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**OPERATOR'S, ORGANIZATIONAL, DIRECT
SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL**

INCLUDING

**REPAIR PARTS
AND SPECIAL TOOLS LIST**

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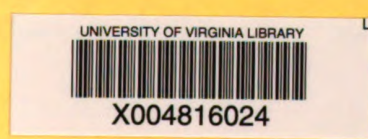
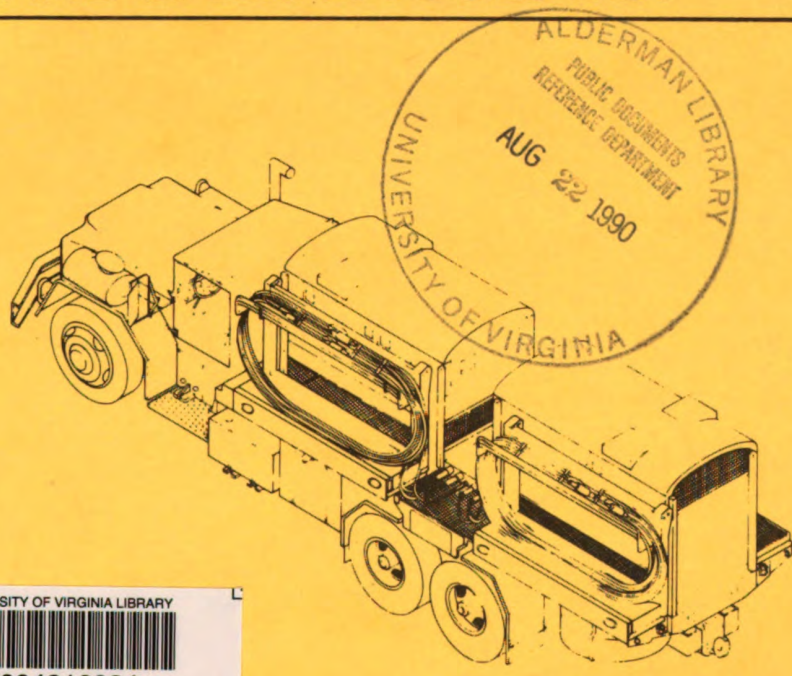
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**ELECTRIC POWER PLANT II
AN/MJQ-24
(6115-01-102-3524)**

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Operator's, Organizational, Direct Support
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ELECTRIC POWER PLANT II
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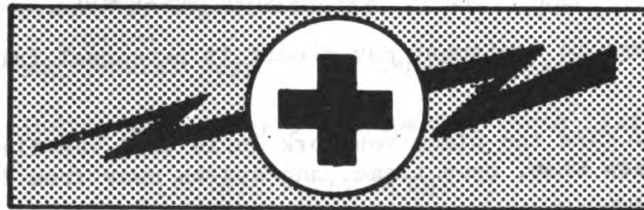
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WARNING



WARNING

HIGH VOLTAGE
is used in the operation of this equipment.
DEATH OR SEVERE INJURY
may result if personnel fail to observe safety precautions.

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

Do not operate generator set unless ground terminal stud is connected to a suitable ground. Electrical fault in generator sets, load lines, or load equipment can cause severe injury or electrocution from contact with ungrounded system.

Whenever possible, the generators must be turned off before beginning work on the equipment. Always ground every part before touching it.

Do not attempt to connect wires or cables unless generator sets are shut down and fully deenergized.

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

Remove all dog tags, rings, watches, and other jewelry before working on electrical equipment. Metal contact with electrical current can cause severe burns.

WARNING

Do not be misled by the term "low voltage." Potentials as low as 50 volts may cause death under adverse conditions.

WARNING

HAZARDOUS FUELS

Hazardous fuels are used in this equipment.

Personal injury or damage to equipment may result if personnel fail to observe safety precautions.

When fuels are used, be sure the place you work in is well ventilated. Wear gloves and eye protection. Keep heat, open flame, and sparks away from flammable liquids.

When refueling is necessary during operation, fuel fumes may be ignited if the tanker truck is not properly grounded. Make sure that tanker truck ground wire is attached to the fuel tank, and keep metal-to-metal contact between the fuel nozzle and the fuel tank.

WARNING

HIGH NOISE LEVEL

High noise level of the generators can cause hearing damage. Hearing protection is required while operating this equipment.

For artificial respiration procedures, refer to FM 21-11.

b

TECHNICAL MANUAL

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C.

Operator's, Organizational, Direct Support,
and General Support Maintenance Manual
Including Repair Parts and Special Tools List

ELECTRIC POWER PLANT II
AN/MJQ-24
(6115-01-102-2524)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Reports shall be submitted as follows: A reply will be furnished to you.

(A) Army - DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to Commander, U. S. Army Troop Support Command, ATTN: AMSTR-MCTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798 .

(F) Air Force - AFTO Form 22 directly to: Commander, Sacramento Air Logistics Center, ATTN: MMST, McClellan Air Force Base, CA 95652 in accordance with TO-00-5-1.

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HOW TO USE THIS MANUAL

This manual provides information for operator, organizational, direct support, and general support maintenance personnel for use in operating and maintaining the Electric Power Plant II (EPP II), AN/MJQ-24. Maintaining the EPP II includes preventive maintenance checks and services, observations of trouble symptoms, troubleshooting, and maintenance procedures to correct malfunctions. This manual also contains an illustrated list of repair parts used in the Electric Power Plant II.

Study this manual carefully and become familiar with its contents. Read and learn the warnings on the warning pages.

MANUAL CONTENT

a. This manual consists of the following:

- (1) Warning pages
- (2) Table of contents, list of illustrations, and list of tables
- (3) How to use this manual
- (4) Chapters 1 through 5
- (5) Appendixes A through H
- (6) Glossary
- (7) Index
- (8) Metric table

b. The five chapters and eight appendixes are divided as follows:

- (1) Chapter 1. Introduction. Contains general information and a general description of the equipment.
- (2) Chapter 2. Operating Instructions. Describes the operation of the equipment and the operator's preventive maintenance checks and services.
- (3) Chapter 3. Operator's Maintenance. Describes the operator's maintenance procedures.
- (4) Chapter 4. Organizational Maintenance. Describes maintenance procedures at the organizational level.
- (5) Chapter 5. Direct Support and General Support Maintenance. Contains maintenance procedures at the direct support and general support levels.
- (6) Appendix A. References. This is a list of the references that apply to this equipment.

(7) Appendix B. Maintenance Allocation Chart (MAC). This lists and assigns the maintenance tasks for this equipment.

(8) Appendix C. Components of End Item and Basic Issue Items List. Contains a list of the components of the Electric Power Plant II and the basic issue items.

(9) Appendix D. Additional Authorization List (AAL) Items. This is a list of items not issued with the end item, but authorized separately.

(10) Appendix E. Expendable Supplies and Materials List. This lists the expendable supplies and materials needed to operate and maintain the Electric Power Plant II.

(11) Appendix F. Repair Parts and Special Tools List (RPSTL). This is a list of repair parts and special tools required for maintenance and repair of the Electric Power Plant II.

(12) Appendix G. Illustrated List of Manufactured Items. This is a list of components required to fabricate items in the field with illustrations to aid in identification.

(13) Appendix H. Torque Limits. This table shows standard torque values and gives general torque information.

(14) Glossary. Contains a list of unique abbreviations and acronyms used within this manual to assist the user.

(15) Index. Contains an alphabetical index.

(16) Metric Table. The inside back cover contains a metric conversion table to assist the manual user in determining the metric values when other measurements are used.

Read and learn each of the procedures. Study each step and follow the sequence of steps. Take the manual to the Electric Power Plant II and, observing the warnings, cautions, and notes, locate the parts and controls.

With the help of a trained operator/mechanic, perform the preventive maintenance checks and services, then simulate operating the equipment.

When this is learned, go through a complete hookup operation and securing procedure. Ask questions. The trained operator/mechanic will know the answers or where to get them.

Repeat operations and hookup until you are familiar with the unit. Learn the system and work carefully. Knowledge, skill, and accuracy make an efficient crew member.

Part sizes, tool sizes, and component configurations of the equipment described in this manual are correct as of the date of publication. Some prototype and production equipment may have parts of slightly different sizes or configurations.

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

a. This manual is published for the use of personnel who will work with the Electric Power Plant II (EPP II) discussed in chapters 2 through 5. The manual describes: operation; troubleshooting; maintenance; and repair at the operator, organizational, and direct support/general support levels.

b. This manual also contains in appendix F an illustrated list of all repair parts used in the Electric Power Plant II.

c. The appropriate technical manuals (TM's) published for the generators and truck are referenced in appendix A and must be used to supplement the information in this manual. Should conflict occur between contents of this manual and any other, follow this manual.

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

1-3. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's). If your Electric Power Plant II (EPP II) needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commanding General, U.S. Army Troop Support Command, Attn: AMSTR-QX, 4300 Goodfellow Boulevard, St. Louis, Missouri 63120-1798. A reply will be furnished directly to you.

1-4. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. See TM 43-0002-24 for procedures to follow for destruction of Army materiel to prevent enemy use.

1-5. PREPARATION FOR STORAGE OR SHIPMENT. Instructions for preparation for storage or shipment are contained in chapter 4, page 4-106 of this technical manual.

Section II. EQUIPMENT DESCRIPTION

1-6. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

a. Purpose of Electric Power Plant II (EPP II). The truck-mounted gas turbine generators are designed to provide alternating current to the engagement control station (ECS) and radar station (RS). A typical Electric Power Plant II emplacement is shown in figure 1-1, page 1-2.

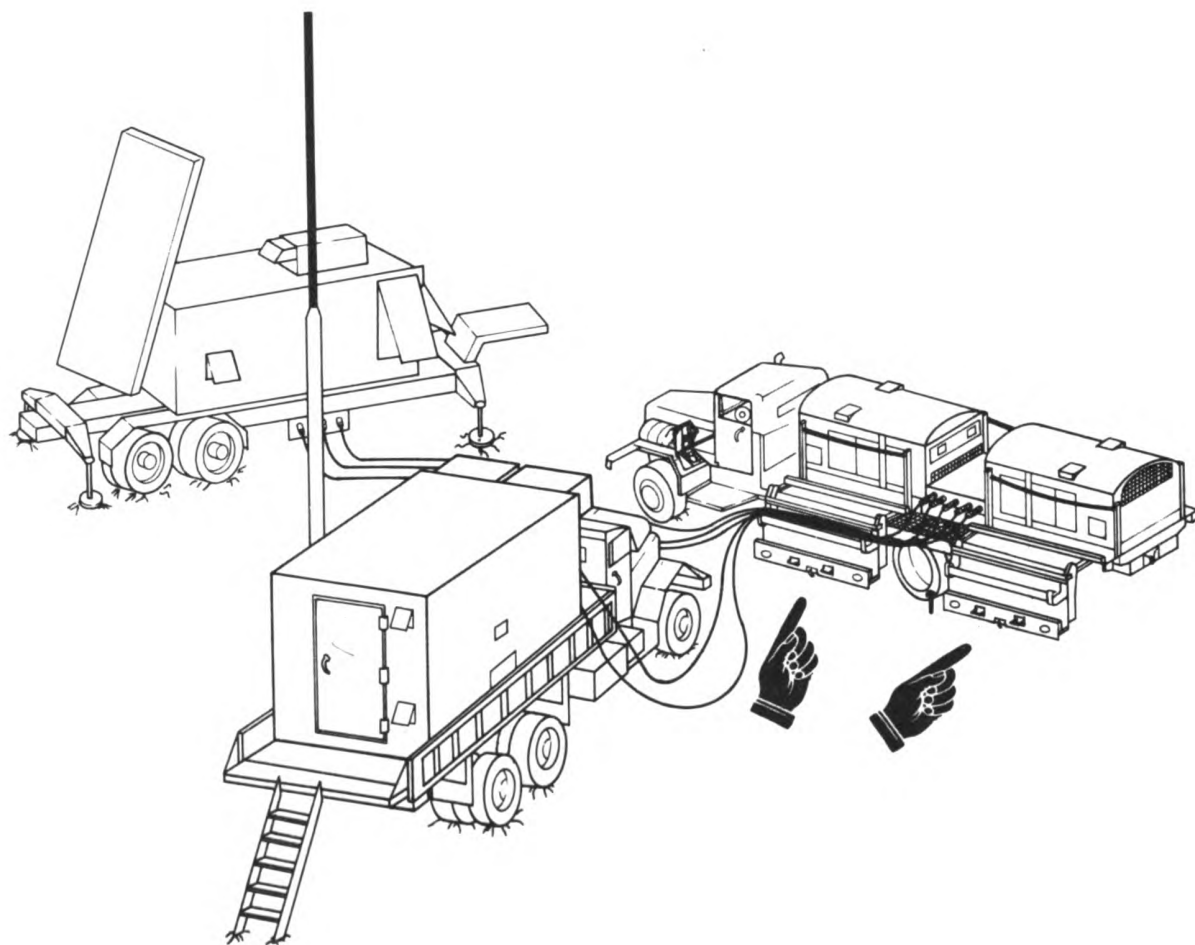


Figure 1-1. Electric Power Plant II Emplacement

b. Capabilities and Features

(1) Two 150-KW (MEP-D424A) generators are mounted on either M811 or M942 truck frames to provide 120/208-volt alternating current at 400 hertz.

NOTE

Check data plate on dash board to determine truck configuration.

- (2) Generators are powered by gas turbine engines for increased reliability.
- (3) Limited remote control is available from the engagement control station (ECS); generator status is shown there also.
- (4) Cable storage racks shall be lowered before operation, remain lowered during operation, then raised for travel after cables have been stored.

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS. This paragraph describes and locates the major components of the Electric Power Plant II shown in figure 1-2.

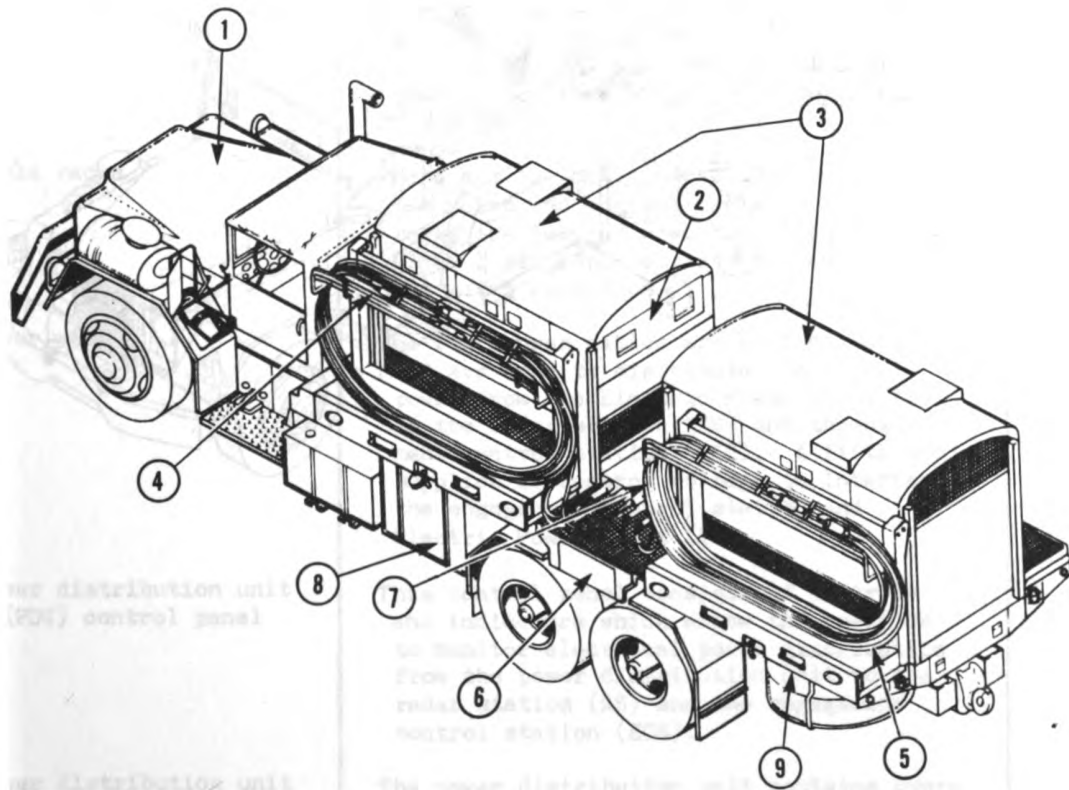


Figure 1-2. Major Components of the Electric Power Plant II (Sheet 1 of 2)

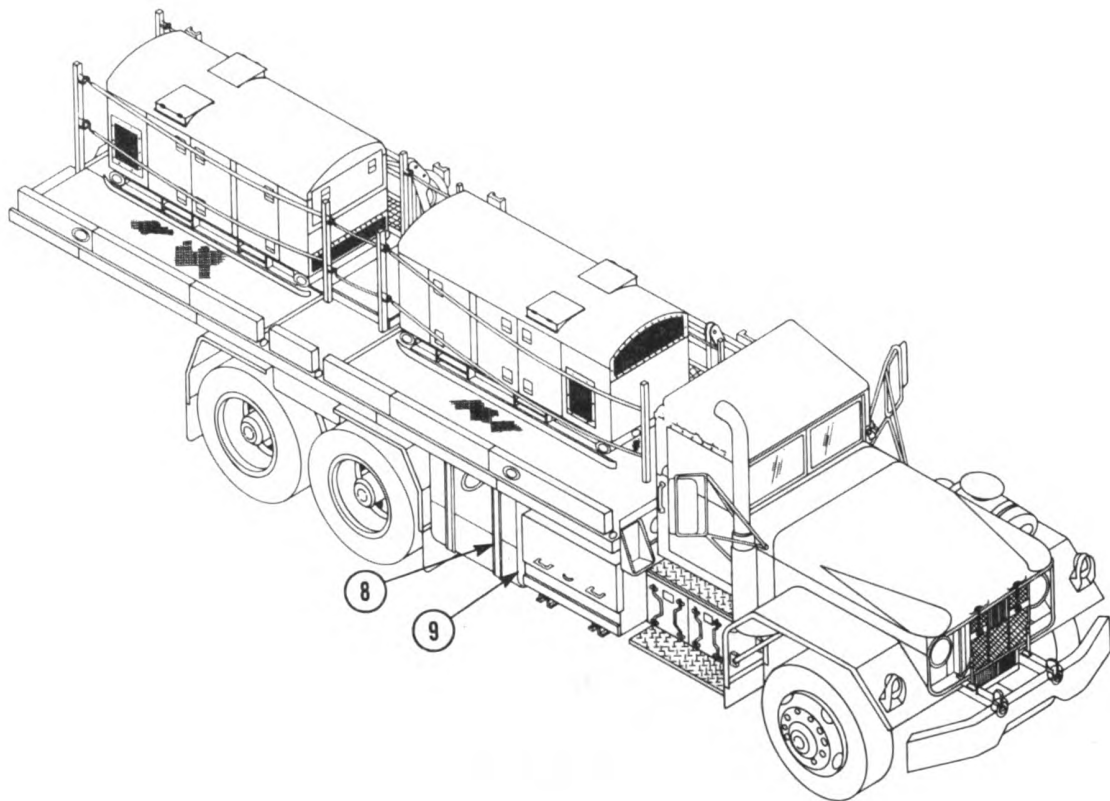


Figure 1-2. Major Components of the Electric Power Plant II (Sheet 2 of 2)

1-4 Change 2

Table 1-1. Electric Power Plant II

Key No.	Name	Function
①	Truck (see figure 1-2)	The truck is a 5-ton, model M811, or M942, modified to allow components of the Electric Power Plant II to be mounted on the chassis. See TM-9-2320-260-10 for complete description.
②	Generator control panel	Each generator has a control panel. One generator must be running when the Electric Power Plant II is in operation; both generators must be running to initiate the parallel function. See TM 5-6115-598-12 for complete instructions on operation of the generator sets.
③	Generators	The two generators are model MEP-D424A, gas turbine-driven units, each supplying 150-kW, 120/208-Vac, 3-phase, 400-hertz power. See TM 5-6115-598-12 for complete description.
④	Cable racks	There are two cable racks used to hold the power and control cables. These racks are lowered when the Electric Power Plant II is emplaced, and raised when in the march condition.
⑤	Power cables	The four power cables are 75 feet long and are used to distribute electrical power from the Electric Power Plant II to the radar station (RS) and the engagement control station (ECS). A fifth cable supplies dc control voltage to interface the engagement control station and Electric Power Plant II.
⑥	Power distribution unit (PDU) control panel	This control panel consists of controls and indicators which allow the operator to monitor electrical power distribution from the power distribution unit to the radar station (RS) and the engagement control station (ECS).
⑦	Power distribution unit (PDU)	The power distribution unit contains overload sensing and control units used to distribute and control the electrical power from the generators.

Table 1-1. Electric Power Plant II - Continued

Key No.	Name	Function
⑧	Saddle tanks	There are two 70-gallon saddle fuel tanks (one on each side of the truck) separate from the truck fuel tanks. These two tanks supply fuel to the generator day tanks. The fuel flow is monitored by the power distribution unit and indicated on a control panel in the engagement control station (ECS).
⑨	Fuel filter/water separators	There are two filters that remove water and other impurities from the fuel before it is drawn into the generator day tanks (see TM 5-6115-598-12). One fuel filter/water separator is located below the rear cable rack; the other is next to the curbside saddle tank.

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1-8. EQUIPMENT DATA.

Weights and Dimensions

Road March

	M942		M811	
Weight	32,400 lbs	14.55 met. tons	30,745 lbs.	13.94 met. tons
Length	380.81 in.	9.65 meters	31.67 ft.	9.65 meters
Width	97.50 in.	2.47 meters	8.08 ft.	2.46 meters
Height	120.25 in.	3.05 meters	8.62 ft.	2.53 meters

Emplaced

	M942		M811	
Weight	32,400 lbs	14.55 met. tons	30,745 lbs.	13.94 met. tons
Length	380.81 in.	9.65 meters	31.67 ft.	9.65 meters
Width	135.00 in.	3.44 meters	11.25 ft.	3.43 meters
Height	120.25 in.	3.05 meters	8.62 ft.	2.53 meters

Performance

Maximum power	150 kW
Voltage	208 Vac line-to-line
	120 Vac line-to-neutral
Phase	3-phase
Frequency	400 hertz

1-6 Change 4

Section III. TECHNICAL PRINCIPLES OF OPERATION

1-9. GENERAL. The operation of the Electric Power Plant II is essentially automatic and needs little attention from the operator. Operator duties consist of connecting electrical cables when the unit is positioned, starting the generators, putting the Electric Power Plant II on-line, and monitoring operations. When in operation, the generator regulator/monitor senses generator output voltage and maintains it at a constant value. The generator electronic control senses generator output frequency and controls turbine speed to maintain a constant output frequency. In addition to the Electric Power Plant II operator, personnel in the engagement control station (ECS) can also monitor these functions.

The generator electronic control provides automatic control of the order of events during the start cycle. When a start cycle begins, the starter engages and begins cranking the turbine. Fuel and ignition are turned on at a preset value; the ignition system and starter are turned off automatically. The turbine continues to accelerate until it stabilizes at run speed.

After the turbine has been started and has stabilized at run speed (normally within 15 seconds), the output voltage and frequency must be manually adjusted to the desired levels by the operator. Once these values have been set, the generator set may be switched on-line to furnish power. When maintenance is to be performed on a generator set that is running, or when a problem occurs, the second generator is started before the first is shut down.

The fuel for operation of the generator sets is stored in two 70-gallon saddle tanks, one mounted on each side of the truck chassis. During operation, fuel is drawn from the saddle tanks, through fuel filter/water separators, and into the generator set day tanks. The fuel system is controlled and monitored automatically and the status is indicated on a panel in the engagement control station (ECS).

CHAPTER 2

OPERATING INSTRUCTIONS

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

2-1. INTRODUCTION. This chapter describes the procedures used by the operator for operating and maintaining the Electric Power Plant II, AN/MJQ-24. Section I describes the controls and indicators, section II describes preventive maintenance checks and services (PMCS), section III describes operation under usual conditions and section IV discusses operation under unusual conditions.

2-2. GENERAL. This paragraph describes the controls and indicators which allow the operator to operate and troubleshoot the Electric Power Plant II. Refer to figure 2-1 and table 2-1, and figure 2-2 and table 2-2.

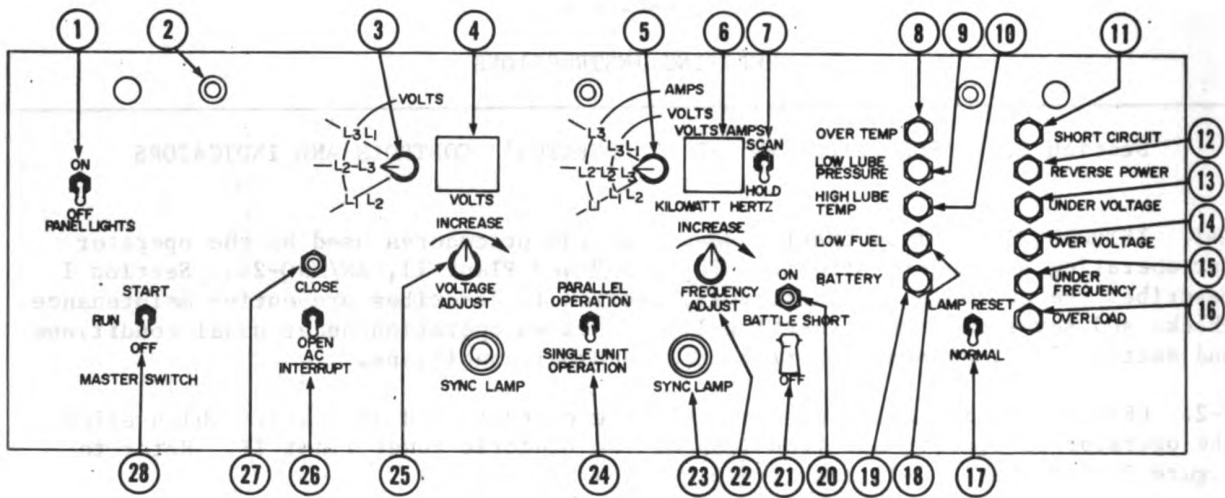


Figure 2-1. Generator Control Panel, Controls and Indicators

Table 2-1. Generator Control Panel, Controls and Indicators

Key	Controls or Indicators	Function
①	PANEL LIGHTS switch	Turns the three control panel illumination lights ② on and off.
②	Panel lights	Illuminate the control panel.
③	Phase select knob	The phase select knob selects the generator phase (L3-L1, L2-L3, or L1-L2) to be indicated on the meter ④.
④	VOLTS digital meter	The VOLTS meter indicates the voltage output of the selected phase of the generator.
⑤	Phase select knob	The phase select knob selects the generator phase (L3-L1, L2-L3, or L1-L2) to be indicated on the meter ⑥.
⑥	Frequency/load meter	The meter indicates the volts, amps, kilowatts, or hertz (frequency) of the selected phase of the generator.

Table 2-1. Generator Control Panel, Controls and Indicators - Continued

Key	Controls or Indicators	Function
⑦	SCAN-HOLD switch	Placing this switch to SCAN causes the frequency/load meter ⑥ to scan the volts, amps, kilowatts, and hertz (frequency) of the selected generator phase. An indicator light in each corner of the meter will come on to indicate which parameter is being indicated. Placing the switch to the HOLD position will stop the scan; a light in each corner of the meter will continue to indicate the parameter displayed at the time the switch was placed to HOLD.
⑧	OVER TEMP indicator lamp (T4)	The lamp will come on to provide an engine overtemperature warning. The lamp will remain on if T4 exceeds 1975° F (1079° C) for 6 seconds to indicate an overtemperature shutdown. Push to test bulb; turn right to dim for blackout operation.
⑨	LOW LUBE PRESSURE indicator lamp	This lamp will come on and an automatic shutdown will occur if engine oil pressure drops below 30 psi for 10 seconds. Push to test bulb; turn right to dim for blackout operation.
⑩	HIGH LUBE TEMP indicator lamp	This lamp will come on and an automatic shutdown will occur if engine oil temperature exceeds 265° F (130° C). Push to test bulb; turn right to dim for blackout operation.
⑪	SHORT CIRCUIT indicator lamp	This lamp will come on and the generator will trip off-line if a short circuit exists in the line. Push to test bulb; turn right to dim for blackout operation.
⑫	REVERSE POWER indicator lamp	This lamp will come on and the generator will trip off-line if line power tends to drive the generator. Push to test bulb; turn right to dim for blackout operation.

Table 2-1. Generator Control Panel, Controls and Indicators - Continued

Key	Controls or Indicators	Function
⑬	UNDER VOLTAGE indicator lamp	This lamp will come on and the generator will trip off-line if generator output voltage decreases below a preset value. Push to test bulb; turn right to dim for blackout operation.
⑭	OVER VOLTAGE indicator lamp	This lamp will come on and the generator will trip off-line if generator output or line voltage increases above a preset value. Push to test bulb; turn right to dim for blackout operation.
⑮	UNDER FREQUENCY indicator lamp	This lamp will come on and the generator will trip off-line if generator output frequency decreases below a preset value. Push to test bulb; turn right to dim for blackout operation.
⑯	OVERLOAD indicator lamp	This lamp will come on and the generator will trip off-line if the electrical load on the generator exceeds a preset value. Push to test bulb; turn right to dim for blackout operation.
⑰	LAMP RESET switch	This switch has two positions, LAMP RESET and NORMAL and is spring-returned to NORMAL. Moving the switch to the LAMP RESET position releases the latching circuit and turns off the fault indicator lamp(s).
⑱	LOW FUEL indicator lamp	This lamp will come on and an automatic shutdown will occur if fuel in the day tank drops below a preset level. Push to test bulb; turn right to dim for blackout operation.
⑲	BATTERY indicator lamp	This lamp will come on momentarily when a start is initiated and will go off shortly after the engine starts cranking and the battery charging alternator starts delivering power. The lamp will come on during operation if a fault exists in the battery charging circuit and the alternator stops charging. Push to test bulb; turn right to dim for blackout operation.

Table 2-1. Generator Control Panel, Controls and Indicators - Continued

Key	Controls or Indicators	Function
⑳	BATTLE SHORT indicator lamp	The BATTLE SHORT indicator lamp will be on when switch ㉑ is in BATTLE SHORT. Push to test bulb; turn right to dim for black-out operation.
㉑	BATTLE SHORT switch	This is a red guarded switch with positions BATTLE SHORT and OFF. Its normal position is OFF. Raising the red guard and placing the switch to BATTLE SHORT prevents an automatic shutdown from being initiated. Placing the red guard down will put the switch in the OFF position.
㉒	FREQUENCY ADJUST rheostat	This rheostat is used to increase or decrease the output frequency of the generator set. A locking ring behind the knob locks it in position after it is set. Turn the knob to the right to increase and to the left to decrease frequency. Volts, amps, kilowatts, or hertz (frequency) output is indicated on the meter above the rheostat.
㉓	SYNC LAMP	<p>The ac main contactor can be closed only when both lamps are off. Turn adjusting rings to right to dim for blackout operation.</p> <p>The two lamps indicate the phase relationship between the two paralleling generator sets. Both lamps are off when the generators are in phase and will flash on when they are out of phase.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">Each SYNC LAMP will go from off to on (dim), then the light will increase in intensity and then then go off. (This action is referred to as flash.)</p>
㉔	PARALLEL-SINGLE UNIT OPERATION switch	This switch has two positions, PARALLEL and SINGLE UNIT. In the SINGLE UNIT position, the ac main contactor may be closed at any time as long as all operating conditions are normal and

Table 2-1. Generator Control Panel, Controls and Indicators - Continued

Key	Controls or Indicators	Function
②5	VOLTAGE ADJUST rheostat	<p>it is the only generator set that will be supplying power. This switch must be in the PARALLEL position to operate both sets together.</p> <p>This rheostat is used to increase or decrease voltage output of the generator set. Turn the knob to the right to increase voltage output; to the left to decrease. A locking ring behind the knob locks it in position after it is set. Voltage output is indicated on the VOLTS meter ④.</p>
②6	AC INTERRUPT switch	<p>This switch has positions OPEN and CLOSE with spring return to neutral. It is used to open and close the ac main contactor (and power distribution unit contactor) to place the generator set on- and off-line. Placing the switch to CLOSE will close the main contactor.</p>
②7	AC INTERRUPT indicator lamp	<p>The AC INTERRUPT amber indicator lamp will come on when the main contactor is closed. Placing the AC INTERRUPT switch 26 to OPEN will open the main contactor and take the generator off-line. The indicator lamp will go off when the main contactor opens. Push to test bulb; turn right to dim for blackout operation.</p>
②8	MASTER SWITCH	<p>This switch has positions OFF, RUN, and START. Momentarily placing the switch to START and releasing it to RUN will energize the start and run circuits.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">MASTER SWITCH is spring-returned to RUN from the START position.</p> <p>The engine will start automatically and stabilize at operating speed or at idle speed if preselected before a start. Placing the switch to OFF will shut down the generator set.</p>

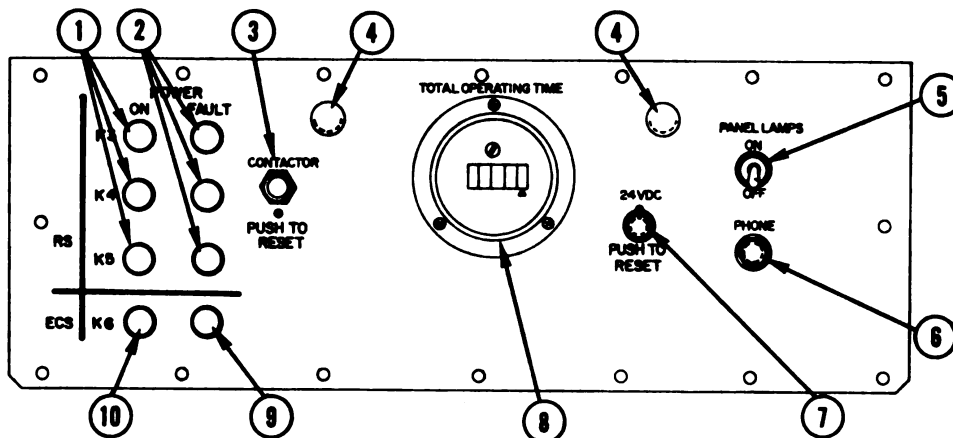


Figure 2-2. Power Distribution Unit Control Panel, Controls and Indicators

Table 2-2. Power Distribution Unit Control Panel, Controls and Indicators

Key	Controls or Indicators	Function
)	RS POWER ON K3, K4, and K5 indicators	Lamp comes on when current is flowing to the radar station (RS). This is a press-to-test lamp.
)	RS POWER FAULT K3, K4, and K5 indicators	Lamp comes on when power overload to the radar station (RS) is sensed and the appropriate overcurrent contactor (K3, K4, or K5) has tripped. This is a press-to-test lamp.
)	PUSH TO RESET CONTACTOR	This switch resets the contactors for radar station (RS) and engagement control station (ECS) POWER FAULT K3, K4, K5, or K6, when one or more of the lights indicates the contactor has been tripped due to an overload. The indicator lamp should go out when this switch is pushed.
)	Panel lamps	Two panel lamps light the panel; each lamp lights 180° at the bottom of the lamp shield. The two lamps are controlled by the PANEL LAMPS ON OFF toggle switch (5).

