

TECHNICAL MANUAL

**OPERATOR'S AND INTERMEDIATE
MAINTENANCE MANUAL INCLUDING
REPAIR PARTS AND SPECIAL TOOLS LIST**

FOR

SHOP SET, TURBINE ENGINE, AIRMOBILE

P/N

NSN

4920-99-CL-A87

4920-00-224-3684

Approved for public release; distribution is unlimited.

CHANGE

No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 15 January 1993

Operator's and Intermediate
Maintenance Manual
(Including Repair Parts and Special Tools List)
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TM 1-4920-454-13&P, 1 May 1991, is changed as follows:

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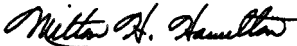
3-27 through 3-30

3-27 through 3-30

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

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WARNING PRECAUTIONARY DATA

Personnel performing operations, procedures and practices which are included or implied in this Technical Manual shall observe the following warnings. Failure to observe these warnings and precautionary information can cause serious injury, death, or destruction of materiel.

WARNING

An operating procedure, practice, etc., which, if not correctly followed, could result in injury or loss of life.

CAUTION

An operating procedure, practice, etc., which, if not strictly observed, could result in damage or destruction of equipment.

NOTE

An operating procedure, condition, etc., which is essential to highlight.

WARNING

When all equipment and materiel is stored on the stationary side of the shelter, the limited floor space presents an obstacle to operating personnel. This is most critical during the raising and lowering of the roof panel. Failure to observe supplemental expansion instructions could result in personnel inside the shelter becoming trapped between the roof panel and equipment. Serious injury to personnel could result.

WARNING

The fold-out floor counterbalance cables must be secured at the cable housings prior to aligning the shelter hinged floor. If the counterbalance cables are not secured, the counterbalance cables will remain under tension. DO NOT attempt to remove cables if the counterbalance cables are not secured. Removing cables while under tension could cause serious injury to personnel.

WARNING

HIGH VOLTAGE exists in the electrical system of the shop. All electrical inspections, repairs or replacement will be performed with the power off and only by qualified electricians. Serious shock hazards exist which could result in injury or death to personnel.

WARNING

Four personnel are needed when moving or lifting the Environmental Control Unit (ECU). Unit weighs approximately 290 pounds. Trying in move or lift. an ECU without sufficient help can cause serious injury to personnel.

WARNING

Cabinets are extremely heavy when fully equipped. At least two personnel are required to lift or move. Attempting to lift or move cabinet without sufficient personnel can result in severe injury.

WARNING

Methylethylketone (MEK), used to clean replacement inserts, is flammable and toxic. Use only in well ventilated areas. Breathing vapors can cause headaches and nausea. Repeated contact with skin can cause irritation. If irritation persists see a doctor. If in contact with eyes, wash immediately with water for 15 minutes and seek medical attention.

Safety goggles will be worn when drilling and cleaning holes for insert replacement. Flying chips can cause eye injury or blindness.

WARNING

High pressure compressed air against skin or near eye can cause injury or blindness. Do not direct compressed air against skin or near eyes. Always wear safety goggles when working with compressed air.

WARNING

Extreme care must be taken while performing all types of welding operations. Serious health and fire hazards exist. Harmful light rays can cause eye injury or blindness. Protective face masks and goggles must be used as well as other special clothing to reduce risks. Poisonous fumes, burns, electric shock, fire and explosion hazards are some of the additional possibilities of injury associated with welding operations. It is essential that all safe practices be strictly observed.

CAUTION

Shop utilizes 3-PHASE Electric Current. Proper phasing must be achieved when wiring the Power Distribution Panel to power source. Improper phasing can result in damage to the ECUs and other electrically operated equipment.

CAUTION

Care must be taken to ensure that proper hardware is used to secure equipment for transport. Lack of correct hardware could cause extensive damage to equipment or the shelter when shop is moved.

CAUTION

Torque values must be observed to prevent possible damage to equipment or the shelter. Improper procedures could result in extensive damage to government property. See App. G.

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DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 1 May 1991

OPERATOR'S AND INTERMEDIATE
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REPAIR PARTS AND SPECIAL TOOLS LIST FOR

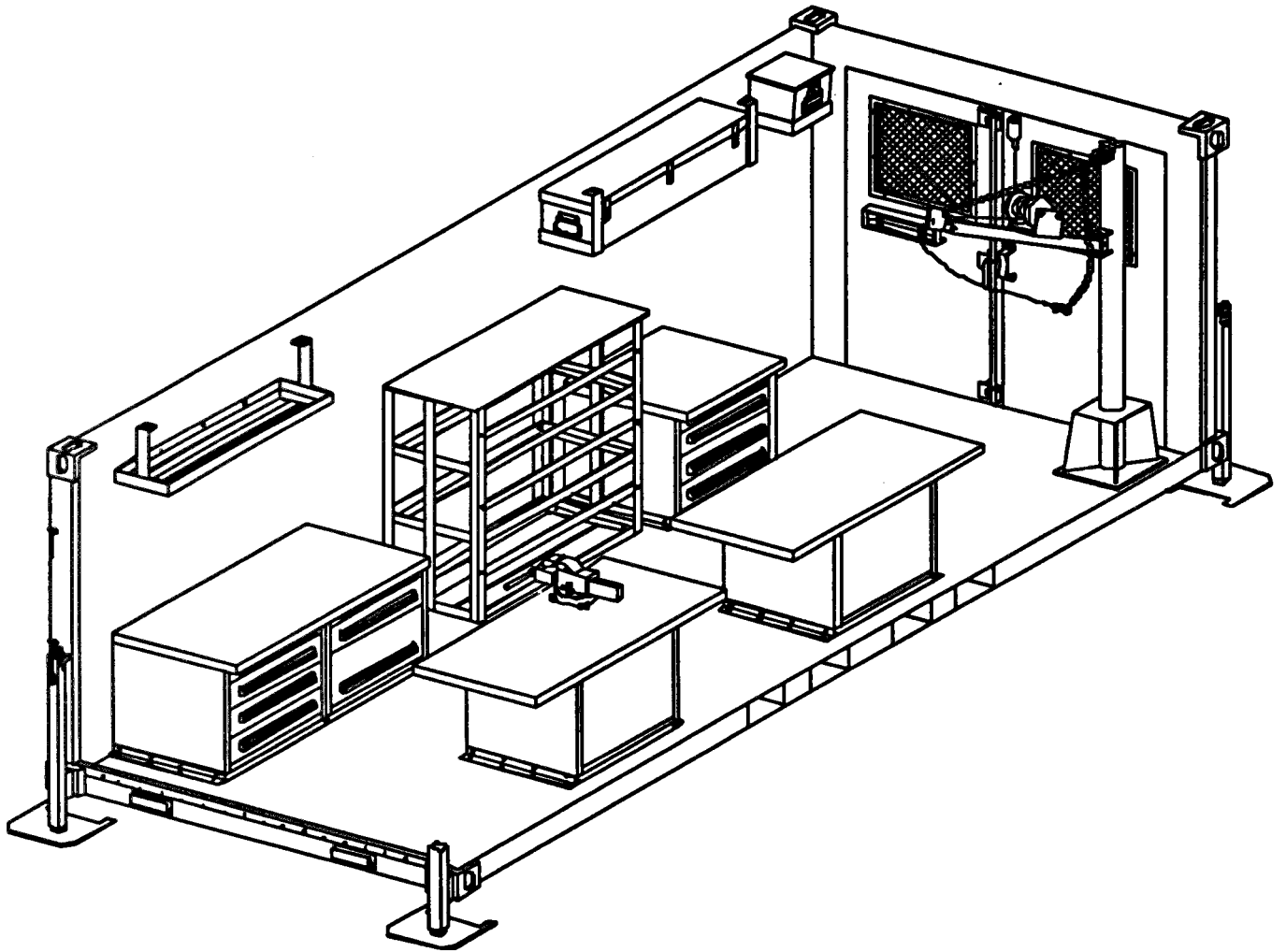
SHOP SET, TURBINE ENGINE, AIRMOBILE

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of any way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Aviation Systems Command ATTN: AMSAV-MC, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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CHAPTER 1 INTRODUCTION

SECTION I. GENERAL INFORMATION

1-1. scope.

Type of Manual: Operator and Intermediate Maintenance

Equipment Name: Turbine Engine Shop

Purpose of Equipment: To provide turbine engine repair and maintenance support for divisional aviation units. This shop is utilized in conjunction with other maintenance shops in the AVIM support unit.

1-2. Maintenance Forms, Records and Reports.

Department of the Army forms and records used to maintain this equipment will be those prescribed by DA PAM 738-751, The Army Maintenance Management System - Aviation (TAMMS-A).

1-3. Repotting Equipment Improvement Recommendations (EIR).

If your Turbine Engine Shop 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. Put it on an SF 368 (Quality Deficiency Report). Mail it to: Commander, US Army Aviation Systems Command, ATTN: AMSAV-QRF, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. We will send you a reply.

1-4. Destruction of Army Materiel to Prevent Enemy Use.

Procedure for destroying Army materiel to prevent enemy use are listed in TM 750-244-1-4, Procedures for Destruction of Aviation Ground Support Equipment (FSC 4920), to Prevent Enemy Use.

1-5. Preparation for Storage or Shipment.

For general technical information on preparation for storage and shipment refer to TM 55-1500-204-25/1 and TM 743-200-1. For specific information to prepare the shop for storage or shipment refer to paragraph 2-12.

SECTION II. EQUIPMENT DESCRIPTION AND DATA

1-6. Characteristics, Capabilities and Features.

a. Characteristics.

- (1) Provides work area for Turbine Engine Shop to perform its maintenance function.
- (2) Provides turbine engine repair and maintenance support for the AVIM unit.
- (3) Housed in a tactical, one side expandable, shelter (NSN 5411-01-124-1377).

b. Capabilities and Features.

(1) Transportable by highway, rail, marine or air (C-130, C-141 or C-5 aircraft, Army CH-47 and CH-54 helicopter).

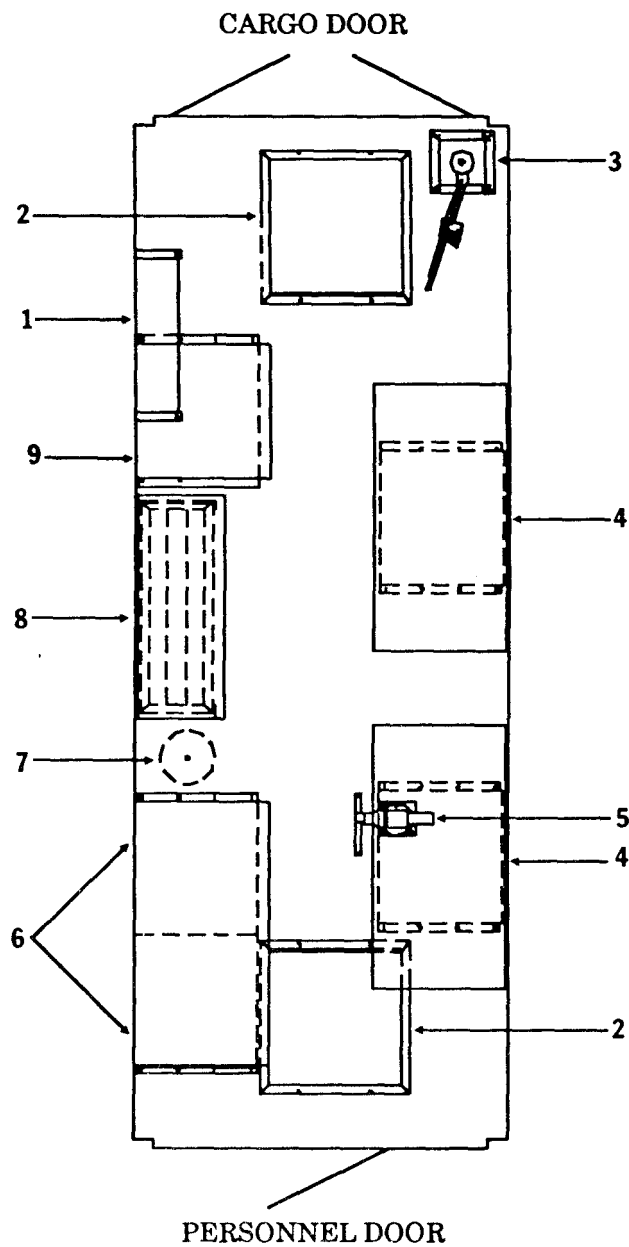
(2) Can be operated in any geographic area under any climatic condition.

(3) Can be stored/transported and operated out of the same ISO shelter.

1-7. Location and Description of Major Components.

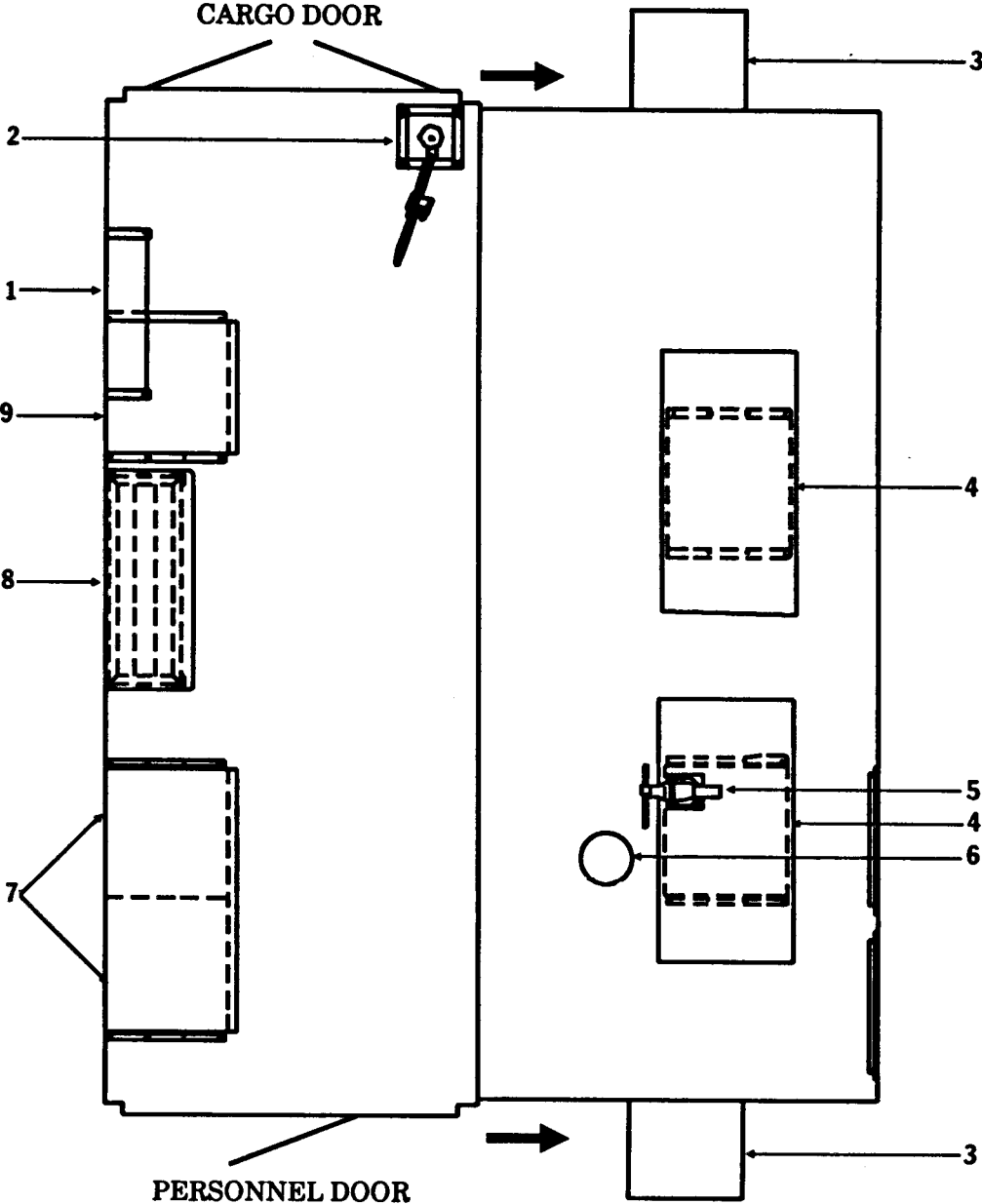
a. Equipment Location in Transport/Storage Mode (Shelter Closed).

- (1) STORAGE CHEST
- (2) ECU
- (3) DAVIT CRANE
- (4) CABINET
- (5) VISE
- (6) CABINET
- (7) STOOL
- (8) TOOL BOX RACK
- (9) CABINET



1-7. Location and Description of Major Components-Continued.

b. Recommended Equipment Location in Operational Mode (Shelter Expanded).



- (1) STORAGE CHEST
- (2) DAVIT CRANE
- (3) ECU
- (4) CABINET
- (5) VISE

- (6) STOOL
- (7) CABINET
- (8) TOOL BOX RACK
- (9) CABINET

SECTION III. PRINCIPLES OF OPERATION

1-8. After the shelter has been expanded, the operator will unbolt selected items of equipment. These items will be moved to recommended positions on the expanded side of the shelter (see para., 1-7b). The selected items, when moved, will not be secured (bolted) in place. This allows the shop personnel a certain flexibility in the event long or bulky material must be repaired within the shelter. The recommended locations were selected for proper utilization of floor space and maximum safety for the operating personnel.

1-9. Detailed instructions for unbolting equipment and the recommended sequence for movement are contained in Chapter 2, Section II. Supplemental procedures for opening and closing the shelter are contained in Chapter 2, Sections I and III. TM 10-5411-201-14 is required for detailed instructions.

1-10. Electrical power to operate the Turbine Engine Shop is provided by a generator or a commercial power source. A power distribution panel (PDP) is used between the power source and the power entry panel of the shelter. Overload protection is provided by circuit breakers.

CHAPTER 2 OPERATOR INSTRUCTIONS

SECTION I. INITIAL SHOP EXPANSION

2-1. Placement of Turbine Engine Shop. The Turbine Engine Shop should be located with power cable length, tactical deployment, exhaust/inlet of ECUs and phasing between related shops kept in mind. The shop's power entry panel, next to the personnel entrance door, should be facing toward the power source and power distribution panel.

2-2. Shelter Expansion

a. Remove shop storage chest, located on fixed sidewall near ceiling at cargo entrance door, from mounting bracket for easy access to hardware and tools.

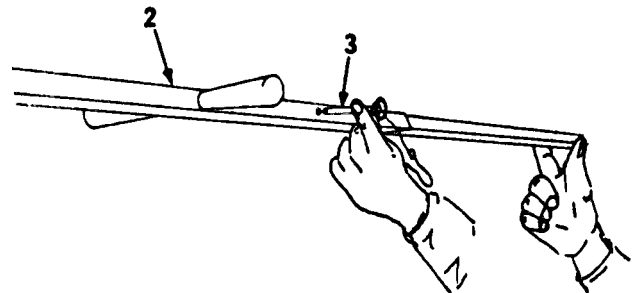
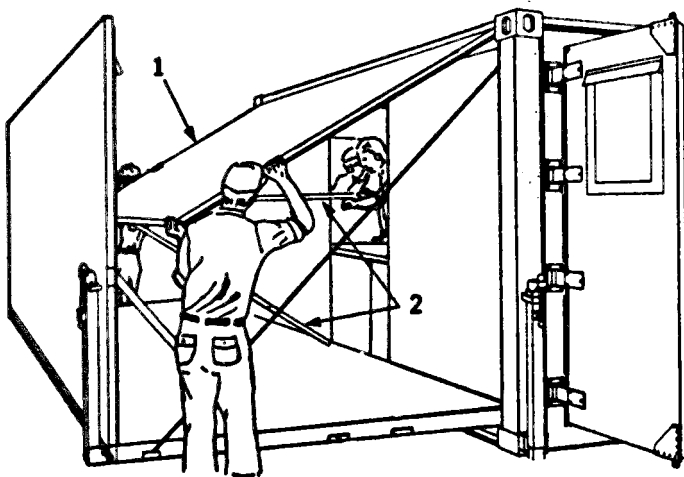
b. Observe shelter expansion instructions in TM 10-5411-201-14 until two handles of solar bar are extended and hinged roof is slid outward. Continue shelter expansion observing supplemental expansion instructions found below.

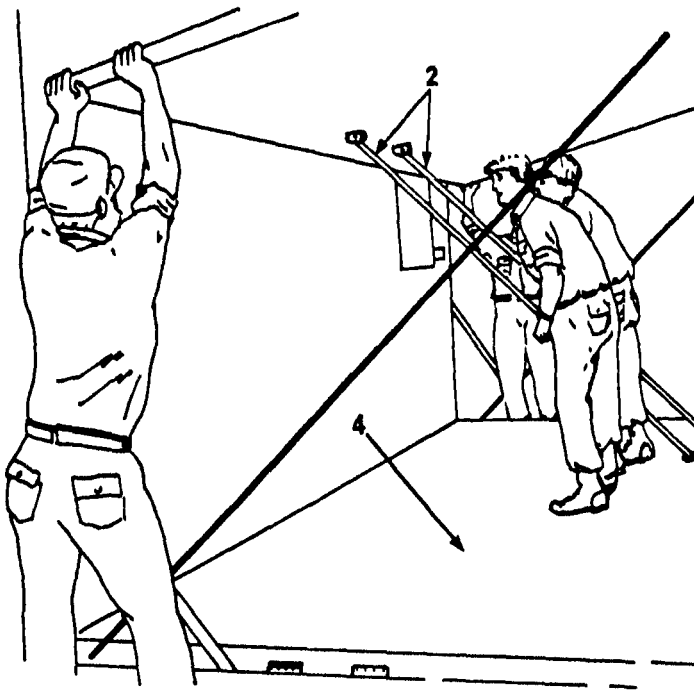
c. Supplemental Expansion Instructions.

WARNING

When all equipment and materiel is stored on the stationary side of the shelter, the limited floor space presents an obstacle to operating personnel. This is most critical during the raising and lowering of the roof panel. Failure to observe supplemental expansion instructions could result in personnel inside the shelter becoming trapped between the roof panel and equipment. Serious injury to personnel could result.

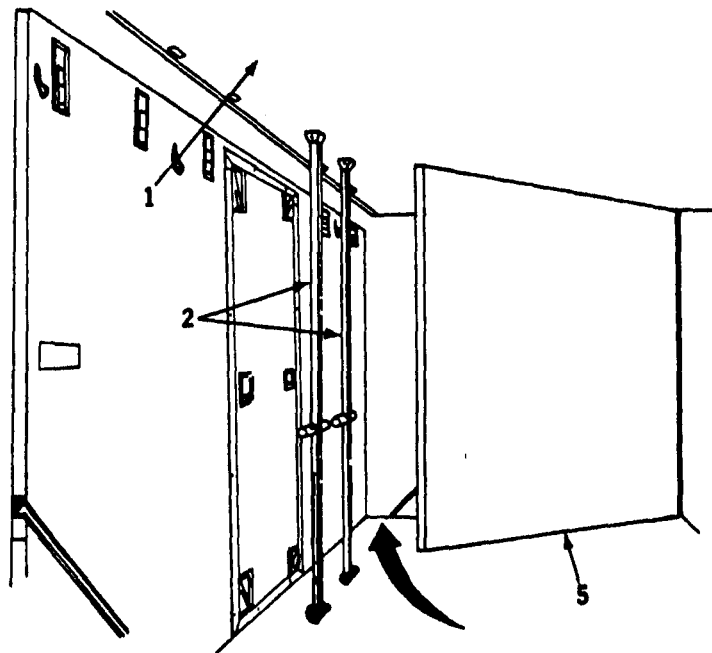
1. Two personnel, outside the shelter, must lift the roof panel (1) far enough to allow two people inside to release the support struts (2), extend them to full length and insert quick-release pins (3).





2. As soon as there is enough floor area (4), the personnel inside will move to the expanded side of the shelter raising the roof with extended support struts (2).

3. Once the struts (2) are totally supporting the roof panel (1), the end walls (5) are swung to the open position.



WARNING

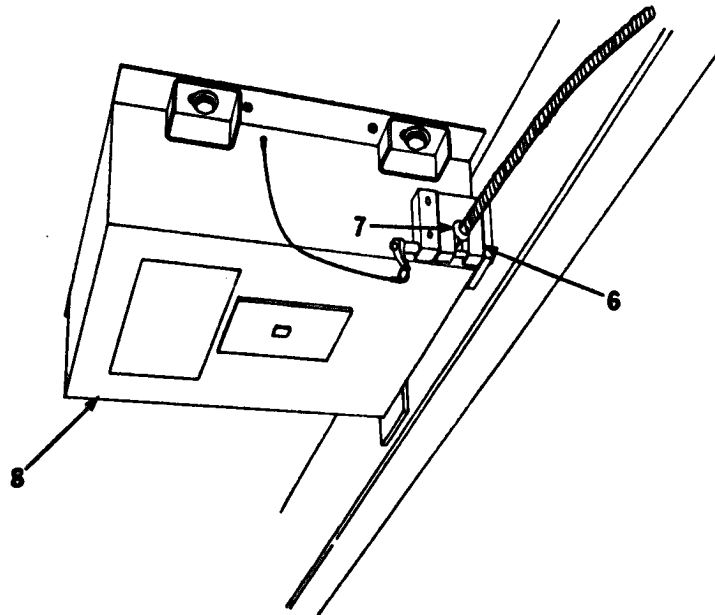
The fold-out floor counterbalance cables must be secured at the cable housings prior to aligning the shelter hinged floor. If the counterbalance cables are not secured, the counterbalance cables will remain under tension. DO NOT attempt to remove cables if the counterbalance cables are not secured. Removing cables while under tension could cause serious injury to personnel.

NOTE

It may be necessary to further lower the fold-out floor to expose the cable stop balls in order to engage the slide stops.

4. Ensure slide stops (6) are closed against counterbalance cable stop balls (7) on cable reels (8) at each end of shelter.

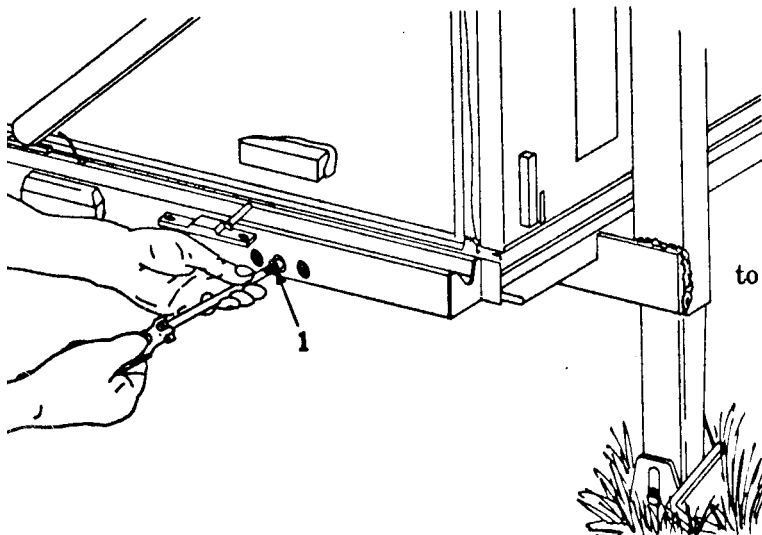
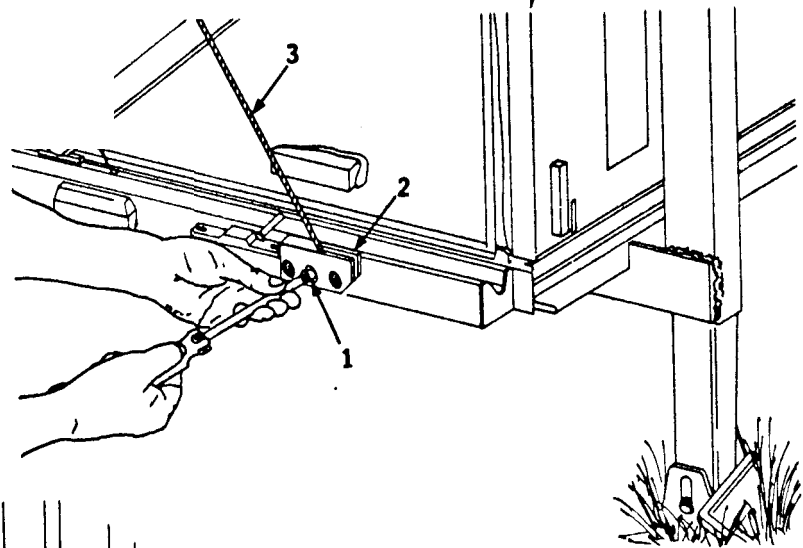
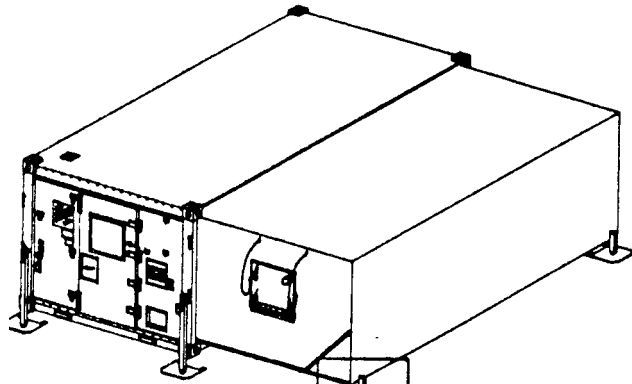
5. Continue with remaining expansion procedures outlined in TM 10-5411-201-14 for final expansion of the shelter.



d. Removing Counterbalance Cables.

1. After shop erection is complete (AND COUNTERBALANCE CABLES ARE SECURED), remove three screws (1) from cable retainer block (2).

2. Let cable (3) and retainer block (2) hang loose next to shelter.



3. Install retainer block screws (1) and secure.

4. Repeat 1,2, and 3 above for remaining cable.

e. Shop is now ready for positioning of equipment to operational mode.

SECTION II. PREPARING SHOP FOR OPERATION

2-3. Electric Power.

a. External Grounding of Shop.

1. Remove ground rod assembly from shop.
2. Install external ground IAW TM 10-5411-201-14 and TC 11-6.

WARNING

HIGH VOLTAGE exists in the electrical system of the shop. All electrical inspections, repairs or replacement will be performed with the power off and only by qualified electricians. Serious shock hazards exist which could result in injury or death to personnel.

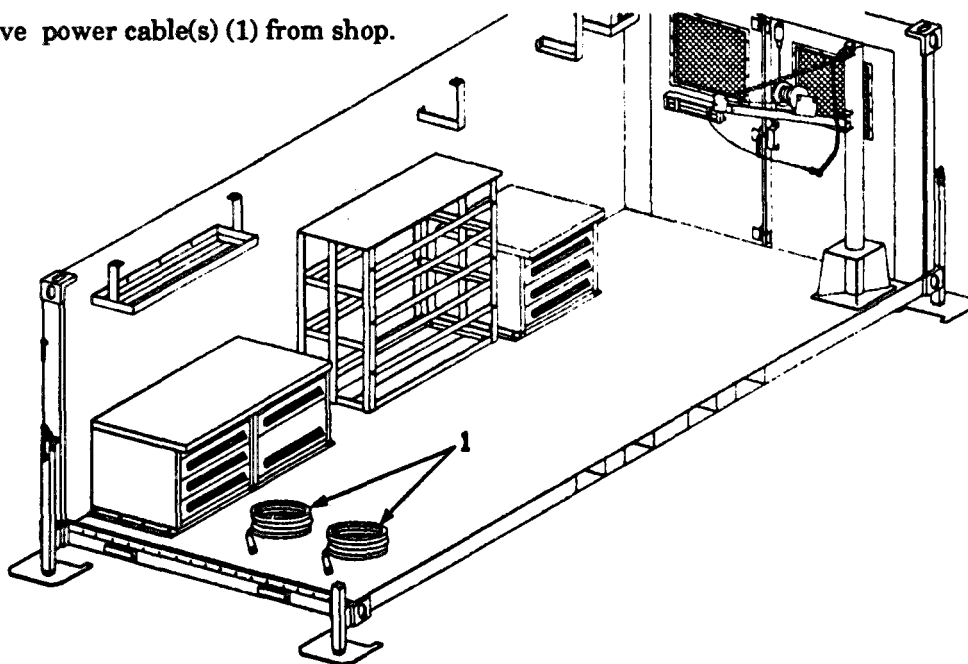
CAUTION

Shop utilizes 3-PHASE Electric Current. Proper phasing must be achieved when wiring the Power Distribution Panel to power source. Improper phasing can result in damage to the ECUs and other electrically operated equipment.

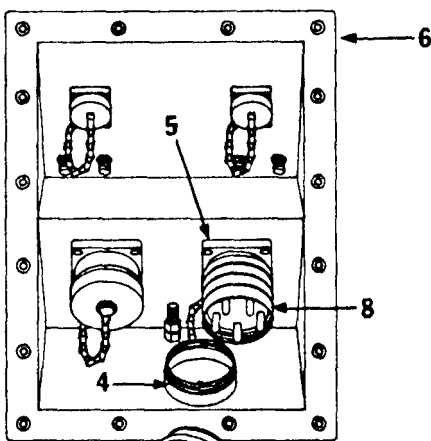
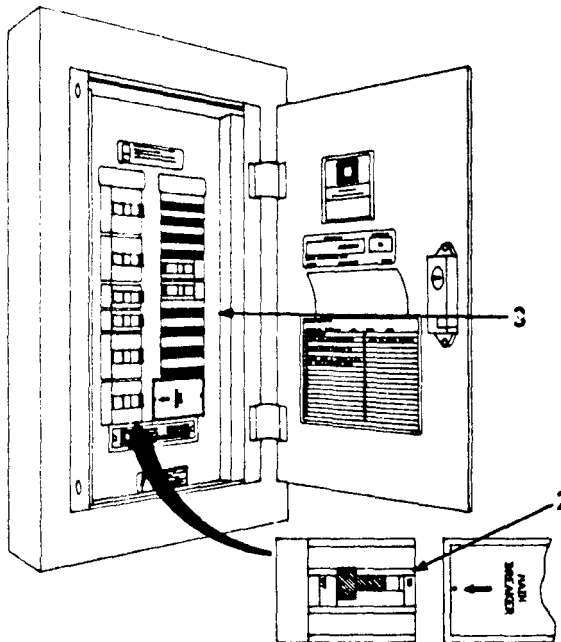
b. **Connecting Distribution Panel to Power Source.** A qualified electrician will connect power distribution panel power cable to power source IAW TM 5-6150-226-13&P, and set power distribution panel main circuit breaker to ON and individual breakers OFF.

c. **Connecting Shelter Power Cable.** Two 100-foot cables provided may be connected or used individually.

1. **Remove power cable(s) (1) from shop.**

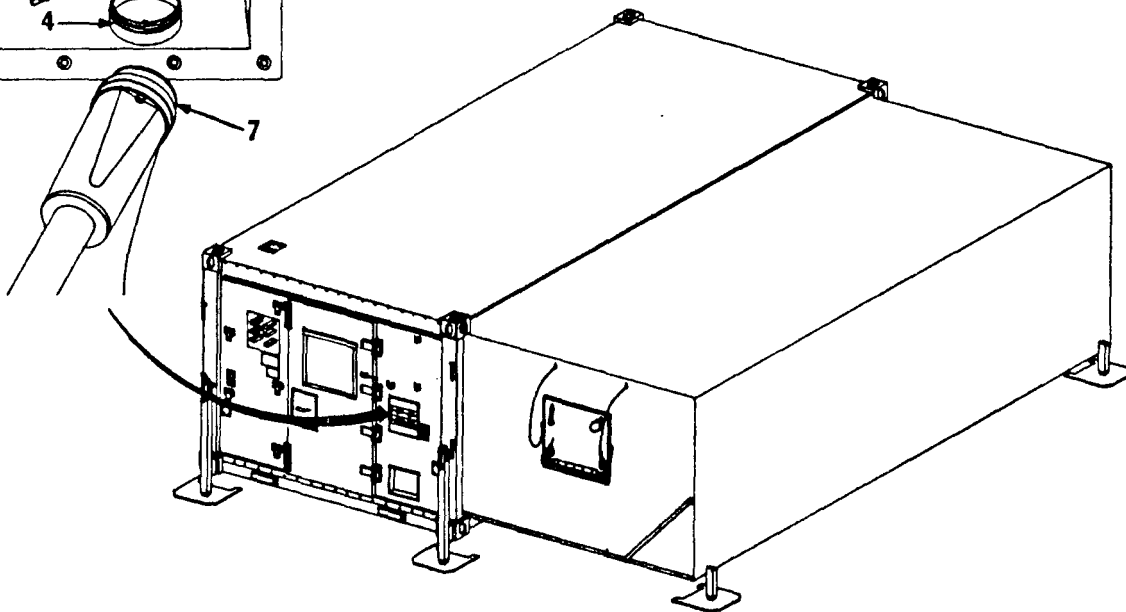


2. Ensure main circuit breaker (2) in breaker panel (3) is set to OFF position before connecting power cable.



3. Remove dust cap (4) from J1 Service Entrance receptacle (5) on power entry panel (6).

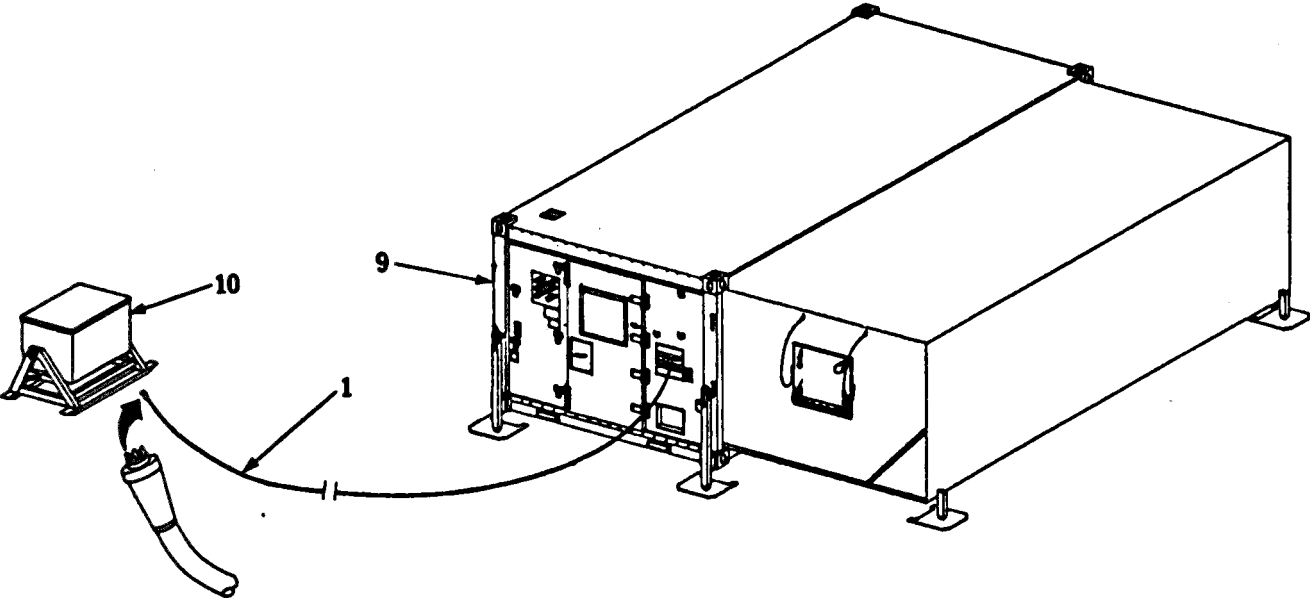
4. Insert cable female connector (7) ,firmly into receptacle (5) and secure with lock ring (8).



CAUTION

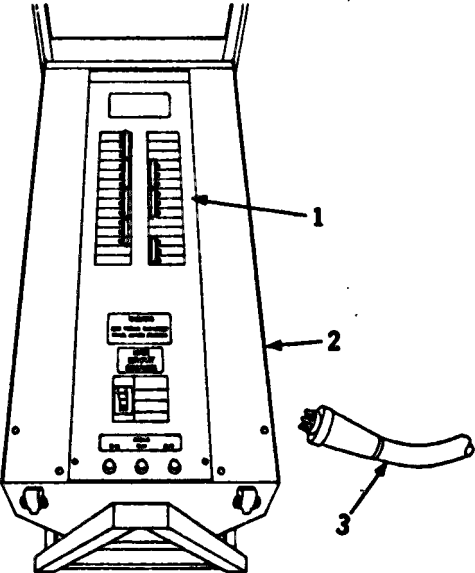
Ensure that the power cable is not twisted, kinked or laid over sharp objects.

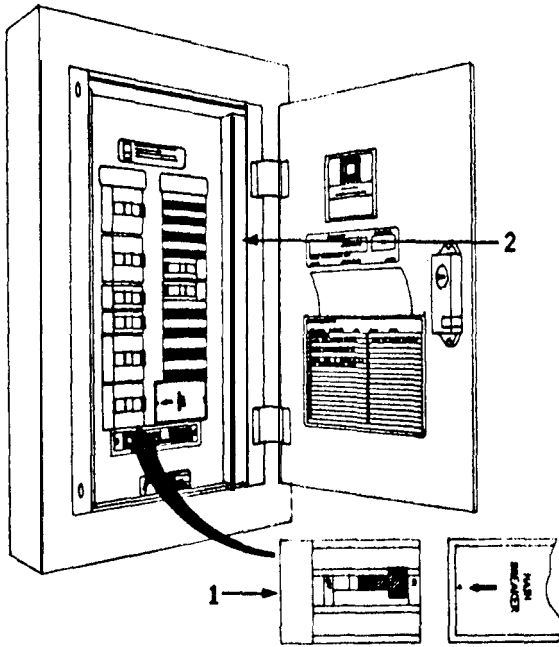
5. Extend power cable(s) (1) between shop (9) and power distribution panel (10).



d. Connecting Shelter Power Cable to Power Distribution Panel.

- 1. Ensure corresponding shelter's power cable outlet circuit breaker (1) in power distribution panel (2) is set to OFF position.
- 2. Connect the shelter power cable (3) to power distribution panel (2).
- 3. Set corresponding shelter's power cable outlet circuit breaker (1) to ON position.





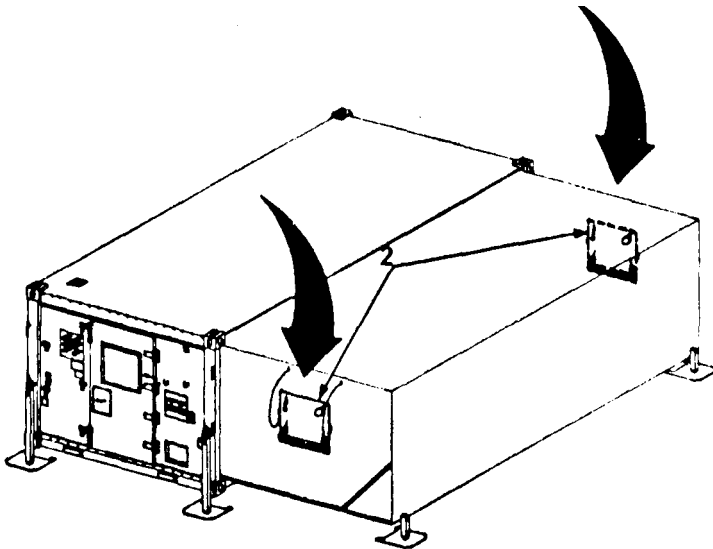
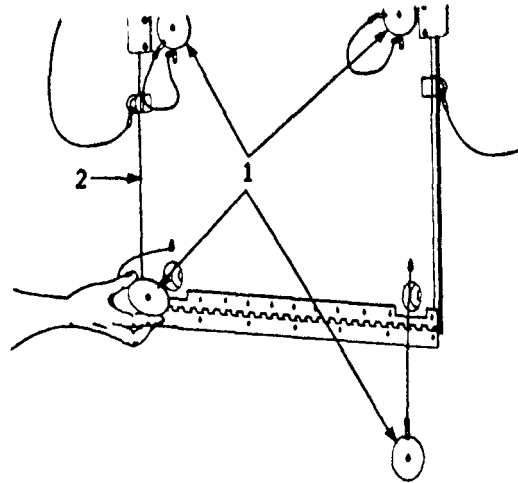
e. Power On at Shelter.

1. Ensure all circuit breakers are in the OFF position.
2. Set main circuit breaker (1) in the shelter breaker panel (2) to ON position.
3. Set selected circuit breakers to ON position.

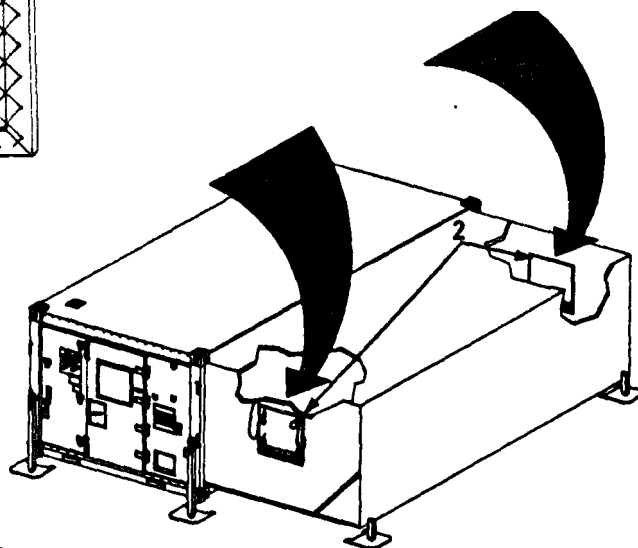
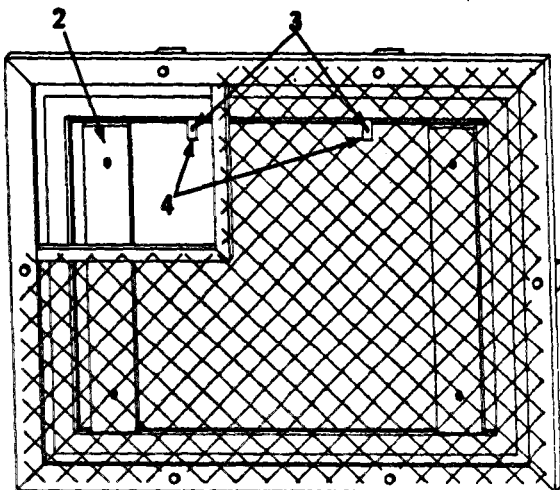
2-4 Positioning Shop Equipment for Operation.

a. Positioning ECUs for Operation.

