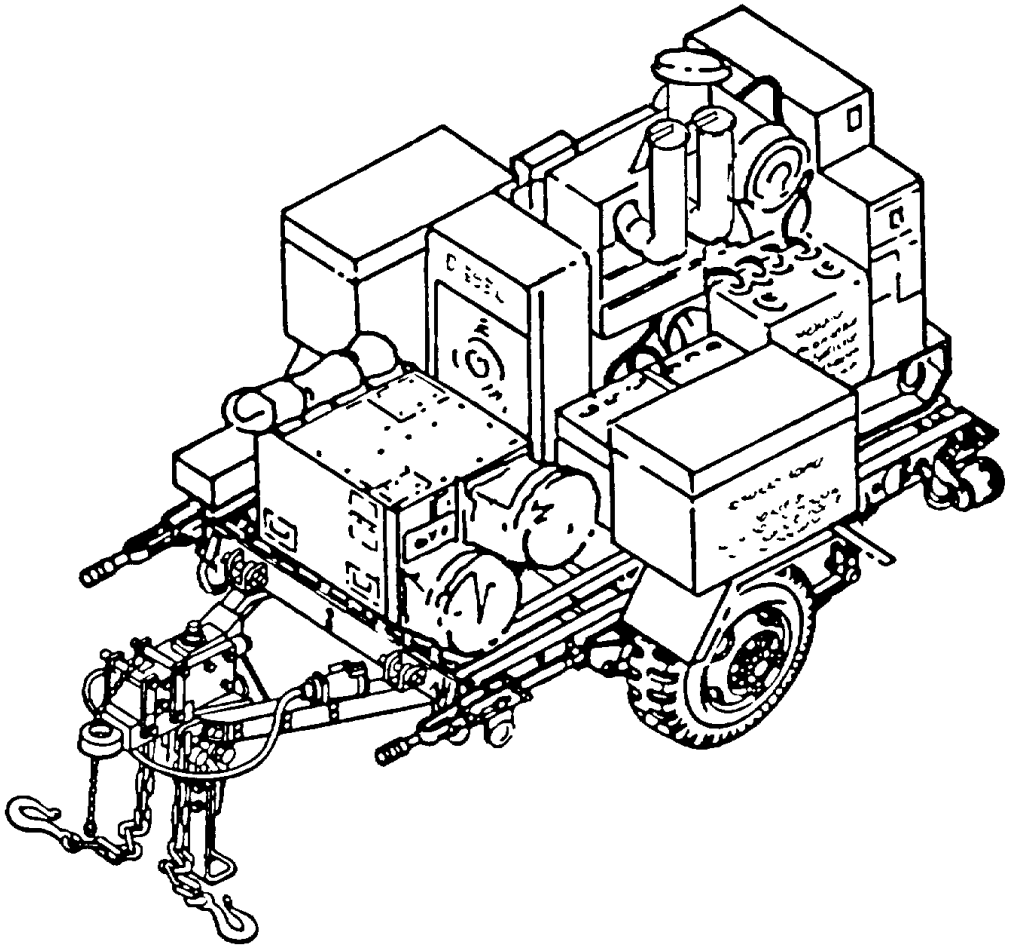
TECHNICAL MANUAL

OPERATOR'S, UNIT AND DIRECT SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

AIR CONDITIONER: TRAILER-MOUNTED, GENERATOR-SET-POWERED, 18,000 BTU/HR (NSN 4120-00-930-5700)



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HEADQUARTERS, DEPARTMENT OF THE ARMY
21 AUGUST 1991

WARNING

HIGH VOLTAGE

is used in operation of this equipment

DEATH ON CONTACT

may result if personnel fail to observe safety precautions.

Never work on electrical equipment unless there is another person nearby who is familiar with operation and hazards of equipment and who is competent in administering first aid. When technician is aided by operators, he must warn them about dangerous areas.

Whenever possible, input power supply to equipment must be shut off before beginning work. Take particular care to ground every capacitor likely to hold a dangerous charge. When working inside, after power has been turned off, always ground every part before touching it. Be careful not to contact high voltage connections of 208 volts AC input when installing or operating this equipment.

Whenever nature of operation permits, keep one hand away from equipment to reduce hazard to current flowing through vital organs of body. Do not operate equipment without all guards, louvers, and covers in place and tightly secured.

WARNING

High noise area. May cause hearing loss. Use proper ear protection within 14 ft.

WARNING

Before attempting to connect load cables. Make sure the generator set is not operating, all switches are in the off or open position, and set is grounded.

WARNING

All personnel involved in the operation or maintenance of the generator set should become thoroughly familiar with the safety precautions prior to performing operation or maintenance procedures.

Prior to connection of load cables, make sure all switches are in OFF or OPEN position and the generator set is not operating.

Inspect the generator set ground connection prior to starting the unit. Electrical defects in load lines or load equipment can cause death by electrocution when contact is made with an ungrounded system.

Do not smoke or carry an open flame when servicing the batteries or fuel tank. Exercise extreme care to prevent electrical arcing in the area of the batteries.

WARNING

Battery electrolyte contains sulfuric acid and can cause severe burns. Handle it with care. If the electrolyte comes in contact with the body, eyes, or clothing, rinse immediately with clean water. Avoid spilling electrolyte on painted surfaces. Do not work alone or smoke when servicing batteries.

Do not operate generator set in an enclosed area unless the exhaust gases are piped to the outside. Continued breathing of exhaust fumes is dangerous.

Stay clear of all exposed electrical terminals when generator set is operating.

Remove all rings, watches, and other jewelry when performing maintenance on the generator set. Loose fitting clothing should be secured to prevent it from catching on moving parts.

TECHNICAL MANUAL

NO. TM 9-4120-405-13&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 21 August 1991

OPERATOR'S, UNIT AND DIRECT SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

For

AIR CONDITIONER: TRAILER-MOUNTED, GENERATOR-SET-POWERED, 18,000 BTU/HR
NSN 4120-000-930-5700

REPORTING OF ERRORS AND RECOMMENDED IMPROVEMENTS

You can help improve this publication. If you find any errors or if you know of a way to improve this publication, 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 directly to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MMTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished to you.

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Current as of 17 May 1991

TABLE OF CONTENTS

Table of Contents (continued)

List of Illustrations

List of Tables

HOW TO USE THIS MANUAL

This manual is to be used as a system manual for the integration of the following hardware items:

a. Generator Set. Refer to TM 5-6115-585-12, -34

b. Air Conditioner. Refer to TM 5-4120-384-14

c. Trailer. Refer to TM 9-2330-202-14&P

Maintenance for the referenced items is covered in the associated manuals. This manual only covers those hardware items not covered in referenced manuals and how the trailer-mounted, generator-set powered, air conditioner works as a system.

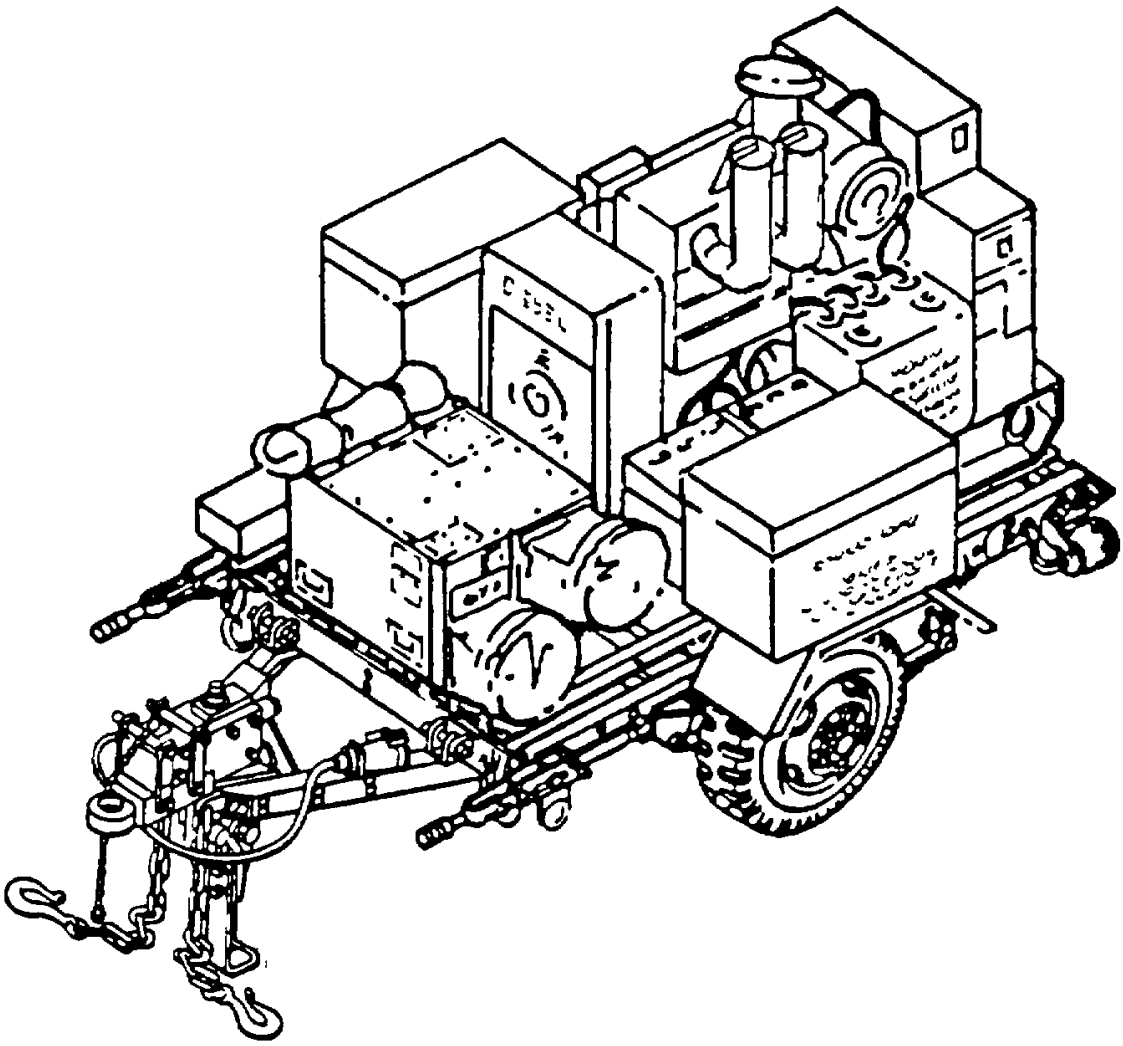


Figure 1-1. Air Conditioner: Trailer-Mounted, Generator-Set-Powered, 18,000 BTU/HR.

CHAPTER 1
INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

a. Type of Manual. Operator's, Unit, and Direct Support Maintenance Manual, including Repair Parts and Special Tools List.

b. Model Number and Equipment Name. Trailer-Mounted, Generator-Set Powered, 18,000 BTU/HR, Air Conditioner.

c. Purpose of Equipment. The unit covered in this manual is designed to integrate an air conditioner, generator, and trailer so that the air conditioner is self powered, transportable and usable on shelters.

1-2. MAINTENANCE FORMS AND RECORDS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS).

1-3. MAINTENANCE FORMS AND RECORDS (EIR's). If your system needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at Commander, Headquarters, U.S. Army Troop Support Command, ATTN: AMSTR-MOF, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. We will send you a reply.

1-4. DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE. Refer to TM 750244-3, Procedures for Destruction of Equipment to Prevent Enemy Use.

1-5. PREPARATION FOR STORAGE OR SHIPMENT. Contact unit maintenance for system/unit preparation for storage or shipment. Refer to para. 4-34.

1-6. CORROSION PREVENTION AND CONTROL (CPC).

Corrosion Prevention and Control (CPC) of Army Material is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form (SF) 368, Product Quality Deficiency Report. Use of keywords such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem.

The form should be submitted to Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MOF, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-7. PURPOSE, CAPABILITIES, AND FEATURES.

a. Purpose. The air conditioner is mobile; it can be towed by the CUCV/HMMWV vehicles. Its primary use is for air conditioning of communications shelters that do not have self-contained air conditioning units.

b. Capabilities and features. The 18,000 BTU/HR trailer-mounted, generator set powered, air conditioner is made up of a model F18H-3SB air conditioner and a DOD model MEP-003A generator set mounted on a modified M116A2 trailer.

(1) Air conditioner Is a horizontal, compact unit rated at 18,000 BTU/HR cooling capacity and requires 208V, 3 phase, 50/60 Hz power supplied by an external source.

(2) Generator set is diesel engine driven, 10 kW, tactical, utility class, 60 Hz, connectable for 1 phase, 2 wire, 120V; 1 phase, 3 wire, 120/240V; or 3 phase, 4 wire, 120/208V. For this application, the generator set has been prewired for 3 phase, 4 wire, 120/208V operation so that no wiring harness and no user hookup is required.

(3) Trailer is a 2-wheel, 3/4-ton trailer chassis that has been modified by adding fenders, rails for mounting the generator set, rails for mounting the air conditioner, a bracket to hold a fire extinguisher, two accessory boxes, one storage box, and leg prop assembly.

1-8. EQUIPMENT DATA.

GENERAL

Dimensions

Length	145.31 in (369.1 cm)
Width	71.12 in (180.64 cm)
Height	67.75 in (172.1 cm)
Weight	2700 lb (1225.8 kg)
Angle of departure	33°
Center of gravity (measures from center of rear axle) - loaded	36 1/4 in (92.1 cm)

AIR CONDITIONER

Model	F18H-3SB
NSN	4120-01-268-4451

Dimensions

Length	28.0 in (71.12 cm)
Width	30.0 in (76.2 cm)
Height	20.0 in (50.8 cm)
Weight	265 lb (120.2 kg)

Power Required

Voltage	208 V
Phase	3
Hertz	50/60
Amperage	16

Performance

Cooling Capacity	18,000 BTU/HR
Heating Capacity	14,300 BTU/HR

GENERATOR-SET DIESEL ENGINE

Model	MEP-003A
NSN	6115-00-465-1030

Dimensions

Length	62 in (157.48 cm)
Width	23 in (58.42 cm)
Height	37 in (93.98 cm)
Weight	1220 lb (553.9 kg)

Power Required

Voltage	120/208 V
Phase	3
Hertz	60
Watts	10 kW
Amperage	34.7
PF	0.8

TRAILER

Model	M116A2
NSN	2330-01-101-8434

Dimensions

Length	147 in (373.4 cm)
Width	73 1/2 in (186.7 cm)
Height of chassis	35 in (88.9 cm)
Height of trailer - loaded	79 in (200.7 cm)
Towing attachment	Drawbar ring
Towing vehicle	CUCV/HMMWV

COMPONENTS

Axle	Tubular
Springs	Semi-elliptical
Shock absorbers	Hydraulic, double acting
Handbrakes	
Actuation	Mechanical
Location	Front of Frame
Quantity	Two
Lights	24V
Tires	
Quantity	Two
Ply	Eight
Size	9x 16 in (22.9 x 40.6 cm)
Tire Inflation	35 psig (241 kPA)
Wheels	
Number of studs	Five
Rim	size 16 x 6 1/2 in (40.6 x 16.5 cm)

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS. (Refer to figure 1-2).

AIR CONDITIONER (1). Cools and heats shelter. Capable of filtering air through the nuclear, biological, and chemical (NBC) filtering unit.

GENERATOR-SET (2). Powers air conditioner.

TRAILER (3). Holds and transports the air conditioner and generator-set.

FIRE EXTINGUISHER (4). Used for extinguishing fires.

STACK EXHAUST (5). Directs exhaust from generator-set away from unit.

LEG PROP ASSEMBLY (6). Provides added stability for the trailer.

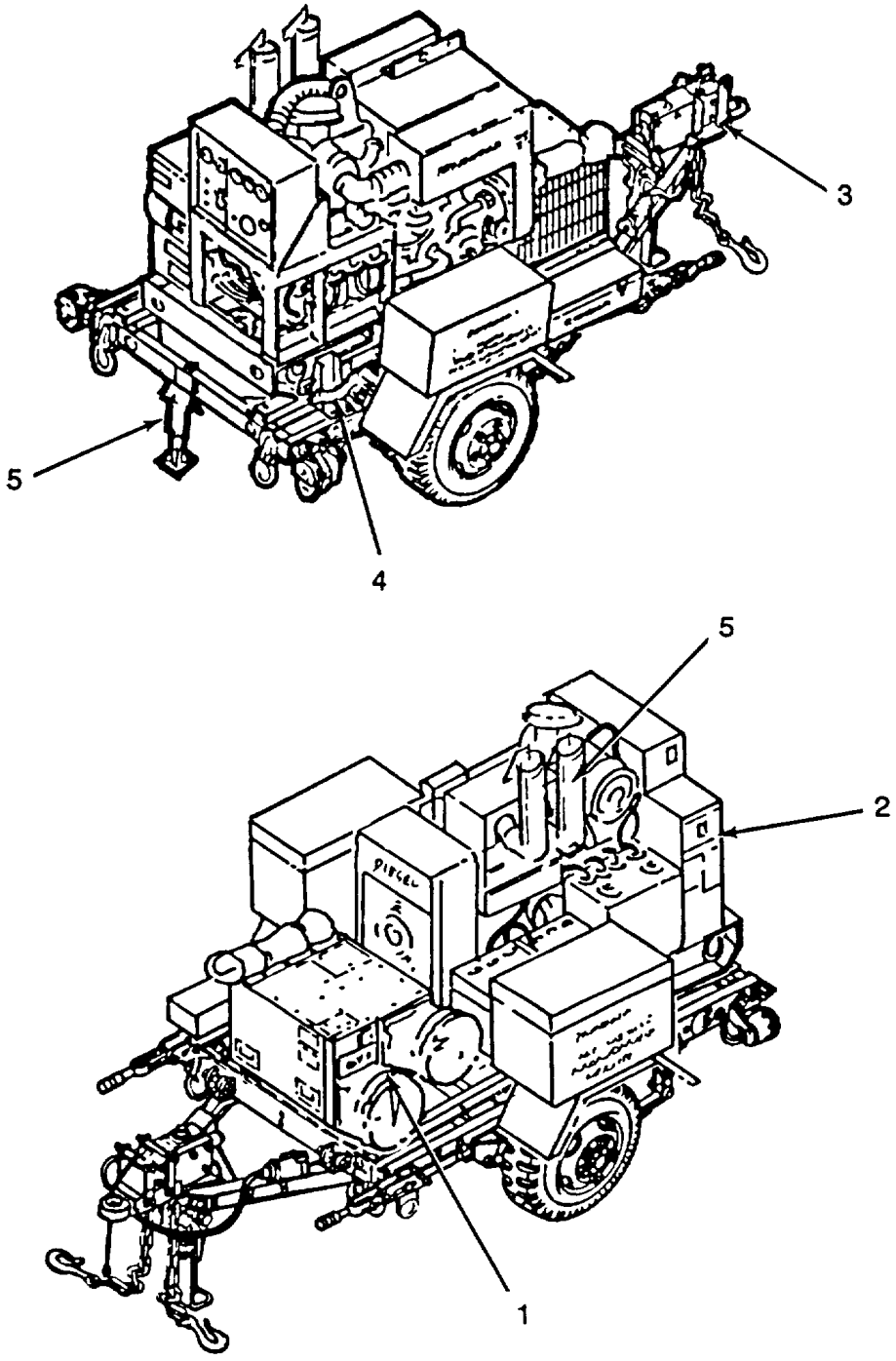


Figure 1-2. Location of Major Components.

Section III. TECHNICAL PRINCIPLES OF OPERATION

1-10. GENERAL. The trailer-mounted, generator-set powered, air conditioner consists of three separate components creating a self-powered air conditioner. Principles of operation for each component is found in the following technical manuals.

Air Conditioner	TM 5-4120-384-14
Generator-Set	TM 5-6115-585-12
Trailer	TM 9-2330-202-14&P

For power cable and ground wire connections refer to figure 1-3.

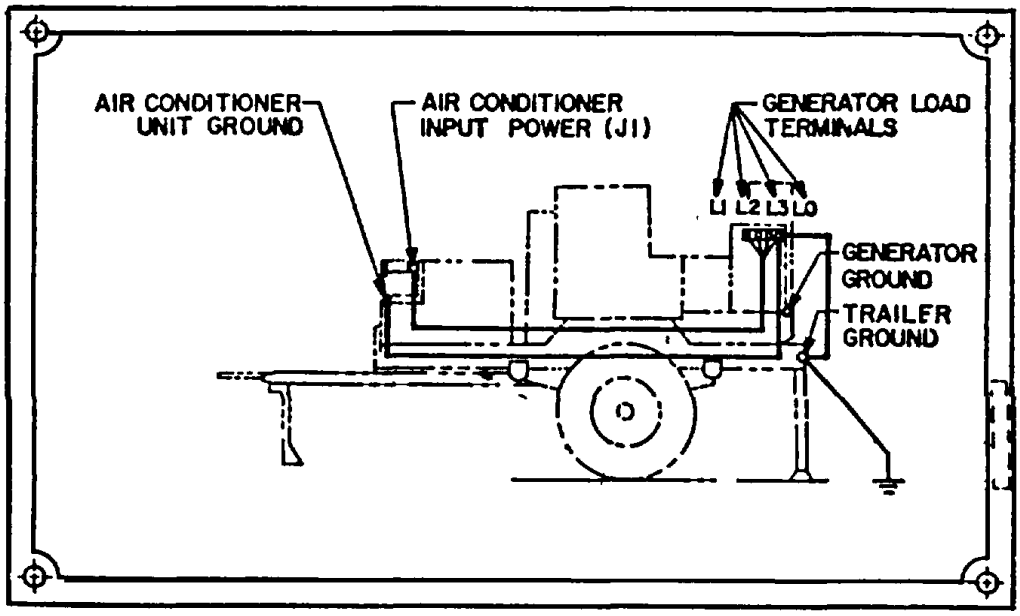


Figure 1-3. Interconnecting Wiring Diagram.

CHAPTER 2
OPERATING INSTRUCTIONS

Table of Contents

Section I. DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

2-1. GENERAL. For specific usage of controls and indicators on the air conditioner, refer to TM 5-4120-384-14: for the generator-set, refer to TM 5-6115-585-12: and for the trailer, refer to TM 9-2330-202-14&P.

2-2. OPERATOR CONTROLS. (Refer to figure 2-1.)

a. Air Conditioner. The air conditioner is designed for a wide variety of installations and for operation under a wide range of climatic conditions. It is also designed for continuous or intermittent operation as a self-contained unit or may be connected to external filtering equipment for operation under nuclear, biological, and chemical (NBC) environmental conditions. Operators must be aware of any peculianties or operational limitations for their specific installation.

JUNCTION BOX AND CONTROL PANEL (1). Contains temperature selector switch, power input receptacle (primary location), control circuit breaker, compressor circuit breaker, high pressure cutout switch, mode selector switch, and low pressure cutout switch.

INPUT POWER RECEPTACLE (2), (Primary Location). Located on the control panel. For connection of external power.

INPUT POWER RECEPTACLE (3), (Alternate Location). Located on the rear of the unit. For connection of external power.

VENT CONTROL (4). Located on the front right side. For opening and closing vent.

b. Generator-Set. The generator-set is designed for using different currents, however the only current used In the trailer-mounted, generator-set powered, air conditioner is for a 3-Phase 120/208 V output with a frequency of 60 Hz.

CONTROL PANEL (5). Contains engine and generator controls.

OIL PRESSURE GAUGE (6). Measures engine oil pressure by 0-50 pounds per square inch (psig).

RECONNECTION SWITCH (7). Preset to 120/208 V, 3 phase output.

LOAD TERMINALS (8). Used to supply power from the generator-set to the air conditioner.

c. Trailer. The trailer has been modified for use with the trailer-mounted, generator-set powered, air conditioner.

DRAWBAR RING (9). Couples trailer to towing vehicle.

LEG PROP ASSEMBLIES (10). Supports trailer when it is not coupled to towing vehicle.

PLUNGER ASSEMBLY (11). Locks leg drop in the up or down position.

SAFETY CHAIN (12). Couples trailer to towing vehicle. If ring accidentally uncouples from towing vehicle, the safety chain prevents the trailer from running away.

HANDBRAKE LEVER (13). Applies or releases service brake.

BRAKEAWAY LEVER AND CHAIN (14). Applies hydraulic brakes if trailer accidentally uncouples from towing vehicle.

INTERVEHICULAR CABLE (15). Connects electrical power from the towing vehicle to the trailer's tail lights.

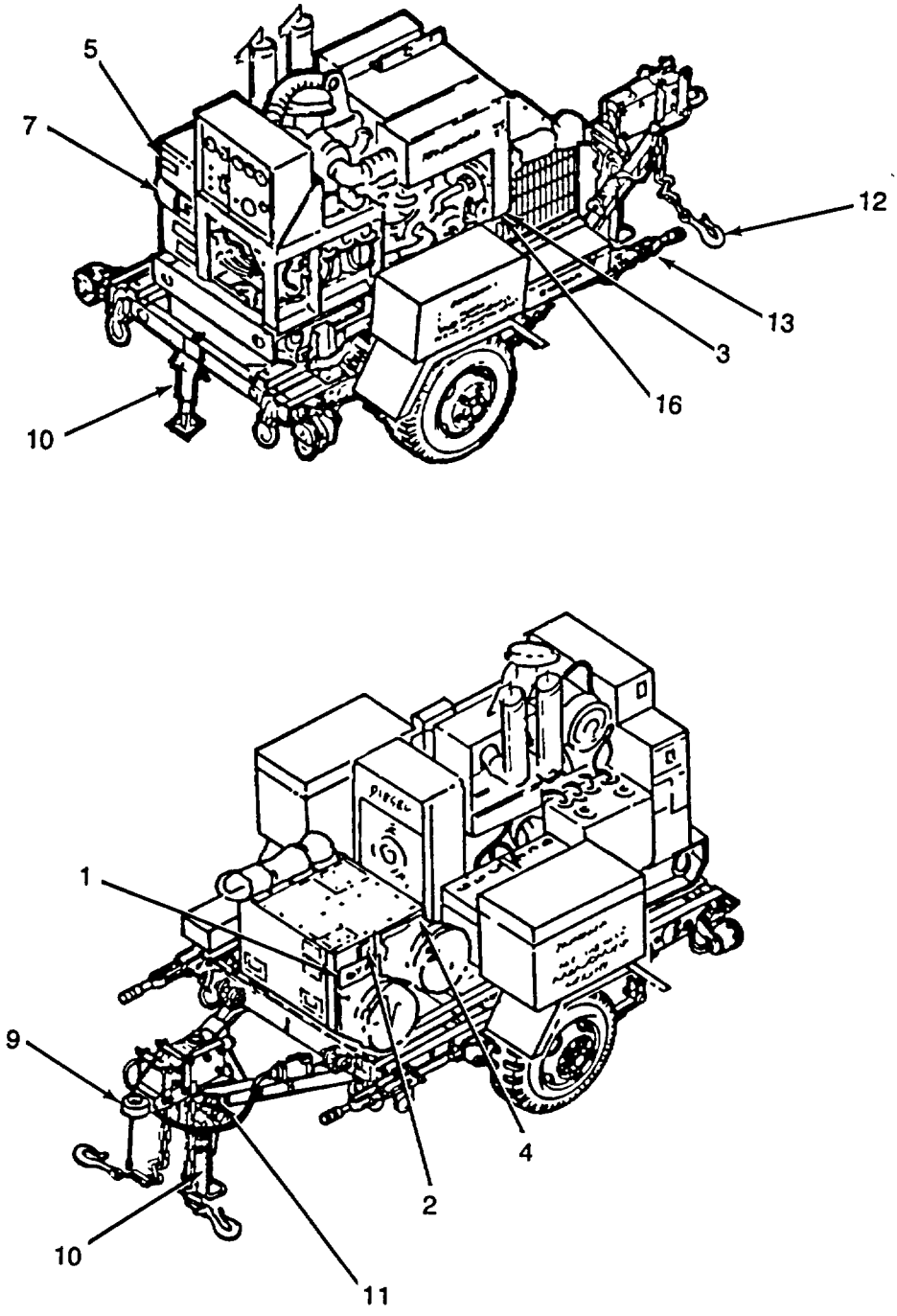


Figure 2-1. Operator Controls and Indicators (Sheet 1 of 2).

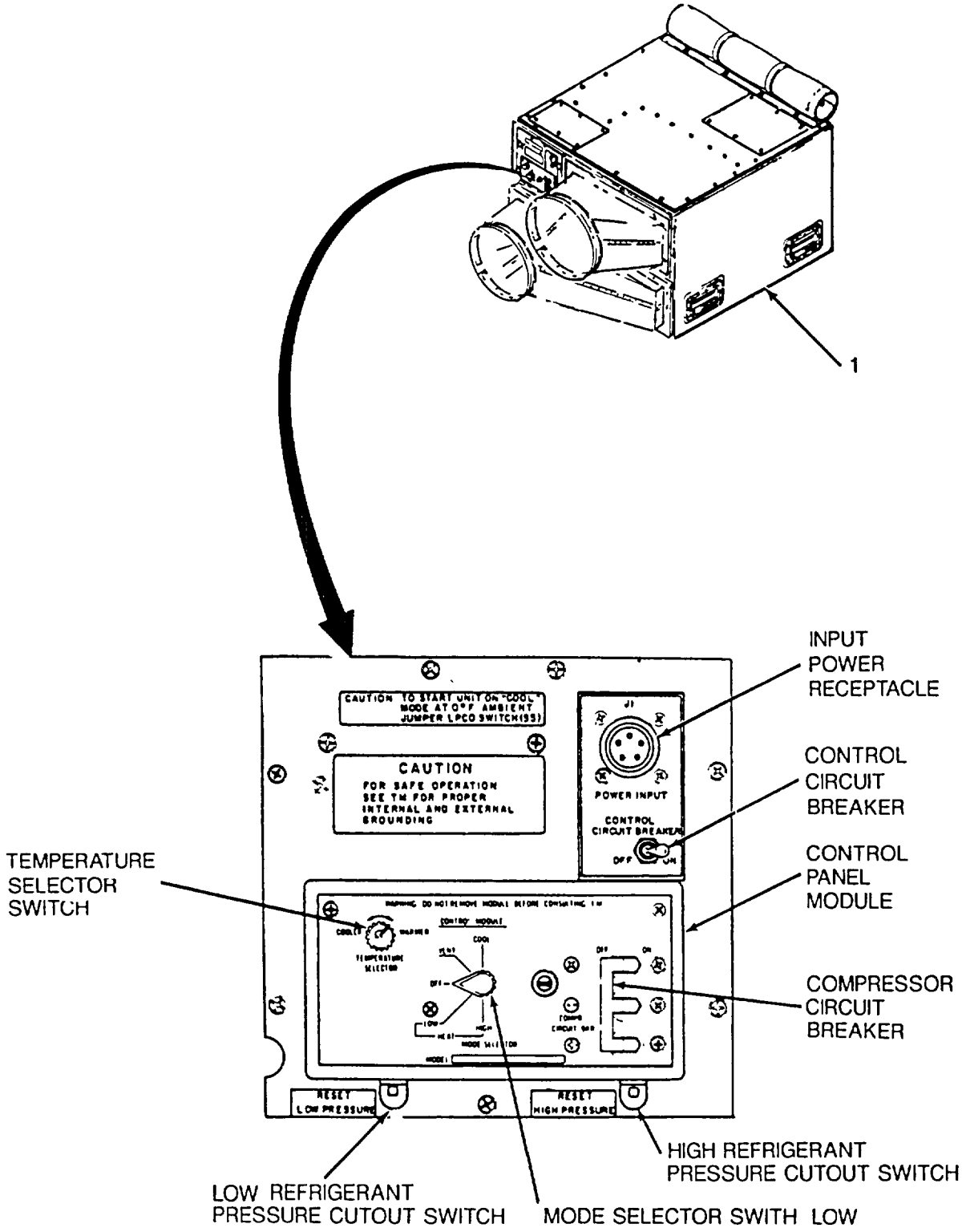


Figure 2-1. Operator and Indicators (Sheet 2 of 2).

2-3. INDICATORS. (Refer to figure 2-1.)

Air Conditioner. Refrigerant sight glass (15) is the only visual indicator used on the air conditioner. The sight glass is a port through which the refrigerant condition can be seen. Liquid refrigerant actually flows through the sight glass chamber only during cooling cycles when the air conditioner is in operation in the COOL mode. The unit must be operated approximately 15 minutes at maximum cooling prior to checking condition of the refrigerant at sight glass. The sight glass is equipped with a center indicator that is moisture sensitive Dry refrigerant is indicated by green, it turns to chartreuse when the moisture content becomes undesirable, and to yellow when the level becomes unacceptable. Excessive moisture in the refrigerant may damage or possibly destroy the compressor. If the liquid refrigerant observed in the sight glass has an opaque, milky appearance, or frequent bubbles appear, the volume of refrigerant is low and the system should be charged. Refer to TM 5-4120-384-14 for maintenance.

CAUTION

Do not operate the air conditioner in the COOL mode if the refrigerant color has reached the yellow bank or if numerous bubbles appear in the sight glass. COOL mode operation may be continued with the refrigerant color in the chartreuse band or with only an occasional bubble appearing in the window, but the sight glass should be rechecked after each 4 hours of operation to ensure that the condition has not become worse.

Section II. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-4. GENERAL. Preventive Maintenance Checks and Services (PMCS) are essential to the efficient operation of the trailer-mounted, generator-set powered, air conditioner and to prevent possible damage that might occur through neglect or failure to observe warning symptoms in a timely manner. Checks and services performed by operators are limited to those functions which are described in table 2-1.

a. Before You Operate. Always keep in mind and observe the Warnings and Cautions. Perform your before (B) PMCS.

b. While You Operate. Always keep in mind and observe the Warnings and Cautions. Perform your during (D) PMCS.

c. After You Operate. Be sure to perform your after (A) PMCS.

d. If Your Equipment Fails to Operate. Troubleshoot with proper equipment. Report any deficiencies using DA Form 2404. See DA PAM 738-750 for instructions.

e. Perform weekly, as well as before operations, PMCS if:

(1) You are the assigned operator and have not operated the item since the last weekly.

(2) You are operating the item for the first time.

NOTE

If the equipment must be kept in continuous operation, check and service only those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the equipment can be shut down.

2-5. LEAKAGE TEST. It is necessary for you to know how fluid leakage affects the status of your equipment. The following definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn, then be familiar with them and REMEMBER WHEN IN DOUBT, NOTIFY YOUR SUPERVISOR.

Leakage Definitions:

Class I	Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.
Class II	Leakage of fluid great enough to form drops but not enough to cause drops to drop from item being checked/inspected.
Class III	Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

Table 2-1. Operator Preventive Maintenance Checks and Services

B - BEFORE D - DURING A - AFTER W - WEEKLY M - MONTHLY

Item No.	Interval B	D	A	W	M	Item to be Inspected	Procedures: Check for and have repaired, filled or adjusted as needed	Equipment is Not Ready/ Available If:
							AIR CONDITIONER	
1	•					Information Plates	Check for legibility and loose or missing hardware.	
2	•					Fabric Cover	Check that cover is rolled up for normal operation.	
					•		Roll down cover and check for condition of snaps, mildew, tears, or worn edges.	Cover is missing or damaged.
3	•					Panels	Check for cracks, dents, or missing hardware.	Panels missing or damaged.
4	•	•	•		•	Air Filter	Check that filter is clean.	Filter is clogged or missing.
5	•					Vent Control	Check for proper adjustment. Should be in closed position.	
					•		Freedom of operation.	Control wheel missing or inoperable.
6		•				Condensate Drain	No water dripping anywhere except drain.	Water is leaking in an area that would cause damage or be a hazard.

Table 2-1. Operator Preventive Maintenance Checks and Services (cont.)

B - BEFORE D - DURING A - AFTER W - WEEKLY M - MONTHLY

Item No.	Interval B	D	A	W	M	Item to be Inspected	Procedures: Check for and have repaired, filled or adjusted as needed	Equipment is Not Ready/ Available If:
7	•					Control Module	Inspect for damage, secure mounting, and proper operation in accordance with para. 2-8.	Control module damaged or operating improperly.
8		•				Refrigerant Sight Glass	After 15 minutes of operation in maximum cooling, check for bubbles or milky flow indicating low refrigerant charge. Check for yellow color which indicates presence of moisture.	Bubbles, milky flow, or yellow color is observed.
9	•	•				Flexible Ducts and Adapters	Check for obstruction, damage, proper adjustment, loose or missing duct or hardware.	Flexible duct missing or damaged beyond repair.
							GENERATOR-SET	
10	•					Generator-Set	a. Check on, around, and beneath the generator-set for fuel or oil leaks.	Any fuel leaks are detected. Class III oil or fuel leaks detected.
	•						b. Check that generator-set is properly grounded.	Not properly grounded.
	•						c. Check for secure connections **CAUTION** **Dangerous gases. Do not smoke or use open flame while servicing battery due to possible presence of hydrogen, a highly explosive gas.**	Loose or missing parts frayed or damaged ground wire.
	•						d. Check battery electrolyte level. Level should be about 3/8 in. above top of plates. Add water if level is low. Use clean water (distilled water if available).	

Table 2-1. Operator Preventive Maintenance Checks and Services (cont.)

B - BEFORE D - DURING A - AFTER W - WEEKLY M - MONTHLY

Item No.	Interval B	D	A	W	M	Item to be Inspected	Procedures: Check for and have repaired, filled or adjusted as needed	Equipment is Not Ready/ Available If:
11	•					Electrical Connections	Check for secure mounting, frayed or damaged wires.	Loose, missing, or damaged wires
12	•					Fuel Gauge	Check for sufficient fuel for continuous operation.	
13	•					Engine Oil	Check oil filler dipstick for proper oil level. Add oil as required.	
14	•	•				Air Cleaner Indicator	Check indicator for restricted air cleaner. If red warning indicator becomes visible, clean or replace dust cap and filter element (Refer to TM 5-6115-585- 12).	Air cleaner is missing or unserviceable. Indicator indicates red.
15	•			•		Fuel Strainer and Filters	Drain water and sediment from strainer, primary and secondary filters. Allow to drain until fuel runs clean. (Refer to TM 5-6115-585-12).	
16		•				Gauges and Instruments	Check gauges and instruments for proper generator set operation.	
		•				a. Battery Indicator	Normal indication: yellow area while charging, green area when fully charged.	Battery indicator not in green or yellow area
		•				b. Frequency Meter	Normal indication: 60 Hz (red line) when generator is loaded.	Proper frequency cannot be maintained.
		•				c. Current Meter	Indicates percent of rated output current per phase, as selected with ammeter- voltmeter transfer switch. Meter indication must not exceed 100% or more than 5% load difference between phases (Refer to TM 5-6115-585-12).	
		•				d. Voltmeter	Indicates generator output voltage: 120, 208 or 240 volts, depending on load connections, and as selected on amps-volts transfer switch.	Desired voltage cannot be obtained.
		•				e. Oil Pressure Gauge	Indicates engine oil pressure. Normal indication is 25 psig.	Oil pressure drops below 15 psig.

Table 2-1. Operator Preventive Maintenance Checks and Services (cont.)

B - BEFORE D - DURING A - AFTER W - WEEKLY M - MONTHLY

Item No.	Interval B	D	A	W	M	Item to be Inspected	Procedures: Check for and have repaired, filled or adjusted as needed	Equipment is Not Ready/ Available If:
17	•		•			Fuel Tank	Drain water and sediment. Allow to drain until fuel runs clean. Fill tank upon completion of operation.	
18	•					Primary Fuel Filter	Clean filter housing and replace filter element (Refer to TM 5-6115-585-12).	
19	•					Secondary Fuel Filter	Clean filter housing and replace filter element. (Refer to TM 5-6115-585-12).	
							TRAILER	
20				•		Tires	a. Check that tire pressure is 35 psig (241.22 kPa) when tires are cool. b. Check tires for cuts, foreign objects, or unusual tread wear. Remove any stones from between the treads.	One tire is flat, missing, or unserviceable.
21						Wheels	**NOTE** **The left and right stud nuts are turned clockwise to tighten and counterclockwise to loosen.**	
	•						Check wheels for damage and wheel stud nuts for tightness and presence.	One wheel is damaged. One wheel stud nut loose or missing.
22	•					Drawbar Ring	Check drawbar ring for secure mounting and obvious damage.	Ring is loose or bent.
23	•					Intervehicular Cable	Check intervehicular cable for cuts and breaks.	
24	•					Safety Chains	Check safety chains for secure mounting and obvious damage.	Safety chains are missing or unsecure.

Table 2-1. Operator Preventive Maintenance Checks and Services (cont.)

B - BEFORE D - DURING A - AFTER W - WEEKLY M - MONTHLY

Item No.	Interval B	D	A	W	M	Item to be Inspected	Procedures: Check for and have repaired, filled or adjusted as needed	Equipment is Not Ready/ Available If:
25					•	Frames	a. Check that air conditioner and generator-set are securely mounted.	Mounting hardware is loose or missing.
							b. Inspect the entire chassis frame when trailer is loaded for damage, cracks, broken welds.	Frame is obviously broken or cracked.
26		•				Leg Prop Assembly	With trailer connected to towing vehicle, check leg prop assembly for ease of operation.	Leg prop assembly will not secure in the stored position or will not support trailer.
27		•				Brake System	Test brake system by hooking trailer to towing vehicle.	Service brakes fail to operate.
28			•			Handbrakes	With trailer hooked to towing vehicle, set the handbrakes. Move the trailer slightly to see if the handbrakes hold the wheel.	
29						Lights and Reflectors		
							NOTE **An assistant is required while checking the brake lights.**	
		•					a. Connect the intervehicular cable to the towing vehicle.	
		•					b. Operate the vehicle light switch through all settings and check the lights.	
					•		c. Check for damage and presence of reflectors.	

Section III. OPERATION UNDER USUAL CONDITIONS

2-6. ASSEMBLY AND PREPARATION FOR USE. Services of unit maintenance should be employed for original unpacking, assembly installation, and preparation for use. See paragraph 4-6.

2-7. INITIAL ADJUSTMENTS AND CHECKS.

a. Inspect all covers, panels, screens for loose mounting, obstructions, or shipping damage. Report any deficiencies to unit maintenance.

b. Perform the preventive maintenance checks and services listed in table 2-1.

2-8. OPERATIONAL CHECKS. The following general operational checks and explanations should be used and understood to be sure that the trailer-mounted, generator-set powered, air conditioner will operate in the best possible manner. Refer to figure 2-1 for location of operator's controls and indicators.

a. Perform the preventive maintenance checks and services in table 2-1.

b. Tie back canvas cover from air conditioner.

CAUTION

Always start the generator set and warm up the engine before turning air conditioner ON.

c. Check that the air conditioning unit is properly connected to the generator set and that power has been on for 4 hours before starting air conditioner.

d. Check that flexible ducts are properly installed on shelter.

e. Check to see that the CONTROL CIRCUIT BREAKER and the COMPRESSOR CIRCUIT BREAKER on the air conditioner are in the ON position.

f. On the air conditioner, turn the MODE SELECTOR switch to VENT. The evaporator fan should start immediately. Use a paper streamer or other method to check the air flow into the return air duct and out of the conditioned air supply duct.

NOTE

Air conditioner has been modified to ventilate with recirculated air only.

g. On the air conditioner, turn the TEMPERATURE SELECTOR (thermostat) knob to the fully WARMER (clockwise) position. Then turn the MODE SELECTOR switch to LOW HEAT. Place your hand in the air flow from the conditioned air supply louver and feel for a temperature rise.: When the supply air temperature has reached a relatively stable level, turn the MODE SELECTOR switch to HIGH HEAT and feel for further temperature rise. Next, turn the TEMPERATURE SELECTOR thermostat control knob to the fully COOLER (counterclockwise) position. Feel that supply air temperature drops to approximately the same relatively stable level previously noted In LOW HEAT. Finally, turn the MODE SELECTOR switch to LOW HEAT and feel the discharge air temperature drop to ambient level (room temperature).

NOTE

The temperature thermostat control has an effective functional range between 60°F and 90°F (16°C and 32°C). In extreme conditions when ambient air temperature is below 60°F (16°C) or above 90°F (32°C), the operation in either LOW HEAT or HIGH HEAT mode will vary from that described above.

