximately 0.10 in. (0.25 cm) high.)

b. Replace with a new fabricated item (fig. 26, app E) if damaged or removed.



**REASSEMBLY**

1 BAND (1). Slip over wire rope (2).

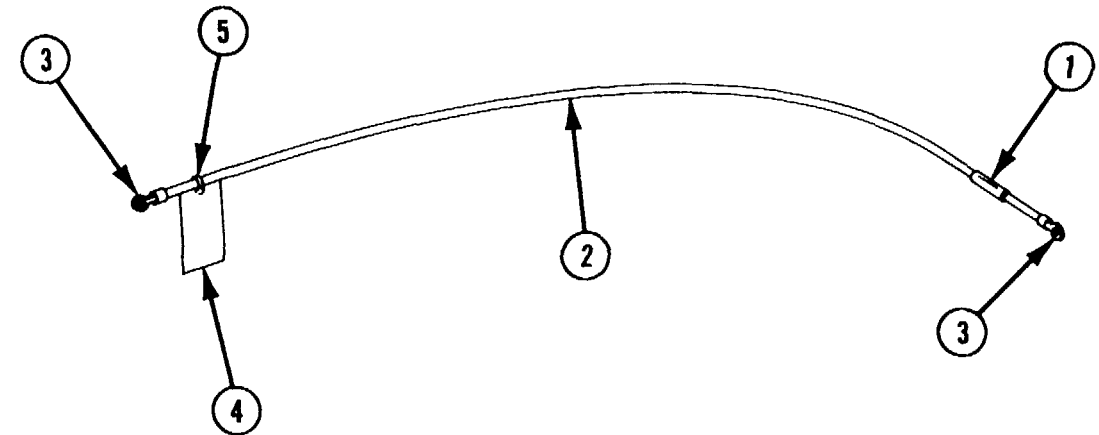
2 TWO TERMINALS (3). Crimp on each end of wire rope (2).

3 BAND (1).

a. Position with 0.50 in. (1.27 cm) between end and one terminal (3).

b. Use heat gun to shrink in place.

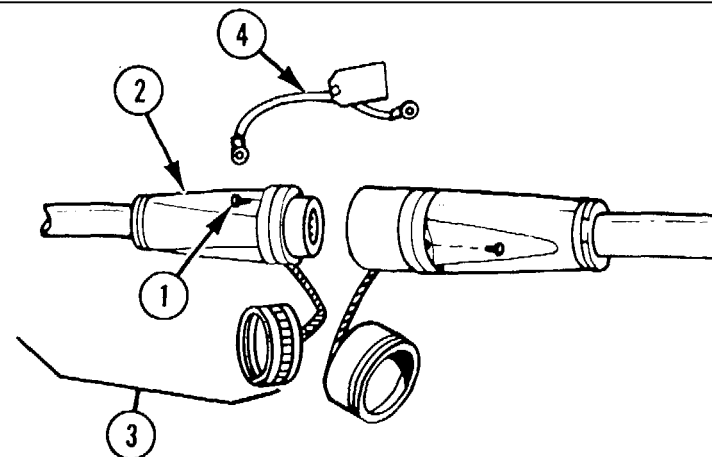
4 TAG (4) AND STRAP (5). Assemble and attach to wire rope (2).



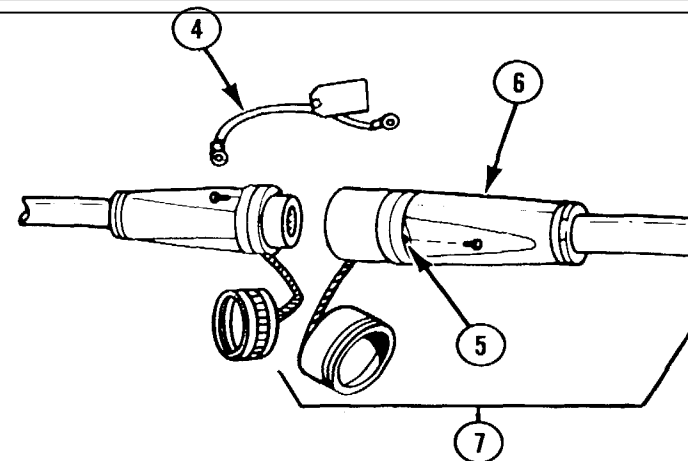
**3-29. CABLE ADAPTER ASSEMBLY--CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**INSTALLATION**

- 1 SCREW (1). Remove from female connector (2) on cable adapter assembly (3).
- 2 CABLE ASSEMBLY (4). Assemble one end with screw (1).
- 3 SCREW (1). Reinstall in female connector (2).



- 4 SCREW (5). Remove from electrical plug connector (male) (6) on 120/208V cable assembly (7).
- 5 CABLE ASSEMBLY (4). Assemble one end on screw (5).
- 6 SCREW (5). Reinstall in electrical plug connector (male) (6).



**3-30. WIRE ASSEMBLY (SWITCHBOX)--MAINTENANCE INSTRUCTIONS**

**This task covers:**

- a. Removal
- b. Inspection
- c. Disassembly
- d. Repair
- e. Reassembly
- f. Installation

**INITIAL SETUP:**

**Special Tools**

- Armament repair shop set (SC 4933-95-CL-A21)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

**Materials/Parts**

- Abrasive cloth (item 4, app D)
- Lug terminal (MS25036-111)
- Wire (12011690-4)

**References**

- Appendix D
- Appendix E
- 3-59 Wire table.
- 3-38 Disassembly and reassembly procedures for shop set--electrical installation.

**General Safety Instructions**

**WARNING**

The shop set contains voltages which are dangerous if contacted. Before performing any maintenance on the wire assembly,

ensure the circuit breaker on power distribution panel connected to the power source is in the OFF position and the 120/208V cable assembly is disconnected from the shelter.

**NOTE**

**There are two wire assemblies tagged no. 4B and no. 8 used in the S7/S8 switchbox assembly as interconnections between the S7 microswitch and S8 toggle switch. Each assembly consists of one 4.00-in. (10.16-cm) stranded black wire with a lug terminal at each end. Refer to wire table 3-2. The following procedures are written for a quantity of one wire assembly and must be repeated for the second wire assembly.**



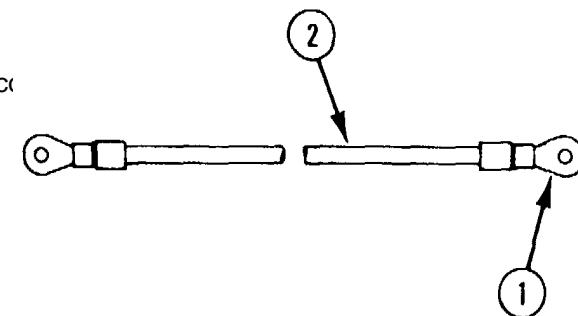
**3-30. WIRE ASSEMBLY (SWITCHBOX)--MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL**

Refer to the disassembly procedure in paragraph 3-10, page 3-38.

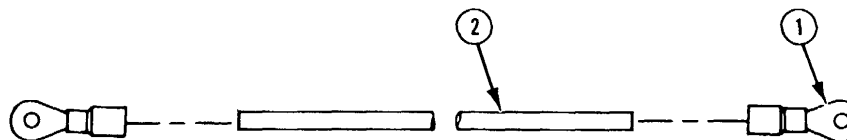
**INSPECTION**

- 1 TWO LUG TERMINALS (1). Check for missing, damaged, or cracked.
- 2 WIRE (2).
  - a. Check for damaged insulation.
  - b. Check for broken conductor.



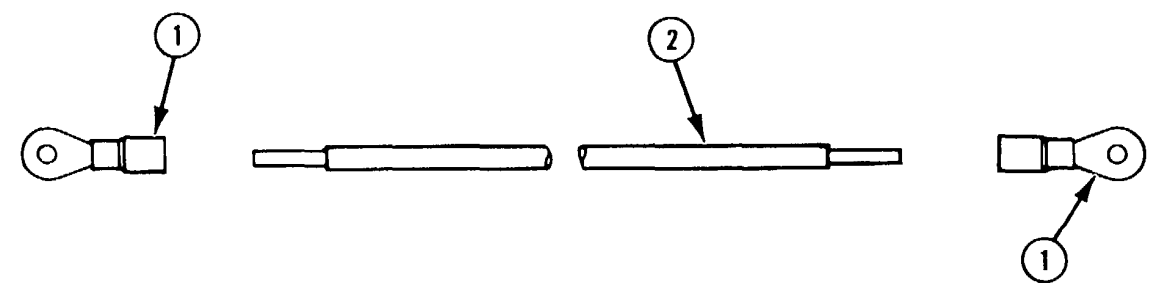
**DISASSEMBLY**

TWO LUG TERMINALS (1) AND WIRE (2). Separate by cutting only if replacement of any parts is required.



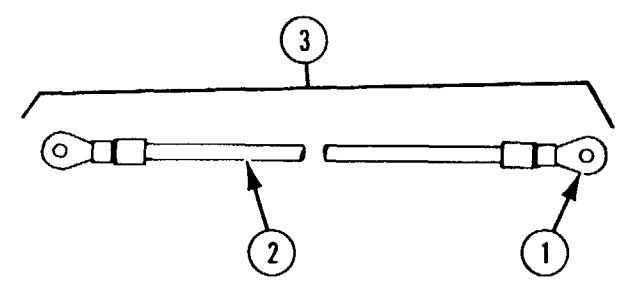
**REPAIR**

- 1 TWO LUG TERMINALS (1).
  - a. Remove corrosion with abrasive cloth (item 4, app D).
  - b. Replace with new parts if disassembled.
- 2 WIRE (2).
  - a. If disassembled but still useable, strip 0.50 in. (1.27 cm) of insulation from each end.
  - b. If not repairable, replace with a new fabricated part (fig. 4, app E).



**REASSEMBLY**

- 1 TWO LUG TERMINALS (1) AND WIRE (2). Assemble by crimping.
- 2 WIRE ASSEMBLY (3). If the tag number is not present, add appropriate tag number.



**INSTALLATION**

Refer to the reassembly procedure in paragraph 3-10, page 3-38.

**3-31. WIRE ASSEMBLY (CEILING OUTLETS)--MAINTENANCE INSTRUCTIONS**

**This task covers:**

- a. Removal
- b. Inspection
- c. Disassembly
- d. Repair
- e. Reassembly
- f. Installation

**INITIAL SETUP:**

**Special Tools**

- Armament repair shop set (SC 4933-95-CL-A21)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

**Material s/Parts**

- Abrasive cloth (item 4, app D)
- Lug terminal (MS25036-156)
- Wire (12011690-9)

**References**

- Appendix D
- Appendix E
- 3-59 Wire table.
- 3-38 Disassembly and reassembly procedures for shop set--electrical installation.

**General Safety Instructions**

**WARNING**

The shop set contains voltages which are dangerous if contacted. Before performing any maintenance on the wire assembly, be sure the circuit breaker on power distribution panel connected to the power source is in the OFF position and the 120/208V cable assembly is disconnected from the shelter.

**NOTE**

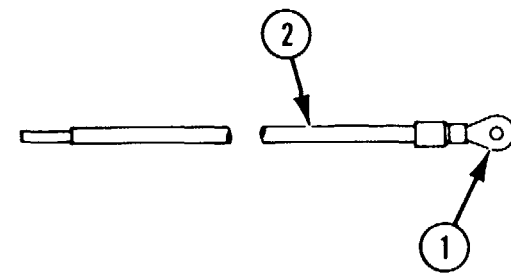
There are four wire assemblies tagged no. 11A, no. 11B, no. 14A, and no. 14B used in the J20, J21, and J22 conduit boxes and J23 receptacle box to ground the electrical receptacle. Each assembly consists of one 4.00-in. (10.16-cm) green wire with a lug terminal attached to one end. Refer to wire table 3-2. The following procedures are written for a quantity of one wire assembly and must be repeated for the other wire assemblies.

**REMOVAL**

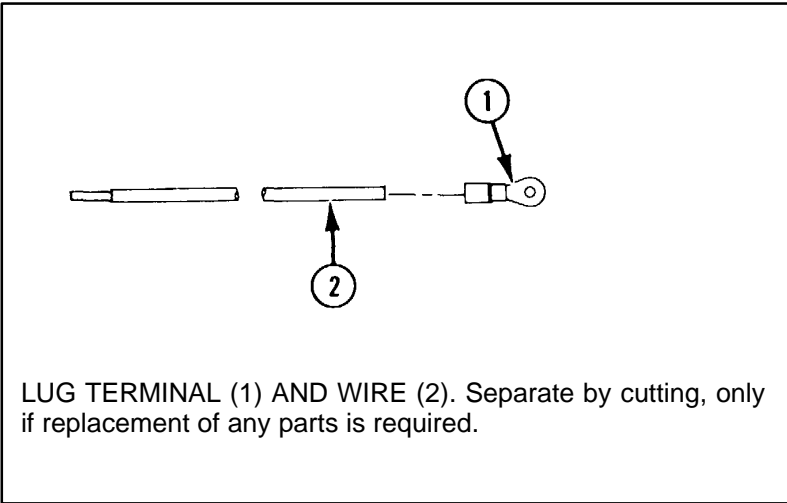
Refer to the disassembly procedure in paragraph 3-10, page 3-38.

**INSPECTION**

- 1 LUG TERMINAL (1). Check for missing, damaged, or corroded parts.
- 2 WIRE (2).
  - a. Check for damaged insulation.
  - b. Check for broken conductor.

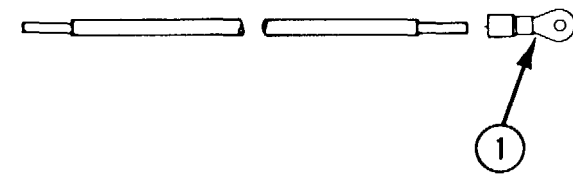


**DISASSEMBLY**



**REPAIR**

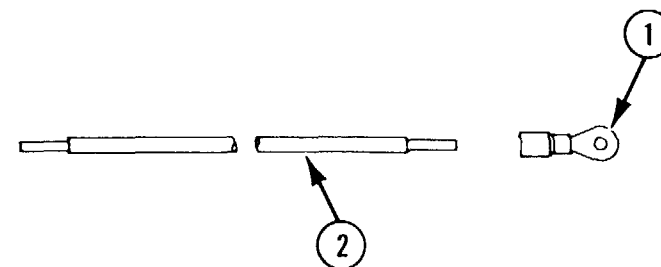
- 1 LUG TERMINAL (1).
  - a. Remove corrosion with abrasive cloth (item 4, app D).
  - b. Replace with new part if disassembled.



**3-31. WIRE ASSEMBLY (CEILING OUTLETS)--MAINTENANCE INSTRUCTIONS (cont)**

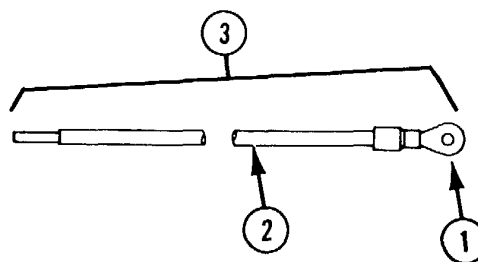
**REPAIR (cont)**

- 2 WIRE (2).
  - a. If disassembled but still useable, strip 0.50 in. (1.27 cm) of insulation from end where lug terminal (1) has been cut.
  - b. If not repairable, replace with a new fabricated part (fig. 4, app E).



**REASSEMBLY**

- 1 LUG TERMINAL (1) AND WIRE (2).  
Assemble by crimping.
- 2 WIRE ASSEMBLY (3). If tag number is not present, add appropriate tag number.



**INSTALLATION**

Refer to the reassembly procedure in paragraph 3-10, page 3-38.

**3-32. WIRING HARNESS ASSEMBLY (SWITCHBOX TO DISTRIBUTION PANEL)--MAINTENANCE INSTRUCTIONS**

**This task covers:**

- a. Removal
- b. Inspection
- c. Disassembly
- d. Repair
- e. Reassembly
- f. Installation

**INITIAL SETUP:**

Test Equipment  
Ohmmeter

3-253 Repair procedures for wire assembly.  
3-59 Wire table.

Special Tools

- Armament repair shop set (SC 4933-95-CL-A21)
- Basic aircraft armament repair tool set (SC 5180-95-CL-BO9)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

General Safety Instructions

**WARNING**

De-energize shop set by placing circuit breaker on power distribution panel connected to power source in OFF position and disconnect 120/208V cable assembly from shelter.

Materials/Parts

- Tape (item 18, app D)
- Wire (12011690-1)

References

- Appendix D
- 3-38 Disassembly and reassembly procedures for shop set--electrical installation.

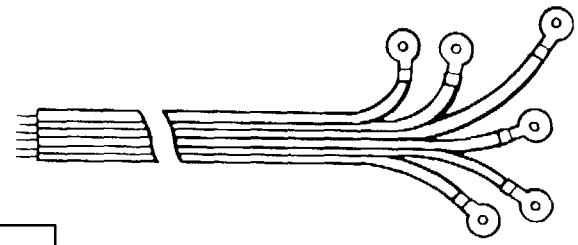
**3-32. WIRING HARNESS ASSEMBLY (SWITCHBOX TO DISTRIBUTION PANEL)--MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL**

**NOTE**  
 The harness assembly is comprised of six wire assemblies which are tagged no. 1, no. 2, no. 3, no. 4A, no. 6A, and no. 7. Refer to wire table 3-2.  
 For removal procedures for the wiring harness assembly, refer to paragraph 3-10, page 3-38.

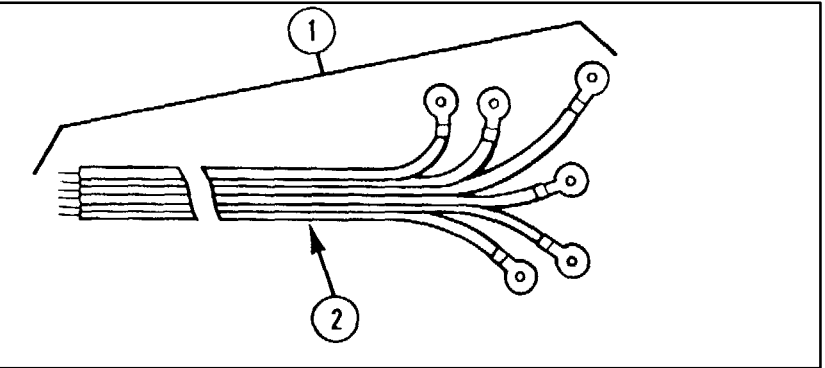
**INSPECTION**

**SIX WIRE ASSEMBLIES.**  
 a. Inspect for breaks, corrosion, and worn or deteriorated parts.  
 b. Check continuity with an ohmmeter.



**DISASSEMBLY**

HARNESS ASSEMBLY (1). Separate six wire assemblies (2).

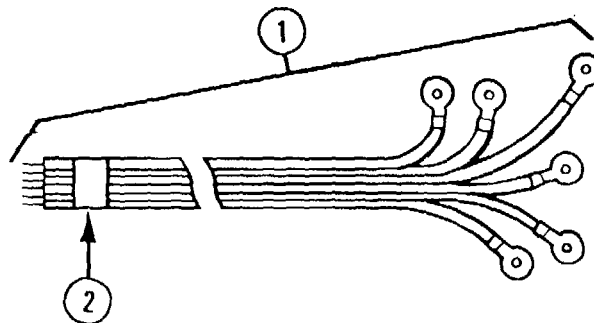


**REPAIR**

For repair, refer to paragraph 3-33, page 3-253.

**REASSEMBLY**

HARNESS ASSEMBLY (1). Apply tape (2) (item 18, app D) as required to keep stripped wire ends together for installation.



**INSTALLATION**

For installation procedures, refer to paragraph 3-10, page 3-38.

**3-33. WIRE ASSEMBLY--MAINTENANCE INSTRUCTIONS**

**This task covers:**

- a. Removal
- b. Inspection
- c. Disassembly
- d. Repair
- e. Reassembly
- f. Installation

**INITIAL SETUP:**

**Special Tools**

- Armament repair shop set (SC 4933-95-CL-A21)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

**Materials/Parts**

- Abrasive cloth (item 4, app D)
- Lug terminal (MS25036-111)
- Wire (12011690-1)

**References**

- Appendix D
- Appendix E
- 3-251 Disassembly and reassembly procedures for wiring harness assembly (switchbox to distribution panel).
- 3-59 Wire table.



**3-33. WIRE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**INITIAL SETUP:**

General Safety Instructions

**WARNING**

De-energize shop set by placing circuit breaker on power distribution panel connected to power source in OFF position and then disconnect 120/208V cable assembly from shelter.

**NOTE**

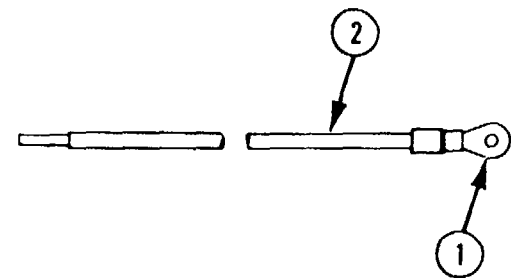
There are six wire assemblies tagged no. 1, no. 2, no. 3, no. 4A, no. 6A, and no. 7 used in connecting the S7/S8 switchbox assembly to the circuit breaker panel box PL1. Each assembly consists of one 30.00-in. (76.20-cm) stranded black wire with a lug terminal at one end. Refer to wire table 3-2. The following procedures are written for quantity of one wire assembly, and must be repeated for the other five wire assemblies.

**REMOVAL**

Refer to the disassembly procedures in paragraph 3-32, page 3-251.

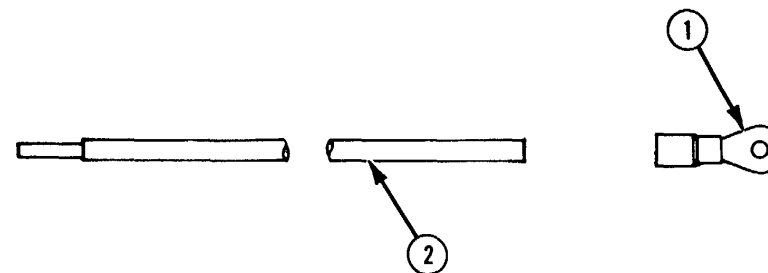
**INPECTION**

- 1 LUG TERMINAL (1). Check for missing, damaged, or corroded parts.
- 2 WIRE (2).
  - a. Check for damaged insulation.
  - b. Check for broken conductor.



**DISASSEMBLY**

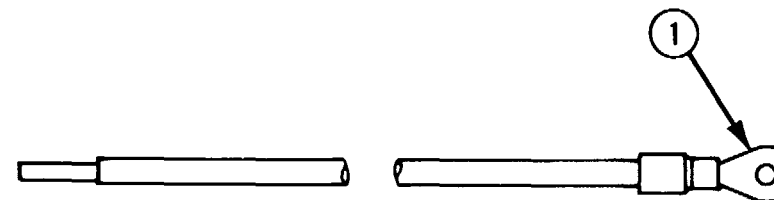
LUG TERMINAL (1) AND WIRE (2). Separate by cutting only if replacement of any parts is required.



**REPAIR**

1 LUG TERMINAL (1).

- a. Remove corrosion with abrasive cloth (item 4, app D).
- b. Replace with new parts if disassembled.

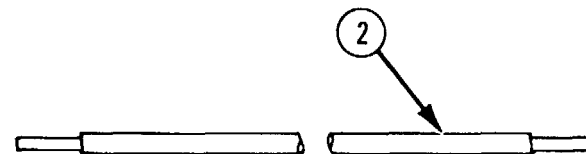


**3-33. WIRE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

2 WIRE (2).

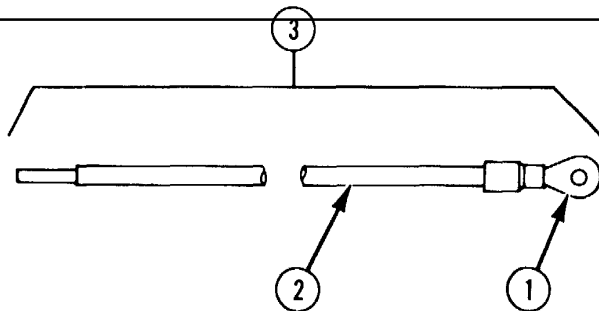
- a. If disassembled but still useable, strip 0.50 in. (1.27 cm) of insulation from each end.
- b. If not repairable, replace with a new fabricated part (fig. 4, app E).



**REASSEMBLY**

1 LUG TERMINAL (1) AND WIRE (2). Assemble by crimping.

2 WIRE ASSEMBLY (3). If the tag number is not present, add appropriate tag number.



**INSTALLATION**

Refer to the reassembly procedures in paragraph 3-32, page 3-251.

I

**3-34. WIRING HARNESS ASSEMBLY (SWITCH TO DISTRIBUTION CEILING OUTLETS)—MAINTENANCE INSTRUCTIONS**

**This task covers:**

- a. Removal
- b. Inspection
- c. Disassembly
- d. Repair
- e. Reassembly
- f. Installation

**INITIAL SETUP:**

Test Equipment  
Ohmmeter

Special Tools  
 Armament repair shop set (SC 4933-95-CL-A21)  
 Basic aircraft armament repair tool set (SC 5180-95-CL-B09)  
 Supplemental aircraft armament repair tool set (**SC 5180-95-CL-B10**)

Material s/Parts  
 Tape (item 18, app D)  
 Lug terminal (MS25036-111)  
 Lug terminal (MS25036-156)  
 Wire (12011690-24)  
 Wire (12011690-25)  
 Wire (12011690-26)  
 Wire (3) (12011690-5)  
 Wire (12011690-6)  
 Wire (12011690-7)  
 Wire (12011690-8)

References  
 Appendix C  
 Appendix D  
 Appendix E  
 3-38 Disassembly, repair, reassembly procedures for shop set--electrical installation.  
 3-59 Wire table.

General Safety Instructions

**WARNING**

The shop set contains voltages which are dangerous if contacted. Before performing any maintenance on the wiring harness assembly, be sure the circuit breaker on power distribution panel connected to the power source is in the OFF position and the 120/208V cable assembly is disconnected from shelter.

**NOTE**

**The harness assembly is comprised of sixteen wire sections of various lengths. All sections were tagged with the following numbers: no. 4, no. 5, no. 6, no. 9, no. 10, no. 11, no. 12, no. 13, and no. 14. Refer to wire table 3-2. Seven sections were removed separately and nine sections are removed together.**

**3-34. WIRING HARNESS ASSEMBLY (SWITCH TO DISTRIBUTION CEILING OUTLETS)—MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL**

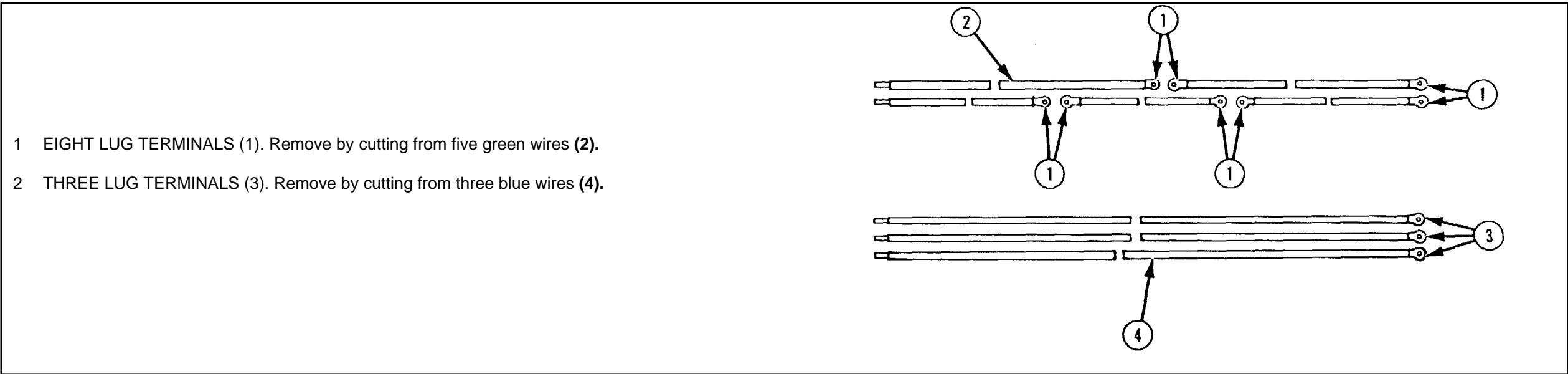
Refer to the removal procedures for the harness assembly in paragraph 3-10, page 3-38.

**INSPECTION**

Check all wire sections in the harness assembly for breaks, corrosion, and worn or deteriorated insulation. Check for continuity with a suitable ohmmeter.

**DISASSEMBLY**

**NOTE**  
Lug terminals should be removed only when necessary to replace defective parts.



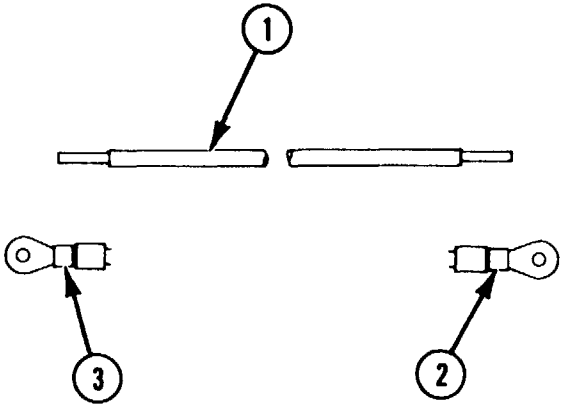
- 1 EIGHT LUG TERMINALS (1). Remove by cutting from five green wires (2).
- 2 THREE LUG TERMINALS (3). Remove by cutting from three blue wires (4).

**REPAIR**

**NOTE**  
**Each individual wire section may be repaired or replaced by a like item, refer to wire table 3-2.**

**NOTE**  
 For initial installation of harness assembly or replacement of complete harness assembly, refer to paragraph 3-10, page 3-38.

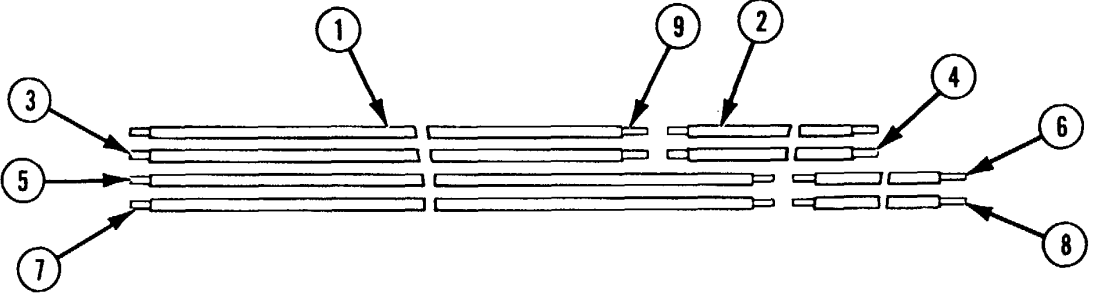
- 1 SIXTEEN WIRE SECTIONS (1). Repair by fabrication (fig. 4, app E).
- 2 EIGHT LUG TERMINALS (2) AND THREE LUG TERMINALS (3). Repair by replacement (app C).



**REASSEMBLY**

**NOTE**  
**The following five procedures are performed if any or all wire sections are being replaced.**

- 1 BLACK WIRE SECTION NO. 9 (1), BLACK WIRE SECTION NO. 9 (2), WHITE WIRE SECTION NO. 10 (3), WHITE WIRE SECTION NO. 10 (4), WHITE WIRE SECTION NO. 13 (5), WHITE WIRE SECTION NO. 13 (6), RED WIRE SECTION NO. 12 (7), AND RED WIRE SECTION NO. 12 (8). Strip insulation (9) back 0.50 in. (1.27 cm) from both ends.

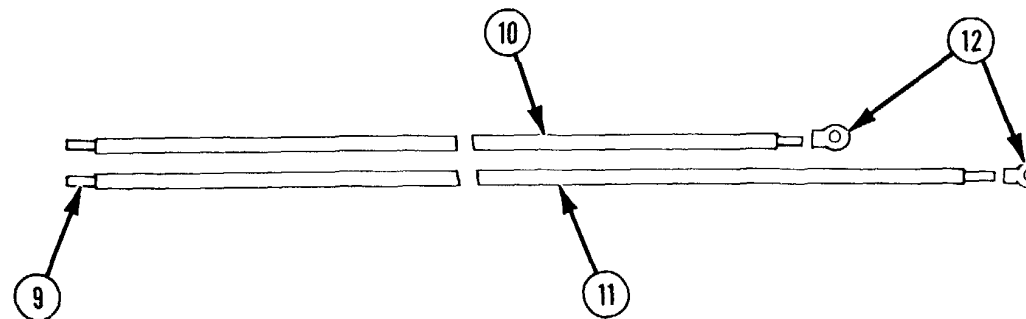


**3-34. WIRING HARNESS ASSEMBLY (SWITCH TO DISTRIBUTION CEILING OUTLETS)—MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

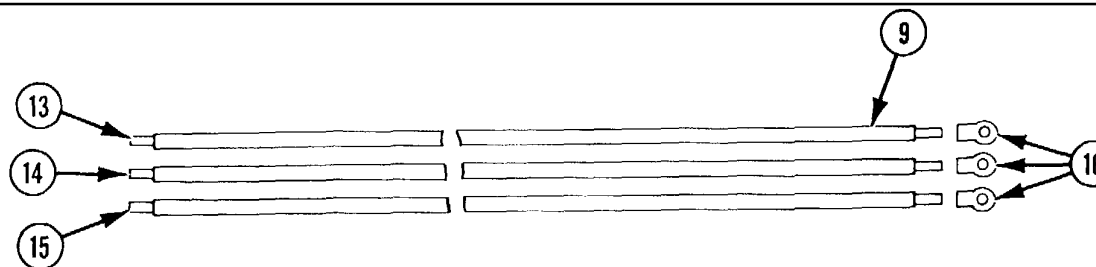
2 GREEN WIRE SECTION NO. 11 (10) AND GREEN WIRE SECTION NO. 14 (11).

- a. Strip insulation (9) back 0.50 in. (1.27 cm) from both ends.
- b. Install two lug terminals (12) by crimping one lug terminal to each wire.



3 BLUE WIRE SECTION NO. 4 (13), BLUE WIRE SECTION NO. 5 (14), AND BLUE WIRE SECTION NO. 6 (15).

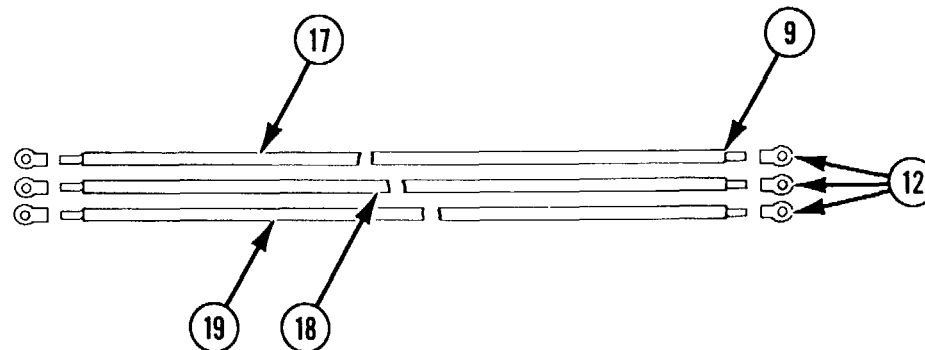
- a. Strip insulation (9) back 0.50 in. (1.27 cm) from both ends.
- b. Install three lug terminals (16) by crimping one lug terminal to each wire.



4 GREEN WIRE SECTION NO. 11 (17), GREEN WIRE SECTION NO. 11 (18), AND GREEN WIRE SECTION NO. 14 (19).

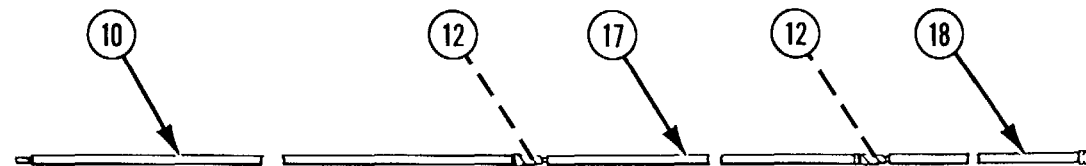
- a. Strip insulation (9) back 0.50 in. (1.27 cm) from both ends.
- b. Install six lug terminals (12) by crimping two lug terminals to each wire.

5 TAG NUMBER. If not present, add tag no. to respective wire section, refer to wire table 3-2.



6 GREEN WIRE SECTION NO. 11 (10) FROM PL1 TO J20, GREEN WIRE SECTION NO. 11 (17) FROM J20 TO J21, AND GREEN WIRE SECTION NO. 11 (18) FROM J21 TO S9.

- a. Place end to end.
- b. Secure with tape (item 18, app D) at two places where lug terminals (12) overlap.

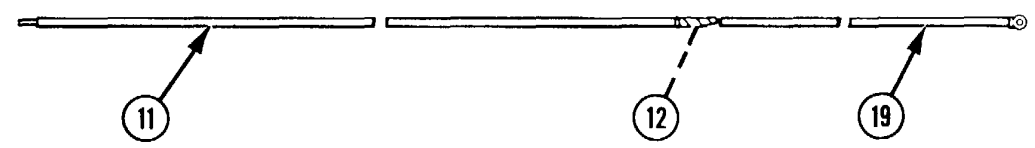




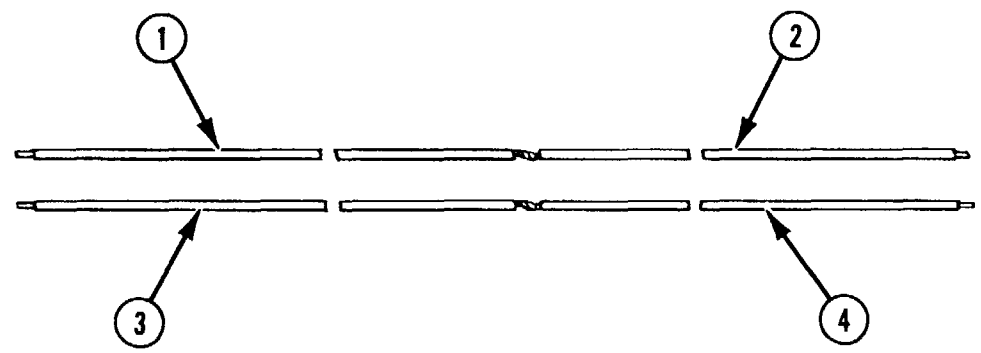
**3-34. WIRING HARNESS ASSEMBLY (SWITCH TO DISTRIBUTION CEILING OUTLETS)—MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

- 7 GREEN WIRE SECTION NO. 14 (11) FROM PL1 TO J22, AND GREEN WIRE SECTION NO. 14 (19) FROM J22 TO J23.
- a. Place end to end.
  - b. Secure with tape (item 18, app D) at place where lug terminals (12) overlap.



- 8 BLACK WIRE SECTION NO. 9 (1) FROM PL1 TO J20, AND BLACK WIRE SECTION NO. 9 (2) FROM J20 TO J22.
- a. Place end to end.
  - b. Secure with tape (item 18, app D) at place where bare wires overlap.
- 9 WHITE WIRE SECTION NO. 10 (3) FROM PL1 TO J20, AND WHITE WIRE SECTION NO. 10 (4) FROM J20 TO J21.
- a. Place end to end.
  - b. Secure with tape (item 18, app D) at place where bare wires overlap.

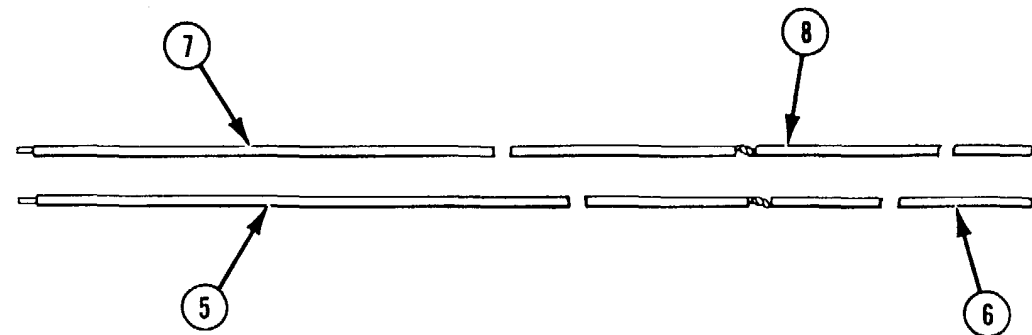


10 RED WIRE SECTION NO. 12 (7) FROM PL1 TO J22, AND RED WIRE SECTION NO. 12 (8) FROM J22 TO J23.

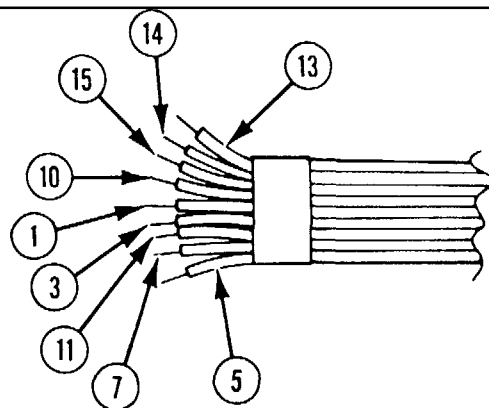
- a. Place end to end.
- b. Secure with tape (item 18, app D) at place where bare wires overlap.

11 WHITE WIRE SECTION NO. 13 (5) FROM PL1 TO J22, AND WHITE WIRE SECTION NO. 13 (6) FROM J22 TO J23.

- a. Place end to end.
- b. Secure with tape (item 18, app D) at place where bare wires overlap.



12 BLUE WIRE SECTION NO. 4 (13), BLUE WIRE SECTION NO. 5 (14), BLUE WIRE SECTION NO. 6 (15), GREEN WIRE SECTION NO. 11 (10), BLACK WIRE SECTION NO. 9 (1), WHITE WIRE SECTION NO. 10 (3), GREEN WIRE SECTION NO. 14 (11), RED WIRE SECTION NO. 12 (7), AND WHITE WIRE SECTION NO. 13 (5). Securely tape (item 18, app D) bare wire ends (tagged PL1) evenly together for installation.



**INSTALLATION**

For installation procedures for harness assembly, refer to paragraph 3-10, page 3-38.

**3-35. END CURTAIN ASSEMBLY--MAINTENANCE INSTRUCTIONS**

**This task covers:**

- a. Removal
- b. Inspection
- c. Repair

- d. Reassembly
- e. Installation

**INITIAL SETUP:**

Special Tools

- Armament repair shop set (SC 4933-95-CL-A21)
- AVIM sheet metal shop set (SC 4920-99-CL-A85)

Materials/Parts

- Tape (item 18, app D)
- Rivets (5) (MS20470A4-6)

References

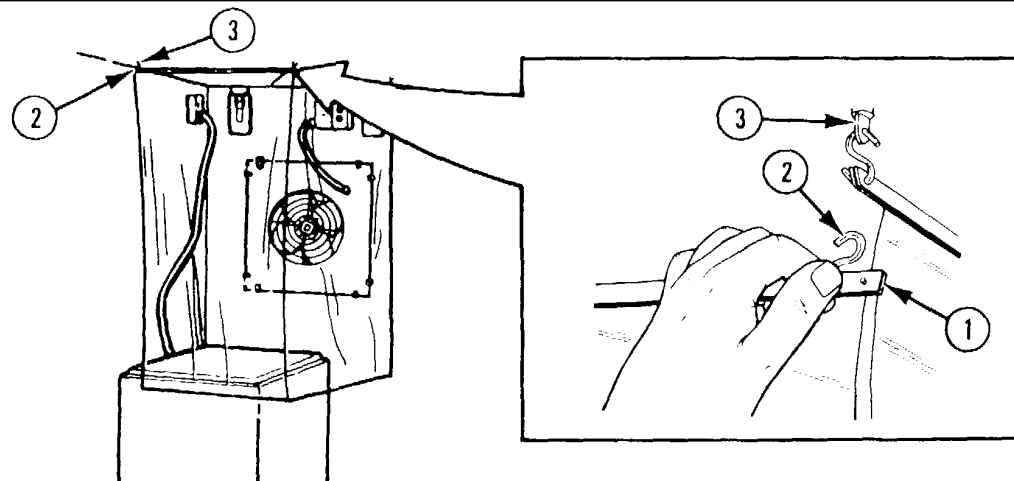
- Appendix C
- Appendix D
- Appendix E

Equipment Conditions

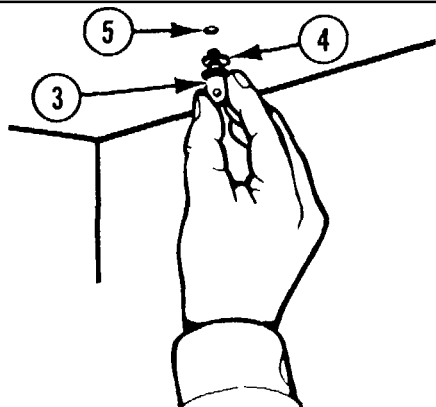
- 2-22 Portable degreaser not in use with cover closed.

**REMOVAL**

- 1 **END CURTAIN ASSEMBLY (1) AND TWO CHAIN HOOKS (2).** Remove from two eye bolts (3).
- 2 **TWO CHAIN HOOKS (2).** Remove from **end** curtain assembly (1).

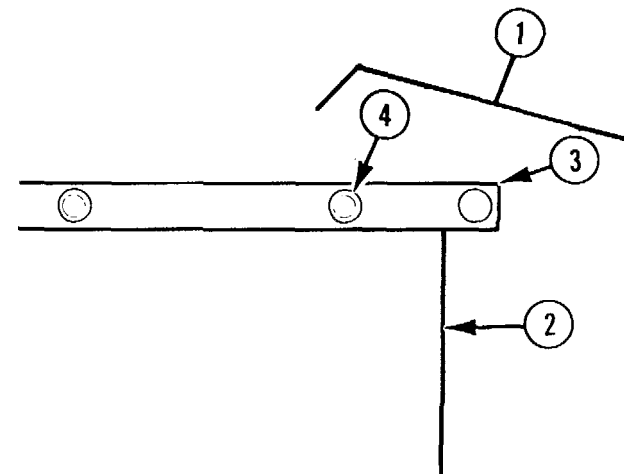


**INSPECTION**

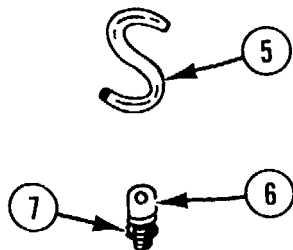


3 TWO EYE BOLTS (3) AND TWO LOCK-WASHERS (4). Remove from blind inserts (5) in ceiling.

- 1 END CURTAIN ASSEMBLY (1).
  - a. Inspect end curtain (2) for tears or holes.
  - b. Inspect two aluminum strips (3) for cracks or breaks.
  - c. Inspect five rivets (4) for missing or damaged parts.

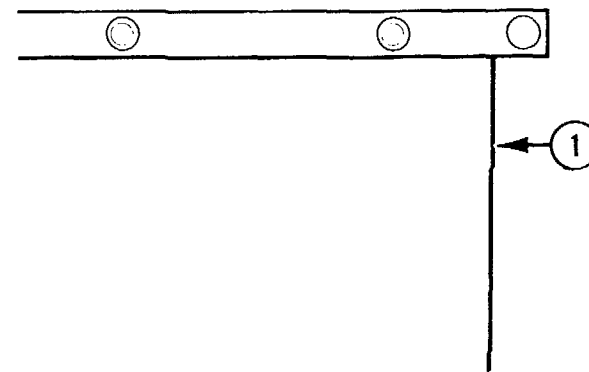


**REPAIR**



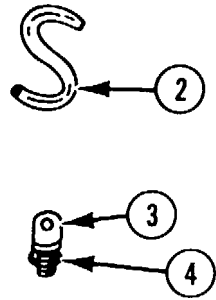
- 2 TWO CHAIN HOOKS (5). Inspect to ensure they are not missing or broken.
- 3 TWO EYE BOLTS (6) AND TWO LOCK-WASHERS (7). Inspect to ensure they are not missing or broken.

- 1 END CURTAIN (1). Repair torn areas with tape (item 18, app D). If not repairable, replace with new fabricated item (fig. 27, app E).

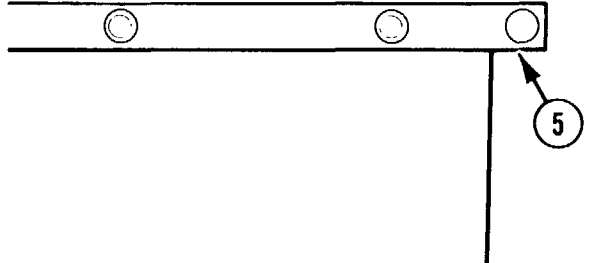


**3-35. END CURTAIN ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

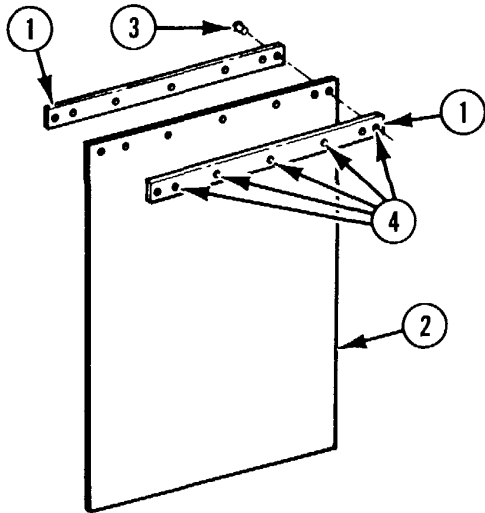


2 TWO CHAIN HOOKS (2), TWO EYE BOLTS (3), AND TWO LOCKWASHERS (4).. Repair by replacement (app C).



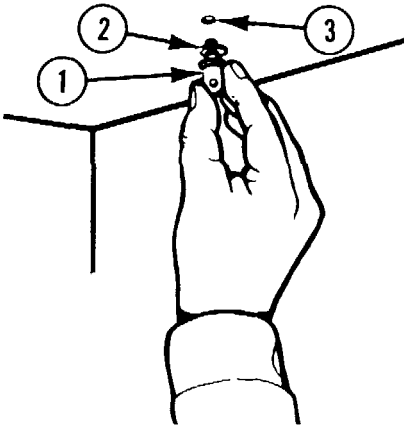
3 TWO ALUMINUM STRIPS (5). Replace by fabrication (fig. 28, app E).

**REASSEMBLY**



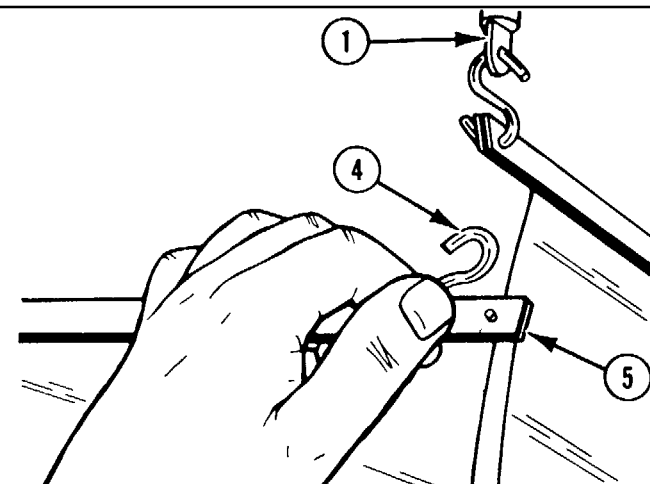
1 TWO ALUMINUM STRIPS (1). Install on end curtain (2).  
2 FIVE RIVETS (3). Install in five holes (4).

**INSTALLATION**



1 TWO EYE BOLTS (1) AND TWO LOCK-WASHERS (2). Install in blind inserts (3) in ceiling.

- 2 TWO CHAIN HOOKS (4). Attach to end curtain assembly (5).
- 3 TWO CHAIN HOOKS (4) AND END CURTAIN ASSEMBLY (5). Attach to two eye bolts (1).