1. Remove four plugs (1) on outside of shelf (2).

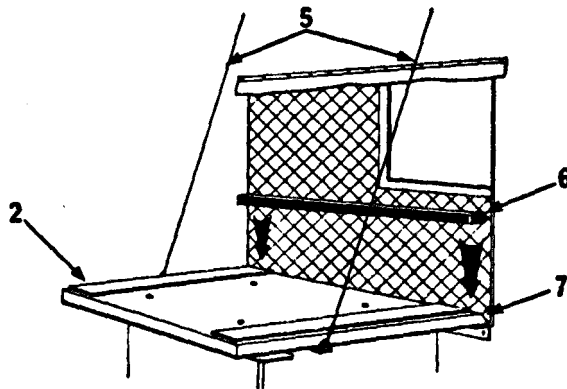


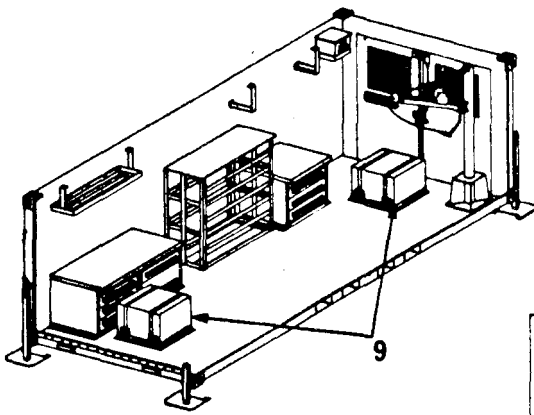
2. From inside shelter, loosen two latch bolts (3) on shelf (2). Turn latches (4) to release fold-down shelf (2).



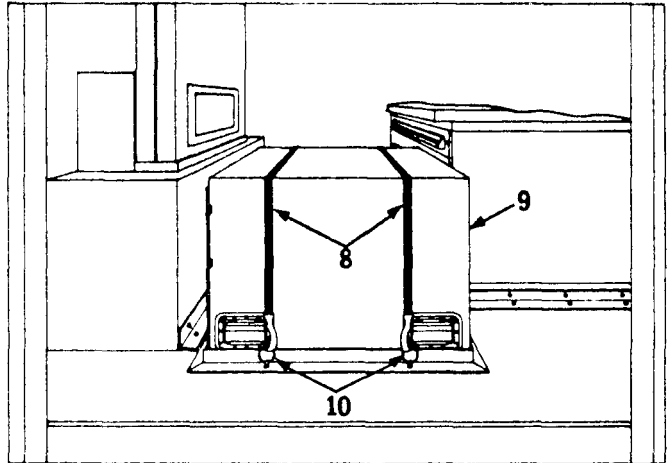
3. Lower shelf (2) to the limit of the support cables (5).

4. Obtain one ECU seal (6) from storage chest and insert at frame bottom (7).



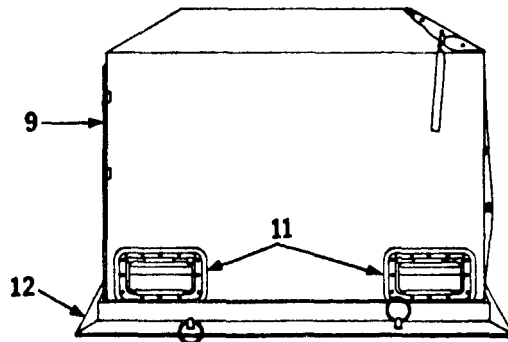


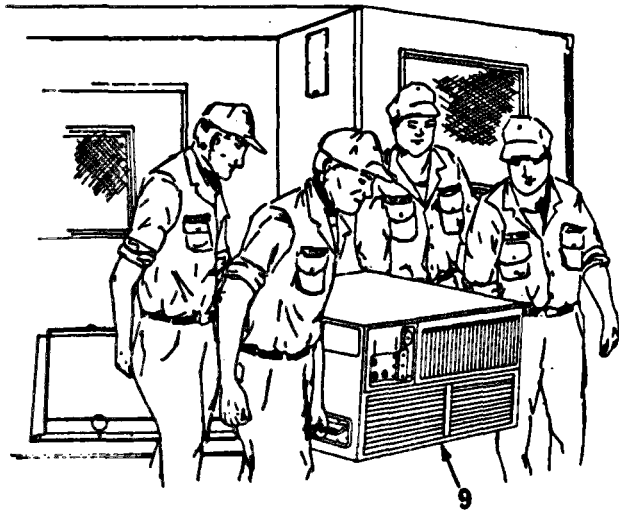
5. Loosen cargo straps (8) on ECU (9), release from ring bolts (10) and remove.



Four personnel are needed when moving or lifting the Environmental Control Unit (ECU). Unit weighs approximately 290 pounds. Trying to move or lift an ECU without sufficient help can cause serious injury to personnel.

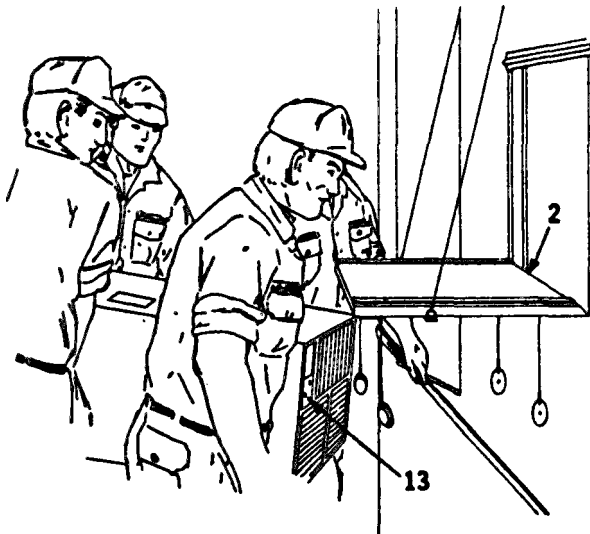
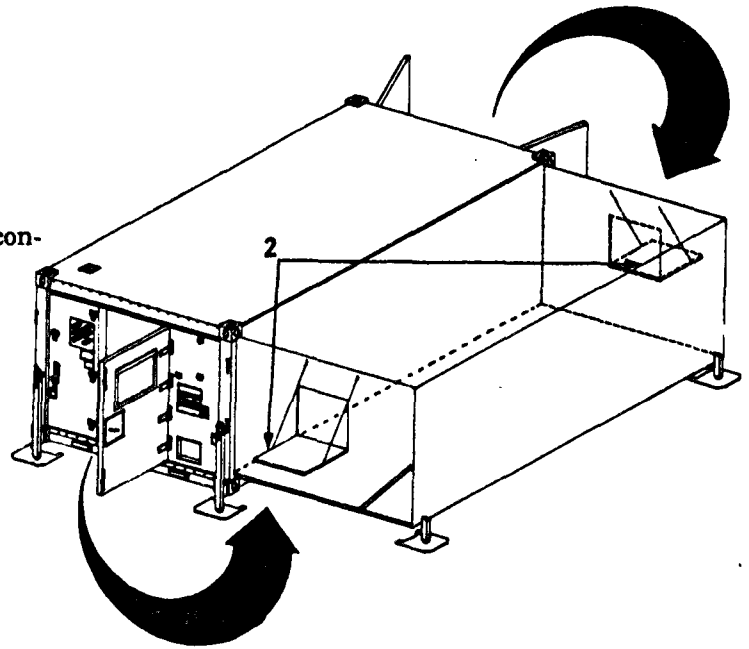
6. Use lift handles (11) to raise ECU (9), from the floor frame (12).



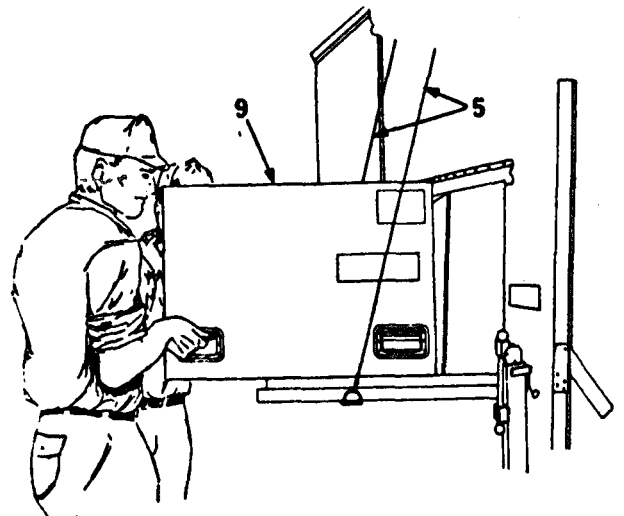


7. Carry ECU (9) outside and position near end wall shelf (2).

8. Lift ECU (9) onto fold-down shelf (2) with control panel (13) facing toward inside of shop.

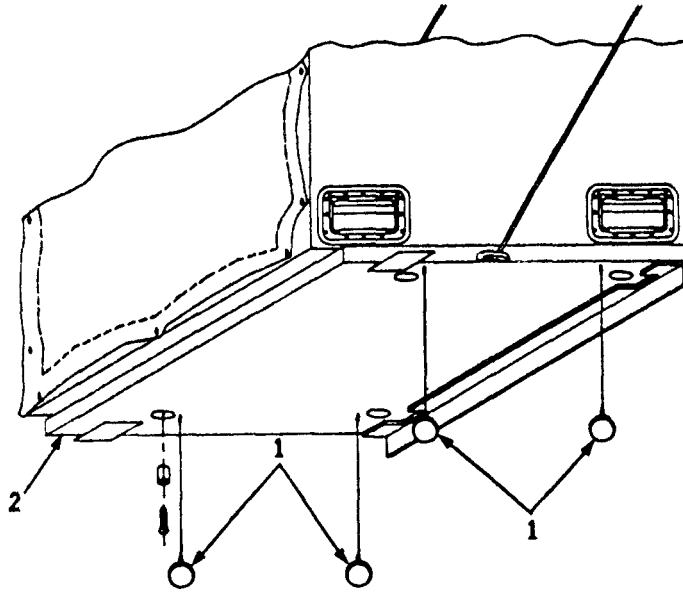
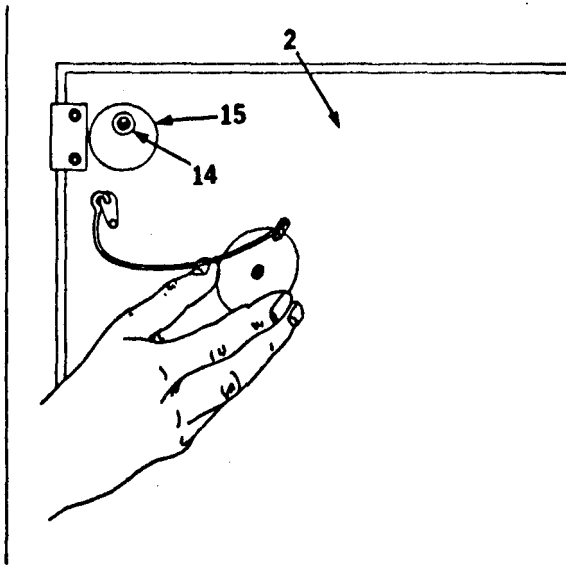


9. Slide ECU (9) forward between support cables (5).



10. Aline bolt holes (14) in base of ECU with holes (15) in shelf (2).

11. Obtain ECU mounting hardware from shop storage chest and install IAW TM 5-4120-384-14.

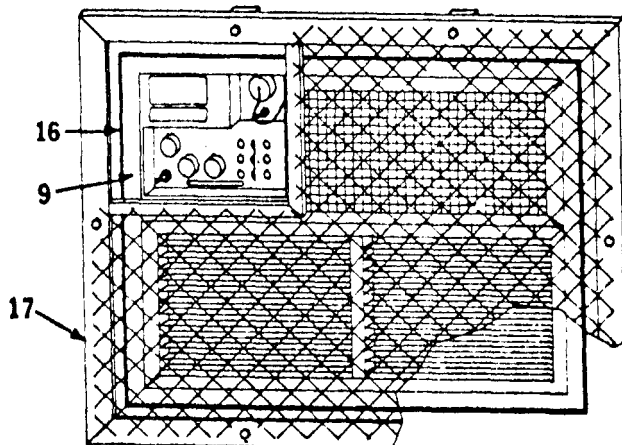


12. Install four plugs (1) in shelf (2).

NOTE

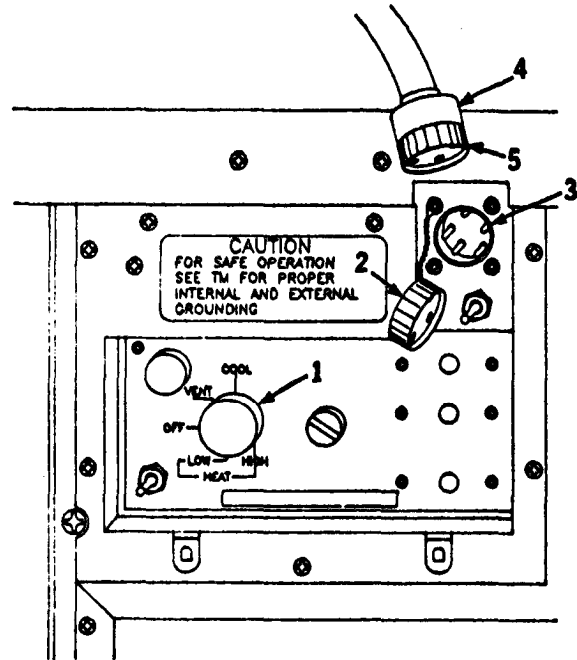
Proper fit between ECU and surrounding seal is essential to maintain light discipline.

13. Check seal (16) around ECU (9) for proper fit and alinement. It maybe necessary to temporarily remove the ECU Security Screen (17) to properly aline ECU seal.



b. Connecting Power to ECU.

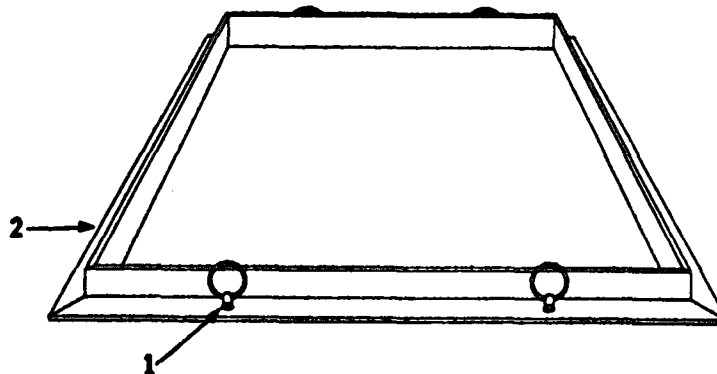
1. Set ECU MODE SELECTOR switch (1) to OFF position.
2. Remove cap (2) from receptacle (3).
3. Aline end of ECU cable connector (4) and ECU power input receptacle (3). Push firmly until seated.
4. Screw connector lock ring (5) on receptacle (3).

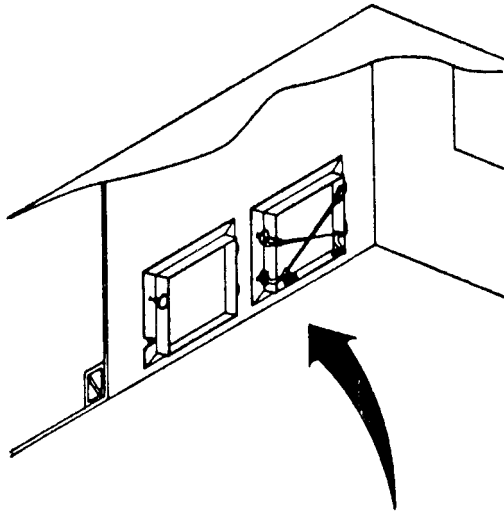


c. Repeat a and b above for remaining ECU.

d. Storing ECU Support Frames.

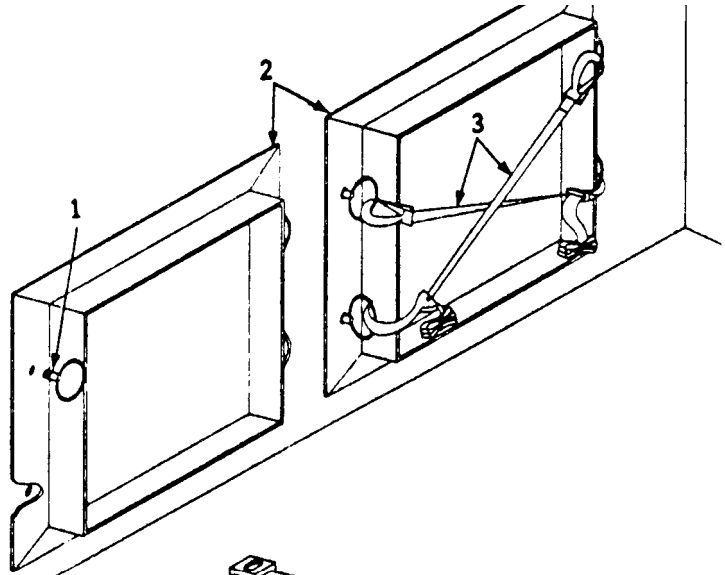
1. Remove four ring bolts (1) from both ECU support frames (2). Move frames to expanded side wall.



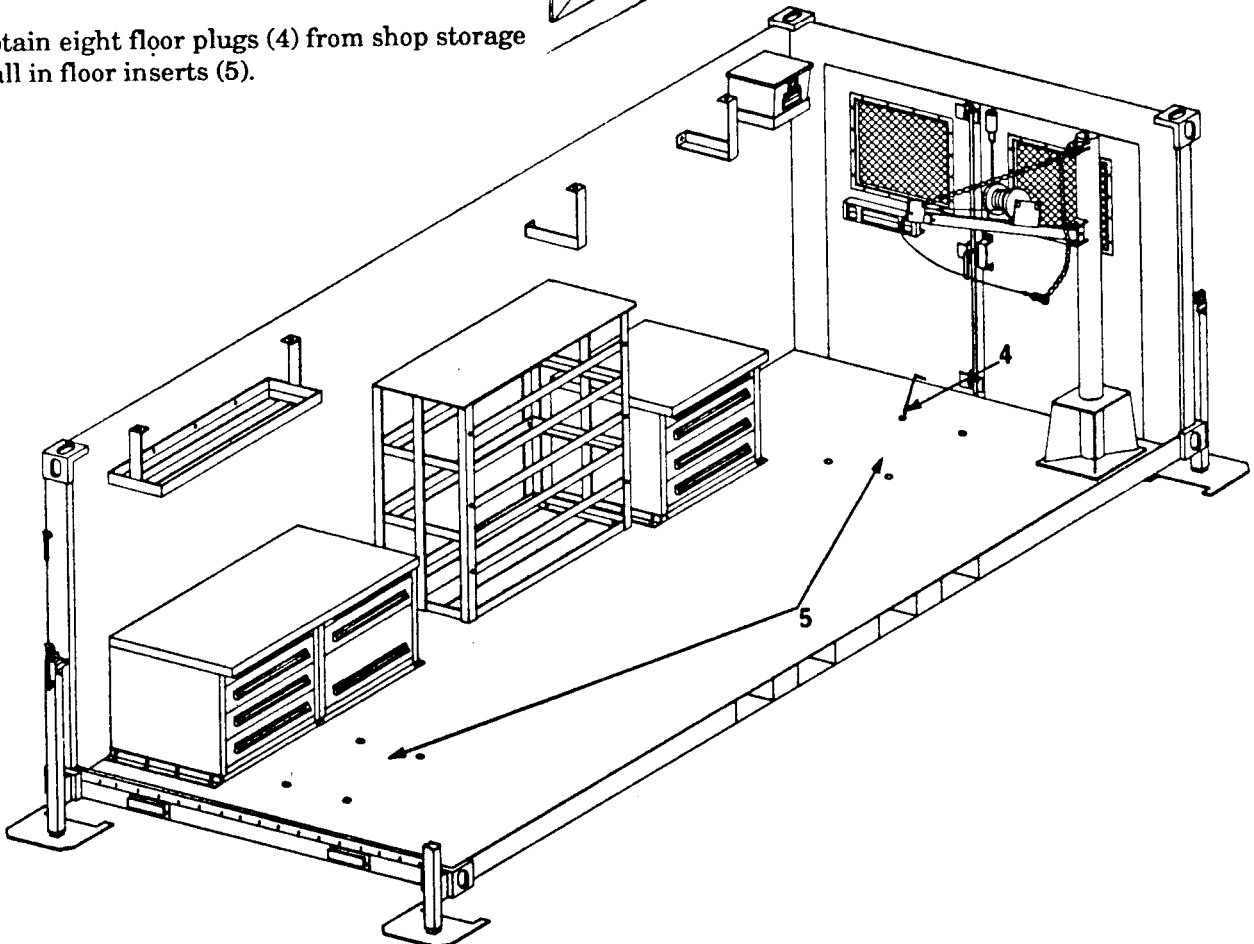


2. Position frames (2) against wall, align holes in frames with wall inserts and secure each frame with

3. Hook cargo straps (3) to ring bolts (1). Tighten and secure.

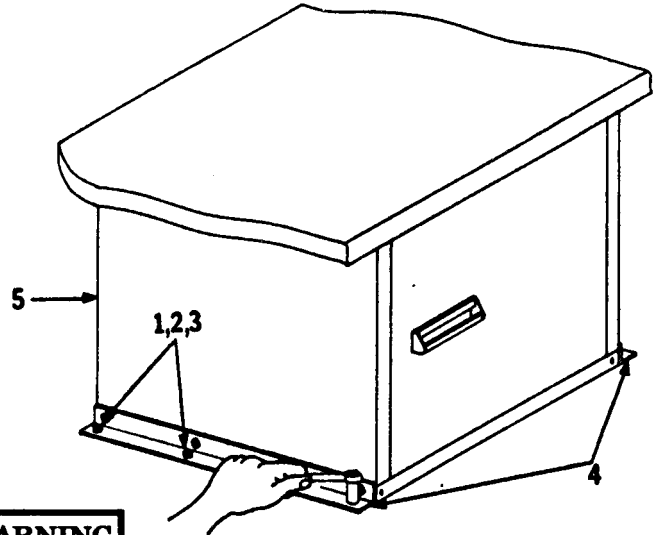


4. Obtain eight floor plugs (4) from shop storage chest. Install in floor inserts (5).



e. Positioning Cabinets for Operation.

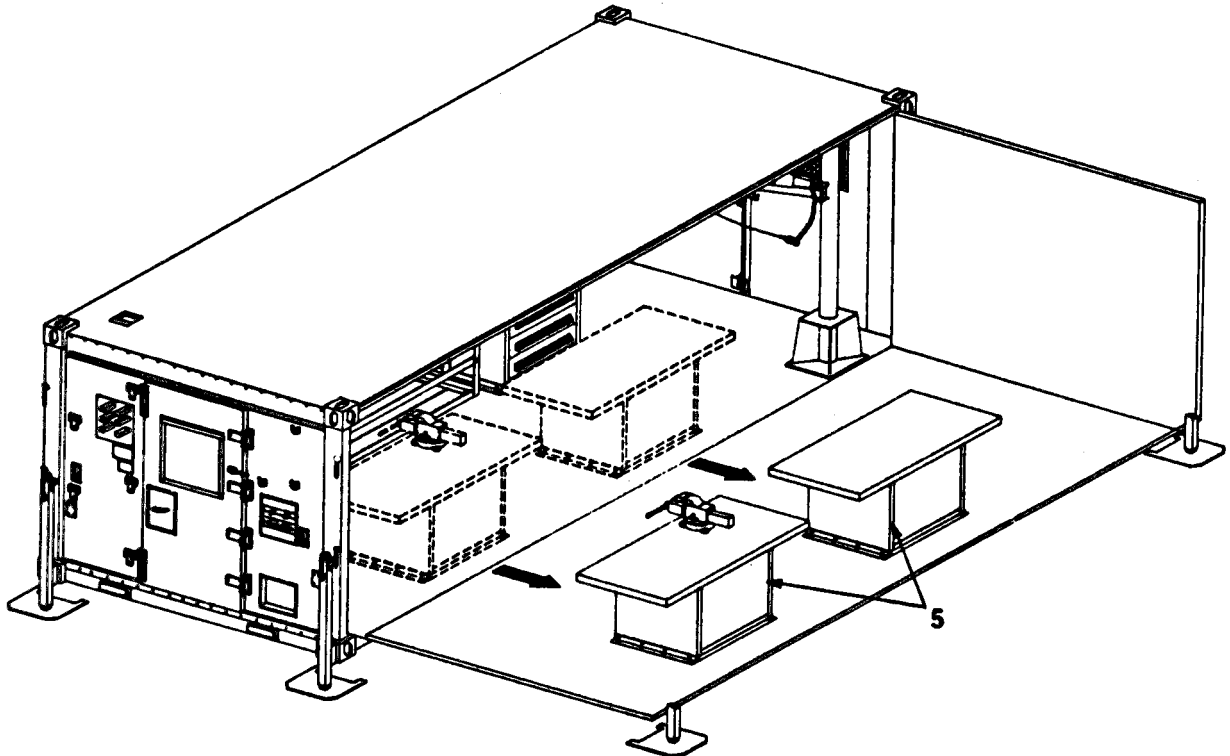
1. Remove eight bolts (1), lockwashers (2) and washers (3) from brackets (4) located on two sides of cabinet (5). Store bolts, lockwashers, and washers in storage chest.



WARNING

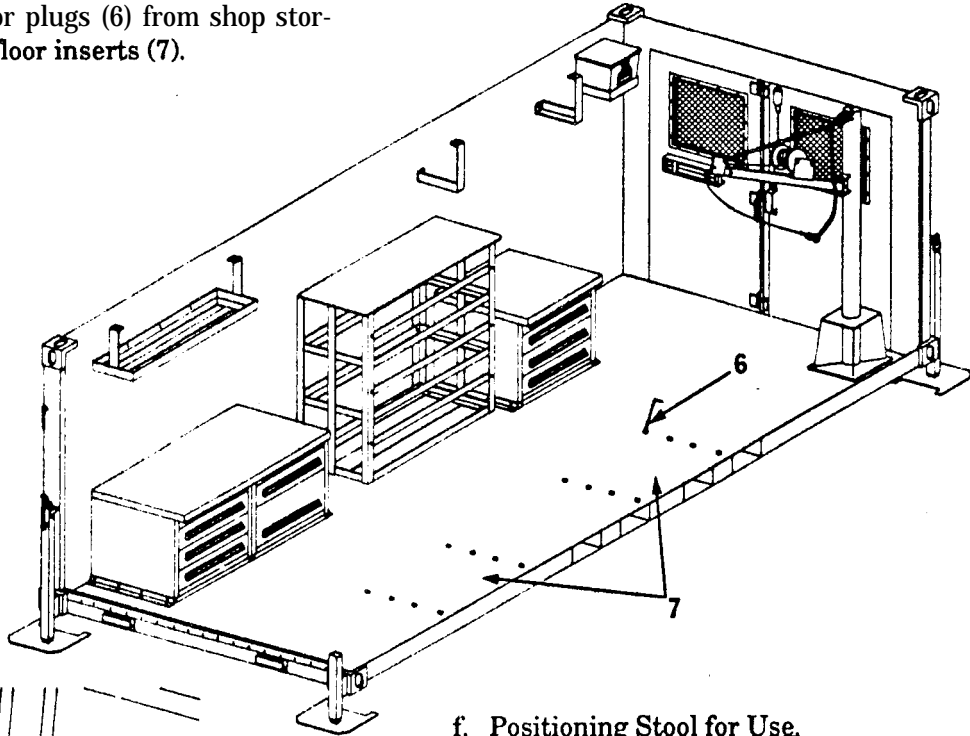
Cabinets are extremely heavy when fully equipped. At least two personnel are required to lift or move. Attempting to lift or move cabinet without sufficient personnel can result in severe injury.

2. Position cabinet (5) by sliding along floor to recommended location.



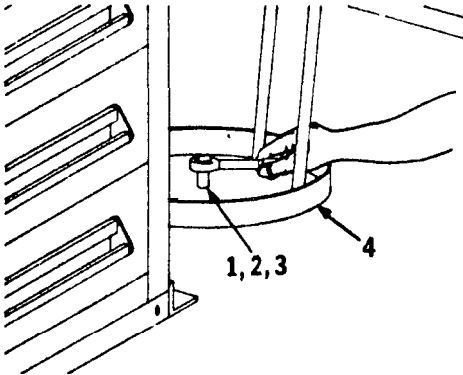
3. Repeat 1 and 2 above for remaining cabinet.

4. Obtain sixteen floor plugs (6) from shop storage chest and install into floor inserts (7).

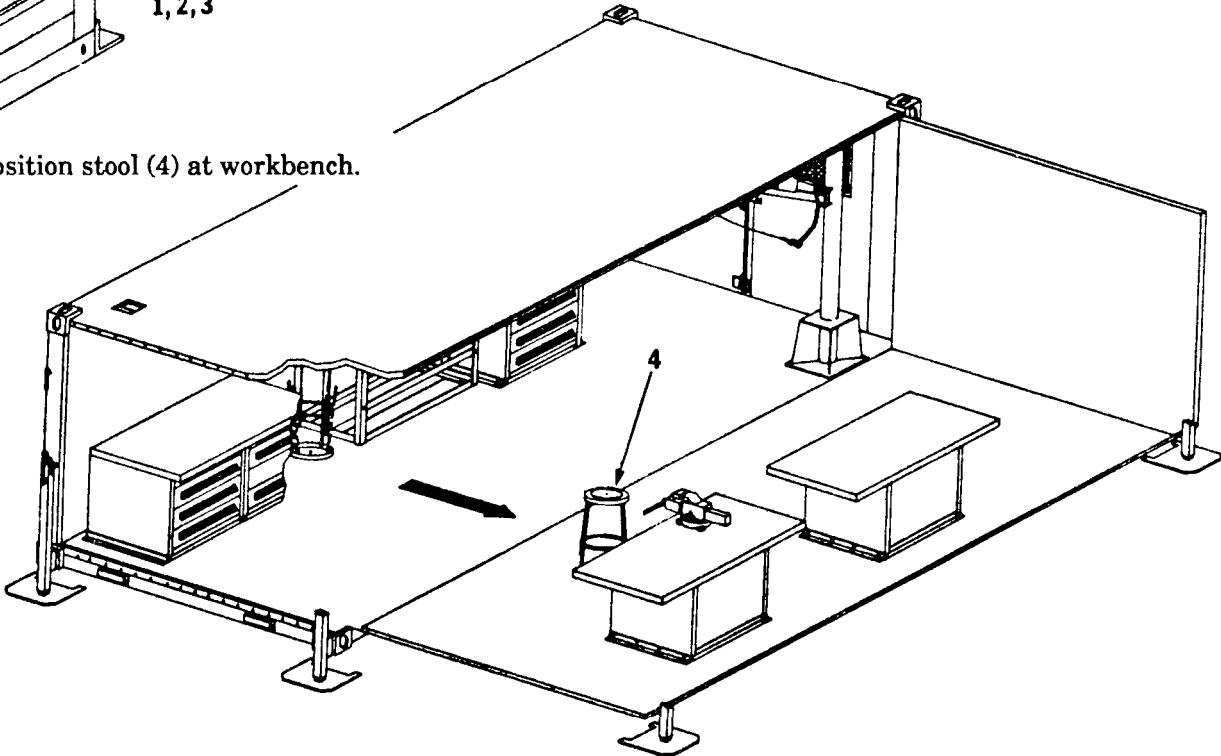


f. Positioning Stool for Use.

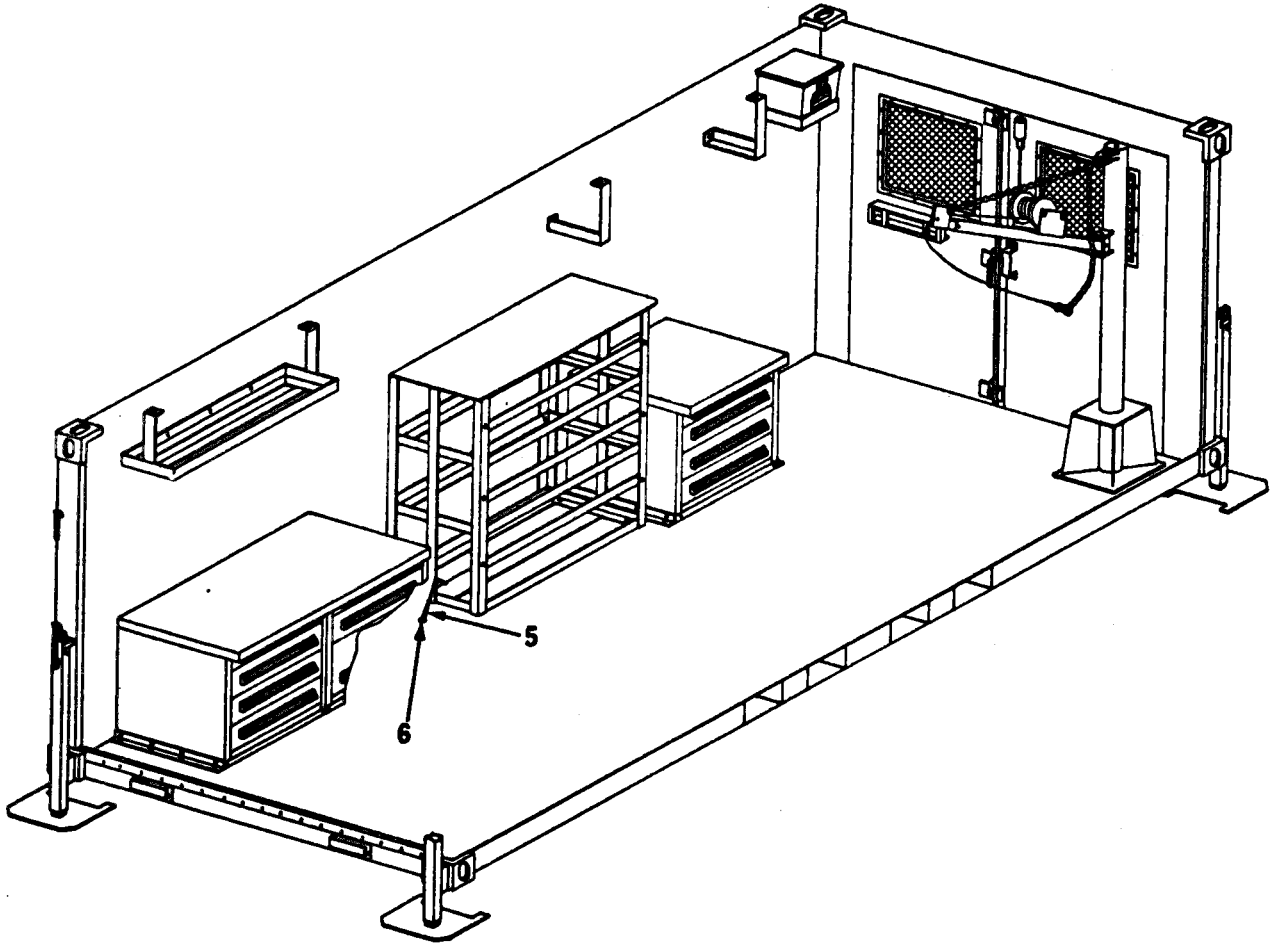
1. Remove one bolt (1), lockwasher (2) and washer (3) from inverted stool seat (4). Store bolt, lockwasher and washer in shop storage chest.



2. Position stool (4) at workbench.



3. Obtain one floor plug (5) from shop storage chest and install into floor insert (6).

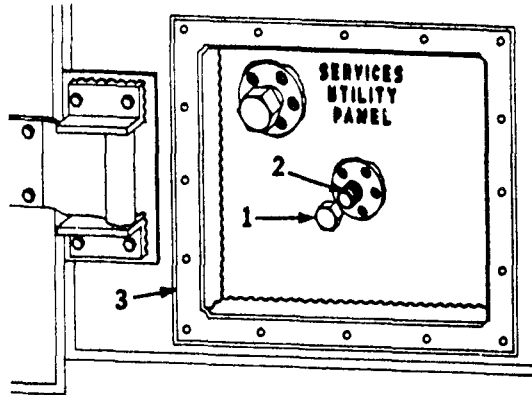
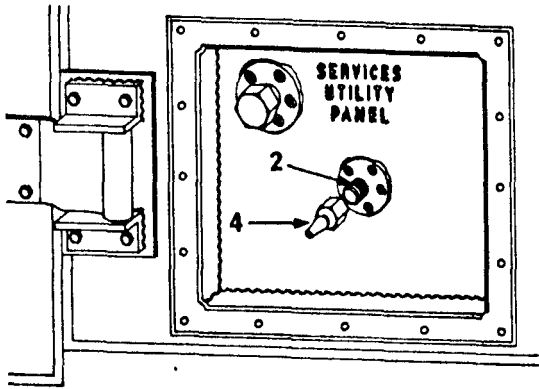


g. Prepare davit crane for operation.

2-5. Other Shop Utilities. In addition to electrical power the shop is provided with connections for compressed air and water.

a. Connecting Compressed Air.

1. Remove protective dust cap (1) from air inlet nipple (2) at the service utility panel (3). Store in shop storage chest.



2. Obtain a quick disconnect coupling (4) from storage chest.

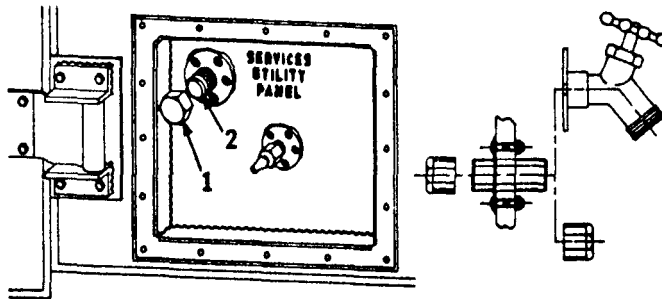
3. Install the quick disconnect coupling (4) on air inlet nipple (2).

4. Tighten coupling (4) securely.

b. Connecting Water Supply.

1. Remove protective dust cap (1) from each end of water feed thru connector (2). Store in shop storage chest.

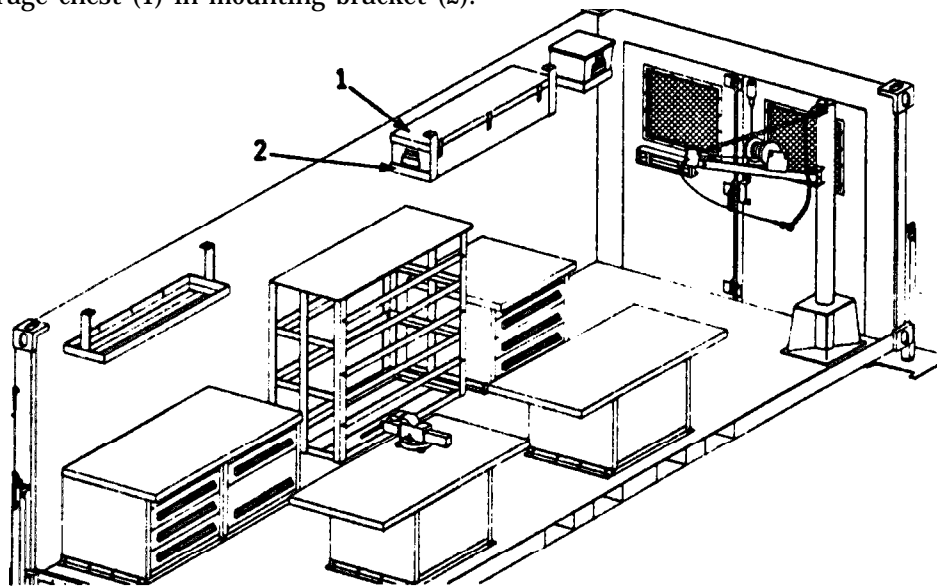
2. Install adapters and fittings as required.



2-6. Storage of Hardware.**CAUTION**

Care must be taken to ensure that proper hardware is used to secure equipment for transport. Lack of correct hardware could cause extensive damage to equipment or the shelter when shop is moved.

- a. All hardware removed from equipment will be collected and placed in cotton mailing bags (see item 3, App E). Bags are stored in the shop storage chest until shelter is to be moved and equipment bolted to the floor.
- b. Position storage chest (1) in mounting bracket (2).



2-7. Checking Shelter Level. Once all equipment is in the recommended operational position recheck leveling of shelter. Use procedures in TM 10-5411-201-14 to verify and adjust level. Correct adjustment is essential to ensure proper operation of machine tools, doors and access panels. The Turbine Engine Shop is now operational.

SECTION III. PREPARING SHOP FOR SHIPMENT OR STORAGE**2-8. Recover and Inspect Equipment Hardware.**

- a. Remove shop storage chest from mounting brackets.

CAUTION

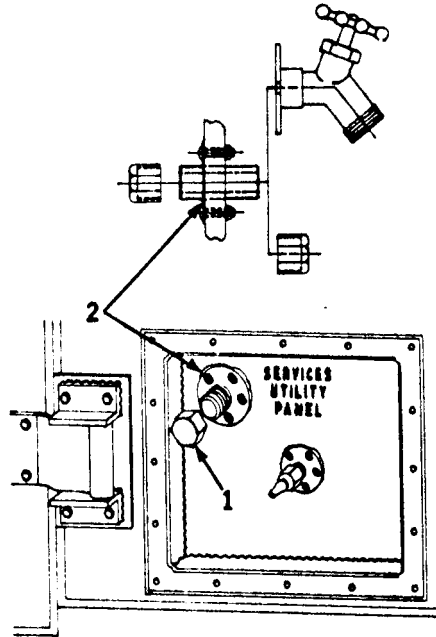
Care must be taken to ensure that proper hardware is used to secure equipment for transport. Lack of correct hardware could cause extensive damage to equipment or the shelter when shop is moved.

- b. Recover cotton mailing bags with hardware from shop storage chest.
- c. Inspect hardware for damage or missing parts.

2-9. Disconnecting Shop Utilities (Other Than Electrical).

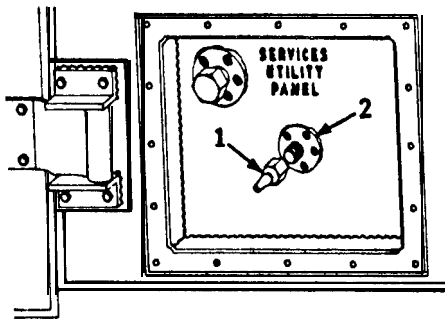
a. Disconnecting Water Supply

1. Obtain two protective dust caps (1) from shop storage chest.
2. Remove adapters and fittings from connector (2) at service panel.
3. Install dust cap on each end of feed thru connector (2), tighten securely.

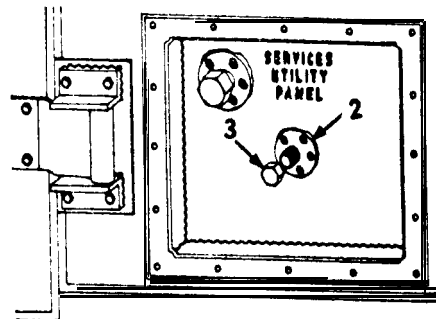


b. Disconnecting Compressed Air.

1. Remove male quick-disconnect coupling (1) from the air inlet nipple (2) at service utility panel. Store in shop storage chest.
2. Obtain a dust cap (3) from storage chest.



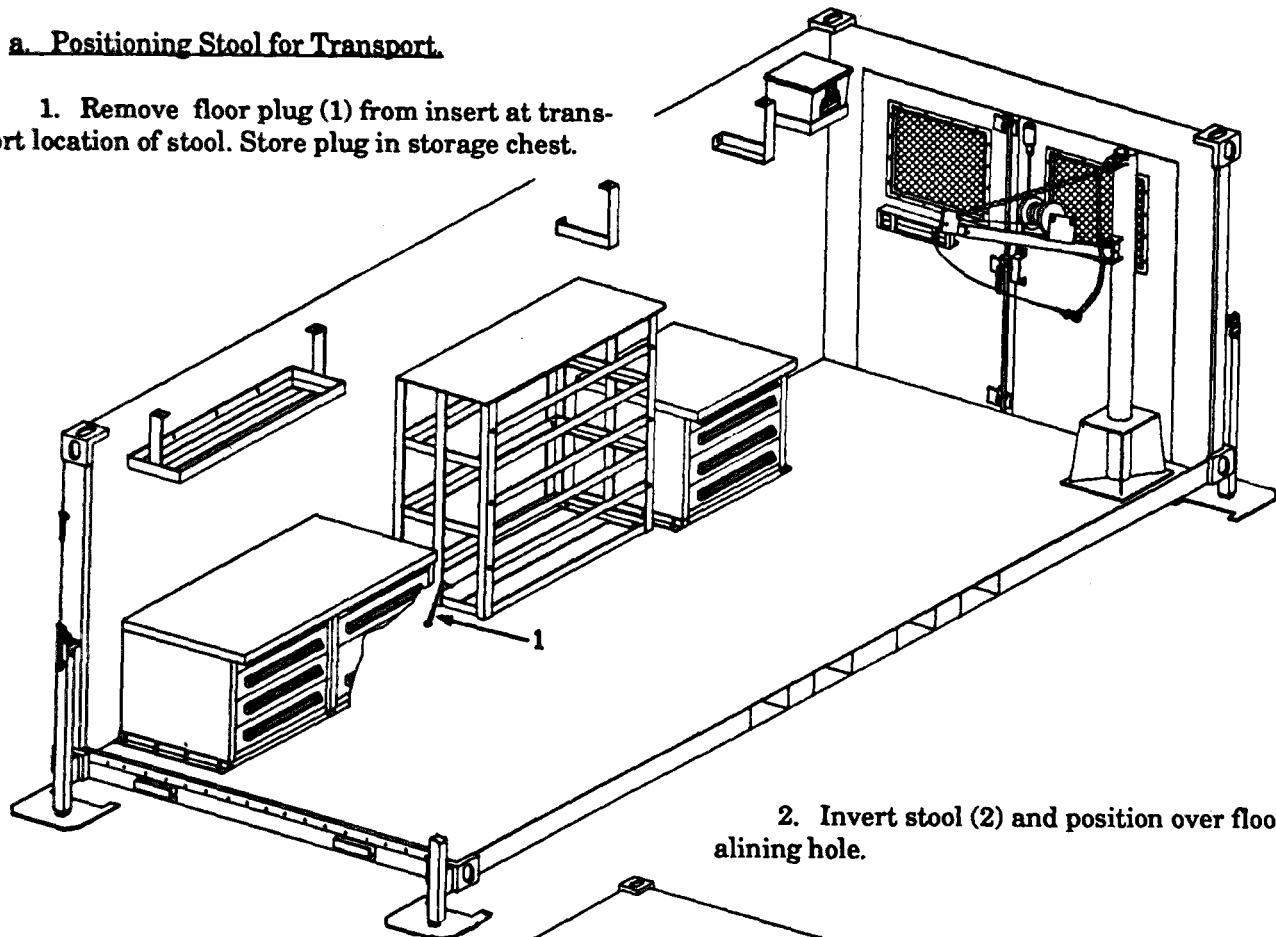
3. Install dust cap (3) on air inlet nipple (2). tighten securely.