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Table 2-2. Power Distribution Unit Control Panel,
Controls and Indicators - Continued

Key	Controls or Indicators	Function
⑤	PANEL LAMPS ON OFF switch	This toggle switch, when in the ON position, provides power to two panel lamps ④.
⑥	PHONE jack	This is a telephone jack used for communications with the engagement control station (ECS).
⑦	24 VDC PUSH TO RESET circuit breaker	This is a push-to-reset circuit breaker that controls the 24-Vdc power throughout the Electric Power Plant II.
⑧	TOTAL OPERATING TIME meter	This meter shows the amount of time, in hours, that the generators were running and on-line.
⑨	ECS POWER FAULT, K6 indicator	Lamp comes on when a power overload to the engagement control station (ECS) is sensed and overcurrent contactor K6 has tripped. This is a press-to-test lamp.
⑩	ECS POWER ON, K6 indicator	Lamp comes on when current is flowing to the engagement control station (ECS). This is a press-to-test lamp.

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-3. GENERAL. To insure that the Electric Power Plant II is operational at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance checks and services are listed in table 2-3. Defects discovered during operation will be noted for future correction, to be made as soon as all operations have ceased. Notify the engagement control station (ECS) at once if a condition is noted which would damage the equipment if operation were continued. Those deficiencies and shortcomings discovered during before-operation service that cannot be corrected at your maintenance level will be reported to organizational maintenance level personnel prior to starting the power plant.

a. Before You Operate. Always keep in mind the CAUTIONS and WARNINGS. Perform your "Before" (B) preventive maintenance checks and services (PMCS).

b. While You Operate. Always keep in mind the CAUTIONS and WARNINGS. Perform your "During" (D) preventive maintenance checks and services (PMCS).

c. After You Operate. Always keep in mind CAUTIONS and WARNINGS. Perform your "After" (A) preventive maintenance checks and services (PMCS).

d. Perform weekly preventive maintenance checks and services (PMCS) on the truck (TM 9-2320-260-10) and generator sets (TM 5-6115-598-12) as well as before-operations preventive maintenance checks and services (PMCS) if:

(1) You are the assigned operator and have not operated the equipment since the last weekly preventive maintenance checks and services (PMCS) were performed, or,

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

e. If Your Equipment Fails To Operate. Troubleshoot with proper equipment. Report any deficiencies to organizational maintenance using the proper forms. See DA PAM 738-750.

2-4. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) PROCEDURES. The purpose of table 2-3 is to list those items and give the sequence of services required before, during, and after operation of the Electric Power Plant II. The table has five columns.

2-5. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) COLUMNAR ENTRIES.

a. The "Item Number" column is arranged in the order of occurrence of checks or services. This column shall be used as a source of item numbers for the "TM Number Column" on DA Form 2404, Equipment Inspection and Maintenance Worksheet, in recording results of preventive maintenance checks and services (PMCS).

b. The "Interval" column, headed "B," "D," and "A," shows when a service is required. A dot (•) in the "B" column indicates a service is required before operation. A dot (•) in the "D" column indicates a service is required during

Change 2 2-9

operation. A dot (●) in the "A" column indicates a service is required after operation. Dots (●) in the "B", "D", and "A" columns indicate the service is required before, during, and after operation.

c. The "Item to be inspected" column contains the name of the item to be inspected.

d. The "Procedures" column gives a brief description of the procedure to be performed to accomplish the checks or services indicated in the "Interval" column and the "Item to be inspected" column.

e. The "Equipment not ready/available if" column identifies the conditions that would make the equipment not ready/available, for readiness reporting purposes, and that would deny use of the equipment until corrective maintenance has been performed.

NOTE

Item numbers in table 2-3 are keyed to figure 2-3, pages 2-10 and 2-11.

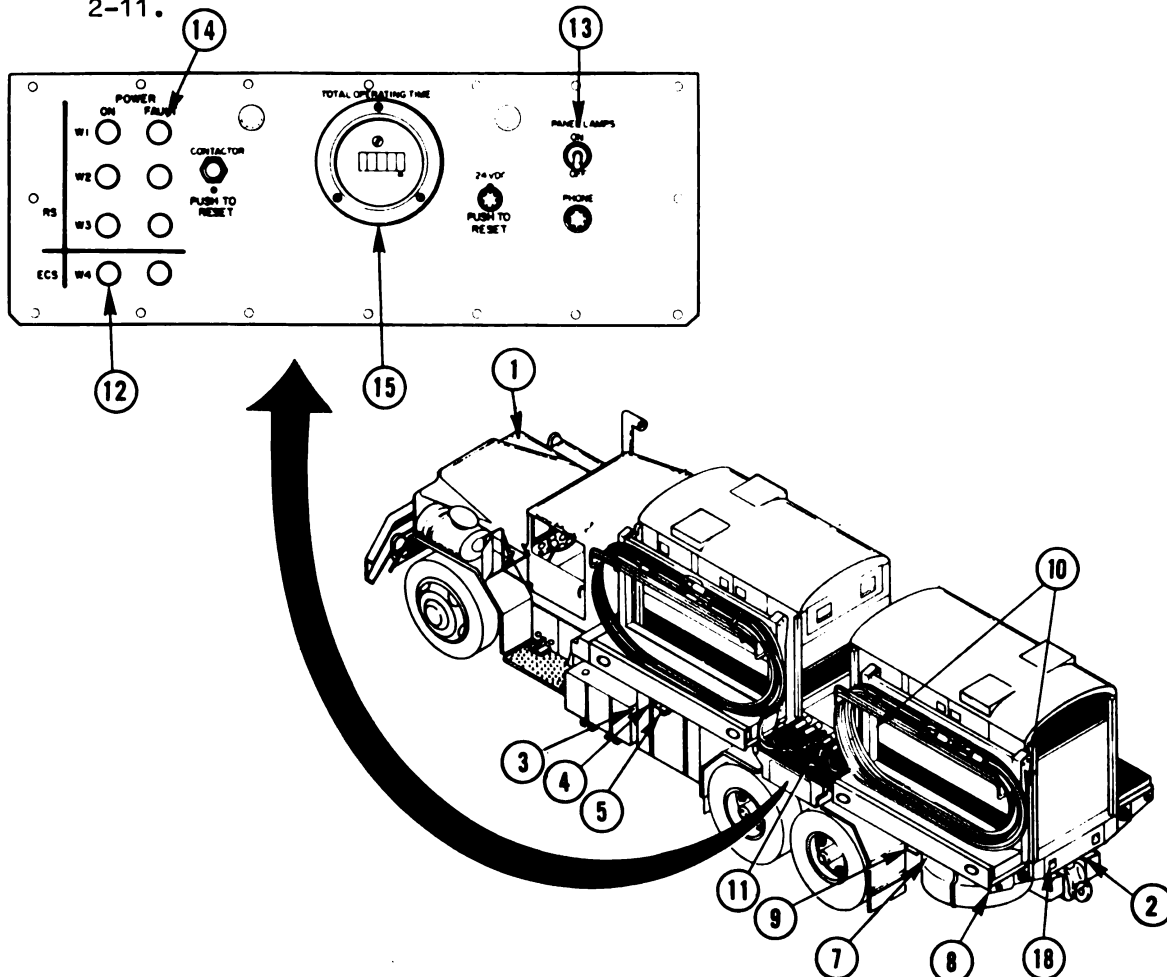
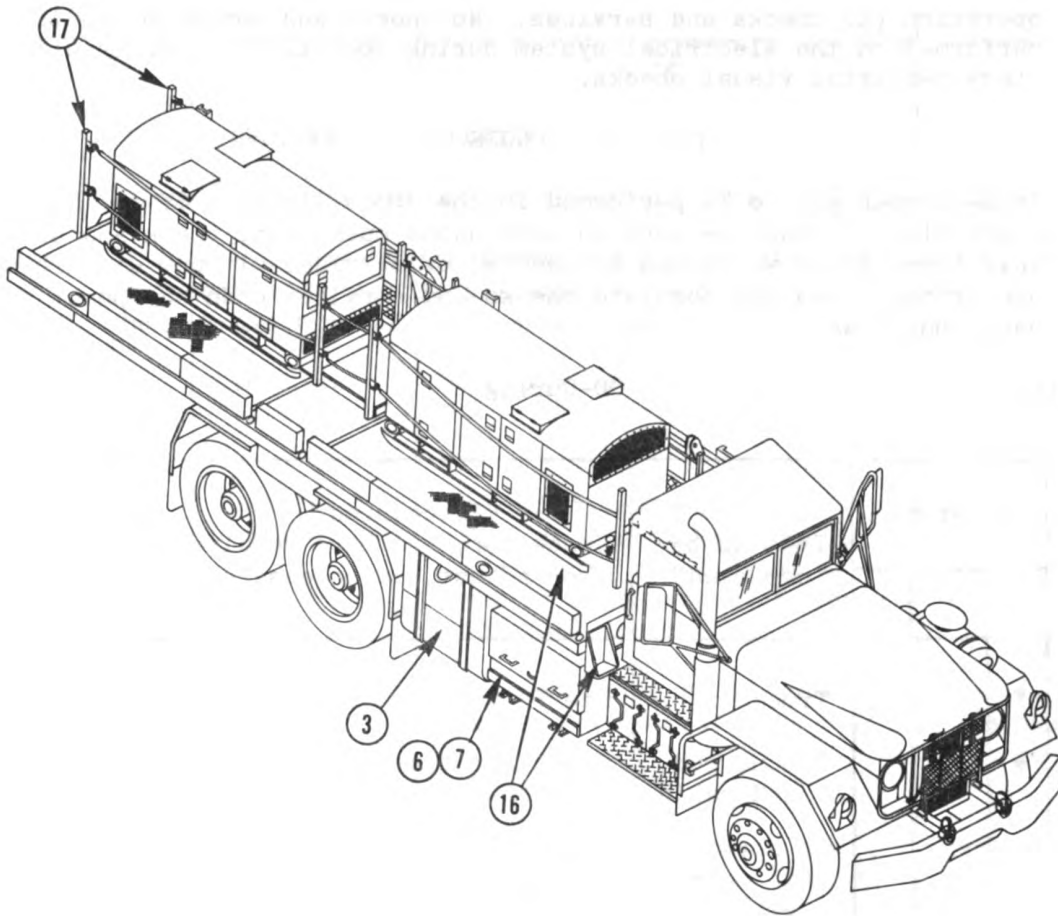


Figure 2-3. Preventive Maintenance Checks and Services Locator, Roadside (Sheet 1 of 2)



NOTE

Steps on M811 trucks only

Figure 2-3. Preventive Maintenance Checks and Services Locator, Curbside
(Sheet 2 of 2)

Change 4 2-11

Table 2-3. Preventive Maintenance Checks and Services

WARNING

Electric current is present in this equipment. Electric shock can cause severe injury or death. Make sure equipment is properly grounded before performing any maintenance on this equipment. Perform before-operation (B) checks and services before generator sets are started. Make sure the generators have been turned off before performing after-operation (A) checks and services. No checks and services are to be performed on the electrical system during operation, other than those items requiring visual checks.

NOTE

These checks are to be performed in the order listed. If the Electric Power Plant II must be kept in continuous operation, check and service only those items which can be checked or serviced without disturbing operation. Make the complete checks and services when equipment has been shut down.

B-Before

D-During

A-After

Item No.	Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary:	Equipment not ready/available if:
	B	D	A			
①	•			Truck	See TM 9-2320-260-10.	
②	•			Ground rod and cable	Check for missing or broken sections, damaged threads, or damaged cable. Make sure connections are tight (see page 2-20).	Components are damaged, loose, or missing.
<u>WARNING</u>						
Fuel is flammable. Use extreme caution when working around fuel. Bodily injury may occur.						
③	•			Fuel system tanks	Check for dents, leaks, and loose connections.	Class II leakage present.

2-12 Change 4

Table 2-3. Preventive Maintenance Checks and Services - Continued

Item No.	Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary:	Equipment not ready/ available if:
	B	D	A			
					NOTE	
					Class I leak - Seepage not enough to form drops.	
					Class II leak - Leakage which forms drops but not enough to drip.	
					Class III leak - Leakage which forms drops that fall from the equipment. Equipment operation is allowable with a class I or class II leak. When in doubt notify your supervisor.	
④	•			Lines and fittings	Check for leaks or breaks.	Class III leakage present.
⑤	•	•	•	Fuel level gages	Check that gages indicate fuel in the tanks. During operation, check gages to see if gages are registering fuel levels.	
⑥	•			Ball valve	Check the valve to be sure it opens and closes. Set to the open position before operation.	Class III leakage present.
⑦			•	Fuel filter/ water separator	Check for dents, leaks, and loose connections. Thirty minutes after shutdown, open drain on bottom of each filter and drain off water (see paragraph 3-1). Close drain tightly before operation. Fuel filter element must be changed every 600 hours of operation. Notify organizational maintenance to change filter element when log book shows this time has been reached.	Class III leakage present.

Table 2-3. Preventive Maintenance Checks and Services - Continued

Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary	Equipment not ready/available if:
B	D	A			
•		•	Check rack	Check that pivot pin moves freely and that spring is not broken or missing. If pivot pins bind, lubricate using solid film lubricant MIL-L-46147. <u>WARNING</u>	
		•	Cable rack	Make sure that locking pins have been installed and are secured	
•		•	Cable rack latch handle	Check for loose, damaged, or missing hardware. Make sure parts move freely. If lock assembly binds, lubricate using solid-film lubricant, MIL-L-46147.	
•			Cable rack springs	Check to make sure that both cable rack springs are in place and undamaged.	
•		•	Power and control cables	Check the entire lengths for broken insulation and connectors for damage.	Insulation worn or broken with bare wire exposed. Connectors broken.
		•	POWER ON lamps K3, K4, K5, and K6	With generator set running and on-line, check that lamps light when indicator lens assembly is pushed to test.	
		•	PANEL LAMPS ON OFF Switch	With generator set running and on-line, turn the PANEL LAMPS switch to ON and OFF to see if lights and switch are working.	
		•	POWER FAULT lamps K3, K4, K5, and K6	With generator set running and on-line, check that lamps light when indicator lens assembly is pushed to test.	

e racks can snap up with great force and cause personal injury. Carefully around racks; stand completely clear when possible.

Table 2-3. Preventive Maintenance Checks and Services - Continued

Item No.	Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary:	Equipment not ready/ available if:
	B	D	A			
15		•		TOTAL OPERATING TIME meter	With generator set running and on-line, check that operation indicator is turning.	
16	•			Steps and walkways	Check that steps on roadside move properly to allow access to truck fuel tank. If hinge or spring-plunger does not move freely, lubricate using solid-film lubricant, MIL-L-46147. Check walkways for broken welds.	
17	•			Stanchions	Check for broken or missing stanchions and chains. If stanchions are difficult to remove from holders, lubricate spring-plunger and stanchion holders using solid-film lubricant, MIL-L-46147.	
18			•	Rear storage compartment	Make sure ground rod is stored and storage compartment door is securely latched and locked.	
NOTE						
Item 19 through 31 pertain to the 150 kW generator sets. See TM. 5-6115-598-12 for maintenance instructions as necessary.						
19	•	•		Air inlet screen and louvers (LH and RH)	Inspect for wind-blown debris blocking airflow. Remove debris.	Air flow is blocked.
<u>WARNING</u>						
Toxic solvent is used for general cleaning of the generator set. Illness or skin damage may be caused by prolonged breathing of solvent fumes or excessive skin contact with the liquid. Avoid open flame or sparks while using flammable solvent.						
•					Inspect for heavy dirt and dust contamination. Clean with approved cleaning solvent and rags.	

Table 2-3. Preventive Maintenance Checks and Services - Continued

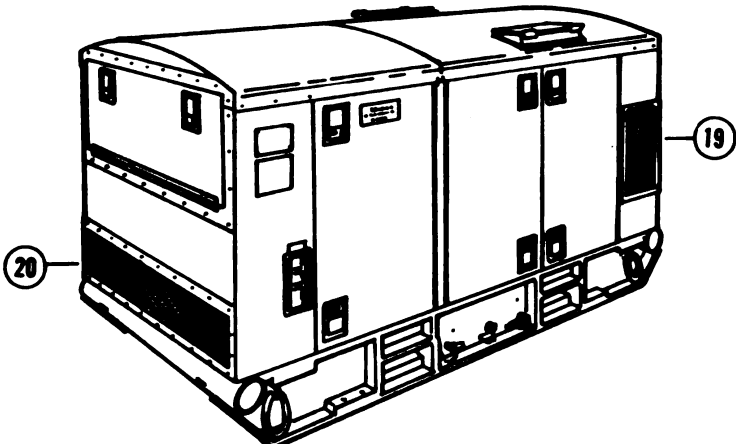
Item No.	Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary:	Equipment not ready/available if:
	B	D	A			
						
				<p>NOTE</p> <p>It may become necessary to clean air inlet screen more often if the generator set is being operated in dusty, dirty, or salty areas.</p> <p style="text-align: center;"><u>WARNING</u></p> <p>Solvent is toxic. Insure there is adequate ventilation. Avoid open flame or spark while using.</p>		
(20)	•	•		Rear air inlet screen	Inspect for wind-blown debris, heavy dirt and dust contamination. Remove debris or clean with approved cleaning solvent and rags.	Airflow is blocked.
	•	•			Inspect for damage or missing components. Notify next higher level of maintenance.	
(21)	•		•	Fuel, air, and oil lines and fittings	Inspect for leaks, seeps, and damage lines or fittings. Notify next higher level of maintenance.	Fuel, air, or oil leaking.

Table 2-3. Preventive Maintenance Checks and Services - Continued

Item No.	Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary:	Equipment not ready/available if:
	B	D	A			
NOTE						
Always allow a minimum of 5 minutes after shutdown before checking the oil. This is to allow oil to drain down.						
22	•		•	Oil level gage	Check for proper oil levels. Notify next higher level maintenance.	Oil level is at or below ADD mark.
23	•	•	•	Hourmeter	Inspect for broken glass or damaged components. See that readout is advancing during operation.	Hourmeter is not advancing.
24	•		•	Fuel tank (day tank)	Inspect for corrosion, cracks, breaks, leakage, or any other damage, notify next higher level of maintenance.	Fuel is leaking.
25	•		•	Fuel transfer and mechanical fuel pumps	Inspect for oil or fuel leaks indicated by oil or fuel under pumps or seal drain tube in bottom of engine compartment. Notify next higher level or maintenance..	Fuel or oil is leaking.
26	•			Primary and both secondary fuel filters	Using a suitable container to catch fuel, open drain cock on primary canister and catch any drainage. Inspect drainage for dirt or contamination.	Fuel is dirty or contaminated.
	•		•		Inspect all filters for leakage, seepage, or damaged canister, notify next higher level of maintenance.	Fuel is leaking.

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Table 2-3. Preventive Maintenance Checks and Services - Continued

Item No.	Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary:	Equipment not ready/available if:
	B	D	A			
(27)	•		•	Oil filter	Inspect for leaks, seeps, loose items, or damage to housing or canister, notify next higher level of maintenance.	Oil is leaking.
(28)	•			Battery cables	Inspect for cracked insulation, broken terminals, loose, damaged, or missing components. Notify next higher level of maintenance.	Terminals are loose, corroded, or broken.

Table 2-3. Preventive Maintenance Checks and Services - Continued

Item No.	Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary:	Equipment not ready/available if:
	B	D	A			
<p><u>WARNING</u></p> <p>Battery electrolyte must be handled with care to avoid acid burns from spillage. Do not add electrolyte to a battery that has been previously filled. Use care not to splash electrolyte on skin when checking liquid level. Always use gloves and an apron to avoid burns when handling electrolyte. If electrolyte contacts skin or clothes, wash immediately. If electrolyte gets in eyes, flush with water immediately and seek medical attention.</p>						
29	•			Batteries	<p>Inspect for cracked or leaking case, broken, loose, or bent posts, damaged hold-down clamps or studs, or missing battery caps. Notify next higher level of maintenance.</p> <p>Inspect for proper fluid level, add distilled water as needed to fill battery to bottom of fill neck.</p> <p>Check that battery tops are clean and dry. Wipe with a rag, then dispose of rag.</p>	Battery is damaged.
30	•			AC wiring harness	<p>Inspect for breaks, loose, or broken connections and terminals, also for frayed or burned areas. Notify next higher level of maintenance.</p> <p style="text-align: center;"><u>WARNING</u></p> <p>Battery voltage may result in shock and flash burns. Be sure to not make any contact with slave cables while draining the filter,</p>	Wiring is damaged or loose connections.
31	•		•	Primary fuel filter (catch and drain)	<p>Inspect for leakage, seepage, or damaged cannister. Notify next higher level of maintenance.</p>	Fuel is leaking.

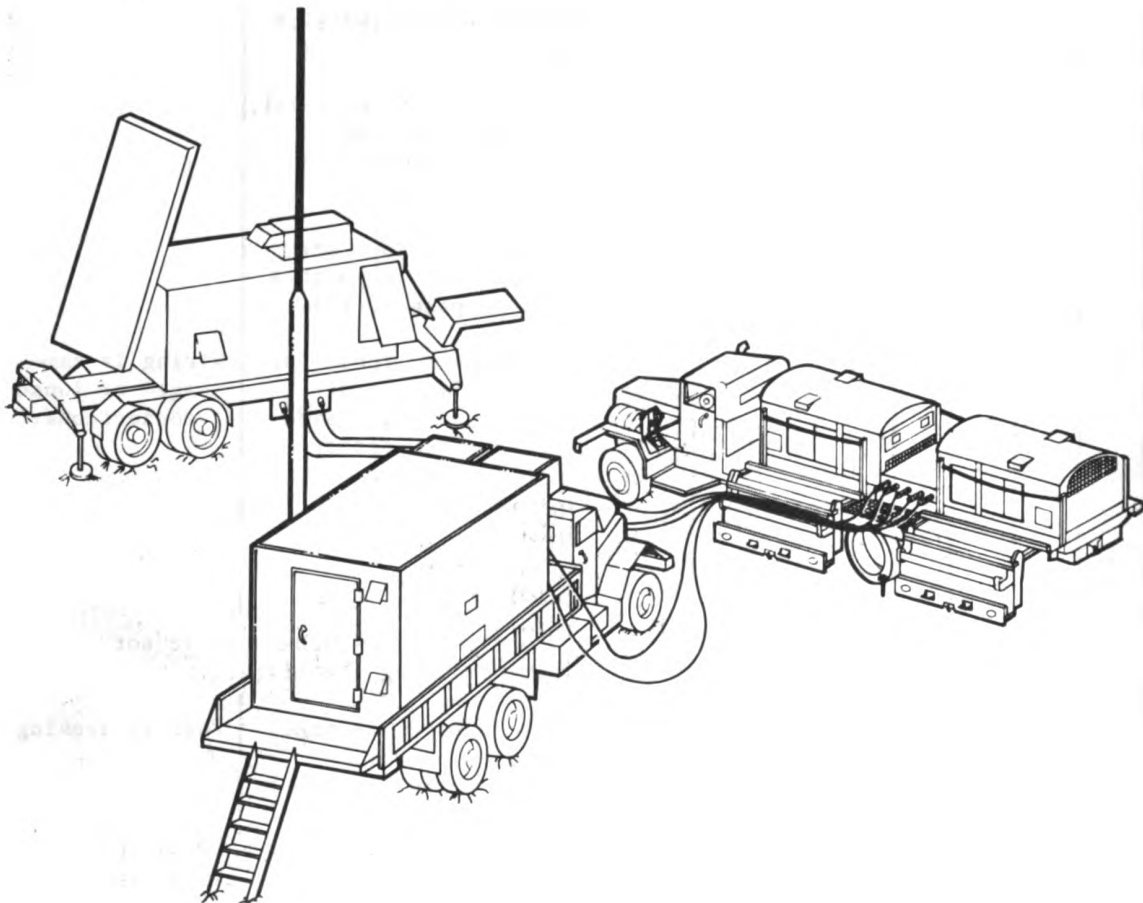
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Table 2-3. Preventive Maintenance Checks and Services - Continued

Item No.	Interval			Item to be inspected	Procedures Check for, and have repaired or adjust, as necessary:	Equipment not ready/ available if:
	B	D	A			
	•		•		Using a suitable container and rags, open drain cock and catch any drainage from the canister.	

Section III. OPERATION UNDER USUAL CONDITIONS

2-6. PREPARATION FOR OPERATION



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2-6. PREPARATION FOR OPERATION - Continued

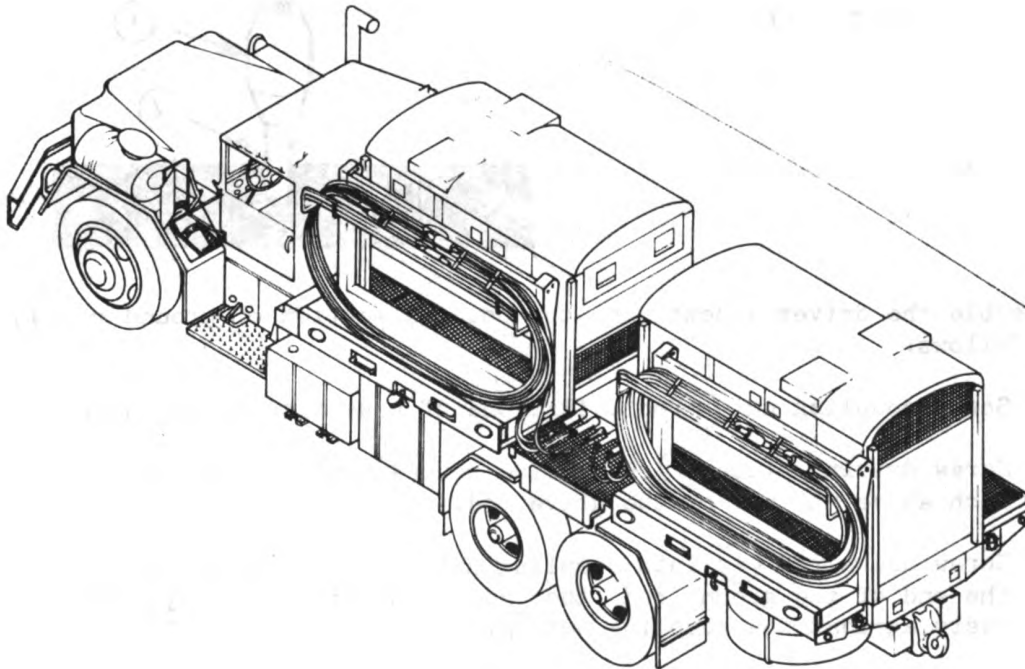
WARNING

Hot exhaust can cause fires. Park the truck with generator exhaust away from trees or brush.

a. Park the truck at the site of operation. The site should be as level as possible. The truck should not tilt more than 10 degrees in any direction. Park within 52 feet (16 meters) of the radar station (RS) and the engagement control station (ECS). Make sure no trees or bushes are near the generator exhaust - hot exhaust can start a fire.

CAUTION

Insure that truck is parked within the 52-foot limit before cables are removed from racks. Do not move the truck after cables have been connected to the RS or ECS vans.

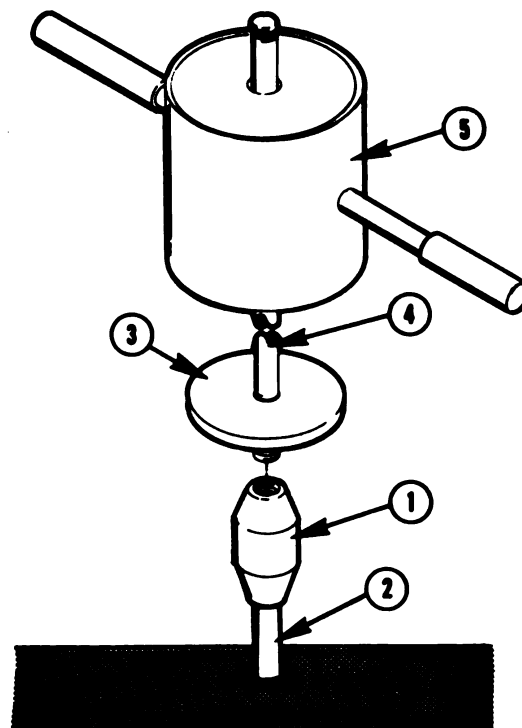
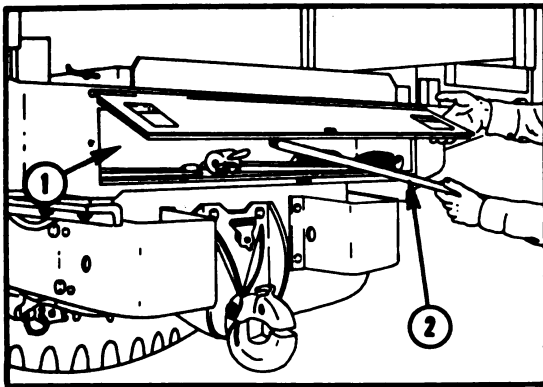


2-6. PREPARATION FOR OPERATION - Continued

CAUTION

If the ground is too hard to drive the grounding rod the equipment still must be properly grounded. Refer to FM 20-31, Electric Power Generation in the Field, for alternative grounding.

- b. Ground the Electric Power Plant II. Unlock the rear storage compartment ① and remove the pieces of the ground rod ②. Prepare to drive the rod into the ground near the roadside rear wheels, out of the way of the cable racks and control panel.

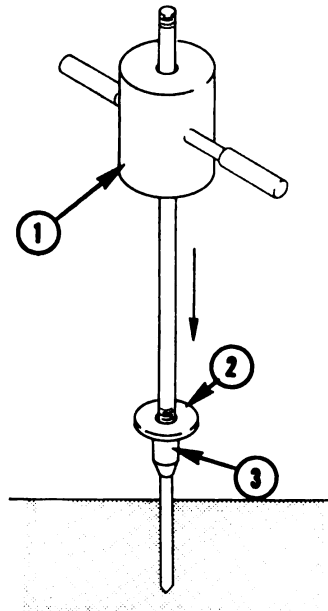


Assemble the driver assembly on the pointed section of ground rod ④ as follows:

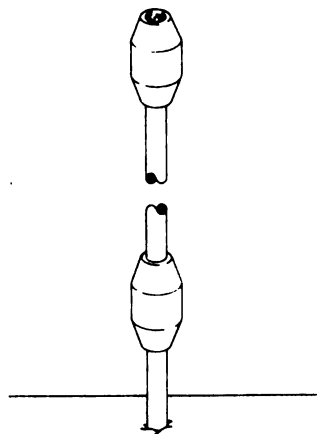
- (1) Screw coupling nut ① onto flat end of a section of ground rod ②.
- (2) Screw driving plate ③ onto drive rod ④ until it is about one inch above the end of the drive rod.
- (3) Screw drive rod ④ into coupling nut ① until it is flat against the end of the ground rod, then adjust driving plate ③ until it rests against the coupling nut ①.
- (4) Slide driver ⑤ onto drive rod ④.

2-6. PREPARATION FOR OPERATION - Continued

- c. Drive rod into ground by slamming driver (1) down on drive plate (2). Drive rod in until only about 6 inches (15 centimeters) are above ground.



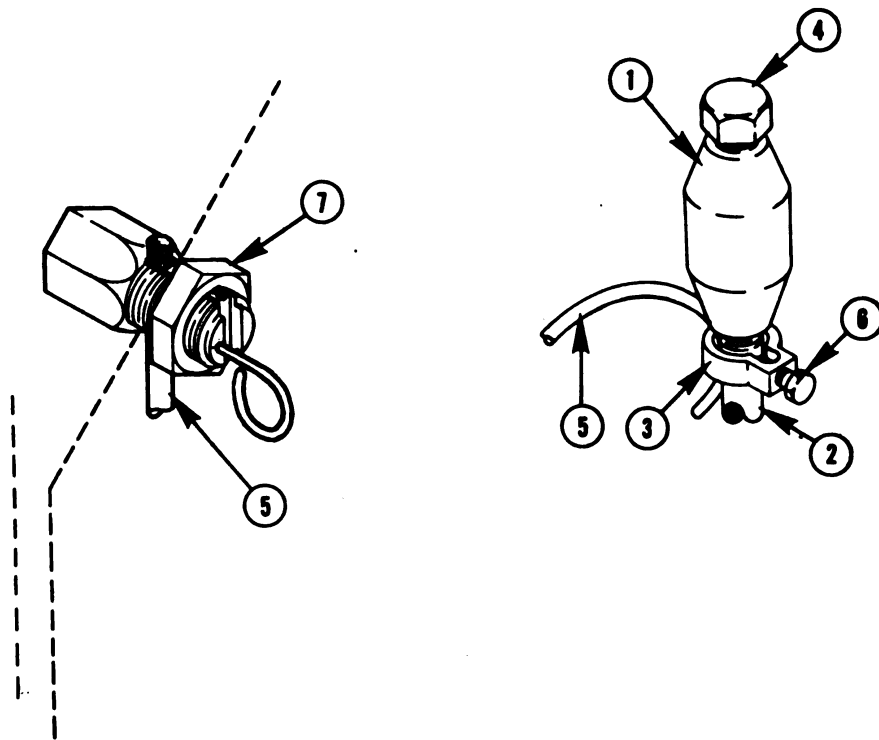
- d. Unscrew driver and rod (1) from the coupling nut (3). Screw next section of ground rod into the coupling nut. Screw another coupling nut (3) onto the top of the rod. Screw driver and rod (1) into new coupling nut (3).
- e. Drive rod into earth until about 6 inches (15 centimeters) are above the surface.
- f. Repeat procedure for third section of ground rod then remove the driver assembly and store it in the rear storage compartment.



2-6. PREPARATION FOR OPERATION - Continued

g. Attach the grounding cable as follows:

- (1) Remove coupling nut (1) from top section of ground rod (2).
- (2) Slide ground rod clamp (3) onto ground rod (2).
- (3) Screw coupling nut (1) back onto ground rod (2), then screw driving stud (4) into coupling nut (1).
- (4) Insert grounding cable (5) between ground rod (2) and ground rod clamp (3) and secure in place by tightening nut (6) using an adjustable wrench.
- (5) Insert other end of grounding cable (5) through hole in chassis grounding stud (7). Clamp wire into place by tightening nut with adjustable wrench.

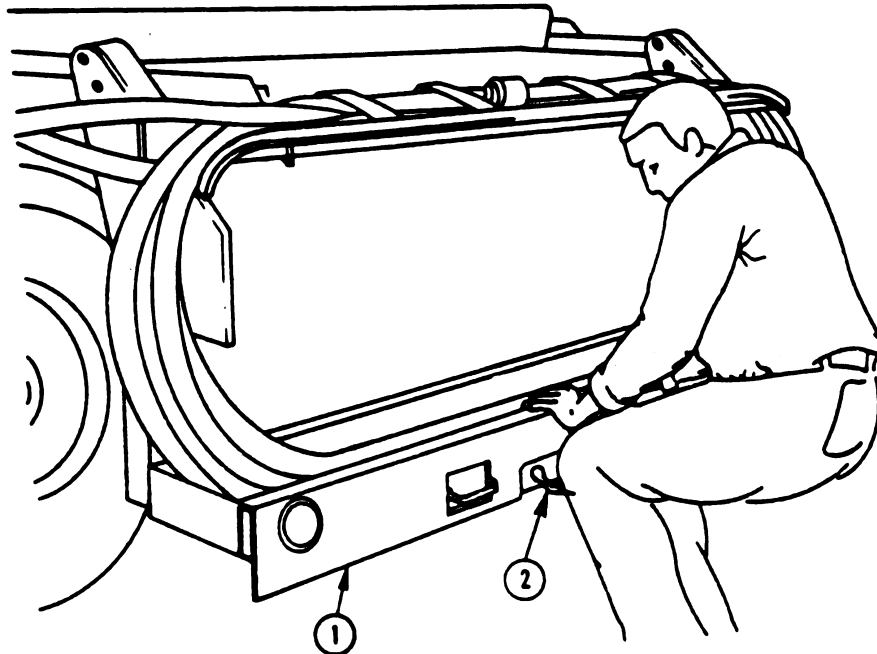


2-6. PREPARATION FOR OPERATION - Continued

WARNING

The cable racks are balanced by springs which can cause the racks to snap up if not secured. Make sure the racks are locked securely in place before and after lowering.