**3-36. SIDE CURTAIN ASSEMBLY--MAINTENANCE INSTRUCTIONS**

**This task covers:**

- a. Removal
- b. Inspection
- c. Repair
- d. Reassembly
- e. Installation

**INITIAL SETUP:**

Special Tools

- Armament repair shop set (SC 4933-95-CL-A21)
- AVIM sheet metal shop set (SC 4920-99-CL-A85)

Material s/Parts

- Tape (item 18, app D)
- Rivets (7) (MS20470A4-6)

References

- Appendix C
- Appendix D
- Appendix E

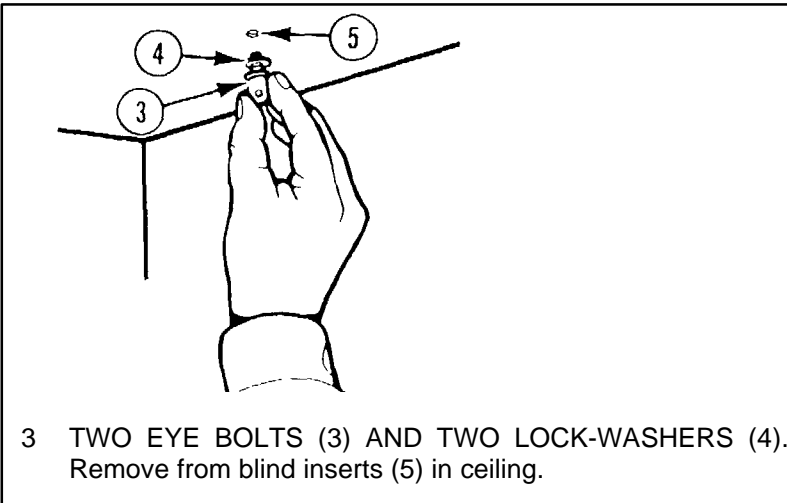
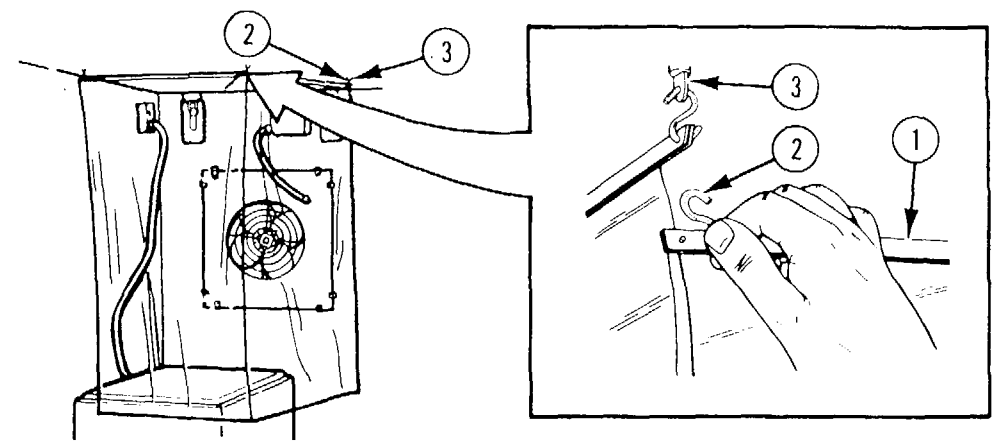
Equipment Conditions

- 2-22 Portable degreaser not in use with cover closed.

**3-36. SIDE CURTAIN ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL**

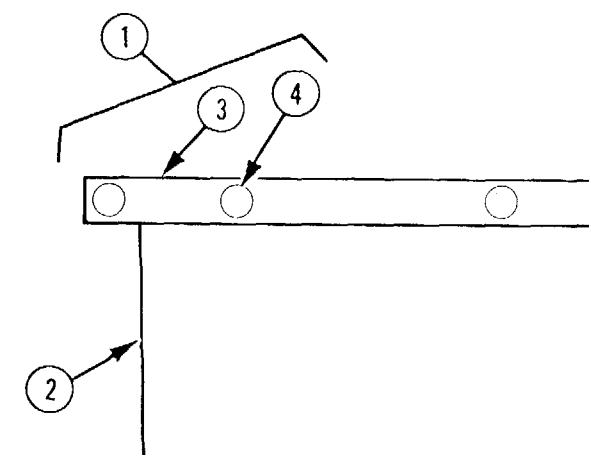
- 1 SIDE CURTAIN ASSEMBLY (1) AND TWO CHAIN HOOKS (2). Remove from two eye bolts (3).
- 2 TWO CHAIN HOOKS (2). Remove from side curtain assembly (1).



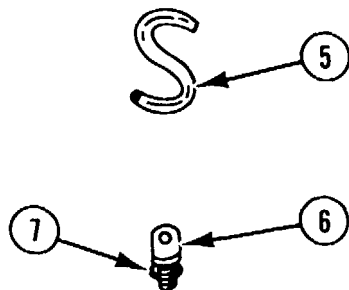
- 3 TWO EYE BOLTS (3) AND TWO LOCK-WASHERS (4). Remove from blind inserts (5) in ceiling.

**INSPECTION**

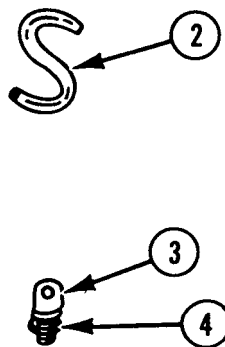
- 1 SIDE CURTAIN ASSEMBLY (1).
  - a. Inspect side curtain (2) for tears or holes.
  - b. Inspect two aluminum strips (3) for cracks or breaks.
  - c. Inspect seven rivets (4) for missing or damaged parts.



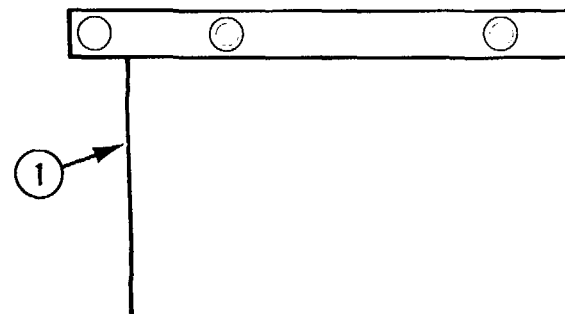
**REPAIR**



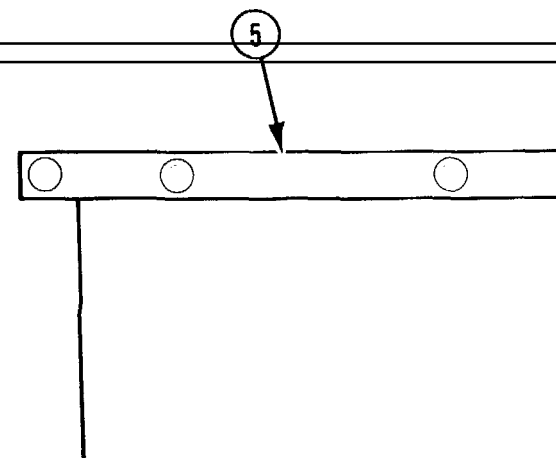
- 2 TWO CHAIN HOOKS (5). Inspect to ensure they are not missing or broken.
- 3 TWO EYE BOLTS (6) AND TWO LOCK-WASHERS (7). Inspect to ensure they are not missing or broken.



- 2 TWO CHAIN HOOKS (2), TWO EYE BOLTS (3), AND TWO LOCKWASHERS (4). Repair by replacement (app C).



- 1 SIDE CURTAIN (1). Repair torn areas with tape (item 18, app D). If not repairable replace with new fabricated item (fig. 29, app E).

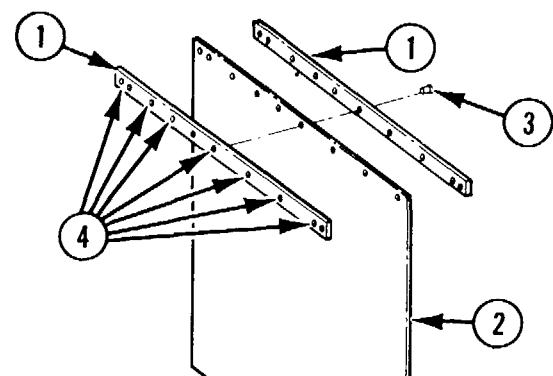


- 3 TWO ALUMINUM STRIPS (5). Replace by fabrication (fig. 30, app E).



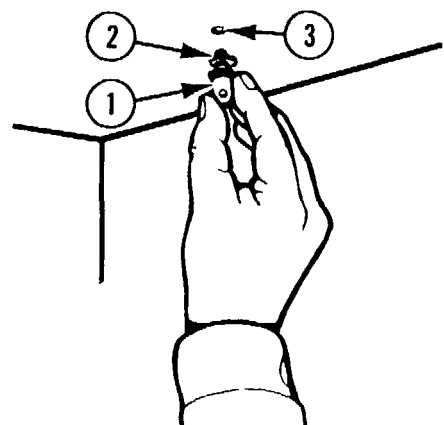
**3-36. SIDE CURTAIN ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY**

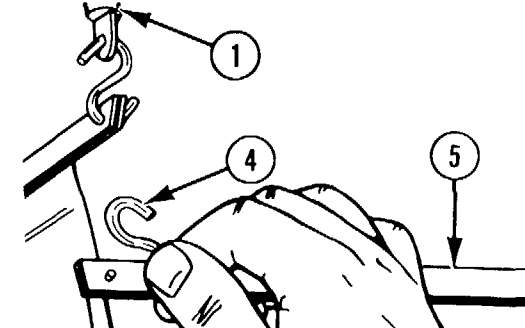


1 TWO ALUMINUM STRIPS (1). Install on side curtain (2).  
 2 SEVEN RIVETS (3). Install in seven holes (4).

**INSTALLATION**



1 TWO EYEBOLTS (1) AND TWO LOCK-WASHERS (2). Install in blind inserts (3) in ceiling.



2 TWO CHAIN HOOKS (4). Attach to side curtain assembly (5).  
 3 TWO CHAIN HOOKS (4) AND SIDE CURTAIN ASSEMBLY (5). Attach to two eye bolts (1).

**3-37. AIRHOSE--MAINTENANCE INSTRUCTIONS**

**This task covers:**

- a. Removal
- b. Inspection
- c. Disassembly
- d. Repair
- e. Reassembly
- f. Installation

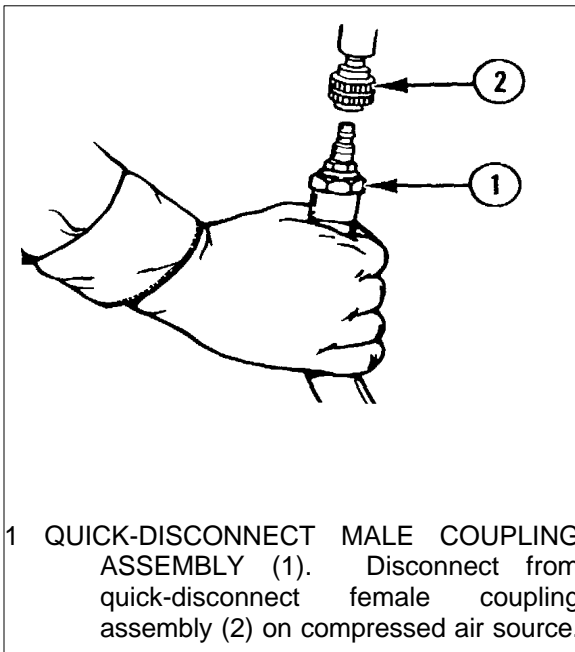
**INITIAL SETUP:**

Special Tools  
 Armament repair shop set (SC 4933-95-CL-A21)

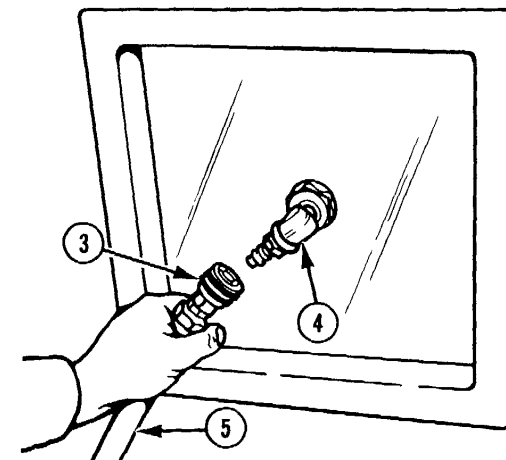
General Safety Warning

**WARNING**  
 Injury to personnel may result if pressure is not relieved before beginning any maintenance on airhose.

**REMOVAL**

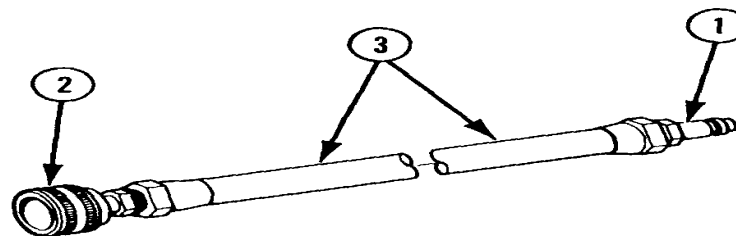


- 2 QUICK-DISCONNECT FEMALE COUPLING ASSEMBLY (3). Disconnect from quick-disconnect male coupling assembly (4) on the outside shelter wall to the left of the personnel door.
- 3 AIRHOSE (5). Remove



**INSPECTION**

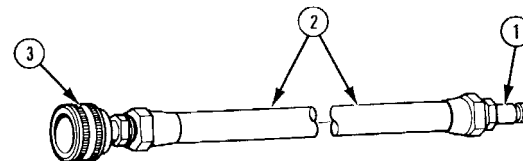
- 1 QUICK-DISCONNECT MALE COUPLING ASSEMBLY (1) AND QUICK-DISCONNECT FEMALE COUPLING ASSEMBLY (2). Check to ensure parts connect/disconnect properly with the mating parts.
- 2 HOSE (3).
  - a. Check for worn, cracked, or deteriorated rubber.
  - b. Check each end for damaged nipples



**13-37. AIRHOSE--MAINTENANCE INSTRUCTIONS (cont)**

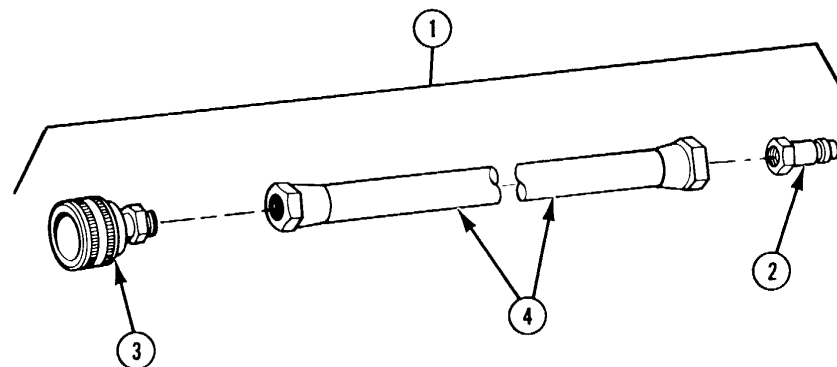
**DISASSEMBLY**

- 1 QUICK-DISCONNECT MALE COUPLING ASSEMBLY (1). Unscrew from hose (2).
- 2 QUICK-DISCONNECT FEMALE COUPLING ASSEMBLY (3). Unscrew from hose (2).



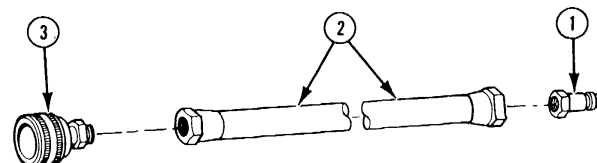
**REPAIR**

- 1 AIRHOSE (1). Replace entire assembly if any parts are missing or unrepairable.
- 2 QUICK-DISCONNECT MALE COUPLING ASSEMBLY (2) AND QUICK-DISCONNECT FEMALE COUPLING ASSEMBLY (3). Replace if items do not connect/disconnect properly with mating parts.
- 3 HOSE (4).
  - a. Replace if rubber is worn, cracked, or deteriorated.
  - b. Replace if nipples on either end are damaged



**REASSEMBLY**

- 1 QUICK-DISCONNECT MALE COUPLING ASSEMBLY (1). Screw onto hose (2).
- 2 QUICK-DISCONNECT FEMALE COUPLING ASSEMBLY (3). Screw onto hose (2).



**INSTALLATION**

1 AIRHOSE (1). Place between compressed air source and quick-disconnect male coupling assembly (2) on outside shelter wall to left of personnel door.

2. QUICK-DISCONNECT MALE COUPLING ASSEMBLY (3). Connect to quick-disconnect female coupling assembly (4) on compressed air source

3 QUICK-DISCONNECT FEMALE COUPLING ASSEMBLY (5). Connect to quick-disconnect male coupling assembly (2) on outside shelter wall to the left of the personnel door.

**3-38. SORTING FILE--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- a. Inspection
- b. Service
- c. Removal
- d. Disassembly
- e. Repair
- f. Reassembly
- g. Installation

**INITIAL SETUP**

**Special Tools**

- Armament repair shop set (SC 4933-95-CL-A21)
- AVIM sheet metal shop set (SC 4920-99-CL-A85)
- AVIM welding shop set (SC 4920-99-CL-A88)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

**Materials/Parts**

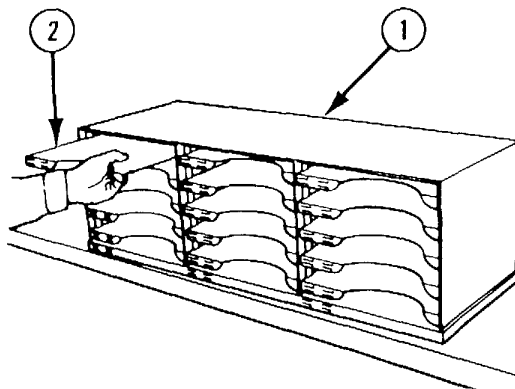
Polishing cloth (item 5, app D)

**References**

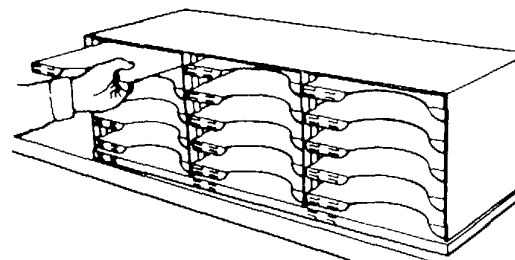
- TM 9-237
- Appendix D

**INSPECTION**

- 1 FILE (1). Inspect for bent or broken parts.
- 2 FIFTEEN SHELVES (2). Inspect for bent or broken parts.

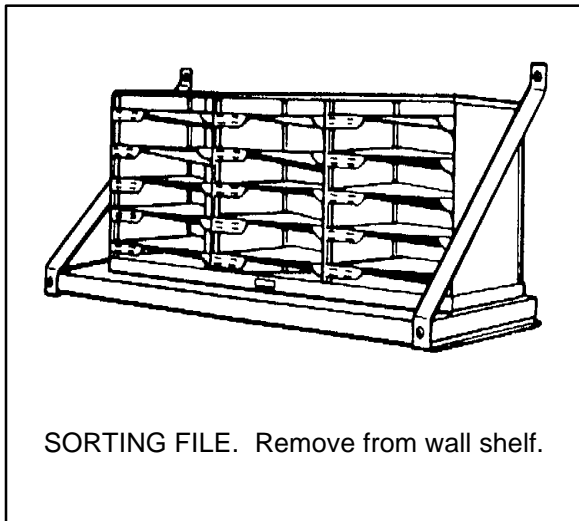


**SERVICE**



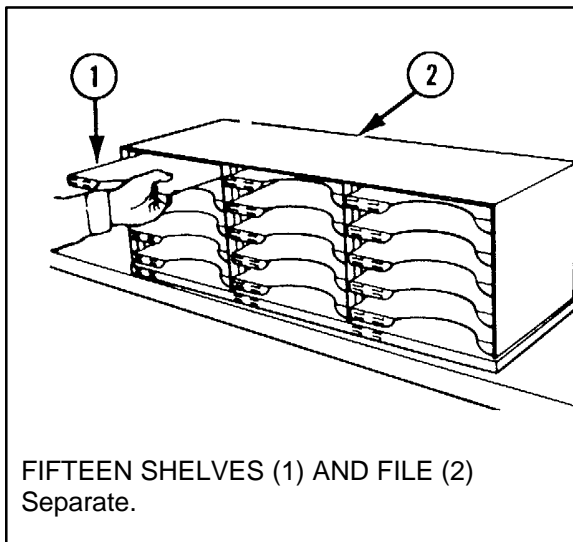
SORTING FILE. Remove dust or dirt using polishing cloth (item 5, app D).

**REMOVAL**



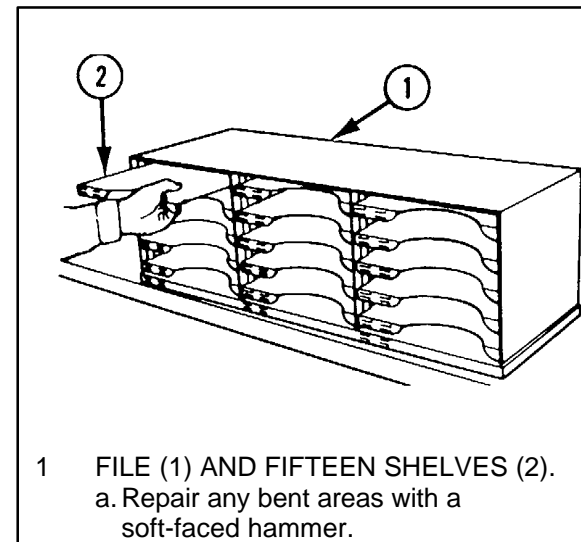
SORTING FILE. Remove from wall shelf.

**DISASSEMBLY**



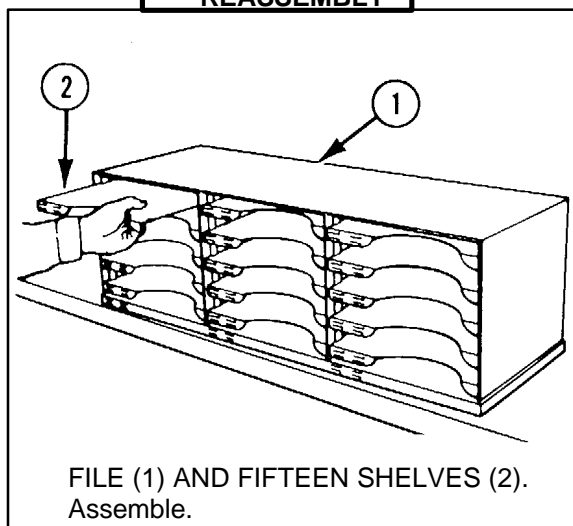
FIFTEEN SHELVES (1) AND FILE (2) Separate.

**REPAIR**



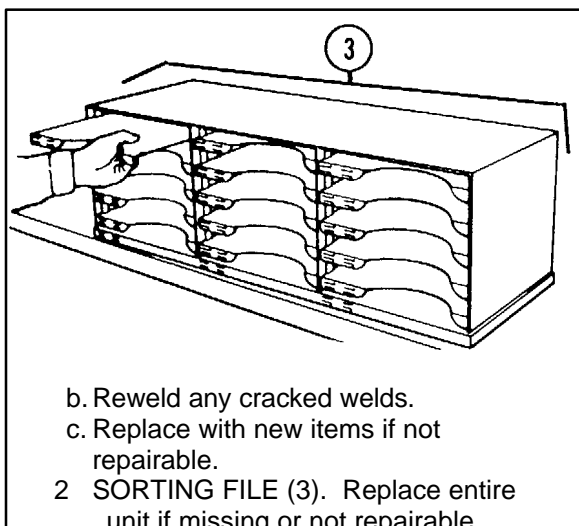
1 FILE (1) AND FIFTEEN SHELVES (2).  
a. Repair any bent areas with a soft-faced hammer.

**REASSEMBLY**

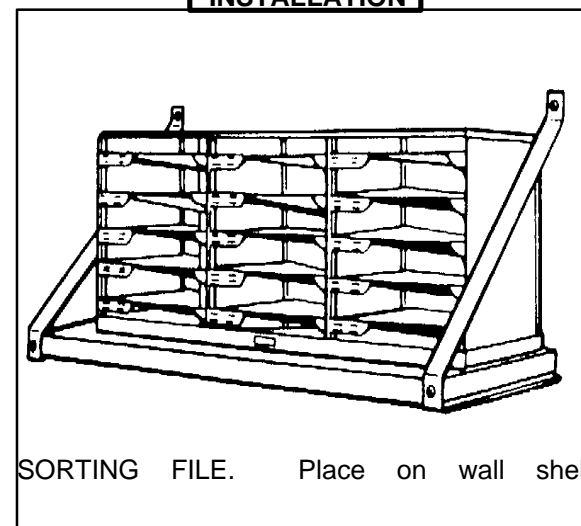


FILE (1) AND FIFTEEN SHELVES (2). Assemble.

**INSTALLATION**



b. Reweld any cracked welds.  
c. Replace with new items if not repairable.  
2 SORTING FILE (3). Replace entire unit if missing or not repairable



SORTING FILE. Place on wall shelf

**3-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:

- |                |                 |
|----------------|-----------------|
| a. Inspection  | e. Reassembly   |
| b. Removal     | f. Test         |
| c. Disassembly | g. Installation |
| d. Repair      |                 |

INITIAL SETUP

Test Equipment  
Ohmmeter

Special Tools

Armament repair shop set (SC 4933-95-CL-A21)

Basic aircraft armament repair tool set (SC 5180-95-CL-B09)

Removal tool no.4 (MS90562-5)

Removal tool no.6 (MS90562-6)

Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

Materials/Parts

Solder (item 16, app D)

Bushings (8) (MS3348-4-6L)

References

Appendix D

3-296 Repair procedures for 120/208V cable assembly--electrical plug connector (female).

3-298 Repair procedures for 120/208V cable assembly--electrical plug connector (male).

Troubleshooting Reference

3-8 Environmental control units or exhaust fans do not operate correctly.

**NOTE**

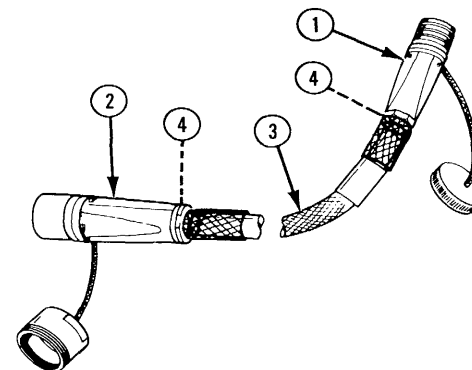
There are two 120/208V cable assemblies furnished to connect the cable adapter assembly to the shop set. One or both 120/208V cable assemblies may be used as required.

The procedures listed pertain to only one 120/208V cable assembly .Repeat procedures for second 120/208V cable assembly.

**3-39. 120/208V CABLE ASSEMBLY—MAINTENANCE INSTRUCTIONS (cont.)**

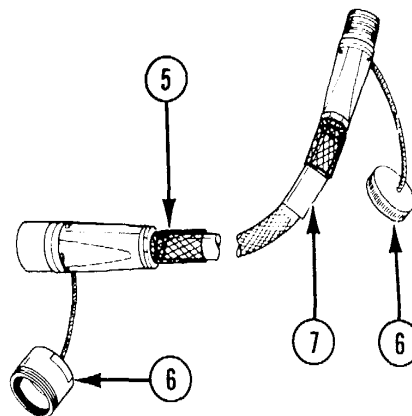
**REMOVAL (cont.)**

- 1 ELECTRICAL PLUG CONNECTOR (FEMALE) (1) AND ELECTRICAL PLUG CONNECTOR (MALE) (2). Check for bent or broken parts.
- 2 CABLE (3).
  - a. Check for worn, cracked, or cut insulation.
  - b. Check for cut or broken wires.
- 3 TWO GLANDS (4). Check for deformed or deteriorated condition.



**REMOVAL**

- 4 TWO GRIPS (5). Check for broken parts.
- 5 TWO DUST COVERS (6). Check for bent or broken parts.
- 6 BAND (7). Check to ensure it is not missing and is readable



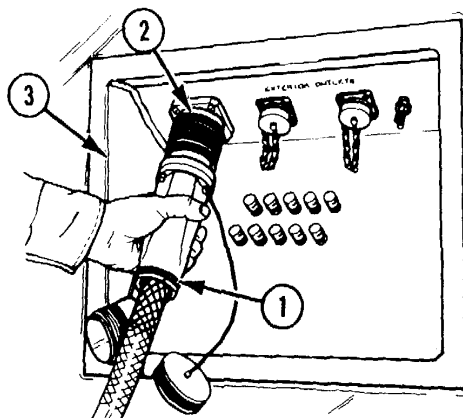
**WARNING**  
 De-energize shop set by placing circuit breaker on power distribution panel connected to power source in OFF position and then disconnect 120/208V cable assembly from shelter



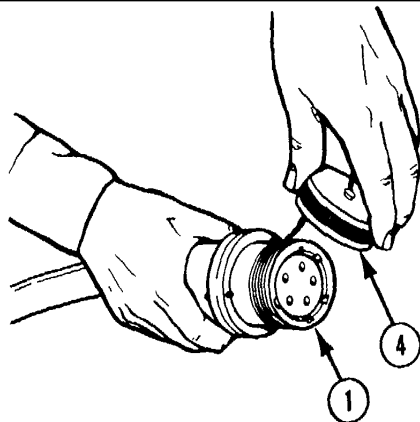
**3-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REMOVAL (cont)**

1 ELECTRICAL PLUG CONNECTOR FEMALE) (1). Disconnect from male connector (2) on power input panel (3) on exterior shelter wall to the left of personnel door.

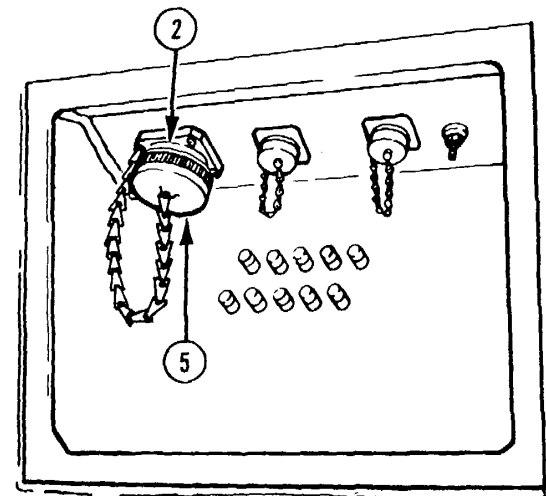


**CAUTION**  
Install dust covers on electrical plug connectors immediately after disconnection for protection against dirt, dust, etc.

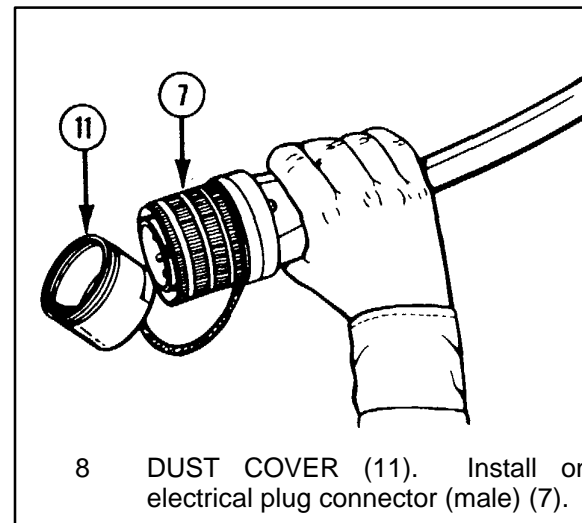
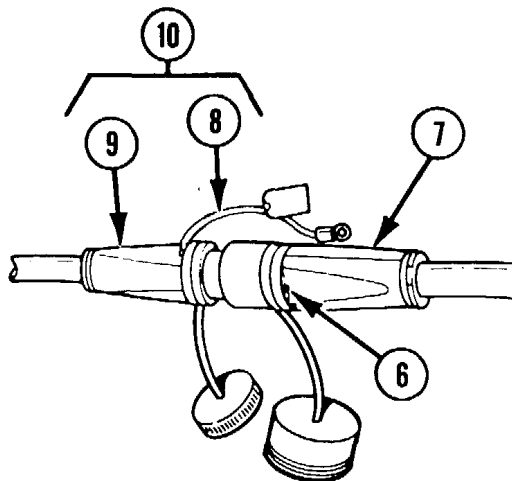


2 DUST COVER (4). Install on electrical plug connector (female) (1).

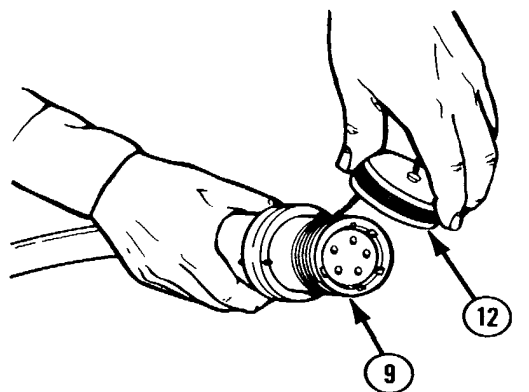
3 DUST COVER (5). Install on male connector (2)



- 4 SCREW (6). Remove from electrical plug connector (male) (7).
- 5 CABLE ASSEMBLY (8). Remove one end from electrical plug connector (male) (7).
- 6 SCREW (6). Replace on electrical plug connector (male) (7).
- 7 ELECTRICAL PLUG CONNECTOR (MALE) (7). Disconnect from female connector (9) on cable adapter assembly (10).

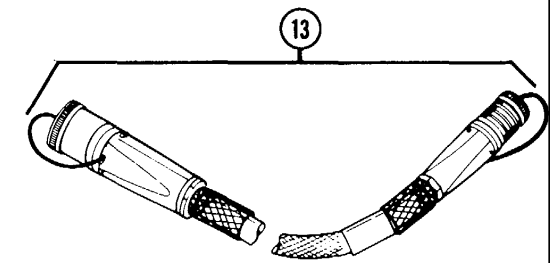


8 DUST COVER (11). Install on electrical plug connector (male) (7).



9. DUST COVER (12). Install on female connector (9).

10 120/208V CABLE ASSEMBLY (13).  
Remove.



**3-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY**

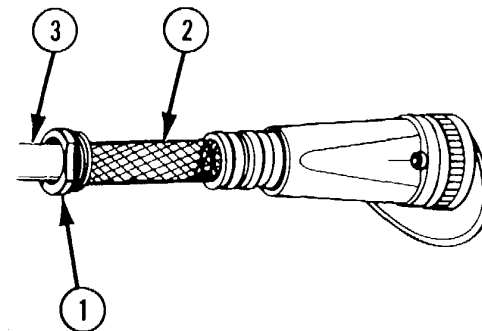
**CAUTION**

Gland nut has left-hand threads and should be loosened by turning in the opposite direction from that used to loosen standard right-hand threaded nuts.

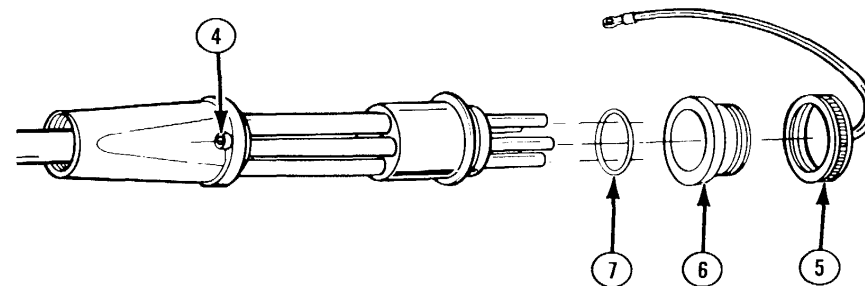
**NOTE**

Steps 1 thru 10 pertain to removal of the electrical plug connector (female)

- 1 GLAND NUT (1). Loosen.
- 2 GRIP (2). Push weave together.
- 3 GLAND NUT (1) AND GRIP (2). Slide back over cable (3)

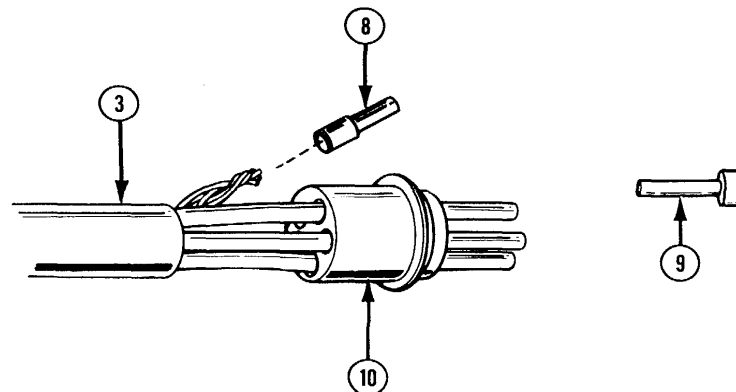


- 4 THREE SCREWS (4). Remove.
- 5 DUST COVER (5) AND FORWARD CONNECTOR HOUSING (6). Remove.
- 6 PREFORMED PACKING (7). Remove.



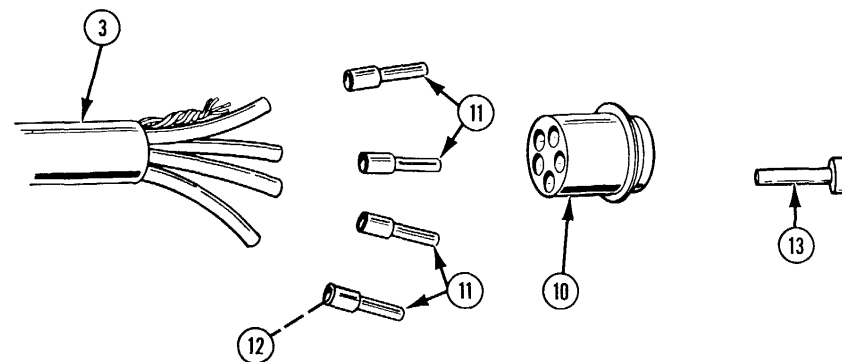
7 GROUND SOCKET (8).

- a. Use removal tool no. 6 (9) to release from socket insert (10).
- b. Remove from wire of cable (3) by cutting.



8 FOUR SOCKETS (A, B, C, AND N) (11) AND FOUR BUSHINGS (12).

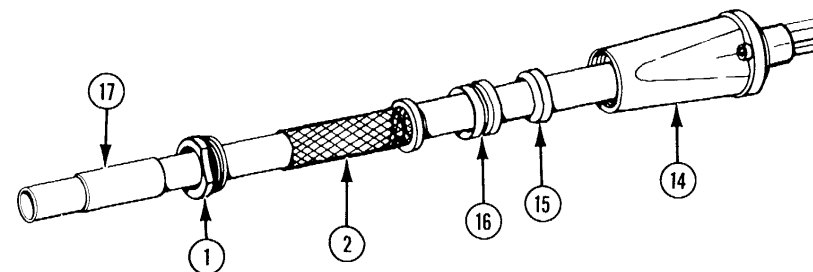
- a. Use removal tool no. 4 (13) to release from socket insert (10).
- b. Remove from wires of cable (3) by cutting.



**3-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**DISASSEMBLY (cont)**

- 9 REAR CONNECTOR HOUSING (14), SPACER (15), GLAND (16), GRIP (2), AND GLAND NUT (1). Remove.
- 10 BAND (17). Remove.



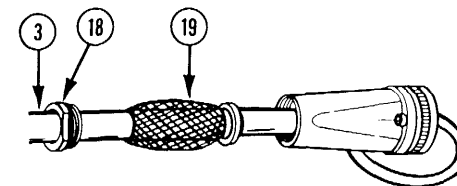
**CAUTION**

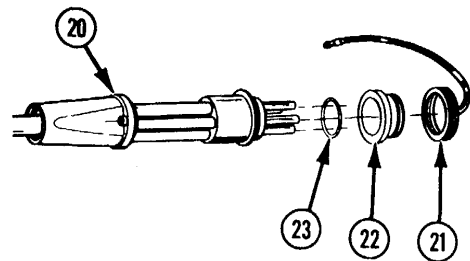
Gland nut has left-hand threads and should be loosened by turning in the opposite direction from that used to loosen standard right-hand threaded nuts.

**NOTE**

Steps 11 thru 20 pertain to removal of the electrical plug connector (male).

- 11 GLAND NUT (18). Loosen.
- 12 GRIP (19). Push weave together.
- 13 GLAND NUT (18) AND GRIP (19). Slide back over cable (3).

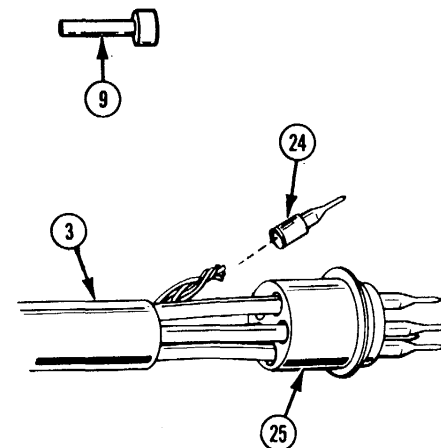




- 14 THREE SCREWS (20). Remove.
- 15 DUST COVER (21) AND FORWARD CONNECTOR HOUSING (22). Remove.
- 16 PREFORMED PACKING (23). Remove.

17 CONTACT PIN (G) (24).

- a. Use removal tool no. 6 (9) to release from pin socket (25).
- b. Remove from wires of cable (3) by cutting.

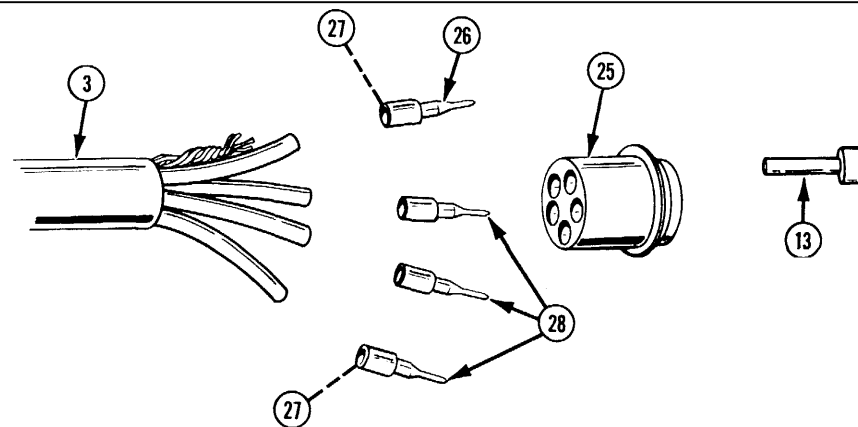


18 CONTACT PIN (N) (26) AND BUSHING (27).

- a. Use removal tool no. 4 (13) to release from pin socket (25).
- b. Remove from wire of cable (3) by cutting.

19 THREE CONTACT PINS (A, B, AND C) (28) AND THREE BUSHINGS (27).

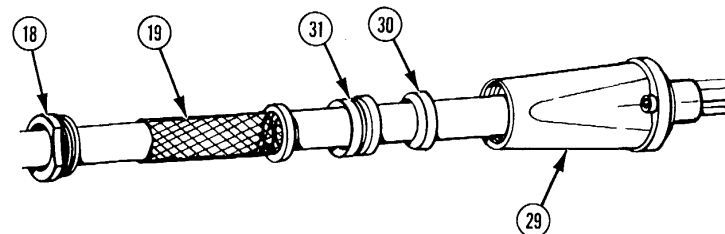
- a. Use removal tool no. 4 (13) to release from pin socket (25).
- b. Remove from wires of cable (3) by cutting.



**3-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

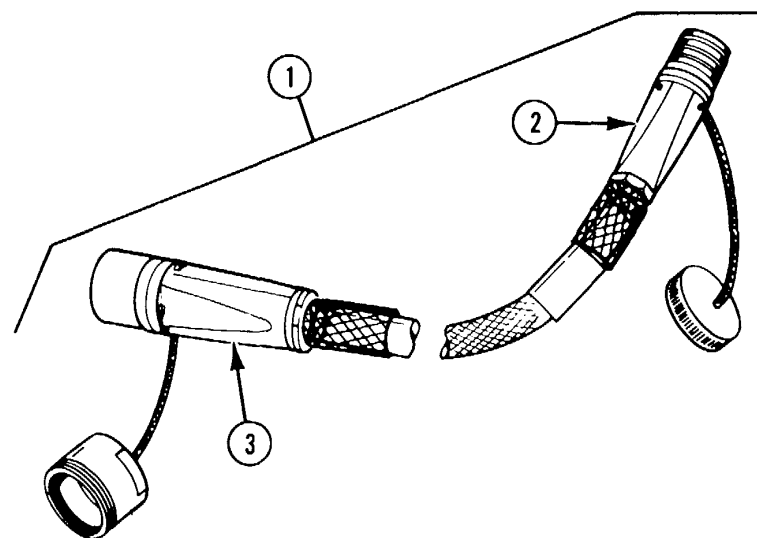
**DISASSEMBLY (cont)**

20 REAR CONNECTOR HOUSING (29), SPACER (30), GLAND (31), GRIP (19), AND GLAND NUT (18). Remove.



**REPAIR**

- 1 120/208V CABLE ASSEMBLY (1). Replace entire assembly if missing or not repairable.
- 2 ELECTRICAL PLUG CONNECTOR (FEMALE) (2).
  - a. Replace if not repairable.
  - b. Refer to paragraph 3-40, page 3-296, for repair instructions.
- 3 ELECTRICAL PLUG CONNECTOR (MALE)(3).
  - a. Replace if not repairable.
  - b. Refer to paragraph 3-41, page 3-298, for repair instructions.



4 CABLE (4).

- a. Repair, if possible, damaged insulation or wires by shortening slightly.
- b. Replace with a 100-ft (30.48-m) long piece of cable (fig. 22, app E) if not repairable.

5 TWO GLANDS (5). Replace if deformed or deteriorated.

6 TWO GRIPS (6). Replace if broken.

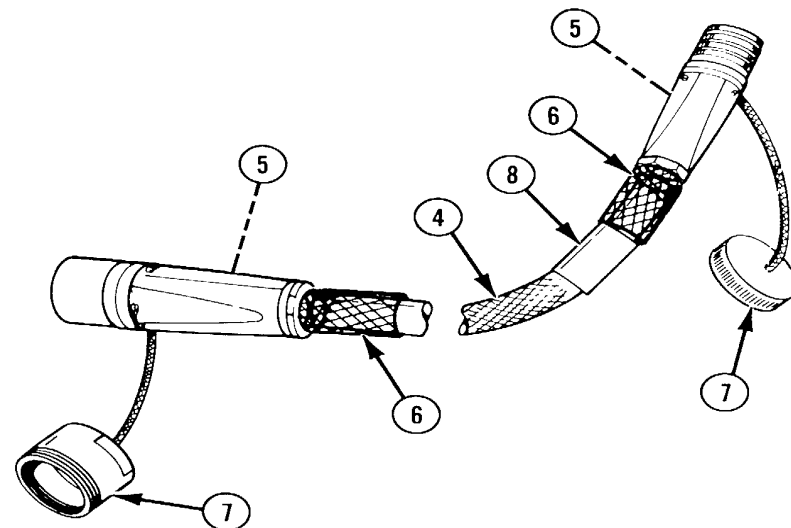
7 TWO DUST COVERS (7). Replace if bent or broken.

8 BAND (8).

- a. Clearly mark any hard to read parts with black letters 0.31-in. (0.79-cm) high, using marking ink (item 17, app D), to read as follows:

CABLE ASSEMBLY  
PART NO. 72289-100

- b. If not repairable, replace with a new fabricated item (fig. 23, app E).



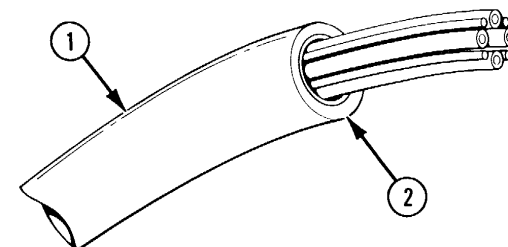
**REASSEMBLY**

**NOTE**

The following procedures pertain to assembly of the electrical plug connector (male).

1 CABLE (1).

- a. Cut both ends square.
- b. Remove outer jacket (2) to 4.25 in. (10.80 cm) from each end.





**13-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

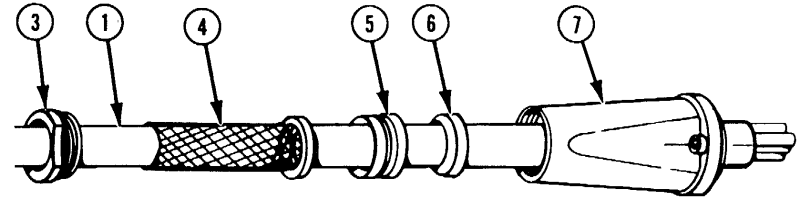
2 GLAND NUT (3). Slip on cable (1).

3 GRIP (4). Slip on cable (1).

4 GLAND (5). Slip on cable (1).

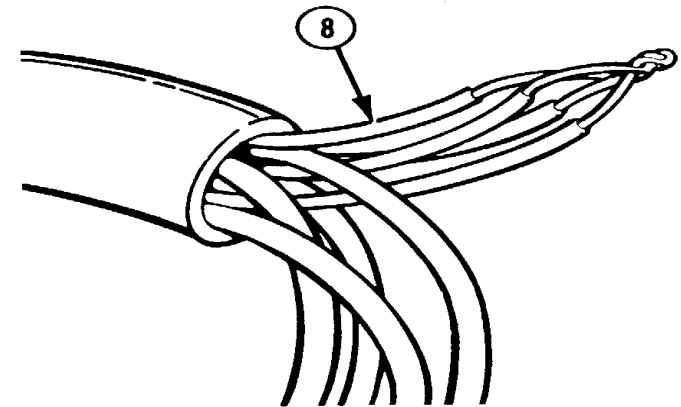
5 SPACER (6). Slip on cable (1).

6 REAR CONNECTOR HOUSING (7). Slip on cable (1).



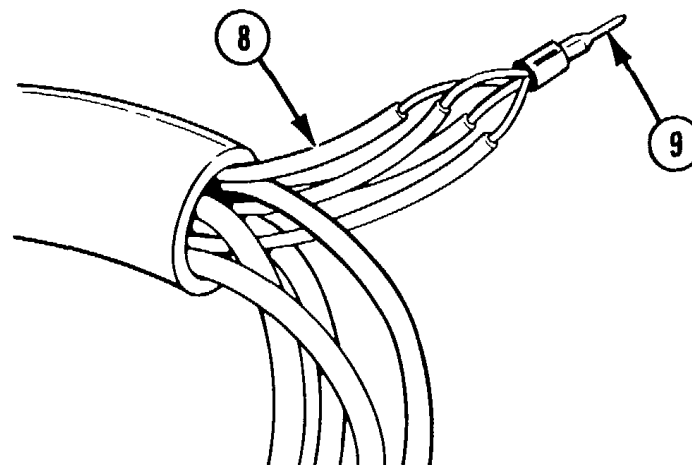
7 FOUR GREEN WIRES (8).

- a. Remove insulation to 1.50 in. (3.81 cm) from end.
- b. Bring three of the green wires to the green wire between the red and blue or orange wire; twist ends of all four green wires together.
- c. Cut twisted ends to 0.75 in. (1.91 cm) from insulation



8 CONTACT PIN (G) (9).

- a. Slip onto twisted ends of four green wires (8).
- b. Solder in place using solder (item 16, app D).



