TECHNICAL MANUAL

OPERATOR, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS)

POWER UNIT PU-789/M (NSN 6115-01-208-9827) MEP-114A 30 KW 400 HZ GENERATOR SET M353 2-WHEEL, 2-TIRE, MODIFIED TRAILER

*This manual supersedes Chapter 17 of TM 5-6115-594-14&P, dated 25 September 1984.

HEADQUARTERS, DEPARTMENT OF THE ARMY

11 AUGUST 1990

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

DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

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

SEND FOR HELP AS SOON AS POSSIBLE

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

WARNING

All specific cautions and warnings contained in this manual shall be strictly adhered to. Otherwise, severe injury, death and/or damage to the equipment may result.

HIGH VOLTAGE

is produced when this power unit is in operation.

DEATH

or severe burns may result if personnel fall to observe safety precautions. Do not operate this power unit until the ground terminal stud has been connected to a suitable ground. Disconnect the battery ground cable on the generator set before removing and installing components on the engine or in the electrical control panel system. Remove all rings, watches, and other jewelry when performing maintenance on this equipment. Loose fitting clothing should be secured to prevent it catching moving parts. Do not attempt to service or otherwise make any adjustments, connections or reconnections of wires or cables until generator set is shut down and completely de-energized.

DANGEROUS GASES

Batteries generate explosive gas during charging therefore, utilize extreme caution. Do not smoke, or use open flame in the vicinity of the generator set when servicing batteries.

Exhaust discharge contains noxious and deadly fumes. Do not operate power unit generator sets in enclosed areas unless exhaust discharge is properly vented to the outside.

To avoid sparking between filler nozzle and fuel tank, always maintain metal to metal contact between filler nozzle and fuel tank when filling generator set fuel tank.

Do not smoke or use open flame in the vicinity of the power unit while refueling generator sets.

LIQUIDS UNDER HIGH PRESSURE

are generated as a result of operation of the power unit generator set. Do not expose any part of the body to a high pressure leak in the fuel injection system.

NOISE

Operating noise level of the generator set can cause hearing damage. Ear protectors, as recommended by the medical or safety officer, must be worn when working near this power unit.

WARNING

Clean parts in a well-ventilated area. Avoid inhalation of solvent fumes and prolonged exposure of skin to cleaning solvent. Wash exposed skin thoroughly. Dry cleaning solvent (PD-680) used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of solvent is 100°F to 138°F (380C to 590C).

CHANGE

NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 14 March 1994

Operator, Unit, Direct Support and
General Support Maintenance Manual
(Including Repair Parts and
Special Tools Lists)

POWER UNIT
PU-789/M (NSN 6115-01-208-9827)
MEP-114A 30 KW 400 HZ GENERATOR SET
M353 2-WHEEL, 2-TIRE, MODIFIED
TRAILER

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

TM 9-6115-647-14&P, 1 August 1990, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	**Insert pages**
iii and iv	iii and iv
1-1 through 1-4	1-1 through 1-5/(1-6 blank)
3-5 and 3-6	3-5 and 3-6
4-3 through 4-6	4-3 through 4-6
4-19 through 4-24	4-19 through 4-24
4-31 through 4-36	4-31 through 4-36
4-45 and 4-46	4-45 and 4-46
4-49 through 4-52	4-49 through 4-53/(4-54 blank)
5-1 through 5-8	5-1 through 5-8
5-19 and 5-20	5-19 and 5-20
5-25 and 5-26	5-25 and 5-26
D-7 through (D-15 blank)/D-16	D-7 through D-16
D-27 through D-29/(D-30 blank)	D-27 through D-29/(D-30 blank)
D-35 Through D-42	D-35 through D-42
D-49 through D-52	D-49 through 0-52
(D-55 blank)/D-56 through D-64	(D-55 blank)/D-56 through D-64
D-67 and D-68	D-67 and D-68
D-71 through D-82	D-71 through D-83/(D-84 blank)

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

TM 9-6115-647-14&P
C 1

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
06453

DISTRIBUTION:

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TECHNICAL MANUAL
NO. 9-6115-647-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 11 August 1990

Operator, Unit, Direct Support and General Support Maintenance Manual
(Including Repair Parts and Special Tools Lists)
for
POWER UNIT, PU-789/M
(NSN 6115-01-208-9827)
MEP-114A 30 KW 400 HZ GENERATOR SET
M353 2-WHEEL, 2-TIRE, MODIFIED TRAILER
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*This manual supersedes Chapter 17 of TM 5-6115-594-14&P dated 25 September 1984.

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LIST OF ILLUSTRATIONS (cont)

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope. This manual is for your use in operating and maintaining the Power Unit PU-789/M. The PU-789/M is a mobile power unit used to supply power to the Patriot Information Coordination Central (ICC) and its Antenna Mast Group (AMG) or to the Communications Relay Group (CRG) and its Antenna Mast Group. In addition to operating instructions and operator, unit, direct support and general support maintenance procedures, this manual contains a Repair Parts and Special Tools List for the power unit.

1-2. Maintenance Forms and Records. Maintenance forms and records used by Army personnel are prescribed by DA Pam 738-750.

1-3. Reporting of Errors. Reporting of errors and omissions and recommendations for improvement of this publication by the individual user is encouraged Reports should be submitted on a DA Form 2028 directly to Commander, U S Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798.

1-4. Reporting Equipment Improvement Recommendations (EIR). EIR's will be prepared using SF 368 Product Quality Deficiency Report. Instructions for preparing EIR's are provided in DA Pam 738-750, The Army Maintenance Management System. EIR's should be mailed directly to Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MDS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798.

1-5. Levels of Maintenance Accomplishment. Army users shall refer to the Maintenance Allocation Chart (MAC) for tasks and levels of maintenance to be performed.

1-6. Destruction of Army Materiel. Destruction of Army Materiel to prevent enemy use shall be in accordance with TM 750-244-3.

1-7. Administrative Storage.

a. Placement of equipment in administrative storage should be for short periods of time when a shortage of maintenance effort exists. Items should be in mission readiness within 24 hours or within the time factors as determined by the directing authority. During the storage period appropriate maintenance records will be kept.

b. Army equipment placed in administrative storage will have preventive maintenance performed In accordance with the PMCS tables before storage. When equipment is removed from storage, PMCS will be performed to assure operational readiness.

c. Storage site selection. Inside storage is preferred for items selected for administrative storage. If inside storage is not available, trucks, vans, conex containers and other containers may be used.

1-8. Preparation for Shipment and Storage. Refer to TB 740-97-2.

Section II. DESCRIPTION AND DATA

1-9. Description. Power Unit PU-789/M (figures 1-1 and 1-2) is made up of one Tactical Precise Generator Set, DOD model MEP-114A, mounted on a modified M353 trailer. The generator set is a liquid-cooled diesel engine-driven unit with a load capacity of 30 KW at 400 HZ. The trailer is a two-wheeled, two-tire unit with a 3-½-ton carrying capacity. The modifications to the basic trailer provide stowage for the accessories and all equipment necessary for mobile operation, work platforms and access steps for the operator and maintenance personnel, and a 93-gallon fuel tank. A low fuel sensor is activated and supplies a low fuel signal to the Patriot Information Coordination Central (ICC) and the Communications Relay Group (CRG) when the fuel level drops below 13.5 gallons (51.1 liters). The PU-789/M provides a generator on-line signal to the ICC/CRG and provides for power disconnect from the ICC/CRG. Since the PU-789/M is exclusively used for supplying power to the ICC and its Antenna Mast Group (AMG) or to the CRG and its Antenna Mast Group, the power unit is equipped with a Patriot application kit. This kit consists of a power distribution unit (PDU) mounted on the trailer, an adapter plate assembly mounted on the generator set to provide an interconnection point for generator set and PDU cabling, and the related cables and wiring harnesses. In the field, two PU-789/M power units are used interconnected as shown in figure 1-3, where one power unit is designated the primary power source and the second unit serves as a standby unit in the field configuration, the PDU provides an interconnection point for the primary and standby power units and the ICC or CRG, allowing either unit to supply 120/208 VAC 400 HZ power to the equipment.

1-10. Tabulated Data. The tabulated data provides operator and unit level personnel with the dimensions and weights for Power Unit PU-789/M. These specifications are computed from the combined dimensions and weights of the generator set and trailer as modified for use with the power unit. Specifications of the individual components can be found in their respective technical publications. For additional information concerning Generator Set DOD Model MEP-114A, refer to TM 5-6115-465-12, -24P and -34. For additional information on the M353 trailer, refer to TM 9-2330-247-14&P. The tabulated data also includes the location and content of all data plates unique to the power unit.

a. Identification and Instruction Plates.

(1) **Identification plate**.

(a) **Location**. This plate is located on the front curbside trailer frame.

(b) **Content.**

US ARMY
ELECTRIC POWER UNIT
PU-789/M
LG 188 19 IN./W 96 00 IN./HGT 84.50 IN.
NSN 6115-01-208-9827
PART NO. 97403-13227E5850
MFD BY:
CONTRACT NO.
DATE MFD:
SERIAL NO.
DRY WT 6800 LBS
REGISTRATION NO. VB01FY

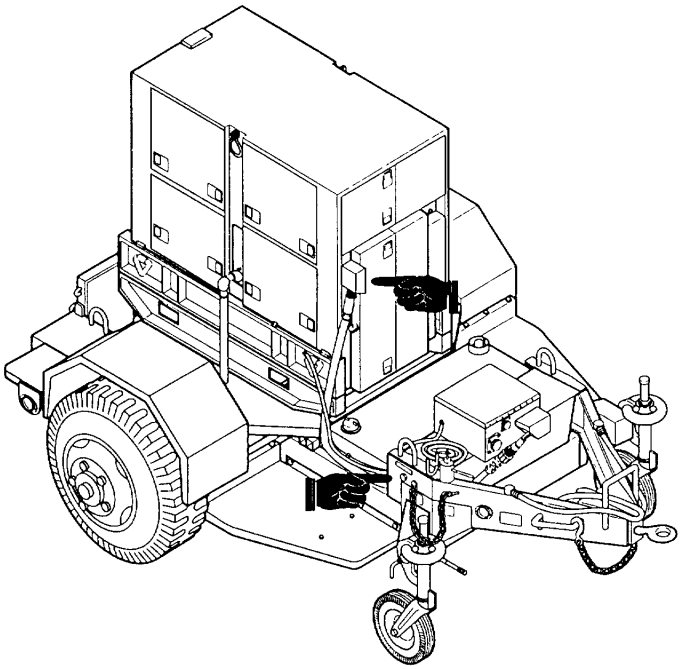


Figure 1-1. Power Unit, Curbside Front, Three-Quarter View.

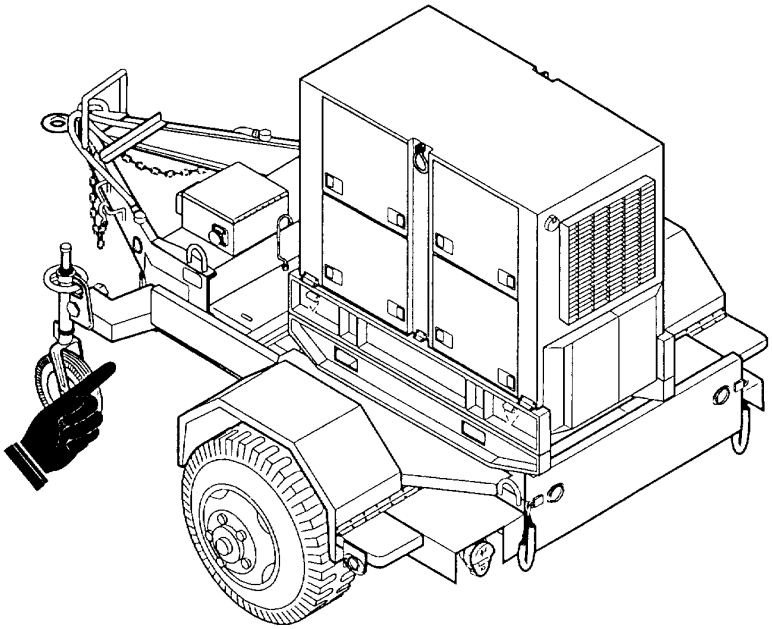


Figure 1-2. Power Unit, Roadside Rear, Three Quarter View.

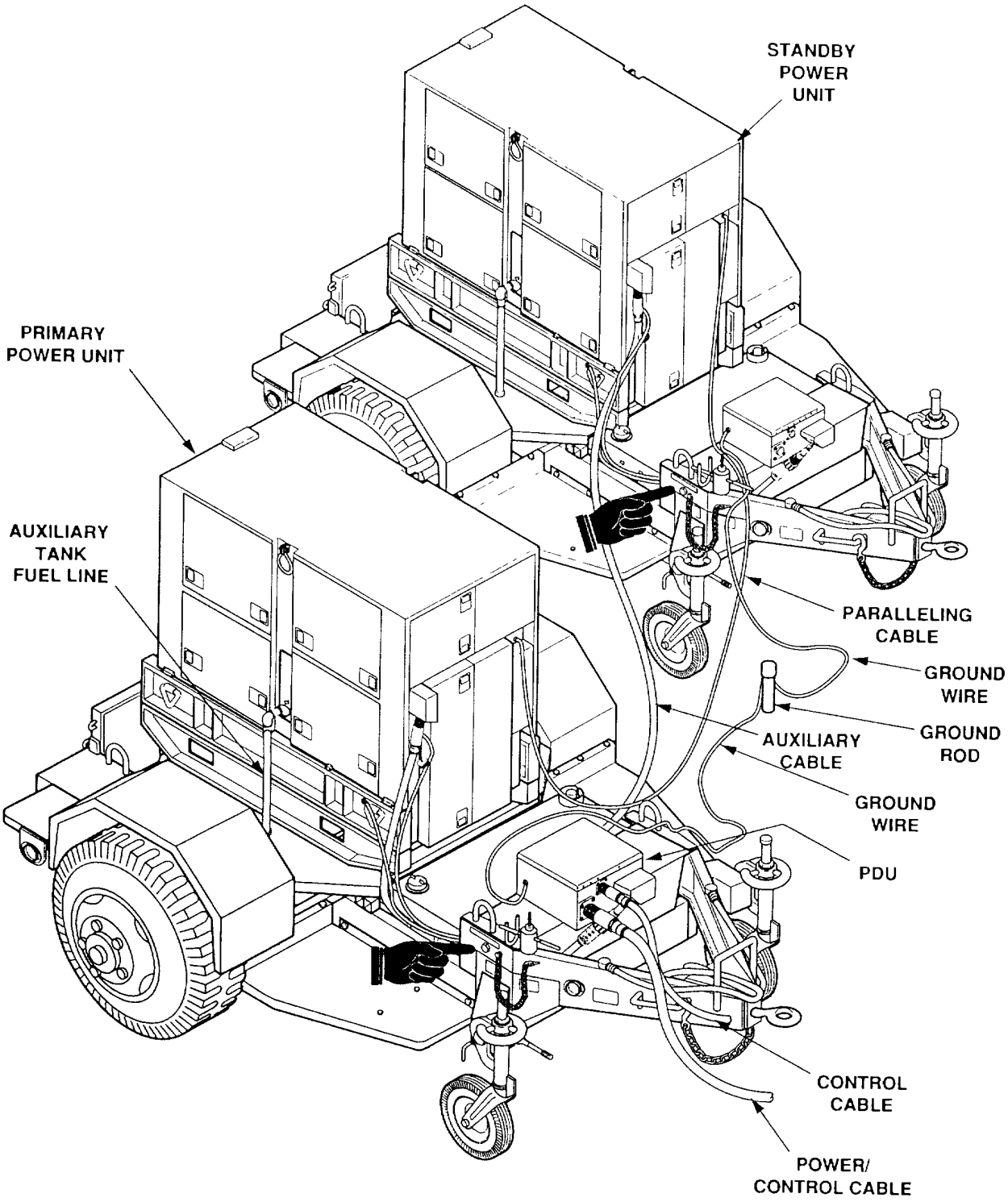


Figure 1-3. Interconnected Power Units.

(2) Instruction plate.

(a) **Location**. This plate is located near the ground stud on the front, curbside corner of the trailer body.

(b) **Content**

GROUND

(3) Handling data plate.

(a) **Location**. This plate is located on the front curbside corner of the trailer body.

(b) **Content**. This plate contains a diagram of the power unit and gives dimensions, shipping weight, cubage and pinpoints lifting locations.

b. Tabulated Data for Power Unit.

Overall Length	188.19 inches (478 centimeters)
Overall Width	95 ½ inches (242 6 centimeters)
Overall Height	84.5 inches (214 6 centimeters)
Net Weight (empty)	T.B.S.
Net Weight (filled)	T.B.S.
Shipping Weight	6800 pounds (3087.2 kilograms)
Volume	884 cubic feet (24.75 cubic meters)

1-11. Differences Between Models. There are no differences between models.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. OPERATING PROCEDURES

2-1. Power Unit Operating Procedures. The typical mission for any mobile power generating equipment can be described in three steps or phases. In the first phase, the power unit is towed to the worksite and installed by unit level technicians (paragraph 4-2). In the second phase of the mission, the operator starts the generator set, runs it to power a system or equipment, and eventually shuts it down. In the final phase, the power unit is dismantled, packed up and either moved to a new worksite or returned to standby status (paragraph 4-3). This final phase is also accomplished by unit level technicians.

a. **Generator Set Operating Procedures**.

WARNING

Do not operate power unit generator set until properly grounded (paragraph 4-2, b.). Serious injury or death by electrocution can result from operating an ungrounded generator set.

Operating noise level of generator set can cause hearing damage . Ear protectors, as recommended by medical or safety officer, must be worn when working near power unit.

Make sure ICC or CRG generator power switch is in OFF position before starting or stopping generator set.

CAUTION

To avoid damage to equipment, make certain of voltage, frequency, and phase requirements of load connected to power unit.

NOTE

Before starting generator set, do your Before PMCS as described in table 3-2.

Detailed procedures for prestarting, starting, operating, and shutting down the power unit generator set are found in TM 5-6115-465-12 and on the Operating Instruction data plate found on the equipment. Refer to the data plate, located inside the right hand control panel door, to start and run the generator set. Monitor and adjust power output as required during operation. At the end of the mission, shut down generator set in accordance with the operating instructions on the data plate. To switch the power source from the primary power unit to the standby unit, shut down the primary unit as outlined on the instruction plate and repeat startup and operating procedures using standby unit. For paralleling instructions, refer to TM 5-6115-465-12.

b. Trailer Operating Procedures. Refer to TM 9-2330-247-14&P for specific operating procedures for the M353 trailer.

Section II. OPERATION OF AUXILIARY EQUIPMENT

2-2. Operation of Auxiliary Equipment. There is no auxiliary equipment supplied with the power unit.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

2-3. Operation Under Unusual Conditions. When operating the power unit under unusual conditions such as extremes in temperature or difficult terrain, there are steps that must be taken to protect the equipment.

a. Refer to TM 5-6115-465-12 for special procedures when operating the generator set under unusual conditions.

b. Refer to TM 9-2330-247-14&P for special procedures when operating the trailer under unusual conditions.

2-4. Operation Under Emergency Conditions. When low fuel is indicated on primary power unit and standby unit fails to start, follow the procedures below to enable primary power unit to use standby unit fuel supply.

a. Set primary generator set fuel selector valve to SET TANK position.

b. Remove 25-foot auxiliary fuel line from standby generator set.

c. Disconnect fuel lines from both generator sets at auxiliary fuel connection.

d. Connect adapter on 25-foot auxiliary fuel line to connector on 25-foot auxiliary fuel line. Connect other end of adapter to auxiliary tank fuel line on standby generator set. Connect other end of auxiliary fuel line to auxiliary tank fuel fitting on primary generator set.

CHAPTER 3

OPERATOR/CREW MAINTENANCE INSTRUCTIONS

Section I. CONSUMABLE OPERATING AND MAINTENANCE SUPPLIES

3-1. Consumable Supplies. Consumable supplies used in the maintenance and operation of the power unit are listed in Table 3-1.

Table 3-1. Consumable Operating and Maintenance Supplies.

(1) Component application	(2) National stock number	(3) Description	(4) Qty required for initial operation	(5) Qty required 8 hours operation	(6) Notes
General Cleaning	6850-00-664-5685	Solvent, Drycleaning, PD-680	1 quart	As required	
Power Distribution Unit and Tailgate	9150-00-186-6681	Oil, Lubricating, OE/HDO-30	1 quart	As required	
	9150-00-402-4478	Oil, Lubricating, OEA	1 quart	As required	
	13222E9697	Adhesive, Silicone, Conductive		As required	
		Adhesive		As required	

Section II. LUBRICATION INSTRUCTIONS

3-2. **General.** Detailed instructions for the lubrication of the major components of the power unit are contained in the applicable Lubrication Orders (LO's). Refer to DA Pam 25-30 to ensure the latest editions of the LO's are used.

3-3. **Generator Lubrication**. Refer to TM 5-6115-465-12 for generator set Lubrication Order.

3-4. Trailer Lubrication. There are no operator/crew lubrication requirements for the power unit trailer.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

NOTE

The PMCS chart in this section contains all necessary Operator/Crew preventive maintenance checks and services for this equipment.

3-5. General. The preventive maintenance checks and services listed in Table 3-2 are grouped according to stages of equipment operation or time intervals. Using the following as a guide, do the checks and services at the intervals shown.

a. Before you operate, perform your before (B) PMCS. Observe all CAUTIONS and WARNINGS.

b. While you operate, perform your during (D) PMCS. Observe all CAUTIONS and WARNINGS.

c. After you operate, be sure to perform your after (A) PMCS.

d. Do (W) PMCS weekly.

e. Do (M) PMCS monthly.

f. If equipment falls to operate, refer to Section IV Troubleshooting. If the problem cannot be corrected, see paragraph 3-8, Reporting Deficiencies.

3-6. Purpose of PMCS Table. The purpose of the PMCS table is to provide a systematic method of inspecting and servicing the equipment. In this way, small defects can be detected early before they become a major problem causing the equipment to fall to complete its mission. The PMCS table is arranged with the individual PMCS procedures listed in sequence under assigned intervals. The most logical time (before, during, or after operation) to perform each procedure determines the interval to which it is assigned. Make a habit of doing the checks and services in the same order each time and anything wrong will be seen quickly. See paragraph 3-7 for an explanation of the columns in table 3-2.

3-7. Explanation of Columns. The following is a list of the PMCS table column headings with a description of the Information found in each column.

a. Item No. This column shows the sequence in which the checks and services are to be performed, and is used to identify the equipment area on the Equipment Inspection and Maintenance Worksheet, DA Form 2404.

b. Interval. This column shows when each check is to be done.

c. Item to be Inspected. This column identifies the general area or specific part where the check or service is to be done.

d. Procedures. This column lists the checks or services to be done and explains how to do them.

e. Equipment is Not Ready/Available If. This column lists conditions that make the equipment unavailable for use because it is unable to perform its mission or because it would represent a safety hazard. Do not accept or operate equipment with a condition in the "Equipment is Not Ready/Available If" column.

3-8. Reporting Deficiencies. If you discover any problem with the equipment during PMCS or while operating it that you are unable to correct, it must be reported. Refer to DA Pam 738-750 and report the deficiency using the proper forms.

3-9. Special Instructions. Preventive maintenance is not limited to performing the checks and services listed in the PMCS table. Covering unused receptacles, stowing unused equipment and other routine procedures such as equipment inventory, cleaning components, and touch-up painting are not listed in the PMCS table.

These are things you should do any time you see they need to be done. If a routine check is listed in the PMCS table it is because other operators have reported problems with this item. Take along tools and cleaning cloths needed to perform the required checks and services. Use the information in the following paragraphs to help you identify problems at any time

a *Routine inspections*. Use the following information to help identify potential problems before and during checks and services.

WARNING

Dry-cleaning solvent PD-680 is both toxic and flammable. Wear safety goggles and gloves and use in a well-ventilated area. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 100°F to 138°F (38°C to 590C). If you become dizzy while using PD-680, get fresh air immediately and get medical aid. If PD-680 contacts eyes, flush with water and get medical aid immediately.

(1) Keep it clean. Dirt, grease, and oil get in the way and may cover up a serious problem. Use dry-cleaning solvent PD-680, to clean metal surfaces. Use soap and water to clean rubber or plastic parts and material

(2) Bolts, nuts, and screws. Check them all to make sure they're not loose, missing, bent, or broken. Don't try to check them all with a tool, but look for chipped paint, bare metal, or rust around bolt heads. If you find one loose, tighten it or report it to unit maintenance.

(3) Welds. Look for loose or chipped paint, rust, or gaps where parts are welded together. If a broken weld is found, report it to higher level of maintenance.

(4) Electrical wires connectors, terminals and receptacles. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and make sure the wires are in good condition. Examine terminals and receptacles for serviceability

(5) Hoses and fluid lines. Look for wear, damage, and leaks. Make sure clamps and fittings are tight. Wet spots and stains around a fitting or connector can mean a leak if a leak comes from a loose connector, tighten it. If something is broken or worn out, report it to unit maintenance.

b. **Leakage Definitions**. It is necessary for you to know how fluid leakage affects the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn and be familiar with them. 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 drip from item being checked/inspected.
Class III	Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

CAUTION

Equipment operation is allowable with minor leakage (Class i or iI) of any fluid except fuel. Of course, consideration must be given to the fluid capacity in the item being checked/inspected. When in doubt, notify your supervisor.

When operating with Class i or ii leaks, continue to check fluid level more often than required in the PMCS. Parts without fluid will stop working and/or cause equipment damage.

Class III leaks should be reported to your supervisor or unit maintenance.

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.

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

Table 3-2. Operator/Crew Preventive Maintenance Checks and Services (PMCS).

B-Before D-During A-After W-Weekly M-Monthly

Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
						WARNING Before performing any maintenance that requires climbing on or under trailer, set trailer handbrakes and chock wheels injury to personnel could result from trailer suddenly rolling. Generator sets must be shut down before performing PMCS on electrical cables. Failure to do so could result in death or serious injury. **NOTE** Perform weekly as well as before PMCS if you are the assigned operator but have not operated the equipment since the last weekly inspection, or if you are operating the equipment for the first time.	

Table 3-2. Operator/Crew Preventive Maintenance Checks and Services (PMCS) (cont).

B-Before D-During A-After W-Weekly M-Monthly

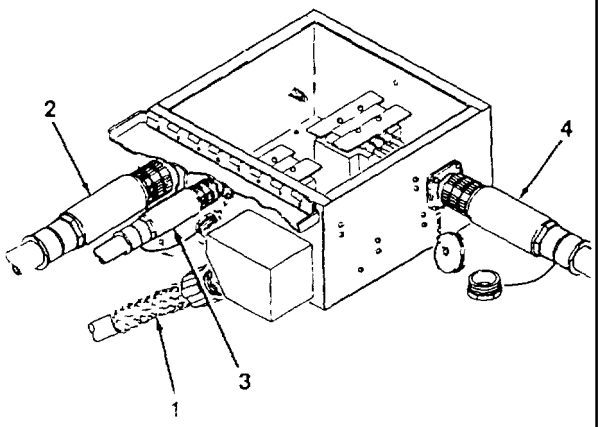
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
1	•					GENERATOR SET EXTERIOR	
						a. Check on, around, and beneath generator set for fuel or oil and coolant leaks.	A Class III coolant or lubrication oil leak or any class fuel leak is detected.
						b. Check that generator set ground is properly installed and grounding connections are tight.	Not properly grounded.
						c. Manually open and close radiator louvers to check for proper operation.	Louvers do not operate correctly.
2	•					POWER/CONTROL CABLES	
						Check for loose connectors on P3 Power/Control cable (1) at adapter plate assembly and PDU. Check for loose connectors on Power/Control cable (2) at PDU and ICC/CRG. Check for loose connectors on Control cable (3) at PDU and ICC/CRG. Check for loose connectors on auxiliary cable (4) at PDU and standby generator adapter plate assembly. 	Connector(s) cannot be tightened, are damaged, or are missing parts.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
3	•					FUEL CABLE ASSEMBLY Check for loose connectors on fuel cable assembly (5) at adapter plate assembly and fuel level sensor.	Connector(s) cannot be tightened, are damaged, or are missing parts.
4	•					GROUND WIRE ASSEMBLIES Check for loose, broken, or damaged wire connections on ground wire assemblies (6) on PDU, trailer frame, and ground rod.	Ground wires are loose, broken, or missing.
5						AUXILIARY FUEL TANK ASSEMBLY	
	•	•				a. Check fuel tank (7) and fuel line (8) for leaks.	Any class fuel leak is detected.
	•					b. Check screen in filler tube (9) for dirt or clogging Clean as required.	
	•					c. Check fuel level gauge (10) for damage.	Fuel level gauge is broken or leaking.
	•					d. Check vent tube (11) for damage.	

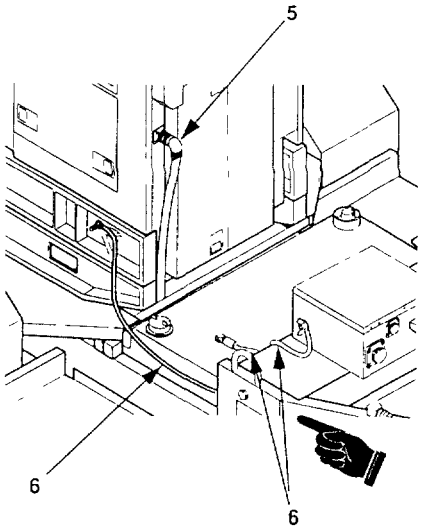


Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

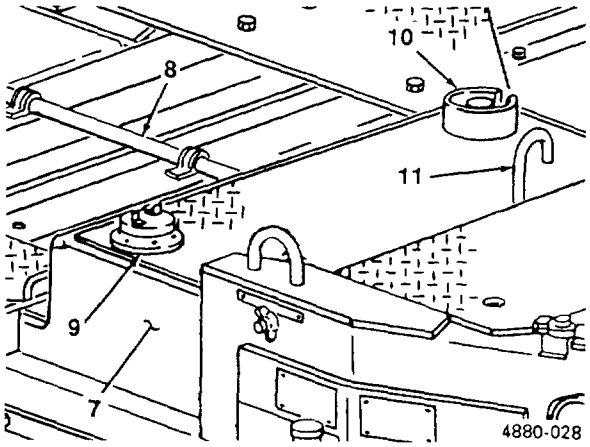
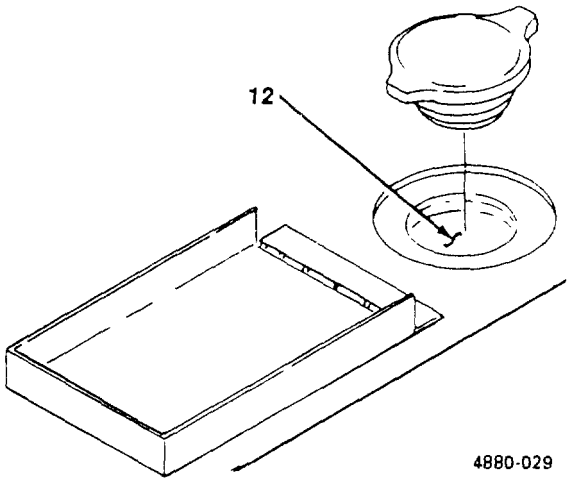
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
5						AUXILIARY FUEL TANK ASSEMBLY (cont) 	
6	•					COOLANT LEVEL Check level of coolant (12) in radiator and add as required. Correct level is 2 inches beneath overflow tube. 	Coolant is at or below level recommended.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

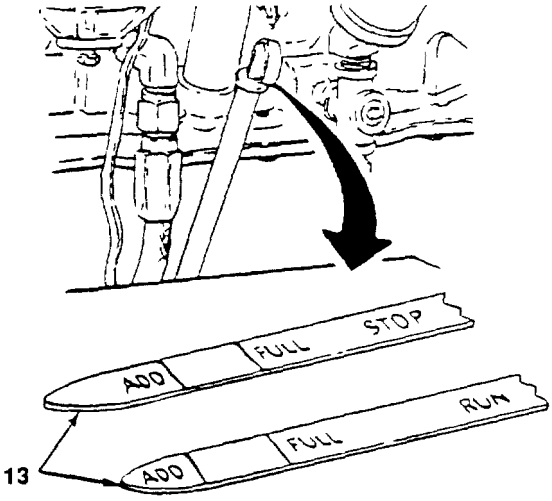
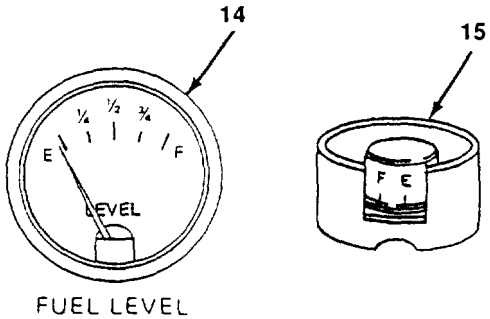
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
7	•					ENGINE OIL LEVEL Check oil filler dipstick (13) for proper oil level. Add oil as required.  4880-030	Engine oil is at or below ADD mark.
8	•					FUEL GAGE Check generator set fuel gage (14) and auxiliary tank fuel gage (15) for sufficient fuel for continuous operation.  FUEL LEVEL	

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

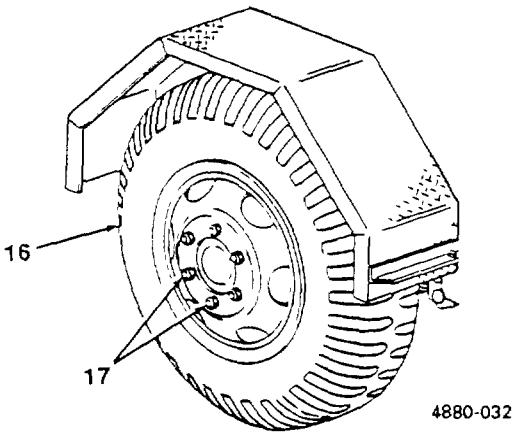
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
9		•				TIRES	
						a. Check for cuts, foreign objects, or unusual tread wear. Remove any stones from between the treads.	One tire is flat, missing, or unserviceable.
						b. Check tires (16) for damage or low pressure Correct pressure is: Highway 70 psi (482 65 kPa). Cross-country 50 psi (344 75 kPa). Mud, snow, or sand 15 psi (103 4 kPa).	Tire (16) has cuts or abrasions that would result in tire failure during operation.
10	•					WHEELS	
						Check for wheel damage and loose or missing stud nuts (17).	One wheel is damaged One stud nut is loose or missing.
							
11	•					ACCESSORIES	
						Check slide hammer and ground rods for availability.	Ground rods are missing.
12						LUNETTE	
						Check lunette (18) for insecure mounting and obvious damage.	Lunette is loose or cracked.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

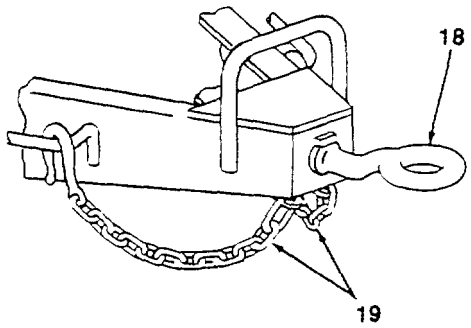
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
13	•					SAFETY CHAINS Check safety chains (19) for insecure mounting and obvious damage.  	Safety chains are missing or damaged.
14	•					AIR HOSES, FITTINGS AND BRAKE AIR CHAMBER Check air hoses (20), fittings (21) and brake air chamber (22) for signs of damage or leaks.	Damage or leaks are detected.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

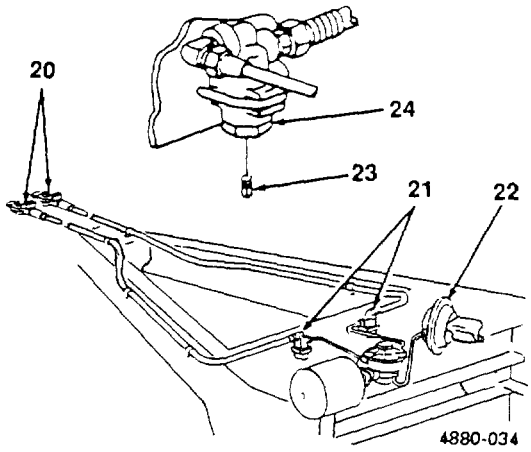
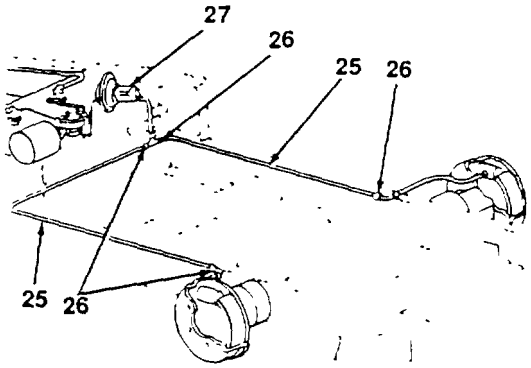
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
15	•					AIR FILTERS Remove pipe plugs (23) from bottom of air filter(s) (24), drain filters and reinstall plugs.  	
16	•					HYDRAULIC HOSES, LINES, FITTINGS, AND MASTER CYLINDER Check brake system hoses (25), fittings (26), and master cylinder (27), and check under vehicle for signs of brake fluid leaks  	A class ill brake fluid leak is detected. Hoses are broken or worn.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

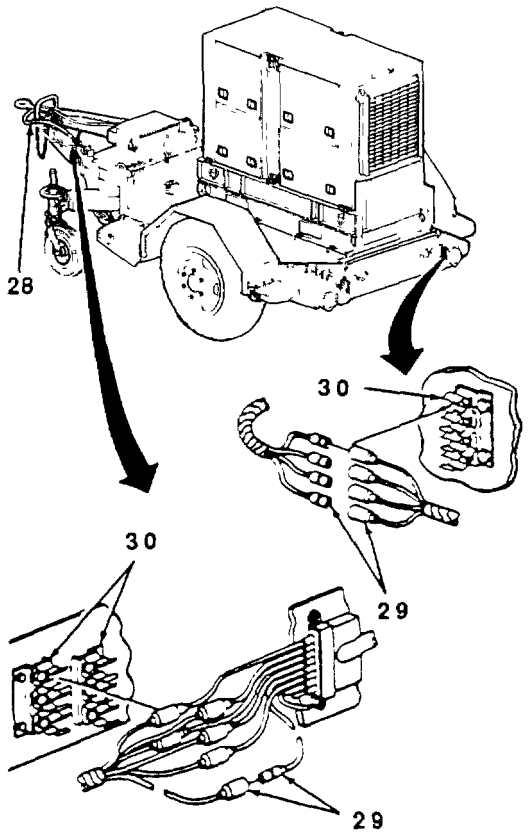
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
17	•					INTERVEHICULAR ELECTRICAL CABLE Inspect cable (28) to insure it is in good condition and all connectors (29) are correctly assembled and secured in the mounting clips (30).  	
18	•					SWIVEL CASTER Check condition of swivel casters (31) and tires (32) Correct pressure for caster tires is 65 psi (448 18 kPa).	There is indication that swivel caster might collapse.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

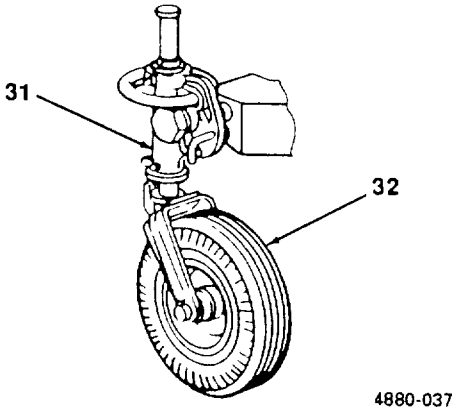
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
18						SWIVEL CASTER (cont)  	
19		•				LIGHTS	
						a. With intervehicular cable connected to towing vehicle, operate vehicle light switch through all settings and check lights (33).	Lights are not operating properly.
						NOTE An assistant is required while checking brake lights.	
						b. Step on brake pedal and check brake lights (33).	Brake lights fall to operate.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

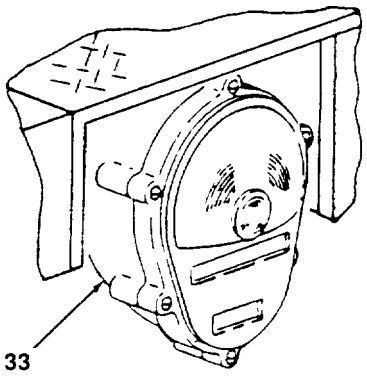
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
19		•				LIGHTS (cont)  	
20		•				BRAKE SYSTEM Test brake system by hooking trailer to towing vehicle and applying brakes.	Service brakes fail to Operate.
21		•				TRAILER OPERATION a. Be alert for any unusual noises while towing trailer. Stop and investigate any unusual noises. b. Ensure that trailer is tracking/following correctly behind towing vehicle with no side pull.	Trailer is not tracking/ following correctly.
22		•				GENERATOR SET GAGES AND INSTRUMENTS a. Check that air cleaner condition indicator (34) does not indicate a clogged air cleaner. Press-to-test b. Check that battery charging ammeter (35) is in green area during normal operation.	Light remains on during operation. Battery indicator not in green area.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

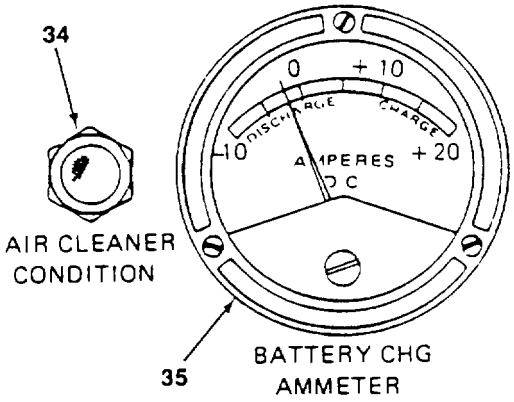
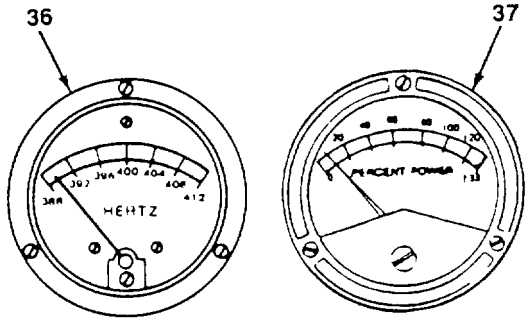
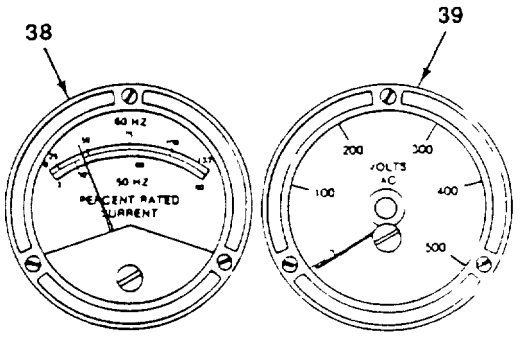
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
22		•				GENERATOR SET GAGES AND INSTRUMENTS (cont)	
							
						c. Check that frequency meter (36) indicates 400 Hz (red line) when generator is operating under load.	Correct frequency cannot be maintained.
						d. Check that kilowatt meter (37) reading does not exceed 100%.	
							

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
22		•				GENERATOR SET GAGES AND INSTRUMENTS (cont).	
						e. Check that A C ammeter (38) reading does not exceed 100% of rated current or more than 5% load difference between phases.	No indication when load is applied.
						f. Check that A C voltmeter (39) indicates desired output voltage as determined by load connections and amps-volts selector switch.	Desired voltage cannot be obtained and maintained.
						g. Check engine oil pressure gage (40) for 20 to 50 psig indication.	Oil pressure drops below 20 psig.
						h Check coolant temperature gage (41) for 1700 to 200°F (76 70 to 93 30C) indication.	Temperature exceeds 200°F (93 3°C).



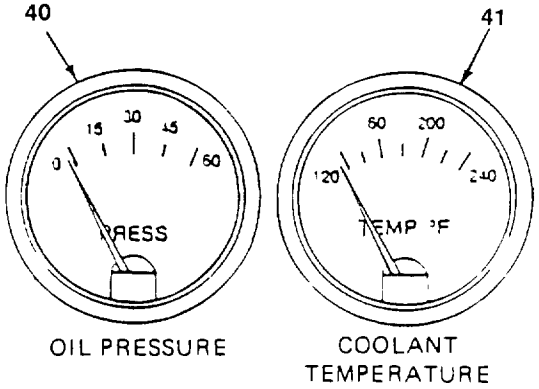


Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

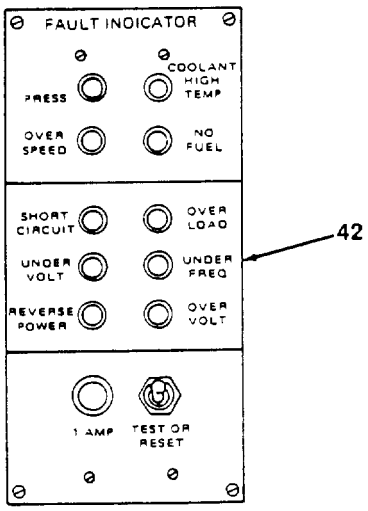
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
22		•				GENERATOR SET GAGES AND INSTRUMENTS (cont) i. Check that all lights on fault indicator panel (42) are out during operation. Check bulb operation with TEST or RESET switch on panel.  	Fault light will not go out when switch is set to TEST or RESET position, then released. All bulbs should be lit when switch is in TEST or RESET position.
23			•			FUEL TANK **WARNING** Do not smoke or use open flame in vicinity of power unit while refueling generator set. a. Fill set tank and auxiliary tank upon completion of operation. **NOTE** Fuel system temperature must be above freezing when draining water and sediment.	

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

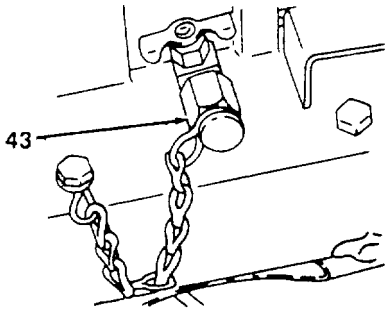
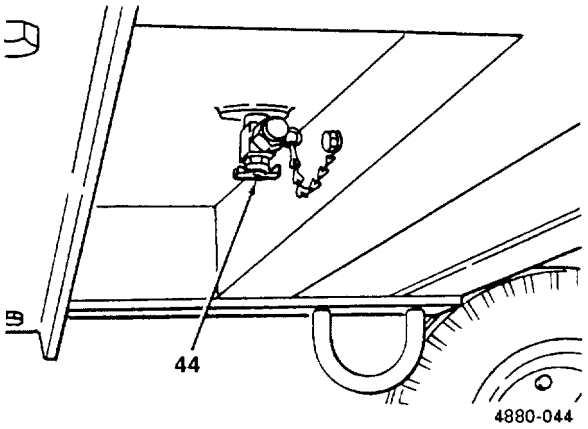
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
23			•			FUEL TANK (cont) b. Individually drain both set and auxiliary fuel tanks by opening respective drains (43) and (44). Drain into a suitable container. Allow tank to drain until fuel runs clean.  	
24					•	DAY TANK **NOTE** Fuel system temperature must be above freezing when draining water and sediment. Open drain (45) and drain water and sediment from day tank (46) into a suitable container. Allow to drain until fuel runs clean.	

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

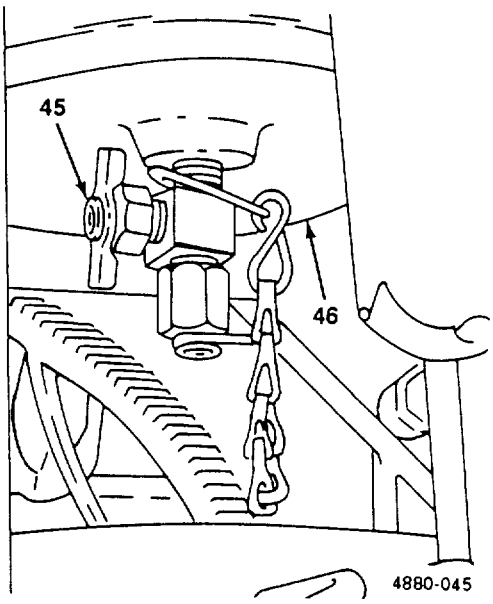
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
24			•			DAY TANK (cont)  	
25			•			FUEL STRAINER AND FILTERS Drain water and sediment from strainer (47), primary (48) and secondary (49) filters into a suitable container. Allow to drain until fuel runs clean.	

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

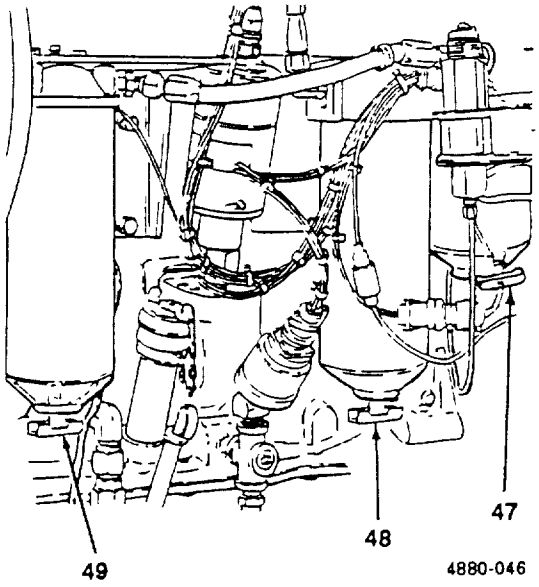
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
25			•			FUEL STRAINER AND FILTERS (cont)  	
26			•			BATTLE SHORT INDICATOR LIGHT Push in on lens housing Light (50) should Illuminate if not, replace bulb.	
27			•			CIRCUIT BREAKER INDICATOR LIGHT Push in on lens housing Light (51) should Illuminate if not, replace bulb.	

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

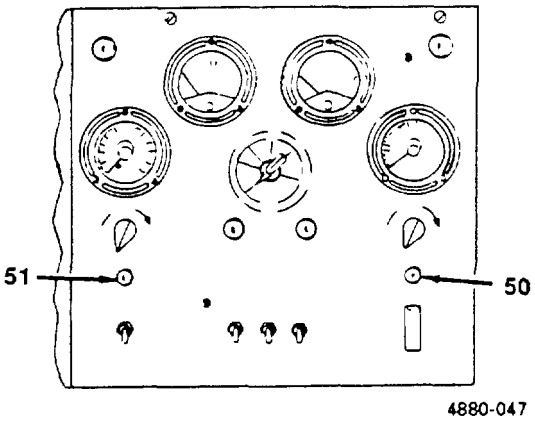
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
27			•			CIRCUIT BREAKER INDICATOR LIGHT (cont)  	
28			•			BRAKE DRUMS AND HUBS **WARNING** A defect in the operation of the brakes or hub can cause these parts to get hot enough to cause serious burns. Use extreme caution when attempting to detect heat in this area. Feel drums (52) and hubs (53) for overheating.	Brakes or hub are dragging or binding.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

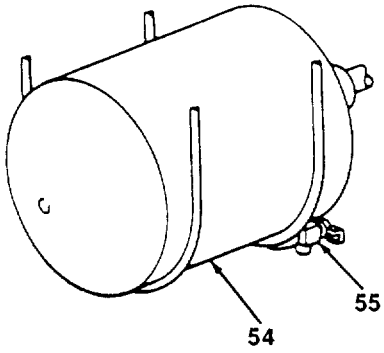
Item No.	B	D	A	W	M	Item To Be Inspected, Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
29		•				AIR RESERVOIR a. Visually inspect air reservoir (54) for damage or leaks. **WARNING** Airstream from open draincock could cause eye injury. Wear protective goggles when working with air under pressure. Failure to do so could result in eye injury. b. Open draincock (55) to drain moisture from air reservoir (54) and close when finished.  	
30			•			HANDBRAKES With trailer hooked to towing vehicle, set handbrakes (56). Move trailer slightly to see if handbrakes hold wheels. Adjust as required.	Handbrakes cannot be adjusted.

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

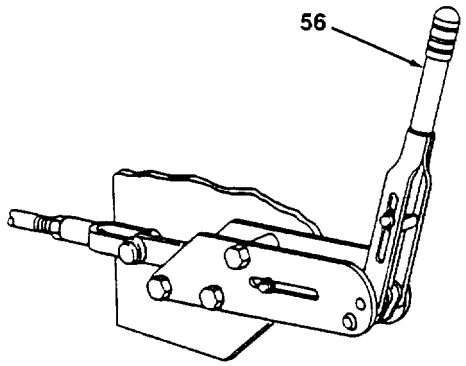
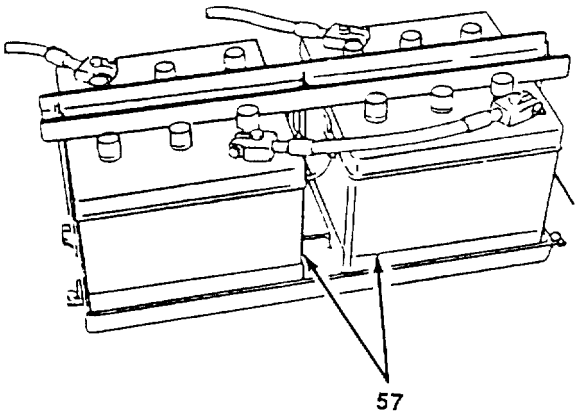
Item No.	B	D	A	W	M	Item to be Inspected Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
30			•			HANDBRAKES (cont)  	
31				•		MISCELLANEOUS TRAILER COMPONENTS Inspect assemblies such as air filter, air chamber and master cylinder, swivel caster, and handbrake levers for looseness of mountings or connections.	
32				•		REFLECTORS Check for damaged or missing reflectors. (Refer to TM 9-2330-247-14&P).	
33				•		BATTERIES Check battery (57) electrolyte level. Level should be about ¾ inch above top of plates. Add water if level is low . Use clean water (distilled water if available).	

Table 3-2. Operator Preventive Maintenance Checks and Services (Cont).

B-Before D-During A-After W-Weekly M-Monthly

Item No.	B	D	A	W	M	Item to be Inspected Procedure: Check For And Have Repaired, Filled, or Adjusted As Needed	Equipment Is Not Ready/Available If:
33				•		BATTERIES (cont)  	
34					•	TRAILER FRAME Inspect entire chassis frame for damage, cracks, and broken welds.	Frame is obviously broken or cracked.

Section IV. TROUBLESHOOTING

3-10. Power Unit Troubleshooting. There are no troubleshooting procedure authorized at operator level for the power unit end item. However, since the field configuration involves two identical interconnected power units, thereby providing the operator with two complete sets of cables, cable substitution may be used to test and cor-rect malfunctions when there is reason to suspect that the cause is a faulty cable. Cables that may be substituted by the operator are the power/control cable (PDU connector J1 to the ICC/CRG), the control cable (PDU connector J6 to the ICC/CRG), the auxiliary cable (PDU connector J10 to the standby power unit) and the P4, P7 fuel cable (adapter plate assembly connector J4 to the fuel tank fuel level sensor). In addition, the 75-foot power/control cable and the 25-foot auxiliary cable are identical except for length, so that either one may serve as a substitute for the other when testing. As a corrective action, however, the auxiliary cable may be replaced with a power/control cable, but the power/control cable may not be replaced with an auxiliary cable. For generator set troubleshooting, refer to TM 5-6115-465-12 For trailer troubleshooting, refer to TM 9-2330-247-14&P

Section V. OPERATOR/CREW MAINTENANCE

3-11. Operator/Crew Maintenance. There are no maintenance tasks peculiar to the power unit end item authorized at the operator/crew level. Maintenance procedures for the generator set and trailer are contained In their respective technical manuals referenced below.

a. *Generator Set*. Refer to TM 5-6115-465-12 for maintenance procedures applicable to the generator set.

b. *Trailer*. Refer to TM 9-2330-247-14&P for maintenance procedures applicable to the trailer.

CHAPTER 4

UNIT MAINTENANCE

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

4-1. Inspecting and Servicing Equipment. The power unit is unpacked, inspected, and serviced as described In the following paragraphs. Unpacked equipment must be checked against the Equipment Packing List to insure completeness. Discrepancies must be reported in accordance with instructions in DA Pam 738-750.

a. *Unpacking Power Unit*. (See figure 4-1.). The generator set is packed in place on the trailer frame.

WARNING

The steel banding used In packaging of power unit has sharp edges. Care should be taken when cutting and handling banding to avoid injury to personnel.

(1) Remove steel banding around plywood box covering generator set and remove box.

(2) Remove plastic barrier material from generator set and power distribution unit.

(3) Unpack and inventory technical manuals packed in compartment mounted inside front roadside door of generator set enclosure.

(4) Remove tape securing air hoses and Intervehicular cable to trailer frame.

(5) Cut wires securing safety chains to trailer frame near lunette.

(6) Remove tape from gas tank vent tube and gas gauge.

(7) Remove tape from slide hammer.

(8) Remove cardboard box containing ground rod from storage tray and unpack ground rod.

(9) Check contents of storage tray against packing list.

(10) Check inside generator set enclosure for auxiliary fuel line.

(11) Stow all authorized accessories in storage tray.

(12) Refer to DA Form 2258, Depreservatlon Guide for Vehicles and Equipment, packed with technical manuals, and follow instructions given for putting unit In service.