CAUTION

If a knocking or pounding noise is heard when the compressor starts in the following check, immediately turn the MODE SELECTOR out of the COOL position. Leave input power connected and wait at least 2 hours before attempting another start in COOL mode. Damage to equipment may result if personnel fail to observe precautions.

h. On the air conditioner, turn the TEMPERATURE SELECTOR control knob to the fully WARMER (clockwise)'\ position, then turn the MODE SELECTOR switch to COOL. Note that the evaporator and condenser fans start immediately and that the compressor starts approximately 30 seconds later. Hold your hand in the air flow from the conditioned air supply louver; there should be no change in temperature. Now turn the TEMPERATURE SELECTOR control knob to the fully COOLER (counterclockwise) position and feel the supply air temperature begin to drop almost immediately. Leave controls in the present position and perform the next check.

i. After 15 minutes of operation, check the sight glass to determine the refrigerant condition. The sight glass is equipped with a center indicator that is moisture sensitive. Dry refrigerant is indicated by green, it turns to chartreuse when the moisture content becomes undesirable, and to yellow when the level becomes unacceptable. Excessive moisture in the refrigerant may damage or possibly destroy the compressor. If the liquid refrigerant observed in the sight glass has a milky appearance, or frequent bubbles appear, the volume of refrigerant is low and the system should be charged. Either moisture or low charge indications should be reported to supervisor for appropriate refrigeration system action.

CAUTION

Do not operate the air conditioner in the COOL mode if the refrigerant color has reached the yellow band or if numerous bubbles appear in the sight glass. COOL mode operation may be continued with the refrigerant color in the chartreuse band or with only an occasional bubble appearing in the window, but the sight glass should be rechecked after each 4 hours of operation to ensure that the condition has not become worse. Damage to the equipment may result if personnel fail to observe precautions.

j. Turn the MODE SELECTOR switch to OFF. Observe that all air conditioner functions cease.

2-9. GENERAL OPERATING PROCEDURES.

a. Generator Set.

WARNING

All personnel involved in the operation or maintenance of the generator set should become thoroughly familiar with the safety precautions prior to performing operation or maintenance procedures.

Prior to connection of load cables, make sure all switches are in OFF or OPEN position and the generator set is not operating.

Inspect the generator-set ground connection prior to starting the unit. Electrical defects in load lines or load equipment can cause death by electrocution when contact is made with an ungrounded system.

Do not smoke or carry an open flame when servicing the batteries or fuel tank. Exercise extreme care to prevent electrical arcing in the area of the batteries.

Battery electrolyte contains sulfuric acid and can cause severe burns. Handle it with care. If the electrolyte comes in contact with the body, eyes, or clothing, rinse immediately with clean water. Avoid spilling electrolyte on painted surfaces. Do not work alone or smoke when servicing batteries.

WARNING

Do not operate generator set in an enclosed area unless the exhaust gases are piped to the outside. Continued breathing of exhaust fumes is dangerous.

Stay clear of all exposed electrical terminals when generator set is operating.

Remove all rings, watches, and other jewelry when performing maintenance on the generator set. Loose fitting clothing should be secured to prevent it from catching on moving parts.

(1) Operating in Alternate Modes.

CAUTION

Reconnection Switch must be set on 120/208 V, 3-phase output or damage to air conditioner will result.

The generator-set is pre-set for 120/208 V 3-phase output operation.

(2) Starting Generator Set.

WARNING

High noise area. May cause hearing loss. Use proper ear protection within 14 ft.

All personnel involved In the operation or maintenance of the generator set should become thoroughly familiar with the safety precautions prior to performing operation or maintenance procedures.

Prior to connection of load cables, make sure all switches are in OFF or OPEN position and the generator set is not operating.

Inspect the generator set ground connection prior to starting the unit. Electrical defects in load lines or load equipment can cause death by electrocution when contact is made with an ungrounded system.

Do not smoke or carry an open flame when servicing the batteries or fuel tank. Exercise extreme care to prevent electrical arcing in the area of the batteries.

Battery electrolyte contains sulfuric acid and can cause severe burns. Handle it with care. If the electrolyte comes in contact with the body, eyes, or clothing, rinse immediately with clean water. Avoid spilling electrolyte on painted surfaces. Do not work alone or smoke when servicing batteries.

Do not operate generator set in an enclosed area unless the exhaust gases are piped to the outside Continued breathing of exhaust fumes is dangerous.

Remove all rings, watches, and other jewelry when performing maintenance on the generator set. Loose fitting clothing should be secured to prevent it from catching on moving parts.

CAUTION

Do not operate in excess of 200 hours continuous with JP-4. MIL-J-5624 bulk fuel (item 12, appendix F). Do not use either to aid in starting unit.

(a) When starting generator-set with a dry fuel system or after a filter drain or change:

1. Make sure the vent on the underside of the fuel filler cap is open.

2. To prime fuel lines, slightly open one drain cock on filter item nearest to check valve.

3. The slowing of pump action Indicates the fuel system is primed.

4. When pump slows down, close drain cock and move master switch to START.

5. Push in the DC circuit breaker.

(b) Move master switch to PREHEAT position and hold for one minute.

NOTE

Preheat is not required when engine is warm.

(c) Place master switch in START position and hold until engine comes to operating speed. If engine does not start within 15 seconds, repeat steps (b) and (c). If engine cranks too slowly utilize slave receptacle (J14) for extra cranking power.

NOTE

If engine does not come to operating speed within 15 seconds, a minimum of 30 seconds cooling period must be observed before attempting another start.

(d) Master switch will return to PRIME & RUN position when released. If running from auxiliary fuel source, move master switch to PRIME & RUN AUXILIARY FUEL position.

(e) Check oil pressure on engine-mounted gage. Oil pressure should be at least 20 psig. Check frequency on frequency meter on control panel and adjust governor, if necessary, using speed control. Rated frequency should register 60 Hz. Pulling speed control knob out will increase frequency, pushing speed control knob In will decrease frequency. For fine control, turn knob clockwise to increase and counterclockwise to decrease.

(f) Place ammeter-voltmeter transfer switch In position corresponding to the position of the reconnection switch. Adjust voltage adjust rheostat to 120/208 volts on voltmeter. Turn rheostat clockwise to increase voltage or counterclockwise to decrease voltage.

(g) Place AC circuit breaker in ON position. Adjust speed control to obtain a full load frequency of 60 Hz.

(h) Place ammeter-voltmeter transfer switch in position to check percent rated current for 3 phase 120/208 V output.

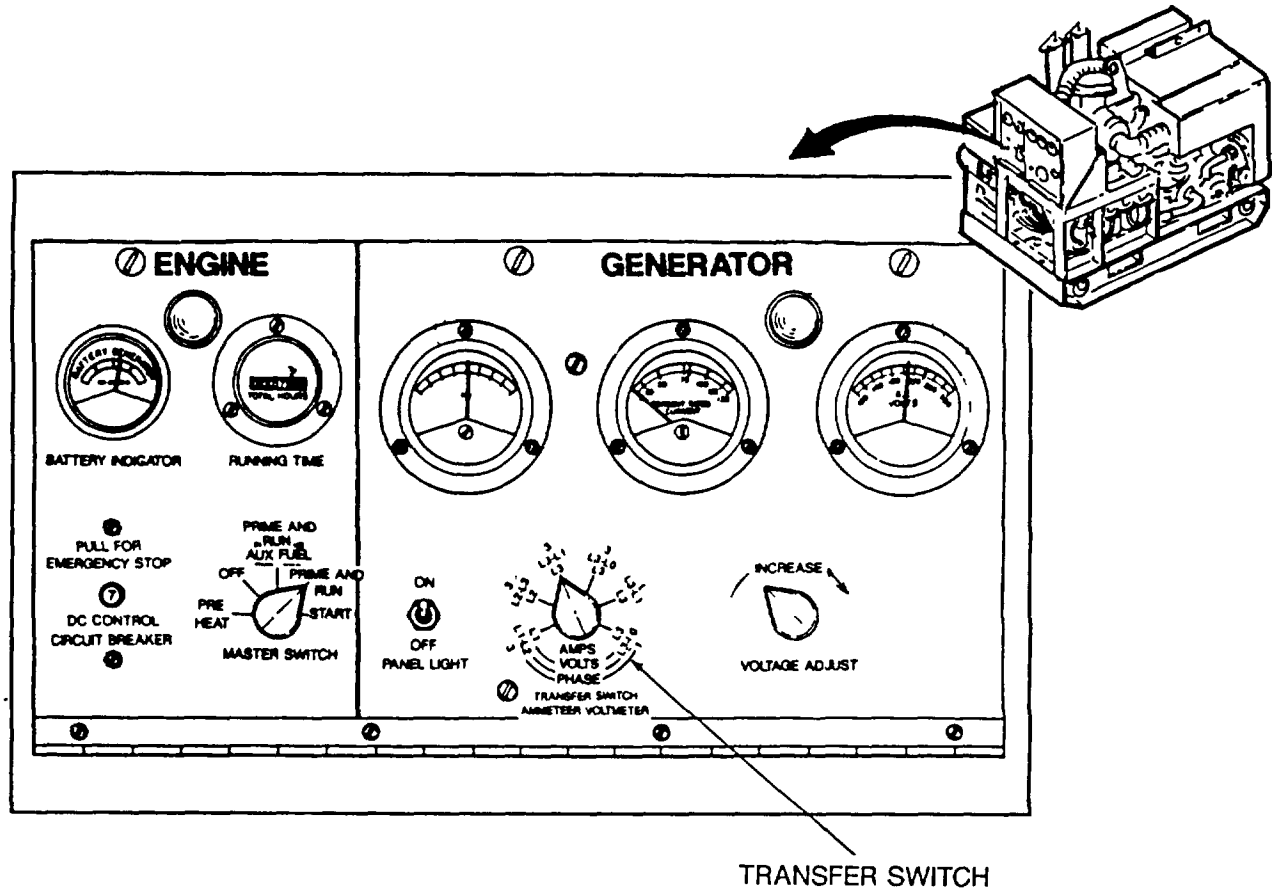


Figure 2-2. Transfer Switch.

1. Switch position should be set for one of four positions. Refer to table 2-2 and figure 2-3.

Table 2-2. Reconnection Switch Positions

Load Voltage and Phases	Switch Position AMP-Volts-Phase			Measurement Access Terminals
120/208 V	L1	L1-L3	3	L1-L2
3-Phase	L2	L2-L3	3	L2-L3
	L3	L3-L1	3	L3-L1
	L3	L3-L0	3	L3-L0

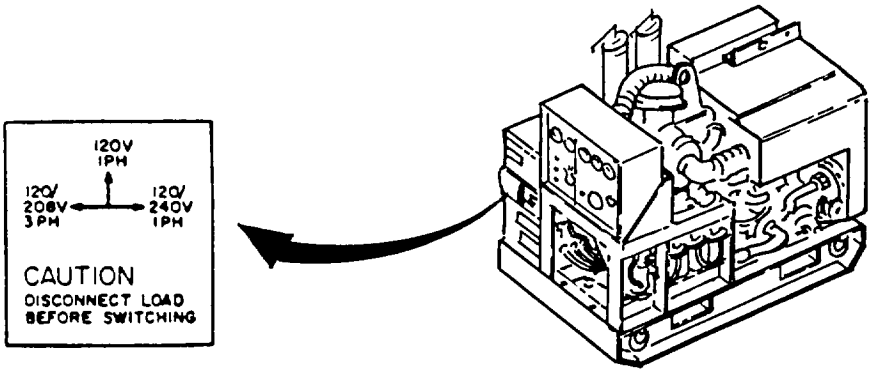


Figure 2-3. Reconnection Switch.

2. Observe percent rated current meter. Do not exceed 5% load difference between phases. A 0.8 power factor load equals a 100% meter reading for maximum rated load. A 1.0 power factor load equals an 80% meter reading for maximum rated load.

(i) During operation of the generator set, observe the following.

1. Check % rated current meter.
2. Check fuel level gage periodically.
3. Oil pressure gage located in engine should indicate 20 psig minimum.
4. Check running time meter periodically in order to perform preventive maintenance checks and services at proper intervals.
5. Battery indicator should indicate yellow while battery is charging, green when battery is fully charged.
6. AC voltmeter should indicate 208 V.
7. Frequency meter should indicate 60 Hz at rated load.

(j) During operation, inspect for leaks, paying particular attention to engine fuel and oil lines and connections. Refer to paragraph 2-5 for leak test.

(k) During operation, listen for unusual noises which may indicate a pending malfunction.

b. Air Conditioner. The air conditioner is designed for operation in a wide range of climatic conditions either continuously or intermittently. The amount of operator attention required will vary depending on specific local conditions for each installation. Under usual conditions, the air conditioner will be set up for the appropriate mode of operation at the beginning of a season and will only need starting and stopping and minor adjustments for the rest of the season. Table 2-3 provides the recommended initial control settings to establish the desired mode for operation.

NOTE

Under some climatic conditions, local practices may be established to close the vent control and/or roll down and snap in place the fabric cover during shutdown periods. If such practices are in effect, the operator must first unsnap, roll up, and secure the fabric cover and appropriately adjust the vent control before turning the MODE SELECTOR switch to the desired operating mode.

Table 2-3. Initial Operator Control Settings

MODE	MODE SELECTOR	TEMPERATURES SELECTOR	VENT CONTROL	FABRIC COVER
Ventilation with 100% Recirculated Air	VENT	Any setting	Fully Closed	Optional
Heating with 100% Recirculated Air	LOW HEAT or HIGH HEAT	Desired Temperature	Fully Closed	Optional
Cooling with 100% Recirculated	COOL	Desired temperature	Fully Closed	Open Rolled
Any Mode - with make-up Air Through NBC Filter	Desired Mode	Desired Temperature	Fully Closed	Open Rolled

2-10. GENERAL OPERATION OF CONTROLS.

Air Conditioner. Do not adjust controls unnecessarily. When the controls are properly set (refer to paragraph 2-9), the unit will automatically control the temperature. The temperature control thermostat on the control module operates like a conventional room thermostat except that the temperature scale is not marked on the control module. The thermostat has a control range of 40°F to 90°F (5°C to 32°C). The centered position of the control knob would be approximately 65°F (18°C). The full INCREASE (warmer) would be 90°F (30°C). The full DECREASE (cooler) would be 40°F (5°C). When the control module is mounted in the unit, the control temperature is sensed at the conditioned air inlet. When the control module is mounted in a remote location (away from the unit) the temperature is sensed at the location.

(a) During Cold or Hot Weather:

Adjust shades, blinds, etc. (when applicable) to admit sunlight during day. Close them at night.

(b) During Hot Weather:

Adjust shades, blinds, etc. (when applicable) to block out sunlight during day.

2-11. OPERATION IN VENTILATE MODE. (No Heating or Cooling Needed).

Air conditioner.

a. Turn mode selector switch to VENTILATE.

b. Adjust vent control to fully closed position.

NOTE

While in ventilation mode, air conditioner only recirculates shelter air.

2-12. OPERATION IN LO HEAT MODE.

Air Conditioner. In the LO HEAT mode three thermostatically controlled heaters are activated. To operate the unit in LO HEAT mode, perform the following steps.

a. Turn mode selector switch to LO HEAT.

b. Turn temperature control thermostat knob as far as it will go in the INCREASE (warmer) position.

NOTE

For faster warm up, start unit in HI HEAT mode. In moderate temperature, unit can then be switched back to LO HEAT.

c. When room or enclosure temperature reaches the desired level, slowly turn the temperature control thermostat knob toward DECREASE (cooler). Heating will stop when you reach the approximate room temperature. Further adjustment can be made by turning the temperature control thermostat knob slightly toward INCREASE (warmer) or DECREASE (cooler) until desired temperature is controlled automatically.

NOTE

Should unit fail to heat the room or enclosure to the desired temperature or fail to maintain the desired temperature with temperature control thermostat set in maximum INCREASE position, switch to HI HEAT.

NOTE

An overheat thermostat located near the heating elements will turn them off if the temperature in the heater compartment reaches an excessive level.

d. Adjust vent control to fully closed position.

2-13. OPERATION IN HI HEAT MODE.

Air Conditioner. In the HI HEAT mode, six heaters are activated. Three are thermostatically controlled. Three of these heater elements operate all of the time. To operate the unit in the HI HEAT mode, perform the following steps.

a. Turn mode selector to HI HEAT.

b. Turn temperature control thermostat knob as far as it will go in the INCREASE (warmer) position.

c. When room or enclosure temperature reaches the desired level, slowly turn the temperature thermostat knob toward DECREASE (cooler). Make small adjustments until desired temperature is maintained.

NOTE

Should unit continue to produce too much heat with temperature control thermostat knob adjusted toward the DECREASE (cooler) setting, switch to LO HEAT.

d. Adjust vent control to fully closed position.

e. During periods of very cold weather, the fabric cover should be rolled down and snapped.

NOTE

An overheat thermostat located near the heating elements will turn them off if the temperature in the heater compartment reaches an excessive level.

2-14. OPERATION IN COOL MODE.

Air Conditioner. To operate the unit in the COOL mode, perform the following steps.

CAUTION

Fabric cover must be rolled up and secured with ties. If fabric cover is not rolled up, a high temperature/high pressure condition will occur within the unit which may damage the compressor or cause the unit to stop functioning.

a. Turn mode selector switch to COOL.

b. Turn temperature control thermostat knob as far as it will go in the DECREASE (cooler) position.

c. When room or enclosure temperature reaches the desired level, slowly turn the temperature control thermostat knob toward INCREASE (warmer). Cooling will stop when you reach the approximate room temperature. Further adjustment can be made by turning the temperature control thermostat slightly toward DECREASE (cooler) or INCREASE (warmer) until desired temperature is controlled automatically.

2-15. SHUTDOWN.

a. Air Conditioner. Turn the mode selector switch to OFF.

NOTE

DO NOT disconnect or turn off power to the air conditioner during periods of normal shutdown. If power is disconnected, the heater and thermostat inside the compressor will not allow the unit to be operated in the COOL mode until 30 minutes after power has been reconnected. Power should be disconnected only if unit is to be serviced, during emergency conditions, or during periods of extended shutdown.

b. Generator Set.

(1) Place AC circuit breaker in the OFF position.

(2) To stop the generator set, place the master switch in the OFF position.

(3) After operation of the generator set, perform the inspection and service requirements as outlined in preventive maintenance checks and services (PMCS)

(4) Emergency Stop. To stop generator set In an emergency, pull out DC control circuit breaker.

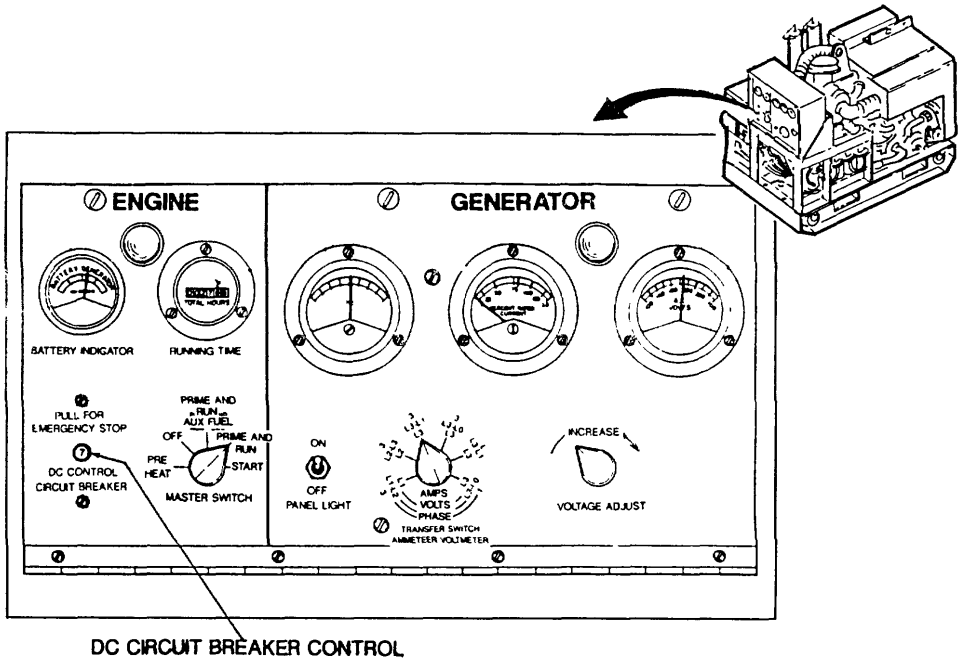
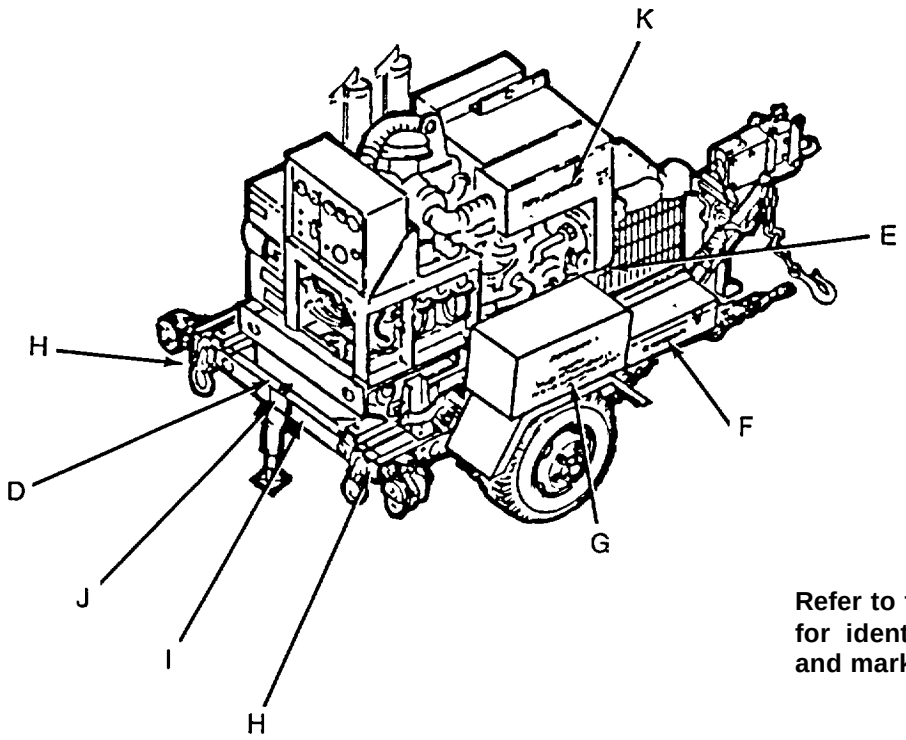


Figure 2-4. DC Control Circuit Breaker.

(5) If generator set is not going to be operated for 2 weeks or more, disconnect the negative cable from the battery. The generator set will be ready to go upon reconnection of the negative cable.

c. Trailer. For long shutdown periods, park in a sheltered spot out of the wind. For long shutdown periods, if dry ground is not available, prepare a footing of planks or brush. Remove all buildup of ice and snow as soon as possible after shutdown. Cover your trailer with tarpaulins, but keep the ends of the canvas off the ground to prevent the ends from freezing to the ground.

2-16. INFORMATION PLATES AND MARKINGS. Refer to figures 2-5, 2-6, and 2-7 for the locations and text of the information plates and stencil markings on the trailer-mounted air conditioner with power.



NOTE

Refer to figures 2-6 and 2-7 for identification of plates and markings

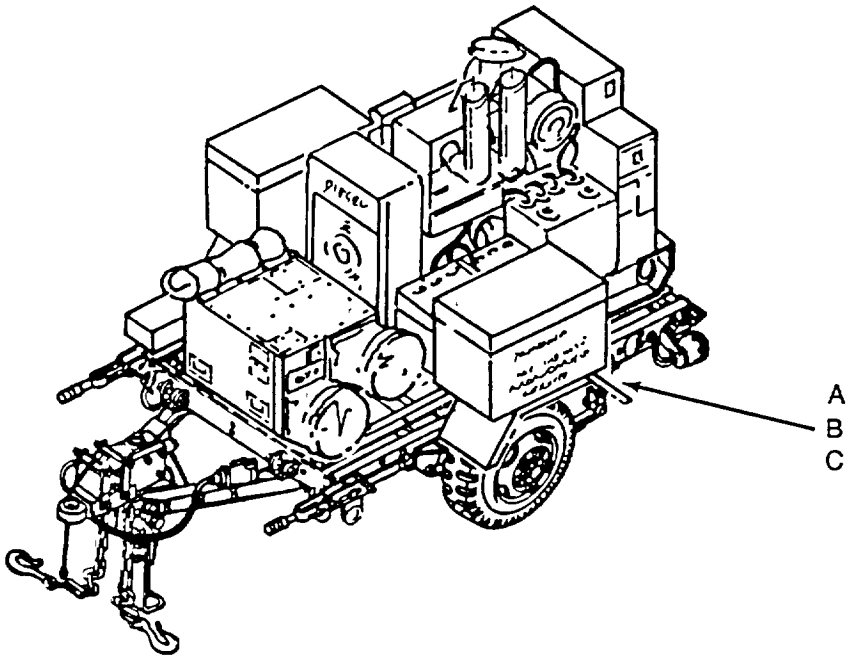
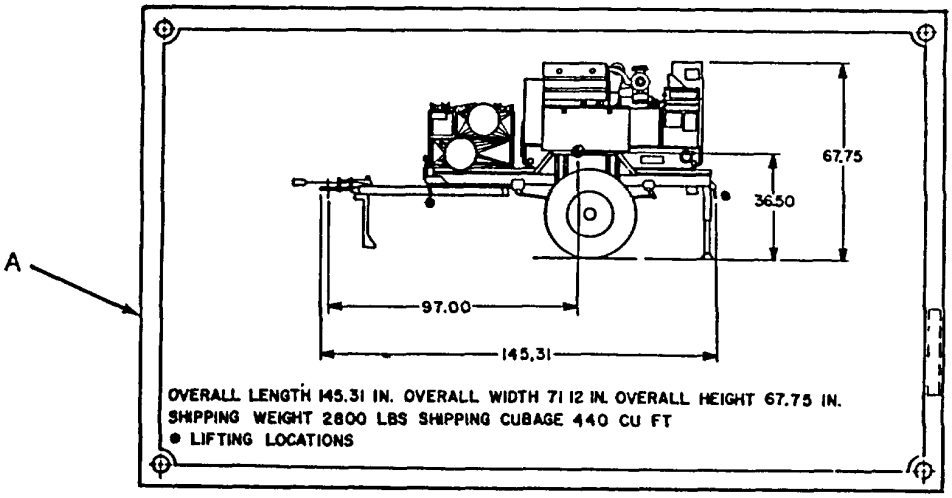
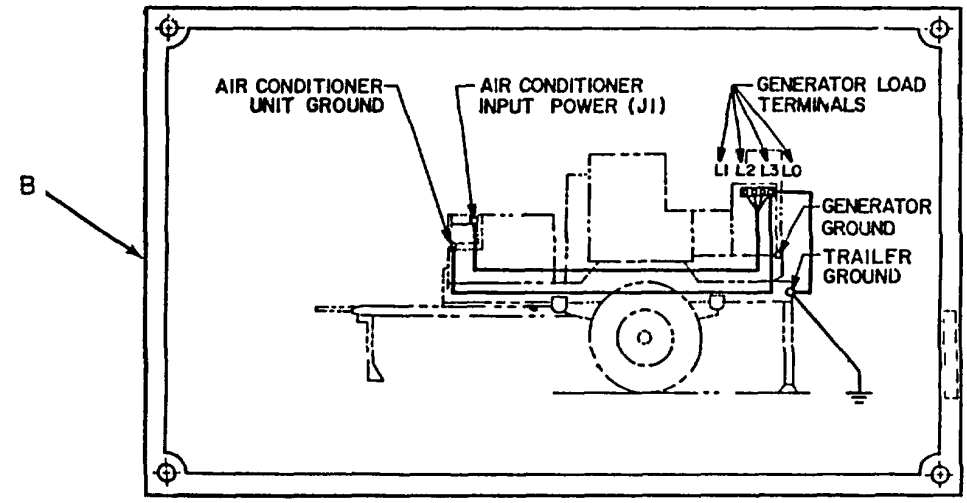
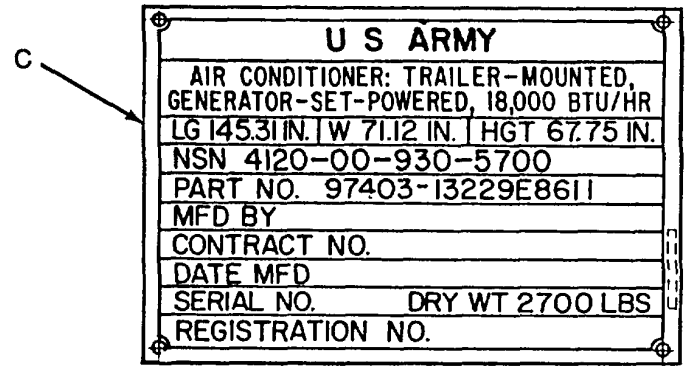


Figure 2-5. Location of Information Plates and Markings.



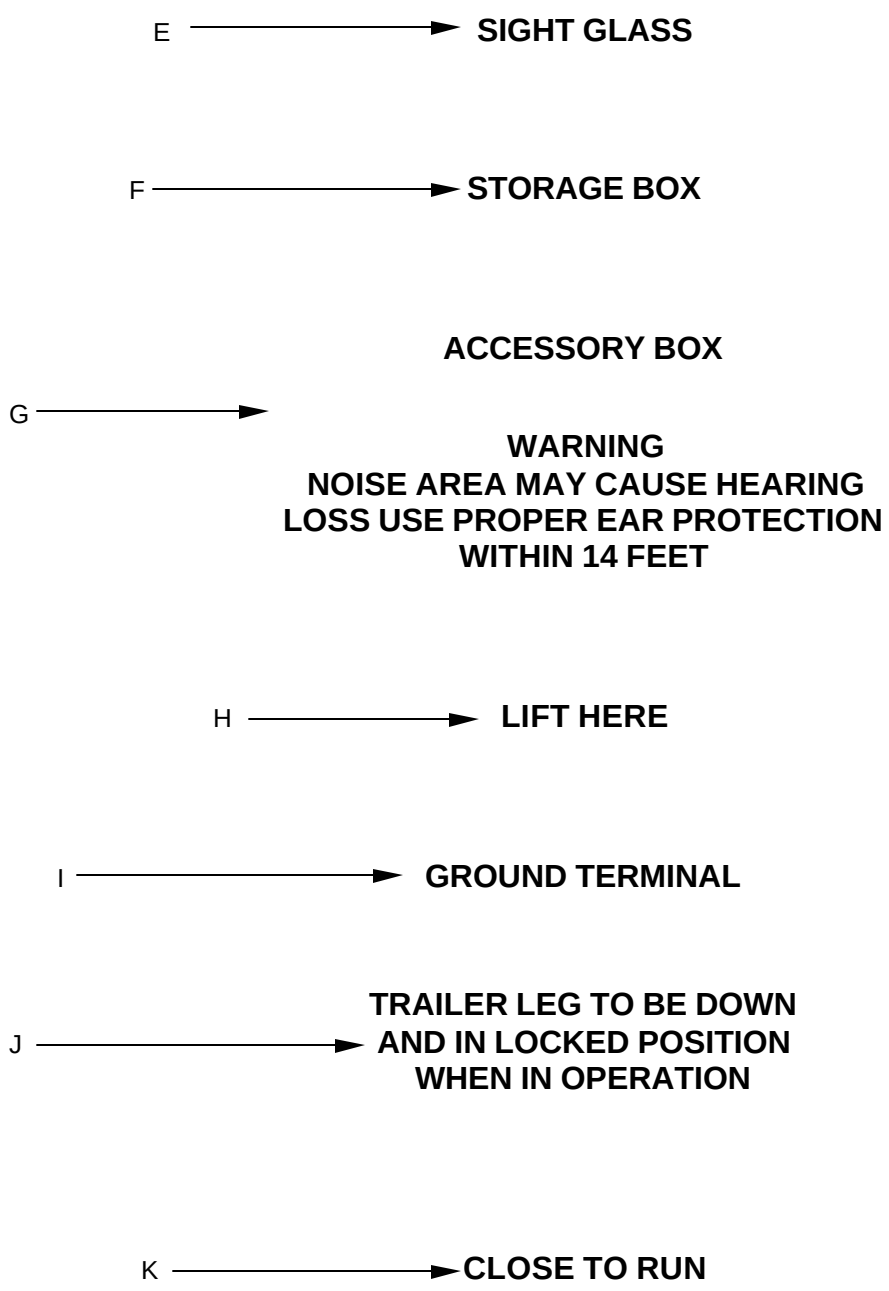




NOTE

Refer to figure 2-5 for location of plates.

Figure 2-6. Identification of Information Plates.



NOTE

Refer to figure 2-5 for location of markings.

Figure 2-7. Identification of Markings.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

2-17. GENERAL. The air conditioner and generator set is designed to operate normally within a wide range of climatic conditions. However, some extreme conditions require special operating and servicing procedures to prevent undue loading and excessive wear on the equipment. These unusual conditions and the special steps to be performed are listed in the following paragraphs.

2-18. OPERATION IN EXTREME HEAT. The air conditioner is designed to operate in temperatures up to 120°F (49°C) or higher. Extra care should be taken to minimize the cooling load when operating in extremely high temperatures.

a. Air Conditioner.

NOTE

Unit Preventive Maintenance Checks and Services (PMCS) should be performed at daily Intervals.

(1) Protection.

(a) Check all openings in the shelter or enclosure, especially doors and windows, to be sure they arc tightly closed Limit in and out traffic, if possible.

(b) When appropriate, use shades or awnings to shut out direct rays of the sun.

(c) When possible, limit the use of electrical lights and other heat producing equipment.

NOTE

Weather stripping, the installation of storm doors and windows (if appropriate), and insulation of surfaces exposed to the outside is recommended when operating in extremely high temperatures for extended periods.

(2) Cleaning. Clean outside grills, coils, filters, and mist eliminator more frequently.

b. Generator Set.

(1) Be sure that nothing obstructs air flow to and from the generator set.

(2) Keep cooling fins clean.

(3) Inspect battery electrolyte level daily. Add distilled water if necessary.

(4) Keep generator free of dirt and grime. Be sure ventilating screens are free of obstructions.

c. Trailer. When practical, park the trailer under cover to protect it from sun, sand, and dust.

2-19. OPERATION IN EXTREME COLD. When operating the air conditioner and generator set in temperatures down to -50°F (-45°C), extra care should be taken to minimize the heating load. Some of the steps that may be taken are:

a. Air Conditioner.

CAUTION

Do not disturb electrical wiring that has been exposed to extremely low temperatures. When exposed to cold, both the wire and insulation become brittle and can be easily broken.

(1) Check all openings in the enclosure, especially doors and windows, to be sure they are tightly closed. Limit in and out traffic, if possible.

(2) Open shades and awnings to permit entry of direct rays of the sun, if appropriate.

NOTE

Weather stripping, the installation of storm doors and windows (if appropriate), and insulation of surfaces, exposed to, the outside is recommended when operation at extremely low temperatures for extended periods is anticipated.

b. Generator Set.

(1) Use correct lubricating oil in engine crankcase for temperature conditions, refer to TM 5-6115-585-12. Change oil only when engine is warm.

(2) Use Arctic Grade diesel fuel.

(3) Keep batteries in a well-charged condition.

(4) Be certain air cleaner intake control is in cold weather position.

(5) Shutter blades should be fully closed for cold engine, open only partially under light load, open more as load increases.

(6) Hold master switch in START position for 2 minutes after engine comes to operating speed.

c. Trailer.

(1) Be careful when placing the trailer in motion after a shutdown. Congealed lubricants can cause part failure.

(2) Tires may be frozen to the ground. If tires were under-inflated, they may have flat spots.

(3) If brake shoes are frozen to the brake drums, use a torch to heat drums.

(4) Refer to FM 207 and FM 21-305 for special instructions on driving hazards that may be encountered during extreme cold weather conditions.

2-20. OPERATION IN DUSTY OR SANDY CONDITIONS. Dusty or sandy conditions can seriously reduce the efficiency of the air conditioner by clogging the air filters which will restrict the volume of air flow. Accumulation of dust or sand in the condenser coil and/or in the compressor compartment of the air conditioner may cause overheating of the refrigeration system. Dust or sand may also clog the condensate trap and water drain lines. When operating the air conditioner and generator set in these dusty and sandy conditions, perform the following steps.

a. Air Conditioner.

NOTE

Never operate the air conditioner without having the air filters in place.

(1) Protection.

(a) Shield the air conditioner from dust as much as possible.
(b) Take advantage of any natural barriers which offer protection.
(c) Roll down and secure the fabric cover on the back of the cabinet during periods of shutdown.

(2) Cleaning.

(a) Keep the air conditioner as clean as possible.
(b) Pay particular attention to the outside grills, condenser, filters, mist eliminator, and electrical components.
(c) In extreme conditions, daily cleaning of condenser, filters, and outside grills may be necessary.

b. Generator Set.

(1) Clean generator set frequently.

(2) Service air cleaner frequently. Check air restriction indicator daily. If red signal is visible, service the air cleaner. Be certain that all air cleaner and intake manifold connections do not leak. Be certain oil filler cap fits snugly.

(3) Change crankcase oil and oil filter frequently.

(4) Store oil and fuel in dust-free containers.

(5) Make sure that generator set ground connection is free of dust and sand and connections are tight before starting the unit.

c. Trailer.

(1) Frequently inspect and clean moving parts when operating in sandy or dusty areas.

(2) Have your trailer lubricated frequently.

(3) Wheel bearings should be cleaned and packed by unit maintenance in accordance with the lubrication instruction.

2-21. OPERATION IN UNUSUALLY WET CONDITIONS. When operating the air conditioner and generator set in unusually wet conditions, perform the following:

a. Air Conditioner.

(1) More frequent inspection and cleaning of the condensate trap and drain lines to ensure proper drainage and prevent accumulation of water inside the cabinet.

(2) Roll down and secure the fabric cover on the back of the cabinet during periods of wet, windy weather when the air conditioner is not in operation.

(3) Roll up, and secure the fabric cover during dry spells when the air conditioner is not in operation so that the interior can dry out and condensation will not accumulate.

b. Generator Set.

(1) Keep fuel tank full to protect against moisture condensation and accumulation.

(2) Check wiring connectors for corrosion and wire insulation for signs of deterioration.

c. Trailer.

(1) Frequently inspect and clean your trailer to prevent accumulation of rust and fungus.

(2) Have inactive trailers lubricated periodically.

2-22. OPERATION IN SALT AIR OR SEA SPRAY.

a. Air Conditioner. Salt air or sea spray may cause many of the same clogging problems as encountered when operating in a dusty or sandy environment. In addition, the nature of salt presents serious corrosion problems.

WARNING

HIGH VOLTAGE
is used in operation of this equipment.

DEATH ON CONTACT
may result if personnel fail to observe safety precautions.

Never work on electrical equipment unless there is another person nearby who is familiar with operation and hazards of equipment and who is competent in administering first aid. When technician is aided by operators, he must warn them about dangerous areas.

Whenever possible, input power supply to equipment must be shut off before beginning work. Take particular care to ground every capacitor likely to hold a dangerous charge. When working inside, after power has been turned off, always ground every part before touching it. Be careful not to contact high voltage connections of 208 volts AC input when installing or operating this equipment.

Whenever nature of operation permits, keep one hand away from equipment to reduce hazard to current flowing through vital organs of body. Do not operate equipment without al guards. louvers, and covers in place and tightly secured.

WARNING

Do not allow excessive amounts of water to enter unit. Water can collect in electrical component areas and cause electrical shorts.

Frequent cleaning is necessary during which all exposed surfaces should be thoroughly sprayed, rinsed, or sponged with fresh water to remove salt. The fabric cover on the back of the cabinet should be rolled down and secured during all periods when the air conditioner is not in operation.

b. Trailer. Salt water will cause rapid rusting of metal parts. After operation is completed, wash the trailer with fresh water. Have the trailer lubricated frequently by unit maintenance.

2-23. OPERATION IN SNOW.

Trailer. Refer to FM 21-305 for special instructions in snow.

2-24. OPERATION IN MUD.

Trailer. If wheels sink into mud, it may be necessary to jack up the mired wheels and put planking or matting underneath. Clean off all mud as soon as possible after operation.

2-25. OPERATION IN ROCKY TERRAIN.

Trailer. Use extreme caution when traveling over rocky terrain. Maintain tire pressure of 35 psig (241 kPa) to minimize damage to tires and tubes.

2-26. OPERATION UNDER EMERGENCY CONDITIONS.

Air Conditioner. NBC (nuclear, biological, chemical). This unit has provisions for connection to an external NBC filtering source. Should it be necessary to operate in conditions requiring use of NBC filtration equipment, see specific instructions for your shelter or facility installation. For additional general NBC information, refer to MIL-HDBK-116, Environmental Control of Small Shelters. The following are general suggestions for operation in NBC hazards and do not apply if they conflict with instructions for your shelter or facility installation.

a. The vent control should be in fully closed position.

b. The conditioned air inlet louvers should be adjusted (partially or completely) closed in conjunction with the NBC filter intake volume. This will cause a more positive pressure on inside of shelter or enclosure and keep air from being drawn.

2-27. OPERATION USING NATO SLAVE CABLE.

Generator Set. The existing Army slave cable has end connectors with two pins to mate with the slave receptacle in the generator set. The NATO slave cable has end connectors with one pin. In order to utilize the NATO slave cable on the generator set, an adapter connector (Appendix E) must be used.

WARNING

Before using either cable, make sure the master battery switches and all electrical switches in both the live and dead equipment are in the OFF position. If attempting to install the cable into live operating equipment, arcing can occur. Personal injury or damage to equipment may occur.

2-28. FORDING.

Trailer. Do not tow trailer through water deeper than 24 in (61 cm). Spray electrical cable connections with ignition insulation compound. After fording, have wheeling bearings cleaned and packed by unit maintenance.

CHAPTER 3
OPERATOR MAINTENANCE

Section I. OPERATOR LUBRICATION INSTRUCTIONS

3-1. GENERAL. Refer to technical manuals TM 5-4120-384-14 (air conditioner) and TM 9-2330-202-14&P (trailer) for individual requirements. Refer to figure 3-1 for a reproduction of the Lubrication Order for the generator-set.

3-2. DRAIN HOSE CONNECTION, OIL (for generator-set). Refer to figure 3-2.

NOTE

Drain valve should be in off position.

a. Remove drain hose extension (item 10, appendix D) (1) from storage box.

b. Detach drain hose (2) from drain hose plug (3) on generator-set.

c. Install drain hose extension (1) to drain hose (2).

d. Position drain hose extension to allow oil to drain into a suitable container.

Section II. OPERATOR TROUBLESHOOTING PROCEDURES

3-3. USE OF TABLE. Table 3-1 contains troubleshooting instructions designed to be useful in diagnosing and correcting unsatisfactory operation or failure of the trailer-mounted air conditioner with power.

a. The table lists the common malfunctions which you may find during the operation or maintenance of the trailer-mounted air conditioner with power or its components. You should perform the tests/inspections and corrective actions in the order listed.

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

c. Any trouble or corrective action beyond the scope of operator maintenance shall be reported to unit maintenance.

LUBRICATION ORDER L05-6115-585-12

Reference TM 5-6115-585-12

(SUPERSEDES L05-6115-585-12, 22 AUGUST 1977)

GENERATOR SET, DIESEL ENGINE DRIVEN, TACTICAL SKID MOUNTED, 10KW

Intervals and the related man hour times are based on normal operation. The man hour time specified is the time required to perform all the services prescribed for a particular interval. The interval shall be changed to compensate for abnormal operation and severe operating conditions or contaminated lubricants. The interval may be extended during periods of low level activity, commensurate with adequate preservation precautions.

Relubricate after washing or fording.

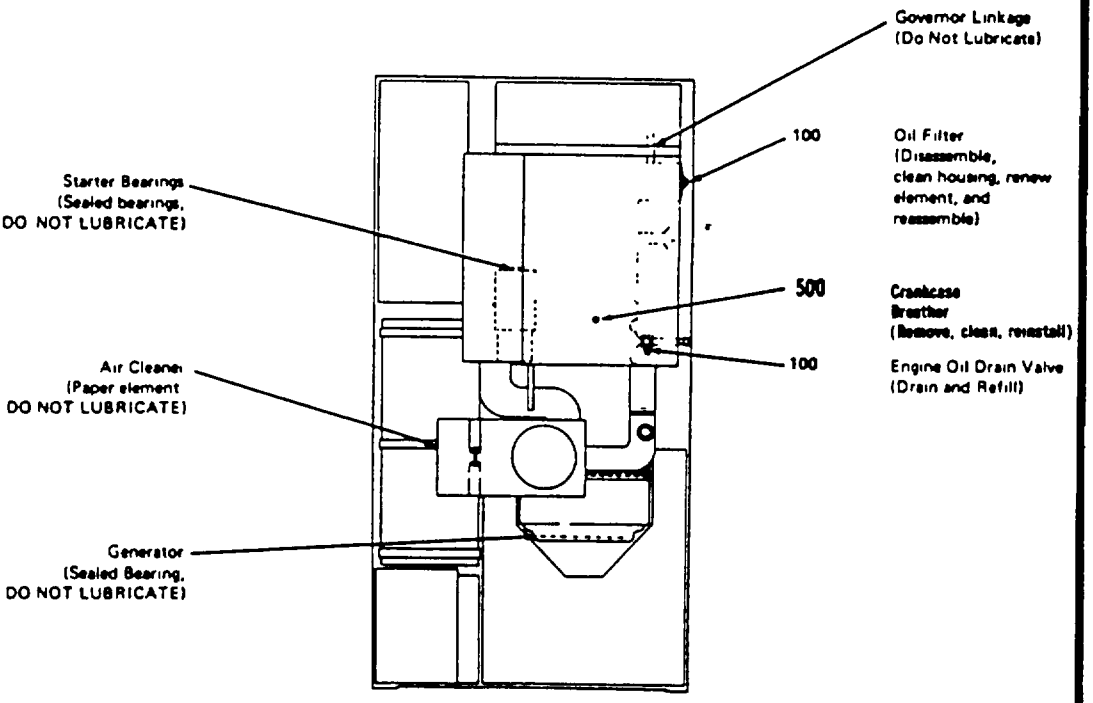
Clean parts with SOLVENT, dry-cleaning, or with OIL, fuel Diesel. Dry before lubricating.