9 WHITE WIRE (10).

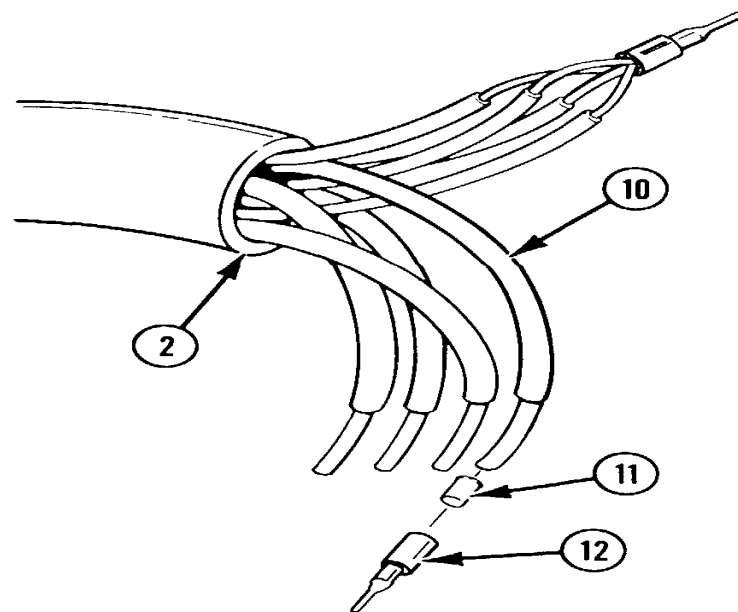
- a. Cut carefully to allow wire to protrude 3.25 in. (8.26 from outer jacket (2).
- b. Remove 0.75 in. (1.91 cm) of insulation from end of wire
- c. Twist end.

10 BUSHING (11).

- a. Slip onto white wire (10).
- b. Solder in place using solder (item 16, app D).

11 CONTACT PIN (N) (12).

- a. Slip on bushing (11) attached to white wire (10).
- b. Solder in place using solder (item 16, app D).



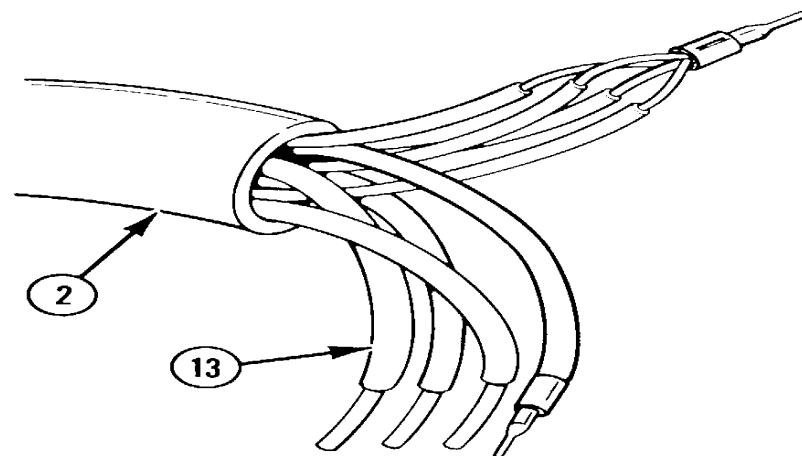
**13-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

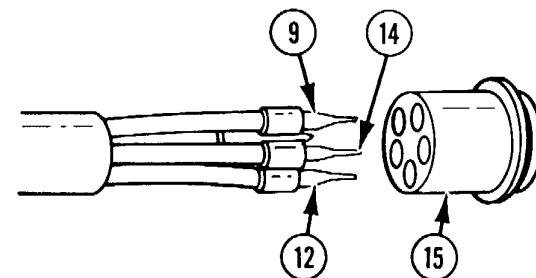
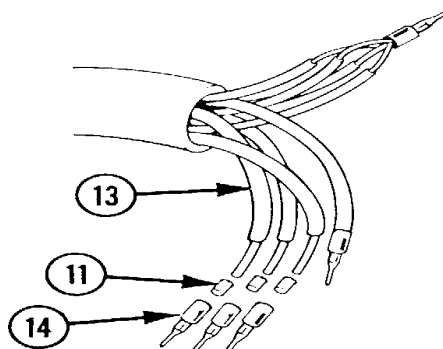
**NOTE**

Step 12 pertains to three wires which are black, red, and blue or orange in color.

- 12 THREE WIRES (13).
  - a. Cut carefully to allow wires to protrude 3.25 in. (8.26 cm) from outer jacket (2).
  - b. Remove 0.75 in. (1.91 cm) of insulation from end of wires.
  - c. Twist ends.



- 13 THREE BUSHINGS (11).
  - a. Slip onto three wires (13).
  - b. Solder in place using solder (item 16, app D).
- 14 THREE CONTACT PINS (A, B, AND C) (14).
  - a. Slip on three bushings (11) attached to three wires (13).
  - b. Solder in place using solder (item 16, app D).



- 15 CONTACT PIN (G) (9), CONTACT PIN (N) (12), AND THREE CONTACT PINS (A, B, AND C) (14). Install in pin socket (15) according to information in table 3-8.

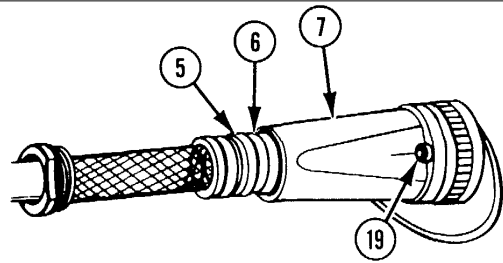
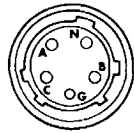
Table 3-8. Wire Positioning on Connector

**NOTE**

Use the following information to obtain correct wire polarity.

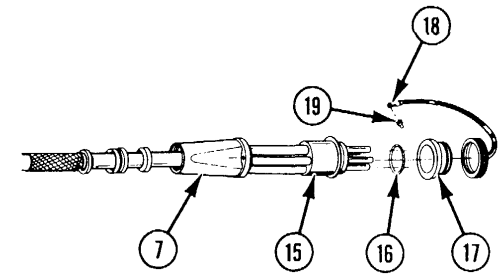
Wire color	Designation on socket
------------	-----------------------

Black	A
Red	B
Blue or Orange	C
White	N
Green G	



- 20 THREE SCREWS (19). Install.  
 21 SPACER (6) AND GLAND (5). Slide into position at end of rear connector housing (7).

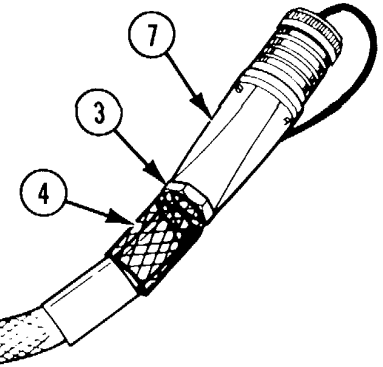
- 16 PIN SOCKET (15). Slide into rear connector housing (7).  
 17 PREFORMED PACKING (16). Install.  
 18 FORWARD CONNECTOR HOUSING (17). Install.  
 19 EYELET OF DUST COVER (18) AND SCREW (19). Assemble.



- 22 GRIP (4). Push together.

**CAUTION**  
 Gland nut has left-hand threads and should be tightened by turning in the opposite direction from that used to tighten standard right-hand threaded nuts.

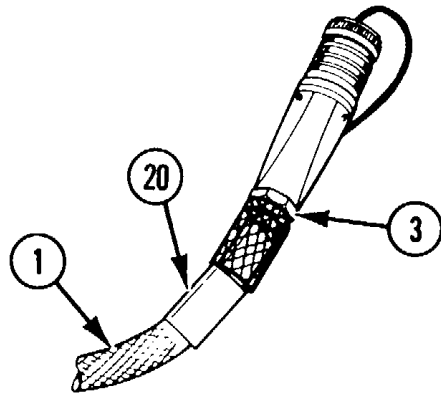
- 23 GLAND NUT (3).  
 a. Slide toward rear connector housing (7).



**3-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

- 23 GLAND NUT (3). (cont)
  - b. Tighten to a torque level of 35 to 40 lb-ft (47.25 to 54 N-m).
  - c. Retorque to same level after approximately 12 hours.
- 24 BAND (20). Slip on cable (1).

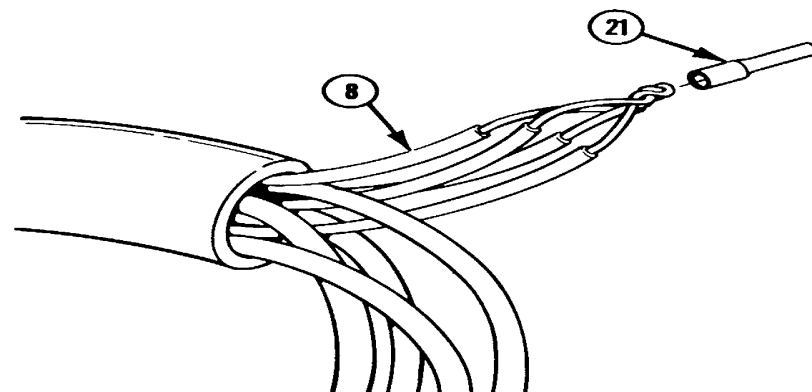


**NOTE**  
 The following procedures pertain to assembly of the electrical plug connector (female).

- 25 CABLE (1).
  - a. Cut both ends square.
  - b. Remove outer jacket (2) to 4.25 in. (10.80 cm) from each end.

- 26 GLAND NUT (3). Slip on cable (1).
- 27 GRIP (4). Slip on cable (1).
- 28 GLAND (5). Slip on cable (1).
- 29 SPACER (6). Slip on cable (1).
- 30 REAR CONNECTOR HOUSING (7)  
Slip on cable (1)

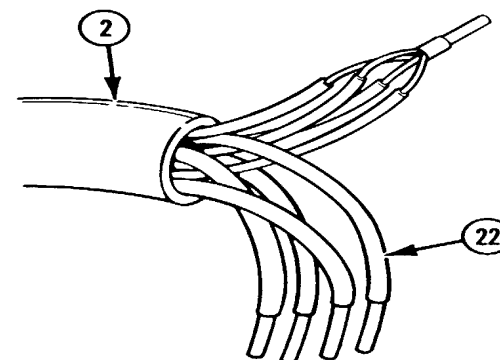
- 31 **FOUR GREEN WIRES (8).**
  - a. Remove insulation to 1.50 in. (3.81 cm) from end.
  - b. Bring three of the green wires to the green wire between the red and blue or orange wire; twist ends of all four green wires together.
  - c. Cut twisted ends to 0.75 in. (1.91 cm) from insulation.
- 32 **GROUND SOCKET (21).**
  - a. Slip on twisted ends of four green wires (8).
  - b. Solder in place using solder (item 16, app D).



**NOTE**

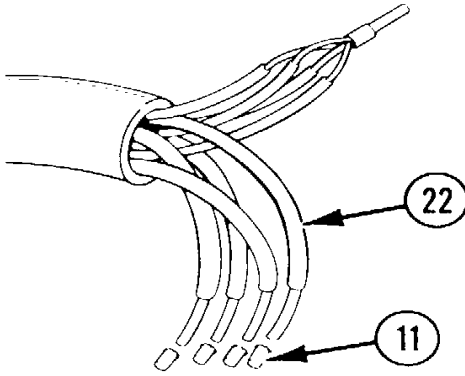
Step 33 pertains to four wires which are white, black, red, and blue or orange in color.

- 33 **FOUR WIRES (22).**
  - a. Cut carefully to allow wire to protrude 3.25 in. (8.26 cm) from outer jacket (2).
  - b. Remove 0.75 in. (1.91 cm) of insulation from end of wires.
  - c. Twist ends.



**3-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**



34 FOUR BUSHINGS (11).

- Slip onto four wires (22).
- Solder in place using solder (item 16, app D).

35 FOUR SOCKETS (A, B, C, AND N) (23).

- Slip on four bushings (11).
- Solder in place using solder (item 16, app D).
- Install in socket insert (24) according to information in table 3-9

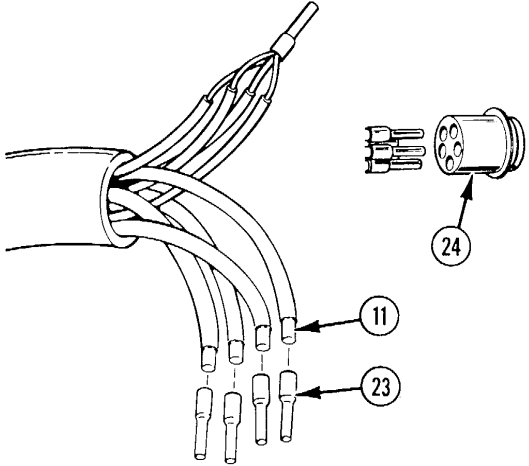
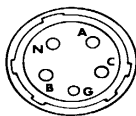


Table 3-9. Wire Positioning on Female Connector

**NOTE**  
Use the following information to obtain correct wire polarity.

Wire color	Designation on socket
------------	-----------------------

Black	A
Red	B
Blue or Orange	C
White	N
Green	G

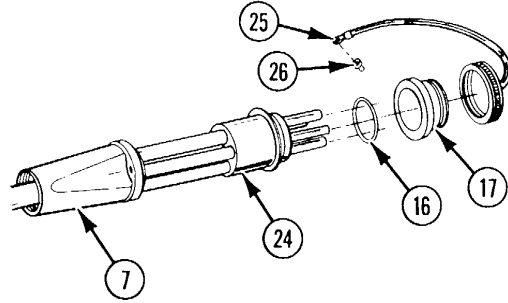


36 SOCKET INSERT (24) AND REAR CONNECTOR HOUSING (7). Assemble.

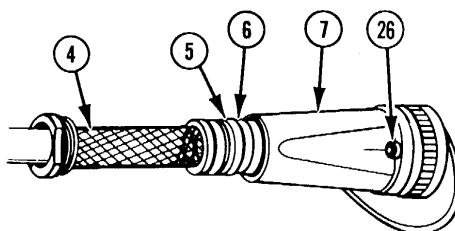
37 PREFORMED PACKING (16). Install.

38 FORWARD CONNECTOR HOUSING (17). Install.

39 EYELET OF DUST COVER (25) AND SCREW (26). Assemble



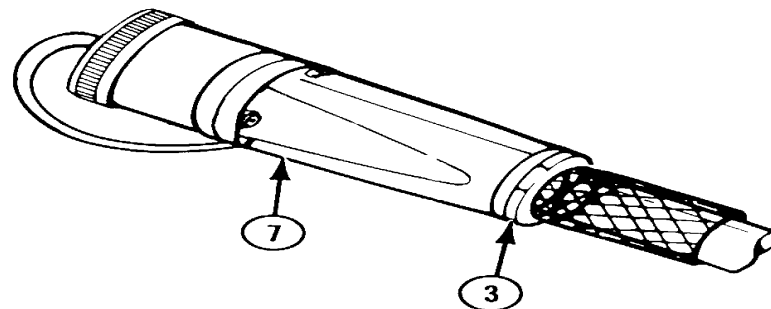
- 40 THREE SCREWS (26). Install.
- 41 SPACER (6) AND GLAND (5). Slide into position at end of rear connector housing (7).
- 42 GRIP (4). Push together



**CAUTION**

Gland nut has left-hand threads and should be tightened by turning in the opposite direction from that used to tighten standard right-hand threaded nuts.

- 43 GLAND NUT (3).
  - a. Slide toward rear connector housing (7).
  - b. Tighten to a torque level of 35 to 40 lb-ft (47.25 to 54 N-m).
  - c. Retorque to same level after approximately 12 hours.





**3-39. 120/208V CABLE ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)**

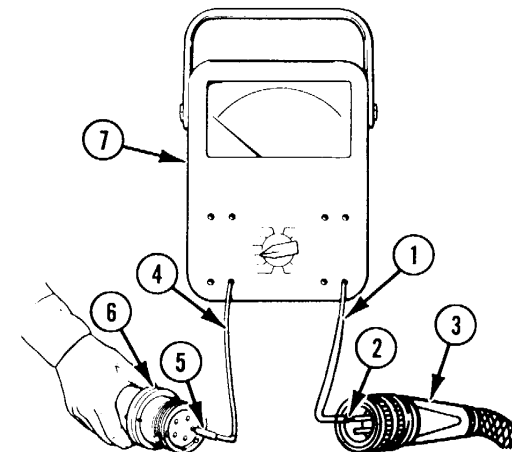
**TEST**

**NOTE**

Correct wiring of the 120/208V cable assembly should be checked with an ohmmeter as described below (electrical continuity test). An end view of the connector is shown for reference.

All five sets of contact pins (A, B, C, G, and N) should be checked according to steps 1 thru 3.

- 1 OHMMETER LEAD NO. 1 (1).  
Place on one contact pin (A, B, C, G, or N) (2) on electrical plug connector (male) (3).
- 2 OHMMETER LEAD NO. 2 (4). Place on corresponding socket (5) on electrical plug connector (female) (6) at other end of 120/- 208V cable assembly.
- 3 OHMMETER (7). Check to ensure reading is approximately zero.



**INSTALLATION**

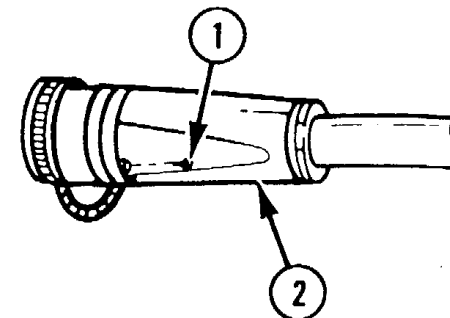
**WARNING**

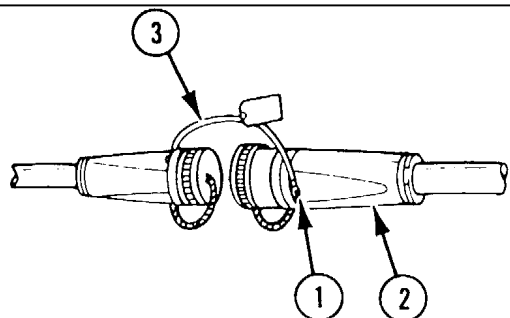
De-energize shop set by placing circuit breaker on power distribution panel connected to power source in OFF position and then disconnect 120/ 208V cable assembly from shelter.

**CAUTION**

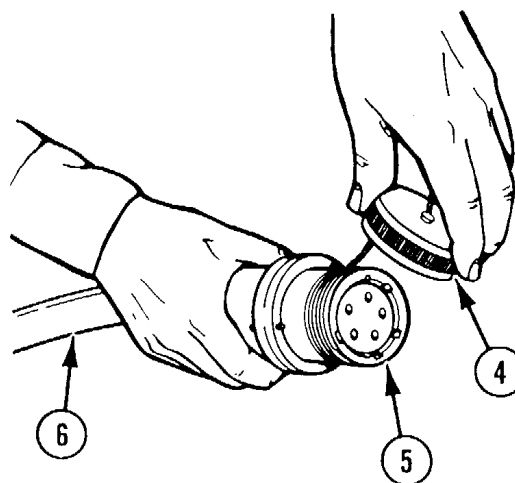
Remove dust covers from connectors just prior to connection to ensure protection against dirt, dust, etc.

- 1 SCREW (1). Remove from electrical plug connector (male) (2) on 120/208V cable assembly.

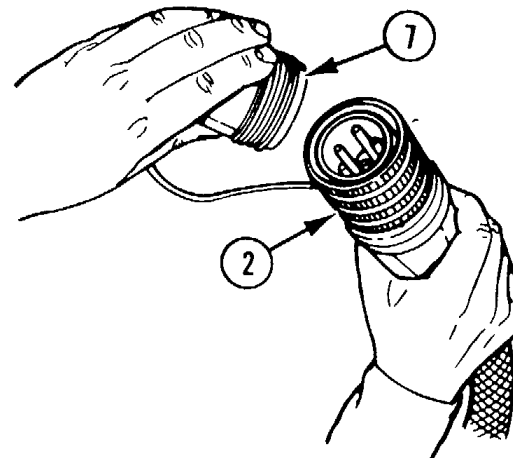




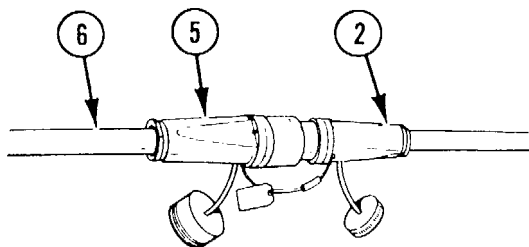
- 2 SCREW (1) AND CABLE ASSEMBLY (3) Assemble.
- 3 SCREW (1). Install in electrical plug connector (male) (2).



- 4 DUST COVER (4). Remove from female connector (5) on cable adapter assembly (6).



- 5 DUST COVER (7). Remove from electrical plug connector (male) (2).

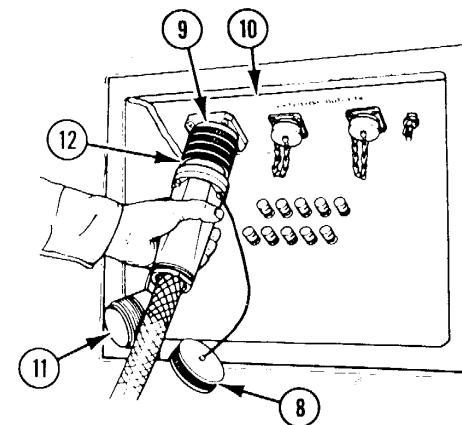


- 6 ELECTRICAL PLUG CONNECTOR (MALE) (2). Connect to female connector (5) on cable adapter assembly(6).

- 7 DUST COVER (8). Remove from male connector (9) on power input panel (10).

- 8 DUST COVER (11). Remove from electrical plug connector (female) (12) on 120/208V cable assembly.

- 9 ELECTRICAL PLUG CONNECTOR (FEMALE) (12). Connect to male connector (9).



**3-40. 120/208V CABLE ASSEMBLY--ELECTRICAL PLUG CONNECTOR (FEMALE)--MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:

- a. Removal
- b. Inspection
- c. Service
- d. Repair
- e. Installation

INITIAL SETUP

Special Tools

- Armament repair shop set (SC 4933-95-CL-A2)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)
- Removal tool no. 4 (MS90562-5)
- Removal tool no. 6 (MS90562-6)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

Material s/Parts

- Polishing Cloth (item 5, app D)
- Solder (item 16, app D)
- Bushings (4) (MS3348-4-6L)
- Ground Socket (M39029/49-329)

- Preformed packing (MS29513-132)
- Sockets (A, B, C, and N) (4) (M39029/49-331)

References

- Appendix D
- 3-276 Reassembly, test, and installation procedures for 120/208V cable assembly.
- 3-276 Removal and disassembly procedures for 120/208V cable assembly.

Troubleshooting Reference

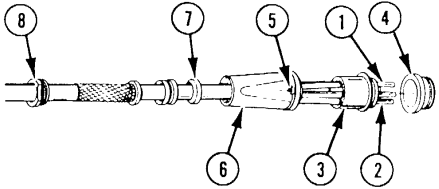
- 3-8 Environmental control units or exhaust fans do not operate correctly

**REMOVAL**

Refer to removal and disassembly procedures on paragraph 3-39, page 3-276, for the 120/208V cable assembly.

**INSPECTION**

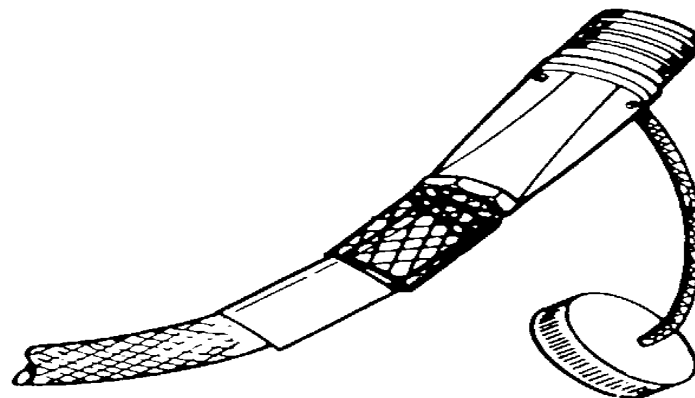
- 1 GROUND SOCKET (1) AND FOUR SOCKETS (A, B, C, AND N) (2). Check for damaged or corroded parts.
- 2 SOCKET INSERT (3), FORWARD CONNECTOR HOUSING (4), THREE SCREWS (5), REAR CONNECTOR HOUSING (6), SPACER (7), AND GLAND NUT (8). Check for bent or broken parts.



**Change 1 3-296**

**SERVICE**

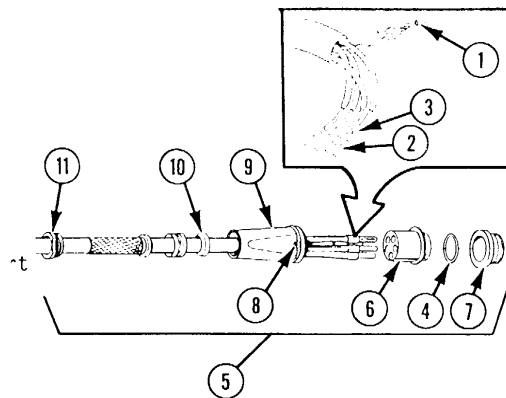
ELECTRICAL PLUG CONNECTOR (FEMALE). Remove dirt with polishing cloth (item 5, app D)



ELECTRICAL PLUG CONNECTOR (FEMALE)

**REPAIR**

- 1 GROUND SOCKET (1), FOUR SOCKETS (A, B, C, AND N) (2), FOUR BUSHINGS (3), AND PREFORMED PACKING (4). Replace with new parts if removed.
- 2 ELECTRICAL PLUG CONNECTOR (FEMALE) (5). Replace with a new item if any of the following parts are damaged: socket insert (6), forward connector housing (7), three screws (8), rear connector housing (9), spacer (10), and gland nut (11).



**INSTALLATION**

Refer to reassembly, test, and installation procedures on paragraph 3-39, page 3-276, for the 120/208V cable assembly.

**3-41. 120/208V CABLE ASSEMBLY--ELECTRICAL PLUG CONNECTOR (MALE)--MAINTENANCE INSTRUCTIONS**

**THIS TASK COVERS:**

- a. Removal
- b. Inspection
- c. Service
- d. Repair
- e. Installation

**INITIAL SETUP**

**Special Tools**

- Armament repair shop set (SC 4933-95-CL-A2)
- Basic aircraft armament repair tool set (SC 5180-95-CL-B09)
- Removal tool no. 4 (MS90562-5)
- Removal tool no. 6 (MS90562-6)
- Supplemental aircraft armament repair tool set (SC 5180-95-CL-B10)

**Material s/Parts**

- Polishing cloth (item 5, app D)
- Solder item 5 Tem 16, app D)
- Contact pin (A, B, and C) (3) (M39029/48-320)
- Contact pin (G) (M39029/48-318)

- Contact pin (N) (M39029/48-321)
- Preformed packing (MS29513-132)

**References**  
Appendix D

- 3-276 Reassembly, test, and installation procedures for 120/208V cable assembly.
- 3-276 Removal and disassembly procedures for 120/208V cable assembly.

**Troubleshooting Reference**

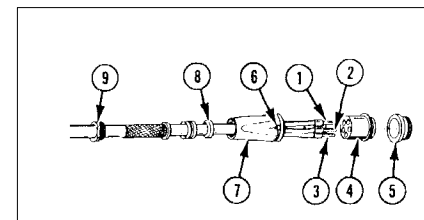
- 3-8 Environmental control units or exhaust fans do not operate correctly.

**REMOVAL**

Refer to removal and disassembly procedures on paragraph 3-39, page 3-276, for the 120/208V cable assembly.

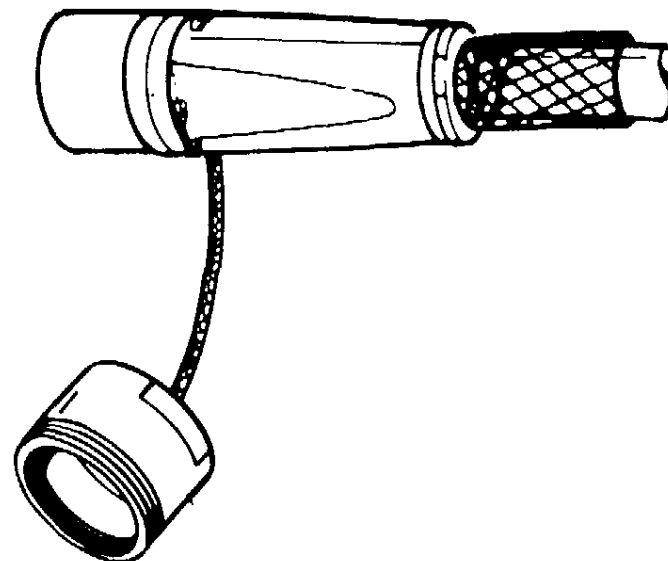
**INSPECTION**

- 1 CONTACT PIN (G) (1), CONTACT PIN (N) (2), AND THREE CONTACT PINS (A, B, AND C) (3). Check for bent, broken, or corroded parts.
- 2 PIN SOCKET (4), FORWARD CONNECTOR HOUSING (5), THREE SCREWS (6), REAR CONNECTOR HOUSING (7), SPACER (8), AND GLAND NUT (9). Check for bent or broken parts.



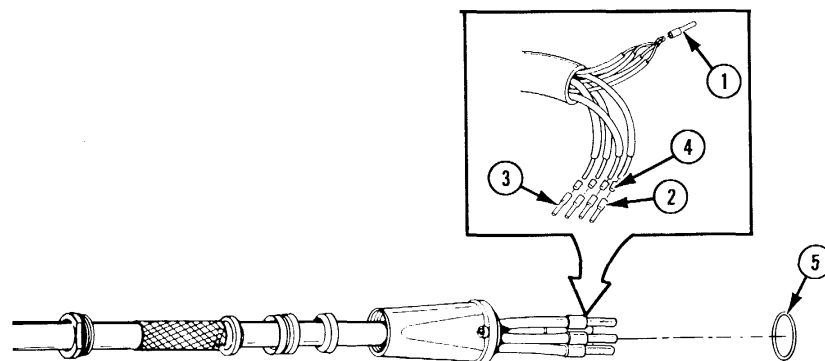
**SERVICE**

ELECTRICAL PLUG CONNECTOR (MALE). Remove dirt with polishing cloth (item 5, app D).



**REPAIR**

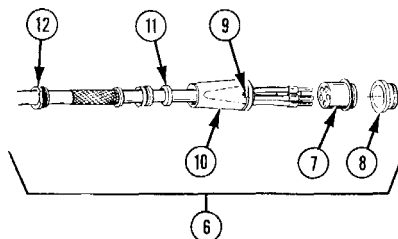
1 CONTACT PIN (G) (1), CONTACT PIN (N) (2), THREE CONTACT PINS (A, B, AND C) (3), FOUR BUSHINGS (4), AND PREFORMED PACKING (5). Replace with new parts if removed



**3-41. 120/208V CABLE ASSEMBLY--ELECTRICAL PLUG CONNECTOR (MALE)--MAINTENANCE INSTRUCTIONS (cont)**

**REPAIR (cont)**

2 ELECTRICAL PLUG CONNECTOR (MALE) (6). Replace with a new item if any of the following parts are damaged: pin socket (7), forward connector housing (8), three screws (9), rear connector housing (10), spacer (11), and gland nut (12).



**INSTALLATION**

Refer to reassembly, test, and installation procedures on paragraph 3-39, page 3-276, for the 120/208V cable assembly.

**Section V. PREPARATION FOR STORAGE OR SHIPMENT**

**3-42. STORAGE OR SHIPMENT**

For instructions on preservation, packaging, packing, shipping requirements, and storage; refer to TM 740- 90-1.

**APPENDIX A  
REFERENCES**

**A-1. TECHNICAL MANUALS (TM)**

- |   |   |
|---|---|
| <p>TM 10-5410-224-14.....Operator, Organizational, Direct Support, and General Support Maintenance Manual for Shelter, Expandable for Shop, Portable, Aircraft Maintenance (SPAM), NSN 5410-01-003-2933.</p> <p>TM 38-750 .....The Army Maintenance Management System (TAMMS).</p> <p>TM 43-0139.....Painting Instructions for Field Use.</p> <p>TM 5-4120-243-14.....Operator's, Organizational, Direct Support and General Support Maintenance Manual for Air Conditioner, Horizontal Compact: 18, 000 BTU, 208 V, 3 Phase, 50/60 Hz (Trane Model MAC6H18-208-1201-02); (Harvey W. Hottel Model CH20-6-08); (American Air Filter Model CH618-2) (NSN 4120-00-411-3730); 208 V, 3 Phase, 400 Hz (Trane Model MAC4H18-208-1201-03); (Harvey W. Hottel Model CH20-4-08);</p> | <p>(KECO Model Air Conditioners (Horizontal Compact) 18, 000 BTU KECO: F18H -4S MAC6H18-230-1201-01 and (KECO Model F18H) (4120-00-411-3729) Changes 1-5.</p> <p>TM 740-90-1 .....Administrative Storage of Equipment.</p> <p>TM 750-244-1-4.....Procedures for the Destruction of Aviation Ground Support Equipment (FSC4920) to Prevent Enemy Use, Changes 1.</p> <p>TM 750-244-3 .....Procedures for Destruction of Equipment to Prevent Enemy Use (Mobility Equipment Command).</p> <p>TM 9-237 .....Operator's Manual: Welding Theory and Application (TO 34W4-1-5).</p> <p>TM 9-4931-374-13&amp;P.....Shelter, Shop Set, Aviation Intermediate Maintenance, Fire Control Repair, Air-mobile, Shelter-Mounted.</p> |
|---|---|



**A-2. OTHER**

AR 700-42.....Classification, Reclassification, Maintenance, Issuance and Reporting of Maintenance Training Aircraft.

DA Form 2028.....Recommended Changes to Publications and Blank Forms.

DA Form 2028-2 .....Recommended Changes to Equipment Technical Manuals.

DA Form 2404.....Equipment Inspection and Maintenance Worksheet.

FM 21-11 .....First Aid for Soldiers.

SB 708-41/42.....Federal Supply Code for Manufacturers: United States and Canada--Name to Code and Code to Name (GSA- FSS H4-1/H4-2).

SC 4933-95-CL-A21.....Shop Set, Aviation Intermediate Maintenance, (DIV) Armament Repair, Air Mobile, Shelter-Mounted.

SF 364.....Report of-Discrepancy (ROD).

SF 368.....Quality Deficiency Report.

## APPENDIX B MAINTENANCE ALLOCATION CHART

### Section I. INTRODUCTION

#### B-1. MAINTENANCE ALLOCATION CHART

a. This Maintenance Allocation Chart (MAC) assigns maintenance functions in accordance with the three levels of maintenance concept for Army aviation. These maintenance levels (categories) - Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM), and Depot Maintenance - are depicted on the MAC as:

AVUM, which corresponds to an 0 code in the Repair Parts and Special Tools List (RPSTL)

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

DEPOT, which corresponds to a D code in the Repair Parts and Special Tools List (RPSTL)

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

(1) Aviation Unit Maintenance (AVUM) activities will be staffed and equipped to perform high frequency "On-Aircraft" maintenance tasks required to retain or return aircraft systems to a serviceable condition. The maintenance capability of the AVUM will be governed by the Maintenance Allocation Chart (MAC) and limited by the amount and complexity of ground support equipment (GSE), facilities required, authorized manning strength, and critical skills available. The range

and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignments of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources, and air mobility requirements.)

(a) Company Size Aviation Units: Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of aircraft operational readiness. Perform maintenance inspections and servicing to include preflight, daily, intermediate, periodic (or phased), and special inspections as authorized by the MAC or higher head-quarters. Identify the cause of equipment/system mal-functions using applicable technical manual trouble-shooting instructions, built-in-test equipment (BITE), installed aircraft instruments, or test, measurement, and diagnostic equipment (TMDE). Replace worn or damaged modules/components that do not require complex adjustments or system alinement and which can be removed/installed with available skills, tools, and ground support equipment. Perform operational and continuity checks and make minor repairs to the electrical system. Inspect, service and make operational, capacity, and pressure checks to hydraulic systems. Perform servicing, functional adjustments, and minor repair/replacement to the flight control, propulsion, power train, and fuel systems. Accomplish air frame

**B-1. MAINTENANCE ALLOCATION CHART (cont)**

repair that does not require extensive disassembly, jiggling, or alinement. The manufacture of air frame parts will be limited to those items which can be fabricated with tools and equipment found in current air mobile tool and shop sets. Evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the supporting AVIM.

(b) Less than Company Size Aviation Units:

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

(2) Aviation Intermediate Maintenance (AVIM) provides mobile, responsive "One-Stop" maintenance support. (Maintenance functions which are not conducive to sustaining air mobility will be assigned to depot maintenance.) AVIM may perform all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/ components and end items which can be accomplished efficiently with available skills, tools, and equipment. AVIM establishes the Direct Exchange (DX) pro-

gram for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level. The AVIM level inspects, troubleshoots, performs diagnostic tests, repairs, adjusts, calibrates, and alines aircraft system modules/components. AVIM units will have capability to determine the serviceability of specified modules/ components removed prior to the expiration of the Time Between Overhaul (TBO) or finite life. Module/ component disassembly and repair will support the DX program and will normally be limited to tasks requiring cleaning and the replacement of seals, fittings, and items of common hardware. Air frame repair and fabrication of parts will be limited to those maintenance tasks which can be performed with available tools and test equipment. Unserviceable reparable modules/components and end items which are beyond the capability of AVIM to repair will be evacuated to Depot Maintenance. AVIM will perform aircraft weight and balance inspections and other special inspections which exceed AVUM capability. Provides quick response maintenance support, including aircraft recovery and air evacuation, on-the-job training, and technical assistance through the use of mobile maintenance contact teams. Maintains authorized operational readiness float aircraft. Provides collection and classification services for serviceable/unserviceable material. Operates a cannibalization activity in accordance with AR 750-50. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting non-divisional AVIM unit.)

**B-2. USE OF THE MAINTENANCE ALLOCATION CHART (SECTION II)**

**NOTE**

Nomenclatures used throughout the MAC are approved item names. Those terms/ nomenclatures expressed in parentheses are generic in nature and are not to be considered as official terminology.

a. The Maintenance Allocation Chart assigns maintenance functions to the lowest category of maintenance based on past experience and the following considerations:

- (1) Skills available.
- (2) Work time required.
- (3) Tools and test equipment required and/or available.

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

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

d. A maintenance function that cannot be performed at the assigned category of maintenance for any reason may be evacuated to the next higher maintenance category. Higher maintenance categories will perform the maintenance functions of lower maintenance categories when required or directed by the commander that has the authority to direct such tasking.

e. The assignment of a maintenance function will not be construed as authorization to carry the related repair parts or spares in stock. Information to requisition or otherwise secure the necessary repair parts will be as specified in the associated Repair Parts and Special Tools List (RPSTL).

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

g. Changes to the Maintenance Allocation Chart will be based on continuing evaluation and analysis by responsible technical personnel and on reports received from field activities.

**B-3. MAINTENANCE FUNCTIONS**

Maintenance functions will be limited to and defined as follows:

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

**B-3. MAINTENANCE FUNCTIONS (cont)**

b. Test. To verify serviceability by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with pre-scribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to pre-serve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

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

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

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

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

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

i. Repair. The application of maintenance services or other maintenance actions<sup>2</sup> to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/ action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards 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 materiel 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 equipments/components.

**B-4. STANDARD GROUPS (COLUMNS 1 AND 2)**

a. Column 1, Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

1 Services--inspect, test, service, adjust, aline, calibrate, or replace.

2 Actions--welding, grinding, riveting, straightening, facing, remachining, or resurfacing.

b. Column 2, Component/Assembly.' Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

**B-5. MAINTENANCE FUNCTION (COLUMN 3)**

Column 3 lists the functions to be performed on the items listed in column 2.

**B-6. MAINTENANCE CATEGORIES AND WORK TIMES (COLUMN 4)**

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

**B-7. TOOLS AND TEST EQUIPMENT (COLUMN 5 AND SECTION III)**

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

**B-8. REMARKS (COLUMN 6 AND SECTION IV)**

Remarks (identified by an alphabetic code in column 6) and other notes (identified by a number in parentheses in the applicable column) are listed in section IV to provide a ready reference to the definition of the remark/note.

**Section II. MAINTENANCE ALLOCATION CHART**

(1) Group number	(2) Component/assembly	(3) Maint. function	(4) Maint. category			(5) Tool/ Equipment	(6) Remarks
			AVUM	AVIM	DEPOT		
00	SHOP SET, ARMAMENT AVIM	Inspect Service Repair		4.8 0.2 30.5		1, 5 1 1 thru 5	A, B
01	SWITCHBOX AND MOUNTING BRACKET (with toggle switch)	Inspect Repair		0.1 1.0		1 1	

MAINTENANCE ALLOCATION CHART

(1) Group number	(2) Component/assembly	(3) Maint. function	(4) Maint. category			(5) Tool/ Equipment	(6) Remarks
			AVUM	AVIM	DEPOT		
02	SWITCHBOX AND MOUNTING BRACKET (without toggle switch)	Inspect		0.1		1	
		Repair		1.0		1	
03	COVER ASSEMBLY, BLACK-OUT, FAN	Inspect		0.5		1	
		Replace		2.0		1, 2, 4, and 5	
		Repair		1.5		1, 2, 4, and 5	
04	FRAME ASSEMBLY, ECU STOWING	Inspect		0.1		1	
		Replace		3.0		1, 2, 4, and 5	
		Repair		1.0		1, 2, 4, and 5	
0401	STRAP, WEBBING	Inspect		0.1		1	
		Replace		0.5		1	
		Repair		0.2		1	
05	HOLDER ASSEMBLY, FIRST AID KIT	Inspect		0.1		1	
		Replace		0.5		1	
		Repair		0.5		1	
0501	HOLDER ASSEMBLY	Inspect		0.1		1	
		Replace		0.5		1	
		Repair		0.5		1	
0502	BRACKET ASSEMBLY	Inspect	0.1	1			
		Replace	1.0	1			
		Repair	0.5	1			

06	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL	Inspect Service Replace Repair	0.1 0.2 2.0 1.0	1 1 and 5 thru 8 1 and 5 thru 8 1 and 5 thru 8	C
0601	CONNECTOR, PLUG, ELECTRICAL	Inspect Service Replace Repair	0.1 0.2 1.5 1.0	1 1 and 5 thru 8 1 and 5 thru 8 1 and 5 thru 8	C
0602	CONNECTOR, PLUG, ELECTRICAL	Inspect Service Replace	0.1 0.2 1.5	1, 5, and 8 1, 5, and 8 1, 5, and 8	
0603	CABLE ASSEMBLY	Inspect Replace Repair	0.1 1.0 0.2	1 1, 5, and 8 1, 5, and 8	
07	WIRE ASSEMBLY (switchbox)	Inspect Replace Repair	0.5 1.0 1.0	1 1, 5, and 8 1, 5, and 8	
08	WIRE ASSEMBLY (ceiling outlets)	Inspect Replace Repair	0.5 1.0 1.0	1 1, 5, and 8 1, 5, and 8	
09	HARNESS ASSEMBLY, WIRING (switchbox to distribution panel)	Inspect Replace Repair	1.0 2.0 1.5	1 1, 5, and 8 1, 5, and 8	
0901	WIRE ASSEMBLY	Inspect Replace Repair	0.5 1.0 1.0	1 1, 5, and 8 1, 5, and 8	



MAINTENANCE ALLOCATION CHART

(1) Group number	(2) Component/assembly	(3) Maint. function	(4) Maint. category			(5) Tool/ Equipment	(6) Remarks
			AVUM	AVIM	DEPOT		
10	HARNESS ASSEMBLY, WIRING (switch to distribution ceiling outlets)	Inspect		1.0		1	
		Replace		2.0		1, 5, and 8	
		Repair		1.5		1, 5, and 8	
11	CURTAIN ASSEMBLY (end curtain)	Inspect		0.1		1	
		Replace		2.0		1, 2	
		Repair		1.0		1, 2	
12	CURTAIN ASSEMBLY (side curtain)	Inspect		0.1		1	
		Replace		2.0		1, 2	
		Repair		1.0		1, 2	
13	AIRHOSE ASSEMBLY	Inspect		0.1		1	
		Replace		1.0		1	
		Repair		0.5		1	
14	FILE, WORK ORGANIZER	Inspect		0.2		1	
		Service		1.0		1, 2, 4, and 5	
		Replace		2.0		1, 2, 4, and 5	
		Repair		1.0		1, 2, 4, and 5	
15	CABLE ASSEMBLY, POWER, ELECTRICAL	Inspect		0.5		1	
		Replace		2.0		1 and 5 thru 8	
		Repair		1.5		1 and 5 thru 8	
1501	CONNECTOR, PLUG, ELECTRICAL (female)	Inspect		0.1		1	
		Service		0.5		1 and 5 thru 8	
		Replace		1.5		1 and 5 thru 8	
		Repair		1.0		1 and 5 thru 8	
1502	CONNECTOR, PLUG, ELECTRICAL (male)	Inspect		0.1		1	
		Service		0.5		1 and 5 thru 8	
		Replace		1.5		1 and 5 thru 8	
		Repair		1.0		1 and 5 thru 8	

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) TOOL OR TEST EQUIPMENT REF CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL/NATO STOCK NUMBER	(5) TOOL NUMBER
1	AVIM	Armament Repair Shop Set	4933-00-122-6771	SC 4933-95-CL-A21
2	AVIM	AVIM Sheet Metal Shop Set	4920-00-166-5505	SC 4920-99-CL-A85
3	AVIM	AVIM Tool Crib Shop Set	4920-00-472-4183	SC 4920-99-CL-A86
4	AVIM	AVIM Welding Shop Set	4920-00-163-5093	SC 4920-99-CL-A88
5	AVIM	Basic Aircraft Armament Repair Tool Set	5180-00-987-9816	SC 5180-95-CL-B09
6	AVIM	Connector Electrical Con- tact Removal Tool	5120-01-122-3897	MS90562-5
7	AVIM	Connector Electrical Con- tact Removal Tool	5120-01-144-4495	MS90562-6
8	AVIM	Supplemental Aircraft Armament Repair Tool Set	SC 5180-95-CL-B10	5180-00-994-9242

Change 1 B-9

**Section IV. REMARKS**

REFERENCE CODE	REMARKS
A	Straightening of the strap buckle and reclamping of loose strap clips is authorized.
B	Operation, maintenance, and repair of the 5410-01-003-2933 shelter are covered in TM 10-5410-224-14 and -24&P. Operation, maintenance, and repair of the 4120- 00-441-3730 environmental control units are covered by TM 5-4120-243-14. Operation, maintenance, and repair of the arbor press, drilling machine, degreaser, and grinding machine are addressed by the commercial manuals packed with each item. Fire extinguisher instructions are on the extinguisher data plate. See SC 4933-95-CL-A21 for a component list of this shop set.
C	The MS90562-5 and -6 connector electrical removal tools are provided in the 4931-00-122-7088 shop set to permit contact removal from MS90556, MS90557, and MS90558 connectors.

## APPENDIX C

**OPERATOR'S AND AVIATION INTERMEDIATE MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST**

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**SECTION I. INTRODUCTION****C-1. SCOPE**

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of operator's and aviation intermediate maintenance of the armament repair shelter. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

**C-2. GENERAL**

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

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

**b. Section III. Special Tools List.** A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance.

**c. Section IV. Cross-Reference Indexes.** A list, in National Item Identification Number (NIIN) sequence, of all National Stock Numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National Stock Numbers and part numbers are cross-referenced to each illustration figure and item number appearance. The figure and item number index lists figure and item numbers in alphanumeric sequence and cross-references NSN, CAGEC, and part number.

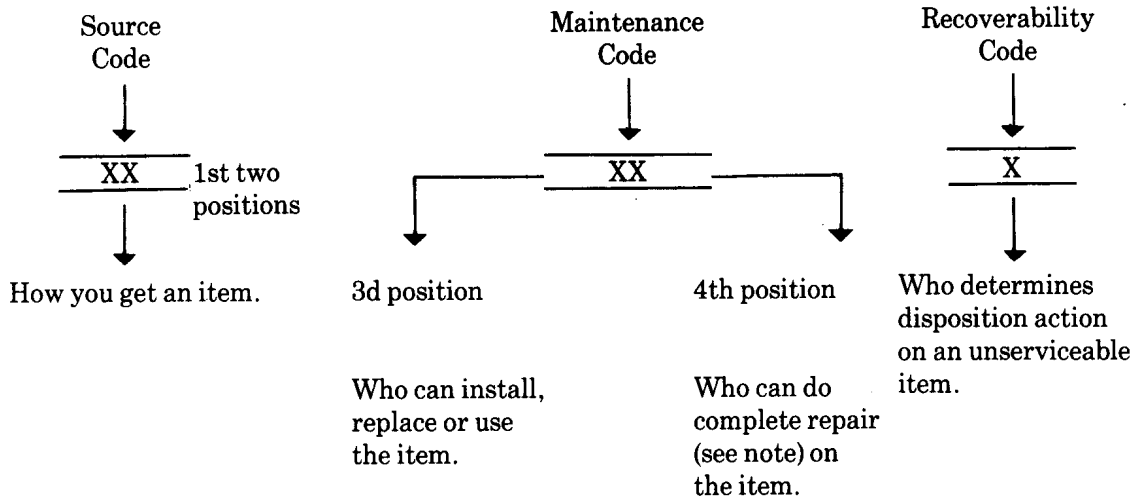
**C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III)**

**a. ITEM NO. (Column (1)).** Indicates the number used to identify items called out in the illustration.

**Change 1 C-1**

**C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III)--Continued**

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

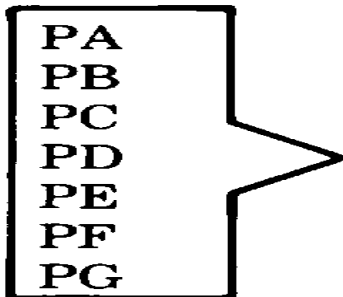


\*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

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

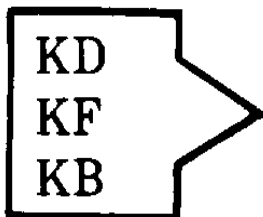
**Code**

**Explanation**



Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the level indicated by the code entered in the 3d position of the SMR code.

\*\*NOTE: Items coded PC are subject to deterioration.



Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.

**Code**

**Explanation**

MO—Made at org/  
AVUM category  
MF—Made at DS/  
AVUM category  
MH—Made at GS  
category  
ML—Made at  
Specialized  
Repair Activity  
(SRA)  
MD—Made at Depot

Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

AO —Assembled by  
org/AVUM  
category  
AF —Assembled by  
DS/AVUM  
category  
AH —Assembled by  
GS category  
AL —Assembled by  
SRA  
AD —Assembled by  
Depot

Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.

XA - Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)

XB - If an "XB" item is not available from salvage, order it using the CAGEC and part number given.

XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.

XD - Item is not stocked. Order an "XD"-coded item through normal supply channels using the CAGEC and part number given if no NSN is available.

**NOTE**

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

**C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III)--Continued**

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

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

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

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

<b>Code</b>	<b>Application/Explanation</b>
<b>O</b>	-Unit or aviation unit is the lowest level that can do complete repair of the item.
<b>F</b>	-Direct support or aviation intermediate is the lowest level that can do complete repair of the item.
<b>H</b>	-General support is the lowest level that can do complete repair of the item.

Code	Application/Explanation
L	-Specialized repair activity is the lowest level that can do complete repair of the item.
D	-Depot is the lowest level that can do complete repair of the item.
Z	-Nonreparable. No repair is authorized.
B	-No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be re-conditioned by adjusting, lubricating, etc., at the user level.

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

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



**C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III)--Continued**

**c. CAGEC (Column (3)).** The Contractor and Government Entity Code (CAGEC) is a 5-digit alphanumeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

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

**NOTE**

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

**e. DESCRIPTION AND USABLE ON CODE (UOC) (Column (5)).** This column includes the following information:

- (1) The Federal item name and, when required, a minimum description to identify the item.
- (2) Items that are included in kits and sets are listed below the name of the kit or set.
- (3) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.
- (4) Part numbers for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.
- (5) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC).
- (6) The usable on code, when applicable (see paragraph 5, Special Information).
- (7) In the Special Tools List section, the Basis Of Issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipment supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.
- (8) The statement "END OF FIGURE" appears just below the last item description in Column 5 for a given figure in both Section II and Section III.