- h. Lower cable racks ①. Remove cable rack locking pins from both ends of cable rack assy. Grasp the handle ② in the center of the cable rack. Turn handle down to release latches, then guide rack down until it locks.

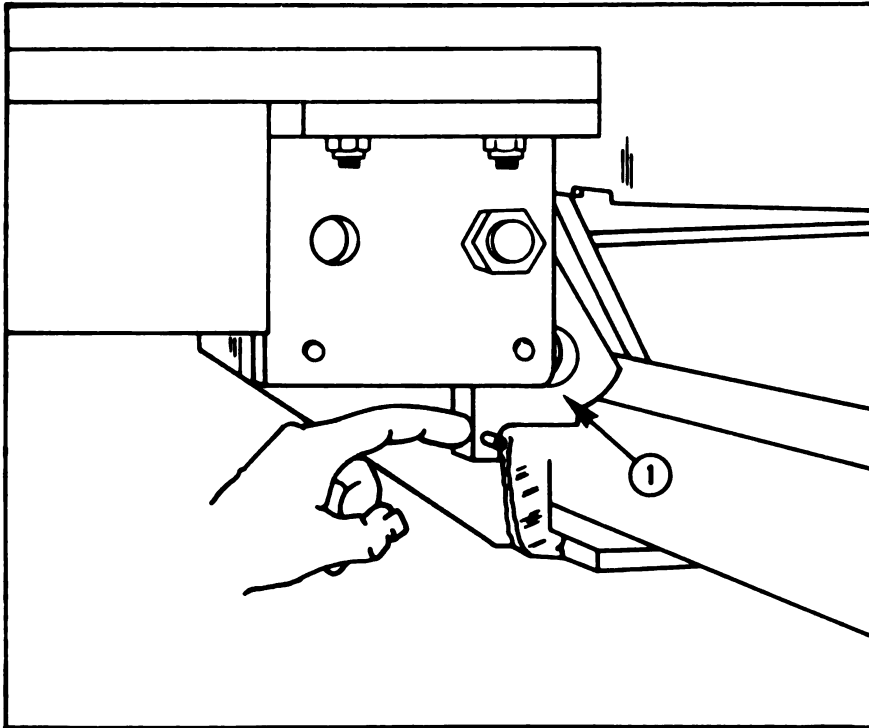
**CAUTION**

Insure that truck is parked within the 52-foot limit before cables are removed from racks. Do not move the truck after cables have been connected to the RS or ECS vans.

Change 4 2-21

2-6. PREPARATION FOR OPERATION - Continued

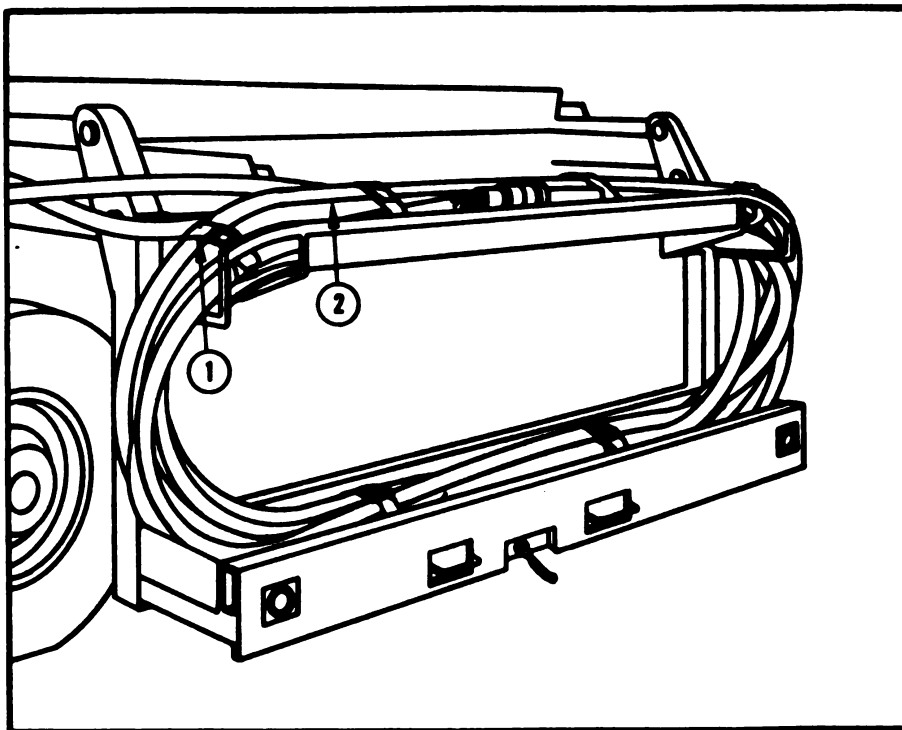
- i. Check to make sure the latches (1) on the sides of the cable rack are locking the rack in place.



- j. Lower the second cable rack the same way as the first one.

-6. PREPARATION FOR OPERATION - Continued

- k. Remove cables. Release the cable straps (1) holding cables (2) on the rack. Unwind cables from racks and lay them on the ground.
- l. Remove cables from other rack the same way.



CAUTION

- Do not attempt to emplace power cables by operating a moving vehicle. Any procedure using a vehicle to stretch out (emplace) the power cable is not good practice and can only result in power cable failure.
 - Dragging the cable connectors across the ground can damage the connectors and cause shorts, fires, and system failure. Move the cables with the connectors off the ground. Don't drag them.
- m. Move cables W1, W2, and W3 to radar station (RS).

2-6. PREPARATION FOR OPERATION - Continued

- n. Unscrew the covers from the cable connectors and connect cables as follows to the radar station (RS):

W1 to J1
W2 to J2
W3 to J3

NOTE

Make sure the connectors are tight. This insures that power interlocks will be operational.

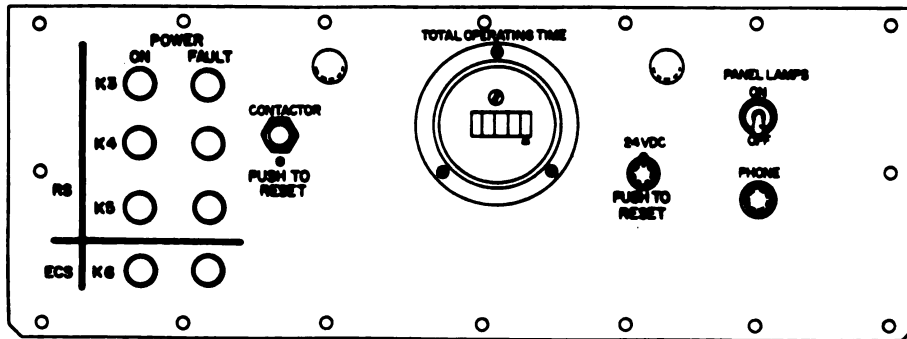
- o. Move power cable W4 and control cable W5 to the engagement control station (ECS).
- p. Unscrew the covers from the cable connectors and connect cables as follows to the engagement control station (ECS):

W4 to J1
W5 to J3

NOTE

Make sure the connectors are tight. This insures that power interlocks will be operational.

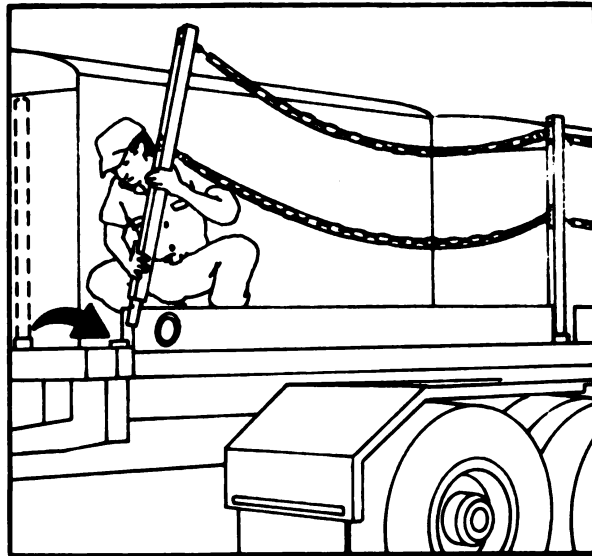
- q. Expose PDU control panel. Pull the latches on the PDU control panel access door and lower the door.
- r. Check circuit breakers. If 24 VDC or CONTACTOR circuit breaker has opened, push in to reset.



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2-6. PREPARATION FOR OPERATION - Continued

- s. Set up stanchions. Pull eight stanchions from walkway storage places, and push them into their mounting holes on edges of platforms. If stanchions are difficult to remove, lubricate stanchion holders and spring-plungers using solid-film lubricant, MIL-L-46147.



NOTE

Be sure you have performed before-operations preventive maintenance checks and services (PMCS) on the generator sets before continuing. See TM 5-6115-598-12.

t. Generator startup

- (1) Unlatch and open control cabinet outer door at rear of set.

WARNING

Do not operate generator set unless ground terminal stud is connected to a suitable ground. Electrical fault in generator sets, load lines, or load equipment can cause severe injury or electrocution from contact with ungrounded system.

2-6. PREPARATION FOR OPERATION - Continued

CAUTION

Before operating the generator set, check the voltage and frequency requirements of the load against the voltage and frequency ratings of the generator set. If the voltage and frequency requirements do not match the generator set ratings, DO NOT attempt to operate the generator set.

NOTE

A generator set operating instructions plate is attached to the inside surface of the control cabinet outer door.

- (2) If control panel lighting is needed, place PANEL LIGHTS switch in ON position. The three panel lights should come on.

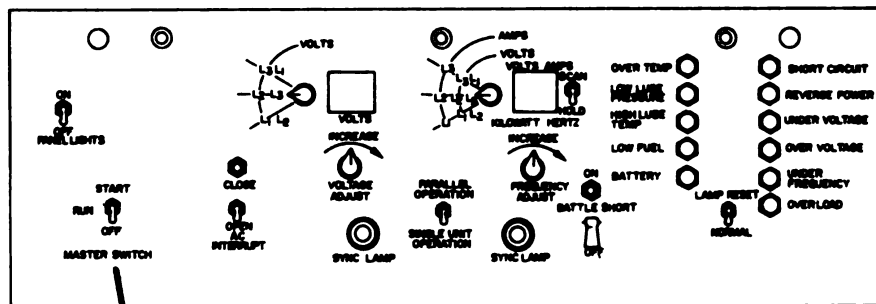
NOTE

All other control panel switches should be in down position except AC INTERRUPT switch which is spring loaded to center (neutral) position. All control panel indicator lamps must be off.

CAUTION

Make sure Fuel Filter/Water Separator is installed before Electric Power Plant is started. Failure to observe this caution can cause damage to turbine engine fuel system components.

- (3) Hold MASTER SWITCH to START (up) position. When engine starts cranking, release switch to RUN (center) position. Engine will start, accelerate, and stabilize at operating speed automatically.



2-6. PREPARATION FOR OPERATION - Continued

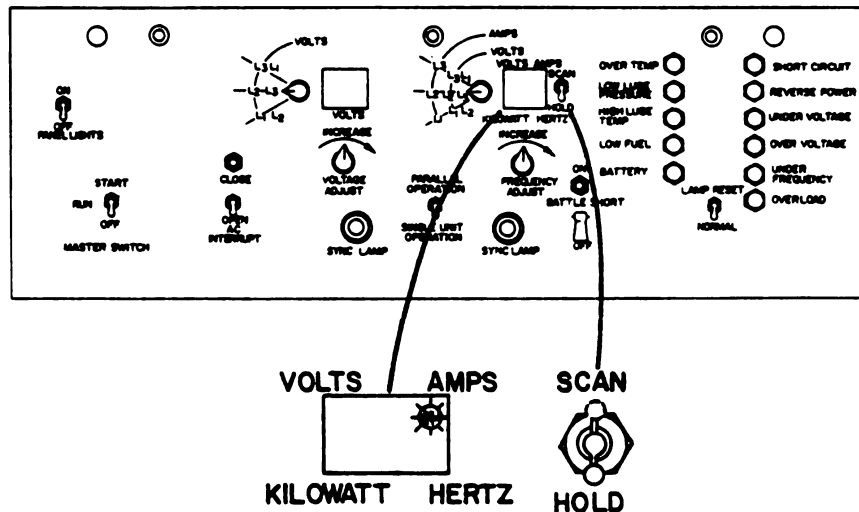
NOTE

Engine starting is fully automatic. MASTER SWITCH must be placed to OFF (down) position (see step (5)) before attempting to start the engine again. Light-off should occur within 2 seconds after starter engages. Engine will accelerate and starter will cut off at about 50 percent gasifier rotor (N1) speed. Engine will continue to accelerate and pause at about 70 percent N1 speed until gasifier (N1) and power turbine (N2) rotors reach same speed. Power transfer clutch lockup occurs and the engine and generator continue to accelerate and stabilize at operating speed.

- (4) After stabilizing for 10 seconds, check all press-to-test indicator lamps. Replace bulb if lamp does not come on.
- (5) If engine automatic shutdown occurs, leave MASTER SWITCH on RUN. Observe and note any faults, then place MASTER SWITCH to OFF.

u. Single Unit Operation

- (1) Place SCAN-HOLD switch to SCAN (up) position. When HERTZ lamp in frequency meter comes on, return switch to HOLD (down) position.

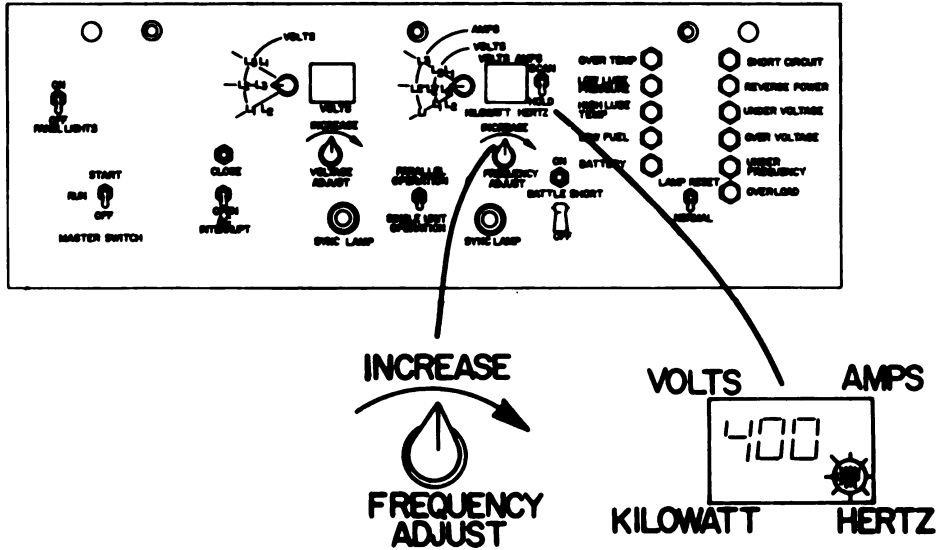


2-6. PREPARATION FOR OPERATION - Continued

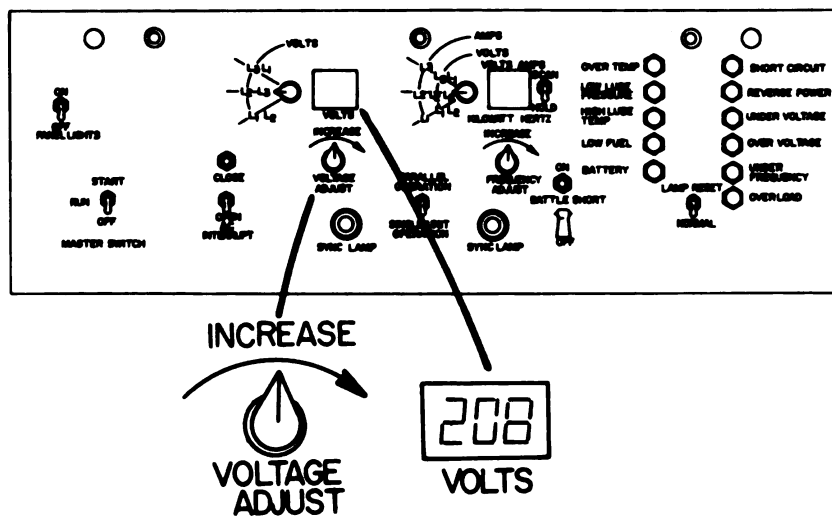
- (2) Read hertz on meter. Adjust FREQUENCY ADJUST rheostat to meet load frequency requirements of 400 hertz (turn knob right to increase, left to decrease).

NOTE

Fluctuation of ± 5 hertz is normal.

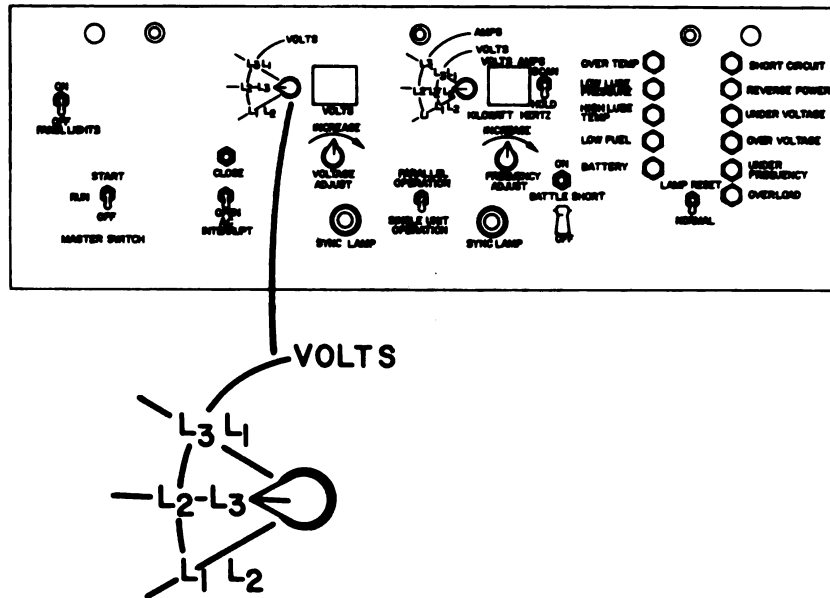


- (3) Read voltage on VOLTS meter. Adjust VOLTAGE ADJUST rheostat to meet load voltage requirements of 208 volts. Turn knob right to increase, left to decrease.

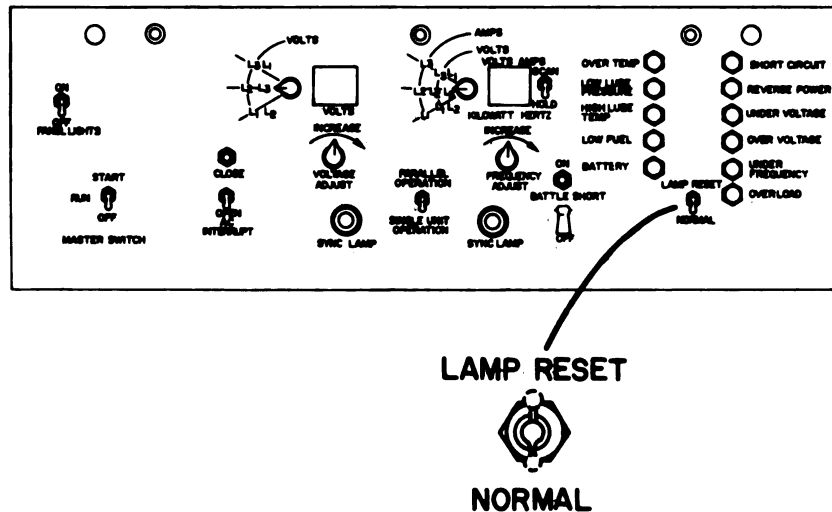


2-6. PREPARATION FOR OPERATION - Continued

- (4) Rotate phase select knob adjacent to VOLTS meter through all three positions L3-L1, L2-L3, and L1-L2. Read voltage on VOLTS meter at all three positions. Readings should be equal within ± 2 volts on all three phases.

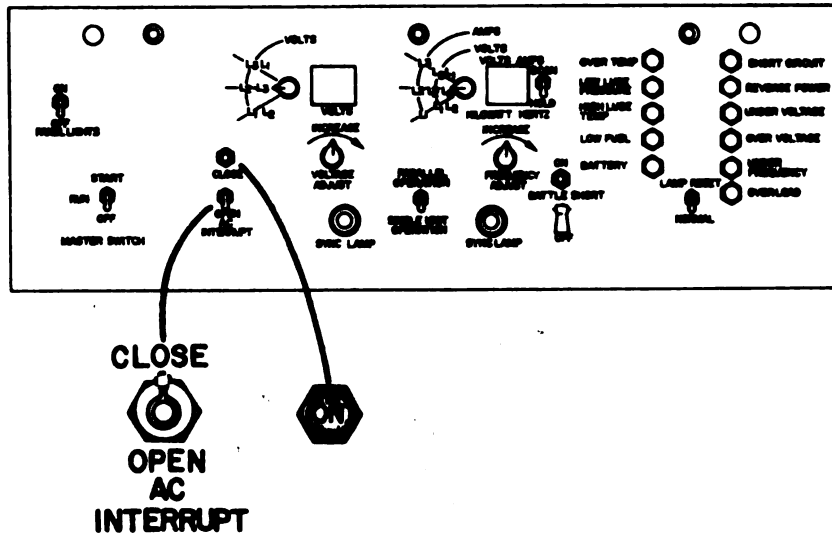


- (5) If any fault indicator lamps are on or come on during operation, place LAMP RESET switch to LAMP RESET (up) and release to NORMAL (down). If any lamp comes on after reset, correct fault before proceeding. Refer to TM 5-6115-598-12.

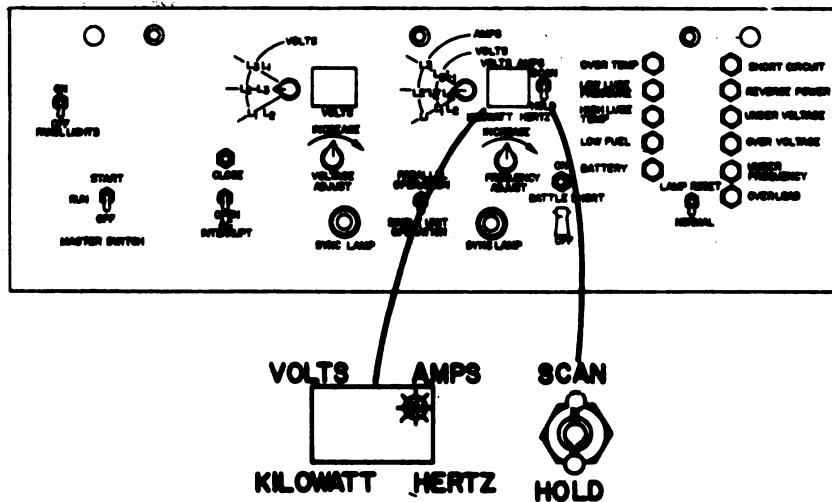


2-6. PREPARATION FOR OPERATION - Continued

- (6) Close ac main contactors by momentarily holding AC INTERRUPT switch to CLOSE (up) until AC INTERRUPT lamp comes on; then release switch.



- (7) Place SCAN-HOLD switch to SCAN (up). When AMPS lamp in meter comes on, return switch to HOLD (down) position. Any electrical load on generator should cause AMPS reading on the meter.

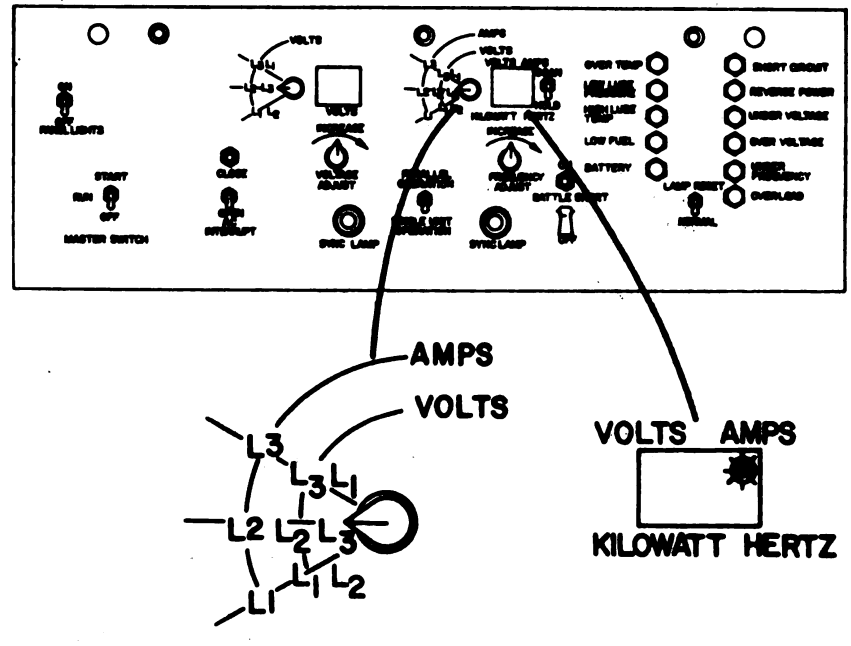


2-6. PREPARATION FOR OPERATION - Continued

CAUTION

A serious load unbalance exists if the following limit is exceeded which will cause serious damage to the equipment if not corrected. Shut down and notify the next higher level of maintenance.

- (8) Rotate phase select switch next to the meter through all three positions (L3-L3-L1, L2-L2-L3, and L1-L1-L2). Read AMPS on meter at all three positions. Differential between lowest and highest readings should not exceed 75 amp.



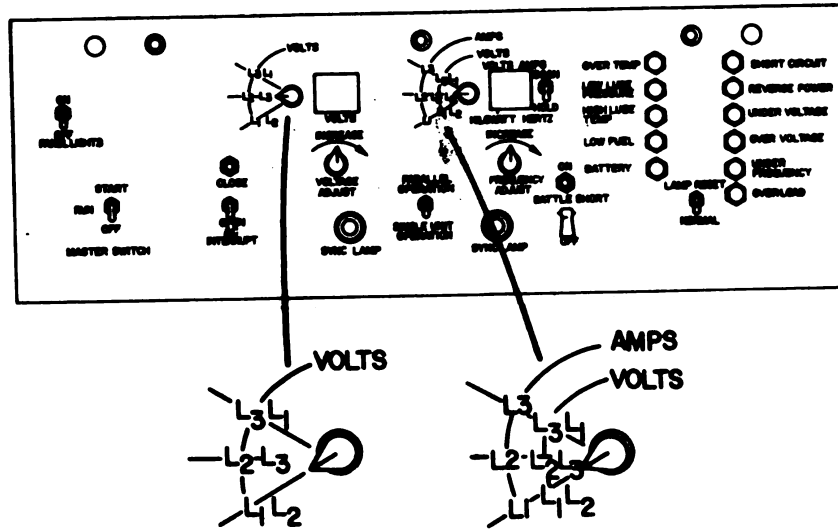
v. Parallel Operation

- (1) Start generator set to be paralleled. (Refer to Starting Procedures, para 2-6t.)

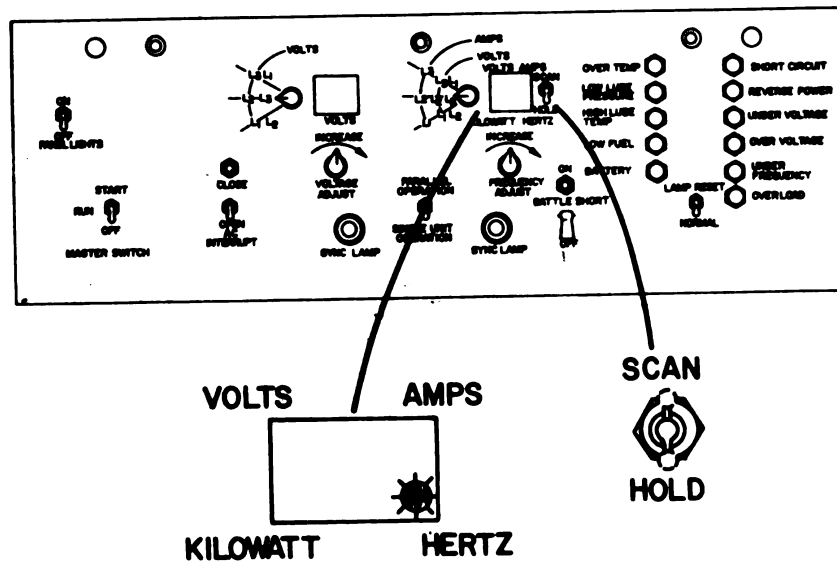
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2-6. PREPARATION FOR OPERATION - Continued

(2) Place both phase select switches on both generator sets to phase L1-L2.

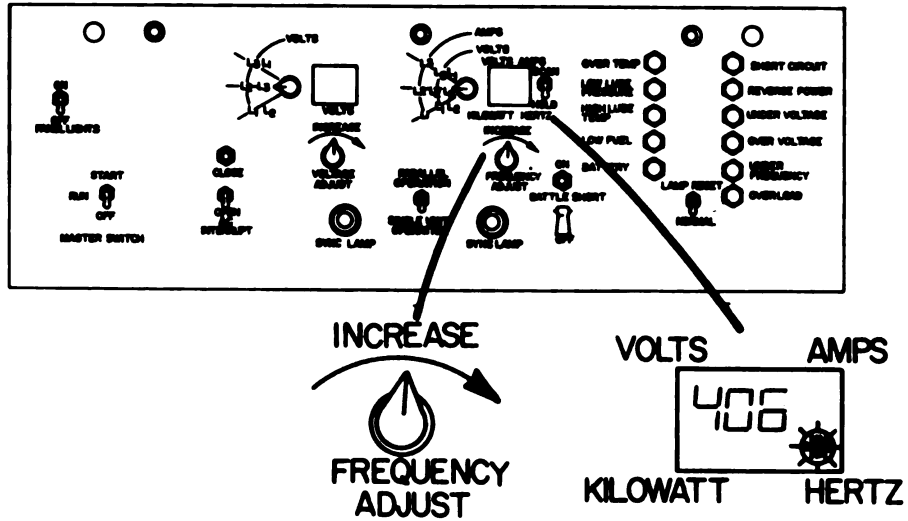


(3) Place SCAN-HOLD switch to SCAN (up) until HERTZ lamp in meter comes on; then return switch to HOLD (down).

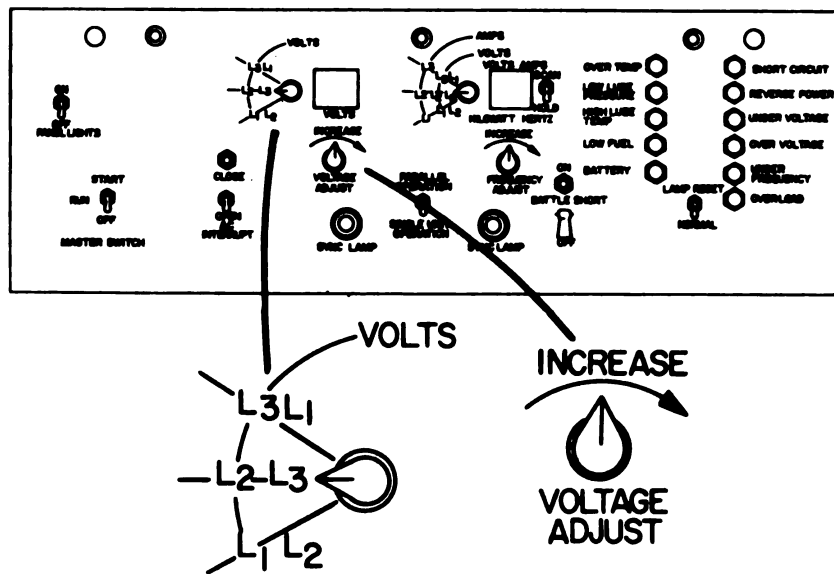


2-6. PREPARATION FOR OPERATION - Continued

- (4) Read frequency on meter. Adjust FREQUENCY ADJUST rheostat so that generator set runs about 6 hertz higher than set that is on-line.

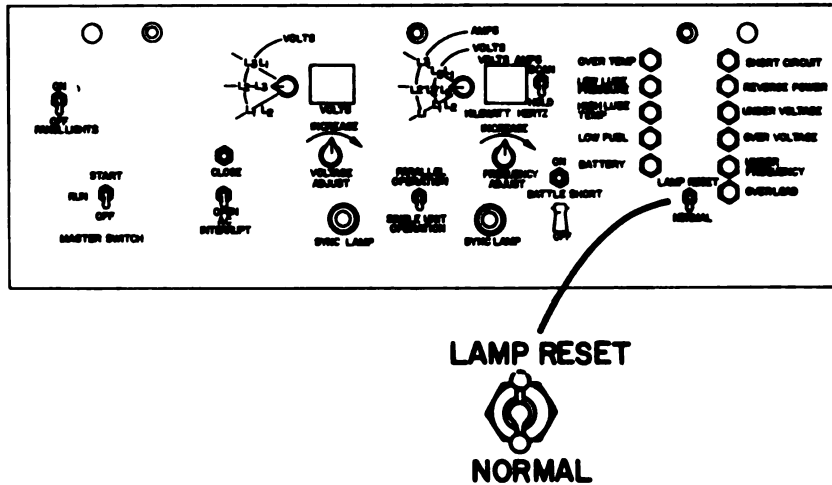


- (5) Rotate phase select knob adjacent to VOLTS meter through all three positions (L3-L1, L2-L3, and L1-L2). Read volts and adjust VOLTAGE ADJUST rheostat at all three positions to 2 volts higher than the operating generator set. Turn knob right to increase; left to decrease. Voltages on all three phases should be equal within ± 2 volts.

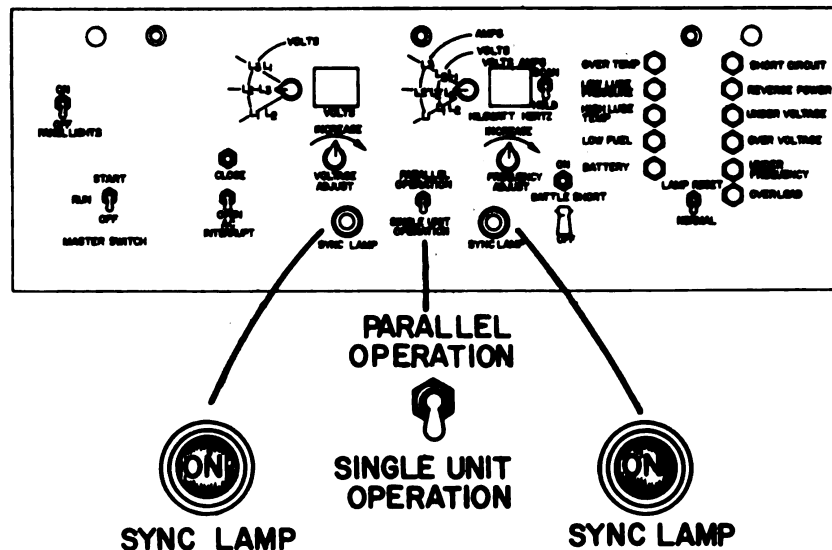


2-6. PREPARATION FOR OPERATION - Continued

- (6) If any fault indicator lamps are on, place LAMP RESET switch to RESET (up) and release to NORMAL (down). If any lamp comes on after reset, notify the next higher level of maintenance for repair before proceeding.