Drain crankcase when hot. Fill and check level.

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

LUBRICANT ● INTERVAL

INTERVAL ● LUBRICANT



TOTAL MAN-HR		TOTAL MAN-HR	
INTERVAL	MAN-HR	INTERVAL	MAN-HR
500	0 5	100	0 4

Figure 3-1. Lubrication Order, Generator-Set (Sheet 1 of 2).

— KEY —

LUBRICANTT	CAPACITY	EXPECTED TEMPERATURE			INTERVALS
		Above +30°F	+30°F to +10°F	+10°F to -25°F	
OE-10 L. Engine, Heavy Duty Crankcase Oil Can Points	5 qt. (w/ filter) 8 Lubr. w/Filter	OE 30	OE 10	OES	Intervals given are in hours of normal operation
OES-10 L. Engine, Low Temp					

NOTES.

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW 10°F. Remove lubricants prescribed in the key for temperatures above 10°F. Re lubricate with lubricants specified in the key for temperatures below +10°F.

2. OIL CAN POINTS Every 50 hours clean and lightly coat door hinges and latches, control cables linkages pins and clevises and all exposed adjusting threads with OE

3. OIL FILTER After installing new filter element, fill crankcase, operate engine 5 minutes and check for leaks Stop engine, check crankcase oil level and fill to full mark.

4 LUBRICANTS The following is a list of lubricants with the Military Symbols and applicable specification numbers
OE MIL L 7104 OES MIL L 10295

Instructions contained herein are mandatory.

Copy of this lubrication order must remain with the equipment at all times. Instructions contained herein are mandatory.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:
To be distributed in accordance with DA Form 12-25A, Operator and Organizational Maintenance requirements for Generator Set, Diesel Engine, Tactical, Skid Mounted, 120, 120/240, 120/208V, 10KW, 1PH/2 Wire, 1PH/3 Wire, 3PH/4 Wire (60HZ: MEP-003A; 400HZ: MEP-112A0 (TM 5-6115-593 Series)

Figure 3-1. Lubrication Order, Generator-Set (Sheet 2 of 2).

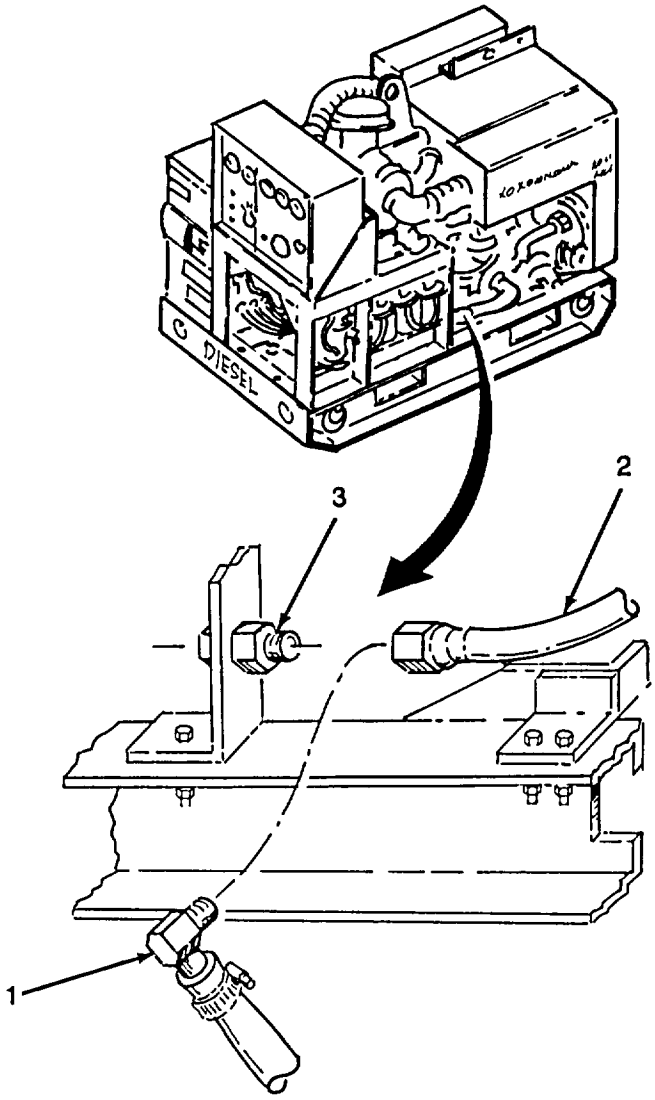


Figure 3-2. Drain Hose Connection, Oil.

Table 3-1. Operator Troubleshooting.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

AIR CONDITIONER

1. AIR CONDITIONER WILL NOT START IN ANY MODE.

   Step 1. Check that input power has not been disconnected.

   Connect input power.

CAUTION

During cool weather do not start in COOL mode for 4 hours. Damage to the equipment may result if personnel fail to observe precaution.

   Step 2. Check If CONTROL CIRCUIT BREAKER or COMPRESSOR CIRCUIT BREAKER has tripped.

   Reset circuit breaker(s).

   Step 3. Check if generator-set CIRCUIT BREAKER has tripped.

   Reset circuit breaker.

2. REDUCED COLLING CAPACITY.

   Step 1. Check that MODE SELECTOR switch is turned to COOL.

   Turn to COOL.

   Step 2. Check operation of TEMPERATURE SELECTOR.

   Set control at maximum COOLER, then, if condition improves, adjust properly.

   Step 3. Check that supply and return air louvers in shelter are properly adjusted.

   Adjust louvers properly.

   Step 4. Check that all doors, windows, and other openings in room are tightly closed.

   Tightly close all openings.

Table 3-1. Operator Troubleshooting. (Cont.)

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

Step 5. Check that condenser air inlet guard or discharge air louver are not obstructed.

Remove obstruction.

Step 6. Check condition of refrigerant in sight glass.

If refrigerant color is in the yellow zone or numerous bubbles appear in window, turn selector to OFF and contact your supervisor.

3. REDUCE HEATING CAPACITY.

Step 1. See that MODE SELECTOR switch is properly set.

Set switch on LOW or HIGH HEAT.

Step 2. Check operation of TEMPERATURE SELECTOR switch.

Set control to fully WARMER then, if condition improves, adjust properly.

Step 3. Check that all doors, windows, and other openings in shelter are tightly closed.

Tightly close all openings.

4. TOO MUCH HEAT.

Step 1. See that MODE SELECTOR switch is properly set.

Set switch on LOW HEAT. (When MODE SELECTOR switch is set for HIGH HEAT, half of the heaters will operate all of the time.)

Step 2. Check operation of TEMPERATURE SELECTOR switch.

Adjust to a slightly COOLER setting.

GENERATOR-SET

5. ENGINE FAILS TO CRANK WHEN MASTER SWITCH IS HELD IN THE START POSITION.

Step 1. Check to see that DC CONTROL CIRCUIT on the control panel is set.

Set circuit breaker. If circuit breaker will not stay set, notify supervisor.

Table 3-1. Operator Troubleshooting. (cont.)

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

Step 2. Inspect for loose, corroded; or broken battery cables or starter ground cable. (Refer to TM 5-6115-585-12.)

(a) If loose, corroded, or broken battery cables and starter ground cable are found, notify your supervisor.

(b) Use slave receptacle when extra cranking power is required.

Step 3. Check to see that electrolyte (liquid) level in each battery cell is above the top of the plates. (Refer to TM 5-6115-585-12.)

6. ENGINE CRANKS NORMALLY BUT FAILS TO START.

Step 1. Check for empty fuel tank.

Fill tank if fuel is low or tank is empty.

Step 2. Check for sediment or water in both fuel filters and fuel strainer. (Refer to TM 5-6115-585-12.)

Open drains on the bottom of fuel filters and fuel strainer, and drain sediment and water. If necessary, drain fuel system and use fresh clean fuel supply.

Step 3. Inspect for loose fuel fittings or bad fuel lines. (Refer to TM 5- 6115-585-12.)

If fuel lines are loose, cracked, or show signs of leaking, notify your supervisor.

Step 4. Check governor linkage for obstructions or bindings. (Refer to TM 5- 6115-585-12.)

7. ENGINE STARTS BUT DOES NOT RUN SMOOTHLY (MISFIRES, KNOCKS, OR MAKES UNUSUAL NOISES).

Step 1. Check steps 2 and 3 under ENGINE CRANKS NORMALLY BUT FAILS TO START above.

Perform corrective action as necessary.

Step 2. Check air cleaner assembly to see that inlet shutter assembly is in proper position for either COLD WEATHER or NORMAL WEATHER operation. (Refer to TM 5-6115-585-12.)

Push knob and slide assembly into proper position.

Step 3. Inspect exhaust muffler assembly for obstructions (paragraph 3-8).

Remove obstruction if possible or notify your supervisor.

8. ENGINE STARTS AND RUNS NORMALLY BUT SUDDENLY "STOPS".

Step 1. Check fuel level indicated by gauge on fuel tank.

Add fuel if necessary.

Table 3-1. Operator Troubleshooting. (cont.)

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

Step 2. Check to see that shutters on shutter box have fully opened. (Refer to TM 5-6115-585-12.)

If shutters are not open, notify your supervisor.

Step 3. Check that vent on under side of fuel filter cap is open. (Refer to TM 5-6115-585-12.)

Clear vent hole.

Step 4. Check to see that blower housing grill and engine cooling fins are clean. (Refer to TM 5-6115-585-12.)

If grill and fins are not clean, notify your supervisor.

Step 5. Low oil pressure will cause engine to shut down. Check oil level. (Refer to TM 5-6115-585-12.)

Add correct weight oil, if necessary.

9. ENGINE RUNS BUT EMITS BLACK SMOKE IN EXHAUST.

Step 1. Check air cleaner assembly to see that inlet shutter assembly is in proper position for either COLD WEATHER or NORMAL WEATHER operation. (Refer to TM 5-6115-585-12.)

Push knob and slide assembly into proper position.

Step 2. Check for restricted air intake. Red signal on air flow indicator should be visible. (Refer to TM 5-6115-585-12.)

Remove any restricted air intake port. Check and, if necessary, replace air cleaner filter.

Step 3. Check load on generator-set by checking % rated current meter on control panel.

Load should register 60 Hz; if It does not, notify your supervisor.

10. ENGINE RUNS WITH EXCESSIVE OIL CONSUMPTION.

Step 1. Inspect for oil leaks especially at front and rear oil seals, at oil pan gasket and dipstick cap. (Refer to TM 5-6115-585-12.)

If leak is present, notify your supervisor.

Step 2. Check for red warning signal on air flow indicator indicating a dirty air cleaner filter. (Refer to TM 5-6115-585-12.)

Clean or replace filter. Reset air flow indicator by pushing reset button.

Step 3. Check for air leaks to crankcase (loose oil filler cap, leaks at gaskets, etc.). (Refer to TM 5-6115-585-12.)

Tighten oil filler cap or notify your supervisor.

Table 3-1. Operator Troubleshooting. (cont.)

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

11. GENERATOR SUPPLIES NO VOLTAGE TO LOAD.

    Step 1. Check main circuit breaker for ON position on AC output control box

    Place circuit breaker on ON position. If breaker will not stay ON, notify your supervisor.

    Step 2. Check load terminal board.

    Make certain load leads are attached to the correct load terminals. Make certain connections are clean and tight.

12. GENERATOR SUPPLIES IMPROPER (UNDER AND OVER) VOLTAGE/FREQUENCY TO LOAD.

    Step 1. Check reconnection switch on AC output control box.

    Make certain switch position matches load. (Refer to TM 5-6115-585-12.)

CAUTION

Disconnect load before switching.

    Step 2. Check load terminal board.

    Make certain load leads are attached to the correct load terminals. Make certain connections are clean and tight.

    Step 3. Check engine speed.

    (a) Adjust engine speed by turning speed control assembly until frequency meter on control panel indicates rated frequency with load on generator-set.

    (b) If engine speed cannot be brought up so that generator-set operates at rated frequency, check external governor linkage for binding and check steps under ENGINE STARTS BUT DOES NOT RUN SMOOTHLY.

    (c) If engine cannot be brought down so that generator-set operates at rated frequency, check external governor linkage for binding or notify your supervisor. (Refer to TM 5-6115-585-12.)

TRAILER

13. ALL LAMPS FAIL TO LIGHT.

    Step 1. Check operation of light switch in towing vehicle.

    Notify supervisor for maintenance.

    Step 2. Check circuit breakers and fuses in towing vehicle.

    Reset circuit breakers and replace bad fuses. (Refer to towing vehicle's technical manual.)

Table 3-1. Operator Troubleshooting. (cont.)

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
Step 3. Check for proper connection of intervehicular cable plug at towing vehicle's receptacle. Pull intervehicular cable plug out and reinsert cable plug into receptacle.
14. ONE OR MORE LAMPS FAIL TO LIGHT. Check for loose connection between terminal assembly and electrical contact at bad light. Push terminal assembly into electrical contact until they lock; if malfunction still exists, notify your supervisor.
15. DIM OR FLICKERING LAMPS. Check for loose connection between terminal assembly and electrical contact at bad light. Push terminal assembly into electrical contact until it locks.
16. BRAKES OVERHEAT. Check for unreleased handbrake lever. Release handbrake lever. If malfunction still exists, notify your supervisor.
17. ABNORMAL OR UNEVEN TIRE WEAR. Check tire pressure. Inflate both tires to 35 psig (241 kPa). If malfunction still exists, notify your supervisor.

Section III. OPERATOR MAINTENANCE PROCEDURES

3-4. GENERAL. This section contains the maintenance procedures authorized for operator maintenance as defined in the Maintenance Allocation Chart located in Appendix B. Before performing any procedures in this section, use the Operator troubleshooting procedures to identify and locate the parts on the trailer-mounted, generator-set powered, air conditioner requiring maintenance. Refer to TM 5-6115-585-12 for operator maintenance on the generator-set.

CHAPTER 4
UNIT MAINTENANCE INSTRUCTIONS

Table Of Contents

Section I. UNIT LUBRICATION INSTRUCTIONS

4-1. GENERAL. Unit lubrication is not required for the air conditioner or generator-set. Refer to figure 4-1 for Lubrication Order for the trailer.

NOTE

Keep all lubricants in closed containers and store in a clean, dry place away from external heat. Keep container covers clean and allow no dust, dirt, or other foreign material to mix with the lubricants. Keep all lubrication equipment clean and ready for use.

NOTE

Keep all external parts not requiring lubrication free of lubricants. Before lubricating the equipment, wipe all lubrication points free of dirt and grease. Clean all lubrication points after servicing to prevent accumulation of foreign matter.

4-2. LUBRICATION INTERVAL. Service the lubrication points at the proper intervals as specified in the lubrication order, figure 4-1. The intervals specified are based on operation under normal conditions. Modification of the recommended intervals may be required under unusual operating conditions.

a. For lubrication under normal conditions, refer to figure 4-1.

b. For instructions on lubrication in weather below 0°F (-18°C), refer to FM 9-207.

c. For lubrication before and after fording, refer to TM 9-238.

NOTE

After operating in mud, dust, sand, or other unusual conditions, clean and inspect all lubrication points. Lubricate the trailer in accordance with figure 4-1.

LUBRICATION CHART

TRAILER: CARGO 3/4-TON, 2-WHEEL
M101 (2330-00-738-9509)
M101A1 (2330-00-898-6779)
M101A2 (2330-01-102-4697)

CHASSIS: TRAILER 3/4-TON, 2-WHEEL
M116 (2330-00-542-5987)
M116A1 (2330-00-898-6780)
M116A2 (2330-01-101-8434)

Intervals (on-condition or hard time) and the related man-hour times are based on normal operations. The man-hour time specified is the time you need to do all the services prescribed for a particular interval. Change the hard time interval if your lubricants are contaminated or if you are operating the equipment under adverse operating conditions, including fording. The interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken.

NOTE

LV is Localized View

*The time specified is the time required to perform all services at the particular interval

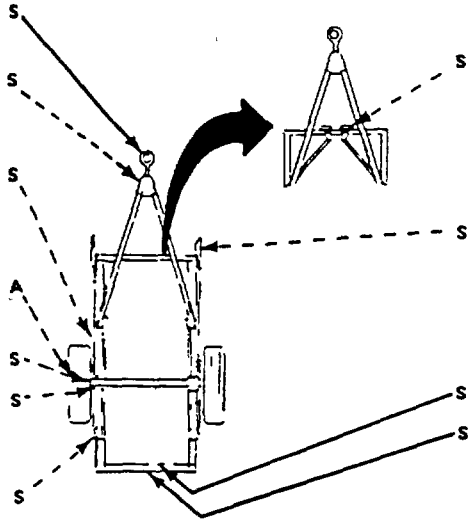
Dotted leader lines indicate lubrication is required on both sides of the equipment

WARNING

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near an open flame or excessive heat. Flash point of solvent is 138°F (59°C).

Clean all fittings, and the area around lube points with drycleaning solvent PD-680 or equivalent, before lubricating

LUBRICANT • INTERVAL			INTERVAL • LUBRICANT		
Front Support Leg (See Note 1) (See LV-A)	OE/HDO	S	S	OE/HDO	Models M101 and M116 Handbrake Lever and Bellcrank (See Note 1)(See LV-B)
Models M101A2 and M116A2 Master Cylinder(See Note 6) (See LV-I)	BFS	S			
Brake Linkage Front Shackle Bolt (See Note 1) (See LV F)	OE/HDO, GAA	S	S	OE/HDO	Handbrake Lever Assembly (See Note 1)(See LV-C)
Wheel Bearings (See Note 3) (See LV-D)	GAA	A			
Brake Camshaft Lever and Brake Camshaft Bracket (See LV E)	OE/HDO	S	S	OE/HDO	Rear Support Leg (Model M101A2) (See LV-H)
	GAA	S	S	GAA	
Rear Shackle Bolt (See LV G)	GAA	S			



*TOTAL MAN HOURS

INTERVAL	MAN HOURS
A	25
S	10

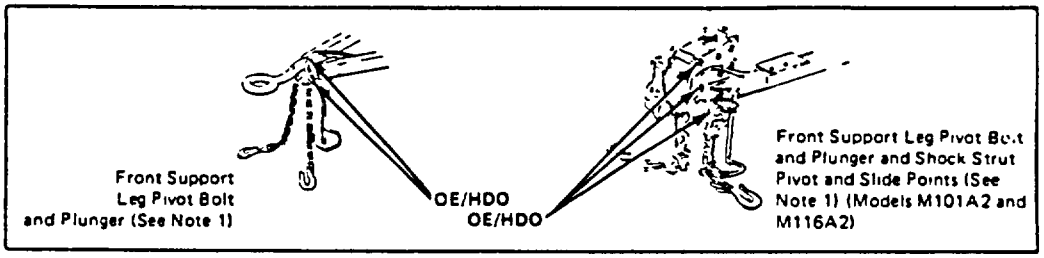
Figure 4-1. Lubrication Order, Trailer (Sheet 1 of 3).

– KEY –

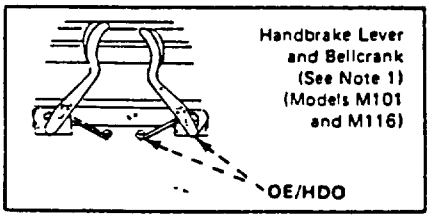
LUBRICANTS	CAPACITIES	EXPECTED TEMPERATURE: ABOVE +15°F (ABOVE +9°C)	EXPECTED TEMPERATURE: +40°F TO -15°F (+4°C TO 26°C)	EXPECTED TEMPERATURE: +40°F TO -65°F (+4°C TO 54°C)	For arctic operations, refer to FM 9 207	INTERVALS
OE/HDO – Oil, Lubricating, ICE, Tactical Service OEA – Oil, Lubricating, ICE, Arctic		OE/HDO 30	OE/HDO 10 (See Note 5)	OEA		A – Annually S – Semi-annually
GAA – Grease, Automotive, and Artillery		ALL TEMPERATURES				
BFS – Fluid, Hydraulic Brake						

Notes

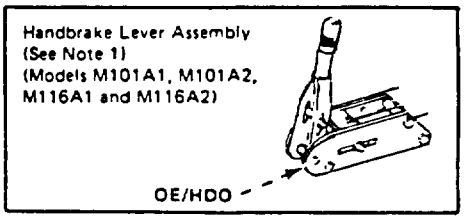
1. Oil can points. Lubricate brake linkage, handbrake lever, tailgate hinges, latches, and hydraulic brake actuator pivot and slide points with OE lubricating oil.
2. Do not lubricate springs.
3. See page 4-180, Wheel Bearing Removal and Installation (A – Annual Service)
4. Lubrication instructions are mandatory requirements
5. If OEA lubricant is required to meet the temperature ranges prescribed in the key, OEA lubricant is to be used in place of OE/HDO-10 lubricant for all temperature ranges where OE/HDO-10 is specified.
6. See page 4-156, Hydraulic Brake Actuator Servicing



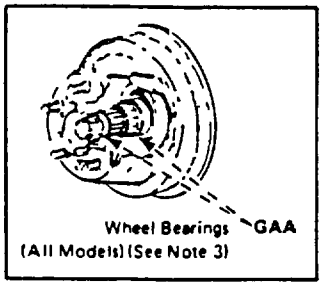
LV-A



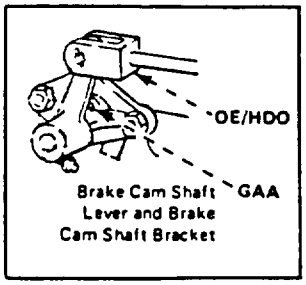
LV B



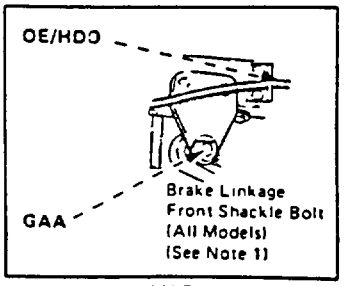
LV C



LV D



LV-E



LV-F

Figure 4-1. Lubrication Order, Trailer (Sheet 2 of 3).

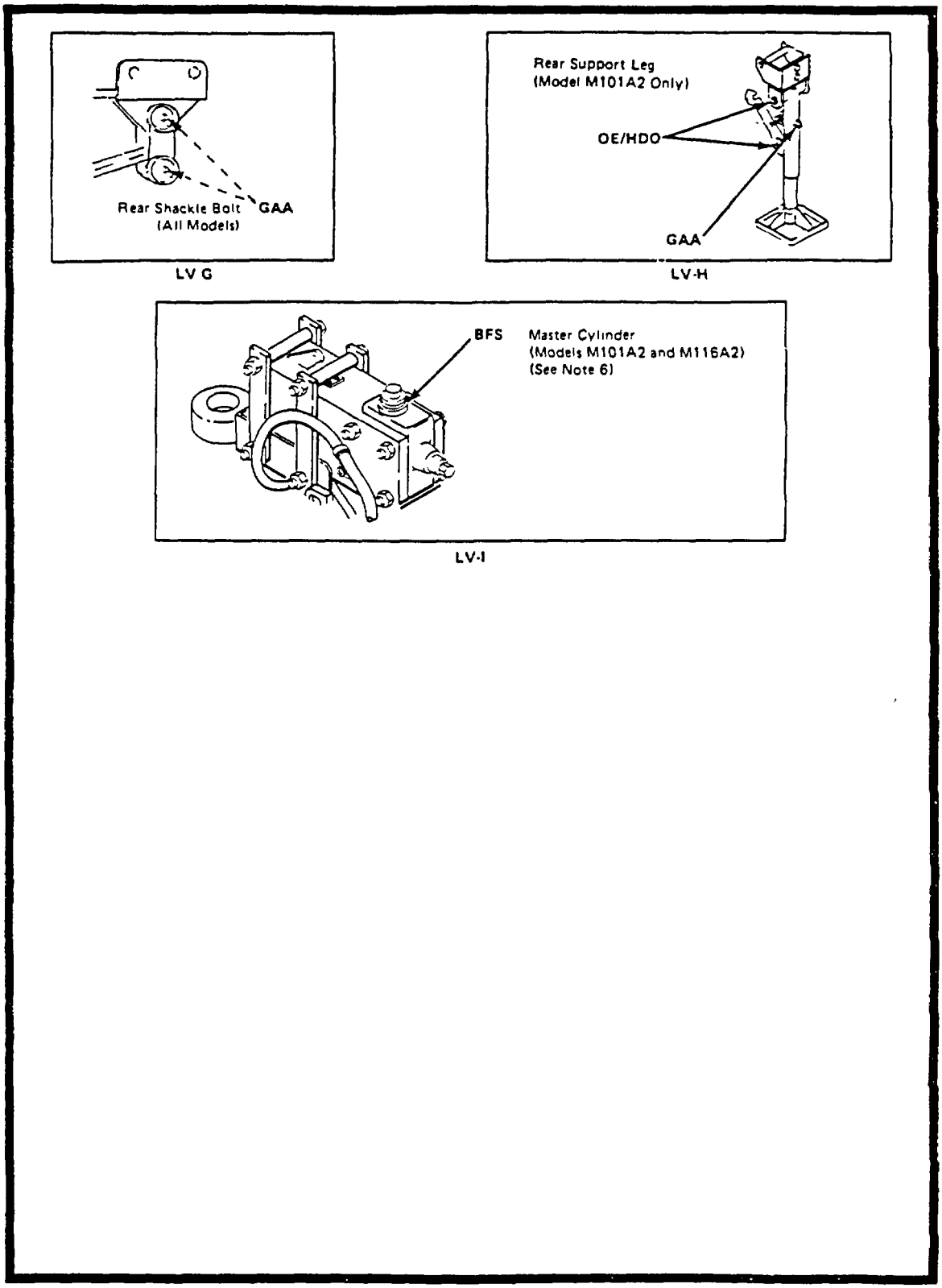


Figure 4-1. Lubrication Order, Trailer (Sheet 3 of 3).

Section II. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

4-3. COMMON TOOLS AND EQUIPMENT. For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

4-4. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT. No special tools are required for maintenance of the equipment. Test, Measurement, and Diagnostic Equipment (TMDE) and Support Equipment include standard equipment found in any maintenance shop.

4-5. REPAIR PARTS. Repair parts are listed and illustrated in the Repair Parts and Special Tools List (RPSTL), Appendix C, for the trailer-mounted, generator-set-powered, air conditioner. Refer to the following manuals for RPSTLs on individual components:

Air Conditioners	TM 5-4120-384-24P
Generator Set	TM 5-6115-585-24P
Trailer	TM 9-2330-202-14&P

Section III. SERVICE UPON RECEIPT AND PREPARATION FOR MOVEMENT

4-6. SERVICE UPON RECEIPT. The following paragraphs contain the procedures for unpacking and general checking of the unpacked trailer mounted, generator-set powered, air conditioner.

4-7. UNPACKING THE EQUIPMENT. Trailer mounted, generator-set powered, air conditioners shipped within the continental United States will usually not be boxed or crated, but will usually be boxed or crated for overseas shipment. If boxed/crated, unpack the equipment as follows:

a. Remove and set aside packing list and shortage packing list (if applicable) from side of box/crate.

WARNING

Steel strapping used in packaging of the equipment has sharp edges and may be under load or tension. To avoid injury to personnel, use care when handling steel strapping.

b. Using metal cutters while standing so you are not in line with strapping, carefully cut the steel strapping around the box/crate. Remove the box/crate from trailer.

c. If accessories are boxed separately, open box in which they are packed and remove all packaging/cushioning material.

4-8. CHECKING UNPACKED EQUIPMENT. Perform receiving inspection of the trailer-mounted, generator-set powered, air conditioner in the following manner.

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report 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 Pamphlet 738-750, The Army Maintenance Management System.

NOTE

The following items may come packaged with this unit. However, they are not used with this system.

Description	Part Number	Qty.
BOLT	MS90726-64	4
WASHER	13216E6138-2	4
SPACER	13216E6152	4
TUBE	13216E6153	4
MOUNT	13216E6137	8
CONNECTOR	13216E6177	1
CONNECTOR	13216E6209-1	1
CONNECTOR	MS3106R18-115	1
LOUVERS, SUPPLY	13216E6078	1
LOUVERS, RETURN	13216E6080-1	1
GUARD, FRESH AIR	13218E6956	1

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

d. Using the packing list(s) removed in step a, inventory the accessories. Check missing items against shortage packing list (if sent). Report any discrepancies to your supervisor.

e. Remove all tags from components. Retain tags for future information.

f. Store remaining accessories in the storage box.

4-9. INSTALLATION SITE PREPARATION.

a. Position trailer-mounted, generator-set powered, air conditioner so that rear end of trailer is on level ground and air conditioner duct adapters are within 12 feet of shelter duct adapters. Refer to figure 4-2.

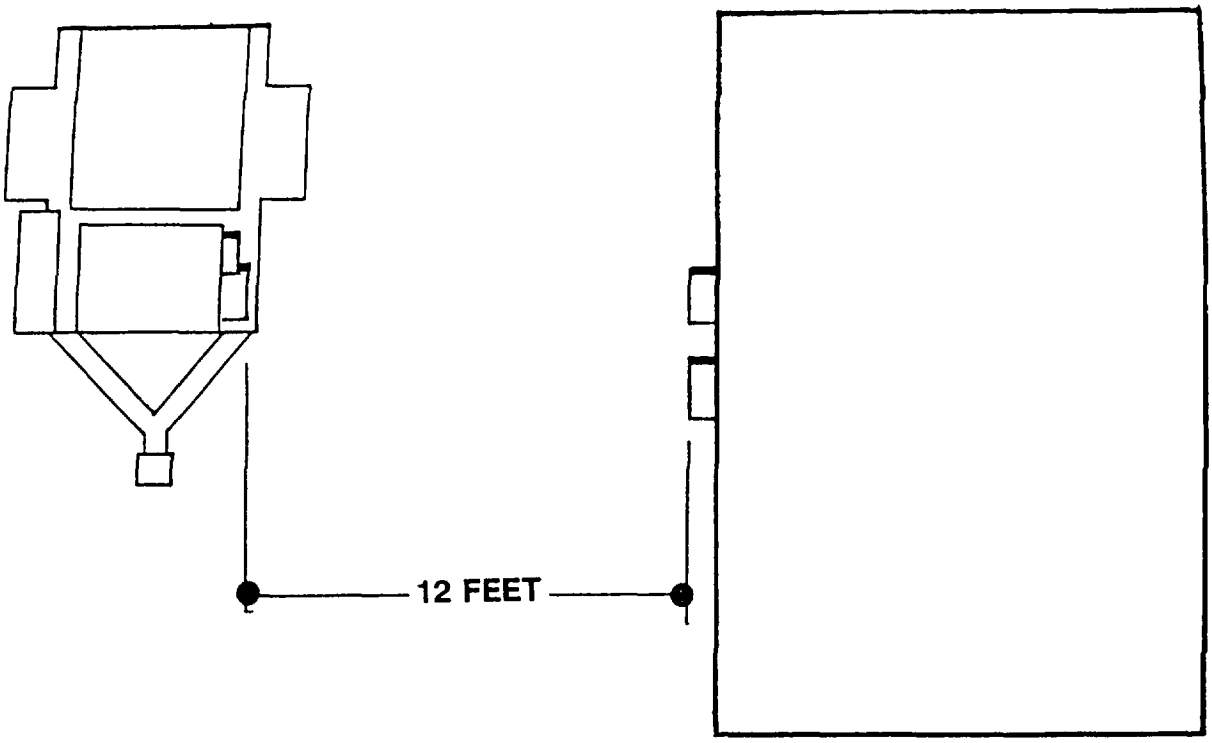


Figure 4-2. Site Preparation.

WARNING

Serious injury to personnel can result if the trailer up-ends or rolls when disconnected from the towing vehicle. Brakes must be set and trailer front support leg assembly must be down before disconnecting trailer from towing vehicle.

b. Using the two handbrake levers, set trailer brakes securely to prevent any movement.

c. Lower the trailer front support leg as follows.

(1) Pull out spring-loaded plunger (1)

(2) Push front support leg (2) down.

(3) Lock front support leg (2) in down position by pushing spring-loaded plunger (1) in all the way. Refer to figure 4-3.

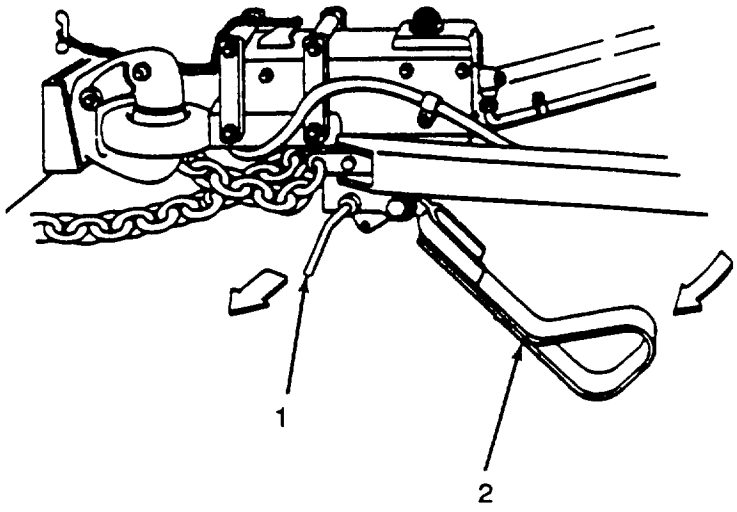


Figure 4-3. Front Support Leg.

d. Refer to TM 9-2330-202-14&P and disconnect trailer from towing vehicle.

WARNING

Serious injury to personnel can result if the trailer up-ends when disconnected from the towing vehicle. Trailer leg prop assembly must be down before operating the equipment.

e. Pull out pin (1) that secured leg prop assembly (2) in traveling position. Refer to figure 4-4.

f. Pull leg prop assembly (1) down. Insert pin (2) in bracket (3) to secure leg prop assembly (1) in operating position. Refer to figure 4-4.

g. Turn leg base (4) until it makes firm contact with ground.

4-10. PREPARATION FOR INSTALLATION. Refer to MIL-HDBK-116, Environmental Control of Small Shelters for general information.

4-11. INSTALLATION INSTRUCTIONS. All alterations to the shelter or facility into which the trailer-mounted, generator-set powered, air conditioner with power is to be installed should be complete before installation of air conditioner.

a. Position trailer so that air conditioner duct adapters can be easily attached to the shelter. (Refer to paragraph 4-9).

b. Grounding rod should be in place and secured. (Refer to paragraph 4-12).

c. Secure flexible ducts to shelter using mounting hardware. (Refer to paragraph 4-13).

NOTE

Seal all openings around flexible ducts; air and watertight. Use gasket, caulking, or other suitable material (Item, appendix F).

d. Secure fire extinguisher. (Refer to paragraph 4-14).

e. Install auxiliary fuel hose to be used and fuel drum adapter. (Refer to paragraph 4-15).

f. Install exhaust stacks on generator-set. (Refer to paragraph 4-30).

g. Secure shelter adapter onto shelter. Refer to figure 4-5.

NOTE

Take care not to damage the rubber molded gasket on shelter adapter during installation.

h. Refer to air conditioner electrical schematic, TM 5-4120-384-14, for additional wiring information.

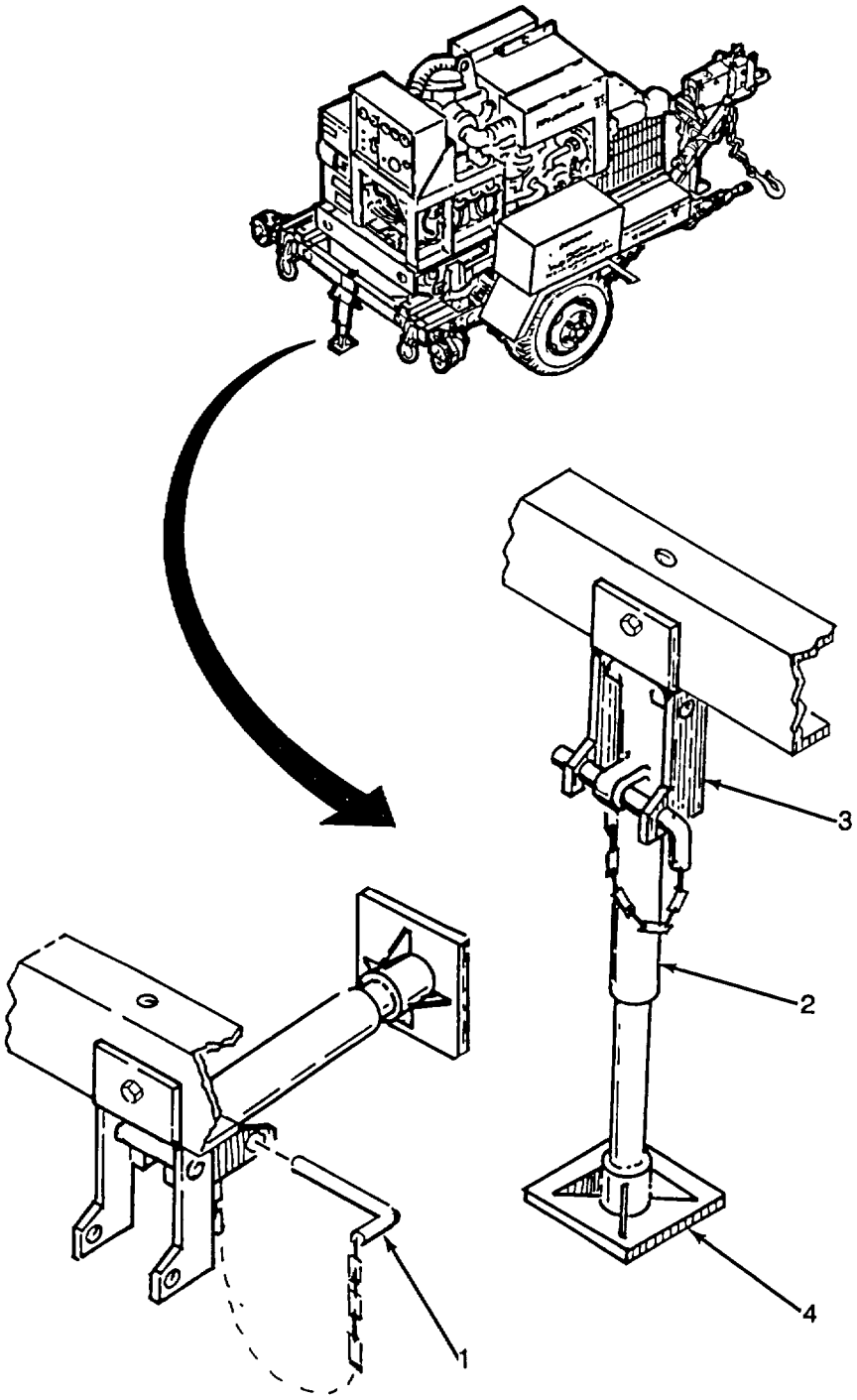


Figure 4-4. Leg Prop Assembly.

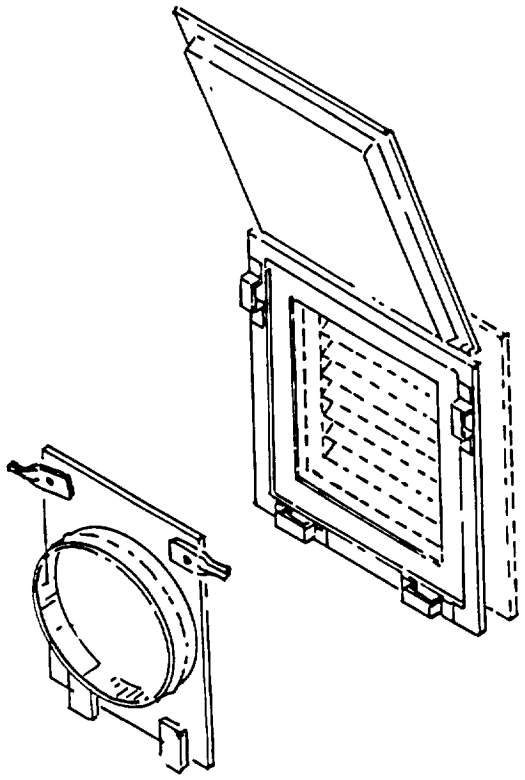


Figure 4-5. Shelter Adapters.

4-12. GROUNDING.

WARNING

Do not operate the equipment until it has been properly grounded. Serious injury or death by electrocution can result from operating this equipment when it is not grounded.

The trailer-mounted, generator-set powered, air conditioner must be grounded prior to operation. The ground can be, in order of preference: (1) an underground metallic water system, (2) a driven metal rod, or (3) a buried metal plate (refer to figure 4-6). If the effectively grounded portion of the buried metallic water pipe is less than 10 feet due to insulated sections or joints, this preferred grounding method must be supplemented by an additional driven metal rod ground or a buried metal plate ground. A driven ground rod must have a minimum diameter of 5/8 inch of solid or 3/4 inch of pipe, and driven to a minimum depth of 8 feet. A buried metal ground plate must have a minimum area of 9 square feet, minimum thickness of 1/4 inch, and be buried to a minimum depth of 4 feet. The ground lead must be at least No. 6 AWG (American Wire Gauge) copper wire. If a driven ground rod is used, install and connect it as follows.

a. Installation.

(1) Remove ground rod and ground driver/puller from the storage box.

(2) Connect a ground rod coupler (1) to ground rod section with pointed tip (2).

WARNING

Nuts must be securely connected to ground rod driver/puller. Faulty connections could result in death or serious injury.

CAUTION

Impact disk must be tightened to end of threads on ground rod driver/puller. Also lockwasher and nut must be tightened firmly against impact disk. If not tightened properly, damage to threads and impact disk could result.

(3) Ensure that impact disk is tightened to end of thread on rod of ground rod driver/puller.

(4) Ensure that lockwasher and nut are tightened firmly against impact disk.

(5) Ensure that nut and other end of ground rod driver/puller are tightened to end of threads.

CAUTION

Ground rod driver/puller and ground rod must make firm contact inside ground rod coupler. If not in firm contact, damage to ground rod, coupler, and driver/puller could result.

(6) Connect impact disk end of ground rod driver/puller to ground rod coupler that was installed in step b. Tighten so that end of ground rod driver/puller makes firm contact with end of ground rod inside coupler.

(7) Use ground rod driver/puller to drive ground rod into ground. Drive ground rod until coupler is just above surface.