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

**C-4. EXPLANATION OF COLUMNS (SECTION IV)****a. NATIONAL STOCK NUMBER (NSN) INDEX.**

(1) **STOCK NUMBER column.** This column lists the NSN by National Item Identification Number (NIIN) sequence. The NIIN consists of the last nine digits of the

NSN  
-----  
NIIN

NSN (i.e., 5305-01-674-1467). When using this column to locate an item, ignore the first 4 digits of

the NSN. However, the complete NSN should be used when ordering items by stock number.

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

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

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

(1) **CAGEC column.** The Contractor and Government Entity Code (CAGEC) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) **PART NUMBER column.** Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

(3) **STOCK NUMBER column.** This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and CAGEC columns to the left.

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

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

**C-4. EXPLANATION OF COLUMNS (SECTION IV)--Continued****c. FIGURE AND ITEM NUMBER INDEX.**

(1) **FIG column.** This column lists the number of the figure where the item is identified/located in Sections II and III.

(2) **ITEM column.** The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

(3) **STOCK NUMBER column.** This column lists the NSN for the item.

(4) **CAGEC column.** The Contractor and Government Entity Code (CAGEC) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(5) **PART NUMBER column.** Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

**C-5. SPECIAL INFORMATION**

**a. FABRICATION INSTRUCTIONS.** Bulk materials required to manufacture items are listed in the Bulk Material Functional Group of this RPSTL. Part numbers for bulk materials are also referenced in the description column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in appendix E.

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

**c. ASSOCIATED PUBLICATIONS. None.**

**C-6. HOW TO LOCATE REPAIR PARTS**

**a. WHEN NATIONAL STOCK NUMBER OR PART NUMBER IS NOT KNOWN:**

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

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

(3) **Third.** Identify the item on the figure and use the Figure and Item Number Index to find the NSN.

**b. WHEN NATIONAL STOCK NUMBER OR PART NUMBER IS KNOWN:**

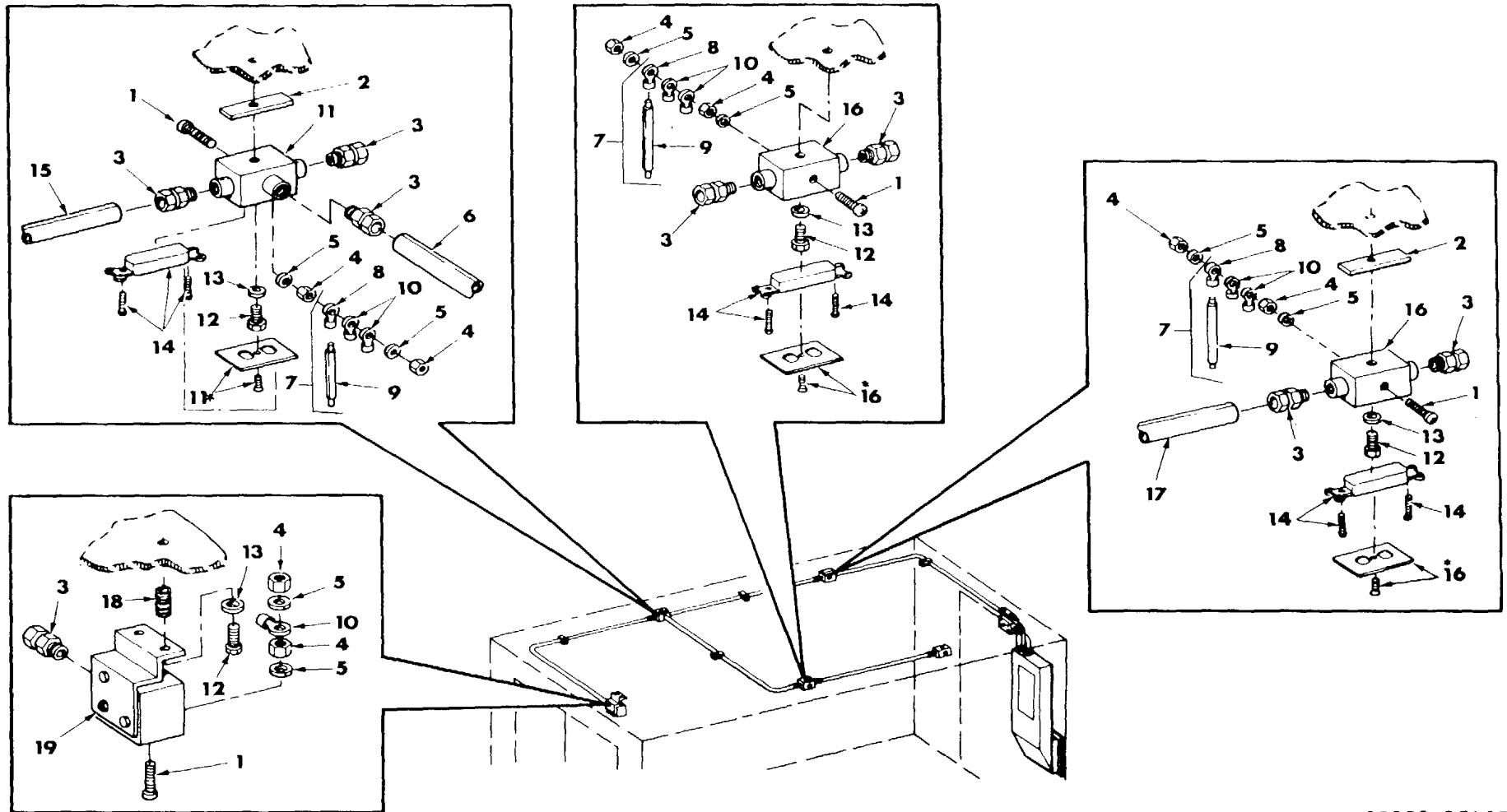
(1) **First.** Using the National Stock Number or the Part Number Index, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN) sequence (see 4.a(1)). The part numbers in the Part Number Index are listed in ascending alphanumeric sequence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

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

**C-7. ABBREVIATIONS**

MFR .....Manufacture

Section II. REPAIR PARTS LIST



NOTE: \*SUPPLIED WITH IDENTICALLY NUMBERED PART.

ARR82-25165

Figure 1. Shop set, armament AVIM 5911163 and wire assembly 12011690-9, ceiling outlets.

## SECTION II

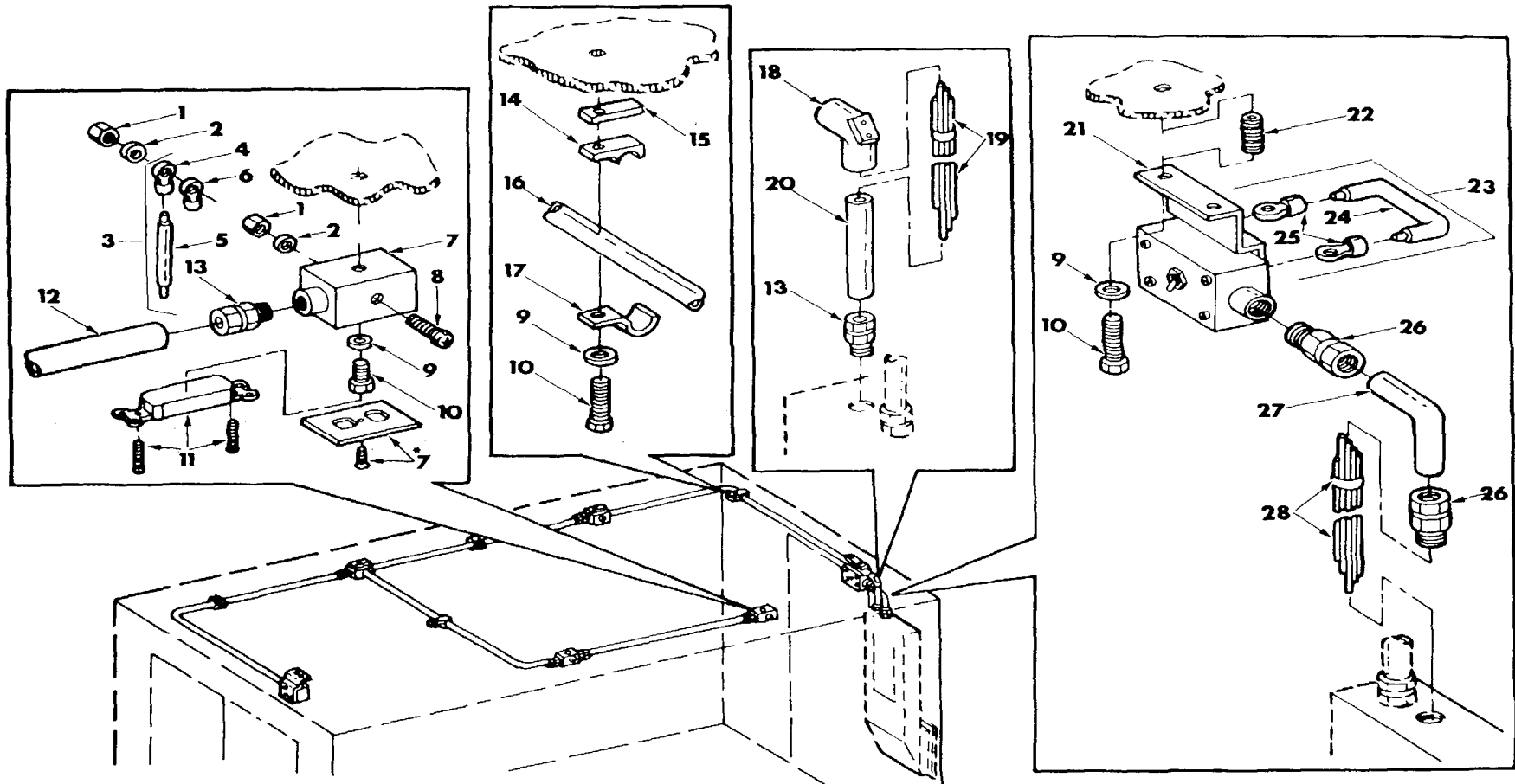
TM 9-4933-223-13&amp;P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
FIG 1. (GROUP 00) SHOP SET, ARMAMENT, AVIM 5911163 AND WIRE ASSEMBLY 12011690-9, CEILING OUTLETS					
1	PBFZZ	96906	MS35206-246	SCREW, MACHINE .....	4
2	MFFZZ	19204	7551093-1	SPACER, PLATE (MFR FROM 9530-00-236- 7671) .....	2
3	PBFZZ	81348	W-F-408	BOX CONNECTOR, ELECTRICAL (2 CLASS..... AND L KIND AND 0.750 IN. SIZE AND STYLE AND I TYPE).....	8
4	PBFZZ	96906	MS35649-282	NUT, PLAIN, HEXAGON.....	8
5	PBFZZ	96906	MS35338-42	WASHER, LOCK.....	8
6	MFFZZ	19204	7551085-4	CONDUIT, METAL, RIGID (MFR FROM ..... 5975-00-178-1217).....	1
7	AFFFF	19204	12011690-9	WIRE ASSEMBLY (CEILING OUTLETS).....	3
8	PBFZZ	96906	MS25036-156	.TERMINAL, LUG.....	3
9	MFFZZ	19204	12011690	.WIRE, ELECTRICAL, BLACK (MFR FROM ..... 6145-00-239-1245).....	3
10	PBFZZ	96906	MS25036-156	TERMINAL, LUG.....	7
11	PBFZZ	19204	7551738	CONDUIT OUTLET.....	1
12	PBFZZ	80204	B1821BH025F100N	SCREW, CAP, HEXAGON HEAD.....	5
13	PBFZZ	88044	AN960-416	WASHER, FLAT.....	5
14	PBFZZ	81348	WC596/12-4	CONNECTOR, RECEPTACLE, ELECTRICAL ..... (GROUNDING, DUPLEX).....	3
15	MFFZZ	19204	7551084	CONDUIT, METAL, RIGID (MFR FROM ..... 5975-00-178-1217).....	1
16	PBFZZ	19204	7551739	CONDUIT OUTLET.....	2
17	MFFZZ	19204	7551085-3	CONDUIT, METAL, RIGID (MFR FROM ..... 5975-00-178-1217).....	1
18	PAFZZ	19204	12011685	RIVET, BLIND .....	8
19	XDFFF	19204	7551735-2	SWITCH BOX MOUNTING BRACKET.....	1

END OF FIGURE

Change 1 C-11

REPAIR PARTS LIST (cont)



NOTE: \*SUPPLIED WITH IDENTICALLY NUMBERED PART.

ARR82-25166

Figure 2. Shop set, armament AVIM 5911163; wire assembly 120116904, switchbox; and wire assembly 12011690-9, ceiling outlets.

## SECTION II

TM 9-4933-223-13&amp;P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
FIG. 2. (GROUP 00) SHOP SET, ARMA- MENT, AVIM 5911163; (GROUP 07) WIRE ASSEMBLY 12011690-4, SWITCHBOX; AND (GROUP 08) WIRE ASSEMBLY 12011690-9, CEILING OUTLETS					
1	PBFZZ	96906	MS35649-282	NUT, PLAIN, HEXAGON.....	2
2	PBFZZ	96906	MS35338-42	WASHER, LOCK.....	2
3	AFFFF	19204	12011690-9	WIRE ASSEMBLY (CEILING OUTLETS).....	1
4	PBFZZ	96906	MS25036-156	.TERMINAL, LUG.....	1
5	MFFZZ	19204	12011690	.WIRE, ELECTRICAL, BLACK (MFR FROM ..... 6145-00-239-1245).....	1
6	PBFZZ	96906	MS25036-156	TERMINAL, LUG.....	1
7	PBFZZ	19204	7551740	CONDUIT OUTLET.....	1
8	PBFZZ	96906	MS35206-246	SCREW, MACHINE.....	1
9	PBFZZ	88044	AN960-416	WASHER, FLAT.....	7
10	PBFZZ	80204	B1821BH025F100N	SCREW, CAP, HEXAGON HEAD.....	7
11	PBFZZ	81348	WC596/12-4	CONNECTOR, RECEPTACLE, ELECTRICAL.....	1
12	MFFZZ	19204	7551085-5	CONDUIT, METAL, RIGID (MFR FROM ..... 5975-00-178-1217).....	1
13	PBFZZ	81348	W-F-408	BOX CONNECTOR, ELECTRICAL (2 CLASS..... AND L KIND AND 0.750 IN. SIZE AND STYLE AND I TYPE).....	2
14	PBFZZ	03743	CLB-50M	SUPPORT, ELECTRICAL.....	4
15	MFFZZ	19204	7551093-2	SPACER, PLATE (MFR FROM 9530-00-236- ..... 7671).....	4
16	MFFZZ	19204	7551085-2	CONDUIT, METAL, RIGID (MFR FROM ..... 5975-00-178-1217).....	1
17	PAFZZ	03743	TWCL75	STRAP, RETAINING RETAINING LOOP.....	4
18	PAFZZ	96160	5863-2	ELBOW, TUBE ELECTRICAL CONDUIT.....	1
19	AFFFF	19204	7551097-3	HARNESS ASSEMBLY, WIRING (SWITCH..... TO DISTRIBUTION CEILING OUTLETS).....	1
20	MFFZZ	19204	7551085-1	CONDUIT, METAL, RIGID (MFR FROM ..... 5975-00-178-1217).....	1
21	XDFFF	19204	7551735-1	SWITCH BOX MOUNTING BRACKET.....	1
22	PAFZZ	19204	12011685	RIVET, BLIND THREAD.....	3
23	AFFFF	19204	12011690-4	WIRE ASSEMBLY (SWITCHBOX).....	2
24	MFFZZ	19204	12011690	.WIRE, ELECTRICAL, BLACK (MFR FROM ..... 6145-00-239-1245).....	1
25	PBFZZ	96906	MS25036-111	.TERMINAL, LUG.....	2
26	PAFZZ	03743	ST-50	BOX CONNECTOR, ELECTRICAL.....	2
27	MFFZZ	19204	7551429-7	CONDUIT, METAL, FLEXIBLE (MFR FROM..... 4720-00-965-9319).....	1
28	AFFFF	19204	7551097-1	HARNESS ASSEMBLY, WIRING..... (SWITCHBOX TO DISTRIBUTION PANEL)	1

END OF FIGURE

Change 1 C-13



REPAIR PARTS LIST (cont)

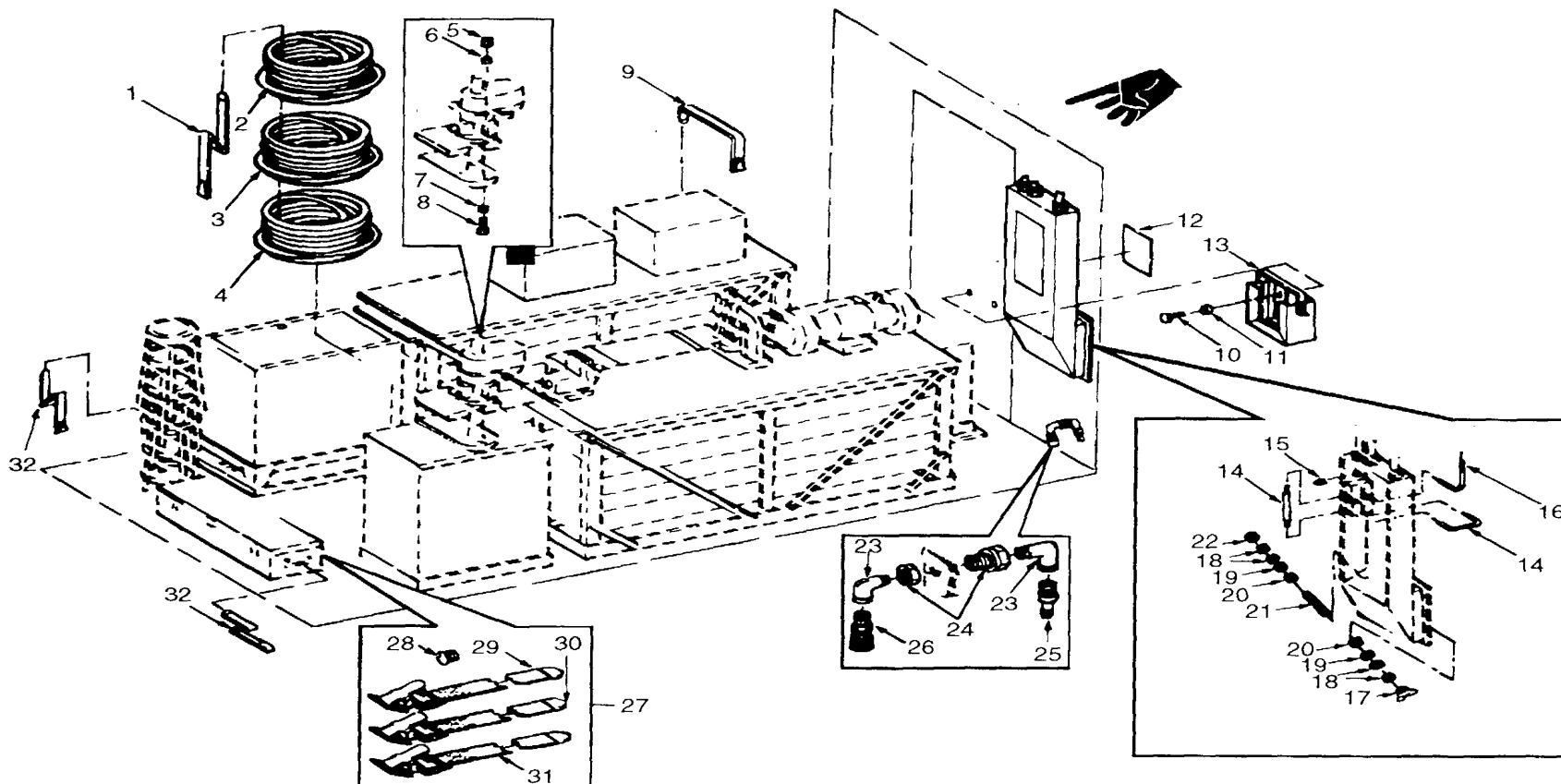


Figure 3. Shop set, armament, AVIM 5911163, straps, cables, and door modification parts.

Change 1 C-14

## SECTION II

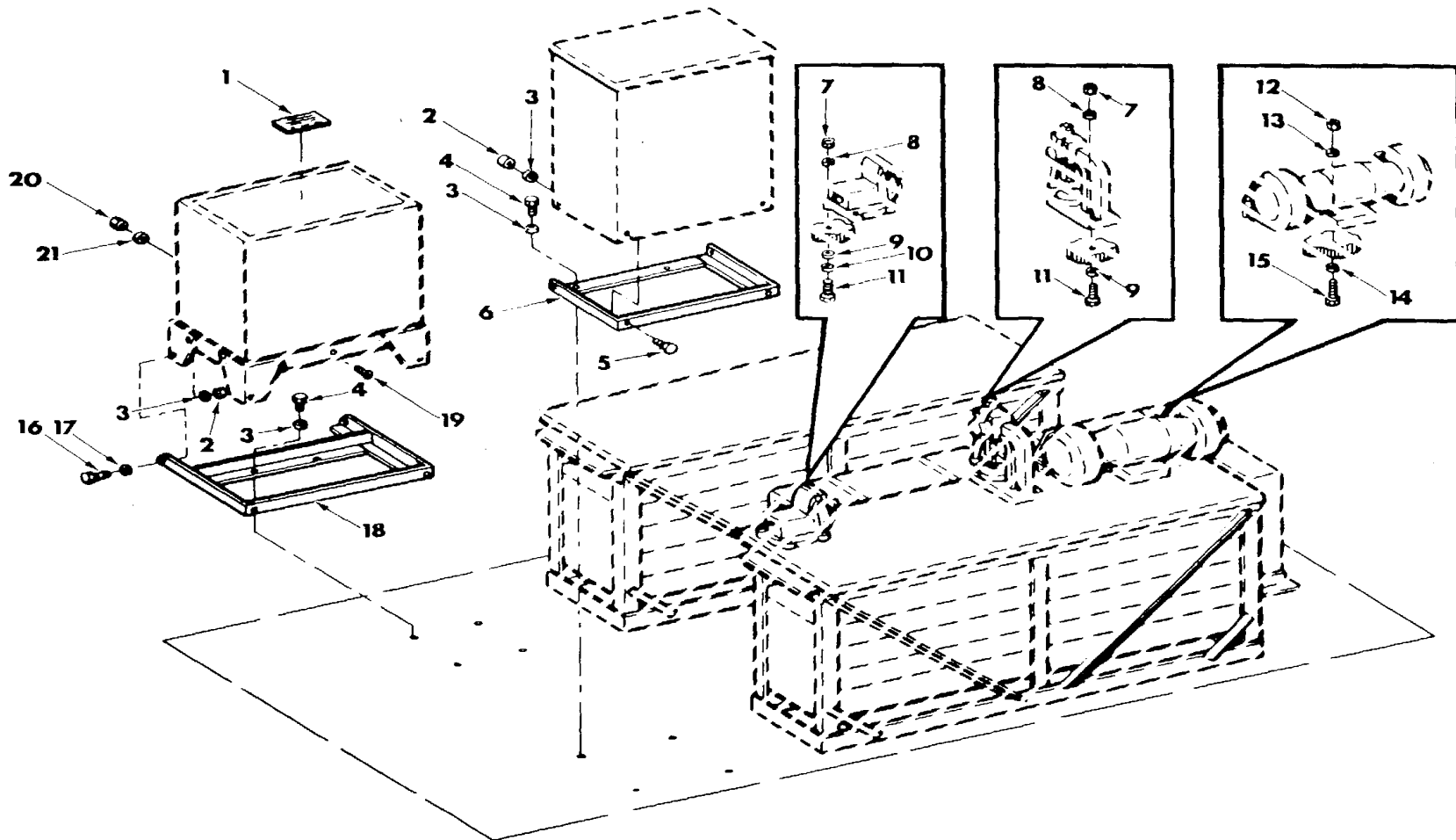
TM 9-4933-223-13&amp;P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
FIG. 3. (GROUP 00) SHOP SET, ARMA- MENT, AVIM 5911163, STRAPS, CABLES, AND DOOR MODIFICA- TION PARTS					
1	PAFZZ	19204	7550588-3	STRAP, WEBBING .....	2
2	PBFFF	19204	7551086	HOSE ASSEMBLY, NONMETALLIC .....	1
3	PBFFF	19204	12011687	CABLE ASSEMBLY, SPECIAL PURPOSE, .....	1
				ELECTRICAL .....	
4	PBFFF	07878	72289-100	CABLE ASSEMBLY, POWE POWER, ELECTRICAL	
2					
5	PBFZZ	96906	MS51967-8	NUT, PLAIN, HEXAGON .....	3
6	PBFZZ	88044	AN970-6	WASHER, FLAT .....	3
7	PBFZZ	96906	MS35338-46	WASHER, LOCK .....	3
8	PBFZZ	96906	MS35751-81	BOLT, SQUARE NECK .....	3
9	PAFZZ	19204	7550588-10	STRAP, WEBBING .....	4
10	PBFZZ	96906	MS90727-5	SCREW, CAP, HEXAGON H EAD .....	2
11	PBFZZ	96906	MS35338-44	WASHER, LOCK .....	2
12	XDFZZ	19204	12011686	PLATE, INSTRUCTION .....	1
13	PBFFF	19204	7551436	HOLDER ASSEMBLY, FIR ST AID KIT .....	1
14	MFFZZ	19204	12011690-3	WIRE, ELECTRICAL, BLACK (MFR FROM 6145-00- 239-1245) .....	2
15	PBFZZ	75037	R	SPLICE, CONDUCTOR .....	3
16	MFFZZ	19204	12011690-2	WIRE, ELECTRICAL, BLACK (MFR FROM 6145-00- 239-1245) .....	1
17	PAFZZ	96906	MS35425-71	.NUT, PLAIN, WING .....	1
18	PAFZZ	81348	FFW92TYPEA- GRADE1CLASSE- MEDIUM	.WASHER, FLAT .....	4
19	PAFZZ	96906	MS45904-68	.WASHER, LOCK .....	2
20	PBFZZ	96906	MS35691-4	.NUT, PLAIN, HEXAGON .....	2
21	PBFZZ	19204	7550795-2	.STUD, CONTINUOUS THR EAD .....	1
22	PBFZZ	96906	MS51969-1	.NUT, PLAIN, HEXAGON .....	1
23	PBFZZ	81348	WWP460	ELBOW, PIPE .....	2
24	PBFZZ	19204	7551741	ADAPTER, STRAIGHT, PIPE TO BOSS .....	1
25	PAFZZ	81349	M4109-09-12-00-B	COUPLING HALF, QUICK DISCONNECT (MALE) ...	1
26	PAFZZ	81349	M4109-01-12-00-B	COUPLING HALF, QUICK DISCONNECT (FEMALE)	
1					
27	XAFZZ	19204	7551433	ACCESSORIES, PACKAGE .....	1
28	PAFZZ	99017	EC4	.CAP-PLUG, PROTECTIVE , DUST AND MOISTURE SEAL .....	
24					
29	PAFZZ	19204	7550588-6	.STRAP, WEBBING .....	12
30	PAFZZ	19204	7550588-10	.STRAP, WEBBING .....	6
31	PAFZZ	19204	7550588-9	.STRAP, WEBBING .....	6
32	PAFZZ	19204	7550588-8	STRAP, WEBBING .....	4

END OF FIGURE

Change 1 C-15

REPAIR PARTS LIST (cont)



ARR82-26044

Figure 4. Shop set, armament AVIM 5911163, degreaser and cabinet mounting parts.

## SECTION II

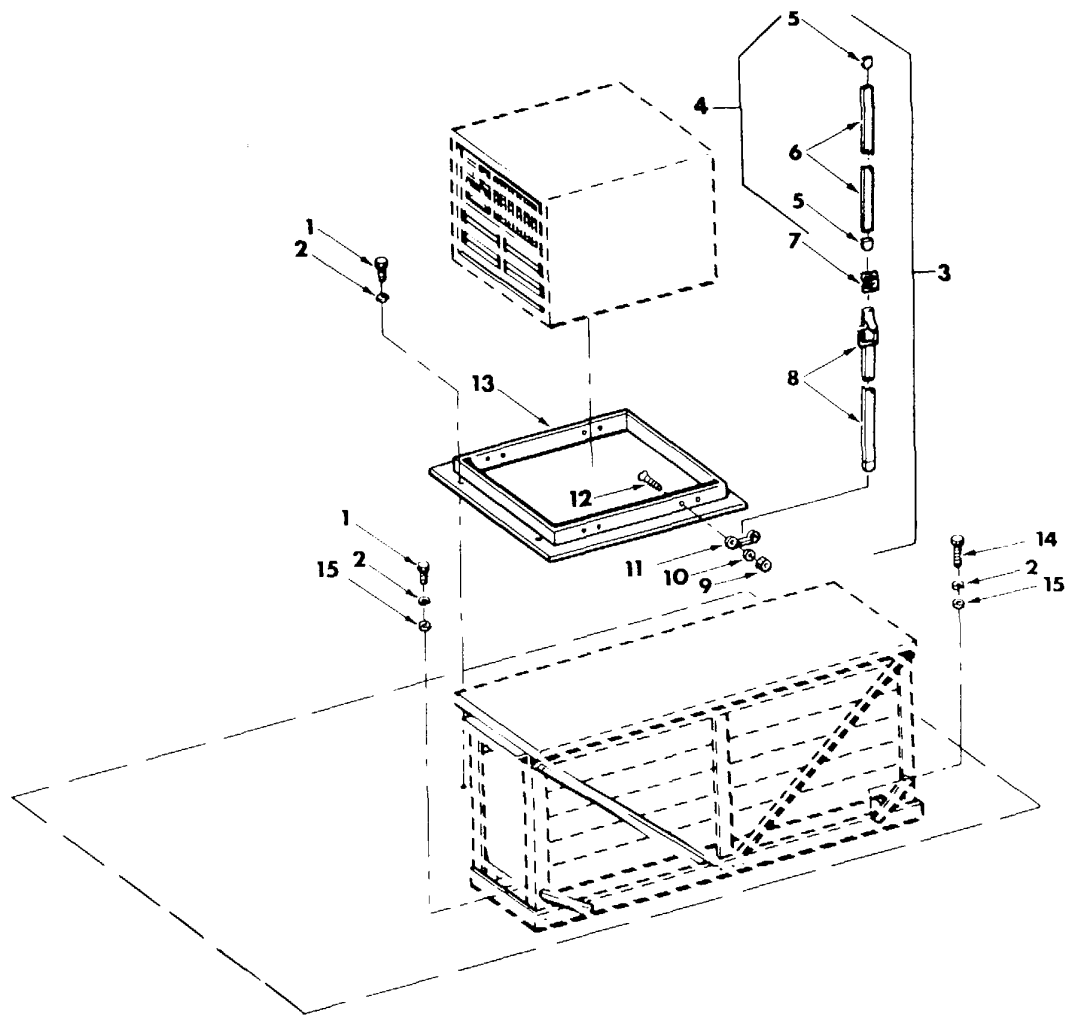
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(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
FIG. 4. (GROUP 00) SHOP SET, ARMA- MENT, AVIM 5911163, DEGREASER AND CABINET MOUNTING PARTS					
1	XDFZZ	19204	7551806	PLATE, INSTRUCTION.....	1
2	PBFZZ	96906	MS51968-8	NUT, PLAIN, HEXAGON.....	8
3	PAFZZ	96906	MS35338-46	WASHER, LOCK.....	16
4	PBFZZ	80204	B1821BH038C113N	SCREW, CAP, HEXAGON HEAD.....	8
5	PBFZZ	96906	MS90726-61	SCREW, CAP, HEXAGON HEAD.....	4
6	MFFZZ	19204	12011652	FRAME, CABINET MOUNTING (MFR FROM..... 9520-00-277-4939 & 9515-00-204-3993)	1
7	PBFZZ	96906	MS51967-14	NUT, PLAIN, HEXAGON.....	6
8	PBFZZ	96906	MS35338-48	WASHER, LOCK.....	6
9	PBFZZ	88044	AN970-8	WASHER, FLAT.....	6
10	PBFZZ	96906	MS27183-18	WASHER, FLAT.....	4
11	PBFZZ	80204	B1821BH050C350N	SCREW, CAP, HEXAGON H EAD.....	6
12	PBFZZ	96906	MS51967-5	NUT, PLAIN, HEXAGON.....	2
13	PBFZZ	96906	MS35338-45	WASHER, LOCK.....	2
14	PBFZZ	88044	AN970-5	WASHER, FLAT.....	2
15	PBFZZ	96906	MS90725-43	SCREW, CAP, HEXAGON HEAD.....	2
16	PAFZZ	80204	B1821BH038F125N	SCREW, CAP, HEXAGON HEAD.....	4
17	PAFZZ	96906	MS27183-14	WASHER, FLAT.....	4
18	MFFZZ	19204	12011651	FRAME, DEGREASER MOUNTING (MFR..... FROM 9520-00-277-4912).....	1
19	PAFZZ	96906	MS35207-264	SCREW, MACHINE.....	10
20	PAFZZ	96906	MS35650-302	NUT, PLAIN, HEXAGON.....	10
21	PAFZZ	96906	MS35338-43	WASHER, LOCK.....	10

END OF FIGURE

Change 1 C-17

REPAIR PARTS LIST (cont)



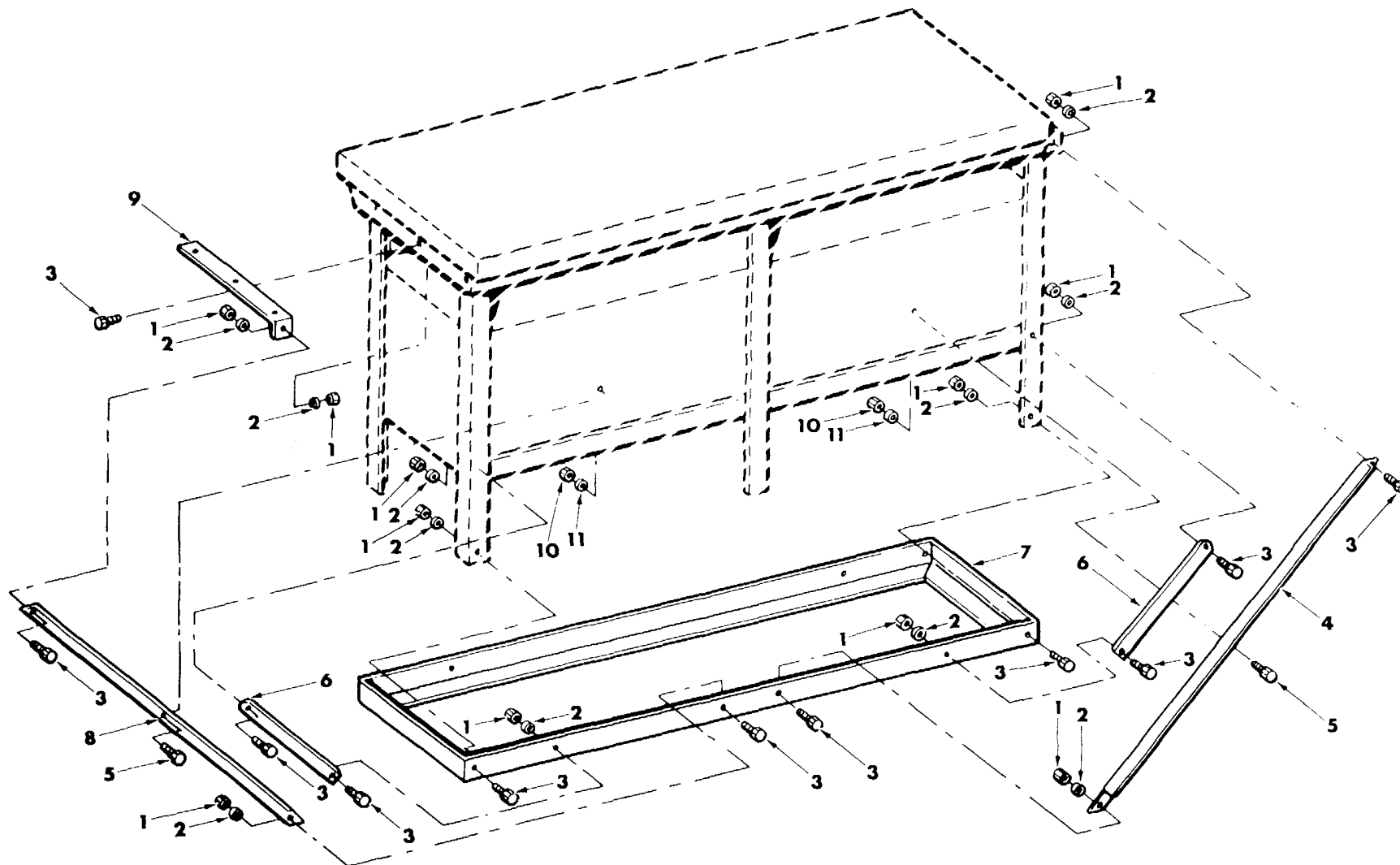
ARR82-26045

Figure 5. Shop set, armament AVIM 5911163; frame assembly, ECU stowing 12011669; and strap, webbing 12011671.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 5. (GROUP 00) SHOP SET, ARMA- MENT, AVIM 5911163; (GROUP 04) FRAME ASSEMBLY, ECU STOWING 12011669; AND (GROUP 0401) STRAP, WEBBING	
1	PAFZZ	80204	B1821BH038C113N	SCREW, CAP, HEXAGON HEAD.....	28
2	PBFZZ	96906	MS35338-46	WASHER, LOCK.....	32
3	AFZZ	19204	12011669	FRAME ASSEMBLY, ECU STOWING .....	2
4	AFZZ	19204	12011671	STRAP, WEBBING .....	2
8	PAFZZ	19204	12011670	STRAP, WEBBING .....	2
9	PAFZZ	96906	MS35650-302	NUT, PLAIN, HEXAGON .....	8
10	PAFZZ	96906	MS35338-43	WASHER, LOCK.....	8
11	PAFZZ	96906	MS51939-1	LOOP, STRAP FASTENER .....	4
12	PAFZZ	96906	MS35191-273	SCREW, MACHINE.....	8
13	MFFZZ	19204	12011668	FRAME, ECU STOWING (MFR FROM 9520- 00-277-4912).....	1
14	PBFZZ	80204	B1821BH038C150N	SCREW, CAP, HEXAGON HEAD.....	4
15	PBFZZ	96906	MS27183-14	WASHER, FLAT .....	24
				END OF FIGURE	

Change 1 C-19

REPAIR PARTS LIST (cont)



ARR82-26046

Figure 6. Shop set, armament AVIM 5911163, table modification parts for rh and lh tables.

## SECTION II

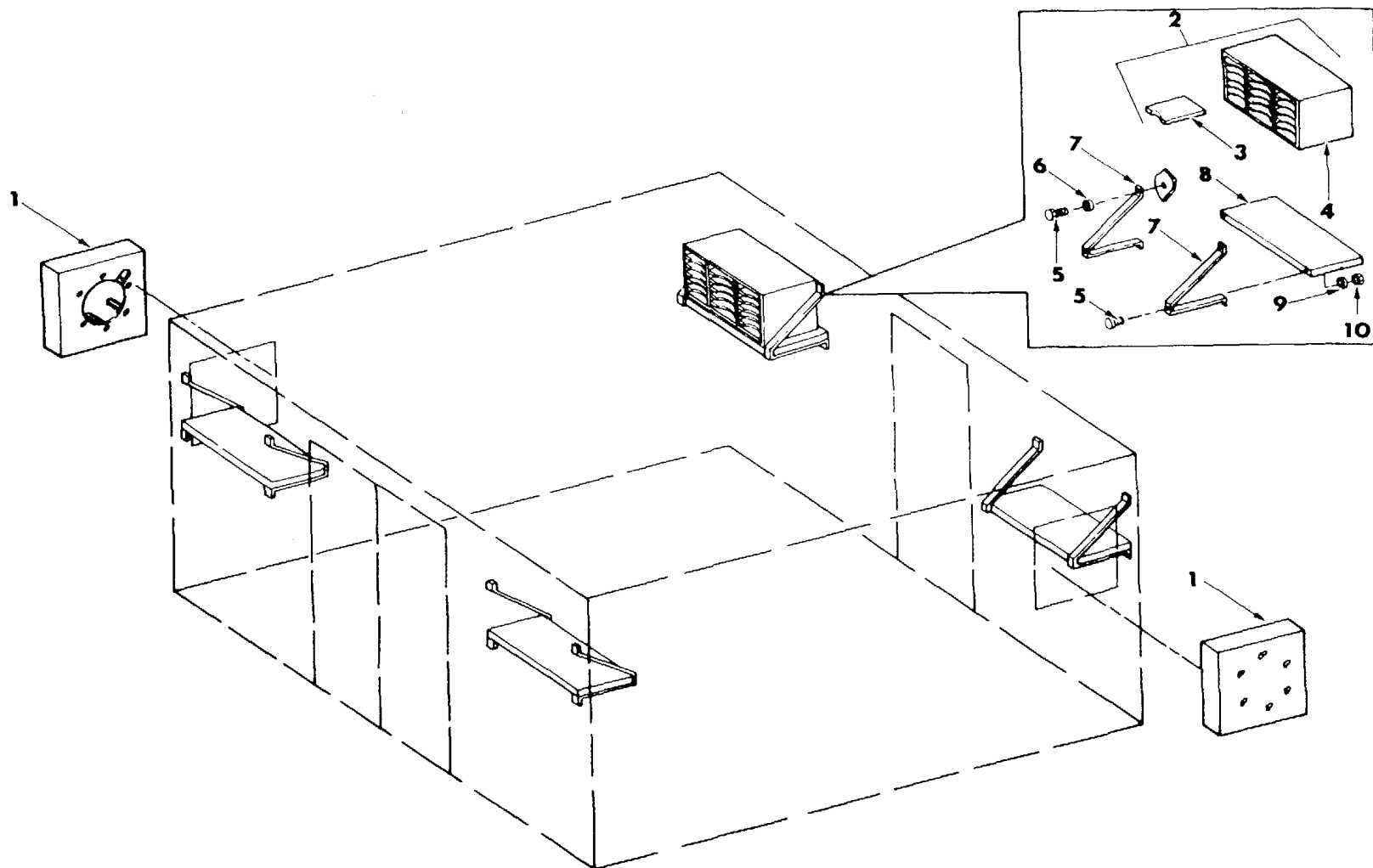
TM9-4933-223-13&amp;P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG 6 (GROUP 00) SHOP SET, ARMA- MENT, AVIM 5911163, TABLE MODIFICATION PARTS FOR RH AND LH TABLES	
1	PBFZZ	96906	MS51968-8	NUT, PLAIN, HEXAGON .....	24
2	PBFZZ	96906	MS35338-46	WASHER, LOCK.....	24
3	PBFZZ	96906	MS90726-60	SCREW, CAP, HEXAGON HEAD.....	24
4	MFFZZ	19204	12011665	BRACE, TABLE, LONG, LH (MFR FROM..... 9520-00-277-5987).....	1
5	PBFZZ	96906	MS90727-5	SCREW, CAP, HEXAGON HEAD.....	2
6	MFFZZ	19204	12011663	BRACE, TABLE, SHORT (MFR FROM 9515-00-204-3991).....	4
7	MFFZZ	19204	12011662	FRAME, TABLE, BASE (MFR FROM 9520-00-277-4912) .....	1
8	MFFZZ	19204	12011664	BRACE, TABLE, LONG, RH (MFR FROM 9520-00-277-5987)	1
9	MFFZZ	19204	12011666	BRACE, TABLE, SUPPORT (MFR FROM 9520-00-277-4902 & 9515-00-204-3991).....	2
10	PBFZZ	96906	MS51968-2	NUT, PLAIN, HEXAGON .....	2
11	PAFZZ	96906	MS35338-44	WASHER, LOCK.....	2
				END OF FIGURE	

Change 1 C-21



REPAIR PARTS LIST (cont)



ARR82-26047

Figure 7. Shop set, armament AVIM 5911163 and file, work organizer 7551094.

## SECTION II

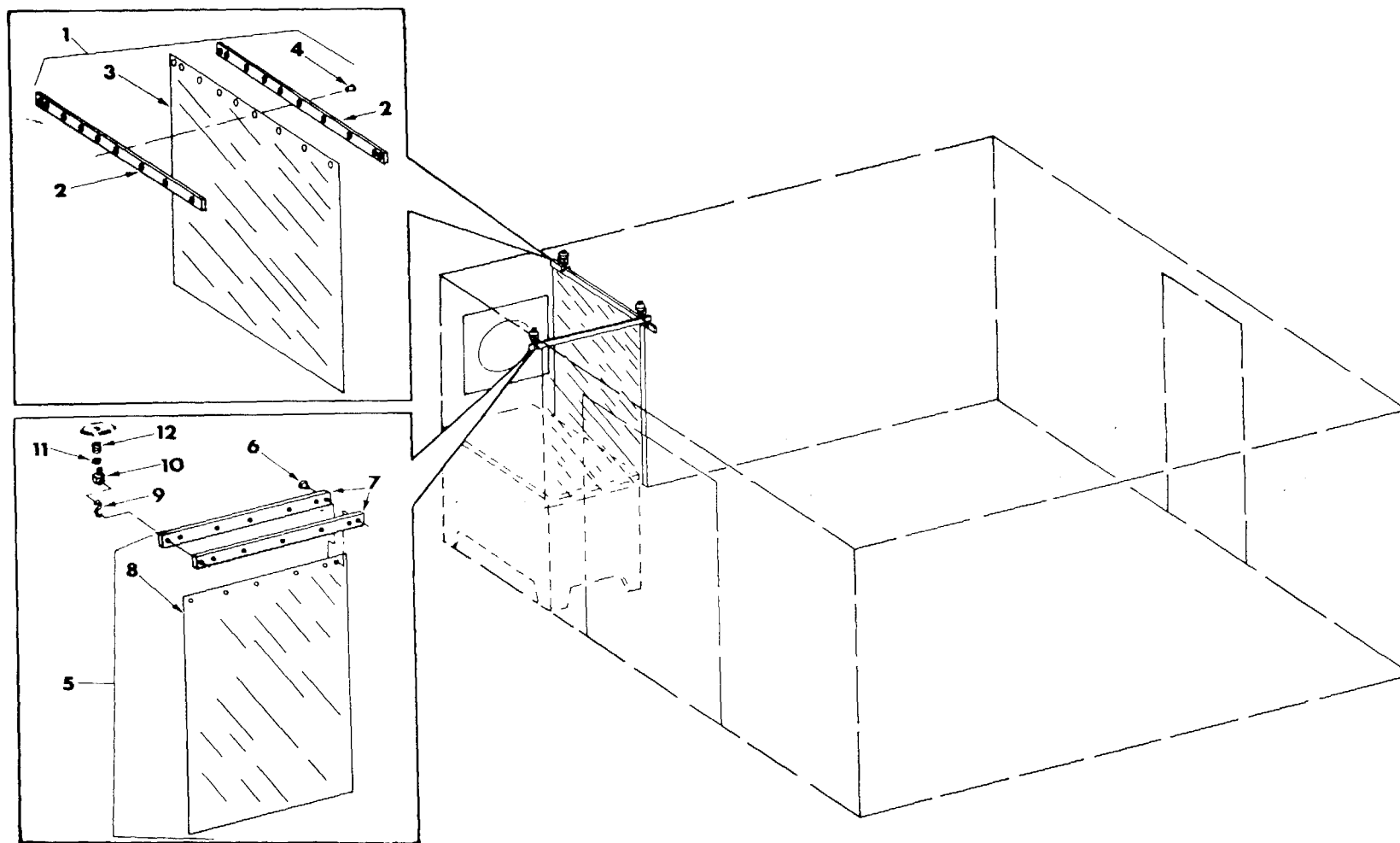
TM9-4933-223-13&amp;P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 7. (GROUP 00) SHOP SET, ARMA- MENT, AVIM 5911163; AND (GROUP 14) FILE, WORK ORGANIZER 7551094	
1	AFFFF	19204	7551733	COVER ASSEMBLY, BLACKOUT, FAN .....	2
2	XDFFF	19204	7551094	FILE, HORIZONTAL, DESK, WORK ORGANIZER .....	1
4	PBFZZ	76038	1300	.CABINET, MAIL SORTING, WORK ORGANIZER .....	1
5	PAFZZ	18876	PSM90727001-06	BOLT, MACHINE.....	24
6	PAFZZ	88044	AN960-416	WASHER, FLAT.....	16
7	MFFZZ	19204	7551731	BRACKET, SHELF, WALL (MFR FROM 9515-00-204-3977) ..	8
8	XDFZZ	19204	7551087	SHELVING, STORAGE AND PANEL.....	4
9	PAFZZ	96906	MS35338-44	WASHER, LOCK.....	8
10	PAFZZ	96906	MS35650-3252	NUT, PLAIN, HEXAGON .....	8

END OF FIGURE

Change 1 C-23

REPAIR PARTS LIST (cont)



ARR82-26048

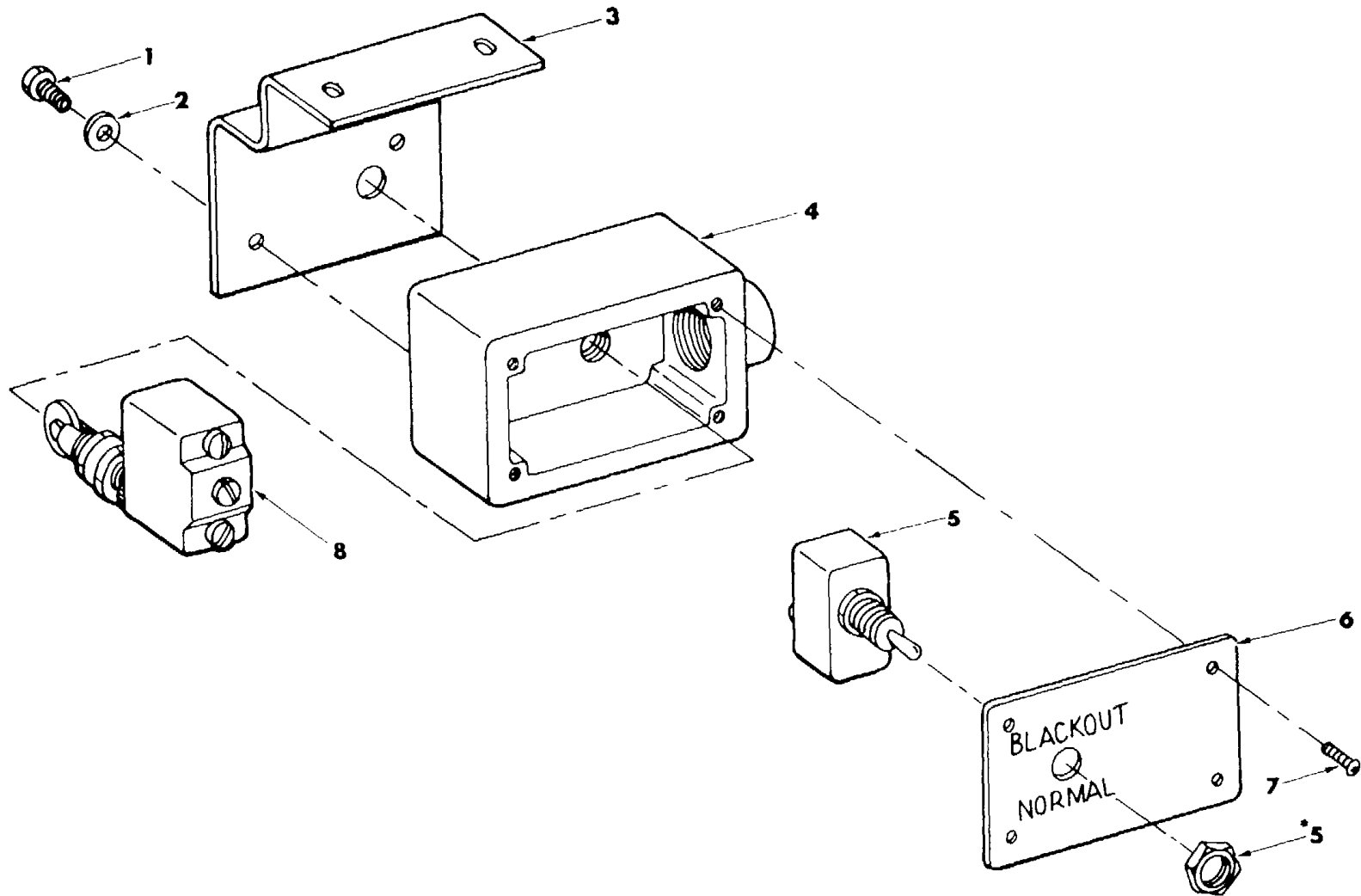
Figure 8. Shop set, armament AVIM 5911163; curtain assembly 7551091, end curtain; and curtain assembly 7551092, side curtain.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 8. (GROUP 00) SHOP SET, ARMA- MENT, AVIM 5911163; (GROUP 11) CURTAIN ASSEMBLY 7551091; AND (GROUP 12) CURTAIN ASSEMBLY 7551092, SIDE CURTAIN	
1	AFFFF	19204	7551092	CURTAIN ASSEMBLY (SIDE CURTAIN) .....	1
2	MFFZZ	19204	7551092-1	.STRIP, ALUMINUM (MFR FROM 9535-00-808-333).....	2
3	MFFZZ	19204	7551092-2	.PLASTIC SHEET (MFR FROM 9330-00-988-1894) .....	1
4	PBFZZ	96906	MS20470A4-6	.RIVET, SOLID .....	7
5	AFFFF	19204	7551091	CURTAIN ASSEMBLY (END CURTAIN) .....	1
6	PBFZZ	96906	MS20470A4-6	.RIVET, SOLID .....	5
7	MFFZZ	19204	7551091-1	.STRIP, ALUMINUM (MFR FROM 9535-00-808-3333).....	2
8	MFFZZ	19204	7551091-2	.PLASTIC SHEET (MFR FROM 9330-00-988-1894) .....	1
9	PAFZZ	96906	MS87006-33	HOOK, CHAIN, S .....	3
10	PAFZZ	88044	AN43B-C4A	BOLT, EYE .....	3
11	PAFZZ	96906	MS35338-44	WASHER, LOCK.....	3
12	PBFZZ	19204	12011685	RIVET, BLIND .....	4

END OF FIGURE

Change 1 C-25

REPAIR PARTS LIST(cont)



NOTE: \*SUPPLIED WITH IDENTICALLY NUMBERED PART.