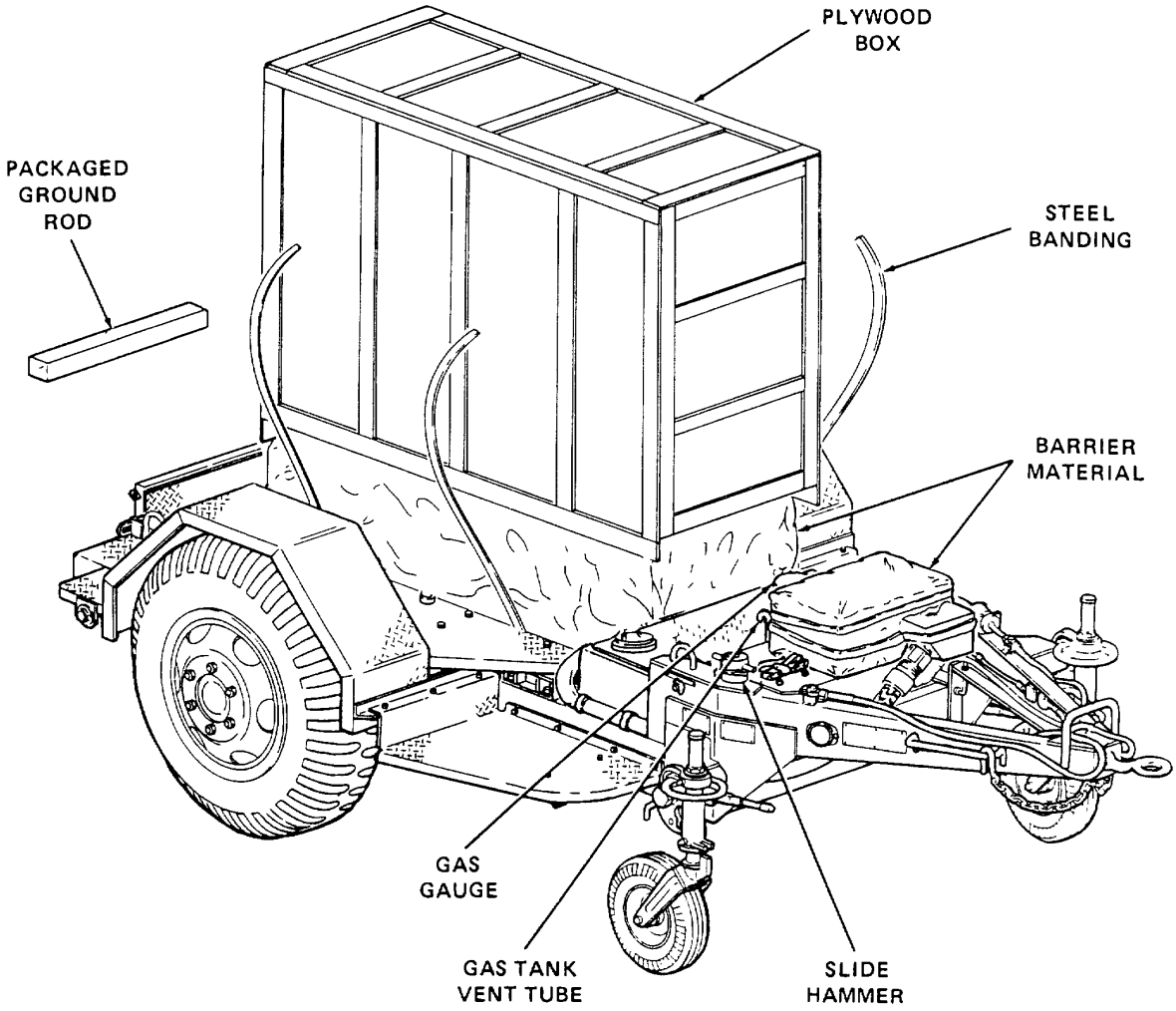


Figure 4-1. Unpacking Power Unit.

b. *Inspection and Servicing of Generator Set.* Refer to Service Upon Receipt of Materiel in TM 5-6115-465-12 for initial inspection and servicing procedures.

c. *Inspection and Servicing of Trailer.* Refer to Service Upon Receipt of Materiel in TM 9-2330-247-14&P for initial inspection servicing procedures.

4-2. Installation. (See figure 4-2.). The field configuration of the PU-789/M involves the use of two interconnected power units-a primary unit and a standby unit. Therefore, installation involves positioning both trailers, grounding both power units and interconnecting both power units.

a. *Positioning Power Unit*. Position each power unit on the work site as follows:

(1) Select an area as level as possible to install power unit and position trailer.

(2) Set trailer handbrakes.

(3) Deleted.

(4) Remove all cables from storage tray on primary power unit.

(5) On standby power unit, disconnect P3 power/control cable from J3 on adapter plate assembly. Install protector cap on cable connector P3.

WARNING

Do not operate generator set until power unit is properly grounded (paragraph 4-2, *b.*). Serious injury or death by electrocution can result from operating an ungrounded power unit.

Hazardous electrical voltage exists within system. Do not connect or disconnect cables while generator set power is ON.

CAUTION

Do not drop or drag connectors on hard surface or connectors may be damaged.

(6) Connect P10 connector on auxiliary cable to J10 on primary power unit PDU. Connect P11 on auxiliary cable to J3 on standby power unit adapter plate assembly

WARNING

Power/control cable weighs approximately 180 pounds (81 72 kg). Do not attempt to carry cable without assistance or personal injury may result.

(7) Connect P1 connector on 75-foot power/control cable to J1 on PDU. Connect P2 on cable to J2 on ICC or CRG.

(8) Connect P6 connector on control cable to J6 on PDU. Connect P5 on cable J5 on ICC or CRG.

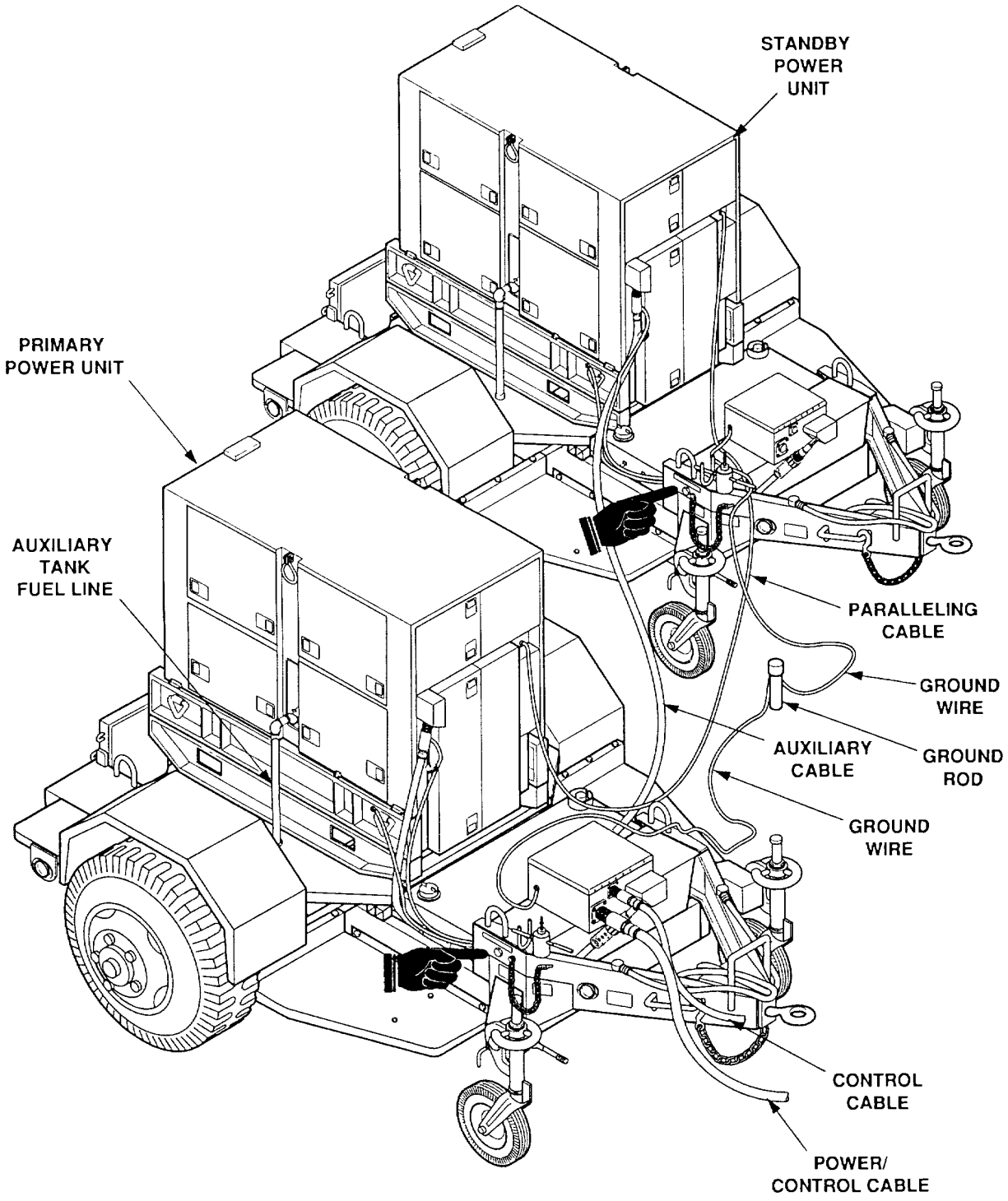


Figure 4-2. Installing Power Unit.

(9) Remove paralleling cable from storage box located inside generator set enclosure at curbside rear. Connect paralleling cable between primary and standby unit. Refer to TM 5-6115-465-12 for paralleling procedures.

(10) Deleted.

(11) Deleted.

(12) Close all doors on generator set enclosure except control panel doors and the two doors immediately below the control panel.

(13) Check that generator set fuel selector valve is set to AUXILIARY.

b. *Grounding*. Check that generator set, auxiliary fuel tank and PDU are grounded to GROUND TERMINAL stud on trailer frame. Remove power unit ground wire from its storage position on trailer next to PDU. Using ground wire, connect power unit GROUND on adapter plate assembly to a suitable ground as described below. The following sources of good ground are listed in order of preference. Connect the primary and standby units to the same ground rod.

WARNING

Be sure to ground both the primary power unit and standby unit generator sets.

NOTE

As a substitute for the supplied ground wire, any copper wire of at least No 6 AWG may be used.

(1) Ground rod. Drive ground rod a minimum of eight feet into earth. A ground rod must have a minimum diameter of 5/8-inch, if solid, or ¾-inch if pipe.

NOTE

It may be necessary to saturate the area around ground rod with water if soil conditions are dry.

(2) Ground plate. Ground power unit to a metal plate buried four feet deep. Ground plate should cover a minimum area of nine square feet.

(3) Underground water system. Ground power unit to one of the accessible pipes in an underground water system. Make certain underground pipe is made of metal and there is no insulation, such as a water meter, between ground wire and the earth.

Section II. MOVEMENT TO A NEW WORKSITE

4-3. Dismantling for Movement. Because the power unit is designed to be mobile, a minimum amount of effort is required to relocate to a new worksite. Procedures are as follows

a. Disconnect power unit from ICC and CRG.

b. Disconnect auxiliary power cable and paralleling cable connecting primary and standby power units.

c. On standby unit, remove protector cap from P3 connector on P3 power/control cable and connect cable to J3 on adapter plate assembly.

d. Disconnect ground wire from source of ground. Roll up ground wire and store on trailer next to the PDU using straps provided.

e. Using slide hammer, remove ground rod. Disassemble and clean ground rod and stow in storage tray. Return slide hammer to its storage position on front of trailer and secure with lock pin.

f. Install protector caps on cable connectors and store connectors in storage tray.

g. Stow any remaining authorized equipment in storage tray.

h. Close all doors on generator set enclosure.

i. Close and secure trailer tailgate.

j. Deleted.

k. Attach power unit to towing vehicle. Refer to TM 9-2330-247-14&P.

I. Release trailer handbrakes.

4-4. Reinstallation After Movement. After movement to a new worksite, install power unit in accordance with paragraph 4-2.

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

4-5. Tools and Equipment. A power source jumper cable is required to maintain the PU-789/M power unit. Refer to paragraph 4-26 for fabrication instructions, and to figure D-23 for parts information.

4-6. Maintenance Repair Parts. Repair parts and equipment for maintenance of this power unit are listed and illustrated in the repair parts and special tools list in Appendix D of this manual.

Section IV. LUBRICATION INSTRUCTIONS

4-7. General. Detailed instructions for the lubrication of the major components of the power unit are contained in the applicable Lubrication Orders (LO's). Refer to DA Pam 25-30 to ensure that the latest editions of the L O 's are used. This section contains lubrication instructions that are not included in the Lubrication Orders.

4-8. Generator Lubrication. Refer to TM 5-6115-465-12 for generator set Lubrication Order.

4-9. Trailer Assembly Lubrication.

WARNING

Clean parts in a well-ventilated area. Avoid inhalation of solvent fumes and prolonged exposure of skin to cleaning solvent. Wash exposed skin thoroughly. Dry cleaning solvent (PD-680) used to clean parts is potentially dangerous to personnel and property. Do not smoke or use near open flame or excessive heat. Flash point of solvent is 100°F to 1380F (380C to 590C).

NOTE

Before applying lubricant, clean area to be lubricated using PD-680 or equivalent.

a. *Trailer Lubrication*. Refer to TM 9-2330-247-14&P for Trailer Lubrication Order.

b. *Tailgate Lubrication*. The tailgate is a modification to the standard M353 trailer and, as such, does not appear in the associated LO. Lubricate the hinge block pivot pins and tailgate pin holes semiannually using OE lubricating oil.

c. *Power Distribution Unit Lubrication.* The power distribution unit is a component of the power unit end item added to the standard M353 trailer and, as such, does not appear in the trailer LO. Lubricate the cover hinge semiannually using OE lubricating oil.

Section V. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

NOTE

The PMCS chart In this section contains all necessary unit preventive maintenance checks and services for this equipment.

4-10. General. The trailer assembly and generator set must be inspected and serviced systematically to insure that the power unit Is ready for operation at all times. Inspection will allow defects to be discovered and corrected before they result in serious damage or failure. Table 4-1 contains a tabulated list of preventive maintenance checks and services to be performed by unit maintenance personnel. All of the unit PMCS on the trailer is scheduled to be performed semiannually. Unit PMCS on the generator set is scheduled monthly, semiannually or on a per-hours-of-operation basis. The running time meter on the control panel is used to determine the operating time of the generator set. Using the following as a guide, do the checks and services at the intervals shown. Observe all CAUTIONS and WARNINGS.

a. For PMCS performed on an operating time basis, perform your hourly (H) PMCS as close as possible to the time intervals indicated.

NOTE

For units in continuous operation, perform PMCS before starting operation. If continuous operation will extend service interval past that which is shown.

b. Perform your monthly (M) PMCS every month or 100 hours of generator set operating time.

c. Do your semiannual (S) PMCS once every six months.

d. If you discover a problem with the equipment, refer to Section VI, Troubleshooting. If you cannot correct the problem, refer to paragraph 4-12, Reporting Deficiencies.

4-11. Explanation of Columns. The following is a list of the PMCS table column headings with a description of the information found in each column.

a. *Item No*. This column shows the sequence in which to do the checks and services, and is used to identify the equipment area on the Equipment Inspection and Maintenance Worksheet, DA Form 2404.

b. *Interval*. This column shows when each check is to be done.

c. *Item to be Inspected*. This column identifies the general area or specific part where the check or service is to be done.

d. *Procedures*. This column lists the checks or service you have to do and explains how to do them.

4-12. Reporting Deficiencies. If you discover any problem with the equipment during PMCS that you are unable to correct, it must be reported Refer to DA Pam 738-750 and report the deficiency using the proper forms.

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

H-Hours of operation (As indicated) M-Monthly (100 hours) S-Semiannually (500 hours)

Item No.	H	M	S	Item to be Inspected	Procedures
					WARNING Before performing any maintenance that requires climbing on or under trailer set handbrakes and, chock wheels. Injury to personnel could result from trailer suddenly rolling. Generator sets must be shut down before performing PMCS on electrical cables. Failure to do so could result In death or serious injury.
1		•	•	Generator Set Exterior	Inspect generator set for fuel and oil leaks, loose or missing components and hardware, and unusual wear or deterioration.
2		•		Fuel Strainer and Filters	**NOTE** Fuel system must be above freezing temperature when draining water and sediment from strainer, filters, and tank. Open drains on fuel strainer, and primary and secondary fuel filters. Drain water and sediment into a suitable container. Allow to drain until fuel runs clean.
3		•		Fuel Tanks	Open drains on main fuel tank and day tank. Drain water and sediment into a suitable container. Allow to drain until fuel runs clean.
4			•	Fuel Pumps	Clean or replace, as necessary, fuel strainer in bottom of fuel pump.
5		•		Batteries	Perform a hydrometer test on batteries every 100 hours. Refer to TM 5-6115-465-12 for test procedures.

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

H-Hours of operation (As indicated) M-Monthly (100 hours) S-Semiannually (500 hours)

Item No.	H	M	S	Item to be Inspected	Procedures
6		•		V-Belts	Inspect for worn, frayed, oil soaked, or cracked belts. Check adjustment. Proper adjustment for fan belt is a deflection of ½ inch with application of 12-14 lb pressure midway between alternator and water pump pulley.
7		•		Fuel Filters	Replace filter elements.
8	300			Fuel Strainers	Clean fuel strainer.
9	300			Lubricating 011 and Filters	Change lubricating oil and filter. (Refer to L O).
10	300			Breather and Breather Tube	Inspect for damage. Clean breather and tube at oil change interval.
11	AR			Air Cleaner	Clean air cleaner element whenever necessary as indicated by air filter condition indicator light.
12			•	Taillights	Replace any broken or cracked lenses or defective bulbs.
13			•	Intervehicular Cable	Check for cuts, breaks, frayed wires, or damaged plug.
14			•	Electrical Wiring	Inspect wiring harness, clips, connectors, shields, grommets and electrical boxes. Repair or replace as necessary.
15			•	Lunette	Check security of mounting Inspect ring for excessive wear.
16			•	Safety Chains	Inspect for broken links or missing chain(s).
17			•	Reflectors	Replace any cracked, broken, or missing reflectors
18				Data Plates and Markings	Make sure data plates are legible and securely mounted. Replace illegible data plates.

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

H-Hours of operation (As indicated) M-Monthly (100 hours) S-Semiannually (500 hours)

Item No.	H	M	S	Item to be Inspected	Procedures
19			•	Swivel Caster	Inspect swivel casters and associated frame mountings for breaks, cracks, bent members, or broken welds. Check for freedom of movement and lubricate as required.
20			•	Suspension Assemblies	a. Inspect shackles, bearings, pins, leaf springs and spring eyes for damage or broken parts. b. Inspect mounting brackets for cracks or loose or missing hardware.
21	Axle		•		a. Check for damaged axle tube. b. Check for loose or missing U-bolts or nuts.
22			•	Wheels and Tires	a. Check serviceability of tires as indicated in TM 9-2610-200-24. b. Tighten wheel stud nuts to 450 to 500 ft-lb (611 to 678 N·m).
23			•	Brakes	a. Inspect brake linings for wear. Replace if brake shoe lining is less than 1/8-inch (3 2 mm) thick. b. Inspect brake adjusting screw, retaining screw, retaining pins, and clips for corrosion and springs, wear. c. Inspect hydraulic wheel cylinders for leaks. d. Adjust brakes.
24			•	Wheel Bearings	Clean and repack wheel bearings.
25			•	Hydraulic Brake Hoses and Fittings	Inspect for dents, cracks, loose connections and leaks.

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

H-Hours of operation (As indicated)	M-Monthly (100 hours)	S-Semiannually (500 hours)

Item No.	H	M	S	Item to be Inspected	Procedures
26			•	Air Hoses, Reservoir and Fittings	Inspect for dents, cracks, loose connections, and leaks. Test for leaks by stopping towing vehicle's engine when air pressure is at a maximum and observing gauge. There should be no drop in the air pressure gauge within one minute.
27			•	Brake Master Cylinder	Check fluid level. Fill to ½ inch from top.
28 tailgate			•	Tailgate	Lubricate hinge block pivot pins and pin holes.
29			•	Power Distribution Unit	Lubricate cover hinge.
30			•	Trailer-Road Test	Perform road test paying special attention to items that were repaired or adjusted, in accordance with TM 9-2330-247-14&P.

Section VI. TROUBLESHOOTING

4-13. Power Unit Troubleshooting. Table 4-2 contains troubleshooting information for locating and correcting operating troubles which may develop in components unique to the power unit end item. Each malfunction is followed by a list of tests or inspections which will help determine probable cause and corrective actions to take. Perform the tests/inspections and corrective actions in the order listed. This manual cannot list all malfunctions that may occur, nor all tests or inspections or corrective actions. If a malfunction is not listed or cannot be corrected by listed corrective actions, notify your supervisor. Refer to TM 5-6115-465-12 for troubleshooting procedures applicable to the generator set. Refer to TM 9-2330-247-14&P for troubleshooting procedures applicable to the trailer.

WARNING

Make sure generator sets are shut down before performing voltage tests. Failure to observe this precaution can result in serious injury or death by electrocution.

NOTE

Some of the tests in table 4-2 require the use of a power source jumper cable. Refer to Appendix D, Section III for jumper cable fabrication data before performing troubleshooting.

When performing voltage tests, refer to the schematic diagram located on the inside of the power distribution unit cover.

Table 4-2. Troubleshooting.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

1. ICC/CRG DOES NOT RECEIVE POWER WHEN POWER UNIT GENERATOR SET IS TURNED ON.

Step 1. Make sure ICC/CRG ON-OFF switch is in ON position.

Turn ON-OFF switch to ON.

Step 2. Shut down generator set. Open PDU cover and generator set front curbside panel. Check P3 cable, power/control cable, control cable and P12, J11 wiring harness for good connections.

Tighten loose connections.

Step 3. Switch power source to alternate power unit (para 2-1).

If ICC/CRG still does not receive power, go to malfunction 2.

WARNING

Generator set must be shut down before performing all remaining troubleshooting procedures. Failure to observe this precaution can result in serious injury or death by electrocution.

CAUTION

Do not exceed voltage required for test being performed. Excessively high voltage may damage equipment.

Step 4. Shut down generator set and open PDU cover. Connect power source jumper cable to generator battery . If primary power unit is being tested, disconnect P3 from J3 and connect jumper cable positive (+) lead to P3 pin B and negative (-) lead to P3 pin D. If standby unit is being tested, disconnect P11 from J3 on standby unit and connect jumper cable positive lead to P11 pin B and negative lead to P11 pin D. Using multimeter, test for presence of 24 +3 VDC between TB1-3 and TB1-5.

a. If 24 +3 VDC is not present, go to step 5.

b. If 24 +3 VDC is present, go to step 7

Table 4-2. Troubleshooting.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

1. ICC/CRG DOES NOT RECEIVE POWER WHEN POWER UNIT GENERATOR SET IS TURNED ON (cont).

Step 5. Disconnect power source jumper cable from generator battery and perform continuity test on P3 cable (paragraph 4-21) for primary power unit, or P10, P11 cable (paragraph 4-19) and J10 wiring harness (paragraph 4-23 c) for standby power unit.

a. Replace defective cable or wiring harness (paragraph 4-22 or 4-24 c).

b. If P3 cable, P10, P11 cable and J10 wiring harness are not defective, go to step 6.

Step 6. Perform continuity test on J1 wiring harness (paragraph 4-23 a) and J6 wiring harness (paragraph 4-23 b).

a. Replace defective wiring harness (paragraph 4-24 a or 4-24 b).

b. If wiring harnesses are not defective, go to step 7.

Step 7. Connect power source jumper cable to generator battery. Using multimeter, test for presence of 24 +3 VDC between TB1-1 and TB-13 for primary unit, or between TB1-1 and TB1-12 for standby unit.

a. If 24 +3 VDC is not present, go to step 8.

b. If 24 +3 VDC is present, go to step 9.

Step 8. Disconnect power source jumper cable from generator battery and perform continuity test on control relay/diodes wiring harness (paragraph 4-23 f).

a. Replace defective wiring harness (paragraph 4-24 f)

b. If wiring harness is not defective, go to step 9

Step 9. Disconnect power source jumper cable from generator battery. Disconnect P8 from J8 on contractor K1 (primary power unit), or P9 from J9 on contractor K2 (standby unit) . Connect jumper cable to generator battery. Using multimeter, test for 24 +3 VDC between pins A and B on P8 or P9, as applicable.

a. If 24 +3 VDC is not present, go to step 10.

b. If 24 +3 VDC is present when testing primary power unit, notify higher level of maintenance for K1 contractor replacement.

c. If 24 +3 VDC is present when testing standby power unit, go to step 11.

Table 4-2. Troubleshooting.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

1. ICC/CRG DOES NOT RECEIVE POWER WHEN POWER UNIT GENERATOR SET IS TURNED ON (cont).

Step 10. Disconnect power source jumper cable from generator battery and perform continuity test on P8 wiring harness (paragraph 4-23 d) or P9 wiring harness (paragraph 4-23 e), as applicable.

Replace defective wiring harness (paragraph 4-24 d or 4-24 e).

NOTE

Step 11 applies to malfunctions in the standby power unit only.

Step 11. Using multimeter, test for presence of 24 +3 VDC between contacts A2 on K1 and K2, between contacts B2 on K1 and K2, and between contacts C2 on K1 and K2.

a. Replace any defective leads between K1 and K2.

b. Troubleshoot generator set.

c. Notify higher level of maintenance for K2 contractor replacement.

2. BOTH POWER UNITS FAIL TO PROVIDE POWER TO ICC/CRG.

Step 1. Make sure ICC/CRG ON-OFF switch is in ON position.

Turn ON-OFF switch to ON.

Step 2. Remove two screws and two washers and remove K3 relay from relay socket. Connect power source jumper cable to generator battery. Using multimeter test for presence of 24 ±3 VDC 8 relay socket between XK3-2 and XK3-7.

a. If 24 +33 VDC is not present, disconnect jumper cable from battery and replace wire (TB1-5 to K3-2).

b. If 24 +33 VDC is present, replace relay (para 4-25).

Step 3. Disconnect power source jumper cable from generator battery. Disconnect control cable connector at ICC/CRG. Connect power source jumper cable to generator battery. Using multimeter, test for presence of 24 +3 VDC at connector between pins S and L or between pins Q and L.

a. If 24 +3 VDC is not present, go to step 4.

b. If 24 +33 VDC is present, go to step 5.

Table 4-2. Troubleshooting.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
2. BOTH POWER UNITS FAIL TO PROVIDE POWER TO ICC/CRG (cont).
Step 4. Disconnect power source jumper cable from generator battery. Disconnect control cable from PDU connector J 6, and perform continuity test on cable (paragraph 4-20).
a. Replace defective control cable.
b. If cable is not defective, go to step 5.
Step 5. Disconnect power/control cable from ICC/CRG and PDU connector J1, and perform continuity test on cable (paragraph 4-19).
Replace defective cable
3. APPROPRIATE GENERATOR ON-LINE INDICATOR DOES NOT LIGHT AT ICC/CRG CONTROL PANEL.
Step 1. Disconnect control cable from ICC/CRG and PDU connector J6, and perform continuity test on cable (paragraph 4-20).
a. Replace defective cable.
b. If cable is not defective, go to step 2.
Step 2. Disconnect control cable from PDU connector J6 and disconnect P8 from J8 on K1 contractor (for primary power unit), or P9 from J9 on K2 contractor (for standby unit) . Using multimeter, check continuity between J6 pin G and TB1-9 and between TB1-9 and P8 pin H (for primary power unit), or between J6 pin G and TB1-10 and between TB1-10 and P9 pin H (for standby unit).
a. Replace defective J6 wiring harness (paragraph 4-24 b), P8 wiring harness (paragraph 4-24 d), or P9 wiring harness (paragraph 4-24.e), as applicable.
b. If cables are not defective, go to step 3.
Step 3. Disconnect P3 from J3 (for primary power unit) or P11 from J3 (for standby unit) . Using multimeter, check continuity between P3 pin H and TB1-17 and between TB1-17 and P8 pin G (for primary power unit), or between P11 pin H and TB1-18 and between TB1-18 and P9 pin G (for standby unit).
a. If continuity does not exist between P3 pin H and TB1-17, replace P3 cable (paragraph 4-22).

Table 4-2. Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

3. APPROPRIATE GENERATOR ON-LINE INDICATOR DOES NOT LIGHT AT ICC/CRG CONTROL PANEL (cont).

   b. If continuity does not exist between TB1-17 and P8 pin G, replace P8 wiring harness (paragraph 4-24.d).

   c. If continuity does not exist between P11 pin H and TB1-18, disconnect P10 from PDU connector J10 and check continuity from P11 pin H to P10 pin H. If continuity does not exist, replace P10, P11 auxiliary cable. If continuity does exist, replace J10 wiring harness (paragraph 4-24 c).

   d. If continuity does not exist between TB1-18 and P9 pin G, replace P9 wiring harness (paragraph 4-24 e).

4. ICC/CRG LOW FUEL LIGHT GIVES FALSE LOW FUEL WARNING.

   Step 1. Disconnect P4, P7 fuel cable from adapter plate assembly and fuel tank. Using multimeter, check continuity between J4 pin A and J7 pin C.

   a. If continuity exists, cable is shorted Replace cable.

   b. If continuity does not exist, go to step 2.

   Step 2. Using multimeter, check continuity between J4 pin A and TB2-5.

   a If continuity exists, J4 wiring harness is shorted. Notify higher level of maintenance for wiring harness replacement or repair.

   b. If continuity does not exist, go to step 3.

   Step 3. Disconnect control cable from ICC/CRG and PDU connector J6. Using multimeter, check continuity between pin F on one connector and pin L on opposite connector.

   a. If continuity exists, control cable is shorted Replace cable.

   b. If continuity does not exist, notify higher level of maintenance for fuel sensor replacement.

Table 4-2. Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

5. ICC/CRG LOW FUEL WARNING LIGHT DOES NOT GO ON WHEN FUEL LEVEL DROPS BELOW 13 GALLONS.

Step 1. Disconnect P4, P7 fuel cable from fuel tank and adapter plate assembly. Using multimeter, check continuity between P4 pin A and P7 pin A, and between P4 pin C and P7 pin C.

a. If continuity does not exist between both pairs of test points, replace cable.

b. If fuel cable is not defective, go to step 2.

Step 2. Disconnect P12 from J41 on generator set and disconnect J3 from P3 (primary power unit) or P11 (standby unit). Using multimeter, check continuity between J4 pin A and P12 pin D, and between J4 pin C and J3 pin F.

a. If continuity does not exist between either pair of test points, replace wiring harness (para 4-18) or notify higher level of maintenance for repair.

b. If wiring harnesses are not defective, go to step 3.

Step 3. Disconnect control cable from PDU connector J6. Using multimeter, check continuity between J6 pin F and P3 (primary power unit) or J10 (standby unit) pin F.

a. If continuity does not exist, go to step 4.

b. If continuity exists, go to step 5.

Step 4. Check continuity between P3 pin F and TB1-16 (primary power unit) or between J10 pin F and TB1-15 (standby unit), check continuity between TB1-15 or TB1-16 and CR1 pin A or CR2 pin A, as applicable, check continuity between CR1 pin B or CR2 pin B and TB1-14, check continuity between TB1-14 and J6 pin F.

a. If continuity does not exist between P3 or J10 pin F and TB1, replace P3 cable (paragraph 4-22) or J10 wiring harness (paragraph 4-24.c).

b. If continuity does not exist between TB1-14, TB1-15 or TB1-16 and CR1 or CR2, replace control relay/diodes wiring harness (paragraph 4-24.f).

c. If continuity does not exist between TB1-14 and J6 pin F, replace J6 wiring harness (paragraph 4-24.b).

d. If continuity exists between each pair of test points, go to step 5.

Table 4-2. Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION	
5. ICC/CRG LOW FUEL WARNING LIGHT DOES NOT GO ON WHEN FUEL LEVEL DROPS BELOW 13 GALLONS (cont)	
Step 5. Disconnect control cable from ICC/CRG and PDU connector J6 Check continuity between pins F on each connector, and between pins L on each connector	
a. Replace defective control cable	
b. Notify higher level of maintenance	

Section VII. RADIO INTERFERENCE SUPPRESSION

4-14. **General Methods Used to Attain Proper Suppression**. Essentially, suppression is attained by providing a low resistance path to ground for stray currents The methods used include shielding ignition, cables and high-frequency wires, grounding the frame with bonding straps, and using filtering systems

4-15. **Radio Interference Suppression Components**. Most of the component parts on the power unit end Item, whose primary or secondary function is radio interference suppression, are on the generator set Refer to TM 5-6115-465-12 for location of radio interference suppression components on the generator set in addition to those components on the generator set, the P3 power/control cable, the power/control cable to the ICC/CRG, and the auxiliary cable are made of shielded cable, and EMI gaskets shield the PDU at the P3 cable point of entry into the PDU and the adapter plate assembly at J3 and J4

Section VIII. MAINTENANCE OF POWER UNIT ELECTRICAL SYSTEM

4-16. **General.** This section of the manual covers maintenance procedures authorized at unit level for components of the electrical system unique to the power unit end item Maintenance of electrical system components that are part of the generator set can be found in TM 5-6115-465-12 and -34 Maintenance of electrical system components that are part of the basic trailer can be found in TM 9-2330-247-14&P. When the power unit has been painted in camouflage, replacement parts must be painted to match authorized patterns and colors as specified in TB 43-0147 Application of camouflage paint shall be done in accordance with MIL-C-53072

WARNING

Before performing any maintenance that requires climbing on or under trailer, apply trailer handbrakes Injury to personnel could result from trailer suddenly rolling

Make sure generator set is shut down before performing the maintenance procedures described in this section Serious injury or death by electrocution can result if procedures are performed with power on

4-17. **Adapter Plate Assembly Testing**. Continuity testing is used to detect faults in the wiring harnesses, surge protectors, and cables associated with the adapter plate assembly. When performing continuity tests, refer to the wiring diagram, figure 4-3, for harness and cable routing information.

a. **J3 Wining Harness Testing.** (See figure 4-3.). Wiring harness J3 runs from connector P3 on the adapter plate assembly to the generator set load terminals and to terminal board TB2 on the adapter plate assembly.
   (1) Set multimeter for continuity testing.
   (2) Disconnect P3 cable connector from J3 connector.
   (3) Touch one multimeter test probe to connector J3 contact A and touch remaining test probe to load terminal LI on the generator set. Multimeter must indicate continuity. If it doesn't, there is an open in connector or associated wire.

   (4) Repeat step (3) for each remaining wire in wiring harness. Refer to figure 4-3 for correct ongoing and destination of each wire.

   (5) Disconnect the wire from L1. Touch one multimeter test probe to connector J3 contact A and touch the remaining test probe to J3 contact E. Multimeter must indicate resistance of infinity If it doesn't there is a short in the surge protector.

   (6) Disconnect the wire from L2. Touch one multimeter test probe to connector J3 contact C and touch the remaining test probe to J3 contact E. Multimeter must indicate resistance of infinity. If it doesn't, there is a short in the surge protector.
   (7) Disconnect the wire from L3. Touch one multimeter test probe to connector J3 contact G and touch the remaining test probe to J3 contact E. Multimeter must indicate resistance of infinity. If it doesn't, there is a short in the surge protector.

   (8) If an open is detected in wiring harness, or a short is detected in a surge protector, replace the adapter plate assembly (paragraph 4-18) or notify higher level of maintenance for repair.

b. **J4 Wining Harness Testing.** (See figure 4-3.). Wiring harness J4 runs from connector P4 on the adapter plate assembly to terminal board TB2.

   (1) Set multimeter controls for continuity testing.

   (2) Disconnect P4 cable connector from J4 connector.
   (3) Touch one multimeter test probe to connector J4 contact A and touch remaining probe to TB2 terminal 2. Multimeter must indicate continuity If it doesn't there is an open in connector or associated wire.

   (4) Touch one multimeter test probe to connector J4 contact C and touch second probe to TB2 terminal 5. Multimeter must indicate continuity If it doesn't there is an open in connector or wire.

   (5) If an open is detected in wiring harness, replace adapter plate assembly (paragraph 4-18) or notify higher level of maintenance for repair.

c. **P12, J11 Wiring Harness Testing.** (See figure 4-3.) Wiring harness P12, J11 runs between P41 and J41 on the generator set control system and circuit breaker and TB2 on the adapter plate assembly.

(1) Set multimeter controls for continuity testing.

(2) Disconnect connectors P12 and J11 from generator set.

(3) Check each wire in harness by touching one multimeter test probe to each contact on connector J1 1 or P12 and touching second probe to its associated contact on opposite connector or on TB2, as applicable. Refer to figure 4-3 for the correct origin and destination of each wire.

(4) If multimeter does not indicate continuity for each wire in harness, replace wiring harness or notify higher level of maintenance for repair.

(5) If replacement is required, disconnect wires from terminal board TB2 on adapter plate assembly Refer to figure 4-3 when installing repaired or replacement wiring harness.

d. **P4, P7 Low Fuel Cable Testing**. (See figure 4-3) Low fuel cable P4, P7 runs from connector J4 on the adapter plate assembly to fuel level sensor J7 on the fuel tank.

(1) Set multimeter controls for continuity testing.

(2) Disconnect cable from adapter plate assembly and fuel tank.

(3) Touch one multimeter test probe to connector P4 contact A and touch remaining probe to connector P7. contact A Multimeter must indicate continuity If it doesn't, there is an open in one or both connectors or in wire.

(4) With first probe still touching connector P4 contact A, touch second probe to P7 contacts B, C, and D In each of these positions, multimeter should not indicate continuity If it does, cable is shorted.

(5) Test for continuity between P4 on contact A and P4 connector housing, and between P7 contact A and P7. connector housing Multimeter should indicate no continuity in either of these positions.

(6) Repeat steps (3) through (5) for wire between P4 contact C and P7 contact C.

(7) If an open or short is detected in cable, replace cable or notify higher level of maintenance for repair.

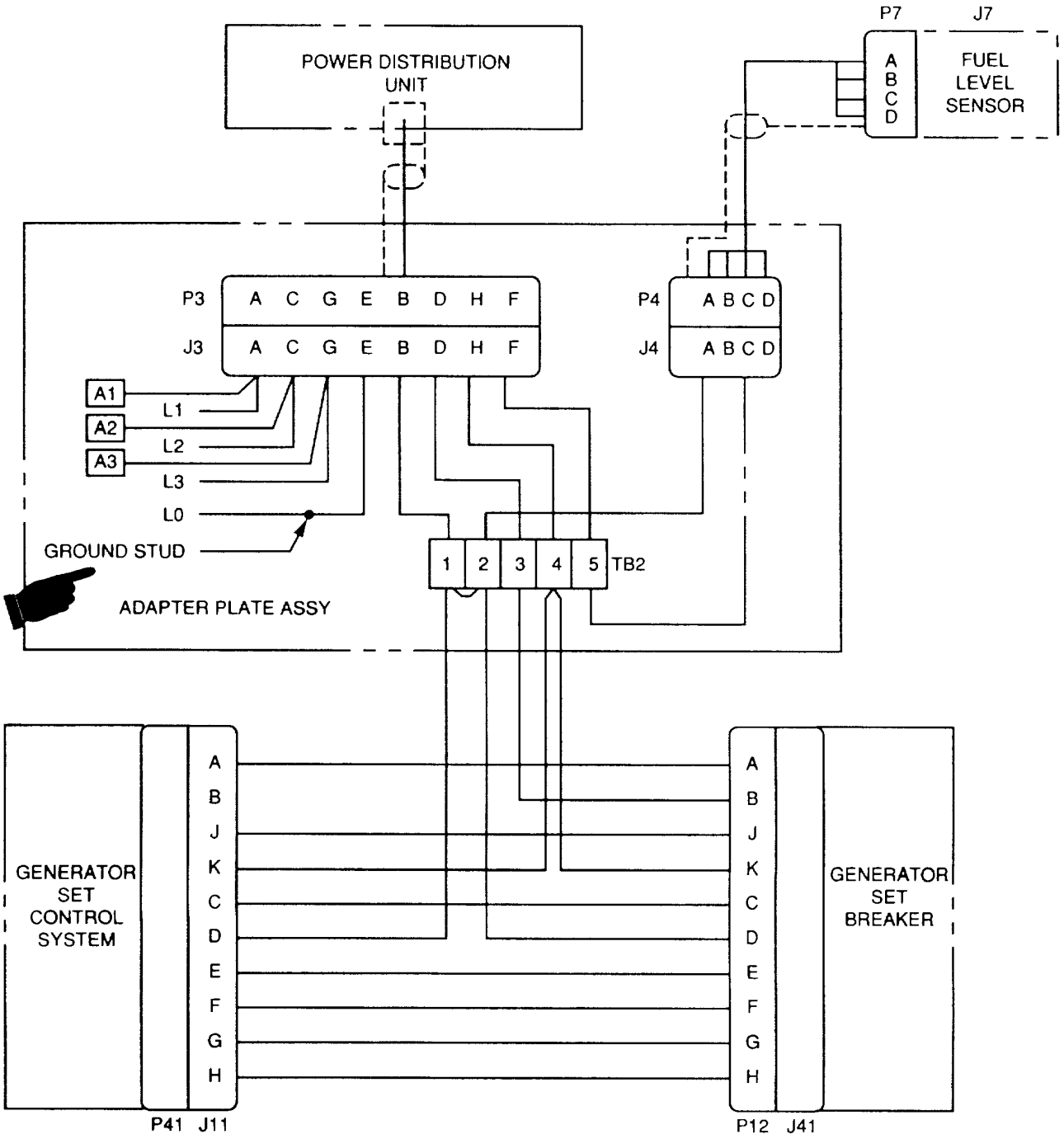


Figure 4-3. Adapter Plate Assembly Wiring Diagram.

4-18. **Adapter Plate Assembly Replacement**. (See figure 4-4).

a. **Removal**.

(1) Open side panels on generator set (1, figure 4-4).

(2) Unplug P3 power/control cable (2) and P4, P7 low fuel cable (3) from adapter plate assembly (4).

NOTE

P12, J11 wiring harness is not a component of adapter plate assembly and, therefore, must not be removed with the adapter plate assembly

(3) Disconnect ground cable from adapter plate assembly GROUND (10)

(4) Tag and disconnect P12, J11 wiring harness (5) from terminal board TB2 (6) on adapter plate assembly (4).

(5) Tag and disconnect J3 wiring harness (7) from generator set load terminals.

(6) Remove six screws (8) and six lockwashers (9) and remove adapter plate assembly (4) from generator set (1).

b. **Installation**.

(1) Position adapter plate assembly (4) on generator set (1) and fasten with six screws (8) and six lockwashers (9).

(2) Connect J3 wiring harness (7) to generator set load terminals. Refer to figure 4-3 for wiring information.

(3) Connect P12, J11 wiring harness (5) to terminal board TB2 (6). Refer to figure 4-3 for wiring information.

(4) Connect P3 power/control cable (2) and P4, P7 low fuel cable (3) to adapter plate assembly (4). Connect ground cable to adapter plate GROUND (10).

(5) Close side panels on generator set (1).

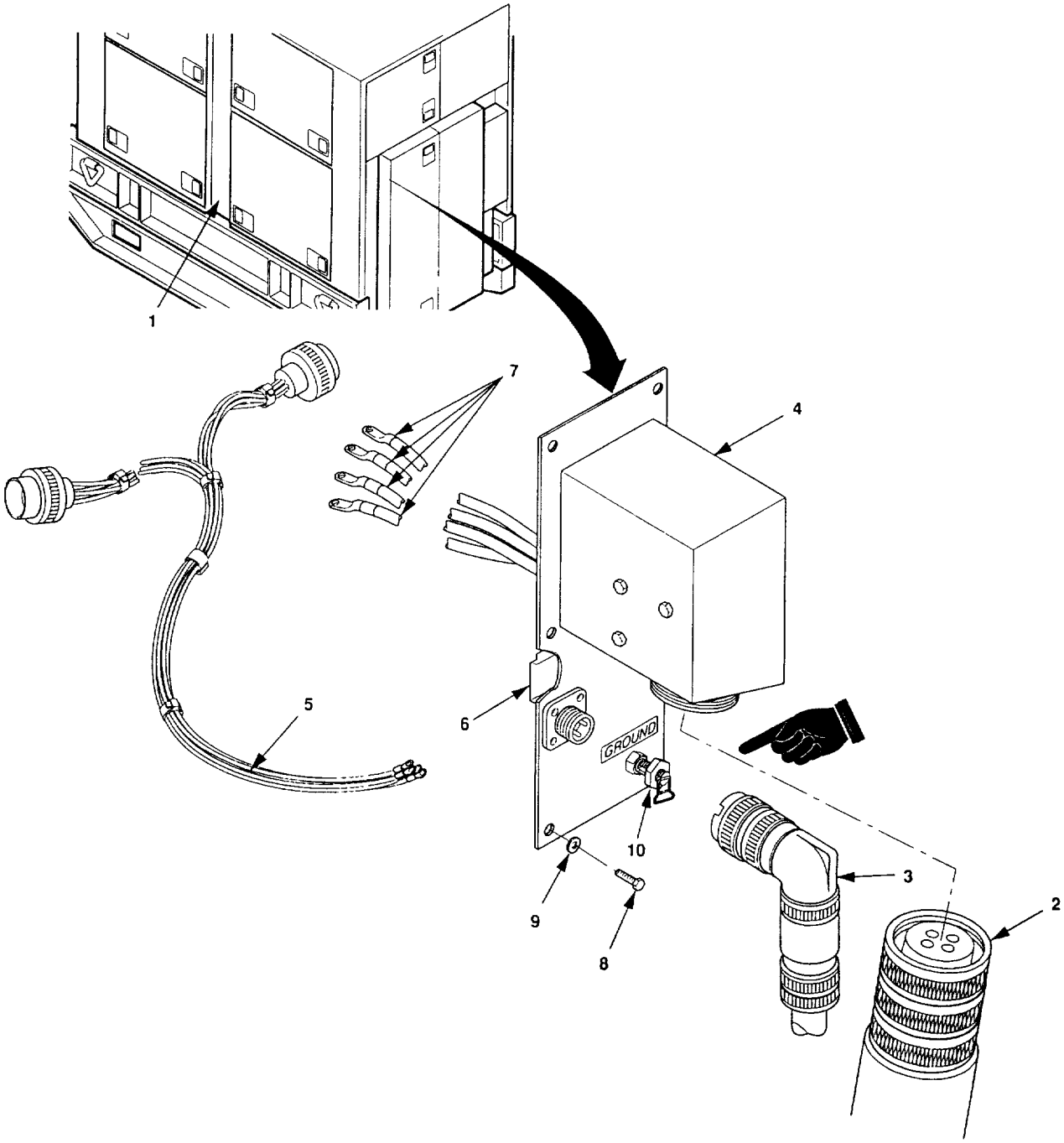


Figure 4-4. Adapter Plate Assembly Replacement.

4-19. **Power/Control Cable and Auxiliary Cable Testing**. (See figure 4-5.). The 75-foot power/control cable connects the PDU at J1 to the ICC or CRG. The 25-foot auxiliary cable connects the PDU at J10 to the standby power unit. Except for the length, these two cables are the same. A continuity test is used to detect faults in these cables. The procedure is the same for both cables.

a. Set multimeter controls for continuity testing.

b. Touch one multimeter test probe to contact A of one connector and touch remaining probe to contact A of connector at opposite end of cable Multimeter must indicate continuity If it doesn't, there is an open in one or both connectors or in wire

c. With one probe still at contact A of one connector, touch second probe to each remaining contact of second connector In each of these positions, multimeter should indicate greater than 10 ohms If reading is less, cable is shorted

d. With one probe still at contact A, touch second probe to connector housing Multimeter should indicate no continuity

e. Repeat steps b through d for each remaining wire In cable. Refer to figure 4-5 for correct ongoing and destination of each wire

f. If an open, short or ground fault is detected In cable, replace cable or notify higher level of maintenance

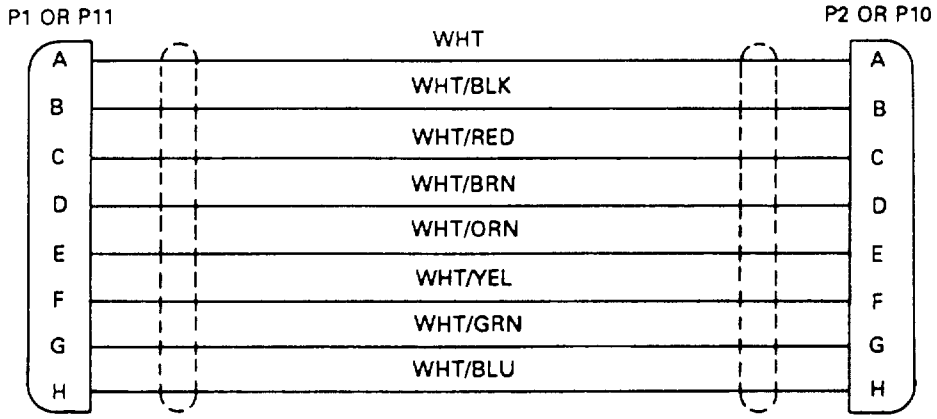


Figure 4-5. Power/Control Cable and Auxiliary Cable Wiring Diagram.

4-20. **Control Cable Testing**. (See figure 4-6). The control cable connects the PDU at J6 to the ICC or CRG. A continuity test is used to detect faults In the cable.

a. Set multimeter controls for continuity testing.

b. Touch one multimeter test probe to connector P5 contact A and touch remaining probe to connector P6 contact A. Multimeter must indicate continuity. If It doesn't, there is an open in one or both connectors or in wire.

c. With first probe still at P5 contact A, touch second probe to each remaining contact of P6. In each of these positions, multimeter should indicate no continuity If continuity exists, cable is shorted.

d. With first probe still at P5 contact A, touch second probe to connector housing. Multimeter should Indicate no continuity.

e. Repeat steps b through d for each remaining wire In cable Refer to figure 4-6 for correct ongoing and destination of each wire.

f. If an open or short is detected in cable, replace cable or notify higher level of maintenance for repair.

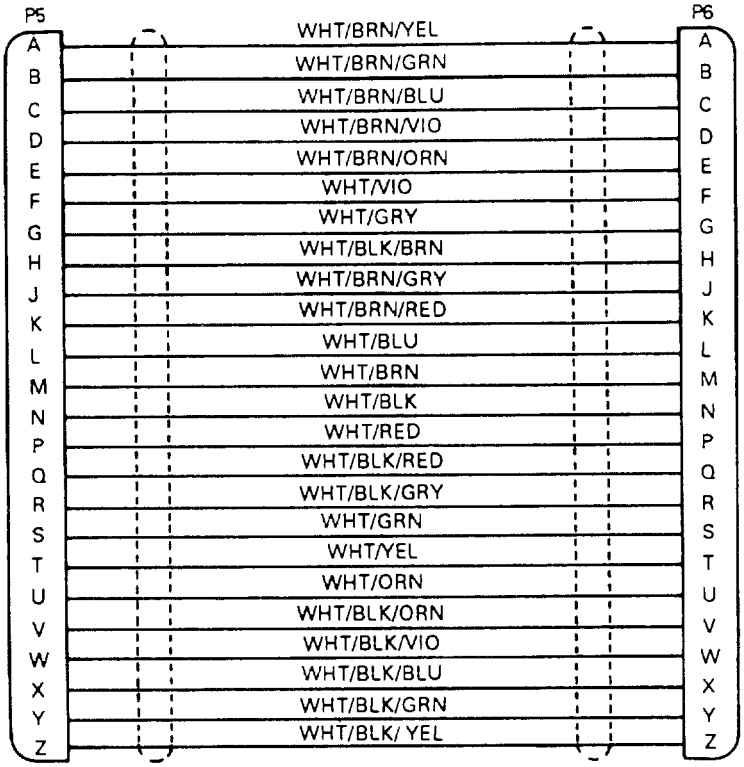


Figure 4-6. Control Cable Wiring Diagram.

4-21. **P3 Power/Control Cable Testing**. (See figure 4-7) The P3 power/control cable runs from the PDU to J3 on the adapter plate assembly A continuity test is used to detect faults In the cable.

a. Set multimeter controls for continuity testing.

b. Open cover latch on PDU and lift cover to allow access to cable wire terminals inside PDU

c. Disconnect P3 from adapter plate assembly.

d. Touch one multimeter test probe to connector P3 contact A. Touch remaining probe to wire terminal at contact A1 on PDU contactor K1. Multimeter must indicate continuity if it doesn't, there is an open in connector or wire.

e. With one test probe still at P3 contact A, touch second probe to each of the following terminal locations on the PDU terminal board TB1 contacts 1, 13, 16 and 17, contactor K1 contacts B1 and C1; and ground stud E1. In each of these positions, multimeter should indicate greater than 10 ohms. If reading is less, cable is shorted.

f. With one probe still at P3 contact A, touch second probe to connector housing Multimeter should indicate no continuity.

g. Repeat steps d through f for each remaining wire In cable Refer to figure 4-7 for correct ongoing and destination of each wire

h. If an open or short is detected in cable, replace cable (paragraph 4-22) or notify higher level of maintenance

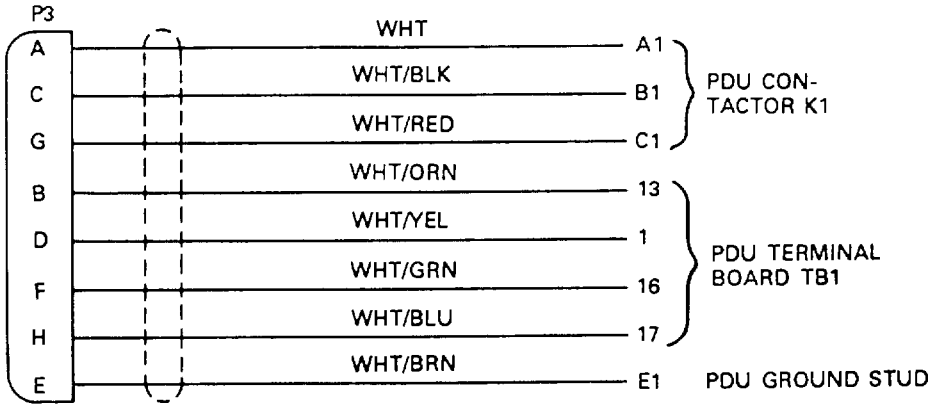


Figure 4-7. P3 Power/Control Cable Wiring Diagram.

4-22. **P3 Power/Control Cable Replacement**. (See figure 4-8).

a. **Removal.**

(1) Disconnect P3 connector (1, figure 4-8) from J3 connector on adapter plate assembly (2).

(2) Release latch and open cover (3) on PDU.

(3) Disconnect P3 cable wires from terminal board TB1 (4) contacts 1, 13, 16 and 17, and from ground stud E1 (5).

(4) Remove two screws (6), two washers (7) and K1 contactor cover (8). Tag and disconnect P3 cable wires from K1 contactor (9).

(5) Loosen locknuts (10) on inside and outside of PDU housing (11) and pull cable out of housing.

(6) Remove EMI gasket (12).

(7) Disconnect EMI sealing grip gland nut (13) from sealing grip interconnector (14), and slide gland nut above cable grip (15).

(8) Collapse cable grip (15) and slide cable grip away from interconnector (14). Slide gland washer (16) and rubber bushing (17) away from interconnector.

(9) Disconnect EMI sealing grip body (18) from interconnector (14) Remove body (18), nylon bushing (19), interconnector (14), rubber bushing (17), gland washer (16), cable grip (15) and gland nut (13) from cable.

(10) Remove three screws (20), three flat washers (21), three self-locking nuts (22) and three loop clamps (23) mounting cable to trailer frame. Remove loop clamps from cable.

b. **Installation**.

(1) Install loop clamps (23) on cable and fasten each clamp to trailer frame with one screw (20), one flat washer (21) and one self-locking nut (22).

(2) Slide gland nut (13) onto cable.

(3) Collapse cable grip (15) and slide cable grip onto cable. Stretch cable grip so that fitting is about two inches from end of cable outer jacket, and mesh is taut.

(4) Slide gland washer (16), rubber bushing (17) and interconnector (14) onto cable.

(5) Slide gland nut (13) over cable grip fitting, and connect interconnector (14) to gland nut (13).

(6) Slide nylon bushing (19) over cable and into interconnector (14).

(7) Roll back cable shielding over beveled edge of nylon bushing (19).

(8) Slide sealing grip body (18) over cable and connect to interconnector (14).

(9) Slide EMI gasket (12) and one locknut (10) onto cable. Feed wires through opening in PDU housing (11) and secure with locknut (10).

(10) Connect cable wires to terminal board TB1 (4), ground stud (5) and K1 contactor (9). Replace contactor cover (8). Refer to figure 4-7 for correct termination of each wire.

(11) Close and secure cover (3).

(12) Connect P3 connector (1) to J3 connector on adapter plate assembly (2).