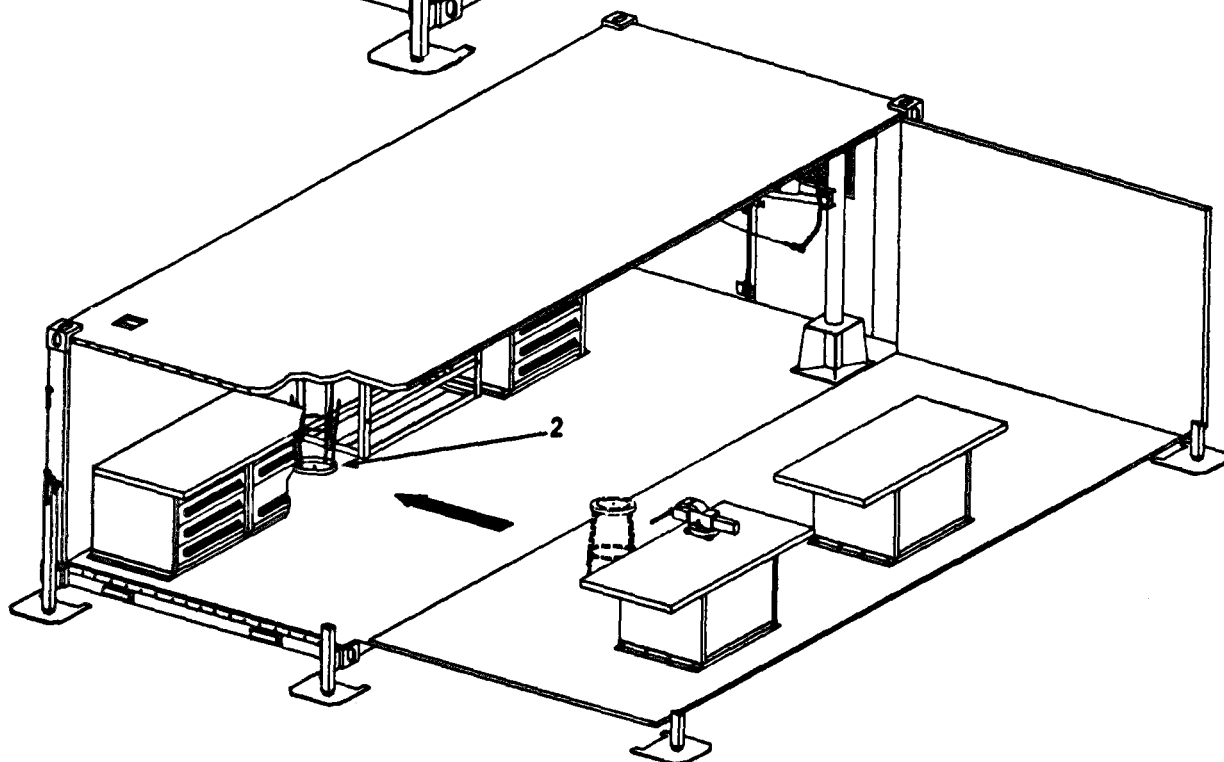
2-10. Positioning Shop Equipment for Transport. The following procedures, and recommended sequence, for moving equipment from the operational mode to the transport or storage mode will be observed.

a. Positioning Stool for Transport.

1. Remove floor plug (1) from insert at transport location of stool. Store plug in storage chest.



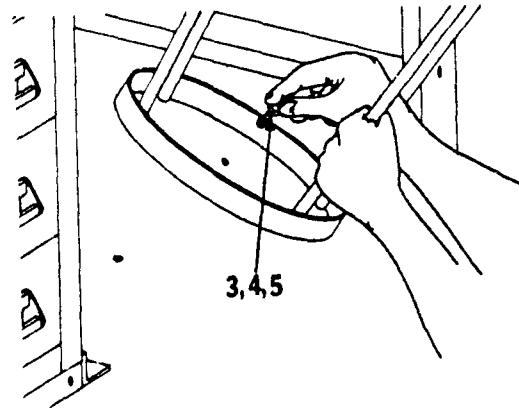
2. Invert stool (2) and position over floor insert, alining hole.



CAUTION

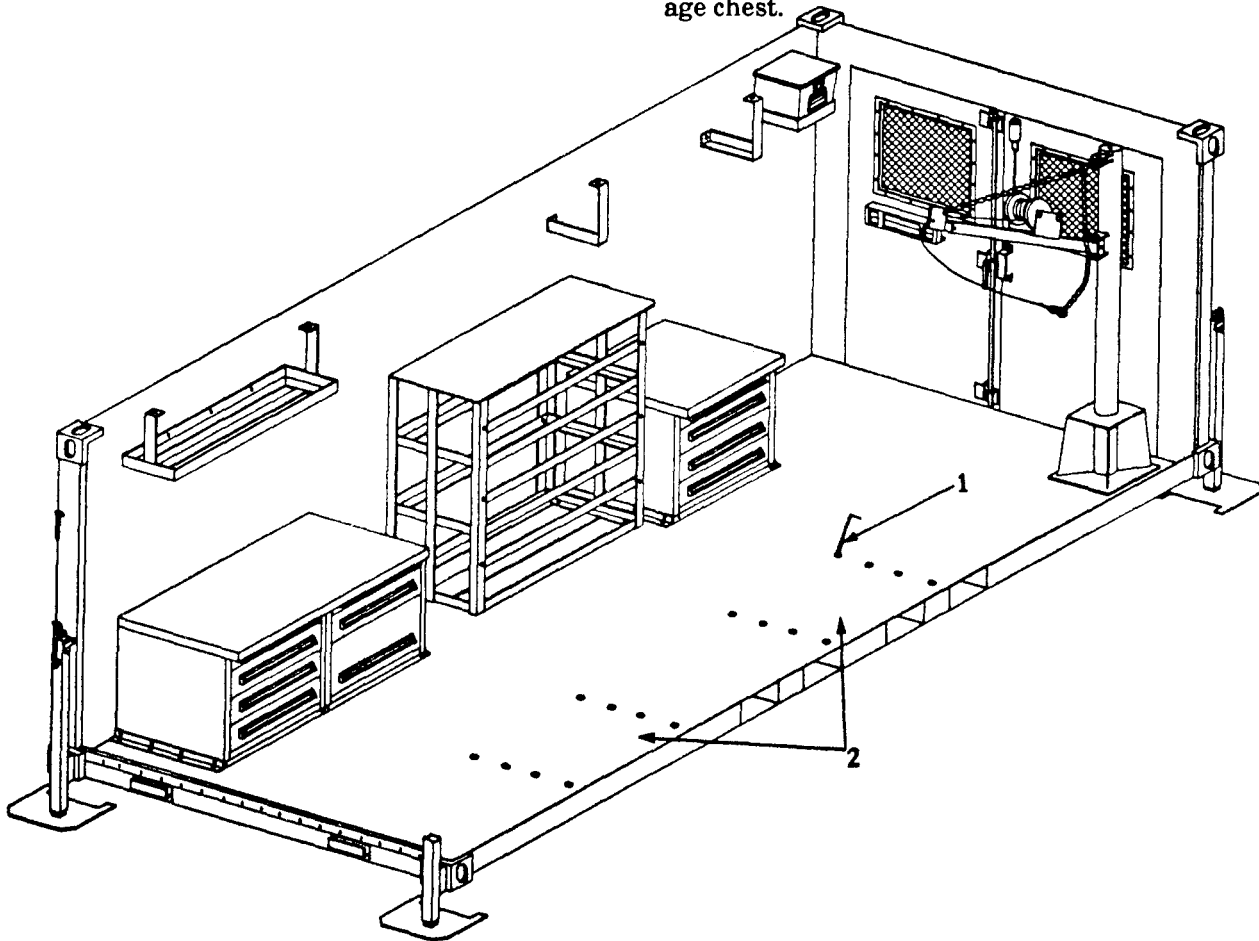
Torque values must be observed to prevent possible damage to equipment or the shelter. Improper procedures could result in extensive damage to government property. See App. G.

3. Install one bolt (3), lockwasher (4) and washer (5) and torque.



b. Positioning Cabinets for Transport.

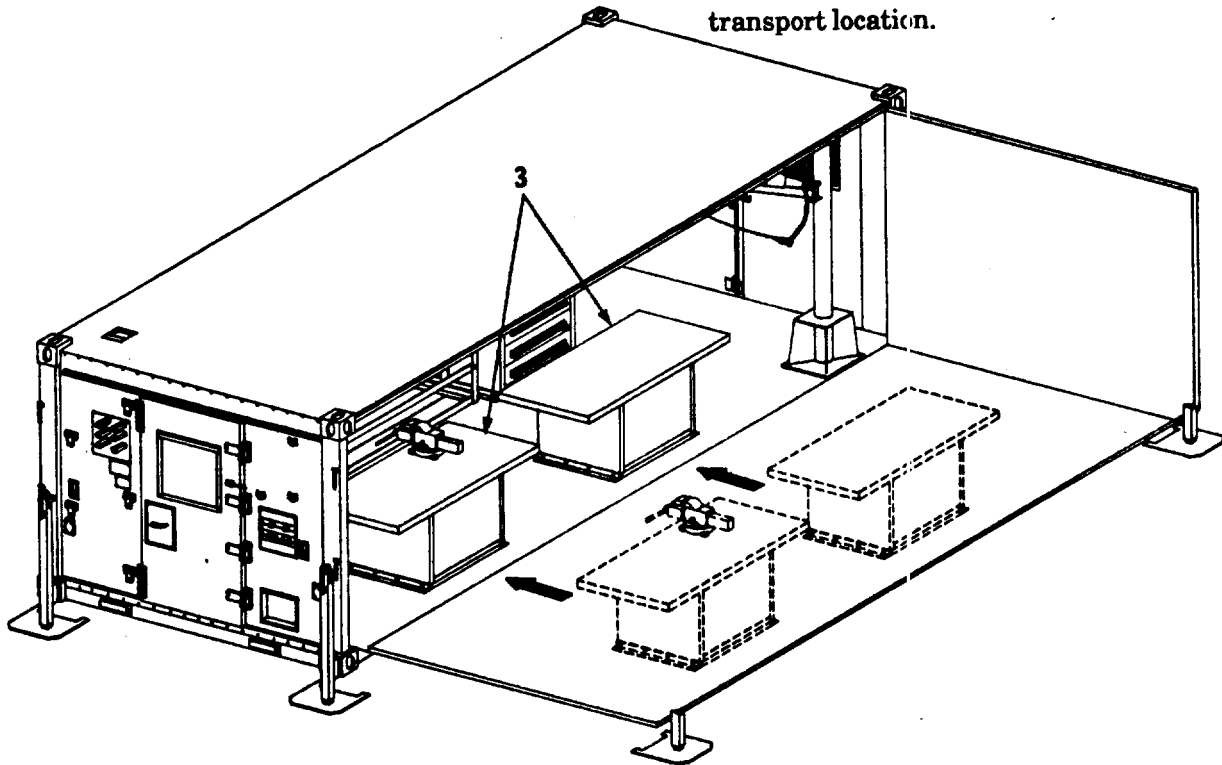
1. Remove sixteen floor plugs (1) from inserts at transport location of cabinets (2). Store plugs in storage chest.



WARNING

Cabinets are extremely heavy when fully equipped. At least two personnel are required to lift or move. Attempting to lift or move cabinet without sufficient personnel can result in severe injury.

2. Position cabinet (3) by sliding along floor to transport location.

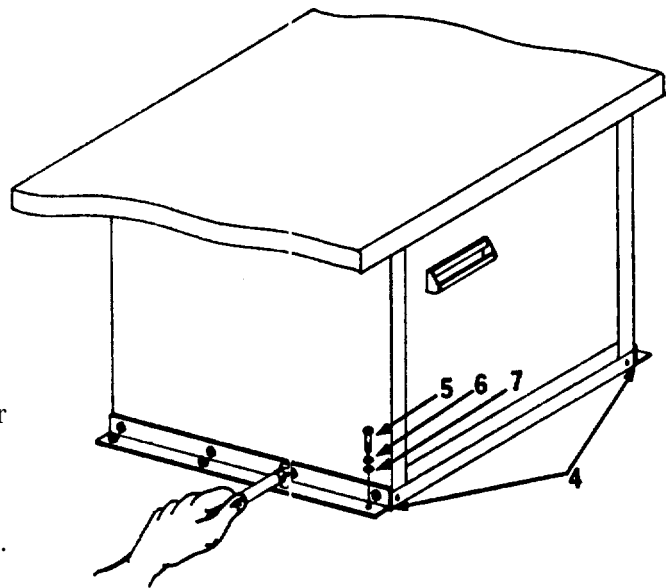


CAUTION

Torque values must be observed to prevent possible damage to equipment or the shelter. Improper procedures could result in extensive damage to government property. See App. G.

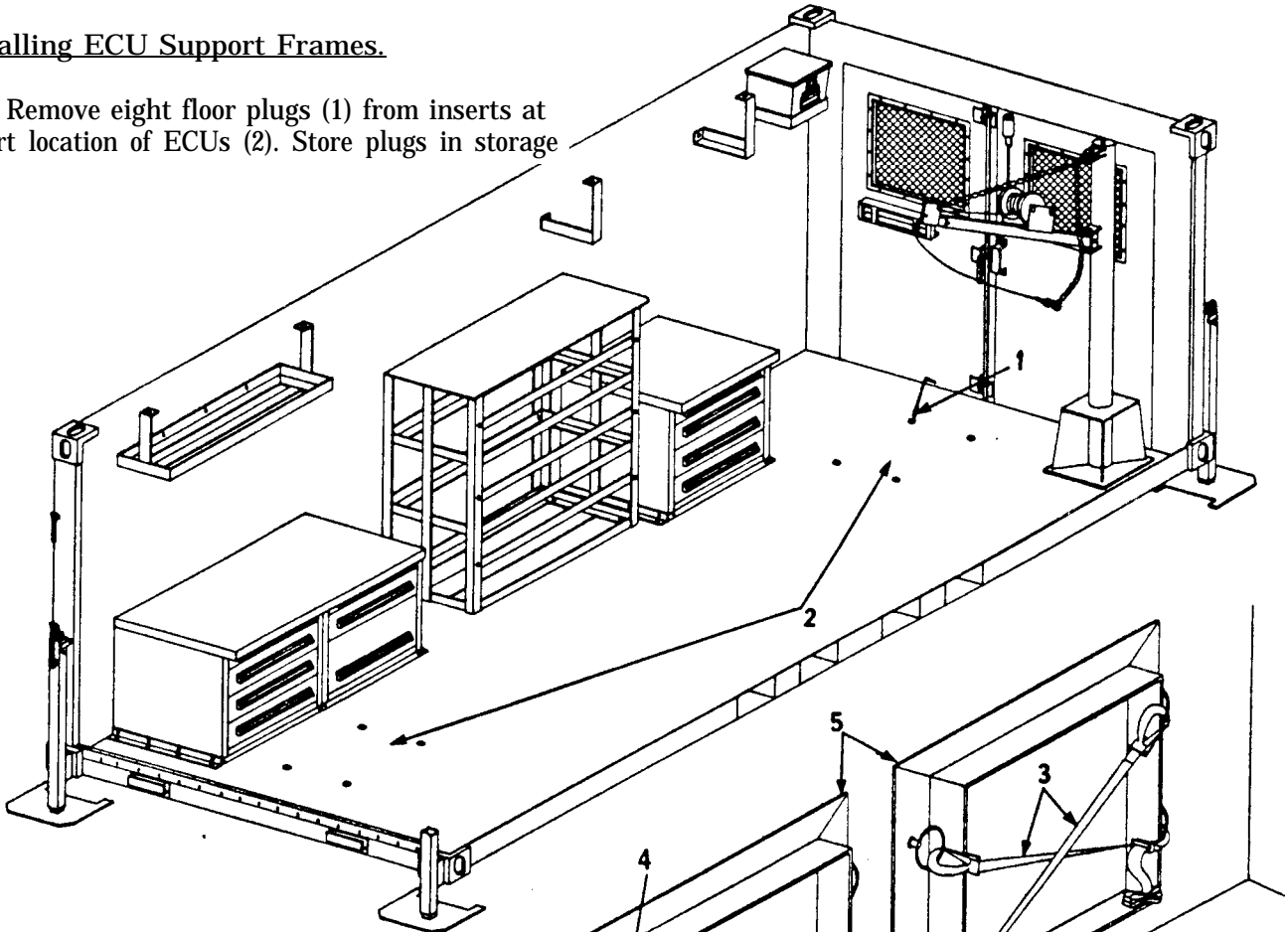
3. Aline holes in support brackets (4) with floor inserts. Install eight bolts (5), lockwashers (6) and washers (7) and torque.

4. Repeat 2 and 3 above for remaining cabinet.



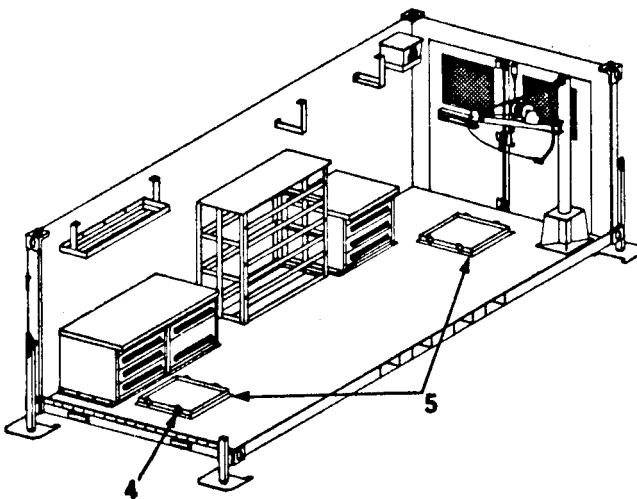
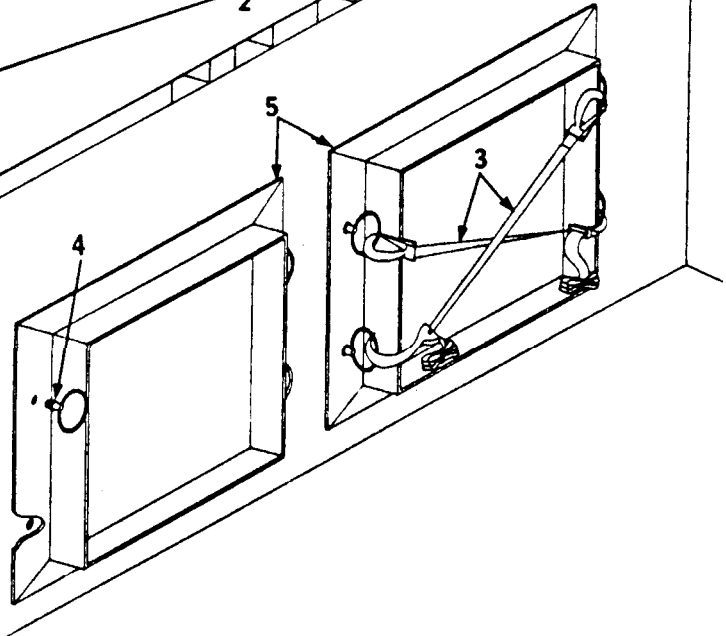
c. Installing ECU Support Frames.

1. Remove eight floor plugs (1) from inserts at transport location of ECUs (2). Store plugs in storage chest



2. Loosen and remove cargo straps (3).

3. Remove four ring bolts (4) securing each frame (5) to wall. Remove frames.

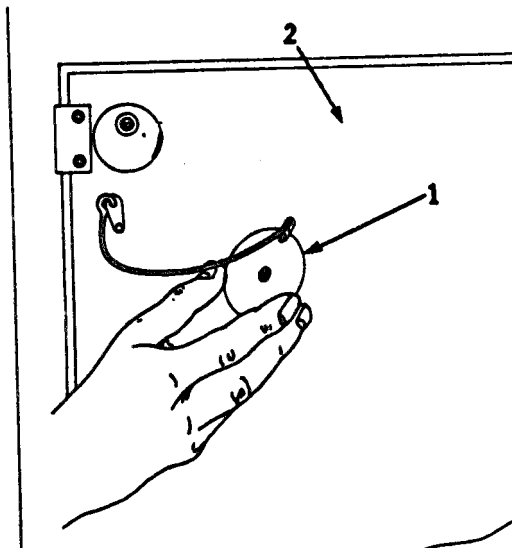
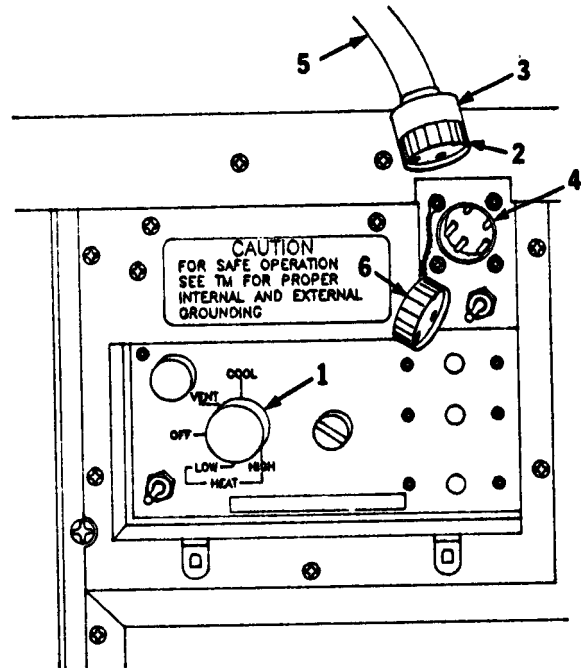


4. Position ECU frames (5) over floor inserts and align holes.

5. Install four ring bolts (4) in each and securely tighten.

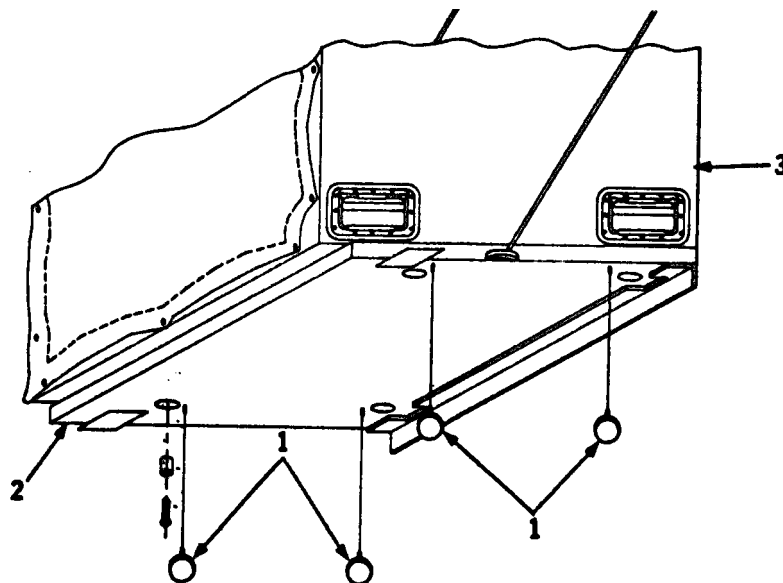
d. Disconnecting Power from ECU.

1. Set ECU MODE SELECTOR switch (1) in OFF position.
2. Unscrew lock ring (2) and pull connector (3) from ECU receptacle (4). Secure cable (5) with hook and loop fasteners.
3. Replace cap (6) on receptacle (4).



e. Positioning ECUs for Transport.

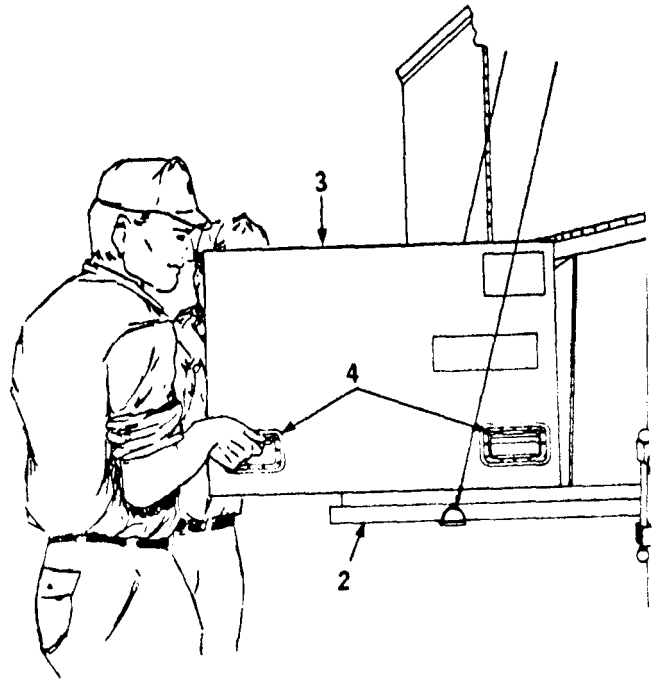
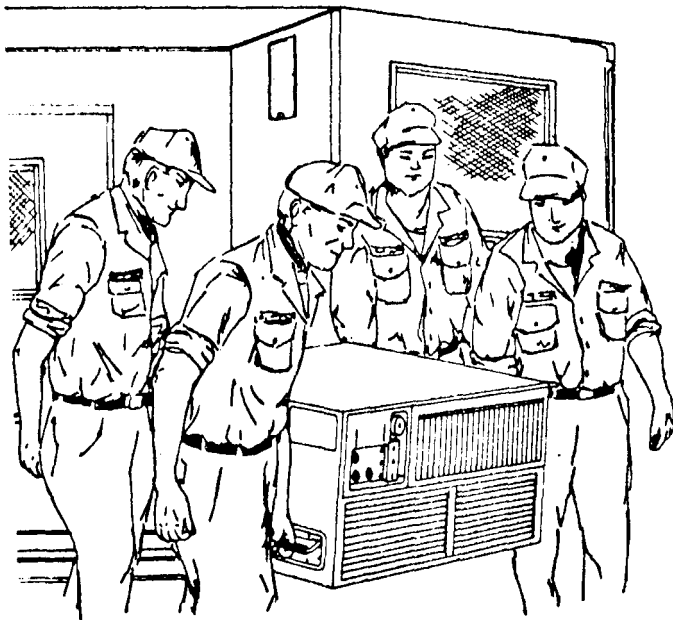
1. Remove four plugs (1) on bottom of ECU shelf (2).
2. Remove mounting hardware securing ECU (3) to fold-down shelf (2) IAW TM 5-4120-384-14. Store hardware in shop storage chest.



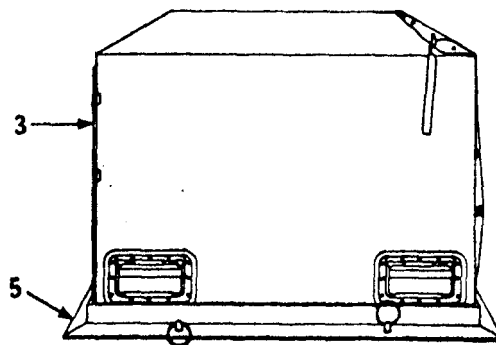
WARNING

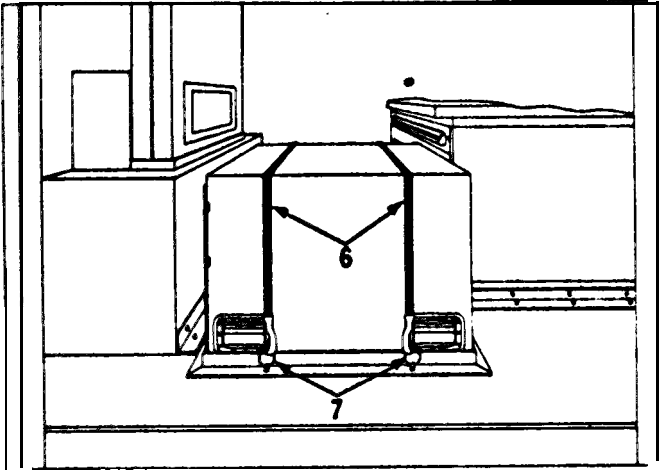
Four people are needed when moving or lifting the Environmental Control Units (ECUs). Each unit weighs approximately 290 pounds. Trying to move or lift an ECU without sufficient help can cause serious injury to personnel.

3. Grasp lift handles (4) and slide ECU (3) off fold-down shelf (2).



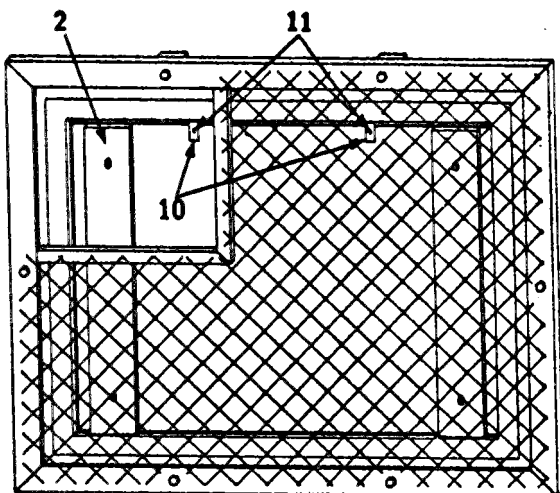
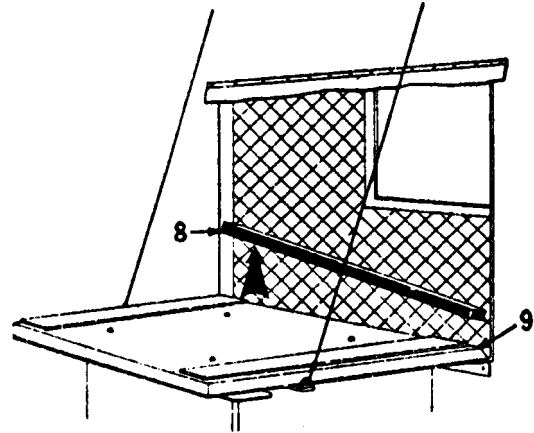
4. Carry ECU (3) inside and position in floor frame (5).





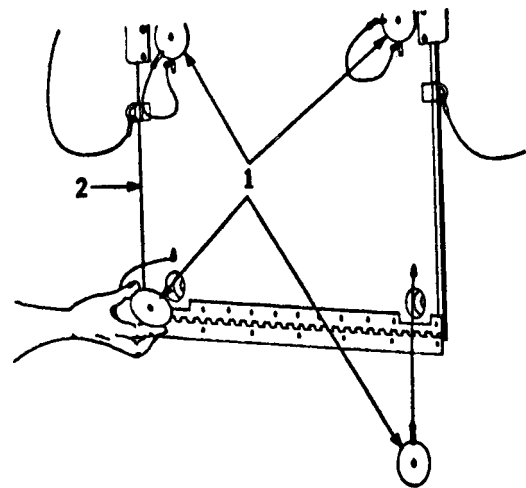
5. Place two cargo straps (6) on ECU and hook to ring bolts (7). Tighten cargo straps to secure ECU in place.

6. From outside shelter, remove ECU seal (8) from bottom of frame (9). Close ECU shelf (2) and store ECU seal in shop storage chest.



7. From inside shelter, turn latches (10) to locked position and tighten latch bolts (11).

8. Insert four plugs (1) in ECU shelf (2).



f. Repeat d and e above for remaining ECU.

g. Secure davit crane for transport.

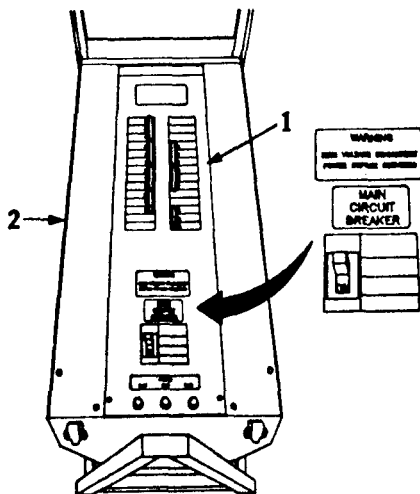
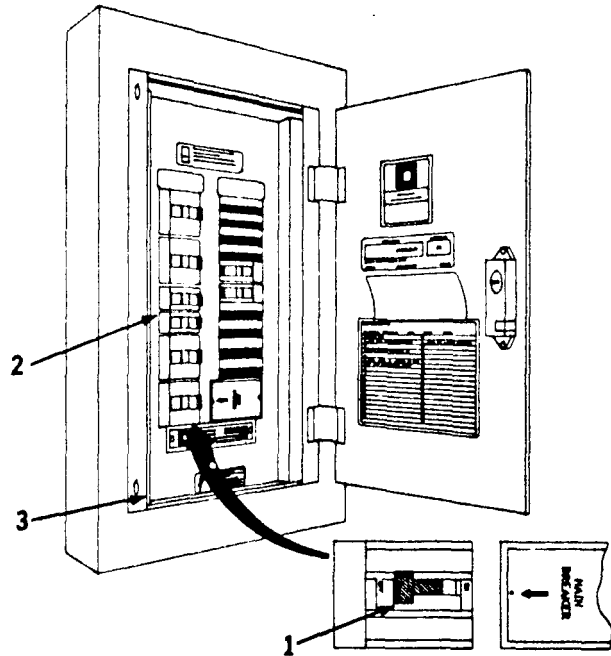
2-11. Power Shutdown.

WARNING

HIGH VOLTAGE exists in the electrical system of the shop. All electrical inspections, repairs or replacement will be performed with the power off and only by qualified electricians. Serious shock hazards exist which could result in injury or death to personnel.

a. Power Off at Shelter.

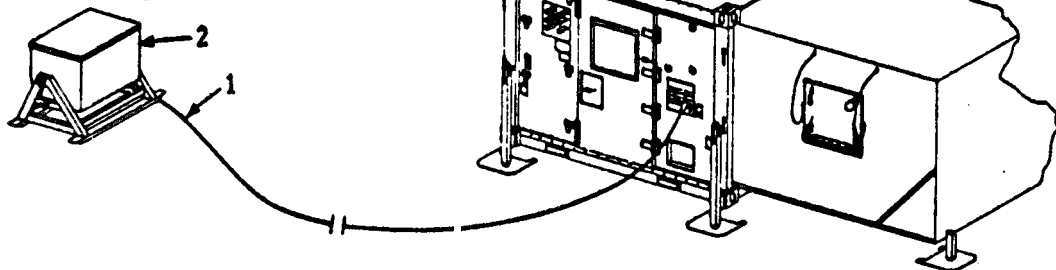
1. Ensure all electrical tools and shop equipment are turned off.
2. Set main (1) and individual (2) circuit breakers in circuit breaker panel (3) to OFF position.



- b. Power Off at Power Distribution Panel. Set corresponding shelter power cable circuit breaker (1) in power distribution panel (2) to OFF position.

c. Disconnecting Shelter Power Cable.

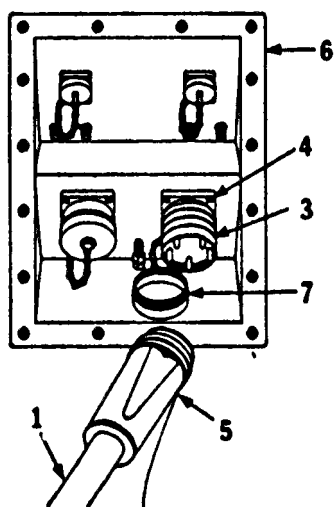
1. Disconnect male end of shelter power cable (1) from power distribution panel (2).



2. Unscrew lock ring (3) on J1 receptacle (4) or shelter power entry panel (6) and remove cable connector (5) from receptacle.

3. Replace dust cap (7).

4. Clean cable (1) and store in shelter.

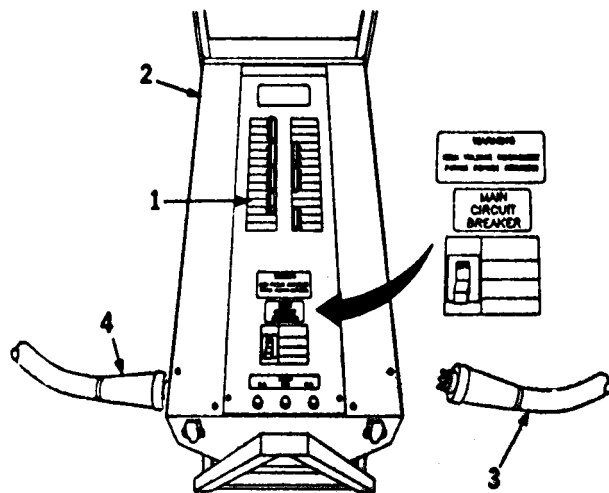


d. Disconnecting Power Distribution Panel from Power Source.

1. Ensure all circuit breakers (1) in the power distribution panel (2) are in the OFF position.

2. Ensure all shelter power cables (3) are disconnected from the power distribution panel (2).

3. A qualified electrician should disconnect power distribution panel power cable (4) from the power distribution panel (2) and the power source IAW TM 5-6150-226-13&P.



e. Removing External Ground Rod.

1. Remove external ground rod IAW TM 10-5411-201-14 and TC 11-6.
2. Store ground rod assembly in shop.

2-12. Administrative Storage Procedures. In the event the Turbine Engine Shop is to be placed in administrative storage, the provisions of AR 750-1, TM 55-1500-204-25/1, and applicable shop equipment TMs will be followed.

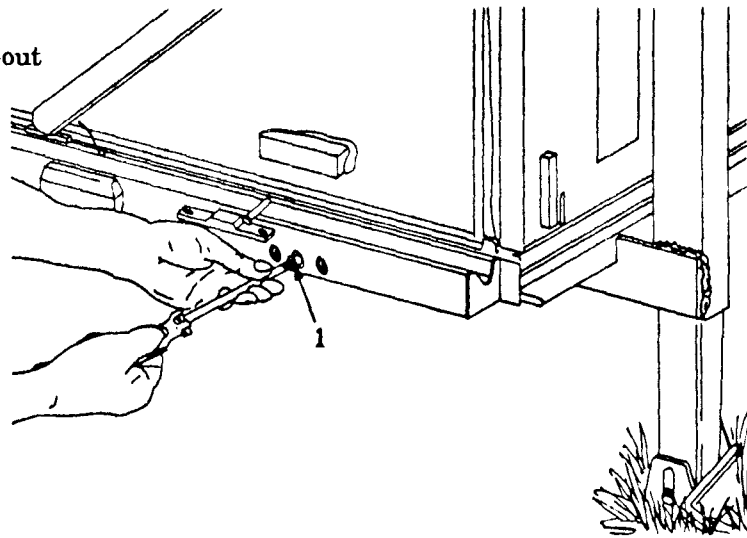
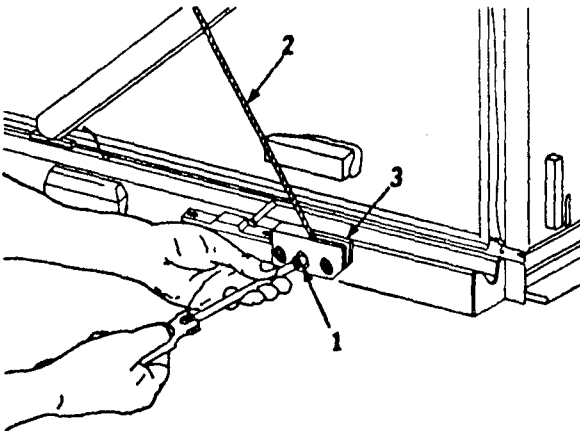
2-13. Closing the Shelter.

WARNING

When all equipment is stowed on the stationary side of the shelter, the limited floor space presents an obstacle to operating personnel. This is most critical during the raising and lowering of the roof panel. Failure to observe closing instructions could result in serious injury to personnel. Personnel inside the shelter could become trapped between the roof panel and equipment.

a. Installing Counterbalance Cables.

1. Remove screws (1) at both corners of fold-out floor.



2. Install cable (2) and retainer block (3) with screws (1).

3. Proceed with closing the shelter as outlined in TM 10-5411-201-14.

b. After the shelter has been closed and prepared in accordance with TM 10-5411-201-14, the Turbine Engine Shop is ready for transport or storage.

CHAPTER 3 MAINTENANCE INSTRUCTIONS

SECTION I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

3-1. Common Tools and Equipment. For authorized common tools and equipment refer to the Table/Modified Table of Organization and Equipment (TOE/MTOE) applicable to the AVIM unit and to the Supply Catalog (SC) applicable to the Turbine Engine Shop.

3-2. Torque Values. All equipment or tools secured to the floor or wall of the shelter must be carefully tightened to specific torque limits. These torque limits are contained in Appendix G of this manual.

3-3. Special Tools, TMDE, and Support Equipment. No special tools are required.

3-4. Repair Parts. Repair parts are listed and illustrated in Appendix D of this manual.

3-5. Repair Procedures. Inspection, repair and replacement tasks for all fabricated brackets and components encompass similar procedures due to the commonality of the materials and hardware utilized. The inspection, repair and replacement tasks for the book rack are presented as a guide for maintenance procedures for the remainder of the fabricated components as listed in Appendix F.

SECTION II. SERVICE UPON RECEIPT

3-6. Checking Unpacked Equipment.

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

b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions of DA PAM 738-751.

c. Check to see whether the equipment has been modified.

d. After equipment has been positioned to the recommended operational floor plan, check all items requiring service. Preventive maintenance (PM) and preoperational services will be performed IAW applicable equipment TMs.

SECTION III. MAINTENANCE PROCEDURES

3-7. Fasteners-Inspect

3-7

This task covers: Inspection of common fasteners.

INITIAL SETUP

Tools:

Basic Issue Items (BII) - App C

Wrench, Torque 0-600 inch pounds, NSN 5120-00-288-8865

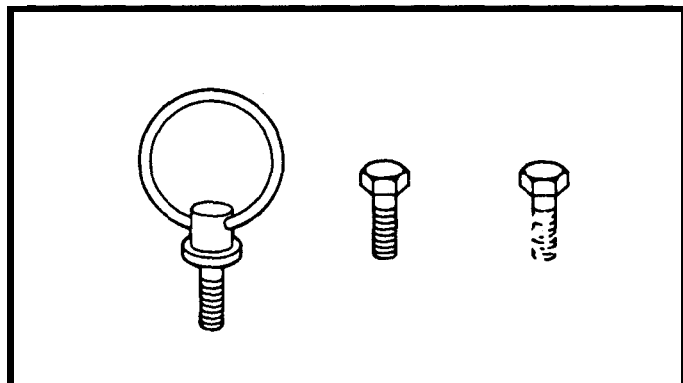
Personnel Required:

68B Aircraft Powerplant Repairer

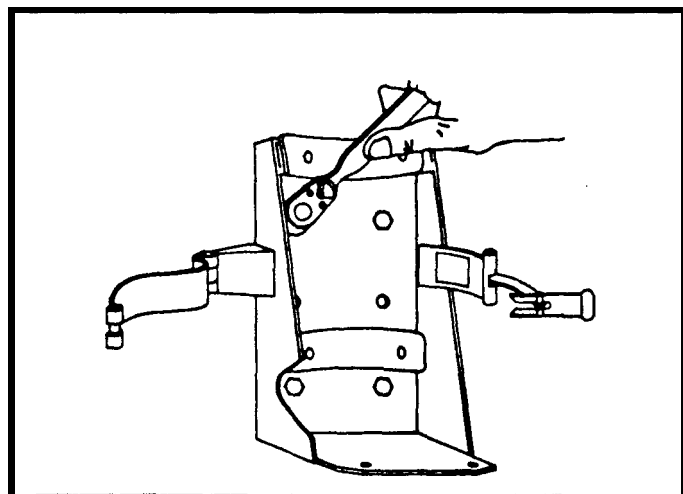
INSPECTION

1. Inspect bolts.

- a. Inspect bolts for damaged threads, rounded head or other damage prior to installation and upon removal.



- b. Replace bolts as necessary.

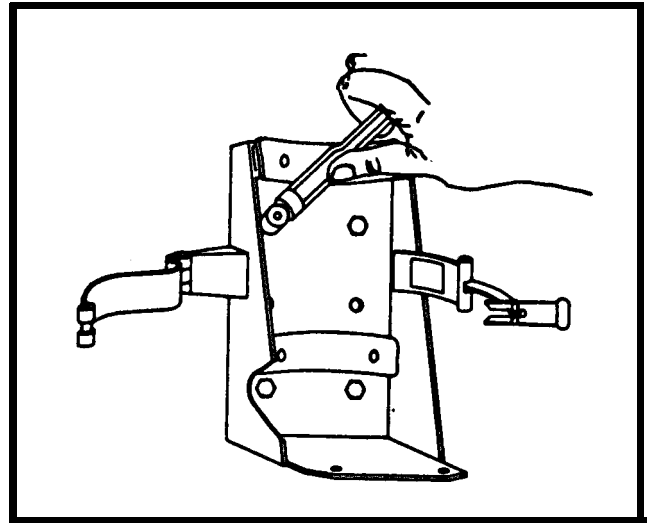


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3-7. Fasteners - Inspect (Cent)

3-7

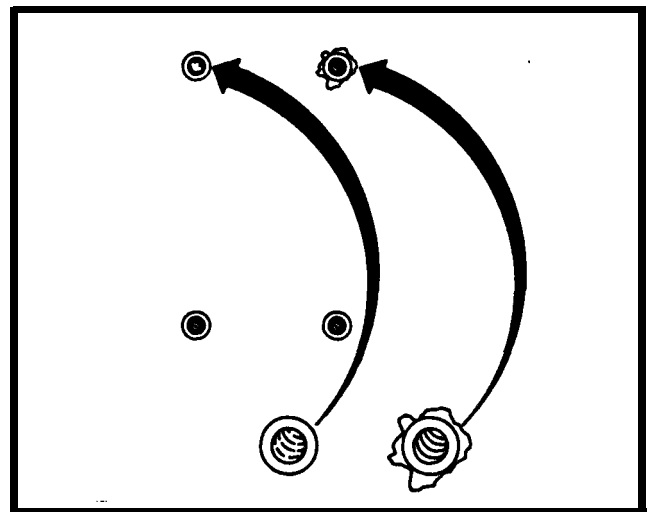
- c. Upon installation, if bolt does not tighten to spec torque (App G), remove and reinspect bolt. Proceed to step 2, if bolts are serviceable.



2. Inspect Inserts.

- a. Clean insert of foreign debris.
- b. Inspect inserts for broken threads and determine if insert has broken loose.
- c. Replace IAW TASK 3-8, if conditions in Step 2 exist.

END OF TASK



3-8. Inserts - Replace

3-8

This task covers: Replacement of inserts

INITIAL SETUP

Personnel Required:

68B Aircraft Powerplant Repairer

Reference Information:

TM 10-5411-201-14

WARNING

Methylethylketone (MEK), used to clean replacement inserts, is flammable and toxic. Use only in well ventilated areas. Breathing vapors can cause headaches and nausea. Repeated contact with skin can cause irritation. If irritation persists see a doctor. If in contact with eyes, wash immediately with water for 15 minutes and seek medical attention.

Safety goggles will be worn when drilling and cleaning holes for insert replacement. Flying chips can cause eye injury or blindness.

REPLACEMENT

Perform task IAW TM 10-5411-201-14.