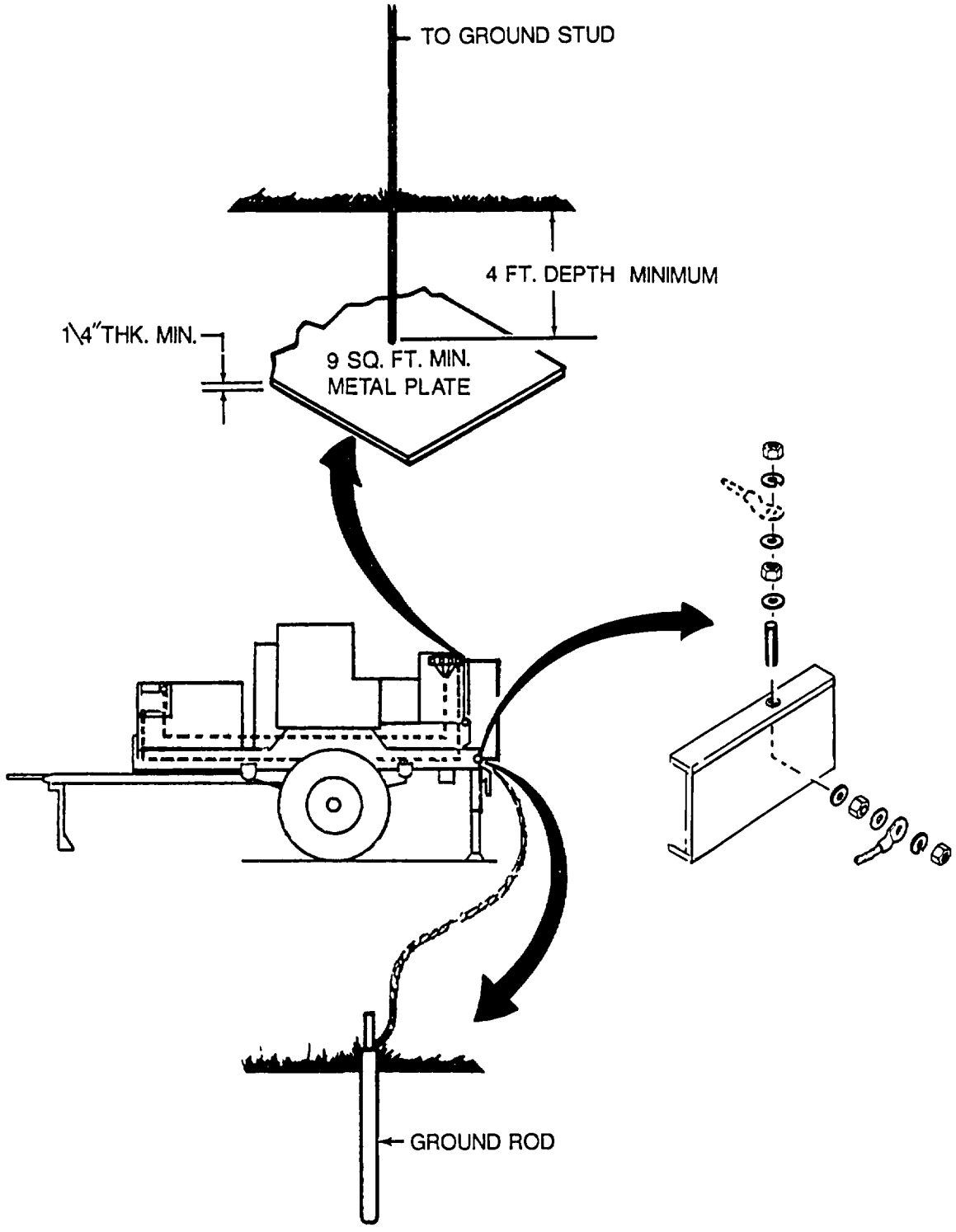


Figure 4-6. Grounding Trailer-Mounted, Generator-Set Powered, Air Conditioner.

(8) Disconnect ground rod driver/puller. Install another section of ground rod.

(9) Install another coupler and reconnect ground rod driver/puller. Drive ground rod until new coupler is just above ground surface.

(10) Repeat steps 8 and 9 for last ground rod section.

(11) Ensure that ground rod has been driven 8 feet or deeper, providing an effective ground.

(12) Disconnect ground rod driver/puller from ground rod coupler.

(13) Remove coupler from ground rod.

(14) Place a ground cable clamp on ground rod. Install coupler on ground rod.

(15) Connect a ground rod cable to the ground stud on rear trailer.

(16) Inset end of ground cable into cable clamp. Tighten clamp screw.

(17) Return ground rod driver/puller to storage box.

b. Removal.

(1) Disconnect ground cable from ground terminal on trailer.

(2) Disconnect ground cable from ground rod. Roll up ground cable. Store ground cable in storage box.

(3) Remove coupler from ground rod.

(4) Remove clamp from ground rod. Store clamp in storage box.

(5) Install coupler removed in step (3) above on ground rod.

WARNING

Nuts must be securely connected to ground rod driver/puller. Faulty connections could result in death or serious injury.

CAUTION

Impact disk must be tightened to end of threads on ground rod driver/puller. Also, lockwasher and nut must be tightened firmly against impact disk. If not tightened properly, damage to threads and impact disk could result.

(6) Remove ground rod as follows:

(a) Ensure the impact disk is tightened to end of threads on ground rod driver/puller.

(b) Ensure that lockwasher and nut are tightened firmly against impact disk.

(c) Ensure that nut on other end of ground rod driver/puller is tightened to end of threads.

CAUTION

Ground rod driver/puller and ground rod must make firm contact inside ground rod coupler. If not in firm contact, damage to ground rod, coupler, and driver/puller could result.

(d) Position ground rod driver/puller above ground rod and ensure that impact disk end is up. Connect ground rod driver/puller to ground rod coupler. Tighten so that end of ground rod driver/puller makes firm contact with end of ground rod inside coupler.

(e) Use ground rod driver/puller to pull ground rod out of ground until second coupler is exposed.

(f) Disconnect ground rod driver/puller from top ground rod coupler.

(g) Disconnect top ground rod from bottom ground rod coupler.

(h) Connect ground rod driver/puller to ground rod coupler still in ground.

(i) Use ground rod driver/puller to pull ground rod out of ground until third coupler is exposed.

(j) Repeat steps (f) through (h) for third ground rod section.

(k) Use ground rod driver/puller to pull remaining ground rod section out of ground.

(l) Disconnect ground rod driver/puller from ground rod coupler.

(m) Remove couplers from ground rod sections.

(n) Store couplers, ground rod sections, and ground rod driver/puller in storage box.

4-13. FLEXIBLE DUCTS. Two flexible ducts (storage and supply) are contained in the accessories storage box located on the trailer. To attach the ducts to the air conditioner duct adapters, proceed as follows:

NOTE

Two people are required for installation.

a. Remove flexible ducts from accessory box.

b. Remove adapter end cover from the supply and return duct adapters. Store covers inside accessory box.

WARNING

Generator-set engine exhaust is located near the air conditioner and may enter the air conditioner air inlets if they are not properly sealed. Exhaust gases can cause eye and respiratory irritation, and may lead to carbon monoxide asphyxiation if air conditioner air inlets are not properly sealed.

NOTE

Observe air flow directional arrow on flexible ducts. Refer to figure 4-7.

c. Slide the end of the flexible duct onto the return duct adapter, making sure the directional arrow is pointing in the correct direction (refer to figure 4-7). When properly in place, the hem containing the strap is passed over the raised rim of the duct adapter. Make sure the strap ends are positioned to allow tightening of retaining clamps.

d. Tighten the screw sufficiently to clamp the flexible duct securely onto the return duct adapter. Do not over tighten; the duct will carry airflow at a relatively low pressure.

e. Repeat steps c and d as necessary to attach the supply flexible duct to the supply duct adapter, making sure the directional arrow is pointing in the correct direction (refer to figure 4-7).

4-14. FIRE EXTINGUISHER. Remove fire extinguisher from accessory box and place securely in holder. Refer to figure 4-8.

4-15. AUXILIARY FUEL LINE CONNECTION.

The generator-set has provisions for obtaining fuel from an external source, such as a 55-gallon diesel fuel drum. This enables operation for extended periods, without manually refilling the fuel tank. The external fuel source can be connected as follows.

a. To connect auxiliary fuel source, perform the following steps.

(1) Place the external fuel source several feet, but not more than 25 feet, away from the generator-set.

(2) Remove the fuel drum adapter (item 1, appendix D) from the storage box. Refer to figure 4-9.

(3) Make sure the fuel drum adapter components are clean.

(4) Thread the fuel pickup tube (1) into the adapter (2).

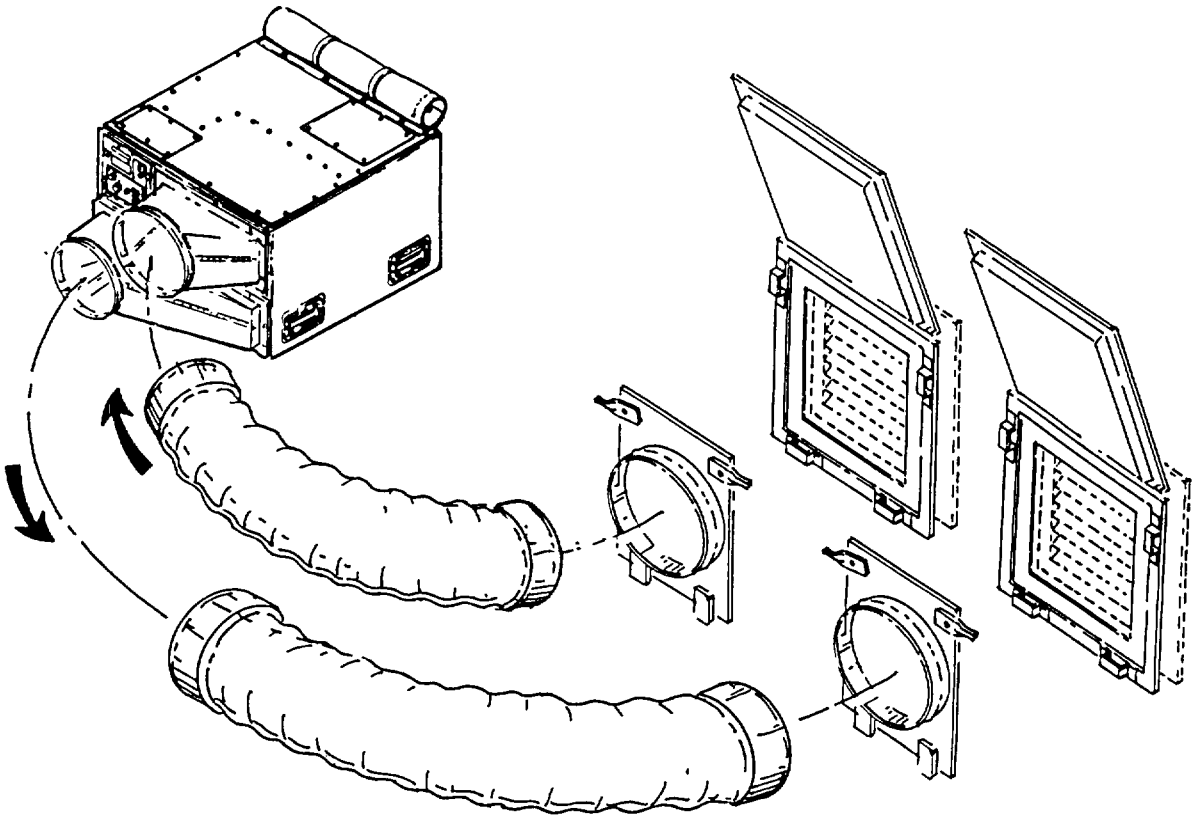


Figure 4-7. Flexible Duct Attachment to Adapters.

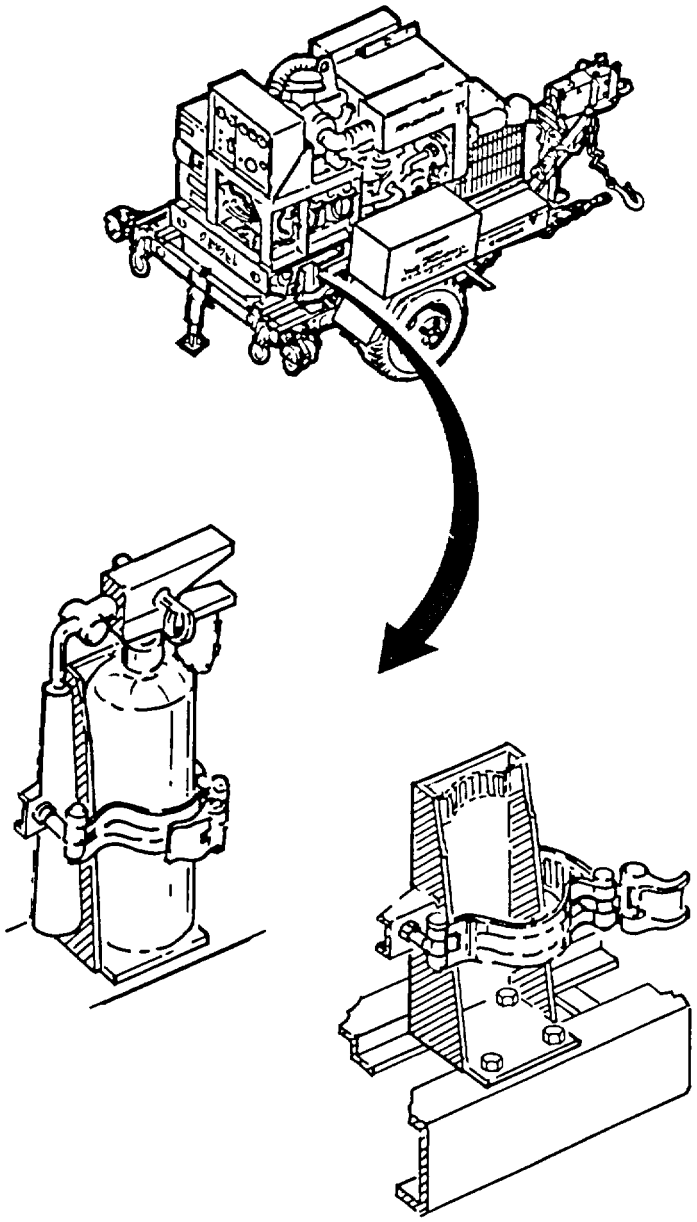


Figure 4-8. Fire Extinguisher.

(5) Thread extension pipe (3) onto fuel pickup tube (1).

(6) Remove the auxiliary fuel hose (item 11, appendix D) from accessory box. Make sure that auxiliary fuel hose fittings are clean.

(7) Thread one end of the auxiliary fuel hose onto the fuel drum adapter fitting. Thread other end of the auxiliary fuel hose onto the generator-set (refer to figure 4-10). Tighten the connection.

(8) Insert the fuel drum adapter into the external fuel source. Secure the fuel drum adapter by pressing down on the lever (4).

(9) Set control panel MASTER SWITCH to the PRIME & RUN AUX. FUEL position.

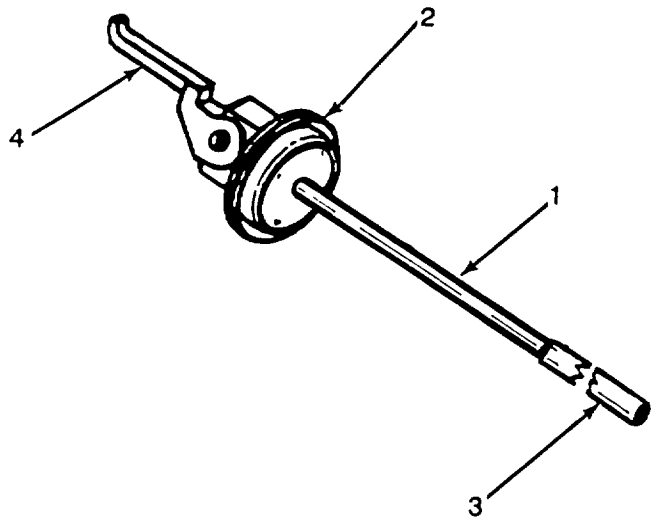


Figure 4-9. Fuel Drum Adapter.

b. To disconnect auxiliary fuel source, perform the following steps.

(1) Disconnect the auxiliary fuel hose from the generator-set external fuel supply connection, install cap (attached to small chain) on fitting to keep out dust and dirt. Elevate the auxiliary fuel hose to drain fuel back into the external fuel source. Place free end of the auxiliary fuel hose on a clean surface.

(2) Disconnect the auxiliary fuel hose from the fuel drum adapter.

(3) Store the auxiliary fuel hose in the accessory box.

(4) Release and remove the fuel drum adapter from the external fuel source by lifting the fuel drum adapter lever.

(5) Store fuel drum adapter in storage box.

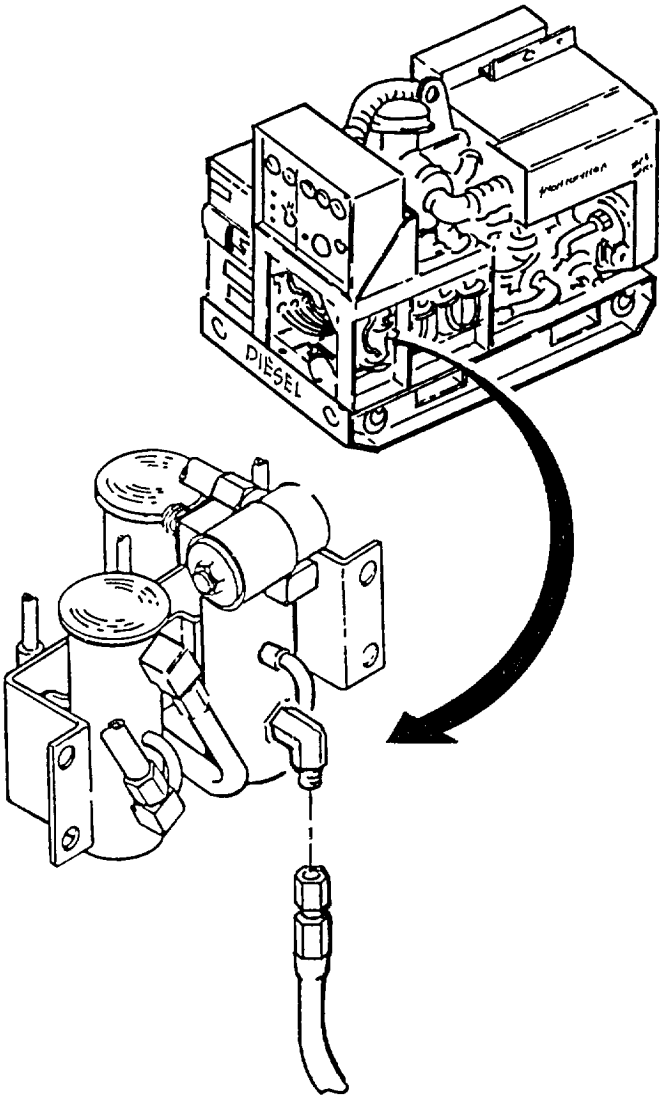


Figure 4-10. Auxiliary Fuel Line Connection.

Section IV. UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

4-16. INTRODUCTION, INSPECTION, AND SERVICE.

a. Systematic, periodic, Preventive Maintenance Checks and Services (PMCS) are essential to ensure that the trailer-mounted air conditioner with power is ready for operation at all times. The purpose of a preventive maintenance program is to discover and correct defects and deficiencies before they can cause serious damage or complete failure of the equipment. Any effective preventive maintenance program must begin with the indoctrination of operators to report all unusual conditions noted during daily checks or actual operation to unit maintenance. All defects and deficiencies discovered during maintenance inspections must be recorded, together with corrective action taken, on DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

b. A schedule for unit preventive maintenance inspection and service should be established immediately after installation of the trailer-mounted air conditioner with power. A quarterly interval, equal to 3 calendar months or 250 hours of operation (whichever occurs first), is recommended for usual operating conditions. When operating under unusual conditions, such as a very dusty or sandy environment, it may be necessary to reduce the interval to monthly, or even less if conditions are extreme.

c. Table 4-2 lists the unit preventive maintenance checks and services that should be performed at quarterly (or otherwise established) intervals. The PMCS items in the table have been arranged and numbered in a logical sequence to provide for greater personnel efficiency and least amount of required maintenance downtime.

Table 4-1. Unit Preventive Maintenance Checks and Services (PMCS).

Item No.	Interval M	Interval Q	Interval A	Item To Be Inspected	Procedure
		NOTE **The PMCS contained in this table apply to only those items peculiar to the trailer mounted, generator-set powered, air conditioner. Refer to the following technical manuals for component PMCS.**			
1	•			Air conditioner	Refer to TM 5-4120-384-14.
2	•			Generator-Set	Refer to TM 5-6115-585-12.
3	•			Trailer	Refer to TM 9-2330-202-14&P

Section V. UNIT TROUBLESHOOTING PROCEDURES

4-17. GENERAL.

a. This section contains troubleshooting information for locating and correcting most of the operating troubles which may develop in the trailer- mounted, generator-set powered, air conditioner. Each malfunction for an individual component, unit, or system is followed by a list of tests or inspections which will help you determine corrective actions to take. You should perform the tests/inspections and corrective actions in the order listed.

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

c. Table 4-3 lists the common malfunctions which you may find during the operation or maintenance of the trailer-mounted, generator-set powered, air conditioner or its components. You should perform the tests/inspections and corrective actions in the order listed.

WARNING

HIGH VOLTAGE
is used in operation of this equipment.

DEATH ON CONTACT
may result if personnel fail to observe safety precautions.

Never work on electrical equipment unless there is another person nearby who is familiar with operation and hazards of equipment, and who is competent in administering first aid. When technician is aided by operators, he must warn them about dangerous areas.

Whenever possible, input power supply to equipment must be shut off before beginning work. Take particular care to ground every capacitor likely to hold a dangerous charge. When working inside, after power has been turned off, always ground every part before touching it. Be careful not to contact high voltage connections of 208 volts AC input when installing or operating this equipment.

Whenever nature of operation permits, keep one hand away from equipment to reduce hazard to current flowing through vital organs of body. Do not operate equipment without all guards, louvers, and covers in place and tightly secured.

WARNING

High noise area. May cause hearing loss. Use proper ear protection within 14 ft.

All personnel involved in the operation or maintenance of the generator set should become thoroughly familiar with the safety precautions prior to performing operation or maintenance procedures.

Prior to connection of load cables, make sure all switches are in OFF or OPEN position and the generator set is not operating.

Inspect the generator set ground connection prior to starting the unit. Electrical defects in load lines or load equipment can cause death by electrocution when contact is made with an ungrounded system.

WARNING

Do not smoke or carry an open flame when servicing the batteries or fuel tank. Exercise extreme care to prevent electrical arcing in the area of the batteries.

Battery electrolyte contains sulfuric acid and can cause severe burns. Handle it with care. If the electrolyte comes in contact with the body, eyes, or clothing, rinse immediately with clean water. Avoid spilling electrolyte on painted surfaces. Do not work alone or smoke when servicing batteries.

Do not operate generator set in an enclosed area unless the exhaust gases are piped to the outside. Continued breathing of exhaust fumes is dangerous.

Stay clear of all exposed electrical terminals when generator set is operating.

Remove all rings, watches, and other jewelry when performing maintenance on the generator set. Loose fitting clothing should be secured to prevent it from catching on moving parts.

NOTE

Before you use this table, be sure you have performed all applicable operating checks.

Table 4-2. Unit Troubleshooting.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
AIR CONDITIONER IS NOT FUNCTIONING.
Step 1. Check to be sure power is hooked up. Hook up power cable.
Step 2. Check if circuit breakers are tripped. Reset circuit breakers.
Step 3. Check if HIGH and LOW pressure switches are tripped. Reset HIGH and LOW pressure switches.
Step 4. Air conditioner is still not running. Refer to TM 5-4120-384-14 for air conditioner maintenance.
GENERATOR-SET IS NOT FUNCTIONING.
Step 1. Check for adequate fuel supply. Add fuel.
Step 2. Check if circuit breaker is tripped. Reset circuit breaker.

Table 4-2. Unit Troubleshooting. (cont.)

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
Step 3. Check control panel for correct setting of switches and controls. Reset switches and controls.
Step 4. Check for serviceable battery. a. Use auxiliary power to jump. b. Replace battery as required, refer to TM 5-6115-585-12.
Step 5. Generator is still not running. Refer to TM 5-6115-585-12 for generator-set maintenance.
TRAILER IS NOT STABLE.
Check that leg prop assembly and front support leg is down and properly secured. Secure leg prop assembly and front support leg. Replace as required, refer to TM 9-2330-202-14&P for front support leg and paragraph 4-25 for leg prop assembly.

Section VI. UNIT MAINTENANCE PROCEDURES

4-18. GENERAL INFORMATION. This section contains the maintenance procedures authorized for the Unit maintenance as defined in the Maintenance Allocation Chart located in Appendix B. Before performing any procedures in this section, use the Unit troubleshooting procedures to identify and locate the parts on the trailer-mounted, generator-set powered, air conditioner requiring maintenance.

4-19. ELECTRICAL WIRING REPAIR. Preferred repair methods consist of replacing wires, terminals, connectors, etc., rather than splicing wires, bending ends to and from terminals, and other makeshift procedures; although the latter may be appropriate for emergency field repairs. Determine the proper size and length of wire, or the terminal, or connector to be used for replacement by referring to table 4-4, Wire List, and to the wiring diagram.

a. Crimping Terminals. To install a terminal on the end of a wire, strip 1/4 - 1/2 inch (0.6 - 1.3 cm) of insulation from the end of the wire, apply a 1-inch piece of heat-shrink tubing (if the terminals are of the uninsulated type), and insert wire end into the shank of the terminal. Crimp the shank, and install heat-shrink tubing, if necessary.

b. Insulation Joints. The preferred method of insulating electrical joints is by the use of heat-shrink tubing. To apply, cut a piece of heat-shrink tubing of suitable diameter to a 1-inch length for covering joints at terminals or connectors, or to a length about 1/2 inch (1.3 cm) longer than the joint to be insulated, and slide the tubing over the wire before making the joint. After the joint is made, slide the tubing so that it covers the joint, and shrink in place with moderate heat.

4-20. POWER CABLE AND GROUND WIRES (Figure 4-11).

This Task Covers:
a. Replace
b. Repair

Initial Setup:

Tools Required

Tool kit, general mechanics

Equipment Condition

Generator set off.
Cable clamps removed, paragraph 4-29

REMOVAL.

1. Unclasp wire retainer (1), loosen four terminal retaining nuts (2) on generator-set.

2. Remove four cable leads (3), air conditioner ground wire (4), and trailer ground wire (5) from terminal slots.

3. Disconnect power cable connector (6) from air conditioner.

4. Remove screw (7), lockwasher (8), ground wire terminal lug (9), and flat washer (10) from air conditioner.

5. Remove nut (11), flat washer (12), and ground wire terminal lug (13), flat washer (14), nut (15), and flat washer (16) from ground terminal.

REPAIR.

a. Power cable.

Cut off frayed wire, while retaining wire cable. Trim back rubber insulation far enough to clear broken or damaged wire plus 2 inches. Fold 2-inch wire in half and twist. If damaged beyond repair or if cable connector is damaged, replace cable.

b. Air conditioner ground wire.

(1) Generator-set attachment.

Cut off frayed wire. Trim back rubber insulation far enough to clear broken or damaged wire plus 2 inches. Fold 2-inch wire in half and twist.

(2) Air conditioner attachment.

Cut off terminal lug. Trim back rubber insulation far enough to all crimping, refer to paragraph 4-19. Install new terminal lug.

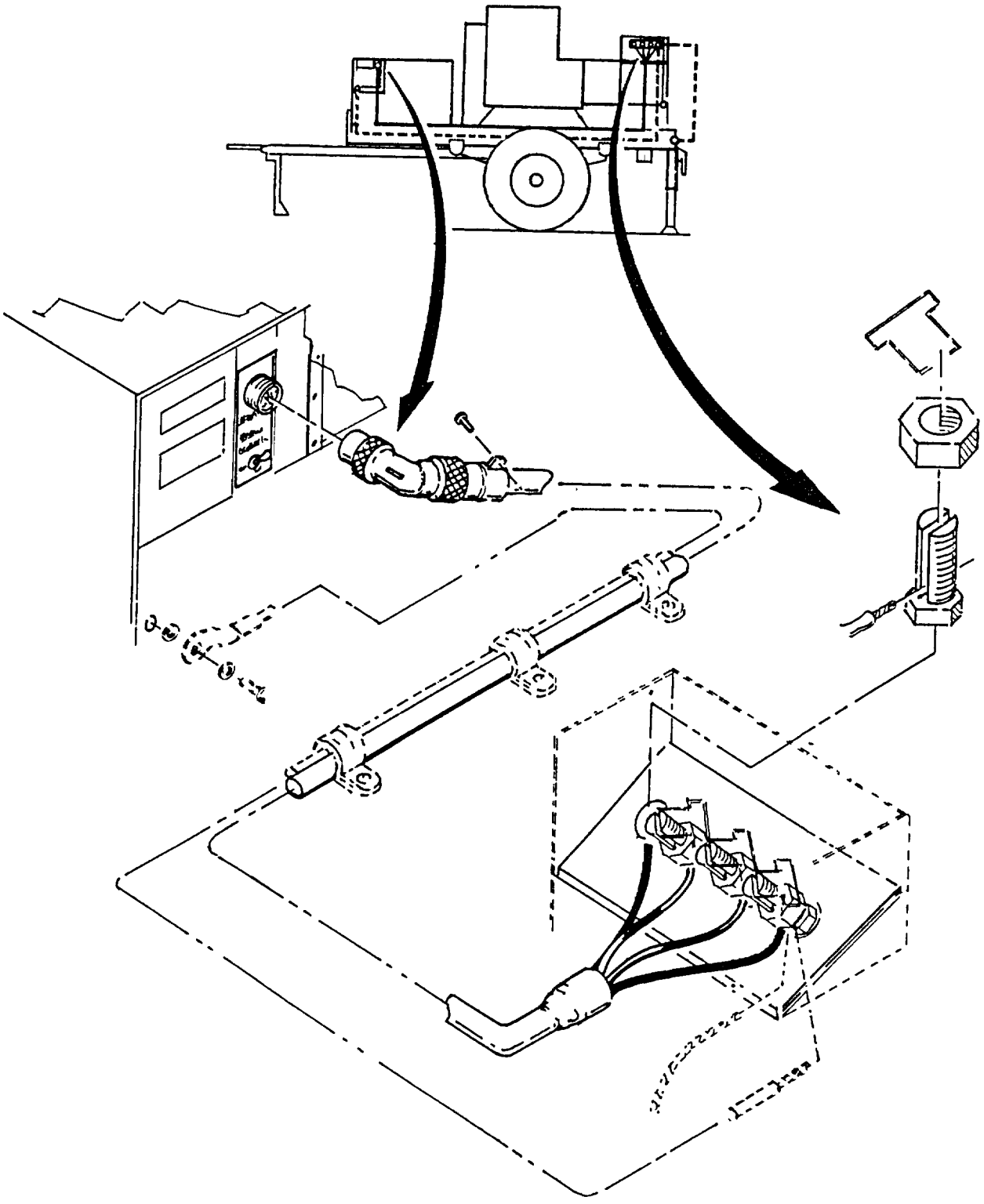


Figure 4-11. Power Cable and Ground Wires (Sheet 1 of 3).

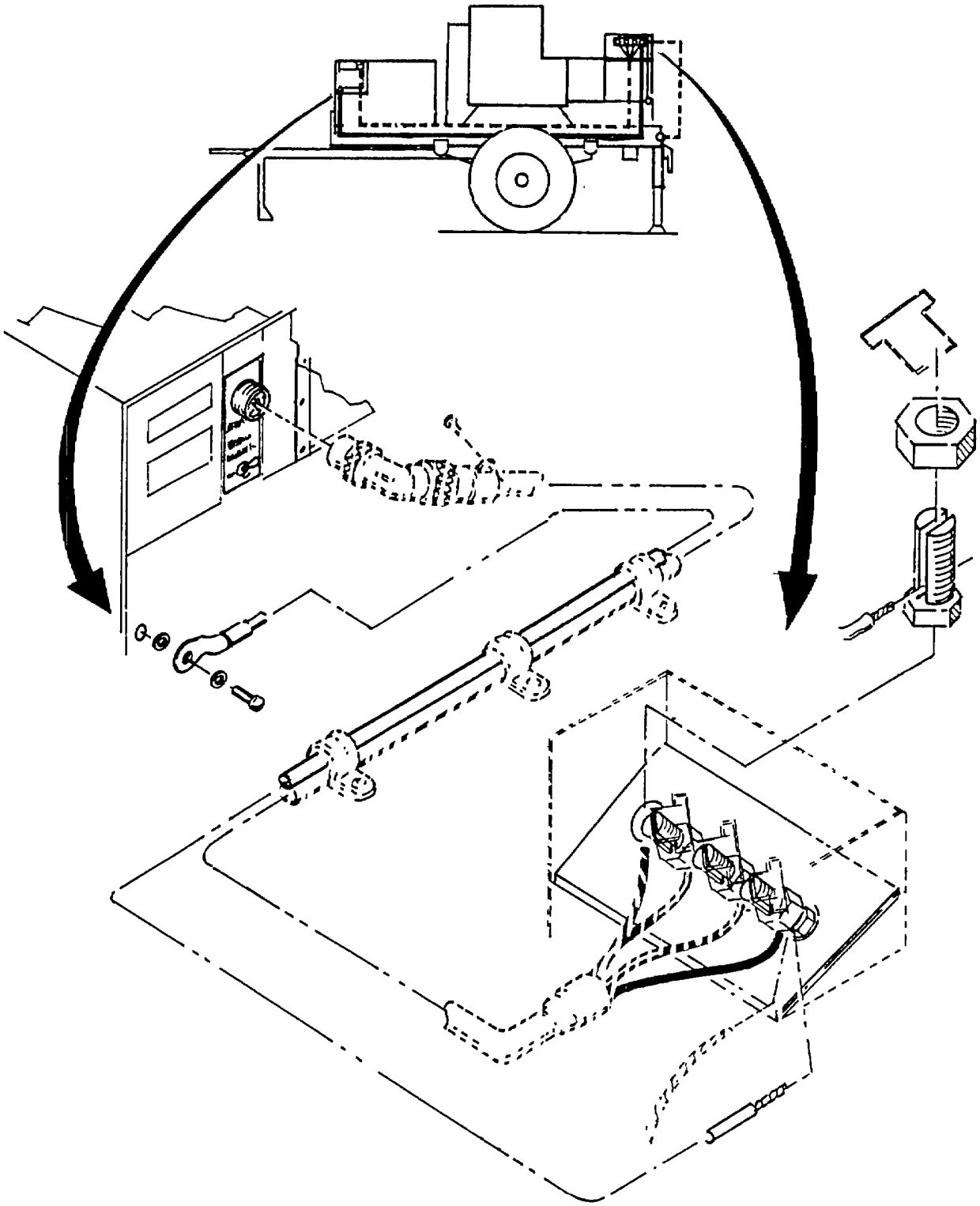


Figure 4-11. Power Cable and Ground Wires (Sheet 2 of 3).

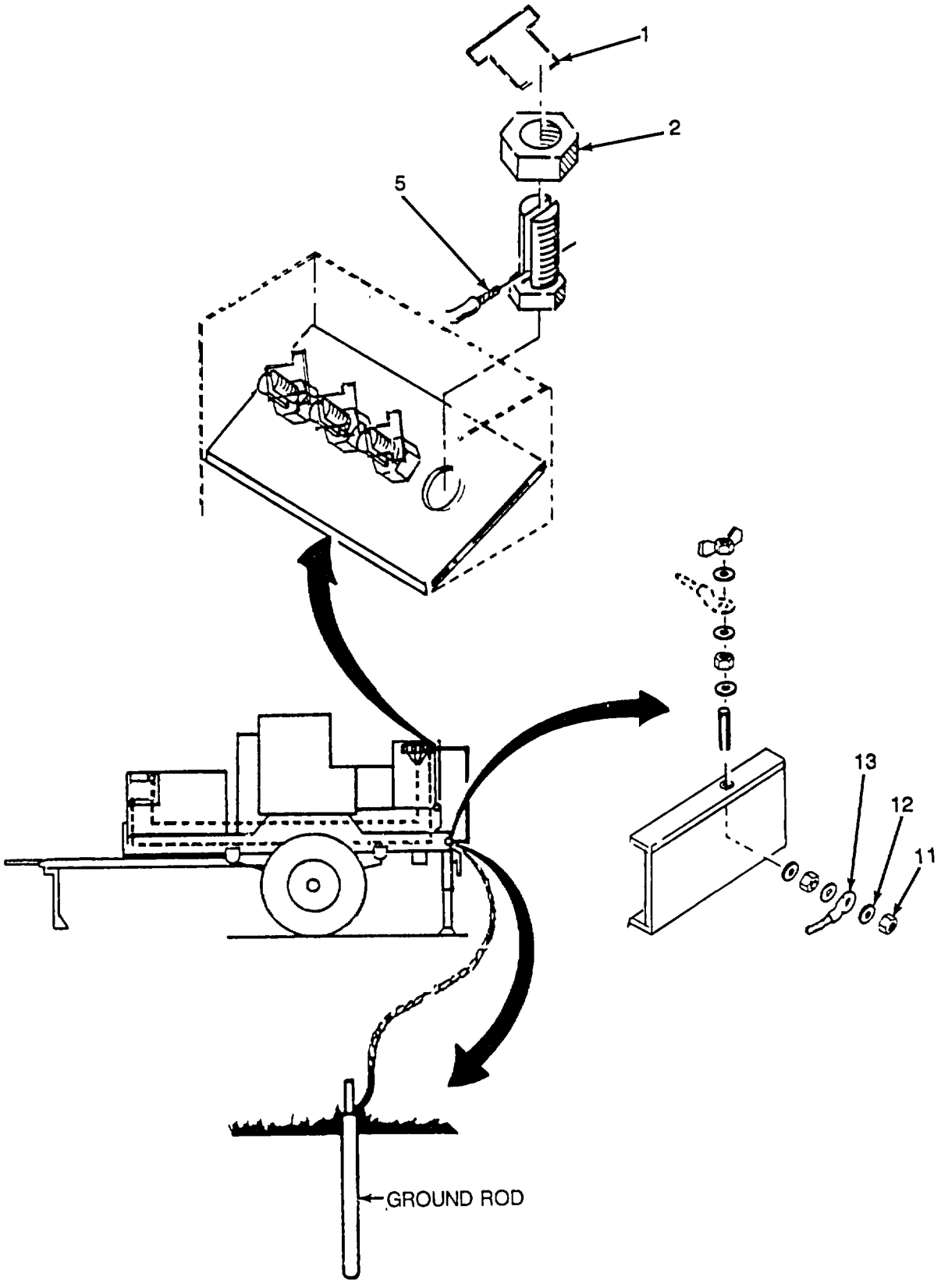


Figure 4-11. Power Cable and Ground Wires (Sheet 3 of 3).

c. Trailer Ground Wire.

(1) Trailer attachment.

Cut off terminal lug. Refer to paragraph 4-19 for crimping. Install new terminal lug.

(2) Generator-set attachment.

Cut off frayed wire. Trim back rubber insulation far enough to clear broken or damaged wire plus 2 inches. Fold 2-inch wire in half and twist.

INSTALLATION.

1. Install flat washer (16), nut (15), flat washer (14), ground wire terminal lug (13), washer (12), and nut (11) onto ground terminal.

2. Install flat washer (10), ground wire terminal lug (9), lockwasher (8), and screw (7) to air conditioner.

3. Connect power cable connector (6) to air conditioner.

WARNING

Before attempting to connect power cable, make sure the generator set is not operating, all switches are in the off or open position, and set is grounded.

4. Position trailer ground wire (5) and air conditioner ground wire (4) in LO terminal slot and four cable leads (3) in corresponding terminal slots.

5. Secure four terminal retaining nuts (2) and clasp wire retainer (1).

6. Install three cable clamps (refer to paragraph 4-29).

4-21. STORAGE AND ACCESSORY BOXES (Figure 4-12).

This Task Covers:
a. Replace
b. Repair

Initial Setup:

Tools Required

Tool kit, general mechanics
Riveter, blind hand

REMOVAL.

1. Remove two nuts (1), four flat washers (2), and two screws (3).
2. Remove storage box (4) from storage box bracket (5).
3. Remove four nuts (6), eight flat washers (7), and four screws (8).
4. Remove storage box bracket (5).
5. Remove four nuts (9), eight flat washers (10), and four screws (11).
6. Remove accessory box (12).

REPAIR.

Box repair is limited to straightening dents and bends and replacement of catch clamps.

INSTALLATION.

1. Position accessory box (12) on fender.
2. Install four screws (11), eight flat washers (10), and four nuts (9).
3. Position storage box bracket (5) on trailer.
4. Install four screws (8), eight flat washers (7), and four nuts (6).
5. Position storage box (4) on storage box bracket (5).
6. Install two screws (3), four flat washers (2), and two nuts (1).

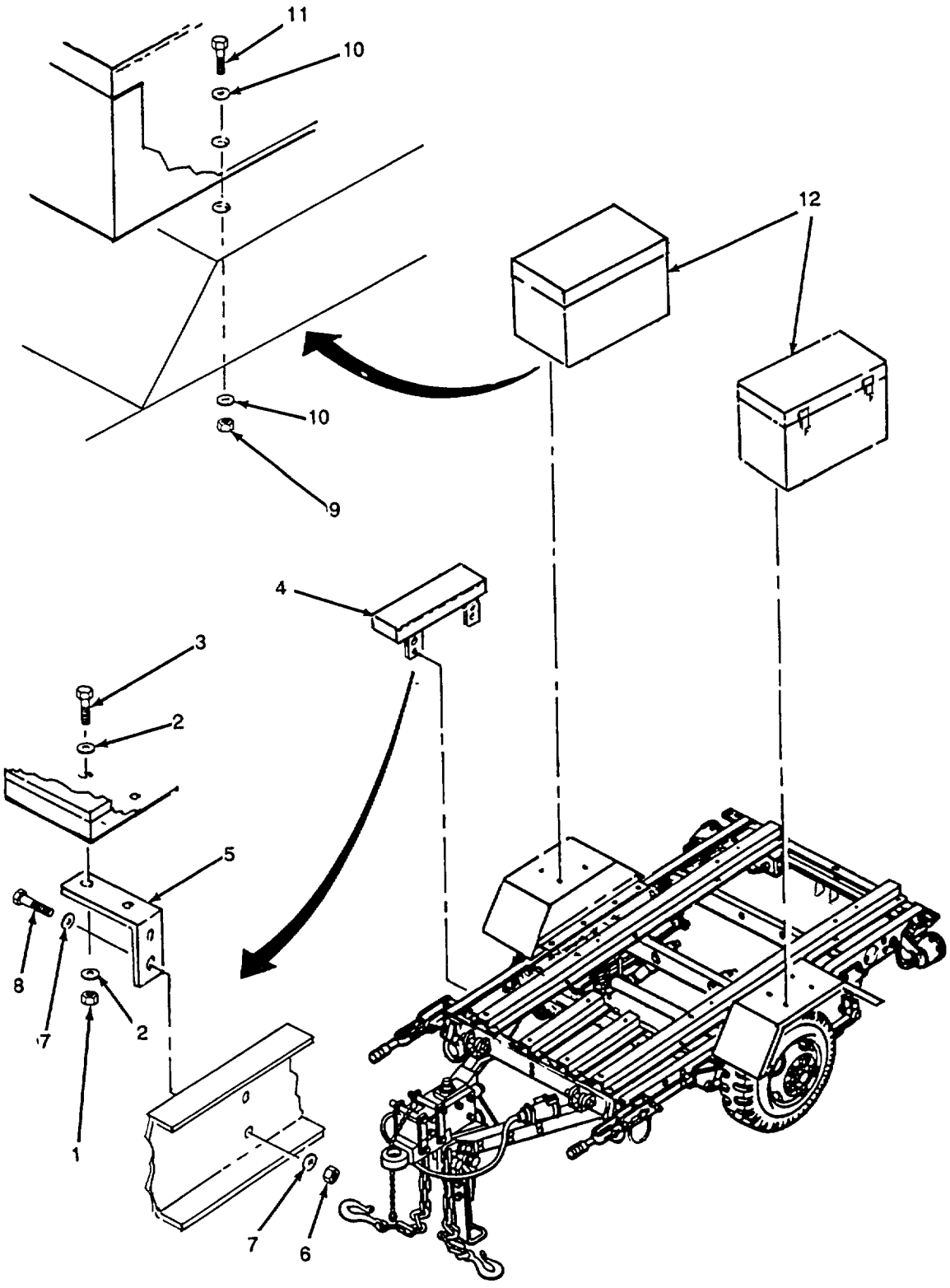


Figure 4-12. Box, Storage and Accessory.

4-22. MOUNTING BRACKET, FIRE EXTINGUISHER (Figure 4-13).