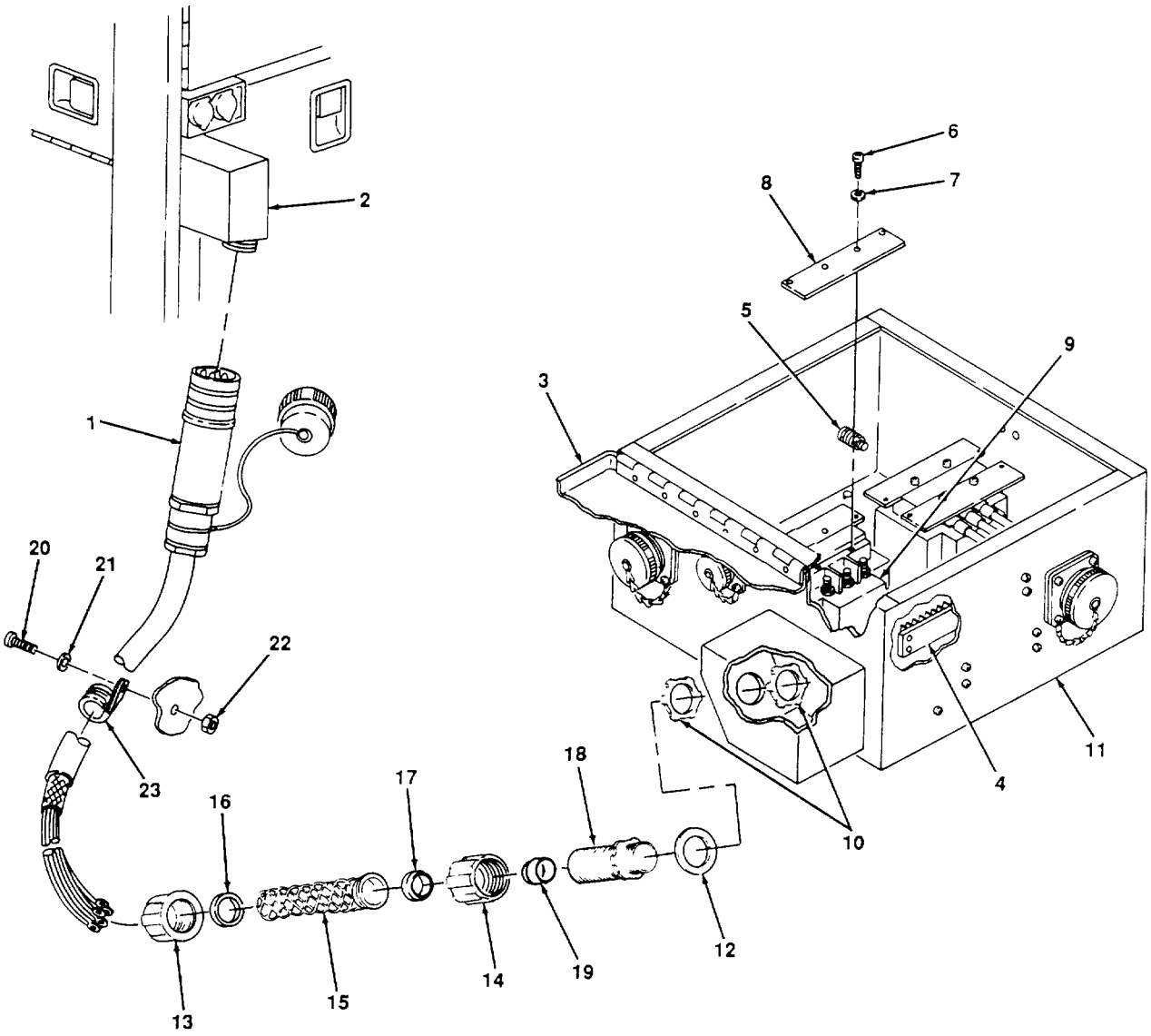


Figure 4-8. P3 Power/Control Cable Replacement.

4-23. **PDU Wiring Harness Testing**. (See figure 4-9). Continuity testing is used to detect faults in the PDU wiring harnesses. When performing continuity tests, refer to the wiring diagram, figure 4-9, for wire routing information.

WARNING

Make sure generator set is shut down before performing tests. Serious injury or death by electrocution can result if tests are performed with power on.

NOTE

In order to perform the following tests, the PDU cover must be open.

a. **J1 Wiring Harness Testing.** Wiring harness J1 runs from connector J1 to terminal board TB1, contactor K1 and ground stud E1.

(1) Set multimeter controls for continuity testing.

(2) Touch one multimeter test probe to connector J1 contact A and touch remaining test probe to K1 contact A2. Multimeter must indicate continuity If it doesn't, there is an open in connector or wire.

(3) Repeat step (2) for each remaining wire in harness. Refer to figure 4-9 for correct ongoing and destination of each wire.

(4) If an open is detected in wiring harness, replace wiring harness (paragraph 4-24) or notify higher level of maintenance for repair.

b. **J6 Wiring Harness Testing.** Wiring harness J6 runs from connector J6 to terminal board TB1.

(1) Set multimeter controls for continuity testing.

(2) Touch one multimeter test probe to connector J6 contact L and touch remaining test probe to TB1 contact 2. Multimeter must indicate continuity If it doesn't, there is an open in connector or wire.

(3) Repeat step (2) for each remaining wire in harness. Refer to figure 4-9 for correct ongoing and destination of each wire.

(4) If an open is detected in wiring harness, replace wiring harness (paragraph 4-24) or notify level of maintenance for repair.

c. **J10 Wiring Harness Testing.** Wiring harness J10 runs from connector J10 to terminal board TB1, contactor K2 and ground stud E1.

(1) Set multimeter controls for continuity testing.

(2) Touch one multimeter test probe to connector J10 contact A and touch remaining test probe to K2 contact Al. Multimeter must indicate continuity If it doesn't, there is an open in connector or wire.

(3) Repeat step (2) for each remaining wire in harness. Refer to figure 4-9 for correct origin and destination of each wire.

(4) If an open is detected in wiring harness, replace wiring harness (paragraph 4-24) or notify higher level of maintenance for repair.

d. **P8 Wring Harness Testing**. Wiring harness P8 runs from connector J9 on contactor K2 to terminal board TB1.

(1) Set multimeter controls for continuity testing.

(2) Touch one multimeter test probe to connector P8 contact A and touch remaining test probe to TB1 contact 13. Multimeter must indicate continuity. If it doesn't, there is an open in connector or wire.

(3) Repeat step (2) for each remaining wire in harness. Refer to figure 4-9 for correct ongoing and destination of each wire.

(4) If an open is detected in wiring harness, replace wiring harness (paragraph 4-24) or notify higher level of maintenance for repair.

e. **P9 Wiring Harness Testing.** Wiring harness P9 runs from connector J8 on contactor K1 to terminal board TB1.

(1) Set multimeter controls for continuity testing.

(2) Touch one multimeter test probe to connector P9 contact A and touch remaining test probe to TB1 contact 12. Multimeter must indicate continuity. If it doesn't, there is an open in connector or wire.

(3) Repeat step (2) for each remaining wire in harness. Refer to figure 4-9 for correct ongoing and destination of each wire.

(4) If an open is detected in wiring harness, replace wiring harness (paragraph 4-24) or notify higher level of maintenance for repair.

f. **Control Relay/Diodes Wiring Harness Testing.** The control relay/diodes wiring harness runs from terminal TB1 to relay K3 and diodes CR1 through CR4.

(1) Set multimeter controls for continuity testing.

(2) Touch one multimeter test probe to XK3 contact 2 and touch remaining test probe to TB1 contact 5. Multimeter must indicate continuity. If it doesn't, there is an open in wire, TB1 or XK3.

(3) Repeat step (2) for each remaining wire in harness. Refer to figure 4-9 for correct ongoing and destination of each wire.

(4) If an open is detected in wiring harness, replace wiring harness (paragraph 4-24) or notify higher level of maintenance for repair.

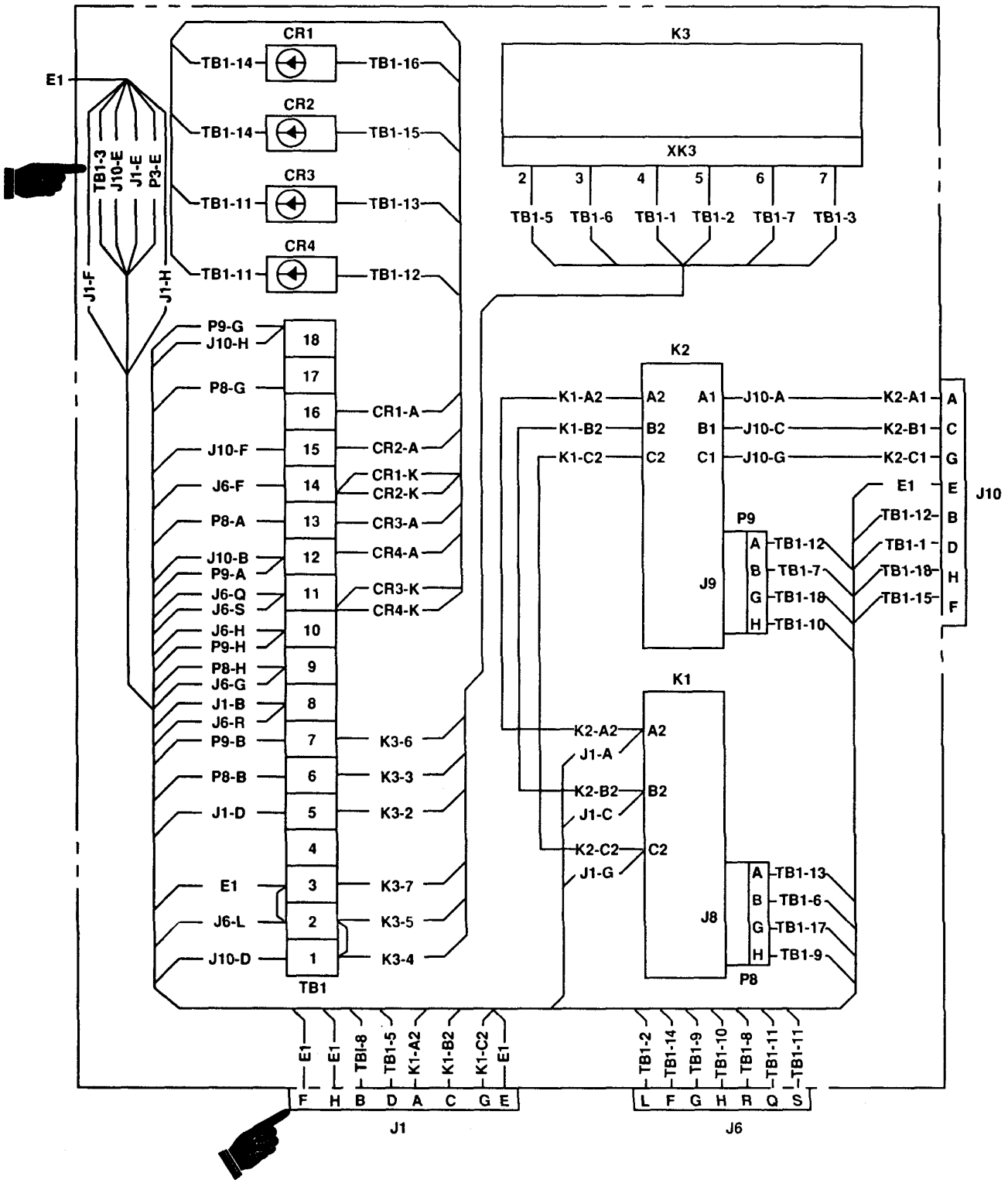


Figure 4-9. Power Distribution Unit Wiring Diagram.

4-24. **PDU Wiring Harness Replacement**.

a. **J1 Wiring Harness Replacement.** (See figures 4-9 and 4-10).

(1) **Removal.**

(a) Release cover latch and open PDU cover.

(b) Detach J1 wiring harness wires from terminal board TB1 (1, figure 4-10) and ground stud E1 (2).

(c) Remove two screws (3) and two washers (4) and remove K1 contactor cover (5) from terminals A2, B2 and C2. Detach one J1 wire from each of these terminals.

(d) Remove all tiedown straps binding J1 harness wires to J6 harness wires.

(e) Remove three nuts (6) and open three clamps (7) Remove two J1 wires.

(f) Remove four screws (8), four flat washers (9) and four nuts (10) and pull J1 wiring harness out of PDU housing (11). Remove gasket (12).

(g) Unscrew and remove connector cover (13) from connector J1 (14).

(2) **Installation.**

(a) Slide gasket (12) over harness wires and up against flange of connector (14).

(b) Feed wires through J1 opening in PDU housing (11).

(c) Seat flange of connector J1 (14) against housing (11) and fasten with four screws (8), four flat washers (9) and four nuts (10). Make sure tab of connector cover chain (14) is mounted to flange with lower right corner hardware.

(d) Install connector cover (13) on connector J1 (14).

(e) Using figure 4-9 for wire routing information, connect two 16 gauge wires to terminal board TB1 (1), two 12 gauge wires and one 6 gauge wire to ground stud E1 (2) and three 1 gauge wires to contactor K1 (15). Install K1 cover (5) using two screws (3) and two washers (4).

(f) Route two 16 gauge wires (to TB1) through clamps (7) and install nuts (6). Bind 16 gauge wires to J6 harness wires with tiedown straps.

(g) Close and secure PDU cover.

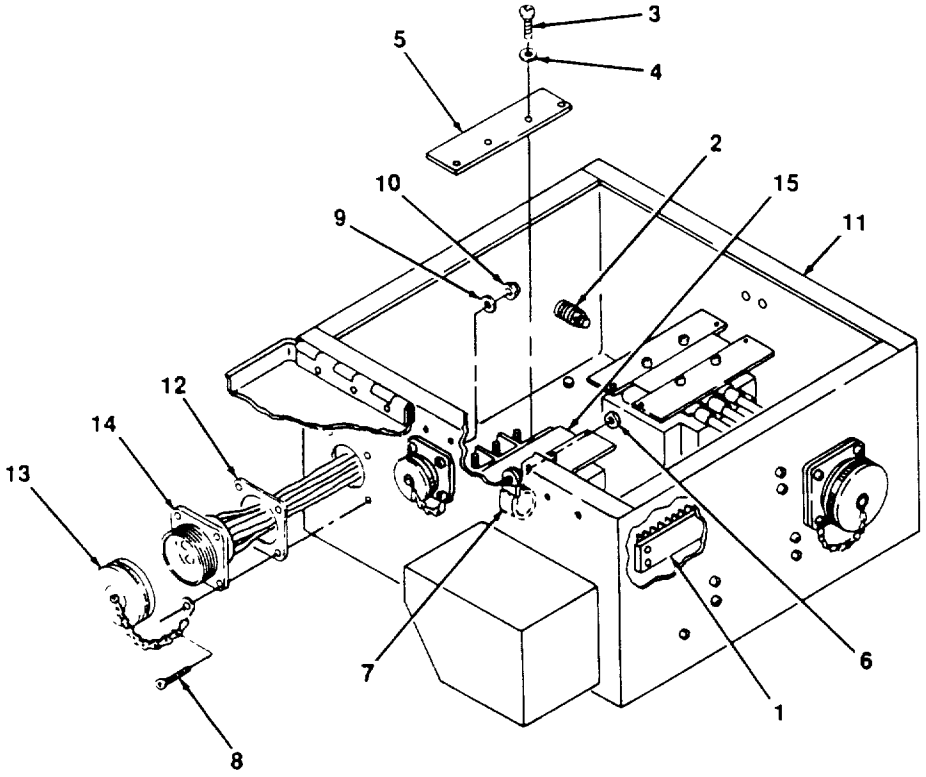


Figure 4-10. J1 Wiring Harness Replacement.

b. **J6 Wiring Harness Replacement**. (See figures 4-9 and 4-11).

(1) **Removal.**

(a) Release cover latch and open PDU cover.

(b) Detach J6 wiring harness wires from terminal board TB1 (1, figure 4-11).

(c) Remove all tiedown straps binding J6 harness wires to J1 harness wires.

(d) Remove two nuts (2) and open two clamps (3) Remove J6 wires.

(e) Remove four screws (4), four flat washers (5) and four nuts (6) and pull wiring harness out of PDU housing (7). Remove gasket (8).

(f) Unscrew and remove connector cover (9) from connector J6 (10).

(2) **Installation.**

(a) Slide gasket (8) over harness wires and up against flange of connector (10).

(b) Feed wires through J6 opening in PDU housing (7).

(c) Seat flange of connector J6 (10) against housing (7) and fasten with four screws (4), four flat washers (5) and four nuts (6). Make sure tab of connector cover chain (9) is mounted to flange with lower right corner hardware.

(d) Install connector cover (9) on connector J6 (10).

(e) Using figure 4-9 for wire routing information, connect wires to terminal board TB1 (1).

(f) Route wires through clamps (3) and install nuts (2). Bind J6 harness to J1 harness with tiedown straps.

(g) Close and secure PDU cover.

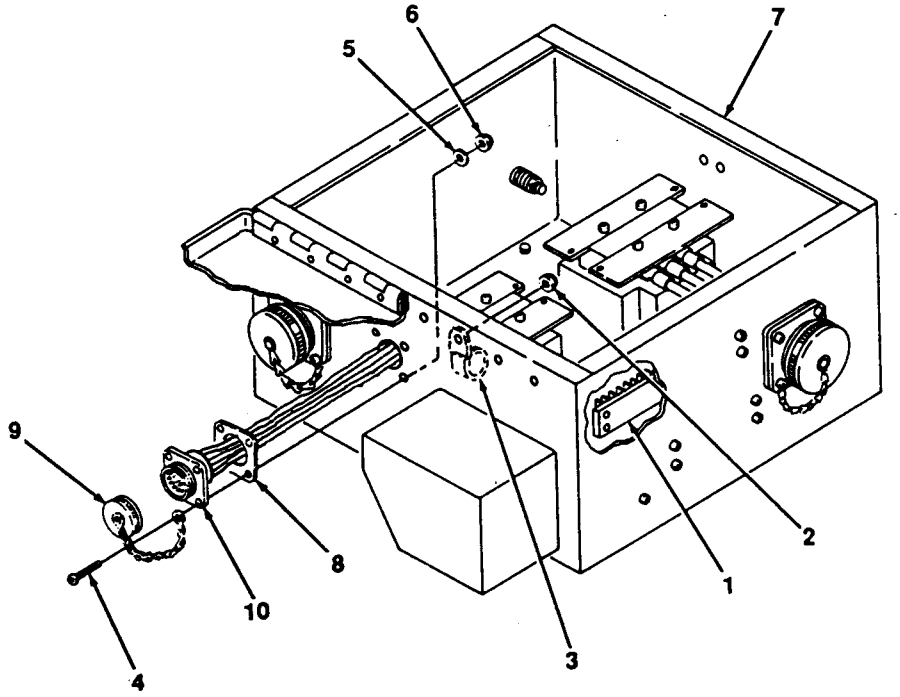


Figure 4-11. J6 Wiring Harness Replacement.

c. **J10 Wiring Harness Replacement**. (See figure 4-9 and 4-12.).

(1) **Removal.**

(a) Release cover latch and open PDU cover.

(b) Detach J10 wiring harness wires from terminal board TB1 (1, figure 4-12) and ground stud E1 (2).

(c) Remove two screws (3) and two washers (4) and remove K2 contactor cover (5) from terminals A1, B1, and C1. Detach J10 wires.

(d) Remove all tiedown straps binding J10 harness wires to other PDU wiring.

(e) Remove four screws (6), four flat washers (7) and four nuts (8) and pull J10 wiring harness out of PDU housing (9). Remove gasket (10).

(f) Unscrew and remove connector cover (11) from connector J10 (12).

(2) **Installation.**

(a) Slide gasket (10) over harness wires and up against flange of connector (12).

(b) Feed wires through J10 opening in PDU housing (9).

(c) Seat flange of connector (12) against housing (9) with four screws (6), four flat washers (7) and four nuts (8). Make sure tab of connector cover chain (11) is mounted to flange with lower corner hardware.

(d) Install connector cover (11) on connector J10 (12).

(e) Using figure 4-9 for wiring information, connect four 16 gauge wires to terminal board TB1 (1), one 6 gauge wire to ground stud E1 (2) and three 1 gauge wires to contactor K2 (13). Install K2 contactor cover (5) with two screws (3) and two washers (4).

(f) Bind four 16 gauge wires (to TB1) to adjacent wire bundles using tiedown straps.

(g) Close and secure PDU door.

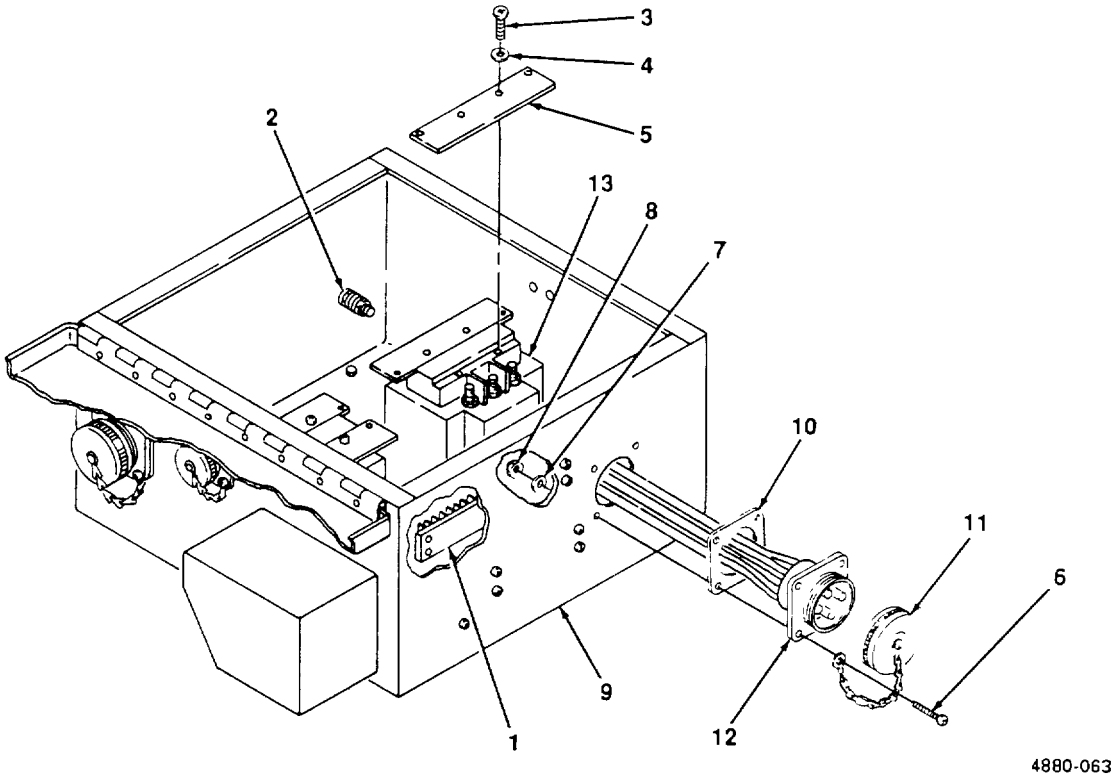


Figure 4-12. J10 Wiring Harness Replacement.

d. *P8 Wiring Harness Replacement.* (See figures 4-9 and 4-13).

(1) *Removal.*

(a) Release cover latch and open PDU cover.

(b) Remove nut (1, figure 4-13) and open clamp (2). Remove four P8 harness wires.

(c) Detach P8 wiring harness wires from terminal board TB1 (3).

(d) Unplug connector P8 (4) from connector J8 on contactor K1 (5).

(2) *Installation.*

(a) Plug connector P8 (4) into connector J8 on contactor K1 (5).

(b) Using figure 4-9 for wire routing information, connect harness wires to terminal board TB1 (3).

(c) Route wires through clamp (2) and install nut (1).

(d) Close and secure PDU cover.

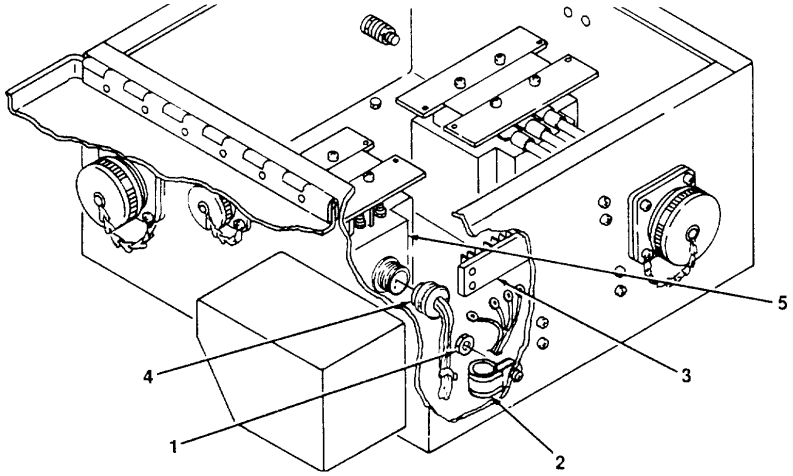


Figure 4-13. P8 Wiring Harness Replacement.

e. *P9 Wiring Harness Replacement*. (See figures 4-9 and 4-14).

(1) *Removal*.

(a) Release cover latch and open PDU cover.

(b) Remove nut (1, figure 4-14) and open clamp (2) Remove four P9 harness wires.

(c) Detach P9 wiring harness wires from terminal board TB1 (3).

(d) Unplug connector P9 (4) from connector J9 on contactor K2 (5).

(2) *Installation*.

(a) Plug connector P9 (4) into connector J9 on contactor K2 (5).

(b) Using figure 4-9 for wire routing information, connect harness wires to terminal board TB1 (3).

(c) Route wires through clamp (2) and install nut (1).

(d) Close and secure PDU cover.

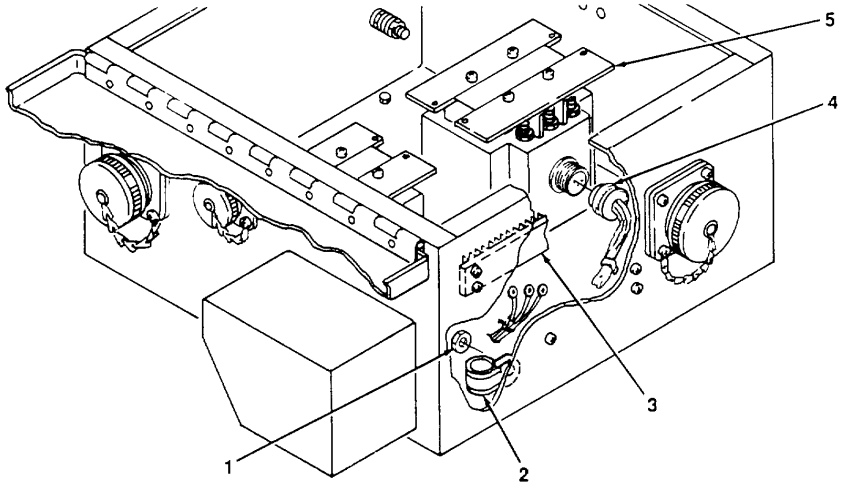


Figure 4-14. P9 Wiring Harness Replacement.

f. *Control Relay/Diodes Wiring Harness Replacement*. (See figures 4-9 and 4-15).

(1) *Removal*.

(a) Release cover latch and open PDU cover.

(b) Remove two screws (1, figure 4-15) and two washers (2) and unplug relay (3) from socket (4).

(c) Unsolder one harness wire from top of each of four diodes (5).

(d) Remove one wire with terminal (6) from bottom of each of four diodes (5).

(e) Detach opposite ends of harness wires from terminal board TB1 (7). (See figure 4-9 for termination of each wire).

(f) Remove all tiedown straps (8) binding control relay/diodes wiring harness to other PDU wire bundle.

(g) Remove two nuts (9) and unscrew two threaded mounting studs (10) from socket (4).

(h) Grasping socket (4), pull remaining five harness wires up through cutout in bracket (11).

NOTE

Screws (1), washers (2), mounting studs (10), nuts (9) and socket (4) are part of control relay/diodes wiring harness and must be kept with rest of harness.

(2) *Installation.*

(a) Push five harness wires soldered to socket (4) through socket cutout in bracket (11).

(b) Fasten socket (4) to bracket (11) with two mounting studs (10) and two nuts (9).

(c) Connect terminal (6) end of four wires to bottoms of diodes (5).

(d) Solder bare wire ends of four wires to tops of diodes (5).

(e) Connect opposite end of each wire to terminal board TB1 (7). (See figure 4-9 for wire routing information).

(f) Bind harness wires together using tiedown straps (8).

(g) Plug relay (3) into socket (4) and secure with two screws (1).

(h) Close and secure PDU cover.
(i)

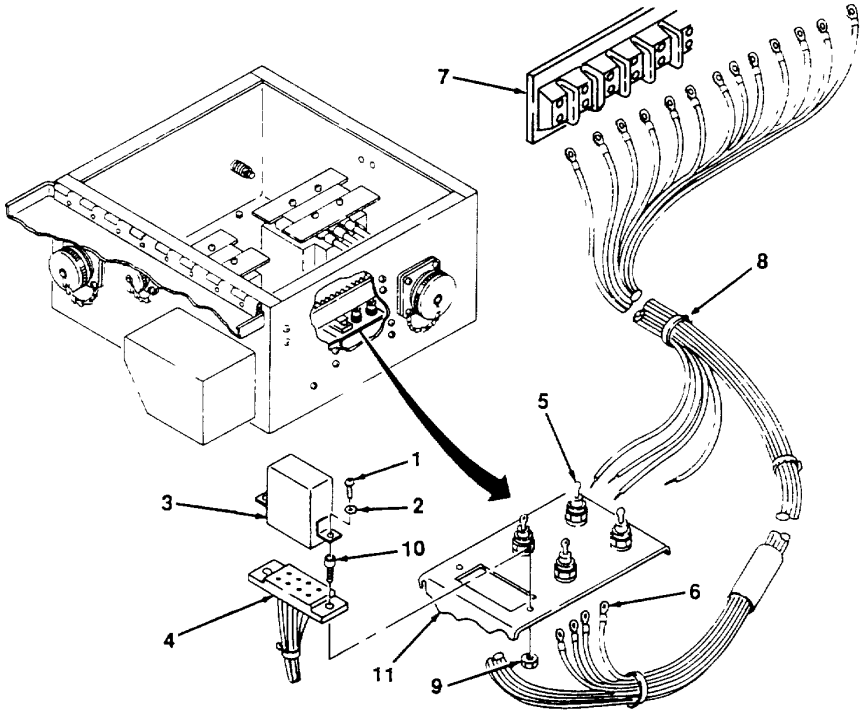


Figure 4-15. Control Relay/Diodes Wiring Harness Replacement.

4-25. PDU Relay K3 Testing and Replacement. (See figure 4-16).

a. *Removal*.

(1) Release cover latch and open PDU cover.

(2) Remove two screws (1, figure 4-16) and two washers (2).

(3) Unplug and remove relay (3) from socket (4).

b. *Testing*.

CAUTION

Do not exceed voltage required for test. Excessively high voltage may damage power source or relay.

(1) Make sure power source used for testing is turned off.

(2) Connect 1 amp, 28 VDC power source positive (+) lead to pin X1 on K3 relay (3).

(3) Connect power source negative (-) lead to pin X2 on relay (3).

WARNING

Hazardous voltages are present when using power source. Do not touch circuitry or metal on power source or leads on multimeter while power is on. Serious injury or death by electrocution can result.

(4) Turn power source on.

(5) Set multimeter controls for continuity testing and check continuity from K3 pins A2 to A1, and from pins B2 to B1.

(6) Turn power source off and check continuity from pins A2 to A3, and from pins B2 to B3.

(7) If multimeter reading is greater than 10 ohms between any pair of test points, replace relay (3).

(8) Disconnect power source from relay (3).

c. **Installation**.

(1) Plug relay (3) into socket (4).

(2) Secure relay (3) to socket (4) with two screws (1) and two washers (2).

(3) Close and latch PDU cover.

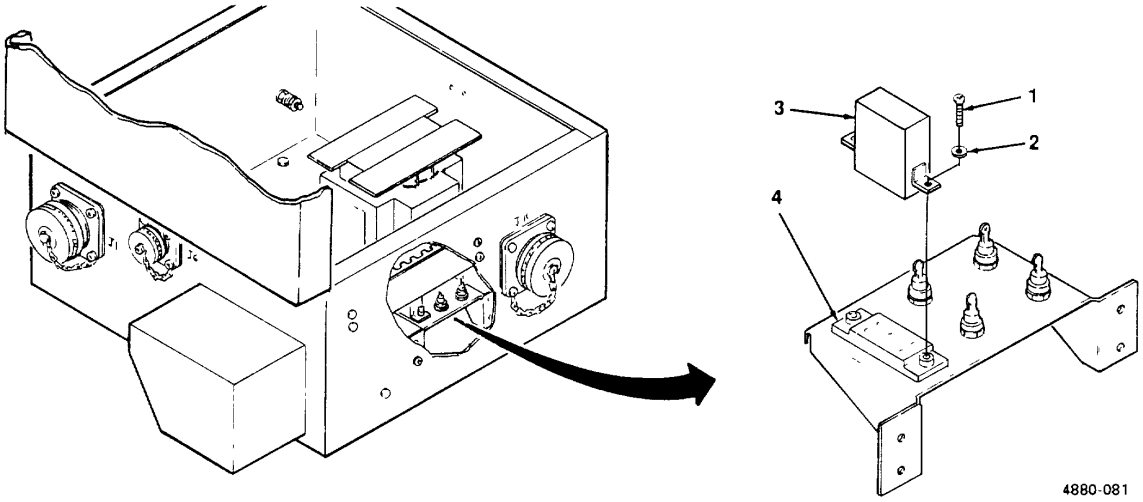


Figure 4-16. PDU Relay Replacement.

4-26. **Power Distribution Unit (PDU) Replacement** . (See figure 4-17).

WARNING

Make sure generator set is shut down before removing PDU. Failure to do so could result in death or serious injury.

a. *Removal*.

(1) Disconnect control cable (1, figure 4-17), power/control cable (2) and auxiliary cable (3) from PDU connectors J1, J6 and J10. Replace connector covers on J1, J6 and J10.

(2) Disconnect P3 power/control cable (4) from PDU (5) (paragraph 4-22).

(3) Disconnect ground wire (6) from ground stud El (7) on PDU (5).

(4) Release cover latch and open PDU cover (8).

(5) Remove four screws (9), eight flat washers (10) and four nuts (11) and remove PDU (5) from trailer forward floor plate (12).

b. *Installation*.

(1) Position PDU (5) on trailer floor plate (12) so that mounting holes line up and connectors J1 and J6 are facing forward.

(2) Install four screws (9), with one flat washer (10) each, down through inside of PDU housing. Working under trailer, install one flat washer (10) and one nut (11) on each screw and tighten hardware.

(3) Close cover (8) and secure with latch.

(4) Connect ground wire (6) to PDU ground stud E1 (7).

(5) Connect P3 power/control cable (4) to PDU (5) (paragraph 4-22).

(6) If required, connect control cable (1) to J6, connect power/control cable (2) to J1, and connect auxiliary cable (3) to J10.

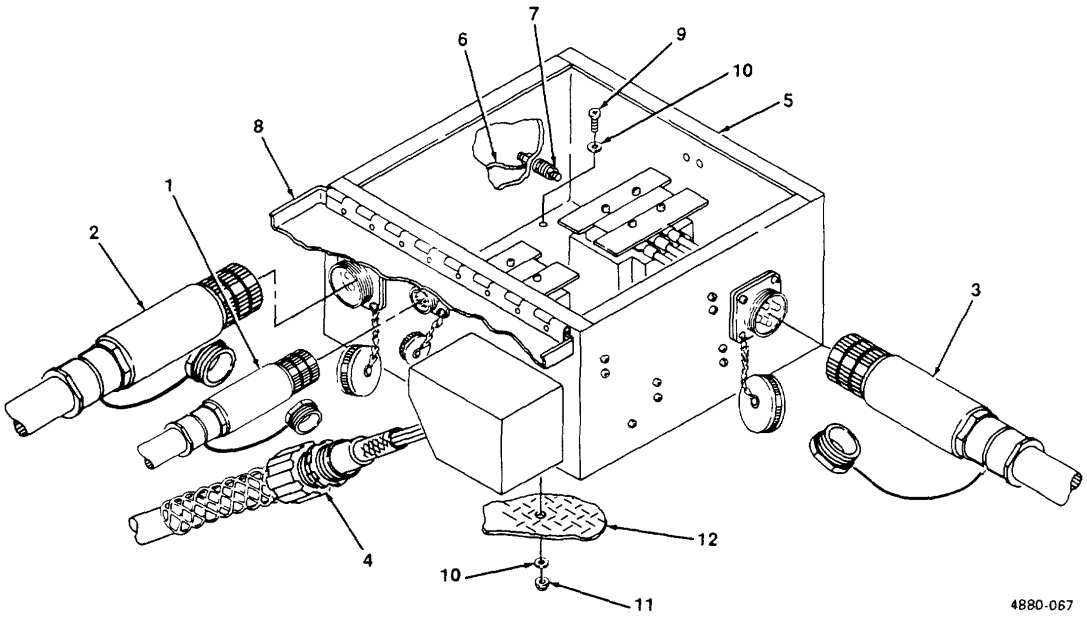


Figure 4-17. Power Distribution Unit Replacement.

4-27. Fabrication of Power Source Jumper Cable. (See table 4-3)

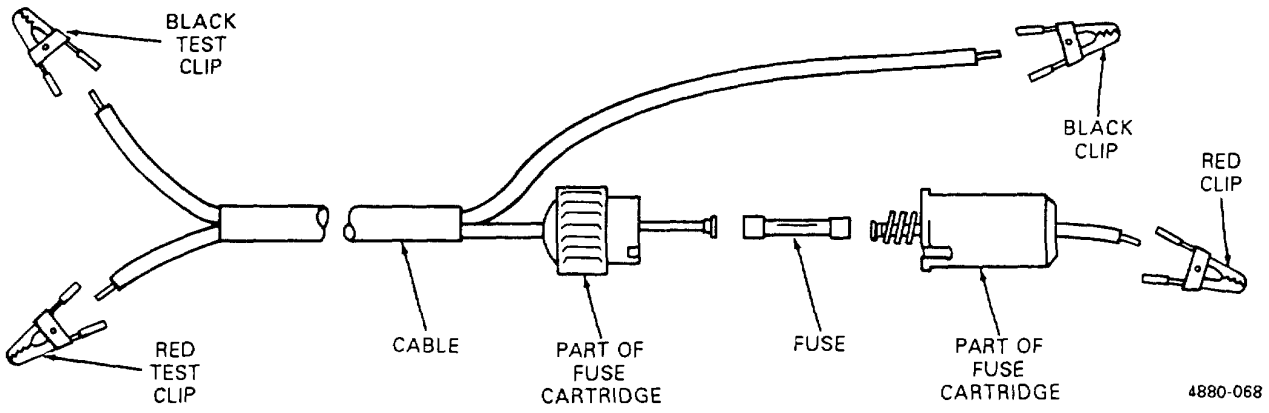
Table 4-3 Fabrication of Power Source Jumper Cable

Nomenclature	*Reference No	Material Required
Clip, Electrical (Black)	63CBLK	
Clip, Electrical (Red)	63CRED	
Cartridge, Fuse	FHN31G1	
Fuse, 5A SLOBLO	LO1323	
Cable, 2-Conductor, 12' Long	CO-02 LLF (2/16) 0230	
Clip, Electrical Test (Red)	48B	
Clip, Electrical Test (Black)	2711	

*Refer to figure D-23 for NSNs.

Fabrication Instructions:

1. Strip ½-inch of insulation at each end of cable and separate two conductors at each end.
2. At one end of cable, solder black test clip to one conductor and red test clip to second conductor.
3. At opposite end of cable, solder black clip to conductor bearing black test clip.
4. Insert fuse into cartridge and solder one end of cartridge to remaining conductor, and opposite end to red clip.



Section IX. MAINTENANCE OF POWER UNIT TRAILER

4-28. **General**. This section of the manual covers maintenance procedures authorized at unit level for components of the M353 trailer added when the trailer is used as part of the PU-789/M power unit. These components are not covered in the trailer maintenance manual. For all other unit maintenance procedures on the trailer, refer to TM 9-2330-247-14&P. When the power unit has been painted in camouflage, replacement parts must be painted to match authorized patterns and colors as specified in TB 43-0147. Application of camouflage paint shall be done in accordance with MIL-C-53072.

WARNING

Before performing any maintenance that requires climbing on or under trailer, chock trailer wheels injury to personnel could result from trailer suddenly rolling.

4-29. Front Step and Support Replacement. (See figure 4-18) The roadside and curbside front steps are symmetrical Replacement procedures are the same for both.

a. Removal.

(1) Remove three screws (1, figure 4-18), six flat washers (2) and three nuts (3) attaching front step (4) to fender (5).

(2) Remove four screws (6), eight flat washers (7) and four nuts (8) attaching front step (4) to trailer frame (9).

(3) Remove two screws (10), four flat washers (11) and two nuts (12) attaching front step (4) to support (13) and remove front step.

(4) Remove two screws (14), four flat washers (15) and two nuts (16) attaching support (13) to underside of trailer frame (9) and remove support.

b. Installation.

(1) Position support (13) on underside of trailer frame (9) and fasten with two screws (14), four flat washers (15) and two nuts (16).

(2) Position front step (4) on trailer frame (9) and fender (5).

(3) Fasten front step (4) to trailer frame (9) with four screws (6), eight flat washers (7) and four nuts (8).

(4) Fasten front step (4) to fender (5) with three screws (1), six flat washers (2) and three nuts (3).

(5) Fasten front step (4) to support (13) with two screws (14), four flat washers (15) and two nuts (16).

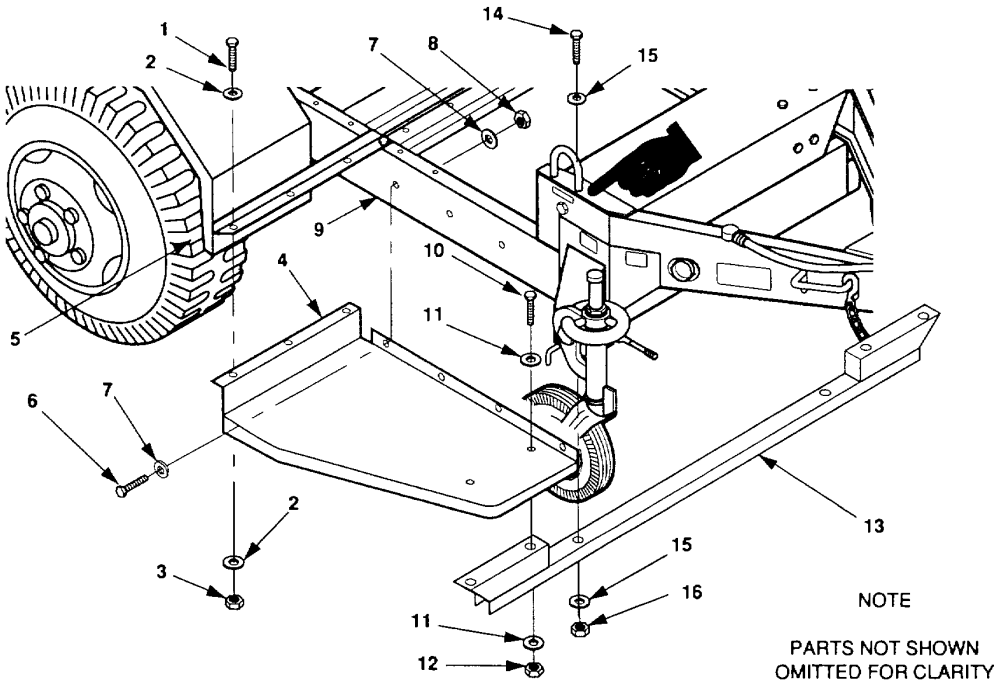


Figure 4-18. Front Step and Support Replacement.

4-30. Rear Step Replacement. (See figure 4-19). The roadside and curbside rear steps are symmetrical Replacement procedures are the same for both.

a. *Removal*.

(1) Remove three screws (1, figure 4-19), six flat washers (2) and three nuts (3) attaching rear step (4) to fender (5).

(2) Working under step, remove two screws (6), four flat washers (7) and two nuts (8) attaching rear step (4) to trailer (9). Remove step.

b. *Installation*.

(1) Position rear step (4) on trailer (9) and fender (5).

(2) Working under step (4), fasten step to trailer (9) with two screws (6), four flat washers (7) and two nuts (8).

(3) Fasten step (4) to fender (5) with three screws (1), six flat washers (2) and three nuts (3).

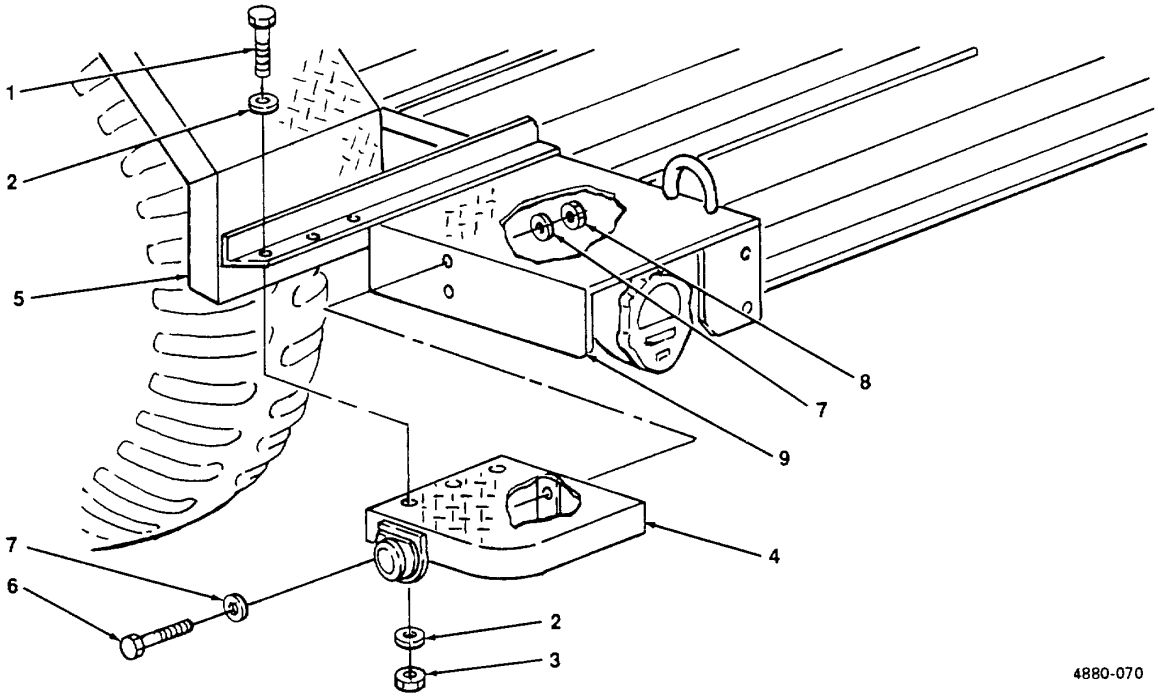


Figure 4-19. Rear Step Replacement.

4-31. Walkway and Fender Bracket Replacement (See figure 4-20). The roadside and curbside walkways and brackets are symmetrical Replacement procedures are the same for both, except where noted.

a. *Removal*.

NOTE

When removing roadside walkway, omit step (1).

(1) Disconnect fuel line (1, figure 4-20) from generator set. Feed fuel line down through walkway (2) Remove and retain grommet (3).

(2) Remove six screws (4), six flat washers (5) and six lockwashers (6) and lift walkway (2) off generator supports (7).

(3) Remove two screws (8), four flat washers (9), two lockwashers (10) and two self-locking nuts (11) attaching fender bracket (12) to trailer frame (13).

(4) Remove two screws (14), four flat washers (15), two lockwashers (16) and two self-locking nuts (17) attaching fender bracket (12) to fender (18) and remove fender bracket.

b. Installation**.**

(1) Position bracket (12) on trailer.

(2) Fasten bracket (12) to fender (18) with two screws (14), four flat washers (15), two lockwashers (16) and two self-locking nuts (17).

(3) Fasten bracket (12) to trailer frame (13) with two screws (8), two flat washers (9), two lockwashers (10) and two self-locking nuts (11).

(4) Position walkway (2) on generator supports (7) so that drilled holes in walkway line up with threaded inserts in generator support. Fasten with six screws (4), six flat washers (5) and six lockwashers (6).

NOTE

When installing roadside walkway, omit step (5).

(5) Install grommet (2) in fuel line hole. Feed fuel line (1) up through hole in walkway (2) and reconnect fuel line to generator set.

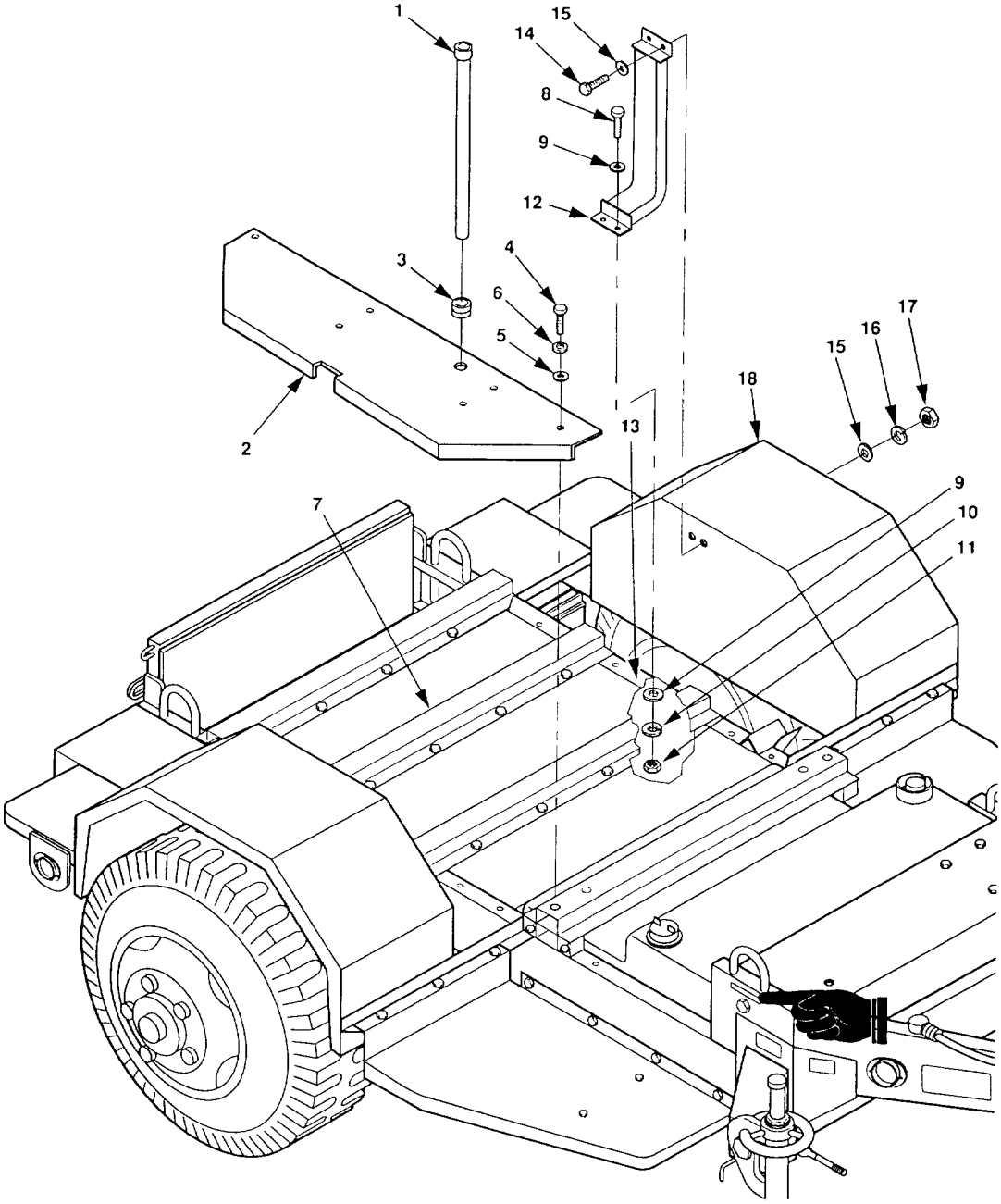


Figure 4-20. Walkway and Fender Bracket Replacement.

4-32. Tailgate and Hinge Block Replacement. (See figure 4-21).

a. *Removal***.**

CAUTION

Before removing hinge block, make sure both safety chains are hooked to tailgate to prevent tailgate from dropping when hinge block is removed.

(1) Remove two screws (1, figure 4-21) and two flat washers (2) from one hinge block (3). Push hinge block as far into recess as possible to disengage pin from tailgate. Take hinge block (3) off trailer (4).

(2) Unhook safety chains (5) from tailgate (6) and remove tailgate from second hinge block (3).

(3) If necessary, remove two screws and two flat washers and remove second hinge block.

b. *Installation***.**

(1) If both hinge blocks (3) were removed, install one hinge block on trailer (4) using two screws (1) and two flat washers (2).

NOTE

Roadside and curbside hinge blocks are mirror opposites. When installing hinge blocks, make sure hinge pin is pointing toward tailgate.

(2) Position tailgate (6) so that hinge block pin fits into pin hole at lower side edge of tailgate.

(3) Hook safety chains (5) to tailgate (6).

(4) Position second hinge block (3) inside recess and install but do not tighten upper screw (1) and flat washer (2).

(5) Rotate hinge block (3) away from tailgate (6) in recess to insert hinge block pin in tailgate.

(6) Install lower screw (1) and flat washer (2) . Tighten all hardware.

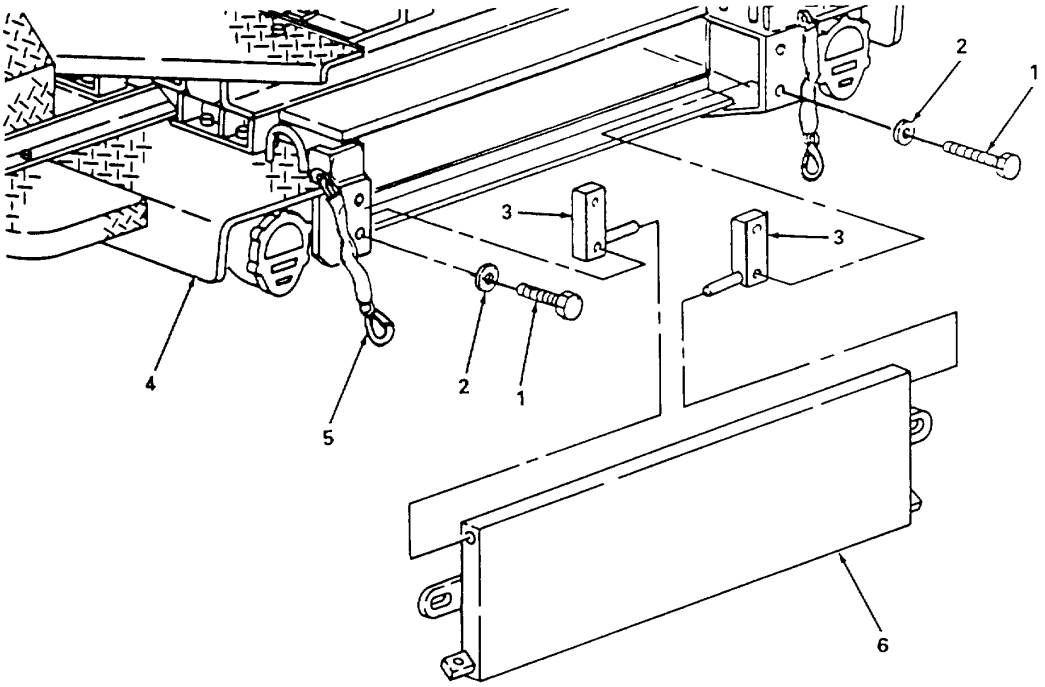


Figure 4-21. Tailgate and Hinge Block Replacement.

4-33. **Reflector Replacement**. (See figure 4-22). One reflector is mounted to the side of each rear step, and two reflectors are mounted to the underside of the tailgate (visible when tailgate is raised).

a. *Removal*.

(1) Remove two screws (1, figure 4-22), two flat washers (2) and two lockwashers (3) and remove reflector (4) from tailgate (5).

(2) Remove two screws (6), two flat washers (7) and two self-locking nuts (8) and remove reflector (9) from rear step (10).

b. *Installation*.

(1) Position reflector (4) on tailgate (5) so that mounting holes in reflector line up with threaded inserts in tailgate. Fasten with two screws (1), two flat washers (2) and two lockwashers (3).

(2) Position reflector (9) on rear step (10) and fasten with two screws (6), two flat washers (7) and two self-locking nuts (8).

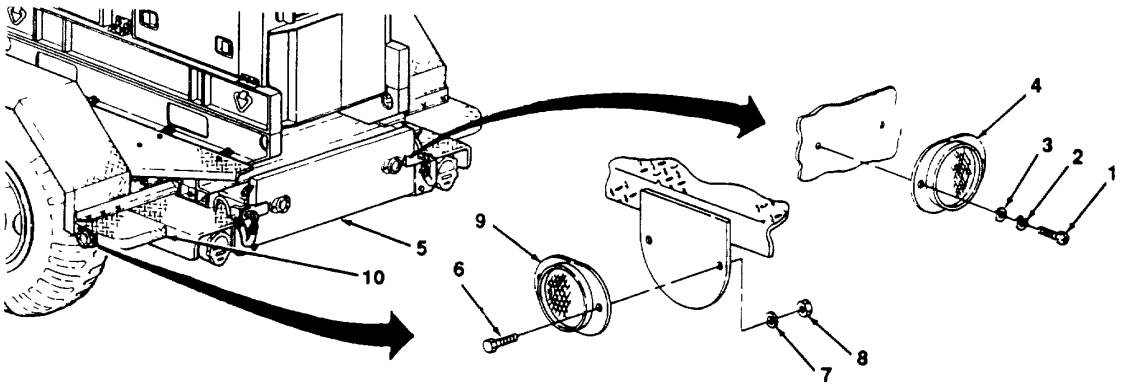


Figure 4-22. Reflector replacement.

4-34. Data and identification Plate Replacement. (See figures 4-23 and 4-23 1). There are two data/identification plates on the front curbside trailer frame and one data plate on the front roadside trailer frame. Replacement procedures for each are the same, except for the quantity of attaching hardware.

a. *Removal*.

(1) Remove four drive screws (1, figure 4-23) and remove data/identification plate (2 or 3) from trailer (4).

(2) Refer to figure 4-23.1 and remove four drive screws (1) and data plate (2) from trailer (3).

b. *Installation*.

(1) Position data plate (2) on trailer and secure with four drive screws (1).

(2) Position data/identification plate (2 or 3, figure 4-23) on trailer and secure with four drive screws (1).