END OF TASK

3-9. Fixtures - Fire Extinguisher - Removal/Installation

3-9

This task covers: Removal and installation of the fire extinguisher

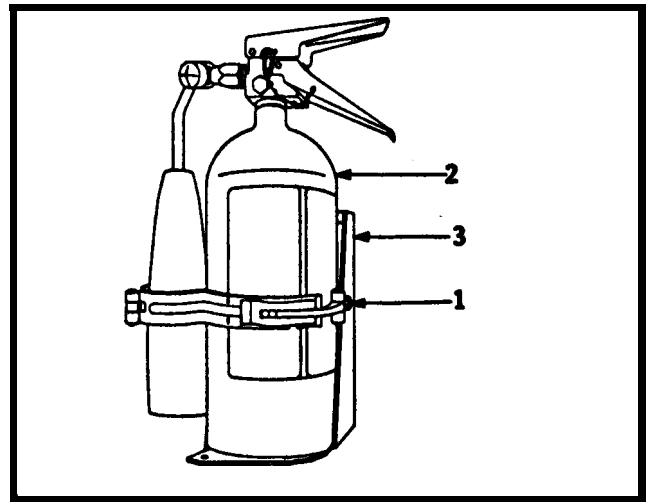
INITIAL SETUP

Personnel Required:

68B Aircraft Powerplant Repairer

REMOVAL

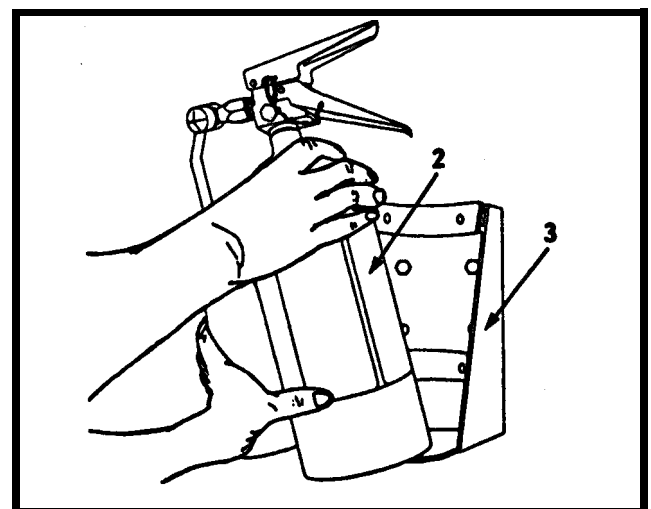
Release clamp (1) securing fire extinguisher (2) in bracket (3) and remove fire extinguisher.



INSTALLATION

Place fire extinguisher (2) in bracket (3) and lock clamp (1) to secure fire extinguisher.

END OF TASK



3-10. Fixtures - Fire Extinguisher Mounting - Inspect

3-10

This task covers: Inspection of fire extinguisher mounting

INITIAL SETUP

Tools:

Basic Issue Items (BII) - App C

Wrench, Torque 0-600 inch pounds, NSN 5120-00-288-8865

Personnel Required:

68B Aircraft Powerplant Repairer

Equipment Condition:

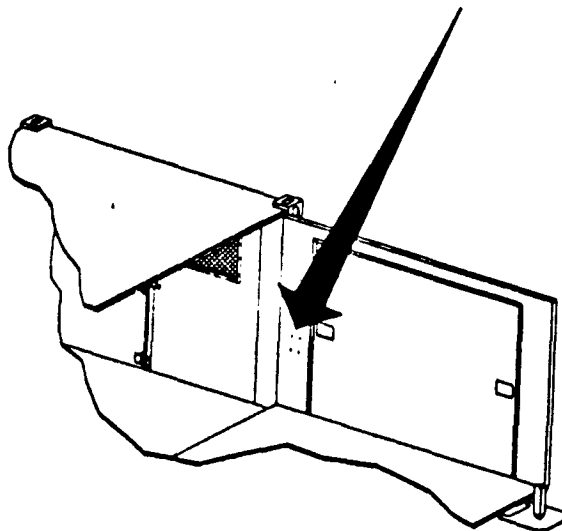
Fire Extinguisher Removed

TASK 3-9

INSPECTION

NOTE

Four additional wall inserts, inside cargo door on end wall, have been provided as alternate fire extinguisher-mounting point.

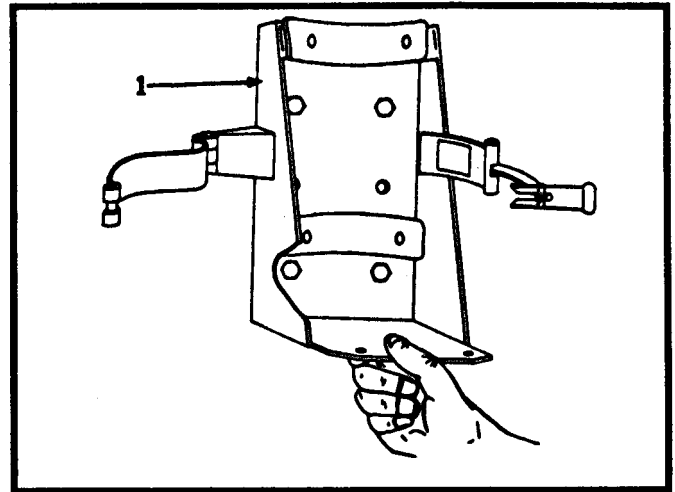


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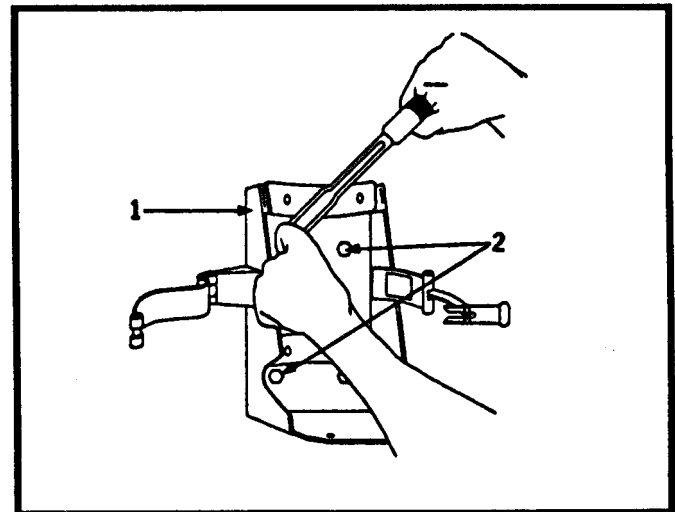
3-10. Fixtures - Fire Extinguisher Mounting - Inspect (Cent)

3-10

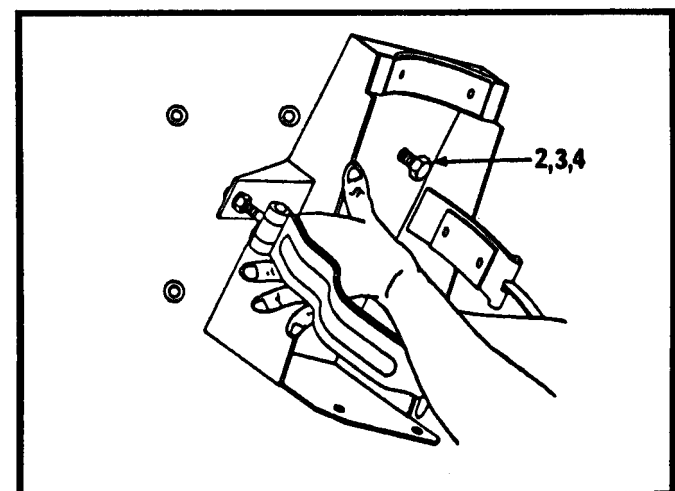
1. Check fire extinguisher bracket (1) for security.



2. Check torque (App G) on bolts (2) when bracket (1) is loose.



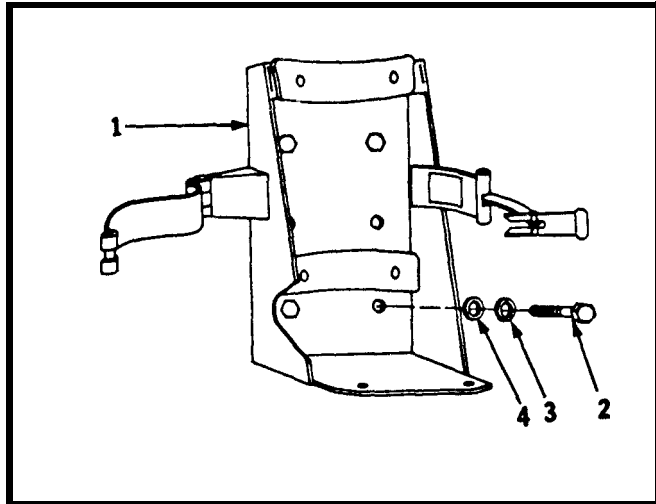
3. Remove bolts (2), lockwashers (3) and washers (4) when unable to tighten bolts (2) to specified torque (App G). Inspect bolts (2) and inserts IAW TASK 3-7.



GO TO NEXT PAGE

4. Position fire extinguisher bracket (1) alining holes with wall inserts. Install bolts (2), lockwashers (3), and washers (4) and torque (App G).

END OF TASK



3-11. Water/OIL Separator Mounting - Inspect

3-11

This tasks covers: Inspection of water/oil separator mounting

INITIAL SETUP**Tools:**

Basic Issue Items (BII) - APP C

Wrench, Torque 0-600 inch pounds, NSN 5120-00-288-8865

PERSONNEL REQUIRED:

68B Aircraft Powerplant Repairer

Equipment Condition:

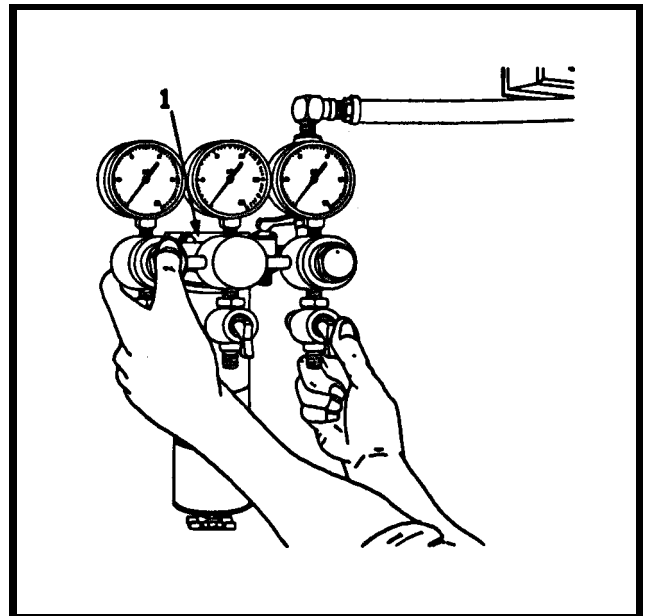
Air supply off and air bled

WARNING

High pressure compressed air against skin or near eye can cause injury or blindness. Do not direct compressed air against skin or near eyes. Always wear safety goggles when working with compressed air. Ensure compressed air supply is disconnected and air bled before attempting this task.

INSPECTION

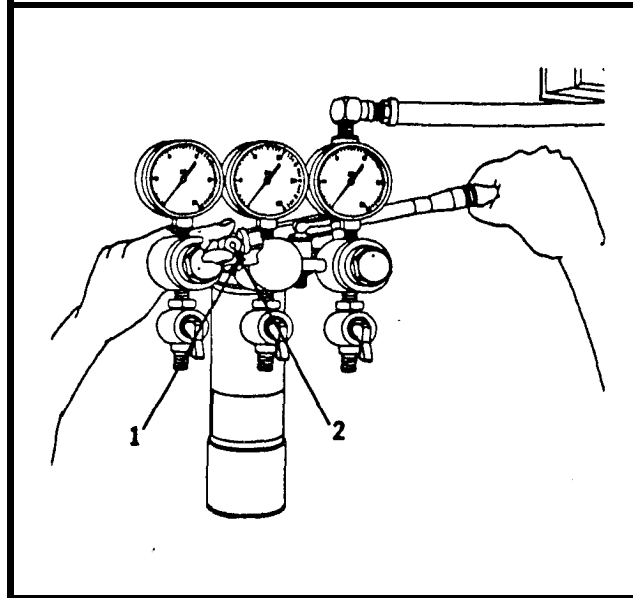
1. Check water/oil separator bracket (1) for security.



GO TO NEXT PAGE

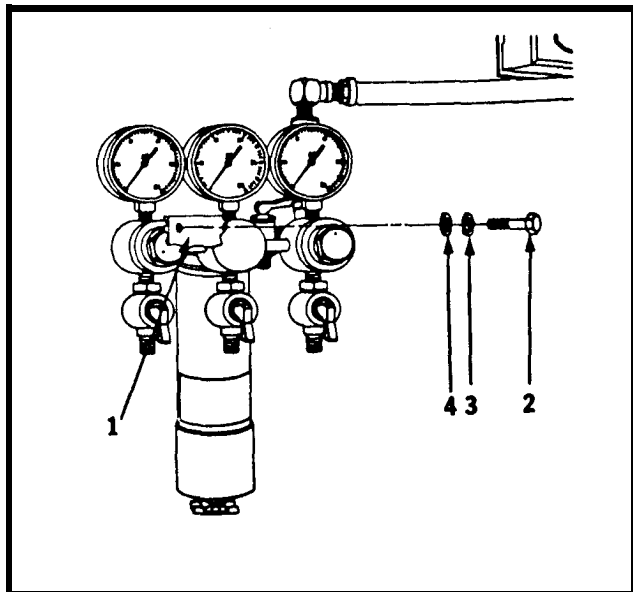
3-11. Water/Oil Separator Mounting -Inspect(Cont)

2. Check torque (App G) on bolts (2) when bracket (1) is loose.
3. Remove bolts (2), lockwashers (3) and washers (4) when unable to tighten bolts (2) to specified torque (APP G). Inspect bolts (2) and inserts IAW TASK 3-7.



4. Position water/oil separator bracket (1) and aline bolt holes with wall inserts. Install bolts (2), lockwashers (3), and washers (4) and torque (App G).

END OF TASK



3-12. Water/Oil Separator Fittings and Air Hose -Inspect

3-12

This tasks covers: Inspection of fittings and air hose

INITIAL SETUP**Personnel Required:**

68B Aircraft PowerPlant Repairer

Equipment Condition:

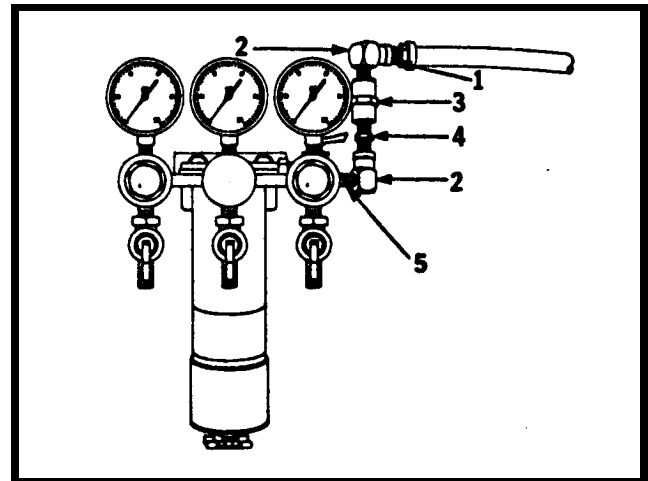
Inspect Fittings: Air supply on

Inspect Air Hose: Air supply off and bled

INSPECT FITTINGS**WARNING**

High pressure compressed air against skin or near eye can cause injury or blindness. Do not direct compressed air against skin or near eyes. Always wear safety goggles when working with compressed air.

Inspect hose fitting (1), elbows (2), coupling (3), nipple (4) and bushing (5) for corrosion and leaks. Replace IAW Task 3-13 when corrosion and leaks exist.



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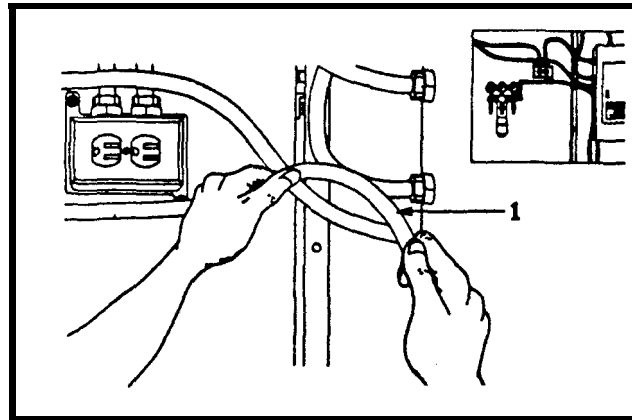
INSPECT AIR HOSE

WARNING

High pressure compressed air against skin or near eye can cause injury or blindness. Do not direct compressed air against skin or near eyes. Always wear safety goggles when working with compressed air. Ensure compressed air supply is disconnected and air bled before attempting this task

Inspect air hose (1) for cracks or checking. Replace if visible IAW TASK 3-13.

END OF TASK



3-13. Water/Oil Separator Fittings and Air Hose-Replace

3-13

This task covers Replacement of fittings and air hose

INITIAL SETUP**Tools:**

Basic Issue Items (BII) - App C

Material:

Hose Assembly, NSN 4720-00-402-9511- App D

Personnel Required:

68B Aircraft Powerplant Repairer

Equipment Condition:

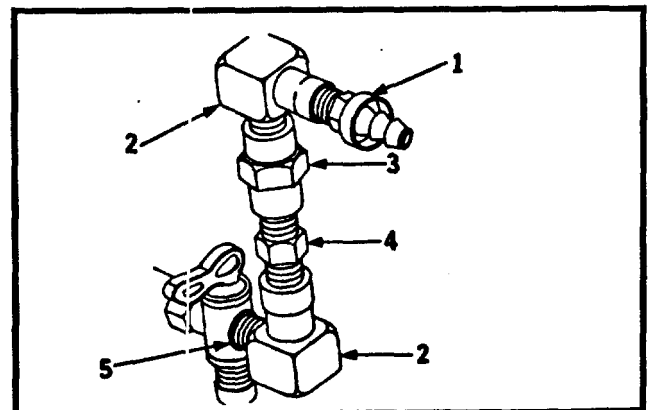
Air supply off and air bled

WARNING

High pressure compressed air against skin or near eye can cause injury or blindness. Do not direct compressed air against skin or near eyes. Always wear safety goggles when working with compressed air. Ensure air supply is disconnected and air bled before attempting this task.

REPLACE FITTINGS

1. Remove air hose from fitting. Retain as much of the hose as possible to permit reuse.
2. Remove hose fitting (1), elbows (2), coupling (3), nipple (4) and bushing (5) as necessary to gain access to defective part.
3. Replace defective part.
4. Install remaining hose fitting (1), elbows (2), coupling (3), nipple (4) and bushing (5) as necessary.
5. Install or replace air hose as appropriate

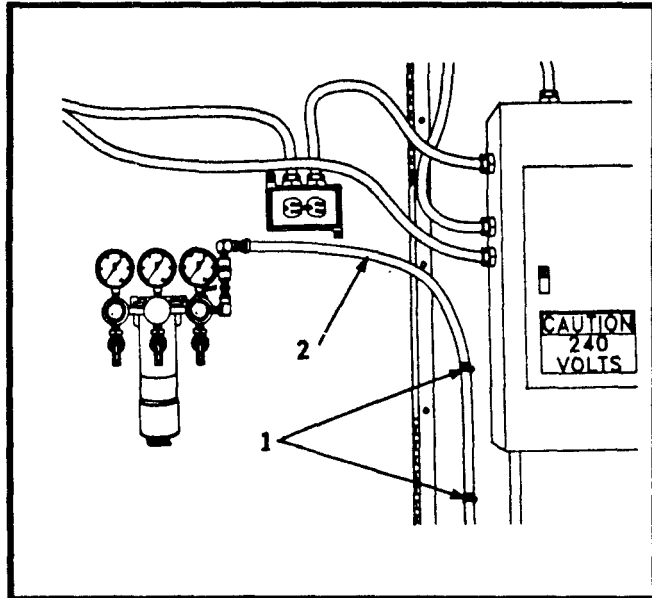
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3-13. Water/Oil Separator Fittings and Air Hose - Replace (Cent)

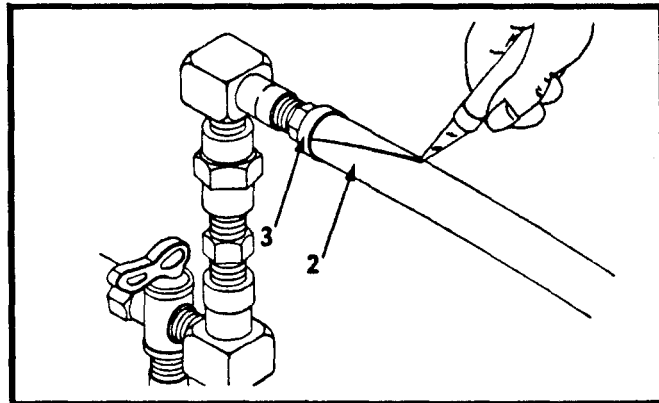
3-13

REPLACE AIR HOSE

1. Remove both loop clamps (1) from defective hose (2).

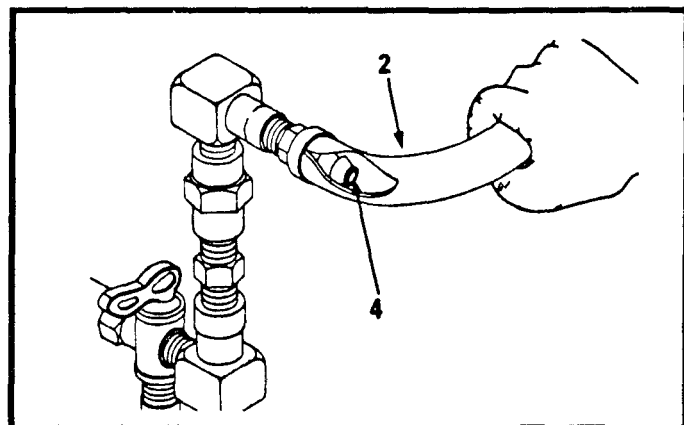


2. Slit hose (2) lengthwise from protective cap (3) to end of fitting (4) (approximately 1 1/2 inches) with knife.



3. Bend hose (2) back over fitting (4) and snap off with quick tug.

4. Repeat Steps 2 and 3 at other end of hose.

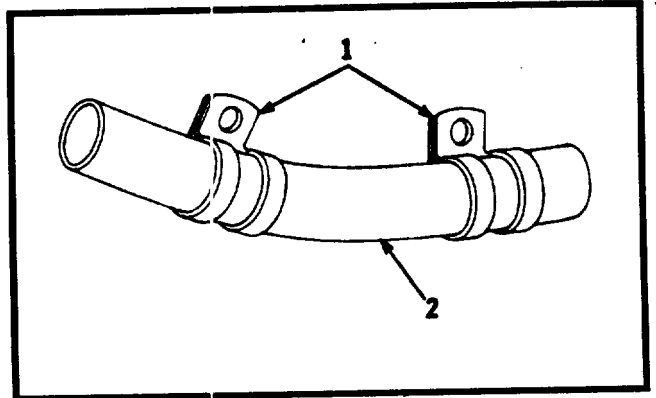


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3-13. Water/Oil Separator Fittings and Air Hose= Replace (Cont)

3-13

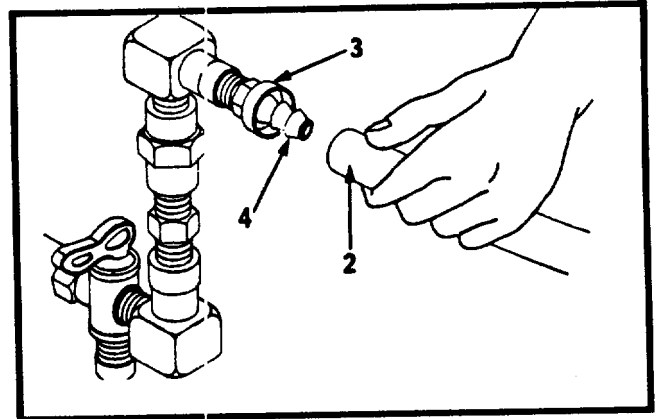
6. Slide loop clamps (1) over new hose (2).



6. Replace fittings, if required, before proceeding to step 7.

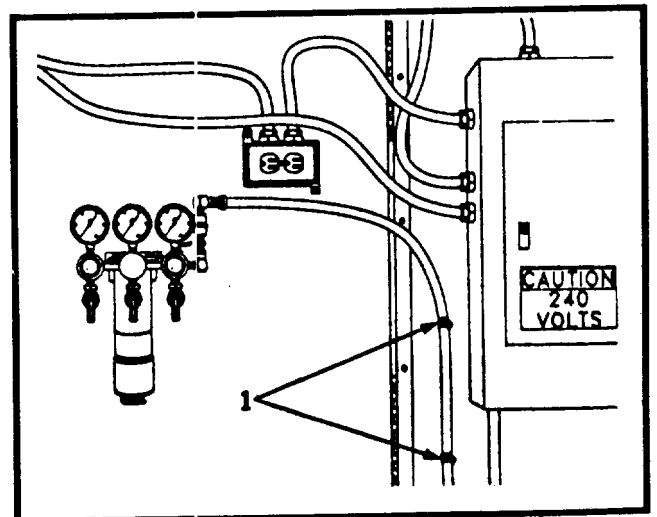
7. Push hose (2) onto fitting (4) until end bottoms underneath protective cap (3).

8. Repeat Step 7 for other end of hose.



9. Install loop clamps (1) in original position and secure.

END OF TASK



3-14. Fixtures - Water Feed Thru Connector - Inspect

3-14

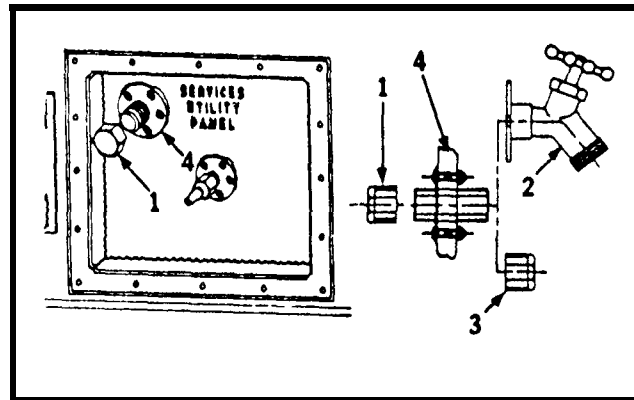
This task covers: Inspection of connector

INITIAL SETUP**Personnel Required:**

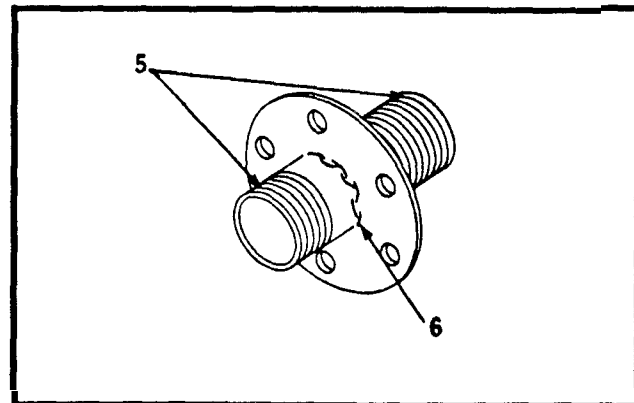
68B Aircraft Powerplant Repairer

INSPECT WATER FEED THRU CONNECTOR

1. Remove dust caps (1), faucet (2) or adapter (3) from connector (4).



2. Inspect condition of connector threads (5). Inspect connector weld (6) for cracks or breaks. Replace IAW Task 3-15, if defective.



3. Install faucet (2) and adapter (3) as necessary.
4. Ensure dust caps (1) are installed when connector (4) is not in use.

END OF TASK

3-15. Fixtures - Water Feed Thru Connector - Replace**3-15**

This task covers: Replacement of connector

INITIAL SETUP**Tools:**

Basic Issue Items (BII) - App C

Material:

Feed thru connector - App F

Adhesive, NSN 8040-00-877-9872- App E

Personnel Required:

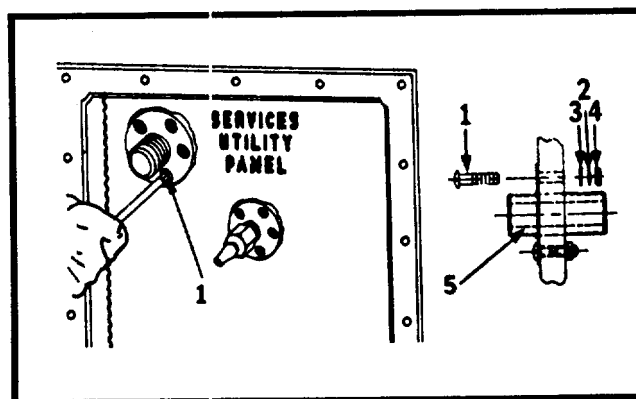
68B Aircraft Powerplant Repairer and Helper

Equipment Condition:

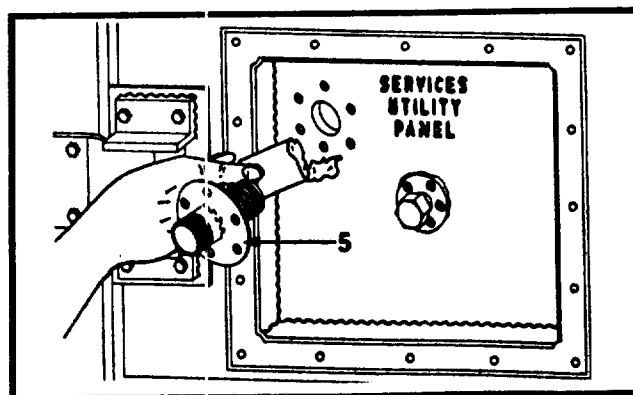
Faucet and adapters removed

REPLACE CONNECTOR

1. Remove six screws (1), lockwashers (2), washers(3) and nuts (4) securing connector (5).



2. Remove connector (5) from panel and scrape off old adhesive.

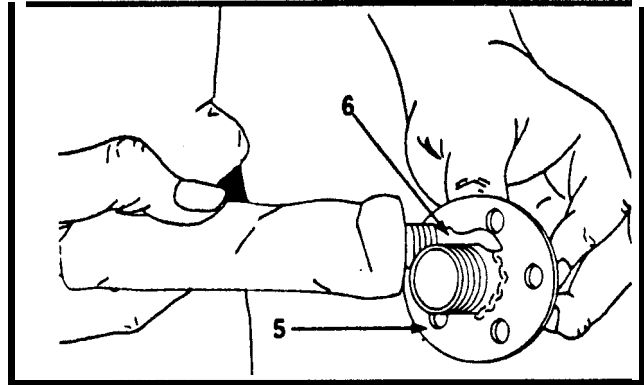


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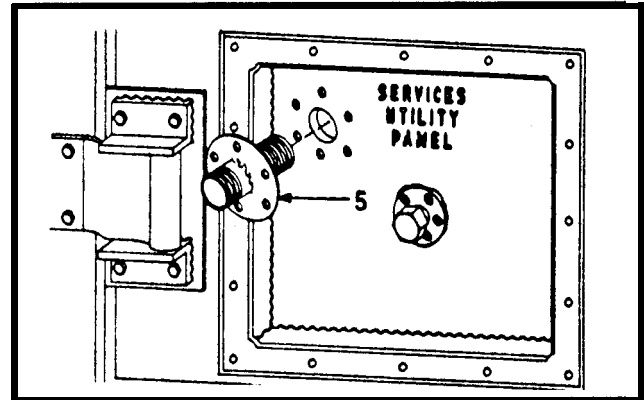
3-15. Fixtures - Water Feed Thru Connector- Replace (Cent)

3-15

3. Manufacture new connector (5) IAW APP F.
4. Apply adhesive (Item 2, App E) on side of connector collar (6) facing long end of connector (5).

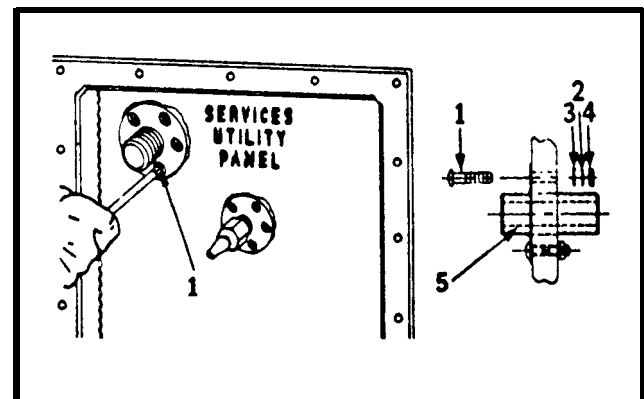


5. Install new connector (5) from outside of shelter; long end of nipple thru hole.



6. Install six screws (1), lockwashers (2), washers (3) and nuts (4).

END OF TASK



3-16. Fixtures - Air Feed Thru Connector - Inspect**3-16**

This task covers: Inspection of connector

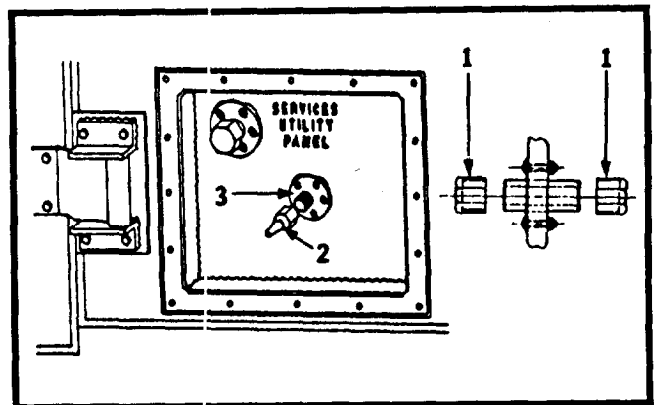
INITIAL SETUP

Personnel Required:

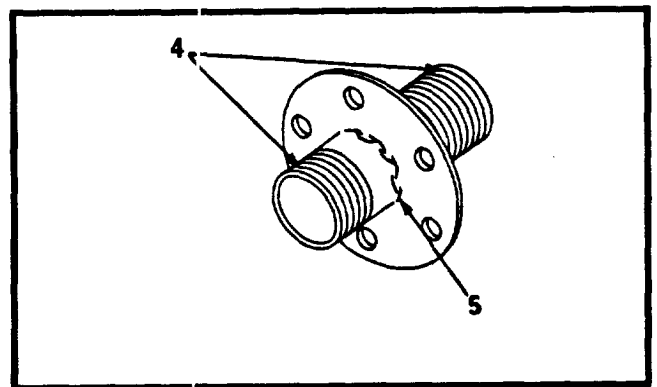
68B Aircraft Powerplant Repairer

INSPECT AIR FEED THRU CONNECTOR

1. Remove dust cap (1) or quick disconnect (2) from connector (3) at exterior service panel.



2. Inspect condition of connector threads (4). Inspect connector weld (5) for cracks or breaks. Replace JAW Task 3-17, if defective.



3. Install quick disconnect(2) as necessary.
4. Ensure dust cap(1) is installed when quick disconnect is not connected.

END OF TASK

3-17. Fixtures - Air Feed Thru Connector- Replace

3-17

This task covers: Replacement of connector

INITIAL SETUP

Tools:

Basic Issue Items (BII) - App C

Material:

Air Feed thru connector - App F

Adhesive, NSN 8040-00-877-9872- App E

Personnel Required:

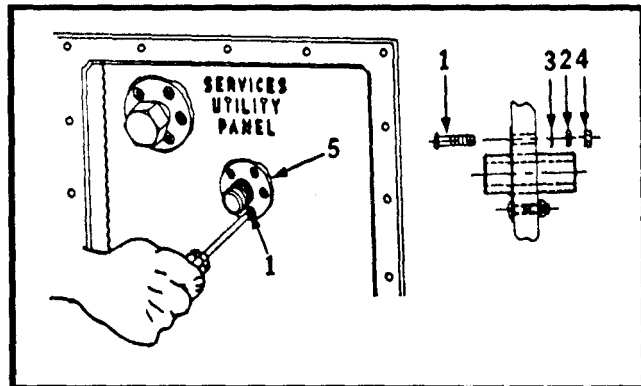
68B Aircraft Powerplant Repairer and Helper

Equipment Condition:

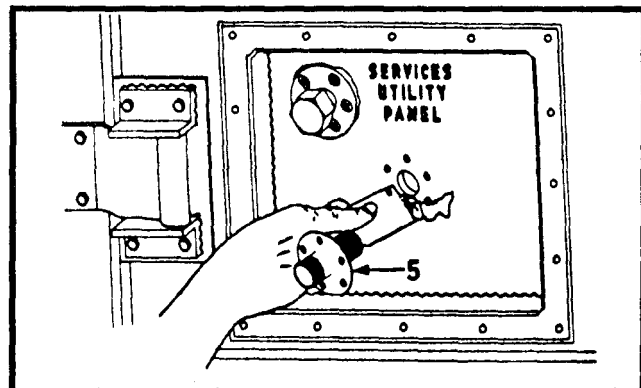
All fittings and adapters removed

REPLACE CONNECTOR

1. Remove six screws (1), lockwashers (2), washers (3) and nuts (4) securing connector (5).



2. Remove connector (5) from wall and scrape off old adhesive.

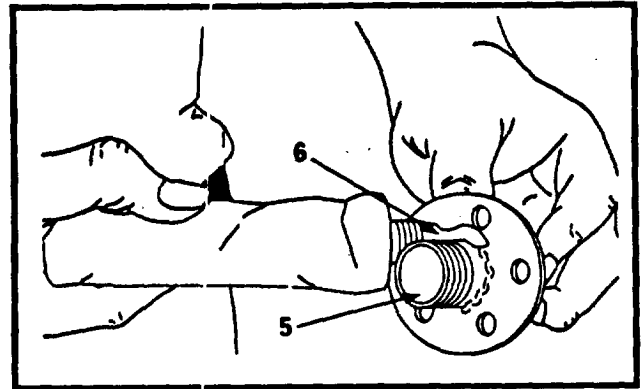


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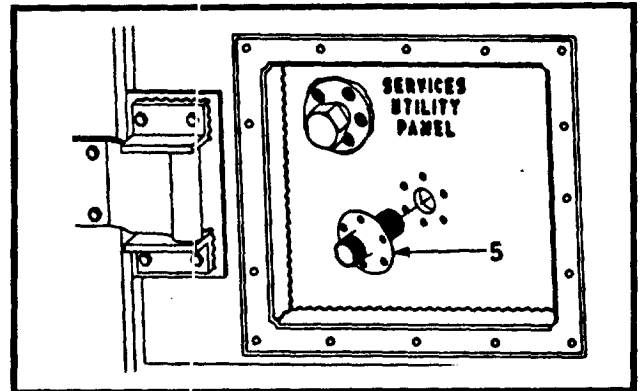
3-17. Fixtures - Air Feed Thru Connector - Replace (Cont)

3-17

3. Manufacture new connector (5) IAW App F.
4. Apply adhesive (Item 2, App E) on flat side of connector collar (6) facing long end of connector(5).

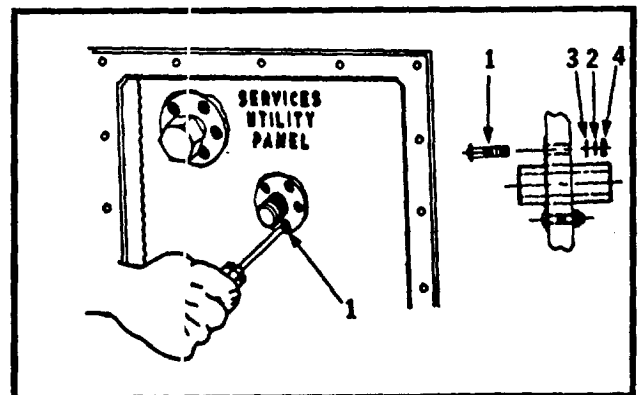


5. Install new connector (5) from outside of shelter inserting long end of nipple thru hole.



6. Install six screws (1), lockwashers (2), washere (3) and nuts (4).

END OF TASK



3-18. Ground Rod/Strap - Inspect

3-18

This task covers: Inspection of ground rod and strap

INITIAL SETUPTools:

Tool Kit, Electrical Repairer, Army Aircraft, NSN 5180-00-323-4915
Multimeter, NSN 6625-01-139-2512

Personnel Required:

68F Aircraft Electrician

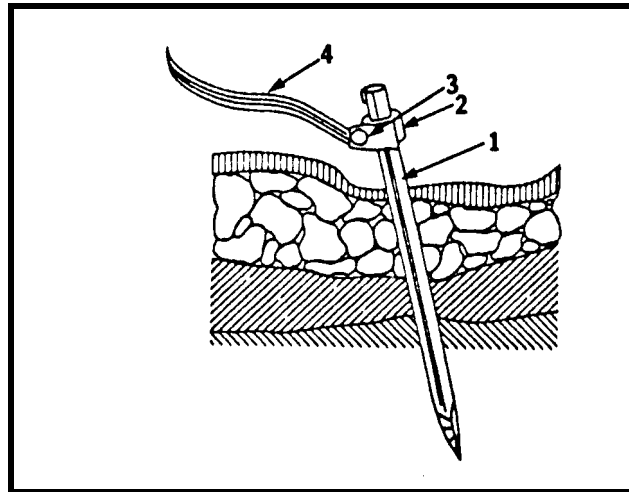
Reference Information:

TC 11-6

INSPECTION**WARNING**

HIGH VOLTAGE exists in the electrical system of this shop. All electrical inspections, repairs or replacements shall be performed with the power OFF and only by qualified electricians. Serious shock hazards exist which could result in serious injury or death to personnel.

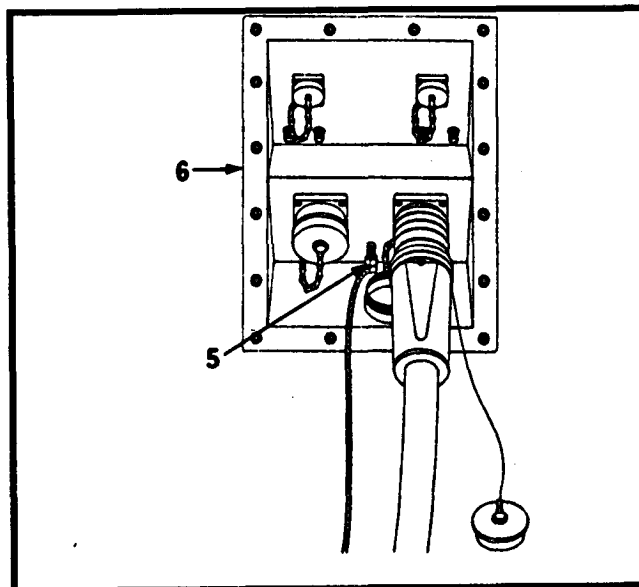
1. Check ground rod.
 - a. Ensure ground rod (1) is firmly driven into ground.
 - b. Ensure that clamp (2) and screw (3) are securely fastened.
 - c. Ensure there is no sign of oxidation around clamp (2) or screw (3).
 - d. Ensure ground strap (4) is not frayed or broken.



GO TO NEXT PAGE

3-18. Ground Rod/Strap - Inspect (cont)

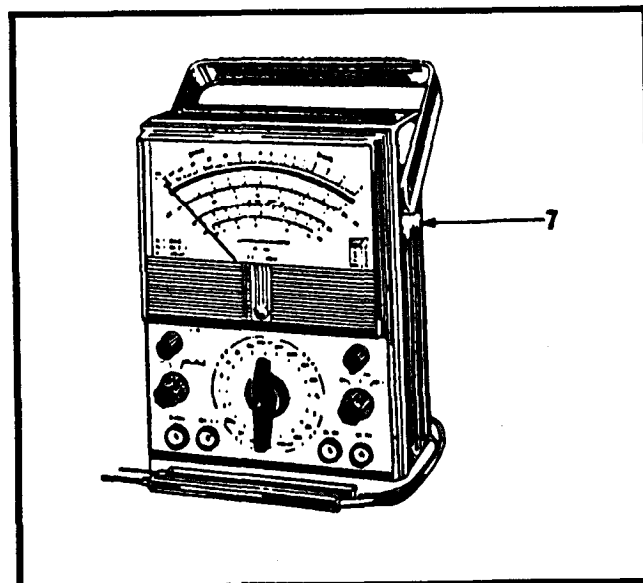
2. Check ground strap connection for security and corrosion at terminal lug (5) on power entry panel (6).



- 3 . Check condition of ground using multimeter (7).
(Use TC 11-6).

- a Set multimeter (7) for AC voltage.
- b Place red lead on shelter.
- c. Place black lead on ground strap.
- d Measure voltage:
 - 0-5 volts, adequate ground;
 - Over 5 volts-poor ground, reinstall ground system.

END OF TASK



3-19. Special Brackets and Fabricated Components, Book Rack - Inspect

3-19

This task covers: Inspection of book rack

INITIAL SETUP

Tools:

Basic Issue Items (BII) - App C

Wrench, Torque 0-600 inch pounds, NSN 5120-00-288-8865

Personnel Required:

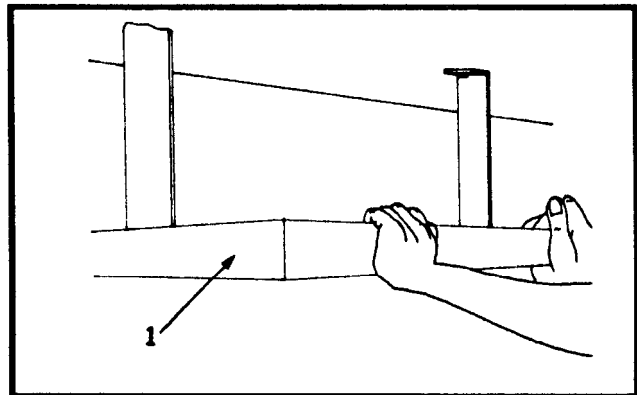
68B Aircraft Powerplant Repairer

NOTE

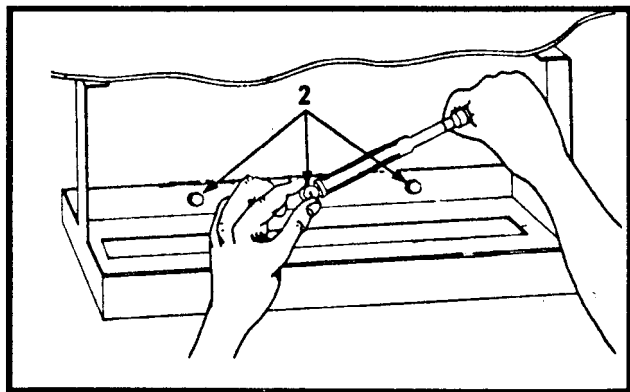
The inspection task for the book rack is presented as a guide for inspection tasks for the remainder of the fabricated components.