- (7) Place PARALLEL-SINGLE UNIT OPERATION switch on both generator sets to PARALLEL OPERATION (up). SYNC LAMPS should flash on and off together.



2-6. PREPARATION FOR OPERATION - Continued

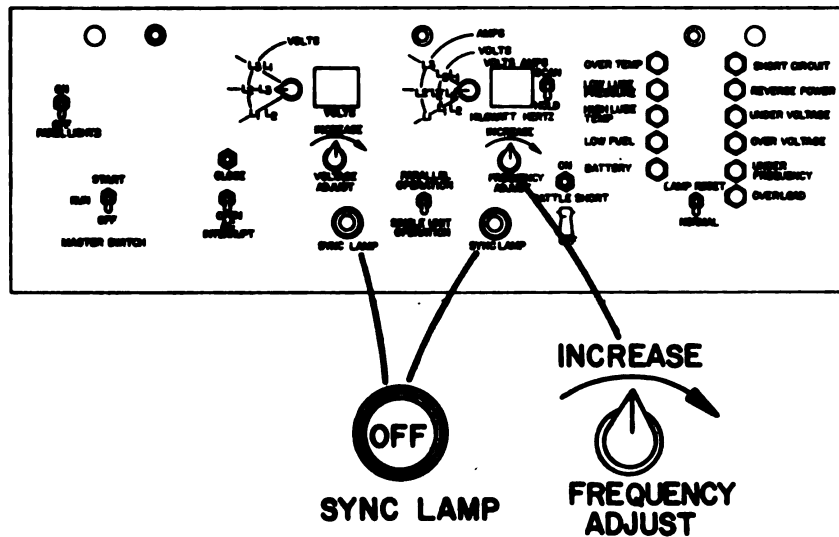
CAUTION

If the SYNC LAMPS do not flash on and off together, the phase relationship between the generator and load is not correct. DO NOT attempt to place the generator set on-line until the phase relationship problem is corrected by the next higher maintenance level.

NOTE

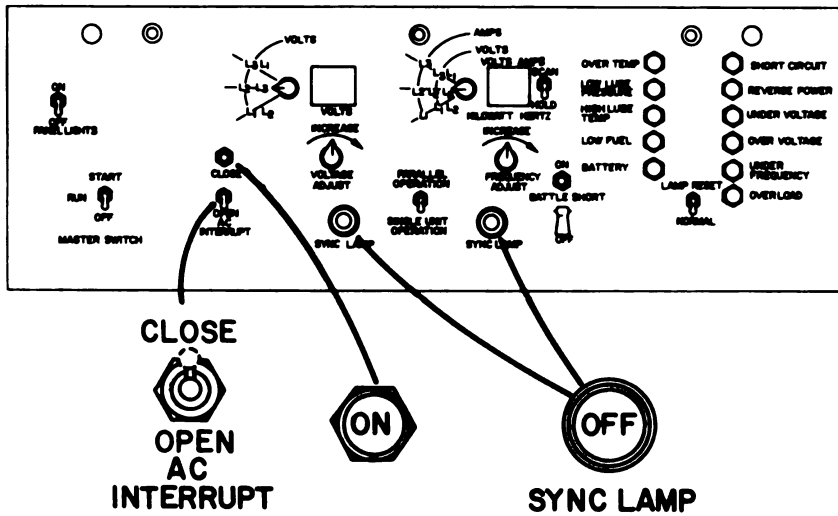
The SYNC LAMPS will go from off to on (dim), then the light will increase and decrease in intensity and then go off to indicate phase relationship between the two generator sets. The generators are in phase when the SYNC LAMPS are off.

- (8) Use FREQUENCY ADJUST rheostat to decrease frequency of set coming on-line until the SYNC LAMPS flash in unison at their slowest possible rate.



2-6. PREPARATION FOR OPERATION - Continued

- (9) When SYNC LAMPS go off, close ac main contactor by momentarily holding AC INTERRUPT switch to CLOSE (up). When AC INTERRUPT lamp comes on, release switch to neutral (center). If contactor does not close and/or if SYNC LAMPS start to come back on, release switch to neutral (center) and repeat steps (8) and (9).

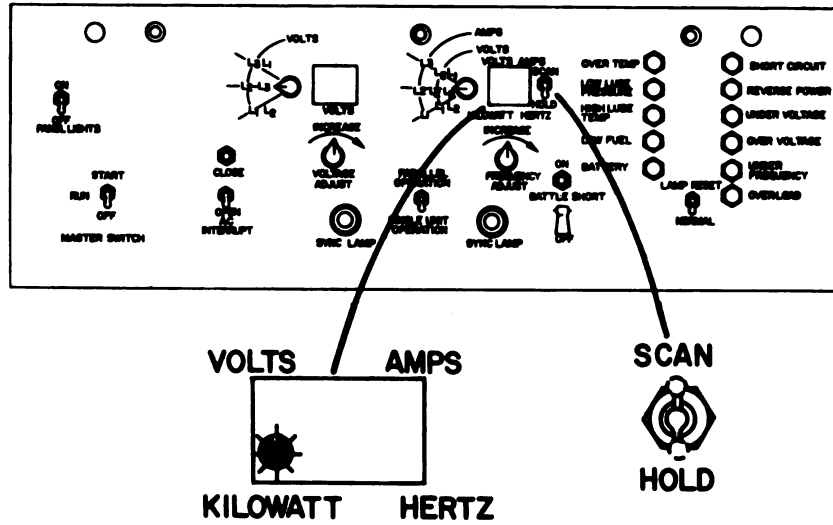


NOTE

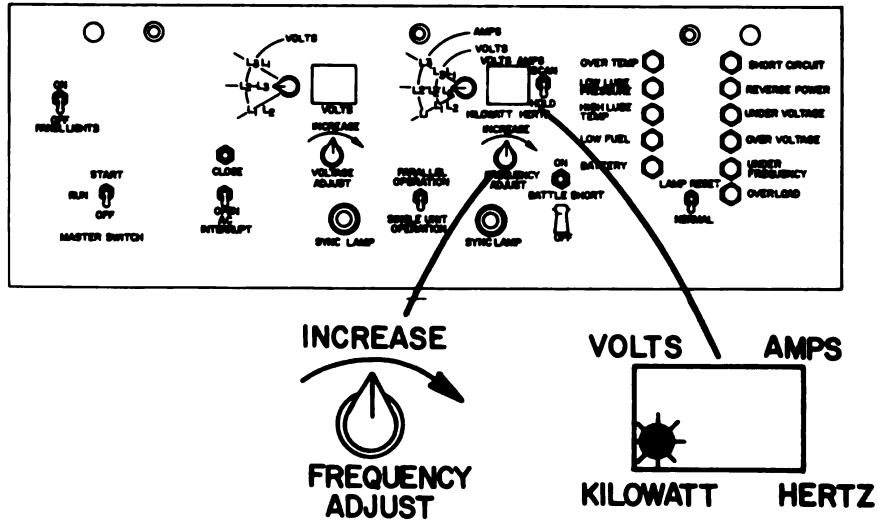
If generator sets are to continue in parallel operation, perform steps (10) through (13).

2-6. PREPARATION FOR OPERATION - Continued

- (10) Place SCAN-HOLD switch to SCAN (up) position until KILOWATT lamp comes on; then quickly return to HOLD (down) position. Repeat this step on the other generator set.

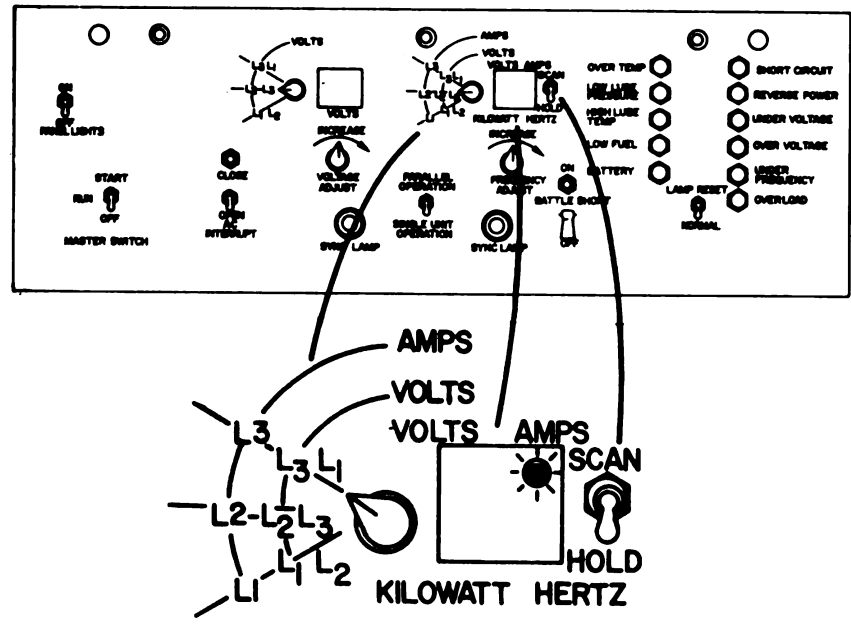


- (11) Make fine adjustments on FREQUENCY ADJUST rheostats until generator sets equally share kilowatts load.

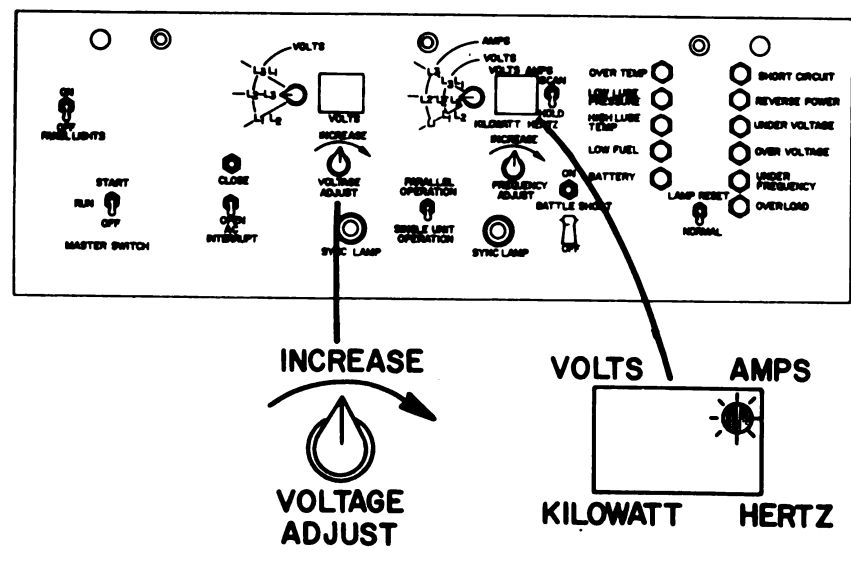


2-6. PREPARATION FOR OPERATION - Continued

- (12) Make sure phase select switches on both generator sets are set to phase L-3. Place SCAN-HOLD switch to SCAN (up) until AMPS lamp come on; then quickly return to HOLD (down). Repeat this step on the other generator set.



- (13) Make fine adjustments on VOLTAGE ADJUST rheostats until generator sets equally share amps load.

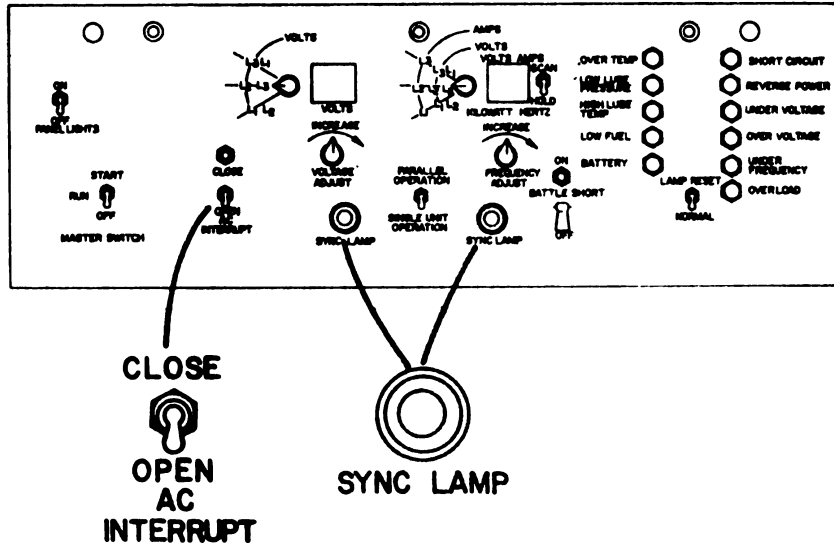


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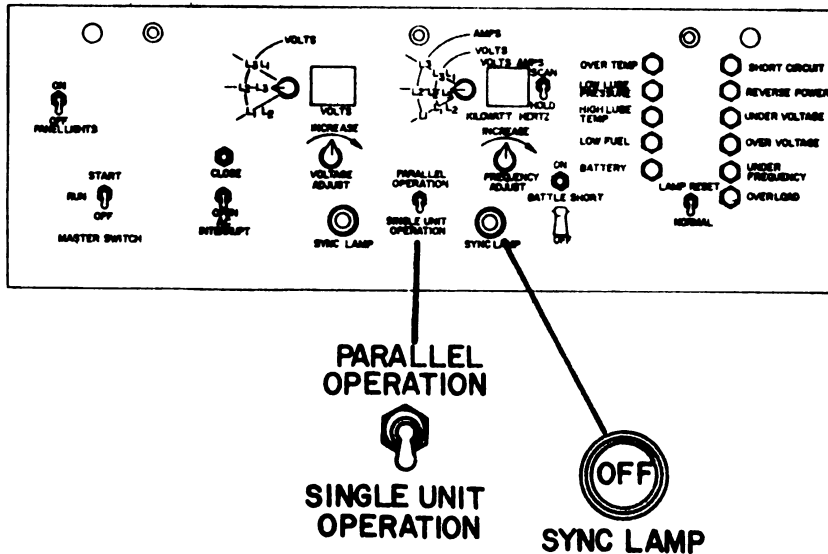
2-6. PREPARATION FOR OPERATION - Continued

w. Stopping (shutdown) Parallel Operation

- (1) Open ac main contactor by placing AC INTERRUPT switch on the unit going off-line to OPEN (down). When AC INTERRUPT lamp goes off, release switch to neutral (center) position. SYNC LAMPS will flash.

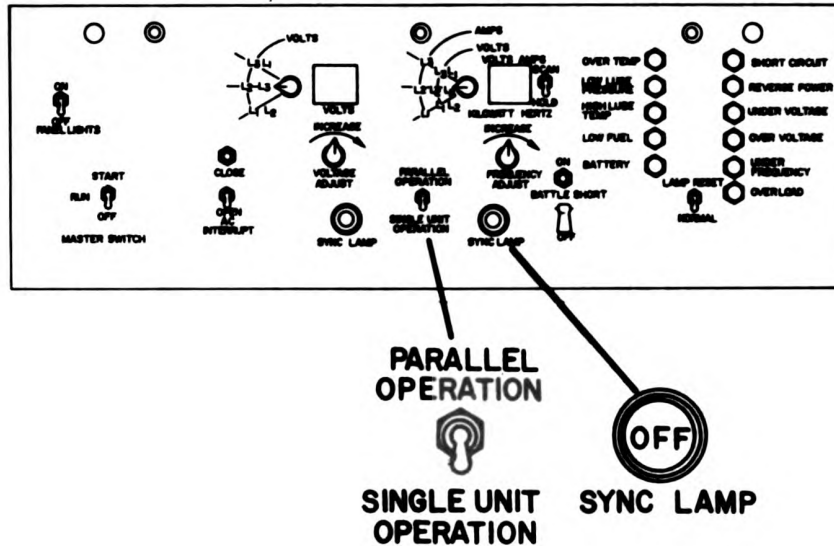


- (2) Place PARALLEL-SINGLE UNIT OPERATION switch to SINGLE UNIT OPERATION (down). SYNC LAMPS should go off.

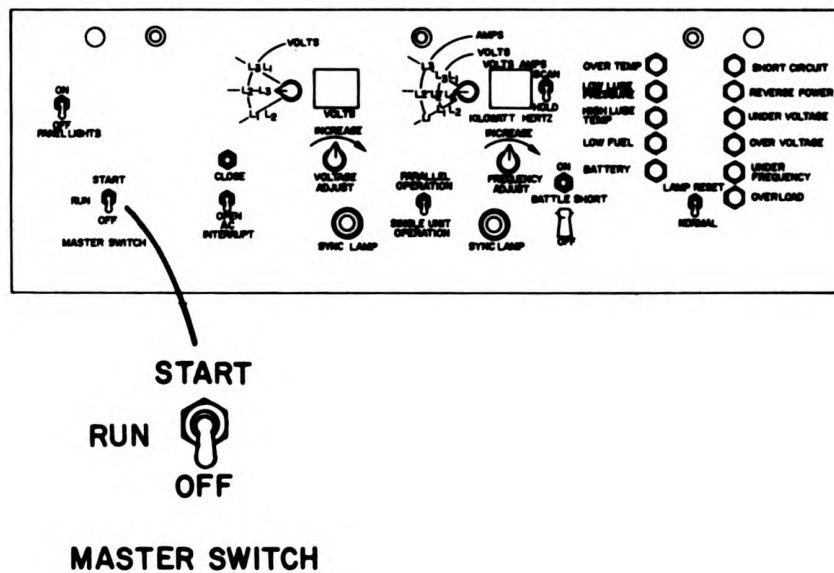


2-6. PREPARATION FOR OPERATION - Continued

- (3) Place PARALLEL-SINGLE UNIT OPERATION switch on operating generator set still on-line to SINGLE UNIT OPERATION (down). SYNC LAMPS should go off.



- (4) Place MASTER SWITCH to OFF on generator set being shut down. Engine and generator will coast to stop.

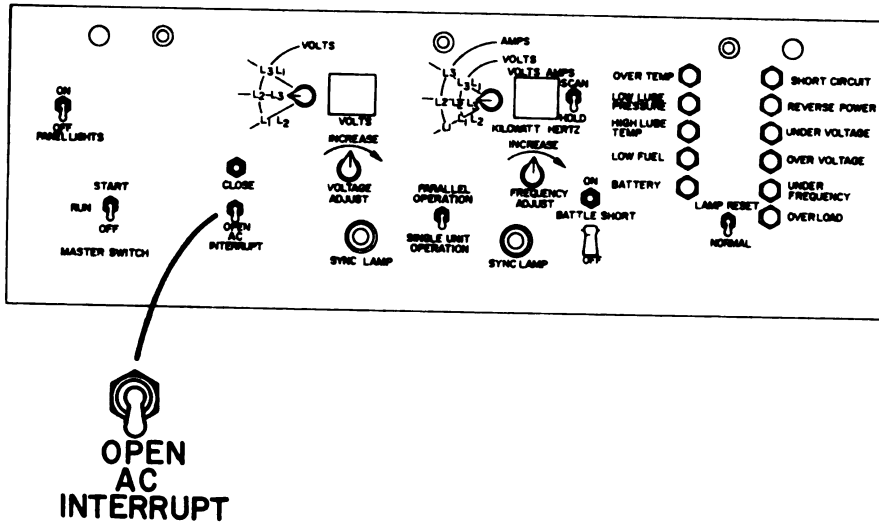


- (5) Place PANEL LIGHTS switch to OFF if lights were on. Three panel lights will go off.
 (6) Close control cabinet outer door.

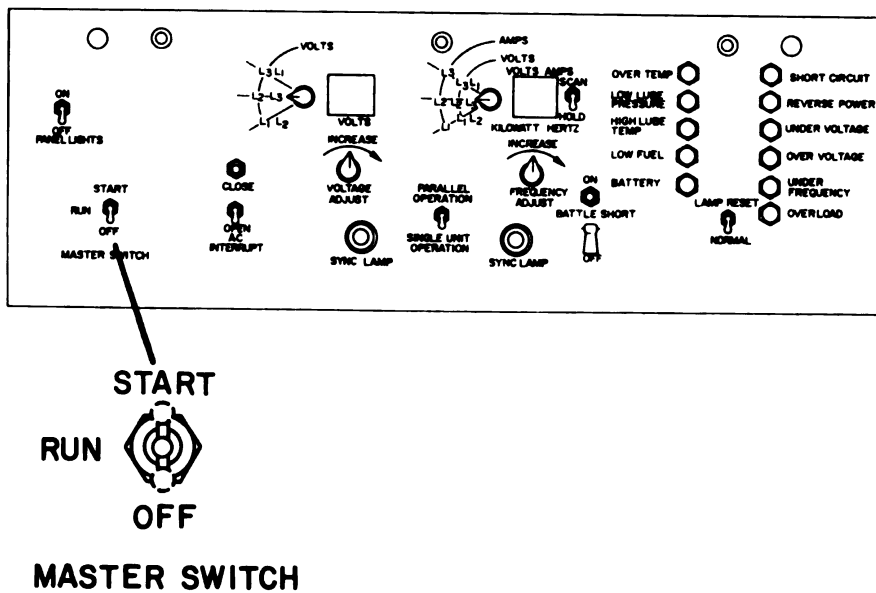
6. PREPARATION FOR OPERATION - Continued

x. Stopping (shutdown) of single unit

- (1) Open ac main contactor by placing AC INTERRUPT switch to OPEN (down). When AC INTERRUPT lamp goes off, release switch to neutral (center) position.

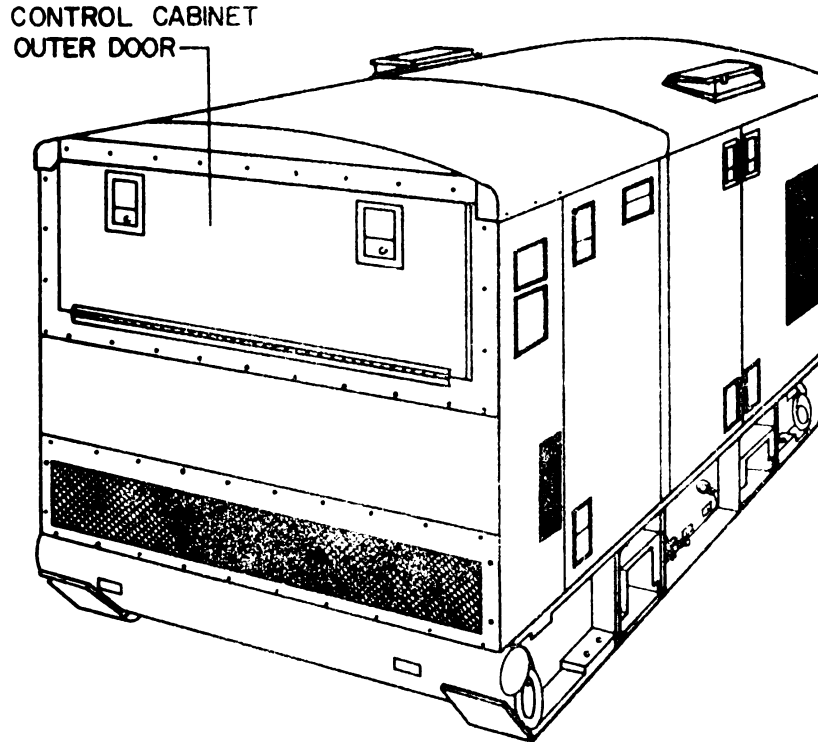


- (2) Place MASTER SWITCH to OFF. Engine and generator will coast to stop.

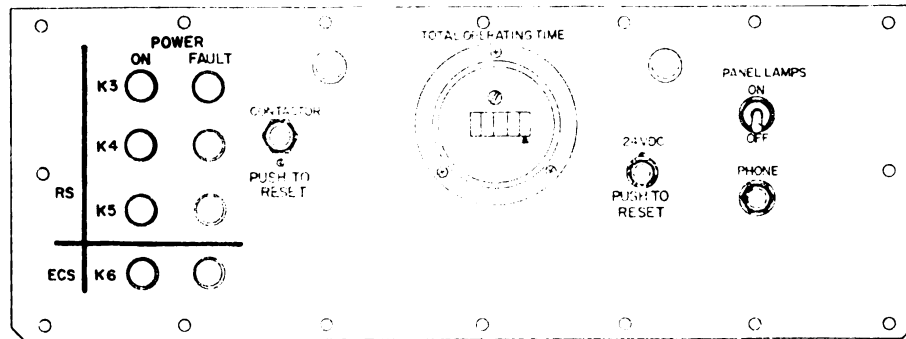


2-6. PREPARATION FOR OPERATION - Continued

- (3) Place PANEL LIGHTS switch to OFF if lights were on. Three panel lights will go off.
- (4) Close control cabinet outer door.

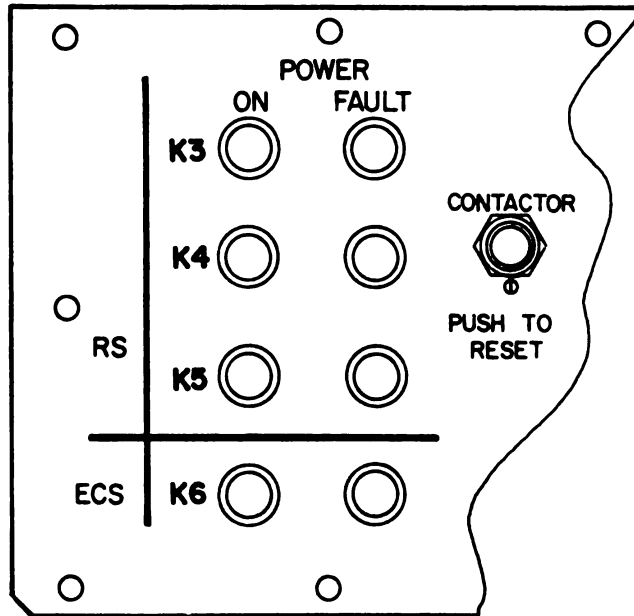


2-7. DURING OPERATION

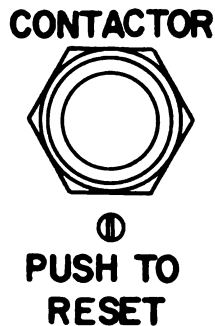


2-7. DURING OPERATION - Continued

- a. During normal operation all four green POWER ON lamps should be on. If one or more of these lights does not come on or goes off, and the matching POWER FAULT lamp does not come on, refer to the troubleshooting section. If the matching POWER FAULT lamp is on press the PUSH TO RESET CONTACTOR. If the POWER FAULT lamp does not go off, notify organizational maintenance.



- b. If the PUSH TO RESET CONTACTOR button or 24VDC circuit breaker pops, press the button in. If button pops out again, notify organizational maintenance.



2-7. DURING OPERATION - Continued

c. Check fuel supply using the fuel level gages on each tank. If fuel level is low, refuel as follows:

- (1) Close ball valve.
- (2) Remove fuel tank cap on one fuel tank.

WARNING

To avoid electrical discharge, the fuel tanker must be properly grounded. Make sure tanker grounding strap is attached to the fuel tank grounding strap bracket before refueling.

- (3) Attach fuel tanker grounding strap to EPP II fuel tank.
- (4) Insert fuel nozzle into fuel tank filler neck.

WARNING

If metal-to-metal contact is not maintained during refueling, a spark may result which could ignite fuel fumes. Make sure fuel nozzle stays in contact with fuel tank.

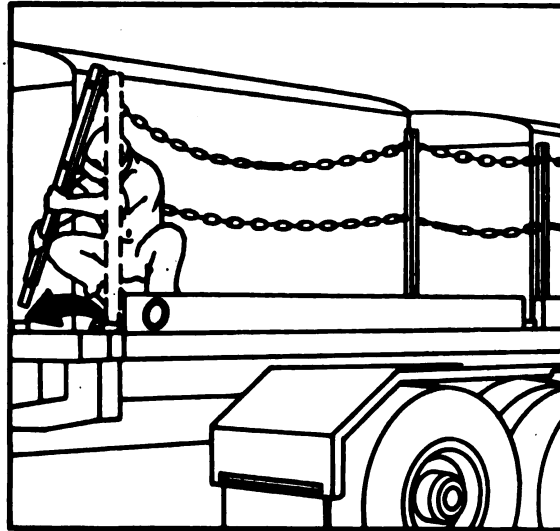
- (5) With fuel nozzle in contact with fuel tank, fill fuel tank to the level marked on the tank. Do not overfill.
 - (6) When tank is full, remove nozzle and immediately replace fuel tank cap.
 - (7) Repeat steps (2) through (6) to fill second tank.
 - (8) Open ball valve.
- d. Perform preventive maintenance checks and services (PMCS) as needed. See table 2-3, steps 15, 16, and 17.
- e. For night operations, turn on panel lamps. Slide hoods in on lamps to dim the lamp.

PANEL LAMPS

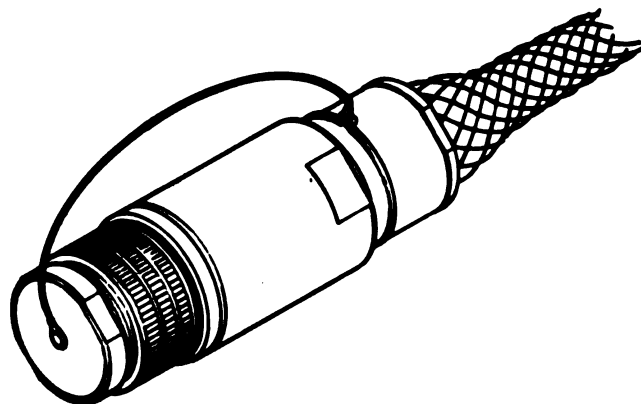


2-8. PREPARATION FOR MARCH

- a. Insure both generator sets are shut down.
- b. Perform after-operation (A) preventive maintenance checks and services (PMCS) on generator sets. See TM 5-6115-598-12.
- c. Store stanchions. Pull out stanchions and set them in the inboard mounting holes on the platform.

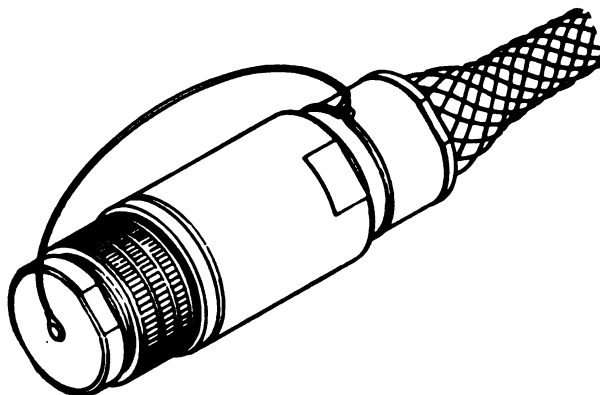


- d. Unscrew the cable connectors from the engagement control station (ECS). Screw the cover tightly onto the connector.



2-8. PREPARATION FOR MARCH - Continued

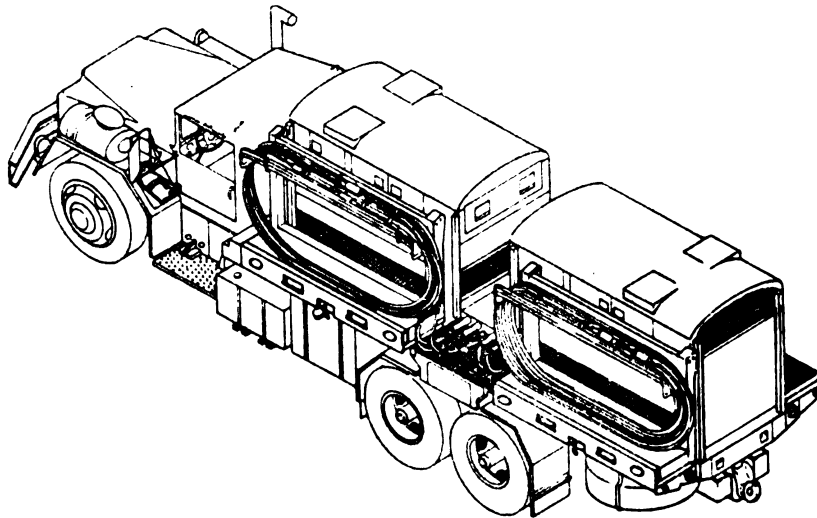
- e. Move the cables over to the cable rack. Do not drag the cable connectors on the ground.**
- f. Unscrew the cables from the radar station (RS). Screw the connector covers on tightly.**



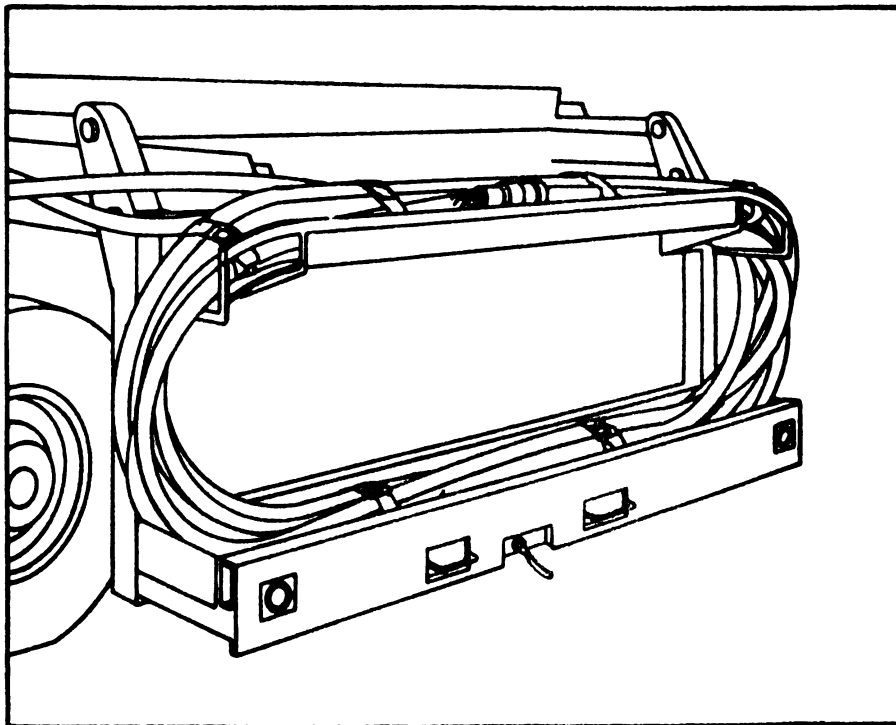
- g. Move the cables over to the cable rack. Do not drag the cable connectors on the ground.**

2-8. PREPARATION FOR MARCH - Continued

- h. Wind the cables one at a time onto the cable rack. Make sure the cable straps are not caught under the cables. Wind two rear power cables on the rear rack in a clockwise direction. Wind the two front power cables on the front rack in a counterclockwise direction. Wrap the control cable on either rack in the same direction as the power cables on that rack.