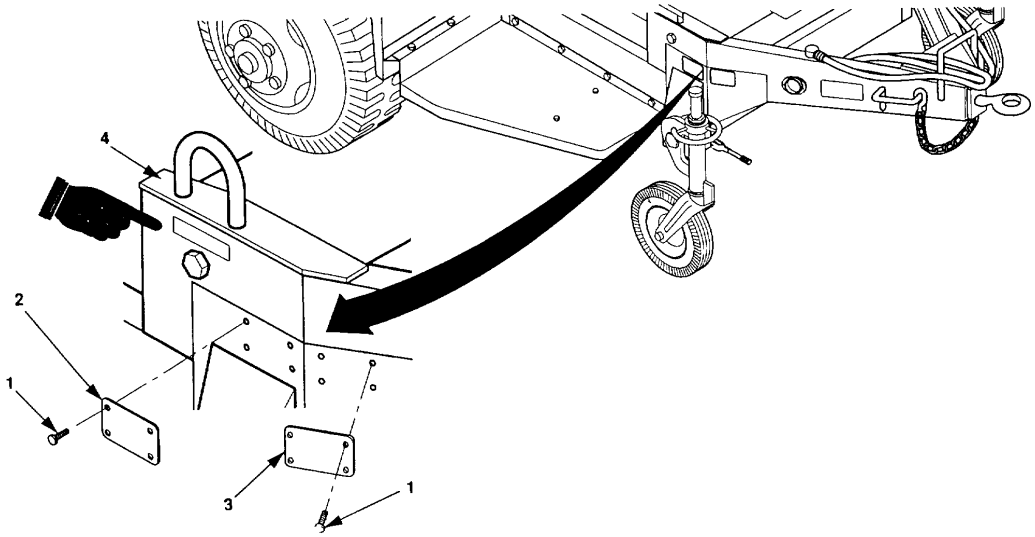


Figure 4-23. Data and Identification Plate Replacement.

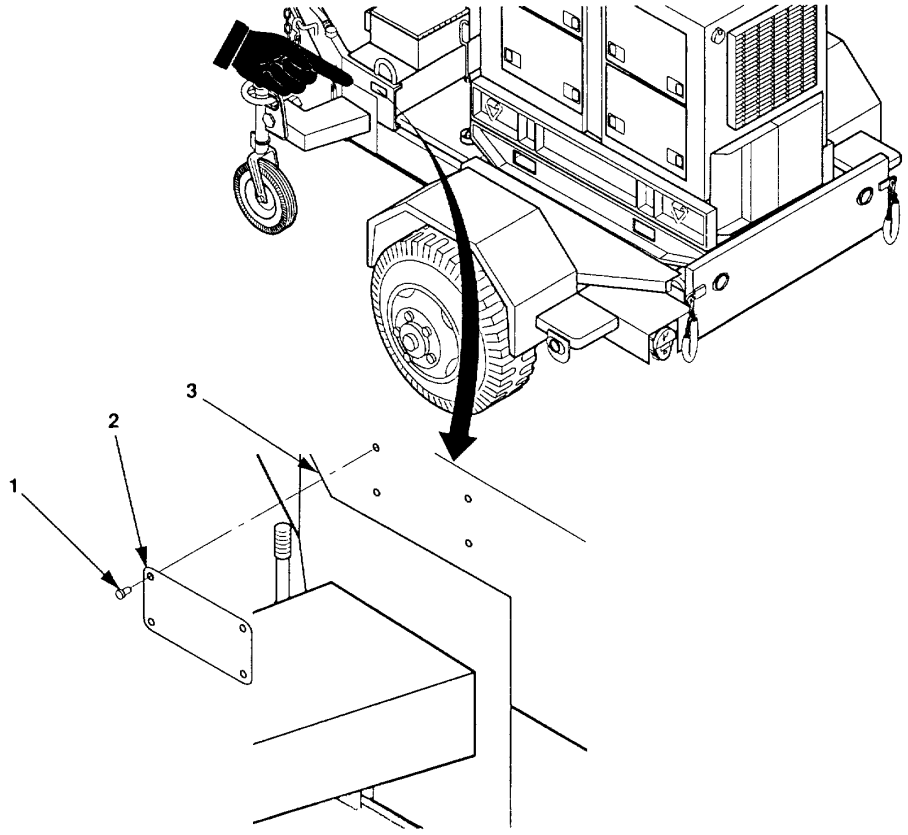


Figure 4-23.1. Data Plate Replacement.

CHAPTER 5

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

Section I. INTRODUCTION

5-1. General. This chapter contains direct support and general support level maintenance procedures for components of the M353 trailer and MEP-1 14A generator set added when they are used as part of the PU-789/M power unit. These components are not covered in the overall trailer or generator set maintenance manuals. For all other direct and general support maintenance procedures on the trailer, refer to TM 9-2330-247-14&P. For direct and general support maintenance procedures on the generator set, refer to TM 5-6115-465-34.

WARNING

Before performing any maintenance that requires climbing on or under trailer, set trailer hand brakes injury to personnel could result from trailer suddenly rolling.

Section II. GENERATOR SET

5-2. Generator Set Replacement. (See figure 5-1.)

a. *Removal*.

(1) Unplug P3 power/control cable (1, figure 5-1) and P4, P7 low fuel cable (2) from adapter plate assembly (3).

(2) Turn fuel selector valve (4) to OFF. Disconnect fuel line (5) from generator set (6) by unscrewing adapter (7) from generator set.

(3) Open generator set side panels.

(4) Disconnect four J3 harness wires (8) from generator set load terminals inside curbside front side panel.

(5) Disconnect P12, J11 wiring harness (9) from connectors P41 and J41 on generator set (6) and from terminal board TB2 on adapter plate assembly (3) . Pull wiring harness out through top. Reconnect P41 and J41.

(6) Disconnect generator set ground wire (9 1) from generator skid ground. Disconnect ground wire (9 2) from adapter plate assembly GROUND.

(7) Remove six screws (10) and six lockwashers (11) and remove adapter plate assembly (3) from generator set (6).

(8) Remove four screws (12) and four lockwashers (13) and remove sleeve plate assembly (14) and spacers (15) from generator set (6). Retain screws, lockwashers and spacers for installation on replacement generator set. Using hardware stored in generator set storage compartment, install sleeve plate assembly on generator set at location from which adapter plate assembly was removed in step (6).

(9) Remove two hose clamps (16) from each of four generator set fuel tank vent lines (17) and retain for installation on new generator set (6).

(10) Close generator set side panels.

(11) Remove eight screws (18) and eight lockwashers (19) securing generator set (6) to trailer.

WARNING

When lifting generator set, use equipment with a minimum lifting capacity of 5000 lb. Do not stand under generator set while it is being lifted. Do not permit generator set to swing. Failure to observe these precautions can cause injury to personnel or damage to equipment.

(12) Attach lifting equipment (20) with a minimum lifting capacity of 5000 lb to both lifting eyes (21) on top edge of generator set (6) . Insert a rope (22) through each of four tiedown rings (23) on generator set.

(13) With one person at each rope to steady and guide generator set (6), lift generator set off trailer.

b. *Installation*.

WARNING

When lifting generator set, use equipment with a minimum lifting capacity of 5000 lb. Do not stand under generator set while it is being lifted. Do not permit generator set to swing. Failure to observe these precautions can cause injury to personnel or damage to equipment.

(1) Attach lifting equipment (20) with a minimum lifting capacity of 5000 lb to both lifting eyes (21) on top edge of generator set (6) . Insert a rope (22) through each of four tiedown rings (23) on generator set.

(2) With one person at each rope to steady and guide generator set (6), lift generator set and carefully lower it onto trailer.

(3) Insert eight screws (18), with one lockwasher (19) each, through generator set skids into threaded inserts in generator supports (24).

(4) Open generator set side panels.

(5) Remove sleeve plate assembly (14) from curbside front of generator set (6) and store hardware in generator set storage compartment. Using four screws (12), four lockwashers (13) and four spacers (15) retained during generator set removal, mount sleeve plate assembly in its storage position on roadside front of generator set, as shown in figure 5-1.

(6) Install adapter plate assembly (3) on curbside front of generator set (6) with six screws (10) and six lockwashers (11).

(7) Separate connectors P41 and J41 on generator set (6). Connect P12, J11 wiring harness (9) to generator set by connecting P12 to J41 and J11 to P41, and to terminal board TB2 on adapter plate assembly (3) (Refer to figure 5-3 when reconnecting wires).

(8) Connect four J3 harness wires (8) to generator set load terminals as follows J3 pin A to L1, J3 pin C to L2, J3 pin G to L3 and J3 pin E to L0.

(9) Connect generator set ground wire (9 1) to generator skid ground Connect ground wire (9 2) to adapter panel assembly GROUND.

(10) Connect fuel line (5) to auxiliary fuel connection on generator set (6) Turn fuel selector valve (4) to AUXILIARY

(11) Plug P3 power/control cable (1) and P4, P7 low fuel cable (2) into connectors J3 and J4 respectively on the adapter plate assembly (3).

NOTE

If worm type hose clamps have already been installed on generator set fuel tank lines, omit step (12).

(12) Remove and discard eight spring type hose clamps from generator set fuel tank vent lines (17), and replace with eight worm type hose clamps (16). Be careful not to over tighten hose clamps.

(13) Close generator set side panels.

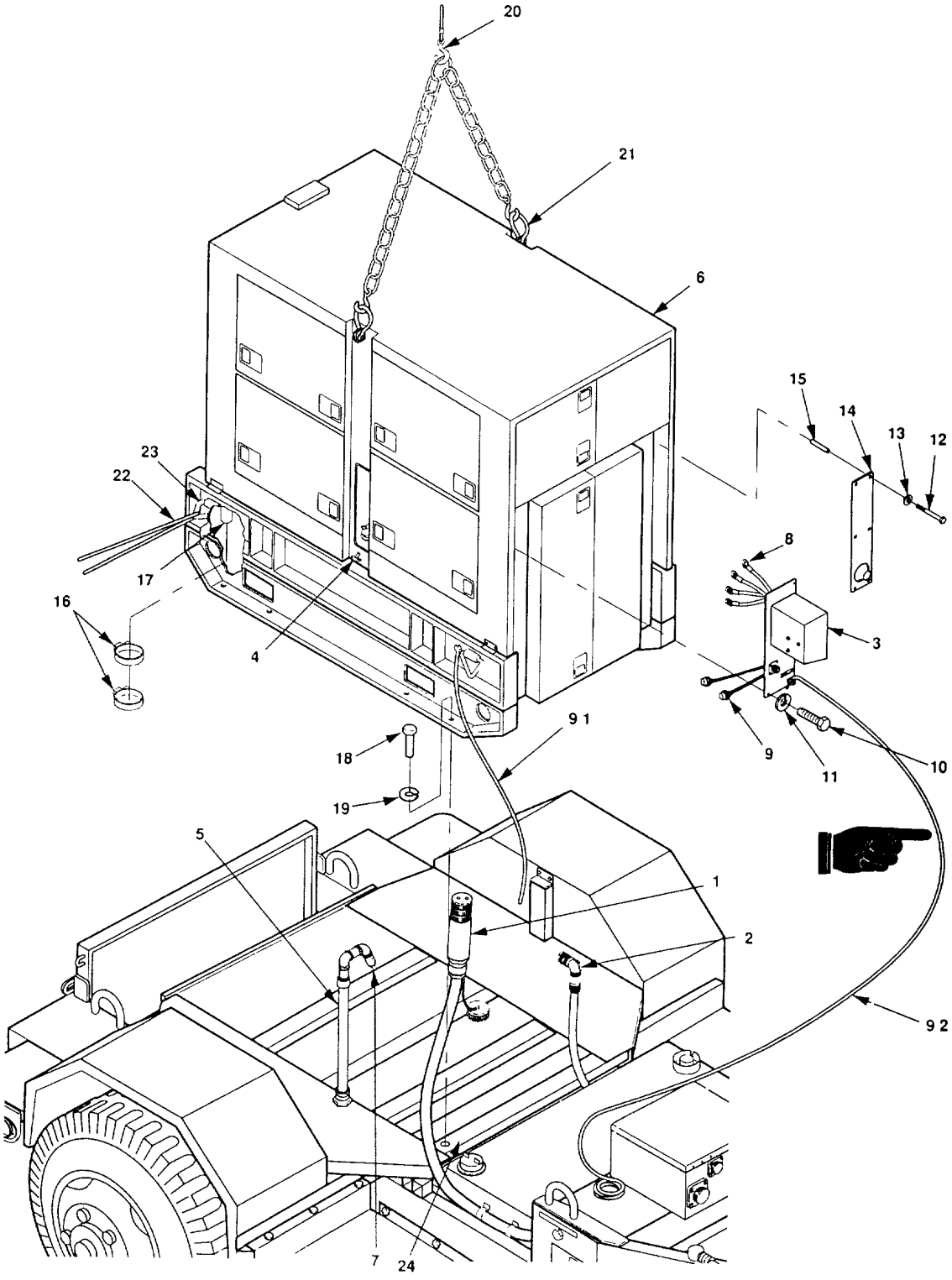


Figure 5-1. Generator Set Replacement.

Section III. MAINTENANCE OF POWER UNIT ELECTRICAL SYSTEM

WARNING

Make sure generator set is shut down before performing the maintenance procedures described in this section. Serious injury or death by electrocution can result if procedures are performed with power on.

5-3. **Adapter Plate Assembly Repair.** (See figures 5-2 and 5-3.) The adapter plate assembly may be repaired by replacing defective components or by repairing faulty wiring harnesses.

NOTE

Disassemble only to the extent necessary to replace defective component(s).

a. **Disassembly**

(1) Open generator set curbside front side panel.

(2) Disconnect P3 power/control cable and P4, P7 low fuel cable from adapter plate assembly.

(3) Disconnect ground cable from adapter plate assembly GROUND.

(4) Disconnect J3 wiring harness (1, figure 5-2) from generator set load terminals and terminal board TB2 (2). Remove four screws (3), four flat washers (4) and four self-locking nuts (5) from J3 connector.

(5) Remove three bolts (5.1), three flat washers (5.2), three lockwashers (5.3), and three nuts (5.4) that secure the surge protectors (5.5) to the adapter plate (6). Pull J3 wiring harness out of adapter plate (6). Remove EMI gasket (7) and connector cover (8).

(6) Disconnect J4 wiring harness (9) from terminal board TB2 (2). Remove four screws (10), four flat washers (11) and four self-locking nuts (12) and pull J4 wiring harness out of adapter plate (6). Remove EMI gasket (13).

(7) Disconnect all wires from terminal board TB2 (2). Remove two screws (14) and remove terminal board and marker strip (15) from adapter plate (6). If necessary, unscrew two terminal screws (16) and remove jumper (17).

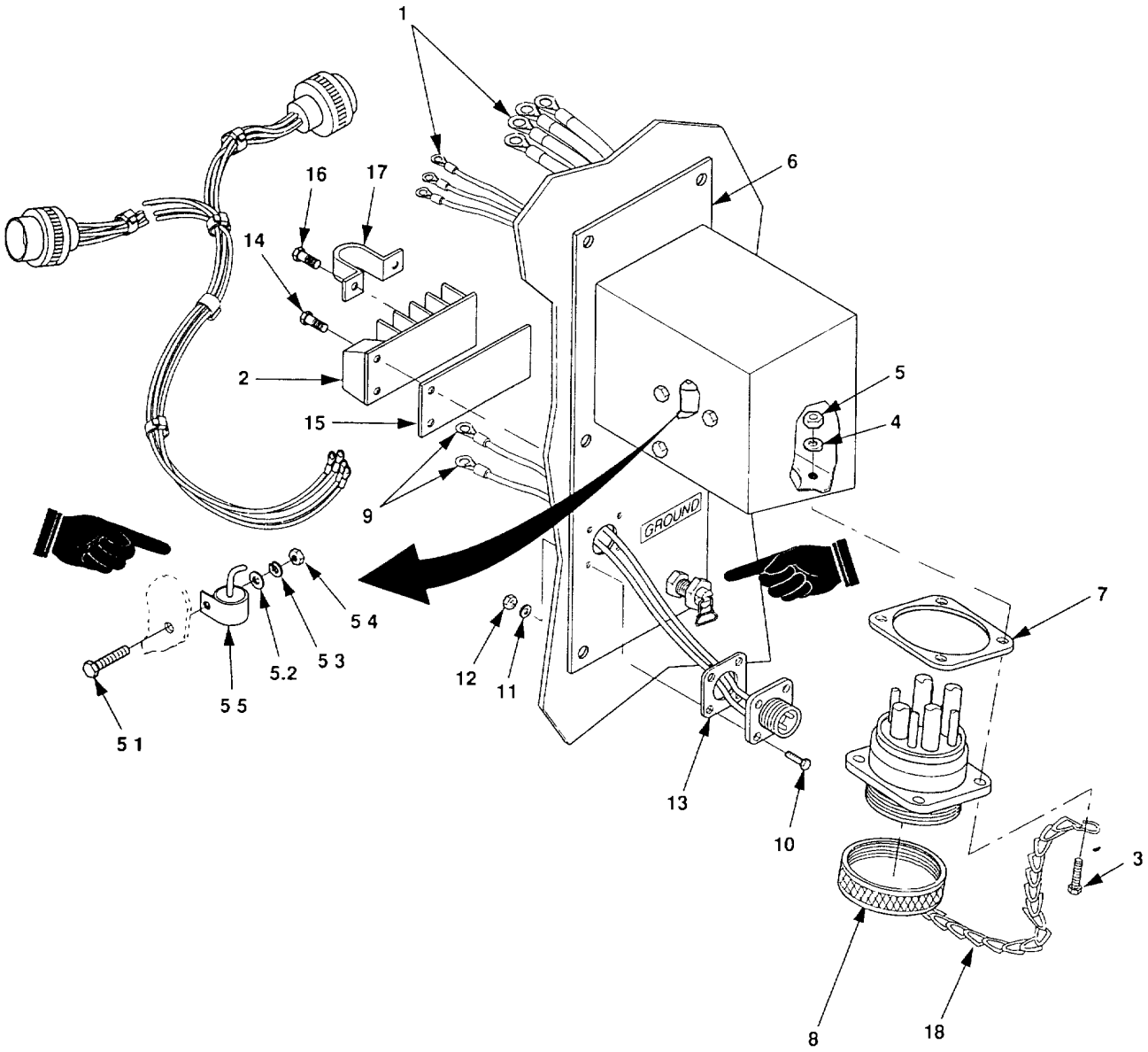


Figure 5-2. Adapter Plate Assembly Repair.

b. **Wiring Harness Repair**. If required, J3 and J4 wiring harnesses may be repaired by replacing broken wires, terminals or connector pins. Refer to paragraph 5-5 for wing harness repair procedures

c. **Reassembly.**

(1) If jumper (17) was removed during disassembly, unscrew one terminal screw (16) on terminal 1 and adjacent screw (16) on terminal 2, position jumper over screw holes and reinstall screws. Position terminal board TB2 (2) and marker strip (15) on welded bracket inside adapter place (6) and fasten with two screws (14). Reconnect wires. (See figure 5-3 for wire routing information.)

(2) Slide EMI gasket (13) over J4 harness wires (9) and up against J4 connector flange. Feed J4 harness wires through J4 connector opening In adapter plate (6) and mount connector and gasket to adapter plate with four screws (10), four flat washers (11) and four self-locking nuts (12). Reconnect J4 harness wires to terminal board TB2 (2). (See figure 5-3 for wire routing Information).

(3) Slide EMI gasket (7) over J3 harness wires (1) and up against J3 connector flange. Feed J3 harness wires through J3 connector opening in adapter plate (6). Secure surge protectors (5.5) to the adapter plate (6) using three bolts (5.1), three flat washers (5.2), three lockwashers (5.3) and three nuts (5.4). Mount connector and gasket to adapter plate (6) with four screws (3), four flat washers (4) and four self-locking nuts. (5). Make sure tab of connector cover chain (18) is mounted to connector with lower right corner hardware. Reconnect J3 harness wires to generator set load terminals and terminal board TB2 (2) (See figure 5-3 for wire routing information.

(4) Reconnect P3 power/control cable and P4, P7 fuel cable Reconnect ground cable to adapter plate GROUND.

(5) Close generator set side panel.

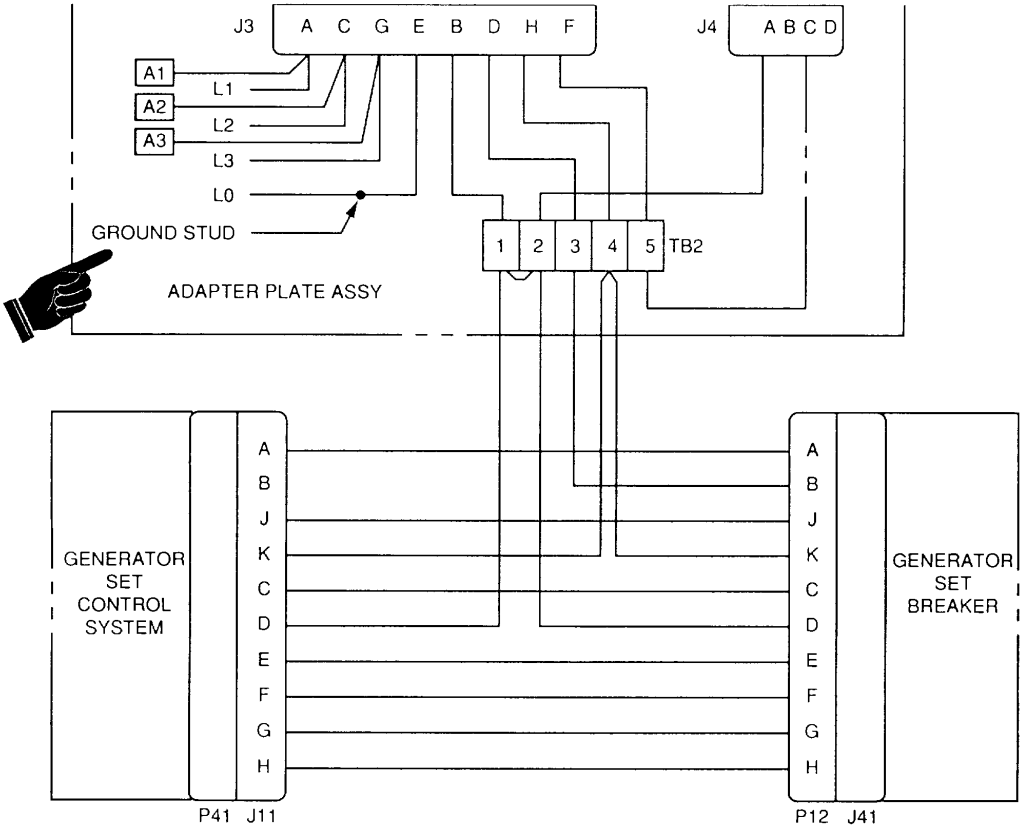


Figure 5-3. Adapter Plate Assembly Wiring Diagram.

5-4 **Cable Repair.** (See figure 5-4) The only cable on the power unit that is repairable is the P4, P7 low fuel cable. Repair as follows:

a. **Disassembly.**

(1) Loosen screws (1, figure 5-4) to release cable clamps (2) on each backshell (3).

(2) Unscrew one connector (4) and pull out until rear of connector is accessible.

(3) Unsolder cable wires from connector pins (Refer to TB SIG 222 and TM 55-1500-323-25 for soldering procedures)

(4) Repeat steps (2) and (3) for second connector (4)

(5) Pull cable (5) out of backshells (3)

(6) Remove sleeving (6) from cable (5)

b. **Assembly.**

(1) Install sleeving (6) on cable (5).

(2) Insert one end of cable (5) into clamp end of one backshell (3) and pull ends through and out connector end

NOTE

If one wire In cable was cut or broken during disassembly, all wires must be cut to the same length.

(3) Solder cable wires to connector pins (Refer to figure 4-3 when making electrical connections Refer to TB SIG 222 and TM 55-1500-323-25 for soldering procedures.)

(4) Retract cable (5) into backshell (3) and screw connector (4) into backshell.

(5) Tighten screws (1) and backshell cable clamp (2).

(6) Repeat steps (2) through (5) for opposite end of cable assembly.

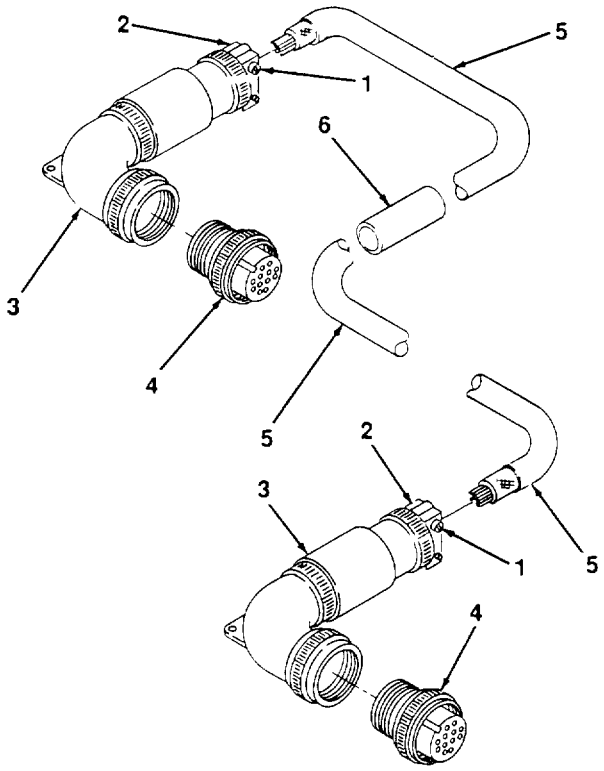


Figure 5-4. P4, P7 Low Fuel Cable Repair.

5-5. **Wiring Harness Repair.** Wiring harness may be repaired by replacing loose or damaged terminals, connectors and insulation sleeving. Connectors are not repairable. Connectors are replaced by unsoldering wires from contacts and resoldering onto replacement connector contacts. Tag wires to identify their relevant connector pins before unsoldering. Terminals may be crimped or soldered. Refer to TB SIG 222 and TM 55-1500-323-25 for soldering procedure.

5-6. **Ground Wire Assembly Repair.** The ground wire assemblies are repaired by tightening or replacing loose or damaged terminals. The repair parts and special tools list in this manual lists part numbers for the terminals. Desolder damaged terminals and solder replacement terminals onto wires in accordance with TB SIG 222 and TM 55-1500-323-.

5-7. **Power Distribution Unit (PDU) Repair**. (See figure 5-5) This paragraph covers replacement (and repair, where applicable) of the PDU minor components and housing. For repair and/or replacement of major PDU components, refer to paragraphs 5-8 through 5-11.

a. **Relay Bracket Replacement**.

(1) Removal.

(a) Release cover latch (1, figure 5-5) and open PDU cover (2).

(b) Remove relay (paragraph 4-25).

(c) Remove diodes (paragraph 5-10).

(d) Remove four screws (3), four flat washers (4) and four self-locking nuts (5) and remove relay bracket (6) from PDU housing (7).

(2) *Installation.*

(a) Position relay bracket (6) on inside of PDU housing (7) below terminal board TB1 (8), and secure with four screws (3), four flat washers (4) and four self-locking nuts (5).

(b) Install diodes (paragraph 5-10).

(c) Install relay (paragraph 4-25).

(d) Close PDU cover (2) and secure with latch (1).

b. **Clamp Replacement**. There are five clamps mounted to the Inside of the PDU housing. Four of these clamps share attaching hardware with the PDU cover. Replacement procedures are the same for all five, except where noted.

(1) *Removal.*

(a) Release cover latch (1, figure 5-5) and open PDU cover (2).

(b) Remove screw (9) and self-locking nut (10) to remove clamp (11) mounted to PDU housing (7) next to relay bracket (6). Remove screw (12), flat washer (13) and self-locking nut (14) to remove each remaining clamp.

(c) Pull wire out of clamp (11).

(2) *Installation.*

(a) Position clamp (11) on inside of PDU housing (7) and fasten with screw (9) and self-locking nut (10), or screw (12), flat washer (13) and self-locking nut (14), as applicable

(b) Insert wires into clamp (11).

(c) Close PDU cover (2) and secure with latch (1).

c. **Ground Stud Replacement**.

(1) *Removal.*

(a) Release cover latch (1, figure 5-5) and open PDU cover (2).

(b) Remove wing nut (15) and nut (16) from stud (17).

(c) Tag and remove wires from stud (17).

(d) Remove five flat washers (18), two nuts (19) and two internal tooth lockwashers (20) and pull stud (17) out of PDU housing (7.

(2) **Installation.**

(a) Insert stud (17) in E1 mounting hole in PDU housing (7) and secure with two internal tooth lockwashers (20) and two nuts (19).

(b) Install two flat washers (18), ground wire (to trailer GROUND TERMINAL STUD) (21), and wing nut (15) on stud (17) outside PDU housing (7). Make sure ground wire terminal is placed between flat washers.

(c) Install three flat washers (18), four wires (from TB1 terminal 3, J10 terminal E, J1 terminal E and P3 terminal E) (22) and nut (16) on stud (17) inside PDU housing (7). Wires may be installed in any sequence. Make sure wire terminals are separated by flat washers

(d) Close PDU cover (2) and secure with latch (1).

d. **PDU Cover Repair and Replacement**. In addition to component replacement described below, the PDU cover may be straightened, welded and repainted If required, repaint in accordance with MIL-T-704, Type G, Color Green, No 383 of MIL-C-46168 If power unit is painted In camouflage, refer to Section VI, Power Unit Marking.

(1) **Removal and Disassembly.**

(a) Release cover latch (1, figure 5-5) on PDU cover (2).

(b) Remove eight screws (12), eight flat washers (13) and eight self-locking nuts (14) and take cover (2) off PDU housing (7).

(c) Take clamps (11) off wires.

(d) If hinge (23) is damaged, drill out eight rivets (24) and remove hinge from cover (2). Be careful not to enlarge rivet holes when removing rivets.

(e) If strike (25) is damaged, drill out two rivets (26) and remove strike from cover (2). Be careful not to enlarge rivet holes when removing rivets.

(f) If schematic (27) is damaged, drill out four rivets (28) and remove schematic.

(g) If sealing strip (29) is damaged, scrape strip off cover (2)

(2) **Assembly and installation**.

(a) If sealing strip (29) was removed, cut new strip to fit and position on inside of cover (2). Bond mesh joints with conductive silicone adhesive. Bond rubber joints using adhesive.

(b) If schematic (27) was removed, position new schematic on inside of cover (2) and fasten with four rivets (28). Install rivets with heads on outside of cover.

(c) If strike (25) was removed, position strike on edge of cover (2) and fasten with two rivets (26). Install rivets with heads on inside of cover.

(d) If hinge (23) was removed, position hinge on edge of cover (2) and fasten with eight rivets (24). Install rivets with heads on Inside.

(e) Position cover (2) on housing (7) and fasten with eight screws (12), eight flat washers (13) and eight self-locking nuts (14).

(f) On alternate screws (12), inside housing (7), replace four clamps (11). Dress wires into clamps.

(g) Close PDU cover (2) and secure with latch (1).

e. **PDU Housing Repair**. In addition to latch replacement described below, the PDU housing may be straightened, welded and repainted. If required, repaint in accordance with MIL-T-704, Type G, Color Green, No. 383 of MIL-C-46168. If power unit is painted in camouflage, refer to Section VI, Power Unit Marking. Replace latch as follows:

(1) **Removal**.

(a) Release latch (1, figure 5-5) and open PDU cover (2).

(b) Drill out two rivets (30) and remove latch (1) from PDU housing (7) Be careful not to enlarge rivet holes when removing rivets.

(2) **Installation.**

(a) Position latch (1) on housing (7) and fasten with two rivets (30). Install rivets with heads on outside of housing.

(b) Close cover (2) and secure with latch (1).

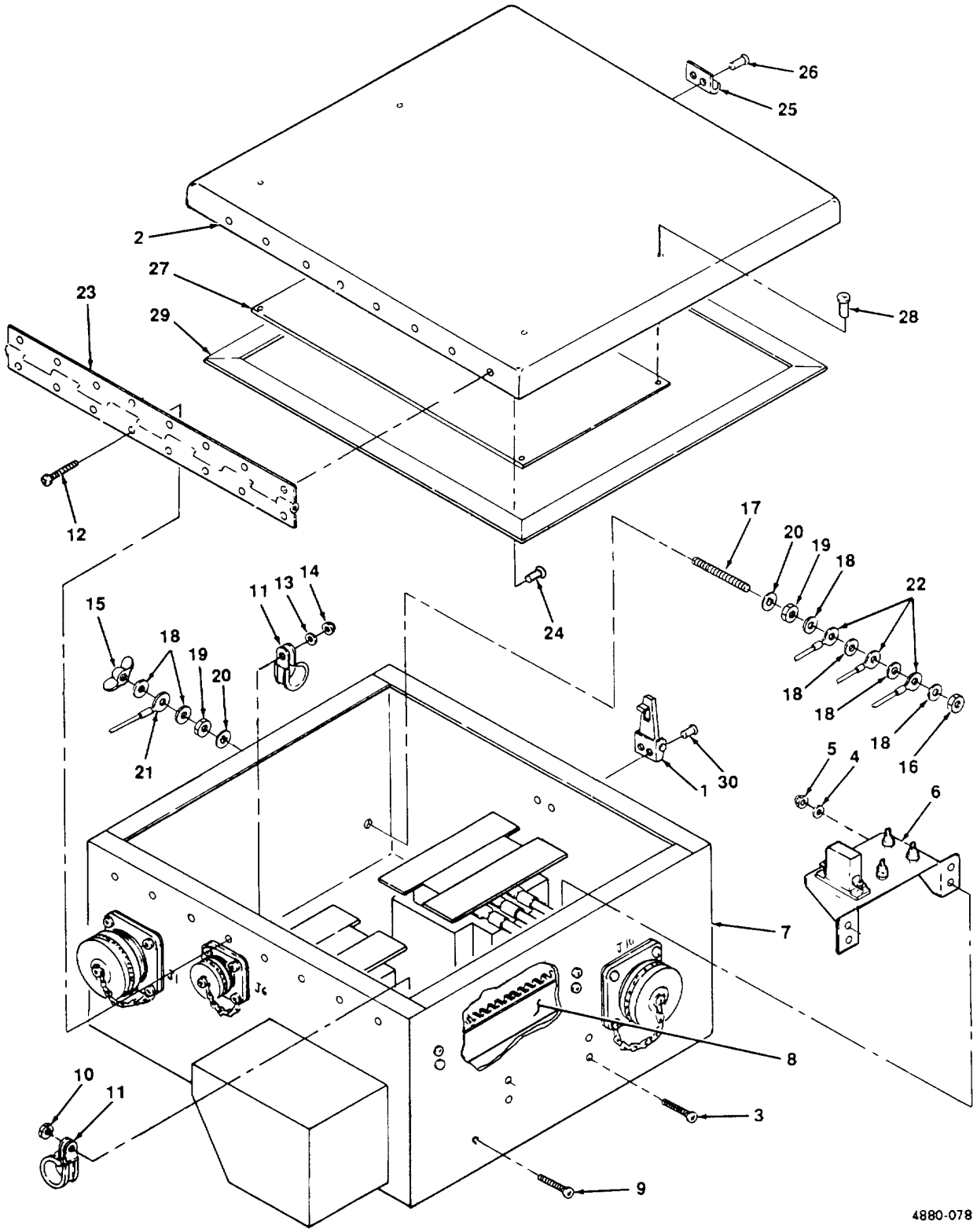


Figure 5-5. Power Distribution Unit Repair.

5-8. **PDU Wiring Harness Repair**. A defective wiring harness in the PDU can be repaired by replacing connectors or terminals, as applicable. Refer to paragraph 5-5 for wiring harness repair procedures.

5-9. **PDU Contactor Testing and Replacement**. (See figures 5-6 and 5-7) The PDU has two contactors. Testing and replacement procedures are the same for both, except where noted.

a. **Removal.**

(1) Release cover latch and open PDU cover.

NOTE

Screws, washers and covers are part of contactor and must remain with contactor

(2) Remove four screws (1, figure 5-6) and four washers (2) and take two contactor covers (3) off contactor (4).

(3) Disconnect connector P8 or P9 (5) from connector J8 or J9 (6) on contactor (4), as applicable.

(4) Tag electrical leads (7) connected to contactor (4). Remove six nuts (8), six lockwashers (9) and six flat washers (10) and remove electrical leads from contactor.

(5) Remove four self-locking nuts (11) and four flat washers (12) and lift contactor (4) out of PDU housing (13).

b. **Testing.**

(1) Make sure power source used for testing is turned off.

CAUTION

Do not exceed voltage required for test. Excessively high voltage may damage power source or contactor.

(2) Connect 2 amp, 28 VDC power source positive (+) lead to pin A of J8 or J9, as applicable.

(3) Connect power source negative (-) lead to pin B of J8 or J9.

WARNING

Hazardous voltages are present when using power source. Do not touch circuitry or metal on power source or leads on multimeter while power is on. Serious Injury or death by electrocution can result.

(4) Turn power source on.

(5) Set multimeter controls for continuity testing and check for continuity between terminal lugs Al and A2, B1 and B2, and C1 and C2, and between pin G and pin H of J8 or J9.

(6) If multimeter reading is greater than one ohm between any pair of test points, replace contactor.

(7) Turn power source off.

(8) Disconnect power source from contactor.

c. **Installation.**

(1) Position contactor (4) on bottom of PDU housing (13) so that threaded studs fit through contactor mounting holes, and connector (6) is facing terminal board (14). Secure with four self-locking nuts (11) and four flat washers (12).

(2) Install electrical leads (7) on contactor terminals and secure with six flat washers (10), six lockwashers (9) and six nuts (8). (Refer to figure 5-7, or to the schematic located inside the PDU cover, when reconnecting leads.)

(3) Plug connector P8 or P9 (5) into contactor connector J8 or J9 (6), as applicable.

(4) Position contactor covers (3) on contactor (4) and fasten each with two screws (1) and two washers (2).

(5) Close and latch PDU cover.

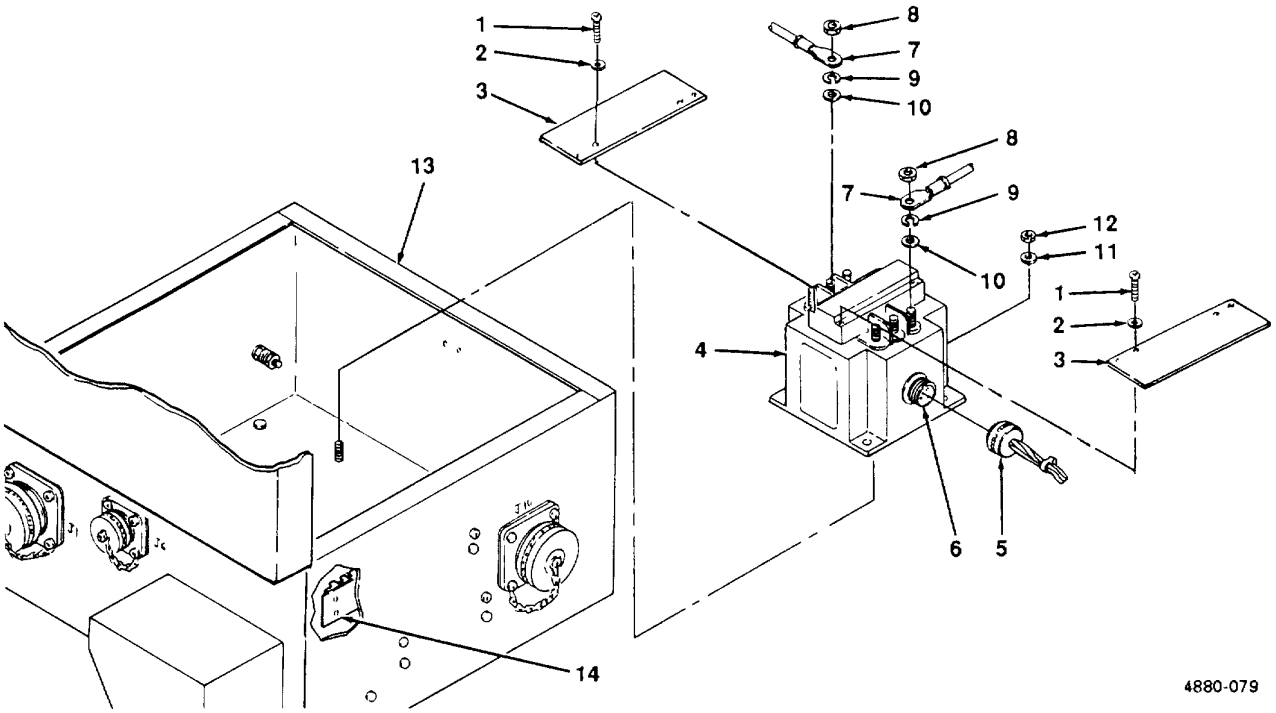


Figure 5-6. PDU Contactor Replacement.

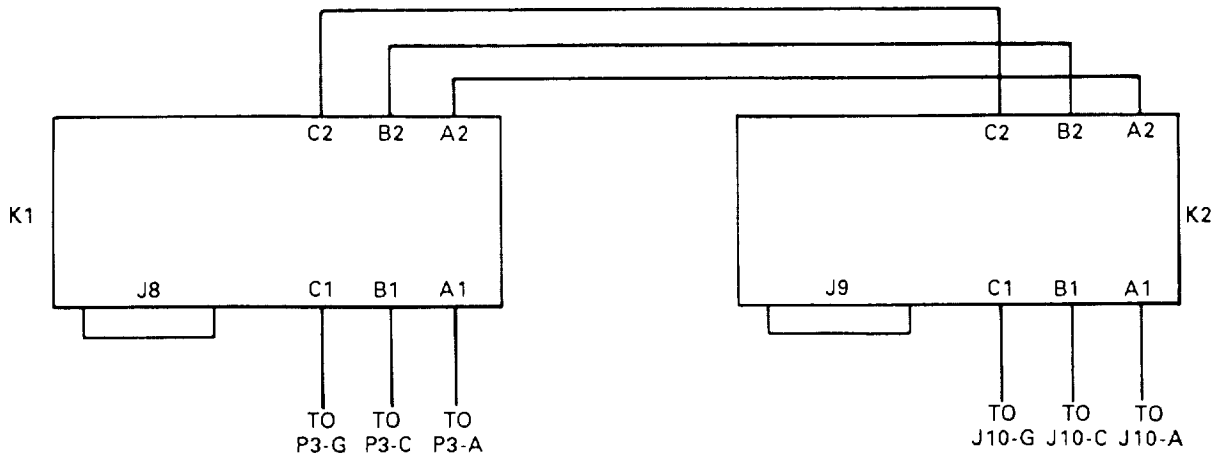


Figure 5-7. PDU Contactor Wiring Diagram.

5-10. **PDU Diode Testing and Replacement.** (See figure 5-8) The PDU has four diodes. Testing and replacement procedures are the same for all four.

NOTE

When testing or replacing more than one diode, perform complete procedure on one diode before removing next diode to be tested or replaced.

a. **Testing.**

(1) Release cover latch and open PDU cover.

(2) Remove nut (1, figure 5-8), lockwasher (2), wire (3), two plastic flat washers (4), spacer (5) and diode (6) from bracket (7.

(3) Touch positive multimeter probe to diode terminal and negative probe to diode base and measure resistance. Resistance should be high.

(4) Reverse multimeter probe positions and measure resistance. Resistance should be low.

(5) If multimeter readings were both low or both high in steps (3) and (4), replace diode.

(6) Install one flat washer (4) and spacer (5) on diode (6). Insert diode into its mounting hole in bracket (7) and install second flat washer (4), wire (3), lockwasher (2) and nut (1).

(7) Close and latch PDU cover.

b *Removal.*

(1) Perform steps (1) and (2) of paragraph 5-11.a.

(2) Unsolder wire (8) from terminal of diode (6).

c. *Installation.*

(1) Solder wire (8) onto terminal of diode (6).

(2) Perform steps (6) and (7) of paragraph 5-11 a.

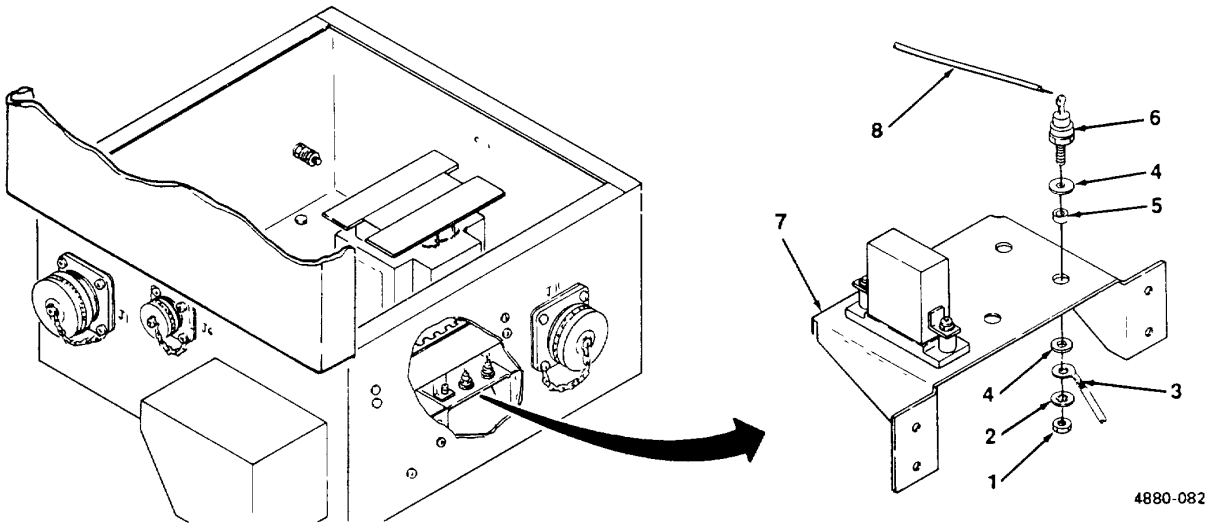


Figure 5-8. PDU Diode Replacement.

5-11. **PDU Terminal Board Replacement.** (See figure 5-9.)

a. **Removal.**

(1) Release cover latch and open PDU cover.

(2) Tag and disconnect all wires from terminal board TB1 (1, figure 5-9). Remove jumpers (2).

(3) Remove four screws (3) and four self-locking nuts (4) and remove terminal board (1) and marker strip (5) from PDU housing (6).

b. **Installation.**

(1) Position marker strip (5) and terminal board (1) on PDU housing (6) at location marked TB1. Fasten with four screws (3) and four self-locking nuts (4) When Installed, screw heads should be on outside of PDU housing and nuts should be on inside.

(2) Connect wires and two jumpers (2) to terminal board (1). One jumper must link terminals 1 and 2 and the second jumper must link terminals 2 and 3. When reconnecting wires, refer to the PDU wiring diagram, figure 4-11, or to the schematic located inside the PDU cover.

(3) Close and latch PDU cover.

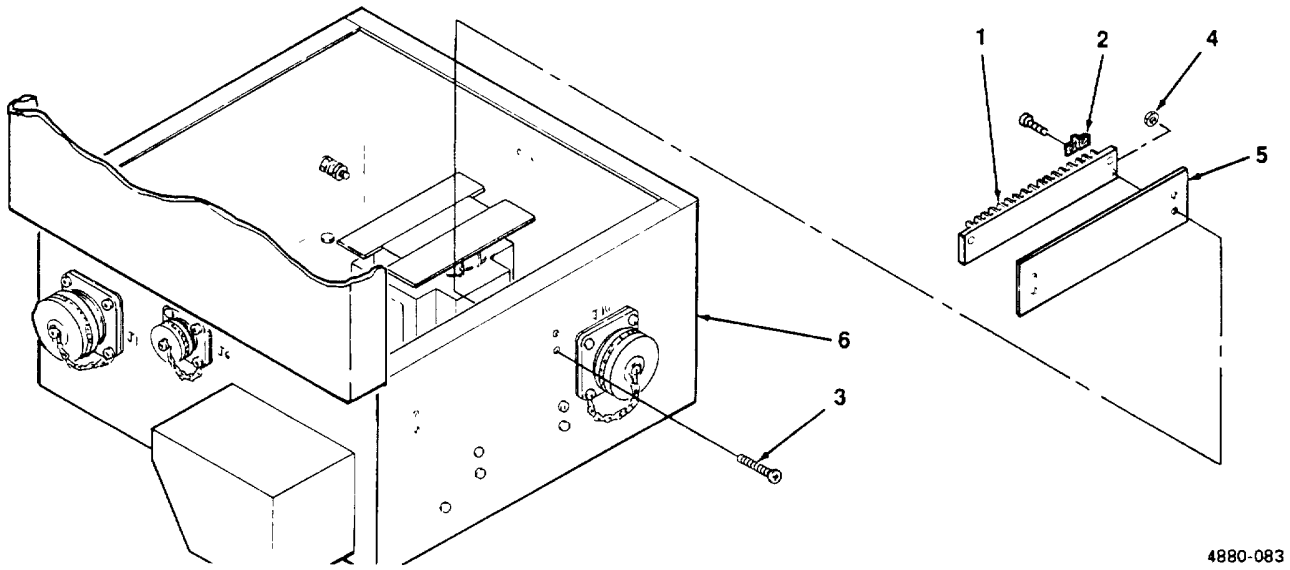


Figure 5-9. PDU Terminal Board Replacement.

Section IV. FUEL SYSTEM MAINTENANCE

5-12. **Fuel Tank and Fuel Line Replacement.** (See figure 5-10)

a **Removal.**

NOTE

If fuel line is being removed but not fuel tank, perform steps (1) through (3) only.

(1) Open drain cock (1, figure 5-10) and drain fuel from fuel tank (2) into a container.

(2) Remove generator set (paragraph 5-2).

(3) Remove three screws (3), three lockwashers (4) and three loop clamps (5) attaching fuel line (6) to front and middle-front generator set supports . Loosen fitting (8) on fuel line and disconnect fuel line from fuel tank . Pull fuel line out of curbside walkway (9).

(4) Remove front and middle-front generator set supports (7) (paragraph 5-16).

(5) Unplug P4, P7 fuel cable (10) from fuel level sensor (11) on fuel tank (2).

(6) Remove screw (12), lockwasher (13) and flat washer (14) and remove ground wire (15) from fuel tank (2).

(7) Loosen nut (16) on fuel tank vent tube (17) and remove vent tube from fuel tank (2).

NOTE

Vibration isolators are not identical Mark each for location and position before removing.

(8) Remove six screws (18), twelve flat washers (19) and six self-locking nuts (20) and remove fuel tank (2) and three vibration isolators (21) from trailer cross-members (22).

(9) Remove drain cock (1) from fuel tank (2).

b. **Installation.**

NOTE

If fuel line was removed but not fuel tank, omit steps (1) through (6).

(1) Install drain cock (1) in bottom of fuel tank (2) Close drain cock.

NOTE

Observe location and position marks on vibration isolators when installing.

(2) Position three vibration isolators (21) and fuel tank (2) on trailer cross-members (22) and fasten with six screws (18), twelve lockwashers (19) and six self-locking nuts (20). Tighten screws until each vibration isolator is compressed to a thickness of 0 090 inch (O 229 centimeters).

(3) Install fuel tank vent tube (17) on fuel tank hydraulic tube fitting (23) and tighten nut (16).

(4) Attach ground wire (15) to fuel tank (2) with screw (12), lockwasher (13) and flat washer (14).

(5) Plug P4 connector on fuel cable (10) into fuel level sensor (11) on fuel tank (2).

(6) Install front and middle-front generator set supports (7) (paragraph 5-16). Make sure front support is positioned so that P4, P7 fuel cable clamp mounting hole is on curbside, and that middle-front support is positioned so that fuel line clamp mounting holes are In middle and curbside.

(7) Install fuel line (6) on fuel tank connector (24) and tighten fitting (8). Slide three loop clamps (5) onto fuel line, position over mounting holes in generator set supports (7) and fasten each clamp with one screw (3) and one lockwasher (4). Pull free end of fuel line up through curbside walkway (9).

(8) Install generator set (paragraph 5-2).

(9) Fill fuel tank (2) and check for leaks.

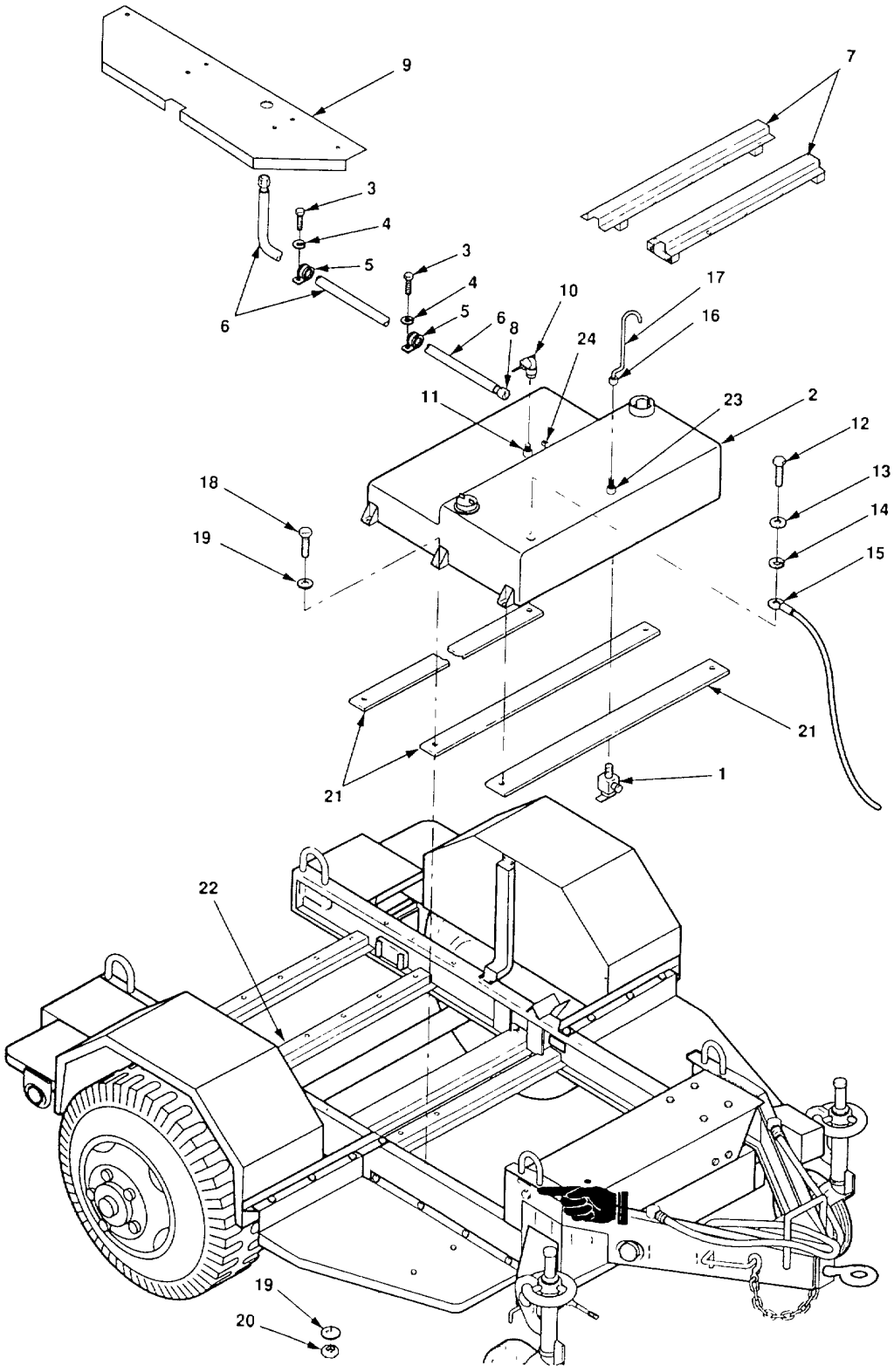


Figure 5-10. Fuel Tank and Fuel Line Replacement.

5-13. **Fuel Tank Repair.** (See figure 5-11) In addition to component replacement described below, the fuel tank may be straightened, welded and repainted. If required, repaint In accordance with MIL-T-704, Type G, Color Green, No. 383 of MIL-C-46168. If power unit Is painted in camouflage, refer to Section VI, Power Unit Marking.

NOTE

Disassemble only to the extent necessary to replace defective components.

a. **Disassembly.**

(1) Unscrew and remove fuel level gage (1, figure 5-11).

(2) Disconnect P4, P7 fuel cable (2) from fuel level sensor (3) Unscrew and remove fuel level sensor.

(3) Disconnect fuel line (4) from connector (5) Unscrew and remove connector.

(4) Disconnect vent tube (6) from connector (7) Unscrew and remove connector.

NOTE

Chain on cap is attached to filter tube.

(5) Remove non-vented cap (8) and filler neck (9).

(6) Remove six screws (10) and six flat washers (11) and remove filler neck (9) and gasket (12).

(7) Remove drain cock (13).

b. **Assembly.**

(1) Install drain cock (14).

(2) Position gasket (12) over filler neck hole in fuel tank and aline mounting holes. Insert filler neck (9) in fuel tank (14) and aline mounting holes Install six screws (10) and six flat washers (11).

(3) Install cap (8) on filler neck (9).

(4) Install connector (7) and reattach vent tube (6).

(5) Install connector (5) and reattach fuel line (4).

(6) Install fuel level sensor (3) and reconnect P4, P7 fuel cable (2).

(7) Install fuel level gage (1).