INSPECTION

1. Ensure book rack (1) is secure on shelter wall.



2. Check torque (App G) on bolts (2) when book rack is loose.

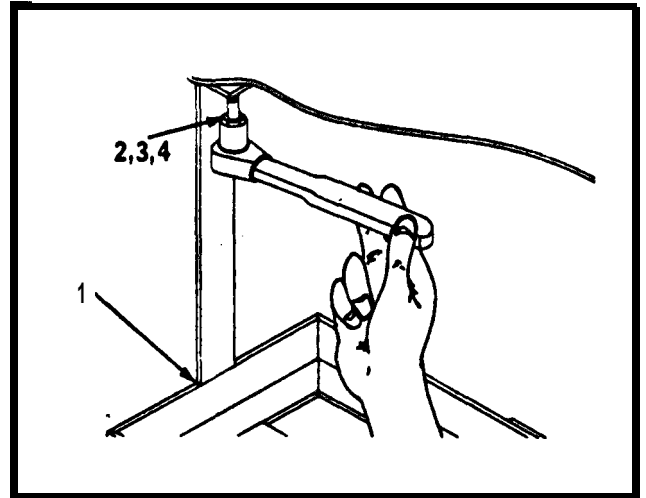


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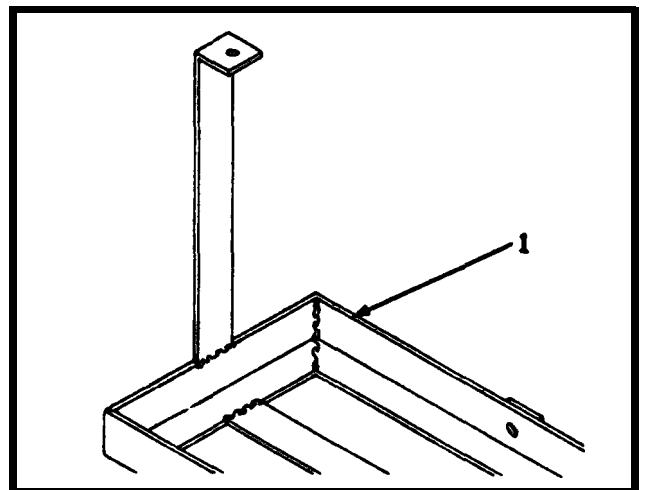
3-19. Special Brackets and Fabricated Components, Book Rack-Inspsct (Cont)

3-19

3. Remove bolts (2), lockwashers (3), washers (4) and book rack (1) when bolts (2) will not tighten to specified torque (App G). Inspect bolts (2) and inserts IAW TASK 3-7.



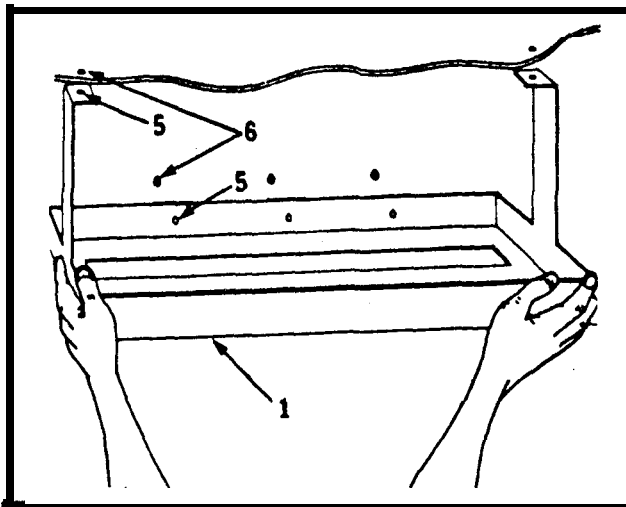
4. Inspect book rack (1) for bends, cracks or broken welds.
5. Make necessary repairs to book rack IAW TASK 3-20.



GO TO NEXT PAGE

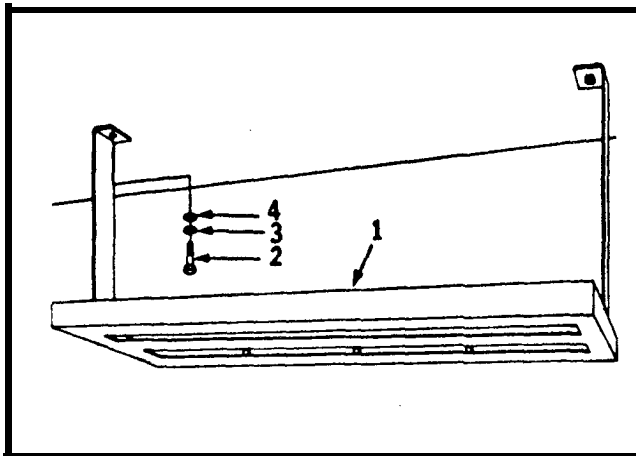
6. Install book rack (1).

a. Position book rack (1) on wall alining holes (5) with inserts (6).



b. Install bolts (2), lockwashers (3) and washers (4), and torque (App G).

END OF TASK



3-20. Special Brackets and Fabricated Components, Book Rack - Repair

3-20

This task covers: Repair of book rack

INITIAL SETUPTools:

Basic Issue Items (BII) - App C
Wrench, Torque 0-600 inch pounds, NSN 5120-00-288-8865
Shop Set, Machine, NSN 4920-00-405-9279
Shop Set, Welding, NSN 4920-00-163-5093

Material:

Rod, welding - App E
Primer coating, NSN 8010-00-297-0593- App E
Enamel, white, NSN 8010-00-159-4520- App E
Enamel, gray, NSN 8010-00-852-9034 -App E

Personnel Required:

68B Aircraft PowerPlant Repairer

Reference Information:

TM 55-1500-204-25/1
MIL-W-8604A
TM 43-0139

NOTE

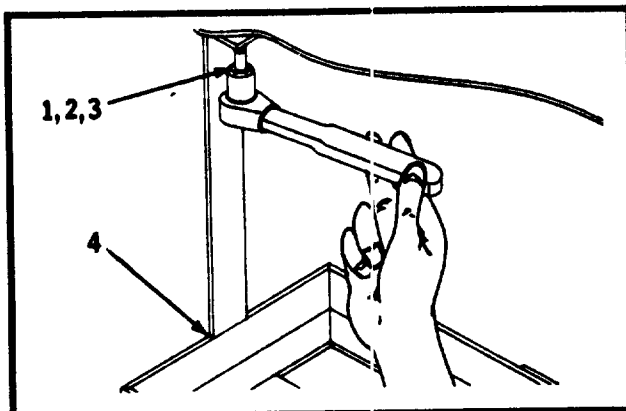
The repair task for the book rack is presented as a guide for repair tasks for the remainder of the fabricated components.

REPAIR**Warning**

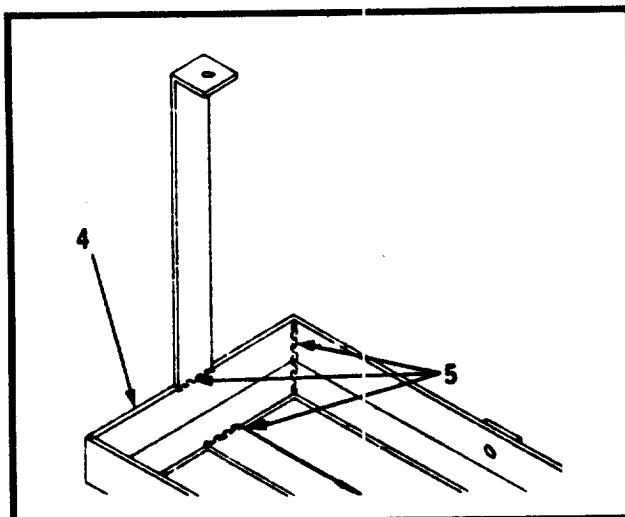
Extreme care must be taken when performing all types of welding operations. Serious health and fire hazards exist. Harmful light rays can cause eye injury or blindness. Protective face masks and goggles must be used as well as other special clothing to reduce risks. Poisonous fumes, burns, electric shock, fire and explosion hazards are some of the additional possibilities of injury associated with welding operations. It is essential that all safe practices be strictly observed.

GO TO NEXT PAGE

1. Remove five bolts (1) lockwashers (2), and washers (3) securing book rack (4) to wall. Remove book rack (1).



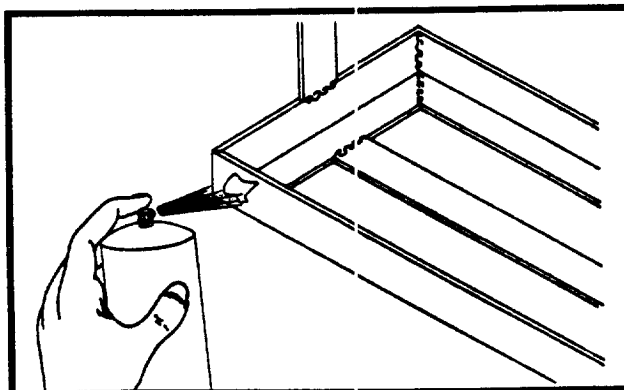
2. Repair cracks or breaks in book rack (4) or welds (5) by welding IAW TM 55-1500-204-25/1 and MIL-W-8604A. (Use welding rod, item 7, App E, or equivalent).



NOTE

Replacement of book rack is required when any repairs result in a change to the original design or dimensions of the book rack. See TASK 3-21.

3. Touch up bare metal as necessary with primer (item 6, App E).
4. Touch up painted surface as necessary with enamel (item 4,5, App E).

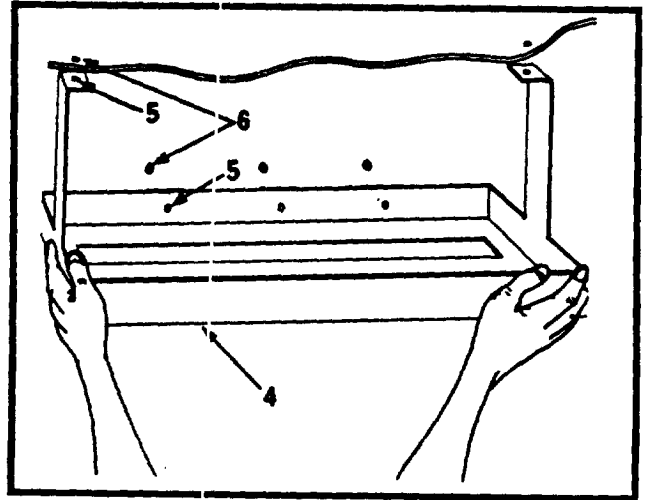


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3-20. Special Brackets and Fabricated Components, Book Rack - Repair (Cont)

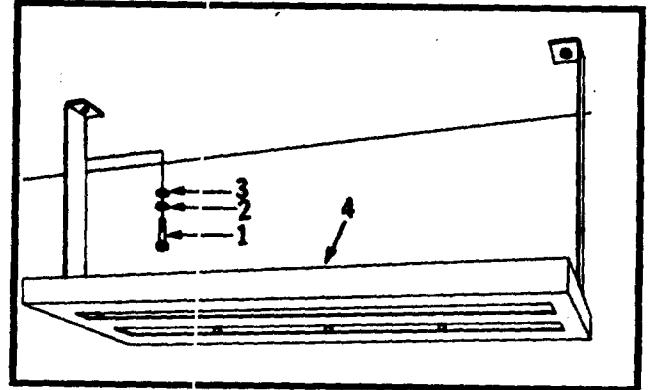
3-20

5. Position book rack(4) on wall alining holes (5) with inserts (6).



6. Install five bolts (1), lockwashers (2), and washers (3) in book rack (4), and torque (App G).

END OF TASK



3-21. Special Brackets and Fabricated Components, Book Rack - Replace

3-21

This tasks covers: Replacement of book rack

INITIAL SETUP

Tools:

Basic Issue Items (BII) - App C

Wrench, Torque 0-600 inch pounds, NSN 5120-00-288-8865

Shop Set, Machine, NSN 4920-00-405-9279

Shop Set, Welding, NSN 4920-00-163-5093

Personnel Required:

68B Aircraft Powerplant Repairer

Reference Information:

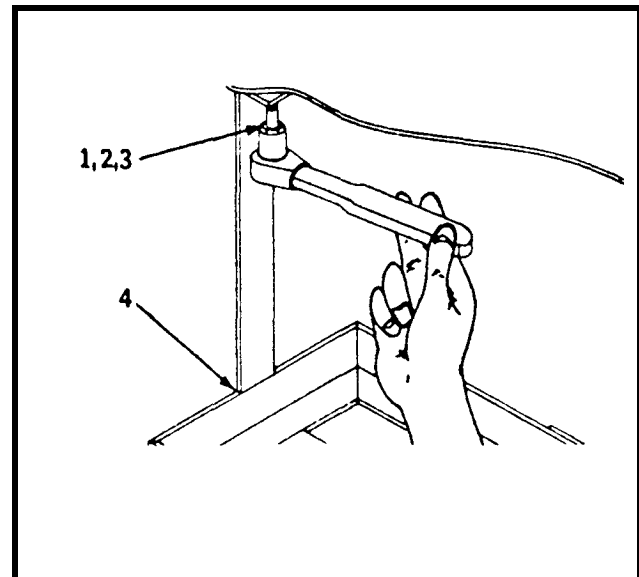
TM 55-1500-204-25/1

NOTE

The replace task for the book rack is presented as a guide for replace tasks for the remainder of the fabricated components.

REPLACEMENT

1. Remove five bolts (1), lockwashers (2) and washers (3) from book rack (4). Remove book rack (4).
2. Fabricate new book rack IAW App F.

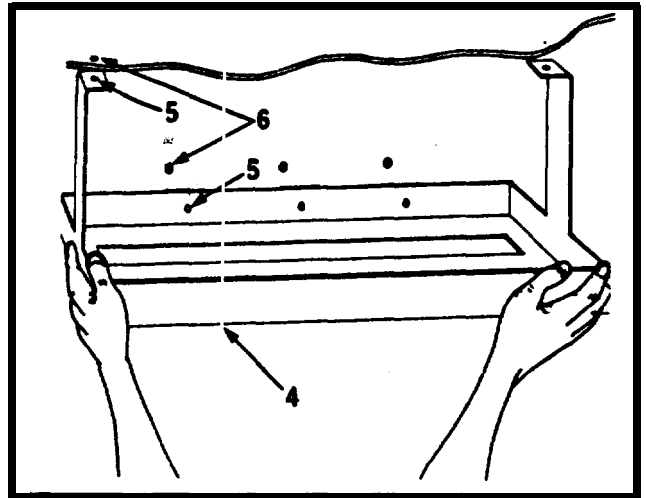


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3-21. **Special Brackets and Fabricated Components, Book Rack- Replace (Cont)**

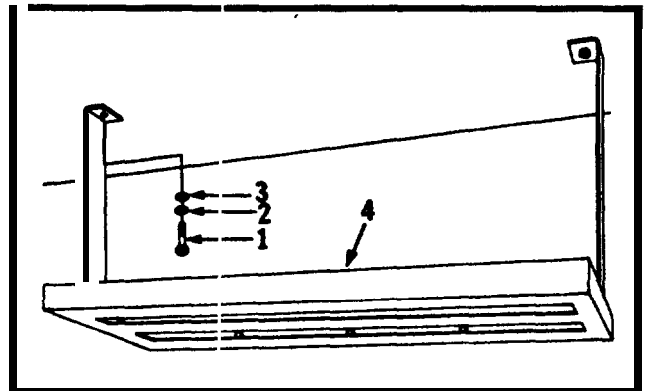
3-21

3. Position **book rack (4)** on wall **aligning holes (5)** with **inserts (6)**.



4. Install five bolts (1), **lockwashers (2)** and washers (3), and torque (App G).

END OF TASK



3-22. Floor Plugs - Inspect

3-22

This tasks covers: Inspection of floor plugs

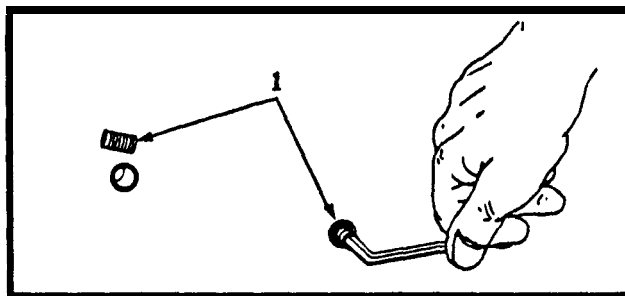
INITIAL SETUP

Tools:
Basic Issue Items (BII) App - C

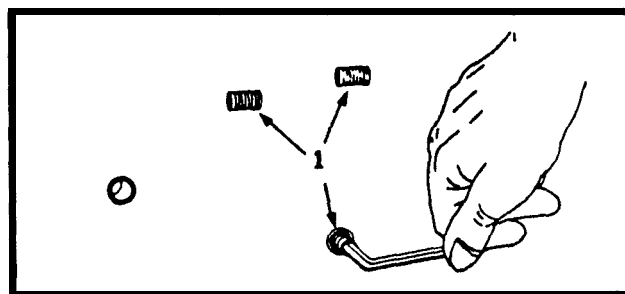
Personnel Required:
68B Aircraft Powerplant Repairer

INSPECTION

1. Inspect floor plugs (1) for damaged or broken threads prior to installation and upon removal.

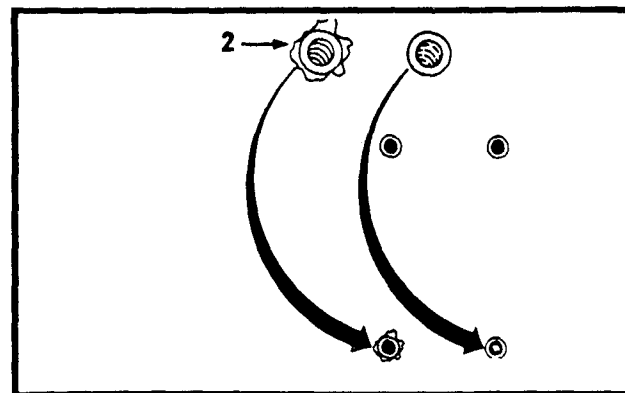


2. Replace floor plugs (1) as necessary.



3. Inspect inserts (2) IAW Task 3-7.

END OF TASK



3-23. Fixed Equipment/Components - Removal/Installation**This tasks covers: Removal/Installation of fixed equipment/componenti**

INITIAL SETUP

Tools:

Shop Set, Tool Crib, NSN 4920-00-472-4183

Personnel Required:

68B Aircraft PowerPlant Repairer

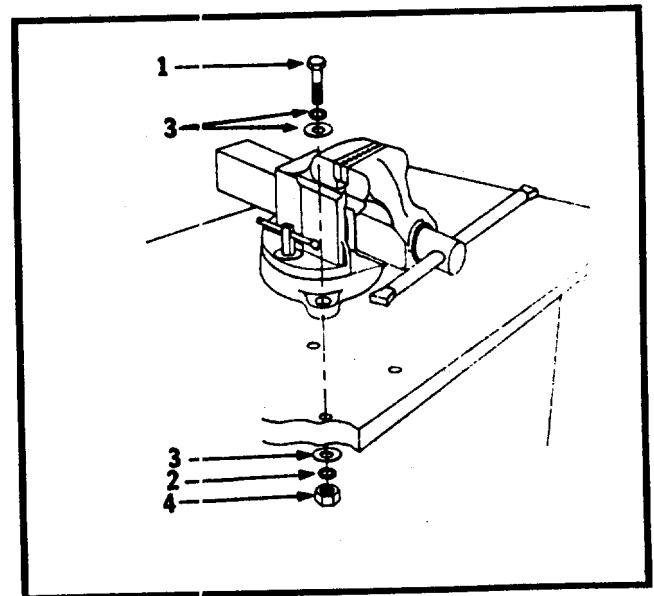
REMOVAL/INSTALLATION

1. REMOVE/INSTALL FIXED EQUIPMENT.

NOTE

Permanently installed equipment should not ordinarily be removed or re-located. However, in the event that it becomes necessary to remove, re-install or replace fixed equipment within the shelter, care must be taken to remove all bolts, washers and nuts and save them them or reuse.

- a. Remove all bolts (1), lockwashers (2), washers (3) and nuts (4) from shop equipment. Remove equipment.
- b. Install new or repaired equipment. If new equipment has different mounting brackets, remount equipment as follows:
 1. Mark new mounting location on bench top.
 2. Drill holes.
 3. Align shop equipment
- c. Install bolts (1), lockwashers (2) washers (3) and nuts (4).



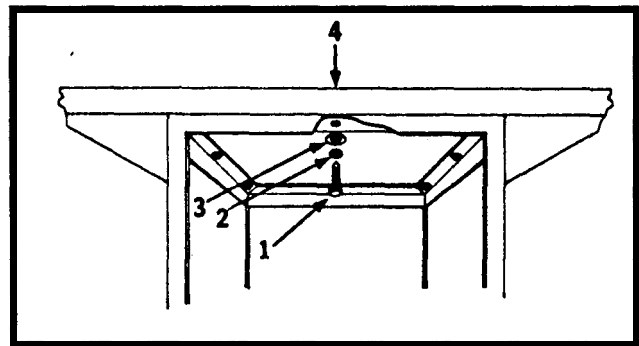
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2. REMOVE/INSTALL BENCH TOP.

NOTE

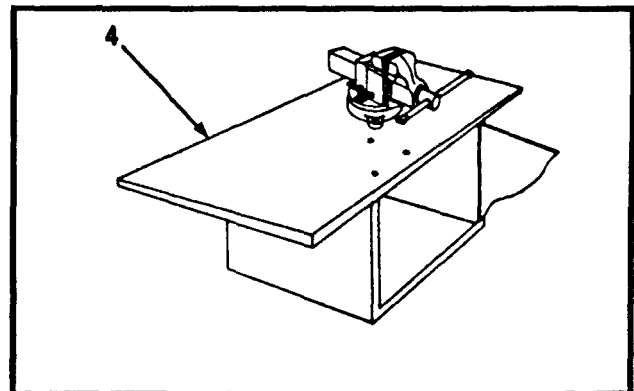
Permanently installed bench tops should not ordinarily be removed or relocated. However, in the event that it becomes necessary to remove, reinstall or replace them within the shelter, care must be taken to remove all bolts, washers and nuts and save them for reuse. Two types of bench tops are installed throughout the shop sets: 1) 30 inch width; 2) 60 inch width. These tops together with open bench legs are attached in several configurations to the cabinets in the shop sets.

- a. Remove all Shop equipment from bench top IAW Step 1.a
- b. Remove all lag bolts (1), lockwashers (2) and washers (3) attaching bench top to cabinet
- c. Remove bench top (4).



- d. If new bench top (4) is to be installed, proceed as follows, otherwise proceed to Step e.
 - 1) Obtain all mounting hole locations and dimensions from old bench top (4).
 - 2) Mark new bench tip (4) for drilling using locations and dimensions obtained in Step 2.d.1.
 - 3) Drill holes.

- e. Align bench top (4) on cabinet and install lagbolts (1), lockwashers (2) and washers(3).
- f. Align shop equipment over mounting holes and install fastening hardware.



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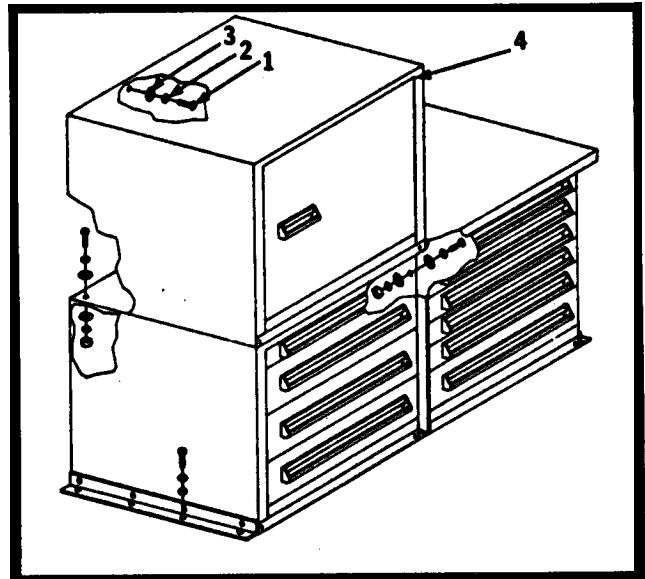
3-23. Fixed Equipment Components - Removal/Installation (Cont)

3-23

3. REMOVE/INSTALL CABINETS.**NOTE**

Permanently installed cabinets should not ordinarily be removed or relocated. However, in the event that it becomes necessary to remove, reinstall or replace cabinets within the shelter, care must be taken to remove all bolts, lockwashers, washers and nuts and save them for reuse. Cabinets are betted to the floor, wall, and adjacent cabinets. Four cabinet styles are installed throughout the shop sets and may be complexed in various configurations. All mounting holes are universal and cabinets may be substituted for others without special mounting considerations.

- a. Remove fixed equipment and bench tops as re-
- b. Remove all bolts (1), lockwashers (2) and washers (3) from cabinets. Remove cabinets (4).
- c. Reposition cabinets (4).
- d. Install bolts (1), lockwashers (2) and washers (3).

END OF TASK

**APPENDIX A
REFERENCES**

A-1. Dictionaries of Terms and Abbreviations.

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

A-2. Publication Indexes.

- DA PAM 25-30 Consolidated Index of Army Publications and Blank Forms

A-3. Logistics and Storage.

- TM 743-200-1 Storage and Material Handling

A-4. Maintenance of Supplies and Equipment.

- AR 750-1 Army Maintenance Material Concepts and Policies
- TM 5-4120-384-14 Air Conditioner, Horizontal, Compact, 18,000 BTU
- TM 5-6150-226-13&P .. Distribution Illumination System, Electrical (DISE)
- TM 10-6411-201-14 Shelter. Tactical Expandable, One Side NSN 5411-01-124-1377
- TM 43-0139 Painting Operations Instructions for Field Use
- TM 55-1500-204-25/1 General Aircraft Maintenance Manual

A-5. Other Publications

- AR 420-90 Fire Prevention and Protection
- AR 55-38 Reporting of Transportation Discrepancies in Shipments
- AR 700-58 Packaging Improvement Report
- DA PAM 310-13 Military Publications Posting and Filing
- DA PAM 738-751 Functional users Manual for The Army Maintenance Management System-Aviation (TAMMS-A)
- FM 21-11 First Aid for Soldiers
- MIL-W-8604A Welding. Fusion, Aluminum Alloy Process and Performance
- TC 11-6 Grounding Techniques
- TB 43-180 Calibration Requirements for the Maintenance Army Material
- TM 750-244-1-4 procedures for the Destruction of Aviation Ground Support Equipment (FSC 4920) to prevent Enemy Use

APPENDIX B MAINTENANCE ALLOCATION CHART

SECTION I. INTRODUCTION

B-1. General.

a. This section provides a general explanation of all maintenance repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in section II designates overall authority and responsibility for performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance categories.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

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

B-2. Maintenance Functions. 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 (e.g., by sight, sound, or feel).

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operational condition, i.e., to clear (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or gases.

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

e. Align. 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 equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the d position code of the SMR code.

i. Repair. The application of maintenance services including fault location/troubleshooting, removal/installation, and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

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

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

B-3. Explanation of Columns In the MAC, Section U.

a. Column 1. Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00."

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

c. Column Function. Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2.).

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

| | |
|-------|-----------------------------------|
| AVUM | Aviation Unit Maintenance |
| AVIM | Aviation intermediate Maintenance |
| DEPOT | Depot Maintenance |

e. Column 5 Tools and equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. Explanation of Columns In Tool and Test Equipment Requirements, Section III.

a. Column 1, Reference Code The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.

b. Column 2, Maintenance Category The lowest category of maintenance authorized to use the tool or test equipment.

c. Column 3, Nomenclature Name or identification of the tool or test equipment.

d. The National Stock Number The national stock number of the tool or test equipment.

e. Column 5, Tool Number The manufacturer's part number.

B-5. Explanation of Columns in Remarks, Section IV.

a. Column 1, Reference Code The code recorded in column 6, Section II.

b. Column 2, Remarks This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

SECTION II. MAINTENANCE ALLOCATION CHART

| (1) GROUP NUMBER | (2) COMPONENT/ASSEMBLY | (3) MAINTENANCE FUNCTIONS | (4) MAINTENANCE CATEGORY | | | (5) TOOLS AND EQPT | (6) REMARKS |
|------------------------|--|---------------------------------|-----------------------------|-----------|-------|-----------------------------|--------------------|
| | | | AVUM | AVIM | DEPOT | | |
| 01 | FASTENERS | | | | | | |
| 0101 | BOLTS | INSPECT REPLACE | | .2 .5 | | 3, 6 3, 6 | A, B, C A, B, C |
| 0102 | INSERTS, POTTED | INSPECT REPLACE | | .2 1.5 | | 3, 6 3, 6 | A, B, C D |
| 0103 | INSERTS, NON-POTTED | INSPECT REPLACE | | .2 1.5 | | 3, 6 3, 6 | A, B, C D |
| 02 | FIXTURES | | | | | | |
| 0201 | FIRE EXTINGUISHER MOUNTING | INSPECT | | .1 | | 3, 6 | B |
| 0202 | WATER/OIL SEPARATOR MOUNTING | INSPECT | | .1 | | 3, 6 | A, B |
| 0203 | WATER/OIL SEPARATOR FITTINGS AND AIR HOSE ASSY | INSPECT REPLACE | | .1 1.0 | | 6 | |
| 0204 | WATER FEED THRU CON- NECTOR | INSPECT REPLACE | | .2 1.0 | | 6 | |
| 0205 | AIR FEED THRU CONNec- TOR | INSPECT REPLACE | | .2 1.0 | | 6 | |
| 03 | ELECTRICAL | | | | | | |
| 0301 | GROUNDROD/STRAP | INSPECT | | .2 | | 1, 5 | E |

SECTION II. MAINTENANCE ALLOCATION CHART - Continued.

| (1) GROUP NUMBER | (2) COMPONENT/ASSEMBLY | (3) MAINTENANCE FUNCTIONS | (4) MAINTENANCE CATEGORY | | | (5) TOOLS AND EQPT | (6) REMARKS |
|------------------------|--|---------------------------------|-----------------------------|-----------------|-------|----------------------------------|----------------|
| | | | AVUM | AVIM | DEPOT | | |
| 04 | SPECIAL BRACKETS AND FABRICATED COMPO- NENTS | | | | | | |
| 0401 | BRACKET, CABINET | INSPECT REPAIR REPLACE | | .1 .5 .3 | | 3, 6 2, 3, 4, 6 2, 3, 4, 6 | C C |
| 0402 | BRACKET, DAVIT CRANE | INSPECT REPAIR REPLACE | | .2 1.2 .3 | | 3, 6 2, 3, 4, 6 2, 3, 4, 6 | C C |
| 0403 | BRACKET ASSEMBLY, STORAGE CHEST | INSPECT REPAIR REPLACE | | .2 1.2 .3 | | 3, 6 2, 3, 4, 6 2, 3, 4, 6 | C C |
| 0404 | RACK ASSEMBLY, BOOK | INSPECT REPAIR REPLACE | | .1 1.0 .5 | | 3, 6 2, 3, 4, 6 2, 3, 4, 6 | C C |
| 0405 | RACK ASSEMBLY, FIRST AIDKIT KIT | INSPECT REPAIR REPLACE | | .1 1.0 .5 | | 3, 6 2, 3, 4, 6 2, 3, 4, 6 | C C |
| 0406 | RACK ASSEMBLY, TOOL BOX | INSPECT REPAIR REPLACE | | .3 2.0 .7 | | 3, 6 2, 3, 4, 6 2, 3, 4, 6 | B,C B,C |
| 0407 | FRAME ASSEMBLY, ECU SUPPORT | INSPECT REPAIR REPLACE | | .2 1.5 .2 | | 3, 6 2, 3, 4, 6 2, 3, 4, 6 | C C |
| 0408 | SECURITY SCREEN, ECU | INSPECT REPAIR REPLACE | | .2 1.0 .2 | | 3, 6 2, 3, 4, 6 2, 3, 4, 6 | C C |
| 05 | FLOOR PLUGS | INSPECT | | .1 | | 6 | |

SECTION III. TOOL AND TEST EQUIPMENT

| (1) TOOL OR TEST EQPT REF CODE | (2) MAINTENANCE CATEGORY | (3) NOMENCLATURE | (4) NATIONAL STOCK NUMBER |
|--------------------------------------|--------------------------------|---|---------------------------------|
| 1 | INTERMEDIATE | MULTIMETER | 6625-01-139-2512 |
| 2 | INTERMEDIATE | SHOP SET, MACHINE | 4920-00-405-9279 |
| 3 | INTERMEDIATE | SHOP SET, TOOL CRIB | 4920-00-472-4183 |
| 4 | INTERMEDIATE | SHOP SET, WELDING | 4920-00-163-5093 |
| 5 | INTERMEDIATE | TOOL KIT, ELECTRICAL REPAIRER ARMY AIRCRAFT | 5180-00-323-4915 |
| 6 | INTERMEDIATE | BASIC ISSUE ITEMS (BII) | |

SECTION IV. REMARKS

| (1) REFERENCE CODE | (2) REMARKS |
|-----------------------|---|
| A. | TORQUE VALUE ON 1/4" BOLTS IS 50-70 INCH POUNDS. |
| B. | TORQUE VALUE ON 5/16" BOLTS IS 100-140 INCH POUNDS. |
| C. | TORQUE VALUE ON 3/8" BOLTS IS 160-190 INCH POUNDS. |
| D. | FOLLOW PROCEDURES IN TM 10-5411-201-14. |
| E. | ELECTRICAL AND GROUND CHECKS TO BE MADE BY QUALIFIED ELECTRICIAN. |

APPENDIX C

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

SECTION I. INTRODUCTION

C-1. SCOPE. This appendix lists Components of End Items (COEI) and Basic Issue Items (BII) for the Turbine Engine Shop to help you inventory items required for safe and efficient operation.

C-2. GENERAL. The components of End Item and Basic Issue Items Lists are divided into the following sections

a. SECTION II. COMPONENTS OF END ITEM. This listing is for informational purposes only, and is not authority to requisition replacements. These items are part of the end item, but are not removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Illustrations are furnished to assist you in identifying the items.

b. SECTION III. Basic Issue Items. These are the minimum essential items required to place the Turbine Engine Shop in operation, to operate it, and to perform emergency repairs. Although shipped separately packed, BII must accompany the Turbine Engine Shop during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to requisition replacement BII based on the TOE/MTOE authorization of the end item.

C-3. EXPLANATION OF COLUMNS. The following provides an explanation of columns found in the tabular

a. Column (1) - Illustration Number (Illus Number). which the item is shown.

b. Column (2) - National Stock Number. Indicates the National Stock Number assigned to the item and will be used for requisitioning purposes.

c. Column (3) - Description. Indicates the Federal Item Name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the CAGEC (in parentheses) followed by the part number.

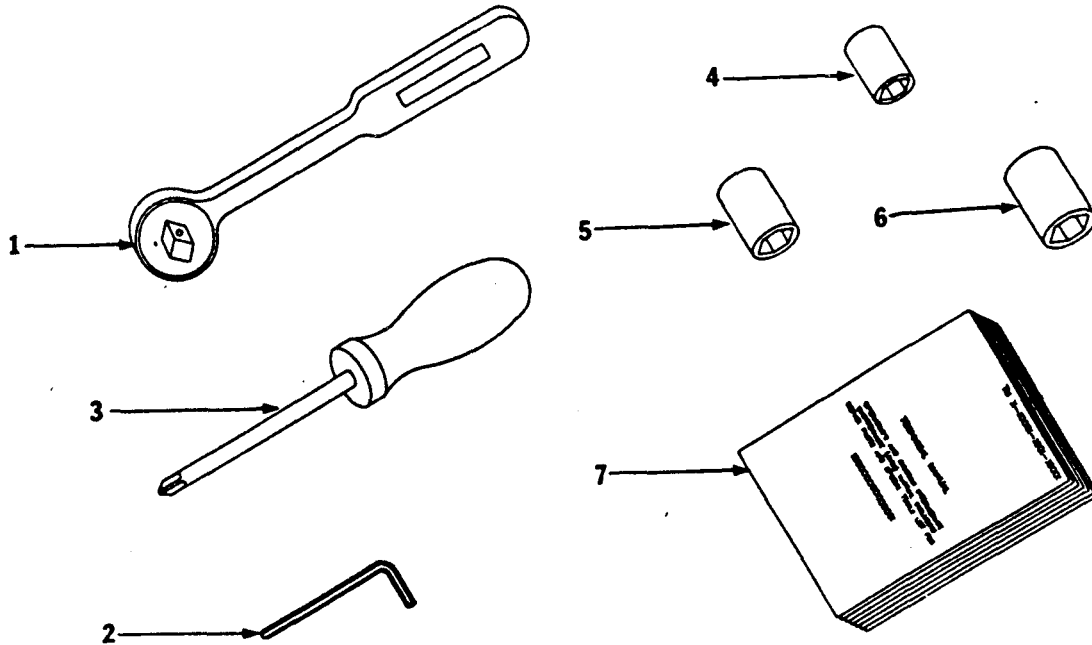
d. Column(4) Unit of Measure (U/M). Indicates the measure used in performing the actual operational/maintenance Function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr)

e. Column (5) - Quantity Required (Qty Rqr). Indicates the quantity of the item authorized to be used with/on the equipment.

SECTION II. COMPONENTS OF END ITEM

There are no components of end items associated with the Turbine Engine Shop.

**SECTION III.
BASIC ISSUE ITEMS (BII)**



| (1) Illus Number | (2) National Stock Number | (3) Description CAGEC and Part Number | (4) U/M | (5) Qty Rqr |
|------------------------|---------------------------------|--|------------|-------------------|
| 1 | 5120-00-240-5364 | Handle, Socket Wrench (81348) | EA | 1 |
| 2 | 5120-00-240-5300 | Key, Socket Head Screw, 3/16" (81348) | EA | 1 |
| 3 | 5120-00-764-8097 | Screwdriver, Crosstip #2 (81348) | EA | 1 |
| 4 | 5120-00-935-7439 | Socket, Socket Wrench 7/16" (81343) | EA | 1 |
| 5 | 5120-00-935-7440 | Socket, Socket Wrench 1/2" (81343) | EA | 1 |
| 6 | 5120-00-935-7441 | Socket, Socket Wrench 9/16" (81343) | EA | 1 |
| 7 | TM 1-4920-454-13&P | Operator's and Intermediate Maintenance Manual including Repair Parts and Special Tools List for Turbine Engine Shop | EA | 1 |

APPENDIX D REPAIR PARTS AND SPECIAL TOOLS LIST

SECTION I. INTRODUCTION

D-1. Scope. This manual 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 Intermediate Maintenance of the Turbine Engine Shop. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the Source, Maintenance, and Recoverable (SMR) codes.

D-2. General. 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 that must be removed for replacement of the authorized parts. Parts lists are composed of fictional groups in ascending numeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in NSN sequence.

b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL for the performance of maintenance.

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

D-3. EXPLANATION OF COLUMNS.

a. Column 1. ILLUSTRATION. Column 1 is divided as follows:

(1) ((a) FIG NO.) Figure Number. Indicates the figure number illustrating an exploded view of a functional group.

(2) ((b) ITEM NO.) Indicates the number used to identify items called out in the illustration.

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

| source Code | Maintenance Code | | Recoverability Code |
|---------------------|---|---|--|
| x x | x | x | x |
| 1st two positions | 3rd position | 4th position | 5th position |
| How you get an item | who can install, replace or use the item. | Who can do complete repair* on the item. | Who determines disposi- tion action on an un-ser- viceable item. |

*Complete repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" fiction 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. Source Codes are always the first two positions of the SMR code. Explanations of source codes follows:

| Code | Explanation |
|--|--|
| PA PB PC PD PE PF PG | Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3rd position of the SMR code. |

| | |
|----------------|--|
| KD KF KB | Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3rd 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 / AVIM Category) MH -(Made at GS Category) MD -(Made at Depot) | Items with these codes are no to be requested/requisitioned individually. They must be made from bulk material which is identified by NSN in the Description column and listed in the hulk Material Group in the repair parts list in this manual. If the item is authorized to you by the 3rd position of the SMR code, but the source code indicates it is made at a higher category, order the item from the higher category of maintenance. |
| AO -(Assembled by org / AWM Category) AF -(Assembled by DS / AVIM Category) AH -(Assembled by GS Category) 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 category of maintenance indicated by the source code. If the 3rd position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher category, order the item from the higher category 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 manufacturers 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, maybe used as a source of supply items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 700-42.

(2) Maintenance Code. Maintenance codes tell you the category(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 youth lowest maintenance category authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following categories of maintenance.

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

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

| Code | Application/Explanation |
|------|---|
| O | Organizational or aviation unit is the lowest category that can do complete repair of the item. |
| F | Direct support or aviation intermediate is the lowest category that can do complete repair of the item. |
| H | General support is the lowest category that can do complete repair of the item. |
| L | Specialized repair activity (designate the specialized repair activity) is the lowest category that can do complete repair of the item. |

| Code | Application/Explanation |
|------|--|
| D | Depot is the lowest category 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 maybe requisitioned by adjusting, lubricating, etc., at the user level. |

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

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

c. Column 3. NATIONAL STOCK NUMBER. Column 3 lists the National stock number (NSN) assigned to the item. Use the NSN for requests/requisitions.

d. Column 4. CAGEC. Column 4, the Contractor's and Government Entity Code (CAGEC) is a 5-digit numeric code which is used to identify the manufacturer, distribute, or Government agency, etc., that supplies the item.

e. Column 5. PART NUMBER. Column 5 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, but go ahead and use or furnish it as the replacement part.

f. Column 6, DESCRIPTION. Column 6 includes the following information:

- (1) **The** Federal item name and, when required, **a** minimum description to identify the item.
- (2) The physical security classification of the item is indicated by the parenthetical entry (insert applicable physical security classification abbreviation, eg., Phy Sec C1 Secret, Phy Sec C1 (T) - Top Secret).
- (3) Items included in kits and sets are listed below the name of the kit or set.
- (4) Spare/repair parts that makeup an assembled item are listed immediately following the assembled item line entry.
- (5) NSNS for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.
- (6) When the item is not used with all serial numbers of the same modes, the effective serial numbers are shown on the last line(s) of the description (UOC).
- (7) The Usable On Code, when applicable.
- (8) **In the Special Tools List section the basis** of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipment supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionally.

g. Column 7, U/M. Column 7, Unit of Measure (U/M) indicates theme inure (e.g., foot, gallon, pound) or count (e.g., each, dozen, gross) of a listed item. A two-character alpha code (e.g., ET, GL, LB, EA DZ, GR) appears in this column to indicate the measure or count. If the U/M code appearing in this column differs from the Unit of Issue (U/I) **code** listed in the Army Master Data File (AMDF), request the lower U/I that will satisfy your needs.

h. Column 8, QTY INC IN UNIT. Column 8, **Quantity** Incorporated in Unit (QTY INC IN UNIT) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a fictional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers).

D-4. 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 fictional group or subfunctional group to which the item belongs. This is necessary since figures are prepared for functional groups and subfunctional groups, and listings are divided into the same groups.
- (2) Second. Find the figure covering the fictional group or subfunctional group to which the item belongs.
- (3) Third. Identify the item on the figure and note the item number of the item.