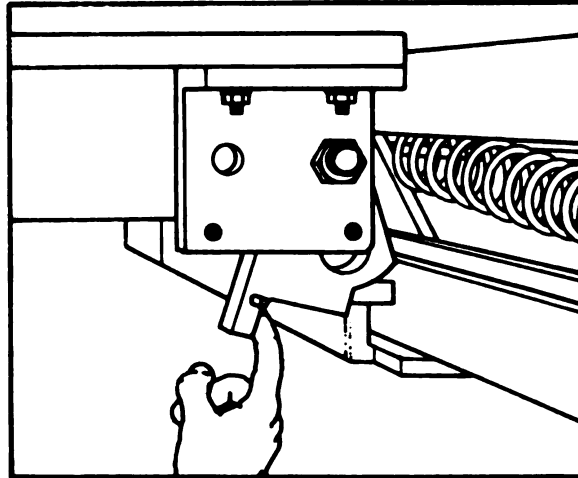


- i. Fasten the cables in place with the cable straps.



2-8. PREPARATION FOR MARCH - Continued

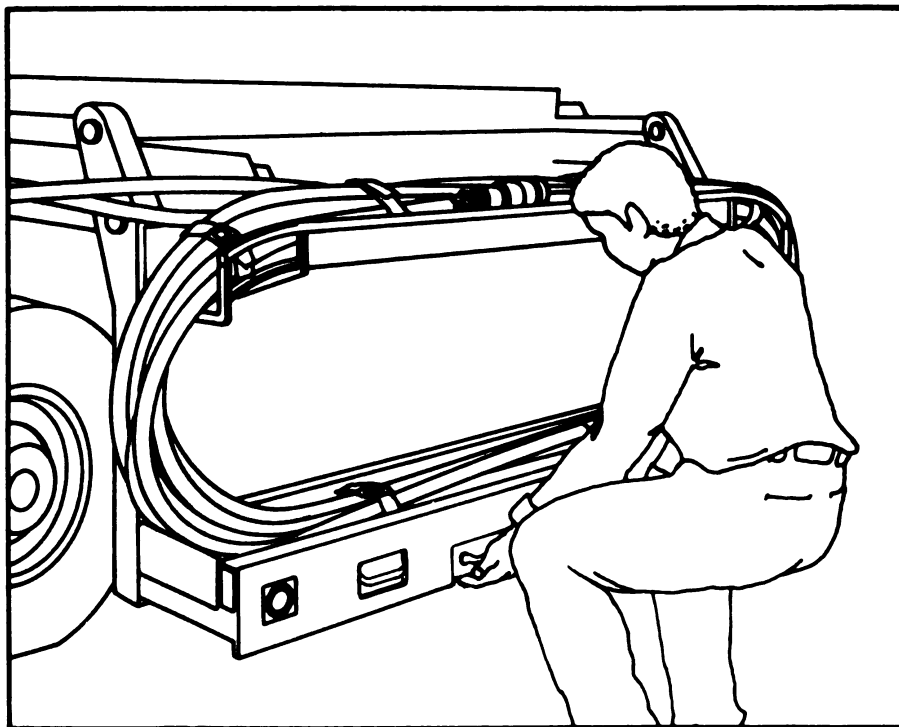
- j. Release the two cable rack locking latches on the rear cable rack.



CAUTION

Do not let the rack snap up. This could damage the assembly.

- k. Lift the rear cable rack slowly until it locks in the up position.



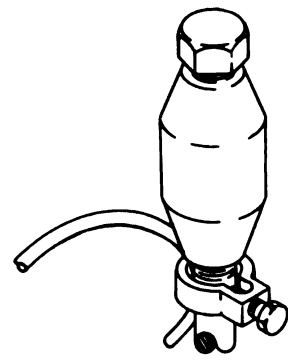
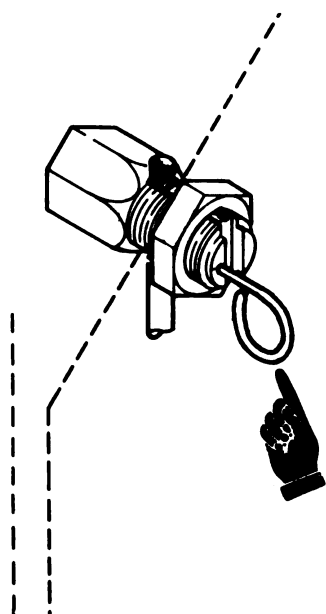
}. PREPARATION FOR MARCH - Continued

- 1. Lift the front cable rack into position the same way.
- m. Turn off panel lamps and close control panel door.

PANEL LAMPS
ON



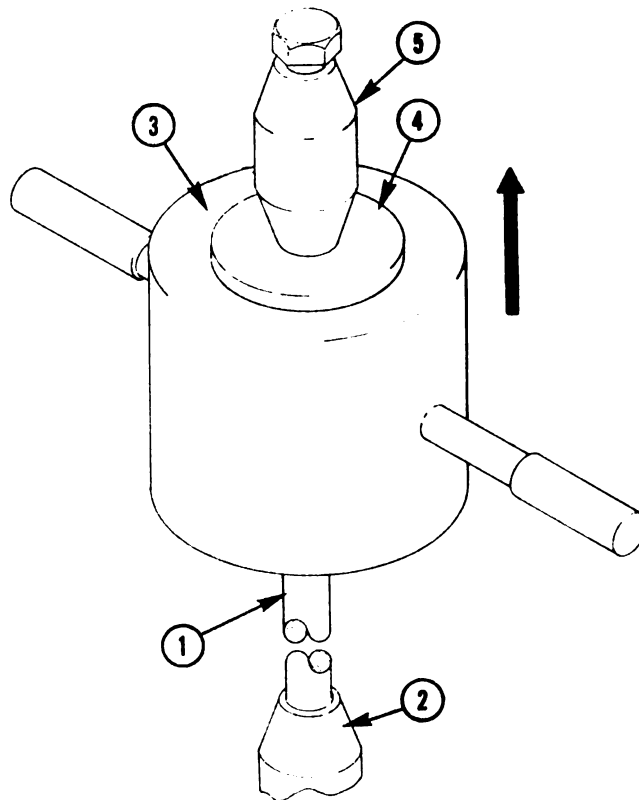
- n. Loosen nut that clamps grounding strap to chassis grounding terminal and remove grounding strap. Loosen nut on grounding rod clamp and remove grounding strap.



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2-8. PREPARATION FOR MARCH - Continued

- o. Put the ground strap in the rear compartment. Take out the driving assembly. Screw the drive rod (1) into the top coupling nut (2). Slide driver (3) onto drive rod, then screw driving plate (4) onto drive rod (1). Screw another coupling nut (5) onto top of drive rod (1) until it rests against the driving plate (4).



- p. Pull the ground rod out of the ground by thrusting the driver upward against the driving plate.
- q. When the first section is completely out of the ground, unscrew driving assembly, remove the top section of ground rod, and screw the driving assembly into the next section of ground rod.
- r. Remove the next two sections of ground rod the same way.

-8. PREPARATION FOR MARCH - Continued

- s. Store the ground rod and driver in the rear compartment and lock the compartment.

CAUTION

Be sure power cables and grounding device are completely disconnected and stowed before moving the transport vehicle to prevent equipment damage.

- t. If you used the grounding plate instead of the grounding rod, follow removal and storage instructions in FM 20-31, Electric Power Generation in the Field.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

r operating procedures during unusual conditions, refer to TM 5-6115-598-12.

CHAPTER 3

OPERATOR'S MAINTENANCE

This chapter is provided to assist the operator in maintaining the Electric Power Plant II.

Section I. LUBRICATION INSTRUCTIONS

The operator will refer to TM 5-6115-598-12 for required lubrication, troubleshooting, and maintenance of the generator sets.

The operator will refer to TM 9-2320-260-10 for required lubrication, troubleshooting, and maintenance of the M811 truck.

Section II. OPERATOR'S MAINTENANCE TROUBLESHOOTING

Table 3-1 lists the common malfunctions which you may find during the operation or maintenance of the Electric Power Plant II or its components. You should 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 and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

Table 3-1. Operator's Troubleshooting

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
1. PANEL LAMP(S) INOPERATIVE - GENERATOR ON-LINE.
Check for missing or burned-out lamp bulb. Unscrew hood ①; remove lamp bulb ② by pressing in, turning to the left until it stops, and pulling the bulb out. Visually inspect to see that filament is intact.
Replace broken or burned-out bulb.
If bulb is not defective or if panel lamp does not work with a new bulb, notify organizational maintenance.

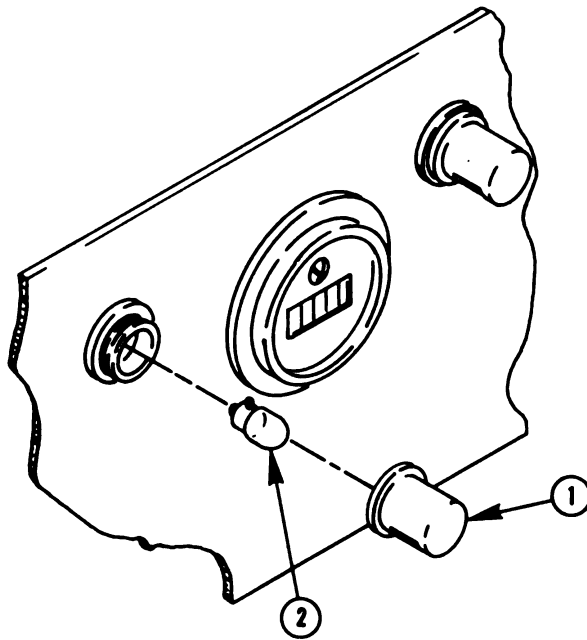
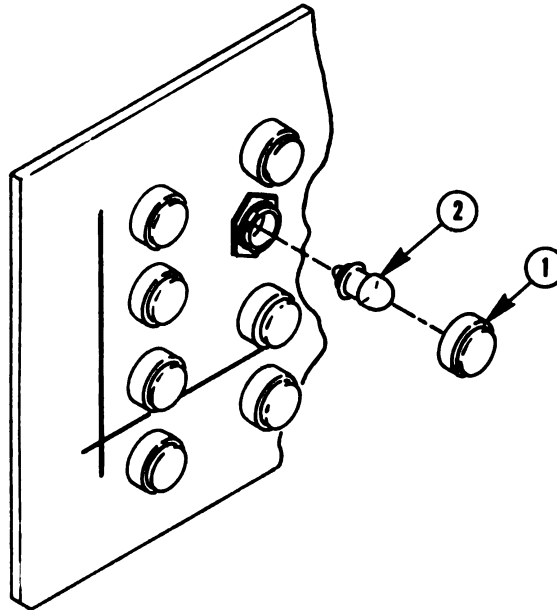


Table 3-1. Operator's Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. INDICATOR LAMP DOES NOT LIGHT WHEN PRESSED TO TEST - GENERATOR ON-LINE.	Check for missing or burned-out lamp bulb. Unscrew lens (1) and remove lamp bulb (2) from lens. Visually inspect to see that filament is intact.	<p>Replace broken or burned-out bulb.</p> <p>If bulb is not defective or if lamp does not work with a new bulb, notify organizational maintenance.</p>



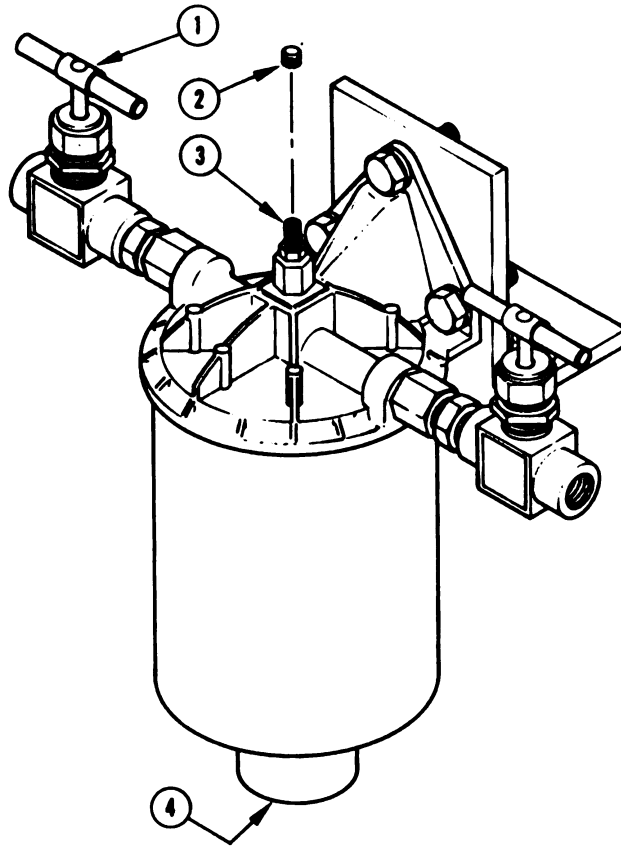
Section III. MAINTENANCE PROCEDURES

There is only one maintenance duty assigned to the operator of the Electric Power Plant II - servicing the fuel filter/water separators. This procedure is described in this section.

3-1. FUEL FILTER/WATER SEPARATOR - SERVICING	
This task covers: Draining	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Equipment Conditions</u>
None	Generator sets shut down.
<u>Tools and Special Tools</u>	<u>Special Environmental Conditions</u>
None	None
<u>Materials/Parts</u>	<u>General Safety Instructions</u>
Suitable container	Fuel is highly flammable. No smoking during this procedure.
<u>Personnel Required</u>	
One Electric Power Plant II operator, MOS 52C	

3-1. FUEL FILTER/WATER SEPARATOR - SERVICING - Continued			
LOCATION	ITEM	ACTION	REMARKS
DRAIN Fuel filters	a. Outlet shutoff valve ①	Close.	
	b. Vent valve cap ②	Remove.	
	c. Vent valve ③	Push down pin in center of vent valve and hold down.	
	d. Drain valve ④	Open and drain fluid into a suitable container until only fuel is draining from filter.	
	e. Drain valve ④	Close.	
	f. Vent valve ③	Release pin.	
	g. Vent valve cap ②	Replace.	
	h. Outlet shutoff valve ①	Open.	

3-1. FUEL FILTER/WATER SEPARATOR - SERVICING - Continued



- 1 OUTLET SHUTOFF VALVE
- 2 VENT VALVE CAP

- 3 VENT VALVE
- 4 DRAIN VALVE

CHAPTER 4

ORGANIZATIONAL MAINTENANCE

The maintenance duties assigned to the organizational repairman of Electric Power Plant II (EPP II), AN/MJQ-24, are listed below, with references to TM 5-6115-598-12 for maintenance requirements of the 150-kW generator sets, and to TM 9-2320-260-20 for the M811 truck.

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

4-1. COMMON TOOLS AND EQUIPMENT. For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

4-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT. Refer to the Maintenance Allocation Chart (MAC), appendix B of this manual, and to the Repair Parts and Special Tools List (RPSTL), appendix F of this manual.

4-3. REPAIR PARTS. Repair parts are listed and illustrated in the RPSTL, appendix F of this manual.

Section II. SERVICE UPON RECEIPT

4-4. GENERAL. The EPP II will be received fully assembled and ready for use. Acceptance services will be accomplished by performing preventive maintenance checks and services (PMCS) referred to in section III of this chapter. Refer to TM 5-6115-598-12 for instructions on the 150-kW generator set and to TM 9-2330-260-20 for the M811 truck.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

4-5. GENERAL. There is no PMCS on the EPP II that is unique to the organizational maintenance level. Refer to chapter 2, section II, table 2-3 for operator/crew PMCS. PMCS for the generator set is contained in TM 5-6115-598-12. PMCS for the M811 truck is contained in TM 9-2330-260-20.

Section IV. ORGANIZATIONAL MAINTENANCE TROUBLESHOOTING

4-6. INTRODUCTION. Troubleshooting involves the identification of problems that you have with the equipment, and what you must do to solve them. This section contains the trouble symptoms (malfunctions), tests or inspections to be performed, and corrective actions needed to remedy the problem. Problems are corrected by maintenance actions indicated in the Maintenance Allocation Chart (MAC) to be performed at the organizational level. These procedures are presented in step-by-step detail. Make sure you read and understand each procedure before you begin it, and perform each procedure exactly as it appears in this manual.

This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or cannot be corrected by the information contained in this manual, notify your supervisor. A decision can then be made as to what level of maintenance is required to put the EPP II back into working order.

Table 4-1. Organizational Maintenance Troubleshooting

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
NOTE
<p>Test of all power distribution unit panel (PDU) components are resistive type checks. Insure generator sets are turned off and PDU control panel removed. (See page 4-19 to remove panel.)</p>
<p>1. PANEL LAMP(S) INOPERATIVE - 24 VDC POWER AVAILABLE.</p>
<p>Step 1. Verify the malfunction.</p>
<p>Step 2. Check for disconnected wires on panel lamp socket(s) and panel lamp switch (S2).</p>
<p>If loose connections are found, resolder.</p>
<p>If there are no loose connections, go to step 3.</p>
<p>Step 3. Test panel lamp switch. Remove both lamp bulbs. Set multimeter on Ohms R X 10 scale and zero the multimeter. Touch probes to pins 2 and 3. With the panel lamp switch on, multimeter should read zero. With the switch off, multimeter should read infinity.</p>
<p>If proper readings are not obtained, replace switch (see paragraph 4-15). Repeat step 3.</p>
<p>If proper readings are obtained, go to step 4.</p>
<p>Step 4. Test panel lamp socket(s) (DS9 and DS10). With multimeter set on Ohms R X 10 scale, from the front of the panel, touch one probe to center conductor of socket and the other probe to the side of the socket. With panel lamp switch on, multimeter should read zero. With switch off, multimeter should read infinity.</p>
<p>If proper readings are not obtained, replace panel lamp socket (see paragraph 4-12). Repeat step 4.</p>
<p>If proper readings are obtained, or if a new socket does not correct the malfunction, notify DS/GS maintenance.</p>

Table 4-1. Organizational Maintenance Troubleshooting - Continued

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>2. INDICATOR LAMP DOES NOT LIGHT WHEN PRESSED TO TEST - 24 VDC POWER AVAILABLE TO THE PDU CONTROL PANEL.</p>
<p>NOTE</p>
<p>If none of the indicator lights work, see MALFUNCTION 3.</p>
<p>Step 1. Verify the malfunction.</p>
<p>Step 2. Inspect for disconnected wires on malfunctioning lamp.</p>
<p>If loose connections are found, resolder.</p>
<p>If there are no loose connections, replace the indicator lamp (see paragraph 4-14). Repeat step 2.</p>
<p>If new indicator lamp socket does not correct malfunction, notify DS/GS maintenance.</p>
<p>3. NO 24-VDC POWER IN SYSTEM-GENERATOR ONLINE.</p>
<p>Step 1. Verify the malfunction.</p>
<p>Step 2. Test 24 VDC circuit breaker (CB1). With multimeter on Ohms R X 10 scale, touch probes to pins 1 and 2 on CB1. With the circuit breaker pushed in, multimeter should read zero. With circuit breaker pulled out, multimeter should read infinity.</p>
<p>If proper readings are not obtained, replace CB1 (see paragraph 4-16). Repeat step 2.</p>
<p>If new circuit breaker does not correct malfunction, notify DS/GS maintenance.</p>
<p>4. PUSH TO RESET CONTACTOR DOES NOT TURN OFF POWER FAULT LAMP.</p>
<p>NOTE</p>
<p>Power fault lamp may go off only for a moment if there is an overload. If this happens, notify DS/GS maintenance.</p>

Table 4-1. Organizational Maintenance Troubleshooting - Continued

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>Step 1. Verify the malfunction.</p> <p>Step 2. Test the PUSH TO RESET CONTACTOR (S1). With multimeter on Ohms R X 10 scale, touch probes to pins C and NC that have wires attached. With contactor out, multimeter should read infinity. With contactor held in, multimeter should read zero.</p> <p style="padding-left: 40px;">If proper readings are not obtained, replace PUSH TO RESET CONTACTOR. (See paragraph 4-17.)</p> <p style="padding-left: 40px;">If proper readings are obtained or if new contactor does not correct the malfunction, notify DS/GS maintenance.</p>
<p>5. TIME METER INOPERATIVE - 24 VDC POWER AVAILABLE.</p> <p>Step 1. Verify the malfunction.</p> <p>Step 2. Check for disconnected wires on time meter.</p> <p style="padding-left: 40px;">If loose wires are found, resolder.</p> <p style="padding-left: 40px;">If no loose wires are found, replace time meter.</p> <p style="padding-left: 40px;">If new meter does not correct the malfunction, notify DS/GS maintenance.</p>
<p>6. LOW FUEL INDICATED WHEN TANK IS MORE THAN 1/2 FULL.</p> <p>Step 1. Verify the malfunction.</p> <p>Step 2. Test the liquid level switch. With the fuel tank more than 1/2 full, disconnect the power cable from the switch. Set the multimeter to the Ohms R X 10 scale and touch the probes to pins A and D. Multimeter should read infinity.</p> <p style="padding-left: 40px;">If proper reading is not obtained, replace liquid level switch (see paragraph 4-18).</p> <p style="padding-left: 40px;">If proper reading is obtained, notify DS/GS maintenance.</p>

Table 4-1. Organizational Maintenance Troubleshooting - Continued

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>7. LOW FUEL NOT INDICATED WHEN TANK IS 1/4 OR LESS FULL.</p> <p>Step 1. Verify the malfunction.</p> <p>Step 2. Test the liquid level switch. With the fuel tank 1/4 or less full, disconnect the power cable from the switch. Set the multimeter to the Ohm R X 10 scale and touch the probes to pins A and D. Multimeter should read zero.</p> <p>If proper reading is not obtained, replace liquid level switch (see paragraph 4-18).</p> <p>If proper reading is obtained, notify DS/GS maintenance.</p>

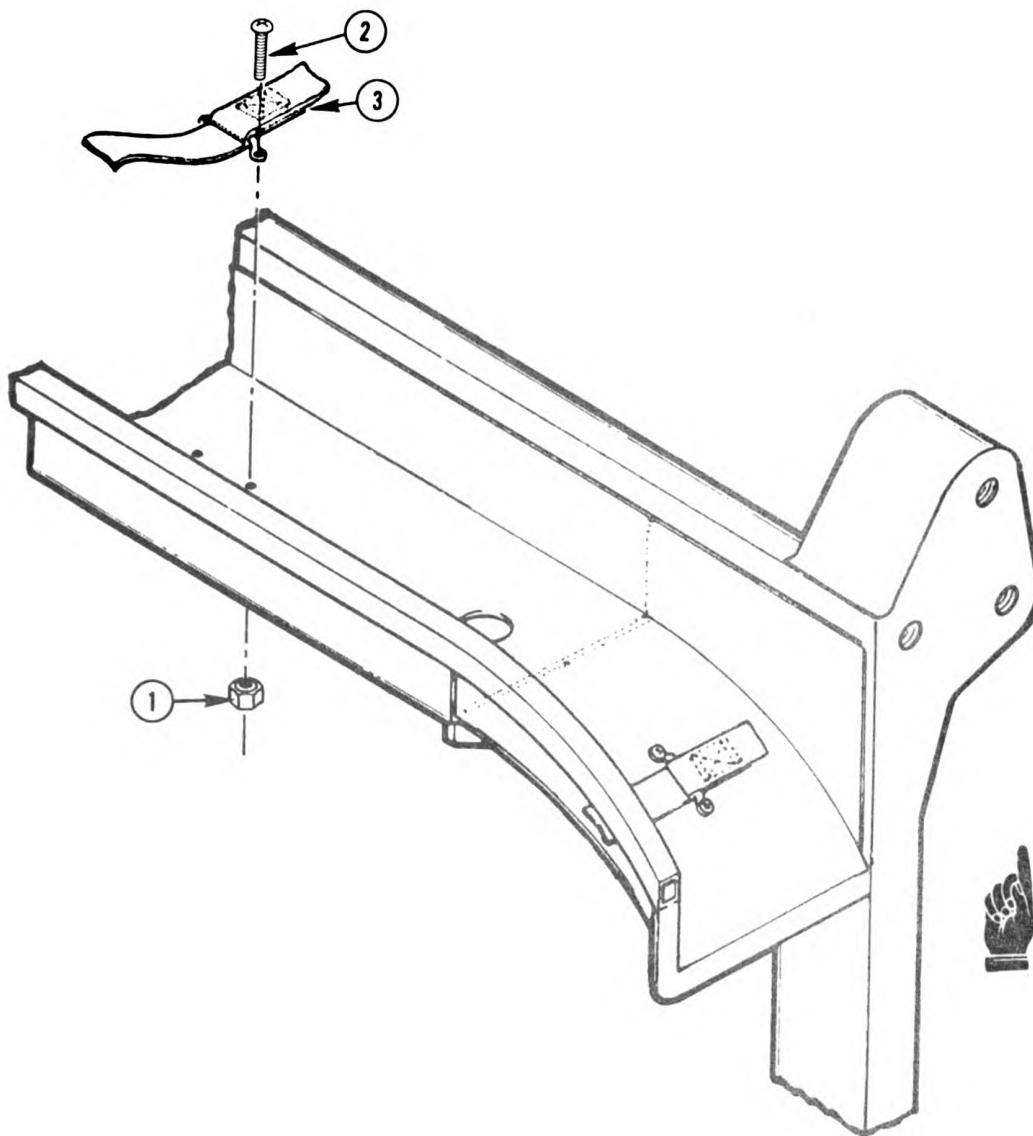
Section V. MAINTENANCE PROCEDURES

4-7. INTRODUCTION. Maintenance involves those procedures that you must perform to keep the equipment in good running order. This section describes the routine procedures that are the responsibility of the organizational maintenance technician. The Maintenance Allocation Chart (MAC) authorizes organizational maintenance to carry out the procedures. Each procedure contains a summary followed by a detailed procedure. Make sure that you read and understand each procedure before you begin it, and perform each procedure exactly as it appears in this manual.

4-8. CABLE STRAP - MAINTENANCE INSTRUCTIONS	
This task covers: a. Remove b. Install	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Equipment Conditions</u>
None	Cable rack down, cables off
<u>Tools and Special Tools</u>	<u>Special Environmental Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 3/8-inch combination wrench Cross tip screwdriver with 8-inch shaft	None
	<u>General Safety Instructions</u>
	<u>WARNING</u>
<u>Materials/Parts</u>	Spring under tension can cause cable rack to snap up, causing injury. Make sure cable rack is down and locked to prevent personal injury.
None	
<u>Personnel Required</u>	
One engineer missile equipment repairman, MOS 52C One helper	

4-8. CABLE STRAP - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
<u>WARNING</u>			
Spring under tension can cause cable rack to snap up, causing injury. Make sure cable rack is down and locked to prevent personal injury.			
REMOVE			
1. Cable rack assembly	Cable rack	(1) Lower and lock in down position. (2) Remove cables.	
2. Cable rack	a. Two self-locking hexnuts ① and two pan-head screws ② b. Cable strap fastener loop ③	Remove using 3/8-inch combination wrench and screwdriver. Remove.	See figure, page 4-8.
INSTALL			
3. Cable rack assembly	a. Cable rack	(1) Lower and lock in down position. (2) Remove cables from rack.	
4. Cable rack	a. Cable strap fastener loop ③ b. Two panhead screws ② and two self-locking hex-nuts ①	Line up strap fastener loop screw holes with holes in cable rack. Install using 3/8-inch combination wrench and screwdriver.	

4-8. CABLE STRAP - MAINTENANCE INSTRUCTIONS - Continued



- 1 SELF-LOCKING HEXNUT
- 2 PANHEAD SCREW
- 3 CABLE STRAP FASTENER LOOP

4-8/(4-9 - 4-12 blank) Change 4

4-9. CABLE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS

This task covers:
Repair

INITIAL SETUP

Test Equipment

None

Personnel Required

Two engineer missile equipment
 repairmen, MOS 52C

Tools and Special Tools

General mechanic's tool kit,
 5180-00-177-7033
 Ball peen hammer
 Diagonal cutting pliers
 Straight-nose, slip-joint
 pliers
 Tapered drive pin punch
 Cross-tip screwdriver

Equipment Conditions

Cable rack down

Special Environmental Conditions

None

General Safety Instructions

Materials/Parts

Wire rope, type 1, compound B,
 MIL-W-83420
 Spring pins (3 each), MS 9047-162
 Wire crimps (4 each)

WARNING

Spring under tension can cause
 cable rack to snap up, causing
 injury. Make sure rack is
 secure before working on springs.

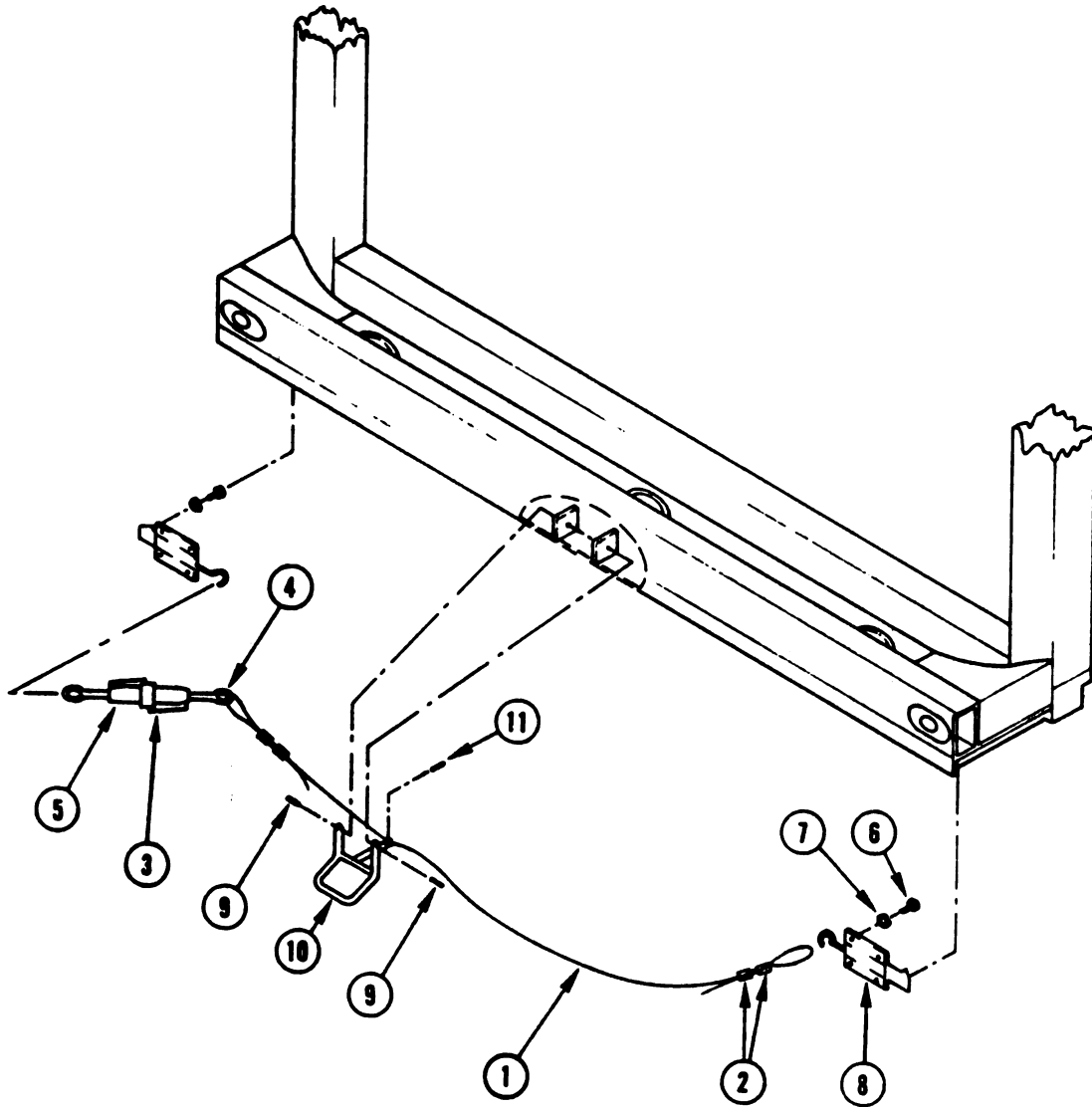
4-9. CABLE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
NOTE			
The cable rack is secured in the up position by two slam-lock bolts. These slam-lock bolts are connected through the center handle by a wire rope assembly which is adjusted with a turnbuckle. Repair of this assembly consists of replacing damaged parts.			
REMOVE WIRE ROPE			
1. Cable rack	a. Wire rope ①	Use diagonal cutting pliers to cut wire rope from turnbuckle and slam-lock bolt.	See figure, page 4-12.
INSTALL WIRE ROPE			
2. Cable rack	a. Wire rope ① and wire crimps ②	(1) Loop one end of wire rope around hook of slam-lock bolt and fasten end to wire with wire crimps using slip-joint pliers. (2) Pass other end of wire rope through one pulley, latch handle, and second pulley. (3) Loop wire rope through turnbuckle eye. Pull rope until taut and fasten with wire crimps using slip-joint pliers. (4) Check adjustment of wire rope by pulling latch handle. Slam-lock bolts should disengage.	Take care not to pull wire rope so tight that slam-lock bolt disengages.

4-9. CABLE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	NOTE		
	Perform step 2b. only if slam-lock bolts do not disengage.		
	b. Locking clip ④ ③, eye end , and turn- buckle ⑤	(1) Use slip-joint pliers to remove locking clip from end of turnbuckle. (2) Turn eye end sever- al turns then check adjustment. Repeat if necessary to otbain proper adjustment. (3) Line up keyways in turnbuckle and eye end. Slide new locking clip inot keyway until hook of locking clip is over hole in center of turnbuckle. Press hook into hole until clip locks into place.	Discard lock- ing clip.
REMOVE SLAM- LOCK BOLT			
3. Cable rack	a. Four screws ⑥ and four lockwashers ⑦ b. Slam-lock bolt ⑧	Remove using cross-tip screwdriver. Remove from wire rope or eye end of turn- buckle.	
INSTALL SLAM- LOCK BOLT			
4. Cable rack	Slam-lock bolt ⑧ four lockwashers ⑦ and four screws ⑥	(1) Slip loop in wire rope or eye end onto hook of slam- lock bolt.	

4-9. CABLE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
		(2) Attach slam-lock bolt to cable rack with screws and lockwashers using cross-tip screw-driver.	
REMOVE LATCH HANDLE			
5. Cable rack	a. Wire rope ①	Remove.	See step 1.
	b. Two tubular spring pins ⑨ and latch handle ⑩	Use tapered drive pin punch and ball peen hammer to drive out spring pins and remove latch handle from cable rack.	Discard spring pins.
INSTALL LATCH HANDLE			
6. Cable rack	a. Spring pin ⑪	Insert into new latch handle using ball peen hammer.	
	b. Latch handle ⑩ and two tubular spring pins ⑨	Attach latch handle to cable rack with new tubular spring pins using ball peen hammer.	
	c. Wire rope ①	Install.	See step 2.