This Task Covers:
Replace

Initial Setup:

Tools Required

Tool kit, general mechanics

Equipment Condition

Fire extinguisher removed

REMOVAL

1. Remove four nuts (1), eight washers (2), and four bolts (3).
2. Remove fire extinguisher bracket (4).

INSTALLATION

1. Position fire extinguisher bracket (4) in place.
2. Install four bolts (3), eight washers (2), and four nuts (1).

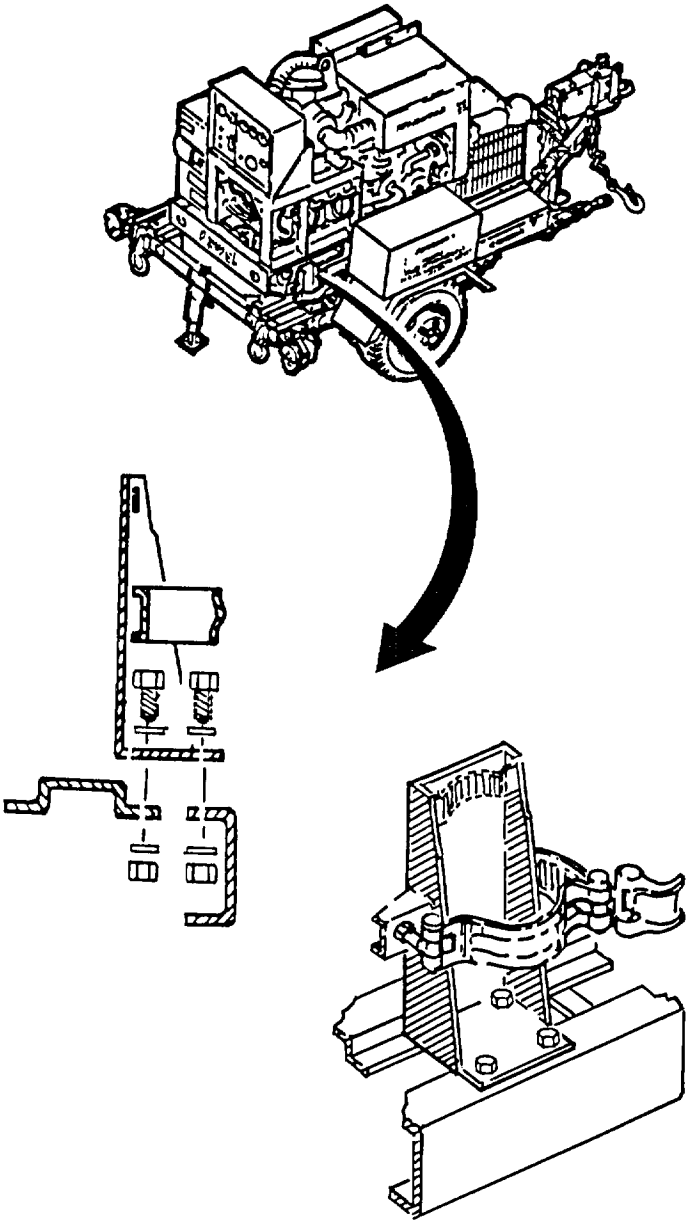


Figure 4-13. Mounting Bracket, Fire Extinguisher.

4-23. ADAPTER, SUPPLY AND RETURN DUCT (Figure 4-14).

This Task Covers:
a. Replace
b. Repair

Initial Setup:

Tools Required

Tool kit, general mechanics
Riveter, blind hand

Materials Required

Tape, duct, item 31, appendix F

Equipment Condition

Air conditioner off
Flexible supply duct removed, paragraph 4-13, if applicable
Adapter end cover removed, if applicable

REMOVAL.

a. Supply Duct Adapter.

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and two retainers (4).
2. Remove supply insulation blanket (5).
3. Remove four screws (6) and four lockwashers (7).
4. Remove supply duct adapter (8).

b. Return Duct Adapter.

1. Remove return insulation blanket (1).
2. Remove six screws (2) and six lockwashers (3).
3. Remove two screws (4) and two lockwashers (5).
4. Remove return duct adapter (6).
5. Remove return air filter, refer to paragraph 4-32. Service or replace as required.

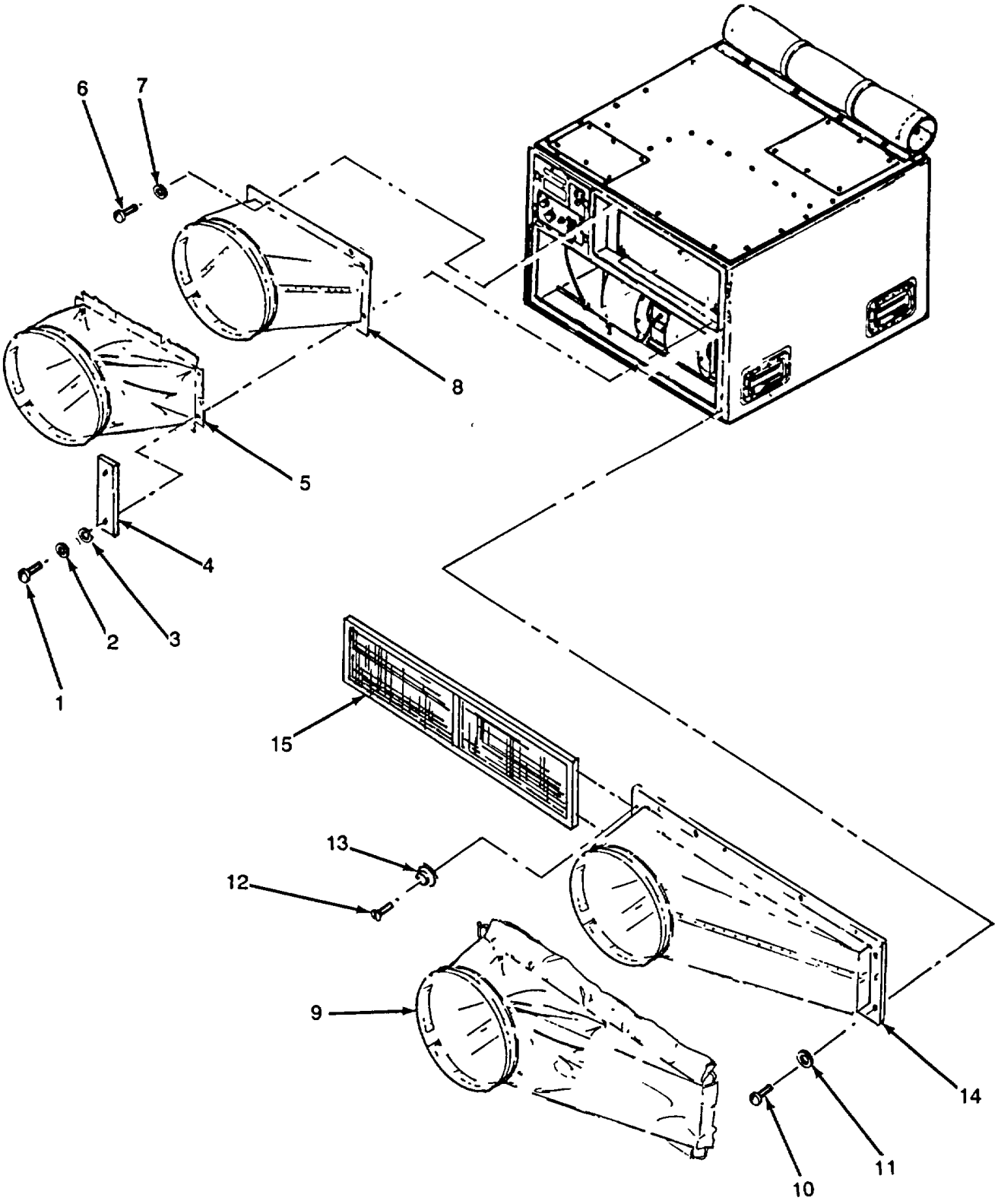


Figure 4-14. Adapters, Supply and Return Duct.

REPAIR.

1. Repair minor rips and tears to insulation blanket with duct tape (item 31, appendix F) applied to the inside surface of insulation blanket.

2. Repair bends and dents by straightening. If beyond repair, replace.

3. Repair latch set on return adapter by replacing latch set.

INSTALLATION.

a. Supply Duct Adapter.

1. Position supply duct adapter (8).

2. Install four lockwashers (7) and four screws (6).

3. Position supply insulation blanket (5).

4. Install two retainers 94), four flat washers (3), four lockwashers (2), and four screws (1).

5. Install flexible duct adapter (paragraph 4-13) or adapter end cover.

b. Return Duct Adapter.

1. Install return air filter, refer to paragraph 4-32.

2. Position return duct adapter (6) on air conditioner.

3. Install two lockwashers (5) and two screws (4).

4. Install six lockwashers (3) and six screws (2).

5. Install return insulation blanket (1).

6. Install flexible duct adapter (paragraph 4-13) or adapter end cover.

4-24. COVER, ADAPTER END (Figure 4-15).

This Task Covers:
Repair

Initial Setup:

Materials Required

Tape, duct, item 31, appendix F

REPAIR.

Repair minor rips and tears with duct tape applied to the inside surface. If damage is beyond repair, replace.

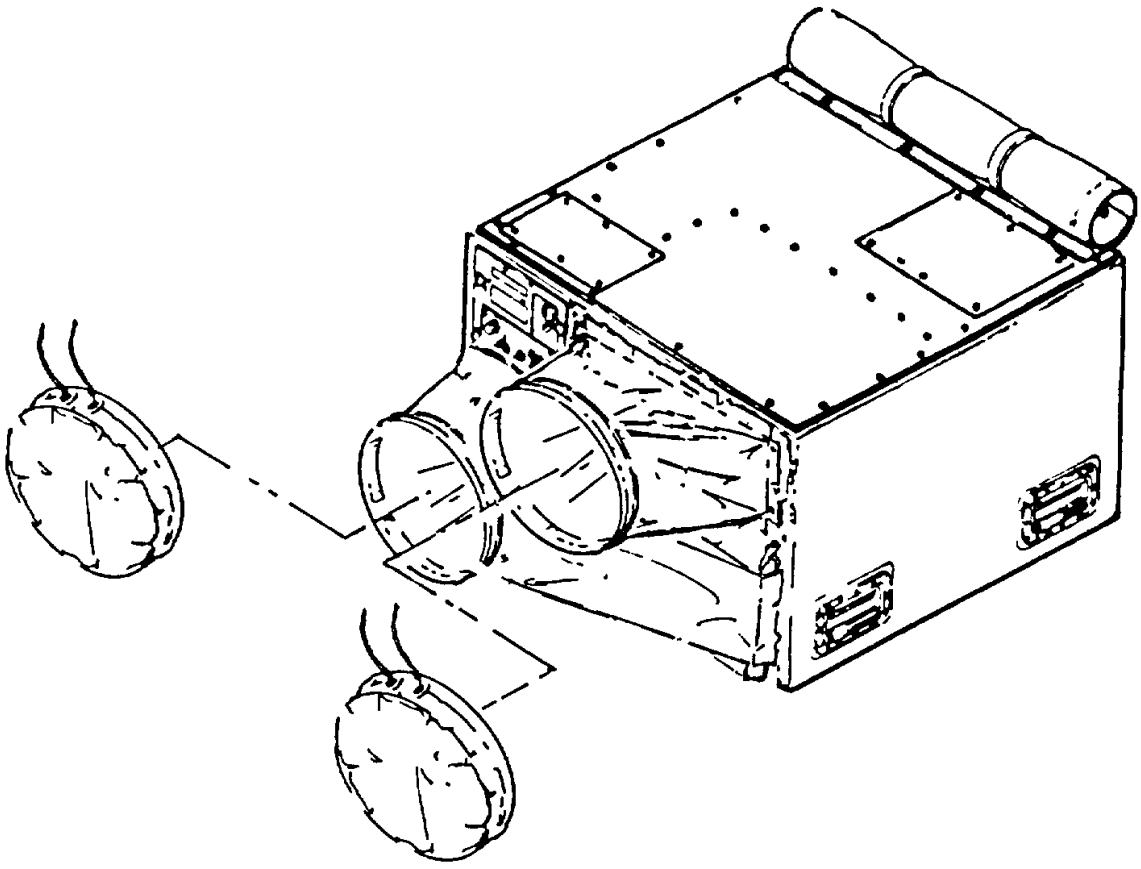


Figure 4-15. Covers, End Adapter.

4-25. LEG DROP ASSEMBLY (Figure 4-16).

This Task Covers:
Replace

Initial Setup:

Tools Required

Tool kit, general mechanics
Stands, jack

Equipment Condition

Generator set off.

REMOVAL.

1. Support rear trailer with jack stands.
2. Remove two nuts (1), four flat washers (2), and two screws (3).
3. Remove leg prop assembly (4).

INSTALLATION.

1. Position leg prop assembly (4).
2. Install two screws (3), four flat washers (2), and two nuts (1).
3. Remove jack stands.

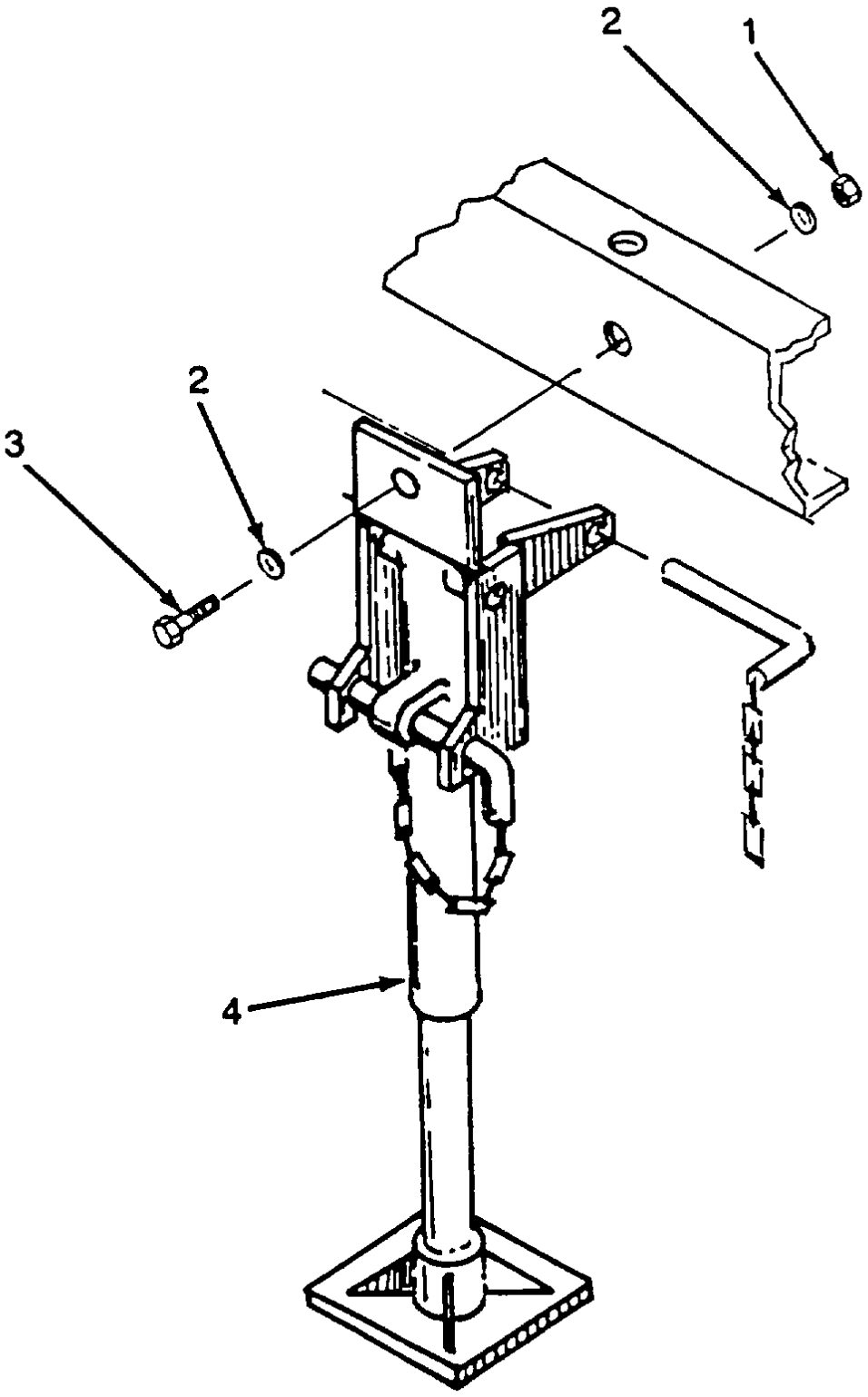


Figure 4-16. Leg Prop Assembly.

4-26. FENDER (Figure 4-17).

This Task Covers:
a. Replace
b. Repair

Initial Setup:

Tools Required

Tool kit, general mechanics

Equipment Condition

Accessory box removed, paragraph 4-21
Data plates removed, paragraph 4-27, as required

REMOVAL.

1. Remove four nuts (1), eight flat washers (2), two spacers (3), and four bolts (4).
2. Remove four nuts (5), eight flat washers (6), and four bolts (7).
3. Remove fender (8).

REPAIR.

Repair is limited to straightening bends and dents.

INSTALLATION.

1. Position fender (8) on trailer.
2. Install four bolts (7), eight flat washers (6), and four nuts (5).
3. Install four bolts (4), two spacers (3), eight flat washers (2), and four nuts (1).
4. Install data plates, paragraph 4-27, as required.
5. Install accessory box, paragraph 4-21.

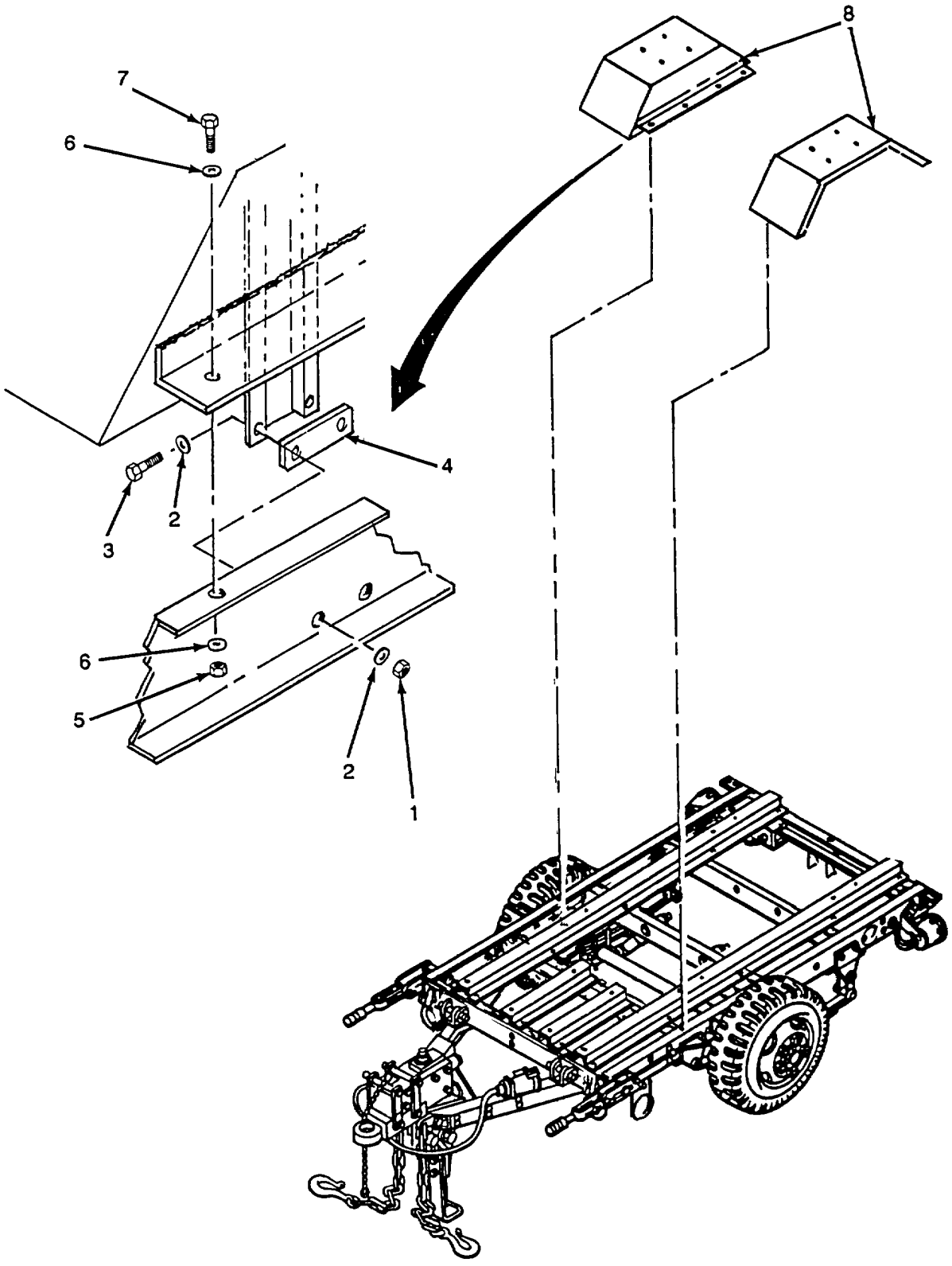


Figure 4-17. Fender.

4-27. PLATES, DATA (Figure 4-18).

This Task Covers:
Replace

Initial Setup:

Tools Required

Tool kit, general mechanics
Riveter, blind hand

REMOVAL.

1. Remove four rivets (1) and data plate (2).
2. Remove four rivets (1) and data plate (3).
3. Remove four rivets (1) and data plate (4).
4. Remove two rivets (5) and data plate (6).

INSTALLATION.

1. Position data plate (6) and install two rivets (5).
2. Position data plate (4) and install four rivets (1).
3. Position data plate (3) and Install four rivets (1).
4. Position data plate (2) and install four rivets (1).

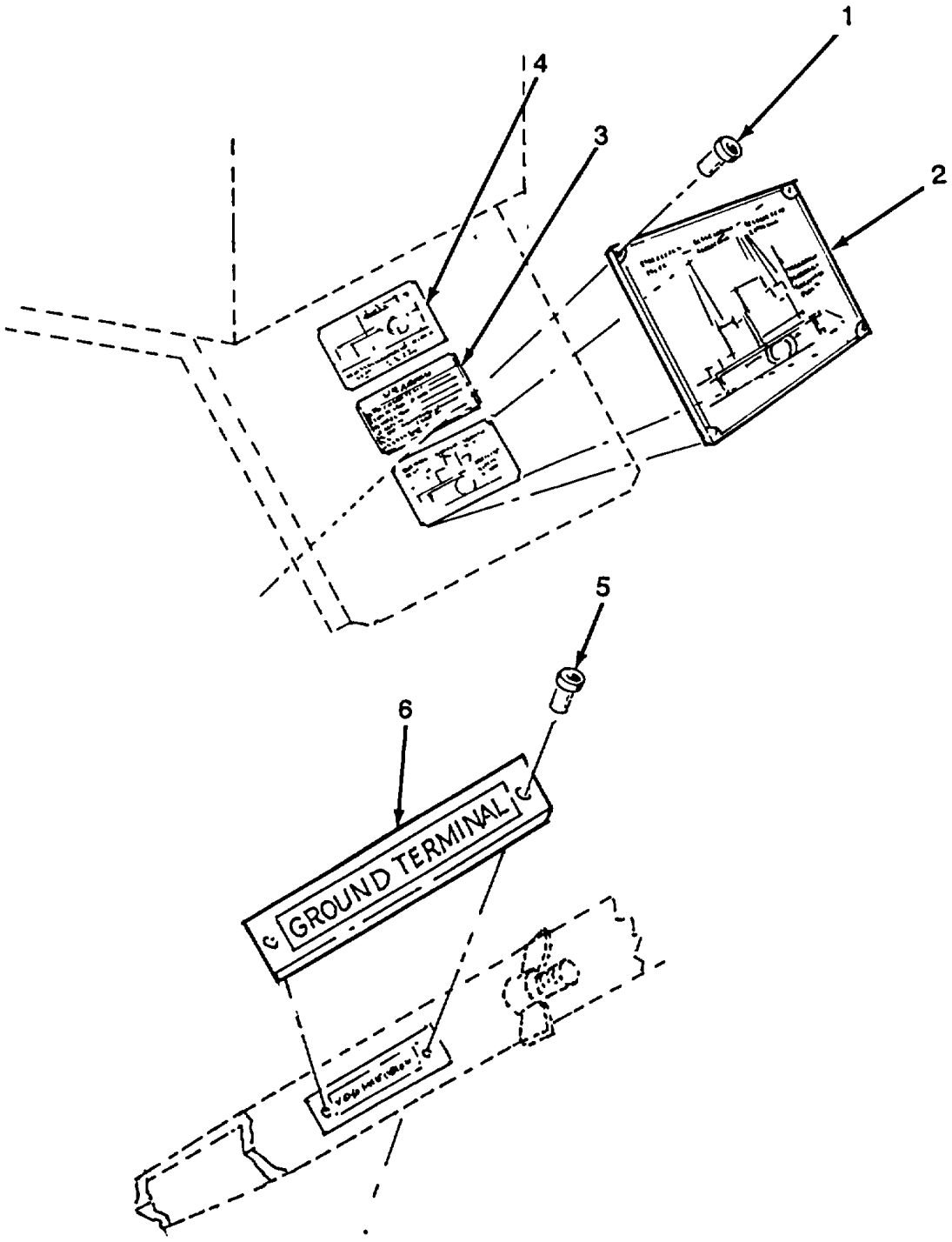


Figure 4-18. Plates, Data.

4-28. REFLECTOR AND BRACKET (Figure 4-19).

This Task Covers:
a. Replace
b. Repair

Initial Setup:

Tools Required

Tool kit, general mechanics

REMOVAL.

1. Remove two nuts (1), two flat washers (2), and two screws (3).
2. Remove reflector bracket (4).
3. Remove two nuts (5), two flat washers (6), and two screws (7).
4. Remove reflector (8).
5. Remove two nuts (9), two flat washers (10), and two screws (11).
6. Remove reflector (12).

REPAIR.

Repair is limited to straightening bends and dents. If beyond repair, replace.

INSTALLATION.

1. Position reflector (12).
2. Install two screws (11), two flat washers (10), and two nuts (9).
3. Position reflector (8).
4. Install two screws (7), two flat washers (6), and two nuts (5).
5. Position reflector bracket (4).
6. Install two screws (3), two flat washers (2), and two nuts (1).

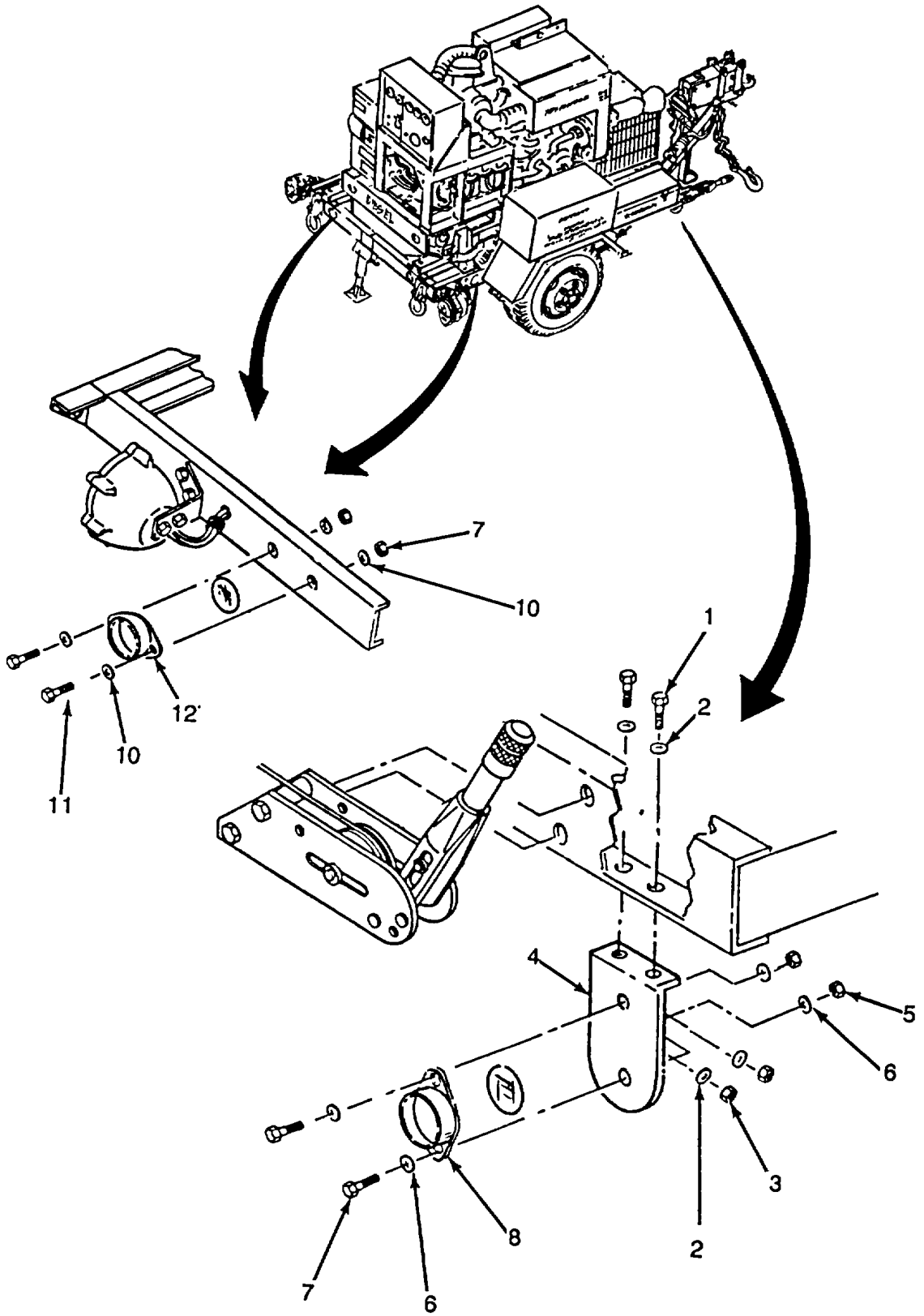


Figure 4-19. Reflector and Bracket.

4-29. CLAMPS, CABLE (Figure 4-20).

This Task Covers:
Replace

Initial Setup:

Tools Required

Tool kit, general mechanics

Equipment Condition

Generator set off.

REMOVAL.

1. Remove three nuts (1), three flat washers (2), and three screws (3).
2. Remove ground wire (4) and power cable (5) from clamps (6).

INSTALLATION.

1. Place power cable (5) and ground wire (4) in clamps (6).
2. Position clamps (6) on trailer and install three screws (3), three flat washers, and three nuts (1).

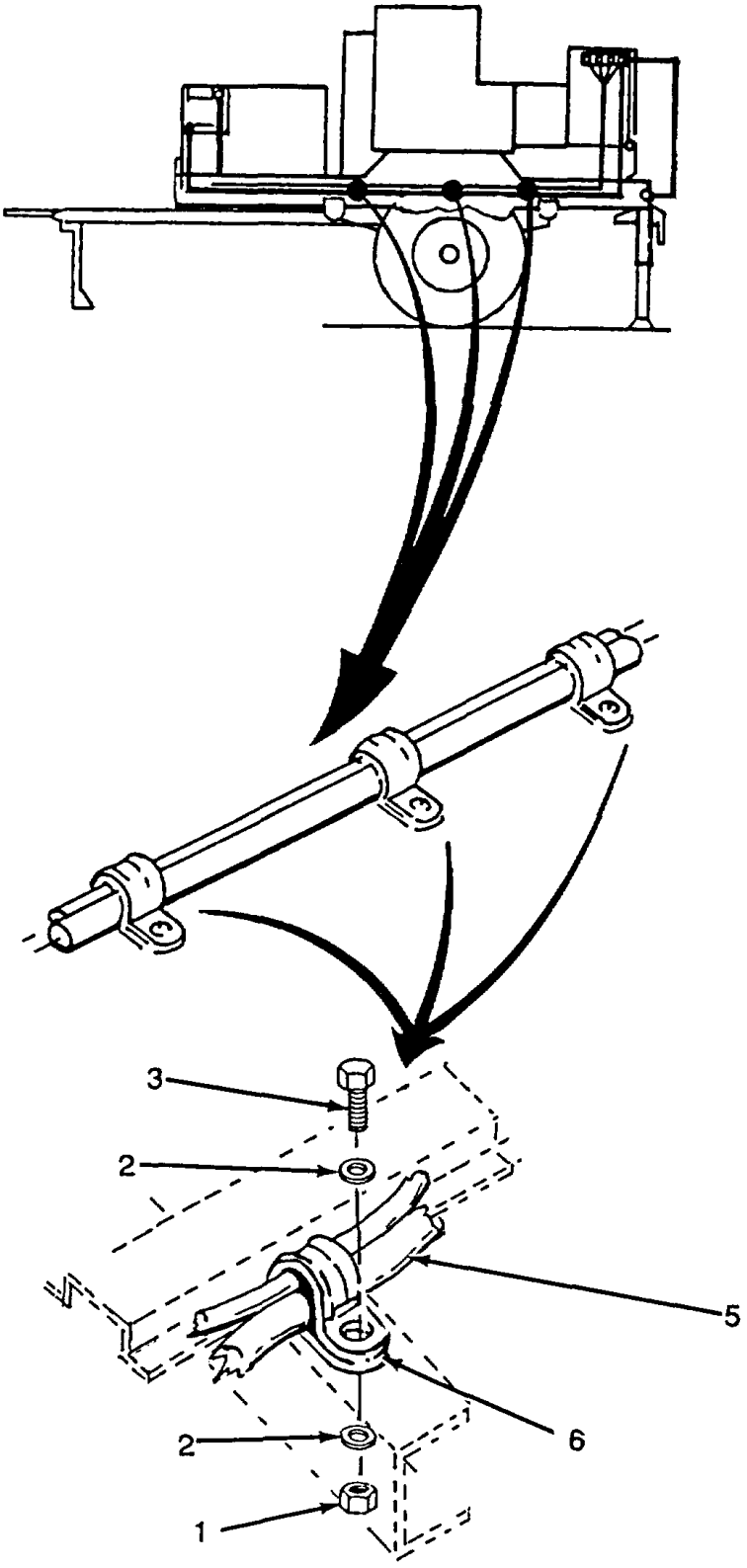


Figure 4-20. Clamps, Cable.

4-30. STACK, EXHAUST (Figure 4-21).

This Task Covers:
a. Replace
b. Repair

Initial Setup:

Tools Required

Tool kit, general mechanics

Equipment Condition

Generator set off

WARNING

Severe burns may result from hot exhaust stacks. Allow sufficient cooling time before performing maintenance.

REMOVAL.

1. Remove flappable rain cap (1) from stack pipe (2).
2. Remove stack pipe (2) from pipe elbow (3).
3. Remove elbow pipe (3) from generator set.

REPAIR.

Repair is limited to replacement of defective components.

INSTALLATION.

1. Remove excess soot from all non-defective parts.
2. Install elbow pipe (3) on unit.
3. Install stack pipe (2) on elbow pipe (3).
4. Install flappable rain cap (1) on stack pipe (2).

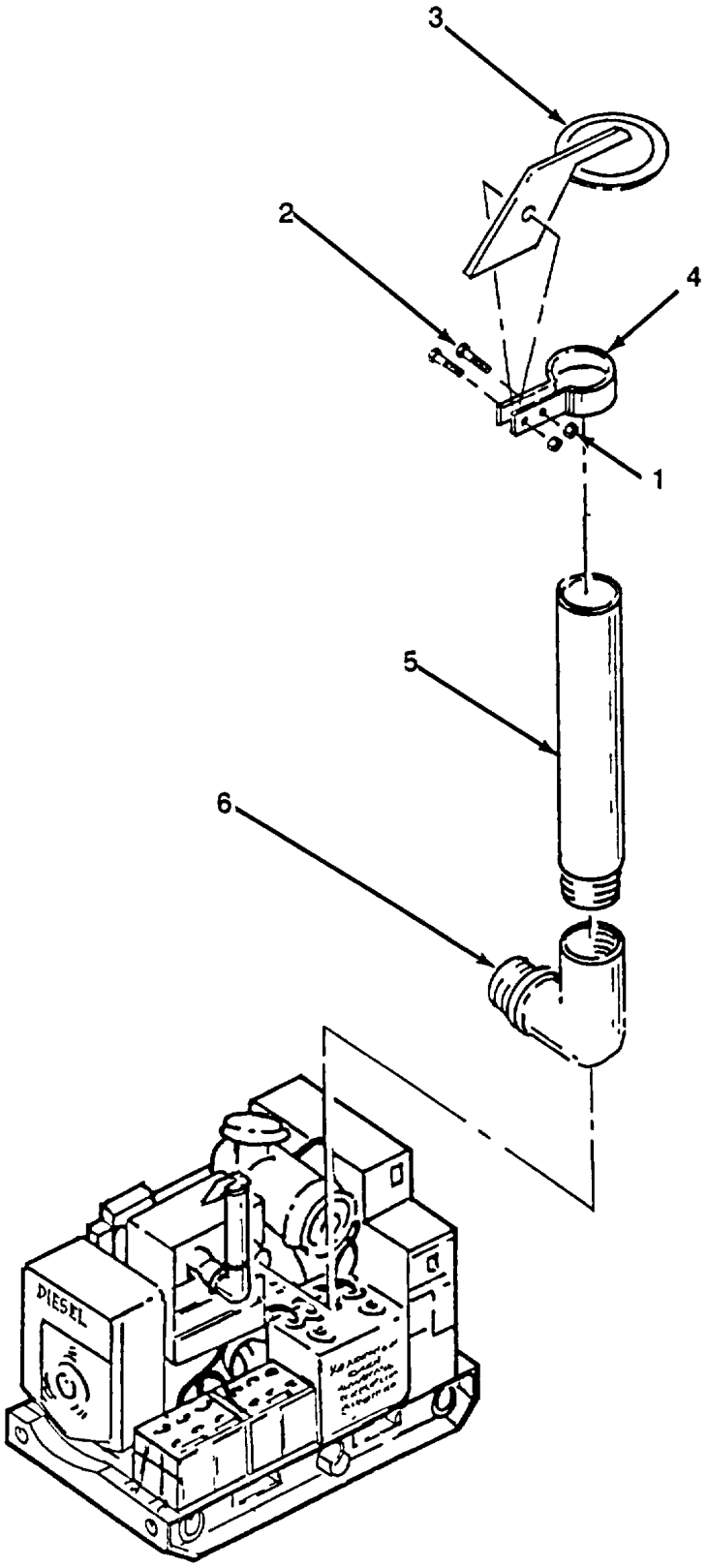


Figure 4-21. Stack, Exhaust.

4-31. HOSE, DRAIN EXTENSION (Figure 4-22).

This Task Covers:
Repair

Initial Setup:

Tools Required

Took kit, general mechanics

REPAIR.

NOTE

Repair is limited to replacement of defective components.

1. Loosen clamp (1).
2. Separate pipe elbow (2) from hose (1).

NOTE

Hose should be cut to no less than 18 inches long.

3. Attach hose (1) to pipe elbow (2) and secure with clamp (10).

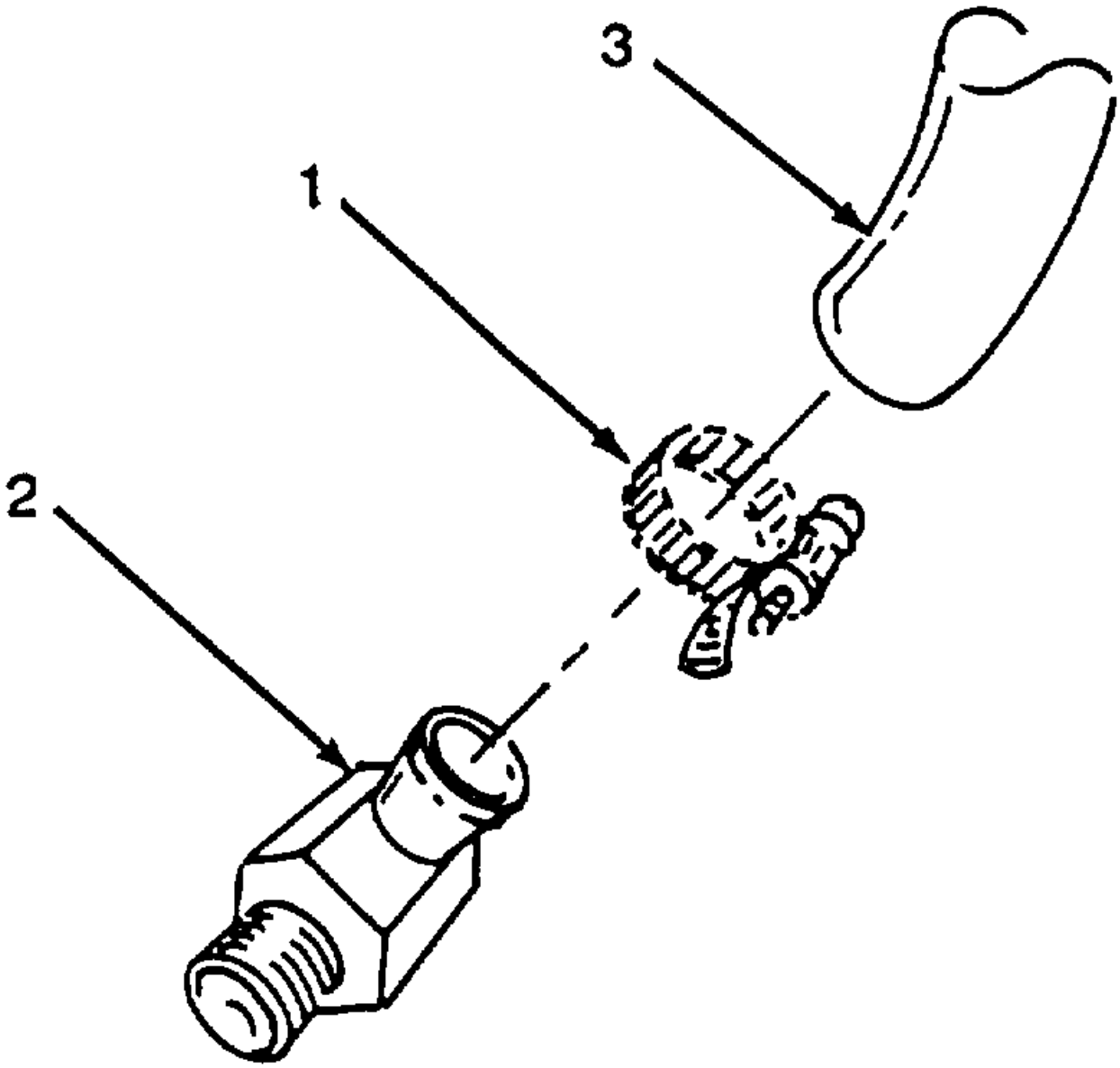


Figure 4-22. Hose, Drain Extension.

4-32. FILTER, RETURN AIR (Figure 4-23).

This Task Covers:
a. Replace
b. Repair

Initial Setup:

Tools Required

Tool kit, general mechanics
Riveter, blind hand

Equipment Condition

Air conditioner off

REMOVAL.

1. Remove return duct adapter insulation blanket.

2. Unclasp latch (1) on side access panel of return duct adapter and slide air filter (2) out.

NOTE

Removal of return duct may be required to manually disengage air filter from the return duct adapter port if the filter sticks.

REPAIR.

Repair is limited to replacement of the rivet and strap.

INSTALLATION.

1. Insert return air filter (2) in the direction of the arrow into the side access panel on return duct adapter. Secure latch (1)

2. Install return duct adapter insulation blanket.

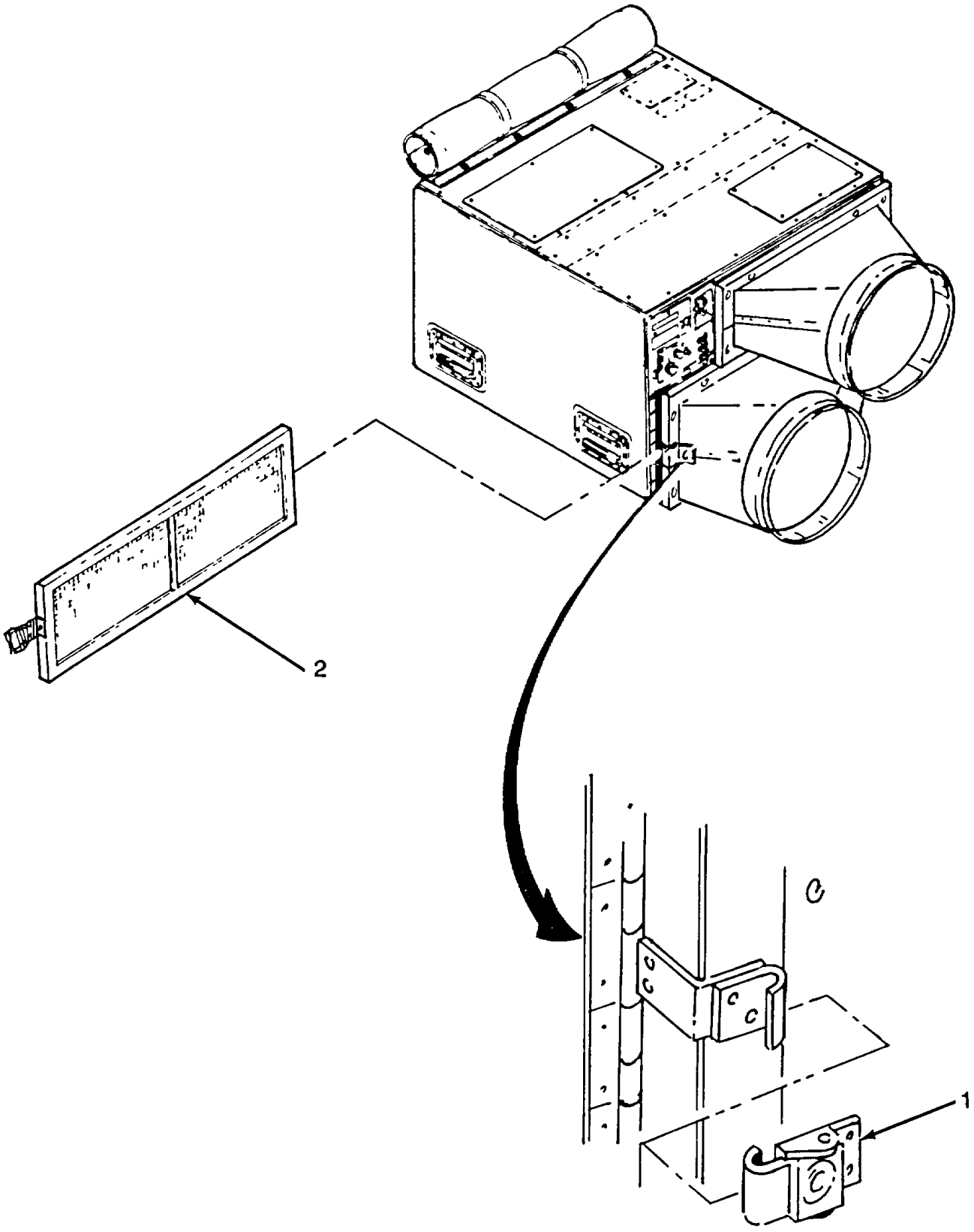


Figure 4-23. Filter, Return Air.