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

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

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

NSN

*The NIIN consists of the last 9 digits of the NSN. (i.e., 5305-01-674-1467)

NIIN

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

D-7. ABBREVIATIONS. (Not applicable)

SECTION II. REPAIR PARTS LIST

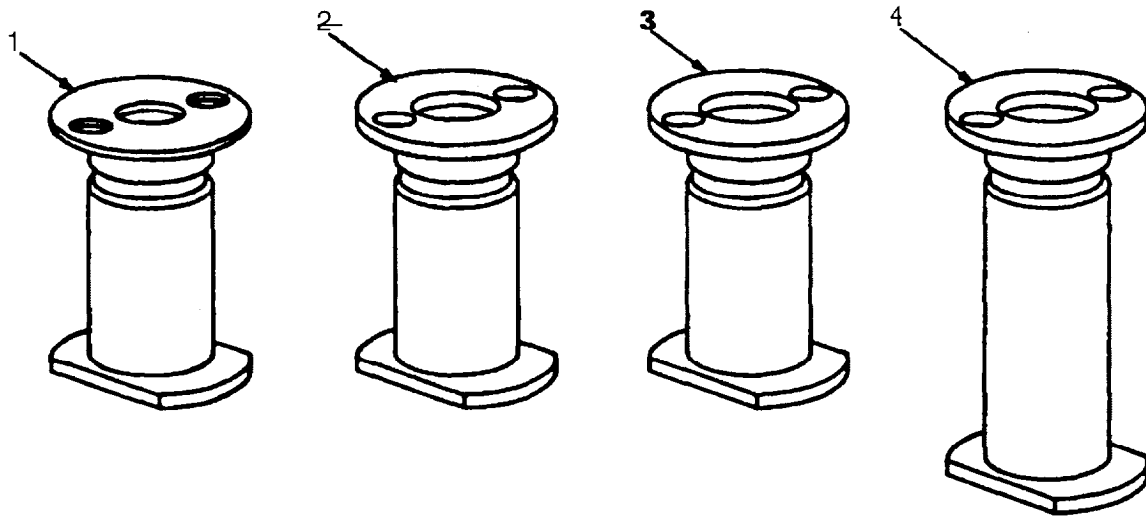


Figure D-1. Potted Inserts

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UN |
| | | | | | | GROUP 01 FASTENERS SUBGROUP 0102 INSERTS,POTTED | | |
| D-1 | 1 | PAFZZ | | 97393 | SL601-4-9C | INSERT,FASTENER | EA | V |
| D-1 | 2 | PAFZZ | | 97393 | SL601-5-10C | INSERT,FASTENER | EA | V |
| D-1 | 3 | PAFZZ | | 97393 | SL601-6-9C | INSERT,FASTENER | EA | V |
| D-1 | 4 | PAFZZ | 5340-00-044-5270 | 97393 | SL601-6-12C | INSERT,FASTENER TYPE | EA | V |

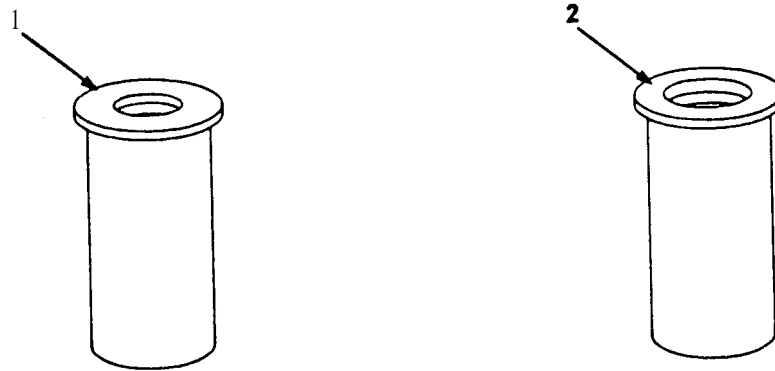


Figure D-2. Non-Potted Inserts

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|--|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| D-2 | | PAFZZ | | 73197 | BN527-624-2-12 | GROUP 01 FASTENERS SUBGROUP 0103 INSERTS, NON-POTTED | EA | V |
| D-2 | 2 | PAFZZ | | 73197 | BN527-524-1-12 | INSERT, NON-POTTED INSERTS, NON-POTTED | EA | V |

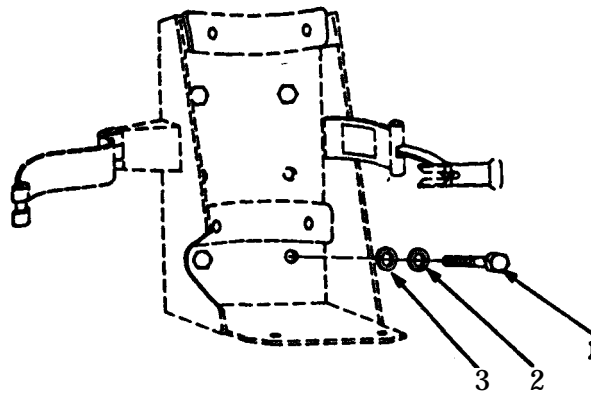


Figure D-3. Fire Extinguisher Mounting

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|--|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| | | | | | | GROUP 02 FIXTURES SUBGROUP 0201 FIRE EXTINGUISHER MOUNTING | | |
| D-3 | 1 | PAFZZ | 5306-00-150-9104 | 88044 | AN5-5A | BOLT, MACHINE | EA | 4 |
| D-3 | 2 | PAFZZ | 5310-00-407-9566 | 99906 | MS35338-45 | WASHER, LOCK | EA | 4 |
| D-3 | 3 | PAFZZ | 5310-00-187-2399 | 88044 | AN980-PD-516 | WASHER, FLAT | EA | 4 |

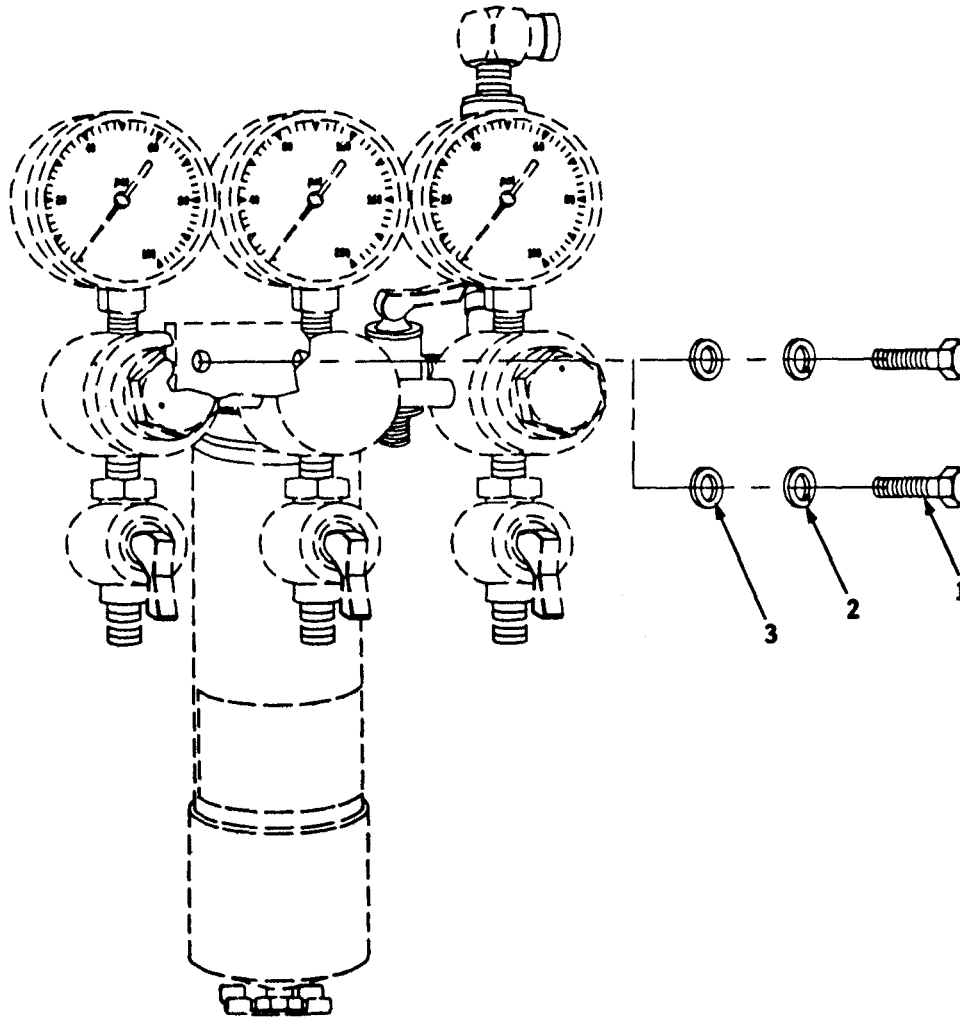


Figure D-4. Water/Oil Separator Mounting

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|------------------------------|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| | | | | | | GROUP 02 FIXTURES | | |
| | | | | | | SUBGROUP 0202 | | |
| | | | | | | WATER/OIL SEPARATOR MOUNTING | | |
| D-4 | 1 | PAFZZ | 5306-00-151-1427 | 88044 | AN4-5A | BOLT, MACHINE | EA | 2 |
| D-4 | 2 | PAFZZ | 5310-00-582-5065 | 96906 | MS35338-44 | WASHER, LOCK | EA | 2 |
| D-4 | 3 | PAFZZ | 5310-00-187-2354 | 88044 | AN960-PD-416 | WASHER, FLAT | EA | 2 |
| | | | | | | ALTERNATE MOUNTING | | |
| D-5 | 1 | PAFZZ | 5306-00-150-9104 | 88044 | AN5-5A | BOLT, MACHINE | EA | 1 |
| D-5 | 2 | PAFZZ | 5310-00-407-9568 | 96906 | MS35338-45 | WASHER, LOCK | EA | 1 |
| D-5 | 3 | PAFZZ | 5310-00-187-2399 | 88044 | AN960-PD-516 | WASHER, FLAT | EA | 1 |

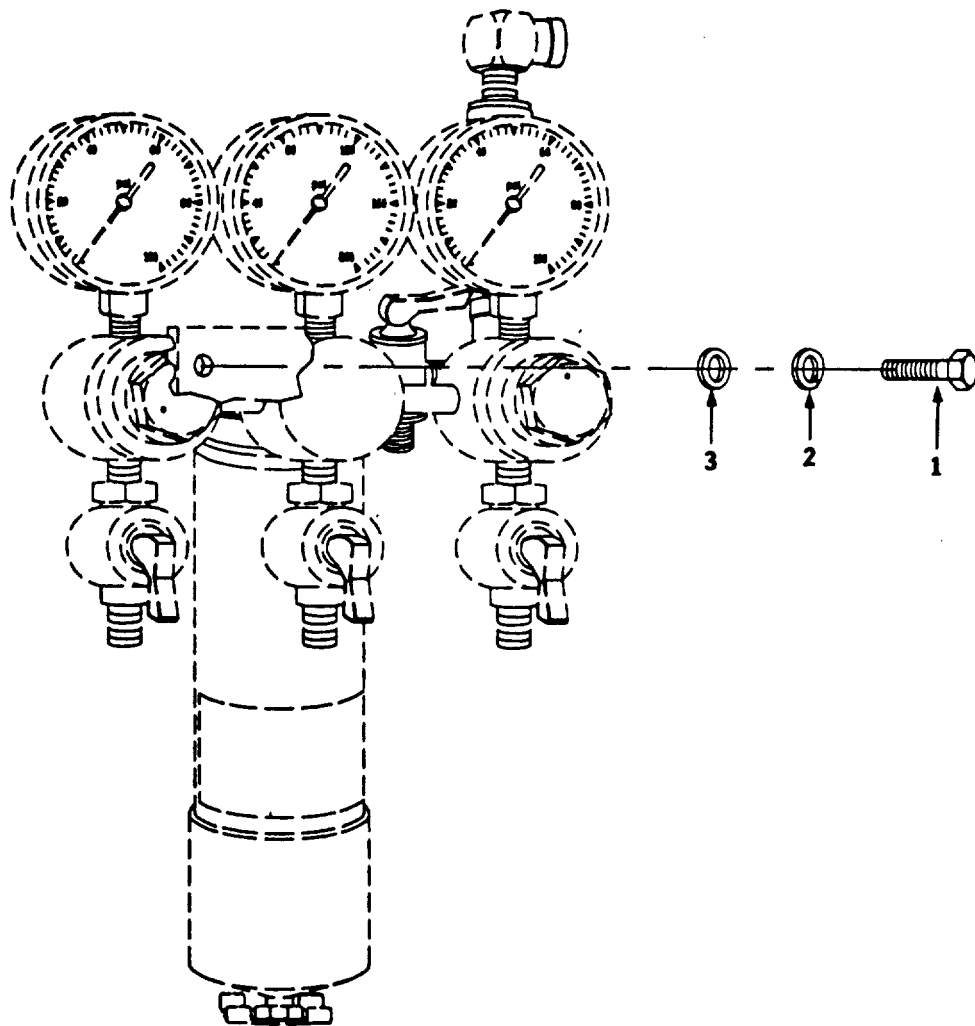


Figure D-5. Alternate Water/Oil Separator Mounting

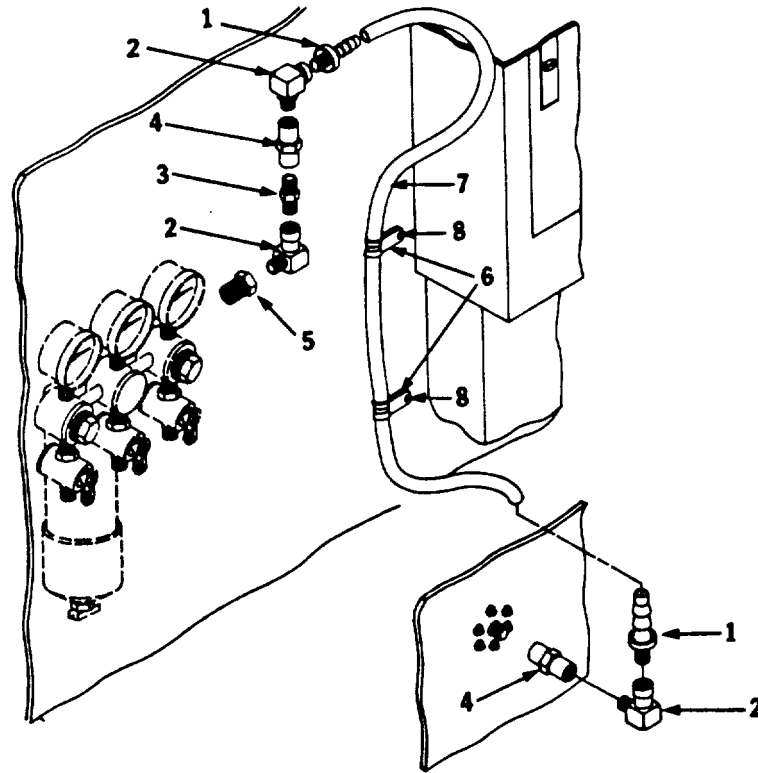


Figure D-6. Fittings and Air Hose Assy

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN JNIT |
| | | | | | | GROUP 02 FIXTURES SUBGROUP 0203 WATER/OIL SEPARATOR FITTINGS AND AIRHOSE ASSY | | |
| D-6 | 1 | PAFZZ | 4730-00-932-7511 | 00624 | 4738-4-6 | FITTING, HOSE | EA | 2 |
| D-6 | 2 | PAFZZ | 4730-00-595-0385 | 79470 | C3409X4 | ELBOW, PIPE | EA | 3 |
| D-6 | 3 | PAFZZ | 4730-00-287-1589 | 03958 | 896WM | NIPPLE, PIPE | EA | 1 |
| D-6 | 4 | PAFZZ | 4730-00-541-8286 | 88044 | AN9102C | COUPLING, PIPE | EA | 2 |
| D-6 | 5 | PAFZZ | 4730-00-277-1896 | 96906 | MS14315-5X | BUSHING, PIPE | EA | 1 |
| D-6 | 6 | PAFZZ | 5340-00-565-0004 | 88044 | AN742-12CB | CLAMP, LOOP | EA | 2 |
| D-6 | 7 | PAFZZ | | | | HOSE, NON-METALLIC (SEE GROUP 09) | | |
| D-6 | 8 | PAFZZ | 5305-00-477-0120 | 96906 | MS51861-46C | SCREW, TAPPING THREAD | EA | 2 |

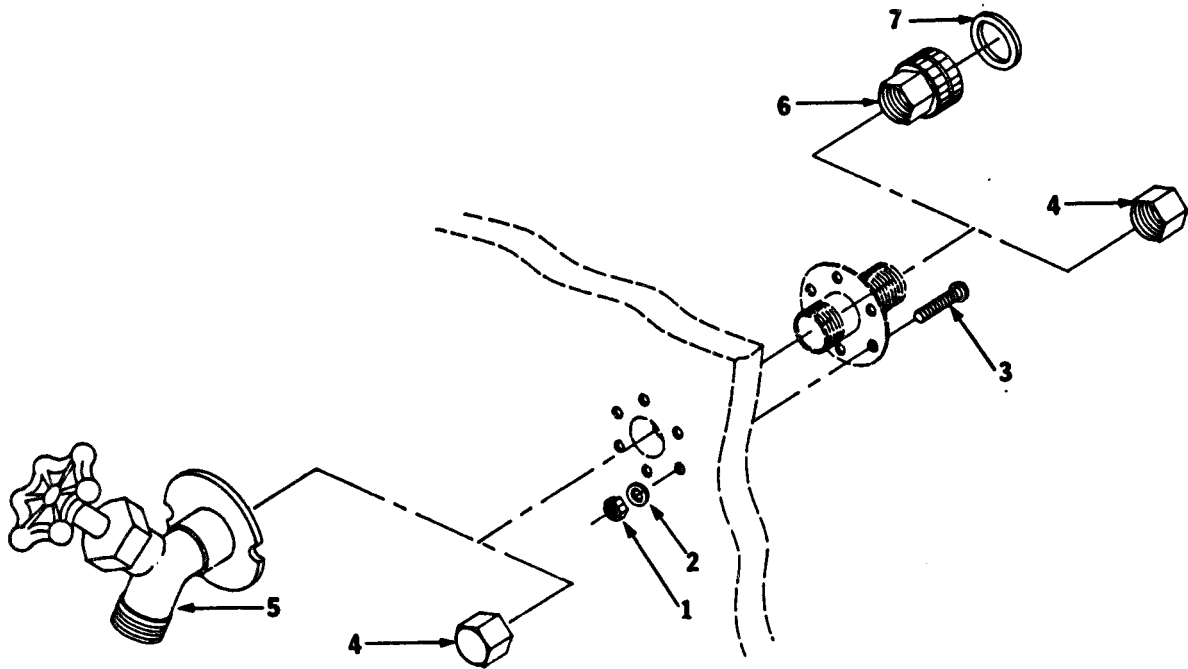


Figure D-7. Water Feed Thru Connector

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|-------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNF |
| | | | | | | GROUP 02 FIXTURES SUBGROUP 0204 WATER FEED THRU CONNECTOR SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS FOR DETAILED DRAWING | | |
| D-7 | 1 | PAFZZ | 5310-00-934-9751 | 19422 | BM12297-06 | NUT PLAIN, HEX | EA | 6 |
| D-7 | 2 | PAFZZ | 5310-00-167-0834 | 59875 | TX90790-34 | WASHER, FLAT | EA | 6 |
| D-7 | 3 | PAFZZ | 5310-00-082-8780 | 28977 | AA52525-24 | SCREW, MACHINE | EA | 6 |
| D-7 | 4 | PAFZZ | 4730-00-724-1908 | 38148 | WW-P-460 | CAP, PIPE | EA | 2 |
| D-7 | 5 | PAFZZ | 4510-00-142-1619 | 58536 | A-A-232 | FAUCET, SINGLE | EA | 1 |
| D-7 | 6 | PAFZZ | 4730-00-547-0941 | 30838 | FIG1820-1 | ADAPTER, STRAIGHT | EA | 1 |
| D-7 | 7 | PAFZZ | 5310-00-599-0776 | | NO REF | WASHER, FLAT | EA | 1 |

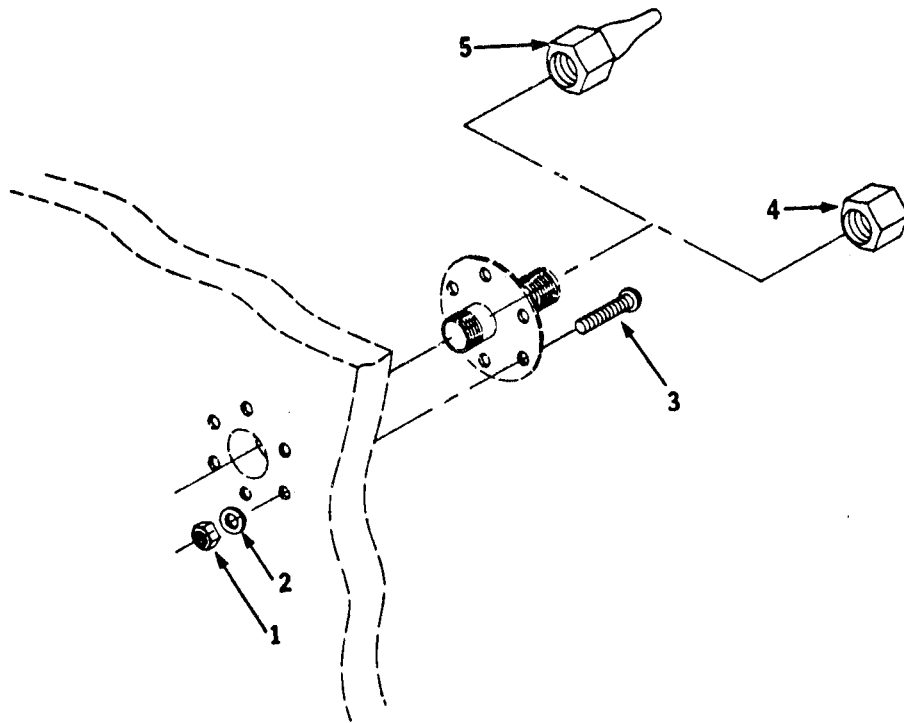


Figure D-8. Air Feed Thru Connector

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|--|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| | | | | | | GROUP 02 FIXTURES SUBGROUP 0205 AIR FEED THRU CONNECTOR SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS FOR DETAILED DRAWING | | |
| D-8 | 1 | PAFZZ | 5310-00-934-9751 | 19422 | BM12297-06 | NUT PLAIN, HEX | EA | 6 |
| D-8 | 2 | PAFZZ | 5310-00-167-0834 | 59875 | TX90790-34 | WASHER, FLAT | EA | 6 |
| D-8 | 3 | PAFZZ | 5310-00-082-6780 | 28977 | AA52525-24 | SCREW, MACHINE | EA | 6 |
| D-8 | 4 | PAFZZ | 4730-00-203-3188 | 81348 | WW-P-521 | CAP, PIPE | EA | 2 |
| D-8 | 5 | PAFZZ | 4730-00-142-1960 | 14127 | SHD11 | COUPLING HALF, QUICK | EA | 1 |

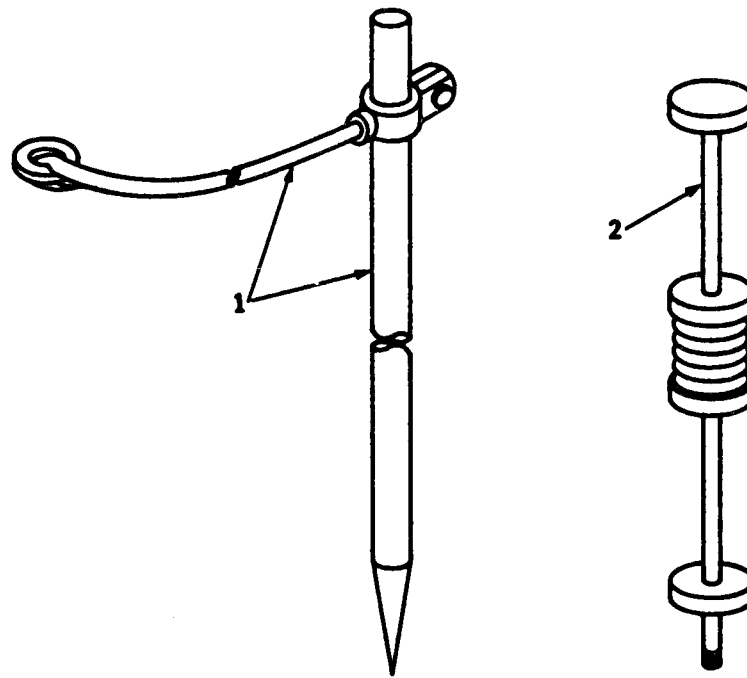


Figure D-9. Ground Rod/Strap

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| D-9 | 1 | PAFZZ | 5875-00-878-3791 | 81349 | MIL-R-11481 | GROUP 03 ELECTRICAL SUBGROUP0301 GROUND ROD/STRAP | EA | 1 |
| D-9 | 2 | PAFZZ | 5120-01-013-1876 | 45225 | P74-144 | GROUND ROD/STRAP SLIDEHAMMER,GROUND | EA | 1 |

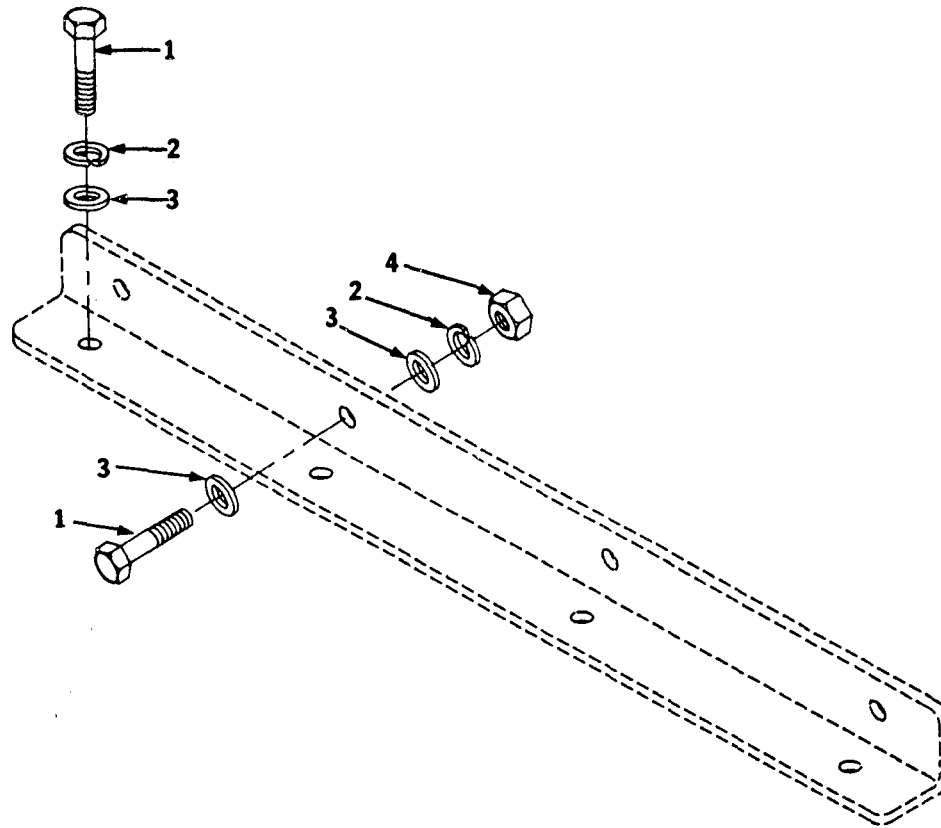


Figure D-10. Cabinet Bracket

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | L/M | QTY INC IN UNIT |
| | | | | | | GROUP 4 SPECIAL BRACKETS AND FABRICATED COMPONENTS SUBGROUP 0401 BRACKET, CABINET SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS, FOR DETAILED DRAWING | | |
| D-10 | 1 | PAFZZ | 5306-00-531-8979 | 88044 | AN6-7A | BOLT, MACHINE | EA | 8 |
| D-10 | 2 | PAFZZ | 5310-00-637-9541 | 96906 | MS35338-46 | WASHER, LOCK | EA | 8 |
| D-10 | 3 | PAFZZ | 5310-00-187-2400 | 88044 | AN960PD-616 | WASHER, FLAT | EA | 12 |
| D-10 | 4 | PAFZZ | 5810-00-058-1626 | 96906 | MS35650-3382 | NUT | EA | 4 |

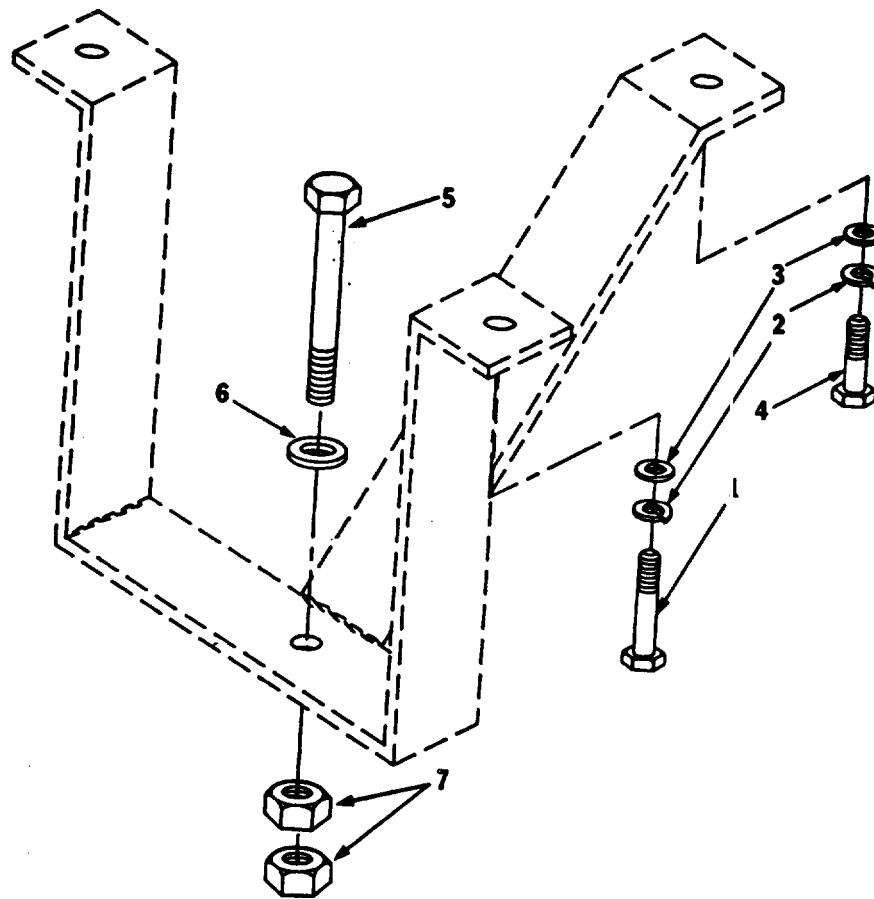


Figure D-11. Davit Crane Bracket

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| | | | | | | GROUP 4 SPECIAL BRACKETS AND FABRICATED COMPONENTS SUBGROUP 0402 BRACKET, DAVIT CRANE SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS, FOR DETAILED DRAWING | | |
| D-11 | 1 | PAFZZ | 5306-00-180-1485 | 88044 | AN6-13A | BOLT, MACHINE | EA | 2 |
| D-11 | 2 | PAFZZ | 5310-00-637-9541 | 98906 | MS35338-48 | WASHER, LOCK | EA | 3 |
| D-11 | 3 | PAFZZ | 5310-00-187-2400 | 88044 | AN980-PD-616 | WASHER, FLAT | EA | 3 |
| D-11 | 4 | PAFZZ | 5306-00-531-8979 | 88044 | AN6-7A | BOLT, MACHINE | EA | 1 |
| D-11 | 5 | PAFZZ | 5306-00-180-1750 | 88044 | AN9-23A | BOLT, MACHINE | EA | 1 |
| D-11 | 6 | PAFZZ | 5310-00-167-0680 | 98906 | MS35338-48 | WASHER, LOCK | EA | 1 |
| D-11 | 7 | PAFZZ | 5310-00-927-7409 | 98906 | MS35891-48 | NUT PLAIN, HEX | EA | 2 |

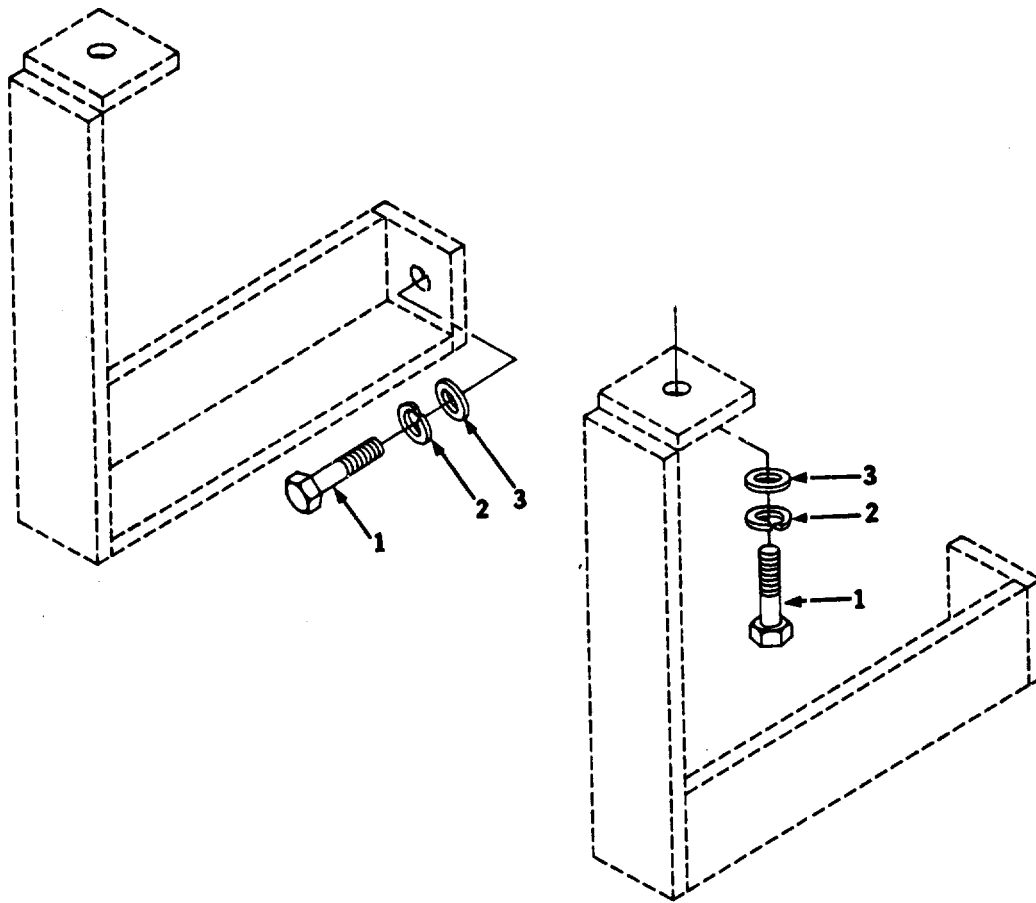


Figure D-12. Storage Chest Bracket Assemblies

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|--|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN INIT |
| | | | | | | GROUP 4 SPECIAL BRACKETS AND FABRICATED COMPONENTS SUBGROUP 0403 BRACKET ASSEMBLY, STORAGE CHEST, R/H AND L/H SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS, FOR DETAILED DRAWING | | |
| D-12 | 1 | PAFZZ | 5306-00-616-1224 | 88044 | AN6-6A | BOLT, MACHINE | EA | 4 |
| D-12 | 2 | PAFZZ | 5310-00-637-9541 | 98906 | MS35338-46 | WASHER, LOCK | EA | 4 |
| D-12 | 3 | PAFZZ | 5310-00-187-2400 | 88044 | AN980-PD-816 | WASHER, FLAT | EA | 4 |

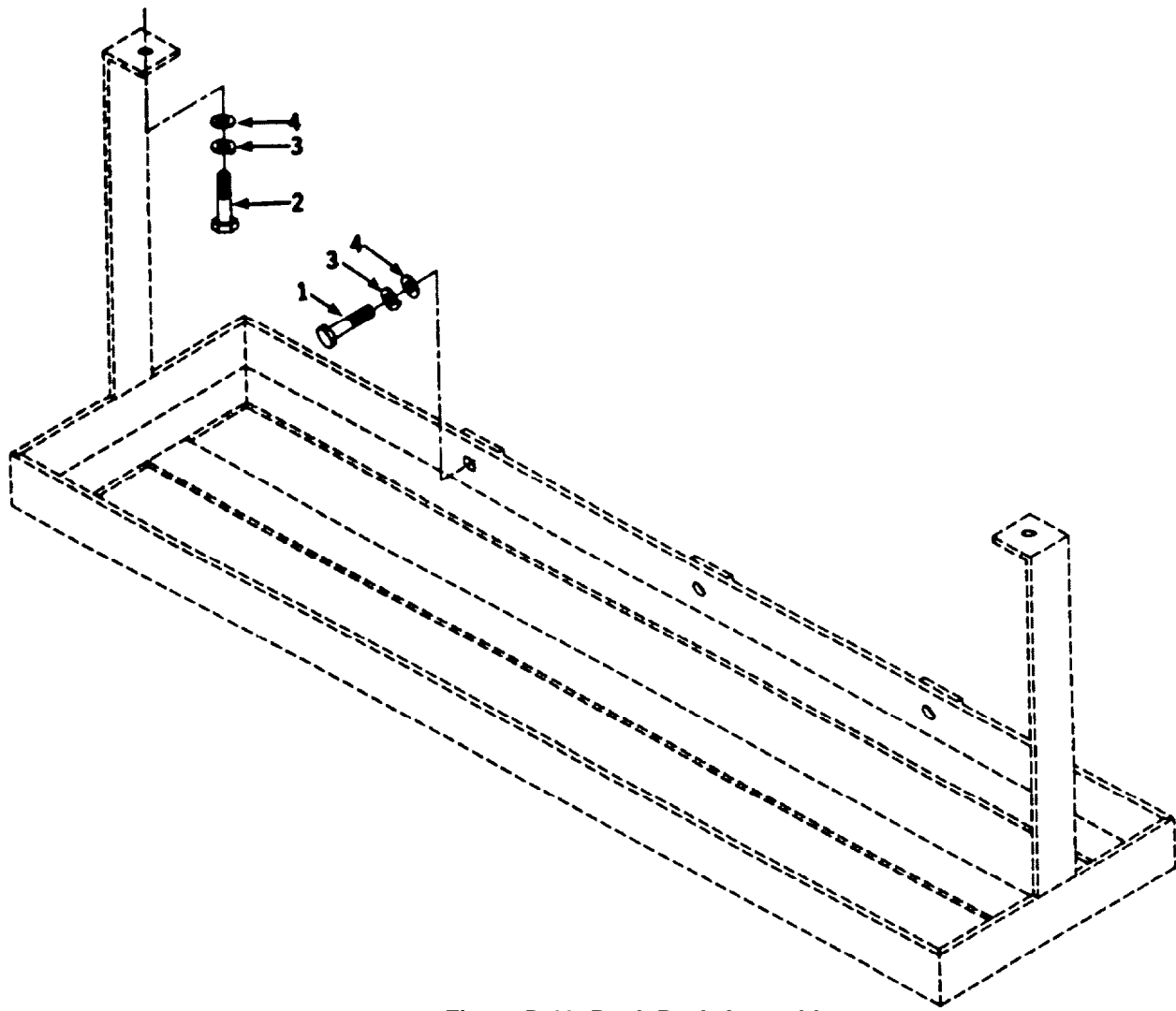


Figure D-13. Book Rack Assembly

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|--|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| | | | | | | GROUP 4 SPECIAL BRACKET AND FABRICATED COMPONENT SUBGROUP 0404 RACK ASSEMBLY, BOOK SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS, FOR DETAILED DRAWING | | |
| D-13 | 1 | PAFZZ | 5306-00-616-1224 | 88044 | AN6-6A | BOLT, MACHINE | EA | 2 |
| D-13 | 2 | PAFZZ | 5306-00-180-1483 | 88044 | AN6-11A | BOLT, MACHINE | EA | 3 |
| D-13 | 3 | PAFZZ | 5310-00-637-9541 | 96906 | MS35338-46 | WASHER, LOCK | EA | 5 |
| D-13 | 4 | PAFZZ | 5310-00-187-2400 | 88044 | AN960-PD-616 | WASHER, FLAT | EA | 5 |

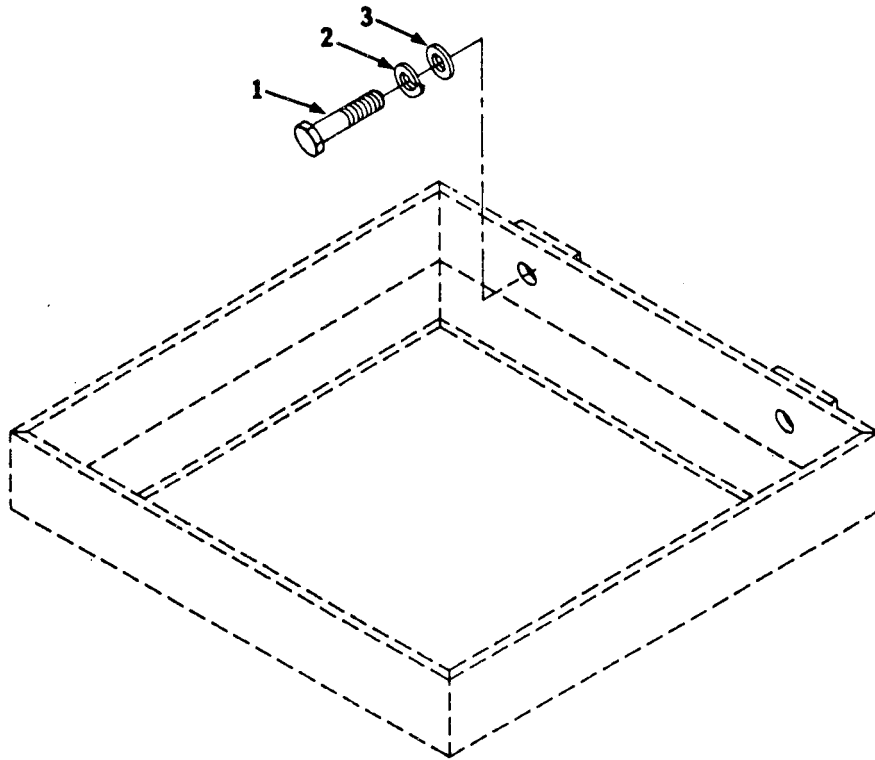


Figure D-14. First Aid Kit Rack Assembly

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN INIT |
| | | | | | | GROUP 4 SPECIAL BRACKETS AND FABRICATED COMPONENTS SUBGROUP 0405 RACK ASSEMBLY, FIRST AID KIT SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS, FOR DETAILED DRAWING | | |
| D-14 | 1 | PAFZZ | 5306-00-180-1483 | 88044 | AN6-11A | BOLT, MACHINE | EA | 2 |
| D-14 | 2 | PAFZZ | 531 0-00-637-9541 | 96906 | MS35338-46 | WASHER, LOCK | EA | 2 |
| D-14 | 3 | PAFZZ | 531 0-00-187-2400 | 88044 | AN960-PD-616 | WASHER, FLAT | EA | 2 |

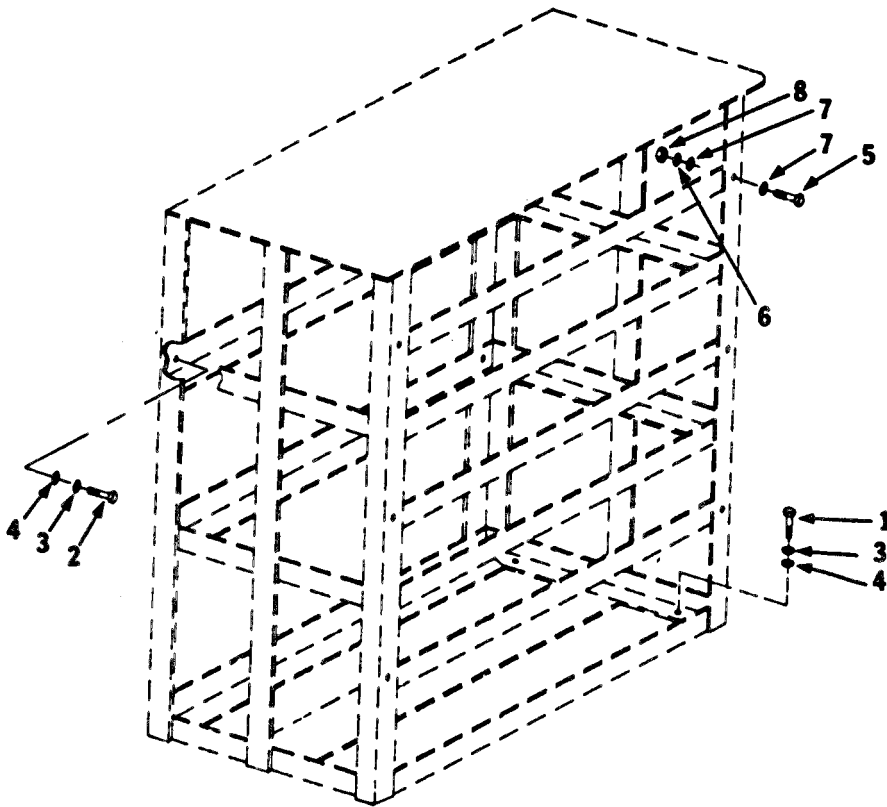


Figure D-15. Tool Box Rack Assembly

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|--|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN JNIT |
| | | | | | | GROUP 04 SPECIAL BRACKETS AND FABRICATED COMPONENTS SUBGROUP 0406 RACK ASSEMBLY, TOOL BOX SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS FOR DETAILED DRAWING | | |
| D-15 | 1 | PAFZZ | 5306-00-616-1224 | 88044 | AN6-6A | BOLT, MACHINE | EA | 4 |
| D-15 | 2 | PAFZZ | 5306-00-180-1483 | 88044 | AN6-11A | BOLT, MACHINE | EA | 4 |
| D-15 | 3 | PAFZZ | 5310-00-637-9541 | 96906 | MS35338-48 | WASHER, LOCK | EA | 8 |
| D-15 | 4 | PAFZZ | 5310-00-187-2400 | 88044 | AN980-PD-616 | WASHER, FLAT | EA | 8 |
| D-15 | 6 | PAFZZ | 5306-00-145-7036 | 88044 | AN5-10A | BOLT, MACHINE | EA | 6 |
| D-15 | 6 | PAFZZ | 5310-00-407-9566 | 96906 | MS35338-45 | WASHER, LOCK | EA | 6 |
| D-15 | 7 | PAFZZ | 5310-00-187-2399 | 88044 | AN980-PD-516 | WASHER, FLAT | EA | 12 |
| D-15 | 8 | PAFZZ | 5310-00-054-4892 | 96906 | MS35650-3312 | NUT | EA | 6 |

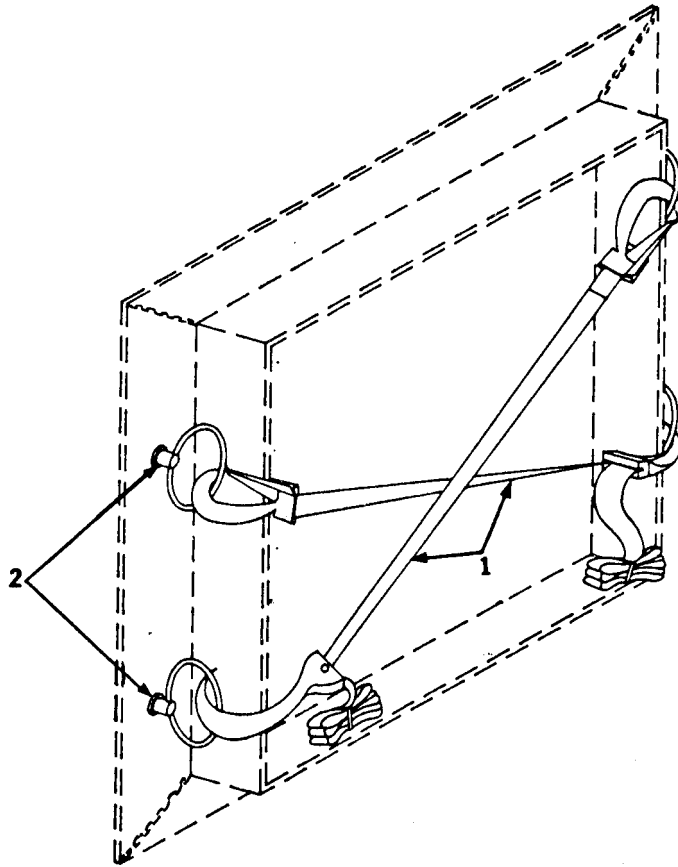


Figure D-16. ECU Support Frame Assembly

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|---------------------------|--|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| | | | | | | GROUP 4 SPECIAL BRACKETS AND FABRICATED COMPONENTS SUBGROUP 0407 FRAME ASSEMBLY. ECU SUPPORT SEE APPENDIX F, ILLUSTRATED LIST OF MANUFACTURED ITEMS, FOR DETAILED DRAWING | | |
| D-16 | 1 | PAFZZ | 1670-00-725-1437 | 81348 | MIL-T-27260 TYPE CGU1B | TIE DOWN, CARGO | EA | 4 |
| D-16 | 2 | PAFZZ | 5306-00-624-9713 | 98313 | FDA 1658-3 | BOLT, RING | EA | 8 |