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4-9. CABLE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued



- 1 WIRE ROPE
- 2 CRIMPS
- 3 LOCKING CLIP
- 4 EYE END
- 5 TURNBUCKLE
- 6 SCREW

- 7 LOCKWASHER
- 8 SLAM-LOCK BOLT
- 9 SPRING PIN
- 10 LATCH HANDLE
- 11 SPRING PIN

4-10. LATCH ASSEMBLY, LEFT-HAND AND RIGHT-HAND - MAINTENANCE INSTRUCTIONS					
<p>This task covers:</p> <table> <tr> <td>a. Remove</td> <td>c. Inspect</td> </tr> <tr> <td>b. Repair</td> <td>d. Install</td> </tr> </table>		a. Remove	c. Inspect	b. Repair	d. Install
a. Remove	c. Inspect				
b. Repair	d. Install				
INITIAL SETUP					
<u>Test Equipment</u>	<u>Personnel Required</u>				
None	One engineer missile equipment repairman, MOS 52C				
<u>Tools and Special Tools</u>	<u>Equipment Conditions</u>				
General mechanic's tool kit, 5180-00-177-7033 9/16-inch combination wrench 15/16-inch combination wrench 9/16-inch socket 15/16-inch socket 1/2-inch drive ratchet 7/16-inch combination wrench 1/8-inch punch 1/4-inch punch Ball peen hammer Slip-joint pliers	Cable racks up <u>Special Environmental Conditions</u> None				
<u>Materials/Parts</u>	<u>General Safety Instructions</u>				
Tubular spring pin, 1/8-inch diameter (1 each), MS 16562-226 Tubular spring pin, 1/4-inch diameter (3 each), MS 16562-252	<p style="text-align: center;"><u>WARNING</u></p> <p>To prevent injury from occurring, make sure cable rack assembly is not released from its up position.</p>				

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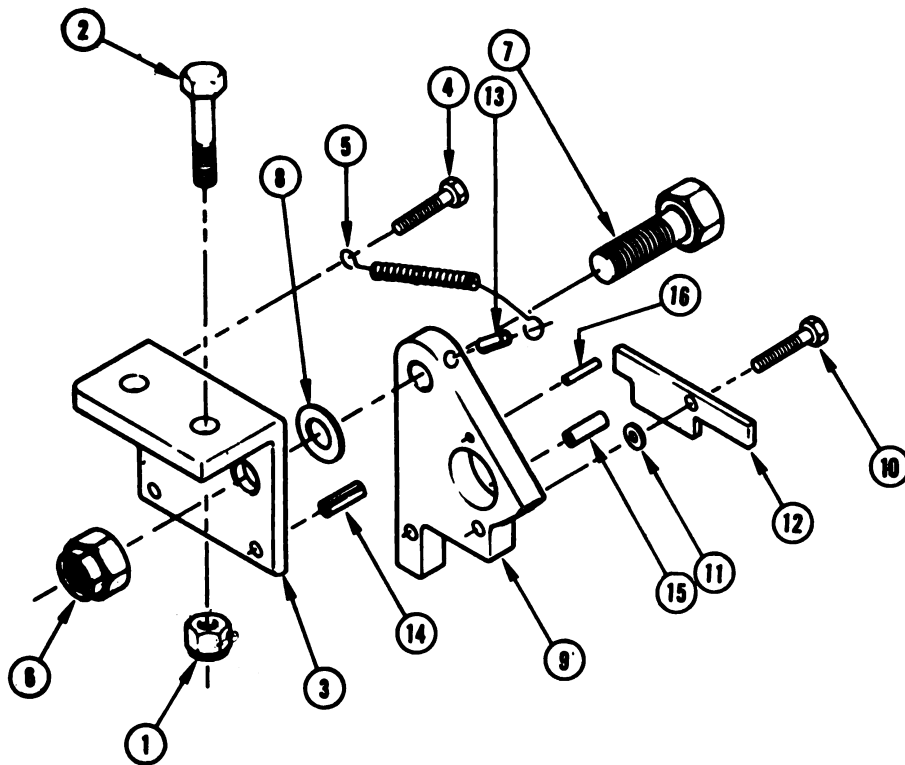
4-10. LATCH ASSEMBLY, LEFT-HAND AND RIGHT-HAND - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
<u>WARNING</u>			
The latch assemblies hold the cable racks in the down position. Never remove the latches when the rack is down, or lower the racks when the latches are removed.			
NOTE			
The following procedures describe maintenance of the left-hand latch assembly. The right-hand latch assembly is identical, except that the detent and repeller rod are pointed to the left. See figure on page 4-17.			
REMOVE			
1. Platform	Two nuts ①, two capscrews ②, and angle mount ③	(1) Using the 9/16-inch combination wrench and the 9/16-inch socket on the ratchet, remove nuts and capscrews. (2) Remove angle mount from truck platform.	See figure, page 4-17. Discard self-locking nuts if damaged.
REPAIR			
2. Latch assembly	a. Capscrew ④ and spring ⑤	(1) Using the 7/16-inch combination wrench, remove capscrew from angle mount and spring. (2) Remove spring from spring pin.	Discard spring if damaged.
	b. Nut ⑥, cap-screw ⑦, washer ⑧, and detent ⑨	(1) Using 15/16-inch combination wrench and the 15/16-inch socket on the ratchet, remove nut.	

4-10. LATCH ASSEMBLY, LEFT-HAND AND RIGHT-HAND - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	<p>c. Capscrew (10), repeller rod (12), and washer (11)</p> <p>d. Tubular spring pins (13), (14), (15), and (16)</p>	<p>(2) Unscrew capscrews from detent.</p> <p>(3) Remove detent and washer from angle mount.</p> <p>(1) Using 7/16-inch combination wrench, remove capscrew from detent and repeller rod.</p> <p>(2) Remove repeller rod and washer.</p> <p>Remove tubular spring pins only if they are damaged.</p> <p>(1) Use slip-joint pliers to remove tubular spring pin (13).</p> <p>(2) Use 1/4-inch punch to remove tubular spring pins (14) and (15).</p> <p>(3) Use 1/8-inch punch to remove tubular spring pin (16).</p>	<p>Discard damaged pin(s).</p>
INSPECT			
3. Latch assembly	All parts	Inspect for rust and corrosion.	Clean rust from all parts.
INSTALL			
4. Latch assembly	a. Tubular spring pins (13), (14), (15), and (16)	Install new pin(s) using the hammer.	

10. LATCH ASSEMBLY, LEFT-HAND AND RIGHT-HAND - MAINTENANCE INSTRUCTIONS -
Continued

CAUTION	ITEM	ACTION	REMARKS
<u>CAUTION</u>			
If the repeller rod is installed backward, the latch assembly will not release properly. Make sure the repeller rod is installed properly.			
Platform	b. Capscrew (10), repeller rod (12), and washer (11)	Insert capscrew through repeller rod and washer. Use 7/16-inch combination wrench to fasten capscrew to detent.	Do not over-tighten capscrew. Repeller rod must be able to pivot freely.
	c. Nut (6), capscrew (7), washer (8), and detent (9)	By hand, screw capscrew through detent. Insert screw through washer and proper hole of angle mount. Screw nut onto capscrew. Tighten using 15/16-inch combination wrench and 15/16-inch socket on the ratchet.	Do not over-tighten nut and capscrew. Detent must be able to pivot freely.
	d. Capscrew (4) and spring (5)	(1) Hook the long end of the spring over tubular spring pin (13). (2) Insert capscrew through the other end of the spring and fasten to angle mount. Tighten with the 7/16-inch combination wrench.	
	Angle mount (3), two capscrews (2), and two nuts (1)	Fasten angle mount to platform with capscrews and nuts. Tighten with 9/16-inch combination wrench and 9/16-inch socket on the ratchet.	

4-10. LATCH ASSEMBLY, LEFT-HAND AND RIGHT-HAND - MAINTENANCE INSTRUCTIONS -
Continued



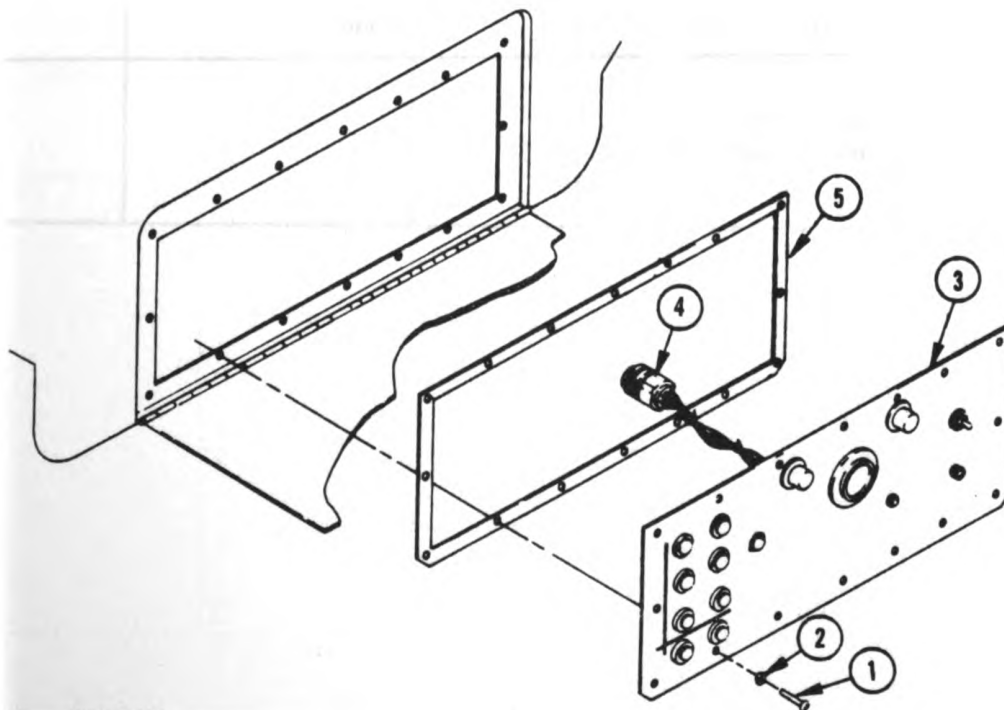
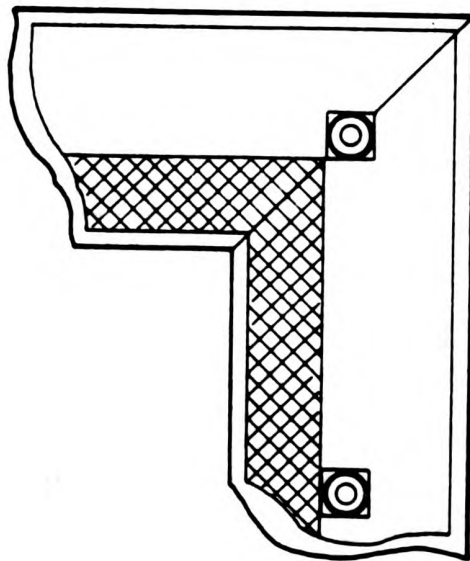
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|--------------------------------|---------------------------------------|
| 1 SELF-LOCKING NUT | 9 DETENT |
| 2 CAPSCREW | 10 CAPSCREW, 1/4-in.-20 x 1-in. |
| 3 ANGLE MOUNT | 11 WASHER, 9/32-in. x 1-in. dia. |
| 4 CAPSCREW, 1/4-in.-20 x 1-in. | 12 REPELLER ROD |
| 5 SPRING | 13 TUBULAR SPRING PIN 1/4-in. x 1-in. |
| 6 SELF-LOCKING NUT | 14 TUBULAR SPRING PIN 1/4-in. x 1-in. |
| 7 CAPSCREW, 5/8-in. x 2-1/4-in | 15 TUBULAR SPRING PIN 1/4-in. x 1-in. |
| 8 WASHER | 16 TUBULAR SPRING PIN 1/8-in. x 1-in. |

4-11. CENTER PLATFORM - MAINTENANCE INSTRUCTIONS	
This task covers: Repair	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Personnel Required</u>
None	One engineer missile equipment repairman, MOS 52C
<u>Tools and Special Tools</u>	<u>Equipment Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 No. 2 cross-tip screwdriver, 4-inch shaft Diagonal cutting pliers Pocket knife	Generators shut down
<u>Materials/Parts</u>	<u>Special Environmental Conditions</u>
Strip, sealing, shielding 13222E9695-1 Adhesive (RTV) (item 5, appendix E) Adhesive, silicone, conductive (item 6, appendix E)	Adhesives must cure for 24 hours at over 60° F (30° C)
	<u>General Safety Instructions</u>
	None

4-11. CENTER PLATFORM - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	NOTE		
	Maintenance of the center platform at the organizational level, is limited to replacement of the sealing/shielding between the center platform and PDU control panel.		
Center platform	a. Sixteen screws (1), sixteen lockwashers (2) and PDU control panel (3)	(1) Using cross-tip screwdriver, remove screws and lockwashers. (2) Carefully pull the PDU control panel forward to expose wiring.	See figure, page 4-21.
	b. Wiring harness connector P-1 (4)	By hand, unscrew and pull connector from PDU receptacle.	
	c. Sealing, shielding strip (5)	(1) Using old shielding as a guide, cut new strips to correct length with pocket knife and diagonal cutting pliers. (2) With pocket knife, remove old shielding strip from center platform. Scrape off all old adhesive. (3) Begin with top strip. Peel backing paper off rubber portion of strip and apply to center platform so that rubber portion of strip covers top row of mounting holes for PDU control panel. (4) Cut the strip on a 45° angle over the end holes as shown on page 4-21.	

4-11. CENTER PLATFORM - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	<p>(5) Cut and apply bottom strip over bottom mounting holes in same way.</p> <p>(6) Cut two side strips to fit against top and bottom strips.</p> <p>(7) Apply RTV adhesive to rubber portion of 45° cuts and silicone conductive adhesive to wire cuts.</p> <p>(8) Peel backing paper off back of rubber portion of sealing strips.</p> <p>(9) Apply strips onto center platform. Make sure that corners bond tightly on rubber and wire mesh sections.</p> <p>(10) Let adhesives cure for 24 hours at 60° F (30° C) or higher.</p> <p>d. Wiring harness connector P-1 ④</p> <p>e. PDU control panel ③, sixteen lock-washers ②, and sixteen screws ①</p>	<p>Connect to PDU receptacle (J1).</p> <p>Attach PDU control panel to center platform with lock-washers and screws.</p>	

4-11. CENTER PLATFORM - MAINTENANCE INSTRUCTIONS - Continued



- 1 SCREWS
- 2 LOCKWASHERS
- 3 PDU CONTROL PANEL
- 4 CONNECTOR
- 5 SEALING STRIP

4-12. GENERATOR GUIDE PINS - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Install

INITIAL SETUP

Test Equipment

None

Personnel Required

One engineer missile equipment
repairman, MOS 52C

Tools and Special Tools

General mechanic's tool kit,
5180-00-177-7033
3/4-inch combination wrench
1-1/16-inch socket,
1/2-inch drive
Ratchet handle, 1/2-inch drive

Equipment Conditions

None

Special Environmental Conditions

None

Materials/parts

None

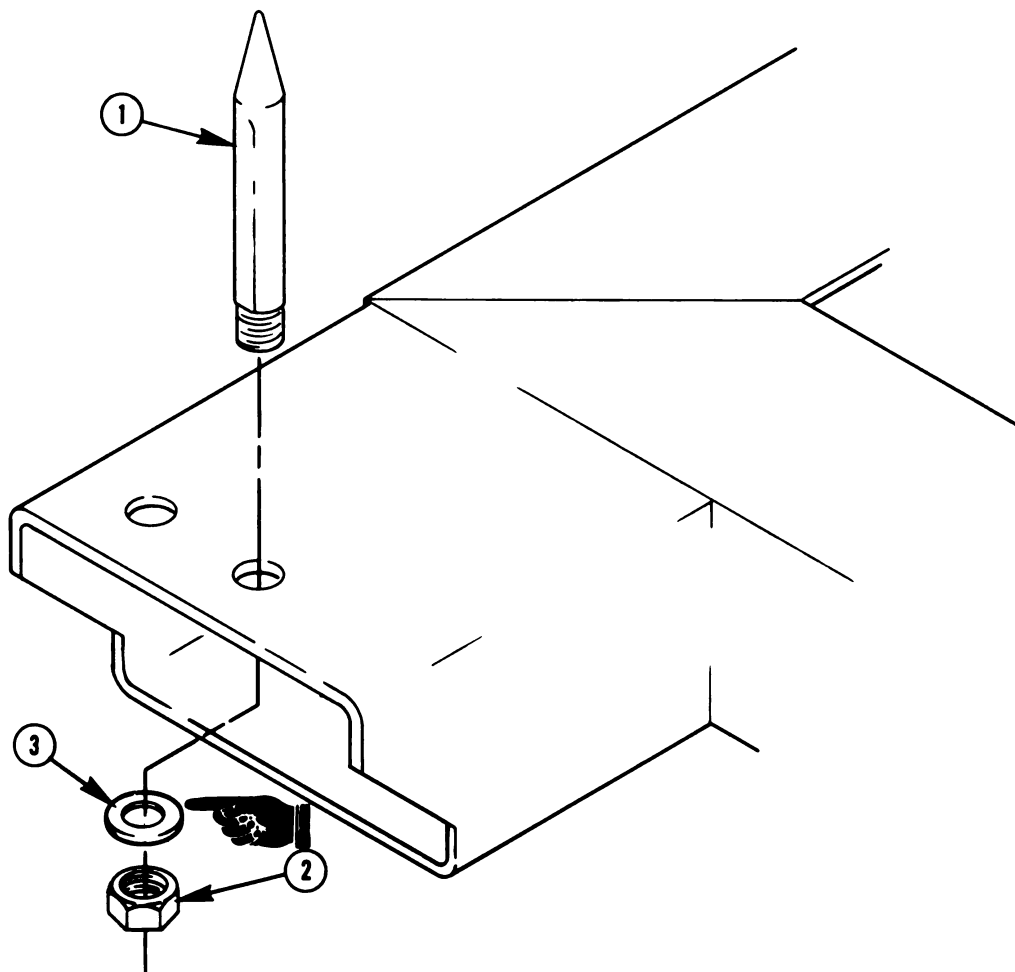
General Safety Instructions

None

4-22 Change 4

4-12. GENERATOR GUIDE PINS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE			
1. Generator mounting frame	Guide pin ①, nut ②, and washer ③	Remove using 3/4-inch combination wrench on guide pin and 1-1/16-inch socket and ratchet handle on nut.	See figure, page 4-24.
INSTALL			
NOTE			
There are two lengths of guide pins to assist in placing the generator sets. Make sure you use the right length pin during installation.			
2. Generator mounting frame	Guide pin ①, nut ② and washer ③	Insert guide pin through generator mounting frame and secure with nut. Tighten using 3/4-inch combination wrench on guide pin and 1-1/16-inch socket and ratchet handle on nut.	

4-12. GENERATOR GUIDE PIN - MAINTENANCE INSTRUCTIONS - Continued



- 1 GUIDE PIN
- 2 NUT
- 3 WASHER

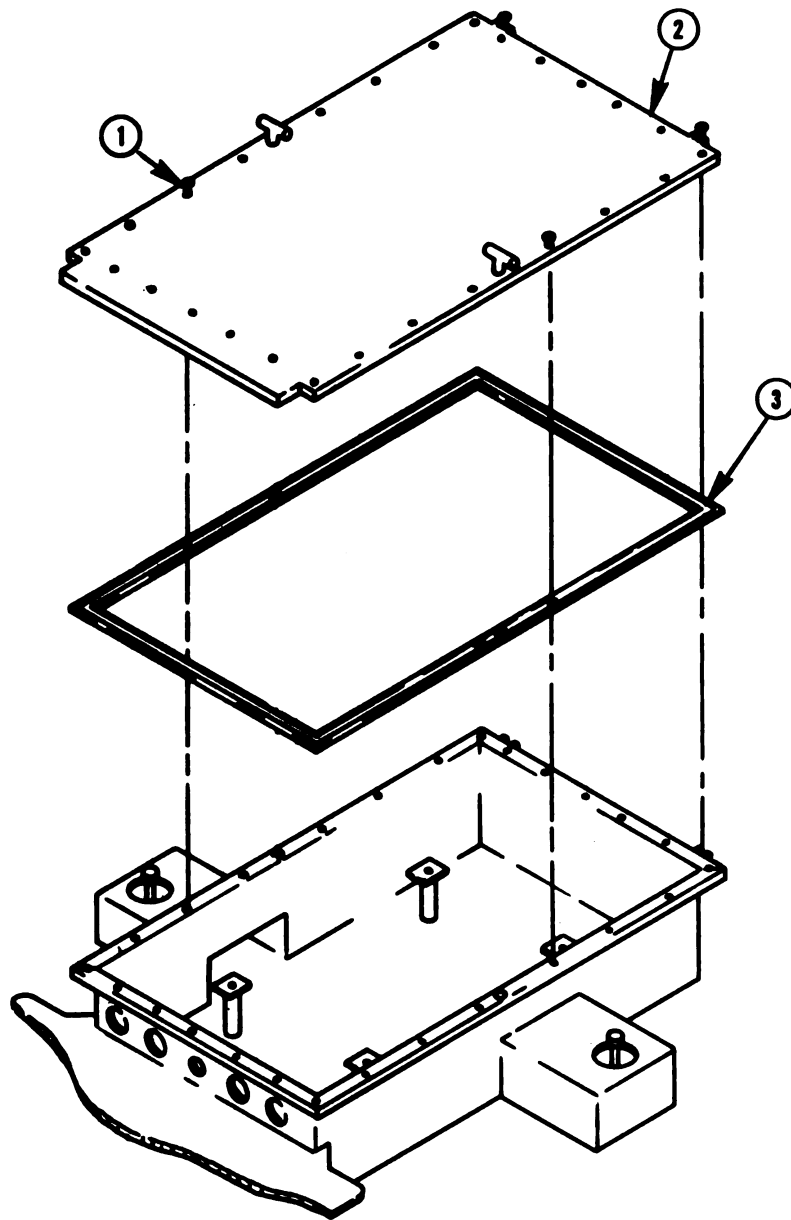
4-13. PDU COVER - MAINTENANCE INSTRUCTIONS	
This task covers: Repair	
<u>INITIAL SETUP</u>	
<u>Test Equipment:</u>	<u>Personnel Required</u>
None	Two engineer missile equipment repairmen, MOS 52C
<u>Tools and Special Tools</u>	<u>Equipment Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 Flat-tip screwdriver, 3/8-inch tip Diagonal cutting pliers Pocket knife	Generators shut down
<u>Materials/Parts</u>	<u>Special Environmental Conditions</u>
Strip, sealing, shielding 13222E9695-1 Adhesive (RTV) (Item 5, appendix E) Adhesive, silicone, conductive (Item 6, appendix E)	Adhesive must cure for 24 hours at over 60° F (30° C).
	<u>General Safety Instructions</u>
	None

4-13. PDU COVER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REPAIR			
1. Center platform	Twenty-six captive fasteners ① and PDU cover ②	Using flat-tip screwdriver, loosen captive fasteners and lift PDU cover off PDU and carry it to work area.	See figure, page 4-29. Two persons are needed to remove PDU cover.
2. PDU cover	Shielding strip ③	<p>a. Using the old shielding as a guide, cut correct lengths of new shielding strip with pocket knife and diagonal cutting pliers. Make sure to measure on the long side of shielding strip and to cut pieces for inner and outer strip.</p> <p>b. With pocket knife, remove all shielding strip from inside PDU cover. Scrape off all adhesive.</p> <p>c. Begin with one of the long outer strips. Peel off backing paper from rubber part of strip. Apply strip to inside of PDU cover with metal shielding toward the outside. Edge of rubber strip must cover half of the captive screw holes and extend beyond the last holes.</p> <p>d. Cut strip on a 45° angle across end holes as shown on page 4-30.</p>	See figure, page 4-29.

4-13. PDU COVER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
		<p>e. Cut and apply second long outer strip in the same way.</p> <p>f. Cut the short outer strips to fit against long strips. Peel off backing paper, apply RTV adhesive to 45° cuts, apply short strips to PDU cover. Make sure the rubber section covers half the captive fastener holes and that wire shielding sections meet. Apply silicone conductive adhesive to wire mesh joints.</p> <p>g. Cut one of the long inner strips to fit inside installed strips.</p> <p>h. Apply RTV adhesive to rubber edge of outer strip. Peel off backing paper and install inner strip with wire mesh toward inside. Make sure rubber edges bond tightly.</p> <p>i. Cut strip on a 45° angle across end holes as shown on page 4-30.</p> <p>j. Cut and apply second long inner strip in the same way.</p>	

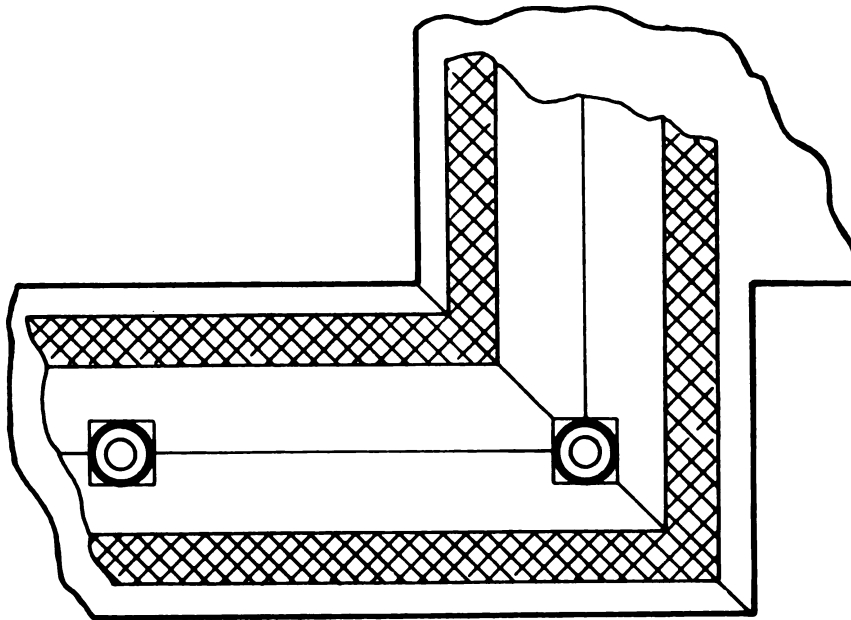
4-13. PDU COVER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
3. Center platform	PDU cover ② and twenty-six captive fasteners ①	<p>k. Cut the short inner strips to fit against long strips. Apply RTV adhesive to rubber edge of outer strips and to 45° cut of the inner strips. Apply silicone conductive adhesive to ends of wire mesh. Peel off backing paper and apply to PDU cover. Make sure rubber edges and wire joints bond tightly.</p> <p>l. Allow adhesives to cure for 24 hours at room temperature (60° F (30° C) or higher).</p> <p>m. With pocket knife, cut 1/2-inch square holes in rubber part of shield for each captive fastener as shown on page 4-30.</p> <p>Place PDU cover on PDU and secure with captive fasteners.</p>	

4-13. PDU COVER - MAINTENANCE INSTRUCTIONS - Continued



- 1 CAPTIVE FASTENERS
- 2 PDU COVER
- 3 SEALING STRIP

4-13. PDU COVER - MAINTENANCE INSTRUCTIONS - Continued



4-14. ROADSIDE STEP - MAINTENANCE INSTRUCTIONS (M811 Truck only)

This task covers:

- a. Remove
- b. Replace

INITIAL SETUP

Test Equipment

None

Personnel Required

One engineer missile
equipment repairman,
MOS 52C

Tools and Special Tools

General mechanic's tool kit
5180-00-177-7033
No. 2 cross-tip screwdriver
4-inch shaft
3/8-inch socket, 1/2-inch drive
Ratchet handle, 1/2-inch drive
6-inch adjustable wrench
1/4-inch allen wrench

Equipment Conditions

None

Special Environmental Conditions

None

General Safety Instructions

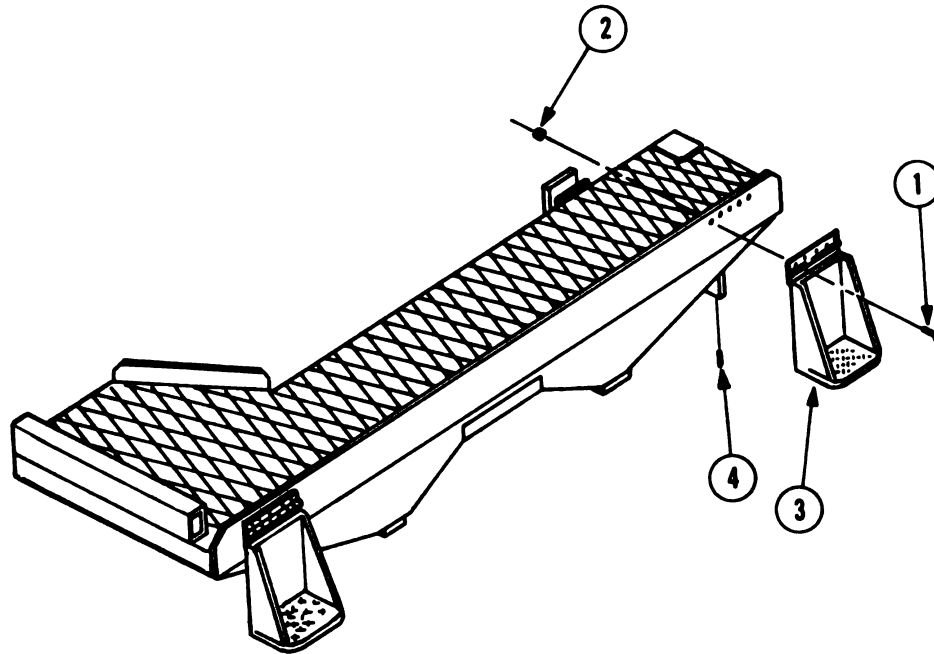
None

Materials/Parts

None

4-14. ROADSIDE STEP - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE			
1. Front platform	a. Five nuts ①, five screws ②, and roadside step ③	Remove using 3/8-inch socket on ratchet handle and cross-tip screwdriver.	See figure, page 4-33.
	b. Spring plunger ④	Remove from front platform using adjustable wrench.	If spring is not broken, the tension of the plunger can be adjusted before replacement.
REPLACE			
2. Front platform	a. Spring plunger ④	(1) Adjust spring tension using allen wrench in socket on back of spring plunger. (2) Insert into front platform using adjustable wrench.	
	b. Roadside step ③, five screws ②, and five nuts ①	Attach step to front platform with nuts and screws using 3/8-inch socket on ratchet handle and cross-tip screwdriver.	
	c. Spring plunger	Adjust spring plunger using adjustable wrench so that roadside step can be secured.	

4-14. ROADSIDE STEP - MAINTENANCE INSTRUCTIONS - Continued



NOTE

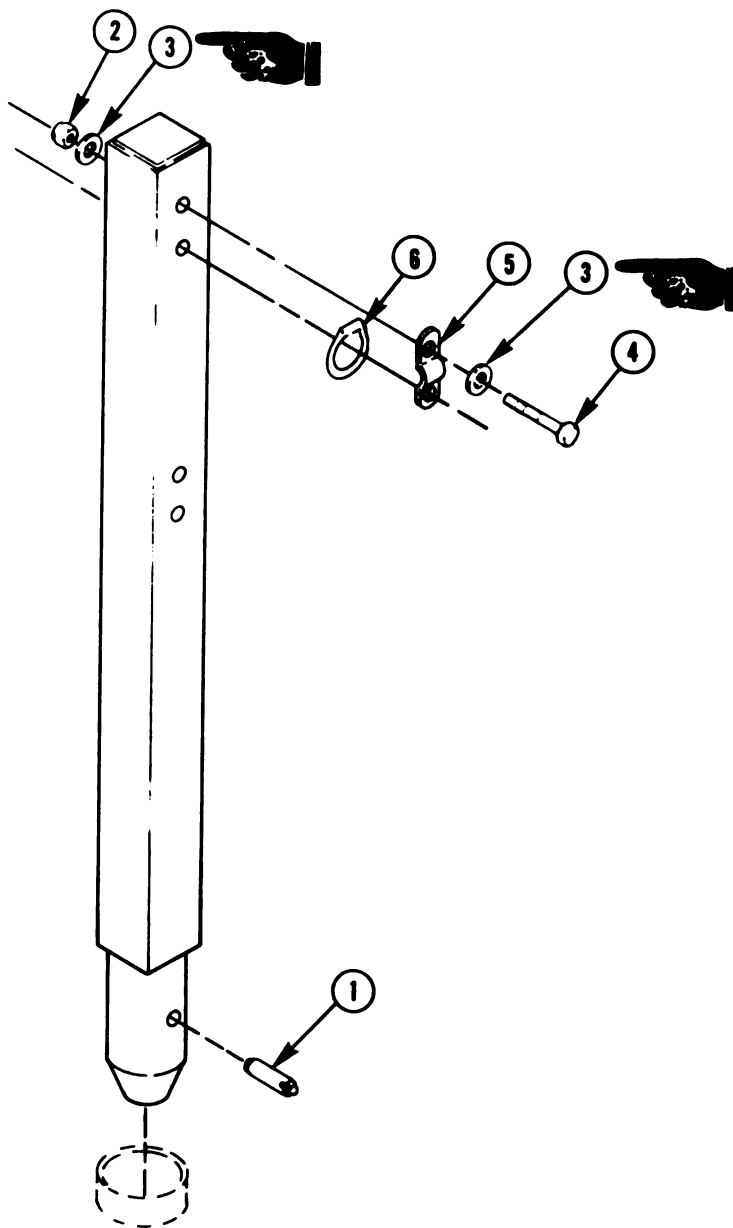
Steps (3) on M811 truck only

- 1 NUT
- 2 SCREW
- 3 ROADSIDE STEP
- 4 SPRING PLUNGER

4-15. STANCHIONS - MAINTENANCE INSTRUCTIONS	
This task covers: Repair	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Personnel Required</u>
None	One turbine engine driven generator repairman, MOS 52F
<u>Tools and Special Tools</u>	<u>Equipment Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 6-inch long adjustable wrench 1/2-inch combination wrench 1/2-inch socket, 1/2-inch drive Ratchet handle, 1/2-inch drive 1/4-inch allen wrench	Stanchion removed from EPP II, chain assembly disconnected
<u>Materials/Parts</u>	<u>Special Environmental Conditions</u>
Sealing Compound, MIL-S-46163 (Item 14, Appendix E)	None
	<u>General Safety Instructions</u>
	None

4-15. STANCHIONS - MAINTENANCE INSTRUCTIONS - Continued				
LOCATION	ITEM	ACTION	REMARKS	
REPAIR 1. Stanchion	a. Spring plunger ①	Unscrew from stanchion using adjustable wrench.	See figure, page 4-36.	
	b. Two nuts ②, four washers ③, and two capscrews ④	Remove using 1/2-inch combination wrench and 1/2-inch socket on ratchet handle.		
	NOTE			
	The center stanchions have two ring and clip assemblies, the end stanchions have only one. The same attaching hardware is used in each case.			
	c. Clip ⑤ and ring ⑥	Remove.		
	d. Ring ⑥ and clip ⑤	Place clip over ring and align mounting holes in clip with holes in stanchion.		
e. Two capscrews ④, four washers ③, and two nuts ②	Insert screws with washer through clip and stanchion, secure with nut and washer. Tighten using 1/2-inch combination wrench and 1/2-inch socket on ratchet.			
f. Spring plunger ①	(1) Adjust spring tension using 1/4-inch allen wrench on adjusting screw on back of spring plunger. (2) Apply sealing compound to threads of spring-plunger and screw into stanchion using adjustable wrench until it fits snugly into platform mounting hole.			

4-15. STANCHIONS - MAINTENANCE INSTRUCTIONS - Continued



- 1 SPRING PLUNGER
- 2 NUT
- 3 WASHER
- 4 CAPSCREW
- 5 CLIP
- 6 RING

4-16. FENDERS - MAINTENANCE INSTRUCTIONS

This task covers:
 a. Remove
 b. Install

INITIAL SETUP

Test Equipment

None

Personnel Required

Two engineer missile equipment
 repairmen, MOS 52C

Tools and Special Tools

General mechanic's tool kit,
 5180-00-177-7033
 7/16-inch combination wrench
 7/16-inch socket
 1/2-inch drive ratchet
 10-inch socket wrench extension,
 1/2-inch drive

Equipment Conditions

Cable racks down.