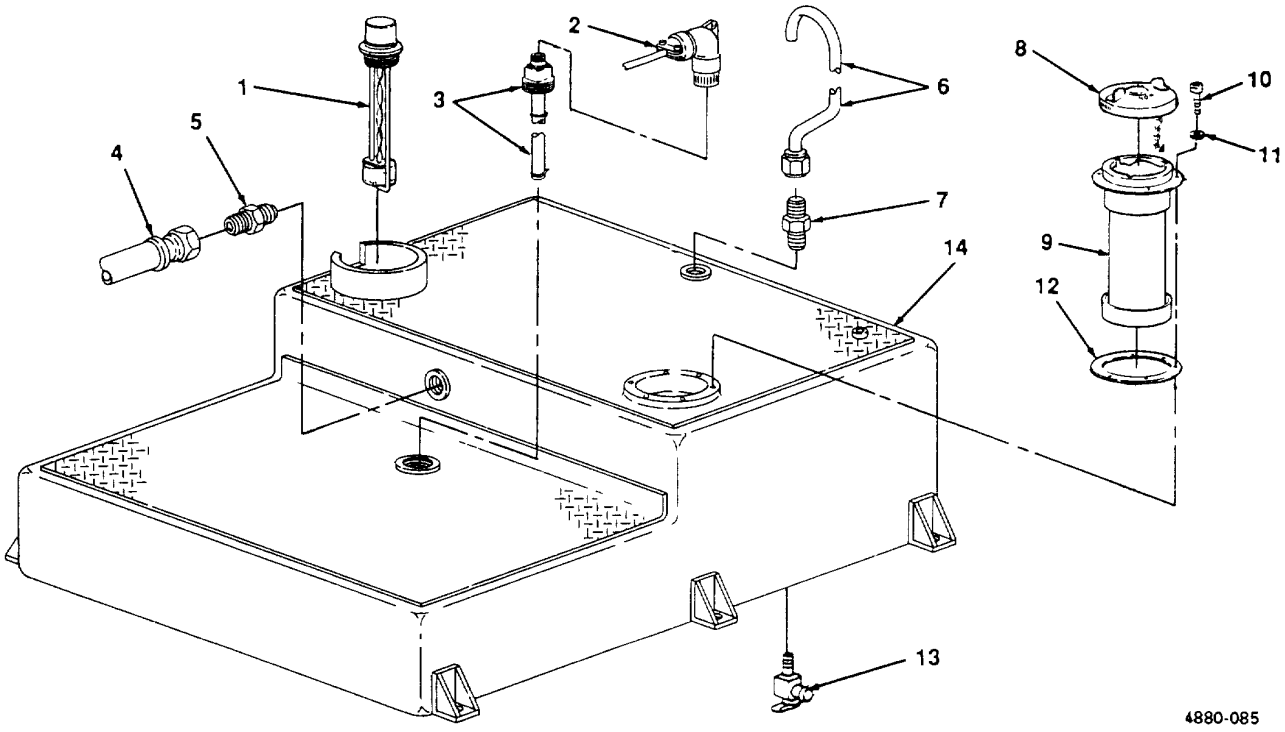


Figure 5-11. Fuel Tank Repair.

Section V. MAINTENANCE OF POWER UNIT TRAILER

5-14. **Storage Tray and Cover Repair and Replacement**. (See figure 5-12)

a. **Removal.**

(1) Remove generator set (paragraph 5-2).

(2) Lower tailgate (1, figure 5-12.

(3) Remove contents of storage tray (2).

(4) Remove 20 screws (3), 20 flat washers (4) and 20 self-locking nuts (5) and remove storage tray cover (6) from generator set supports (7).

NOTE

If storage tray is not being removed, omit step (5).

(5) Remove six screws (8), twelve flat washers (9) and six self-locking nuts (10) and remove storage tray (2) from trailer cross-members (11).

b. Repair Repair of the storage tray and cover is limited to straightening, welding and repainting. If required, repaint in accordance with MIL-T-704, Type G, Color Green, No 383 of MIL-C-46168. If power unit is painted in camouflage, refer to Section VI, Power Unit Marking.

c. Installation.

NOTE

If storage tray was not being removed, omit step (1).

(1) Position storage tray (2) on trailer cross-members (11) and fasten with six screws (8), twelve flat washers (9) and six self-locking nuts (10). Make sure open end of storage tray is at rear.

(2) Position storage tray cover (6) on underside of rear and rear middle generator supports (7) so that mounting holes in cover align with mounting holes in generator support ears. Install 20 screws (3), 20 flat washers (4) and 20 self-locking nuts (5).

(3) Place accessories in storage tray (6).

(4) Raise and secure tailgate (1), if required.

(5) Install generator set (paragraph 5-2).

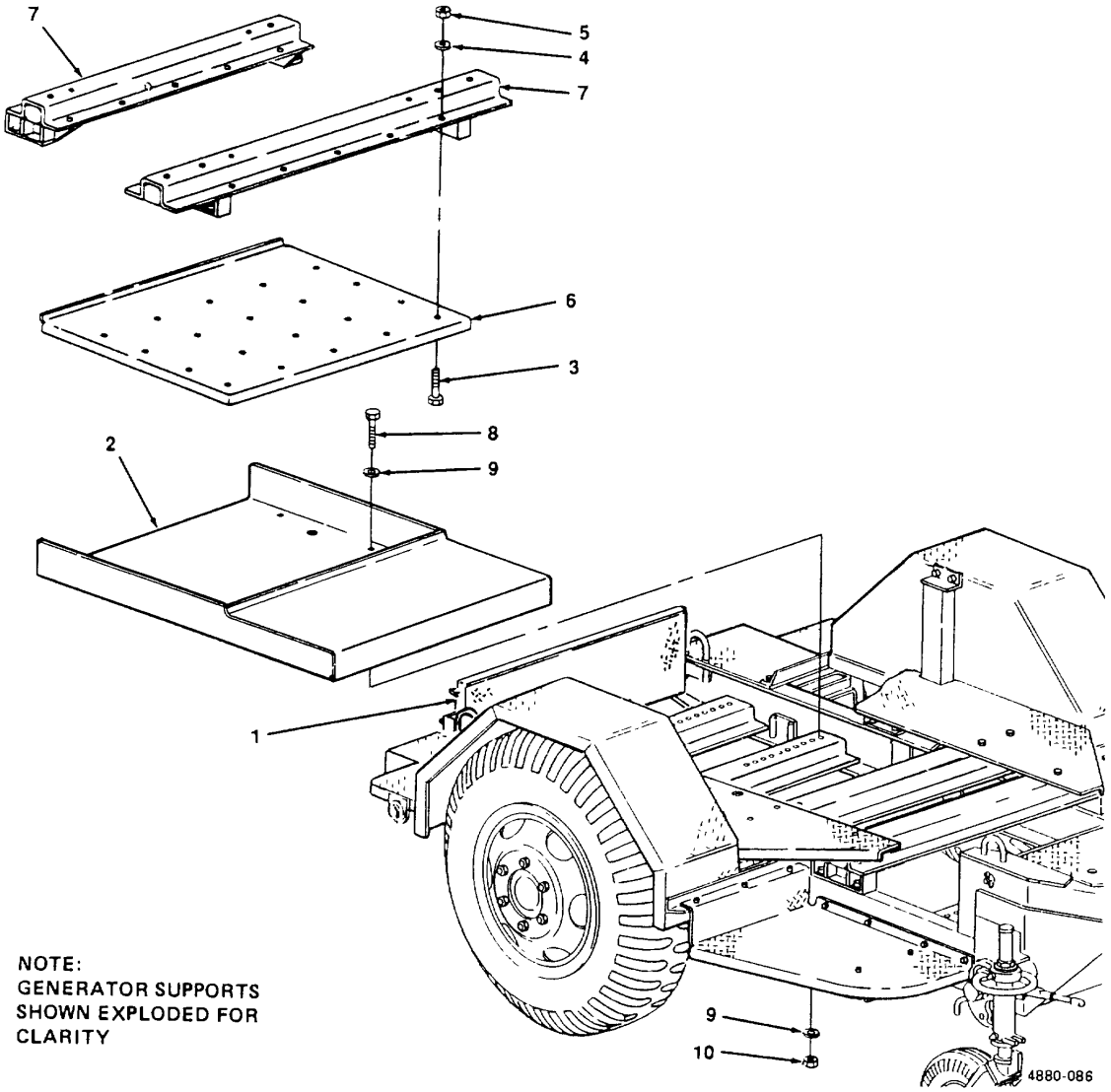


Figure 5-12. Storage Tray and Cover Repair and Replacement.

5-15. Repair of Steps, Walkways, Fender Brackets and Tailgate. Repair of the trailer steps, walkways, fender brackets and tailgate is limited to straightening, welding and repainting. If required, repaint in accordance with MIL-T-704, Type G, Color Green, No 383 of MIL-C-46168. If power unit was painted in camouflage, refer to Section VI, Power Unit Marking.

5-16. Generator Set Support Repair and Replacement. (See figure 5-13.) The power unit has four generator set supports. Replacement procedures are the same for all four, except where noted.

a. Removal.

(1) Remove generator set (paragraph 5-2).

(2) Remove walkways (paragraph 4-31).

(3) Fuel cable is fastened to front support (1, figure 5-13) with one clamp (2) . Fuel line is fastened to front support with one clamp and to middle-front support with two clamps . When removing front or middle-front support, remove screws (4), lockwashers (5) and clamps as necessary and remove fuel cable and/or fuel line from support.

(4) When removing rear support (6) or middle-rear support (7), remove storage tray cover (8) (paragraph 5-14).

(5) Remove four screws (9), eight flat washers (10) and four self-locking nuts (11) and lift support (1,3,6 or 7) off trailer frame (12).

b Repair. The generator set supports may be repaired by drilling out damaged threaded inserts and replacing them with new ones, or by welding or repainting. If repaired, repaint in accordance with MIL-T-704, Type G, Color Green, No 383 of MIL-C-46168.

c. Installation.

NOTE

When installing front or middle-front support, position support so that clamp mounting holes are center and curbside.

(1) Position support (1,3,6 or 7) on trailer frame (12) and fasten with four screws (9), eight flat washers (1.0) and four self-locking nuts (11). Torque to 57 to 63 foot-pounds (77.81 to 86.00 newton-meters).

(2) When installing rear support (6) or middle-rear support (7), install storage tray cover (8) (paragraph 5-14).

(3) When installing front support (1) or middle-front support (3), reconnect fuel cable and/or fuel line, to supports with screws (4), lockwashers (5) and clamps (2) as necessary.

(4) Install walkways (paragraph 4-31).

(5) Install generator set (paragraph 5-2).

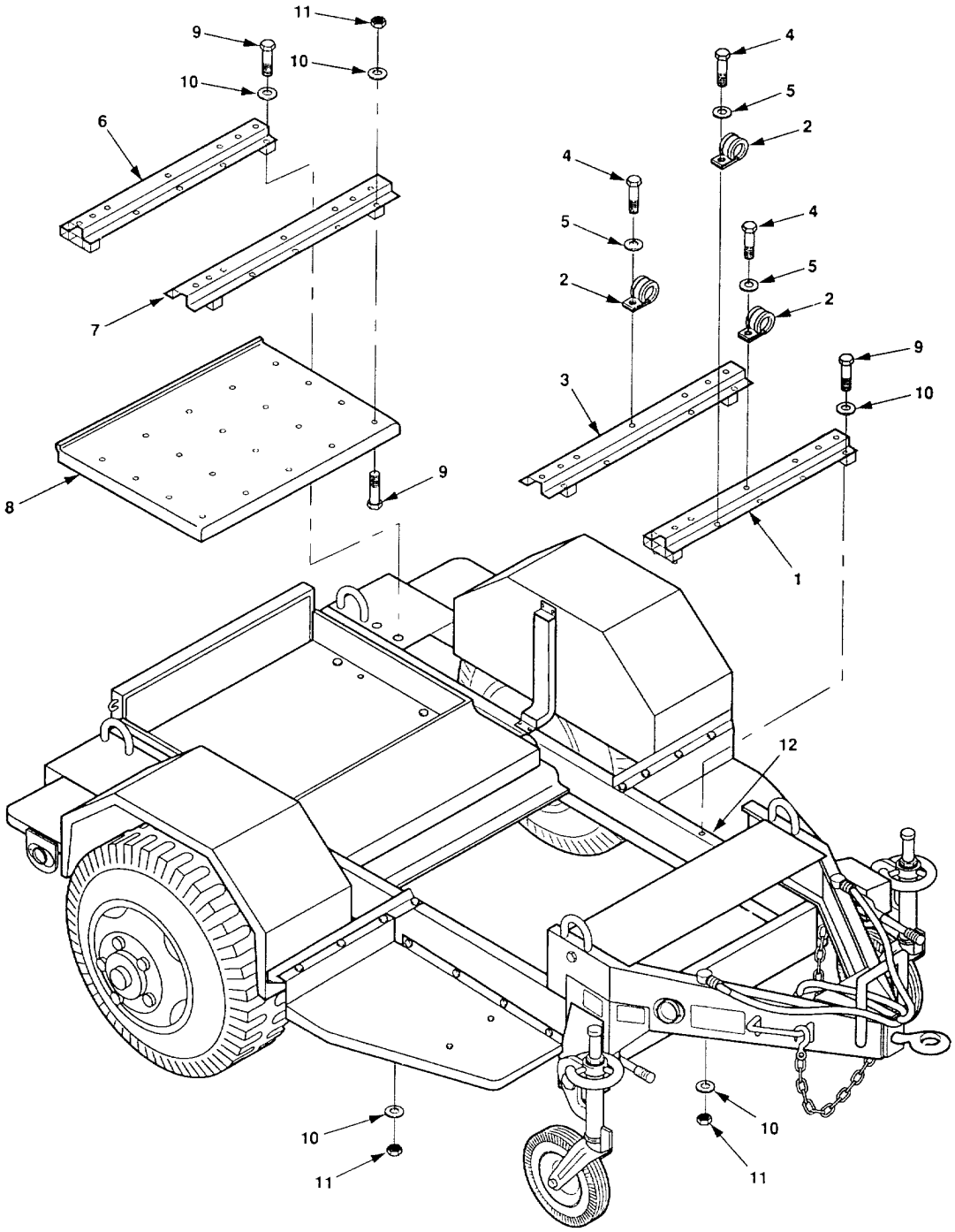


Figure 5-13. Generator Set Support Repair and Replacement.

Section VI. POWER UNIT MARKING

5-17. General. Power unit marking is done in accordance with MIL-STD-642 and MIL-STD-130. If required, touch up painting of the base color shall be done in accordance with MIL-T-704, Type F or G, Color Green, No 383 of MIL-C-46168. When power unit has been painted in camouflage, replacement parts must be painted to match authorized patterns and colors as specified in TB 43-0147. Application of camouflage paint shall be done
in accordance with MIL-C-53072.

5-18. Trailer Marking. (See figure 5-14.) The power unit four-digit registration number, preceded by the prefix "VB", is marked in two places on the power unit trailer. On the fender over each wheel, “TP 50-70 PSI” is marked in 1 00 ± 12 Inch high characters "TP 65 PSI" is marked over each forward stabilizing wheel on the fuel tank curbside, "FUEL FILL" and "FUEL DRAIN" are marked in 50 ± 12 Inch high characters. The work "LIFT" is marked in 50 ± 12 inch high characters at each of four corner lifting rings. The word "LOCKED" and an arrow pointing to ground is marked in two places on the trailer frame at the handbrakes. Figure 5-14 shows the location of trailer markings.

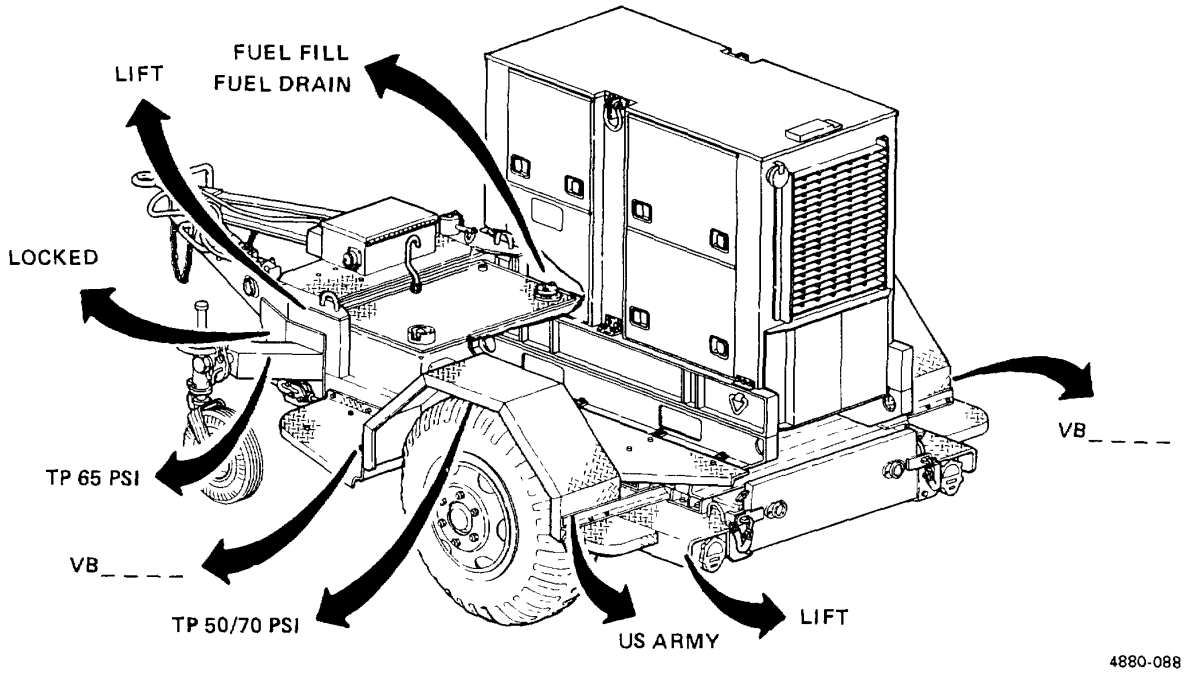


Figure 5-14. Trailer Marking.

5-19. Power Distribution Unit Marking. (See figure 5-15) "J1", "J6" and "J10" are marked next to their respective connectors on the inside and the outside of the PDU housing. Underneath connector J1, "97403 Assy 13227E5855" is marked on the outside of the housing. "E1" is marked next to the ground stud on the inside and outside of the housing. "CR1", "CR2", "CR3", "CR4", "K1", "K2", "K3" and "TB1" are marked next to their respective components inside the housing. Figure 5-15 shows the location of PDU external markings.

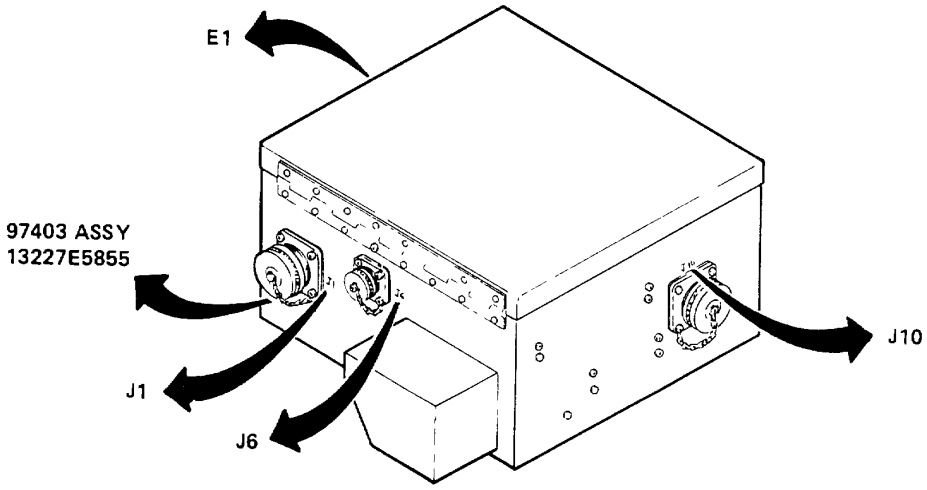


Figure 5-15. Power Distribution Unit Marking.

CHAPTER 6

TEST AND INSPECTION AFTER REPAIR

Section I. GENERAL REQUIREMENTS

6-1. General Requirements. The activity performing the repair is responsible for the performance of all applicable tests and inspections specified in the technical manuals referenced below. Activities performing maintenance on any component of the power unit must perform those tests and Inspections required by the applicable component or system repair instruction.

Section II. INSPECTION

6-2. Generator Set Inspections. Refer to TM 5-6115-465-12 and -34 for inspections required following repair of the generator set.

6-3. Trailer Inspections. Refer to TM 9-2330-247-14&P for inspections required following repair of the trailer.

Section III. OPERATIONAL TESTS

6-4. Generator Set Operational Tests. Refer to TM 5-6115-465-12 and -34 for operational tests required to verify satisfactory performance of the generator set.

6-5. Trailer Operational Tests. Refer to TM 9-2330-247-14&P for operational tests required to verify satisfactory performance of the trailer.

APPENDIX A

REFERENCES

A-1. **Scope**. This appendix lists all pamphlets, forms, technical manuals, specifications and miscellaneous publications referenced in this manual.

A-2. **Forms and Records**.

Supply Policy Below the Wholesale Level.....AR-700-2
Recommended Changes to Publications and Blank Forms.....DA Form 2028
Depreservation Guide for Vehicles and Equipment.....DA Form 2258
Equipment Inspection and Maintenance Worksheet.....DA Form 2404
Maintenance Request.....DA Form 2407
Consolidated Index of Army Publications.....DA PAM 25-30
The Army Maintenance Management System (TAMMS).....DA PAM 738-750
Product Quality Deficiency Report.....SF 368

A-3. **Military Specifications**.

Chemical Agent Resistant Aliphatic Polyurethane Coating.....MIL-C-46168
Chemical Agent Resistant Coating (CARC) System Application Procedure and Q/C Inspection.....MIL-C-53072
Identification Marking of U S Military Property.....MIL-STD-130
Identification Marking of Combat and Tactical Transport.....MIL-STD-642
Treatment and Painting of Materiel.....MIL-T-704

A-4. **Technical Manuals.**

Operator's and Organizational Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical Skid Mtd, 30 KW, 3 Phase, 4 Wire, 120/208 and 240/416 V (DOD Model MEP-005A), Utility Class, 50/60 Hz (NSN 6115-00-463-1240), (Model MEP-104A), Precise Class, 50/60 Hz (6115-00-463-1247), (Model MEP-114A), Precise Class, 400 Hz (6115-00-463-1248) Including Auxiliary Equipment (DOD Model MEP-005AWF), Winterization Kit, Fuel Burning (6115-00-463-9083), (Model MEP-005AWE), Winterization Kit, Electric (6115-00-463-9085), (Model MEP-005ALM), Load Bank Kit (6115-00-463-9088) and (MEP-005AWM), Wheel Mounting Kit (6115-00-463-9094).....TM 5-6115-465-12

Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Generator Set, Diesel Engine Driven, Tactical Skid Mounted, 30 KW, 3 Phase, 4 Wire, 120/208 and 240/416 Volts (DOD Model MEP-005A), Utility Class, 50/60 Hz (6115-00-118-1240), (Model MEP-104A), Precise Class, 50/60 Hz (6115-00-118-1247), (Model MEP-114A), Precise Class, 400 Hz (6115-00-118-1248) including Optional Kits (Model MEP-005AWF), Winterization Kit, Fuel Burning (6115-00-463-9083), (Model MEP-005AWE) Winterization Kit, Electric (6115-00-463-9085), (Model MEP-005ALM) Load Bank Kit (6115-00-463-9088) and (Model MEP-OO5AWM) Wheel Mounting Kit (6115-00-463-9094) . ..... TM 5-6115-465-24P

Intermediate (Field) Direct and General Support) and Depot Level Maintenance Manual Generator Set, Diesel Engine Driven, Tactical Skid Mtd, 30 KW, 3 Phase, 4 Wire, 120/208 and 240/416 V (DOD Model MEP-005A), Utility, 50/60 Hz (NSN 6115-00-118-1240), (Model MEP-104A), Precise, 50/60 Hz (6115-00-118-1247), (Model MEP-114A), Precise, 400 Hz (6115-00-118-1248) Including Optional Kits (Model MEP-005AWF) Winterization Kit, Fuel Burning (6115-00-463-9083), (Model MEP-005AWE) Winterization Kit, Electric (6115-00-463-9085), (Model MEP-005ALM) Load Bank Kit (6115-00-463-9088) and (Model MEP-005AWM) Wheel Mounting Kit (6115-00-463-9094) ..... TM 5-6115-465-34

Installation Practices for Aircraft and Electric and Electronic Wiring (TO-1-1 A-14) ..... TM 55-1500-323-25

Procedures for Destruction of Equipment to Prevent Enemy Use (Mobility Equipment Command) ..... TM 750-244-3

Operator's, Organizational, Direct Support and General Support Maintenance Manual Including Repair Parts and Special Tools List for Chassis, Trailer, General Purpose, 3 ½-Ton, 2-Wheel M353 (NSN 2330-00-542-2831) ..... TM 9-2330-247-14&P

Organizational, Direct Support, and General Support Care Maintenance and Repair of Pneumatic Tires and Inner Tubes ..... TM 9-2610-200-24

A-5. **Technical Bulletins.**

Solder and Soldering (TO 31-3-64) ..... TB SIG 222

Color, Marking and Camouflage Patterns Used on Military Equipment Managed by USATROSCOM ..... TB 43-0147

Preservation of USAMECOM Mechanical Equipment for Shipment and Storage ..... TB 740-97-2

APPENDIX B

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS

Section I. INTRODUCTION

B-1. **Scope.** This appendix lists components of end item and basic issue items for the power unit to help you inventory items required for safe and efficient operation.

B-2. **General**. The Components of End Item and Basic Issue Items lists are divided Into the following sections.

a. **Section II Components of End Item.** This listing is for informational purposes only, and is not authority to requisition replacements. These items are part of the end item, but are 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 power unit in operation, to operate it, and to perform emergency repairs . Although shipped separately packaged, BII must be with the power unit 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 Bll, based on TOE/MTOE authorization of the end item.

B-3. **Explanation of Columns**. The following provides an explanation of columns found in the tabular listings.

a. **Column (1), Illustration Number (Illus No.)** . This column indicates the number assigned to the item.

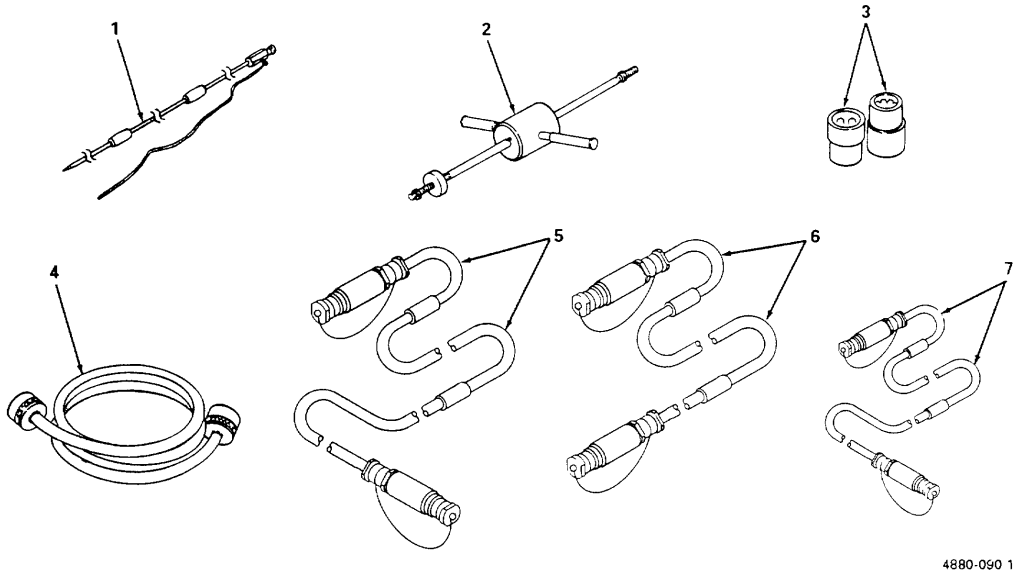
b. **Column (2). National Stock Number**. Indicates the National stock number assigned to the item.

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 CAGE (in parentheses) followed by the part number. If item needed differed for different models of this equipment, the model would be shown under the "Usable on Code" heading in this column. The Usable on Code is not applicable for this equipment.

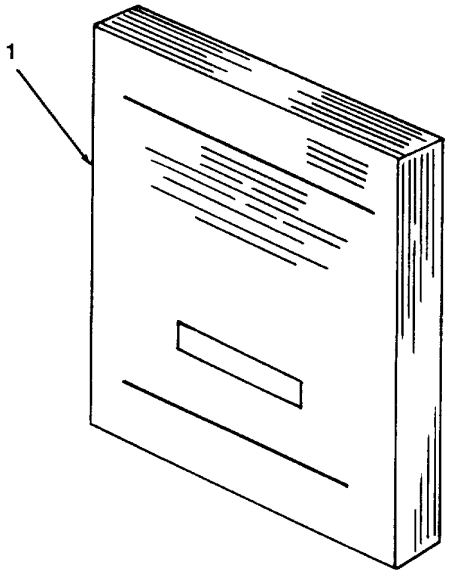
d. **Column (4). Unit of Measure (U/M).** Indicates the measure used in performing the actual operational/ maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea., in, pr).

e **Column (5). Quantity Required (Qty Req'd).** Indicates the quantity of the item authorized to be used with/on the equipment.

Section II. COMPONENTS OF END ITEM



(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION CAGEC and Part Number	USABLE on Code	(4) U/I	(5) QTY req'd
1	5975-00-296-5324	Rod, Ground, Driven, Sectional 9 ft (2.7 m) (81348) W-R-550 Type III		ea	2
2	5120-01-013-1676	Hammer, Slide (97403) 13226E7741		ea	1
3		Kit, Intervehicle Power Cable (19207) 11682379-1		ea	1
4		Paralleling Cable, 25 ft (7 6 m) (30554) 69-772		ea	1
5		Power/Control Cable, 75 ft (97403) 13227E5877-1		ea	1
6		Auxiliary Cable, 25 ft (97403) 13227E5877-2		ea	1
7		Control Cable (97403) 13222E1440		ea	1



4880-0090.2

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION CAGEC and Part Number	USABLE on Code	(4) U/I	(5) QTY req'd
1		Manual, Technical TM 9-6115-647-14&P		ea	1

APPENDIX C

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

C-1. **General.**

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

b. Section II designates overall responsibility for the performance of maintenance functions on the identified end Item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III lists the tools and test equipment required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions, explanatory notes and/or illustrations required for a particular maintenance function.

C-2. **Explanation of Columns in Section II.**

a. **Group Number. Column 1**. The assembly group is a numerical group assigned to each assembly in a top down breakdown sequence. The applicable assembly groups are listed on the MAC in disassembly sequence beginning with the first assembly removed in a top down disassembly sequence.

b **Assembly Group Column 2.** This column contains a brief description of the components of each assembly group.

c. **Maintenance Functions. Column 3**. This column lists the various maintenance functions (A through K) and indicates the lowest maintenance category authorized to perform these functions. 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

The maintenance functions are defined as follows:

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

B - Test. To verify serviceability and to detect electrical or mechanical failure by use of test equipment.

C - Service. To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents, and air. If it is desired that elements, such as painting and lubricating, be defined separately, they may be so listed.

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

E - Align. To adjust specified variable elements of an item to bring to optimum performance.

F - Calibrate. To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared with the certified standard.

G - Install. To set up for use in an operational environment such as emplacement, site, or vehicle.

H - Replace. To replace unserviceable items with serviceable like items.

I - Repair. Those maintenance operations necessary to restore an item to serviceable condition through correction of material damage to a specific failure. Repair may be accomplished at each category of maintenance.

J - Overhaul. Normally, the highest degree of maintenance performed by the Army in order to minimize time work in process is consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by maintenance standard in technical publications for each item of equipment. Overhaul normally does not return an item to like new, zero mileage, or zero hour condition.

K - Rebuild. The highest degree of material maintenance. It consists of restoring equipment as nearly as possible to new conditions in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount factors and then only at the depot maintenance category. Rebuild reduces to zero the hours or miles the equipment, or component thereof, has been in use.

d. **Symbols**. The uppercase letter placed in the appropriate column indicates the lowest level at which that particular maintenance function is to be performed.

e. **Tools and Equipment Column 4**. This column is provided for referencing by code, the special tools and test equipment, (Section III) required to perform the maintenance functions (Section II).

f. **Remarks. Column 5.** This column is provided for referencing by code, the remarks (Section IV) pertinent to the maintenance functions.

C-3**. Explanation of Columns in Section III**. Section III, Tools, Test, and Support Equipment. Requirements is not applicable.

C-4. **Explanation of Columns in Section IV**. Section IV, Remarks, is not applicable.

Section II. MAINTENANCE ALLOCATION CHART

(1)	(2)	(3) Maintenance functions											(4)	(5)
		A	B	C	D	E	F	G	H	I	J	K		
Group no.	Assembly group	Inspect	Test	Service	Adjust	Align	Calibrate	Install	Replace	Repair	Overhaul	Rebuild	Tools and equipment	Remarks
01	GENERATOR SET	C 0.2		C 0.2					F 3.0					See TM 5-6115-465-12,-34 for generator set maintenance.
02	ELECTRICAL SYSTEM													
0201	Adapter plate assy	C 0.1	O 0.3						O 1.0	F 1.0				
0202	Power/control and auxiliary cables	C 0.1	O 0.3						C 0.1					
0203	Control cable	C 0.1	O 0.3						C 0.1					
0204	P3 cable	C 0.1	O 0.3						O 0.1					
0205	P4, P7 fuel cable	C 0.1	O 0.3						C 0.1	F 1.0				
0206	Wiring harness P12, J11	O 0.1	O 0.3						O 0.1	F 1.0				
0207	Ground wire assy	C 0.1							O 0.1	F 0.5				
0208	Power distribution unit	C 0.1	O 0.5						O 0.5	O 2.0 F 2.0				
020801	Wiring harnesses	O 0.1	O 0.3						O 1.0	F 1.0				
020802	K1 and K2 contactors		F 0.5						O 0.5					
020803	K3 relay		O 0.5						O 0.5					
020804	Diodes		F 0.5						F 0.5					
03	FUEL SYSTEM													
0301	Fuel tank assy	C 0.1							F 2.0	F 1.0				
0302	Fuel line	C 0.1							F 2.5					

Section II. MAINTENANCE ALLOCATION CHART

(1)	(2)	(3) Maintenance functions											(4)	(5)
		A	B	C	D	E	F	G	H	I	J	K		
Group no.	Assembly group	Inspect	Test	Service	Adjust	Align	Calibrate	Install	Replace	Repair	Overhaul	Rebuild	Tools and equipment	Remarks
04	ACCESSORIES													
	Slide hammer	C 0.1							C 0.1					
	Ground rods	C 0.1							C 0.1					
05	TRAILER ASSEMBLY	C 0.5	O 1.0	C 0.5										See TM 9-2330-247-14&P for trailer maintenance.
0501	Storage tray								I 1.0	I 2.0				
0502	Steps and walkways								O 1.0	F 2.0				
0503	Fender brackets								O 1.0	F 2.0				
0504	Tailgate								O 1.0	F 2.0				
0505	Generator supports								F 2.0	F 2.0				
0506	Reflectors	C 0.1							O 0.5					
0507	Data plates	C 0.1							O 0.2					

APPENDIX D

UNIT, DIRECT SUPPORT AND GENERAL SUPPORT AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

D-1. **Scope**. This manual lists repair parts and special tools required for the performance of unit, direct support, general support and depot maintenance of the power unit.

D-2. **General.** The Repair Parts and Special Tools List is divided into the following sections:

a. **Repair Parts - Section II**. A list of repair parts authorized for the performance of maintenance at the unit, direct support, general support and depot level in figure and item number sequence.

b. **Special Tools. Test and Support Equipment - Section III**. A list of special tools, test and support equipment authorized for the performance of maintenance at the unit, direct support, general support and depot level.

c. **National Stock Number and Reference Number Index - Section IV**. A list of National stock numbers in numerical sequence, followed by a list of reference numbers appearing in all the listings, in alphanumeric sequence, cross-referenced to the illustration figure number and item number.

d. **Reference Designator Index - Section V**. The reference Designator Column includes all assigned reference designators arranged first in alphabetical order, second in numerical order. Opposite each symbol is listed the figure and item number of the part in Section II and the reference number.

D-3. **Explanation of Columns**. The following provides an explanation of columns in the tabular lists in Sections II and III.

a. **Illustrations. (Column 1)**. This column is divided as follows:

(1) **Figure number.** Indicates the figure number of the illustration on which the item is shown.

(2) **Item number**. Indicates the number used to identify the item on the illustration.

b. Source, Maintenance, and Recoverability Codes (SMR). (Column 2)

(1) **Source codes**

GENERAL: Source Codes are assigned to support items to indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	Definition
PA	Item procured and stocked for anticipated or known usage.
PB	Item procured and stocked for insurance purposes because essentially dictates that a minimum quantity be available in the supply systems.
PC	Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
PD	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.
PE	Support equipment procured and stocked for initial issue or outfittings to specified maintenance repair activities.
PF	Support equipment which will not be stocked but which will be centrally procured on demand.
PG	Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which because of probable discontinuance or shutdown of production facilities would prove uneconomical to reproduce at a later time.
KD	An item of depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
KF	An item of maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at unit or intermediate levels of maintenance.
KB	Item included in both a depot overhaul/repair kit and a maintenance kit.
MO	Item to be manufactured or fabricated at unit level.

Code	Definition
MF	Item to be manufactured or fabricated at general support maintenance levels.
MD	Item to be manufactured or fabricated at depot maintenance level.
AO	Item to be assembled at unit level.
AF	Item to be assembled at direct support maintenance levels.
AH	Item to be assembled at general support maintenance levels.
AD	Item to be assembled at depot maintenance level.
XA	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB	Item is not procured or stocked. If not available through salvage, requisition.
XC	Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD	A support item that is not stocked. When required, item will be procured through normal supply channels.

(2) **Maintenance codes** GENERAL: Maintenance Codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The Maintenance Codes are in the third and fourth position of the Uniform SMR Code Format.

(a) Use (third position): The Maintenance Code entered in the third position indicates the lowest level maintenance level authorized to remove, replace, and use the support item. The Maintenance Code entered in the third position indicates one of the following levels of maintenance.

Code	Application/Definition
O	Support item is removed, replaced, used at the unit level of maintenance.
F	Support item is removed, replaced, used at direct support levels.
H	Support Item is removed, replaced, used general support levels.

Code	Definition
D	Support items that are removed, replaced, used at depot only. Depot, Mobile Depot and Specialized Repair Activity.

(b) Repair (fourth position): The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions).

Code	Application/Definition
O	The lowest maintenance level capable of complete repair of the support item is the unit level.
F	The lowest maintenance level capable of complete repair of the support item is direct support level.
H	The lowest maintenance level capable of complete repair of the support item is general support level.

Code	Definition
D	The lowest maintenance level capable of complete repair of the support item is the depot level Depot, Mobile Depot, and Specialized Repair Activity.

Code	Definition
L	Repair restricted to designated. Specialized Repair Activity.
Z	Nonreparable. No repair is authorized.
B	No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item.

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

Recoverability

Code	Definition
Z	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in column 3.
O	Reparable Item. When uneconomically reparable, condemn and dispose at unit level.
F	Reparable item. When uneconomically reparable, condemn and dispose at direct support level.
H	Reparable Item. When uneconomically reparable, condemn and dispose at general support level.

Recoverability Codes	Definition
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L	Reparable item. Repair, condemnation and disposal not authorized below depot/Specialized Repair Activity level.
A	Item requires special handling or condemnation procedure because of specific reasons (i e , precious metal content, high-dollar value, critical materiel or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. **National Stock Number (Column 4)** . Indicates the National Stock Number assigned to the item and will be used for requisitioning purposes.

d. **Description (Column 5)** . Indicates the Federal item name and any additional descriptions of the item required. The abbreviation "w/e" when used as a part of the nomenclature, indicates that the National Stock Number includes all armament, equipment, accessories and repair parts issued with the item. A part number or other reference number is followed by the applicable five digit Federal Supply Code for Manufacturer in parentheses. If two reference numbers and Federal Supply Codes for Manufacturer are listed, the first listing refers to the Department of Defense Drawing Number, the second listing refers to the actual part manufacturer items that are included in kits and sets are listed below the name of the kit or set with the quantity of each item in the kit or set indicated in the quantity incorporated in unit column.

e. **Unit of Measure (U/M) (Column 6)** . Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e g, ea, in, pr etc) . When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

f. **Quantity Incorporated in Unit (Column 7)** . Indicates the quantity of the item used in the assembly group. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated (e g , shims, spacers, etc.).

D-4 **Special Information**.

a. Identification of Usable On Codes for this manual is not applicable.

b. Army unit maintenance personnel will extract the items which they require from Section II, 3rd or 4th position of column 2 of the direct and general support RPSTL. Parts which are manufactured or assembled at a higher level than that authorized to install the part are indicated by the use of higher level code in the source column.

c. Stockage Information. Army stockage is demand based in accordance with AR 710-2. Repair parts listed in this publication represent those authorized for use at indicated maintenance levels and will be requisitioned on an as-required basis until stockage is justified in accordance with AR 710-2.

d. In the parts list, some items are indented to show that they are a component of the item under which they are indented.

D-5 **How to Locate Repair Parts**.

a. **When National Stock Number or Reference Number is Unknown:**

(1) Using the table of contents, determine the functional group, i.e., batteries and related parts, exhaust and breather pipes, within which the repair part belongs. This is necessary since illustrations are prepared for functional groups.

(2) Find the illustration covering the functional group to which the repair part belongs.

(3) Identify the repair part on the illustration and note the illustration figure and item number of the repair part.

(4) Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. **When National Stock Number or Reference Number is Known:**

(1) Using the index of National Stock Numbers and Reference Numbers, find the pertinent national stock number or reference number. This index is in ascending NSN sequence followed by a list of reference numbers in alphanumeric sequence, cross-referenced to the illustration figure number and item number.

(2) After finding the figure and item number, locate the figure and item number in the repair parts list.

D-6. **Use of the Reference Designator Index Section**. This Section (Section V) is used when the reference designator is known or identified by other technical manuals supporting this equipment. The reference number is given in this section if description or location is desired, note the figure and item number. Turn to Section II to the noted figure and item number. The location of the part and description is given in this listing.

D-7 **Abbreviations.**

Abbreviations	Explanation
	Not Applicable

D-8 **Commercial and Government Entity Code**.

Code	Manufacturer
	Not Applicable

D-9. **Recommendation for Maintenance Publication Improvements**. Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted directly to Commander, US Army Troop Support Command, ATTN: AMSTR-MCTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798.

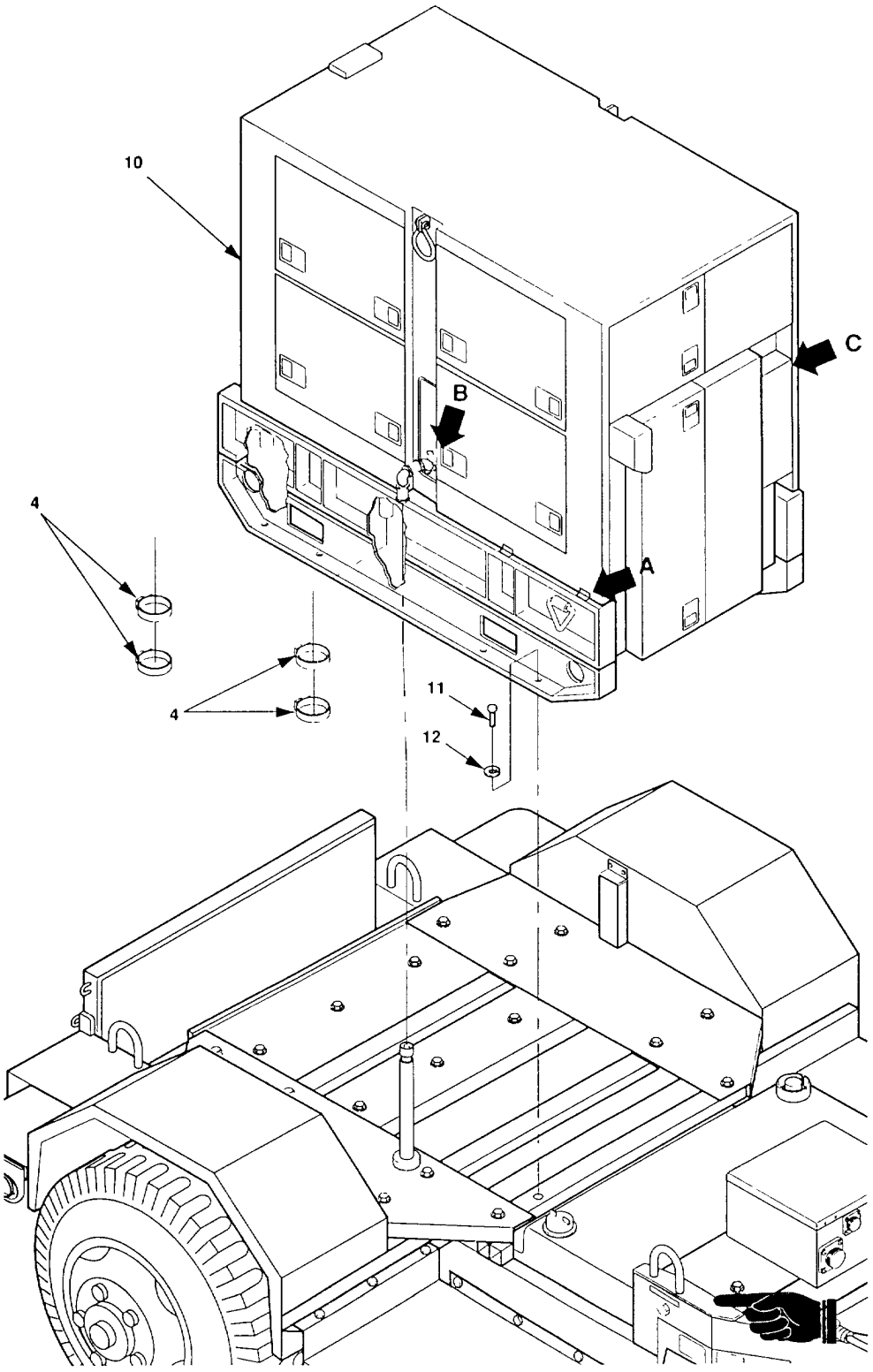
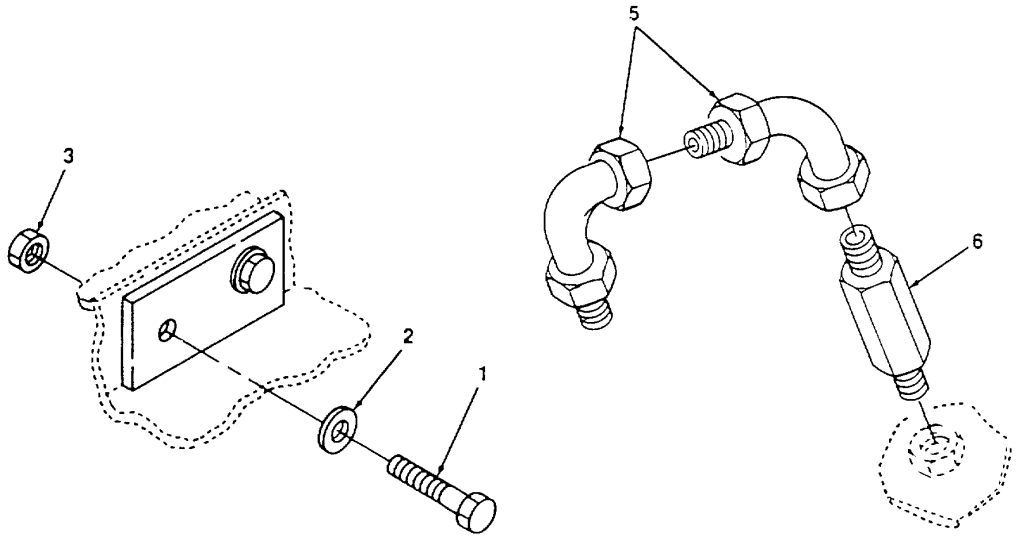
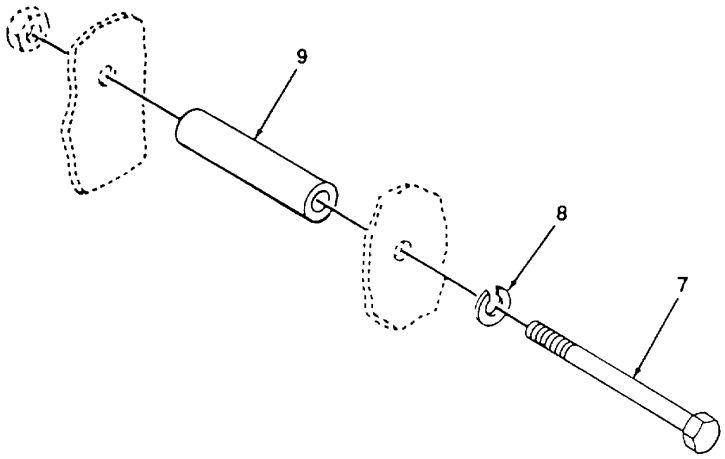


Figure D-1. Generator Set (Sheet 1 of 2).



DETAIL A

DETAIL B



DETAIL C

Figure D-1. Generator Set (Sheet 2 of 2).

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	(5) USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									Group 01 - GENERATOR SET				
D-1	1	PAOZZ						5306 00 225 9498	SCREW,CAP MS90725 33	 96906	EA	4	
D-1	2	PAOZZ						5310 00 081 4219	WASHER, FLAT MS27183-12	 96906	EA	4	
D-1	3	PAOZZ						5310 00 984 3806	NUT, SELF-LOCKING MS51922 9	 96906	EA	4	
D-1	4	PAOZZ						4730 00 908 3195	CLAMP, HOSE MS35842 10	 96906	EA	8	
D-1	5	PAOZZ							ELBOW, 90° 13227E5848 1 39T3 8-8	 97403 88303	EA	2	
D 1	6	PAOZZ						4730 01 231-1740	ADAPTER 13227E5879	 97403	EA	2	
0-1	7	PAOZZ						5305 00 071-2511	SCREW, CAP MS90725 15	 96906	EA	4	
D-1	8	PAOZZ						5310-00 582-5965	LOCKWASHER, SPRING MS35338 44	 96906	EA	4	
D-1	9	PAOZZ						5365 01 031-1798	SPACER 13220E8192	 97403	EA	4	
D-1	10	PDFFD						6115-00 118-1248	GENERATOR SET MEP-114A	 30554	EA	4	
D 1	11	PAOZZ						5305 00 724 5914	SCREW,CAP MS90725-167	 96906	EA	8	
D 1	12	PAOZZ						5310-00 8206653	LOCKWASHER, SPRING MS35338 50	 96906	EA	8	

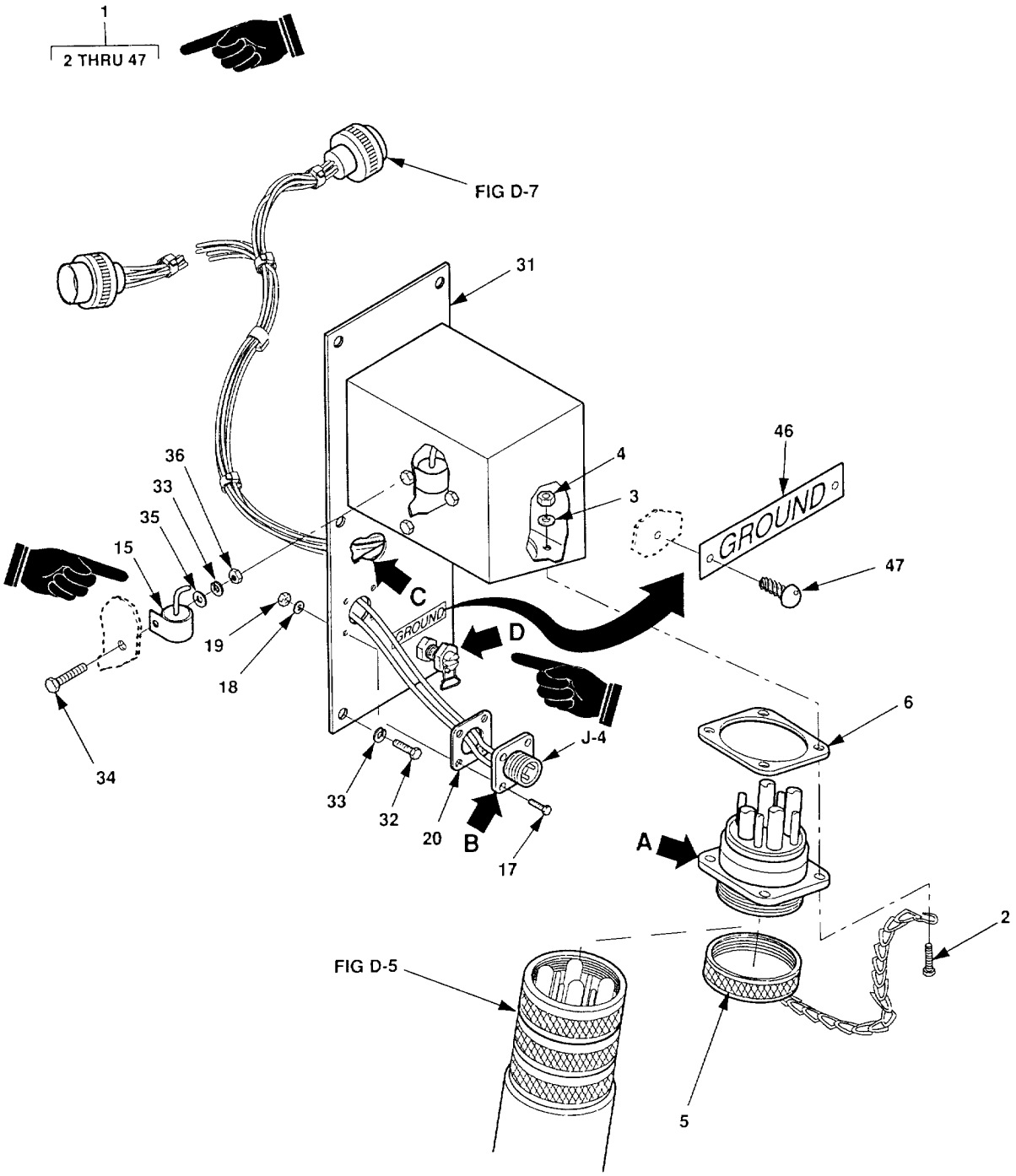


Figure D-2. Adapter Plate Assembly (Sheet 1 of 3).

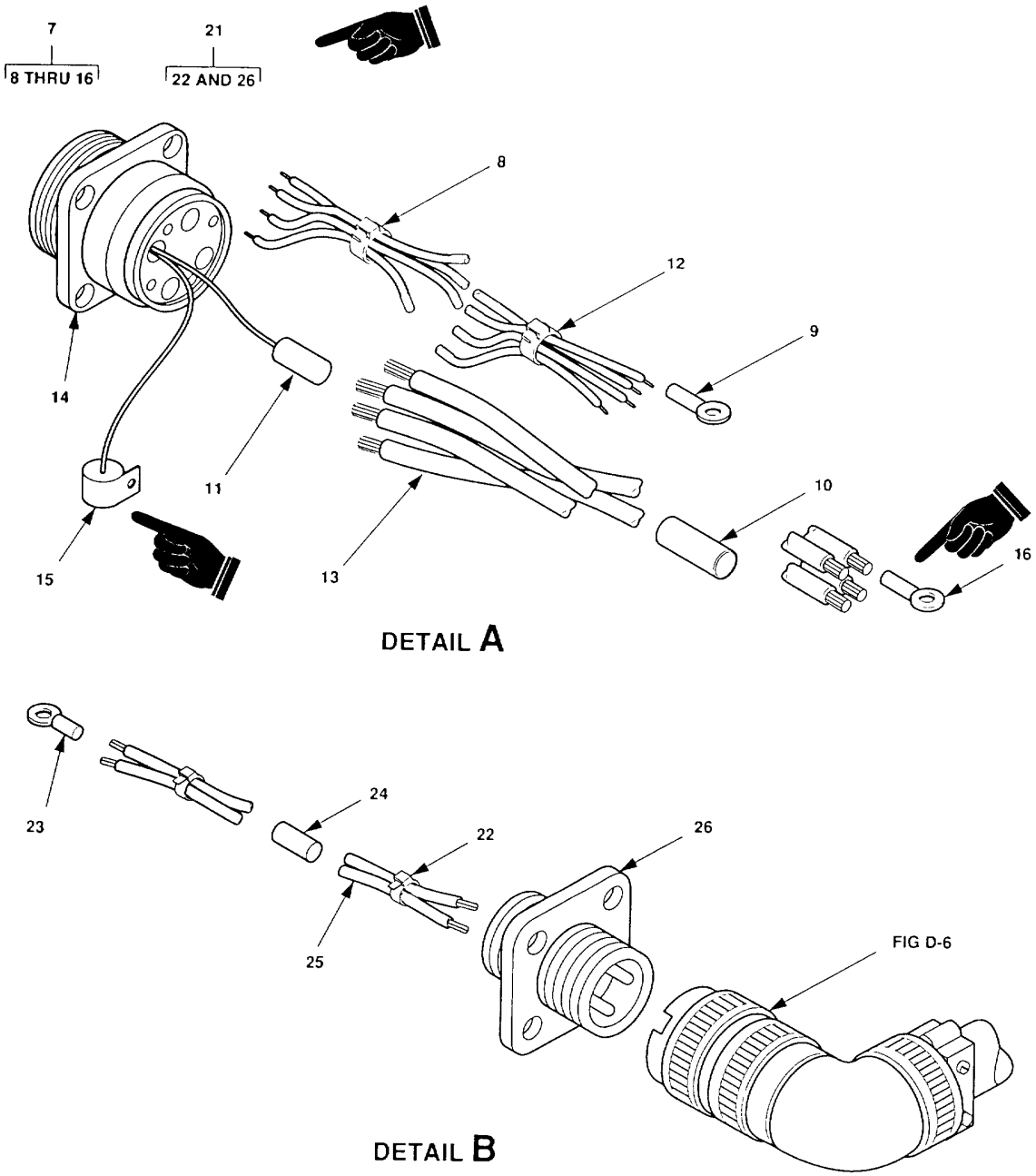


Figure D-2. Adapter Plate Assembly (Sheet 2 of 3).