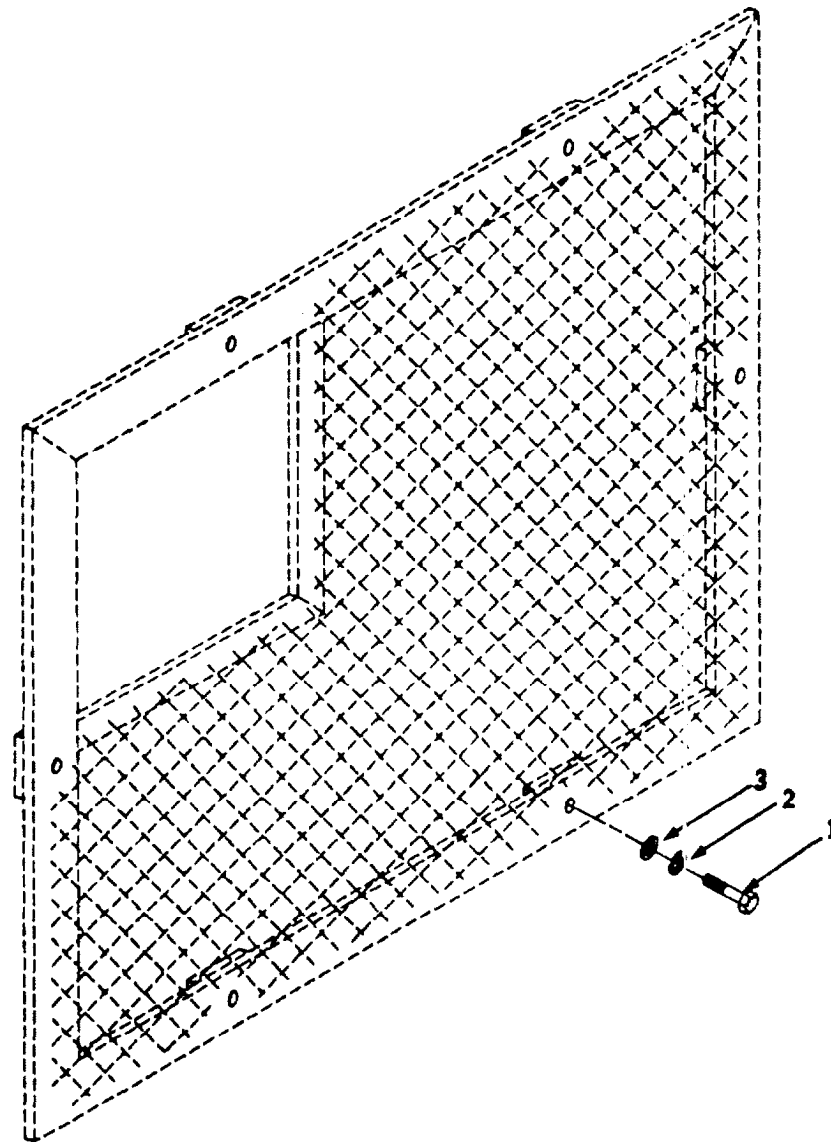


Figure D-17. ECU Security Screen

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) DESCRIPTION | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|-------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | | U/M | QTY INC IN KIT |
| | | | | | | GROUP 4 SPECIAL BRACKET AND FABRICATED COMPONENT SUBGROUP 0408 SECURITY SCREEN,ECU SEE APPENDIX,ILLUSTRATED LIST OF MANUFAC- TURED ITEMS,FOR DETAILED DRAWING | | |
| D-17 | 1 | PAFZZ | 5306-00-180-1483 | 88044 | AN6-11A | BOLT,MACHINE | EA | 6 |
| D-17 | 2 | PAFZZ | 5310-00-637-9541 | 96906 | MS35338-46 | WASHER,LOCK | EA | 6 |
| D-17 | 3 | PAFZZ | 5310-00-187-2400 | 88044 | AN960-PD-616 | WASHER,FLAT | EA | 6 |

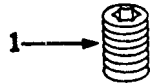


Figure D-18. Floor Plug

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|-------------|-----------------------------|-------|----------------|---|-----|--------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | U/M | QTY INC IN UNIT |
| D-18 | 1 | PAFZZ | 5305-00-728-6350 | 96906 | MS51966-90 | GROUP 5 FLOOR PLUG INSERTS SCREW, SET | EA | V |

| (1) ILLUSTRATION | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------------------|--------------------|------------------|-----------------------------|--------------|-------------------------|------------------------|--------------------------|
| (A) FIG NO. | (B) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | CAGEC | PART NUMBER | DESCRIPTION | QTY INC IN UNIT |
| | | | | | | GROUP 99 BULK MATERIAL | |
| BULK | PAFZZ | 4720-00-402-9511 | 05415 | 134MKC1 | HOSE | FT | V |
| BULK | PAFZZ | | 81337 | MIL-M-17199C | EXPANDED ALUMINUM SHEET | SH | V |
| BULK | PAFZZ | 9530-00-237-0721 | 81348 | QQ-A-200/8 | METAL BAR | FT | V |
| BULK | PAFZZ | 9530-00-228-9315 | 81348 | QQ-A-200/8 | METAL BAR | FT | V |
| BULK | PAFZZ | 9530-00-228-9316 | 81348 | QQ-A-200/8 | METAL BAR | FT | V |
| BULK | PAFZZ | 9510-00-528-7518 | 81349 | MIL-S-6758 | METAL BAR | FT | V |
| BULK | PAFZZ | 9535-00-231-8230 | 81348 | QQ-A-250/11 | METAL SHEET | SH | V |
| BULK | PAFZZ | 9515-00-141-8066 | 81346 | ASTM A366 | SHEET STEEL | SH | V |
| BULK | PAFZZ | 9540-00-197-9850 | 01634 | QQ-A-200/8 | STUCTURAL ANGLE | FT | V |

SECTION III. SPECIAL TOOLS LIST (NOT APPLICABLE)

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

| STOCK NUMBER | FIGURE NO | ITEM NO | STOCK NUMBER | FIGURE NO | ITEM NO |
|------------------|-----------|---------|------------------|-----------|---------|
| 5120-01-013-1676 | D-09 | 2 | 9535-00-231-8230 | BULK | |
| 5340-00-044-5270 | D-01 | 4 | 9530-00-237-0721 | BULK | |
| 5310-00-054-4892 | D-15 | 8 | 4730-00-277-1896 | D-06 | 5 |
| 5310-00-058-1626 | D-10 | 4 | 4730-00-287-1589 | D-06 | 3 |
| 5310-00-082-6780 | D-07 | 3 | 4720-00-402-9511 | BULK | |
| 5310-00-082-6780 | D-08 | 3 | 5310-00-407-9566 | D-03 | 2 |
| 9515-00-141-8066 | BULK | | 5310-00-407-9566 | D-05 | 2 |
| 4510-00-142-1619 | D-07 | 5 | 5310-00-407-9566 | D-15 | 6 |
| 4730-00-142-1960 | D-08 | 5 | 5305-00-477-0120 | D-06 | 8 |
| 5306-00-145-7036 | D-15 | 5 | 5306-00-528-7518 | BULK | |
| 5306-00-150-9104 | D-03 | 1 | 5306-00-531-8979 | D-10 | 1 |
| 5306-00-150-9104 | D-05 | 1 | 5306-00-531-8979 | D-11 | 4 |
| 5306-00-151-1427 | D-04 | 1 | 4730-00-541-8286 | D-06 | 4 |
| 5310-00-167-0680 | D-11 | 6 | 4730-00-547-0941 | D-07 | 6 |
| 5310-00-167-0834 | D-07 | 2 | 5340-00-565-0004 | D-06 | 6 |
| 5310-00-167-0834 | D-08 | 2 | 5310-00-582-5965 | D-04 | 2 |
| 5310-00-180-1483 | D-13 | 2 | 4730-00-595-0385 | D-06 | 2 |
| 5306-00-180-1483 | D-14 | 1 | 5310-00-599-0776 | D-07 | 7 |
| 5306-00-180-1483 | D-15 | 2 | 5306-00-616-1224 | D-12 | 1 |
| 5306-00-180-1483 | D-17 | 1 | 5306-00-616-1224 | D-13 | 1 |
| 5310-00-180-1485 | D-11 | 1 | 5306-00-616-1224 | D-15 | 1 |
| 5306-00-180-1750 | D-11 | 5 | 5306-00-624-9713 | D-16 | 2 |
| 5310-00-187-2354 | D-04 | 3 | 5310-00-637-9541 | D-10 | 2 |
| 5310-00-187-2399 | D-03 | 3 | 5310-00-637-9541 | D-11 | 2 |
| 5310-00-187-2399 | D-05 | 3 | 5310-00-637-9541 | D-12 | 2 |
| 5310-00-187-2399 | D-15 | 7 | 5310-00-637-9541 | D-13 | 3 |
| 5310-00-187-2400 | D-10 | 3 | 5310-00-637-9541 | D-14 | 2 |
| 5310-00-187-2400 | D-11 | 3 | 5310-00-637-9541 | D-15 | 3 |
| 5310-00-187-2400 | D-12 | 3 | 5310-00-637-9541 | D-17 | 2 |
| 5310-00-187-2400 | D-13 | 4 | 4730-00-724-1998 | D-07 | 4 |
| 5310-00-187-2400 | D-14 | 3 | 1670-00-725-1437 | D-16 | 1 |
| 5310-00-187-2400 | D-15 | 4 | 5305-00-728-6350 | D-18 | 1 |
| 5310-00-186-2400 | D-17 | 3 | 5975-00-878-3791 | D-09 | 1 |
| 9540-00-197-9850 | BULK | | 5310-00-927-7409 | D-11 | 7 |
| 4730-00-203-3168 | D-08 | 4 | 4730-00-932-7511 | D-06 | 1 |
| 9530-00-228-9315 | BULK | | 5310-00-934-9751 | D-07 | 1 |
| 9530-00-228-9316 | BULK | | 5310-00-934-9751 | D-08 | 1 |

PART NUMBER INDEX

| CAGEC | PART NO. | FIG NO. | ITEM NO. | CAGEC | PART NO. | FIG NO. | ITEM NO. |
|-------|----------------|---------|----------|-------|--------------|---------|----------|
| 58536 | A-A-232 | D-07 | 5 | 81349 | MIL-T-27260 | | |
| 28977 | AA52525-24 | D-07 | 3 | | TYPECGUIB | D-16 | 1 |
| 28977 | AA52525-24 | D-08 | 3 | 81337 | MIL-M-17199C | BULK | |
| 88044 | AN4-5A | D-04 | 1 | 81349 | MIL-R-11461 | D-09 | 1 |
| 88044 | AN5-10A | D-15 | 5 | 96906 | MS14315-5X | D-06 | 5 |
| 88044 | AN5-5A | D-03 | 1 | 96906 | MS35338-44 | D-04 | 2 |
| 88044 | AN5-5A | D-05 | 1 | 96906 | MS35338-45 | D-03 | 2 |
| 88044 | AN6-6A | D-12 | 1 | 96906 | MS35338-45 | D-05 | 2 |
| 88044 | AN6-6A | D-13 | 1 | 96906 | MS35338-45 | D-15 | 6 |
| 88044 | AN6-6A | D-15 | 1 | 96906 | MS35338-46 | D-10 | 2 |
| 88044 | AN6-7A | D-10 | 1 | 96906 | MS35338-46 | D-11 | 2 |
| 88044 | AN6-7A | D-11 | 4 | 96906 | MS35338-46 | D-12 | 2 |
| 88044 | AN6-11A | D-13 | 2 | 96906 | MS35338-46 | D-13 | 3 |
| 88044 | AN6-11A | D-14 | 1 | 96906 | MS35338-46 | D-14 | 2 |
| 88044 | AN6-11A | D-15 | 2 | 96906 | MS35338-46 | D-15 | 3 |
| 88044 | AN6-11A | D-17 | 1 | 96906 | MS35338-46 | D-17 | 2 |
| 88044 | AN6-13A | D-11 | 1 | 96906 | MS35338-49 | D-11 | 6 |
| 88044 | AN742-12CB | D-06 | 6 | 96906 | MS35650-3312 | D-15 | 8 |
| 88044 | AN9102C | D-06 | 4 | 96906 | MS35650-3382 | D-10 | 4 |
| 88044 | AN9-23A | D-11 | 5 | 96906 | MS35691-46 | D-11 | 7 |
| 88044 | AN960-PD-416 | D-04 | 3 | 96906 | MS51861-46C | D-06 | 8 |
| 88044 | AN960-PD-516 | D-03 | 3 | 96906 | MS51966-90 | D-18 | 1 |
| 88044 | AN960-PD-516 | D-05 | 3 | 45225 | P74-144 | D-09 | 2 |
| 88044 | AN960-PD-516 | D-15 | 7 | 81348 | QQ-A-200/8 | BULK | |
| 88044 | AN960-PD-616 | D-10 | 3 | 01634 | QQ-A-200/8 | BULK | |
| 88044 | AN960-PD-616 | D-11 | 3 | 81348 | QQ-A-250/11 | BULK | |
| 88044 | AN960-PD-616 | D-12 | 3 | 14127 | SHD11 | D-08 | 5 |
| 88044 | AN960-PD-616 | D-13 | 4 | 97393 | SL601-4-8C | D-01 | 1 |
| 88044 | AN960-PD-616 | D-14 | 3 | 97393 | SL601-5-10C | D-01 | 2 |
| 88044 | AN960-PD-616 | D-15 | 4 | 97393 | SL601-6-8C | D-01 | 3 |
| 88044 | AN960-PD-616 | D-17 | 3 | 97393 | SL601-6-12C | D-01 | 4 |
| 81346 | ASTM A366 | BULK | | 59875 | TX90790-34 | D-07 | 2 |
| 19422 | BM12297-06 | D-08 | 1 | 59875 | TX90790-34 | D-08 | 2 |
| 19422 | BM12297-06 | D-07 | 1 | 81348 | WW-P-460 | D-07 | 4 |
| 73197 | BN527-624-2-12 | D-02 | 1 | 81348 | WW-P-521 | D-08 | 4 |
| 73197 | BN527-524-1-12 | D-02 | 2 | 05415 | 134MKC1 | BULK | |
| 79470 | C3409X4 | D-06 | 2 | 00624 | 4738-4-6 | D-06 | 1 |
| 98313 | FDA 1658-3 | D-16 | 2 | 03958 | 896WM | D-06 | 3 |
| 30938 | FIG 1620-1 | D-07 | 6 | | | | |

**APPENDIX E
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST**

E-1. Scope This appendix lists expendable/durable supplies and materials you will need to operate and maintain the Turbine Engine Shop. This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

E-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 corrosion prevention components (item 1, app. E)").

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

AVIM - Aviation Intermediate Maintenance

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

d. Column 4 - Description. Indicates Federal item name and, if required, a description to identify the item. The last line for each item indicates the Contractor and Government Entity Code (CAGEC) in parentheses followed by the part number.

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

| (1) ITEM NO. | (2) LEVEL | (3) NATIONAL STOCK NUMBER | (4) DESCRIPTION, PART NO. AND CAGEC | (5) U/M |
|--------------------|--------------|---------------------------------|---|------------|
| 1 | AVIM | 8040-00-270-8137 | ADHESIVE, (81348) MMM-A-134 | TU |
| 2 | AVIM | 8040-00-877-9872 | ADHESIVE, (81349) MIL-A-46106 | TU |
| 3 | AVIM | 8015-00-271-1511 | BAG, COTTON, MAILING (81348) PPP-B-20 | BD |
| 4 | AVIM | 8010-00-852-9034 | ENAMEL, GRAY (81348) 16187 | PT |
| 5 | AVIM | 8010-00-159-4520 | ENAMEL, WHITE (81348) 17773 | PT |
| 6 | AVIM | 8010-00-297-0593 | PRIMER, COATING (81348) TT-P-1757 | PT |
| 7 | AVIM | 3439-00-063-5200 | ROD, WELDING (81348) 5356 | LB |

APPENDIX F

ILLUSTRATED LIST OF MANUFACTURED ITEMS

F-1. Scope. This appendix includes simplified line drawing illustrations for each item authorized to be manufactured/fabricated, modified or mounted by Aviation Intermediate Maintenance personnel.

F-2. Introduction.

a. This appendix includes complete instructions for making items authorized to be manufactured or fabricated at Aviation Intermediate Maintenance.

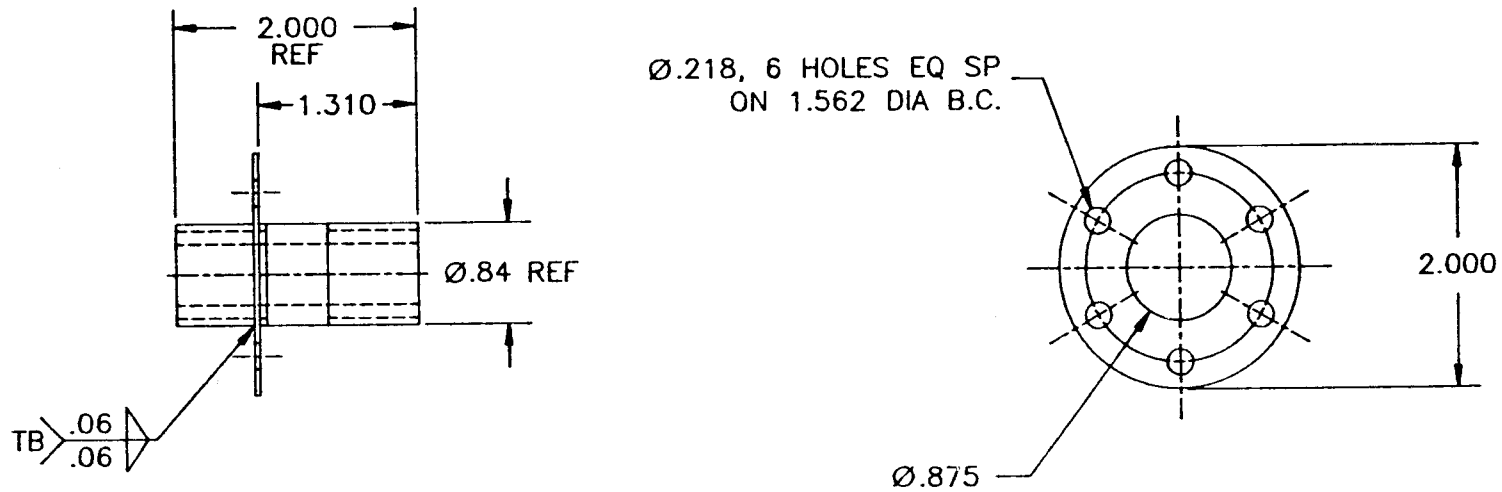
b. Apart number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the figure which covers fabrication criteria.

c. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

d. All dimensions are given in U.S. Standard measures,

F-3. Manufactured Items part number Max.

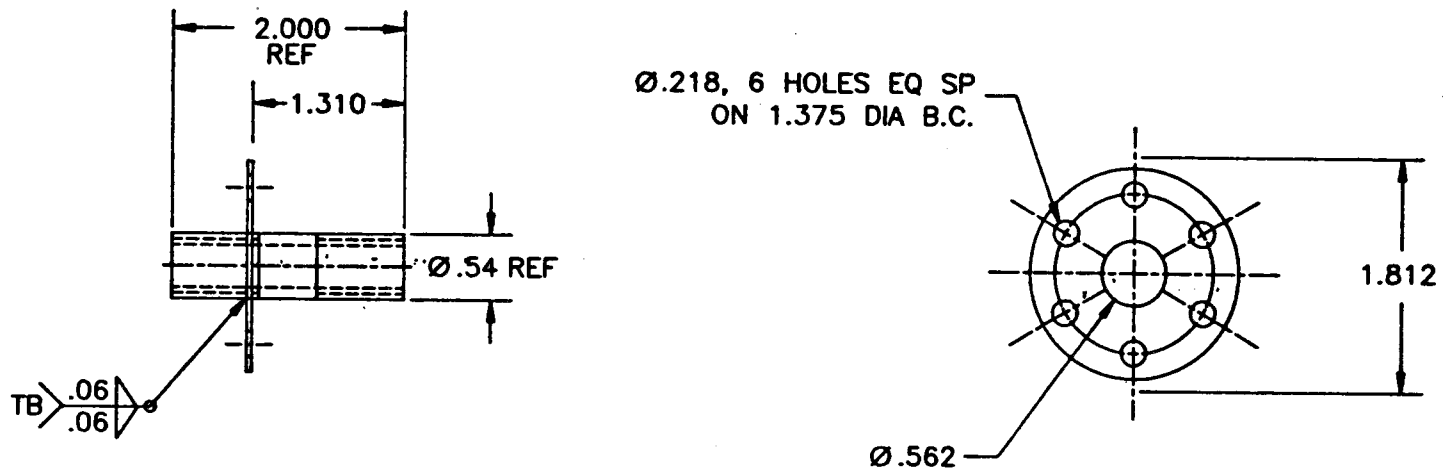
| PART NUMBER | NOMENCLATURE | FIG NO. |
|-------------|--------------------------------------|---------|
| 20063250 | WATER FEED THRU CONNECTOR | 1 |
| 20067056 | AIR FEED THRU CONNECTOR | 2 |
| 20069710 | RACK ASSEMBLY, BOOK | 3 |
| 20089711 | FRAME ASSEMBLY, ECU | 4 |
| 20069712 | BRACKET ASSEMBLY, STORAGE CHEST, R/H | 5 |
| 20089713 | BRACKET ASSEMBLY, STORAGE CHEST, L/H | 6 |
| 20069718 | BRACKET, CABINET | 7 |
| 20069721 | RACK ASSEMBLY, FIRST AID KIT | 8 |
| 20089722 | BRACKET, DAVIT CRANE | 9 |
| 20069725 | RACK ASSEMBLY, TOOL | 10 |
| 20069727 | SECURITY SCREEN, ECU | 11 |



NOTES:

1. FABRICATE FROM:
 - A. SHEET STEEL, 18 GAUGE,
NSN 9515-00-141-8066,
 - B. NIPPLE PIPE, 500 X 2.00,
NSN 4730-00-196-1493.
2. ALL DIMENSIONS ARE IN INCHES.

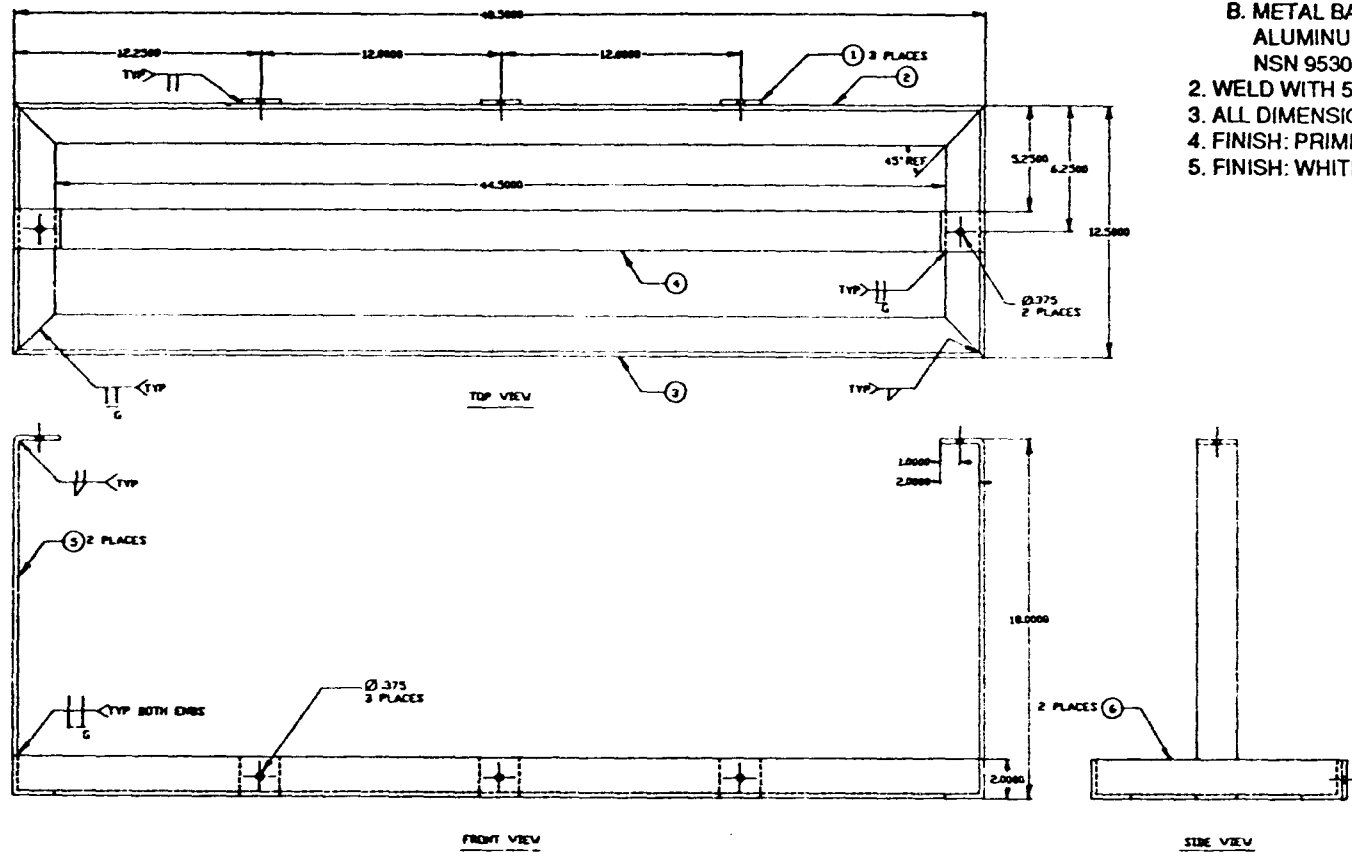
Figure 1. Water Feed Through Connector Part Number 20083250.



NOTES:

1. FABRICATE FROM:
 - A. SHEET STEEL, 18 GAUGE,
NSN 9515-00-141-8066,
 - B. NIPPLE PIPE, .500 X 2.00,
NSN 4730-00-196-1493.
2. ALL DIMENSIONS ARE IN INCHES.

Figure 2. Air Feed Through Connector Part Number 20087058.



NOTES:

1. FABRICATE FROM:
 - A. STRUCTURAL ANGLE, 6061-T6 ALUMINUM ALLOY 2.00 X 2.00 X 0.25, NSN 9540-00-197-9850.
 - B. METAL BAR, 6061-T6 ALUMINUM ALLOY, 2.00 X 0.25, NSN 9530-00-228-9315.
2. WELD WITH 5356 ROD OR EQUAL.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773

Figure 3. Book Rack Assembly Part Number 20089710.

NOTES:

1. FABRICATE FROM:
STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
2. TWO REQUIRED.
3. WELD WITH 5356 ROD OR EQUAL.
4. ALL DIMENSIONS ARE IN INCHES.
5. FINISH: PRIMER, TT-P-1757
6. FINISH: GRAY, PN 16187

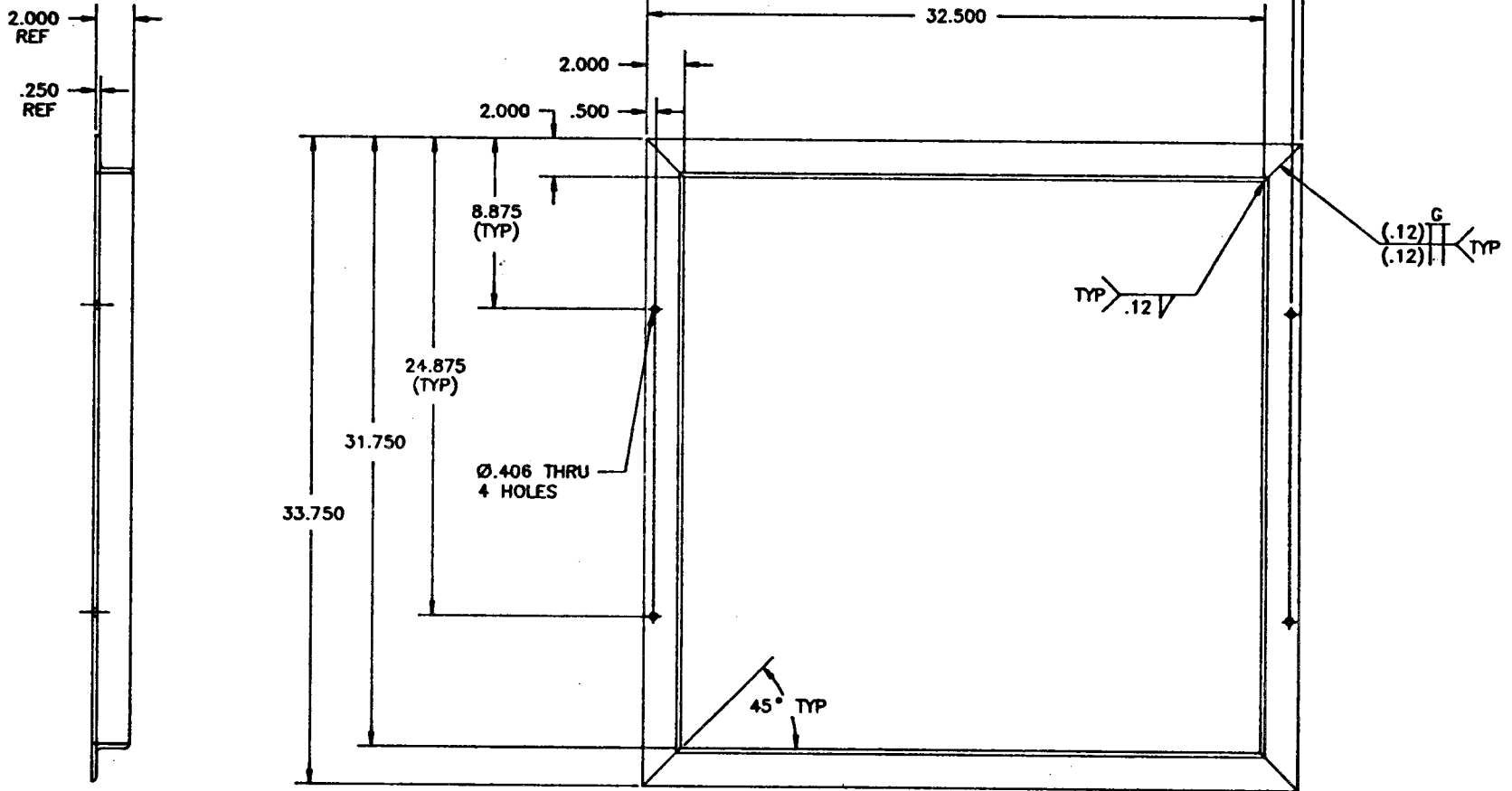
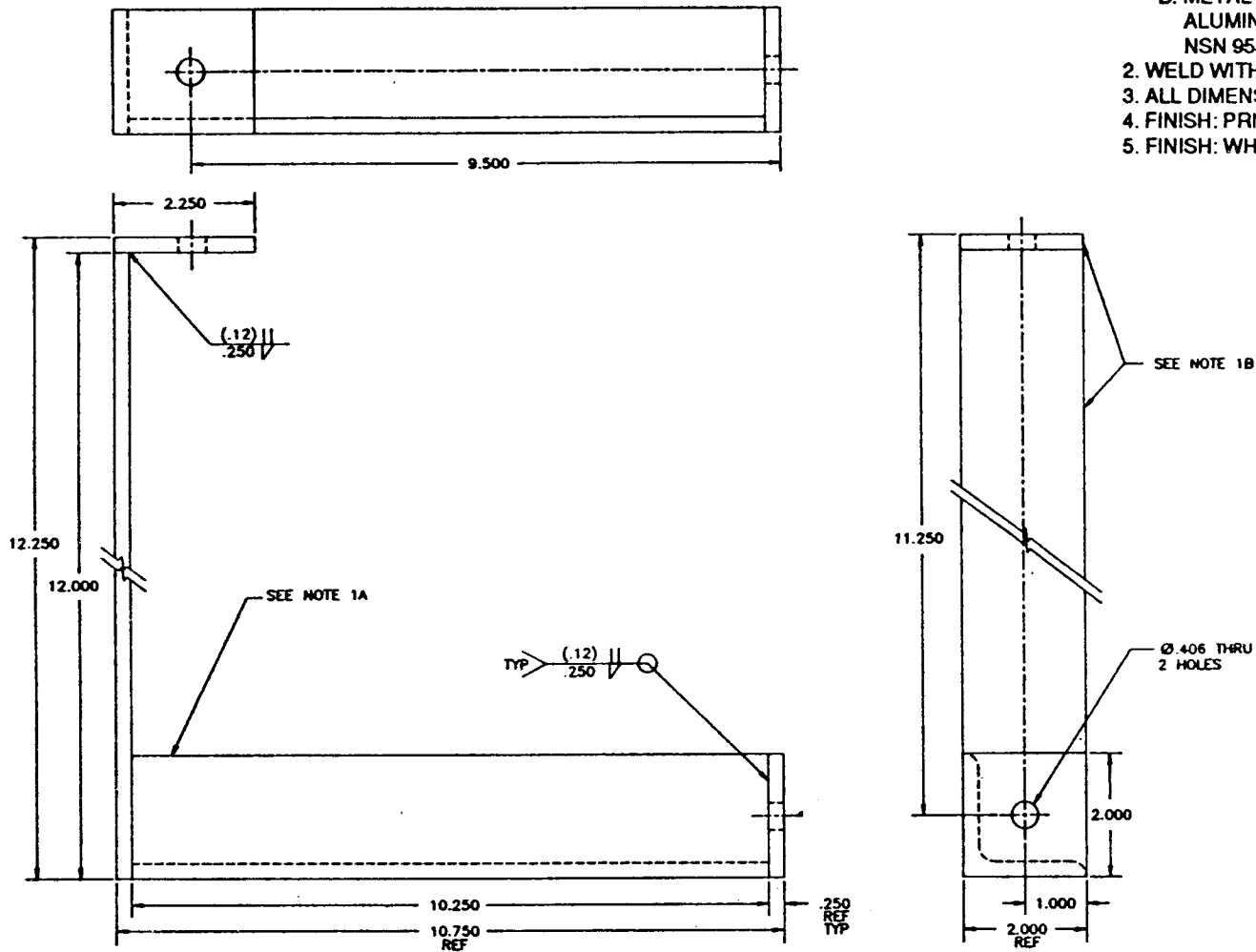


Figure 4. ECU Frame Assembly Part Number 20089711.



NOTES:

1. FABRICATE FROM:

A. STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.

B. METAL BAR, 6061-T6
ALUMINUM ALLOY, 2.00 X 0.25,
NSN 9530-00-228-9315.

2. WELD WITH 5356 ROD OR EQUAL

3. ALL DIMENSIONS ARE IN INCHES.

4. FINISH: PRIMER, TT-P-1757

5. FINISH: WHITE, PN 17773

Figure 5. Storage Chest Bracket Assembly (Right) Part Number 20089712.

NOTES:

- 1. FABRICATE FROM:
 - A. STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
 - B. METAL BAR, 6061-T6
ALUMINUM ALLOY, 2.00 X 0.25,
NSN 9530-00-228-9315.
- 2. WELD WITH 5356 ROD OR EQUAL.
- 3. ALL DIMENSIONS ARE IN INCHES.
- 4. FINISH: PRIMER, TT-P-1757
- 5. FINISH: WHITE, PN 17773

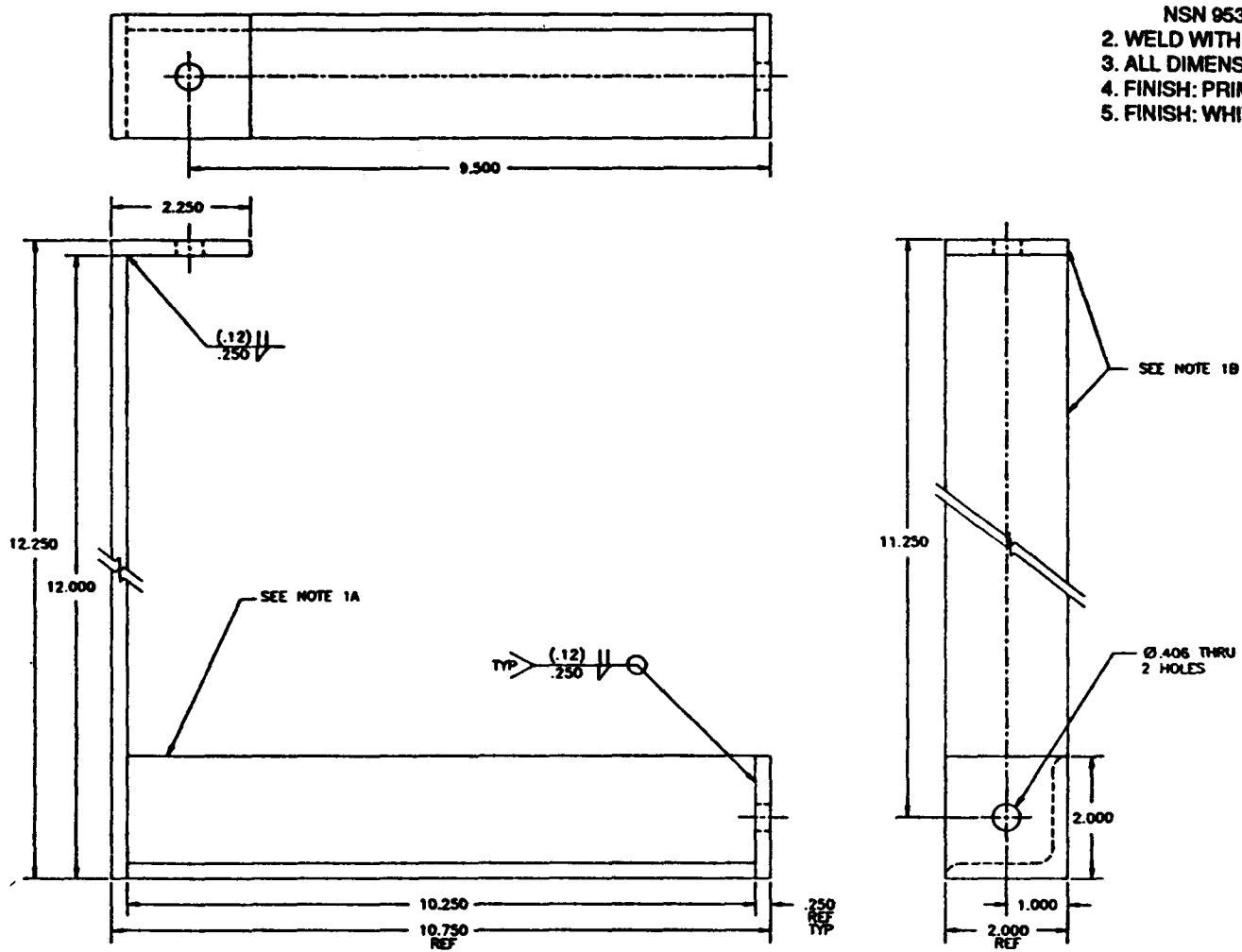
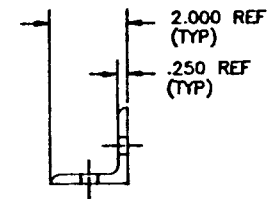
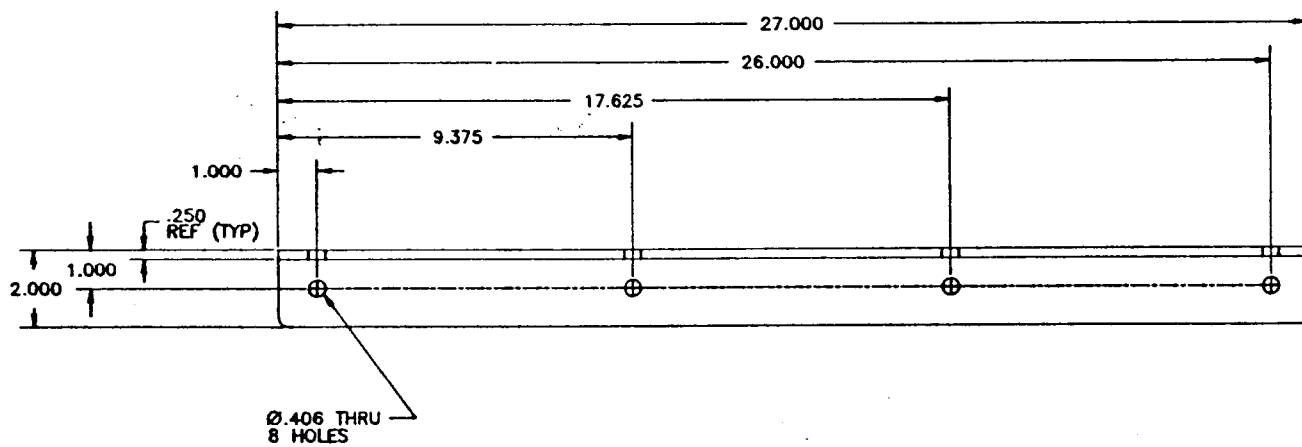


Figure 6. Storage Chest Bracket Assembly (Left) Part Number 20089713.

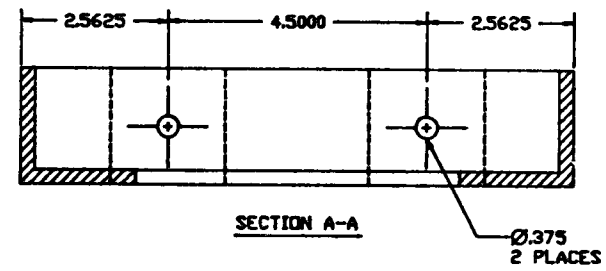
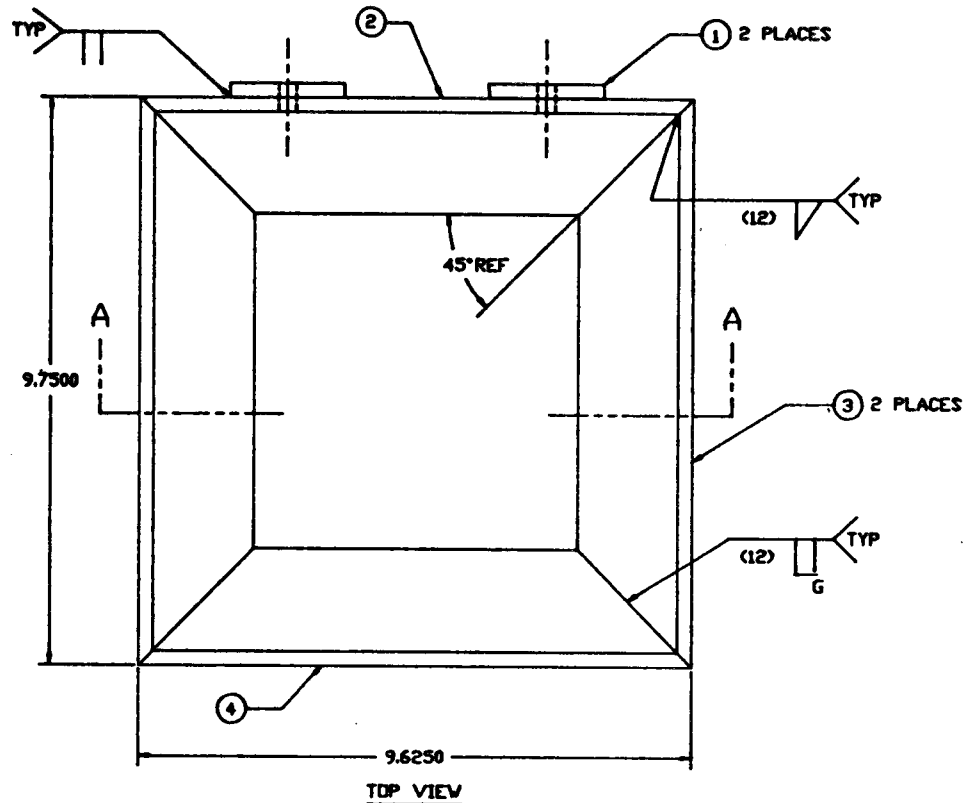
NOTES:

1. FABRICATE FROM:
STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
2. TWO REQUIRED.
3. WELD WITH 5356 ROD OR EQUAL.
4. ALL DIMENSIONS ARE IN INCHES.
5. FINISH: PRIMER, TT-P-1757
6. FINISH: GRAY, PN 16187



SIDE VIEW

Figure 6. Cabinet Bracket Part Number 20089718.



- NOTES:**
1. FABRICATE FROM:
 - A. STRUCTURAL ANGLE, 6061-T6 ALUMINUM ALLOY 2.00 X 2.00 X 0.25, NSN 9540-00-197-9850.
 - B. METAL BAR, 6061-T6 ALUMINUM ALLOY, 2.00 X 0.25, NSN 9530-00-228-9315.
 2. WELD WITH 5356 ROD OR EQUAL.
 3. ALL DIMENSIONS ARE IN INCHES.
 4. FINISH: PRIMER, TT-P-1757
 5. FINISH: WHITE, PN 17773

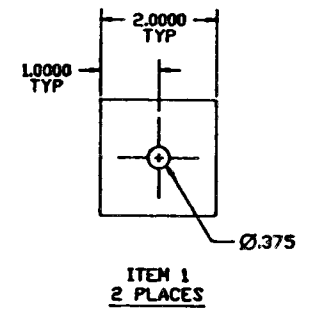
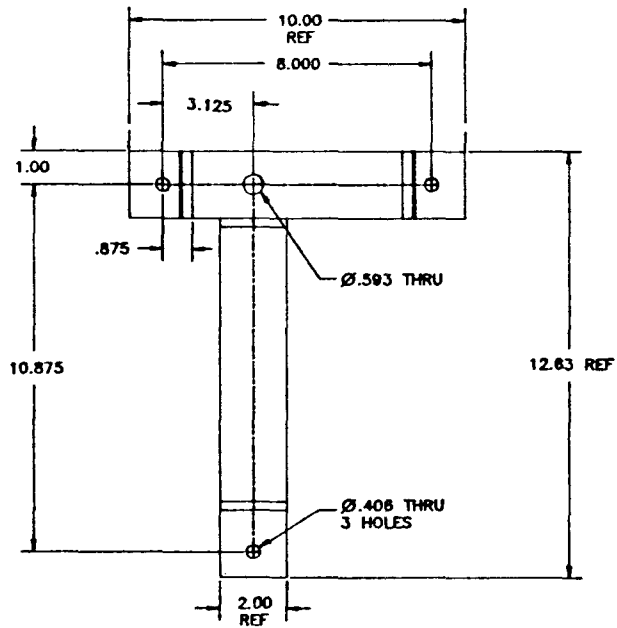
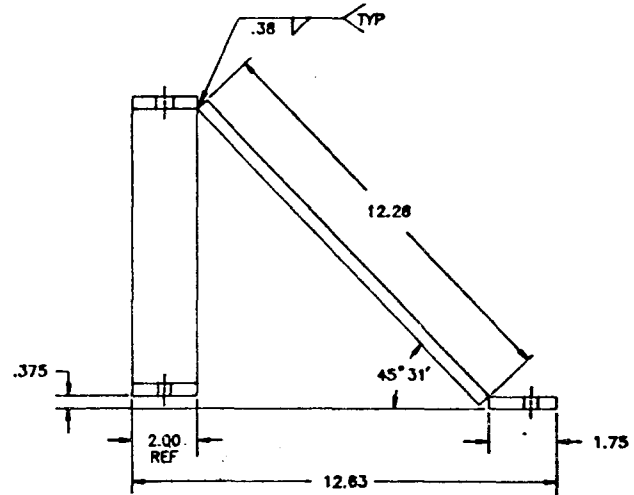
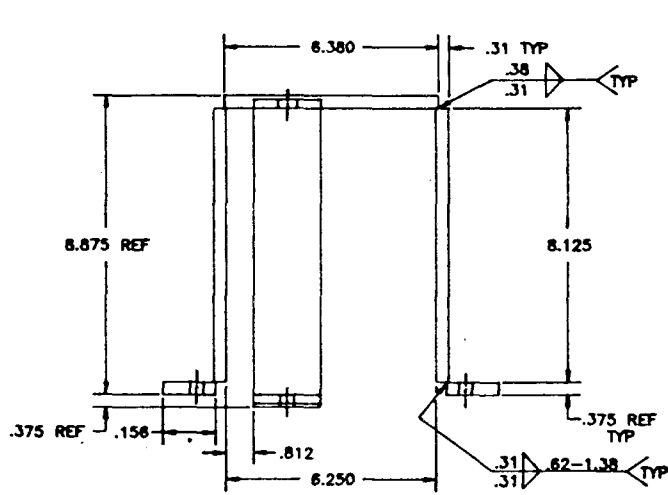


Figure 8. First Aid Kit Rack Assembly Part Number 20089721.