4-33. TERMINAL GROUND (Figure 4-24).

This Task Covers:
Replace

Initial Setup:

Equipment Condition

Generator set off

REPLACEMENT

1. Remove wing nut (1), six flat washers (2), three nuts (3), trailer ground lug (4), and ground lug (5).
2. Remove stud (6).
3. Position stud (6) in trailer.
4. Install ground lug (5), trailer ground lug (4), three nuts (3), six flat washers (2), and wing nut (1).

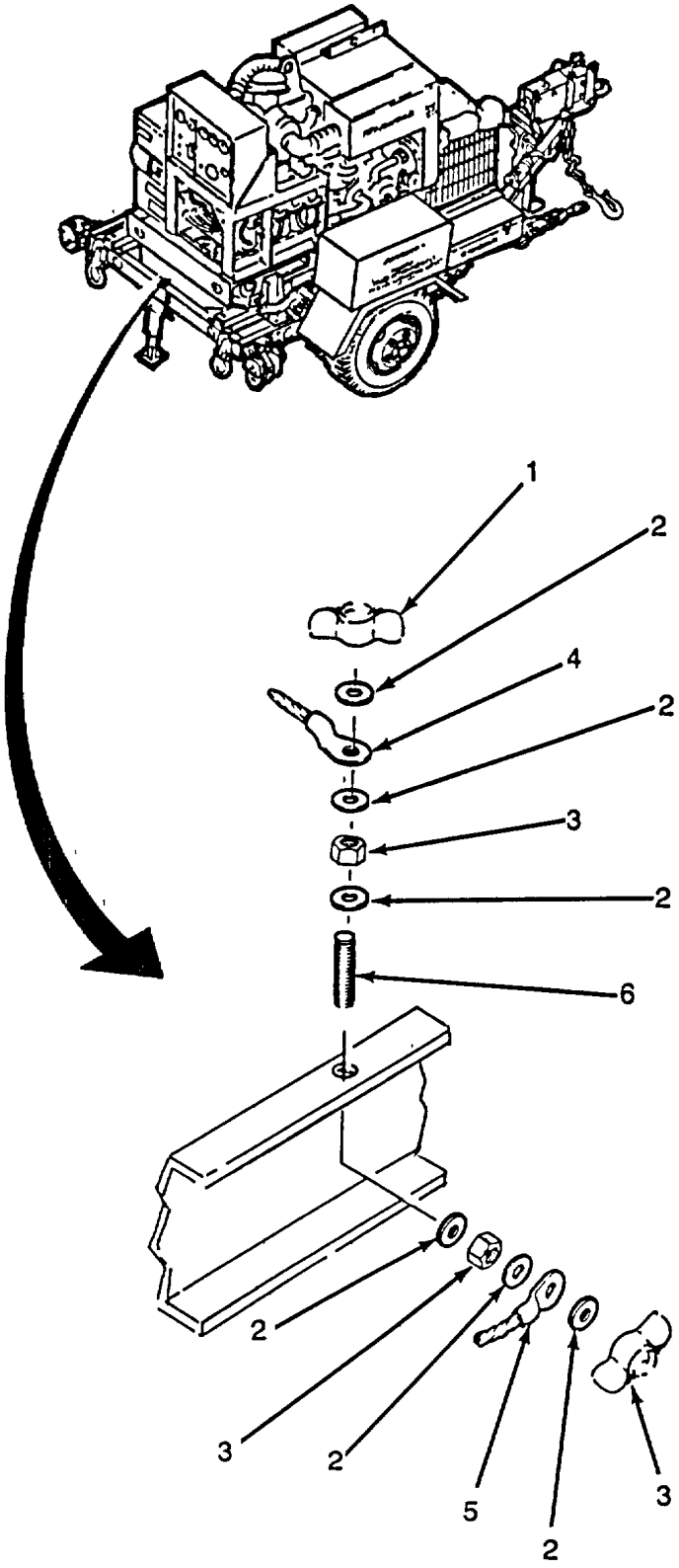


Figure 4-24. Terminal, Ground.

Section VII. PREPARATION FOR STORAGE OR SHIPMENT

4-34. PREPARATION FOR STORAGE.

a. Administrative Storage of Equipment. Reference TM 740-90-1, Administrative Storage of Equipment. Administrative storage is short term storage 1 to 45 days. It covers a storage of equipment which can be readied for mission performance within 24 hours. Before placing an item in administrative storage, the next scheduled preventive maintenance checks and services (PMCS) should be performed, all known deficiencies corrected, and all current modification work orders applied. The administrative storage site should provide required protection from the elements and allow access for visual inspection when applicable.

(1) Disconnect auxiliary fuel hose from generator-set and store drum adapter and fuel hose, if applicable.

(2) Clean exterior surfaces of air conditioner and generator using a soft clean cloth (item 5, appendix F) dampened in dry cleaning solvent (Item 28, appendix F).

(3) Disconnect flexible ducts from air conditioner and shelter, store flexible ducts and shelter adapters in accessory box.

NOTE

Use care not to damage molded rubber gasket on shelter adapter.

(4) Install adapter end covers.

(5) Roll down the fabric cover and snap in place.

(6) Raise leg prop assembly and lock in place.

(7) Remove fire extinguisher from bracket and secure with safety pin. Store in accessory box.

(8) Ensure all brakes and switches are in off position.

(9) Discharge batteries; refer to TM 5-6115-585-12.

(10) Drain excess fuel, if applicable; refer to TM 5-6115-585-12.

(11) Disassemble ground rod and cable (paragraph 4-11). Store in accessory box.

b. Intermediate Storage (46 to 180 days). No special handling is required other than protection from damage and the elements.

(1) Do all steps for administrative storage.

(2) Place the trailer-mounted, generator-set powered, air conditioner in a dry, covered area.

c. Long Term or Flyable Storage (Indefinite Time).

(1) Do all steps for administrative storage.

(2) Cover air conditioner and generator-set with crates, preferably the originals used to ship the unit if they have been preserved.

(3) Wrap the unit with two layers of heavy plastic sheet or barrier paper.

(4) Tape and strap the wrapping in place.

(5) Mark the trailer-mounted air conditioner with power in accordance with the standard Army procedures contained in TM 740-90-1, Administrative Storage of Equipment.

CHAPTER 5
DIRECT SUPPORT MAINTENANCE

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

5-1. COMMON TOOLS AND EQUIPMENT. For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

5-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT. No special tools are required for maintenance of the equipment. Test, Measurement, and Diagnostic Equipment (TMDE) and Support Equipment include standard equipment found in any maintenance shop.

5-3. REPAIR PARTS. Repair parts are listed and illustrated in the Repair Parts and Special Tools List (RPSTL), Appendix C, for the trailer-mounted, generator-set powered, air conditioner. Refer to the following manuals for RPSTL's on individual components:

Air Conditioner	TM 5-4120-384-24P
Generator-Set	TM 5-6115-585-24P
Trailer	TM 9-2330-202-14&P

Section II. DIRECT SUPPORT TROUBLESHOOTING PROCEDURES

5-4. GENERAL. For troubleshooting of individual components on the trailer-mounted, generator- set powered, air conditioner refer to the following technical manuals.

Air Conditioner	TM 5-4120-384-14
Generator-Set	TM 5-6115-585-34
Trailer	TM 9-2330-202-14&P

Section III. DIRECT SUPPORT MAINTENANCE PROCEDURES

5-5. GENERAL INFORMATION.

a. This section contains the maintenance procedures authorized for the Direct Support Maintenance as defined in the Maintenance Allocation Chart located in Appendix B. Step-by-step procedures have been provided for all action authorized to be performed by direct support maintenance in the order they appear in the MAC.

b. Refer to the following manuals for direct support maintenance for individual component maintenance on the trailer-mounted, generator-set powered, air conditioner.

Air Conditioner	TM 5-4120-384-14
Generator-Set	TM 5-6115-585-34
Trailer	TM 9-2330-202-14&P

5-6. AIR CONDITIONER.

This Task Covers:
Replace

Initial Setup:

Tools Required

Tool kit, general mechanics
Hoist, trestle
Chain, hoist

Personnel Required

Four persons required.

Equipment Condition

Power cable disconnected, paragraph 4-20
Ground wire disconnected, paragraph 4-20
Flexible ducts removed, paragraph 4-13
Supply and return duct adapter removed, paragraph 4-23

REMOVAL (Refer to figure 5-1).

1. Remove four screws (1) and four flat washers (2).
2. Dismount air conditioner (3) from mounting rails (4).
3. Remove rubber mounts (5) and retain for reuse.

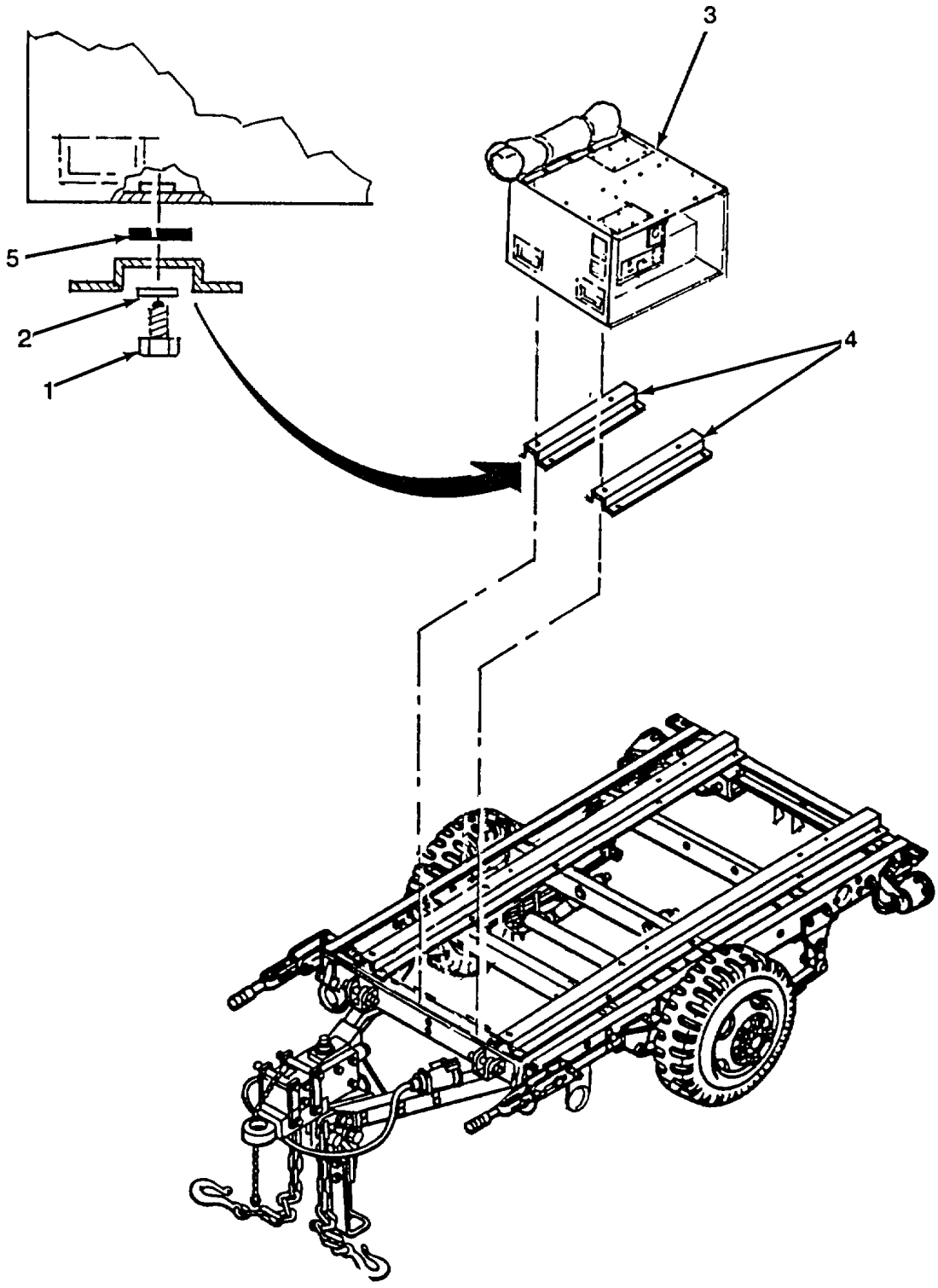


Figure 5-1. Air Conditioner.

NOTE

Replacement air conditioner requires modification before use with the trailer-mounted, generator-set powered air conditioner system.

DISASSEMBLY.

a. Defective air conditioner (Refer to Figure 5-2).

1. Remove two screws (1) and two snaps (2).

2. Remove four screws (3) and four lockwashers (4).

3. Remove vent cover (5) and retain for reuse.

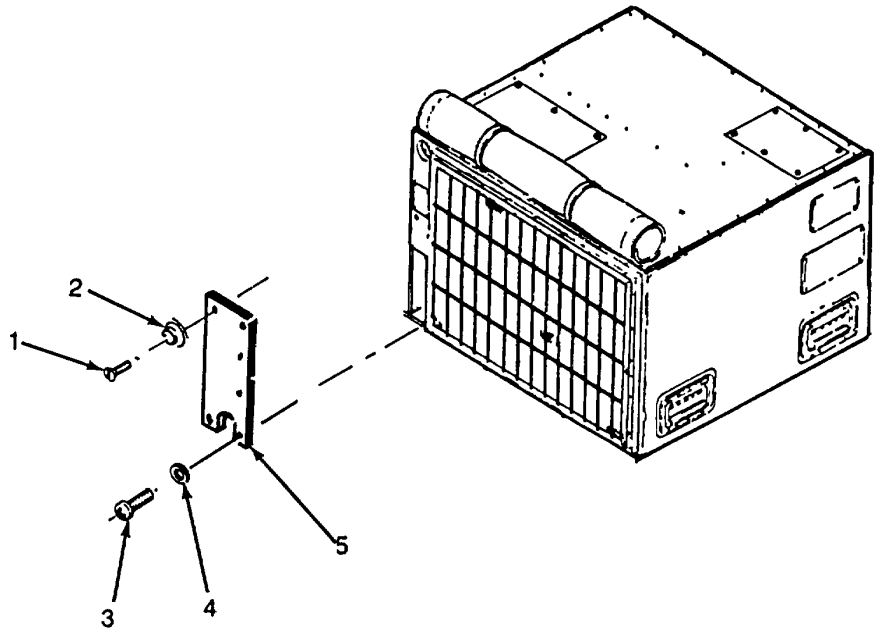


Figure 5-2. Defective Air Conditioner.

b. Replacement air conditioner (Refer to figure 5-3).

1. Remove two screws (1), two lockwashers (2), and fresh air guard (3).

2. Remove eight screws (4), eight lockwashers (5), and supply louver (6).

3. Remove eight screws (7), eight lockwashers (8), return louver (9), and return air filter (10).

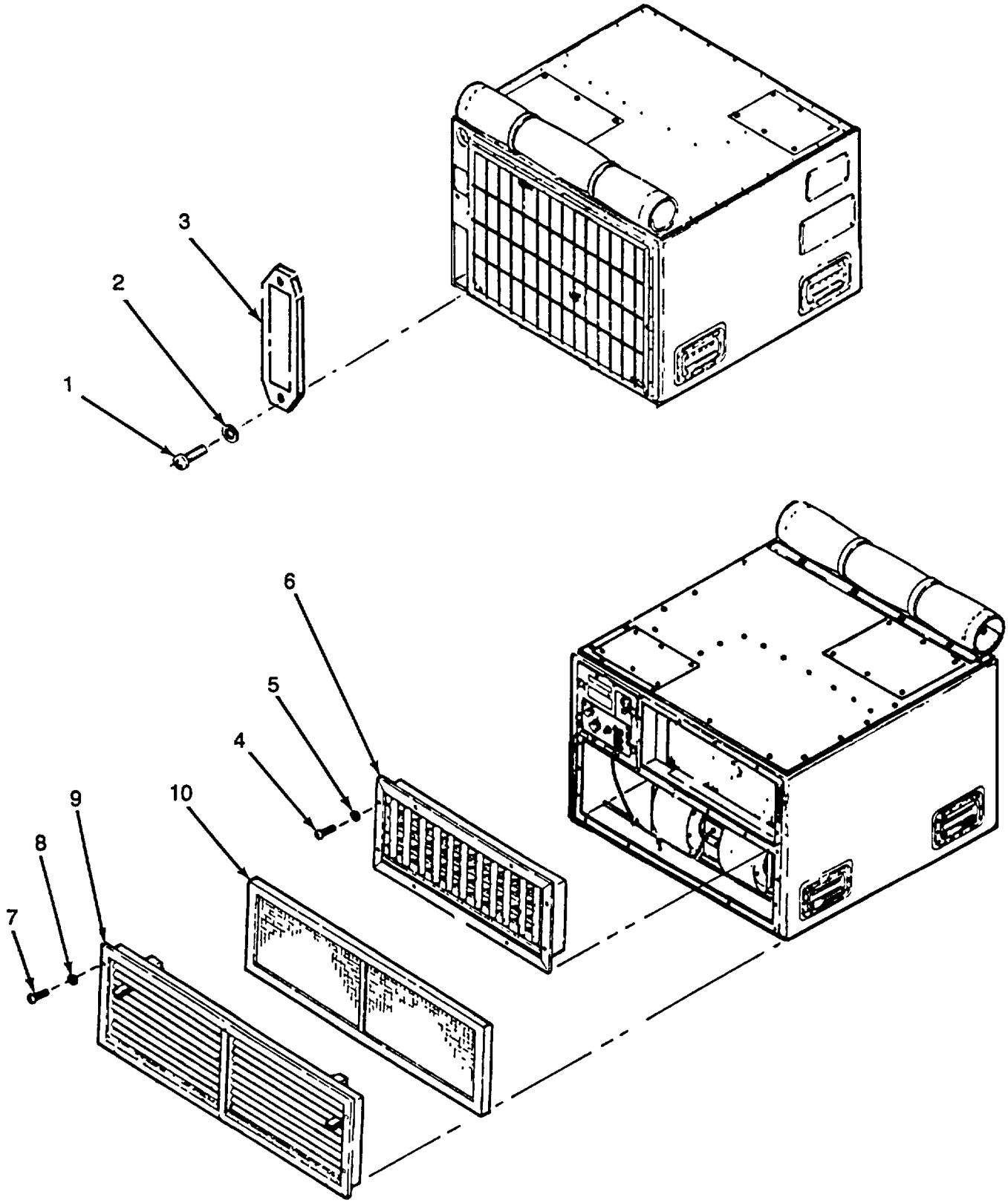


Figure 5-3. Replacement Air Conditioner.

ASSEMBLY.

a. Damaged air conditioner (Refer to figure 5-3).

1. Install return air filter (10) in return air louver (9).
2. Position return air louver (9) and install eight lockwashers (8) and eight screws (7).
3. Position supply louver (6) and install eight lockwasher (5) and eight screws (4).
4. Install fresh air guard (3), two lockwashers (2), and two screws (2).

b. Replacement air conditioner (Refer to figure 5-2).

1. Position vent cover (5).
2. Install four lockwashers (4) and four screws (3).
3. Install two snaps (2) and two screws (1).

INSTALLATION (Refer to figure 5-1).

1. Position rubber mounting (5) on mounting rails (4).
2. Mount modified replacement air conditioner (3) onto mounting rails (4).
3. Install four flat washers (2) and four screws (1). Refer to Appendix G for torque requirements.
4. Install supply and return duct adapter. Refer to paragraph 4-23.
5. Install flexible ducts. Refer to paragraph 4-13.
6. Connect ground wire. Refer to paragraph 4-20.
7. Connect power cable. Refer to paragraph 4-20.

5-7. GENERATOR SET (Figure 5-4).

This Task Covers:
Replace

Initial Setup:

Tools Required

Tool kit, general mechanics
Hoist, trestle
Chain, hoist

Personnel Required

Two persons required

Equipment Condition

Cable clamps removed, paragraph 4-29
Power cable disconnected, paragraph 4-20
Trailer and air conditioner ground wires disconnected, paragraph 4-20
Exhaust stacks removed, paragraph 4-30

REMOVAL.

1. Remove eight nuts (1), eight flat washers (2), eight beveled washers (3), eight flat washers (4), and eight screws (5).

2. Dismount generator set (6) from mounting rails (7).

INSTALLATION.

1. Mount generator set (6) on mounting rails (7).

2. Install eight screws (5), eight flat washers (4), eight beveled washers (3), eight flat washers (2), and eight nuts (1). Refer to Appendix G for torque limits.

3. Install exhaust stacks. Refer to paragraph 4-29.

4. Install power cable. Refer to paragraph 4-19.

5. Install trailer and air conditioner ground wires. Refer to paragraph 4-20.

6. Install cable clamps. Refer to paragraph 4-29.

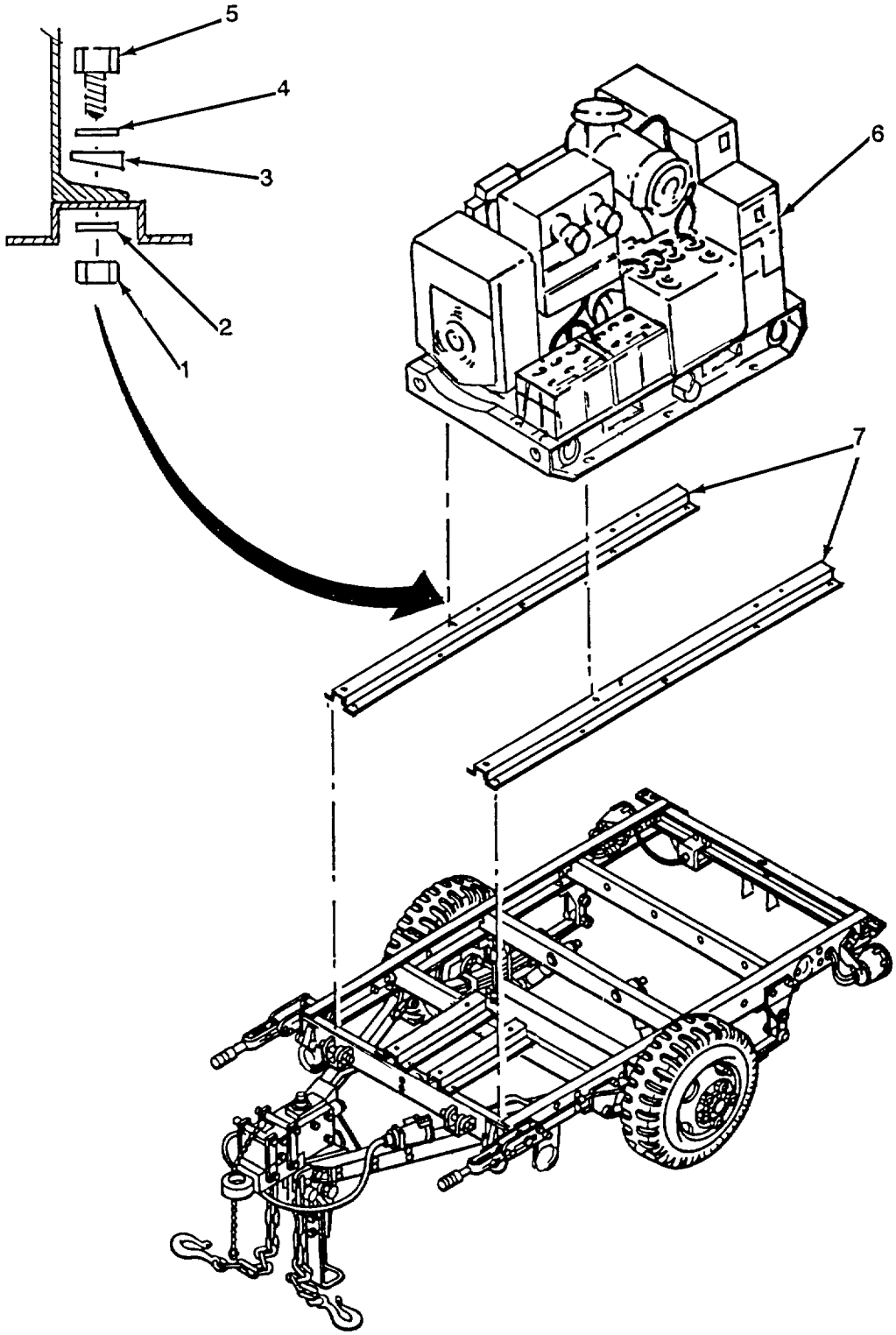


Figure 5-4. Generator Set.

5-8. MOUNTING RAILS (Figure 5-5).

This Task Covers:
Replace

Initial Setup:

Tools Required

Tool kit, general mechanics

Equipment Condition

Air conditioner removed, paragraph 5-6.
Generator set removed, paragraph 5-7.

REMOVAL.

1. Remove 16 nuts (1), 32 flat washers (2) and 16 screws (3).
2. Remove generator-set mounting rails (4).
3. Remove 8 nuts (1), 16 flat washers (2), and 8 screws (3).
4. Remove air-conditioner mounting rails (5).

INSTALLATION.

1. Position air conditioner mounting rails (5) on trailer.
2. Install 8 screws (3), 16 flat washers (2), and 8 nuts (1).
3. Install generator-set mounting rails (4) on trailer.
4. Install 16 screws (3), 32 flat washers (2), and 16 nuts (1).

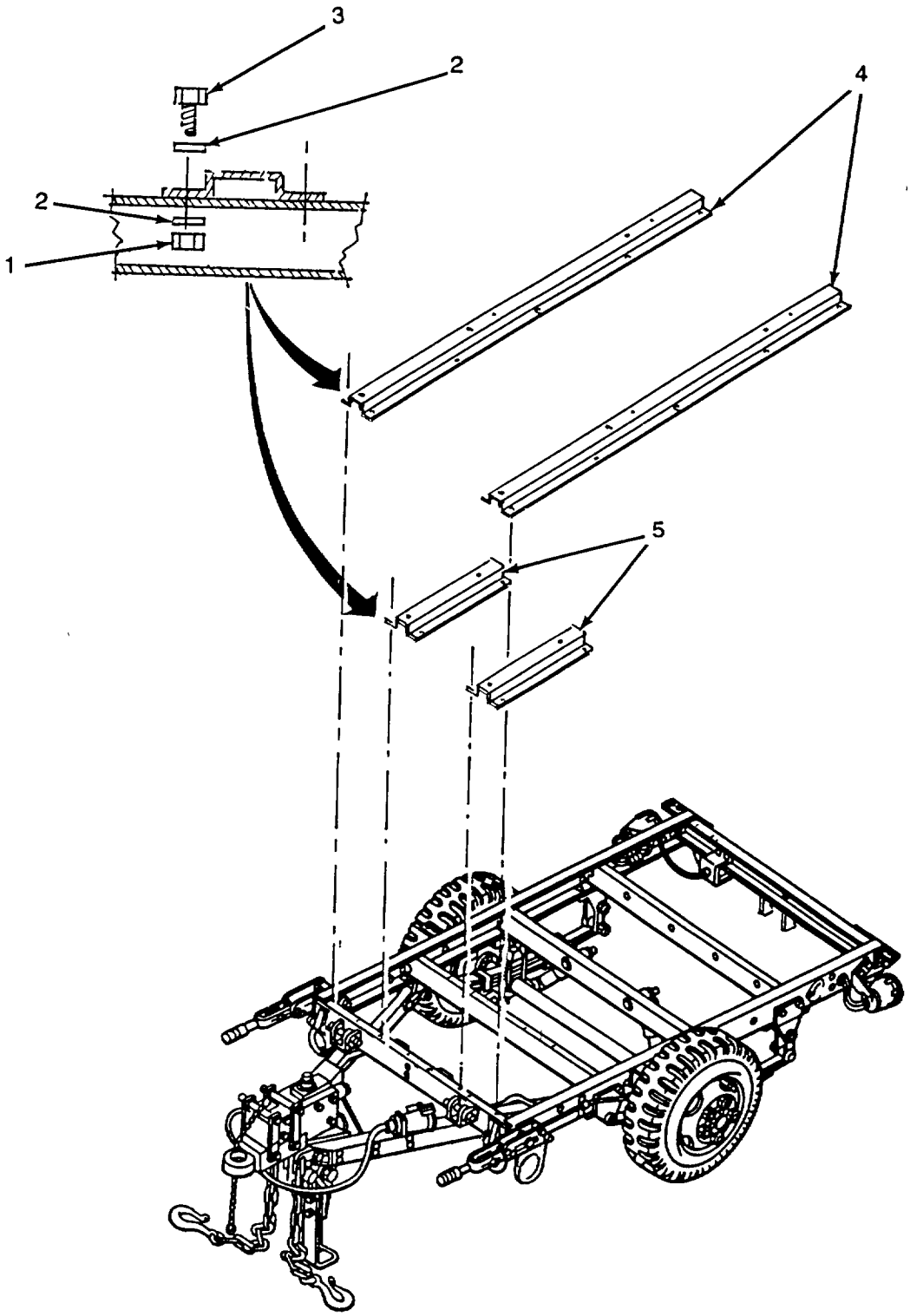


Figure 5-5. Mounting Rails.

APPENDIX A
REFERENCES

A-1. SCOPE.

This appendix lists all forms, field manuals, technical manuals, and miscellaneous publications referenced in this manual.

A-2. FORMS.

Equipment Inspection and Maintenance Worksheet ..... DA Form 2404
Maintenance Request ..... DA Form 2407
Quality Deficiency Report ..... SF 368
Recommended Changes to Equipment Technical Publications ..... DA Form 2028-2
Recommended Changes to Publications and Blank Forms ..... DA Form 2028

A-3. FIELD MANUALS.

First Aid For Soldiers ..... FM 21-11
Manual for the Wheeled Vehicle Driver ..... FM 21-305
Operation and Maintenance of Ordnance Material in Cold Weather (0° to-65°F) ..... FM 207

A-4. TECHNICAL MANUALS.

Administrative Storage of Equipment ..... TM 740-90-1
Operator's and Organizational Maintenance Manual ..... TM 5-6115-585-12
Direct Support and General Support Maintenance Manual ..... TM 5-6115-585-34
Operator's, Organizational, Direct Support and General Support Maintenance Manual ..... TM 5-4120-384-14
Deepwater Fording of Ordnance Material ..... TM 9-238
Procedure for Destruction of Equipment to Prevent Enemy Use (Mobility Equipment Command) ..... TM 750-244-3

A-5. MISCELLANEOUS PUBLICATIONS.

The Army Maintenance Management System ..... DA PAM 738-750
Abbreviations for Use on Drawings, Standards, Specifications and Technical Documents MIL-STD-12
Army Medical Department Expendable/Durable Items ..... CTA 8-100
Consolidated Index of Army Publications and Blank Forms ..... DA PAM 25-30
Expendable Items (Except Medical Class V, Repair Parts and Heraldic Items) ..... CTA 50-970
Environmental Control of Small Shelters MIL-HDBK-116

APPENDIX B
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL.

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

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

c. Section III lists the tools and test equipment (both special tools and common tools 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 operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluid, or gases.

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

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 replacing, seating, or fixing into position a spare, repair

part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the 3rd 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. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/ operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

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

B-3. EXPLANATION OF COLUMNS IN THE MAC, Section II.

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

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

c. Column 3, Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph 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 and necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specified tasks identified for the maintenance functions authorized in the Maintenance Allocation Chart. The symbol designations for the various maintenance categories are as follows:

C .....Operator or crew

O.....Unit Maintenance
F.....Direct Support Maintenance
H.....General Support Maintenance
D.....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. Column 4, National Stock Number. The national stock number of the tool or test equipment.

e. Column 5, Tool Number. The manufacture'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 FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
01	Electrical Connectors								
	Cable, Power	Inspect	0.1						
		Replace		0.5				3,5,7	
		Repair		0.5				3,5,7	
	Wire, Ground	Inspect	0.1						
		Replace		0.5				5	
02	Boxes, Storage and Accessories								
	Box, Storage	Inspect	0.1						
		Replace		0.5				5,7	
		Repair		0.5				5,7	
	Box, Accessories	Inspect	0.1						
		Replace		0.5				5,7	
		Repair		0.5				5,7	
03	Bracket, Fire Extinguisher								
	Bracket	Inspect	0.1	,					
		Replace		0.5				5	
04	Adapters, Duct								
	Adapter, Duct, Supply and Insulation Blanket	Inspect	0.1						
		Replace		0.5				4,5	
		Repair		0.5				4,5	
	Adapter, Duct, Return and Insulation Blanket	Inspect	0.1						
		Replace		0.5				4,5	
		Repair		0.5				4,5	
	Cover, Duct, End	Inspect	0.1						
		Repair		0.5					
05	Leg Prop Assembly								
	Leg Prop Assembly	Inspect	0.1						
		Replace		1.0				5,7	
06	Fenders								
	Fenders	Inspect	0.1						
		Repair		1.0				5,7	
		Replace		1.0				5,7	

Section II. MAINTENANCE ALLOCATION CHART, cont.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
07	Accessories								
	Data Plates	Inspect	0.1						
		Replace		0.5				5	
	Reflectors	Inspect	0.1						
		Replace		0.5				5	
	Clamps, Cable	Inspect	0.1						
		Replace		0.2				5	
	Exhaust Stack	Inspect	0.2						
		Replace		0.5				5,7	
	Drain Hose Extension	Inspect	0.1						
		Replace		0.2				5	
	Filter, Return Air	Inspect	0.1						
		Service		0.2					
		Replace		0.1					
		Repair		0.2				7	
08	Air Conditioner and Mounting Rails								
	Air Conditioner	Inspect	0.2						
		Repair		1.0				5,6,7,8	A
		Replace			1.0			5,7,9	
	Mounting Rails	Inspect	0.1						
		Replace			1.0			5,7,9	
09	Generator Set and Mounting Rails								
	Generator Set	Inspect	0.2						
		Repair		1.0				1,3,5,7	B
		Replace			1.0			5,7,9	
	Mounting Rails	Inspect	0.1						
		Replace			1.0			5,7,9	
10	Trailer Assembly								
	Trailer	Inspect	0.2						
		Repair		1.0				5,7	C
		Replace			2.0			5,7,9	
		Service		0.5				8	

Section III. SPECIAL TOOLS AND TEST EQUIPMENT REQUIREMENT

(1) TOOL/TEST EQUIP. REF CODE	(2) MAINTENANCE CATEGORY	(3) NOMENCLATURE	(4) NSN	(5) TOOL NUMBER
		Standard tools and test equipment contained in the following kits are adequate to perform the maintenance functions listed in Section II.		
1	O,F	Battery Tester	6630-00-171-5126	
2	F	Chain, Hoist 3 Ton	3950-292-9879	
3	O,F	Multimeter	6625-00-553-0142	
4	O	Screwdriver, Cross Tip, No 2, one inch long blade	5120-00-227-7293	
5	O	Shop Equipment, Automotive Maintenance & Repair: Organizational Maintenance Common No. 1, Less Power	4910-00-754-0654	
6	O,F	Thermometer	6685-00-527-7867	
7	O	Tool Kit, Automotive	5180-00-177-7033	
8	O,F	Tool Kit, Service Unit	5180-00-596-1474	SC5180-90-CL-N18 (19099)
9	F	Trestle, Hoist, Portable, 5 Ton	3950-449-7005	

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	Refer to TM 5-4120-384-14
B	Refer to TM 5-6115-585-12
C	Refer to TM 9-2330-202-14&P

APPENDIX C
UNIT AND DIRECT SUPPORT
MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

SECTION I. INTRODUCTION

C-1. SCOPE. This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of unit and direct support, maintenance of the trailer-mounted air conditioner. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

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

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

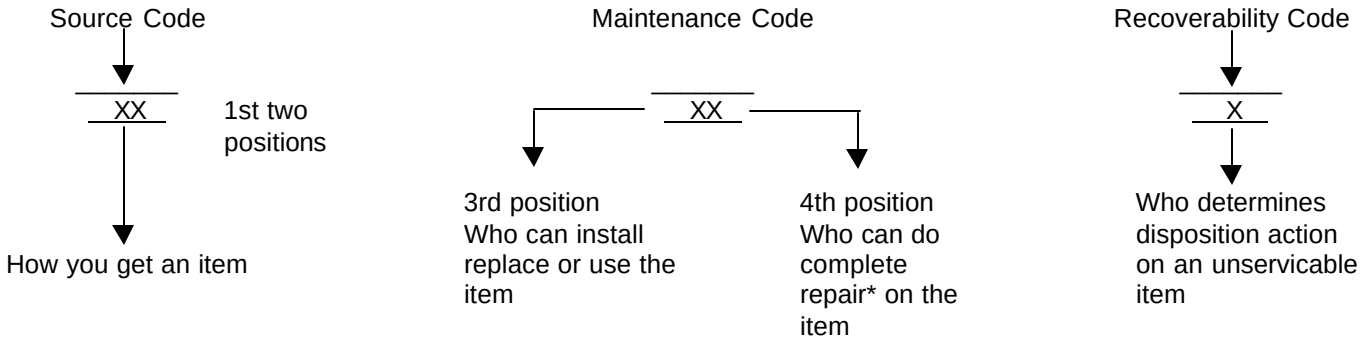
b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance.

c. Section IV. Cross-references Indexes. A list, in National Item Identification Number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross referenced to each illustration figure and item number appearance. The figure and item number index lists figure and item number in alphanumeric sequence and cross references NSN, CAGEC and part number.

C-3. EXPLANATION OF COLUMNS (Sections II AND III).

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

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



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

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

Code	Explanation
PA PB PC** PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3rd position of the SMR code. **NOTE: Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.
MO — (Made at org AVUM Level) MF — (Made at DS/AVUM Level) MH — (Made at GS Level) ML — (Made at Specialized Repair Activity (SRA)) MD — (Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION and USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3rd position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.
AO — (Assembled by org/AVUM Level) AF — (Assembled by DS/AVIM Level AH — (Assembled by GS Category) AL — (Assembled by SRA) AD — (Assembled by Depot)	Items with these codes are not to be requested/'requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3rd position code of the SMR code authorizes you to replace the item, but the source code indicates the items are assembled at a higher level, order the item from the higher level of maintenance.

XA — Do not requisition "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 Reciprocating Compressor manufacturer's part number.
XD — Item is not stocked. Order an "XD" -coded item through normal supply channels using the CAGEC and part number given if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

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

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

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

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

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

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

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

c. CAGEC (Column (3)). The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

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

NOTE

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

e. DESCRIPTION AND USABLE ON CODE (UOC) (Column (5). This column includes the following information:

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

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

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

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

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

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

(7) The usable on code, when applicable (see paragraph 5, Special Information).

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

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

(10) The indenture, shown as dots appearing before the repair part, indicates that the item is a repair part of the next higher assembly.

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

C-4. EXPLANATION OF COLUMNS (SECTION IV).

a. NATIONAL STOCK NUMBER (NSN) INDEX.

(1) STOCK NUMBER column. This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN, i.e.

NSN

5305-01-574-1467

NIIN

When using this column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

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

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

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

(1) CAGEC column. The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) PART NUMBER column. Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

(3) STOCK NUMBER column. This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and CAGEC columns to the left.

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

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

c. FIGURE AND ITEM NUMBER INDEX.

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

(2) ITEM column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

(3) STOCK NUMBER column. This column lists the NSN for the item.

(4) CAGEC column. The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(5) PART NUMBER column. Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

C-5. HOW TO LOCATE REPAIR PARTS.

a. When National Stock Number or Part Number Is NOT Known.

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

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

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

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

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

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

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN)

sequence (see c-4a.(1)). The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see paragraph c-4.b). Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

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

C-6. ABBREVIATIONS. Abbreviations used in this manual are listed in MIL-STD-12.

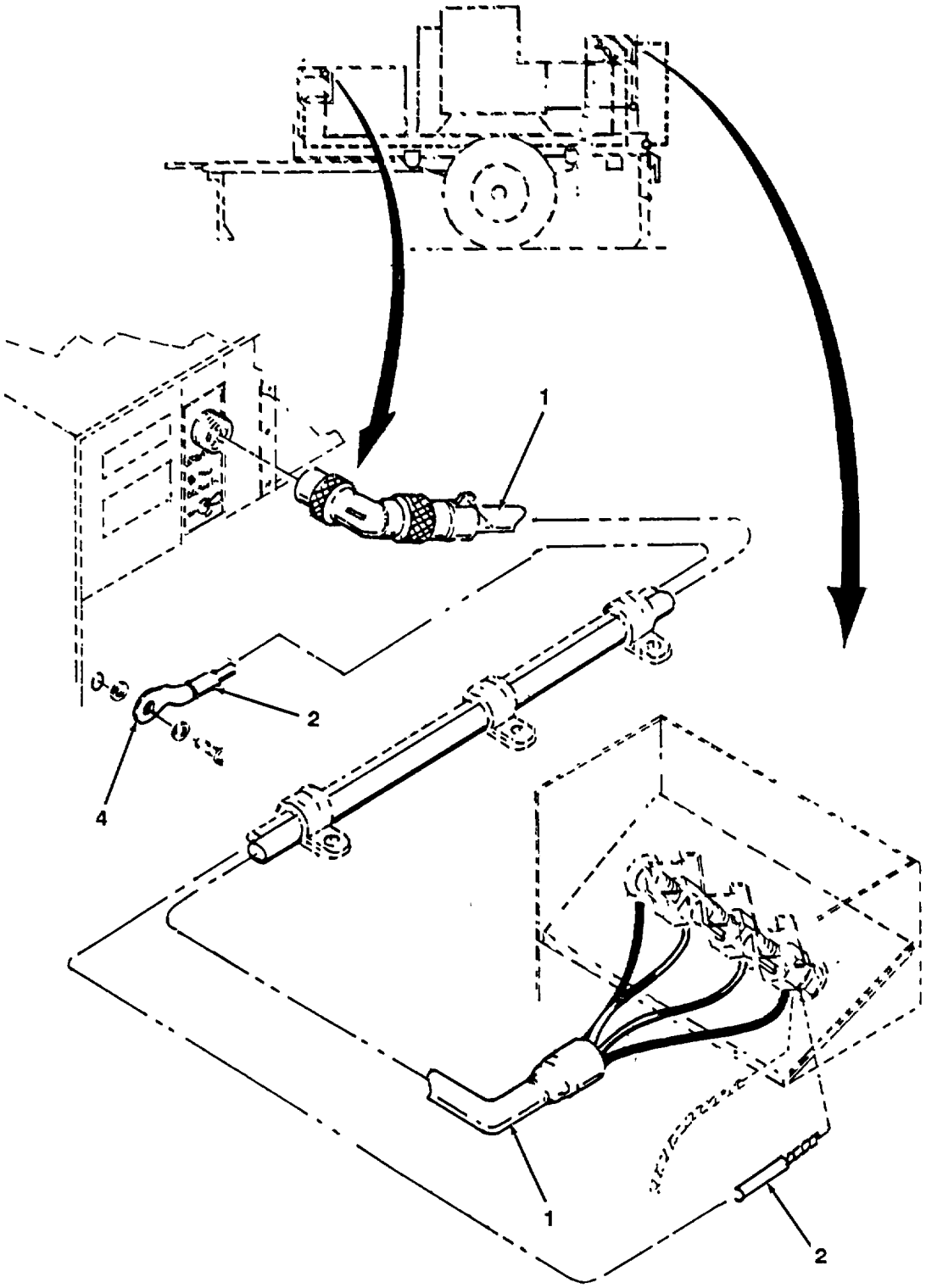


Figure C-1. Electrical Connectors (Sheet 1 of 2).