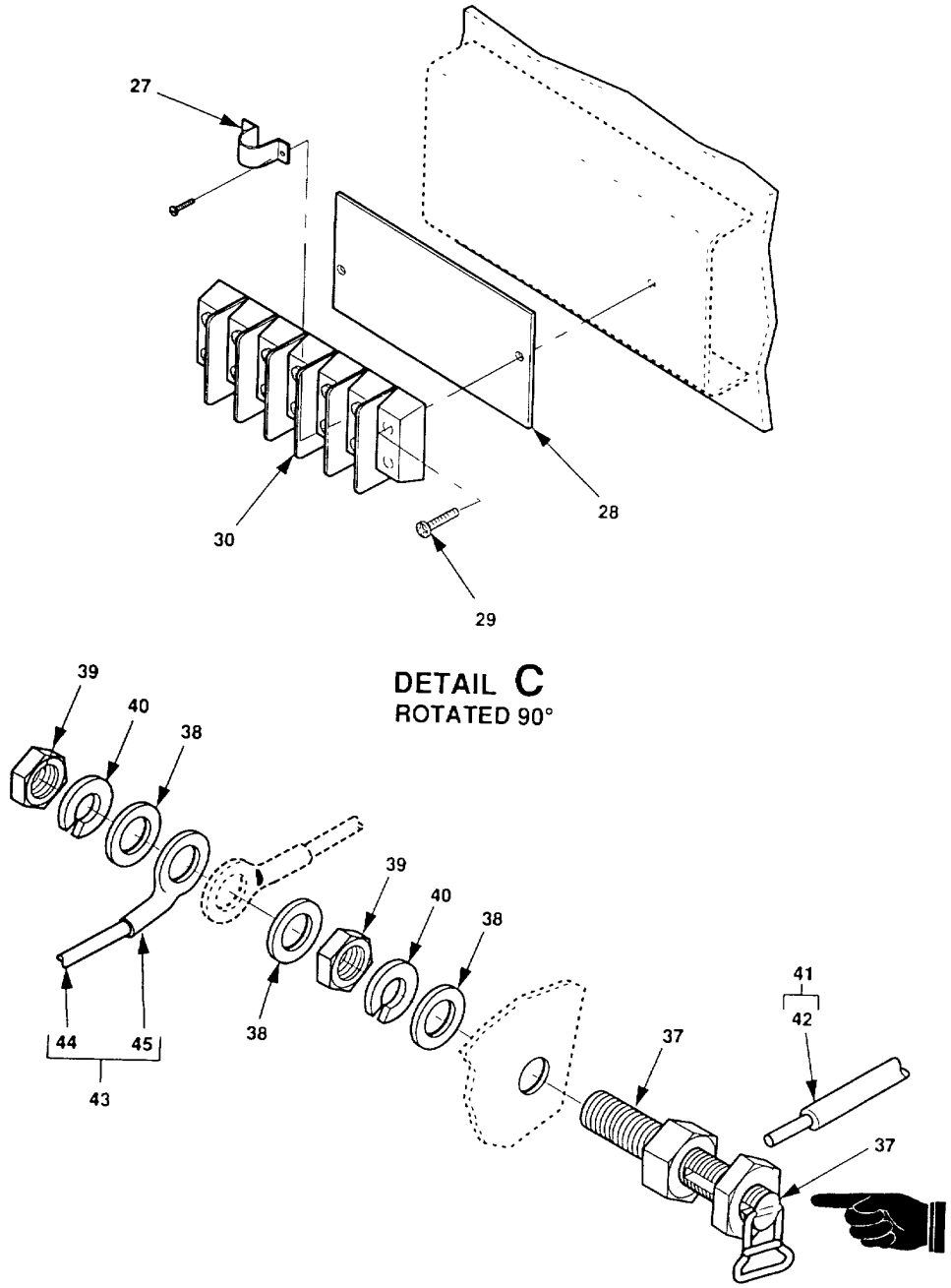


Figure D-2. Adapter Plate Assembly (Sheet 3 of 3).

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									Group 02 - ELECTRICAL SYSTEM 0201 - Adapter Plate Assy				
D-2	1	MDOFF							PLATE ASSY, ADAPTER 13227E5859	97403	EA	1	
D-2	2	PAFZZ						5305-00-059-3661	SCREW, CROSS-RECESSED MS51958-65	96906	EA	4	
D-2	3	PAFZZ						5310-00-014-5850	WASHER, FLAT MS27183-42	96906	EA	4	
D-2	4	PAFZZ						5310-00-877-5797	NUT, SELF-LOCKING MS21044N3	96906	EA	4	
D-2	5	PAFZZ						5935-00-060-2294	COVER, PROTECTIVE MS17349C40B	96906	EA	1	
D-2	6	PAFZZ						5999-01-181-8436	GASKET, RECEPTACLE, EMI 13226E7052-4	97403	EA	1	
D-2	7	PBFFF							WIRING HARNESS, J3 13227E5870 MANUFACTURE FROM	97403	EA	1	
D-2	8	PAFZZ						597500-727-5153	STRAP, TIEDOWN MS3367-4-9	96906	EA	V	
D-2	9	PAFZZ						5940-00-283-5280	TERMINAL, LUG MS25036-106	96906	EA	4	
D-2	10	PAFZZ						5970-00-914-3118	SLEEVING, INSULATION MS23053/5-109-0	81349	FT	V	
D-2	11	PAFZZ						5970-00-954-1622	SLEEVING INSULATION MS23053/5-105-0	81349	FT	V	
D-2	12	PAFZZ						6145-01-1959844	WIRE, ELECTRICAL, 16 AWG (J3 TO TB2-1, TB2-3, TB2-4 AND TB2-5) M16878/8BJE9	81349	FT	V	
D-2	13	PAFZZ						6145-01-197-2687	WIRE, ELECTRICAL, 1 AWG (J3 TO L1 THRU L3 AND GROUND) M1687818BTM9	81349	FT	V	
D-2	14	PAFZZ						5935-01-181-8405	CONNECTOR, RECEPTACLE MIS20045/2-019	18876	EA	1	
0-2	15	PAFZZ							PROTECTOR, SURGE 13228E1908	97403	EA	3	
D-2	16	PAFZZ						5940-00-115-4999	TERMINAL, LUG MS20659-134	96906	EA	1	
D-2	17	PAFZZ						5305-00-054-5650	SCREW, CROSS-RECESSED MS51957-16	96906	EA	4	

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION		(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE	USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									Group 02 - ELECTRICAL SYSTEM 0201 - Adapter Plate Assy (Cont)				
D-2	18	PAFZZ						5310-00-950-1310	WASHER, FLAT MS27183-4 96906		EA	4	
D-2	19	PAFZZ						5310-00-088-0551	NUT SELF-LOCKING MS21044N04 96906		EA	4	
D-2	20	PAFZZ						5999-01-198-6172	GASKET, RECEPTACLE, EMI 13226E7052-1 97403		EA	1	
D-2	21	MDFFF							WIRING HARNESS, J4 13227E5842 97403 MANUFACTURE FROM		EA	1	
D-2	22	PADZZ						5975-00-727-5153	STRAP, TIEDOWN MS3367-4-9 96906		EA	V	
D-2	23	PAFZZ						5940-00-283-5280	TERMINAL, LUG MS25036-106 96906		EA	2	
D-2	24	PAFZZ						5970-00-815-1295	SLEEVING, INSULATION M23053/5-106-0 81349		FT	V	
D-2	25	PAFZZ						6145-00-2952812	WIRE, ELECTRICAL, 16 AWG (J4 TO TB2-2 AND TB2-5) M16878/4BJE9 81349		FT	V	
D-2	26	PAFZZ						5935-01-190-6729	CONNECTOR, RECEPTACLE D38999/20FD5SN 81349		EA	1	
D-2	27	PAFZZ						6150-00-838-4952	JUMPER, TERMINAL BOARD TBJA 81349		EA	1	
D-2	28	MDOFF							STRIP, MARKER 13222E9687-6 97403 MS37TB-5 6ME-7E 75382		EA	1	
D-2	29	PAFZZ						5305-00-054-6655	SCREW, CROSS-RECESSED MS51957-31 96906		EA	2	
D-2	30	PAFZZ						5940-00-983-6046	BOARD, TERMINAL, TYPE 37TB5 MIL-T-5516411 81349		EA	1	
D-2	31	MDOFF							PLATE, ADAPTER 13227E5860 97403		EA	1	
D-2	32	PAOZZ						5305-00-068-0502	SCREW, CAP MS90725-6 96906		EA	6	
D-2	33	PAOZZ						5310-00-582-5965	WASHER, LOCK-SPRING MS35338-44 96906		EA	9	
D-2	34	PAFZZ						5305-00-068-0501	SCREW, CAP MS90725-5 96906		EA	3	

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									Group 02 - ELECTRICAL SYSTEM				
									0201 - Adapter Plate Assy (Cont)				
D-2	35	PAFZZ						5310-00-809-4058	WASHER, FLAT MS27183-10	 96906	EA	3	
D-2	36	PAFZZ						5310-00-761-6882	NUT, HEX MS51967-2	 96906	EA	3	
D-2	37	PAFZZ							TERMINAL, LOAD 13228E1924	 97403	EA	1	
D-2	38	PAFZZ						5310-00-045-5218	WASHER, FLAT MS15795-918	 96906	EA	3	
D-2	39	PAFZZ						5310-00-897-6082	NUT, PLAIN, HEX MS35691-36	 96906	EA	2	
D-2	40	PAFZZ						5310-00-577-5354	WASHER, LOCK-SPRING MS35338-105	 96906	EA	2	
D-2	41	MFFFF							WIRE ASSEMBLY, GROUND 13220E0697-6	 97403	EA	1	
D-2	42	PAFZZ							MANUFACTURE FROM WIRE, 6 AWG HW-C6(127)JO	 81349	FT	V	
D-2	43	MFOFF							WIRE ASSEMBLY,GROUND 13220E0697-5	 97403	EA	1	
D-2	44	PAFZZ						6145-01-197-2687	MANUFACTURE FROM WIRE, 1 AWG M16878/8BTM9	 81349	EA	1	
D-2	45	PAFZZ						5940-00-115-4999	TERMINAL, LUG MS20659-134	 96906	FT	V	
D-2	46	PAFZZ						9905-00-477-4137	NAMEPLATE, GROUND 13211E6730	 97403	EA	1	
D-2	47	PAFZZ						5303-00-253-5615	SCREW, DRIVE MS21318-21	 96906	EA	2	

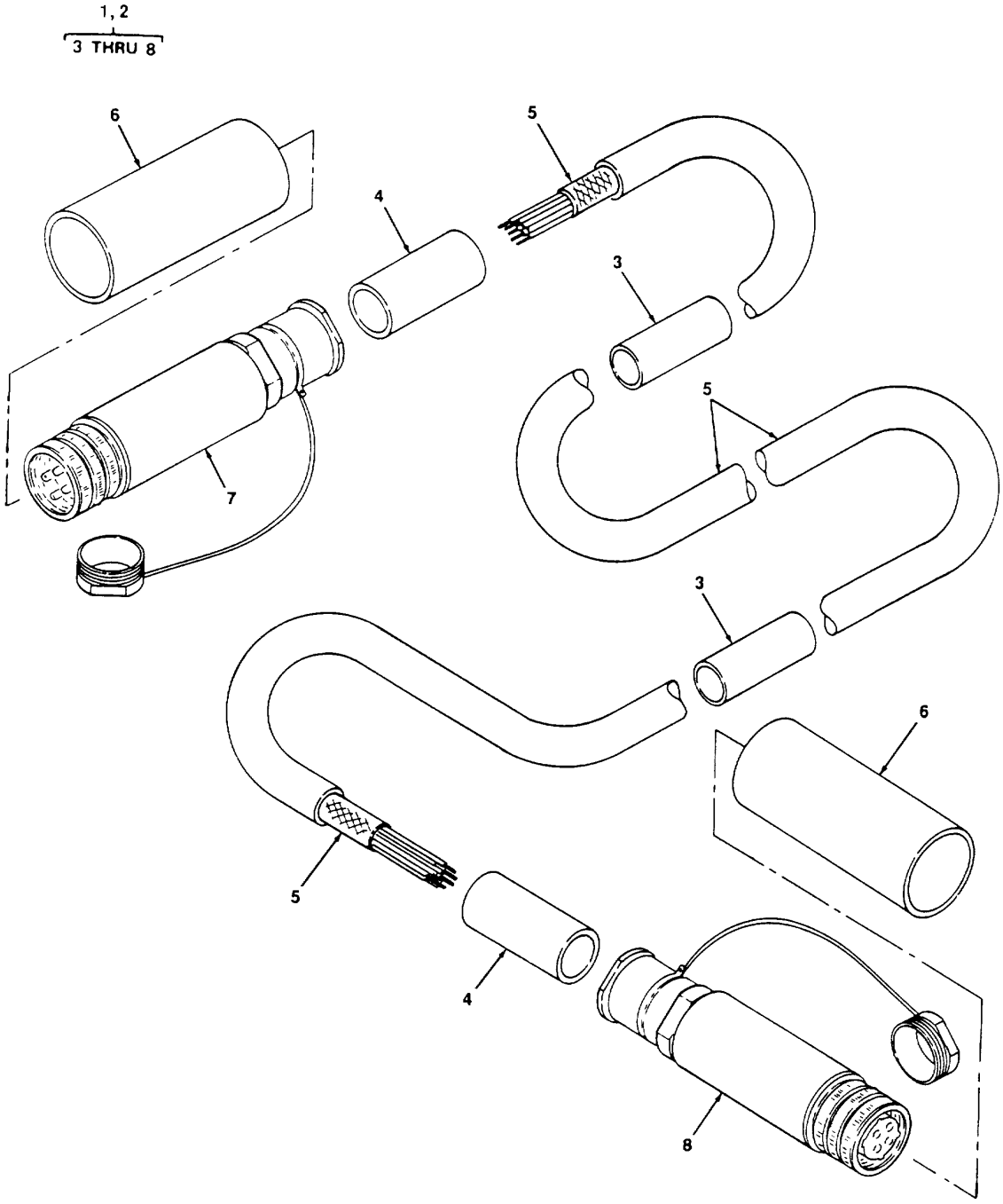


Figure D-3. Power/Control and Auxiliary Cables.

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION	(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									0202 - Power/Control Cables			
D-3	1								CABLE, POWER/CONTROL, 75 FT (PRIMARY POWER DISTRIBUTION UNIT TO ICC/CRG) 13227E5877-1 97403	EA	1	
D 3	2	MOOZZ							CABLE, POWER/CONTROL, 25 FT, AUXILIARY, P10, P11 (AUXILIARY ADAPTER PLATE ASSY TO PRIMARY POWER DISTRIBUTION UNIT) 13227E5877 2 97403	EA	1	
D 3	3	PADZZ						5970 00-834 9119	MANUFACTURE FROM SLEEVING, INSULATION M23053/5-112 0 81349	FT	V	
D 3	4	PADZZ						6145-01 143 0040	SLEEVE, CABLE 13226E1336-1 97403	EA	2	
D 3	5	PAOZZ						6145 01-135-5951	CABLE, POWER 13222E8995 97403	FT	V	
D 3	6	PADZZ						5970 00 789 6832	SLEEVING, INSULATION M23053/5 114-0 81349	FT	V	
D-3	7	PADOZZ						5935 01-136-9896	CONNECTOR, PLUG (MIS20045/11-029) 13226E1440 97403	EA	1	
0 3	8	PADZZ						5934 01-137 3101	CONNECTOR, PLUG (MIS20045/1 028) 13226E1410 97403	EA	1	

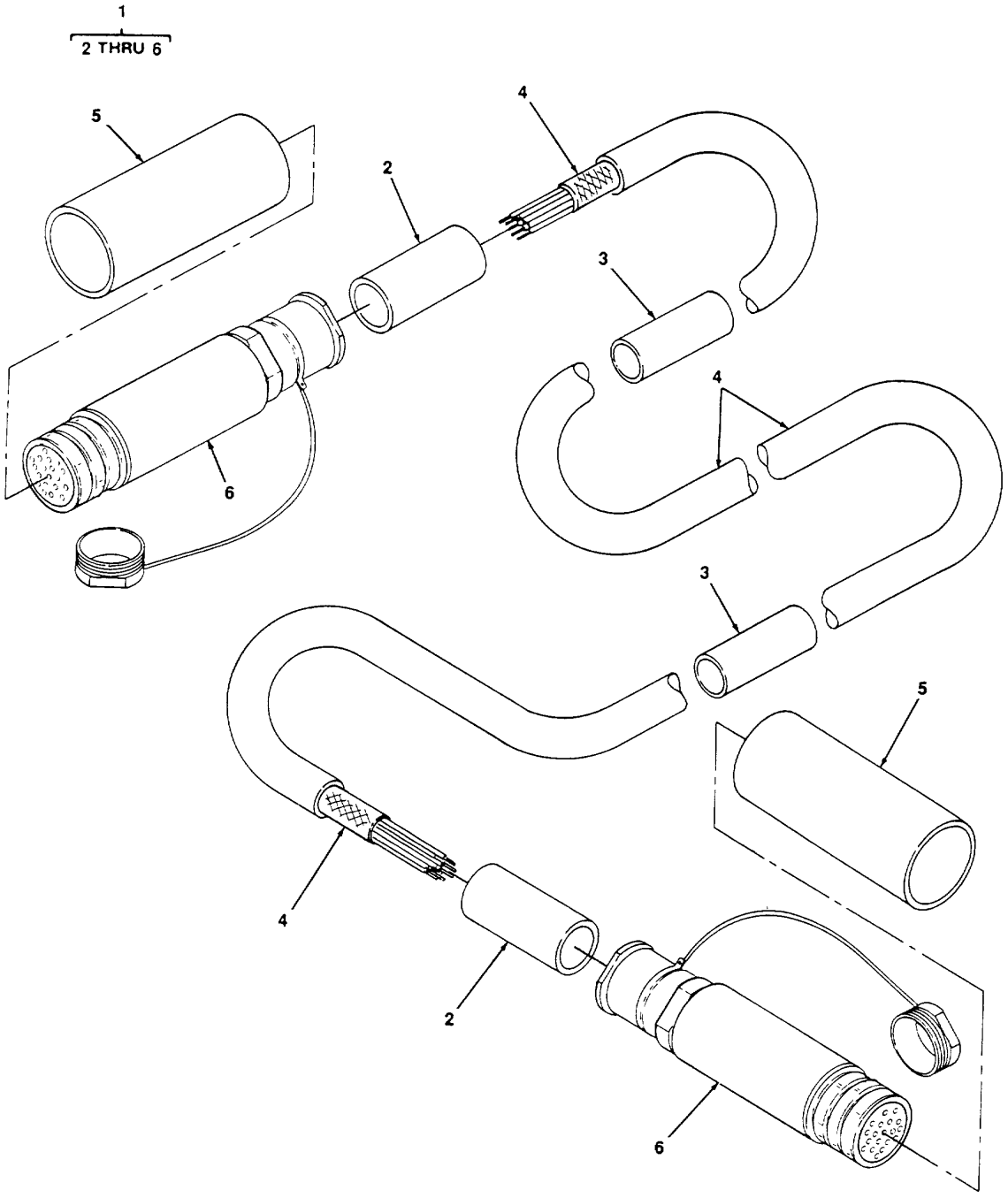


Figure D-4. Control Cable.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	(5) DESCRIPTION USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0203- Control Cable				
04	1								CABLE,POWER DISTRIBUTION UNIT TO ELECTRIC CONTROL SYSTEM 13222E1440	97403	EA	1	
	2	PADOZZ							MANUFACTURE FROM SLEEVE, CABLE 13226E 1336-3	97403	EA	2	
	3	PADZZ						5970 00-812 1356	SLEEVING, INSULATION M23053/5-111-0	81349	EA	2	
	4	PADZZ						6145-01 182-8781	CABLE MIS20076/11 005	18876	FT	V	
	5	PADZZ							SLEEVING, INSULATION M2305315-113-0	81349	FT	V	
	6	PADZZ						5935 01 182 8884	CONNECTOR, PLUG MIS20045/1 015	18876	EA	2	

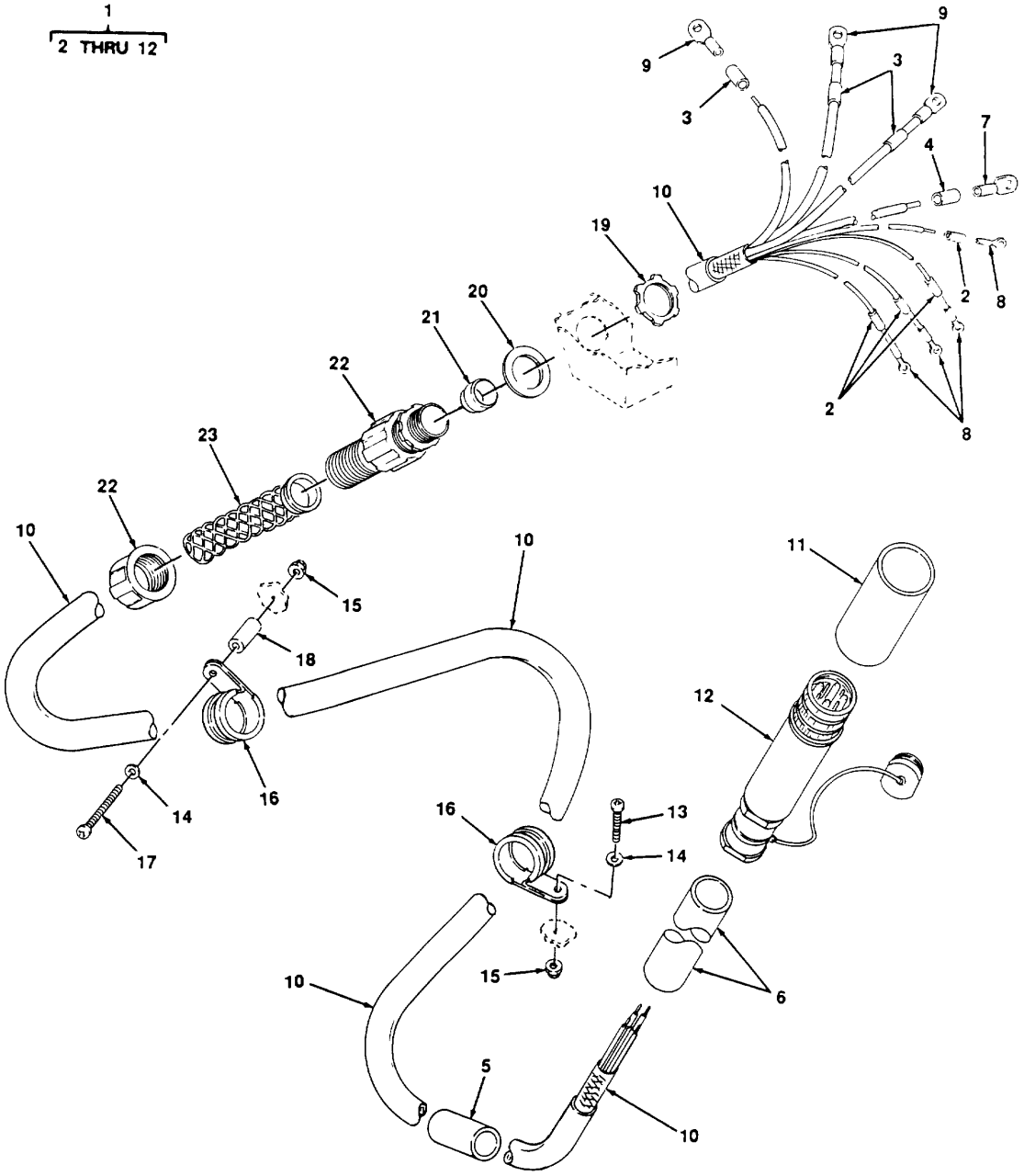


Figure D-5. P3 Power/Control Cable.

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION		(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE	USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									0204 - Power/Control Cable				
D-5	1								CABLE, POWER/CONTROL, P3 (POWER DISTRIBUTION UNIT TO ADAPTER PLATE ASSY) 13227E5868	97403	EA	1	
D 5	2	PADZZ						5970 00 954 1622	MANUFACTURE FROM SLEEVING, INSULATION M23053/5 105-0	 81349	FT	V	
D 5	3	PADZZ						5979 00 914 3118	SLEEVING, INSULATION M23053/5-109 0	 81349	FT	V	
D-S	4	PADZZ						5950 00 812 2967	SLEEVING, INSULATION M23053/5-108 0	 81349	FT	V	
D 5	5	PADZZ						5970-00 834-9119	SLEEVING, INSULATION M23053/5 112-0	 81349	FT	V	
D-5	6	PAOZZ						6145 01-143 0040	SLEEVE, CABLE 13226E1336-1	 97403	EA	1	
D 5	7	PADZZ						5940 00 113 -8190	TERMINAL, LUG MS25036-122	 96906	EA	1	
D-5	8	PADZZ						5940 00 283 5280	TERMINAL, LUG MS25036 106	 96906	EA	4	
D 5	9	PADZZ						5940 00 115 5007	TERMINAL, LUG MS25036 130	 96906	EA	3	
D-5	10	PADZZ						6145 01-135 5951	CABLE, POWER 13222E8995	 97403	FT	V	
D-5	11	PADZZ						5970 00 789 6832	SLEEVING, INSULATION M23053/5 114 0	 81349	FT	V	
D 5	12	PADZZ						5935-01-136-9896	CONNECTOR, PLUG 13226E1440	 97403	EA	1	
D-5	13	PAOZZ						5305 00 993 1848	SCREW, MACHINE MS35207-265	 96906	EA	2	
D 5	14	PAOZZ						5310 00 014 5850	WASHER, FLAT MS27183 42	 96906	EA	3	
D-5	15	PAOZZ						5310 00-877-5797	NUT, SELF LOCKING MS21044N3	 96906	EA	3	
D 5	16	PAOZZ						5340 01-196 0276	CLAMP, LOOP MS21919WCG27	 96906	EA	3	
D-5	11	PAOZZ						5305-00 995-3441	SCREW, MACHINE MS35207-269	 96906	EA	1	
D 5	18	PAOZZ						5365 00-294 0580	SPACER NAS43DD3-48	 80205	EA	1	
D-5	19	PAOZZ						5975 00 100 8776	LOCKNUT, CONDUIT 13215E7892 6	 97403	EA	1	
D-5	20	PAOZZ						5330 01-181 8380	GASKET, EMI 13226E7768-2 82-11561	 97403 07700	EA	1	
D 5	21	PAOZZ						3120 01 181 9363	BUSHING 13226E6162 2	 97403	EA	1	

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	(5) DESCRIPTION USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0204 - Power/Control Cable (Cont)				
D 5	22	XDDZZ							SEALING GRIP, CABLE, EMI		EA	1	
									13226E9502-1	97403			
D 5	23	PAOZZ							GRIP, CABLE		EA	1	
									13226E9503-2	97403			
									004-04-010	81992			

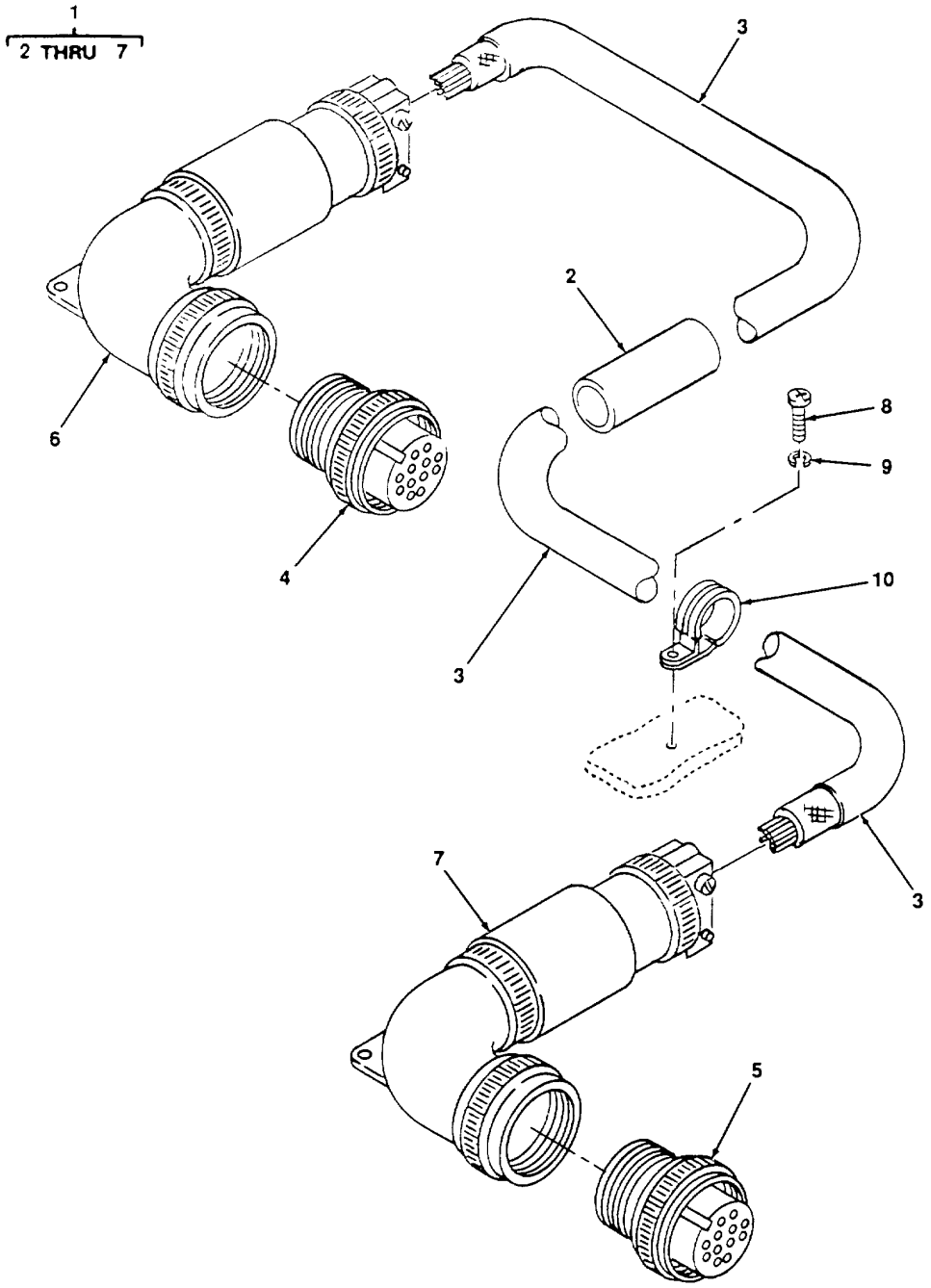


Figure D-6. P4, P7 Fuel Cable.

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION	(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									0205- Fuel Cable			
D 6	1	MOOFF							CABLE ASSEMBLY P4, P7 (ADAPTER PLATE ASSY TO FUEL TANK) 13227E5869 97403	EA	1	
D-6	2	PAFZZ						5970 00-954-1624	MANUFACTURE FROM SLEEVING. INSULATION M23053/5-107-0 81349	FT	V	
D 6	3	PAFZZ						6145-01 129 6897	CABLE 13222E1427 97403 OOC-04A-ABK 90484	FT	V	
D-6	4	PAFZZ							CONNECTOR, ELECTRICAL, P4 D38999/26FD5PN 81349	EA	1	
D-6	5	PAFZZ						5935-00-813-4717	CONNECTOR, ELECTRICAL P7 MS3106R14S-2S 96906	EA	1	
D 6	6	PAFZZ							BACKSHELL, 90 ° 13226E6147 12 97403 390HA002M15D4HA 06324	EA	1	
D-6	7	PAFZZ							BACKSHELL,90° 13226E6147-15 97403 390BA002N1404HA 06324	EA	1	
D-6	8	PAOZZ						5305 00-993 1848	SCREW, MACHINE MS35207-265 96906	EA	1	
D-6	9	PAOZZ						5310-00-045-3296	LOCKWASHER, SPRING MS35338-43 96906	EA	1	
D-6	10	PAOZZ						5340 01-148 3722	CLAMP, LOOP MS21919WCG6 96906	EA	1	

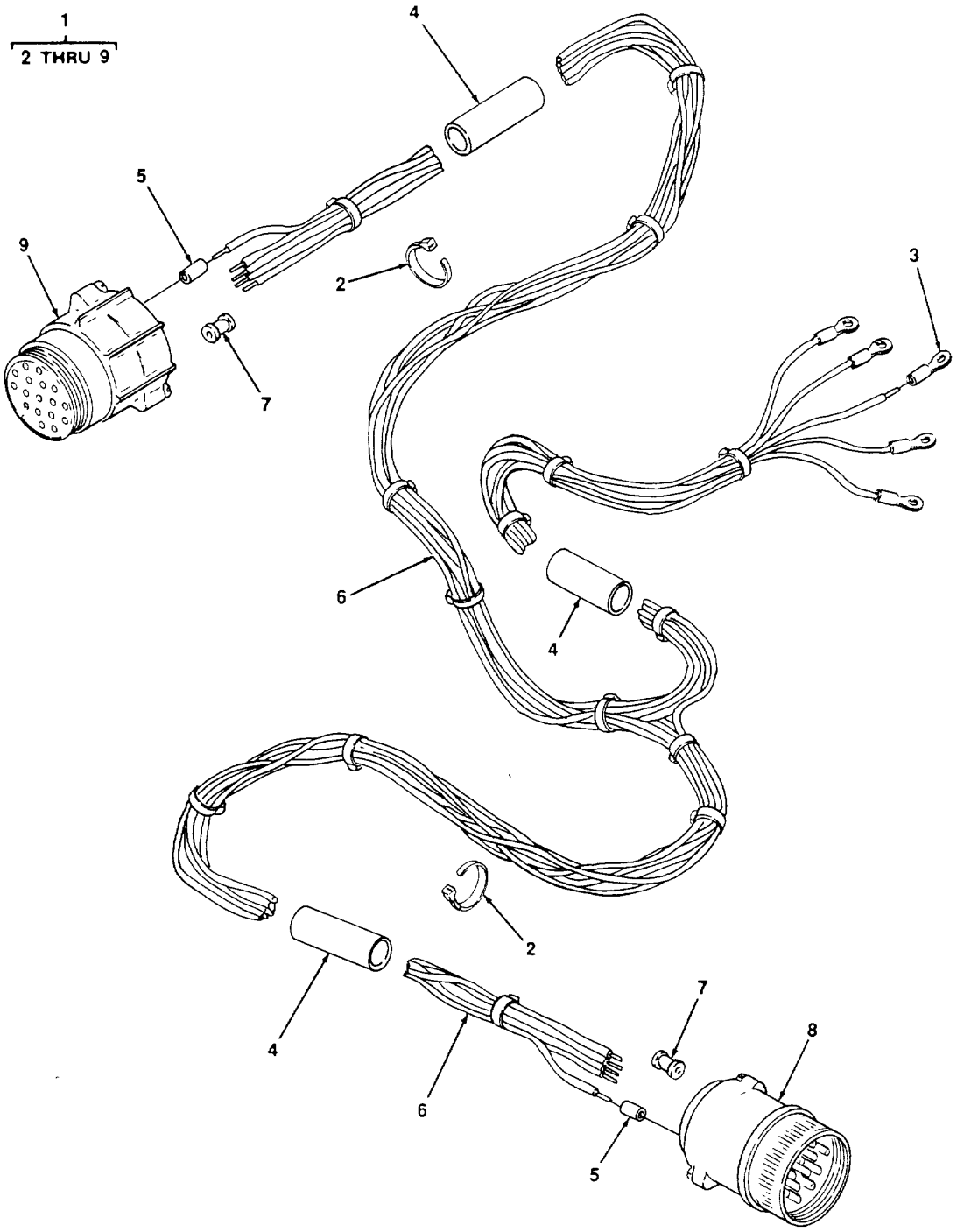


Figure D-7. P12, J11 Wiring Harness.

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION		(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE	USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									0206 - Wiring Harness				
D-7	1	MFOFF							WIRING HARNESS, P12, J11 (ADAPTER PLATE ASSY TO GENERATOR SET) 13227E5843	97403	EA	1	
									MANUFACTURE FROM				
D-7	2	PAFZZ						5975-00-727-5153	STRAP, TIEDOWN MS3367-4-9	96906	EA	V	
D-7	3	PAFZZ						5940-00-283-5280	TERMINAL, LUG MS25036-106	96906	EA	5	
D-7	4	PAFZZ						5970-00-812-2967	SLEEVING, INSULATION M23053/5-108-0	81349	FT	V	
D-7	5	PAFZZ						5970-00-954-1622	SLEEVING, INSULATION M23053/5-105-0	81349	FT	V	
D-7	6	PAFZZ						6145-00-295-2812	WIRE, ELECTRICAL, 16 AWG M16878/4BJE9	81349	FT	V	
D-7	7	PAFZZ						5935-00-823-5322	PLUG, END, SEAL, CONNECTOR MS25251-16	96906	EA	15	
D-7	8	PAFZZ						5935-00-725-8233	CONNECTOR P12 MS3106R20-29S	96906	EA	1	
D-7	9	PAFZZ						5935-00-819-5865	CONNECTORJ11 MS3101R20-29P	96906	EA	1	

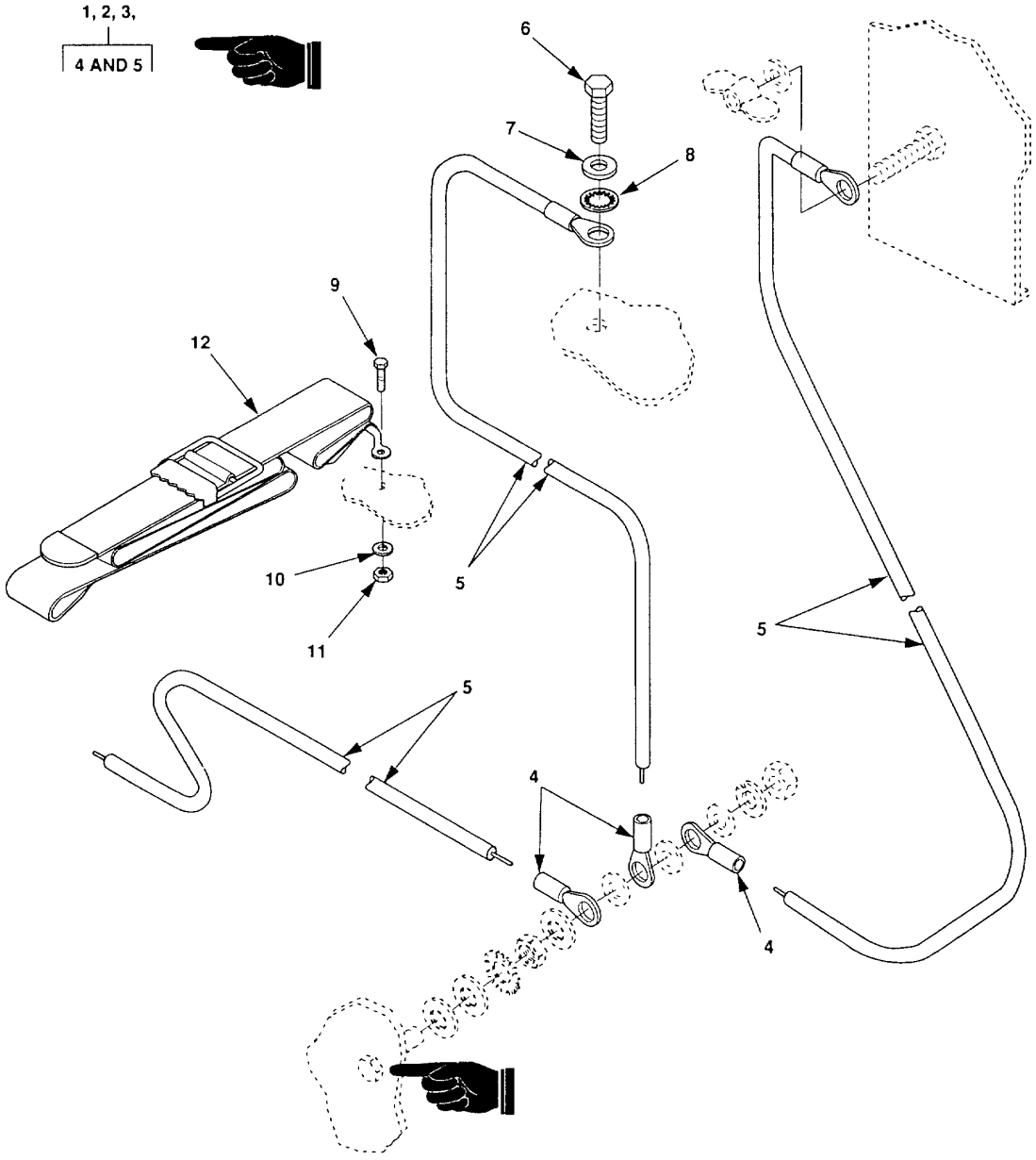


Figure D-8. Ground Wire Assemblies.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0207 - Ground Wire Assy			
D-8	1	MFOFF							WIRE ASSEMBLY, GROUND (POWER DISTRIBUTION UNIT GROUND TO TRAILER GROUND) 13220E0669-7 97403	EA	1	
D-8	2	MFOFF							WIRE ASSEMBLY, GROUND (FUEL TANK GROUND TO TRAILER GROUND) 13220E0669-8 97403	EA	1	
D-8	3	MFOFF							WIRE ASSEMBLY, GROUND (GENERATOR GROUND TO TRAILER GROUND) 13220E0697-4 97403	EA	1	
D-8	4	PAFZZ						5940-00-113-8190	MANUFACTURE FROM TERMINAL, LUG (USED ON 13220E0669-7 AND -8) MS25036-122 96906	EA	2	
		PAFZZ						5940-00-113-8190	TERMINAL, LUG (USED ON 13220E0697-4) MS25036-122 96906	EA	1	
D-8	5	PAFZZ						6145-01-196-0273	WIRE,SIZE6 HW-C6(127)JO 81349	FT	V	
D-8	6	PAOZZ						5305-00-269-3206	SCREW, CAP MS90725-55 96906	EA	1	
D-8	7	PAOZZ						5310-00-187-2413	WASHER, FLAT AN961-616T 81352	EA	1	
D-8	8	PAOZZ						5310-00-0228847	LOCKWASHER, INTERNAL TOOTH MS35333-110 96906	EA	1	
D-8	9	PAOZZ						5305-00-984-7342	SCREW, MACHINE MS35191-274 96906	EA	4	
D-8	10	PAOZZ						5310-00-014-5850	WASHER, FLAT MS27183-42 96906	EA	4	
D-8	11	PAOZZ						5310-00-877-5797	NUT, SELF-LOCKING MS21044N3 96906	EA	4	
D-8	12	PAOZZ						5340-01-228-5831	STRAP ASSY 13220E0670-10 97403	EA	2	

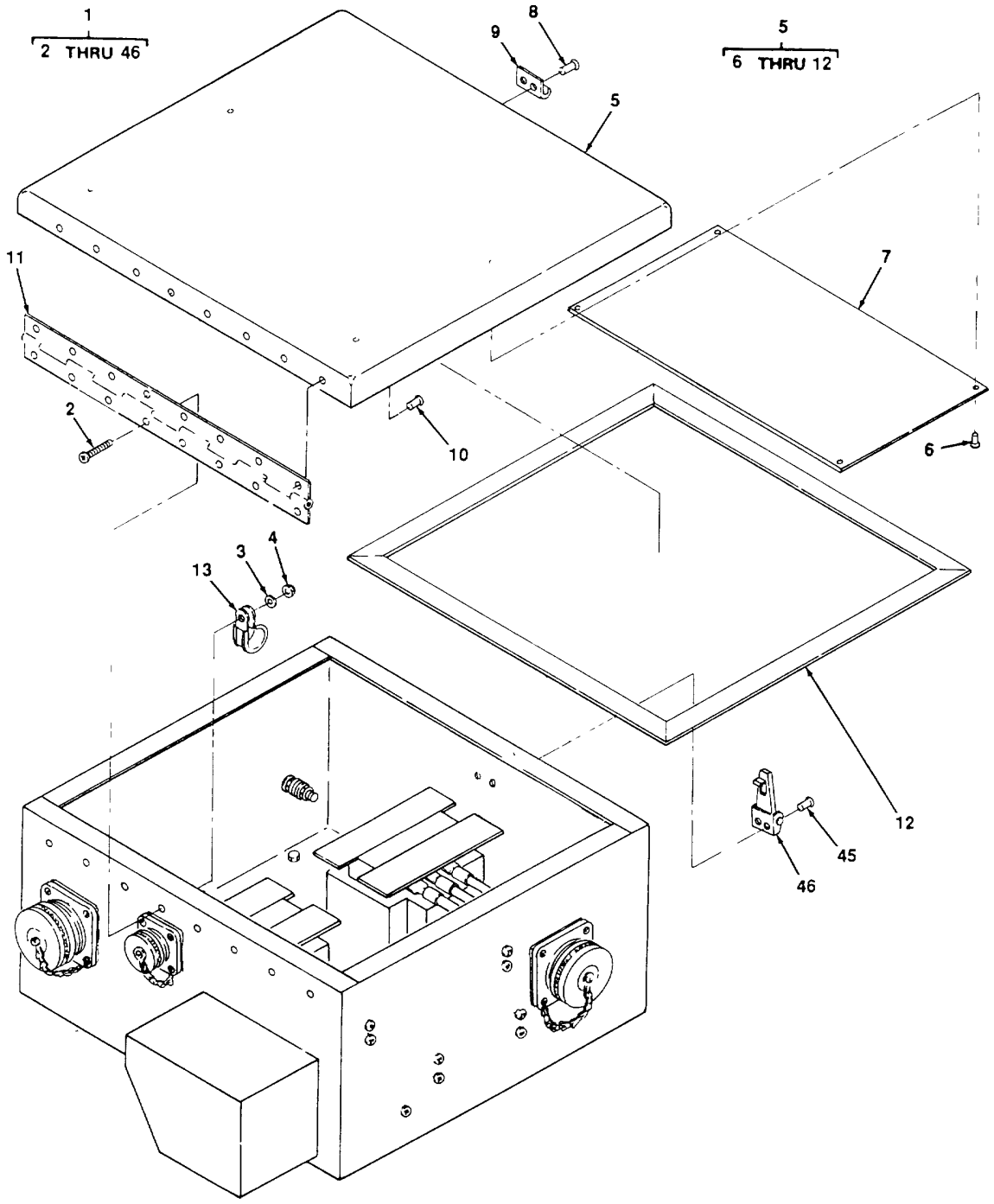


Figure D-9. Power Distribution Unit (Sheet 1 of 4).

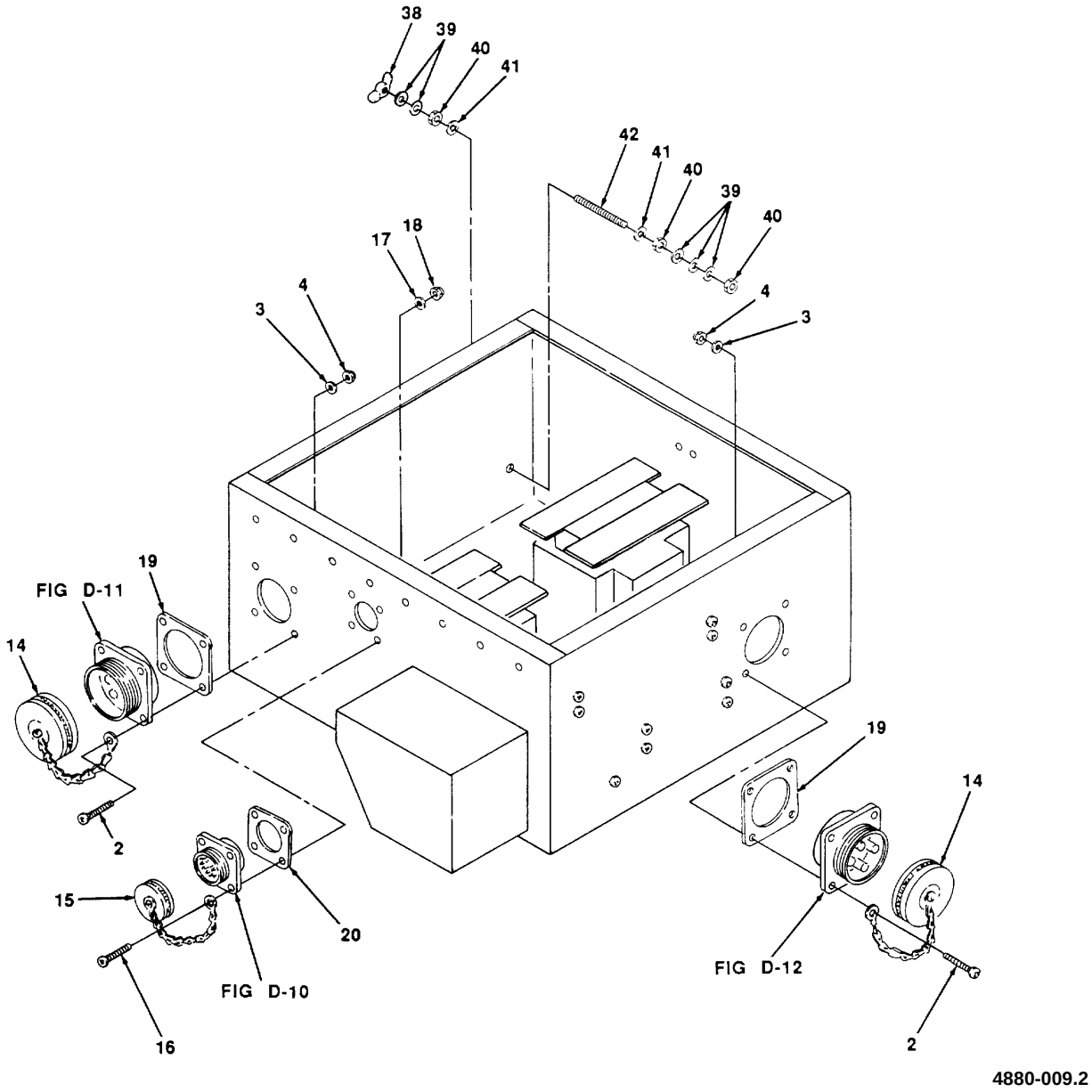


Figure D-9. Power Distribution Unit (Sheet 2 of 4).

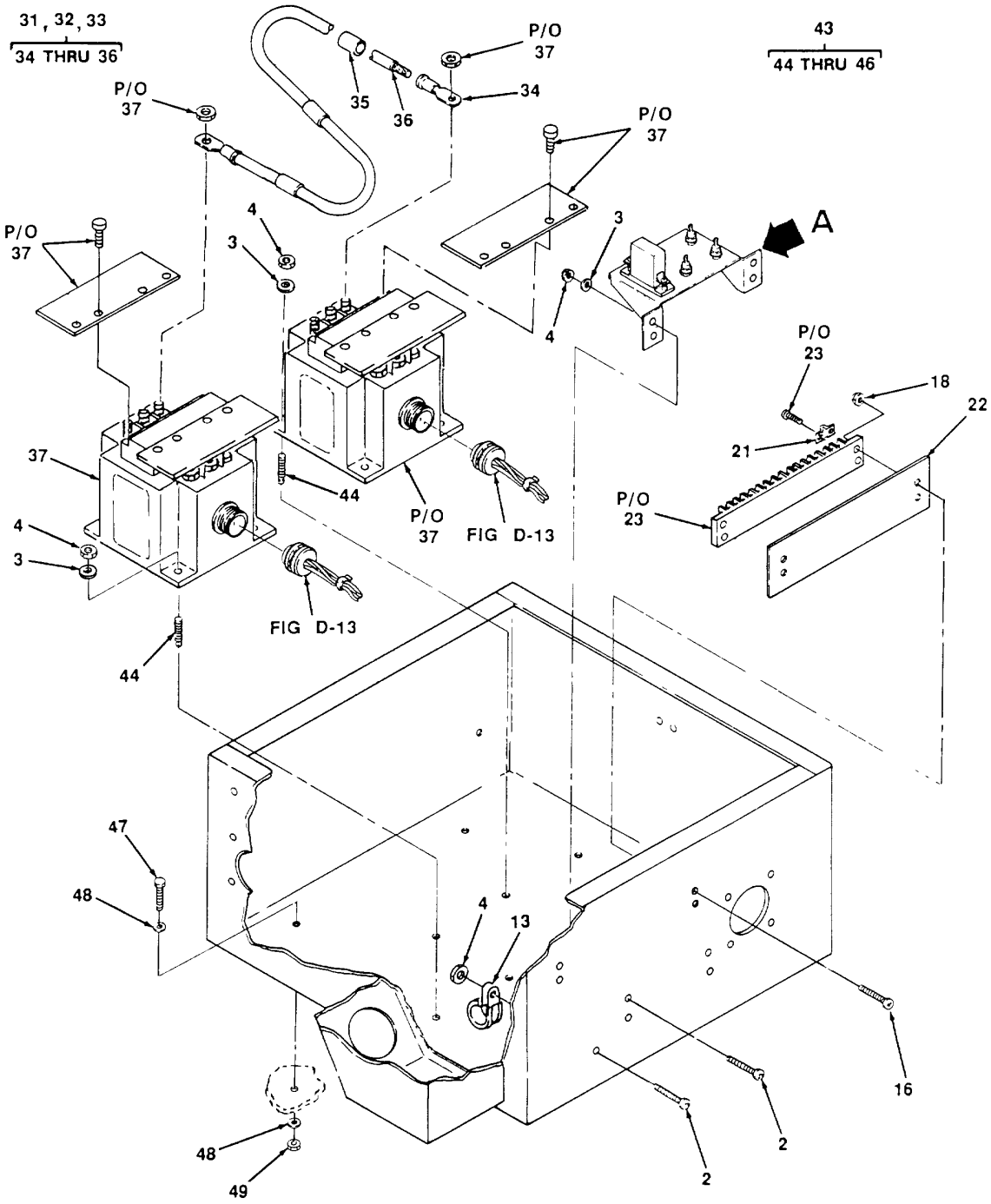
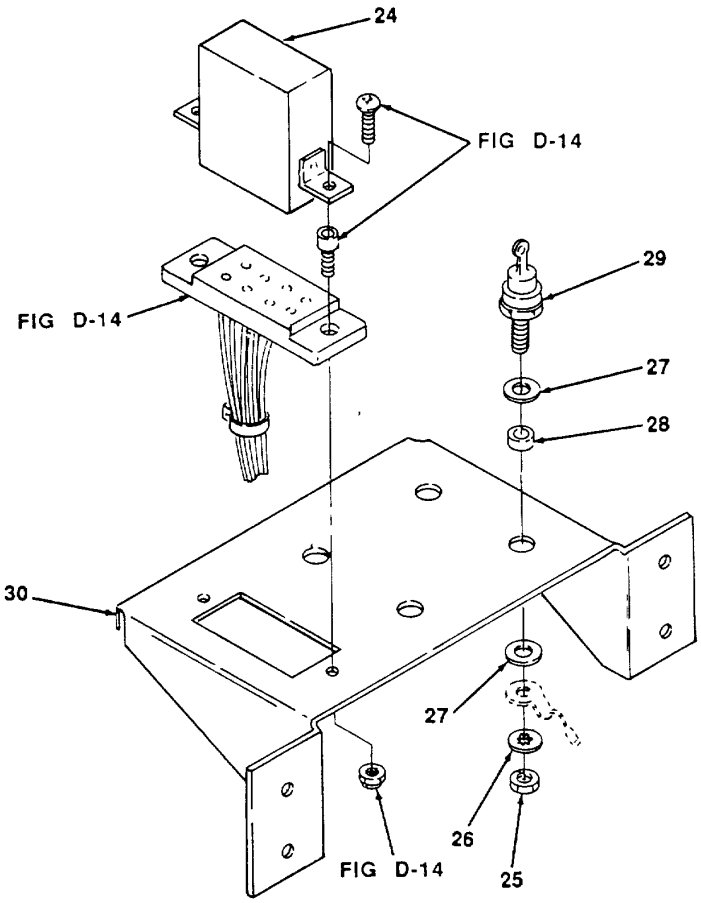


Figure D-9. Power Distribution Unit (Sheet 3 of 4).



DETAIL A

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Figure D-9. Power Distribution Unit (Sheet 4 of 4).