Figure 9. Davit Crane Bracket Part Number 20089722.



NOTES:

1. FABRICATE FROM:
A. METAL BAR, MIL-S-6758
STEEL, 2.00 X .375
NSN 9510-00-528-7518
2. WELD WITH MILD STEEL ELECTRODE.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773 OR YELLOW, PN 13538

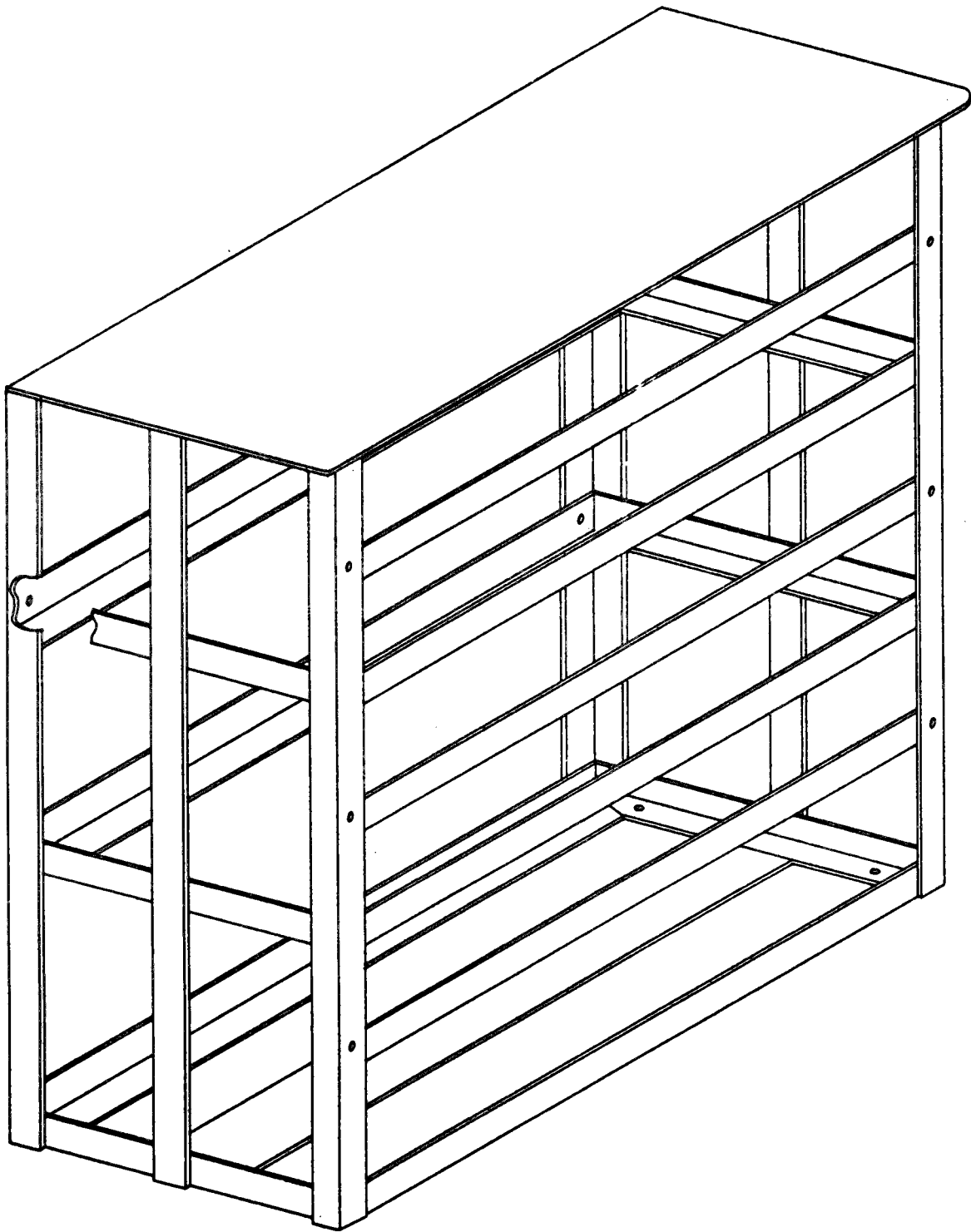
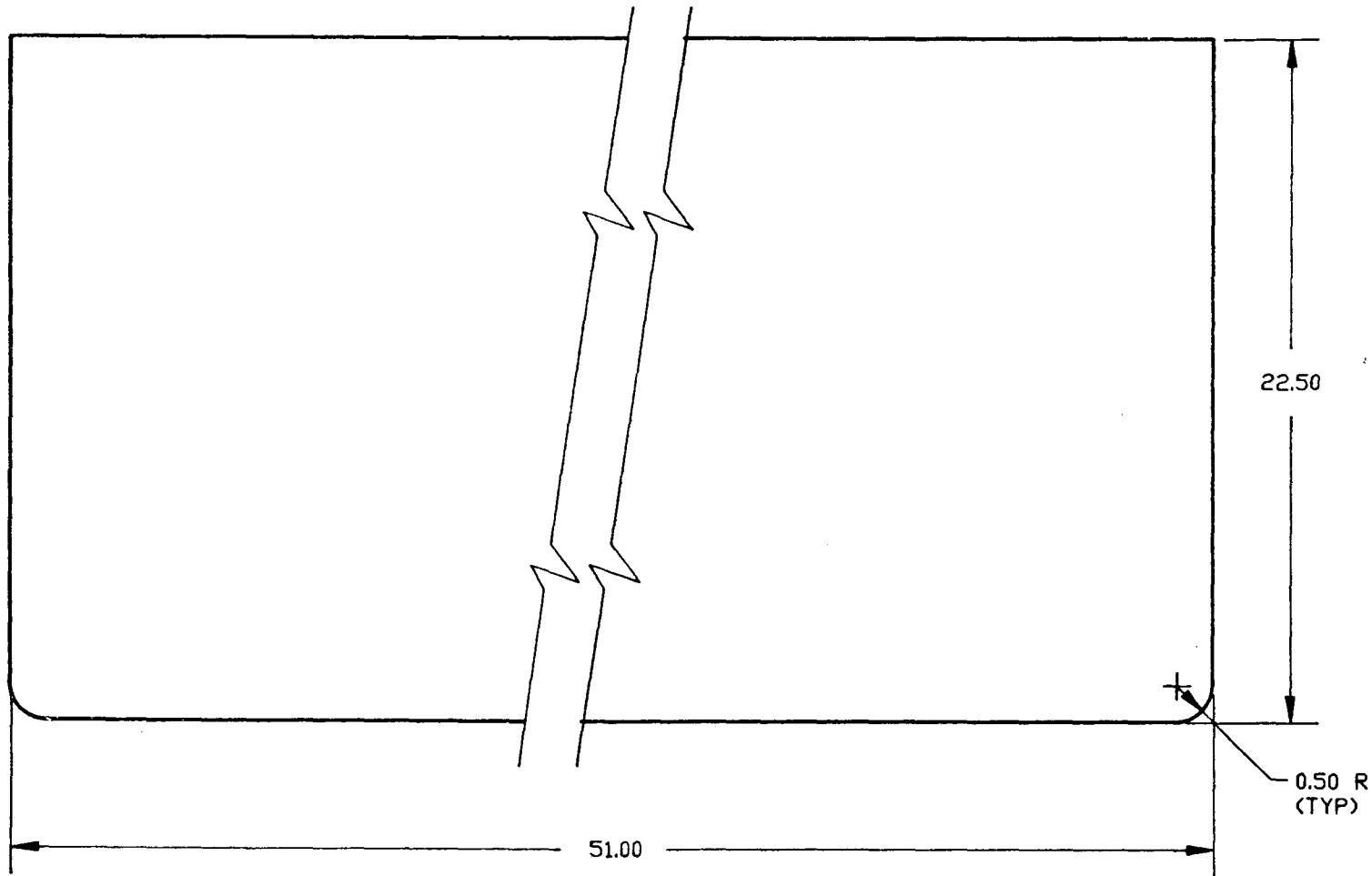


Figure 10. Tool Box Rack Assembly Part Number 20089725-1 (Sheet 1 of 11).

NOTES:

1. FABRICATE FROM:
METAL PLATE, 6061-T6
ALUMINUM ALLOY
NSN 9535-00-231-8230
2. WELD WITH 5356 ROD OR EQUAL.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773



TM 1-4920-454-13&P

Figure 10. Tool Box Rack Assembly Part Number 20089725-2 (Sheet 2 of 11).

NOTES:

1. FABRICATE FROM:
 - A. STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
2. TWO REQUIRED.
3. WELD WITH 5356 ROD OR EQUAL.
4. ALL DIMENSIONS ARE IN INCHES.
5. FINISH: PRIMER, TT-P-1757
6. FINISH: WHITE, PN 17773

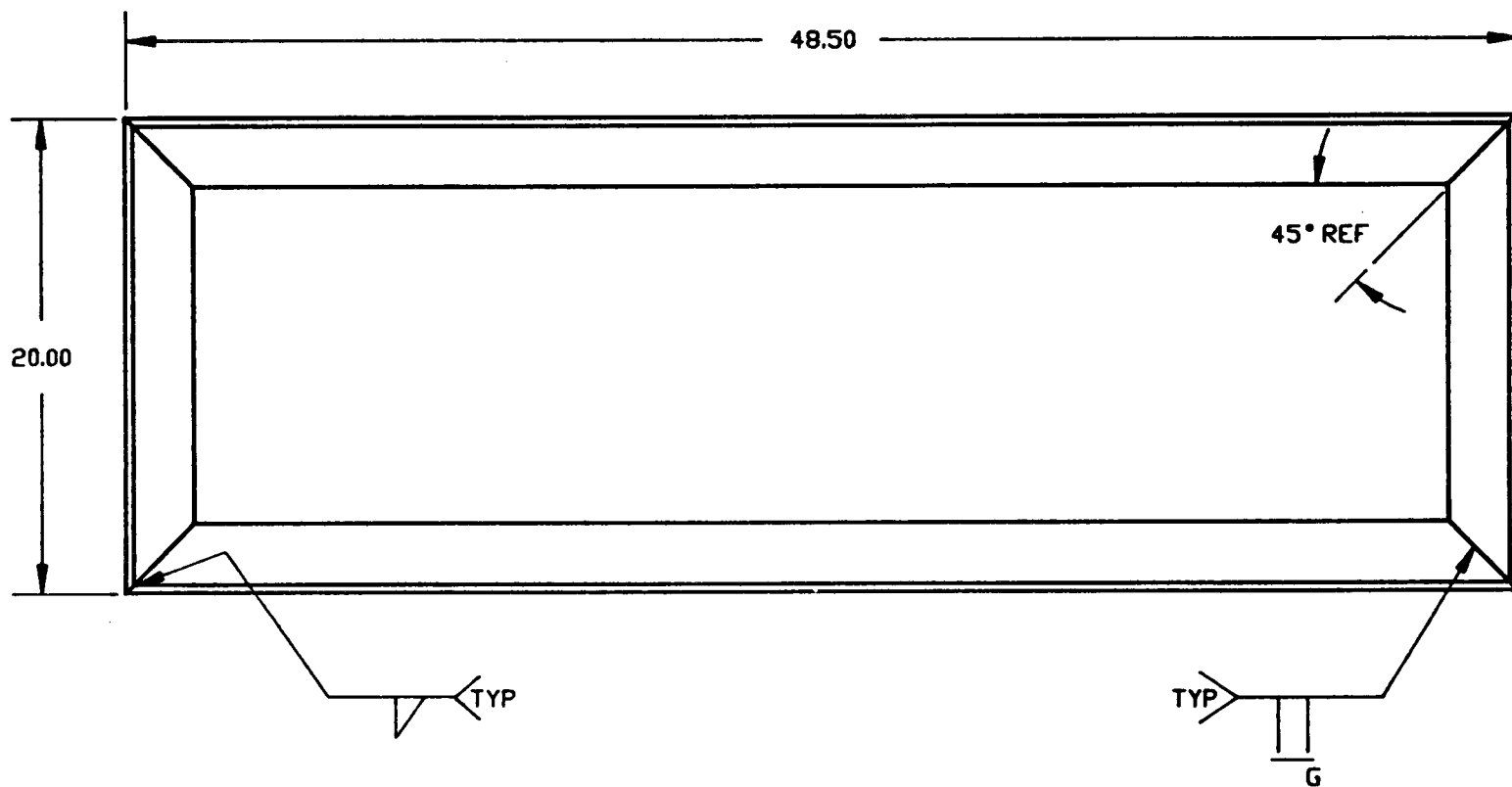


Figure 10. Tool Box Rack Assembly Part Number 20089725-3 (Sheet 3 of 11).

NOTES:

1. FABRICATE FROM:
 - A. METAL BAR, 6061-T6
ALUMINUM ALLOY, 2.00 X 0.25,
NSN 9530-00-228-9315.
2. THREE REQUIRED.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773

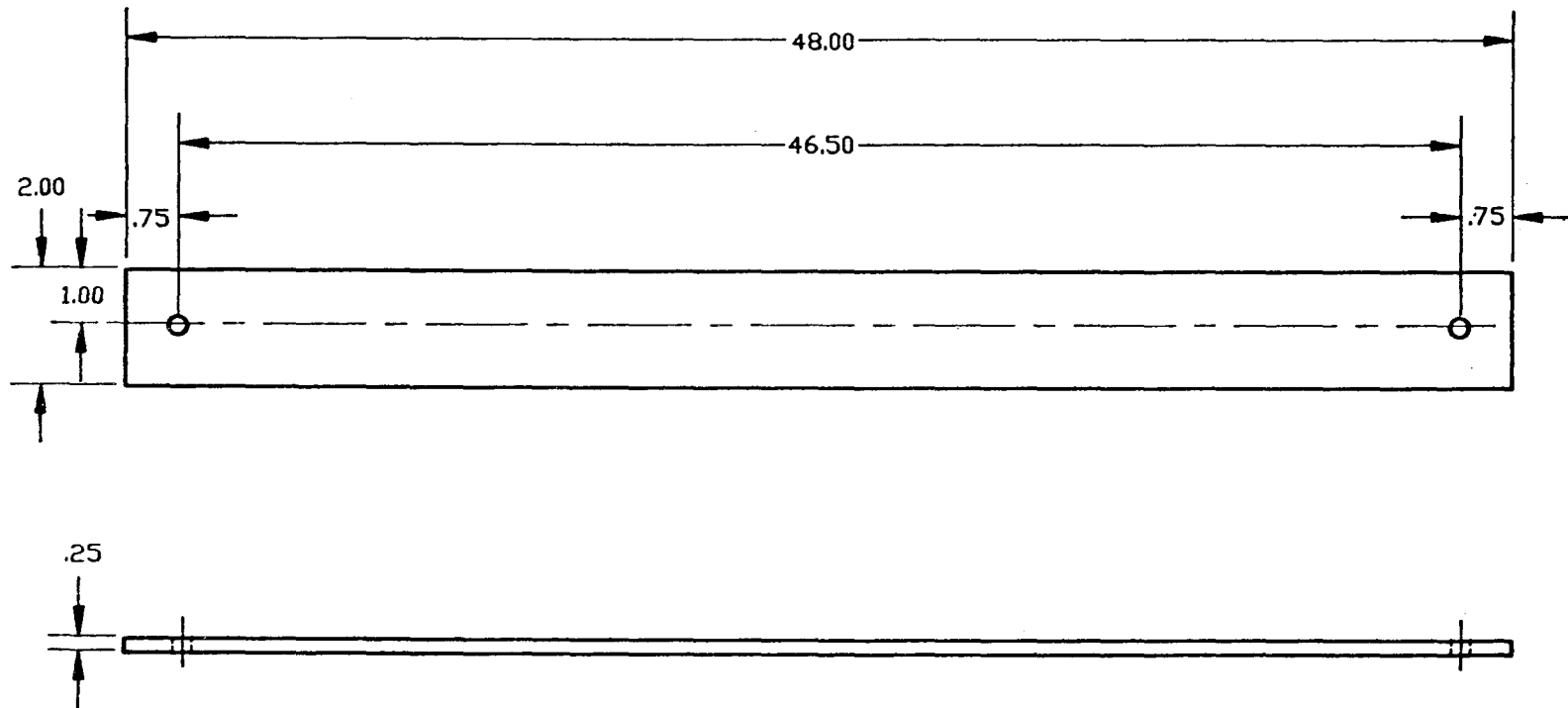


Figure 10. Tool Box Rack Assembly Part Number 20089725-4 (Sheet 4 of 11).

NOTES:

1. FABRICATE FROM:
 - A. METAL BAR, 6061-T6
ALUMINUM ALLOY, 4.00 X 0.25
NSN 9530-00-228-9316
2. THREE REQUIRED.
3. WELD WITH 5356 ROD OR EQUAL.
4. ALL DIMENSIONS ARE IN INCHES.
5. FINISH: PRIMER, TT-P-1757
6. FINISH: WHITE, PN 17773

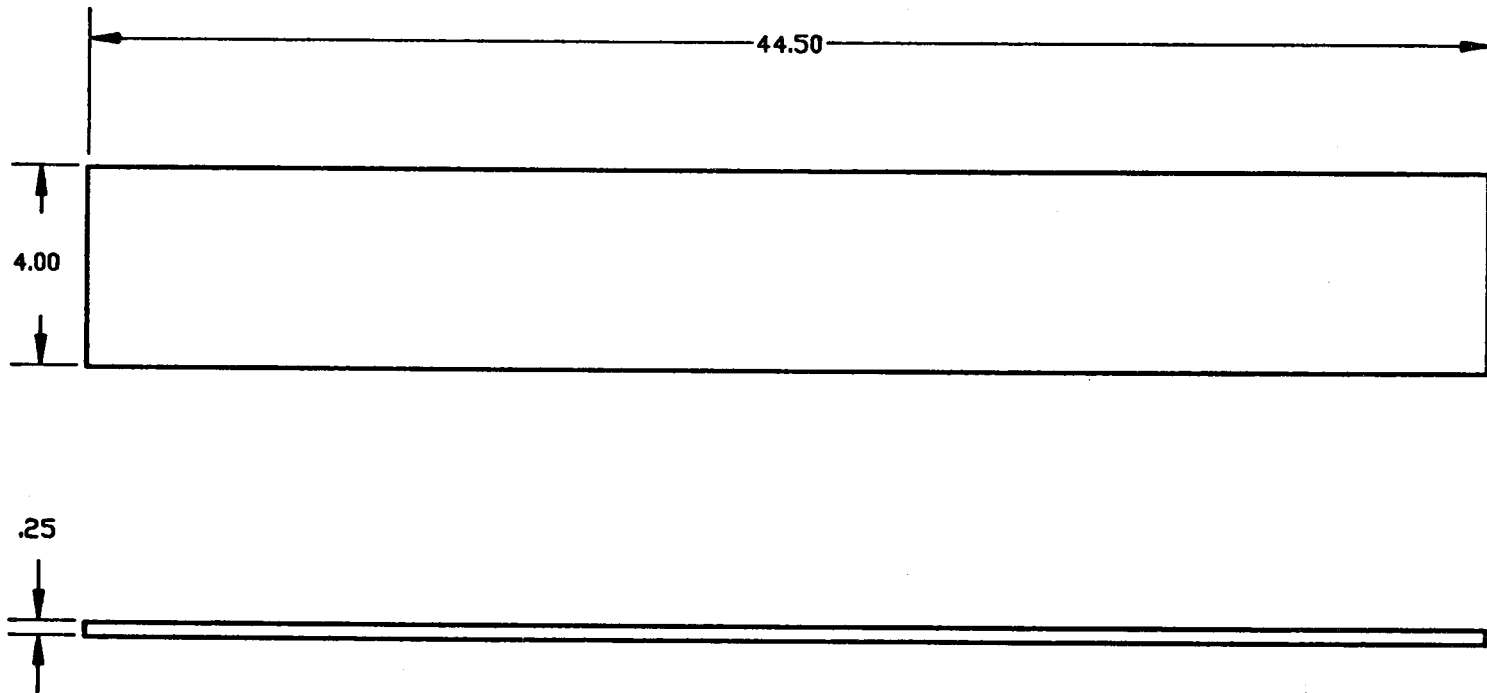
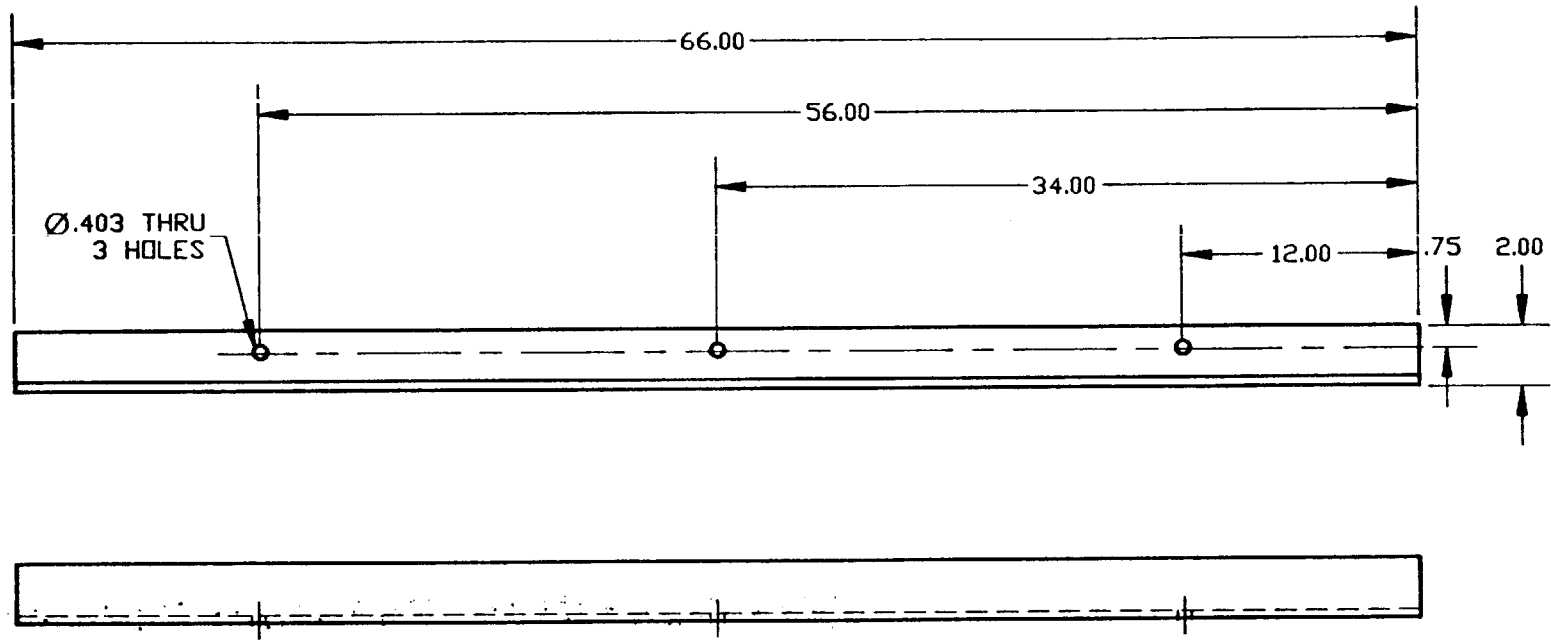


Figure 10. Tool Box Rack Assembly Part Number 20089725-5 (Sheet 5 of 11).



NOTES:

1. FABRICATE FROM:
 - A. STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
2. WELD WITH 5356 ROD OR EQUAL.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773

Figure 10. Tool Box Rack Assembly Part Number 20089725-6 (Sheet 6 of 11).

NOTES:

1. FABRICATE FROM:
 - A. STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
2. WELD WITH 5356 ROD OR EQUAL.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773

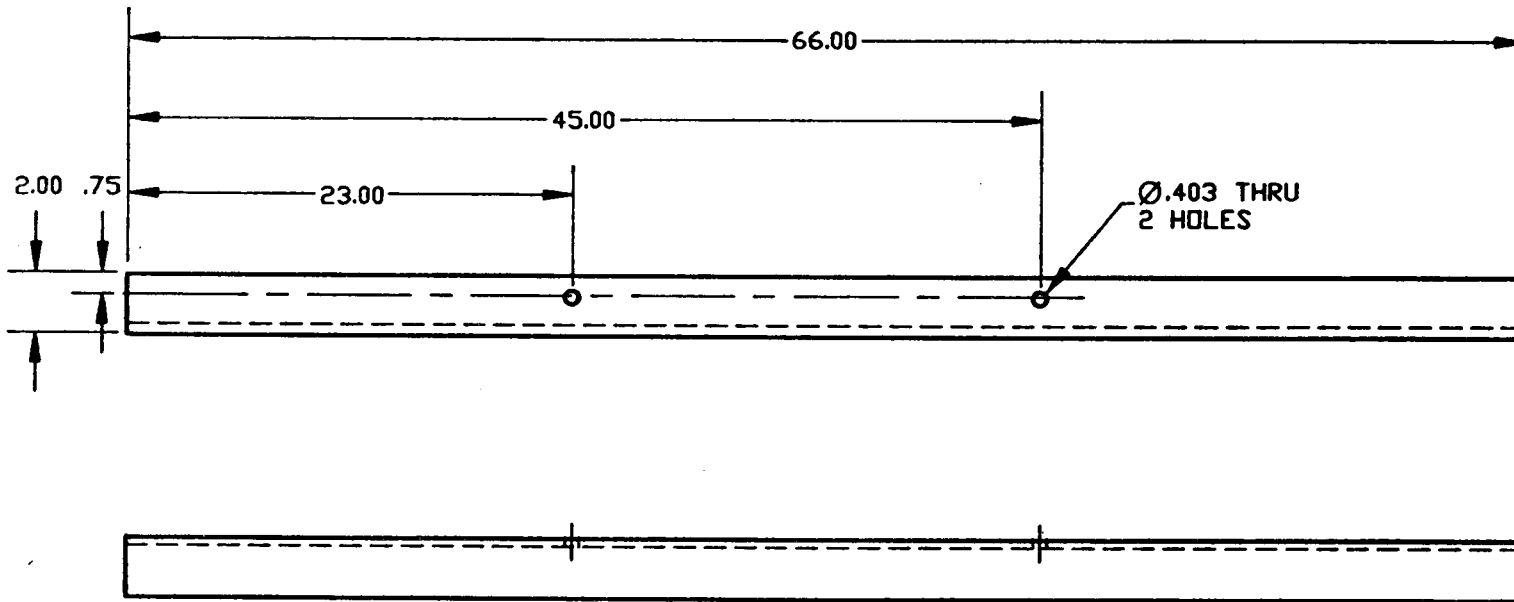


Figure 10. Tool Box Rack Assembly Part Number 20089725-7 (Sheet 7 of 11).

NOTES:

1. FABRICATE FROM:
 - A. ITEM 1: METAL BAR, 6061-T6
ALUMINUM ALLOY, 2.00 X 0.25,
NSN 9530-00-228-9315.
 - B. STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
2. WELD WITH 5356 ROD OR EQUAL.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773

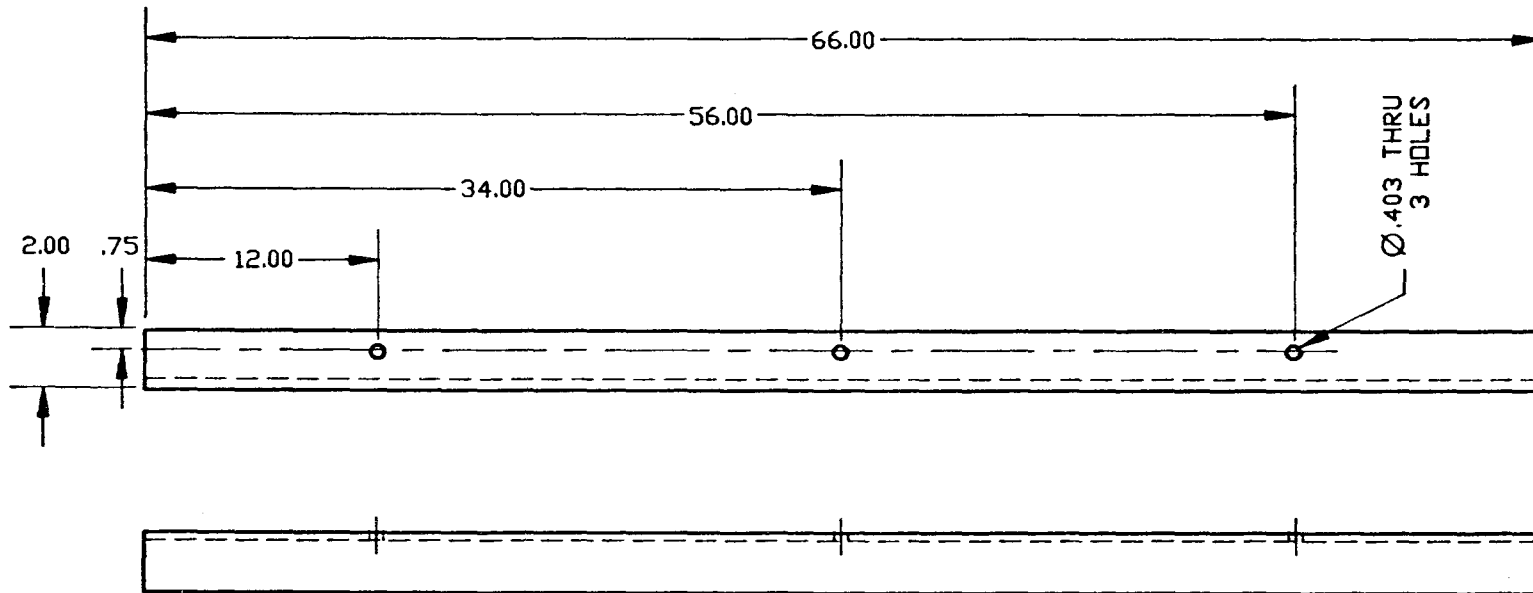


Figure 10. Tool Box Rack Assembly Part Number 20089725-8 (Sheet 8 of 11).

NOTES:

1. FABRICATE FROM:
 - A. METAL BAR, 6061-T6
ALUMINUM ALLOY, 2.00 X 0.25,
NSN 9530-00-228-9315.
2. TWO REQUIRED.
3. WELD WITH 5356 ROD OR EQUAL.
4. DIMENSIONS ARE IN INCHES.
5. FINISH: PRIMER, TT-P-1757
6. FINISH: WHITE, PN 17773

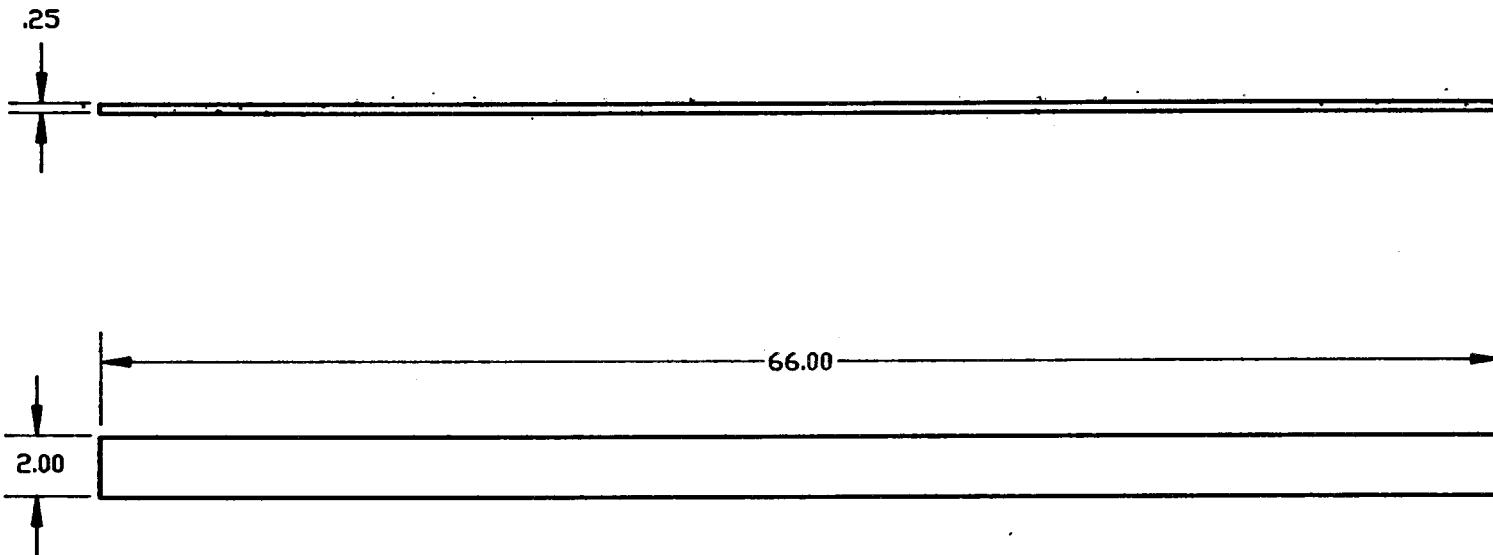
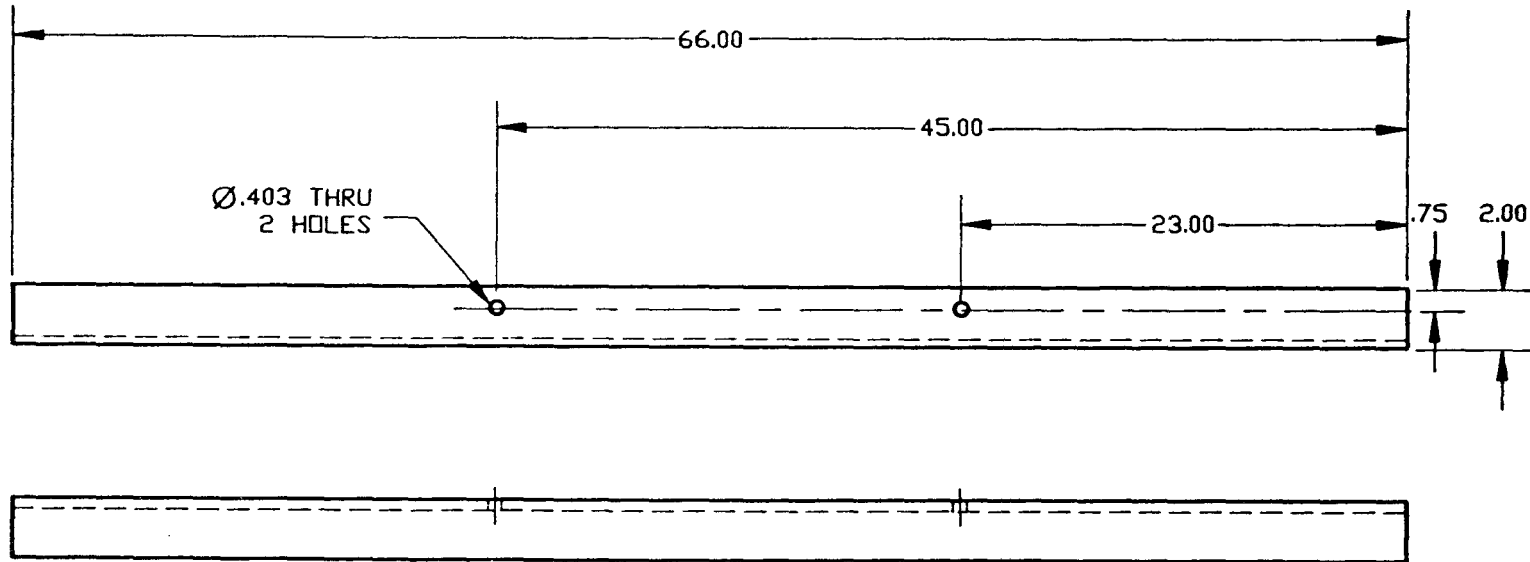


Figure 10. Tool Box Rack Assembly Part Number 20089725-9 (Sheet 9 of 11).



NOTES:

1. FABRICATE FROM:
 - A. STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
2. WELD WITH 5356 ROD OR EQUAL.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773

NOTES:

1. FABRICATE FROM:
A. STRUCTURAL ANGLE, 6061-T6
ALUMINUM ALLOY 2.00 X 2.00 X 0.25,
NSN 9540-00-197-9850.
2. WELD WITH 5356 ROD OR EQUAL.
3. ALL DIMENSIONS ARE IN INCHES.
4. FINISH: PRIMER, TT-P-1757
5. FINISH: WHITE, PN 17773

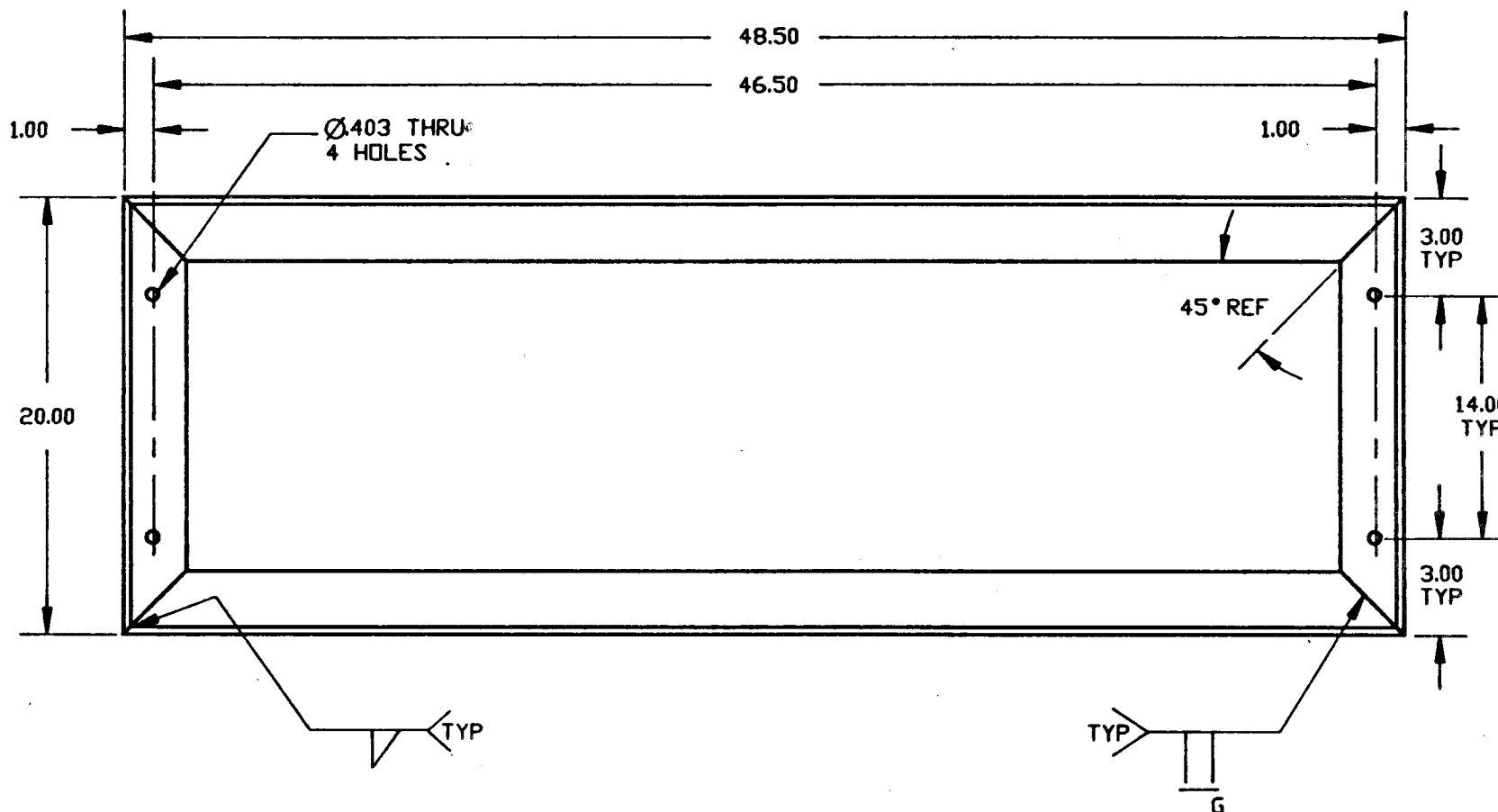
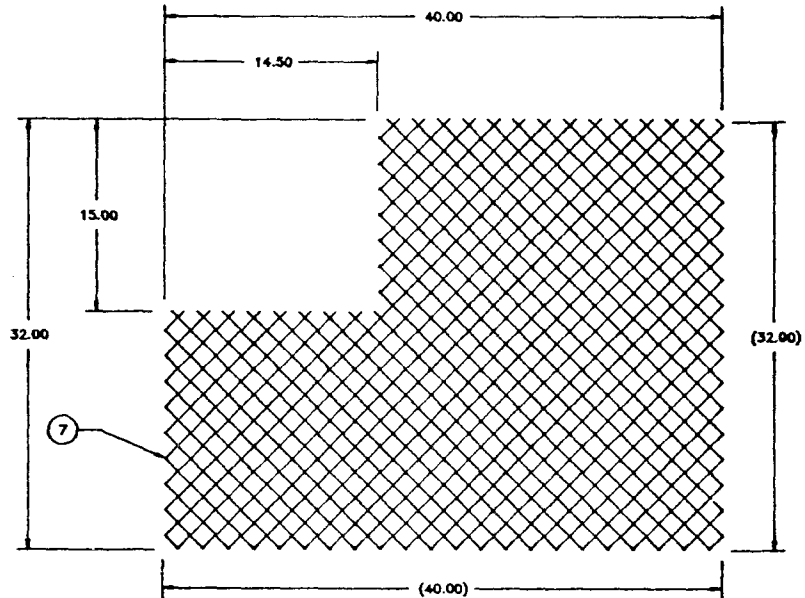
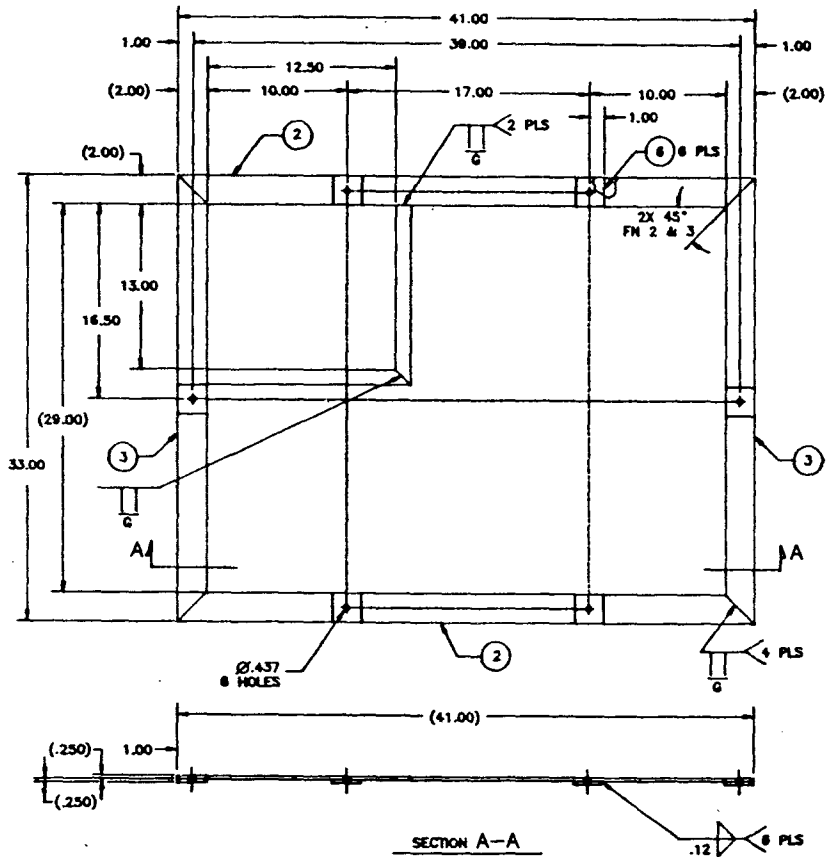


Figure 10. Tool Box Rack Assembly Part Number 20089725-11 (Sheet 11 of 11).



NOTES:

1. FABRICATE FROM:
 - A. METAL BAR, 6061-T6
ALUMINUM ALLOY, 2.00 X 0.25
NSN 9530-00-228-9315
 - B. METAL BAR, 6061-T6
ALUMINUM ALLOY, 1.25 X 0.25
NSN 9530-00-237-0721
 - C. EXPANDED ALUMINUM SHEET, 5055-H-34
2. TWO REQUIRED.
3. WELD WITH 5356 ROD OR EQUAL.
4. ALL DIMENSIONS ARE IN INCHES.
5. FINISH: PRIMER, TT-P-1757.
6. FINISH: WHITE, PN 17773.

Figure 11. ECU Security Screen Part Number 20089727.

**APPENDIX G
TORQUE LIMITS**

| Bolt Size | Tension Loading |
|------------------|----------------------------|
| 1/4-28 | 50-70 inch pounds |
| 5/16-24 | 100-140 inch pounds |
| 3/8-24 | 180-190 inch pounds |

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|------------|------------------|------------|-----------|
| 6 | 2-1 a | | |
| B1 | | 4-3 | |
| 125 | line 20 | | |

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

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

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

I ordered a gasket, item 19 on figure B-16 by NSN 2 910-00-762-3001. I got a gasket but it doesn't fit. Supply says I got what I ordered, so the NSN is wrong. Please give me a good NSN

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The Metric System and Equivalents

Linear Measure

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

Weights

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

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
1 deciliter = 10 centiliters = 9.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

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

Cubic Measure

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

Approximate Conversion Factors

| To change | To | Multiply | To change | To | Multiply |
|---------------|----------------------|----------|--------------------|---------------|----------|
| inches | centimeters | 2.540 | ounce-inches | newton-meters | .007062 |
| feet | meters | .305 | centimeters | inches | .394 |
| yards | meters | .914 | meters | feet | 3.280 |
| miles | kilometers | 1.609 | meters | yards | 1.094 |
| square inches | square centimeters | 6.451 | kilometers | miles | .621 |
| square feet | square meters | .093 | square centimeters | square inches | .155 |
| square yards | square meters | .836 | square meters | square feet | 10.764 |
| square miles | square kilometers | 2.590 | square meters | square yards | 1.196 |
| acres | square hectometers | .405 | square kilometers | square miles | .386 |
| cubic feet | cubic meters | .028 | square hectometers | acres | 2.471 |
| cubic yards | cubic meters | .765 | cubic meters | cubic feet | 35.315 |
| fluid ounces | milliliters | 29.573 | cubic meters | cubic yards | 1.308 |
| pints | liters | .473 | milliliters | fluid ounces | .034 |
| quarts | liters | .946 | liters | pints | 2.113 |
| gallons | liters | 3.785 | liters | quarts | 1.057 |
| ounces | grams | 28.349 | liters | gallons | .264 |
| pounds | kilograms | .454 | grams | ounces | .035 |
| short tons | metric tons | .907 | kilograms | pounds | 2.205 |
| pound-foot | newton-meters | 1.356 | metric tons | short tons | 1.102 |
| pound-inches | newton-meters | .11296 | | | |

Temperature (Exact)

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