ARR82-26049

Figure 9. Switchbox and mounting bracket 7551735-1, with toggle switch.

SECTION II

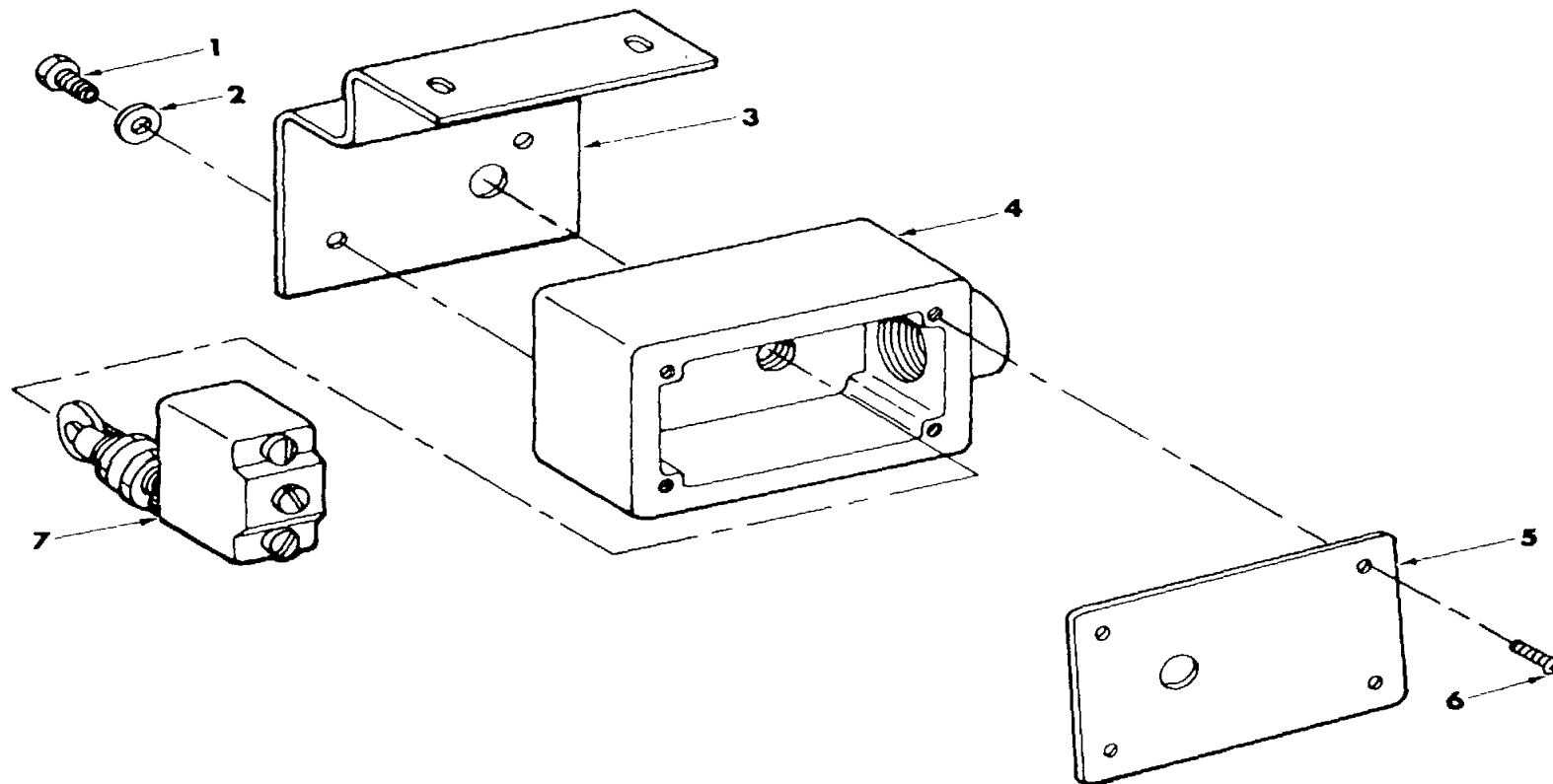
TM9-4933-223-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
FIG. 9. (GROUP 01) SWITCHBOX AND MOUNTING BRACKET 7551735-1, WITH TOGGLE SWITCH					
1	PAFZZ	96906	MS90725-3	SCREW, CAP, HEXAGON HEAD.....	2
2	PAFZZ	96906	MS27183-9	WASHER, FLAT.....	2
3	XBFZZ	19204	7551734	BRACKET, ANGLE.....	1
4	PBFZZ	19204	7551740	CONDUIT OUTLET.....	1
5	PAFZZ	96906	MS25307-212	SWITCH, TOGGLE.....	1
6	PBFZZ	03743	FSK1BCA	COVER, JUNCTION BOX CONDUIT OUTLET.....	1
7	PAFZZ	96906	MS35206-232	SCREW, MACHINE.....	4
8	PAFZZ	91929	BZ-2RQ18-A2	SWITCH, SENSITIVE.....	1

END OF FIGURE

Change 1 C-27

REPAIR PARTS LIST (cont)



ARR82-25050

Figure 10. Switchbox and mounting bracket 7551735-2, without toggle

SECTION II

TM9-4933-223-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 10. (GROUP 02) SWITCHBOX AND MOUNTING BRACKET 7551735-2 WITHOUT TOGGLE SWITCH	
1	PAFZZ	96906	MS90725-3	SCREW, CAP, HEXAGON HEAD.....	2
2	PAFZZ	96906	MS27183-9	WASHER, FLAT.....	2
3	XBFZZ	19204	7551734	BRACKET, ANGLE.....	1
4	PBFZZ	19204	7551740	CONDUIT OUTLET .....	1
5	PBFZZ	03743	FSK1BCA	COVER, JUNCTION BOX CONDUIT OUTLET .....	1
6	PAFZZ	96906	MS35206-232	SCREW, MACHINE.....	4
7	PAFZZ	91929	BZ-2RQ18-A2	SWITCH, SENSITIVE.....	1
				END OF FIGURE	

Change 1 C-29



REPAIR PARTS LIST (cont)

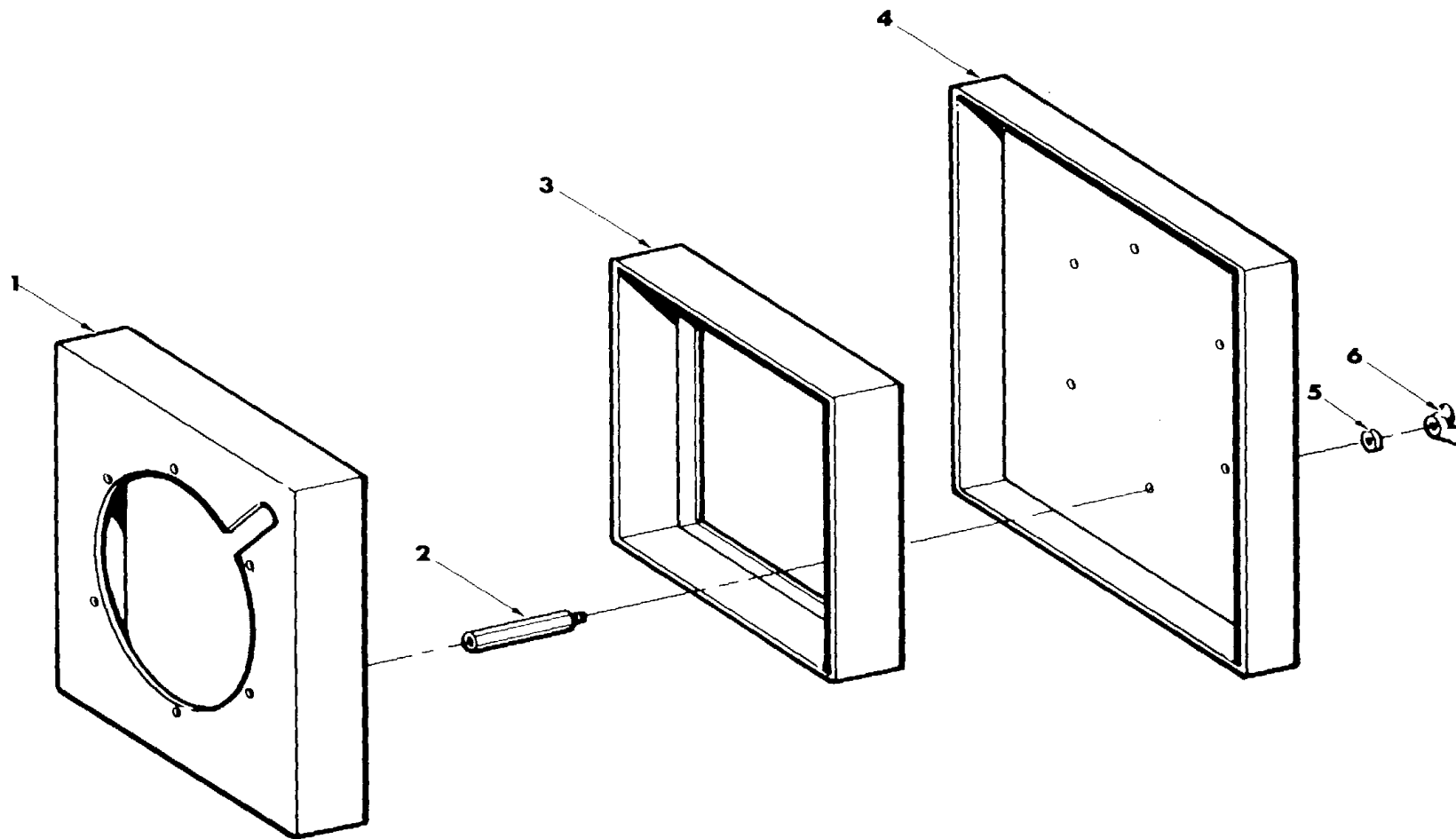


Figure 11. Cover assembly, blackout, fan 7551733.

ARR82-26051

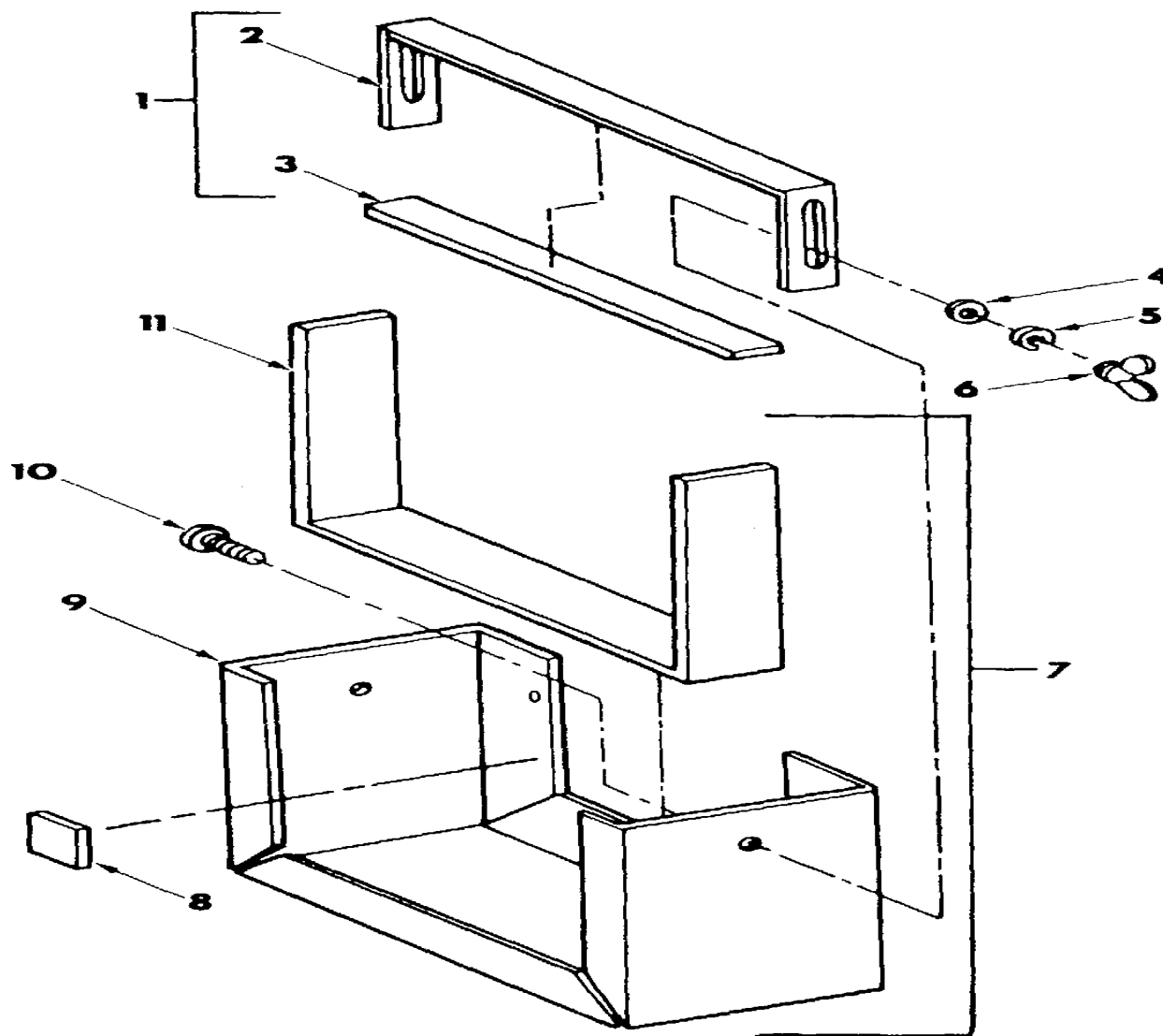
SECTION II

TM9-4933-223-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 11 (GROUP 03) COVER ASSEMBLY, BLACKOUT, FAN 7551733	
1	MFFZZ	19204	7551733-2	COVER, BLACKOUT, FAN, INNER (MFR..... FROM 9515-00-153-3217).....	1
2	MFFZZ	19204	7551732	SPACER, SLEEVE (MFR FROM 9510-00-..... 541-9655).....	6
3	MFFZZ	19204	7551733-3	BAFFLE (MFR FROM 9515-00-153-3217) .....	1
4	MFFZZ	19204	7551733-1	COVER, BLACKOUT, FAN, OUTER (MFR .....	1
				FROM 9515-00-153-3217).....	
5	PBFZZ	96906	MS35338-43	WASHER, LOCK.....	6
6	PBFZZ	96906	MS35426-25	NUT, PLAIN, WING.....	6
				END OF FIGURE	

Change 1 C-31

REPAIR PARTS LIST (cont)



ARR82-26052

Figure 12. Holder assembly, first aid kit 7551436; holder assembly 7551434; and bracket assembly 7551435.

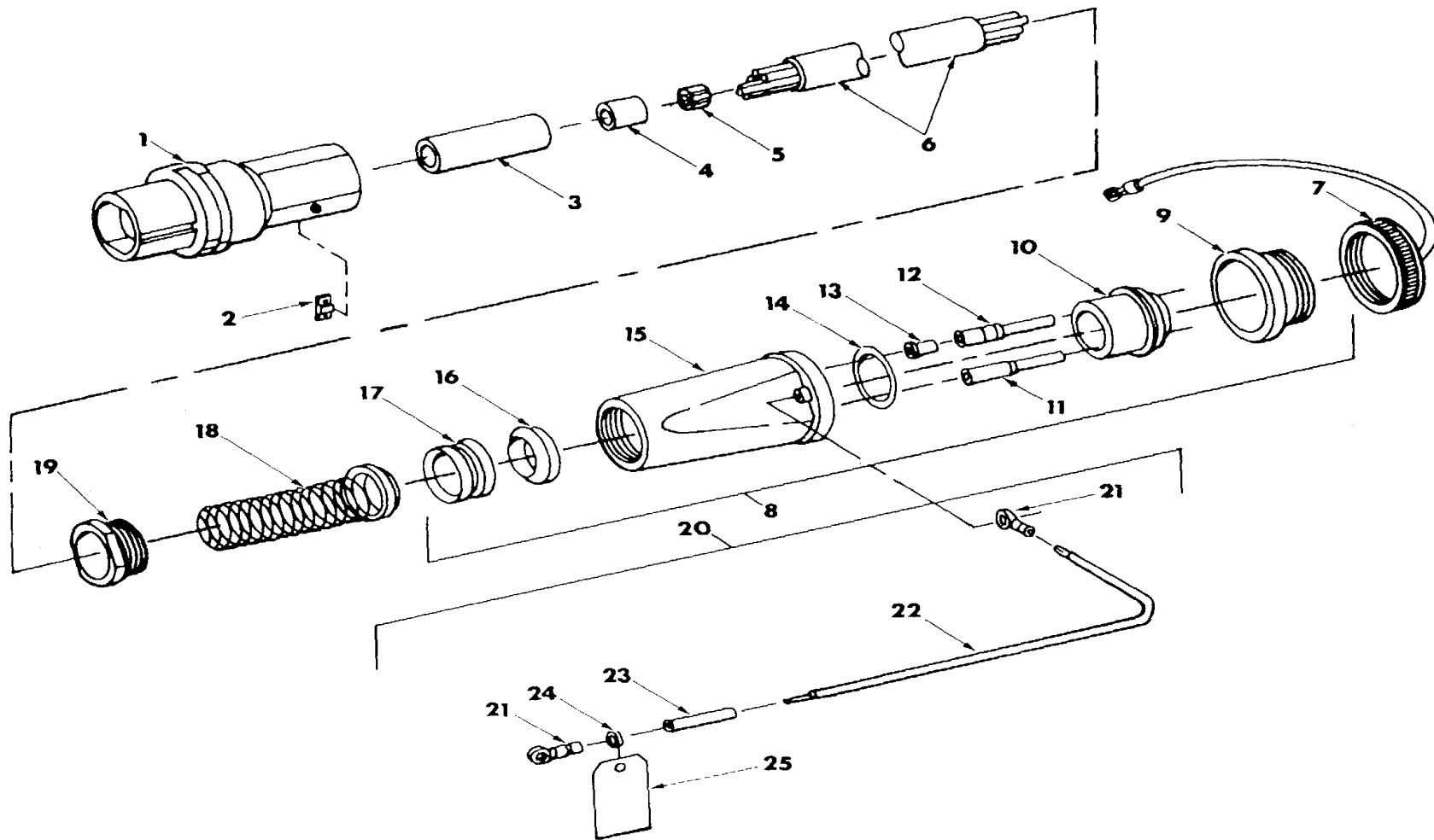
SECTION II

TM9-4933-223-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 12. (GROUP 05) HOLDER ASSEMBLY FIRST AID KIT 7551436; (GROUP 0501) HOLDER ASSEM- BLY 7551434; AND (GROUP 0502) BRACKET ASSEMBLY 7551435	
1	XDFFF	19204	7551435	BRACKET ASSEMBLY.....	1
2	XAFZZ	19204	7551435-1	.BRACKET.....	1
3	MFFZZ	19204	7551435-2	.PAD, CUSHIONING (MFR FROM 9320-00- 282-8284).....	1
4	PAFZZ	96906	MS27183-11	WASHER, FLAT.....	2
5	PAFZZ	96906	MS35338-44	WASHER, LOCK.....	2
6	PAFZZ	96906	MS35425-39	NUT, PLAIN, WING.....	2
7	XAFFF	19204	7551434	HOLDER ASSEMBLY.....	1
8	MFFZZ	19204	7551434-1	.PAD, CUSHIONING (MFR FROM 9320-00- 282-8284).....	4
9	XAFZZ	19204	7551434-3	.HOLDER.....	1
10	XAFZZ	96906	MS51934-22	.BOLT, WELDING.....	2
11	MFFZZ	19204	7551434-2	.PAD, CUSHIONING (MFR FROM 9320-00- 282-8284).....	1
				END OF FIGURE	

Change 1 C-33

REPAIR PARTS LIST (cont)



ARR82-26053

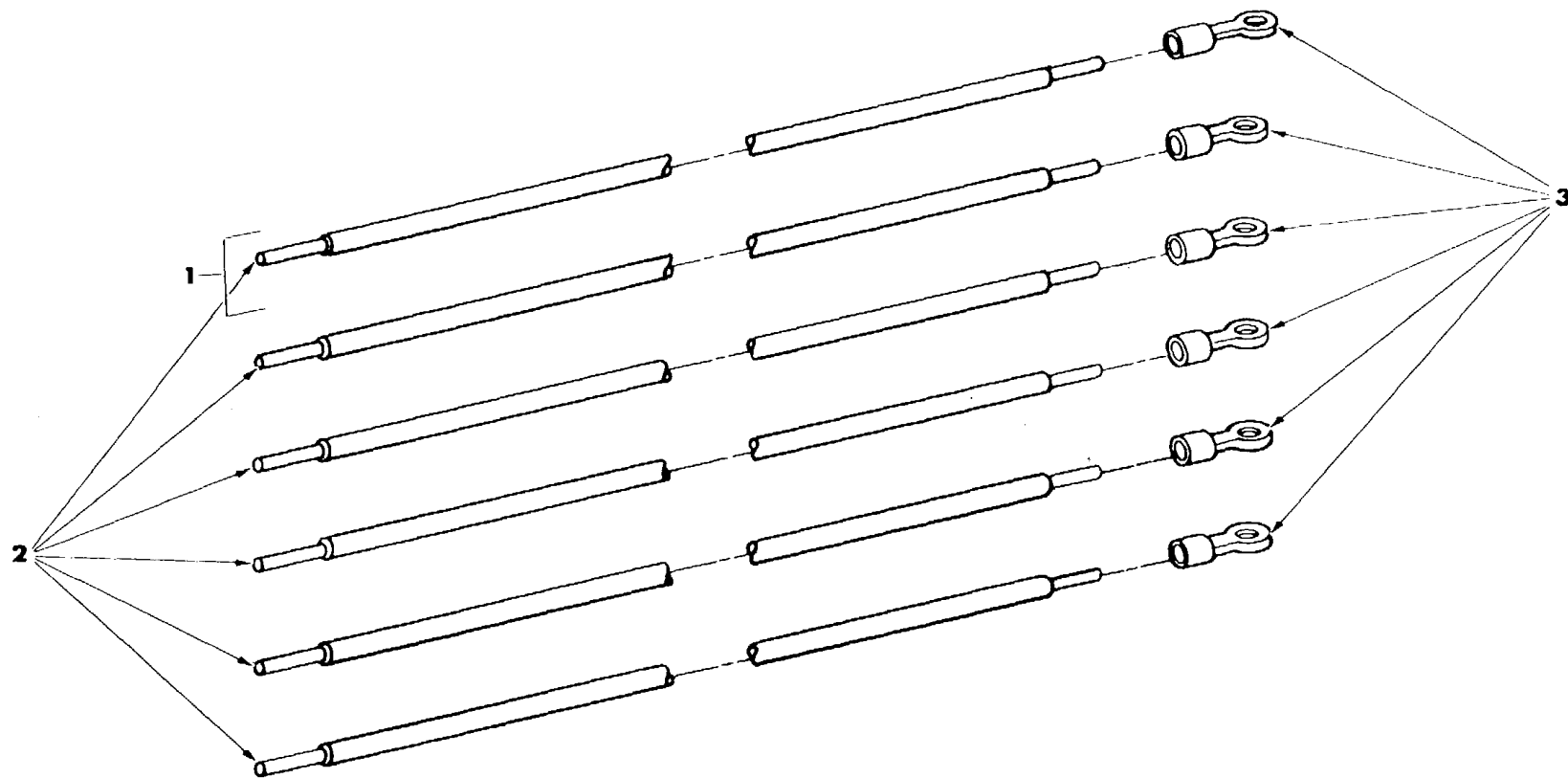
Figure 13. Cable assembly, special purpose, electrical 12011687; connector, plug, electrical MS90557C32412S; connector, plug 12011688; and cable assembly 12011638.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 13. (GROUP 06) CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL 12011687; (GROUP 0601) CONNECTOR, PLUG, ELECTRICAL MS90557C32412S; (GROUP 0602) CONNECTOR, PLUG 12011688; AND (GROUP 0603) CABLE ASSEMBLY 12011638	
1	PBFZA	19204	12011688	CONNECTOR, PLUG, ELECTRICAL.....	1
2	MFFZZ	19204	12011689	TERMINAL, LUG (MFR FROM 5940-00-549-1984).....	1
3	MFFZZ	81349	MIL-I-23053/5	BAND, MARKER (MFR FROM 5970-00-810-6118).....	1
4	MFFZZ	81349	MIL-I-23053/5	INSULATION SLEEVING, ELECTRICAL (MFR FROM 5970-00- 926-2571).....	1
5	XBFZZ	19204	12011667	CONNECTOR, COMPRESSION .....	1
6	MFFZZ	81349	C0-04 HDF 4/6 4/ 12R 1090	CABLE, POWER, ELECTRICAL (MFR FROM .....	1
7	PAFZZ	96906	MS90563-4C	COVER, ELECTRICAL CONNECTOR.....	1
8	PBFZZ	96906	MS90557C32412S	CONNECTOR, PLUG, ELECTRICAL.....	1
9	XAFZZ	00001	NPN	.CONNECTOR, HOUSING, FORWARD .....	1
10	XAFZZ	00002	NPN	.SOCKET, INSERT.....	1
11	PAFZZ	81349	M39029/49-329	.CONTACT, ELECTRICAL GROUND .....	1
12	PAFZZ	81349	M39029/49-331	.CONTACT, ELECTRICAL.....	4
13	PAFZA	96906	MS3348-4-6L	.CONTACT, ELECTRICAL.....	4
14	PAFZZ	96906	MS29513-132	.PACKING, PREFORMED.....	1
15	XAFZZ	00003	NPN	.CONNECTOR, HOUSING, REAR.....	1
16	XAFZZ	00000	NPN	.SPACER, GLAND .....	1
17	PBFZZ	96906	MS23747-2	.GLAND, CABLE SEALING .....	1
18	PBFZZ	96906	MS90561-2	ADAPTER, CABLE CLAMP TO CONNECTOR .....	1
19	XAFZZ	00001	NPN	PACKING NUT, STUFFING TUBE.....	1
20	AFFFF	19204	12011638	CABLE ASSEMBLY.....	1
21	PBFZZ	96906	MS25036-112	.TERMINAL, LUG.....	2
22	MFFZZ	81349	MIL-W-83420	.LEAD, ELECTRICAL (MFR FROM 4010-01-051-8331) .....	1
23	MFFZZ	81349	MIL-I-23053/5	.BAND, MARKER (MFR FROM 5970-00-052-3301) .....	1
24	PBFZZ	96906	MS3367-4-9	.STRAP, TIEDOWN, ELECTRICAL COMPONENTS.....	1
25	XDFZZ	19204	12011692	.TAG, INSTRUCTION.....	1

END OF FIGURE

Change 1 C-35

REPAIR PARTS LIST (cont)



ARR82-26054

Figure 14. Harness assembly, wiring 7551097-1, switchbox to distribution panel; and wire assembly 12011690-1.

SECTION II

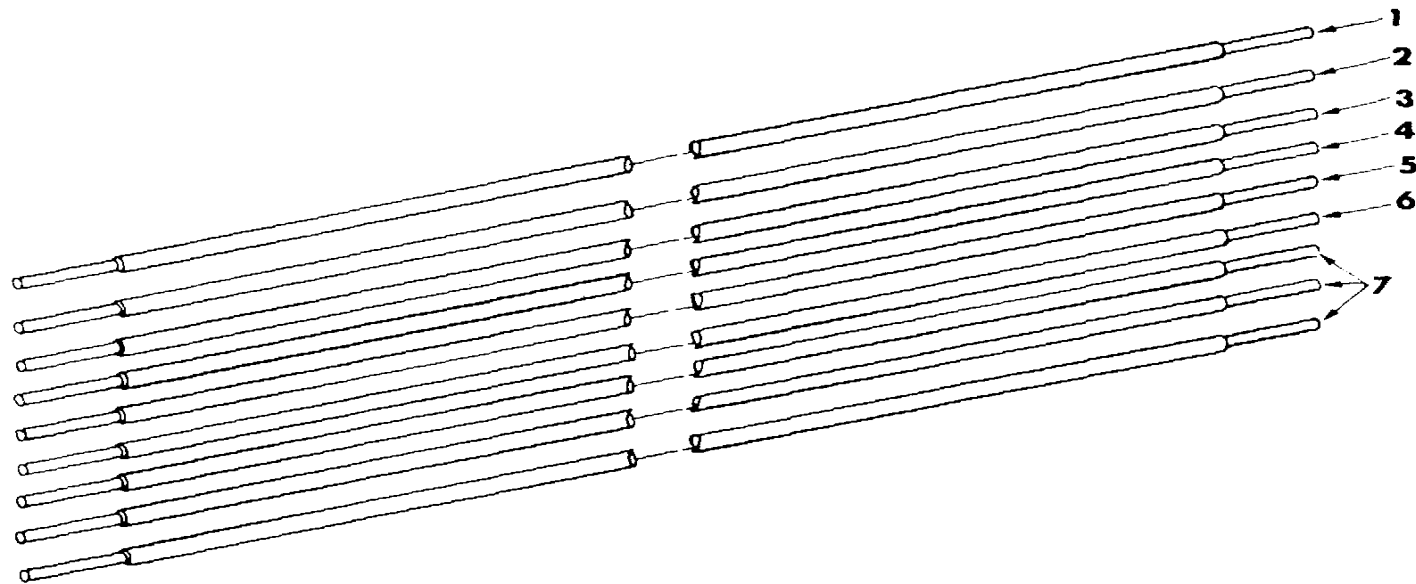
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(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 14. (GROUP 09) HARNESS ASSEMBLY, WIRING 7551097-1, SWITCHBOX TO DISTRIBUTION PANEL; AND (GROUP 0901) WIRE ASSEMBLY 12011690-1	
1	AFFFF	19204	12011690-1	WIRE ASSEMBLY.....	6
2	MFFZZ	19204	12011690	.WIRE, ELECTRICAL, BLACK (MFR FROM 6145-00-239-1245).....	1
3	PBFZZ	96906	MS25036-111	.TERMINAL, LUG.....	1
				END OF FIGURE	

Change 1 C-37



REPAIR PARTS LIST (cont)



ARR82-26055

Figure 15. Harness assembly, wiring 7551097-3, switch to distribution ceiling outlets.

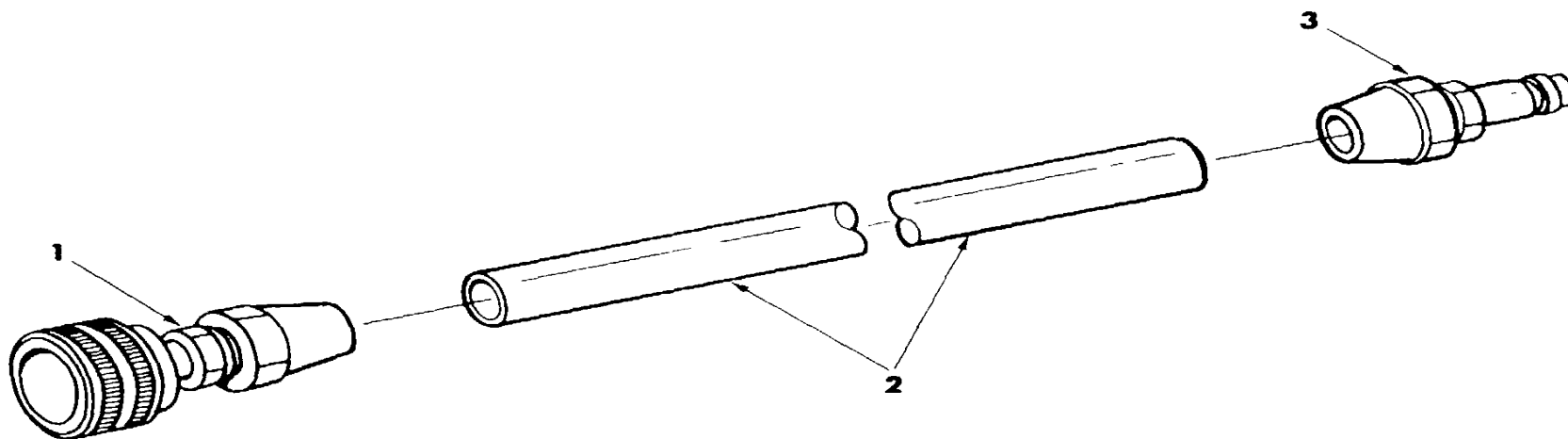
SECTION II

TM9-4933-223-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 15. (GROUP 10) HARNESS ASSEMBLY, WIRING 7551097-3, SWITCH TO DISTRIBUTION CEILING OUTLETS	
1	MFFZZ	19204	12011690-7	LEAD, ELECTRICAL, WHITE (MFR FROM ..... 6145-00-990-3003).....	1
2	MFFZZ	19204	12011690-6	LEAD, ELECTRICAL, BLACK (MFR FROM ..... 6145-00-990-3002).....	1
3	MFFZZ	19204	12011690-8	LEAD, ELECTRICAL, GREEN (MFR FROM ..... 6145-00-904-3811).....	1
4	MFFZZ	19204	12011690-26	LEAD, ELECTRICAL, GREEN (MFR FROM ..... 6145-00-904-3811).....	1
5	MFFZZ	19204	12011690-25	LEAD, ELECTRICAL, WHITE (MFR FROM ..... 6145-00-990-3003).....	1
6	MFFZZ	19204	12011690-24	LEAD, ELECTRICAL, RED (MFR FROM ..... 6145-00-990-3001).....	1
7	MFFZZ	19204	12011690-5	LEAD, ELECTRICAL, BLUE (MFR FROM..... 6145-00-184-5495).....	3
				END OF FIGURE	

Change 1 C-39

REPAIR PARTS LIST (cont)



ARR82-26056

Figure 16. Air hose assembly 7551086.

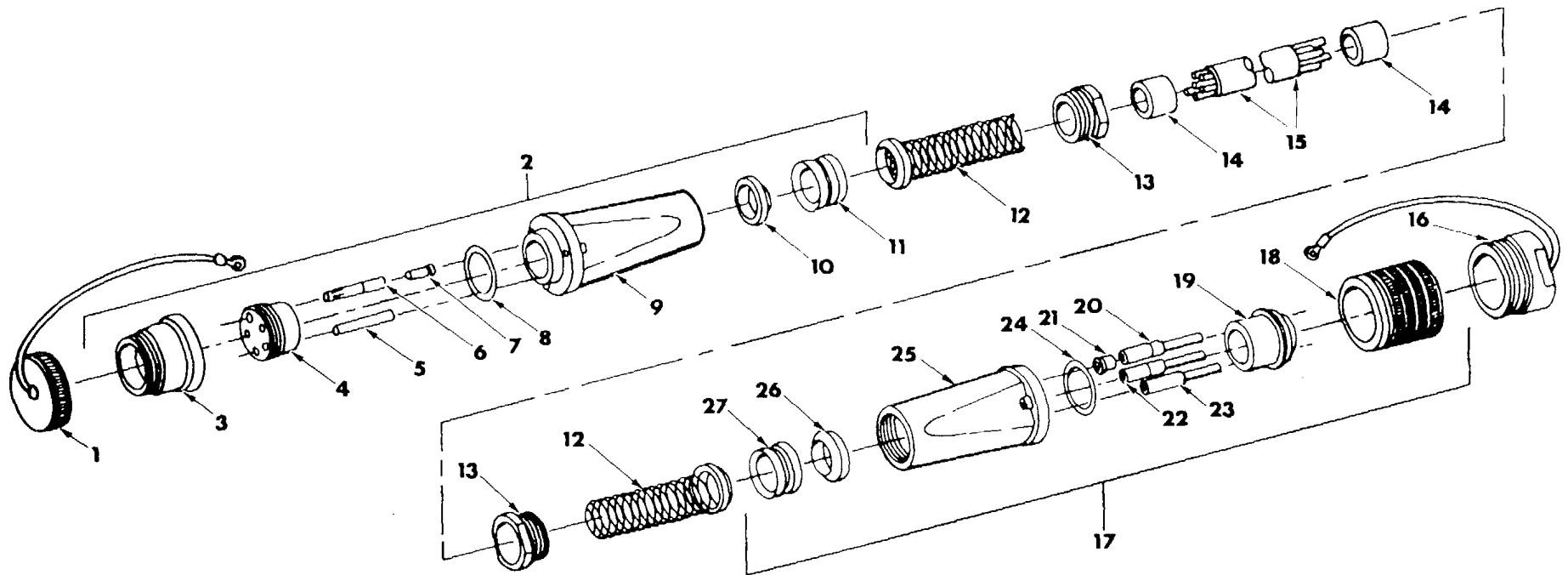
SECTION II

TM9-4933-223-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 16. (GROUP 13) AIR HOSE ASSEMBLY 7551086	
1	XDFZZ	81349	M4109-04-12-28-B	COUPLING HALF, QUICK DISCONNECT ..... (FEMALE) .....	1
2	XAFZZ	81348	ZZ-H-500A	HOSE, NONMETALLIC .....	1
3	PAFZZ	81349	M4109-12-12-28-B	COUPLING HALF, QUICK DISCONNECT ..... (MALE)..... END OF FIGURE	1

Change 1 C-41

REPAIR PARTS LIST (cont)



ARR82-26057

Figure 17. Cable assembly, power, electrical 72289-100; connector, plug, electrical MS90557C32412S, female; and connector, plug, electrical MS90556C32412P, male.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 17. (GROUP 15) CABLE ASSEMBLY, POWER, ELECTRICAL 72289- 100; (GROUP 1501) CONNec- TOR, PLUG, ELECTRICAL MS90557C32412S, FEMALE; AND (GROUP 1502) CONNECTOR PLUG, ELECTRICAL MS90556C32412P, MALE	
1	PAFZZ	96906	MS90563-4C	COVER, ELECTRICAL CONNECTOR.....	1
2	PBFZZ	96906	MS90557C32412S	CONNECTOR, PLUG, ELECTRICAL.....	1
3	XAFZZ	00006	NPN	.CONNECTOR, HOUSING, FORWARD.....	1
4	XAFZZ	00007	NPN	.SOCKET, INSERT.....	1
5	PAFZZ	81349	M39029/49-329	.CONTACT, ELECTRICAL.....	1
6	PAFZZ	81349	M39029/49-331	.CONTACT, ELECTRICAL.....	4
7	PAFZA	96906	MS3348-4-6L	.CONTACT, ELECTRICAL.....	4
8	PAFZZ	96906	MS29513-132	.PACKING, PREFORMED.....	1
9	XAFZZ	00008	NPN	.CONNECTOR, HOUSING, REAR.....	1
10	XAFZZ	00000	NPN	.SPACER, GLAND.....	1
11	PBFZZ	96906	MS23747-2	.GLAND, CABLE SEALING.....	1
12	PBFZZ	96906	MS90561-2	ADAPTER, CABLE CLAMP TO CONNECTOR.....	2
13	XAFZZ	00002	NPN	PACKING NUT, STUFFING TUBE.....	2
14	MFFZZ	81349	MIL-I-23053/5	BAND, IDENTIFICATION (MFR FROM 5970-00-926-2571) ....	2
15	MFFZZ	81349	C0-04 HDF 4/6 4/ 12R 1090	CABLE, POWER, ELECTRICAL (MFR FROM..... 6145-00-191-3606)	1
16	PAFZZ	96906	MS90564-4C	COVER, ELECTRICAL CONNECTOR.....	1
17	PBFFF	96906	MS90556C32412P	CONNECTOR, PLUG, ELECTRICAL.....	1
18	XAFZZ	00011	NPN	.CONNECTOR, PLUG, FORWARD.....	1
19	XAFZZ	00012	NPN	.SOCKET, PIN, INSERT.....	1
20	PAFZZ	81349	M39029/48-320	.CONTACT, ELECTRICAL.....	3
21	PAFZA	96906	MS3348-4-6L	.CONTACT, ELECTRICAL ELECTRICAL.....	4
22	PAFZZ	81349	M39029/48-321	.CONTACT, ELECTRICAL.....	1
23	PAFZZ	81349	M39029/48-318	.CONTACT, ELECTRICAL.....	1
24	PAFZZ	96906	MS29513-132	.PACKING, PREFORMED.....	1
25	XAFZZ	00013	NPN	.CONNECTOR, PLUG, REAR.....	1
26	XAFZZ	00014	NPN	.SPACER, GLAND.....	1
27	PBFZZ	96906	MS23747-2	.GLAND, CABLE SEALING.....	1

END OF FIGURE

Change 1 C-43(C-44 blank)

## SECTION II

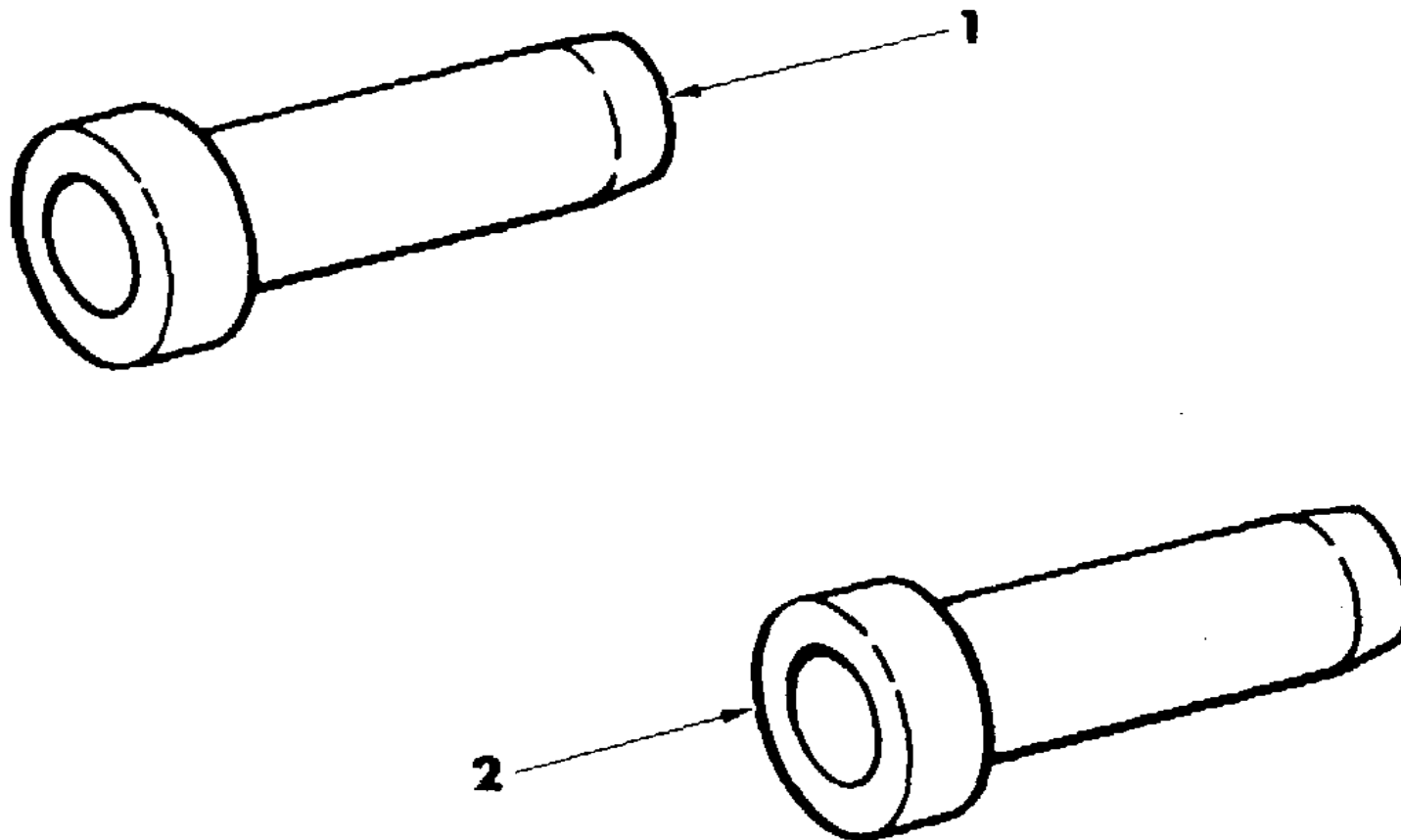
TM9-4933-223-13&amp;P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)  (GROUP 9999) BULK MATERIAL	(6) QTY
1	PAFZZ	81348	QQ-S-741	ANGLE, STRUCTURAL STEEL.....	V
2	PAFZZ	81348	QQ-S-741	ANGLE, STRUCTURAL STEEL.....	V
3	PAFZZ	81348	QQS741	ANGLE, STRUCTURAL STEEL.....	V
4	PAFZZ	81349	MIL-S-22698	ANGLE, STRUCTURAL.....	V
5	PAFZZ	96906	MS14251C049	BAR, METAL ALUMINUM.....	V
6	PAFZZ	81346	ASTM A108	BAR, METAL STEEL.....	V
7	XDFZA	81349	CO-04HDF(4/6-4/1 2R)1100	CABLE, POWER, ELECTRI ELECTRICAL.....	V
8	PAFZZ	81348	WWC563	CONDUIT, METAL, RIGID.....	V
9	PAFZZ	70510	EFSEALTITE1-2IN	HOSE, METALLIC.....	V
10	PAFZZ	81349	M23053/5-112-4	INSULATION SLEEVING , ELECTRICAL.....	V
11	PAFZZ	81349	M23053/5-111-4	INSULATION SLEEVING , ELECTRICAL.....	V
12	PAFZZ	81349	M23053/5-106-4	INSULATION SLEEVING , ELECTRICAL.....	V
13	PAFZZ	81349	MILP18080	PLASTIC SHEET.....	V
14	PAFZZ	81349	MIL-S-22698	PLATE, METAL STEEL ALLOY.....	V
15	PAFZZ	81349	MILC3133	RUBBER SHEET, CELLULAR.....	V
16	PAFZZ	81348	QQA250-11	SHEET, METAL ALUMINUM.....	V
17	PAFZZ	81346	ASTM A569	STRIP, METAL STEEL.....	V
18	PAFZZ	81346	ASTM A569	STRIP, METAL STEEL.....	V
19	PAFZZ	81346	ASTM A569	STRIP, METAL STEEL.....	V
20	PAFZZ	74829	SLU35	TERMINAL, LUG.....	V
21	PAFZZ	81349	MIL-W-4088	WEBBING, TEXTILE WOVEN NYLON.....	V
22	PAFZZ	99862	CL-63-KA-12	WIRE ROPE ASSEMBLY, SINGLE LEG.....	V
23	PAFZZ	81348	J-C-30THW06CE1/1 2TUJ5	WIRE, ELECTRICALNO 12 AWG, TYPE..... THWN, STYLE 1, GREEN.....	V
24	PAFZZ	81348	J-C-30THHN/THWNO 6CE1/12TPJO	WIRE, ELECTRICAL NO. 12 AWG, TYPE..... THWN, STYLE 1, BLACK.....	V
25	PAFZZ	81348	J-C-30THHN/THWNO 6CG1/12TPJ6	WIRE, ELECTRICAL NO. 12 AWG, TYPE..... THWN, STYLE 1, BLUE.....	V
26	PAFZZ	81348	J-C-30THW06CEI/1 2TUJ2	WIRE, ELECTRICAL NO. 12 AWG, TYPE..... THWN, STYLE 1, RED.....	V
27	PAFZZ	81348	J-C-30THW06CEI/1 2TUJO	WIRE, ELECTRICAL NO. 12 AWG, TYPE..... THWN, STYLE 1, BLACK.....	V
28	PAFZZ	81348	J-C-30THW06CEI/1 2TUJ9	WIRE, ELECTRICAL NO. 12 AWG, TYPE..... THWN, STYLE 1, WHITE.....	V

END OF FIGURE

Change 1 C-45

Section III. SPECIAL TOOLS LIST



ARR82-26058

Figure 18. Special Tools.