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0208 - Power Distribution Unit				
D-9	1	MDOOF							POWER DISTRIBUTION UNIT 13227E5855	97403	EA	1	
D-9	2	PAFZZ						5305-00-059-3661	MANUFACTURED FROM SCREW,CROSS-RECESSED MS51958-65	96906	EA	21	
D-9	3	PAOZZ						5310-00-014-5850	WASHER,FLAT MS2718342	96906	EA	17	
D-9	4	PAOZZ						5310-00-877-5797	NUT,SELF-LOCKING MS21044N3	96906	EA	29	
D-9	5	PAFFZ							COVER,ENCLOSURE 13227E5857	97403	EA	1	
D-9	6	PAFZZ						5320-00-616-5549	RIVET,BLIND MS20600-MP4W3	96906	EA	6	
D-9	7	MDFZZ							SCHEMATIC DIAGRAM 13227E5888	97403	EA	1	
D-9	8	PAFZZ						5320-00-208-9632	RIVET MS20427-4C7	96906	EA	2	
D-9	9	PBFZZ							STRIKE,HOOK 13227E5844-1	97403	EA	1	
D-9	10	PAFZZ							RIVET MS20427-4C6	96906	EA	8	
D-9	11	PAFZZ						5340-01-054-6092	HINGE,BUTT MS35826-10C	96906	EA	1	
D-9	12	PAFZZ						599901-181-8435	STRIP,SEALING 13227E9695-3	97403	EA	V	
D-9	13	PAFZZ						5340-01-148-3722	CLAMP,LOOP MS21919WCG6	96906	EA	5	
D-9	14	PAOZZ						593504-060-2294	COVER,PROTECTIVE MS17349C40B	96906	EA	2	
D-9	15	PAOZZ						593040060-2286	COVER,PROTECTIVE MS17349C24B	96906	EA	1	
D-9	16	PAOZZ						530500-054-6656	SCREW,CROSS-RECESSED MS51957-32	96906	EA	8	
D-9	17	PAOZZ						5310-00-182-1404	WASHER,FLAT MS271836	96906	EA	4	
D-9	18	PAOZZ						5310-000818087	NUT,SELF-LOCKING MS21044N06	96906	EA	8	

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0208 Power Distribution Unit (Cont)				
D-9	19	PAFZZ						5999-01-181-8436	GASKET,EMI		EA	2	
									13226E7052-4	97403			
D-9	20	PAFZZ						5999-01-181-8436	GASKET,EMI		EA	1	
									13226E7052-2	97403			
D-9	21	PAFZZ						615000-838-4952	JUMPER,TERMINAL BOARD		EA	2	
									TBJA	81349			
D-9	22	PAFZZ							MARKER STRIP		EA	1	
									13222E9687-2	97403			
									MS37TB-18-GME-7E	75382			
D-9	23	PAFZZ						5940-00-983-6059	BOARD,TERMINAL		EA	1	
									37TB18	81349			
D-9	24	PAOZZ						5943-00-435-1833	RELAY K3		EA	1	
									M575723-003	81349			
D-9	25	PAFZZ						5310-00-934-9765	NUT,PLAIN		EA	4	
									MS35650-304	96906			
D-9	26	PAFZZ						5310-00019-0627	LOCKWASHER,INTERNAL TOOTH		EA	4	
									MS35333-107	96906			
D-9	27	PAFZZ						531000-138-4315	WASHER,FLAT		EA	8	
									MS51859-5	96906			
D-9	28	PAFZZ							SLEEVE,SPACER		EA	4	
									NAS47N3A006	80205			
D-9	29	PAFZZ							DIODE,(1N1202A)		EA	4	
									MIL-S-19500/260	80131			
D-9	30								BRACKET,RELAY/DIODE		EA	1	
									13227E5858	97403			
D-9	31	MFFZZ							LEAD,ELECTRICAL		EA	1	
									13227E5878-1	97403			
D-9	32	MFFZZ							LEAD,ELECTRICAL		EA	1	
									13227E5878-2	97403			
D-9	33	MFFZZ							LEAD,ELECTRICAL		EA	1	
									13227E5878-3	97403			
									MANUFACTURE FROM				
D-9	34	PADZZ						5940-00-1155007	TERMINAL,LUG		EA	6	
									MS25036-130	96906			
D-9	35	PADZZ						5970-00-914-3118	SLEEVING,INSULATION		EA	9	
									M23053/5-109-0	81349			
D-9	36	PADZZ						6145-01-197-2687	WIRE,1 AWG		FT	V	
									M16878/8BTM9	81349			

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0208 - Power Distribution Unit				
D-9	37	PAFZZ						5945-01-165-1065	CONTACTOR D70-501	 30554	EA	2	
D-9	38	PAOZZ						5310-01-78-5996	NUT,WING MS35425-75	 96906	EA	1	
D-9	39	PAOZZ						531000-187-2413	WASHER,FLAT AN961-616T	 81352	EA	5	
D-9	40	PAOZZ						5310-00-410-3023	NUT,PLAIN MS35649-2386	 96906	EA	3	
D-9	41	PAOZZ						5310-00-022-8847	LOCKWASHER,INTERNAL TOOTH MS35333-110	 96906	EA	2	
D-9	42	PAOZZ						5307-00-227-1741	STUD 13214E1223	 97403	EA	1	
D-9	43	XDFZZ							HOUSING,PDU 13227E5856	 97403	EA	1	
D-9	44	PAFZZ							STUD,SELF-CLINCHING 13217E1526-89 FHS-032-8	 97403 46384	EA	8	
D-9	45	PAFZZ						5320-00-882-4599	RIVET MS206134P6	 96906	EA	2	
D-9	46	PAFZZ							LATCH 13227E5883	 97403	EA	1	
D-9	47	PAOZZ						530500071-2069	SCREW,CAP MS90725S113	 96906	EA	4	
D-9	48	PAOZZ						5310-00-809-5998	WASHER,FLAT MS27183-18	 96906	EA	8	
D-9	49	PAOZZ						5310-00-225-6993	NUT,SELF-LOCKING MS51922-33	 96906	EA	4	

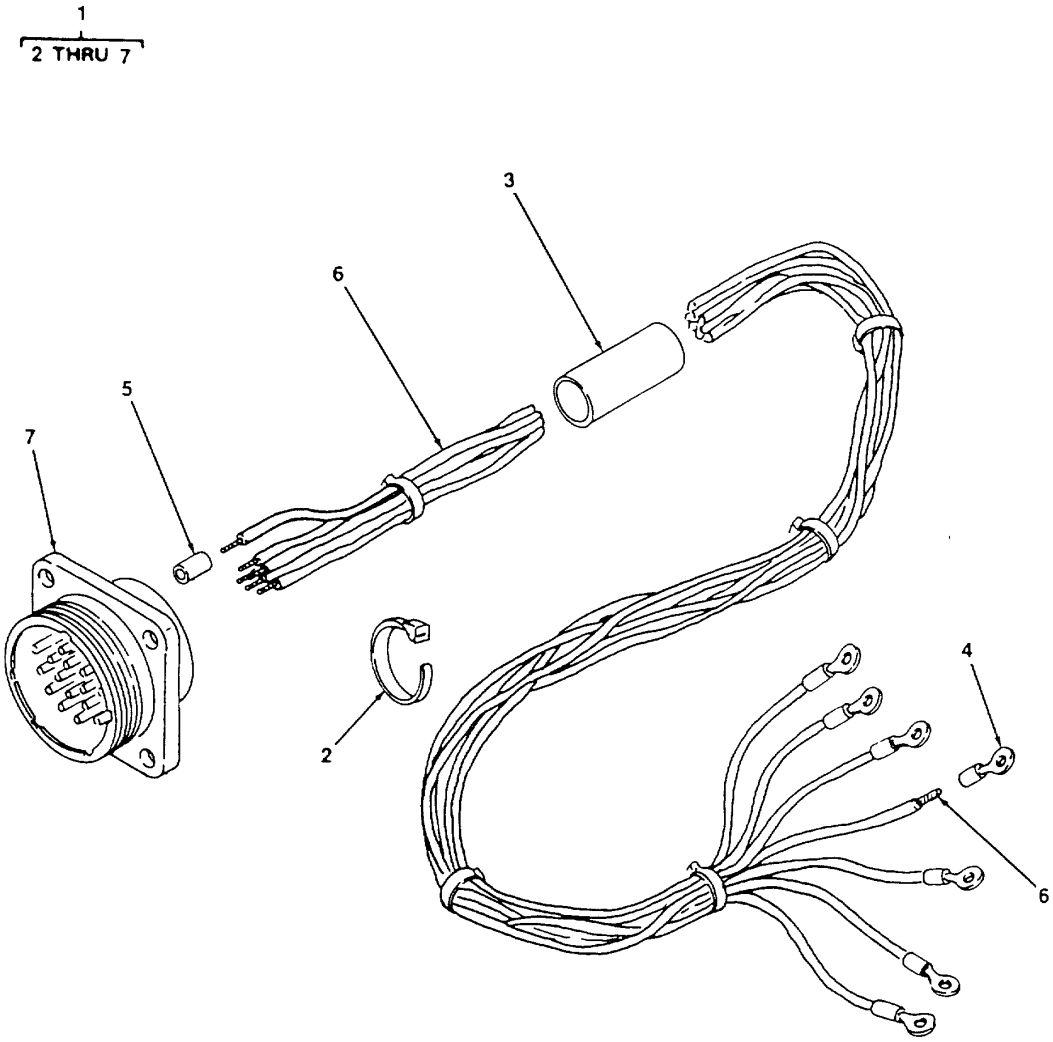

Figure D-10. J6 Wiring Harness.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									020801 - Wiring Harnesses			
D-10	1	PBOFF							WIRING HARNESS, J6 (PDU) 13227E5871 97403 MANUFACTURE FROM	EA	1	
D-10	2	PAFZZ						597500-727-5153	STRAP, TIEDOWN MS3367-4-9 96906	EA	V	
D-10	3	PAFZZ						5970-00-812-2967	SLEEVING, INSULATION M2305315-108-0 81349	FT	V	
D-10	4	PAFZZ						5940-00-283-5280	TERMINAL LUG MS23036-106 96906	EA	7	
D-10	5	PAFZZ						5970-00-954-1622	SLEEVING, INSULATION MS23053/5-105-0 81349	FT	V	
D-10	6	PAFZZ						6145-00-2952812	WIRE, 16AWG(J6TOTB1-2, TB1-2, TB1-8, TB1-9, TB1-lo ANDTBI-11) M16878/4BJE9 81349	FT	V	
D-10	7	PAFZZ						593501-182-8980	CONNECTOR, RECEPTACLE MIS20045/2-016 18876	EA	1	

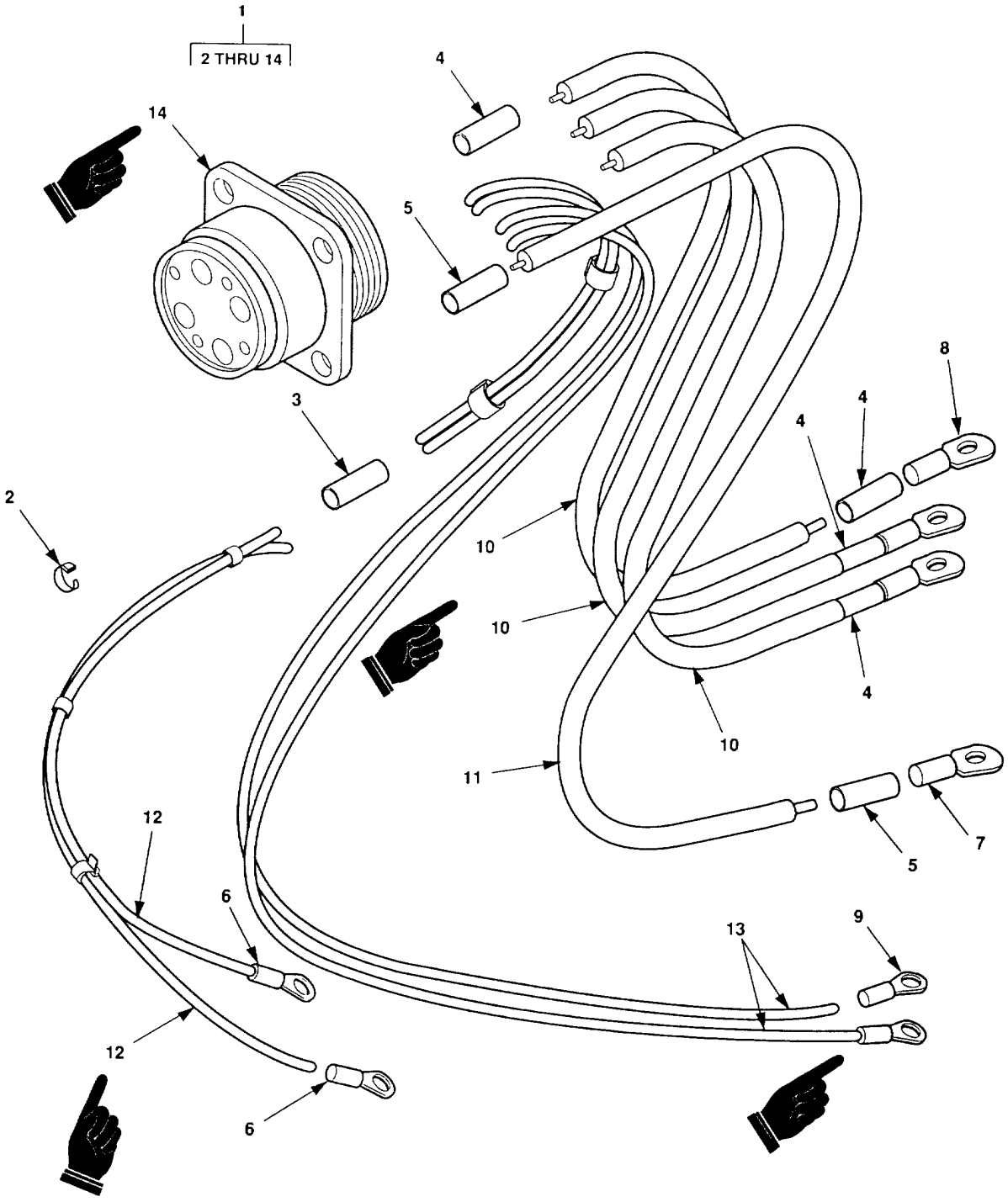

Figure D-11. J1 Wiring Harness.

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION	(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									020801 - Wiring Harness			
D-11	1	PBOFF							WIRING HARNESS J1 (PDU) 13227E5872 97403 MANUFACTURE FROM	EA	1	
D-11	2	PAOZZ						5975-00-727-5153	STRAP, TIEDOWN MS3367-4-9 96906	EA	V	
D-11	3	PAFZZ						5970-00-954-1622	SLEEVING, INSULATION M2305315-105-0 81349	FT	V	
D-11	4	PAFZZ						5970-00-914-3118	SLEEVING, INSULATION (W1, W3 AND W6) M2305315-109-0 81349	FT	V	
D-11	5	PAFZZ						5970-00-812-2967	SLEEVING, INSULATION (W5) M23053/5-108-0 81349	FT	V	
D-11	6	PAFZZ						5940-00-283-5280	TERMINAL, LUG (W2 AND W4) MS25036-106 96906	EA	2	
D-11	7	PAFZZ						5940-00-113-8190	TERMINAL, LUG (W5) MS25036-122 96960	EA	1	
D-11	8	PAFZZ						5940-00-115-5007	TERMINAL, LUG (W1,W3 AND W6) MS25036-130 96906	EA	3	
D-11	9	PAFZZ						59400-113-9826	TERMINAL LUG (W7 ANDW8) MS25036-114 96906	EA	2	
D-11	10	PAFZZ						6145-01-197-2687	WIRE, 1 AWG (WI, W3 AND W6)(J1 TO K1-A2 K1-B2 AND K1-C2) M16878/8BTM9 81349	FT	V	
D-11	11	PAFZZ						6145-1-197-2688	WIRE, 6 AWG (W5)(J1 TO EI) M16878/aBPL9 81349	FT	V	
D-11	12	PAFZZ						6145-00-295-2812	WIRE, 16 AWG (W2 AND W4)(J1 TO TB1-5 AND TB1-8) M1687814BJE9 81349	FT	V	
D-11	13	PAFZZ						6145-01-165-4386	WIRE, 12AWG(W7ANDW8)(J1TO EI) 81349 M1687814BLJ9	FT	V	
D-11	14	PAFZZ						593501-181-8405	CONNECTOR, RECEPTACLE MIS2004512-19 18876	EA	1	

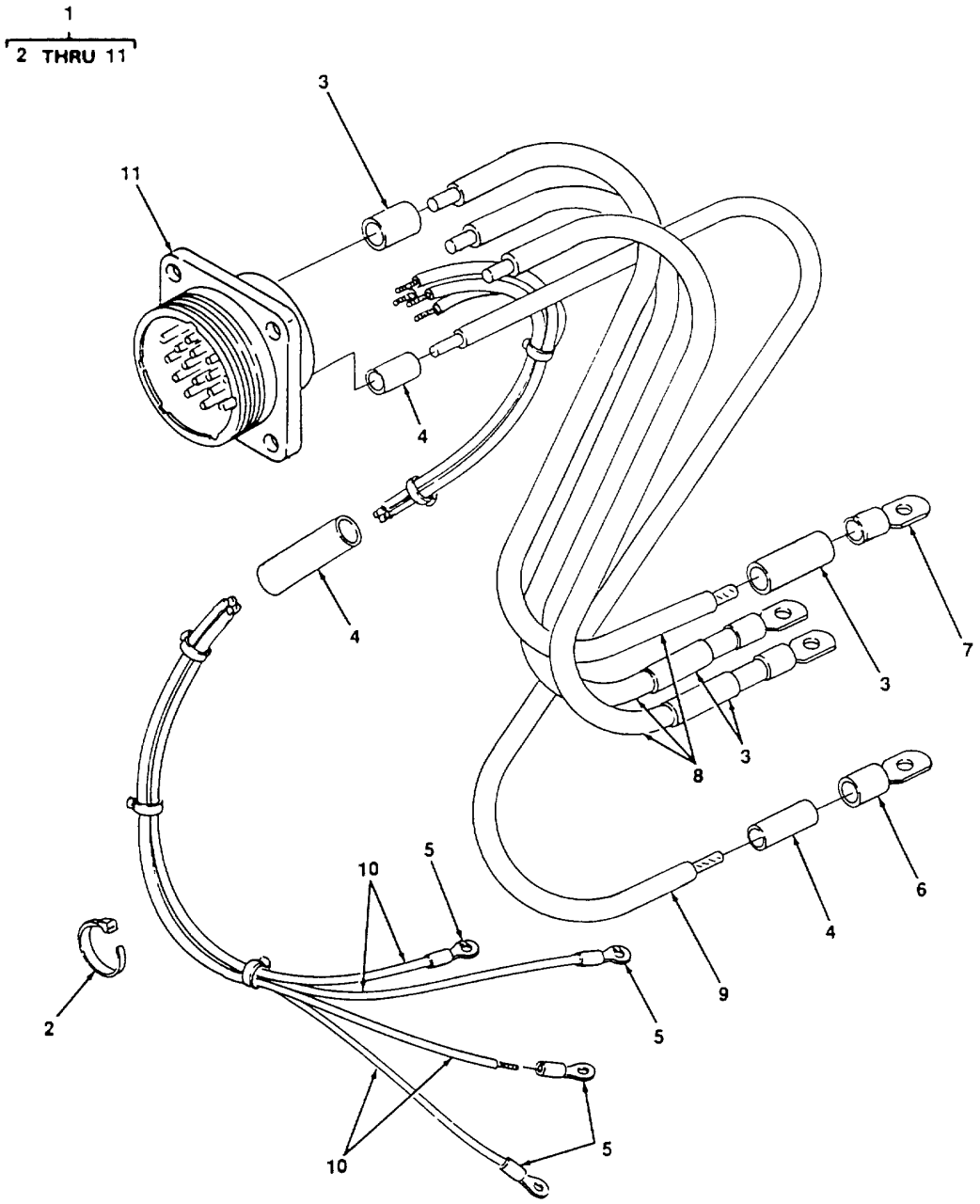

Figure D-12. J10 Wiring Diagram.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									020801 - Wiring Harnesses			
D-12	1	PBOFF						5999-01 181-8436	WIRING HARNESS J10 (PDU) 13227E5873 97403	EA	1	
D-12	2	PAFZZ						5975 00-727-5153	MANUFACTURE FROM STRAP, TIEDOWN MS3367-4-9 96906	EA	V	
D 12	3	PAFZZ						5970 00 914-3118	SLEEVING, INSULATION (WI,W3, AND W6) M23053/5-109-0 81349	FT	V	
D-12	4	PAFZZ						5970-00-812-2967	SLEEVING, INSULATION (WS) M23053/5-108-0 81349	FT	V	
D-12	5	PAFZZ						5940 00-283 5280	TERMINAL, LUG (W2, W4,W7, AND W8) MS25036 106 96906	EA	4	
D 12	6	PAFZZ						5940-00 113 8190	TERMINAL, LUG (W5) MS25036-122 96906	EA	1	
D-12	7	PAFZZ						5940-00-115-5007	TERMINAL, LUG (WI, W3 AND W6) MS25036-130 96906	EA	3	
D-12	8	PAFZZ						6145 01-197 2687	WIRE, 1 AWG (W1,W3AND W6)(J10TO K2 A1, K2-B1 AND K2-C1) M1687818BTM9 81349	FT	V	
D-12	9	PAFZZ						6145-01 197-2688	WIRE, 6 AWG (WS)(J10 TO EI) M16878/8BPL9 81349	FT	V	
D-12	10	PAFZZ						6145-01-108 6907	WIRE, 16AWG (W2, W4, W7 AND W8) (J1OTO TB1-1, TB1.12, TB1-15 AND TB1-18) M16878/4BJE9 81349	FT	V	
D 12	11	PAFZZ						5935-01 192-8928	CONNECTOR, RECEPTACLE MIS20045/2-020 18876	EA	1	

1, 2
3 THRU 8

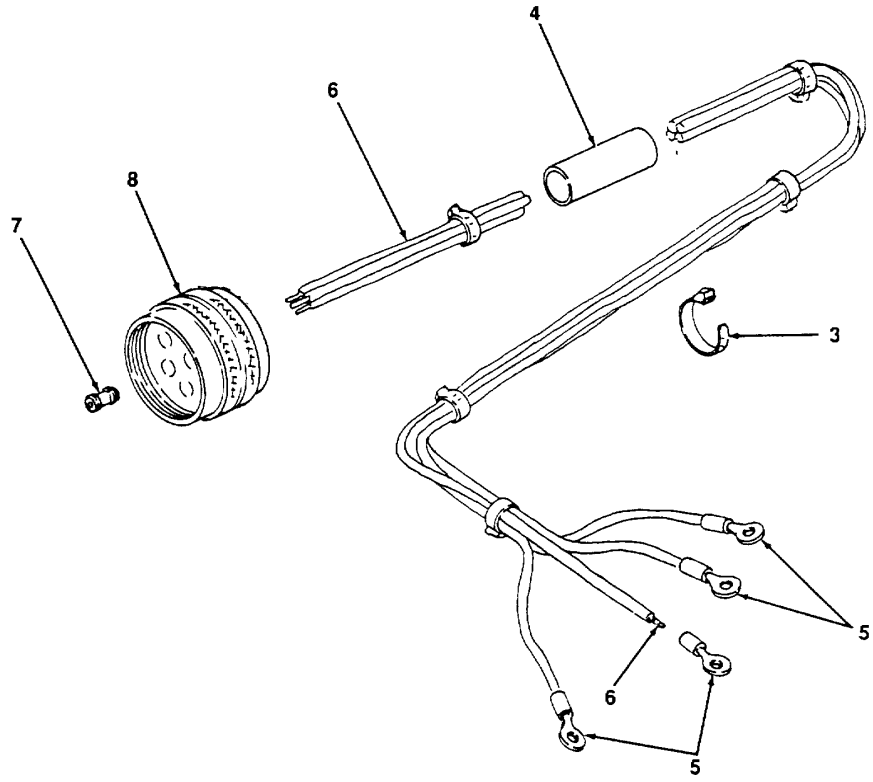

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Figure D-13. P8 and P9 Wiring Harnesses.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									020801 - Wiring Harnesses			
D 13	1	MFOFF							WIRING HARNES P8 (PDU) 13227E5874 97403	EA	1	
D 13	2	MFOFF							WIRING HARNESS P9 (PDU) 13227E5875 97403	EA	1	
D-13	3	PAFZZ						5975-00-727-5153	MANUFACTURE FROM STRAP, TIEDOWN MS3367-4-9 96906	EA	V	
D-13	4	PAFZZ						5970-00-815 1295	SLEEVING, INSULATION M23053/5-1064 81349	FT	V	
0 13	5	PAFZZ							5940 00-283 5280TERMINAL, LUG MS25036-106 96906	EA	4	
D 13	6	PAFZZ						6145-01-108 6907	WIRE, 16AWG (K1-JBTO TBI-6, TB1-9, TB1-13ANDTB1-15 ORK1-J9TOTB1 7, TB1-10, TB1-12AND TB1-18) M16878/4BJE9 81349	FT	V	
D-13	7	PAFZZ						5935-00-823-5322	PLUG, END, SEAL CONNECTOR MS25251 16 96906	EA	13	
0-13	8	PAFZZ						5935-00-725-8233	CONNECTOR, PLUG MS3106R20 29S 96906	EA	1	

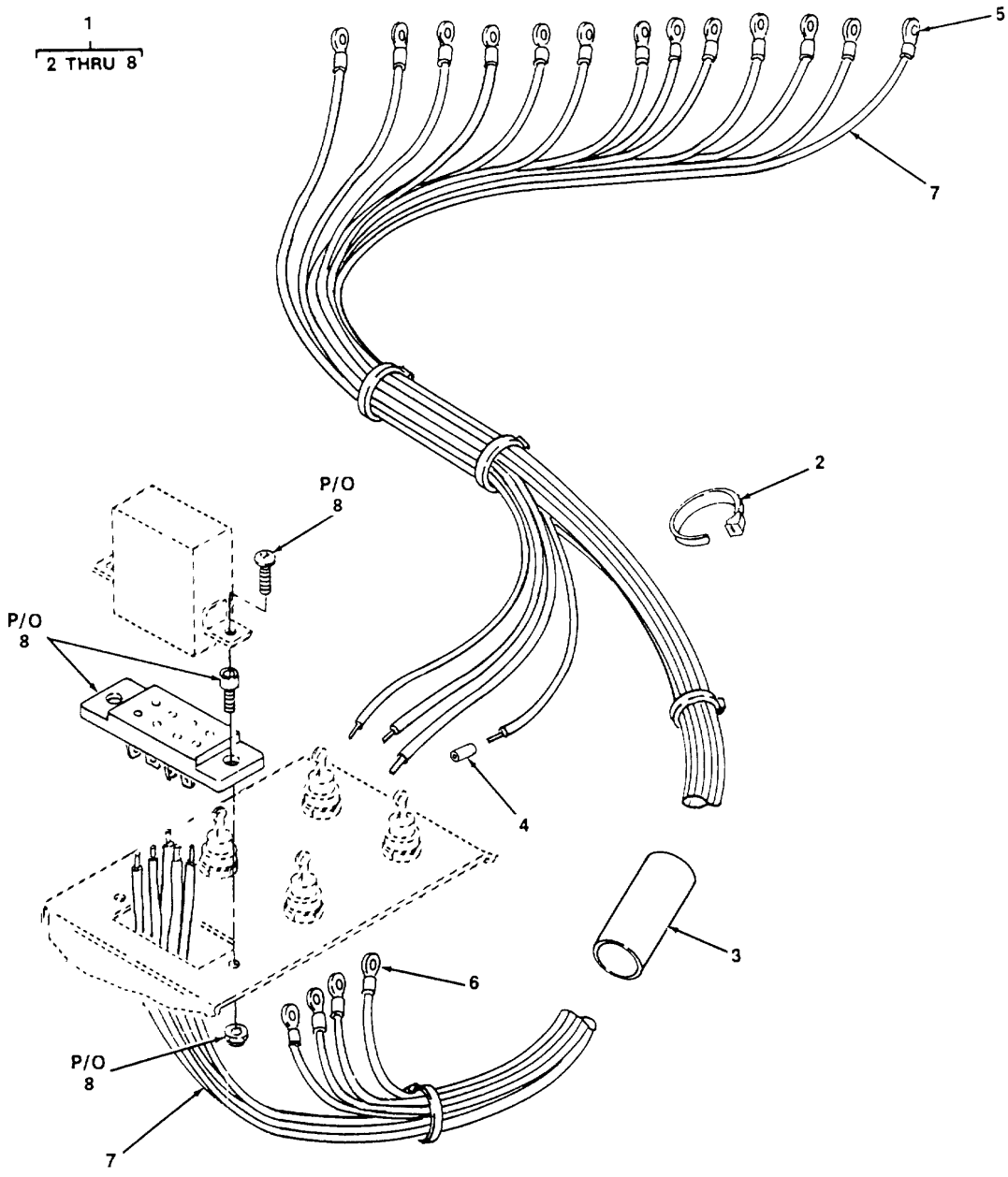


Figure D-14. Control Relay/Diodes Wiring Harness.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									020801 - Wiring Harnesses			
D-14	1	MFOFF							WIRING HARNESS, CONTROL RELAY/DIODES (PDU) (TB1 TO CR1, CR2, CR3, CR4 AND XK3) 13227E5876 97403	EA	1	
D-14	2							5975 00-111-3208	MANUFACTURE FROM STRAP, TIEDOWN MS3367 5 9 96906	EA	V	
0-14	3	PAFZZ						5970 00 954 1624	SLEEVING, INSULATION M23053/5-107-0 81349	EA	1	
D 14		4	PAFZZ					5970-00 954-1622	SLEEVING, INSULATION M23053/5 105-0 81349	FT	V	
D 14	5	PAFZZ						5940-00-283 5280	TERMINAL LUG MS2SO36-106 96906	EA	14	
D-14	6	PAFZZ						5940-00 159-1290	TERMINAL, LUG MS77066 4 96906	EA	4	
0-14	7	PAFZZ						6145-00-500-3079	WIRE, 18 AWG M16878/4BHB9 81349	FT	V	
D 14	8	PAFZZ							SOCKET, RELAY 13222E9686 97403	EA	1	

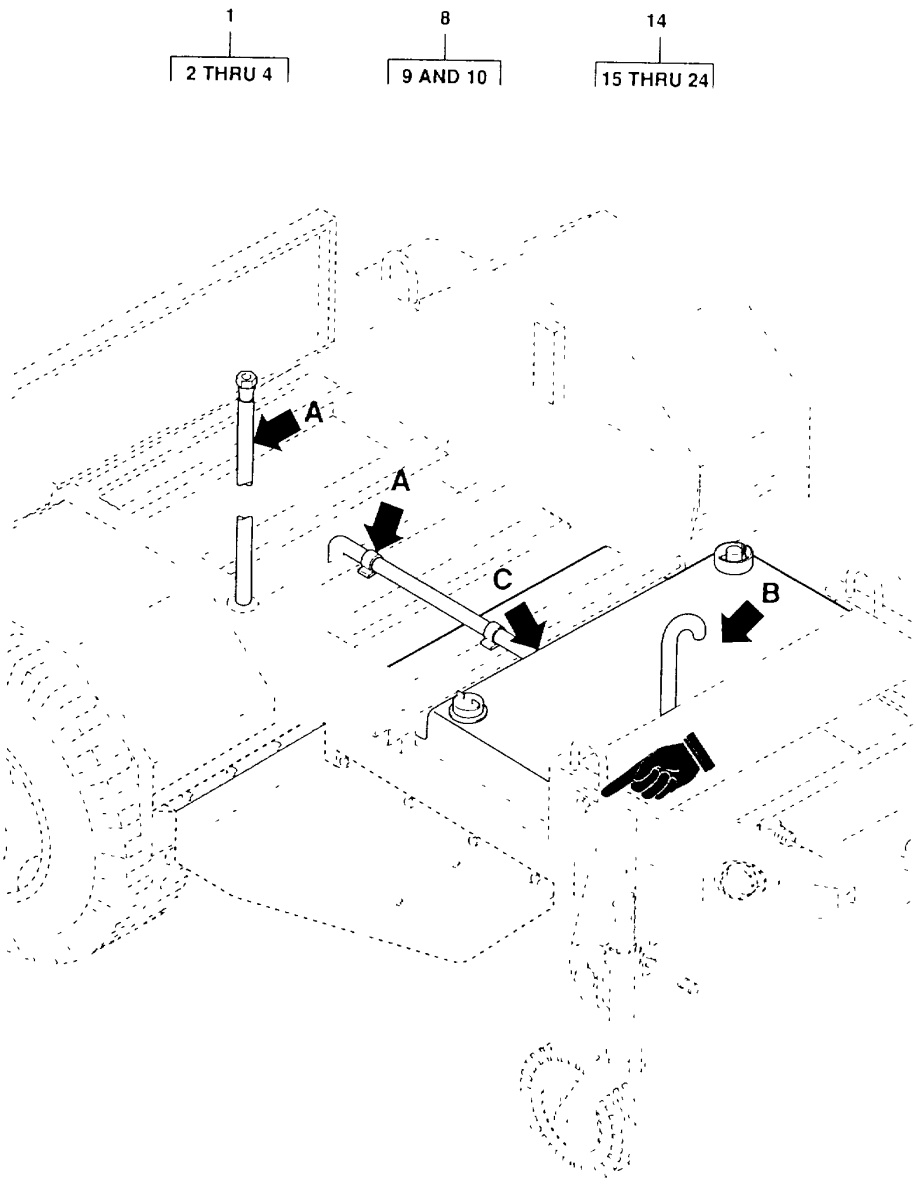
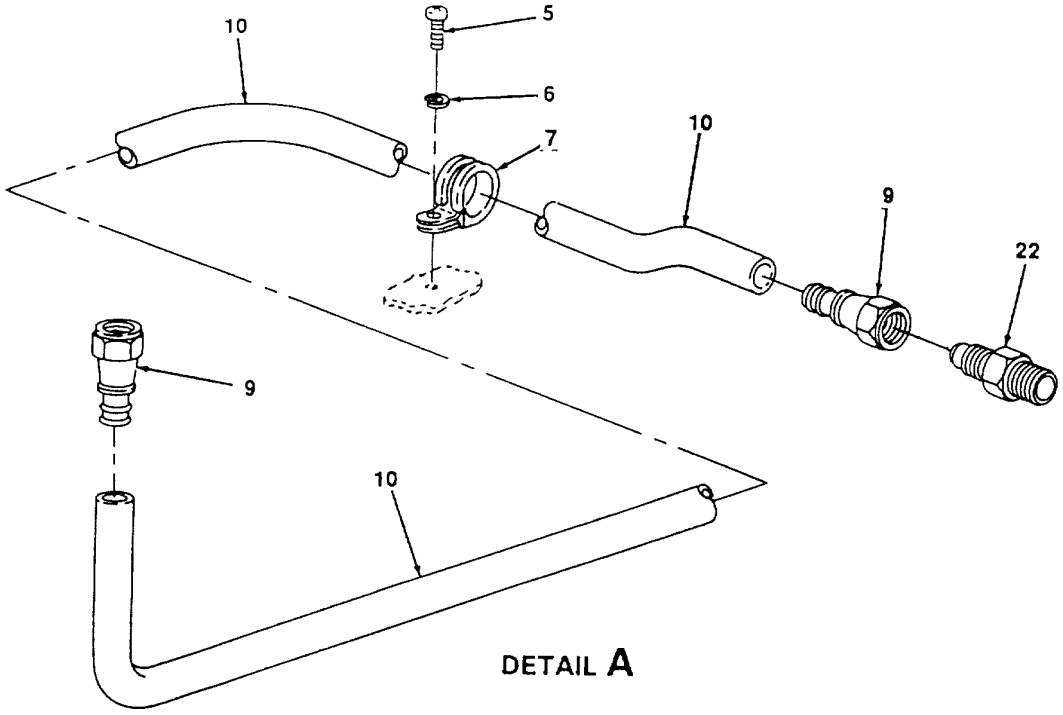
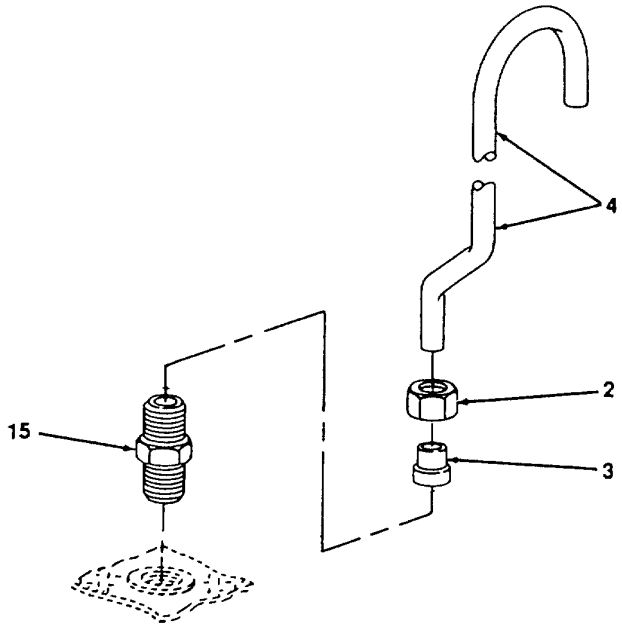


Figure D-15. Fuel System (Sheet 1 of 4).



DETAIL A



DETAIL B

Figure D-15. Fuel System (Sheet 2 of 4).

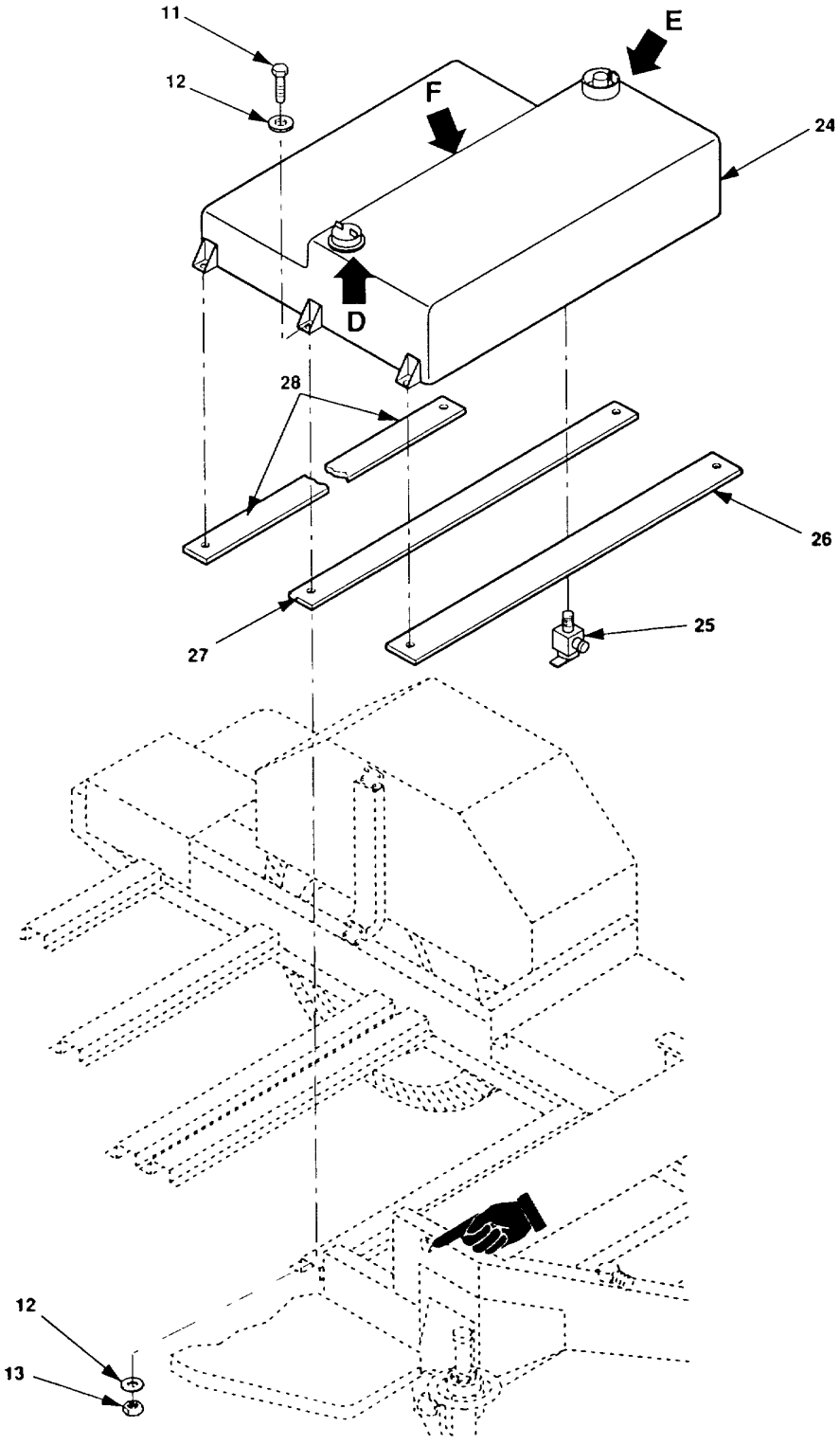


Figure D-15. (Sheet 3 of 4).

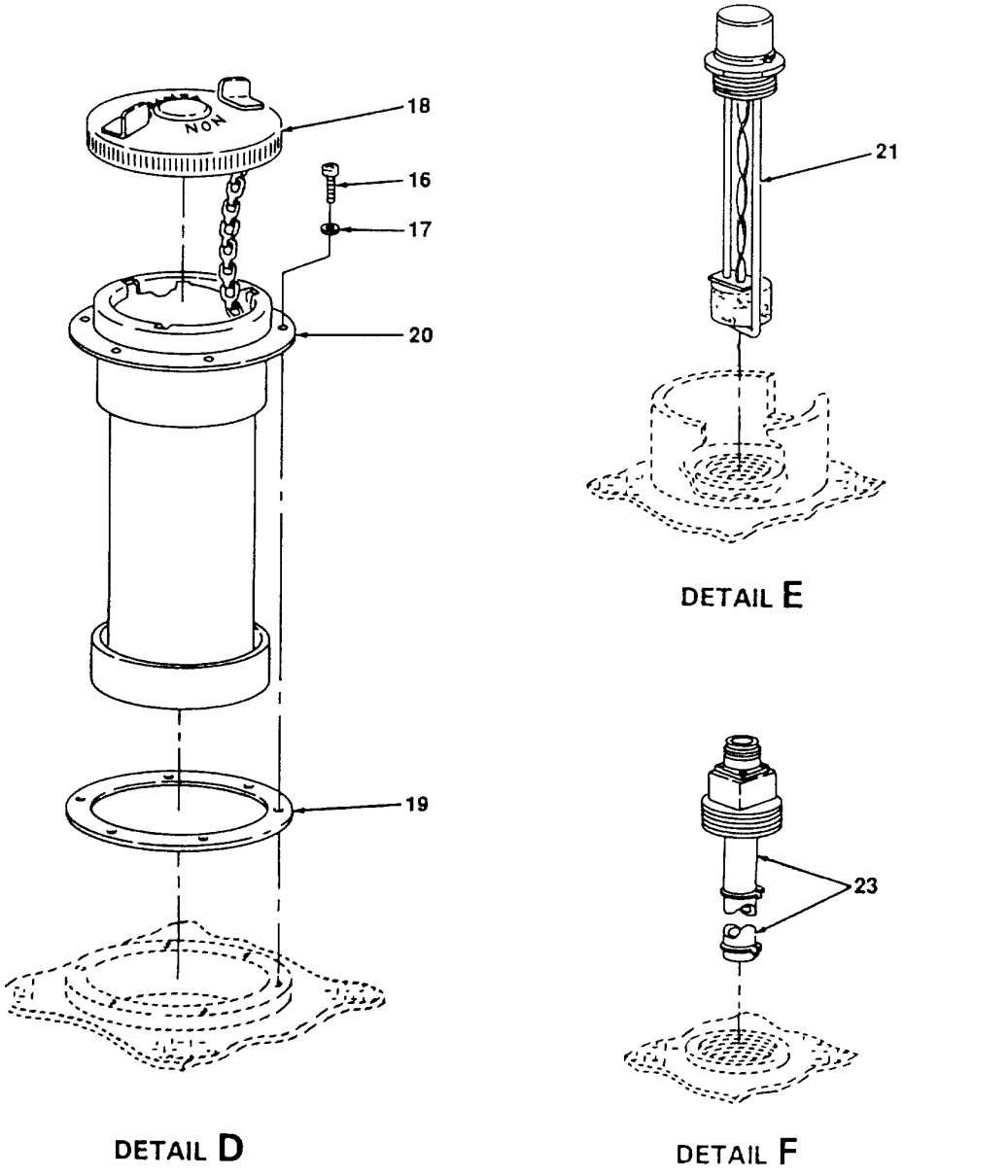


Figure D-15. Fuel System (Sheet 4 of 4).

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT EQUIP	(8) USMC QTY PER
									GROUP 03 FUEL SYSTEM				
D 15	1	MFOFF							VENT, FUEL TANK		EA	1	
									13227E5847	97403			
									MANUFACTURE FROM				
D-15	2	PAFZZ							NUT, TUBE COUPLING		EA	1	
									MS51531B8S	96906			
D 15	3	PAFZZ						4730 01-141 1560	SLEEVE		EA	1	
									MS51533B8S	96906			
D-15	4	PAFZZ							TUBE		EA	1	
									UNS S30400	81348			
D 15	5	PAOZZ						5305 00-993 1848	SCREW, MACHINE		EA	3	
									MS35207-265	96906			
D-15	6	PAOZ7						5310 00 045 3296	LOCKWASHER		EA	3	
									MS35338-43	96906			
D-15	7	PAOZZ						5340-01-195-5220	CLAMP, LOOP		EA	3	
									MS21919WCG13	96906			
D-15	8	MFOFF							FUEL LINE		EA	1	
									13227E5882	97403			
									MANUFACTURE FROM				
D-15	9	PAFZZ						4730-00 542-2807	FITTING		EA	2	
									13222E7029-3	97403			
									4797 8B	01276			
D-15	10	PAFZZ						4720 00 289 9567	HOSE		EA	1	
									MIL H-13444, TYPE I	81349			
D 15	11	PAOZZ						5305-00 071-2069	SCREW,CAP		EA	6	
									MS90725-113	96906			
D-15	12	PAOZZ							WASHER, FLAT		EA	12	
									MS27183-18	96906			
D-15	13	PAOZZ						5310-00 225 6993	NUT, SELF-LOCKING		EA	6	
									MS51922-33	96906			
D 15	14	PBOFF							TANK ASSY, FUEL		EA	1	
									13227E5853	97403			
									MANUFACTURE FROM				
D-15	15	XDFZZ							CONNECTOR, HYDRAULIC				
									TUBE FITTING,		EA	1	
									1/2 TUBE x 3/8 PIPE				
									070102-8-6	81343			
D-15	16	PAFZZ						5305 00-989 7434	SCREW, MACHINE		EA	6	
									MS35207-263	96906			
D-15	17	PAFZZ						5310 00 6191148	WASHER, FLAT		EA	6	
									MS15795 808	96906			
D-15	18	PAFZZ						2110 00 459-8447	CAP, FUEL TANK	EA	1		
									MS53075-1	96906			
D-15	19	PAFZZ						5330 01-137 3172	GASKET, FILLER NECK		EA	1	
									13226E6988	97403			
D 15	20	PAFZZ						2910 00 893-2592	FILLER NECK		EA	1	
									MS35644 1	96906			

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION		(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE	USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									GROUP 03 - FUEL SYSTEM (Cont)				
D-15	21	PAFZZ						6680-01-130-3230	GAGE, FUEL LEVEL 13220E0663	 97403	EA	1	
D-15	22	XDFZZ							CONNECTOR, HYDRAULIC TUBE FITTING, I/2 TUBE x PIPE 070102-8-8	 81343	EA	1	
D-15	23	PAFZZ							SENSOR,FUEL LEVEL 13227E5886	 97403	EA	1	
D-15	24	PBFZZ							TANK, FUEL 13227E5854	 97403	EA	1	
D -15	25	PAOZZ						4820-00-465-1589	COCK, DRAIN 13213E9243	 97403	EA	1	
D-15	26	PAFZZ							ISOLATOR, VIBRATION 13227E5846-1	 97403	EA	1	
D-15	27	PAFZZ						5340-01-230-0783	ISOLATOR, VIBRATION 13227E5846-2	 97403	EA	1	
D-15	28	PAFZZ						5340-01-231-5561	ISOLATOR,VIBRATION		EA	1	

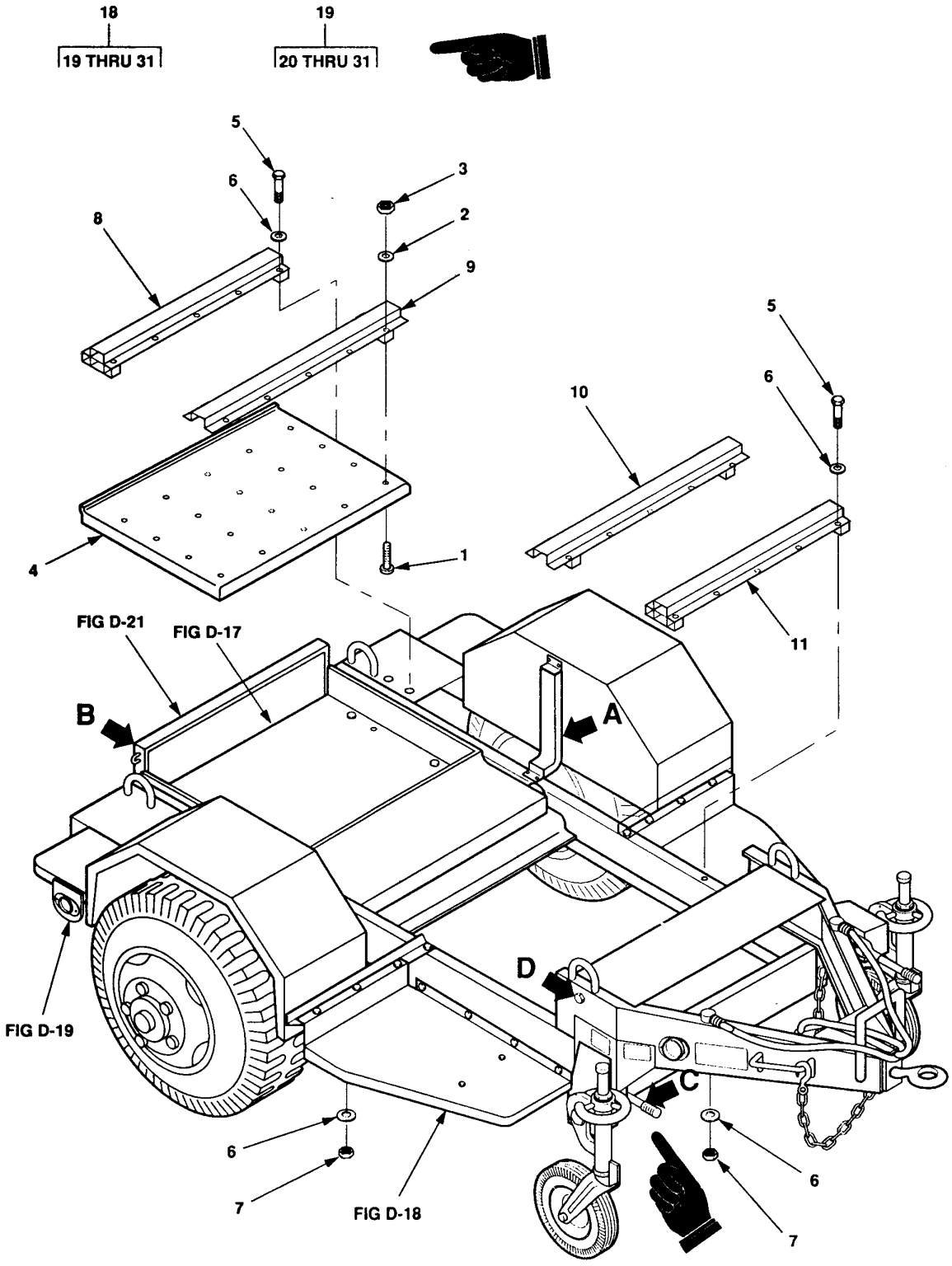


Figure D-16. Trailer Assembly (Sheet 1 of 3).

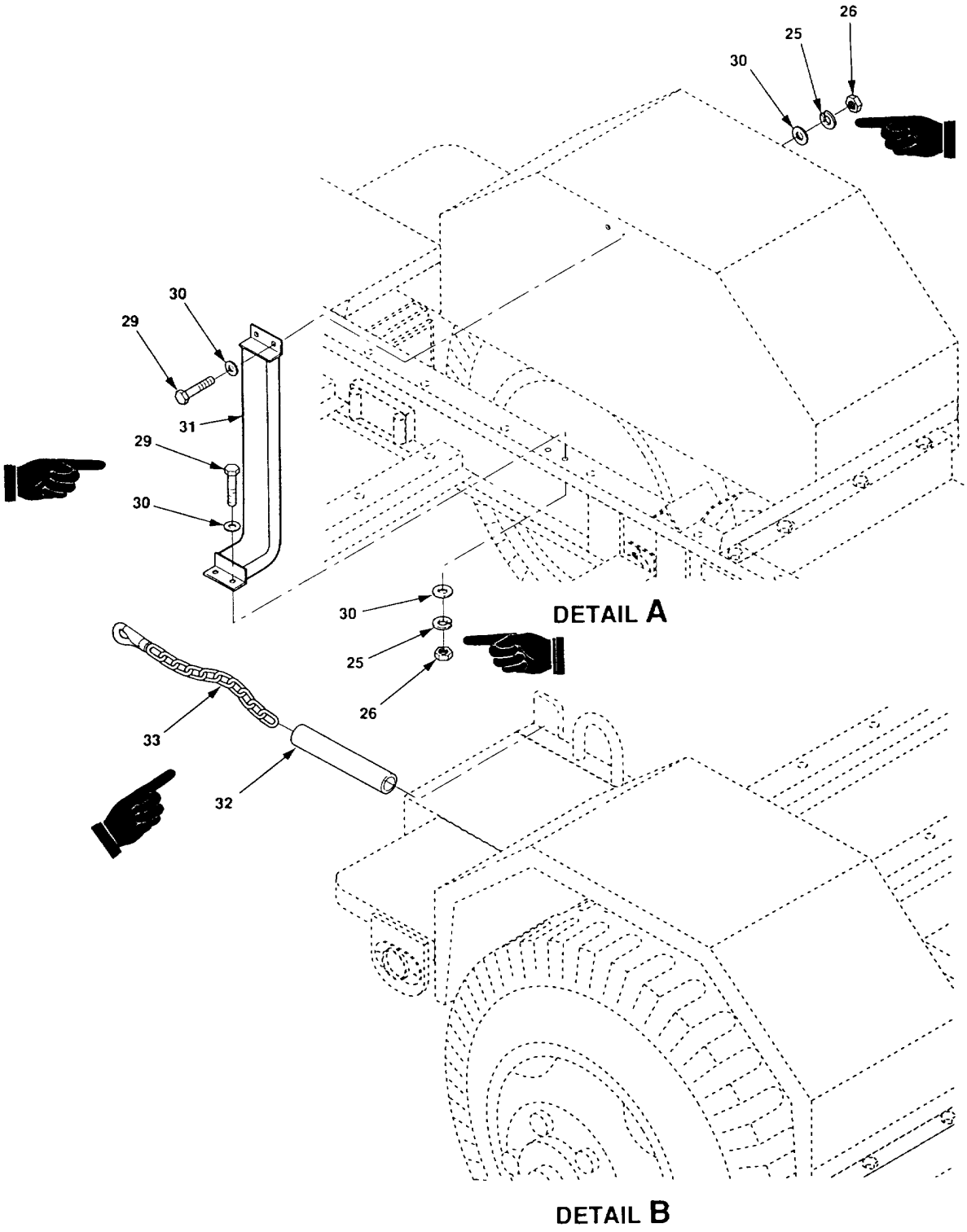
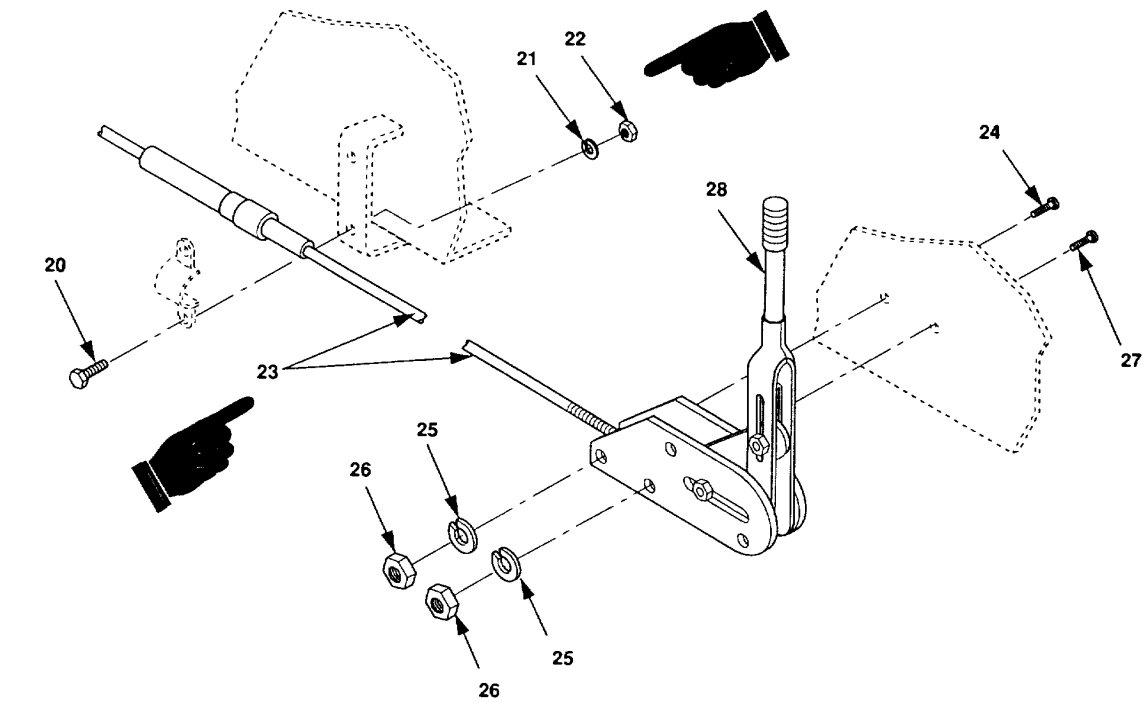
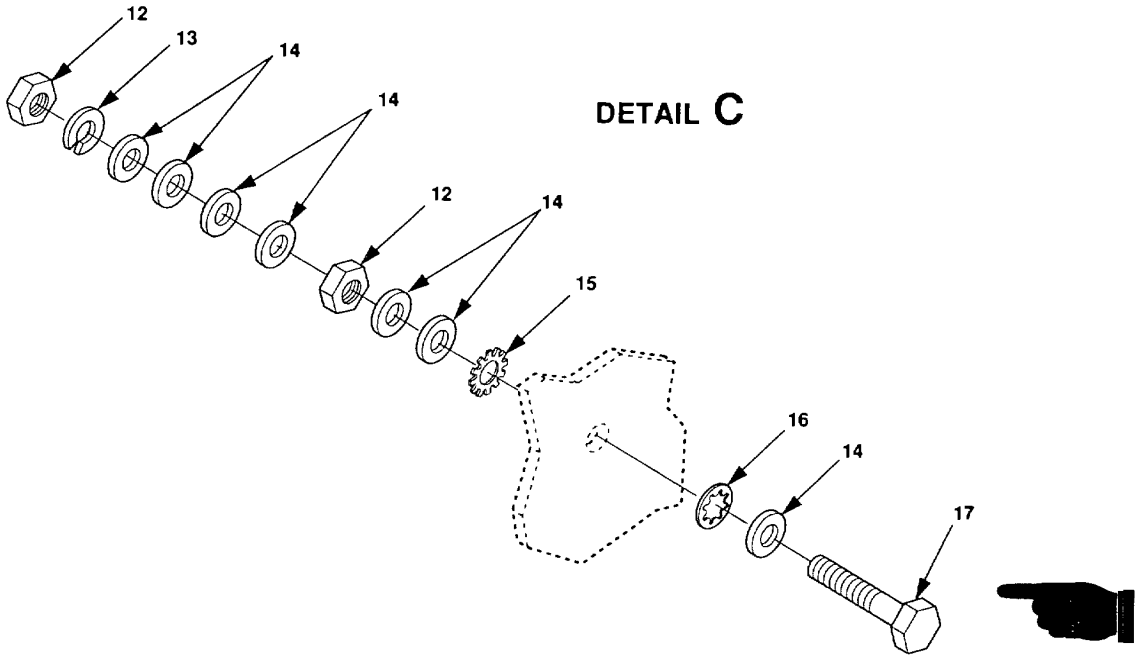


Figure D-16. Trailer Assembly (Sheet 2 of 3).