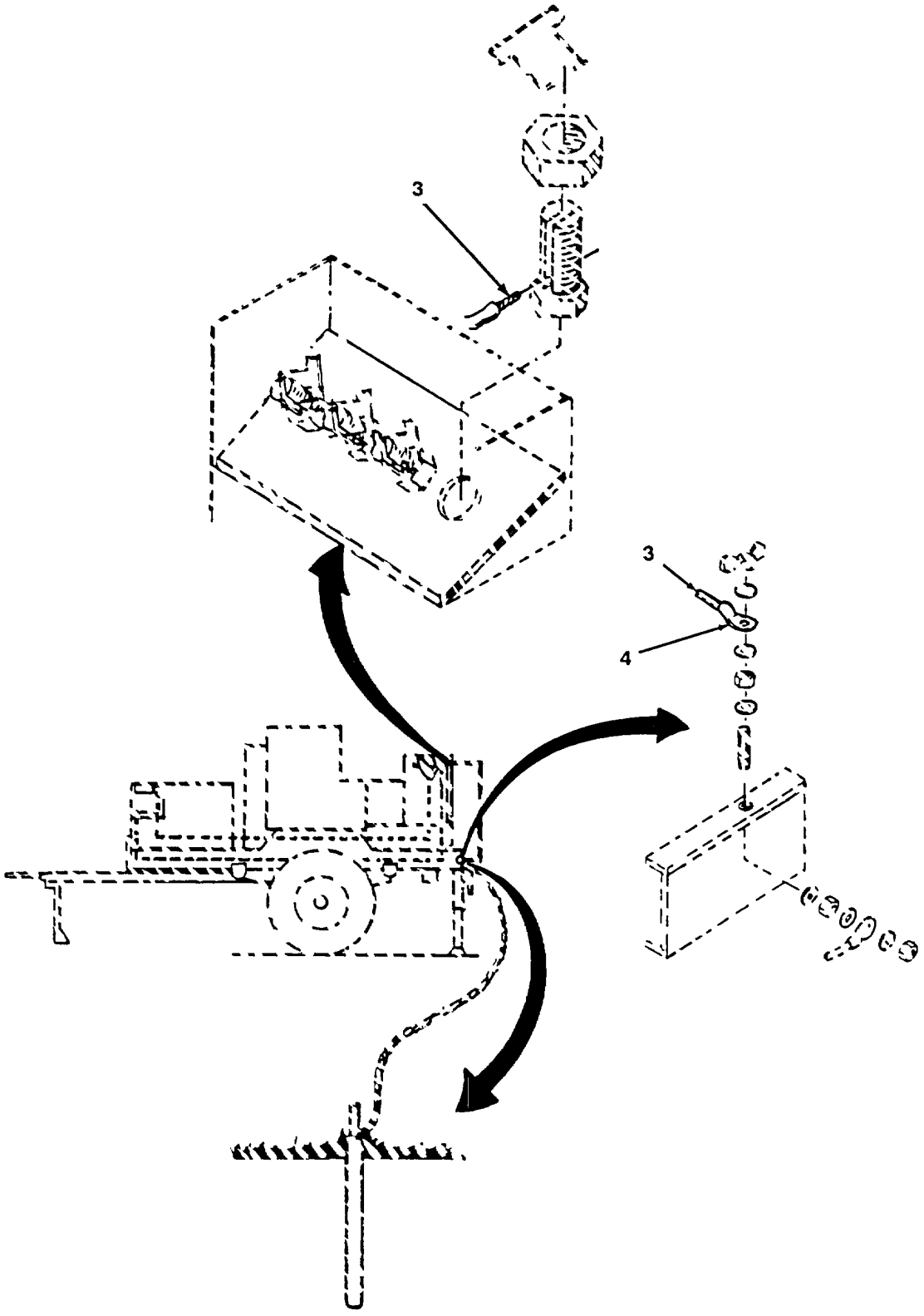


Figure C-1. Electrical Connectors (Sheet 2 of 2).

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 01 ELECTRICAL CONNECTORS	
				FIG. C-1 ELECTRICAL CONNECTORS	
1	PBOZZ	97403	13229E9186	CABLE ASSY	1
2	PBOZZ	97403	13229E9191	WIRE, GROUND	1
3	MFOZZ	97403	13229E9192-2-6FT	WIRE, GROUND M/F P/N MSQQW343CBIB, CUT TO LENGTH	1
4	PAOZZ	96909	MS20659-110	LUG, TERMINAL	2

END OF FIGURE

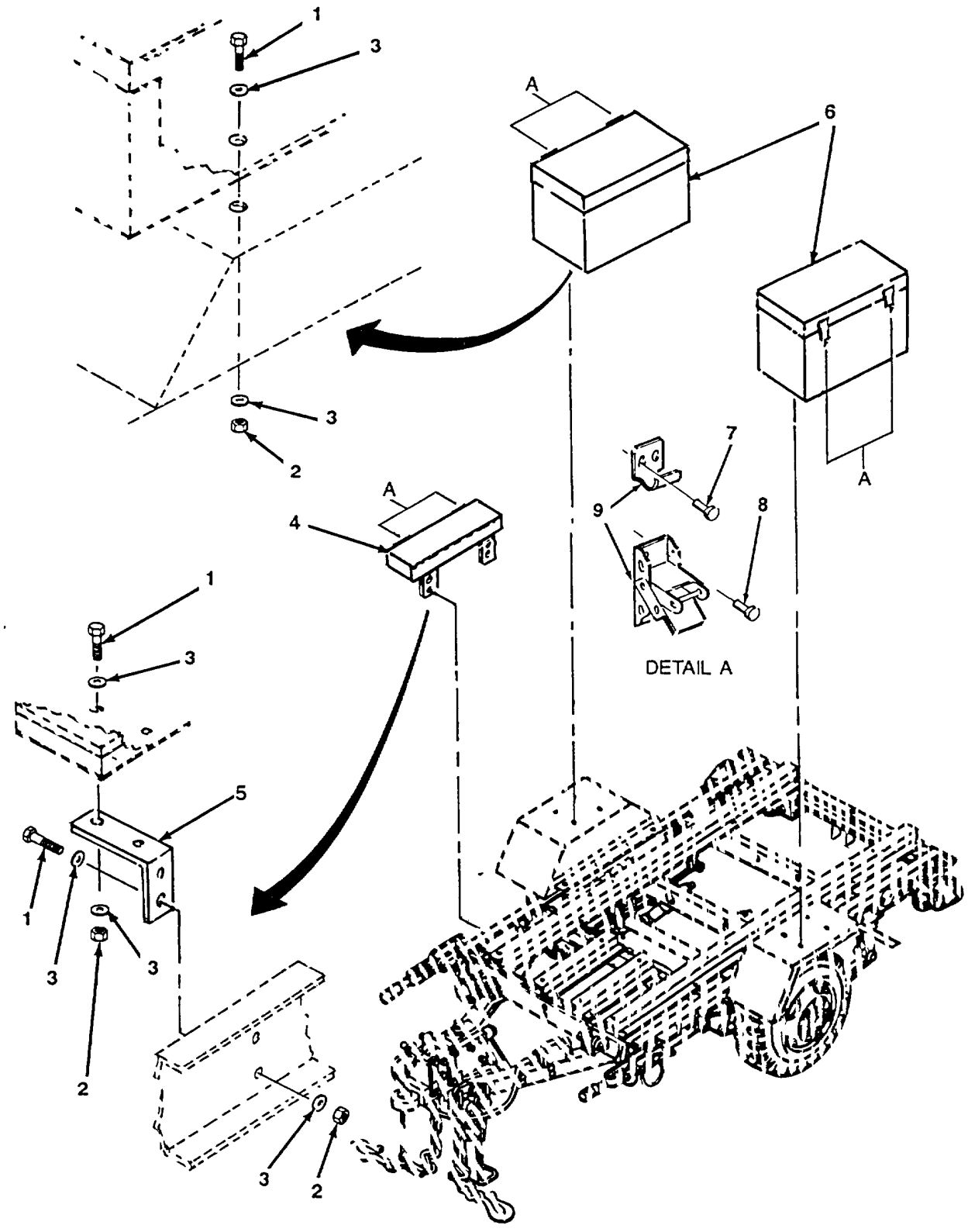


Figure C-2. Storage and Accessory Boxes.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 02 STORAGE AND ACCESSORY BOXES	
				FIG. C-2 STORAGE AND ACCESSORY BOXES	
1	PAOZZ	96906	MS590728-60	SCREW, CAP, HEXAGON H	14
2	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE	14
3	PAOZZ	96906	MS27183-15	WASHER, FLAT	28
4	XBOZZ	97403	13229E9188	BOX, STORAGE	1
5	XBOZZ	97403	13229E8621	BRACKET, MOUNTING	2
6	PBOZZ	97403	13229E8615	BOX, ACCESS, STORAGE	2
7	PAOZZ	81349	M24243/6A402H	RIVET, BLIND	12
8	PAOZZ	96909	MS20470AD4-6	RIVET, SOLID	12
9	PBOZZ	96909	MS18015-1	CATCH, CLAMP, STRIKE	6

END OF FIGURE

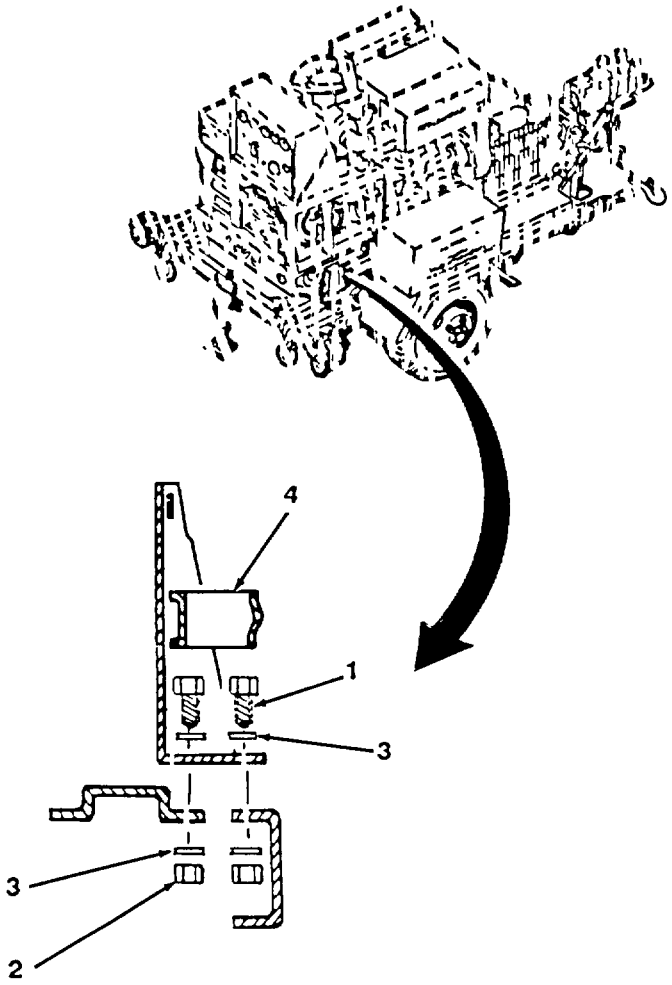


Figure C-3. Fire Extinguisher Bracket.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 03 FIRE EXTINGUISHER BRACKET	
				FIG. C-3 FIRE EXTINGUISHER BRACKET	
1	PAOZZ	96906	MS90728-60	SCREW, CAP, HEXAGON H.....	4
2	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE	4
3	PAOZO	96906	MS27183-15	WASHER, FLAT.....	8
4	XBOZZ	97403	13214E1235	BRACKET, FIRE EXTING	1

END OF FIGURE

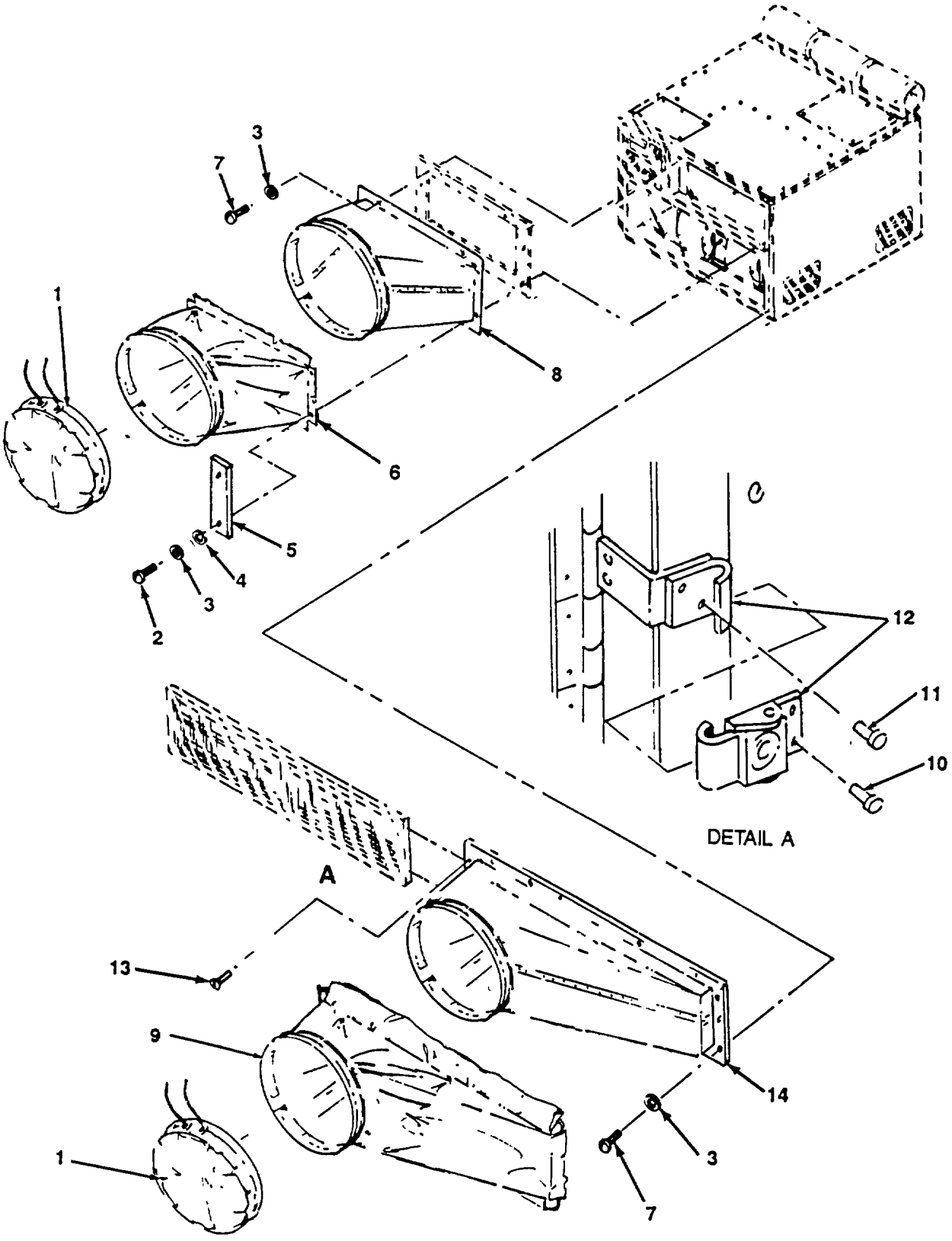


Figure C-4. Duct Adapters.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 04 DUCT ADAPTERS	
				FIG. C-4 DUCT ADAPTERS	
1	PBOZZ	97403	13229E9187	COVER, ADAPT END	2
2	PAOZZ	96906	MS35206-249	SCREW , MACHINE	4
3	PAOZZ	96906	M35338-42	LOCKWASHER #8	14
4	PAOZZ	96906	MS27183-41	WASHER, FLAT	4
5	PBOZZ	97403	13229E9181	RETAINER, INSULATION	2
6	PBOZZ	97403	13229E9189	BLANKET, INSULAT SUP	1
7	PAOZZ	96906	MS35206-248	SCREW , MACHINE	10
8	PBOZZ	97403	13229E8617	ADAPTER, DUCT, SUPPLY	1
9	PBOZZ	97403	13229E9190	BLANKET, INSULAT RET	1
10	PAOZZ	81349	M24243/6A402H	RIVET, BLIND	2
11	PAOZO	96906	MS20470AD4-6	RIVET, SOLID	2
12	PAOZZ	97403	13214E1251-7DS	LATCH SET	1
13	PAOZZ	96906	MS53510-257	SCREW, RECESSED	2
14	PBOZZ	97403	13229E8618	DUCT, ADAPT, RETURN	1

END OF FIGURE

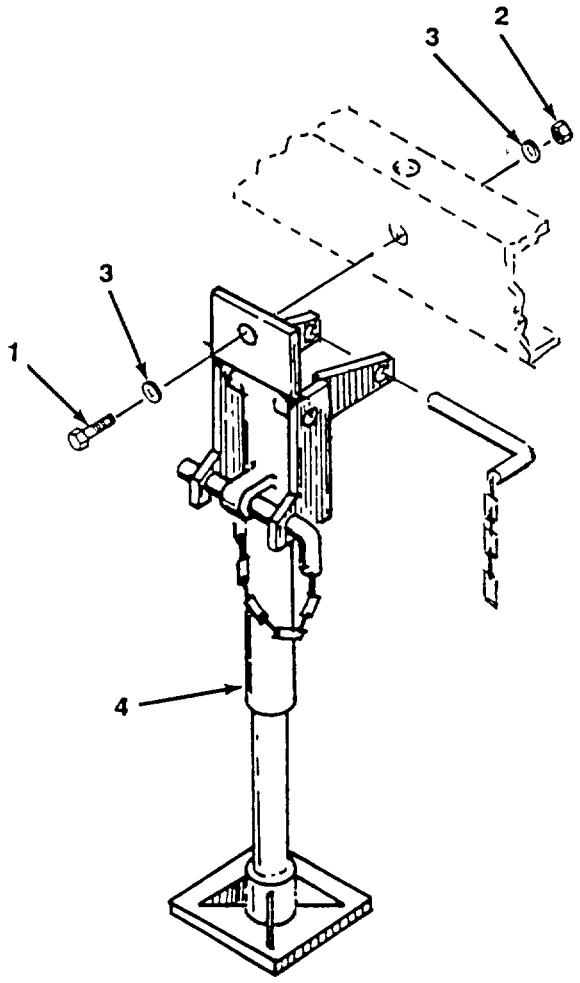


Figure C-5. Leg Prop Assembly.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 05 LEG PROP ASSEMBLY	
				FIG. C-5 LEG PROP ASSEMBLY	
1	PAOZZ	96906	MS90728-60	SCREW, CAP, HEXAGON H.....	3
2	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE	3
3	PAOZO	96906	MS27183-15	WASHER , FLAT	6
4	PBOZZ	97403	13214E1206	JACK, LEVELING-SUPPO	1

END OF FIGURE

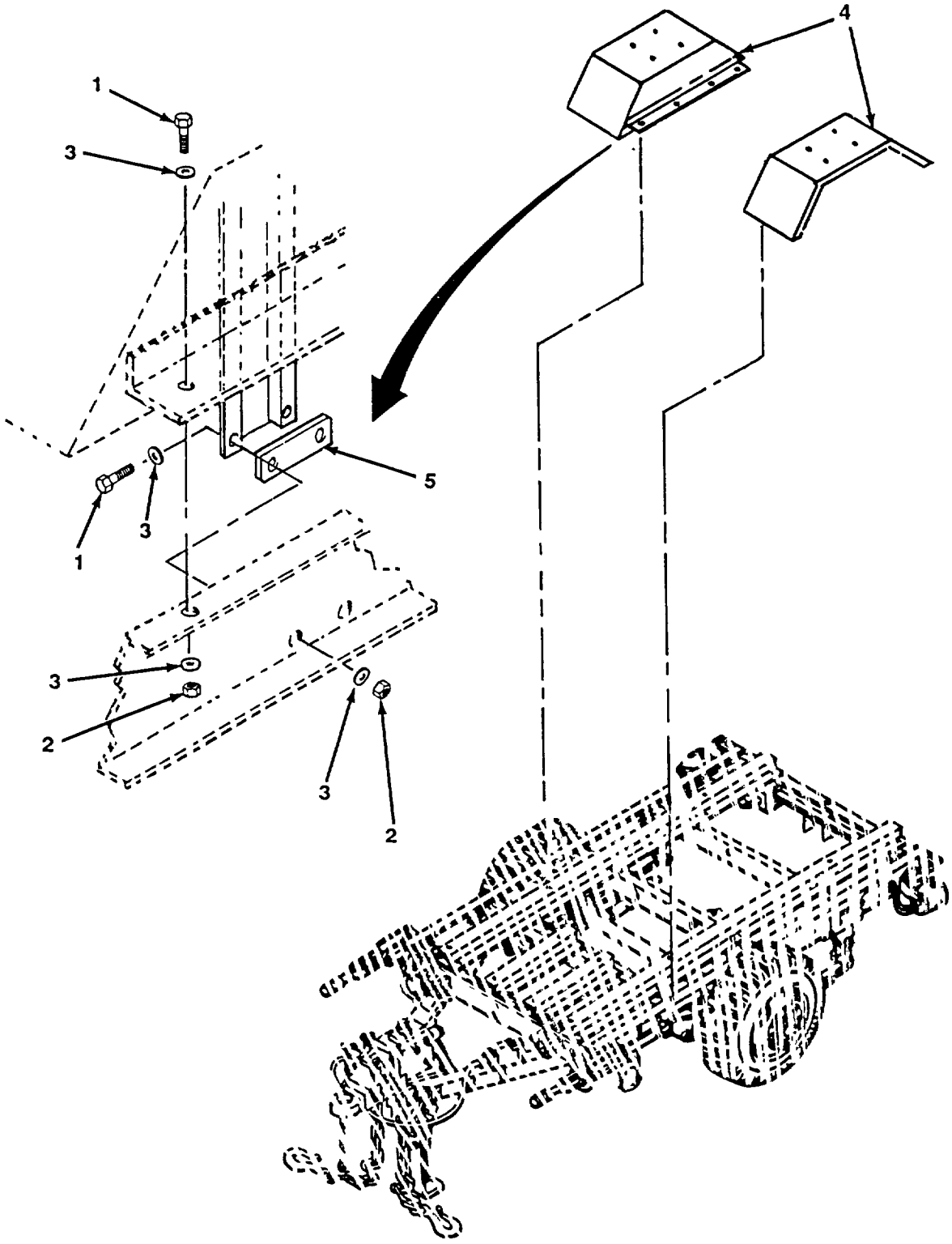


Figure C-6. Fenders.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 06 FENDERS	
				FIG. C-6 FENDERS	
1	PAOZZ	96906	MS90728-60	SCREW, CAP, HEXAGON H.....	16
2	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE	16
3	PAOZO	96906	MS27183-15	WASHER, FLAT.....	32
4	XBOZZ	97403	13229E8614	FENDER, CHASSIS.....	2
5	PBOZZ	97403	13229E9185	SPACER, FENDER.....	4

END OF FIGURE

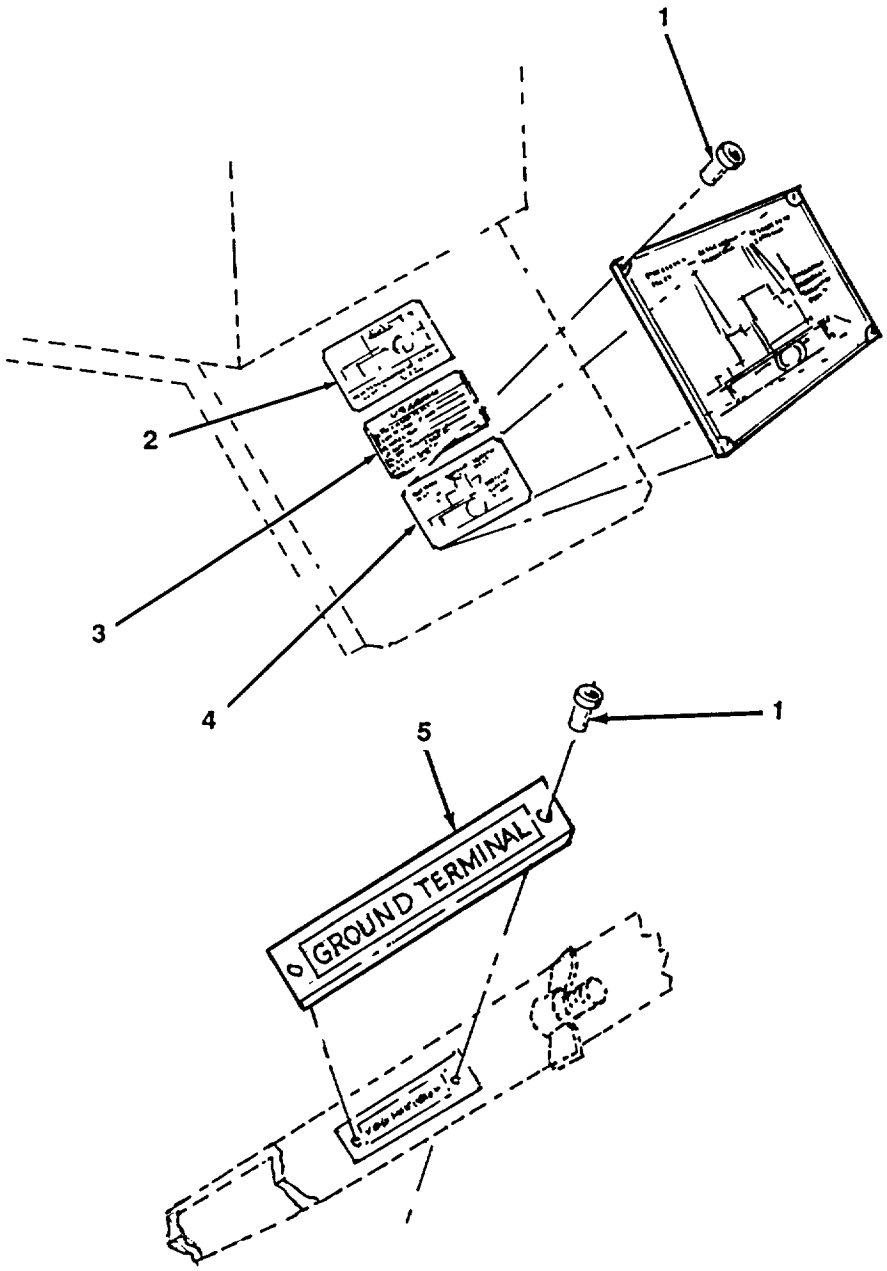


Figure C-7. Data Plates.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 07 ACCESSORIES	
				FIG. C-7 DATA PLATES	
1	PAOZZ	96906	MS21318-13	SCREW, DRIVE	14
2	XBOZZ	97403	13229E8620	PLATE, DATA	1
3	XBOZZ	97403	13229E8619	PLATE, ID	1
4	PAOZZ	96906	MS35387-1	REFLECTOR, INDICATIN	4
4	XBOZZ	97403	13229E9183	PLATE, ID	1
5	XBOZZ	97403	13217E2005	PLATE, IDE NTIFICATIO	1

END OF FIGURE

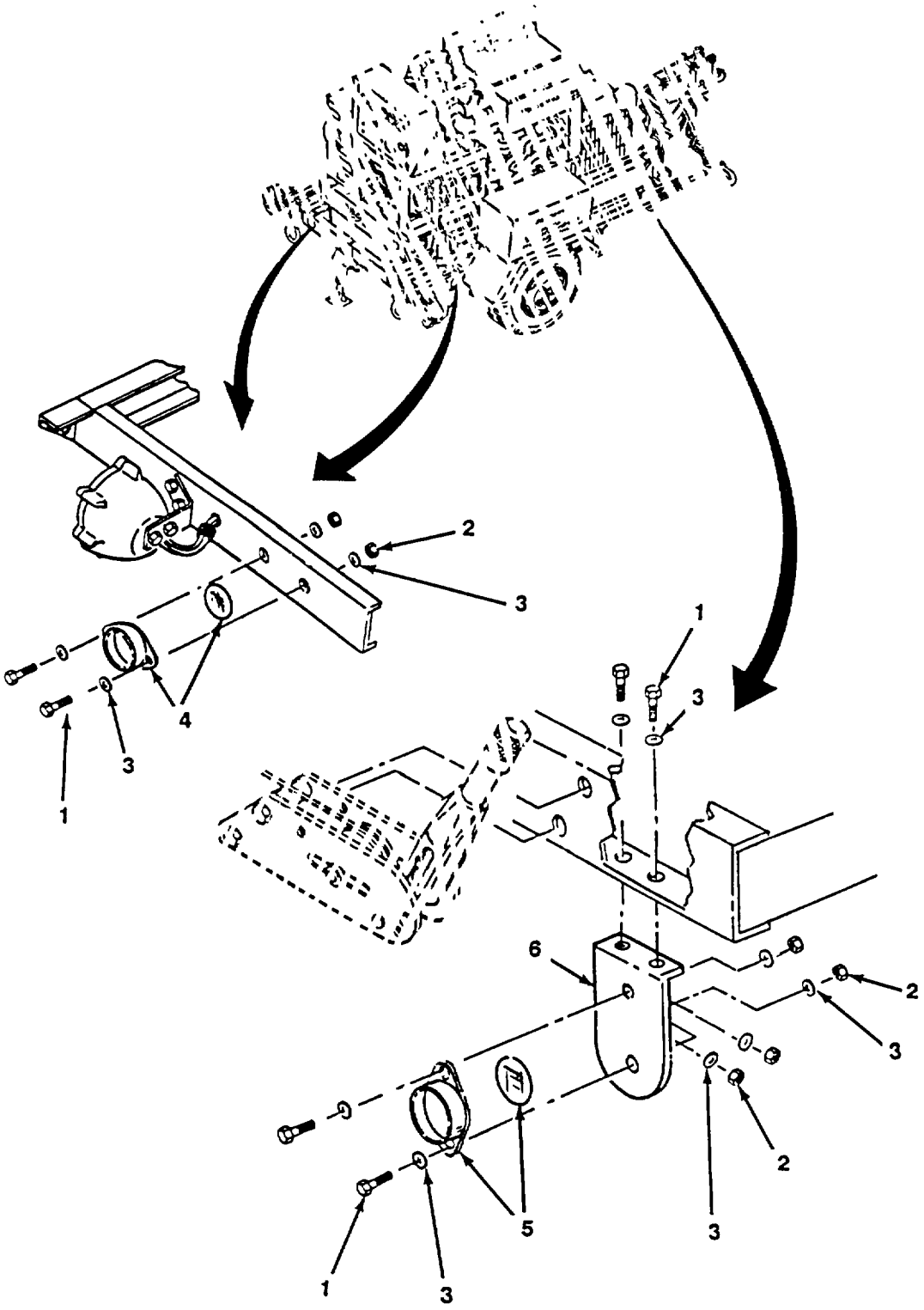


Figure C-8. Reflectors.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 07 ACCESSORIES	
				FIG. C-8 REFLECTORS	
1	PAOZZ	96906	MS90725-5	SCREW, CAP, HEXAGON H	16
2	PAOZZ	96906	MS51922-1	NUT, SELF-LOCKING, HE	16
3	PAOZZ	96906	MS27183-10	WASHER, FLAT	32
4	PAOZZ	96906	MS35387-1	REFLECTOR, INDICATIN	4
5	PAOZZ	96906	MS35387-2	REFLECTOR, INDICATIN	2
6	XBOZZ	97403	13229E9180	BRACKET, REFLECTOR	2

END OF FIGURE

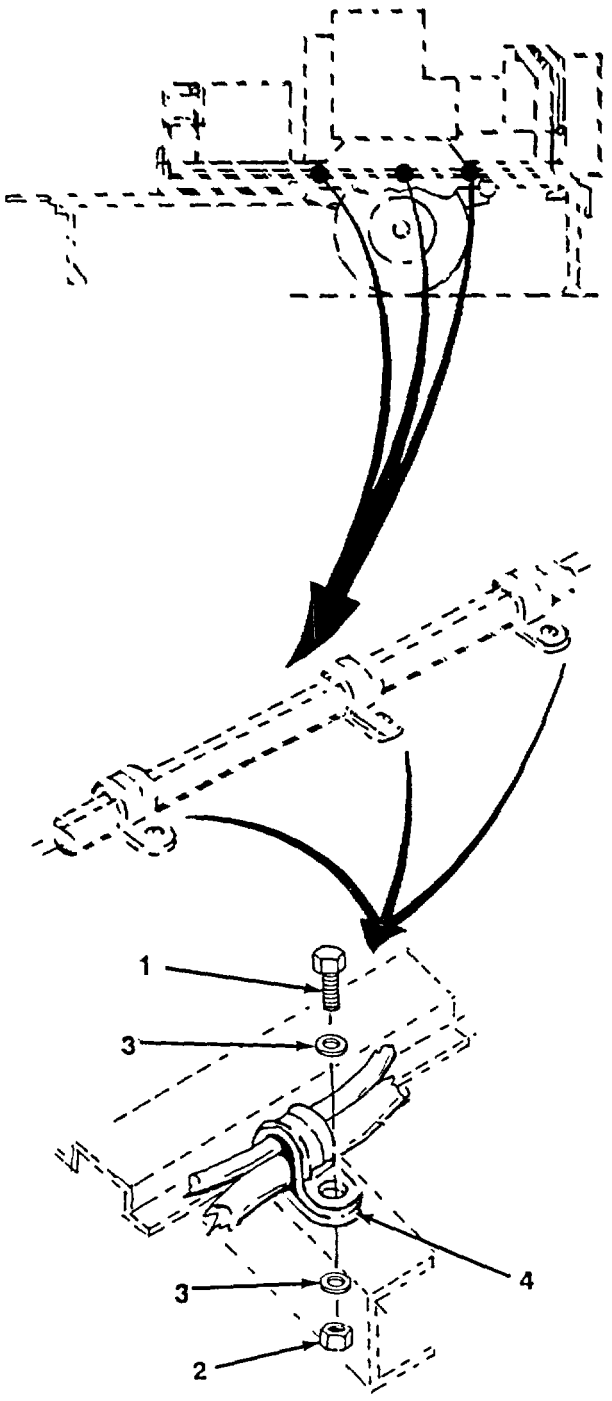


Figure C-9. Cable Clamps.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 07 ACCESSORIES	
				FIG. C-9 CABLE CLAMPS	
1	PAOZZ	96906	MS90728-60	SCREW, CAP, HEXAGON H	3
2	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE	3
3	PAOZO	96906	MS27183-15	WASHER, FLAT	6
4	PAOZZ	96906	MS21333-128	CLAMP, LOOP	3

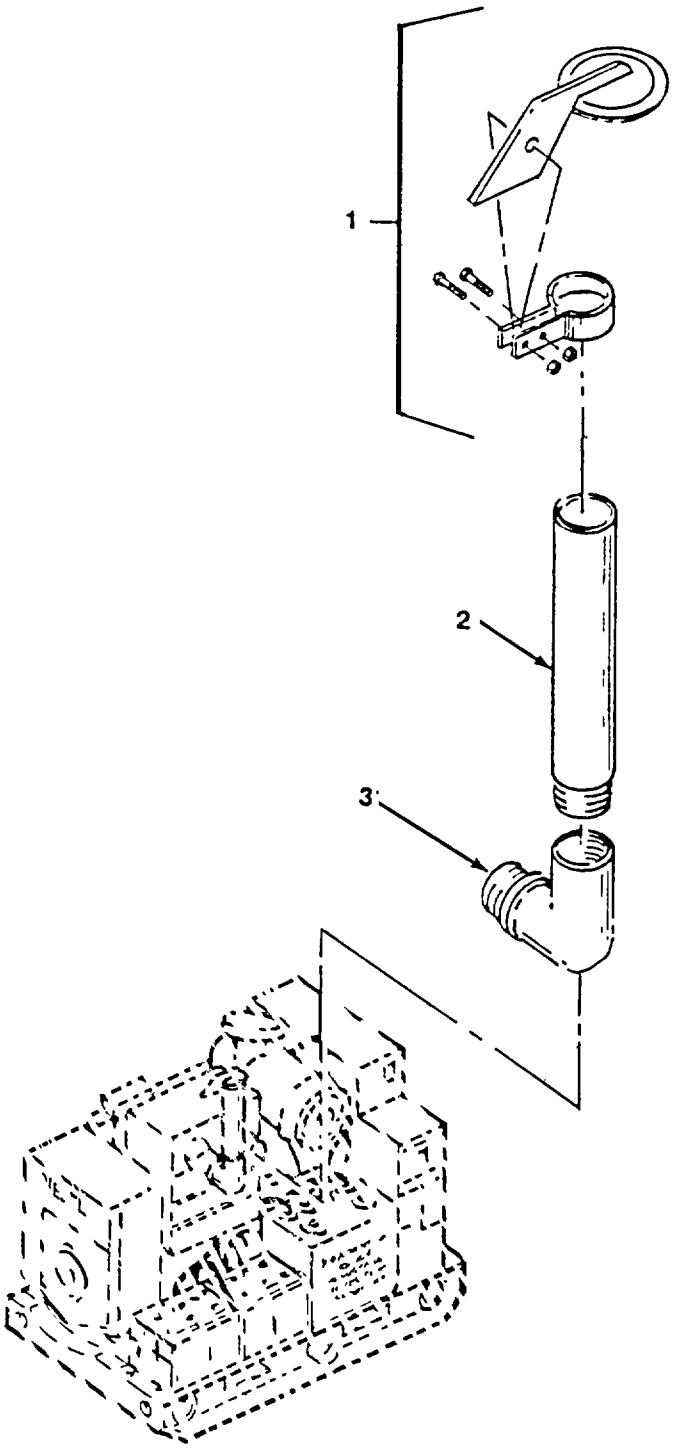


Figure C-10. Exhaust Stack

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 07 ACCESSORIES	
				FIG. C-10 EXHAUST STACK	
1	PBOZZ	97403	13229E9194	CAP ASSEMBLY, PROTE.....	2
2	PBOZZ	97403	13229E9193	PIPE, EXHAUST.....	2
3	PBOZZ	97403	20-20-140238	ELBOW, PIPE, 90 DEG.....	2

END OF FIGURE

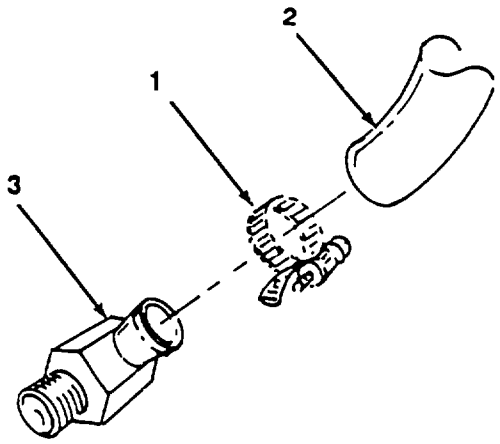


Figure C-11. Drain Hose Extension.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 07 ACCESSORIES	
				FIG. C-11 DRAIN HOSE EXTENSION	
1	PAOZZ	96906	MS35842-11	CLAMP, HOSE	1
2	MFOZZ	97403	3/4IDX18INLG	HOSE, RUBBER M/F P/N MIL-H-6000, 3/ 4 IN ID, CUT TO LENGTH	1
3	PBOZZ	96909	MS24519-9	ELBOW, PIPE TO HOSE	1

END OF FIGURE

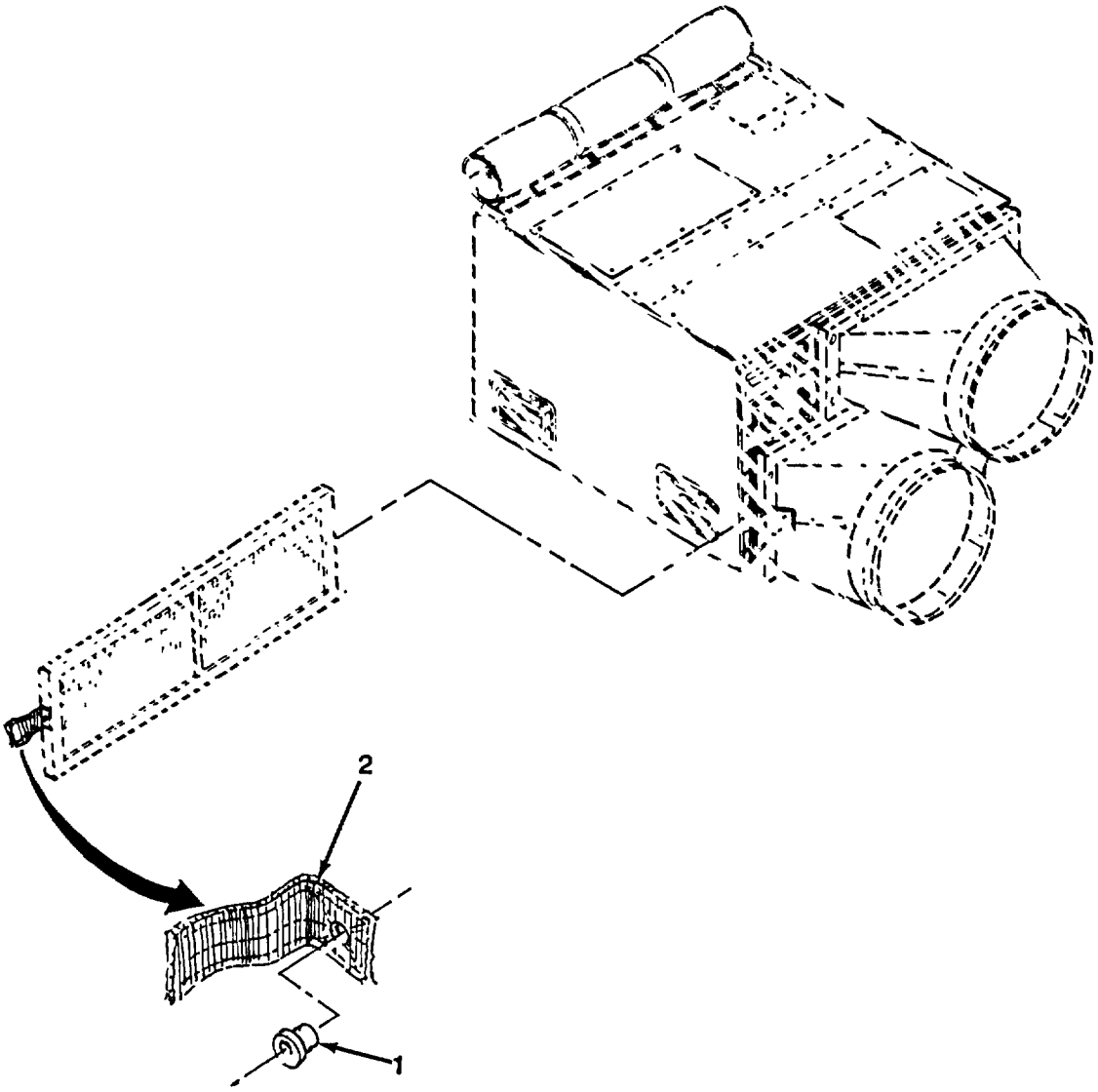


Figure C-12. Return Air Filter.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 07 ACCESSORIES	
				FIG. C-12 RETURN AIR FILTER	
1	PAOZZ	81349	M24243/6A402H	RIVET, BLIND	1
2	MFOZZ	97403	1INX2IN	WEBBING, STRAP, NYLON M/F P/N MIL-W-4080, CUT TO LENGTH	1

END OF FIGURE

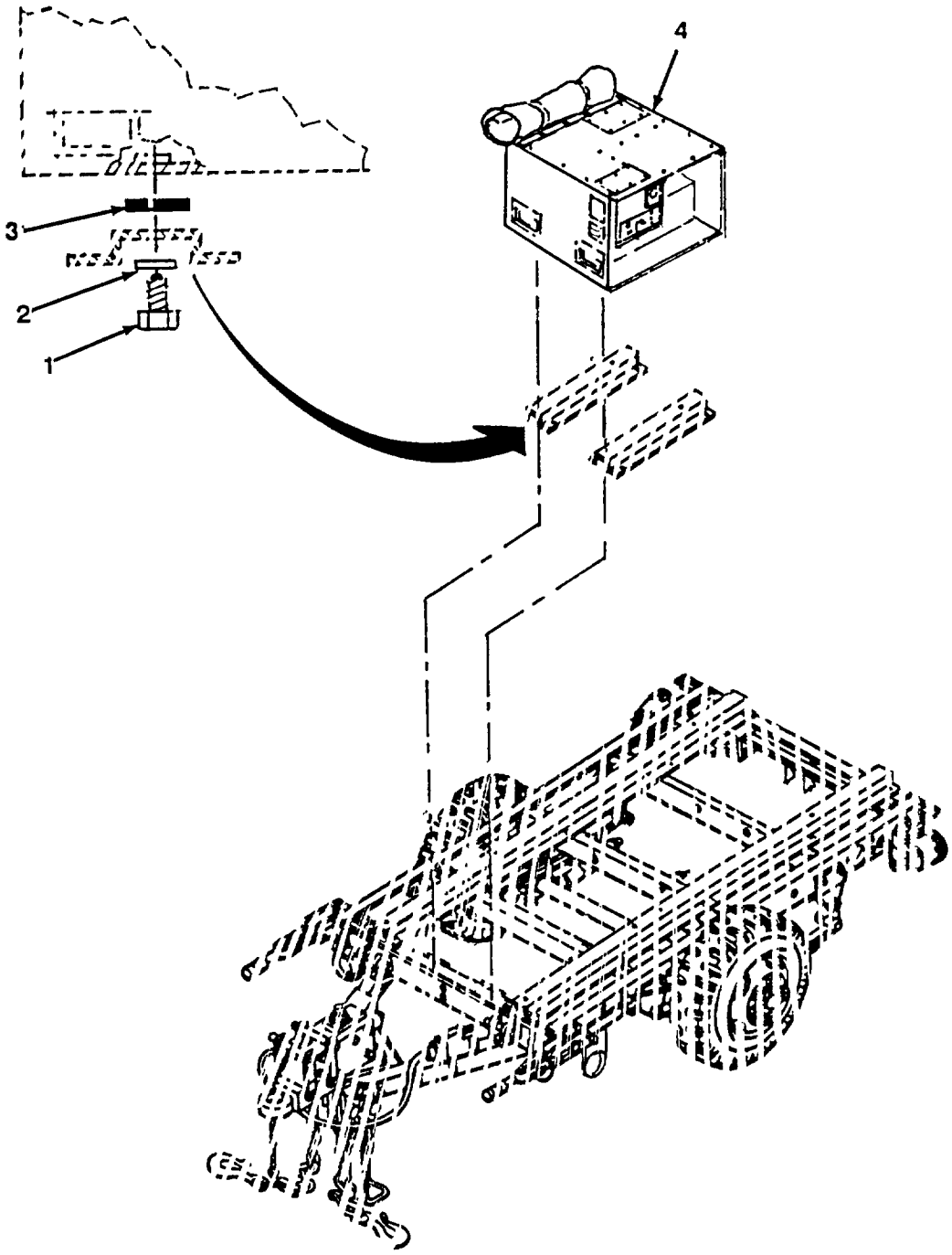


Figure C-13. Air Conditioner and Mounting Rails (Sheet 1 of 2)

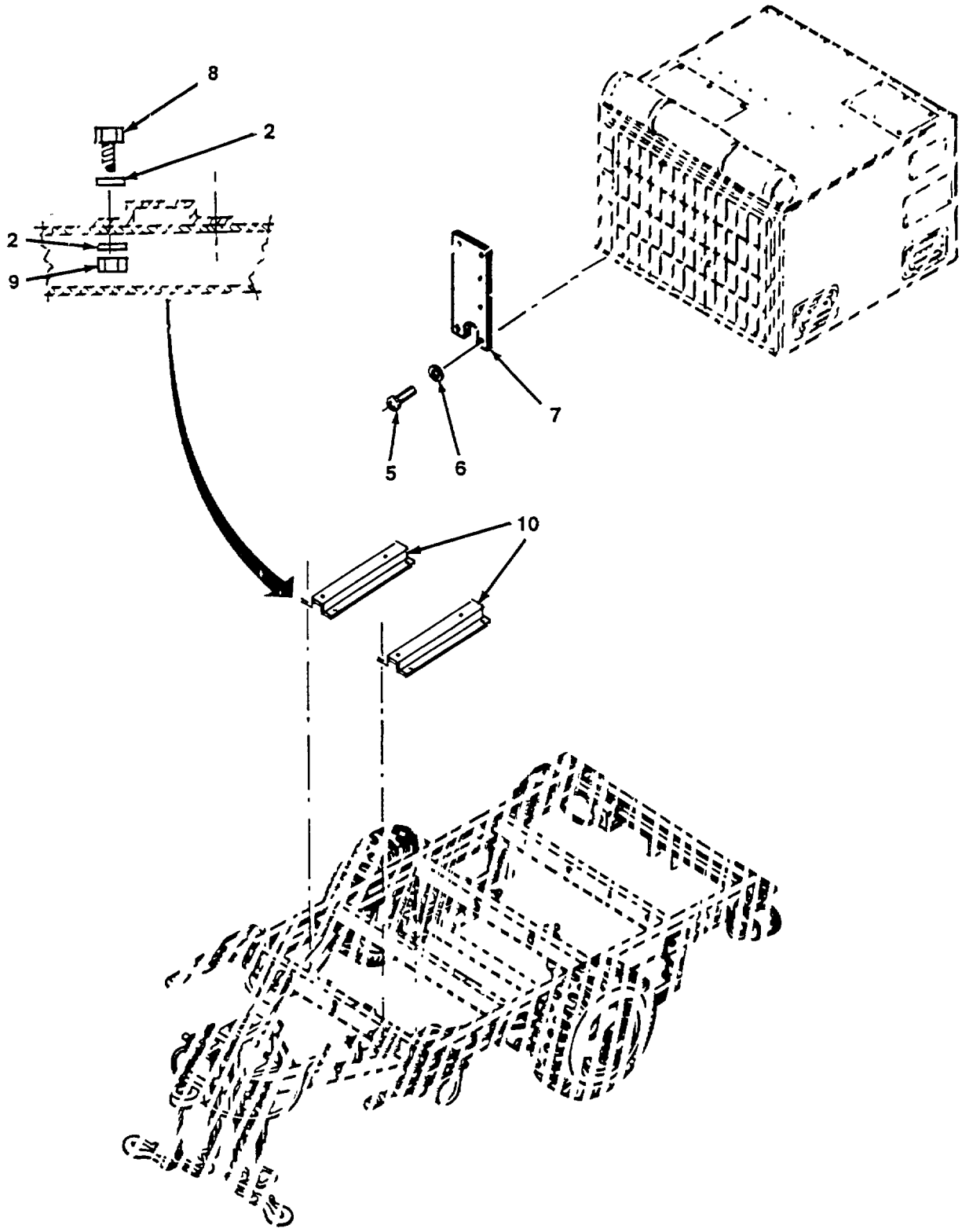


Figure C-13. Air Conditioner and Mounting Rails (Sheet 2 of 2).