Special Environmental Conditions

None

General Safety Instructions

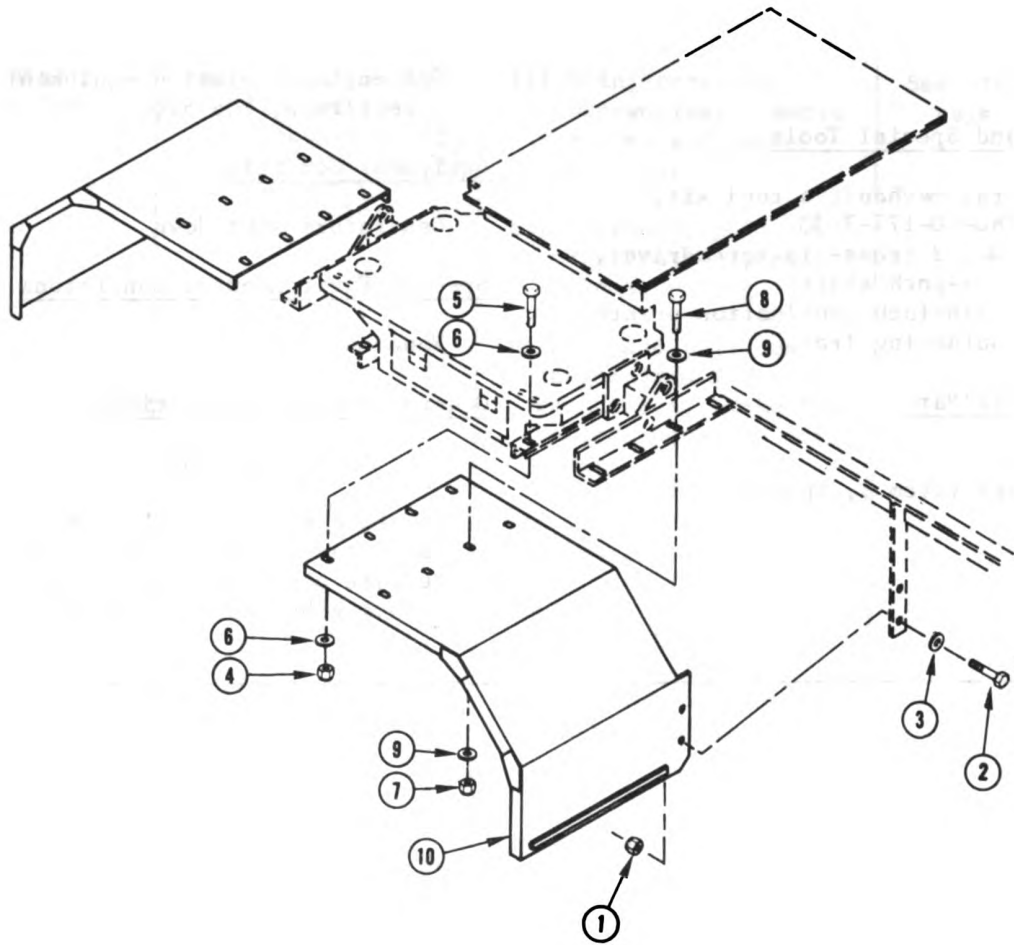
None

Materials/Parts

None

4-16. FENDERS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE			
1. EPP II frame	a. Two nuts ①, two capscrews ②, and two flat washers ③	Remove using 7/16-inch combination wrench and 7/16-inch socket on 1/2-inch drive ratchet.	See figure, page 4-39.
	b. Three nuts ④, three capscrews ⑤, and six flat washers ⑥	Remove using 7/16-inch socket, extension, and ratchet on cap-screw, and 7/16-inch combination wrench on nut.	
	c. Four nuts ⑦, four capscrews ⑧, eight flat washers ⑨, and fender ⑩	Support fender so that it does not drop suddenly, and remove nuts and capscrews using same tools as in step 1b.	
INSTALL			
2. EPP II frame	a. Fender ⑩, four capscrews ⑧, eight flat washers ⑨, and four nuts ⑦	Align fender with holes on mounting plates, and fasten with nuts, flat washers and capscrews, using 7/16-inch combination wrench and 7/16-inch socket on 1/2-inch drive ratchet.	
	b. Three nuts ④, three capscrews ⑤, and six flat washers ⑥	Attach fender to frame using 7/16-inch socket, extension, and ratchet on capscrews, and 7/16-inch combination wrench on nut.	
	c. Two nuts ①, two capscrews ②, and two flat washers ③	Attach using same tools	

4-16. FENDERS - MAINTENANCE INSTRUCTIONS - Continued



- 1 NUT
- 2 CAPSCREW
- 3 FLAT WASHERS
- 4 NUT
- 5 CAPSCREW

- 6 FLAT WASHER
- 7 NUT
- 8 CAPSCREW
- 9 FLAT WASHER
- 10 FENDER

4-17. PUSH TO RESET CONTACTOR - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Install

INITIAL SETUP

Test Equipment

None

Personnel Required

One engineer missile equipment repairman, MOS 52C

Tools and Special Tools

General mechanic's tool kit,
5180-00-177-7033
No. 2 cross-tip screwdriver,
4-inch shaft
9/16-inch combination wrench
Soldering iron

Equipment Condition

Generators shut down

Special Environmental Conditions

None

Materials/Parts

Tags
Solder (Item 1, appendix E)

General Safety Instructions

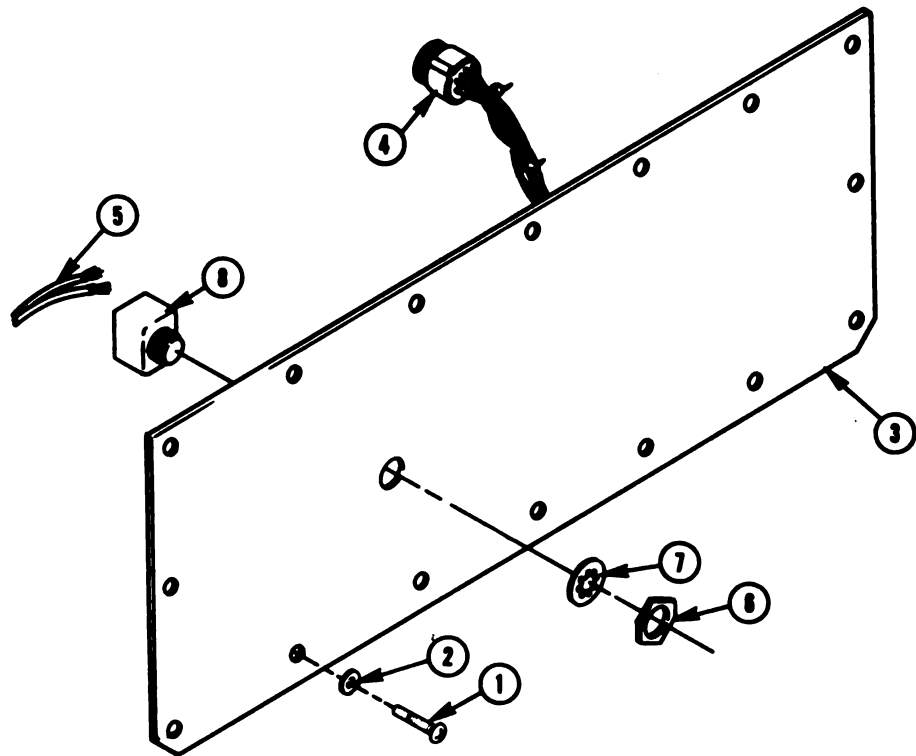
WARNING

Electric power in PDU control panel can cause painful shock. Be sure power is shut off before removing PDU control panel.

4-17. PUSH TO RESET CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
NOTE			
See troubleshooting, table 4-1, page 4-3, for test of PUSH TO RESET CONTACTOR.			
REMOVE			
1. Center platform	a. Sixteen screws ①, sixteen lockwashers ② and PDU control panel ③	(1) Using cross-tip screwdriver, remove screws and lockwashers. (2) Carefully pull out PDU control panel to expose wiring.	See figure, page 4-43.
	b. Wiring harness connector P-1 ④	Unscrew and pull connector from PDU receptacle. Take PDU control panel to work area.	
	2. PDU control panel	a. Wires ⑤ b. Nut ⑥ and lockwasher ⑦ c. Contactor ⑧	
INSTALL			
3. PDU control panel	a. Contactor ⑧, lockwasher ⑦ and nut ⑥	Insert contactor through control panel from back. Fasten with lockwasher and nut. Tighten nut with 9/16-inch combination wrench.	
	b. Wires ⑤	Solder wire to correct terminals of contactor using soldering iron. Remove tags.	

4-17. PUSH TO RESET CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
4. Center platform	a. Wiring harness connector P-1 ④ b. PDU control panel ③, sixteen lockwashers ②, and sixteen nuts ①	Connect to PDU receptacle J1. Attach PDU control panel to center platform with lockwashers and screws.	

4-17. PUSH TO RESET CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued



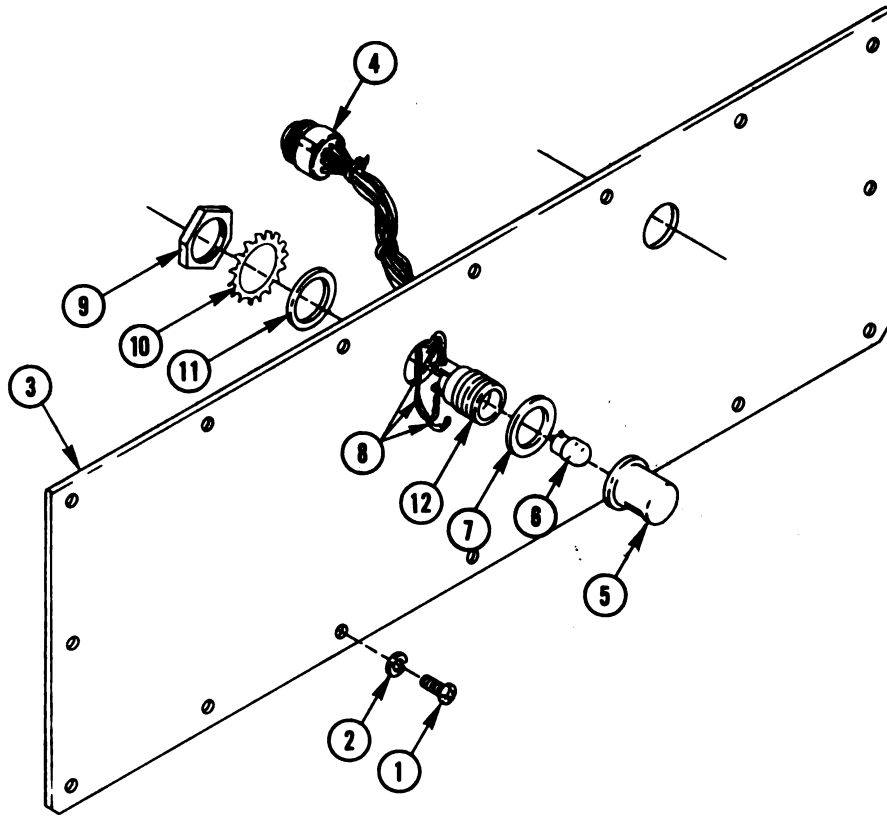
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|---|-------------------|---|-------------------------|
| 1 | SCREW | 5 | WIRES |
| 2 | LOCKWASHER | 6 | NUT |
| 3 | PDU CONTROL PANEL | 7 | LOCKWASHER |
| 4 | CONNECTOR | 8 | PUSH TO RESET CONTACTOR |

4-18. PDU PANEL LAMPS - MAINTENANCE INSTRUCTIONS	
<p>This task covers:</p> <ul style="list-style-type: none"> a. Remove b. Install 	
INITIAL SETUP	
<u>Test Equipment</u>	<u>Personnel Required</u>
None	One engineer missile equipment repairman, MOS 52C
<u>Tools and Special Tools</u>	<u>Equipment Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 No. 2 cross-tip screwdriver with 4-inch shaft 13/16-inch combination wrench Soldering iron, 47.5 watts rating	Generators shut down
	<u>Special Environmental Conditions</u>
	None
<u>Materials/Parts</u>	<u>General Safety Instructions</u>
Solder (Item 1, appendix E)	None
Tags	

4-18. PDU PANEL LAMPS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
NOTE			
See Troubleshooting, table 4-1, page 4-2, for test of panel lamp.			
REMOVE			
1. Center platform	a. Sixteen screws (1), sixteen lockwashers (2), and PDU control panel (3)	(1) Using cross-tip screwdriver, remove screws and lockwashers. (2) Carefully pull PDU control panel forward to expose wiring.	See figure, page 4-47.
	b. Wiring harness connector P-1 (4)	Unscrew and pull connector from PDU receptacle. Take PDU control panel to work area.	
2. PDU control panel	a. Panel lamp hood (5)	Unscrew and remove.	
	b. Lamp bulb (6)	Push in, turn to left, and remove from panel lamp body.	
	c. Gasket (7)	Remove.	
	d. Panel lamp wires (8)	Tag wires. Disconnect using soldering iron.	
	e. Nut (9), lockwasher (10), and gasket (11)	Using 13/16-inch combination wrench, remove nut, lockwasher, and gasket from back of panel lamp body.	
	f. Panel lamp body (12)	Remove from front of PDU control panel.	
INSTALL			
3. PDU control panel	a. Panel lamp body (12)	Insert from front of PDU control panel.	

4-18. PDU PANEL LAMPS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
4. Center platform	b. Nut (8), lock-washer (10), and gasket (11)	Place gasket and lock-washer over back of panel lamp body. Fasten with nut using 13/16-inch combination wrench.	
	c. Panel lamp wires (8)	Solder to panel lamp body and remove tags.	
	d. Gasket (7)	Place on front of panel lamp body.	
	e. Lamp bulb (6)	Install.	
	f. Lamp hood (5)	Screw onto front of panel lamp body.	
	a. Wiring harness connector P-1	Connect to PDU receptacle (J1).	
	b. PDU control panel (3), sixteen screws (1), and sixteen lock-washers (2)	Attach PDU control panel to center platform with lockwashers and screws.	

4-18. PDU PANEL LAMPS - MAINTENANCE INSTRUCTIONS - Continued



- | | | | |
|---|------------|----|------------|
| 1 | SCREW | 7 | GASKET |
| 2 | LOCKWASHER | 8 | WIRE |
| 3 | PANEL | 9 | NUT |
| 4 | CONNECTOR | 10 | LOCKWASHER |
| 5 | HOOD | 11 | GASKET |
| 6 | BULB | 12 | LIGHT BODY |

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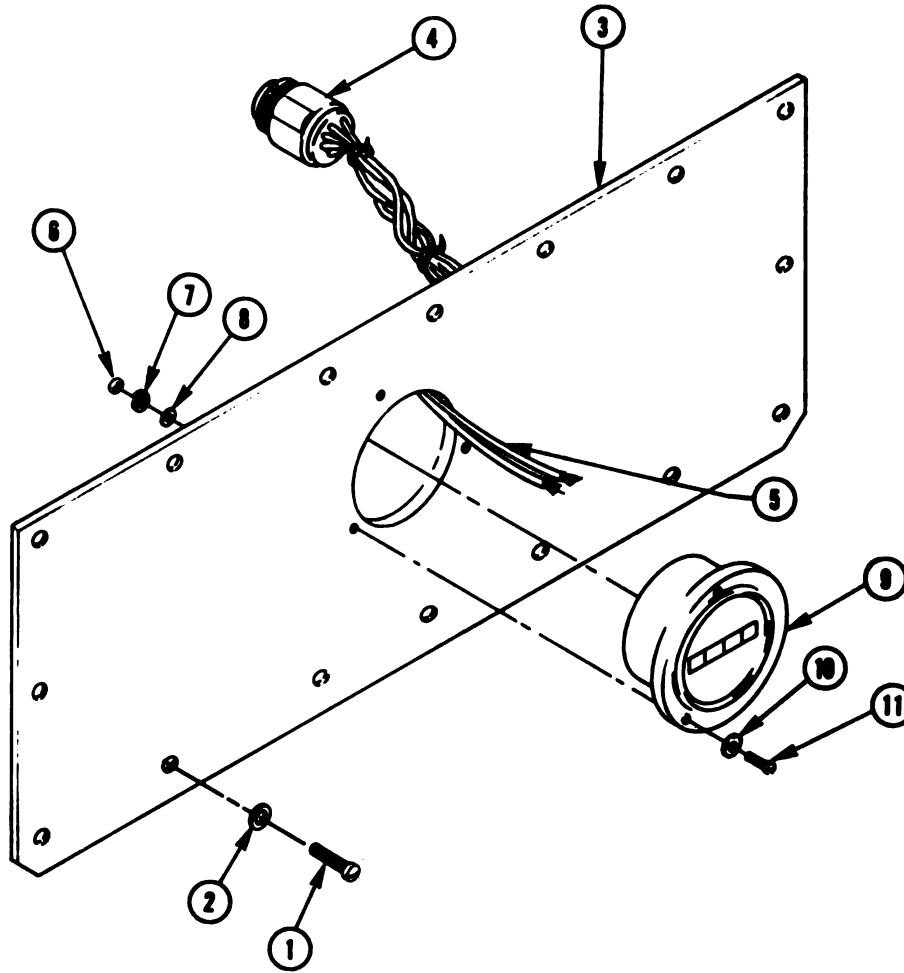
4-19. TIME TOTALIZING METER - MAINTENANCE INSTRUCTIONS	
This task covers: a. Remove b. Install	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Equipment Conditions</u>
None	Generators shut down
<u>Tools and Special Tools</u>	<u>Special Environmental Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 5/16-inch combination wrench Flat-tip screwdriver No. 2 cross-tip screwdriver Soldering iron, 3439-00-465-1649	None
<u>Material/Parts</u>	<u>General Safety Instructions</u>
Tags	<u>WARNING</u> Electricity in the PDU control panel can cause painful shock. Be sure power is shut off before removing PDU control panel.
<u>Personnel Required</u>	
One turbine engine driven generator repairman, MOS, 52F	

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4-19. TIME TOTALIZING METER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE			
1. Center platform	a. Sixteen screws ①, sixteen lockwashers ②, and PDU control panel ③	(1) Using cross-tip screwdriver, remove screws and lockwashers. (2) Carefully pull PDU control panel forward to expose wiring.	See figure, 'page 4-51.
	b. Wiring harness connector P-1 ④	By hand, unscrew and pull connector from PDU receptacle. Take PDU control panel to work area.	
2. PDU control panel	a. Two wires ⑤	Tag wires. Remove from time totalizing meter using soldering iron.	
	b. Three nuts ⑥, three lockwashers ⑦, and three flat washers ⑧	Remove, using 5/16-inch combination wrench.	
	c. Time totalizing meter ⑨	Remove.	
	d. Three flat washers ⑩, and three screws ⑪	Remove flat washers from screws, and screws from time totalizing meter, using flat-tip screwdriver.	
INSTALL			
3. PDU control panel	a. Three screws ⑪, three flat washers ⑩, and time totalizing meter ⑨	Insert screws through flat washers, time totalizing meter, and front of PDU control panel.	

4-19. TIME TOTALIZING METER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
4. Center platform	b. Three flat washers (8), three lock-washers (7), and three nuts (6)	Install flat washers, lockwashers, and nuts on each screw. Tighten with 5/16-inch wrench and flat-tip screwdriver.	
	c. Two wires (5)	Solder to correct terminal on time totalizing meter. Remove tags.	
	a. Wiring harness connector P-1 (4)	Connect to PDU receptacle J1.	
	b. PDU control panel (3), sixteen lock-washers (2), and sixteen screws (1)	Attach PDU control panel to center platform with lock-washers and screws.	

4-19. TIME TOTALIZING METER - MAINTENANCE INSTRUCTIONS - Continued



- | | | | |
|---|------------|----|-------------|
| 1 | SCREWS | 7 | LOCKWASHER |
| 2 | LOCKWASHER | 8 | FLAT WASHER |
| 3 | PANEL | 9 | TIME METER |
| 4 | CONNECTOR | 10 | FLAT WASHER |
| 5 | WIRE | 11 | SCREW |
| 6 | NUT | | |

4-21. PANEL LAMP SWITCH - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Install

INITIAL SETUP

Test Equipment

None

Equipment Conditions

Generators shut down

Tools and Special Tools

General mechanic's tool kit,
5180-00-177-7033
No. 2 cross-tip screwdriver,
4-inch shaft
9/16-inch combination wrench
Soldering iron, 3439-00-465-1649

Special Environmental Conditions

None

General Safety Instructions

WARNING

Electric shock can kill you. Use extreme caution when working with electrical equipment.

Materials/Parts

Solder (Item 1, appendix E)
Tags

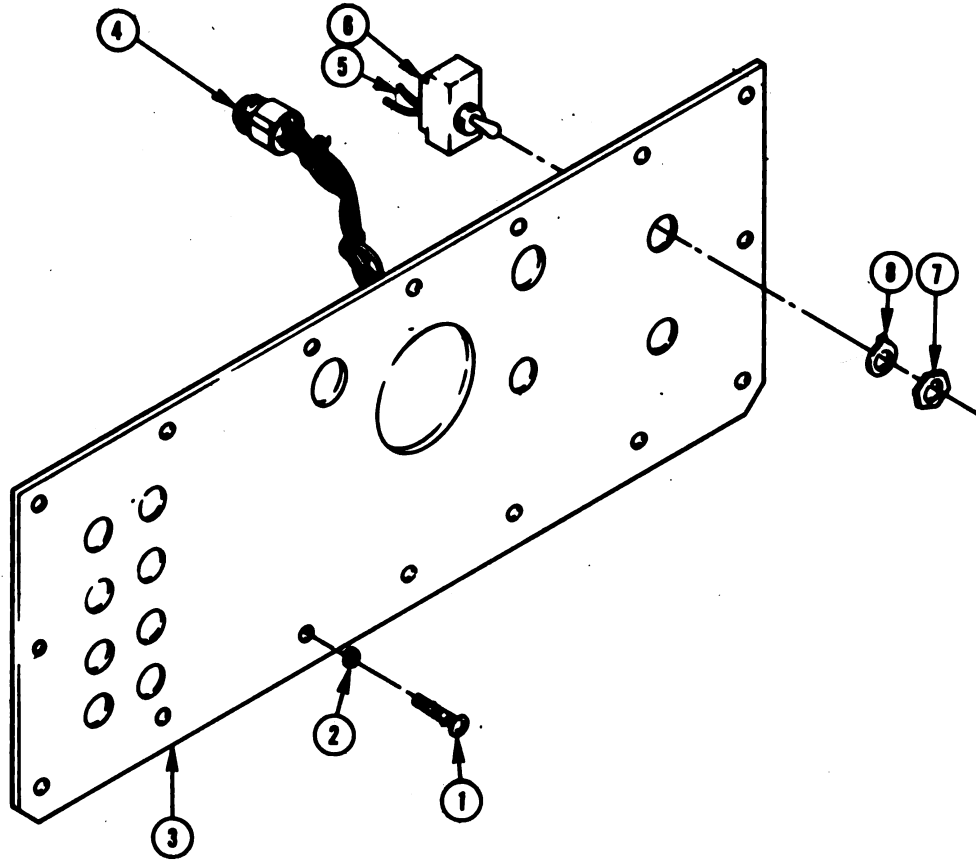
Personnel Required

One turbine engine driven
generator repairman, MOS 52F

4-20. INDICATOR LAMP - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
NOTE			
See Troubleshooting, Table 4-1, page 4-3, for test of indicator lamps.			
REMOVE			
1. Center platform	a. Sixteen screws ①, sixteen lockwashers ②, and PDU control panel ③	(1) Using cross-tip screwdriver, remove screws and lockwashers. (2) Carefully pull PDU control panel forward to expose wiring.	See figure, page 4-55.
	b. Wiring harness connector P-1 ④	By hand, unscrew and pull connector from PDU receptacle. Take PDU control panel to work area.	
2. PDU control panel	a. Lens ⑤ and light bulb ⑥	By hand, unscrew lens from indicator lamp body. Remove light bulb from lens.	
	b. Wires ⑦ and indicator lamp body ⑧	Tag wires and disconnect from lamp body, using soldering iron.	
	c. Nut ⑨ and lockwasher ⑩	Using 9/16-inch combination wrench, remove nut and lockwasher. Push indicator lamp body through PDU control panel from the front.	
INSTALL			
3. PDU control panel	a. Indicator lamp body ⑧, lockwasher ⑩, and nut ⑨	Insert indicator lamp body through PDU control panel from the back. Fasten with nut and lockwashers. Tighten nut with 9/16-inch combination wrench.	

4-21. PANEL LAMP SWITCH - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
4. Center platform	a. Wiring harness connector P-1 ④	Connect to PDU receptacle (J1).	
	b. PDU control panel ③, sixteen lockwashers ②, and sixteen screws ①	Attach PDU control panel to center platform with lockwashers and screws.	

4-21. PANEL LAMP SWITCH - MAINTENANCE INSTRUCTIONS - Continued



- 1 SCREW
- 2 LOCKWASHER
- 3 PANEL
- 4 CONNECTOR

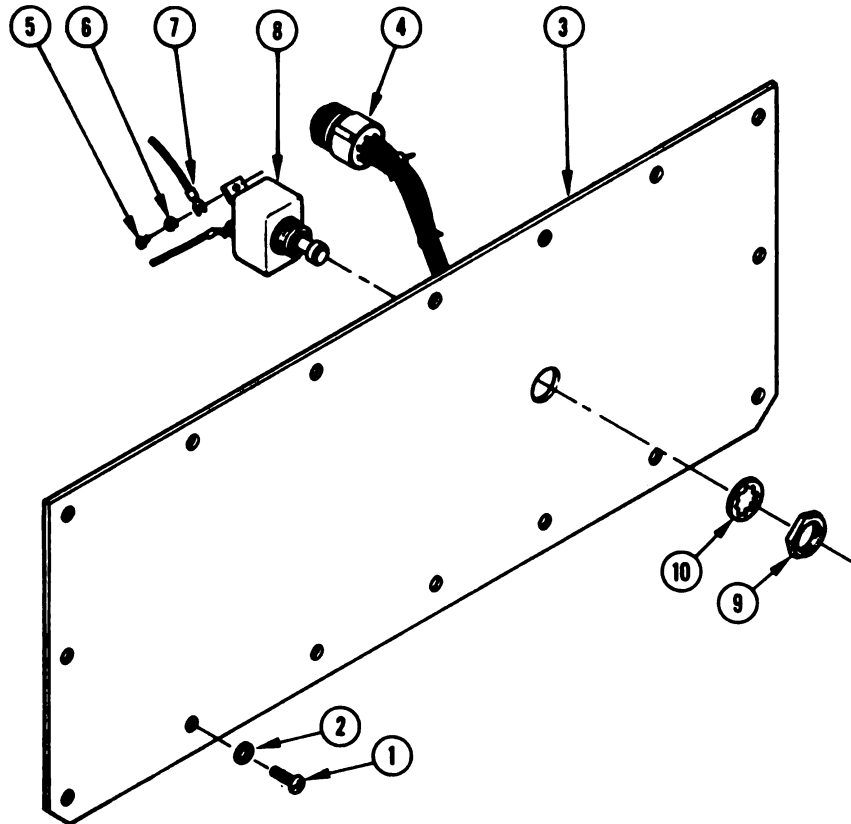
- 5 WIRE
- 6 SWITCH
- 7 NUT
- 8 LOCKWASHER

4-22. CIRCUIT BREAKER - MAINTENANCE INSTRUCTIONS	
<p>This task covers:</p> <ul style="list-style-type: none"> a. Remove b. Install 	
INITIAL SETUP	
<u>Test Equipment</u>	<u>Personnel Required</u>
None	One engineer missile equipment repairman, MOS 52C
<u>Tools and Special Tools</u>	<u>Equipment Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 9/16-inch combination wrench No. 2 cross-tip screwdriver, 4-inch shaft	Generators turned off
<u>Materials/Parts</u>	<u>Special Environmental Conditions</u>
Tags	None
	<u>General Safety Instructions</u>
	<u>WARNING</u>
	Electric shock can kill you. Use extreme caution when working on electrical equipment.

4-22. CIRCUIT BREAKER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
NOTE			
See Troubleshooting, Table 4-1, page 4-2, for test of circuit breaker.			
REMOVE			
1. Center platform	a. Sixteen screws ①, sixteen lockwashers ②, and PDU control panel ③	(1) Using cross-tip screwdriver, remove screws and lockwashers. (2) Carefully pull PDU control panel forward to expose wiring.	See figure, page 4-63.
	b. Wiring harness connector P-1 ④	By hand, unscrew and pull connector from PDU receptacle. Take PDU control panel to work area.	
2. PDU control panel	a. Screws ⑤, lockwashers ⑥, wires ⑦, and circuit breaker ⑧	Tag all wires. Using cross-tip screwdriver remove all screws and lockwashers from circuit breaker terminals. Disconnect all wires.	
	b. Nut ⑨ and lockwasher ⑩	Using the 9/16-inch combination wrench, remove nut and lockwasher. Push circuit breaker through panel from the front.	
INSTALL			
3. PDU control panel	a. Circuit breaker ⑧, lockwasher ⑩, and nut ⑨	Insert circuit breaker through PDU control panel from the back. Fasten with lockwasher and nut. Tighten nut with 9/16-inch combination wrench.	

4-22. CIRCUIT BREAKER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
4. Center platform	b. Circuit breaker ⑧, wires ⑦, lockwashers ⑥, and screws ⑤	Attach all wires to proper terminals with lockwashers and screws. Remove tags.	
	a. Wiring harness connector P-1 ④	Connect to PDU receptacle (J1).	
	b. PDU control panel ③, sixteen lockwashers ②, and sixteen screws ①	Attach PDU control panel to center platform with lockwashers and screws.	

4-22. CIRCUIT BREAKER - MAINTENANCE INSTRUCTIONS - Continued



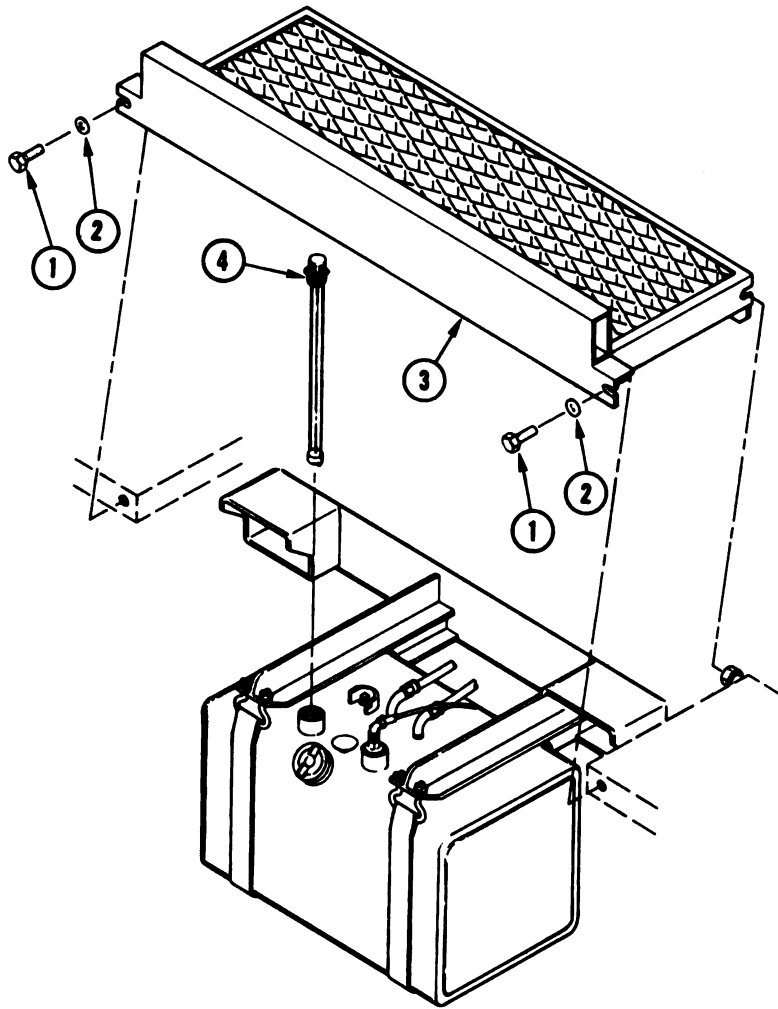
- | | | | |
|---|----------------|----|-----------------|
| 1 | PANHEAD SCREWS | 6 | LOCKWASHER |
| 2 | LOCKWASHER | 7 | WIRE |
| 3 | PANEL | 8 | CIRCUIT BREAKER |
| 4 | CONNECTOR | 9 | NUT |
| 5 | SCREW | 10 | LOCKWASHER |

4-23. FUEL LEVEL GAGE - MAINTENANCE INSTRUCTIONS	
<p>This task covers:</p> <ul style="list-style-type: none"> a. Remove b. Inspect c. Install 	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Equipment Conditions</u>
None	Front cable rack up, cables on rack
<u>Tools and Special Tools</u>	<u>Special Environmental Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 3/4-inch combination wrench 18-inch pipe wrench, 5120-00-277-1479 Truck wrecker, M816, 2320-00-051-0489	None
<u>Materials/Parts</u>	<u>General Safety Instructions</u>
Sealant compound (Item 3, appendix E) 1/2-inch nylon rope	<p style="text-align: center;"><u>WARNING</u></p> <p>Generator fuel is a potential fire hazard. Extreme care must be taken at all times. Do not smoke when working on the fuel level gage.</p>
<u>Personnel Required</u>	
Two engineer missile equipment repairmen, MOS 52C One wrecker operator, MOS 63B	

4-23. FUEL LEVEL GAGE - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE CURBSIDE			
1. Curbside chassis	a. Two capscrews ① and two lockwashers ② holding platform to chassis	Remove capscrews and lockwashers using 3/4-inch combination wrench.	See figure, page 4-67.
	b. Platform ③	Remove.	
2. Curbside fuel tank	Fuel level gage ④	Remove using 18-inch pipe wrench.	
INSPECT			
3. Fuel level gage	Fuel level gage ①	(1) Inspect for broken or discolored indicator cover. Inspect for damaged or missing float. Inspect for broken float rod.	Replace fuel level gage if these parts are damaged.
		(2) Inspect for dirt or particles causing float to jam.	Clean dirt from fuel level gage. If float moves freely after cleaning, do not replace gage.
INSTALL CURBSIDE			
4. Curbside fuel tank	Fuel level gage ④	(1) Apply thread compound to fuel level gage. (2) Insert into fuel tank and tighten using 18-inch pipe wrench.	Do not over-tighten.

4-23. FUEL LEVEL GAGE - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
5. Curbside chassis	a. Platform ③	Place onto truck chassis.	See figure, page 4-67.
	b. Two capscrews ① and two lockwashers ②	Attach platform to chassis with lockwashers and capscrews using 3/4-inch combination wrench.	
REMOVE ROADSIDE			
6. Roadside fuel tank	Fuel level gage ①	Loosen using 18-inch pipe wrench.	See figure, page 4-68.
7. Roadside chassis	Front cable rack ②	Pull out rack enough to reach fuel level gage from above, and secure rack in place using 1/2-inch rope and truck wrecker.	
8. Roadside fuel tank	Fuel level gage ①	Remove.	
NOTE			
See step 3 for inspection of fuel level gage.			
INSTALL ROADSIDE			
9. Roadside chassis	Front cable rack ②	Using 1/2-inch rope and truck wrecker, secure cable rack far enough out to reach fuel tank from above.	
10. Roadside fuel tank	Fuel level gage ①	(1) Apply thread compound to fuel level gage. (2) Insert fuel level gage into fuel tank. (3) Release cable rack to up position. (4) Tighten fuel level gage into tank using 18-inch pipe wrench.	Do not over-tighten.