(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				FIG. 18. (GROUP 9500) SPECIAL TOOLS	
1	PBFZZ	81349	M81969/27-05	REMOVER, ELECTRICAL CONNECTOR ELECTRICAL CONTACT.....	
2	PBFZZ	96906	MS90562-6	REMOVER, ELECTRICAL CONTACT .....	
				END OF FIGURE	

**Change 1 C-47 (C-48 blank)**

## SECTION IV

TM 9-4933-223-13&amp;P

CROSS- REFERENCE-INDEXES  
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5999-00-014-0939	17	23	6150-00-255-8332	3	4
5999-00-014-0941	17	20	5330-00-265-1085	13	14
5999-00-014-0943	17	22		17	8
5999-00-014-0952	13	11		17	24
	17	5	8305-00-267-3009	BULK	21
5310-00-043-0520	7	10	5305-00-267-8953	3	10
5310-00-045-3296	4	21		6	5
	5	10	5305-00-269-2803	6	3
	11	5	5305-00-269-2804	4	5
5310-00-045-3299	1	5	5305-00-269-3238	4	16
	2	2	5940-00-270-5852	3	15
5970-00-052-3301	BULK	12	9520-00-277-4902	BULK	1
9515-00-066-1015	BULK	17	9520-00-277-4912	BULK	4
5305-00-068-0500	9	1	9520-00-277-4939	BULK	2
	10	1	9320-00-282-8284	BULK	15
5305-00-068-0515	1	12	6145-00-334-4116	BULK	25
	2	10	5310-00-407-9566	4	13
5305-00-071-2077	4	11	5340-00-431-6949	3	1
5310-00-080-6004	4	17	5340-00-431-8853	3	32
	5	15	5340-00-450-4031	3	31
5310-00-080-8495	12	6	5340-00-457-1043	3	9
5935-00-114-7285	13	7		3	30
	17	1	5340-00-501-6193	2	17
5935-00-114-8707	17	16	9510-00-529-8831	BULK	3
5935-00-114-8768	13	8	5975-00-535-2804	9	6
	17	2		10	5
5935-00-114-8833	17	17	9510-00-541-9655	BULK	6
5310-00-141-1795	1	13	5305-00-543-2419	4	4
	2	9		5	1
	7	6	5940-00-549-1984	BULK	20
5940-00-143-4775	1	8	7110-00-567-1901	7	4
	1	10	5975-00-578-3666	2	26
	2	4	5310-00-579-3435	3	18
	2	6	5310-00-582-5965	3	11
5940-00-143-4794	13	21		6	11
9515-00-153-3217	BULK	14		7	9
5310-00-167-0767	4	14		8	11
5310-00-167-0768	3	6		12	5
5310-00-167-0770	4	9	5310-00-584-5272	4	8
5975-00-178-1217	BULK	8	5306-00-613-9038	8	10
4730-00-203-0178	3	26	5310-00-637-9541	3	7
9515-00-204-3977	BULK	18		4	3
9515-00-204-3991	BULK	19		5	2
5940-00-204-8990	2	25		6	2
	14	3	5930-00-683-2703	9	8
5305-00-225-8507	4	15		10	7
9530-00-236-7671	BULK	5	5935-00-686-9287	13	1
6145-00-239-1245	BULK	24	5930-00-702-6431	9	5
5975-00-243-5447	2	14	5320-00-721-5211	8	4
4730-00-253-5757	3	23		8	6

Change 1 I-1

**CROSS- REFERENCE-INDEXES  
NATIONAL STOCK NUMBER INDEX**

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5305-00-725-2317	5	14	5935-01-085-5994	17	11
5975-00-727-5153	13	24		17	27
5310-00-732-0558	3	5	5935-01-085-6599	13	18
5310-00-732-0559	4	2		17	12
	6	1	5340-01-085-7258	3	29
5340-00-764-2334	5	11	5340-01-085-8018	5	8
5310-00-768-0318	4	7	5999-01-091-3187	13	12
5310-00-768-0319	6	10		17	6
5975-00-802-6531	1	3	4730-01-092-6575	2	18
	2	13	5975-01-094-1585	1	11
9535-00-808-3333	BULK	16	5975-01-094-1586	1	16
5310-00-809-3078	12	4	4720-01-094-1893	3	2
5310-00-809-5998	4	10	4730-01-094-1902	3	25
5970-00-810-6118	BULK	10	4730-01-094-5170	16	3
5310-00-823-8804	9	2	5975-01-094-6250	2	7
	10	2		9	4
5310-00-842-1699	3	20		10	4
5310-00-880-7744	4	12	5307-01-098-3847	3	21
5310-00-889-2528	3	19	5120-01-122-3897	18	1
6145-00-904-3811	BULK	23	5999-01-130-9233	13	13
5970-00-926-2571	BULK	11		17	7
5310-00-934-9751	4	20		17	21
	5	9	5310-01-142-3218	3	17
5310-00-934-9757	1	4	4730-01-181-5958	3	24
	2	1	5120-01-351-2073	18	2
5310-00-939-2653	3	22			
4030-00-948-7315	8	9			
5306-00-951-5699	3	8			
4720-00-965-9319	BULK	9			
5305-00-984-4992	9	7			
	10	6			
5305-00-984-6194	1	1			
	2	8			
5305-00-984-7341	5	12			
9330-00-988-1894	BULK	13			
5305-00-989-7435	4	19			
6145-00-990-3001	BULK	26			
6145-00-990-3002	BULK	27			
6145-00-990-3003	BULK	28			
5935-01-012-3080	1	14			
	2	11			
5340-01-013-3904	3	28			
5320-01-032-3030	1	18			
	2	22			
	8	12			
4010-01-051-8331	BULK	22			
6150-01-064-2821	3	3			
5310-01-077-1016	11	6			
4933-01-085-1582	3	13			
5935-01-085-5994	13	17			

**CROSS-REFERENCE INDEXES  
PART NUMBER INDEX**

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
88044	AN43B-C4A	5306-00-613-9038	8	10
88044	AN960-416	5310-00-141-1795	1	13
			2	9
			7	6
88044	AN970-5	5310-00-167-0767	4	14
88044	AN970-6	5310-00-167-0768	3	6
88044	AN970-8	5310-00-167-0770	4	9
81346	ASTM A108	9510-00-541-9655	BULK	6
81346	ASTM A569	9515-00-066-1015	BULK	17
		9515-00-204-3977	BULK	18
		9515-00-204-3991	BULK	19
91929	BZ-2RQ18-A2	5930-00-683-2703	9	8
			10	7
80204	B1821BH025F100N	5305-00-068-0515	1	12
			2	10
80204	B1821BH038C113N	5305-00-543-2419	4	4
			5	1
80204	B1821BH038C150N	5305-00-725-2317	5	14
80204	B1821BH038F125N	5305-00-269-3238	4	16
80204	B1821BH050C350N	5305-00-071-2077	4	11
99862	CL-63-KA-12	4010-01-051-8331	BULK	22
03743	CLB-50M	5975-00-243-5447	2	14
81349	CO-04HDF(4/6-4/1 2R)1100		BULK	7
81349	CO-04 HDF 4/6 4/ 12R 1090		13	6
			17	15
99017	EC4	5340-01-013-3904	3	28
70510	EFSEALTITE1-2IN	4720-00-965-9319	BULK	9
81348	FFW92TYPEAGRADE1 CLASSEMEDIUM	5310-00-579-3435	3	18
03743	FSK1BCA	5975-00-535-2804	9	6
			10	5
81348	J-C-30THHN/THWNO 6CE1 /12TPJO	6145-00-239-1245	BULK	24
81348	J-C-30THHN/THWNO 6CG1/12TPJ6	6145-00-334-4116	BULK	25
81348	J-C-30THW06CE1/1 2TUJO	6145-00-990-3002	BULK	27
81348	J-C-30THW06CE1/1 2TUJ2	6145-00-990-3001	BULK	26
81348	J-C-30THW06CE1/1 2TUJ5	6145-00-904-3811	BULK	23
81348	J-C-30THW06CE1/1 2TUJ9	6145-00-990-3003	BULK	28
81349	MIL-I-23053/5		13	3
			13	4
			13	23
			17	14
81349	MIL-S-22698	9520-00-277-4912	BULK	4
		9515-00-153-3217	BULK	14

Change 1 I-3

**CROSS-REFERENCE INDEXES  
PART NUMBER INDEX**

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
81349	MIL-W-4088	8305-00-267-3009	BULK	21
81349	MIL-W-83420		13	22
81349	MILC3133	9320-00-282-8284	BULK	15
81349	MILP18080	9330-00-988-1894	BULK	13
96906	MS14251C049	9530-00-236-7671	BULK	5
96906	MS20470A4-6	5320-00-721-5211	8	4
			8	6
96906	MS23747-2	5935-01-085-5994	13	17
			17	11
			17	27
96906	MS25036-111	5940-00-204-8990	2	25
			14	3
96906	MS25036-112	5940-00-143-4794	13	21
96906	MS25036-156	5940-00-143-4775	1	8
			1	10
			2	4
			2	6
96906	MS25307-212	5930-00-702-6431	9	5
96906	MS27183-11	5310-00-809-3078	12	4
96906	MS27183-14	5310-00-080-6004	4	17
			5	15
96906	MS27183-18	5310-00-809-5998	4	10
96906	MS27183-9	5310-00-823-8804	9	2
			10	2
96906	MS29513-132	5330-00-265-1085	13	14
			17	8
			17	24
96906	MS3348-4-6L	5999-01-130-9233	13	13
			17	7
			17	21
96906	MS3367-4-9	5975-00-727-5153	13	24
96906	MS35191-273	5305-00-984-7341	5	12
96906	MS35206-232	5305-00-984-4992	9	7
			10	6
96906	MS35206-246	5305-00-984-6194	1	1
			2	8
96906	MS35207-264	5305-00-989-7435	4	19
96906	MS35338-42	5310-00-045-3299	1	5
			2	2
96906	MS35338-43	5310-00-045-3296	4	21
			5	10
			11	5
96906	MS35338-44	5310-00-582-5965	3	11
			6	11
			7	9
			8	11
			12	5
96906	MS35338-45	5310-00-407-9566	4	13
96906	MS35338-46	5310-00-637-9541	3	7
			4	3
			5	2

Change 1 I-4

**CROSS-REFERENCE INDEXES  
PART NUMBER INDEX**

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS35338-46	5310-00-637-9541	6	2
96906	MS35338-48	5310-00-584-5272	4	8
96906	MS35425-39	5310-00-080-8495	12	6
96906	MS35425-71	5310-01-142-3218	3	17
96906	MS35426-25	5310-01-077-1016	11	6
96906	MS35649-282	5310-00-934-9757	1	4
			2	1
96906	MS35650-302	5310-00-934-9751	4	20
			5	9
96906	MS35650-3252	5310-00-043-0520	7	10
96906	MS35691-4	5310-00-842-1699	3	20
96906	MS35751-81	5306-00-951-5699	3	8
96906	MS45904-68	5310-00-889-2528	3	19
96906	MS51934-22		12	10
96906	MS51939-1	5340-00-764-2334	5	11
96906	MS51967-14	5310-00-768-0318	4	7
96906	MS51967-5	5310-00-880-7744	4	12
96906	MS51967-8	5310-00-732-0558	3	5
96906	MS51968-2	5310-00-768-0319	6	10
96906	MS51968-8	5310-00-732-0559	4	2
			6	1
96906	MS51969-1	5310-00-939-2653	3	22
96906	MS87006-33	4030-00-948-7315	8	9
96906	MS90556C32412P	5935-00-114-8833	17	17
96906	MS90557C32412S	5935-00-114-8768	13	8
			17	2
96906	MS90561-2	5935-01-085-6599	13	18
			17	12
96906	MS90562-6	5120-01-351-2073	18	2
96906	MS90563-4C	5935-00-114-7285	13	7
			17	1
96906	MS90564-4C	5935-00-114-8707	17	16
96906	MS90725-3	5305-00-068-0500	9	1
			10	1
96906	MS90725-43	5305-00-225-8507	4	15
96906	MS90726-60	5305-00-269-2803	6	3
96906	MS90726-61	5305-00-269-2804	4	5
96906	MS90727-5	5305-00-267-8953	3	10
			6	5
81349	M23053/5-106-4	5970-00-052-3301	BULK	12
81349	M23053/5-111-4	5970-00-926-2571	BULK	11
81349	M23053/5-112-4	5970-00-810-6118	BULK	10
81349	M39029/48-318	5999-00-014-0939	17	23
81349	M39029/48-320	5999-00-014-0941	17	20
81349	M39029/48-321	5999-00-014-0943	17	22
81349	M39029/49-329	5999-00-014-0952	13	11
			17	5
81349	M39029/49-331	5999-01-091-3187	13	12
			17	6
81349	M4109-01-12-00-B	4730-00-203-0178	3	26
81349	M4109-04-12-28-B		16	1

**CROSS-REFERENCE INDEXES  
PART NUMBER INDEX**

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
81349	M4109-09-12-00-B	4730-01-094-1902	3	25
81349	M4109-12-12-28-B	4730-01-094-5170	16	3
81349	M81969/27-05	5120-01-122-3897	18	1
00001	NPN		13	9
			13	10
			13	15
			13	16
			13	19
			17	3
			17	4
			17	9
			17	10
			17	13
			17	18
			17	19
			17	25
			17	26
18876	PSM90727001-06		7	5
81348	QQ-S-741	9520-00-277-4902	BULK	1
		9520-00-277-4939	BULK	2
81348	QQA250-11	9535-00-808-3333	BULK	16
81348	QQS741	9510-00-529-8831	BULK	3
75037	R	5940-00-270-5852	3	15
74829	SLU35	5940-00-549-1984	BULK	20
03743	ST-50	5975-00-578-3666	2	26
03743	TWCL75	5340-00-501-6193	2	17
81348	W-F-408	5975-00-802-6531	1	3
			2	13
81348	WC596/12-4	5935-01-012-3080	1	14
			2	11
81348	WWC563	5975-00-178-1217	BULK	8
81348	WWP460	4730-00-253-5757	3	23
81348	ZZ-H-500A		16	2
19204	12011638		13	20
19204	12011651		4	18
19204	12011652		4	6
19204	12011662		6	7
19204	12011663		6	6
19204	12011664		6	8
19204	12011665		6	4
19204	12011666		6	9
19204	12011667		13	5
19204	12011668		5	13
19204	12011669		5	3
19204	12011670	5340-01-085-8018	5	8
19204	12011671		5	4
19204	12011685	5320-01-032-3030	1	18
			2	22
			8	12
19204	12011686		3	12
19204	12011687	6150-01-064-2821	3	3

**CROSS-REFERENCE INDEXES  
PART NUMBER INDEX**

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19204	12011688	5935-00-686-9287	13	1
19204	12011689		13	2
19204	12011690		1	9
			2	5
			2	24
			14	2
19204	12011690-1		14	1
19204	12011690-2		3	16
19204	12011690-24		15	6
19204	12011690-25		15	5
19204	12011690-26		15	4
19204	12011690-3		3	14
19204	12011690-4		2	23
19204	12011690-5		15	7
19204	12011690-6		15	2
19204	12011690-7		15	1
19204	12011690-8		15	3
19204	12011690-9		1	7
			2	3
19204	12011692		13	25
76038	1300	7110-00-567-1901	7	4
96160	5863-2	4730-01-092-6575	2	18
07878	72289-100	6150-00-255-8332	3	4
19204	7550588-10	5340-00-457-1043	3	9
			3	30
19204	7550588-3	5340-00-431-6949	3	1
19204	7550588-6	5340-01-085-7258	3	29
19204	7550588-8	5340-00-431-8853	3	32
19204	7550588-9	5340-00-450-4031	3	31
19204	7550795-2	5307-01-098-3847	3	21
19204	7551084		1	15
19204	7551085-1		2	20
19204	7551085-2		2	16
19204	7551085-3		1	17
19204	7551085-4		1	6
19204	7551085-5		2	12
19204	7551086	4720-01-094-1893	3	2
19204	7551087		7	8
19204	7551091		8	5
19204	7551091-1		8	7
19204	7551091-2		8	8
19204	7551092		8	1
19204	7551092-1		8	2
19204	7551092-2		8	3
19204	7551093-1		1	2
19204	7551093-2		2	15
19204	7551094		7	2
19204	7551097-1		2	28
19204	7551097-3		2	19
19204	7551429-7		2	27
19204	7551433		3	27



**CROSS-REFERENCE INDEXES  
PART NUMBER INDEX**

<b>CAGEC</b>	<b>PART NUMBER</b>	<b>STOCK NUMBER</b>	<b>FIG.</b>	<b>ITEM</b>
19204	7551434		12	7
19204	7551434-1		12	8
19204	7551434-2		12	11
19204	7551434-3		12	9
19204	7551435		12	1
19204	7551435-1		12	2
19204	7551435-2		12	3
19204	7551436	4933-01-085-1582	3	13
19204	7551731		7	7
19204	7551732		11	2
19204	7551733		7	1
19204	7551733-1		11	4
19204	7551733-2		11	1
19204	7551733-3		11	3
19204	7551734		9	3
			10	3
19204	7551735-1		2	21
19204	7551735-2		1	19
19204	7551738	5975-01-094-1585	1	11
19204	7551739	5975-01-094-1586	1	16
			9	4
			10	4
19204	7551741	4730-01-181-5958	3	24
19204	7551806		4	1

**Change 1 I-8**

## CROSS REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
BULK	1	9520-00-277-4902	81348	QQ-S-741
BULK	2	9520-00-277-4939	81348	QQ-S-741
BULK	3	9510-00-529-8831	81348	QQS741
BULK	4	9520-00-277-4912	81349	MIL-S-22698
BULK	5	9530-00-236-7671	96906	MS14251C049
BULK	6	9510-00-541-9655	81346	ASTM A108
BULK	7		81349	CO-04HDF(4/6-4/1 2R)1100
BULK	8	5975-00-178-1217	81348	WWC563
BULK	9	4720-00-965-9319	70510	EFSEALTITE1-2IN
BULK	10	5970-00-810-6118	81349	M23053/5-112-4
BULK	11	5970-00-926-2571	81349	M23053/5-111-4
BULK	12	5970-00-052-3301	81349	M23053/5-106-4
BULK	13	9330-00-988-1894	81349	MILP18080
BULK	14	9515-00-153-3217	81349	MIL-S-22698
BULK	15	9320-00-282-8284	81349	MILC3133
BULK	16	9535-00-808-3333	81348	QQA250-11
BULK	17	9515-00-066-1015	81346	ASTM A569
BULK	18	9515-00-204-3977	81346	ASTM A569
BULK	19	9515-00-204-3991	81346	ASTM A569
BULK	20	5940-00-549-1984	74829	SLU35
BULK	21	8305-00-267-3009	81349	MIL-W-4088
BULK	22	4010-01-051-8331	99862	CL-63-KA-12
BULK	23	6145-00-904-3811	81348	J-C-30THW06CE1/I 2TUJ5
BULK	24	6145-00-239-1245	81348	J-C-30THHN/THWNO 6CE1 12TPJO
BULK	25	6145-00-334-4116	81348	J-C-30THHN/THWNO 6CG1/12TPJ6
BULK	26	6145-00-990-3001	81348	J-C-30THW06CE1/I 2TUJ2
BULK	27	6145-00-990-3002	81348	J-C-30THW06CE1/I 2TUJO
BULK	28	6145-00-990-3003	81348	J-C-30THW06CE1I1 2TUJ9
1	1	5305-00-984-6194	96906	MS35206-246
1	2		19204	7551093-1
1	3	5975-00-802-6531	81348	W-F-408
1	4	5310-00-934-9757	96906	MS35649-282
1	5	5310-00-045-3299	96906	MS35338-42
1	6		19204	7551085-4
1	7		19204	12011690-9
1	8	5940-00-143-4775	96906	MS25036-156
1	9		19204	12011690
1	10	5940-00-143-4775	96906	MS25036-156
1	11	5975-01-094-1585	19204	7551738
1	12	5305-00-068-0515	80204	B1821BH025F1OON
1	13	5310-00-141-1795	88044	AN960-416
1	14	5935-01-012-3080	81348	WC596/12-4
1	15		19204	7551084
1	16	5975-01-094-1586	19204	7551739

## CROSS REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
1	17		19204	7551085-3
1	18	5320-01-032-3030	19204	12011685
1	19		19204	7551735-2
2	1	5310-00-934-9757	96906	MS35649-282
2	2	5310-00-045-3299	96906	MS35338-42
2	3		19204	12011690-9
2	4	5940-00-143-4775	96906	MS25036-156
2	5		19204	12011690
2	6	5940-00-143-4775	96906	MS25036-156
2	7	5975-01-094-6250	19204	7551740
2	8	5305-00-984-6194	96906	MS35206-246
2	9	5310-00-141-1795	88044	AN960-416
2	10	5305-00-068-0515	80204	B1821BH025F10ON
2	11	5935-01-012-3080	81348	WC596/12-4
2	12		19204	7551085-5
2	13	5975-00-802-6531	81348	W-F-408
2	14	5975-00-243-5447	03743	CLB-50M
2	15		19204	7551093-2
2	16		19204	7551085-2
2	17	5340-00-501-6193	03743	TWCL75
2	18	4730-01-092-6575	96160	5863-2
2	19		19204	7551097-3
2	20		19204	7551085-1
2	21		19204	7551735-1
2	22	5320-01-032-3030	19204	12011685
2	23		19204	12011690-4
2	24		19204	12011690
2	25	5940-00-204-8990	96906	MS25036-111
2	26	5975-00-578-3666	03743	ST-50
2	27		19204	7551429-7
2	28		19204	7551097-1
3	1	5340-00-431-6949	19204	7550588-3
3	2	4720-01-094-1893	19204	7551086
3	3	6150-01-064-2821	19204	12011687
3	4	6150-00-255-8332	07878	72289-100
3	5	5310-00-732-0558	96906	MS51967-8
3	6	5310-00-167-0768	88044	AN970-6
3	7	5310-00-637-9541	96906	MS35338-46
3	8	5306-00-951-5699	96906	MS35751-81
3	9	5340-00-457-1043	19204	7550588-10
3	10	5305-00-267-8953	96906	MS90727-5
3	11	5310-00-582-5965	96906	MS35338-44
3	12		19204	12011686
3	13	4933-01-085-1582	19204	7551436
3	14		19204	12011690-3
3	15	5940-00-270-5852	75037	R
3	16		19204	12011690-2
3	17	5310-01-142-3218	96906	MS35425-71
3	18	5310-00-579-3435	81348	FFW92TYPEAGRADE1 CLASSEMEDIMUM
3	19	5310-00-889-2528	96906	MS45904-68

## CROSS REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
3	20	5310-00-842-1699	96906	MS35691-4
3	21	5307-01-098-3847	19204	7550795-2
3	22	5310-00-939-2653	96906	MS51969-1
3	23	4730-00-253-5757	81348	WWP460
3	24	4730-01-181-5958	19204	7551741
3	25	4730-01-094-1902	81349	M4109-09-12-00-B
3	26	4730-00-203-0178	81349	M4109-01-12-00-B
3	27		19204	7551433
3	28	5340-01-013-3904	99017	EC4
3	29	5340-01-085-7258	19204	7550588-6
3	30	5340-00-457-1043	19204	7550588-10
3	31	5340-00-450-4031	19204	7550588-9
3	32	5340-00-431-8853	19204	7550588-8
4	1		19204	7551806
4	2	5310-00-732-0559	96906	MS51968-8
4	3	5310-00-637-9541	96906	MS35338-46
4	4	5305-00-543-2419	80204	B1821BH038C113N
4	5	5305-00-269-2804	96906	MS90726-61
4	6		19204	12011652
4	7	5310-00-768-0318	96906	MS51967-14
4	8	5310-00-584-5272	96906	MS35338-48
4	9	5310-00-167-0770	88044	AN970-8
4	10	5310-00-809-5998	96906	MS27183-18
4	11	5305-00-071-2077	80204	B1821BH050C350N
4	12	5310-00-880-7744	96906	MS51967-5
4	13	5310-00-407-9566	96906	MS35338-45
4	14	5310-00-167-0767	88044	AN970-5
4	15	5305-00-225-8507	96906	MS90725-43
4	16	5305-00-269-3238	80204	B1821BH038F125N
4	17	5310-00-080-6004	96906	MS27183-14
4	18		19204	12011651
4	19	5305-00-989-7435	96906	MS35207-264
4	20	5310-00-934-9751	96906	MS35650-302
4	21	5310-00-045-3296	96906	MS35338-43
5	1	5305-00-543-2419	80204	B1821BH038C113N
5	2	5310-00-637-9541	96906	MS35338-46
5	3		19204	12011669
5	4		19204	12011671
5	8	5340-01-085-8018	19204	12011670
5	9	5310-00-934-9751	96906	MS35650-302
5	10	5310-00-045-3296	96906	MS35338-43
5	11	5340-00-764-2334	96906	MS51939-1
5	12	5305-00-984-7341	96906	MS35191-273
5	13		19204	12011668
5	14	5305-00-725-2317	80204	B1821BH038C150N
5	15	5310-00-080-6004	96906	MS27183-14
6	1	5310-00-732-0559	96906	MS51968-8
6	2	5310-00-637-9541	96906	MS35338-46
6	3	5305-00-269-2803	96906	MS90726-60
6	4		19204	12011665
6	5	5305-00-267-8953	96906	MS90727-5

## CROSS REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
6	6		19204	12011663
6	7		19204	12011662
6	8		19204	12011664
6	9		19204	12011666
6	10	5310-00-768-0319	96906	MS51968-2
6	11	5310-00-582-5965	96906	MS35338-44
7	1		19204	7551733
7	2		19204	7551094
7	4	7110-00-567-1901	76038	1300
7	5		18876	PSM90727001-06
7	6	5310-00-141-1795	88044	AN960-416
7	7		19204	7551731
7	8		19204	7551087
7	9	5310-00-582-5965	96906	MS35338-44
7	10	5310-00-043-0520	96906	MS35650-3252
8	1		19204	7551092
8	2		19204	7551092-1
8	3		19204	7551092-2
8	4	5320-00-721-5211	96906	MS20470A4-6
8	5		19204	7551091
8	6	5320-00-721-5211	96906	MS20470A4-6
8	7		19204	7551091-1
8	8		19204	7551091-2
8	9	4030-00-948-7315	96906	MS87006-33
8	10	5306-00-613-9038	88044	AN43B-C4A
8	11	5310-00-582-5965	96906	MS35338-44
8	12	5320-01-032-3030	19204	12011685
9	1	5305-00-068-0500	96906	MS90725-3
9	2	5310-00-823-8804	96906	MS27183-9
9	3		19204	7551734
9	4	5975-01-094-6250	19204	7551740
9	5	5930-00-702-6431	96906	MS25307-212
9	6	5975-00-535-2804	03743	FSK1BCA
9	7	5305-00-984-4992	96906	MS35206-232
9	8	5930-00-683-2703	91929	BZ-2RQ18-A2
10	1	5305-00-068-0500	96906	MS90725-3
10	2	5310-00-823-8804	96906	MS27183-9
10	3		19204	7551734
10	4	5975-01-094-6250	19204	7551740
10	5	5975-00-535-2804	03743	FSK1BCA
10	6	5305-00-984-4992	96906	MS35206-232
10	7	5930-00-683-2703	91929	BZ-2RQ18-A2
11	1		19204	7551733-2
11	2		19204	7551732
11	3		19204	7551733-3
11	4		19204	7551733-1
11	5	5310-00-045-3296	96906	MS35338-43
11	6	5310-01-077-1016	96906	MS35426-25
12	1		19204	7551435
12	2		19204	7551435-1
12	3		19204	7551435-2

## CROSS REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
12	4	5310-00-809-3078	96906	MS27183-11
12	5	5310-00-582-5965	96906	MS35338-44
12	6	5310-00-080-8495	96906	MS35425-39
12	7		19204	7551434
12	8		19204	7551434-1
12	9		19204	7551434-3
12	10		96906	MS51934-22
12	11		19204	7551434-2
13	1	5935-00-686-9287	19204	12011688
13	2		19204	12011689
13	3		81349	MIL-I-23053/5
13	4		81349	MIL-I-23053/5
13	5		19204	12011667
13	6		81349	C00-04 HDF 4/6 4/ 12R 1090
13	7	5935-00-114-7285	96906	MS90563-4C
13	8	5935-00-114-8768	96906	MS90557C32412S
13	9		00001	NPN
13	10		00002	NPN
13	11	5999-00-014-0952	81349	M39029/49-329
13	12	5999-01-091-3187	81349	M39029/49-331
13	13	5999-01-130-9233	96906	MS3348-4-6L
13	14	5330-00-265-1085	96906	MS29513-132
13	15		00003	NPN
13	16		00000	NPN
13	17	5935-01-085-5994	96906	MS23747-2
13	18	5935-01-085-6599	96906	MS90561-2
13	19		00001	NPN
13	20		19204	12011638
13	21	5940-00-143-4794	96906	MS25036-112
13	22		81349	MIL-W-83420
13	23		81349	MIL-I-23053/5
13	24	5975-00-727-5153	96906	MS3367-4-9
13	25		19204	12011692
14	1		19204	12011690-1
14	2		19204	12011690
14	3	5940-00-204-8990	96906	MS25036-111
15	1		19204	12011690-7
15	2		19204	12011690-6
15	3		19204	12011690-8
15	4		19204	12011690-26
15	5		19204	12011690-25
15	6		19204	12011690-24
15	7		19204	12011690-5
16	1		81349	M4109-04-12-28-B
16	2		81348	ZZ-H-500A
16	3	4730-01-094-5170	81349	M4109-12-12-28-B
17	1	5935-00-114-7285	96906	MS90563-4C
17	2	5935-00-114-8768	96906	MS90557C32412S
17	3		00006	NPN
17	4		00007	NPN

## CROSS REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
17	5	5999-00-014-0952	81349	M39029/49-329
17	6	5999-01-091-3187	81349	M39029/49-331
17	7	5999-01-130-9233	96906	MS3348-4-6L
17	8	5330-00-265-1085	96906	MS29513-132
17	9		00008	NPN
17	10		00000	NPN
17	11	5935-01-085-5994	96906	MS23747-2
17	12	5935-01-085-6599	96906	MS90561-2
17	13		00002	NPN
17	14		81349	MIL-I-23053/5
17	15		81349	C00-04 HDF 4/6 4/ 12R 1090
17	16	5935-00-114-8707	96906	MS90564-4C
17	17	5935-00-114-8833	96906	MS90556C32412P
17	18		00011	NPN
17	19		00012	NPN
17	20	5999-00-014-0941	81349	M39029/48-320
17	21	5999-01-130-9233	96906	MS3348-4-6L
17	22	5999-00-014-0943	81349	M39029/48-321
17	23	5999-00-014-0939	81349	M39029/48-318
17	24	5330-00-265-1085	96906	MS29513-132
17	25		00013	NPN
17	26		00014	NPN
17	27	5935-01-085-5994	96906	MS23747-2
18	1	5120-01-122-3897	81349	M81969/27-05
18	2	5120-01-351-2073	96906	MS90562-6

Change 1 I-14

**APPENDIX D  
EXPENDABLE SUPPLIES AND MATERIALS LIST**

**Section I. INTRODUCTION**

**D-1. SCOPE**

This appendix lists expendable supplies and materials you will need to operate and maintain the armament repair shop set. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

F .....Aviation Intermediate

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

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

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

**D-2. EXPLANATION OF COLUMNS**

a. Column 1--Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, app D.").

b. Column 2--Level. This column identifies the lowest level of maintenance that requires the listed item.

**Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST**

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) UNIT OF MEAS
1	F	6810-00-551-1487	TRICHLOROETHANE, TYPE 1.1.1 55-gal. (208-1) drum INHIBISOL (86440)  Change 1 D-1	DR



## EXPENDABLE SUPPLIES AND MATERIALS LIST (cont)

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) UNIT OF MEAS
2	F	8040-00-273-8717	ADHESIVE MMM-A-121 (81348)	PT
3	F	8040-00-579-2596	ADHESIVE: (part A, resin 8470 and part B, hardener 8470)	PT
4	F	5350-00-192-5049	CLOTH, ABRASIVE A-A-1048 (81349)	EA
5	F	7920-00-985-6849	CLOTH, POLISHING DDD-C-450	EA
6	F	6850-01-122-1968	DRY CLEANING SOLVENT P-D-680 (81348)	GL
7	F	8010-00-081-0809	ENAMEL, OD, SEMIGLOSS FED-STD-595 (24087)	QT
8	F	8010-00-080-2173	ENAMEL, GREEN, LUSTERLESS FED-STh-595 (34079)	GCL
9	F	8415-00-634-5027	GLOVE, CLOTH, 10-oz (283.50-gram)	PR
10	F	8010-00-166-3147	LACQUER, BLACK, FLAT FED-STD-595 (37038)	DT
11	F	8010-01-040-3758	LACQUER, BLACK, SEMIGLOSS MIL-L-52043 (81349)	GL
<b>Change 1 D-2</b>				

12	F	8010-00-515-1596	LACQUER, WHITE FED-STD-595 (17875)	GL
13	F	9150-00-949-0323	LUBRICATING OIL, SEMIFLUID MIL-L-46150 (81349)	OZ
14	F	8010-00-161-7425	PRIMER COATING	GL
15	F	7920-00-205-1711	RAG, WIPING DDD-R-30 (81348)	BE
16	F	3439-00-453-5473	SOLDER, TIN ALLOY QQ-S-571 (81348)	LB
17	F	7510-00-469-7910	STENCIL MARKING INK, BLACK FED-STD-595 (37038)	OZ
18	F	5970-00-419-4291	TAPE, INSULATION, ELECTRICAL: 3/4-in. (1.91-cm), 1/2-lb (226.80-g) roll FED-SPEC-H.H.-I-510	FT

Change 1 D-3 (D-4 blank)

**APPENDIX E  
ILLUSTRATED LIST OF MANUFACTURED ITEMS**

**E-1. INTRODUCTION**

This appendix includes complete instructions for making items authorized to be manufactured or fabricated at aviation intermediate maintenance.

a. A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the figure which covers fabrication criteria.

b. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

**E-2. MANUFACTURED ITEMS PART NUMBER INDEX**

Part No.	Figure No.
MIL-I-23053/5.....	23
MIL-I-23053/5.....	24
MIL-I-23053/5.....	26
MIL-W-4088 .....	18
MIL-W-83420 .....	25
Type C00-04 HDF 4/6-4/12R 1090 .....	22
12011651 .....	2

Part No.	Figure No.
12011652.....	3
12011662.....	9
12011663.....	10
12011664.....	12
12011665.....	11
12011666.....	13
12011668.....	19
12011689.....	31
12011690.....	4
7551084.....	5
7551085.....	6
7551091-1.....	28
7551091-2.....	27
7551092-1.....	30
7551092-2.....	29
7551093.....	8
7551429-7.....	7
7551434.....	20
7551435-2.....	21
7551731.....	1
7551732.....	14
7551733-1.....	16
7551733-2.....	17
7551733-3.....	15

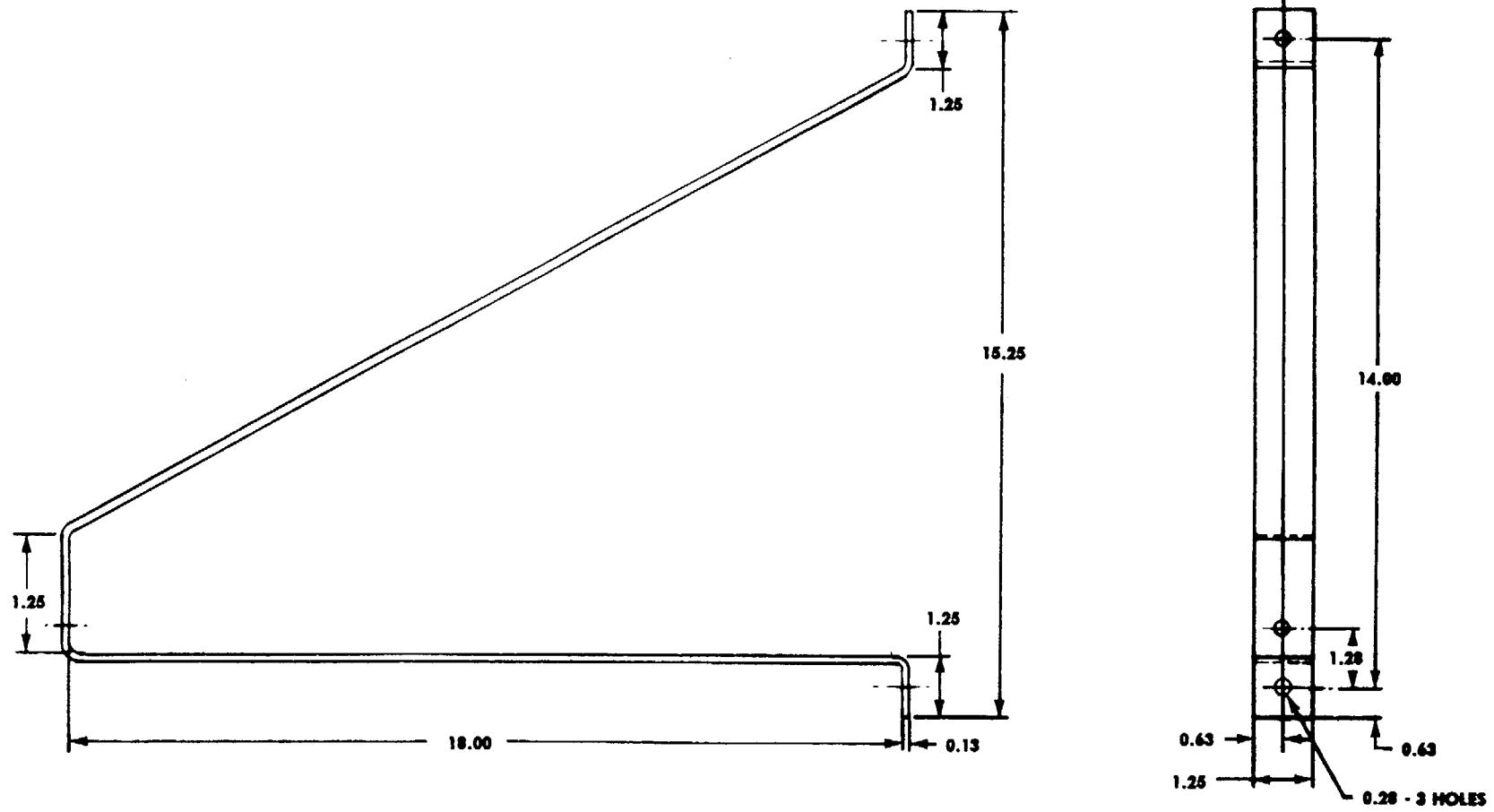


FIGURE 1. WALL SHELF BRACKET (PART NO. 7551731)

CONVERSION TABLE		NOTES
IN.	CM	
1.25	3.18	<p>1. All dimensions shown are in inches and have a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm).</p> <p>2. Fabricate from steel strip, NSN 9515-00-204-3977.</p> <p>3. Break all sharp edges.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats white lacquer (item 12, app D).</p>
0.13	0.33	
15.25	38.74	
0.63	1.60	
0.28	0.71	
1.28	3.25	
14.00	35.56	
18.00	45.72	

**Change 1 E-3**

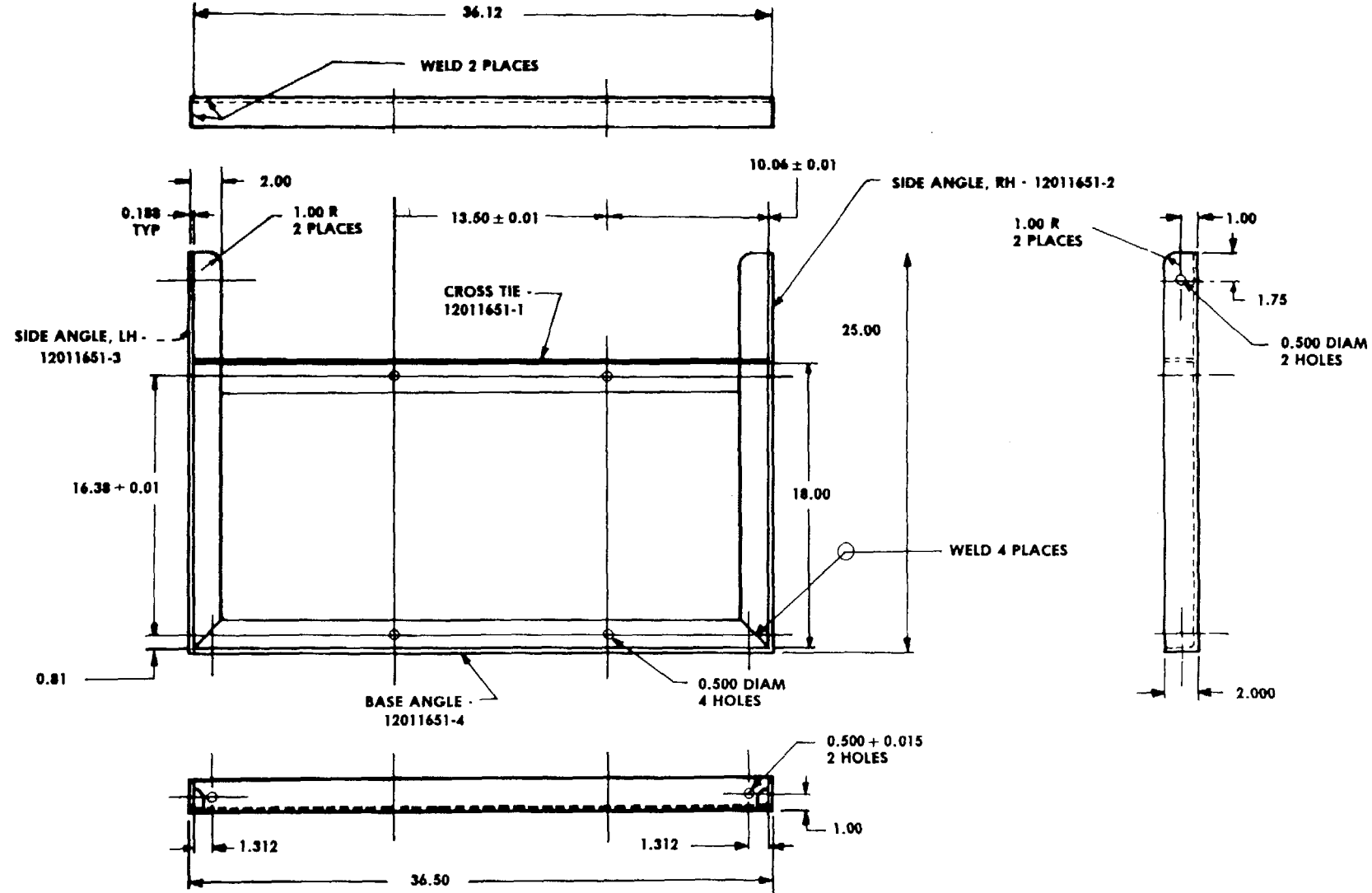


FIGURE 2. PORTABLE DEGREASER MOUNTING FRAME (PART NO. 12011651)

CONVERSION TABLE		NOTES	
IN.	CM		
36.12	91.74	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.015</math> in. (<math>\pm 0.038</math> cm).</p> <p>2. Fabricate from steel structural angle, NSN 9520-00-277-4912.</p> <p>3. Deburr all holes.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats semigloss OD enamel (item 7, app D).</p> <p>6. Mark with black stencil marking ink (item 17, app D) as follows.</p> <p style="text-align: center;">P/N 12011651</p>	
0.25	0.64		
0.188	0.478		
2.00	5.08		
1.00	2.54		
13.50+0.01	34.29+0.03		
10.06+0.01	25.55+0.03		
25.00	63.50		
1.75	4.45		
0.500	1.270		
16.38+0.01	41.61+0.03		
1.312	3.332		
36.50	92.71		
18.00	45.72		
0.81	2.06		

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

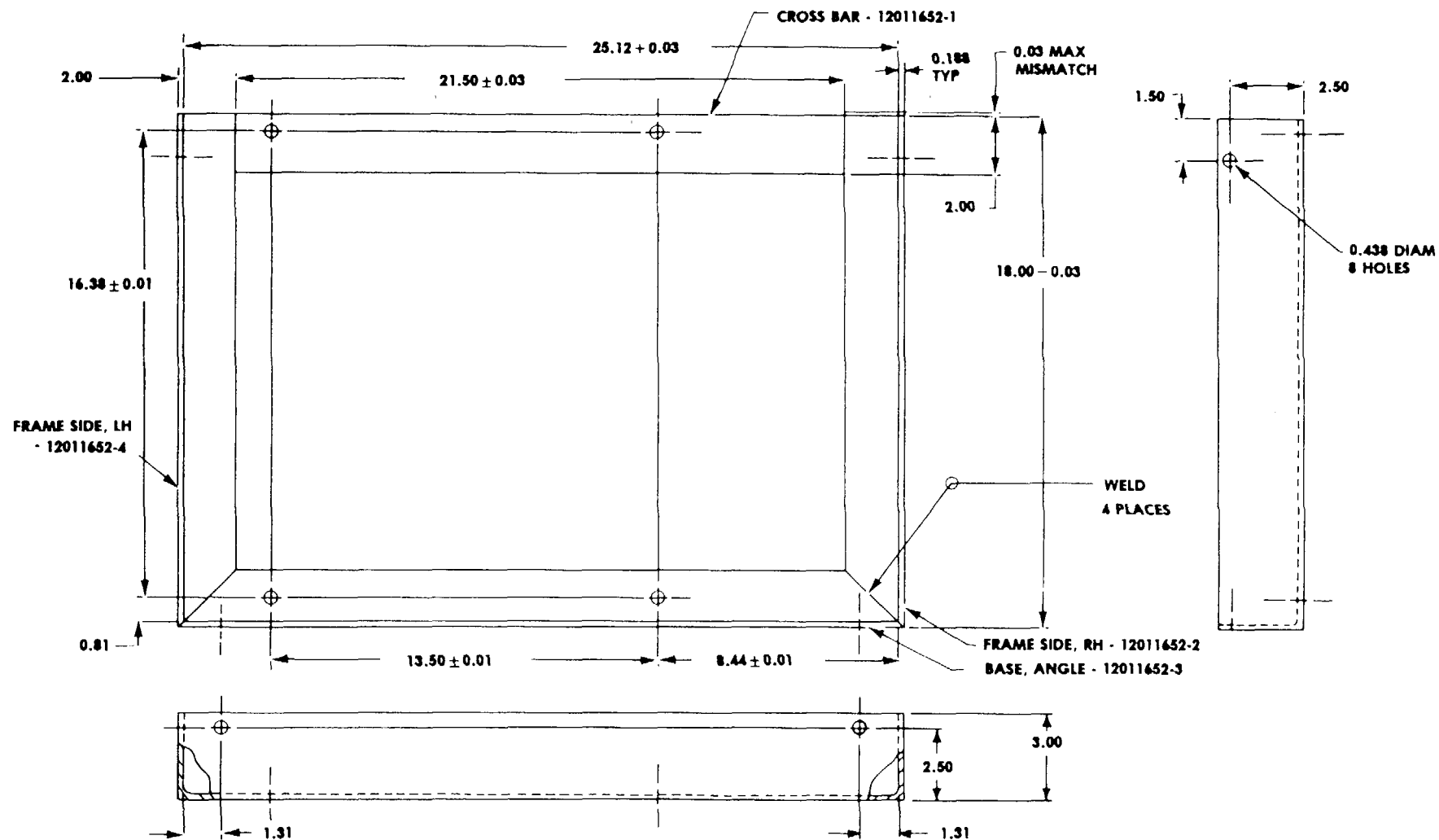


FIGURE 3. STORAGE CABINET MOUNTING FRAME (PART NO. 12011652)



CONVERSION TABLE		NOTES
IN.	CM	
2.00	5.08	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.015</math> in. (<math>\pm 0.038</math> cm).</p> <p>2. Fabricate from steel structural angle, NSN 9520-00-277-4939 and steel metal strip, NSN 9515-00-066-1015.</p> <p>3. Deburr all holes.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats semigloss OD enamel (item 7, app D).</p> <p>6. Mark with black stencil marking ink (item 17, app D) as follows.</p> <p style="text-align: center;">P/N 12011652</p>
21.50+0.03	54.61+0.08	
25.12+0.03	63.80+0.08	
0.188	0.478	
18.00-0.03	45.72-0.08	
1.50	3.81	
2.50	6.35	
0.438	1.113	
16.380+0.01	41.61+0.03	
0.81	2.06	
1.31	3.33	
3.00	7.62	
8.44+0.01	21.44+0.03	
13.50+0.01	34.29+0.03	

Change 1 E-7

**E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)**

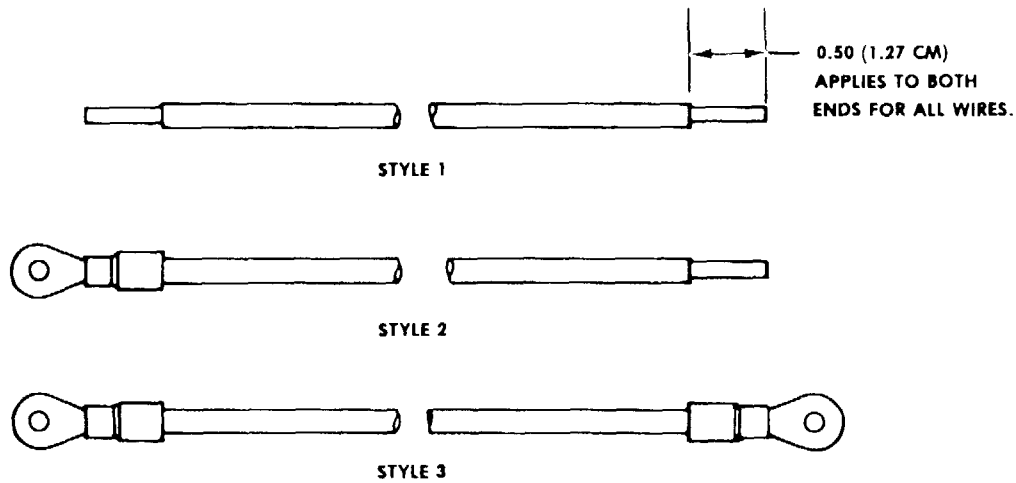


FIGURE 4. WIRE ASSEMBLY (PART NO. 12011690)

PART NO.	TAG NO.	FABRICATE FROM NSN	STYLE	COLOR	LENGTH		LUG TERMINAL
					IN.	CM	
12011690-1	1, 2, 3, 4A, 6A or 7	6145-00-239-1245	2	Black	30.00	76.20	MS25036-111
12011690-2	1A	6145-00-239-1245	1	Black	10.00	25.40	
12011690-3	2A or 2B	6145-00-239-1245	1	Black	6.00	15.24	MS25036-111
12011690-4	4B or 8	6145-00-239-1245	3	Black	4.00	10.16	
12011690-5	4, 5, or 6	6145-00-184-5495	1	Blue	264.00	670.00	
12011690-6	9	6145-00-990-3002	1	Black	192.00	487.68	
12011690-7	10	6145-00-990-3003	1	White	192.00	487.68	MS25036-156
12011690-8	11	6145-00-904-3811	1	Green	264.00	670.00	
12011690-9	11A, 11B, 14A or 14B	6145-00-904-3811	2	Green	4.00	10.16	
12011690-24	12	6145-00-990-3001	1	Red	276.00	701.04	
12011690-25	13	6145-00-990-3003	1	White	276.00	701.04	
12011690-26	14	6145-00-904-3811	1	Green	276.00	701.04	

Change 1 E-8

**NOTE**

The following seven wires 12011690-5, -6, -7, -8, -24, -25 and -26 have been altered at initial installation by either cutting or adding lug terminals, or both.