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 08 AIR CONDITIONER AND MOUNT RAILS	
				FIG. C-13 AIR CONDITIONER AND MOUNT RAILS	
1	PAOZZ	96906	MS90727-61	SCREW, CAP, HEXAGON H	4
2	PAOZO	96906	MS27183-15	WASHER, FLAT	20
3	PBOZZ	97403	13229E9182	MOUNT, RUBBER	4
4	PDOHH	94833	F18H-3S	AIR CONDITIONER	1
5	PAOZZ	96906	MS35206-248	SCREW, MACHINE	6
6	PAOZZ	96906	M335338-42	LOCKWASHER.....	6
7	PBOZZ	97403	13227E9208	COVER, VENT.....	1
8	PAOZZ	96906	MS90728-60	SCREW, CAP, HEXAGON H.....	8
9	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE	8
10	XBOZZ	97403	13229E8616	RAIL, MOUNT, A/C.....	2

END OF FIGURE

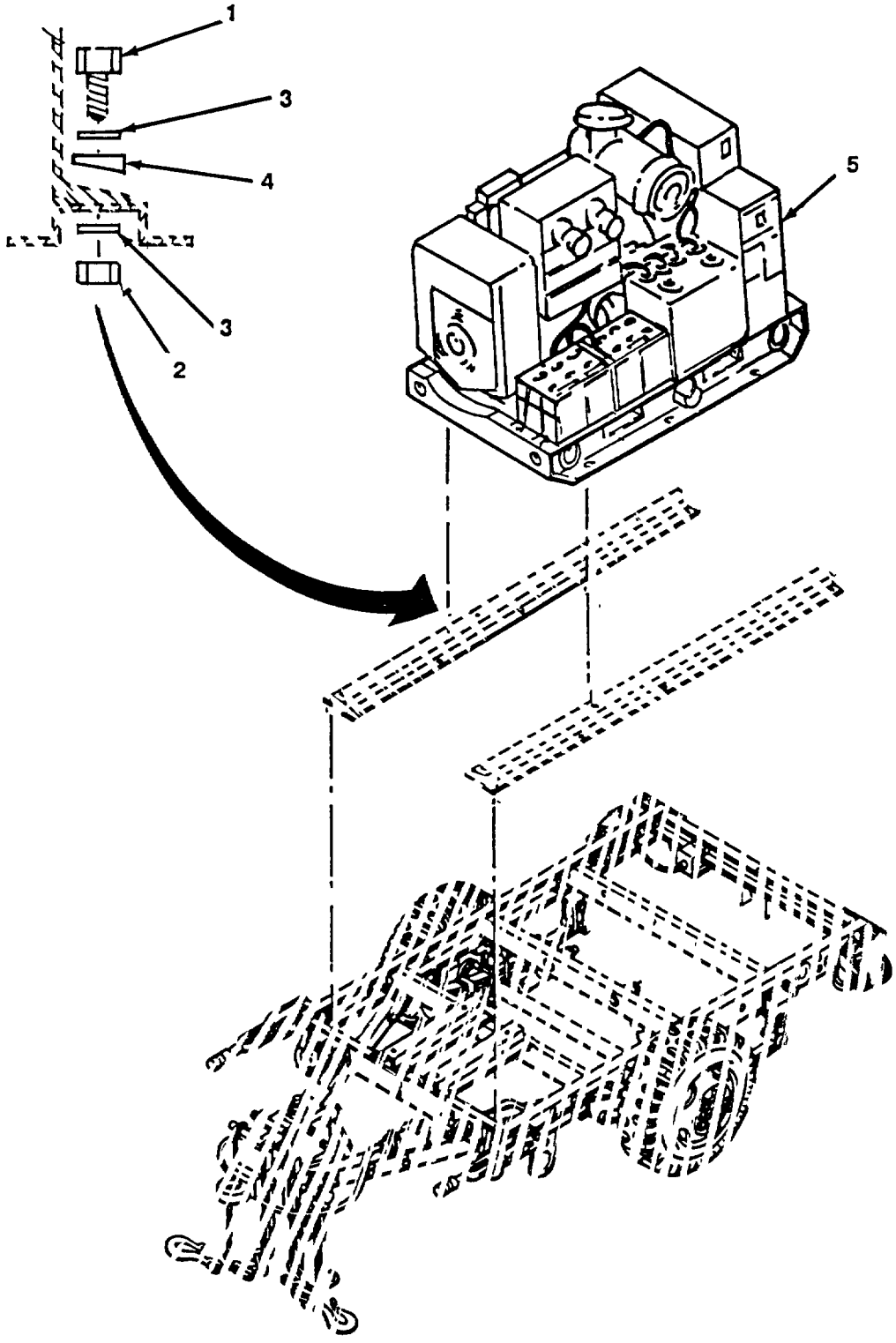


Figure C-14. Generator Set and Mounting Rails (Sheet 1 of 2).

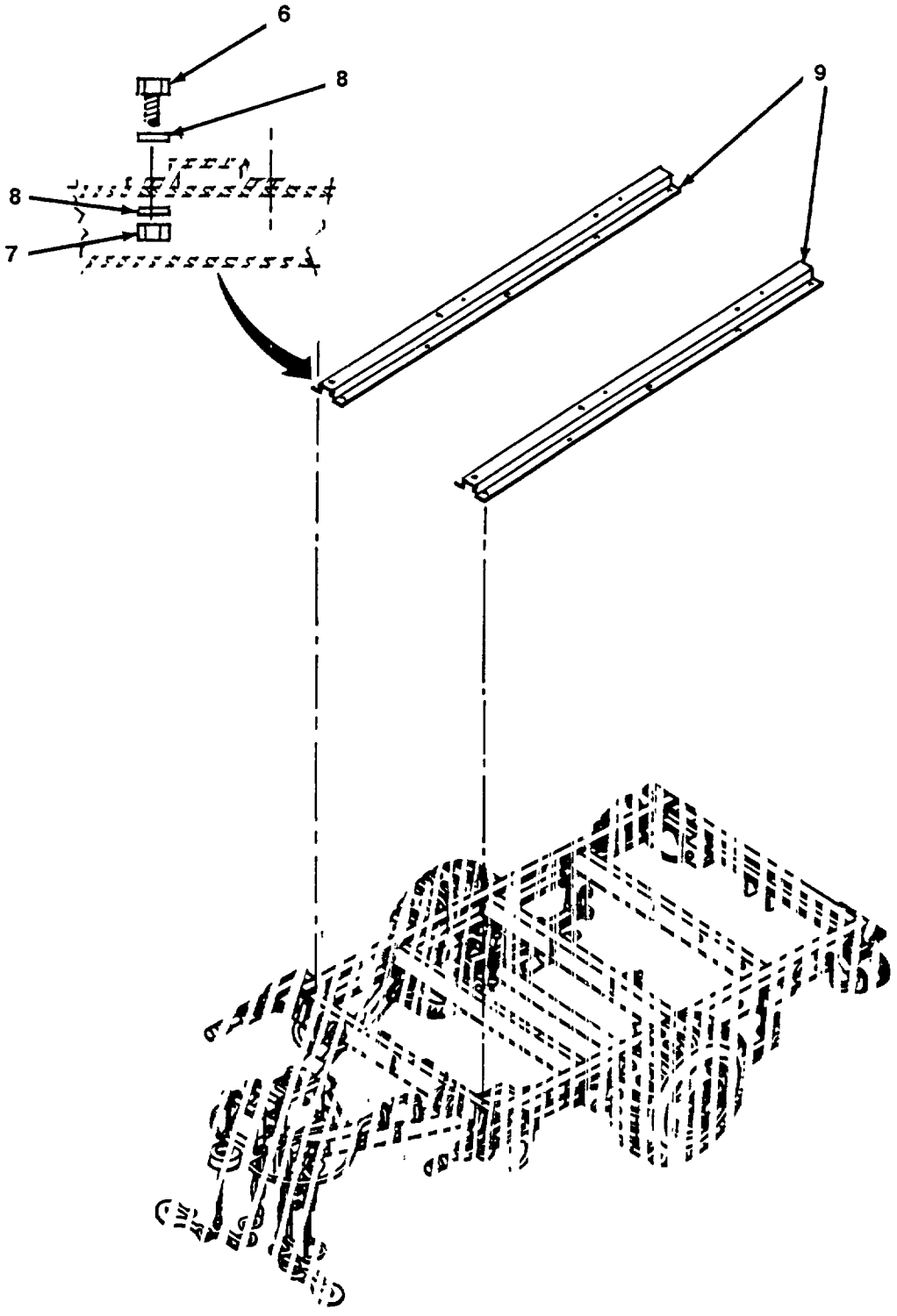


Figure C-14. Generator Set and Mounting Rails (Sheet 2 of 2).

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 09 GENERATOR SET AND MOUNT RAILS	
				FIG. C-14 GENERATOR SET AND MOUNT RAILS	
1	PAOZZ	96909	MS90728-115	SCREW, CAP, HEX	8
2	PAOZZ	96909	MS51922-33	NUT, SELF-LOCK	8
3	PAOZZ	96909	MS27183-18	WASHER, FLAT	16
4	PBOZZ	30554	70-1531-12	WASHER, BEVELED	8
5	PBOZZ	97403	71-003	GEN SET, 10 KW 60HZ	1
6	PAOZZ	96906	MS90728-60	SCREW, CAP, HEXAGON H	16
7	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE	16
8	PAOZO	96906	MS27183-15	WASHER, FLAT	32
9	XBOZZ	97403	13229E8613	RAIL, MOUNT, GEN, SET	2

END OF FIGURE

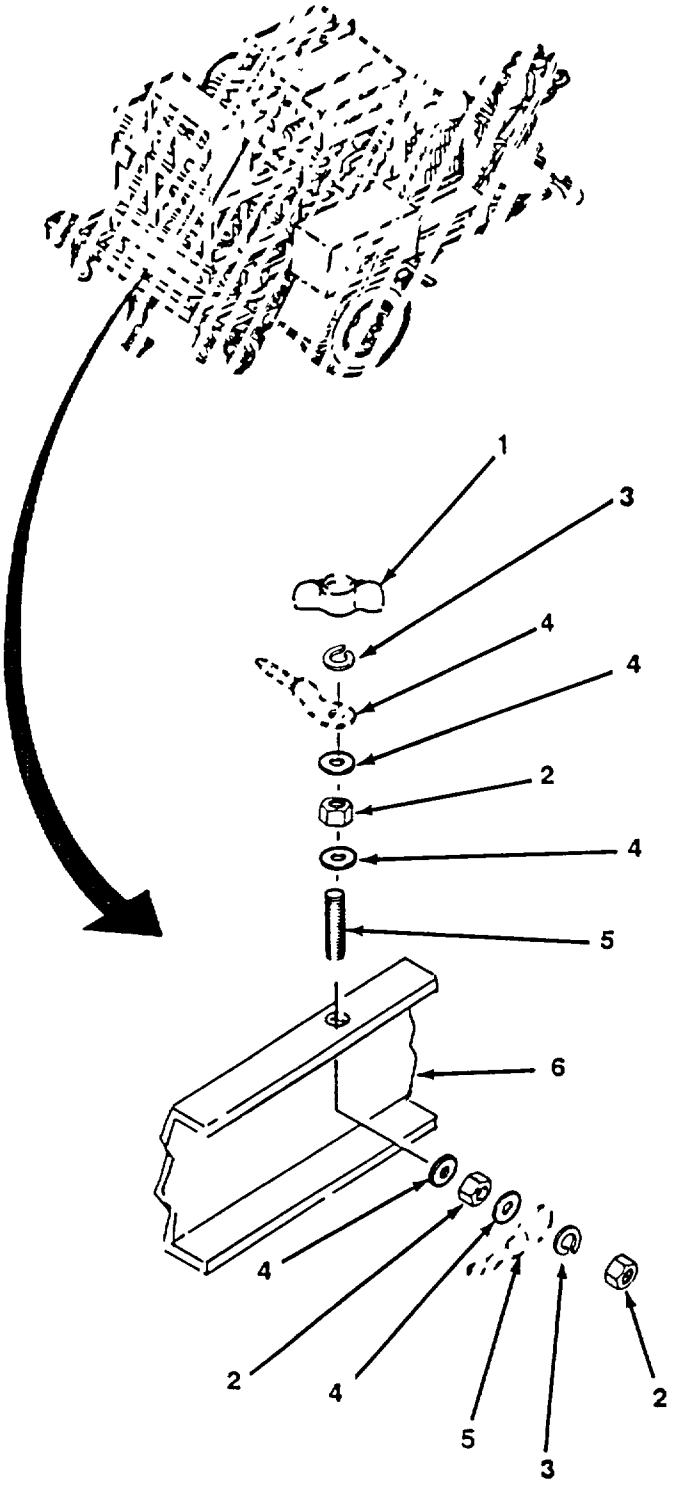


Figure C-15. Trailer Assembly.

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 10 TRAILER ASSEMBLY	
				FIG. C-15 TRAILER ASSEMBLY	
1	PAOZZ	96909	MS35425-75	NUT, PLAIN, WING	1
2	PAOZZ	96906	MS35649-2386	NUT, PLAIN, HEXAGON	3
3	PAOZZ	96909	MS35333-110	WASHER, LOCK	2
4	PAOZZ	97403	AN961-616T	WASHER, FLAT	4
5	XBOZZ	97403	13214E1223	STUD, CONTINUOUS THR	1
6	PBOZZ	97403	13229E8612	CHASSIS, TRAILER	1

END OF FIGURE

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 11 BULK ITEMS	
				FIG. BULK	
1	PAOZZ	96906	MIL-H-6000	HOSE	V
2	PAOZZ	96906	MIL-W-4080	WEBBING, TEXTILE, NYL	V
3	PAOZZ	96906	MSQQW343CBIB	WIRE 6 GAUGE	V

END OF FIGURE

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5305-00-068-0501	C-8	1			
5305-00-068-0510	C-2	1			
	C-3	1			
	C-5	1			
	C-6	1			
	C-9	1			
	C-13	8			
	C-14	6			
5310-00-087-4652	C-2	2			
	C-3	2			
	C-5	2			
	C-6	2			
	C-9	2			
	C-13	9			
	C-14	7			
5310-00-088-1251	C-8	2			
5320-00-117-6828	C-4	11			
9905-00-202-3639	C-8	5			
9905-00-205-2795	C-8	4			
5305-00-253-5609	C-7	1			
5305-00-269-3237	C-13	1			
5310-00-410-3023	C-15	2			
2590-00-420-8929	C-5	4			
5340-00-702-2848	C-9	4			
5310-00-765-3197	C-4	4			
5310-00-809-4058	C-8	3			
5310-00-809-4061	C-2	3			
	C-3	3			
	C-5	3			
	C-6	3			
	C-9	3			
	C-13	2			
	C-14	8			
4730-00-908-3194	C-11	1			
5320-00-932-1972	C-2	7			
	C-4	10			
	C-12	1			
5305-00-984-6196	C-4	7			
	C-13	5			
5305-00-984-6197	C-4	2			
4120-01-165-1125	C-13	4			

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
97403	AN961-616T		C-15	4
94833	F18H-3S	4120-01-165-1125	C-13	4
96906	MIL-H-6000		BULK	1
96906	MIL-W-4080		BULK	2
96906	MSQQW343CBIB		BULK	3
96909	MS18015-1		C-2	9
96909	MS20470AD4-6		C-2	8
		5320-00-117-6828	C-4	11
96909	MS20659-110		C-1	4
96906	MS21318-13	5305-00-253-5609	C-7	1
96906	MS21333-128	5340-00-702-2848	C-9	4
96909	MS24519-9		C-11	3
96906	MS27183-10	5310-00-809-4058	C-8	3
96906	MS27183-15	5310-00-809-4061	C-2	3
			C-3	3
			C-5	3
			C-6	3
			C-9	3
			C-13	2
			C-14	8
96909	MS27183-18		C-14	3
96906	MS27183-41	5310-00-765-3197	C-4	4
96906	MS35206-248	5305-00-984-6196	C-4	7
			C-13	5
96906	MS35206-249	5305-00-984-6197	C-4	2
96909	MS35333-110		C-15	3
96906	MS35387-1	9905-00-205-2795	C-8	4
96906	MS35387-2	9905-00-202-3639	C-8	5
96909	MS35425-75		C-15	1
96906	MS35649-2386	5310-00-410-3023	C-15	2
96906	MS35842-11	4730-00-908-3194	C-11	1
96906	MS51922-1	5310-00-088-1251	C-8	2
96906	MS51922-17	5310-00-087-4652	C-2	2
			C-3	2
			C-5	2
			C-6	2
			C-9	2
			C-13	9
			C-14	7
96909	MS51922-33		C-14	2
96906	MS53510-257		C-4	13
96906	MS90725-5	5305-00-068-0501	C-8	1
96906	MS90727-61	5305-00-269-3237	C-13	1
96909	MS90728-115		C-14	1
96906	MS90728-60	5305-00-068-0510	C-2	1
			C-3	1
			C-5	1
			C-6	1
			C-9	1
			C-13	8
			C-14	6

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
81349	M24243/6A402H	5320-00-932-1972	C-2	7
			C-4	10
			C-12	1
96906	M335338-42		C-13	6
96906	M35338-42		C-4	3
97403	1INX2IN		C-12	2
97403	13214E1206	2590-00-420-8929	C-5	4
97403	13214E1223		C-15	5
97403	13214E1235		C-3	4
97403	13214E1251-7DS		C-4	12
97403	13217E2005		C-7	5
97403	13227E9208		C-13	7
97403	13229E8612		C-15	6
97403	13229E8613		14	9
97403	13229E8614		C-6	4
97403	13229E8615		C-2	6
97403	13229E8616		C-13	10
97403	13229E8617		C-4	8
97403	13229E8618		C-4	14
97403	13229E8619		C-7	3
97403	13229E8620		C-7	2
97403	13229E8621		C-2	5
97403	13229E9180		C-8	6
97403	13229E9181		C-4	5
97403	13229E9182		C-13	3
97403	13229E9183		C-7	4
97403	13229E9185		C-6	5
97403	13229E9186		C-1	1
97403	13229E9187		C-4	1
97403	13229E9188		C-2	4
97403	13229E9189		C-4	6
97403	13229E9190		C-4	9
97403	13229E9191		C-1	2
97403	13229E9192-2-6FT		C-1	3
97403	13229E9193		C-10	2
97403	13229E9194		C-10	1
97403	20-20-140238		C-10	3
97403	3/4IDX18INLG		C-11	2
30554	70-1531-12		C-14	4
97403	71-003		C-14	5

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
BULK	1		96906	MIL-H-6000
BULK	2		96906	MIL-W-4080
BULK	3		96906	MSQQW343CBIB
C-1	1		97403	13229E9186
C-1	2		97403	13229E9191
C-1	3		97403	13229E9192-2-6FT
C-1	4		96909	MS20659-110
C-2	1	5305-00-068-0510	96906	MS90728-60
C-2	2	5310-00-087-4652	96906	MS51922-17
C-2	3	5310-00-809-4061	96906	MS27183-15
C-2	4		97403	13229E9188
C-2	5		97403	13229E8621
C-2	6		97403	13229E8615
C-2	7	5320-00-932-1972	81349	M24243/6A402H
C-2	8		96909	MS20470AD4-6
C-2	9		96909	MS18015-1
C-3	1	5305-00-068-0510	96906	MS90728-60
C-3	2	5310-00-087-4652	96906	MS51922-17
C-3	3	5310-00-809-4061	96906	MS27183-15
C-3	4		97403	13214E1235
C-4	1		97403	13229E9187
C-4	2	5305-00-984-6197	96906	MS35206-249
C-4	3		96906	M35338-42
C-4	4	5310-00-765-3197	96906	MS27183-41
C-4	5		97403	13229E9181
C-4	6		97403	13229E9189
C-4	7	5305-00-984-6196	96906	MS35206-248
C-4	8		97403	13229E8617
C-4	9		97403	13229E9190
C-4	10	5320-00-932-1972	81349	M24243/6A402H
C-4	11	5320-00-117-6828	96906	MS20470AD4-6
C-4	12		97403	13214E1251-7DS
C-4	13		96906	MS53510-257
C-4	14		97403	13229E8618
C-5	1	5305-00-068-0510	96906	MS90728-60
C-5	2	5310-00-087-4652	96906	MS51922-17
C-5	3	5310-00-809-4061	96906	MS27183-15
C-5	4	2590-00-420-8929	97403	13214E1206
C-6	1	5305-00-068-0510	96906	MS90728-60
C-6	2	5310-00-087-4652	96906	MS51922-17
C-6	3	5310-00-809-4061	96906	MS27183-15
C-6	4		97403	13229E8614
C-6	5		97403	13229E9185
C-7	1	5305-00-253-5609	96906	MS21318-13
C-7	2		97403	13229E8620
C-7	3		97403	13229E8619
C-7	4		97403	13229E9183
C-7	5		97403	13217E2005
C-8	1	5305-00-068-0501	96906	MS90725-5
C-8	2	5310-00-088-1251	96906	MS51922-1
C-8	3	5310-00-809-4058	96906	MS27183-10

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
C-8	4	9905-00-205-2795	96906	MS35387-1
C-8	5	9905-00-202-3639	96906	MS35387-2
C-8	6		97403	13229E9180
C-9	1	5305-00-068-0510	96906	MS90728-60
C-9	2	5310-00-087-4652	96906	MS51922-17
C-9	3	5310-00-809-4061	96906	MS27183-15
C-9	4	5340-00-702-2848	96906	MS21333-128
C-10	1		97403	13229E9194
C-10	2		97403	13229E9193
C-10	3		97403	20-20-140238
C-11	1	4730-00-908-3194	96906	MS35842-11
C-11	2		97403	3/4IDX18INLG
C-11	3		96909	M524519-9
C-12	1	5320-00-932-1972	81349	M24243/6A402H
C-12	2		97403	1INX2IN
C-13	1	5305-00-269-3237	96906	MS90727-61
C-13	2	5310-00-809-4061	96906	MS27183-15
C-13	3		97403	13229E9182
C-13	4	4120-01-165-1125	94833	F18H-3S
C-13	5	5305-00-984-6196	96906	MS35206-248
C-13	6		96906	M335338-42
C-13	7		97403	13227E9208
C-13	8	5305-00-068-0510	96906	MS90728-60
C-13	9	5310-00-087-4652	96906	MS51922-17
C-13	10		97403	13229E8616
C-14	1		96909	MS90728-115
C-14	2		96909	MS51922-33
C-14	3		96909	MS27183-18
C-14	4		30554	70-1531-12
C-14	5		97403	71-003
C-14	6	5305-00-068-0510	96906	MS90728-60
C-14	7	5310-00-087-4652	96906	MS51922-17
C-14	8	5310-00-809-4061	96906	MS27183-15
C-15	1		96909	MS35425-75
C-15	2	5310-00-410-3023	96906	MS35649-2386
C-15	3		96909	MS35333-110
C-15	4		97403	AN961-616T
C-15	5		97403	13214E1223
C-15	6		97403	13229E8612
14	9		97403	13229E8613

APPENDIX D
COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

D-1. SCOPE.

This appendix lists components of end item and basic issue items for the trailer-mounted, generator-set-powered, air conditioner to help you inventory items required for safe and efficient operation.

D-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 not authority to requisition replacements. These items are part of the end items, but are 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 trailer-mounted air conditioner with power in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the trailer-mounted air conditioner with power 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 request/requisition replacement BII, based on TOE/MTOE authorization of the end item.

D-3. EXPLANATION OF COLUMNS.

The following provides an explanation of columns found in the tabular listings.

a. Column (1) Illustration Number (Illus. Number). This column indicates the number of the illustration in 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 operation/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.

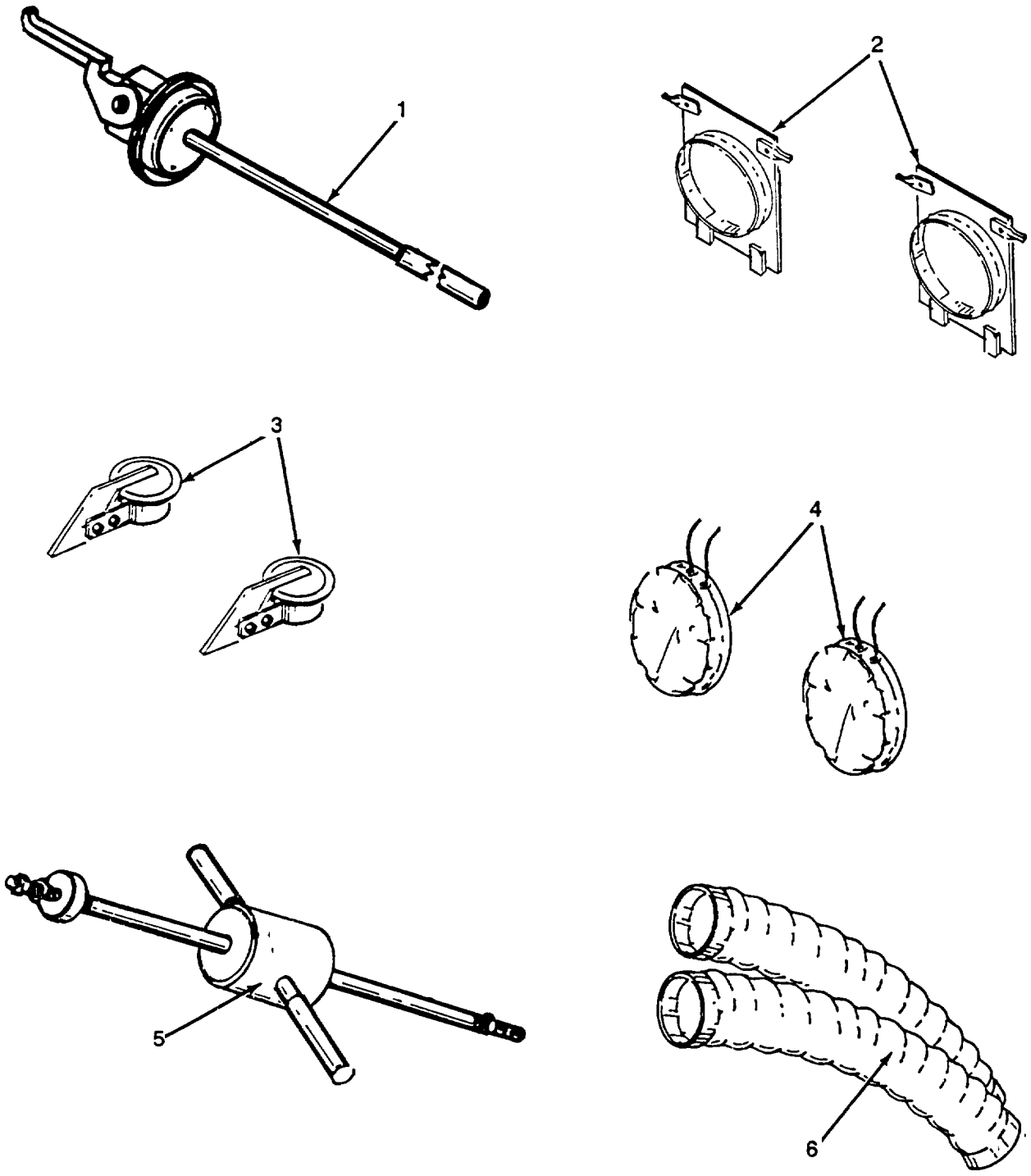


Figure D-1. Components of End Items (Sheet 1 of 2).

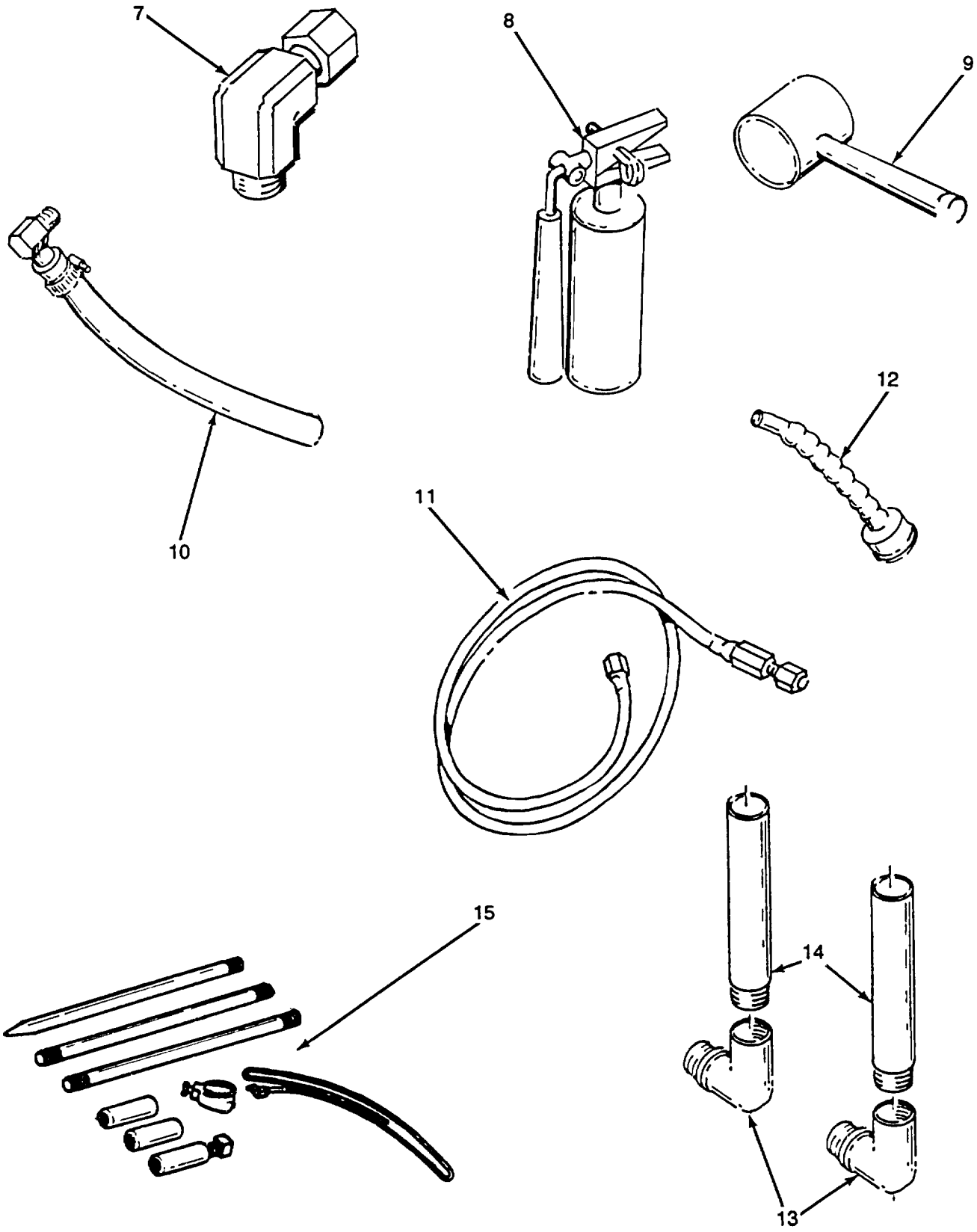


Figure D-1. Components of End Items (Sheet 2 of 2).

Section II. COMPONENTS OF END ITEM

(1) Illus. No.	(2) National Stock Number	(3) Description (CAGEC) and Part Number	(4) U/M	(5) Qty Rqr
1	2910-00-066-1235	Adapter Assembly, Fuel Drum (97403)13211E7541	ea	1
2		Adapters, Shelter (97403) SC-D-681087	ea	2
3		Cap, Flapper, Rain (97403) 13229E9194	ea	2
4		Cover, Adapter, End (97403) 13229E9187	ea	2
5	5120-01-013-1676	Driver/Puller, Ground Rod	ea	1
6		Duct, Flexible (97403) 13229E8622	ea	2
7	2910-00-066-1235	Elbow, Tube, 90° Swivel, 37°Flared (97403) MS51521-B5	ea	1
8	4210-00-270-4512	Extinguisher, Fire	ea	1
9	5120-00-151-4489	Hammer, Hand: 8 lb (3.6 Kg) (81348) GGG-H-86, Type X, Class 1	ea	1
10		Hose, Oil Drain	ea	1
11	4720-00-021-3320	Hose, Fuel, Auxiliary	ea	1
12	7240-00-177-6154	Nozzle, Drain Can, Flex	ea	1
13		Pipe, Elbow, 90° (97403) 20-20-140238	ea	2
14		Pipe, Exhaust (97403) 13229E9193	ea	2
15	5975-00-878-3791	Rod, Ground, Driven, Sectional, 9 ft (2.7 m) long, (81348) W-R-550, Type III. Class B	ea	1

Section III. BASIC ISSUE ITEMS

(1) Illus. No.	(2) National Stock Number	(3) Description (CAGEC) and Part Number	(4) U/M	(5) Qty Rqr
		TM 5-4120-384-14	ea	1
		TM 5-6115-585-12	ea	1
		LO 5-6115-585-12	ea	1
		TM 5-6115-594-14&P	ea	1
		TM 9-2330-202-14&P	ea	1

APPENDIX E
ADDITIONAL AUTHORIZATION LIST

Section I. INTRODUCTION

E-1. SCOPE.

This appendix lists additional items you are authorized for the support of the trailer-mounted, generator-set-powered, air conditioner.

E-2. GENERAL.

This list identifies items that do not have to accompany the trailer-mounted, generator-set-powered, air conditioner and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, TDA, or JTA.

E-3. EXPLANATION OF LISTING.

National stock numbers, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment. The items are listed in alphabetical sequence by item name under the type document (i.e., CTA, MTOE, TDA, or JTA) which authorizes the item(s) to you.

Section II. ADDITIONAL AUTHORIZED LIST

(1) Illus. No.	(2) National Stock Number	(3) Description (CAGEC) and Part Number	(4) U/M	(5) Qty Rqr
	7510-00-889-3494	Binder, Log Book	ea	1
		Wire, Ground, 16 in (40.64 cm)	ea	1
	5935-00-322-8959	Adapter, Connector (Slave Cable)	ea	1

APPENDIX F
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

F-1. SCOPE.

This appendix lists expendable supplies and materials you will need to operate and maintain the trailer-mounted air conditioner with power. 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).

F-2. EXPLANATION OF COLUMNS.

a. Column (1)- Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, Appendix F").

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

C - Operator/Crew

O - Unit Maintenance

F - Direct Support Maintenance

H - General Support Maintenance

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

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

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

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) CATEGORY	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	O	3040-00-664-0439	Adhesive, General Purpose	ea
2	O	9150-01-102-3658	Brake Fluid, Silicone (BFS)	ea
3	O,F	8020-00-207-6658	Brush, Medium, Oval	ea
4	O	8040-00-290-4301	Cement, Bonding, MMM-A-1617, Type 2	ea
5	O,F	7920-00-205-1711	Cloth, Lint-Free	ea
6	O		Desiccant	lb
7	O	7930-00-282-9699	Detergent, GP, Liq, WS, A, MIL-D-16791 (81349)	gl
8	C,O	6810-00-249-9354	Electrolyte, Battery	gl
9	C,O	9140-00-286-5294	Fuel Oil, Diesel, DF2(regular grade)	drum
10	C,O	9140-00-286-5286	Fuel Oil, Diesel, DF1 (winter grade)	drum
11	C,O	9140-00-286-5283	Fuel Oil, Diesel, DFA (Arctic grade)	drum
12	C,O	9130-00-256-8613	Fuel, Tank, JP-4, MIL-J-5624	drum
13	O	5330-00-467-3615	Gasket Material, Paper	sh
14	F	9150-00-065-0029	Grease, Automotive and Artillery, MIL-G-10924 (81349)	tube
15	O		Loctite, MIL-L-46163, Type I, Grade L	oz
16	F	9150-00-181-9858	Oil, Lubricating, MIL-L-2104	gl
17	C,O	9150-00-265-9435	Oil, Lubricating, Grade OE 30, MIL-L-2104 (81349)	gl
18	C,O	9150-00-265-9428	Oil, Lubricating, Grade OE 10, MIL-L-2104 (81349)	gl
19	C,O	9150-00-242-7603	Oil, Lubricating, Grade OES	gl
20	O	9150-00-186-6681	Oil, Lubricating, OE/HDO 30, MIL-L-2104C (81349)	qt
21	O	9150-00-402-4478	Oil, Lubricating, ICE, Arctic, MIL-L-46167 (81349)	qt
22	O	9150-00-265-9425	Oil, Lubricating, OE/HDO 10, MIL-L-2104 (81349)	qt
23	O,F	7920-00-205-1711	Rags, Wiping A-A-531 (58536)	lb
24	O		Rod, Brazing	ft

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST, Cont.

(1) ITEM NUMBER	(2) CATEGORY	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
25	O		Sandpaper, Number OO	ea
26	O		Sheet, Plastic, Black	ft
27	O	7930-00-068-1669	Soap, Mild	gl
28	O,F	6850-00-274-5421	Solvent, Dry Cleaning, P-D-680 (81348)	gl
29	O,F	9905-00-537-8954	Tag, Marker, MIL-T-12755 (81349)	bx
30	F	8030-00-889-3534	Tape, Antisieze, Polytetra-fluorethylene, MIL-T-27730, Size I	roll
31	C,O	5640-00-103-2254	Tape, Duct	roll

APPENDIX G
TORQUE LIMITS

(1)	(2)	(3)
	TORQUE	
NOMENCLATURE	IN/LB/FT	NEWTON METERS
Hydraulic Brake Wheel Cap Screw	130-230 lb/in	14.69-26.0
Air Conditioner Mounting Screw	37-41 lb/ft	50.17-55.6
Generator-Set Mounting Screw	80-88 lb/ft	108.48-119.33

INDEX

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

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

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 9-4120-405-13&P	21 AUGUST 1991	TRAILER-MOUNTED AIR CONDITIONER

BE EXACT PIN-POINT WHERE IT IS

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

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

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

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

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

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

SIGN HERE John Doe
JOHN DOE

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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 = 0.35 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 fluid ounce
1 deciliter = 10 centiliters = 3.38 fluid ounces
1 liter = 10 deciliters = 33.81 fluid ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 27.42 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 = 125.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 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. decimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

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

Temperature (Exact)

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