DETAIL C

DETAIL D

Figure D-16. Trailer Assembly (Sheet 3 of 3).

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION		(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE	USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									GROUP 05 - TRAILER ASSY				
D-16	1	PAFZZ						5305-00-993-1848	SCREW, MACHINE MS35207-265	96906	EA	20	
D-16	2	PAFZZ						5310-00-014-5850	WASHER, FLAT MS27183-42	96906	EA	20	
D-16	3	PAFZZ						5310-00-877-5797	NUT, SELF-LOCKING MS21044N3	96906	EA	20	
D-16	4	XDFZZ							COVER, STORAGE TRAY 13227E5849	97403	EA	1	
D-16	5	PAFZZ						5305-00-071-2069	SCREW, CAP MS90725-113	96906	EA	16	
D-16	6	PAFZZ						5310-00-809-5998	WASHER, FLAT MS27183-18	96906	EA	32	
D-16	7	PAFZZ						5310-00-225-6993	NUT, SELF-LOCKING MS51922-33	96906	EA	16	
D-16	8	XDFFF							SUPPORT, GENERATOR SET 13227E5863	97403	EA	1	
D-16	9	XDFFF							SUPPORT, GENERATOR SET 13227E5880	97403	EA	1	
D-16	10	XDFFF							SUPPORT, GENERATOR SET 13227E5862	97403	EA	1	
D-16	11	XDFFF							SUPPORT, GENERATOR SET 13227E5861	97403	EA	1	
D-16	12	PAFZZ						5310-00-410-3023	NUT, PLAIN MS35649-2386	96960	EA	2	
D-16	13	PAOZZ						5310-00-244-8303	WASHER, LOCK-SPRING MS35338-141	96906	EA	1	
D-16	14	PAFZZ						5310-00-187-2413	WASHER, FLAT AN961-616T	81352	EA	7	
D-16	15	PAFZZ						5310-00-922-1794	LOCKWASHER, EXTERNAL TOOTH MS1621363	96906	EA	1	
D-16	16	PAFZZ						5310-00-022-8847	LOCKWASHER, INTERNAL TOOTH MS35333-110	96906	EA	1	
D-16	17	PAFZZ						5305-00-5588364	SCREW,CAP MS35309-366	96906	EA	1	
D-16	18	MDFDD						2330-00-542-2831	TRAILER ASSY 13227E5851	97403	EA	1	
D-16	19	XDFDD							CHASSIS 13227E5852	97403	EA	1	

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									GROUP 05 - TRAILER ASSY (Cont)				
D-16	20	PAFZZ							SCREW, CAP MS9072532	96906	EA	4	
D-16	21	PAFZZ						5310-00-407-9566	LOCKWASHER, SPRING MS35338-45	96906	EA	4	
D-16	22	PAFZZ						5310-00-880-7744	NUT, PLAIN MS51967-5	96906	EA	4	
D-16	23	PAFZZ							CABLE ASSY, PARKING BRAKE 11625412	19207	EA	2	
D-16	24	PAOZZ						530500-071-1787	SCREW, CAP MS90725-68	96906	EA	2	
D-16	25	PAOZZ						5310-004-5033	LOCKWASHER, SPRING MS35338-46	96906	EA	14	
D-16	26	PAOZZ						5310-00-732-0558	NUT, PLAIN MS51967-8	96906	EA	14	
D-16	27	PAOZZ						5305-00-269-3217	SCREW, CAP MS90725-67	96906	EA	4	
D-16	28	XDFZZ							LEVER, PARKING BRAKE 11625410	19207	EA	2	
D-16	29	PAFZZ						5305-00-269-3214	SCREW, CAP MS9072564	96906	EA	8	
D-16	30	PAFZZ						5310-00806004	WASHER, FLAT MS27183-14	96906	EA	16	
D-16	31	XDFZZ							BRACKET, FENDER 13222E9716	97403	EA	2	
D-16	32	PAOZZ							SLEEVE, CHAIN 13226E1867-7	97403	EA	2	
D-16	33	PAOZZ						4010-01-137-6972	HOOK AND CHAIN ASSY 13222E8676-2	97403	EA	2	

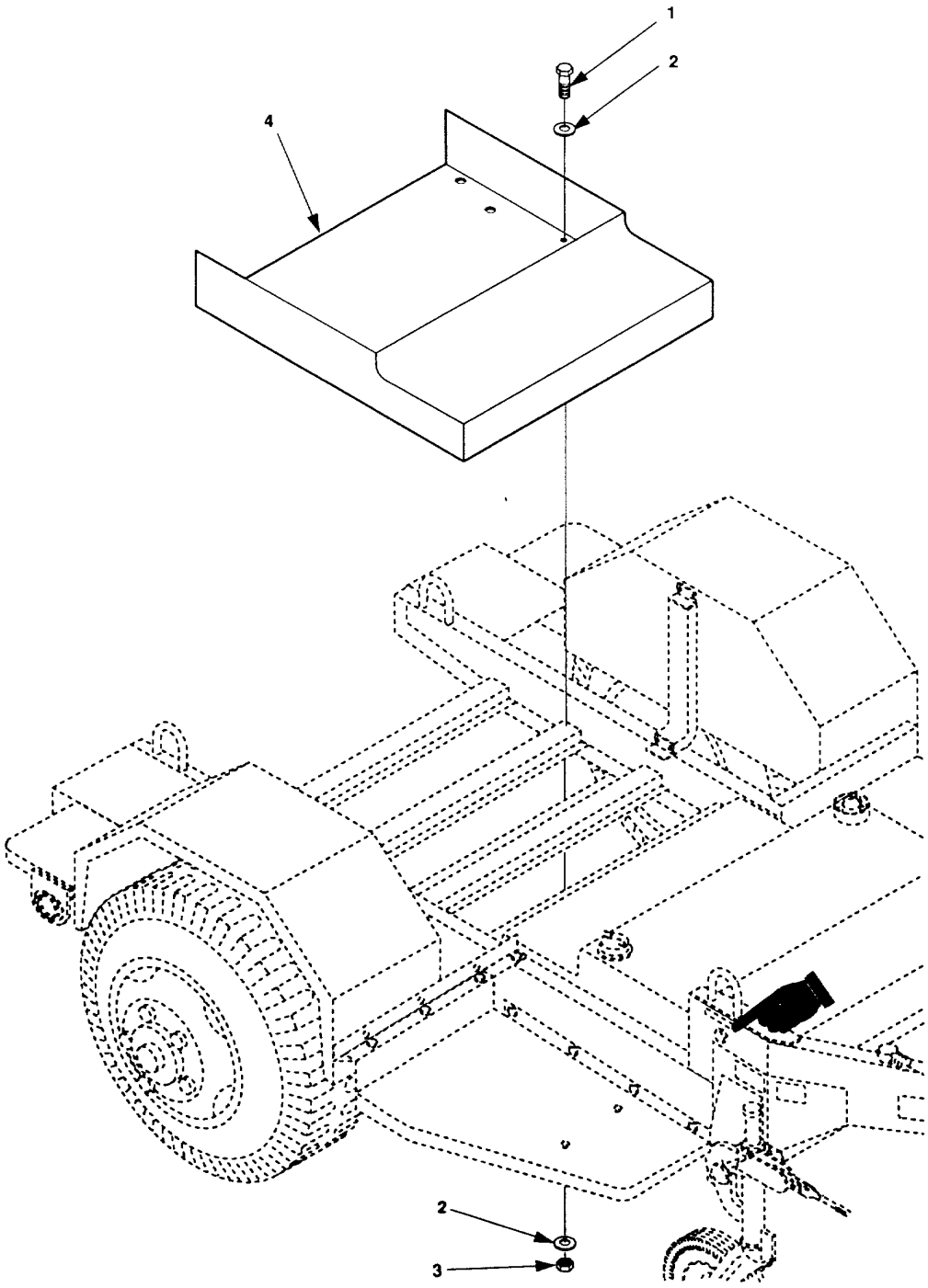


Figure D-17. Storage Tray.

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION		(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE	USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									0501 Storage Tray				
D-17	1	PAFZZ						5305-00 071 2069	SCREW, CAP MS90725-113	 96906	EA	6	
D-17	2	PAFZZ						5310-00 809-5998	WASHER, FLAT MS27183-18	 96906	EA	12	
D-17	3	PAFZZ						5310-00-225-6993	NUT, SELF-LOCKING MS51922 33	 96906	EA	6	
D-17	4	XDFFF							TRAY. STORAGE 13227E5867	 97403	EA	1	

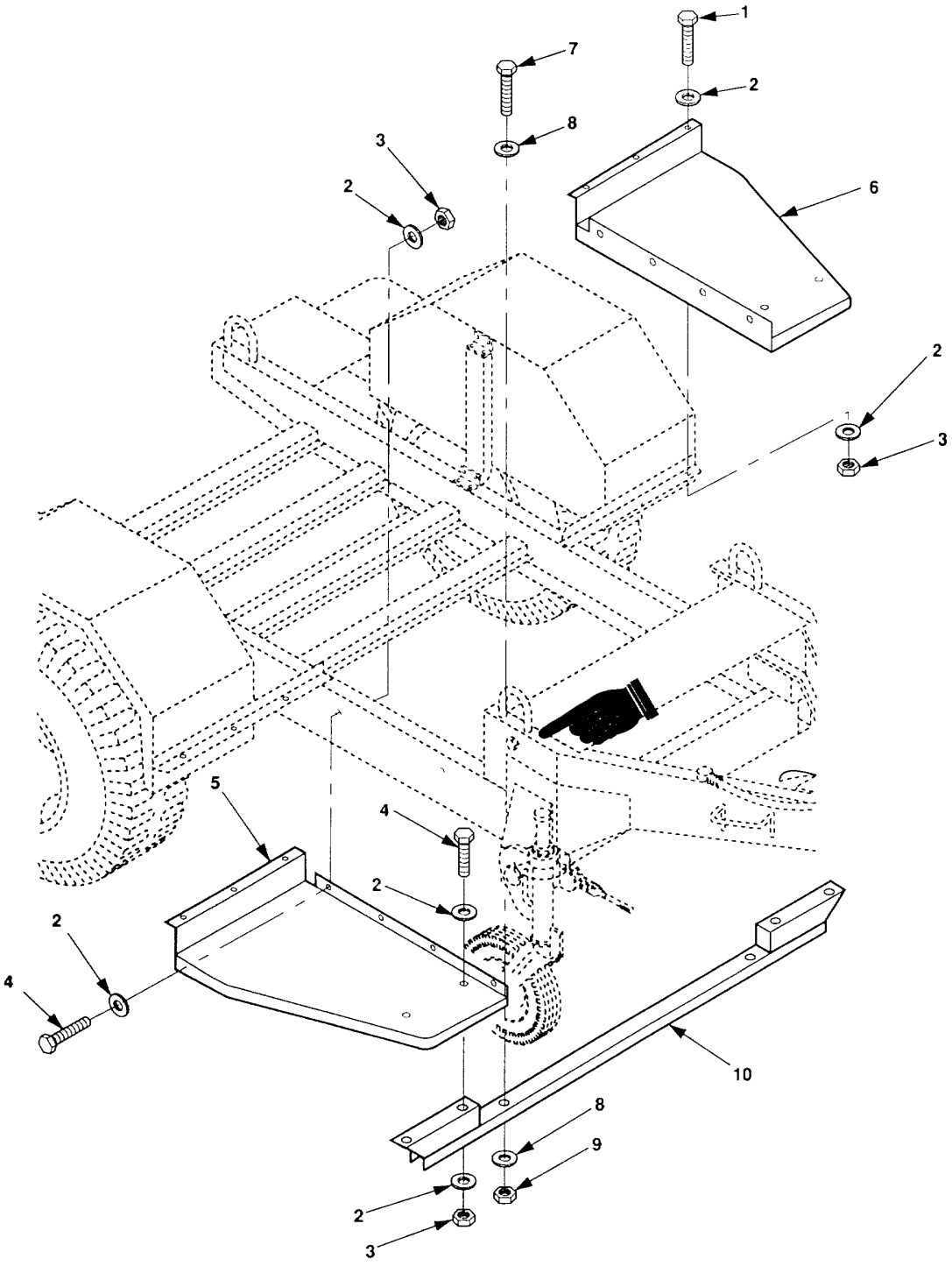


Figure D-18. Front Steps.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0502 Front Steps				
D-18	1	PAOZZ						5305-00-269 3213	SCREW, CAP MS90725-62	96906	EA	6	
D 18	2	PAOZ						5310-00 080 6004	WASHER, FLAT MS27183-14	96906	EA	36	
D-18	3	PAOZZ						5310-00 087-4652	NUT, SELF-LOCKING MS51922-17	96906	EA	18	
D-18	4	PAOZZ						5305 00 006 6574	SCREW, CAP MS90725 60	96906	EA	12	
D-18	5	XDOFF							STEP, FRONT, CURBSIDE 13221E4790	97403	EA	1	
D 18	6	XDOFF							STEP, FRONT, ROADSIDE 13221E4791	97403	EA	1	
D 18	7	PAOZZ						5305 00-782 9495	SCREW, CAP MS90725-111	96906	EA	2	
D-18	8	PAOZZ						5310 00 809 5998	WASHER, FLAT MS27183-18	96906	EA	4	
D 18	9	PAOZZ						5310-00 225-6993	NUT, SELF-LOCKING MS51922 33	96906	EA	2	
0 18	10	XDOZZ							SUPPORT 13222E9718	97403	EA	1	

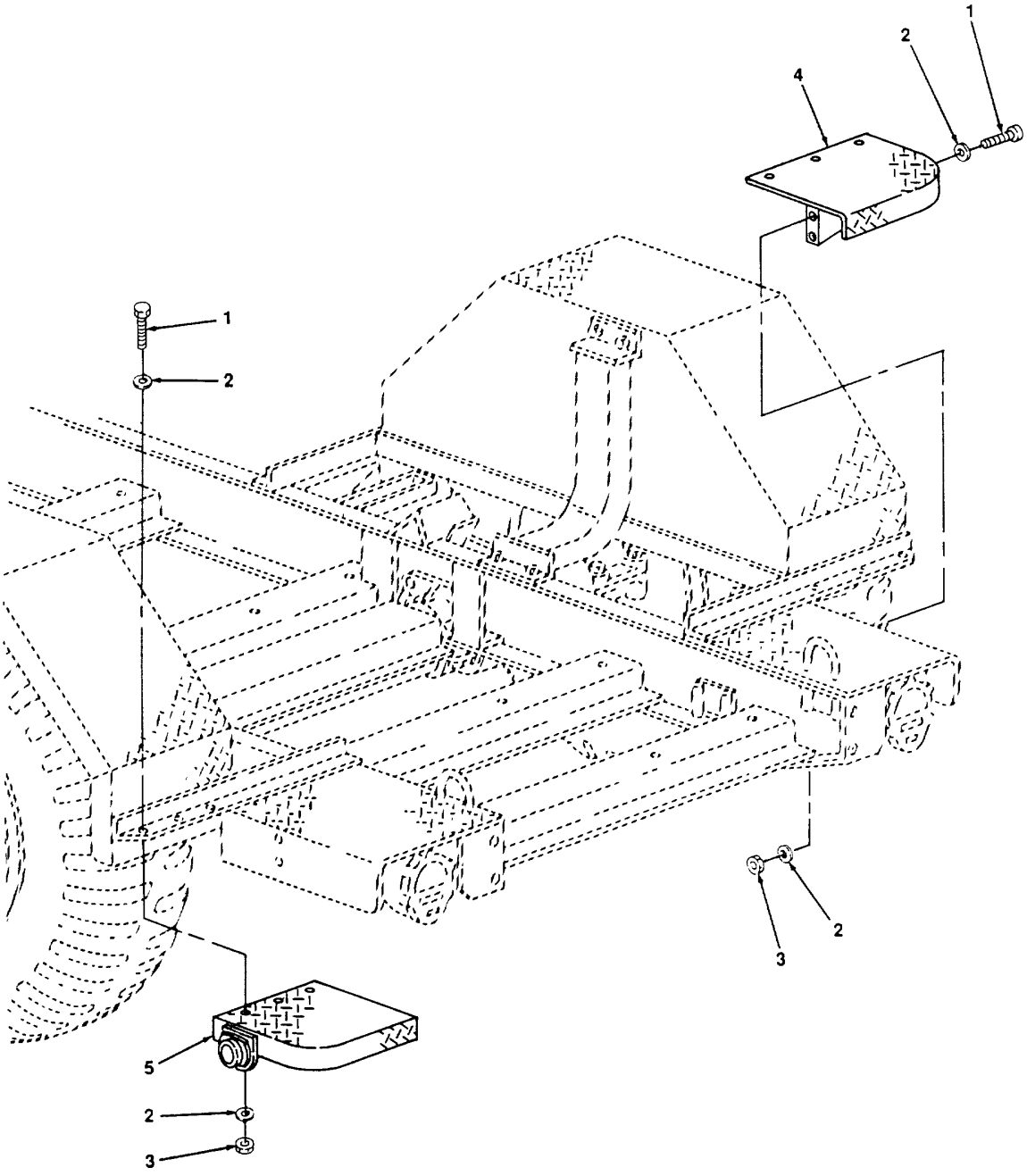


Figure D-19. Rear Steps.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0502 Rear Steps				
D 19	1	PAOZZ						5305 00 006 6574	SCREW, CAP MS90725 60	96906	EA	14	
D 19	2	PAOZD						5310 00 080 6004	WASHER, FLAT MS27183 14	96906	EA	28	
D 19	3	PAOZZ						5310 00 087-4652	NUT, SELF-LOCKING MS51922-17	96906	EA	14	
D-19	4	XDOFF							STEP, REAR, CURBSIDE 13221E4793	97403	EA	1I	
D 19	5	XDOOFF							STEP, REAR, ROADSIDE 13221E4794	97403	EA	1	

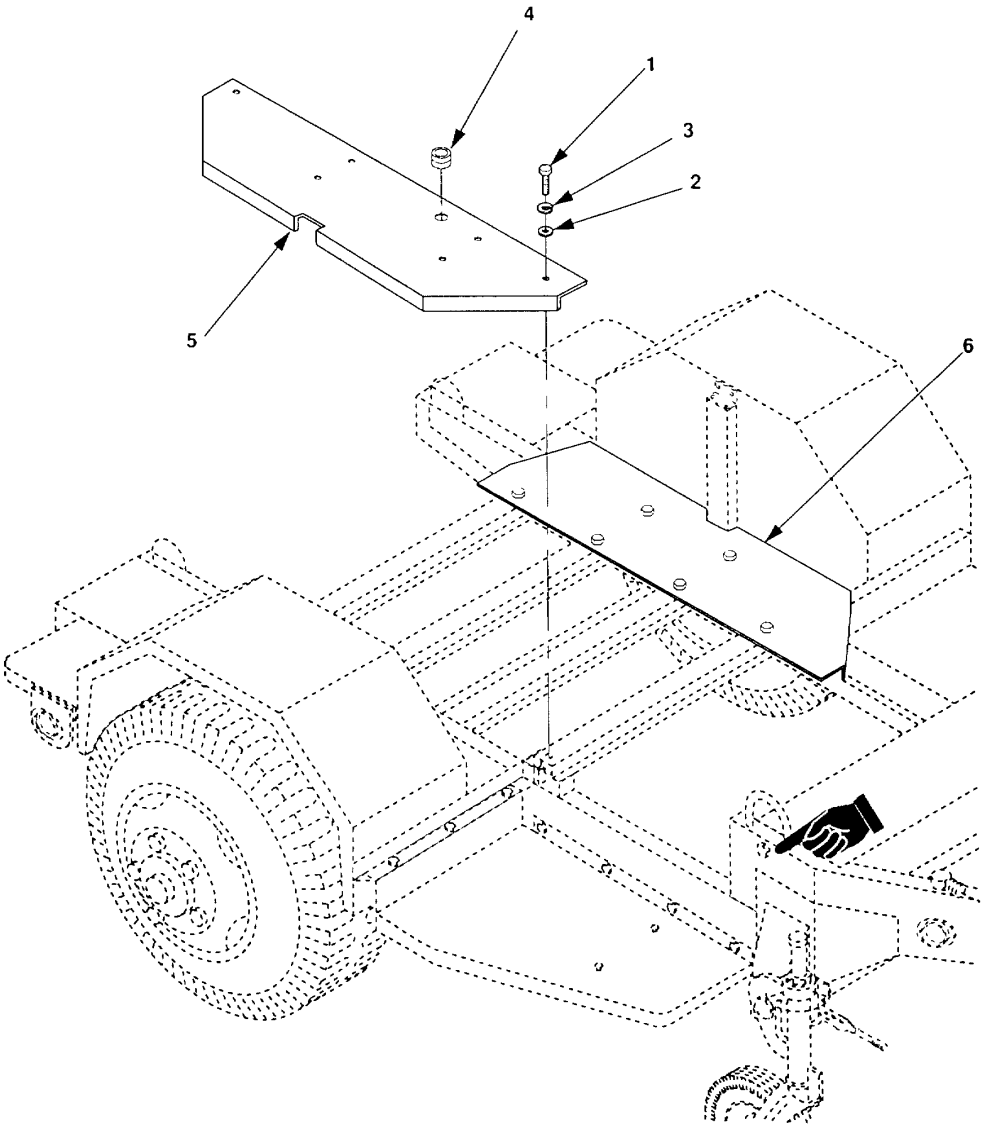
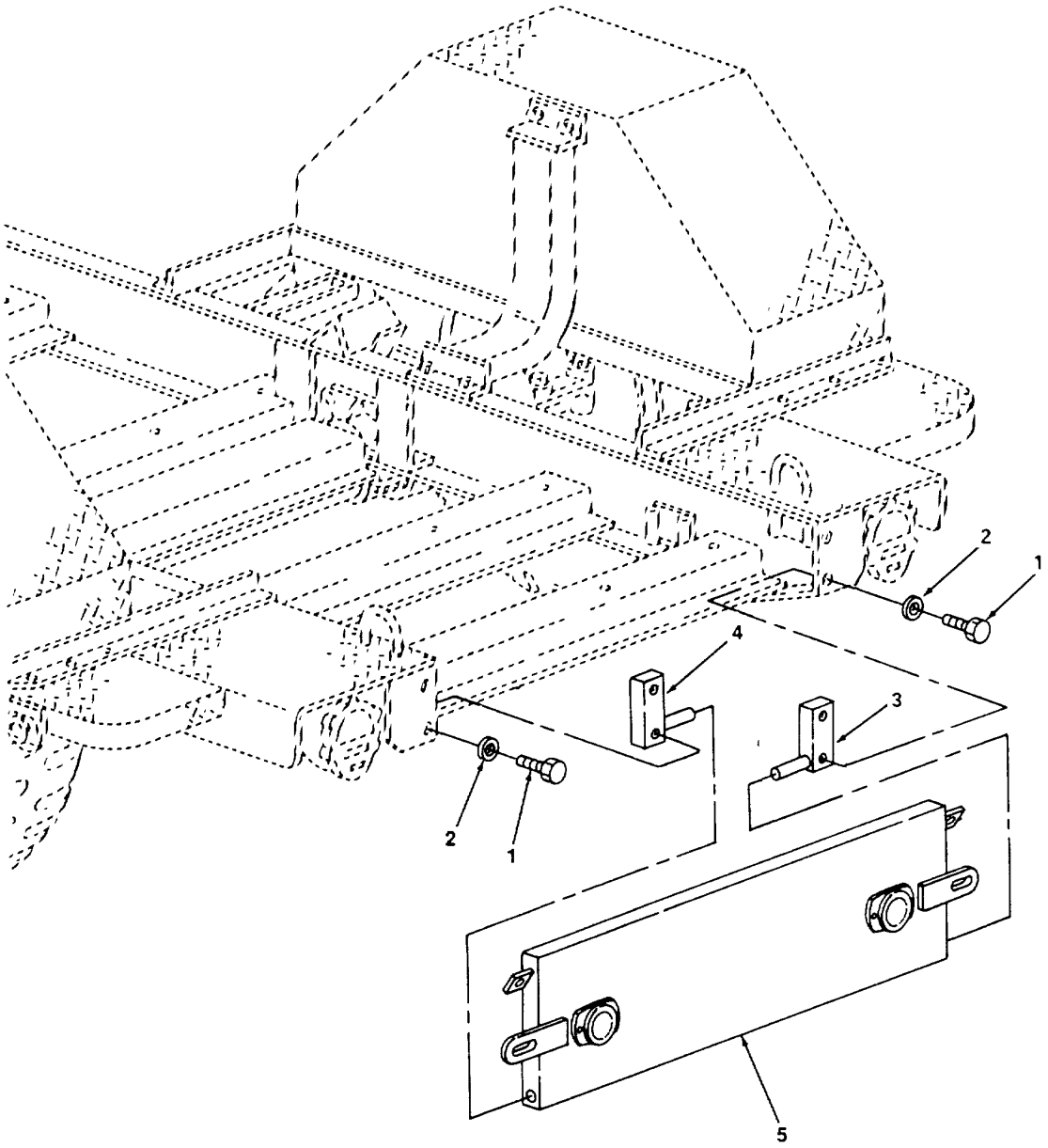


Figure D-20. Walkways.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0502- Walkways				
D-20	1	PAOZZ						5305-00 988-1725	SCREW, MACHINE MS35206-281	96906	EA	12	
D-20	2	PAOZZ						5310-00 809-4058	WASHER, FLAT MS27183-10	96906	EA	12	
D-20	3	PAOZ0						5310 00-582 5965	LOCKWASHER MS35338 44	96906	EA	12	
D 20	4	PAOZD						5325 00-270 8889	GROMMET MS35489 81	96906	EA	1	
0 20	5	XDOZZ							WALKWAY, CURBSIDE 13227E5864	97403	EA	1	
D-20	6	XDOZZ							WALKWAY, ROADSIDE 13227E5865	97403	EA	1	



4880-021

Figure D-21. Tailgate.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
									0504 - Tailgate				
D 21	1	PAOZZ						5305-00 269-3214	SCREW, CAP MS90725-64	 96906	EA	4	
D 21	2	PAOZZ						5310-00-080-6004	WASHER, FLAT MS27183-14	 96906	EA	4	
D 21	3	PAODZ						5340-01-228-0218	BLOCK, HINGE, ROADSIDE 13227E5885	 97403	EA	1	
D 21	4	PAOZZ							BLOCK, HINGE, CURBSIDE 13227E5884	 97403	EA	I	
D 21	5	PAOZZ						2510-01-228-0219	TAILGATE 13227E5866	 97403	EA	1	

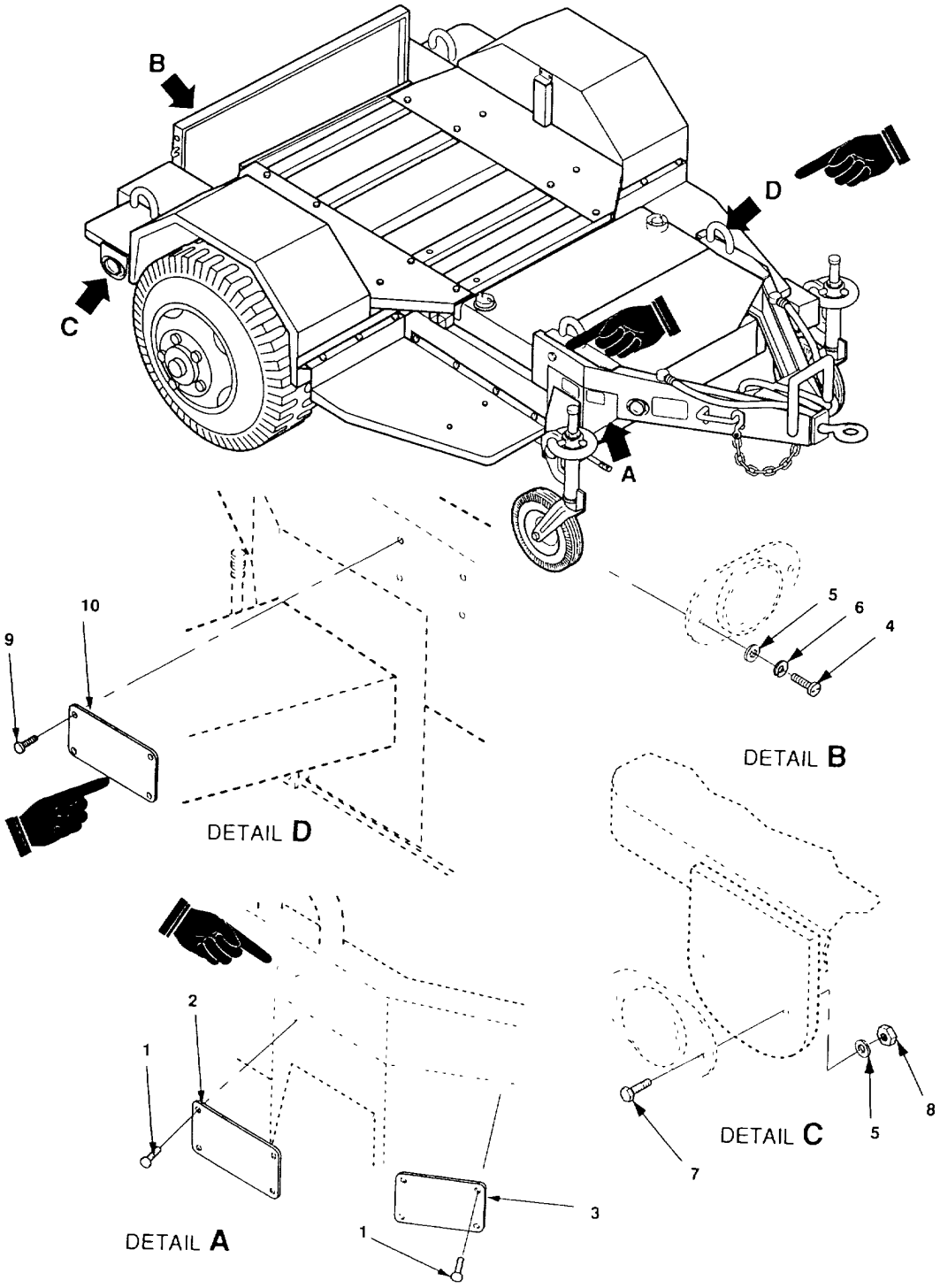


Figure D-22. Data Plates and Reflectors.

(1) ILLUSTRATION		(2) SMR CODE				(3) USMC		(4)	(5) DESCRIPTION		(6)	(7)	(8)
a FIG NO	b ITEM NO	a ARMY	b AIR FORCE	c NAVY	d USMC	a SSI	b REPL FACTOR	NATIONAL STOCK NUMBER	REF NUMBER & MFR CODE	USABLE ON CODE	U/M	QTY INC IN UNIT	USMC QTY PER EQUIP
									0506 - Data Plates and Reflectors				
D-22	1	PAOZZ						530500-253-5612	SCREW, DRIVE MS21318-15	96906	EA	8	
D-22	2	PAOZZ						9905-01-179-7336	PLATE, IDENTIFICATION 13217E2005	97403	EA	1	
D-22	3	MDOZZ							PLATE, DATA, HANDLING 13227E5845	97403	EA	1	
D-22	4	PAOZZ						530500-988-1724	SCREW, MACHINE MS35206-280	96906	EA	4	
D-22	5	PAOZZ						5310-00-8094058	WASHER, FLAT MS27183-10	96906	EA	8	
D-22	6	PAOZZ						5310-00-582-5965	LOCKWASHER, SPRING MS35338-44	96906	EA	4	
D-22	7	PAOZZ						5305-00-0680501	SCREW, CAP MS90725-5	96906	EA	4	
D-22	8	PAOZZ						5310-00-08&1251	NUT, SELF-LOCKING MS51922-1	96906	EA	4	
D-22	9	PAOZZ						5305-00-253-5614	SCREW, DRIVE MS21318-20	96906	EA	4	
D-22	10	PAOZZ							PLATE, DATA 13230E3495	97403	EA	1	

Section III. SPECIAL TOOLS, TEST AND SUPPORT EQUIPMENT

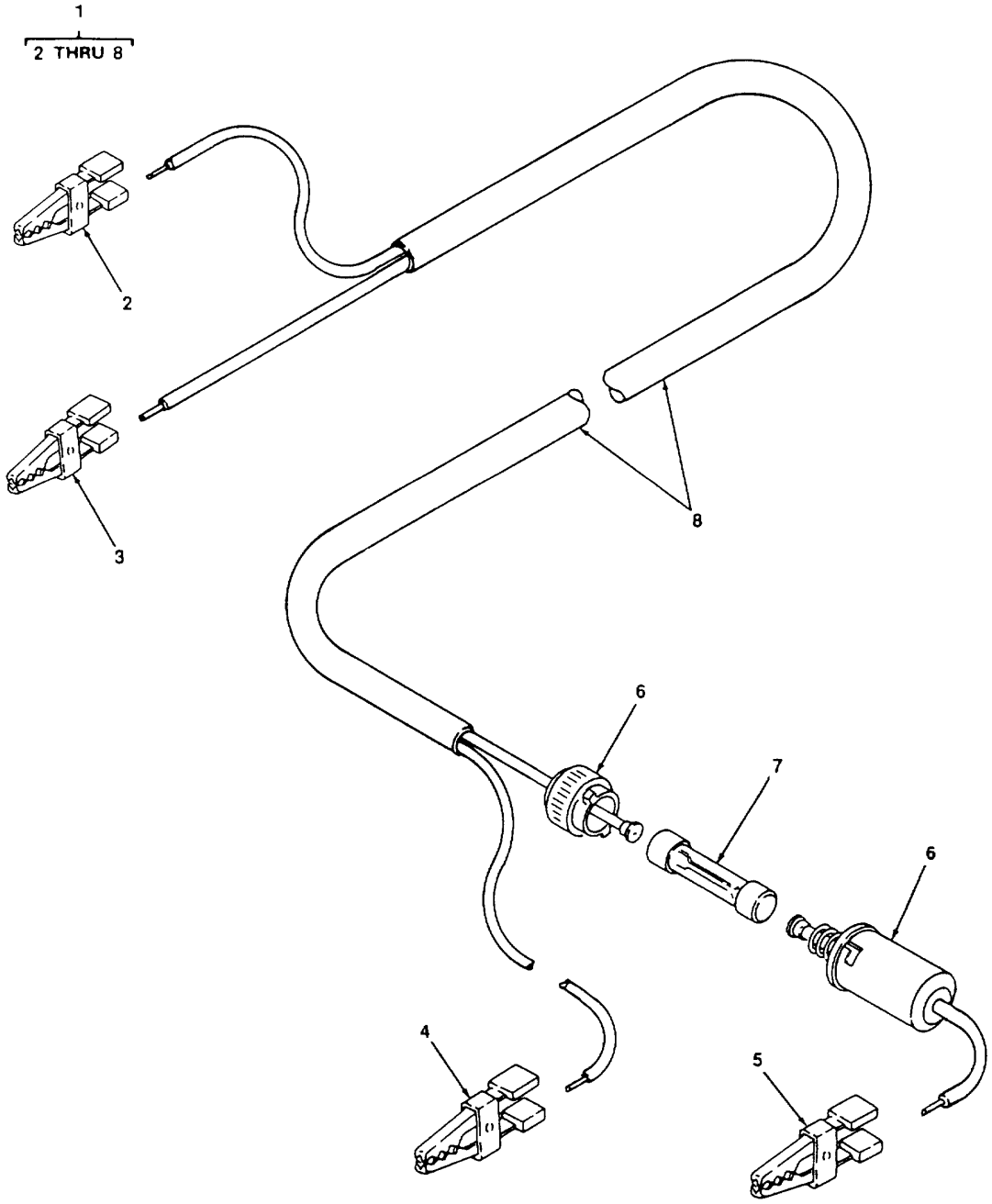


Figure D-23. Power Source Jumper Cable.

(1) ILLUSTRATION a FIG NO	(1) ILLUSTRATION b ITEM NO	(2) SMR CODE a ARMY	(2) SMR CODE b AIR FORCE	(2) SMR CODE c NAVY	(2) SMR CODE d USMC	(3) USMC a SSI	(3) USMC b REPL FACTOR	(4) NATIONAL STOCK NUMBER	(5) DESCRIPTION REF NUMBER & MFR CODE	(5) DESCRIPTION USABLE ON CODE	(6) U/M	(7) QTY INC IN UNIT	(8) USMC QTY PER EQUIP
D-23	1	MOOZZ							CABLE, JUMPER, POWER SOURCE		EA	1	
D-23	2	PAOZZ						5999 00-186-8935	MANUFACTURE FROM: CLIP, ELECTRICAL, TEST (BLACK) 2711	V1257	EA	1	
D-23	3	PAOZZ						5999 00-220 9767	CLIP, ELECTRICAL, TEST (RED) 48B	76545	EA	1	
D-23	4	PAOZD						5999 00-615-1718	CLIP, ELECTRICAL(BLACK) 63CBLK	76545	EA	1	
D-23	5	PAOZZ						5999 00 721 0350	CLIP, ELECTRICAL(RED) 63CRED	76545	EA	1	
D-23	6	PAOZZ						5920 00-892 9395	CARTRIDGE, FUSE FHN31GI	81349	EA	1	
D-23	7	PAOZ7						5920-00-270 5179	FUSE, SA SLOBLO L01323	14933	EA	I	
D-23	8	PAOZZ							CABLE, 2-CONDUCTOR, 12 FOOT CO-02 LLF (2/16) 0230	81349	FT	V	

Section IV. NATIONAL STOCK NUMBER AND REFERENCE INDEX

NSN	FIGURE NO.	ITEM NO.
2110-00-459-8447	D-15	18
2330-00-542-2831	D-16	18
2510-01-228-0219	D-21	5
2910-00-893-2592	D-15	20
3120-01-181-9363	D-5	21
4010-01-137-6972	D-16	33
4720-00-289-9567	D-15	10
4730-00-542-2807	D-15	9
4730-00-908-3195	D-1	4
4730-01-141-1560	D-15	3
4730-01-231-1740	D-1	6
4820-00-465-1589	D-15	25
5145-01-135-5951	D-3	5
	D-5	10
5303-00-253-5615	D-2	47
5305-00-006-6574	D-18	4
	D-19	1
5305-00-054-5650	D-2	17
5305-00-054-6655	D-2	29
	D-9	16
5305-00-059-3661	D-2	2
	D-9	2
5305-00-068-0501	D-2	34
	D-22	7
5305-00-068-0502	D-2	32
5305-00-071-1787	D-16	24
5305-00-071-2069	D-9	47
	D-15	11
	D-16	5
	D-17	1
5305-00-071-2511	D-1	7
5305-00-253-5612	D-22	1
5305-00-253-5614	D-22	9
5305-00-269-3206	D-8	6
5305-00-269-3213	D-18	1
5305-00-269-3214	D-16	29
	D-21	1
5305-00-269-3217	D-16	27
5305-00-558-8364	D-16	17
5305-00-724-5914	D-1	11
5305-00-782-9495	D-18	7
5305-00-984-7342	D-8	9
5305-00-988-1724	D-22	4
5305-00-988-1725	D-20	1
5305-00-989-7434	D-15	16
5305-00-993-1848	D-5	13
	D-6	8
5305-00-993-1848	D-16	1
5305-00-995-3441	D-5	17
5306-00-225-8498	D-1	1
5307-00-227-1741	D-9	42
5310-00-582-5965	D-2	33
5310-00-004-5033	D-16	25
5310-00-014-5850	D-2	3
	D-5	14
	D-8	10
	D-9	3
	D-16	2
5310-00-019-0627	D-9	26
5310-00-022-8847	D-8	8
	D-9	41
	D-16	16
5310-00-045-3296	D-6	9
	D-15	6
5310-00-045-5218	D-2	38
5310-00-080-6004	D-16	30
	D-18	2
	D-19	2
	D-21	2
5310-00-081-4219	D-1	2
5310-00-081-8087	D-9	18
5310-00-087-4652	D-18	3
	D-19	3
5310-00-088-0551	D-2	19
5310-00-088-1251	D-22	8
5310-00-138-4315	D-9	27
5310-00-182-1404	D-9	17
5310-00-187-2413	D-8	7
	D-9	39
	D-16	14
5310-00-225-6993	D-9	49
	D-15	13
	D-16	7
	D-17	3
	D-18	9
5310-00-244-8303	D-16	13
5310-00-407-9566	D-16	21
5310-00-410-3023	D-9	40
	D-16	12
5310-00-577-5354	D-2	40
5310-00-582-5965	D-1	8
	D-2	33
	D-20	3
	D-22	6
	D-15	5

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NSN	FIGURE NO.	ITEM NO.	NSN	FIGURE NO.	ITEM NO.
5310-00-619-1148	D-15	17	5935-00-823-5322	D-7	7
5310-00-732-0558	D-16	24		D-13	7
5310-00-761-6882	D-2	36	5935-01-136-9896	D-3	7
5310-00-809-4058	D-2	35		D-5	12
	D-20	2	5935-01-181-8405	D-2	14
	D-22	5		D-11	14
5310-00-809-5998	D-9	48	5935-01-182-8884	D-4	6
	D-15	12	5935-01-182-8980	D-10	7
	D-16	6	5935-01-190-6729	D-2	26
	D-17	2	5935-01-192-8928	D-12	11
	D-18	8	5940-00-113-8190	D-5	7
5310-00-820-6653	D-1	12		D-8	4
5310-00-877-5797	D-2	4		D-11	7
	D-5	15		D-12	6
	D-8	11	5940-00-113-9826	D-11	9
	D-9	4	5940-00-115-4999	D-2	16
	D-16	3		D-2	45
5310-00-880-7744	D-16	22	5940-00-115-5007	D-5	9
531 0-00-897-6082	D-2	39		D-9	34
5310-00-922-1794	D-16	15		D-11	8
5310-00-934-9765	D-9	25		D-12	7
5310-00-950-1310	D-2	18	5940-00-159-1290	D-14	6
5310-00-984-3806	D-1	3	5940-00-283-5280	D-2	9
5310-01-078-5996	D-9	38		D-2	23
5320-00-206-9632	D-9	8		D-5	8
5320-00-616-5549	D-9	6		D-7	3
5320-00-882-4599	D-9	45		D-10	4
5325-00-270-8889	D-20	4		D-11	6
5330-01-137-3172	D-15	19		D-12	5
5330-01-181-8380	D-5	20		D-13	5
5340-01-148-3722	D-6	10		D-14	5
	D-9	13	5940-00-983-6046	D-2	30
5340-01-054-6092	D-9	11	5940-00-983-6059	D-9	23
I5340-01-196-0276	D-5	16	5940-01-195-5220	D-15	7
5340-01-228-0218	D-21	3	5943-00-435-1833	D-9	24
5340-01-228-5831	D-8	12	5945-01-165-1065	D-9	37
5340-01-230-0783	D-15	27	5970-00-789-6832	D-3	6
5340-01-231-5561	D-15	28		D-5	11
5365-00-294-0580	D-5	18	5970-00-812-1356	D-4	3
5365-01-031-1798	D-1	9	5970-00-812-2967	D-5	4
5930-00-060-2286	D-9	15		D-7	4
5934-01-137-3101	D-3	8		D-10	3
5935-00-060-2294	D-2	5		D-11	5
	D-9	14		D-12	4
5935-00-725-8233	D-7	8	5970-00-815-1295	D-2	24
	D-13	8		D-13	4
5935-00-813-4717	D-6	5	5970-00-834-9119	D-3	3
5935-00-819-5865	D-7	9		D-5	5

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5970-00-914-3118	D-2	10
	D-5	3
	D-9	35
	D-11	4
	D-12	3
5970-00-954-1622	D-2	11
	D-5	2
	D-7	5
	D-10	5
	D-11	3
	D-14	4
5970-00-954-1624	D-6	2
	D-14	3
5975-00-100-8776	D-5	19
5975-00-111-3208	D-14	2
5975-00-727-5153	D-2	8
	D-2	22
	D-7	2
	D-10	2
	D-11	2
	D-12	2
	D-13	3
5999-01-181-8435	D-9	12
5999-01-181-8436	D-2	6
	D-9	19
	D-9	20
	D-12	1
5999-01-198-6172	D-2	20
6115-00-118-1248	D-1	10
6145-00-295-2812	D-2	25
	D-7	6
6145-00-500-3079	D-14	7
6145-01-108-6907	D-7	6
	D-10	6
	D-11	12
	D-12	10
	D-13	6
6145-01-129-6897	D-6	3
6145-01-135-5951	D-3	5
	D-5	10
6145-01-143-0040	D-3	4
	D-5	6
6145-01-165-4386	D-11	13
6145-01-182-8781	D-4	4
6145-01-195-9844	D-2	12
6145-01-196-0273	D-8	5
6145-01-197-2687	D-2	13
	D-2	44
	D-9	36
	D-11	10
	D-12	8
6145-01-197-2688	D-11	11
	D-12	9
6150-00-838-4952	D-2	27
	D-9	21
6680-01-130-3230	D-15	21
9905-00-477-4137	D-2	46
9905-01-179-7336	D-22	2

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AN961-616T	81352	D-8	7
		D-9	39
		D-16	14
DDC-04AOABK	90484	D-6	3
D38999/20FD5SN	81349	D-2	26
D38999/26FD5PN	81349	D-6	4
D70-501	30554	D-9	37
FHS-032-8	46384	D-9	44
HW-C6(127)JO	81349	D-8	5
		D-2	42
MEP-114A	30554	D-1	10
MIL-H-13444, TYPE I	81349	D-15	10
MIL-S-19500/260	80131	D-9	29
MIS20045/1-015	18876	D-4	6
MIS20045/2-019	18876	D-2	14
		D-11	14
MIS20045/2-020	18876	D-12	11
MIS20046-2-016	18876	D-10	7
MIS20076/1-005	18876	D-4	4
MS15795-808	96906	D-15	17
MS15795-918	96906	D-2	38
MS16213-63	96906	D-16	15
MS17349C24B	96906	D-9	15
MS17349C40B	96906	D-2	5
		D-9	14
MS20427-4C6	96906	D-9	10
MS20427-4C7	96906	D-9	8
IMS20600-MP4W3	96906	D-9	6
MS20613-4P6	96906	D-9	45
MS20659-134	96906	D-2	16
		D-2	45
MS21044N04	96906	D-2	19
MS21044N06	96906	D-9	18
MS21044N3	96906	D-2	4
		D-5	15
		D-8	11
		D-9	4
		D-16	3
MS21318-15	96906	D-22	1
MS21318-20	96906	D-22	9
MS21318-21	96906	D-2	47
MS21919WCG13	96906	D-15	7
MS21919WCG27	96906	D-5	16
MS21919WCG6	96906	D-6	10
		D-9	13
MS25036-106	96906	D-2	9
		D-2	23
		D-5	8
		D-7	3
		D-10	4
		D-11	6
		D-12	5
		D-13	5
		D-14	5
MS25036-114	96906	D-11	9
MS25036-122	96906	D-5	7
		D-8	4
		D-11	7
		D-12	6
MS25036-130	96906	D-5	9
		D-9	34
		D-11	8
		D-12	7
MS25251-16	96906	D-7	7
		D-13	7
MS27183-4	96906	D-2	18
MS27183-6	96906	D-9	17
MS27183-10	96906	D-2	35
		D-20	2
		D-22	5
MS27183-12	96906	D-1	2
MS27183-14	96906	D-16	28
		D-18	2
		D-19	2
		D-21	2
MS27183-18	96906	D-9	48
		D-15	12
		D-16	6
		D-17	2
		D-18	8
MS27183-42	96906	D-2	3
		D-5	14

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MS27183-42		D-8	10
		D-9	3
		D-16	2
MS3101 R20-29P	96906	D-7	9
MS3106R14S-2S	96906	D-6	5
MS3106R20-29S	96906	D-13	8
	96906	D-7	8
MS3367-4-9	96906	D-2	8
		D-2	22
		D-7	2
		D-10	2
		D-11	2
		D-12	2
		D-13	3
MS3367-5-9	96906	D-14	2
MS35191-274	96906	D-8	9
MS35206-280	96906	D-22	4
MS35206-281	96906	D-20	1
MS35207-263	96906	D-15	16
MS35207-265	96906	D-5	13
		D-6	8
		D-15	5
		D-16	1
MS35207-269	96906	D-5	17
MS35309-366	96306	D-16	17
MS35333-107	96906	D-9	26
MS35333-110	96906	D-8	8
		D-9	41
MS35338-43	96906	D-6	9
		D-15	6
MS35338-44	96906	D-1	8
		D-2	33
		D-20	3
		D-22	6
MS35338-45	96906	D-16	21
MS35338-46	96906	D-16	25
MS35338-50	96906	D-1	12
MS35338-105	96906	D-2	40
MS35425-75	96906	D-9	38
MS35489-81	96906	D-20	4
MS35644-1	96906	D-15	20
MS35649-2386	96906	D-9	40
		D-16	12
MS35650-304	96906	D-9	25
MS35691-36	96906	D-2	39
MS35826-10C	96906	D-9	11
MS35842-10	96906	D-1	4
MS37TB-18-GME-7E	75382	D-9	22
MS37TB-5.6GME-7E	75382	D-2	28
MS51531B8S	96906	D-15	2
MS51533B8S	96906	D-15	3
MS51859-5	96906	D-9	27
MS51922-1	96906	D-22	8
MS51922-9	96906	D-1	3
MS51922-17	96906	D-18	3
		D-19	3
MS51922-33	96906	D-9	49
		D-15	13
		D-16	7
		D-17	3
		D-18	9
MS51957-16	96906	D-2	17
MS51957-31	96906	D-2	29
		D-9	16
MS51958-65	96906	D-2	2
		D-9	2
MS51967-2	96906	D-2	36
MS51967-5	96906	D-16	22
MS51967-8	96906	D-16	26
MS53075-1	96906	D-15	18
MS77066-4	96906	D-14	6
MS90725-5	96906	D-2	34
		D-22	7
MS90725-6	96906	D-2	32
MS90725-15	96906	D-1	7
MS90725-32	96906	D-16	20
MS90725-33	96906	D-1	1
MS90725-55	96906	D-8	6
MS90725-60	96906	D-18	4
		D-19	1

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MS90725-62	96906	D-18	1
MS90725-64	96906	D-16	27
		D-21	
MS90725-67	96906	D-16	27
MS90725-68	96906	D-16	24
MS90725-111	96906	D-18	7
MS90725-113	96906	D-9	47
		D-15	11
		D-16	5
		D-17	1
MS90725-167	96906	D-1	11
M16878/4BHB9	81349	D-14	7
M16878/4BJE9	81349	D-2	25
		D-7	6
		D-10	6
		D-11	12
		D-12	10
		D-13	6
M16878/4BLJ9	81349	D-11	13
M16878/8BJE9	81349	D-2	12
M16878/8BPL9	81349	D-11	11
		D-12	9
M16878/8BTM9	81349	D-2	13
		D-2	44
		D-9	36
		D-11	10
		D-12	8
		D-7	5
M23053/5-105-0	81349	D-2	11
		D-5	2
		D-7	5
		D-10	5
		D-11	3
		D-14	4
M23053/5-106-0	81349	D-2	24
		D-13	4
M23053/5-107-0	81349	D-6	2
		D-14	3
M23053/5-108-0	81349	D-5	4
		D-7	4
		D-10	3
		D-11	5
		D-12	4
M23053/5-109-0	81349	D-2	10
		D-5	3
		D-9	35
		D-11	4
		D-12	3
M23053/5-111-0	81349	D-4	3
M23053/5-112-0	81349	D-3	3
		D-5	5
M23053/5-113-0	81349	D-4	5
M23053/5-114-0	81349	D-3	6
		D-5	11
M5757/23-003	81349	D-9	24
NAS43DD3-48	80205	D-5	18
NAS47N3A-006	80205	D-9	28
TBJA	81349	D-2	27
		D-9	21
UNS S30400	81349	D-15	4
004-04-010	81992	D-5	23
070102-8-6	81343	D-15	15
070102-8-8	81343	D-15	22
11625410	19207	D-16	28
11625412	19207	D-16	23
13211E6730	97403	D-2	46
13213E9243	97403	D-15	25
13214E1223	97403	D-9	42
13215E7892-6	97403	D-5	19
13217E1526-89	97403	D-9	44
13217E2005	97403	D-22	2
13220E0663	97403	D-15	21
13220E0669-7	97403	D-8	1
13220E0669-8	97403	D-8	2
13220E0670-10	97403	D-8	12
13220E0697-4	97403	D-8	3
13220E0697-5	97403	D-2	43
13220E0697-6	97403	D-2	41
13220E8192	97403	D-1	9
13221E4790	97403	D-18	5
13221E4791	97403	D-18	6

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13221E4793	97403	D-19	4	13227E5849	97403	D-16	4
13221E4794	97403	D-19	5	13227E5851	97403	D-16	18
13222E1427	97403	D-6	3	13227E5852	97403	D-16	19
13222E1440	97403	D-4	1	13227E5853	97403	D-15	14
13222E7029-3	97403	D-15	9	13227E5854	97403	D-15	24
13222E8676-2	97403	D-16	33	13227E5855	97403	D-9	1
13222E8995	97403	D-3	5	13227E5856	97403	D-9	43
		D-5	10	13227E5857	97403	D-9	5
13222E9686	97403	D-14	8	13227E5858	97403	D-9	30
13222E9687-2	97403	D-9	22	13227E5859	97403	D-2	1
13222E9687-6	97430	D-2	28	13227E5860	97403	D-2	31
13222E9695-3	97403	D-9	12	13227E5861	97403	D-16	11
13222E9716	97403	D-16	31	13227E5862	97403	D-16	10
13222E9718	97403	D-18	10	13227E5863	97403	D-16	8
13226E1336-1	97403	D-3	4	13227E5864	97403	D-20	5
		D-5	6	13227E5865	97403	D-20	6
13226E1336-3	97403	D-4	2	13227E5866	97403	D-21	5
13226E1410	97403	D-3	8	13227E5867	97403	D-17	4
13226E1440	97403	D-3	7	13227E5868	97403	D-5	1
		D-5	12	13227E5869	97403	D-6	1
13226E1867-7	97403	D-16	32	13227E5870	97403	D-2	7
13226E6147-12	97403	D-6	6	13227E5871	97403	D-10	1
13226E6147-15	97403	D-6	7	13227E5872	97403	D-11	1
13226E6162-2	97403	D-5	21	13227E5873	97403	D-12	1
13226E6988	97403	D-15	19	13227E5874	97403	D-13	1
13226E7052-1	97403	D-2	20	13227E5875	97403	D-13	2
13226E7052-2	97403	D-9	20	13227E5876	97403	D-14	1
13226E7052-4	97403	D-2	6	13227E5877-1	97403	D-3	1
		D-9	19	13227E5877-2	97403	D-3	2
13226E7768-2	97403	D-5	20	13227E5878-1	97403	D-9	31
13226E9502-1	97403	D-5	22	13227E5878-2	97403	D-9	32
13226E9503-2	97403	D-5	23	13227E5878-3	97403	D-9	33
13227E5842	97403	D-2	21	13227E5879	97403	D-1	6
13227E5843	97403	D-7	1	13227E5880	97403	D-16	9
13227E5844-1	97403	D-9	9	13227E5882	97403	D-15	8
13227E5845	97403	D-22	3	13227E5883	97403	D-9	46
13227E5846-1	97403	D-15	26	13227E5884	97403	D-21	4
13227E5846-2	97403	D-15	27	13227E5885	97403	D-21	3
13227E5846-3	97403	D-15	28	13227E5886	97403	D-15	23
13227E5847	97403	D-15	1	13227E5888	97403	D-9	7
13227E5848-1	97403	D-1	5	13228E1908	97403	D-2	15

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13228E1924	97403	D-2	37				
13230E3495	97403	D-22	10				
37TB18	81349	D-9	23				
37TB5	81349	D-2	30				
39DBA002N1404HA	6324	D-6	7				
39DHA002M15D4HA	6324	D-6	6				
39T3-8-8	88303	D-1	5				
4797-8B	01276	D-15	9				
82-11561	07700	D-5	20				

Section V. REFERENCE DESIGNATOR INDEX

(Not Applicable)

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By Order of the Secretary of the Army.

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

WILLIAM J. MEEHAN, II
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:
To be distributed in accordance with DA Form 12-25E, Operator, Unit, Direct Support and General Support Maintenance Requirements for Generator Set, Diesel Engine Driven, Trailer Mounted.

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The Metric System and Equivalents

Linear Measure

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

Weights

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

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

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

Cubic Measure

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

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

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

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

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

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

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

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TEAR ALONG PERFORATED LINE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

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