PART NO.	TAG NO.	FABRICATE FROM NSN	STYLE	COLOR	LENGTH		LUG TERMINAL
					IN.	CM	
12011690-5	4, 5, 6	6145-00-184-5495	2	Blue	264.00	670.00	MS25036-111
12011690-6	Section 9	6145-00-990-3002	1	Black	130.00	330.20	
12011690-6	Section 9	6145-00-990-3002	1	Black	62.00	157.48	
12011690-7	Section 10	6145-00-990-3003	1	White	130.00	330.20	
12011690-7	Section 10	6145-00-990-3003	1	White	62.00	157.48	
12011690-8	Section 11	6145-00-904-3811	2	Green	112.00	284.48	MS25036-156
12011690-8	Section 11	6145-00-904-3811	3	Green	62.00	157.48	MS25036-156
12011690-8	Section 11	6145-00-904-3811	3	Green	90.00	228.60	MS25036-156
12011690-24	12	6145-00-990-3001	1	Red	239.00	607.06	
12011690-24	12	6145-00-990-3001	1	Red	37.00	93.98	
12011690-25	13	6145-00-990-3003	1	White	239.00	607.06	
12011690-25	13	6145-00-990-3003	1	White	37.00	93.98	
12011690-26	14	6145-00-904-3811	2	Green	239.00	607.06	MS25036-156
12011690-26	14	6145-00-904-3811	3	Green	37.00	93.98	MS25036-156

**Change 1 E-9**

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

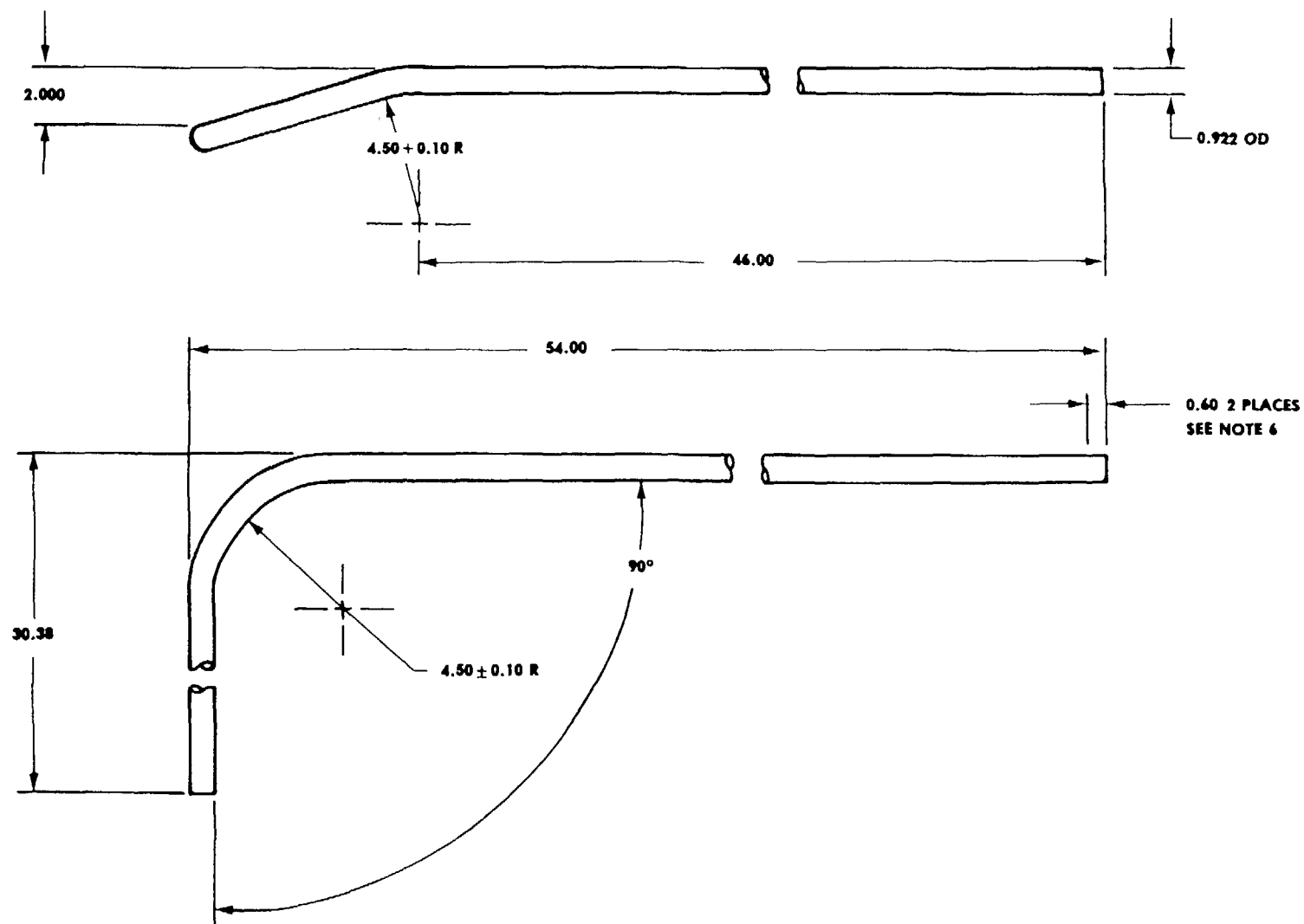


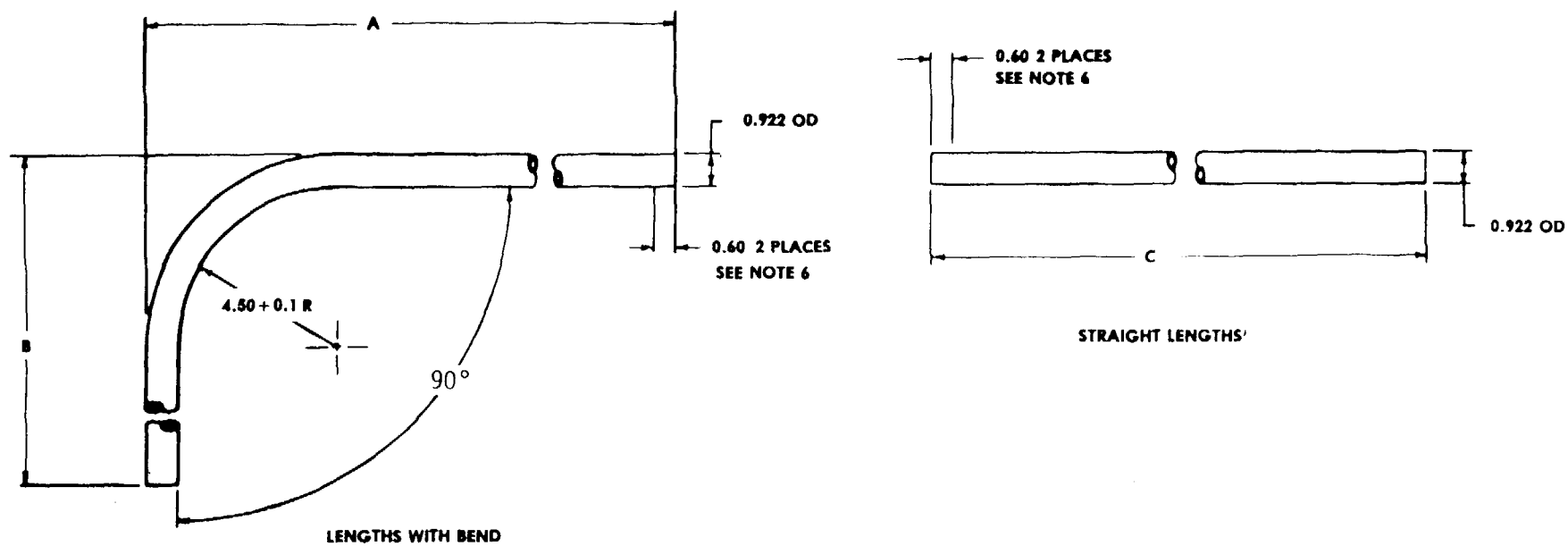
FIGURE 5. CONDUIT (PART NO. 7551084)

Change 1 E-10

CONVERSION TABLE		NOTES
IN.	CM	
2.000- 4.50+0.10 46.00 0.922 0.60 54.00 30.38 0.75	5.080 11.433+0.25 116.84 2.341 1.52 137.16 77.17 1.91	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.13</math> in. (<math>\pm 0.33</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.060</math> in. (<math>\pm 0.152</math> cm). All angles have a tolerance of +5 degrees.</p> <p>2. Fabricate from rigid metal conduit, NSN 5975-00-178-1217.</p> <p>3. Ream ends to remove rough edge and break all sharp edges.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats white lacquer (item 12, app D).</p> <p>6. Do not apply primer or lacquer within 0.60 in. (1.52 cm) of either end.</p>

Change 1 E-11

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)



PART NO.	DIM A.	DIM B.	DIM C.
7551085-1	...	...	7.19
7551085-2	51.75	23.00	...
7551085-3	...	...	56.38
7551085-4	57.00	7.50	...
7551085-5	...	...	30.88

FIGURE 6. CONDUIT (PART NO. 7551085)

CONVERSION TABLE		NOTES
IN.	CM	
4.50+0.10	11.43+0.25	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.13</math> in. (<math>\pm 0.33</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.060</math> in. (<math>\pm 0.152</math> cm). All angles have a tolerance of <math>\pm 5</math> degrees.</p> <p>2. Fabricate from rigid metal conduit, NSN 5975-00-178-1217.</p> <p>3. Ream ends to remove rough edge and break all sharp edges.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats white lacquer (item 12, app D).</p> <p>6. Do not apply primer or lacquer within 0.60 in. (1.52 cm) of either end.</p>
0.60	1.52	
0.922	2.342	
51.75	131.45	
57.00	144.78	
23.00	58.42	
7.50	19.05	
7.19	18.26	
56.38	143.21	
30.88	78.44	

Change 1 E-13

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

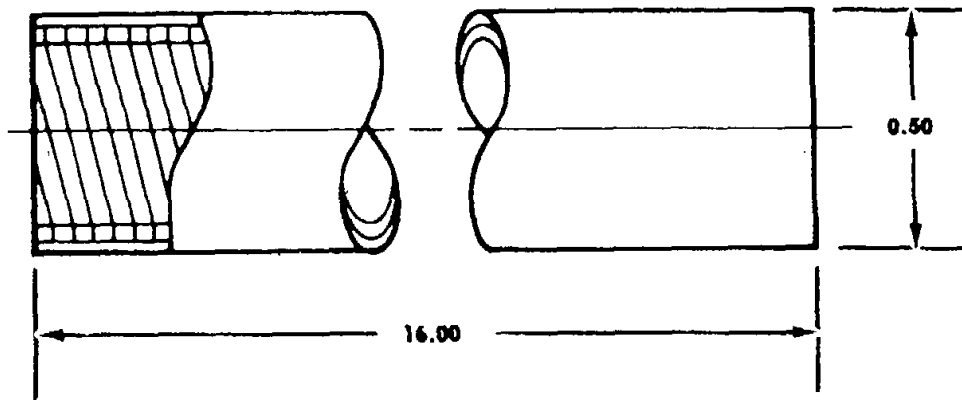


FIGURE 7. FLEXIBLE CONDUIT (PART NO. 7551429-7)

CONVERSION TABLE		NOTES
IN.	CM	
16.00	40.64	1. All dimensions shown are in inches and have a tolerance of $\pm 0.13$ in. (+0.33 cm). 2. Fabricate from metallic hose, NSN 4720-00-965-9319.
0.50	1.27	



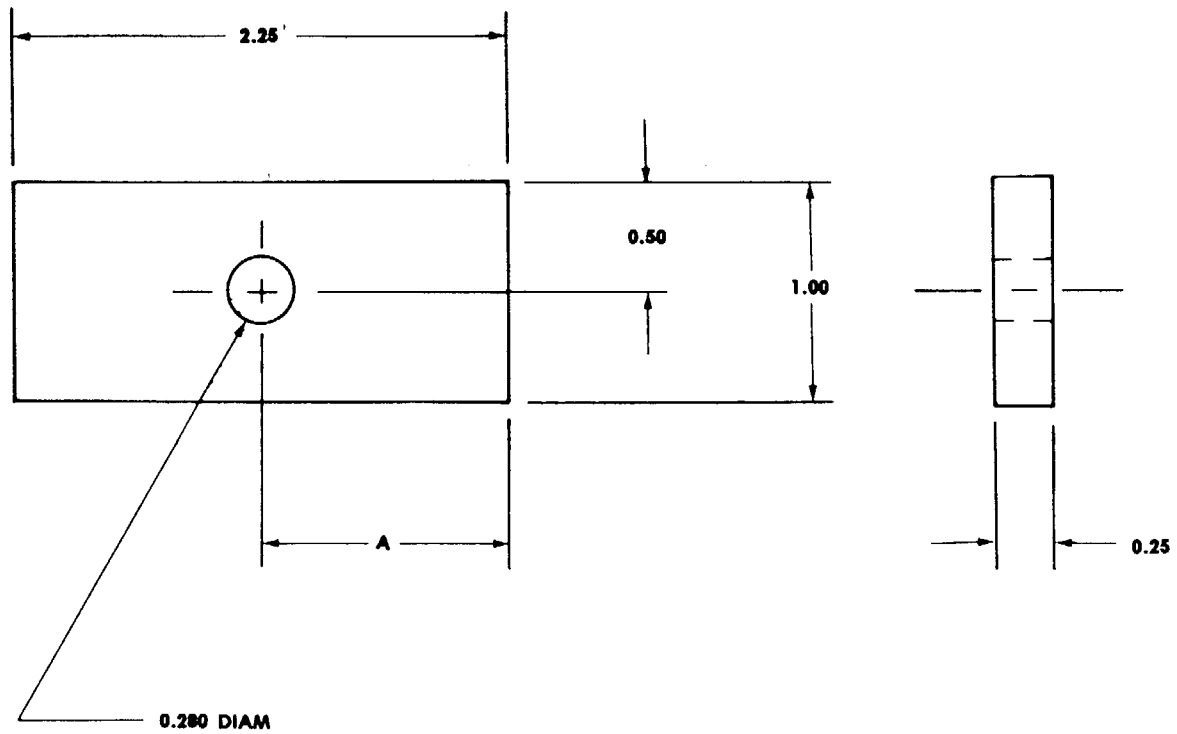


FIGURE 8. SPACER (PART NO. 7551093)

CONVERSION TABLE		NOTES
IN.	CM	
2.25	5.72	1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of $\pm 0.03$ in. ( $\pm 0.08$ cm) and a three-digit decimal has a tolerance of $\pm 0.010$ in. ( $\pm 0.025$ cm).
0.50	1.27	
1.00	2.54	
0.25	0.64	2. Fabricate from aluminum metal plate, NSN 9530-00-236-7671.
0.280	0.711	
0.75	1.91	3. Break all sharp edges and deburr hole.
1.12	2.84	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

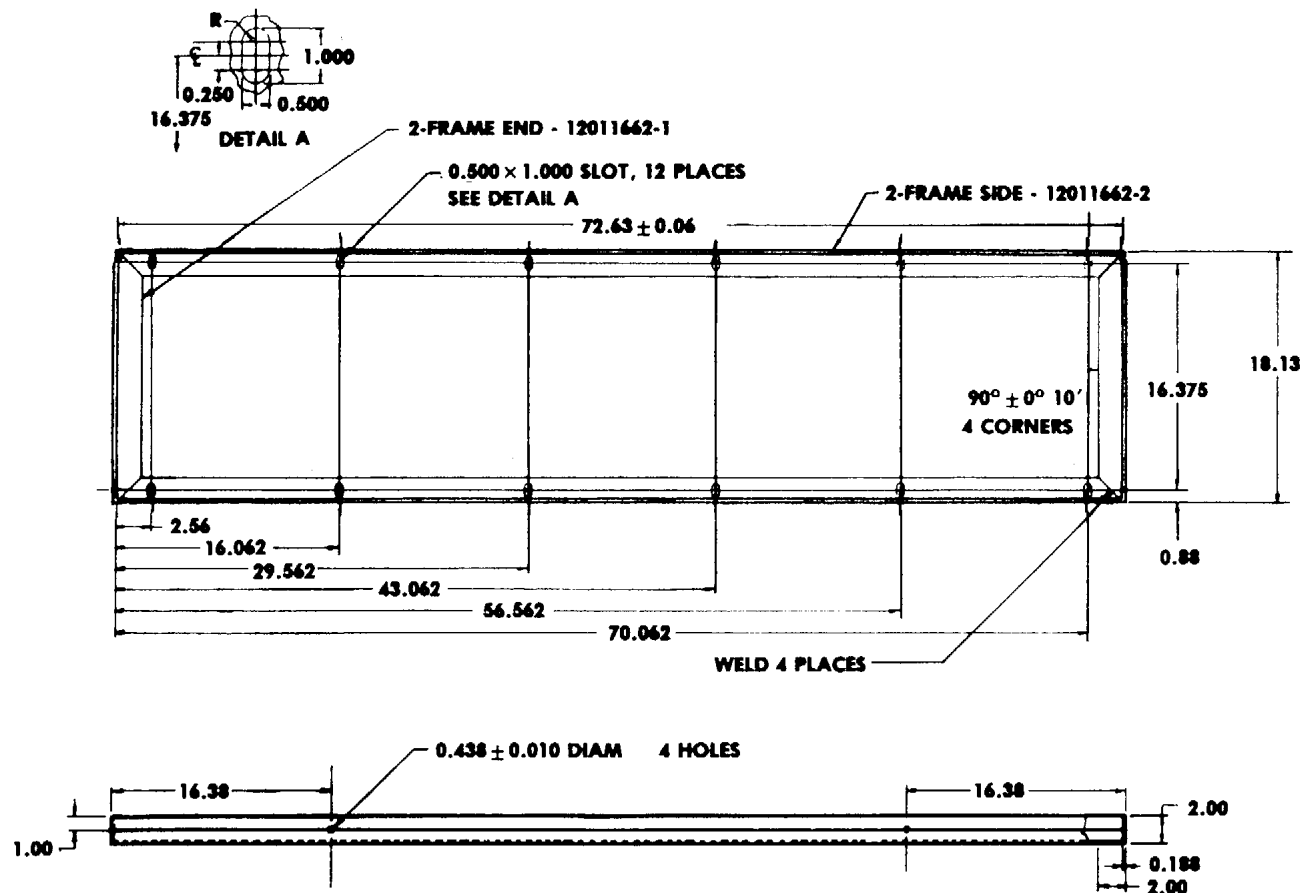


FIGURE 9. TABLE BASE FRAME (PART NO. 12011662)

CONVERSION TABLE		NOTES
IN.	CM	
16.375	41.592	1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of $\pm 0.03$ in. ( $\pm 0.08$ cm) and a three-digit decimal has a tolerance of $\pm 0.015$ in. ( $\pm 0.38$ cm).
0.500	1.27	
1.000	2.54	
0.250	0.635	
72.63 $\pm 0.06$	184.48 $\pm 0.15$	
18.13	46.05	
0.88	2.24	2. Fabricate from steel structural angle, NSN 9520-00-277-4912.
2.56	6.50	
16.062	40.797	3. Break all sharp edges and deburr all holes.  <b>WARNING</b> Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.
29.562	75.087	
43.062	109.377	
56.562	143.667	
70.062	177.957	
16.380	41.605	
0.438 $\pm 0.010$	1.113 $\pm 0.025$	
2.00	5.08	
0.188	0.478	
1.00	2.54	
		4. Degrease with type 1.1.1 trichloroethane (item 1, app D).
		5. Apply one coat primer coating (item 14, app D), followed by two coats semigloss OD enamel (item 7, app D).
		6. Mark with black stencil marking ink (item 17, app D) as follows.

P/N 12011662

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

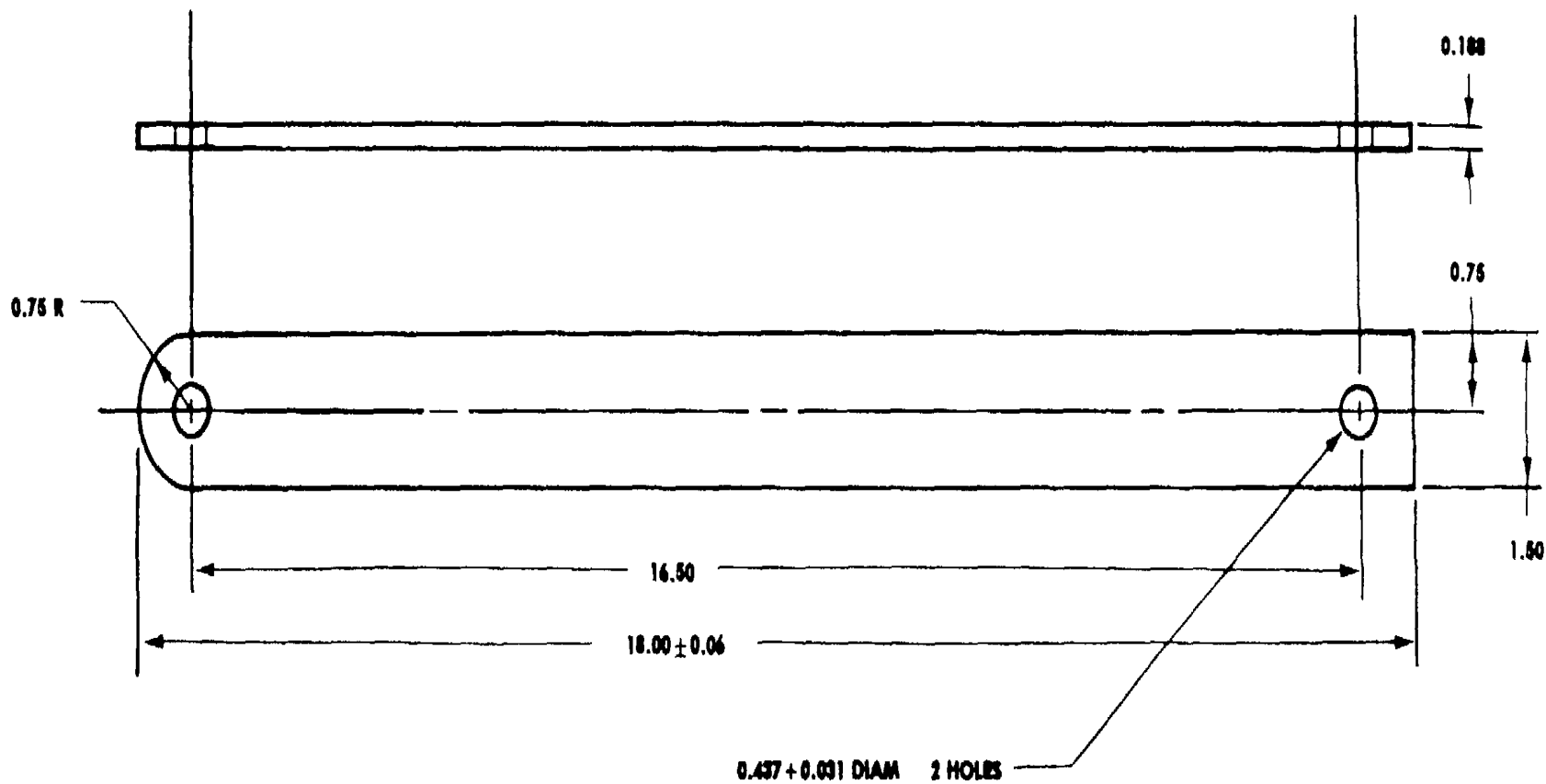


FIGURE 10. SHORT TABLE BRACE (PART NO. 12011663)

CONVERSION TABLE		NOTES
IN.	CM	
0.75	1.91	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.005</math> in. (<math>\pm 0.013</math> cm).</p> <p>2. Fabricate from steel metal strip, NSN 9515-00-204-3991.</p> <p>3. Break all sharp edges and deburr all holes.</p> <p><b>WARNING</b> Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats semigloss OD enamel (item 7, app D).</p> <p>6. Mark with black stencil marking ink (item 17, app D) as follows.</p>
0.188	0.478	
1.50	3.81	
16.50	41.91	
18.00 $\pm 0.06$	45.72 $\pm 0.15$	
0.437 $+0.31$	1.110 $+0.79$	

P/N 12011663

**Change 1 E-19**

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

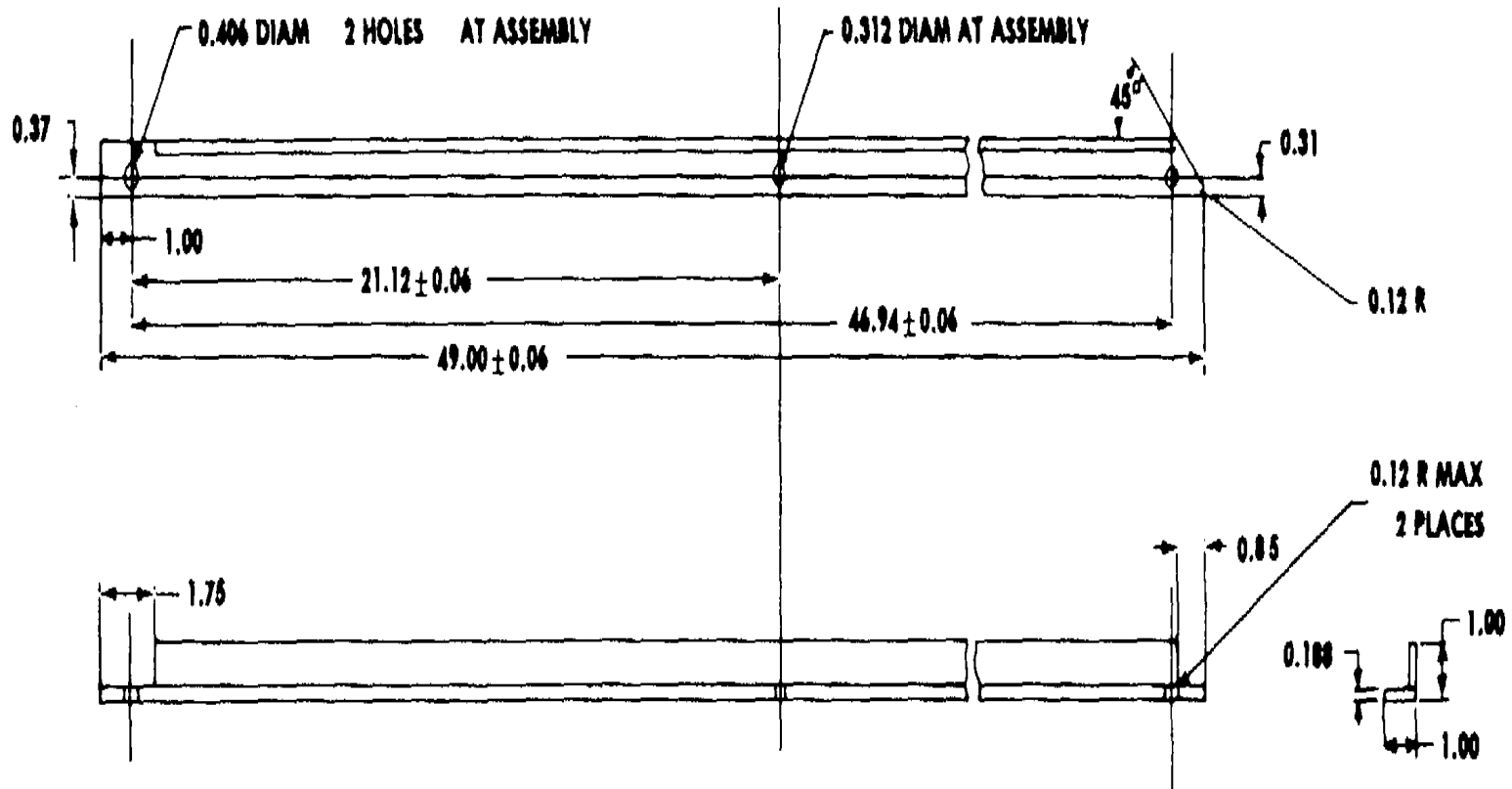


FIGURE 11. LEFT-HAND LONG TABLE BRACE (PART NO. 12011665)  
E-20

CONVERSION TABLE		NOTES
IN.	CM	
0.37	0.94	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.010</math> in. (<math>\pm 0.025</math> cm). All angles have a tolerance of <math>\pm 5</math> degrees.</p> <p>2. Fabricate from steel structural angle, NSN 9520-00-277-5987.</p> <p>3. Break all sharp edges and deburr all holes.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats semigloss OD enamel (item 7, app D).</p> <p>6. Mark with black stencil marking ink (item 17, app D) as follows.</p> <p style="text-align: center;">P/N 12011665</p>
1.00	2.54	
21.12 $\pm$ 0.06	53.64 $\pm$ 0.15	
49.00 $\pm$ 0.06	124.46 $\pm$ 0.15	
1.75	4.45	
0.406	1.03	
0.312	0.79	
46.94 $\pm$ 0.06	119.23 $\pm$ 0.15	
0.31	0.79	
0.12	0.30	
0.85	2.16	
0.188	0.48	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

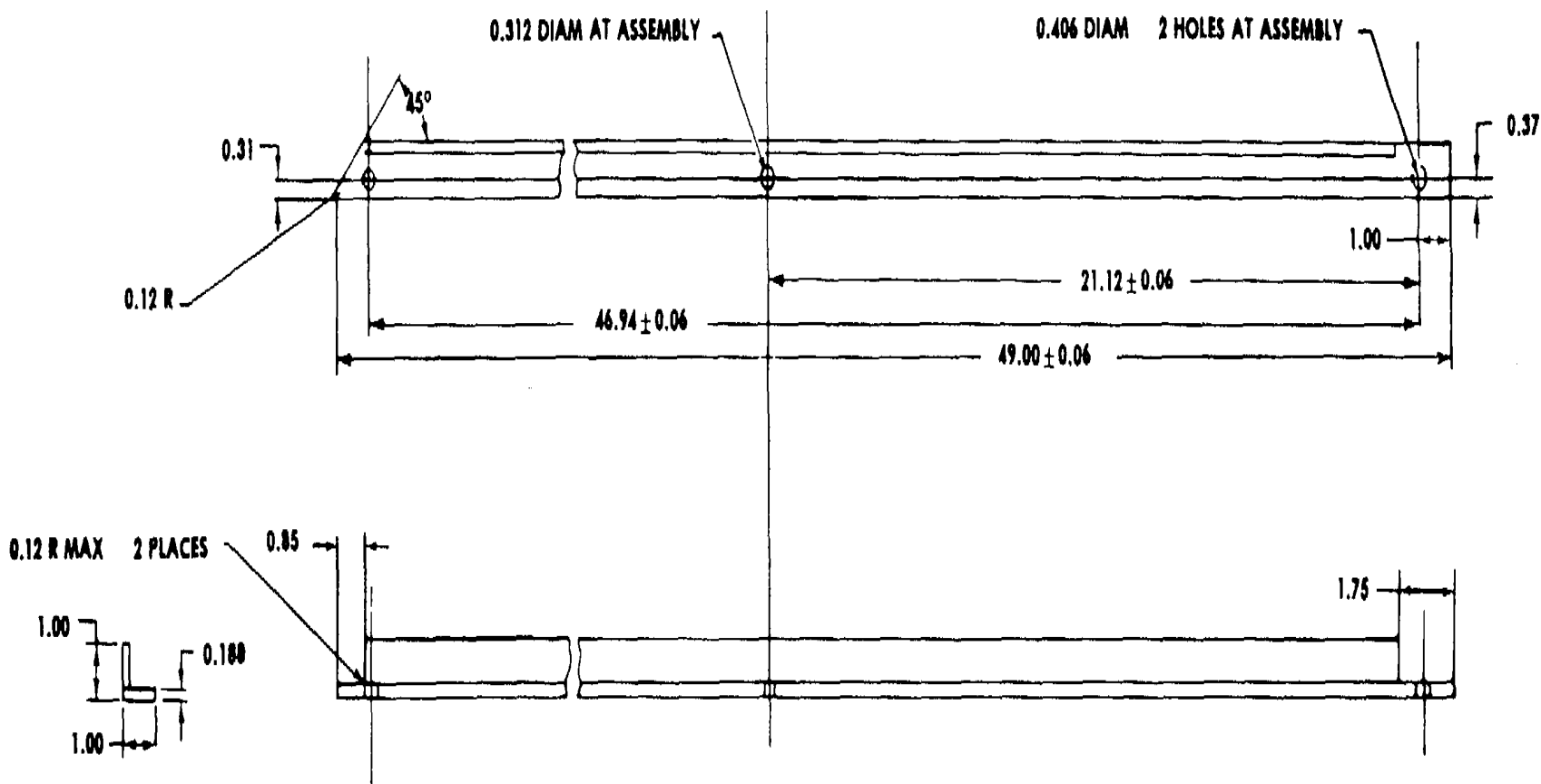


FIGURE 12. RIGHT-HAND LONG TABLE BRACE (PART NO. 12011664)



CONVERSION TABLE		NOTES
IN.	CM	
0.31	0.79	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.005</math> in. (<math>\pm 0.013</math> cm). All angles have a tolerance of <math>\pm 1</math> degree.</p> <p>2. Fabricate from steel structural angle, NSN 9520-00-277-5987.</p> <p>3. Break all sharp edges and deburr all holes.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats semigloss OD enamel (item 7, app D).</p> <p>6. Mark with black stencil marking ink (item 17, app D) as follows.</p> <p style="text-align: right;">P/N 12011664</p>
0.1-	0.30	
0.312	0.792	
0.406	1.031	
46.94 $\pm$ 0.06	119.23 $\pm$ 0.15	
21.00 $\pm$ 0.06	53.34 $\pm$ 0.15	
49.00 $\pm$ 0.06	124.46 $\pm$ 0.15	
1.00	2.54	
0.37	0.94	
1.75	4.45	
0.85	2.16	
0.188	0.478	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

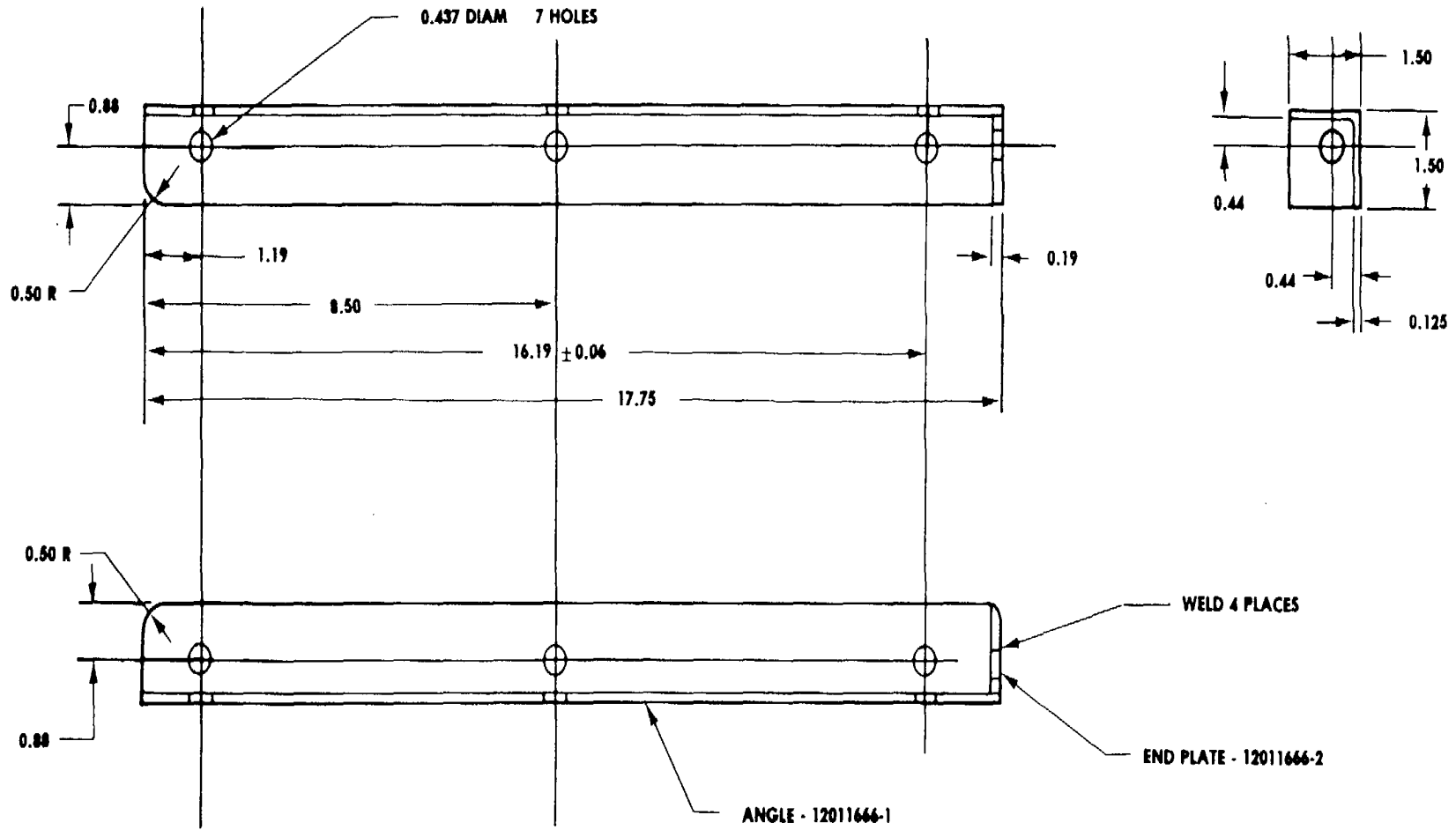


FIGURE 13. TABLE BRACE SUPPORT (PART NO. 12011666)

CONVERSION TABLE		NOTES
IN.	CM	
0.88	2.24	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.010</math> in. (<math>\pm 0.03</math> cm).</p> <p>2. Fabricate from steel structural angle, NSN 9520-00-277-4902 and steel metal strip, NSN 9515-00-204-3991.</p> <p>3. Break all sharp edges and deburr all holes.</p> <p><b>WARNING</b> Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats semigloss OD enamel (item 7, app D).</p> <p>6. Mark with black stencil marking ink (item 17, app D) as follows.</p> <p style="text-align: center;">P/N 12011666</p>
0.50	1.27	
1.19	3.02	
8.50	21.59	
0.437	1.11	
16.19 $\pm$ 0.06	41.12 $\pm$ 0.15	
17.75	45.09	
0.19	0.48	
0.125	0.32	
1.50	3.81	
0.44	1.12	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

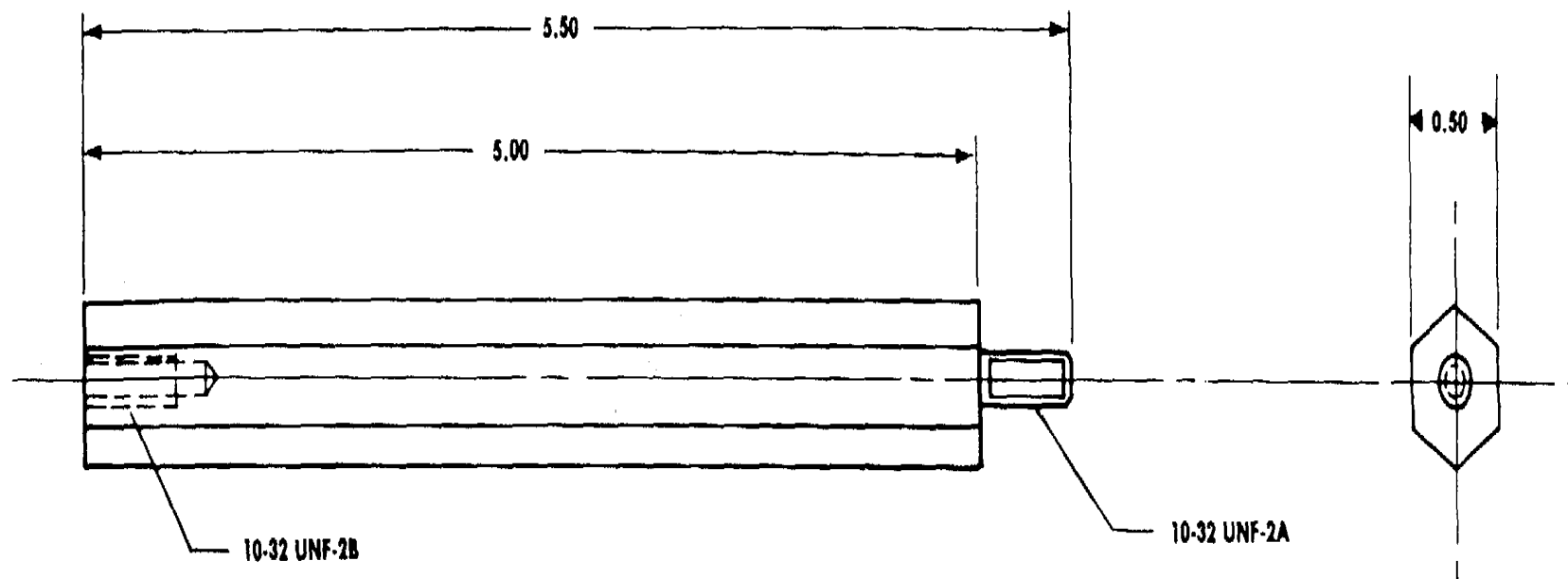


FIGURE 14. SPACER (PART NO. 7551732)

CONVERSION TABLE		NOTES
IN.	CM	
5.50	13.97	<ol style="list-style-type: none"> <li>1. All dimensions shown are in inches and have a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm).</li> <li>2. Fabricate from steel metal bar, NSN 9510-00-541-9655.</li> <li>3. Deburr edges.</li> </ol> <p style="margin-left: 40px;">WARNING</p> <p style="margin-left: 40px;">Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <ol style="list-style-type: none"> <li>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</li> <li>5. Apply one coat primer coating (item 14, app D), followed by two coats black lacquer (item 10, app D).</li> <li>6. Mark with black stencil marking ink (item 17, app D) as follows.</li> </ol> <p style="text-align: center;">P/N 7551732</p>
5.00	12.70	
0.50	1.27	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

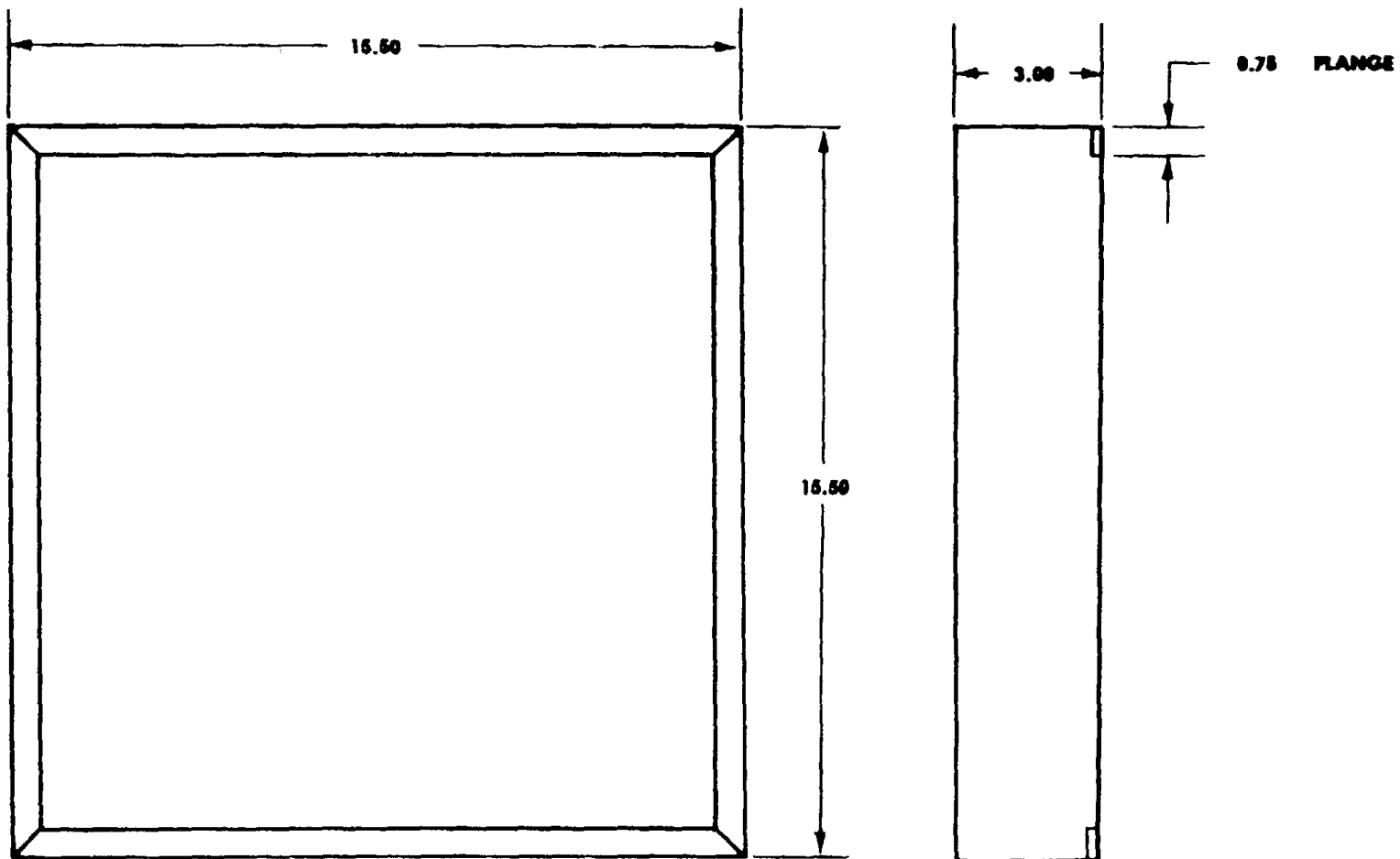


FIGURE 15. BAFFLE (PART NO. 7551733-3)

CONVERSION TABLE		NOTES
IN.	CM	
15.50	39.37	<ol style="list-style-type: none"> <li>1. All dimensions shown are in inches and have a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm).</li> <li>2. Fabricate from steel metal plate, NSN 9515-00-153-3217.</li> <li>3. Break all sharp edges.</li> </ol> <p>WARNING Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <ol style="list-style-type: none"> <li>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</li> <li>5. Apply one coat primer coating (item 14, app D), followed by two coats black lacquer (item 10, app D).</li> </ol>
3.00	7.62	
0.75	1.91	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

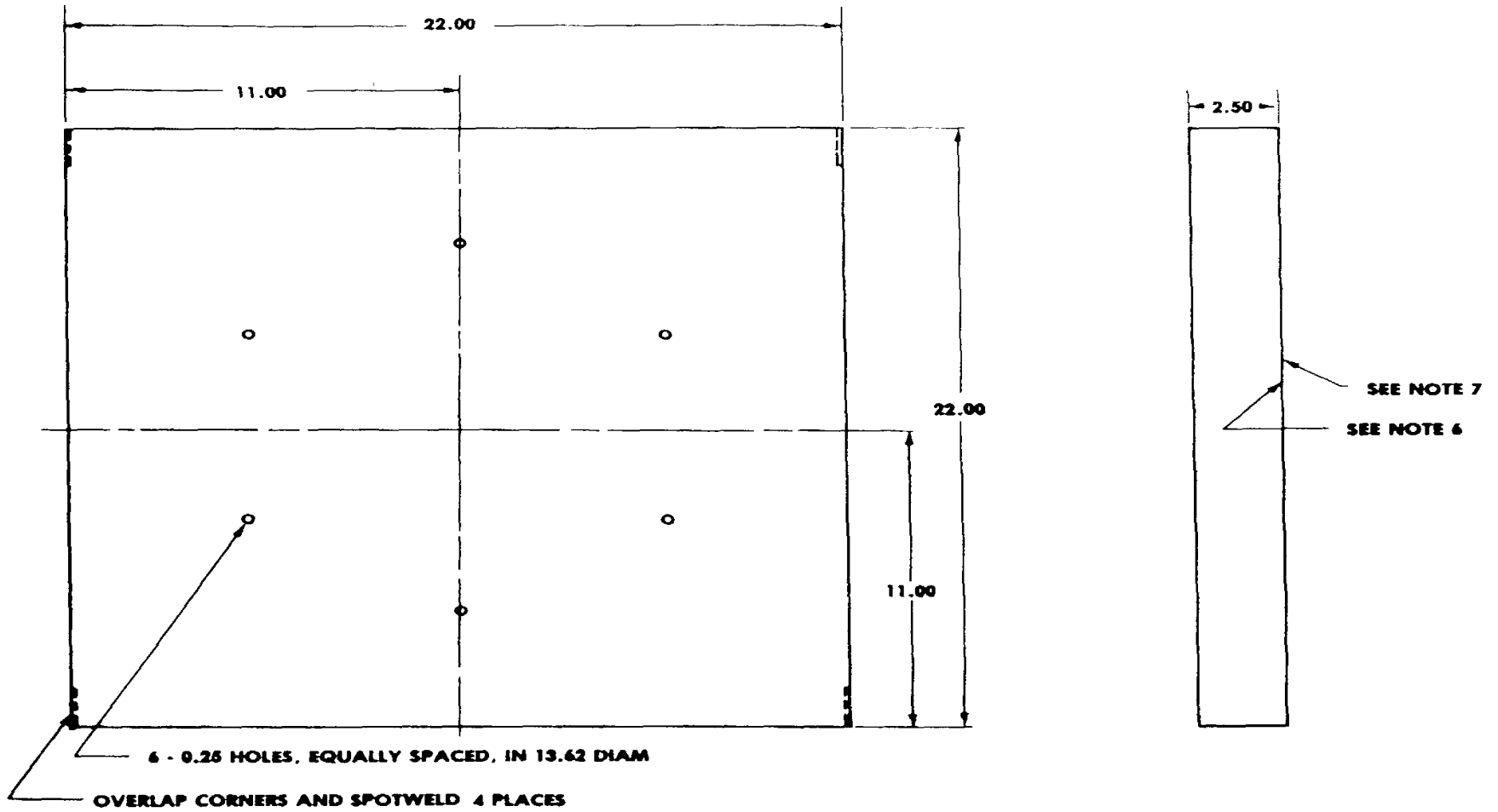


FIGURE 16. OUTER COVER (PART NO. 7551733-1)



CONVERSION TABLE		NOTES
IN.	CM	
22.00	55.88	<p>1. All dimensions shown are in inches and have a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm).</p> <p>2. Fabricate from steel metal plate, NSN 9515-00-153-3217.</p> <p>3. Break all sharp edges.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D).</p> <p>6. Apply two coats black lacquer (item 10, app D) to all interior surfaces.</p> <p>7. Apply two coats lusterless green enamel (item 8, app D) to all exterior surfaces.</p>
2.50	6.35	
0.25	0.64	
13.62	34.59	
11.00	27.94	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

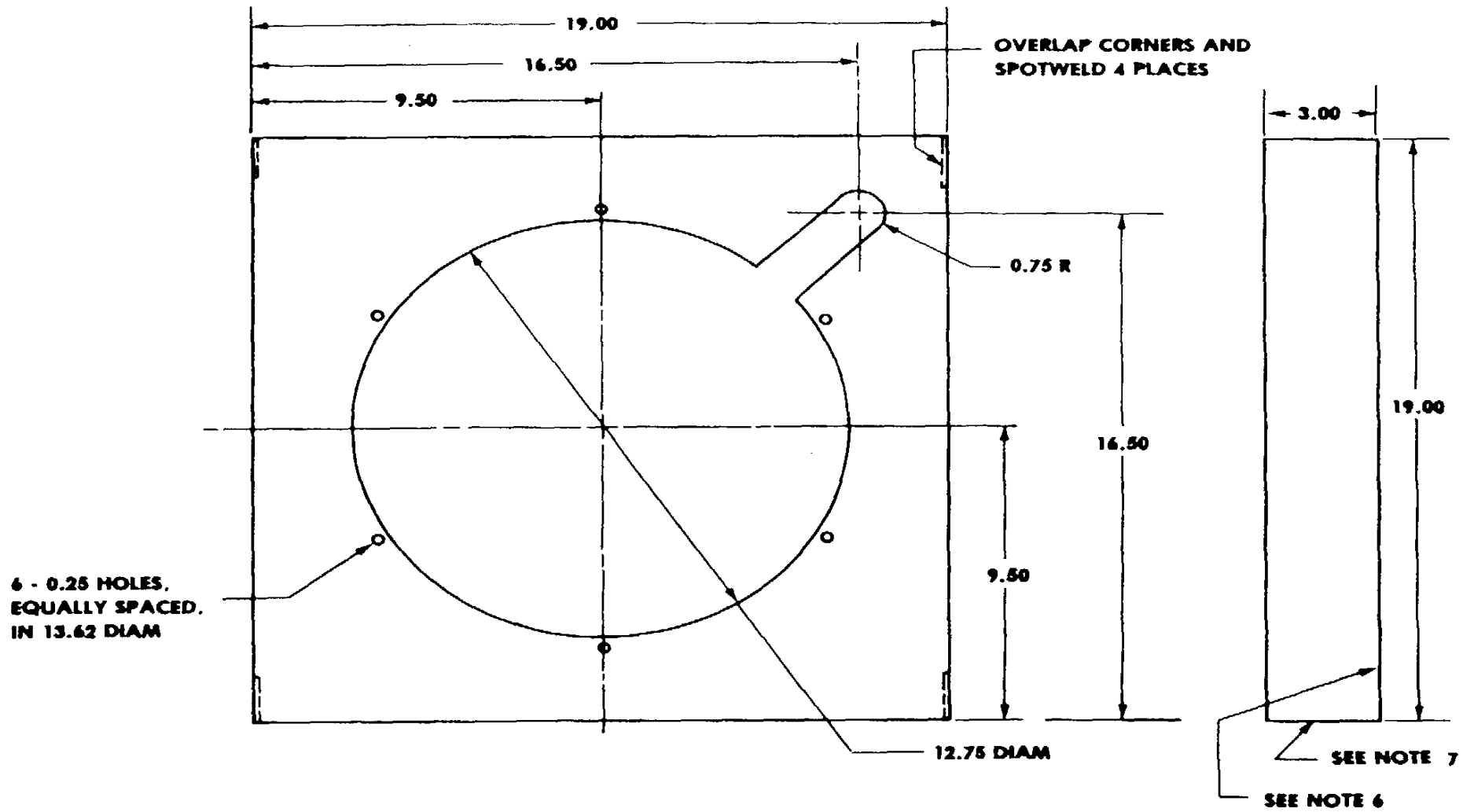


FIGURE 17. INNER COVER (PART NO. 7551733-2)

CONVERSION TABLE		NOTES
IN.	CM	
19.00	48.26	<p>1. All dimensions shown are in inches and have a tolerance of <math>\pm 0.03</math> in. (<math>\pm 0.08</math> cm).</p> <p>2. Fabricate from steel metal plate, NSN 9515-00-153-3217.</p> <p>3. Break all sharp edges.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D).</p> <p>6. Apply two coats black lacquer (item 10, app D) to all interior surfaces.</p> <p>7. Apply two coats lusterless green enamel (item 8, app D) to all exterior surfaces.</p>
16.50	41.91	
0.75	1.91	
12.75	32.39	
3.00	7.62	
9.50	24.13	
0.25	0.64	
13.62	34.59	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

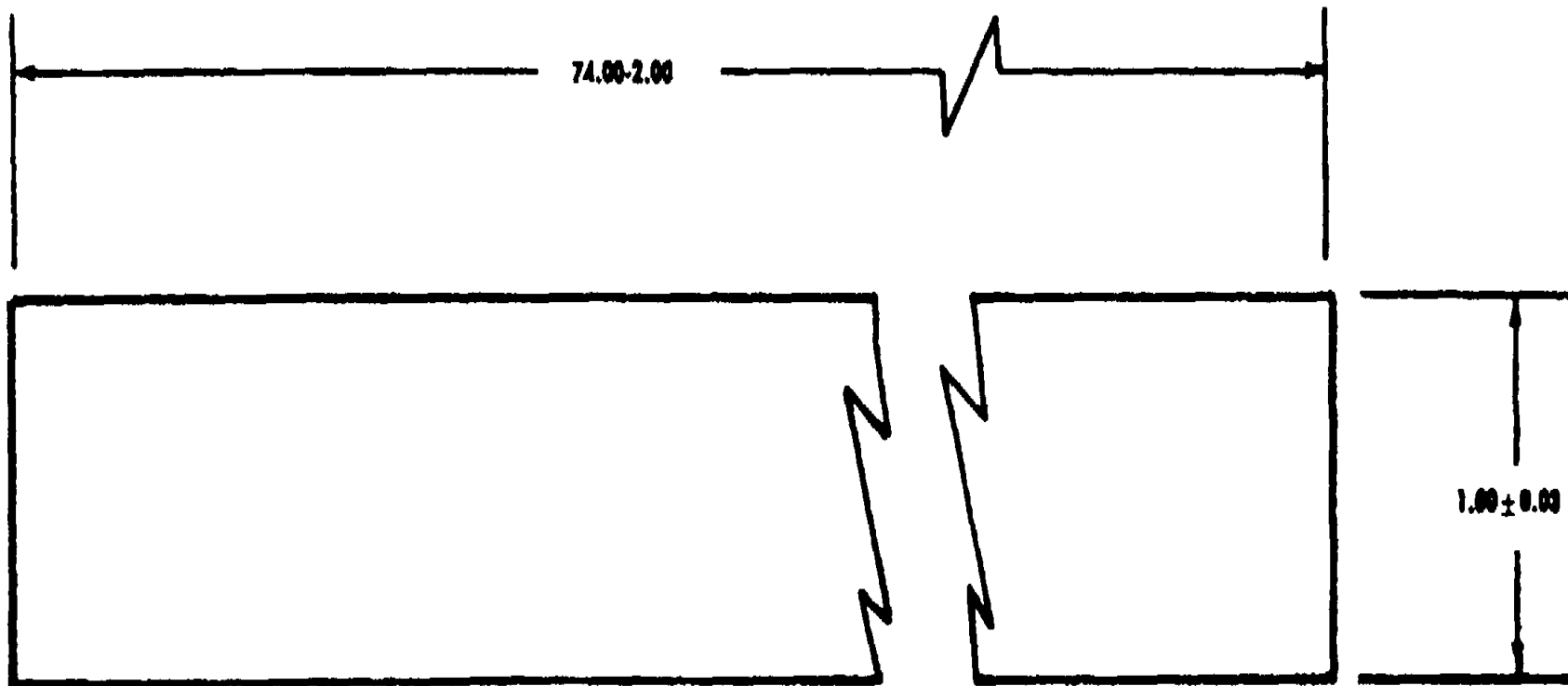


FIGURE 18. WEBBING STRAP (PART NO. MIL-W-4088)

CONVERSION TABLE		NOTES
IN.	CM	
74.00	187.96	1. All dimensions shown are in inches.  2. Fabricate from nylon webbing, NSN 8305-00-267-3009.
1.00	2.54	
2.00	5.08	
0.03	0.08	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

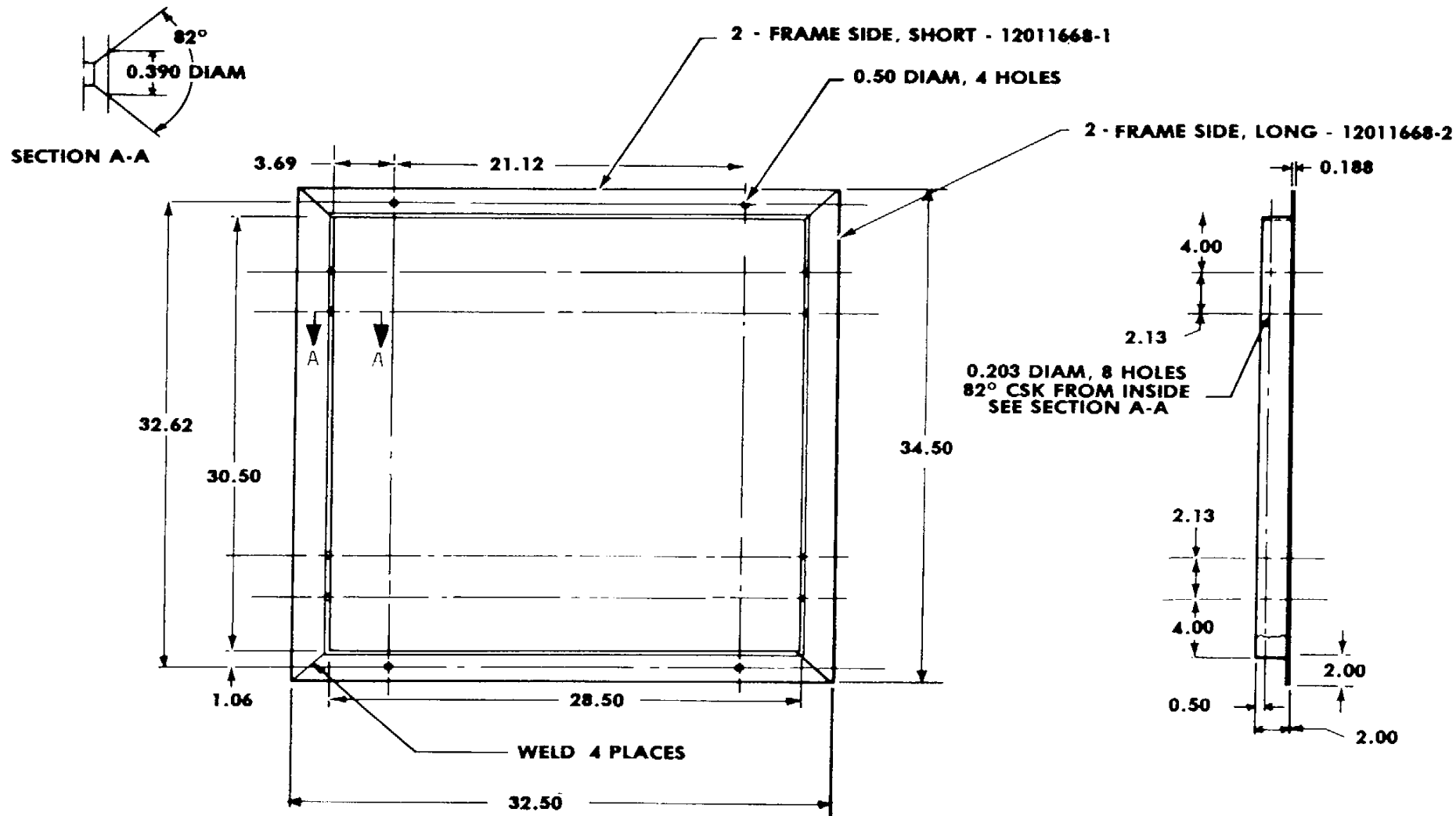


FIGURE 19. ECU STOWING FRAME (PART NO. 12011668)

CONVERSION TABLE		NOTES
IN.	CM	
3.69	9.37	<p>1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of <math>\pm 0.02</math> in. (<math>\pm 0.05</math> cm) and a three-digit decimal has a tolerance of <math>\pm 0.005</math> in. (<math>\pm 0.013</math> cm).</p> <p>2. Fabricate from steel structural angle, NSN 9520-00-277-4912.</p> <p>3. Break all sharp edges and deburr all holes.</p> <p><b>WARNING</b> Use only type 1.1.1 trichloroethane solvent. Never use portable degreaser with solvent in it unless ventilation fan is turned on. Breathing solvent vapors will cause unconsciousness, prolonged skin contact with solvent will cause irritation, and taking solvent internally will cause vomiting.</p> <p>4. Degrease with type 1.1.1 trichloroethane (item 1, app D).</p> <p>5. Apply one coat primer coating (item 14, app D), followed by two coats semigloss OD enamel (item 7, app D).</p>
21.12	53.64	
32.62	82.85	
30.50	77.47	
1.06	2.69	
28.50	72.39	
32.50	82.55	
34.50	87.63	
0.50	1.27	
0.203	0.52	
4.00	10.16	
2.13	5.41	
2.00	5.08	
0.188	0.48	
0.390	0.99	

**E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)**

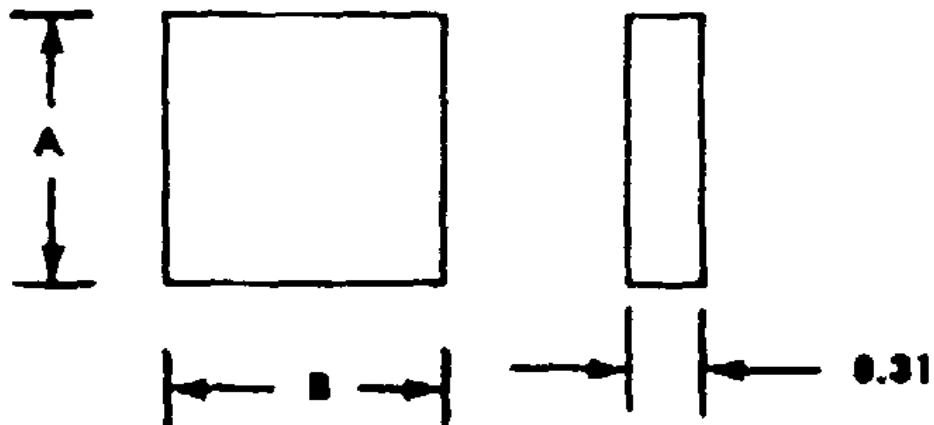


FIGURE 20. PAD (PART NO. 7551434)

CONVERSION TABLE		NOTES
IN.	CM	
0.75	1.91	1. All dimensions shown are in inches and have a tolerance of $\pm 0.02$ in. ( $\pm 0.05$ cm). 2. Fabricate from rubber sheet, NSN 9320-00-282-8284.  PART NO.    DIM A    DIM B 7551434-1    0.75    0.75 7551434-2    19.00    1.25
0.31	0.79	
19.00	48.26	
1.25	3.18	



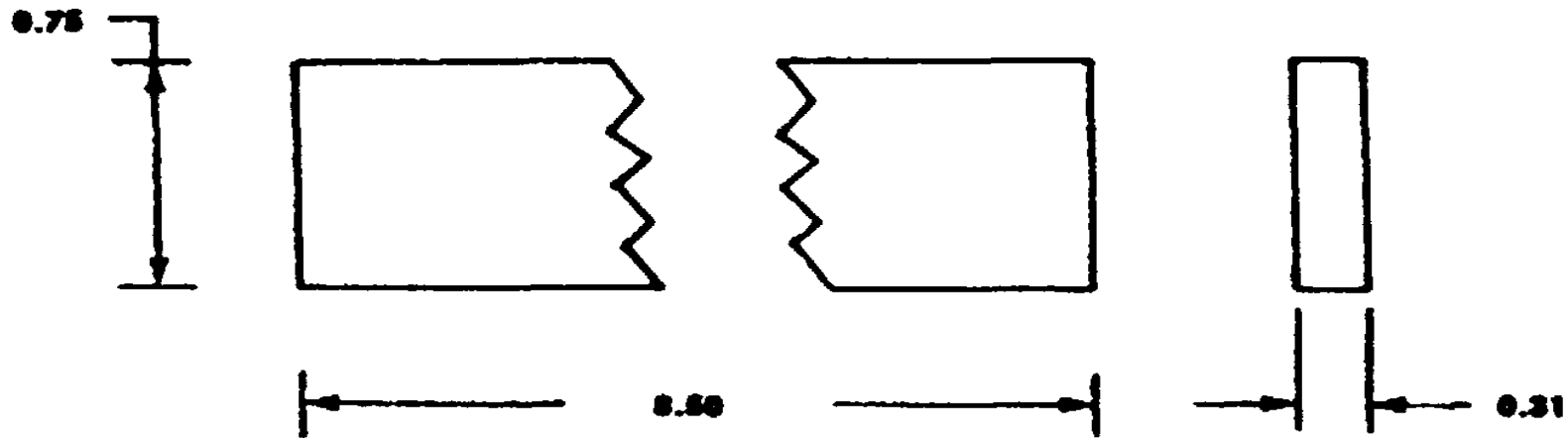


FIGURE 21. PAD (PART NO. 7551435-2)

CONVERSION TABLE		NOTES
IN.	CM	
0.75	1.91	1. All dimensions shown are in inches and have a tolerance of $\pm 0.03$ in. ( $\pm 0.08$ cm). 2. Fabricate from rubber sheet, NSN 9320-00-282-8284.
8.50	21.59	
0.31	0.79	

**E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)**

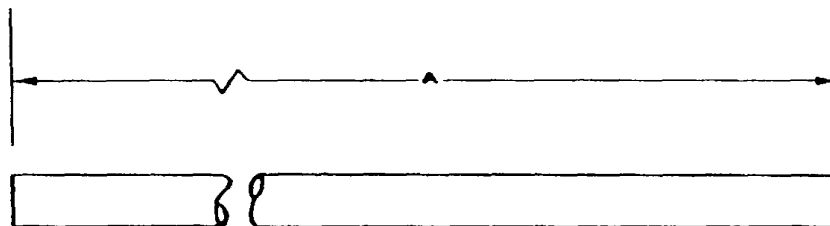


FIGURE 22. CABLE (PART NO. TYPE C0-04 HDF 4/6-4/12R 1090)

CONVERSION TABLE		NOTES
IN.	CM	
19.00 1200.00	48.26 3048.00	1. All dimensions are in inches and have a tolerance of $\pm 0.06$ in. ( $\pm 0.15$ cm). 2. Fabricate from electrical power cable, NSN 6145-00-191-3606.  USED ON DIM A  P/N 12011687 19.00 P/N 72289-100 1200.00

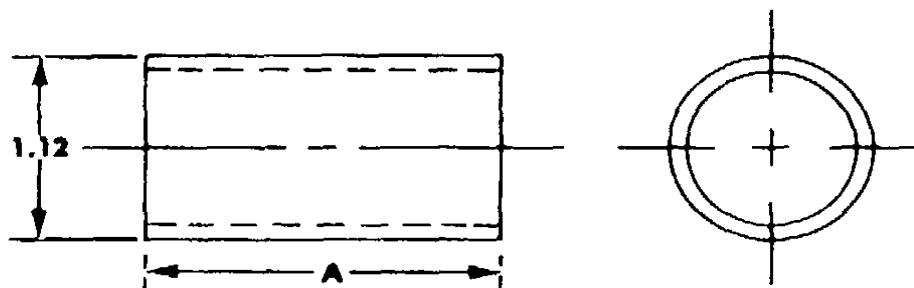


FIGURE 23. BAND (PART NO. MIL-I-23053/5)

CONVERSION TABLE		NOTES
IN.	CM	
3.50	8.89	<p>1. All dimensions shown are in inches and have a tolerance of <math>\pm 0.06</math> in. (<math>\pm 0.15</math> cm).</p> <p>2. Used on cable adapter assembly, P/N 12011687 and cable assembly, P/N 72289-100.</p> <p>3. Fabricate from insulation sleeving, NSN 5970-00-810-6118.</p> <p>4. For use on cable adapter assembly, mark letters approximately 0.312-in. (0.792-an) high with black stencil marking ink (item 17, app D) as follows.</p> <p>CABLE ADAPTER ASSY PART NO. 12011687</p> <p>5. For use on cable assembly, mark letters approximately 0.312-in. (0.792-cm) high with black stencil marking ink (item 17, app D) as follows.</p> <p>CABLE ASSEMBLY (P/N 72289-100) 120/208V 3 PHASE 4 WIRE GROUNDING 60 HZ 60 AMP</p> <p>USED ON      DIM A</p> <p style="text-align: right;">P/N 12011687      3.50 P/N 72289-100      3.00</p>
3.00	7.62	
1.12	2.84	

**E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)**

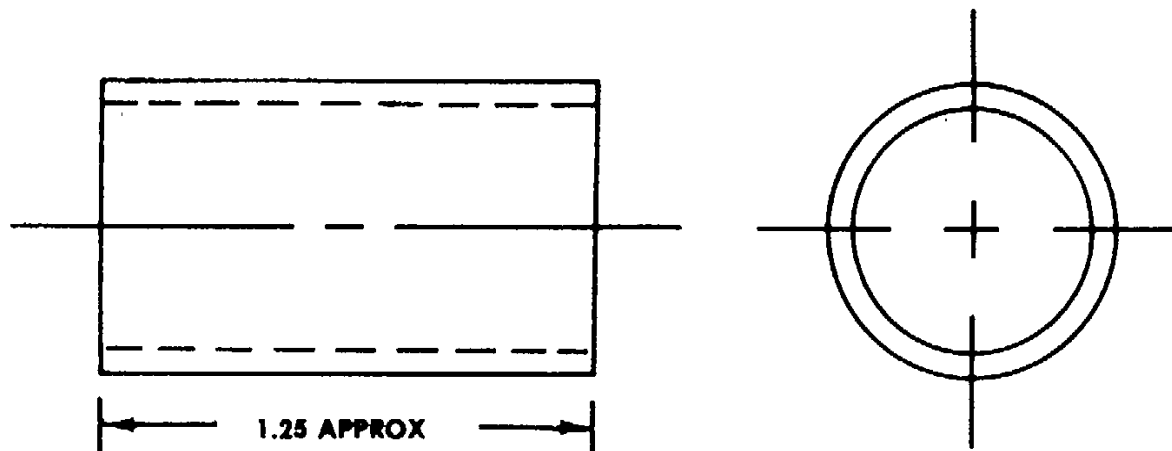


FIGURE 24. INSULATION (PART NO. MIL-I-23053/5)

CONVERSION TABLE		NOTES
IN.	CM	
1.25	3.18	<ol style="list-style-type: none"> <li>1. Dimension shown is in inches and has a tolerance of <math>\pm 0.06</math> in. (<math>\pm 0.15</math> cm).</li> <li>2. Fabricate from insulation sleeving, NSN 5970-00-926-2571.</li> </ol>

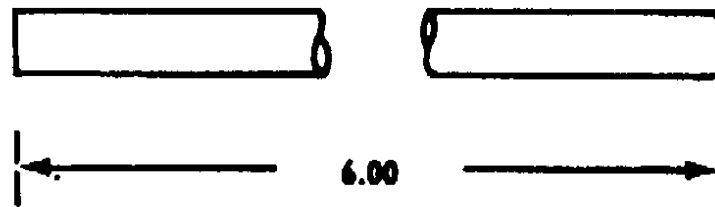


FIGURE 25. WIRE ROPE (PART NO. MIL-W-83420)

CONVERSION TABLE		NOTES
IN.	CM	
6.00	15.24	<ol style="list-style-type: none"> <li>1. Dimension shown is in inches and has a tolerance of <math>\pm 0.50</math> in. (<math>\pm 1.27</math> cm).</li> <li>2. Fabricate from wire rope, NSN 4010-01-051-8331.</li> </ol>

**E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)**

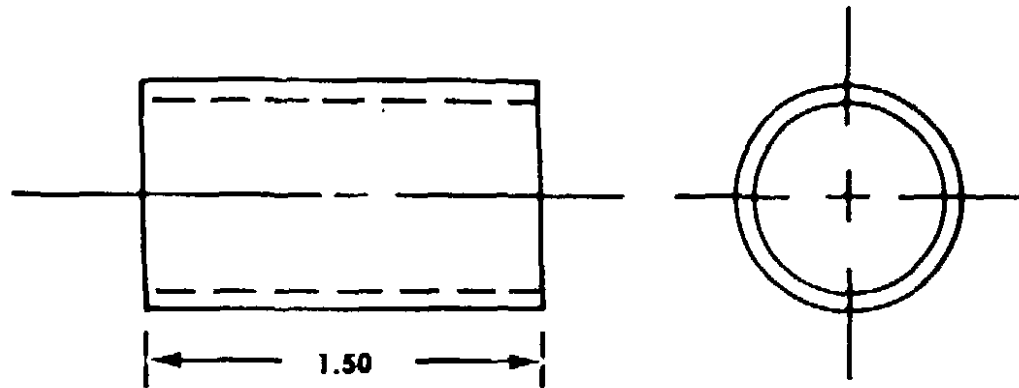


FIGURE 26. BAND MARKER (PART NO. MIL-I-23053/5)

CONVERSION TABLE		NOTES
IN.	CM	
1.50	3.81	<ol style="list-style-type: none"> <li>1. Dimension shown is in inches and has a tolerance of <math>\pm 0.50</math> in. (<math>\pm 1.27</math> cm).</li> <li>2. Fabricate from insulation sleeving, NSN 5970-00-052-3301.</li> <li>3. Mark letters approximately 0.10-in. (0.25-cm) high with black stencil marking ink (item 17, app D) as follows.</li> </ol> <p style="text-align: center;">P/N 12011638</p>

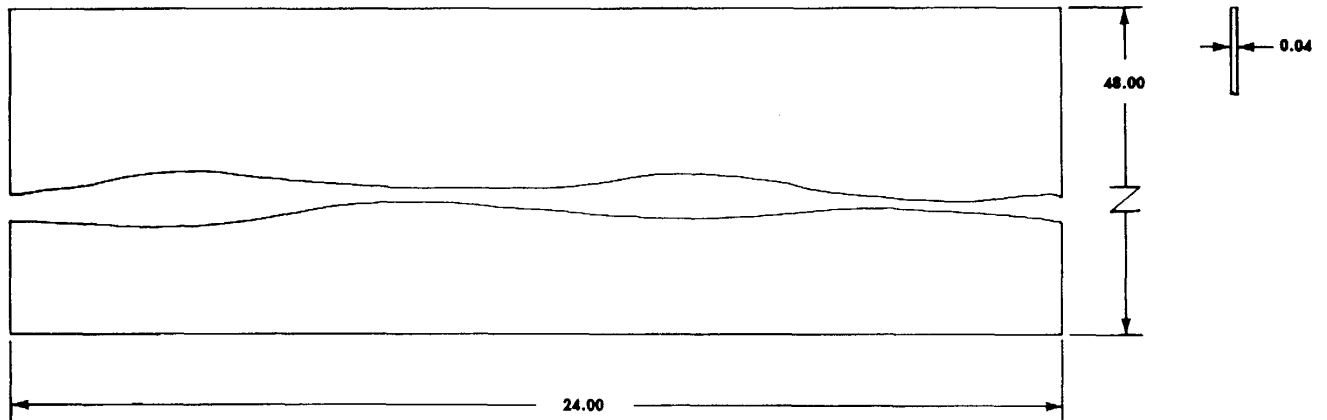


FIGURE 27. CURTAIN (PART NO. 7551091-2)

CONVERSION TABLE		NOTES
IN.	CM	
48.00	121.92	1. All dimensions shown are in inches and have a tolerance of $\pm 0.03$ in. ( $\pm 0.08$ cm). 2. Fabricate from vinyl plastic sheet, NSN 9330-00-988-1894.
24.00	60.96	
0.04	0.10	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

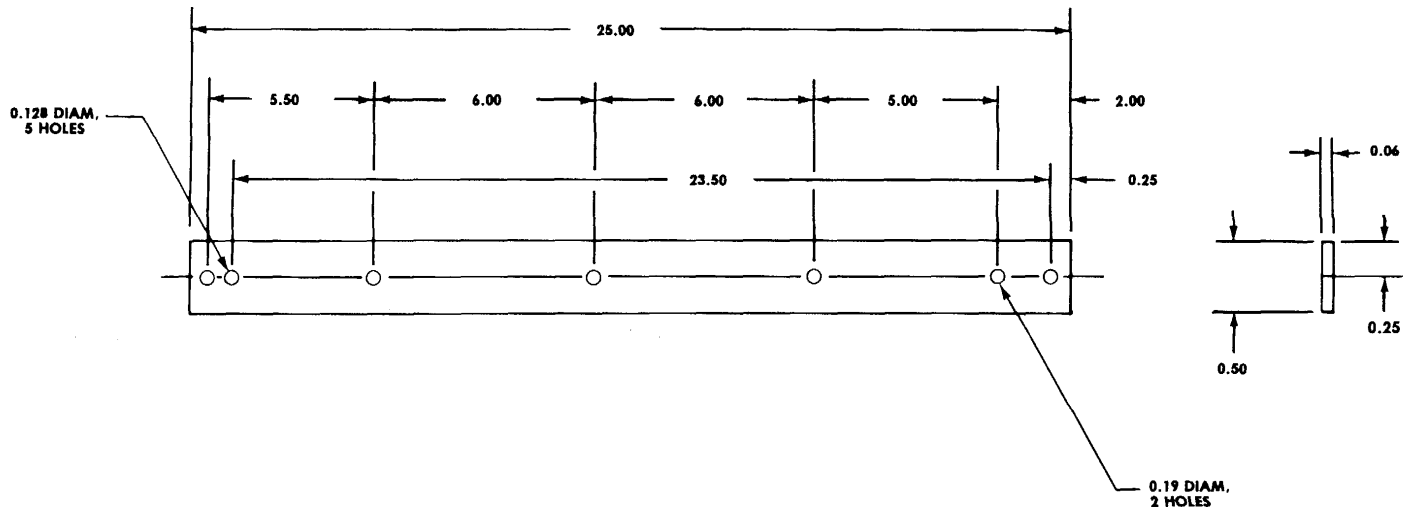


FIGURE 28. STRIP (PART NO. 7551091-1)



CONVERSION TABLE		NOTES
IN.	CM	
25.00	63.50	1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of $\pm 0.03$ in. ( $\pm 0.08$ cm) and a three-digit decimal has a tolerance of $\pm 0.003$ in. ( $\pm 0.008$ cm).  2. Fabricate from aluminum metal sheet, NSN 9535-00-808-3333.
23.50	59.69	
0.25	0.64	
2.00	5.08	
5.00	12.70	
6.00	15.24	
5.50	13.97	
0.50	1.27	
0.06	0.15	
0.128	0.325	
0.19	0.48	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

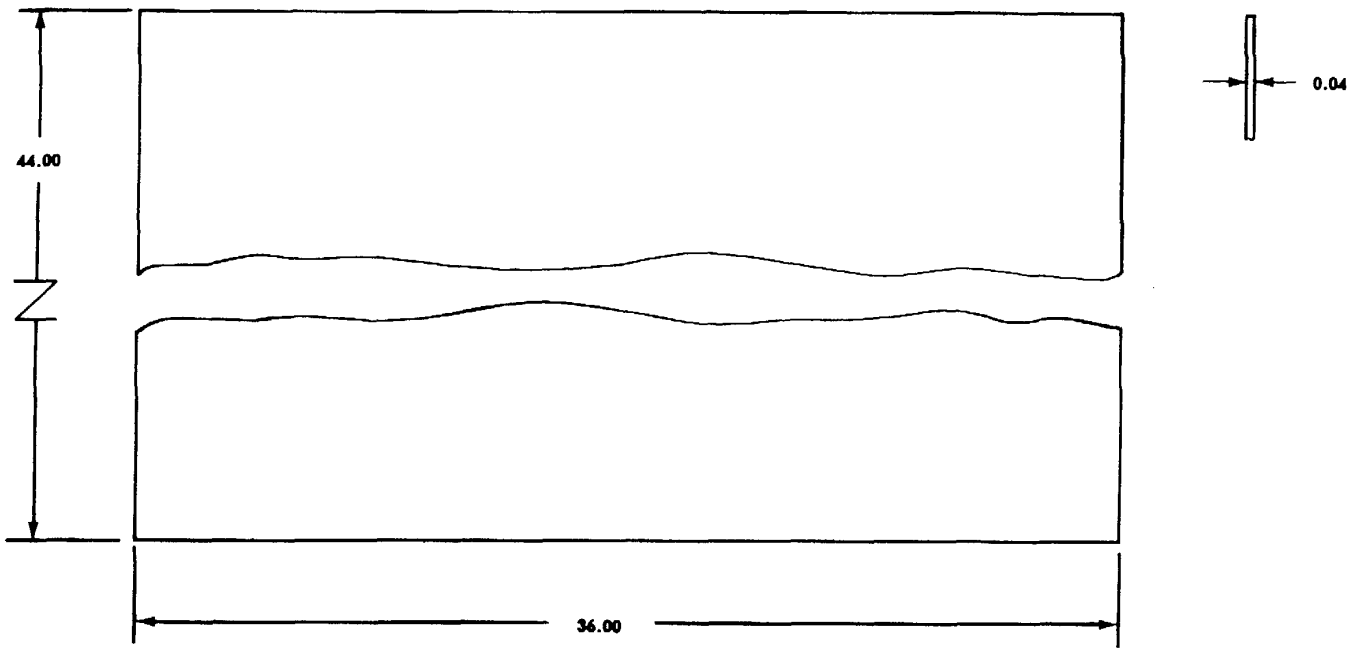


FIGURE 29. CURTAIN (PART NO. 7551092-2)

CONVERSION TABLE		NOTES
IN.	CM	
44.00	111.76	1. All dimensions shown are in inches and have a tolerance of $\pm 0.03$ in. ( $\pm 0.08$ cm). 2. Fabricate from vinyl plastic sheet, NSN 9330-00-988-1894.
36.00	91.44	
0.04	0.10	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

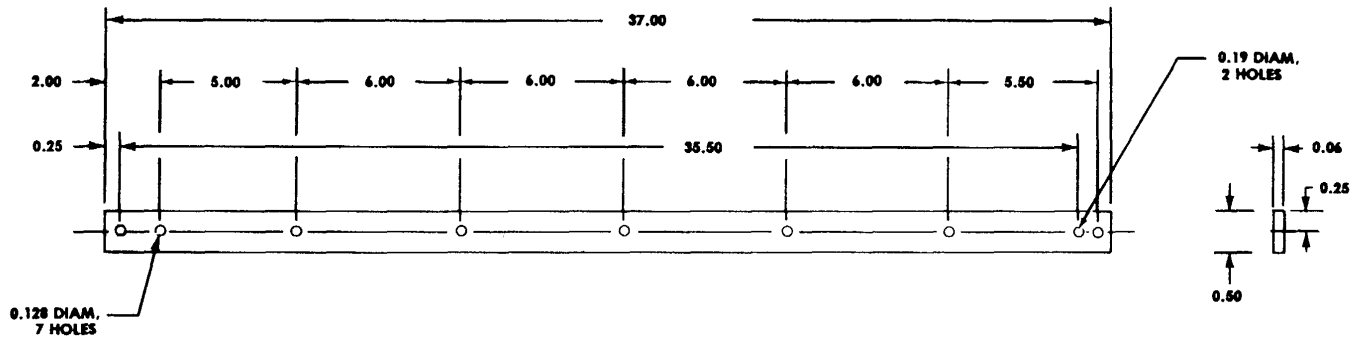


FIGURE 30. STRIP (PART NO. 7551092-1)

CONVERSION TABLE		NOTES
IN.	CM	
0.06	0.15	1. All dimensions shown are in inches. A dimension with a two-digit decimal has a tolerance of $\pm 0.03$ in. ( $\pm 0.08$ cm) and a three-digit decimal has a tolerance of $\pm 0.003$ in. ( $\pm 0.008$ cm).  2. Fabricate from aluminum metal sheet, NSN 9535-00-808-3333.
0.50	1.27	
37.00	93.98	
2.00	5.08	
5.00	12.70	
6.00	15.24	
5.50	13.97	
0.25	0.64	
35.50	90.17	
0.19	0.48	
0.128	0.325	

E-3. MANUFACTURED ITEMS INSTRUCTIONS (cont)

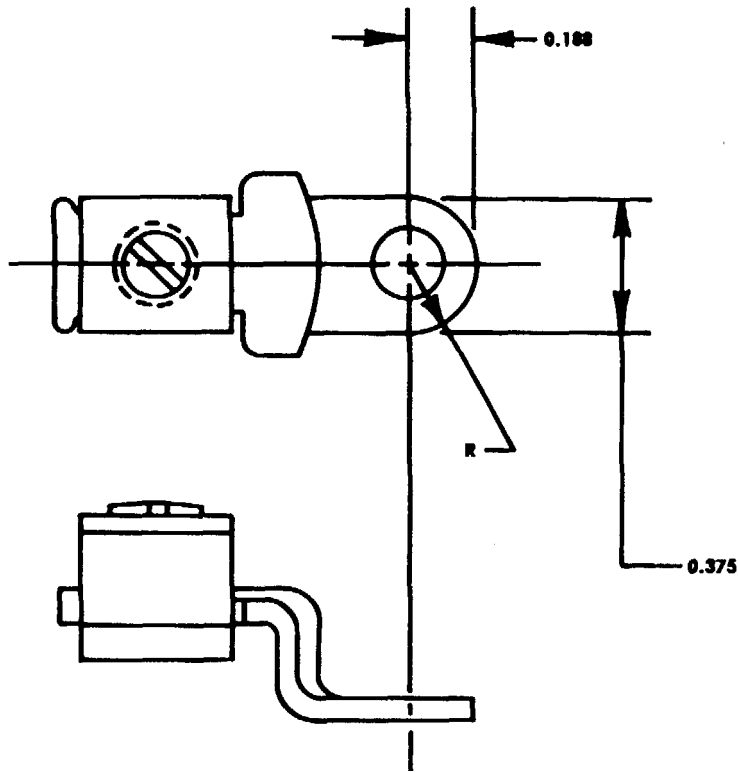


FIGURE 31. LUG TERMINAL (PART NO. 12011689)

CONVERSION TABLE		NOTES
IN.	CM	
0.031	0.078	1. All dimensions shown are in inches and have a tolerance of $\pm 0.031$ in. ( $\pm 0.078$ cm). 2. Fabricate from lug terminal, NSN 5940-00-549-1984.
0.188	0.478	
0.375	0.953	

ALPHABETICAL INDEX

Subject	Page	Subject	Page
A			
Abbreviations, List of.....	1-3	Removal .....	3-210
Adapter Cable Assembly (See Cable Adapter Assembly)		Repair.....	3-211
Airhose:		C	
Disassembly .....	3-272	Cable Adapter Assembly:	
Inspection .....	3-271	Disassembly .....	3-217
Installation .....	3-273	Inspection .....	3-214
Preparation for Use.....	2-8	Installation .....	3-235
Reassembly .....	3-273	Location and Description.....	1-5
Removal .....	3-271	Preparation for Use.....	2-15
Repair.....	3-272	Preparation of Cable for Plug Connector.....	3-224
Stowing.....	2-27	Reassembly .....	3-226
Arbor Press (Also see Installed Equipment List):		Removal .....	3-215
Location and Description.....	1-5	Repair.....	3-221
Principles of Operation.....	1-12	Service .....	3-215
Assembly and Preparation for Use (Shop Set)....	2-8	Stowing.....	2-24
B		Test .....	3-234
Blackout Cover (See Fan Blackout Cover)		Cable Assembly (Cable Adapter Assembly):	
Blackout Switch (See Switchbox and Mounting Bracket (With Toggle Switch))		Disassembly .....	3-242
Bracket Assembly (First Aid Kit Holder Assembly):		Inspection .....	3-241
Disassembly .....	3-211	Installation .....	3-244
Inspection .....	3-211	Reassembly .....	3-243
Installation .....	3-212	Removal .....	3-241
Reassembly .....	3-212	Repair.....	3-242
		Cable Assembly, 120/208V (See 120/208V Cable Assembly)	
		Capabilities of Equipment .....	1-4
		Care of Shop Set .....	1-11

Subject	Page
C	
Ceiling Modification:	
Disassembly .....	3-142
Inspection .....	3-142
Modification of Ceiling .....	3-144
Reassembly .....	3-146
Repair.....	3-143
Ceiling Outlets (See Electrical Installation)	
Characteristics of Equipment.....	1-4
Checking Unpacked Equipment .....	3-5
Circuit Breaker Panel Box (See Electrical Installation)	
Common Tools and Equipment .....	3-2
Conduit Installation:	
Disassembly .....	3-90
Inspection .....	3-90
Modification .....	3-99
Reassembly .....	3-101
Repair.....	3-96
Connector, Electrical Plug (See Electrical Plug Connector (Female), Electrical Plug Connector (Male), or Plug Connector	
Contents, Table of.....	i
Cross-Reference, Nomenclature .....	1-1
Curtain Assembly (See End or Side Curtain Assembly)	

Subject	Page
D	
Data, Equipment .....	1-10
Decals, Operating Instructions on.....	2-32
Degreaser (See Portable Degreaser)	
Description:	
Equipment .....	1-4
Major Components.....	1-4
Destruction of Army Materiel to Prevent Enemy Use .....	1-1
Differences between Models .....	1-9
Door Modification:	
Disassembly .....	3-150
Inspection .....	3-153
Modification of Door.....	3-154
Reassembly .....	3-155
Repair.....	3-153
Drilling Machine (Also see Installed Equipment List):	
Location and Description.....	1-6
Preparation for Shop Set Movement.....	2-21
Preparation for Use.....	2-19
Principles of Operation.....	1-13
E	
ECU (See Environmental Control Unit)	
ECU Stowing Frame Assembly:	
Disassembly .....	3-194

**INDEX 2**



Subject	Page
Inspection .....	3-193
Installation .....	3-197
Reassembly .....	3-196
Removal .....	3-194
Repair.....	3-195
EIR's, Reporting .....	1-4
Electrical Installation:	
Disassembly .....	3-41
Inspection .....	3-38
Inspection After Disassembly .....	3-59
Modification .....	3-63
Reassembly .....	3-64
Repair.....	3-59
Test .....	3-86
Electrical Plug Connector (Female):	
Inspection .....	3-296
Installation .....	3-297
Removal .....	3-296
Repair.....	3-297
Service .....	3-297
Electrical Plug Connector (Male):	
Inspection .....	3-298
Installation .....	3-300
Removal .....	3-298
Repair.....	3-299
Service .....	3-299
Electrical Schematic.....	3-40
End Curtain Assembly:	
Inspection .....	3-265
Installation .....	3-266
Preparation for Use.....	2-9
Reassembly .....	3-266

Subject.....	Page
Removal .....	3-264
Repair.....	3-265
Stowing.....	2-29
Environmental Control Unit (Also see Installed Equipment List):	
Location and Description.....	1-6
Preparation for Use.....	2-12
Principles of Operation.....	1-13
Stowing.....	2-24
Equipment Characteristics, Capabilities, and Features .....	1-4
Equipment Data .....	1-10
Equipment Description and Data .....	1-4
Equipment Improvement Recommendations (EIR), Reporting .....	1-4
Equipment Purpose.....	1-1
Equipment Storage Chest:	
Location and Description.....	1-6
Preparation for Use.....	2-10
Stowing.....	2-27
Expendable Supplies and Materials List (App D) D-1	
F	
Fabricated Items (App E) .....	E-1
Fan Blackout Cover:	
Inspection .....	3-190
Installation .....	3-191
Removal .....	3-189
Repair.....	3-190

Subject	Page
Features of Equipment.....	1-4
Female Connector (Cable Adapter Assembly):	
Inspection .....	3-237
Installation .....	3-238
Removal .....	3-237
Repair.....	3-238
Service .....	3-237
File (See Sorting File)	
Fire Extinguisher (Also see Installed Equipment List).....	1-6
First Aid Kit (Also see Installed Equipment List).....	1-6
First Aid Kit Holder Assembly:	
Disassembly .....	3-202
Inspection .....	3-201
Installation .....	3-204
Reassembly .....	3-203
Removal .....	3-200
Repair.....	3-202
Forms, Maintenance .....	1-1
Frame Assembly, ECU (See ECU Stowing Frame Assembly)	
Frame, Mounting, Portable Degreaser (See Shop Set)	
Frame, Mounting, Storage Cabinet (See Shop Set)	

Subject	Page
	G
General Information .....	1-1
Grinding Machine (Also see Installed Equipment List):	
Location and Description.....	1-5
Principles of Operation.....	1-12
Grounding Stud:	
Disassembly .....	3-87
Inspection .....	3-88
Reassembly .....	3-88
Repair.....	3-88
Service .....	3-88
	H
Handling of Shop Set .....	1-11
Harness Assembly (See Wiring Harness Assembly)	
Holder Assembly (First Aid Kit Holder Assembly):	
Disassembly .....	3-206
Inspection .....	3-206
Installation .....	3-208
Reassembly .....	3-207
Removal .....	3-205
Repair.....	3-207
Hose, Air (See Airhose)	
How to Use This Manual .....	v

Subject	Page
I	
Illustrated List of Manufactured Items (App E) .....	E-1
Installation Instructions.....	3-5
Installed Equipment List:	
Inspection .....	3-110
Installation .....	3-135
Modification of Right Table .....	3-129
Modification of Storage Cabinet and Portable Degreaser .....	3-132
Removal .....	3-119
Repair.....	3-124
Service .....	3-115
Instruction Plates, Operating Instructions on.....	2-32
Intermediate Maintenance Instructions .....	3-1
Introduction .....	1-1
L	
Lights (See Electrical Installation)	
Location and Description of Major Components..	1-4
M	
MAC (App B).....	B-1
Machinist's Vise (Also see Installed Equipment List):	
Location and Description.....	1-6
Preparation for Shop Set Movement.....	2-20

Subject	Page
Preparation for Use.....	2-19
Principles of Operation.....	1-13
Maintenance Allocation Chart (App B).....	B-1
Maintenance:	
Forms, Records, and Reports .....	1-1
Instructions .....	3-1
Procedures .....	3-9
Summary Procedures .....	3-9
Major Components, Location and Description.....	1-4
Manual, How to Use .....	v
Manufactured Items (App E).....	E-1
Miscellaneous Spare Accessories:	
Inspection .....	3-169
Installation .....	3-170
Removal .....	3-170
Repair.....	3-170
Model Differences .....	1-9
Mounting Frame, Portable Degreaser (See Shop Set)	
Mounting Frame, Storage Cabinet (See Shop Set)	
Movement, Preparation for (Shop Set).....	2-20
N	
Nomenclature Cross-Reference .....	1-1

**INDEX 5**

Subject	Page
O	
120/208V, Cable Assembly:	
Disassembly .....	3-280
Inspection .....	3-277
Installation .....	3-294
Location and Description.....	1-5
Preparation for Use.....	2-15
Reassembly .....	3-285
Removal .....	3-277
Repair.....	3-284
Stowing.....	2-24
Test .....	3-294
Operable Equipment .....	1-12
Operating Instructions .....	2-1
Operating Instructions on Decals and Instruction Plates.....	2-32
Operation Under Usual Conditions .....	2-8
Operator's and Aviation Intermediate Maintenance Repair Parts and Special Tools List (App C).....	C-1
P	
Plug Connector (Cable Adapter Assembly):	
Inspection .....	3-239
Installation .....	3-240
Removal .....	3-240
Service .....	3-239
PMCS .....	2-1

Subject	Page
Portable Degreaser (Also see Installed Equipment List):	
Location and Description.....	1-6
Preparation for Use.....	2-17
Principles of Operation.....	1-13
Stowing.....	2-22
Portable Degreaser Mounting Frame (See Shop Set)	
Preparation for Movement (Shop Set).....	2-20
Preparation for Storage or Shipment .....	3-300
Preparation for Use (Shop Set) .....	2-8
Preventive Maintenance Checks and Services...	2-1
Principles of Operation.....	1-12
Purpose of Equipment.....	1-1

R	
Receptacles, Electrical (See Electrical Installation)	
Records, Maintenance.....	1-1
References (App A).....	A-1
Repair Parts .....	3-2
Repair Parts and Special Tools List (App C).....	C-1

Subject	Page
Reports, Maintenance .....	1-1
RPSTL (App C) .....	C-1
S	
Safety, Care, and Handling of Shop Set .....	1-11
Schematic Diagram .....	3-40
Scope of Manual .....	1-1
Service Upon Receipt .....	3-2
Shelter (Also see Installed Equipment List):	
Location and Description .....	1-7
Preparation for Shop Set Movement .....	2-31
Preparation for Use .....	2-8
Shelter Requirements .....	3-2
Shipment, Preparation for .....	3-300
Shop Set:	
Disassembly .....	3-26
Inspection .....	3-23
Reassembly .....	3-34
Repair .....	3-29
Repair/Application of Stencils .....	3-32
Side Curtain Assembly:	
Inspection .....	3-268
Installation .....	3-270
Preparation for Use .....	2-9
Reassembly .....	3-270
Removal .....	3-268
Repair .....	3-269
Stowing .....	2-29

Subject	Page
Site and Shelter Requirements .....	3-2
Sorting File:	
Disassembly .....	3-275
Inspection .....	3-274
Installation .....	3-275
Location and Description .....	1-8
Preparation for Use .....	2-19
Reassembly .....	3-275
Removal .....	3-275
Repair .....	3-275
Service .....	3-274
Stowing .....	2-20
Special Tools .....	C-1
Stencils, Repair/Application of .....	3-32
Stools (Also see Installed Equipment List):	
Location and Description .....	1-8
Preparation for Use .....	2-10
Stowing .....	2-27
Storage Cabinet (Also see Installed Equipment List)	
Storage Cabinet Mounting Frame (See Shop Set)	
Storage Chest (See Equipment Storage Chest)	
Storage, Preparation for .....	3-300
Stowing of Shop Set .....	2-20

Subject	Page
<b>S</b>	
Strap, Webbing (ECU Stowing Frame Assembly):	
Reassembly/Installation .....	3-199
Inspection .....	3-198
Removal/Disassembly .....	3-198
Repair.....	3-199
Summary Procedures.....	3-9
Support Equipment .....	3-2
Switchbox and Mounting Bracket (With Toggle Switch):	
Adjustment of Microswitch .....	3-178
Inspection .....	3-171
Modification .....	3-174
Reassembly/Installation .....	3-174
Removal/Disassembly .....	3-172
Repair.....	3-174
Test .....	3-178
Switchbox and Mounting Bracket (Without Toggle Switch ):	
Adjustment of Microswitch .....	3-186
Inspection .....	3-181
Modification .....	3-183
Reassembly/Installation .....	3-184
Removal/Disassembly .....	3-181
Repair.....	3-183
Test .....	3-186
Symptom Index (Troubleshooting).....	3-6

Subject	Page
<b>T</b>	
Table Modification (Also see Installed Equipment List):	
Disassembly .....	3-161
Inspection .....	3-159
Installation .....	3-168
Location and Description.....	1-8
Modification .....	3-165
Reassembly .....	3-167
Removal .....	3-160
Repair.....	3-162
Table of Contents.....	i
Test Measurement and Diagnostic Equipment (TMDE) .....	3-2
Tools:	
Common.....	3-2
Special.....	3-2
Troubleshooting .....	3-5
Troubleshooting Symptom Index.....	3-6
Troubleshooting Table.....	3-7
<b>U</b>	
Unpacked Equipment, Checking .....	3-5
Use of Manual.....	v

**INDEX 8**

Subject	Page
	V
Vise (See Machinist's Vise)	
	W
Wall Shelving (Also see Shop Set):	
Location and Description.....	1-9
Preparation for Use.....	2-9
Stowing.....	2-29
Warning Page .....	a
Webbing Strap (See Strap, Webbing)	
Wire Assembly:	
Disassembly .....	3-255
Inspection .....	3-254
Installation .....	3-256
Reassembly .....	3-256
Removal .....	3-254
Repair.....	3-255
Wire Assembly (Ceiling Outlets):	
Disassembly .....	3-249
Inspection .....	3-249
Installation .....	3-250
Reassembly .....	3-250
Removal .....	3-249
Repair.....	3-249

Subject	Page
Wire Assembly (Switchbox):	
Disassembly .....	3-246
Inspection .....	3-246
Installation .....	3-247
Reassembly .....	3-247
Removal .....	3-246
Repair.....	3-247
Wire Table .....	3-59
Wiring Diagram .....	3-39
Wiring Harness Assembly (Switch to Distribution Ceiling Outlets):	
Disassembly .....	3-258
Inspection .....	3-258
Installation .....	3-263
Reassembly .....	3-259
Removal .....	3-258
Repair.....	3-259
Wiring Harness Assembly (Switchbox to Distribution Panel):	
Disassembly .....	3-252
Inspection .....	3-252
Installation .....	3-253
Reassembly .....	3-253
Removal .....	3-252
Repair.....	3-252

By Order of the Secretary of the Army:

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*General, United States Army*  
*Chief of Staff*

**ROBERT M. JOYCE**  
*Major General, United States Army*  
*The Adjutant General*

Distribution:

To be distributed in accordance with DA Form 12-21A, requirements for Shop Set, Armament Repair, Air Mobile Shelter Mounted.



## THE METRIC SYSTEM AND EQUIVALENTS

### LINEAR MEASURE

- 1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
- 1 Meter = 100 Centimeters = 1,000 Millimeters = 39.37 Inches
- 1 Kilometer = 1,000 Meters = 0.621 Miles

### SQUARE MEASURE

- 1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
- 1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
- 1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

### CUBIC MEASURE

- 1 Cu Centimeter = 1,000 Cu Millimeters = 0.06 Cu Inches
- 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

### LIQUID MEASURE

- 1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
- 1 Liter = 1,000 Milliliters = 33.82 Fluid Ounces

### TEMPERATURE

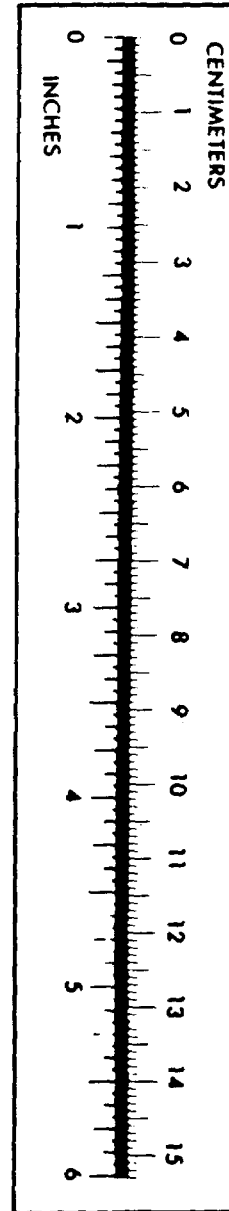
- $5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
- 212° Fahrenheit is equivalent to 100° Celsius
- 90° Fahrenheit is equivalent to 32.2° Celsius
- 32° Fahrenheit is equivalent to 0° Celsius
- $9/5 \text{ C}^{\circ} + 32 = \text{F}^{\circ}$

### WEIGHTS

- 1 Gram = 0.001 Kilograms = 1,000 Milligrams = 0.035 Ounces
- 1 Kilogram = 1,000 Grams = 2.2 lb.
- 1 Metric Ton = 1,000 Kilograms = 1 Megagram = 1.1 Short Tons

### APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds Per Square Inch	Kilopascals	6.895
Miles Per Gallon	Kilometers Per Liter	0.425
Miles Per Hour	Kilometers Per Hour	1.609
TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds Per Square Inch	0.145
Kilometers Per Liter	Miles Per Gallon	2.354
Kilometers Per Hour	Miles Per Hour	0.621



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