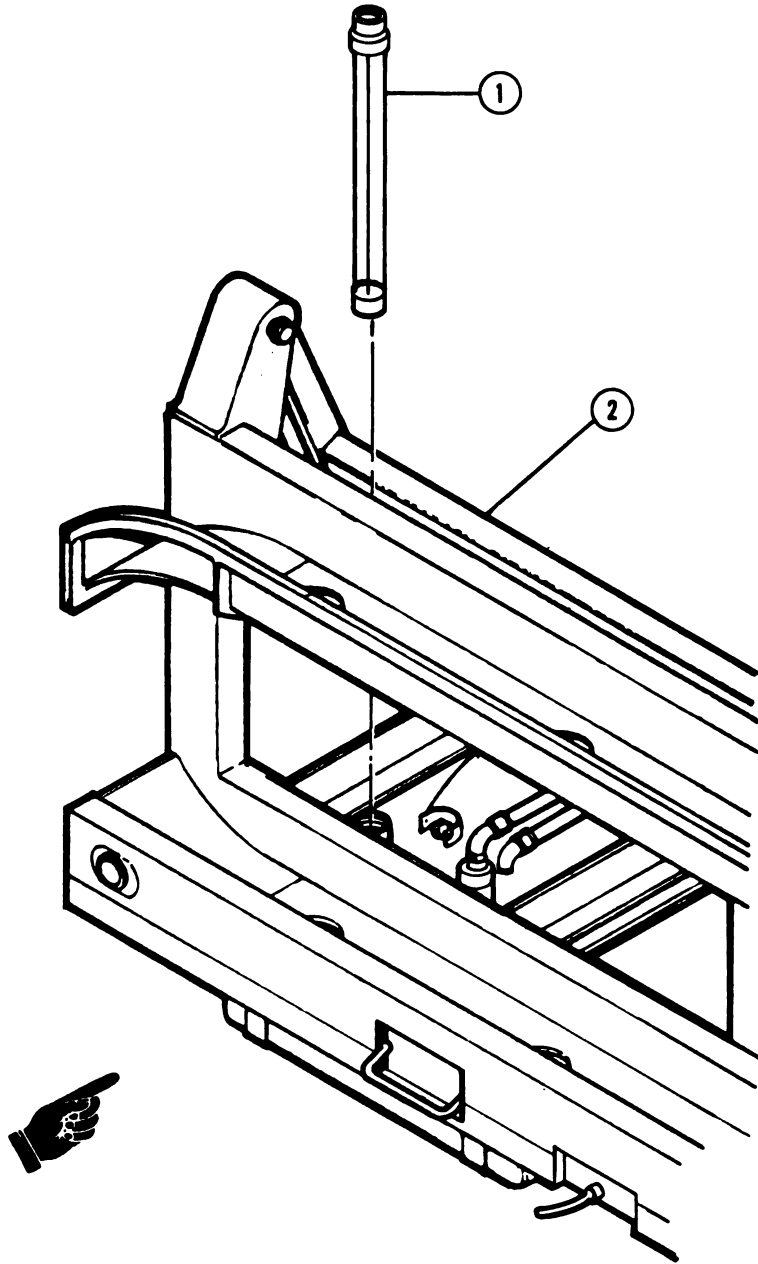
4-23. FUEL LEVEL GAGE - MAINTENANCE INSTRUCTIONS - Continued



- 1 CAPSCREW
- 2 WASHER
- 3 PLATFORM
- 4 FUEL LEVEL GAGE

CURBSIDE

4-23. FUEL LEVEL GAGE - MAINTENANCE INSTRUCTIONS - Continued



- 1 FUEL LEVEL GAGE
- 2 CABLE RACK

ROADSIDE

4-68 Change 4

4-24. LIQUID LEVEL SWITCH - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Test
- c. Install

INITIAL SETUP

Test Equipment

Multimeter AN/URM-105

Equipment Conditions

Front cable rack up, cables on rack

Tools and Special Tools

General mechanic's tool kit,
5180-00-177-7033
3/4-inch combination wrench
Slip-joint pliers
18-inch pipe wrench,
5120-00-277-1479
Truck wrecker, M816,
2320-00-051-0489

Special Environmental Conditions

None

General Safety Instructions

WARNING

Generator fuel is a fire hazard. Extreme care must be taken at all times. Do not smoke when working on the liquid level switch.

Materials/Parts

Sealant compound
(Item 3, appendix E)
1/2-inch nylon rope

Personnel Required

Two engineer missile equipment repairmen, MOS 52C
One wrecker operator, MOS 63B

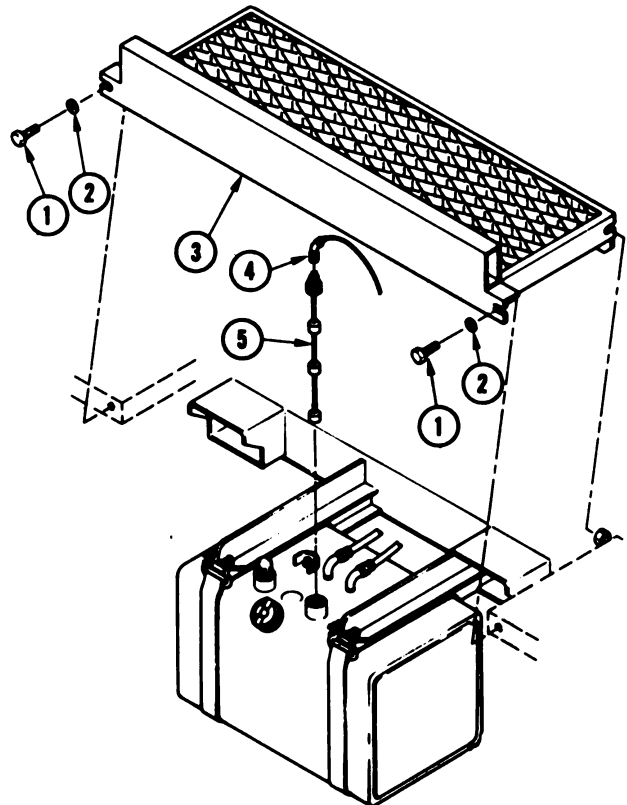
4-24. LIQUID LEVEL SWITCH - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE CURBSIDE			
1. Curbside chassis	a. Two capscrews ① and two lockwashers ② holding platform to chassis	Remove capscrews and lockwashers using 3/4-inch combination wrench.	See figure, page 4-72.
	b. Platform ③	Remove.	
2. Curbside fuel tank	a. Cable connector ④	Unscrew using slip-joint pliers if needed and disconnect from liquid level switch.	
	b. Liquid level switch ⑤	Remove from fuel tank using 18-inch pipe wrench.	
TEST			
3. Liquid level switch		Set multimeter on the R X 1 ohms scale. Touch the probes to pins A and D of the switch. With the bottom float all the way down, the meter should read zero. Raise the bottom float and the meter should read infinity. If incorrect readings are obtained, replace the switch.	
INSTALL CURBSIDE			
4. Curbside fuel tank	a. Liquid level switch ⑤	(1) Apply thread compound to liquid level switch. (2) Insert switch into fuel tank and tighten using 18-inch pipe wrench.	Do not over-tighten.

4-24. LIQUID LEVEL SWITCH - MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
5. Curbside chassis	b. Cable connector ④ a. Platform ③ b. Two lockwashers ② and two capscrews ①	Attach to liquid level switch. Place on chassis. Attach platform to chassis with lockwashers and capscrews using 3/4-inch combination wrench.	
REMOVE ROADSIDE			
6. Roadside fuel tank	a. Cable connector ① b. Liquid level switch ②	Unscrew and disconnect from liquid level switch. Unscrew using 18-inch pipe wrench.	See figure, page 4-73.
7. Roadside chassis	Front cable rack ③	Pull out rack enough to reach liquid level switch from above, and secure rack in place using 1/2-inch rope and truck wrecker.	
8. Roadside fuel tank	Liquid level switch ②	Remove.	
NOTE			
See step 3 to test liquid level switch.			
INSTALL ROADSIDE			
9. Roadside chassis	Front cable rack ③	Using 1/2-inch rope and truck wrecker, secure the cable rack far enough out to reach the fuel tank from above.	

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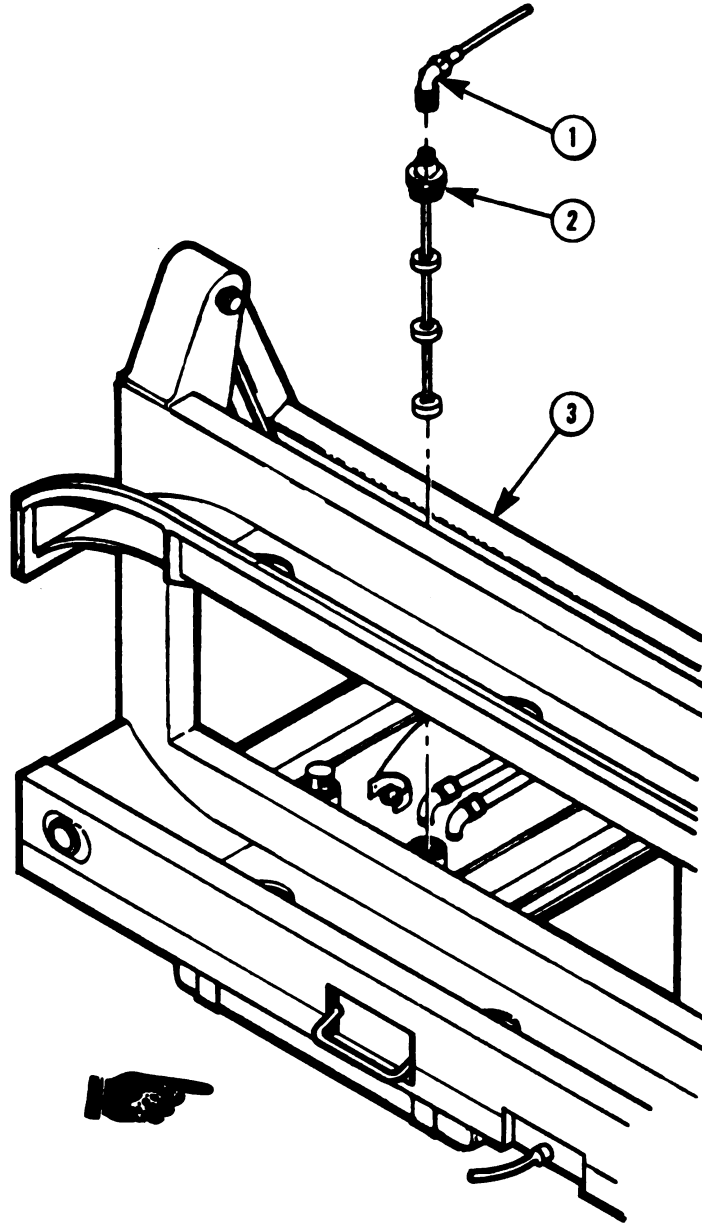
4-24. LIQUID LEVEL SWITCH - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
10. Roadside fuel tank	a. Liquid level switch ②	(1) Apply thread compound to liquid level switch. (2) Insert liquid level switch into fuel tank. (3) Release cable rack to up position. (4) Tighten liquid level switch into fuel tank using 18-inch pipe wrench.	Do not over-tighten.
	b. Cable connector ①	Attach to liquid level switch.	



- 1 CAPSCREW
- 2 LOCKWASHER
- 3 PLATFORM
- 4 CONNECTOR
- 5 SWITCH

CURBSIDE

4-24. LIQUID LEVEL SWITCH - MAINTENANCE INSTRUCTIONS - Continued



- 1 CONNECTOR
- 2 SWITCH
- 3 CABLE RACK

ROADSIDE

4-25. FUEL SYSTEM LINES AND FITTINGS - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Install

INITIAL SETUP

Test Equipment

None

Equipment Conditions

Fuel supply to the damaged line must be shut off

Tools and Special Tools

General mechanic's tool kit,
5180-00-177-7033
7/8-inch combination wrench
10-inch adjustable wrench
Pocket knife
Vise, 5120-00-223-1951

Special Environmental Conditions

None

General Safety Instructions

WARNING

Generator fuel is a potential fire hazard. Extreme care must be taken at all times. Do not smoke when working on the fuel system.

Materials/Parts

Hose, type 1, 1.500 I.D.,
MIL-H-13444
Sealant compound
(Item 3, appendix E)

Personnel Required

One engineer missile equipment
repairman, MOS 52C

4-25. FUEL SYSTEM LINES AND FITTINGS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE			
1. Truck frame	Fuel hose	<p>(1) Using 7/8-inch combination wrench and adjustable wrench, disconnect fitting at each end of damaged fuel hose.</p> <p>(2) Remove fuel line clamps and remove fuel hose.</p>	
INSTALL			
2. Truck frame	Fuel hose	<p>(1) Using damaged fuel hose as guide, cut new lines with pocket knife.</p> <p>(2) Put fitting in vise so that ripple crimp is exposed.</p> <p>(3) Lubricate nipple portion of fitting with thread compound.</p> <p>(4) Force fuel hose onto nipple of fitting as far as possible.</p> <p>(5) Repeat for fitting at other end of hose.</p> <p>(6) Place new fuel hose in position and reconnect fittings.</p> <p>(7) Replace fuel hose clamps.</p> <p>(8) Check for fuel leaks or sucking air when system is in operation.</p>	

4-26. BALL VALVE - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Inspect
- c. Install

INITIAL SETUP

Test Equipment

None

Personnel Required

One turbine engine driven generator repairman, MOS 52F

Tools and Special Tools

General mechanic's tool kit, 5180-00-177-7033
7/8-inch combination wrench
10-inch adjustable wrench
1/2-inch combination wrench
1-inch combination wrench
3/8-inch hinged socket wrench handle, 5120-00-240-5396

Equipment Conditions

None

Special Environmental Conditions

None

General Safety Instructions

Materials/Parts

Sealant compound
(Item 3, appendix E)
Suitable container

WARNING

Generator fuel is a potential fire hazard. Extreme care must be taken at all times. Do not smoke when working on the ball valve.

4-26. BALL VALVE - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE			
	<u>CAUTION</u>		
	Close Ball Valve on fuel tank not being worked on. 140 gallons of fuel could drain during this operation, from the opposite side tank if the other valve is not closed.		
1. Fuel Tank	a. Drain valve ①	Open petcock on drain valve and drain fuel into suitable container.	
	b. Drain plug ②	(1) When fuel stops flowing from drain valve, use 3/8-inch hinged socket wrench handle to remove drain plug located in center of bottom of tank. Drain fuel into suitable container. (2) Replace plug when fuel tank is empty.	
2. Ball valve	a. Male socketless fitting ①	Use 7/8-inch combination wrench and 10-inch adjustable wrench to disconnect fitting from ball valve.	See figure page 4-80
	b. Drain assembly	Remove drain assembly, with ball valve attached, from fuel tank.	
	c. Adapter ③ and ball valve ④	Use 7/8-inch combination wrench on adapter and 10-inch adjustable wrench on ball valve to remove ball valve from drain assembly.	

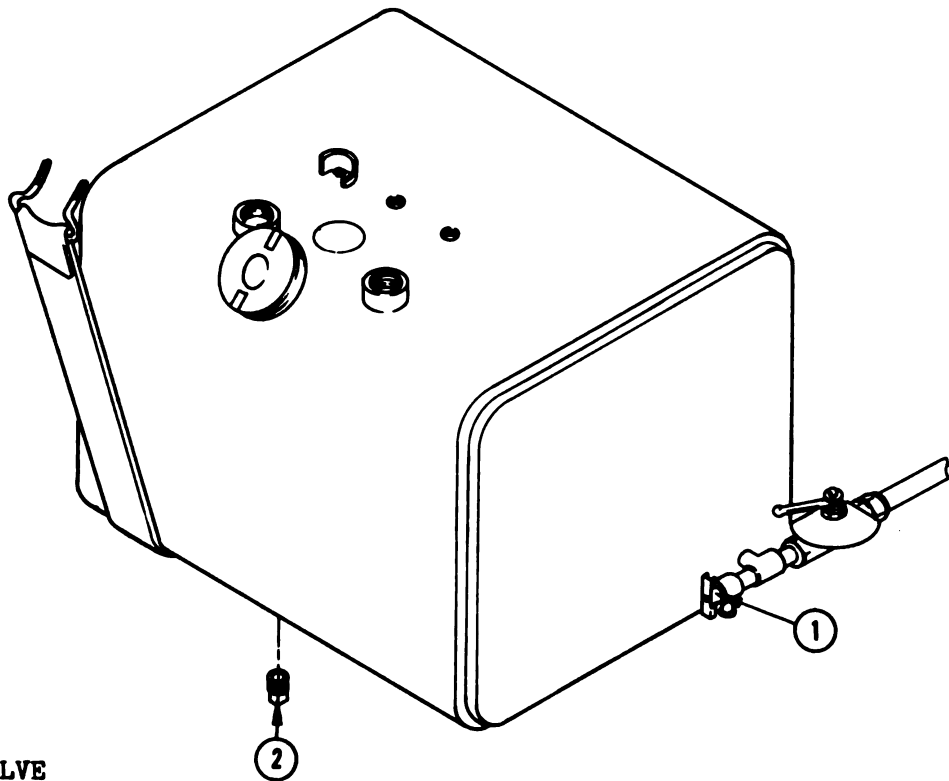
4-26. BALL VALVE - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	d. Nut (5) and handle (6)	Remove nut using 1/2-inch combination wrench. Remove handle from ball valve.	
	e. Nut (7) and plate (8)	Remove nut using 1-inch combination wrench. Remove plate.	Keep instruction plate for installation on new ball valve.
INSPECT			
3. Ball valve		(1) Inspect for stripped threads. Check to see that handle moves freely and that valve opens and closes properly.	Replace defective valve.
		(2) Inspect all attaching pieces for stripped threads and other damage.	Replace damaged items.
INSTALL			
4. Ball valve	a. Plate (8) and nut (7)	Install plate and secure into place with nut using 1-inch combination wrench.	
	b. Handle (6) and nut (5)	Install handle and secure into place with nut using 1/2-inch combination wrench.	
	c. Ball valve (4) and adapter (3)	(1) Apply sealant compound to adapter threads. (2) Attach ball valve to adapter on drain assembly using 7/8-inch wrench on adapter and 10-inch adjuster wrench on ball valve.	

4-26. BALL VALVE - MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
5. Curbside fuel tank	a. Drain assembly ②	(1) Apply sealant compound to drain assembly. (2) Screw drain assembly into fuel tank.	
	b. Male socketless fitting ①	(1) Apply sealant compound to threads of fitting. (2) Attach fitting to adapter using 7/8-inch combination wrench.	

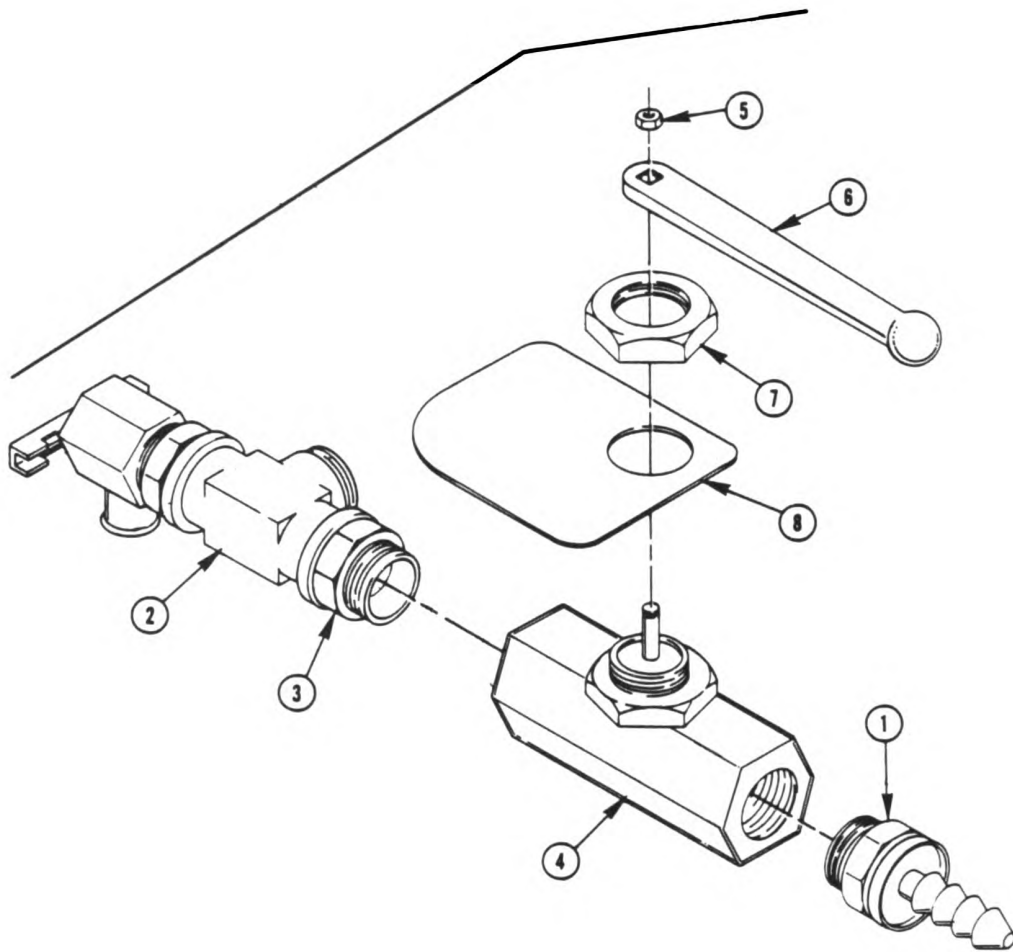
NOTE

Be sure drain valve petcock is closed before filling fuel tank. Open both ball valves when tank is full. Check for leakage, refer to PMCS Table 2-3 for classification of any leaks.



- 1 DRAIN VALVE
- 2 DRAIN PLUG

4-26. BALL VALVE - MAINTENANCE INSTRUCTIONS - Continued



- 1 FITTING
- 2 DRAIN ASSEMBLY
- 3 ADAPTER
- 4 BALL VALVE

- 5 NUT
- 6 HANDLE
- 7 NUT
- 8 PLATE

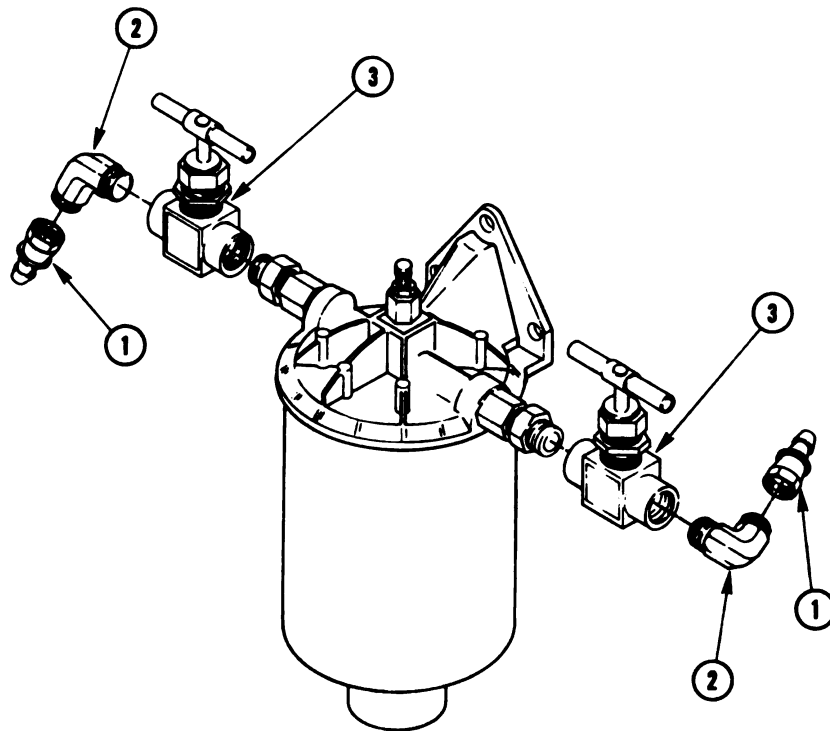
4-27. SHUTOFF VALVES - MAINTENANCE INSTRUCTIONS	
<p>This task covers:</p> <ul style="list-style-type: none"> a. Remove b. Install 	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Personnel Required</u>
None	One engineer missile equipment repairman, MOS 52C
<u>Tools and Special Tools</u>	<u>Equipment Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 7/8-inch combination wrench 10-inch adjustable wrench	Generators shut down
<u>Material/Parts</u>	<u>Special Environmental Conditions</u>
Suitable container Rags Sealant compound (Item 3, appendix E)	None
	<u>General Safety Instructions</u>
	<u>WARNING</u>
	Generator fuel is a fire hazard. Extreme care must be taken at all times. Do not smoke when working on shutoff valves.

4-27. SHUTOFF VALVES - MAINTENANCE INSTRUCTIONS - Continued				
LOCATION	ITEM	ACTION	REMARKS	
REMOVE CURBSIDE				
1. Generator set	Fuel line quick disconnect	Disconnect.		
	2. Curbside fuel filter	a. Shutoff valves	Leave both valves open, and drain all fuel out of fuel filter lines into suitable container.	See paragraph 3-1 for procedure.
		b. Fitting(s) ①	Using 7/8-inch combination wrench and 10-inch adjustable wrench, unscrew fitting(s) from elbow(s)	See figure, page 4-85.
		c. Elbow(s) ②	Using same tools, remove elbow(s) from shutoff valves.	
	d. Shutoff valve(s) ③	Using same tools, remove shutoff valves.		
INSTALL CURBSIDE				
3. Curbside fuel filter	a. Shutoff valve(s) ③	Apply sealant compound to adapter, and attach shutoff valve(s) to fuel filter assembly using 7/8-inch combination wrench and 10-inch adjustable wrench.		
	b. Elbow(s) ②	Attach elbow(s) to shutoff valve(s) using same tools		

4-27. SHUTOFF VALVES - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	c. Fitting(s) ①	Apply sealant compound to threads of fitting(s) and attach to elbow(s) using same tools.	
4. Generator set	Fuel line quick-disconnect	Attach.	
REMOVE ROADSIDE			
5. Generator set	Fuel line quick-disconnect	Disconnect.	
6. Roadside fuel filter	a. Shutoff valves	Leave both valves open and drain all fuel out of filter and lines into suitable container.	
	b. Fitting(s) ①	Using 7/8-inch combination wrench and 10-inch adjustable wrench, disconnect fitting(s).	See figure, page 4-86.
	c. Adapter ② or elbow ③	Using same tools, disconnect adapter or elbow from shutoff valve.	
	d. Shutoff valve(s) ④	Using same tools, disconnect shutoff valve(s) from fuel filter assembly.	
INSTALL ROADSIDE			
7. Roadside fuel filter	a. Shutoff valve(s) ④	Apply sealant compound to adapter threads and attach shutoff valve(s) to fuel filter assembly using 7/8-inch combination wrench and 10-inch adjustable wrench.	

4-27. SHUTOFF VALVES - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
8. Generator Set	b. Adapter ^② or elbow ^③	Apply sealant compound to both ends of adapter or elbow and attach to shutoff valves using same tools.	
	c. Fitting(s) ^①	Attach to adapter(s) using same tools.	
	Fuel line quick-disconnect	Attach.	

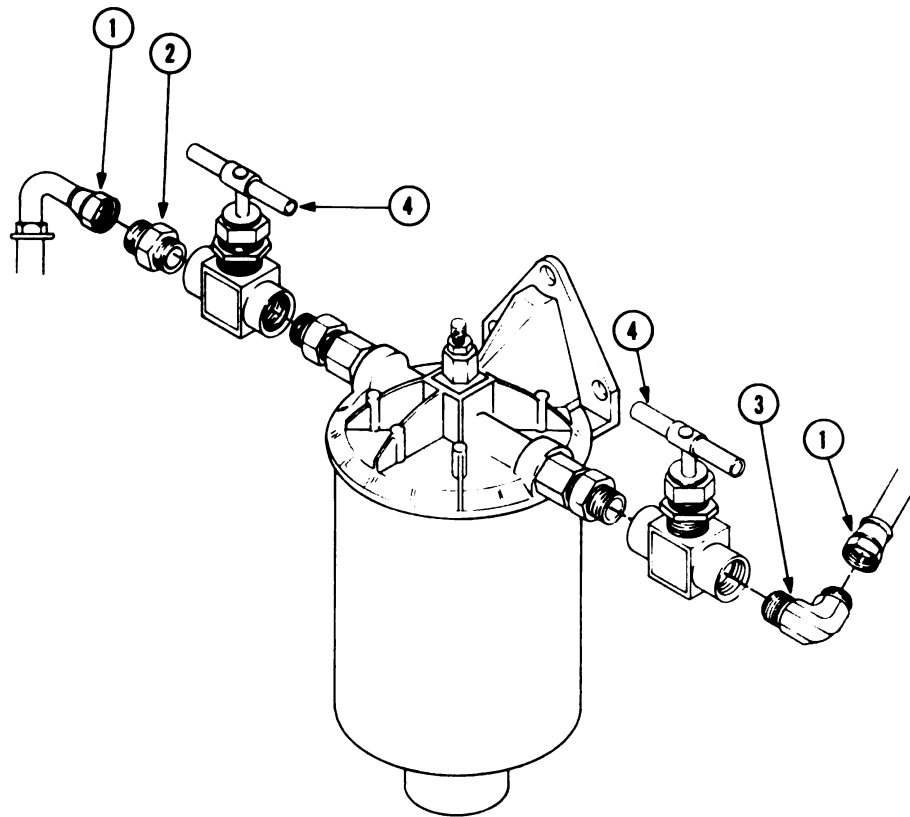
4-27. SHUTOFF VALVES - MAINTENANCE INSTRUCTIONS - Continued



- 1 FITTING
- 2 ELBOWS
- 3 SHUTOFF VALVES

CURBSIDE FUEL FILTER

4-27. SHUTOFF VALVES - MAINTENANCE INSTRUCTIONS - Continued



- 1 FITTINGS
- 2 ADAPTER
- 3 ELBOW
- 4 SHUTOFF VALVES

ROADSIDE FUEL FILTER

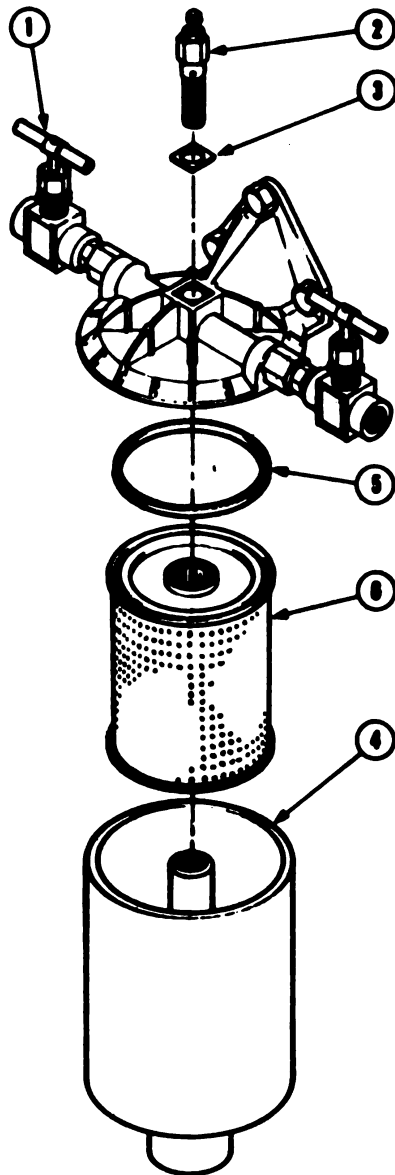
4-28. FUEL FILTER/WATER SEPARATOR - MAINTENANCE INSTRUCTIONS	
<p>This task covers:</p> <ul style="list-style-type: none"> a. Service b. Remove c. Install 	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Personnel Required</u>
None	One engineer missile equipment repairman, MOS 52C
<u>Tools and Special Tools</u>	<u>Equipment Conditions</u>
General mechanic's tool kit, 5180-00-177-7033 3/4-inch combination wrench 9/16-inch combination wrench 9/16-inch socket, 1/2-inch drive 1/2-inch drive ratchet handle 7/8-inch combination wrench	Generators shut down
	<u>Special Environmental Conditions</u>
	None
	<u>General Safety Instructions</u>
<u>Material/Parts</u>	<u>WARNING</u>
Fuel filter element Suitable container Rags	Generator fuel is a fire hazard. Extreme care must be taken at all times. Do not smoke when working on fuel filter.

4-28. FUEL FILTER/WATER SEPARATOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
SERVICE			
1. Fuel filter	a. Shutoff valves ①	(1) Close both shutoff valves. (2) Drain all fuel from fuel filter/water separator into suitable container.	See figure, page 4-91. See paragraph 3-1.
	b. Nut ②, and square washer ③	Hold body of fuel filter/water separator from bottom and remove nut and washer using 3/4-inch combination wrench.	
	c. Fuel filter/water separator body ④ and gasket ⑤	Remove.	
	d. Fuel filter element ⑥	Remove from fuel filter/separator body.	
	e. Fuel filter body	Using clean rags, wipe any dirt out of fuel filter body. If filter body is particularly dirty, wash out with clean diesel fuel and wipe dry.	
	f. Fuel filter element ⑥	(1) Insert into fuel filter body. (2) Fill fuel filter/water separator body with clean fuel.	
	g. Fuel filter/water separator body ④ and gasket ⑤	Place fuel filter/water separator body against fuel filter/water separator cap. Be sure filter element is centered and gasket is not crimped.	

4-28. FUEL FILTER/WATER SEPARATOR - MAINTENANCE INSTRUCTIONS - Continued				
LOCATION	ITEM	ACTION	REMARKS	
REMOVE	h. Square washer (3) and nut (2)	Fasten fuel filter/water separator body to fuel filter cap with nut and washer. Tighten nut using 3/4-inch combination wrench.		
	i. Shutoff valves (1)	Open both shutoff valves.		
	2. Fuel filter/water separator	a. Shutoff valves (1)	Remove.	See paragraph 4-27, page 4-81.
		b. Two double-male adapters (2)	Remove using 7/8-inch combination wrench and 10-inch adjustable wrench.	
	c. Two adapters (3)	Remove from fuel filter/water separator using same tools.		
	d. Three nuts (4), three capscrews (5), three flat washers (6), and fuel filter/water separator (7)	Support fuel filter/water separator and remove nuts and screws using 9/16-inch combination wrench and 9/16-inch socket on ratchet handle. Remove fuel filter/water separator.		
INSTALL				
3. Fuel filter/water separator	a. Filter body	Separate from fuel filter/water separator cap.	See steps 1b and 1c this paragraph.	
	b. Fuel filter/water separator (cap) (7), three capscrews (5), three flat washers (6) and three nuts (4)	Attach fuel filter/water separator cap to EPP II with nuts and capscrews using 9/16-inch combination wrench and 9/16-inch socket on ratchet handle.		

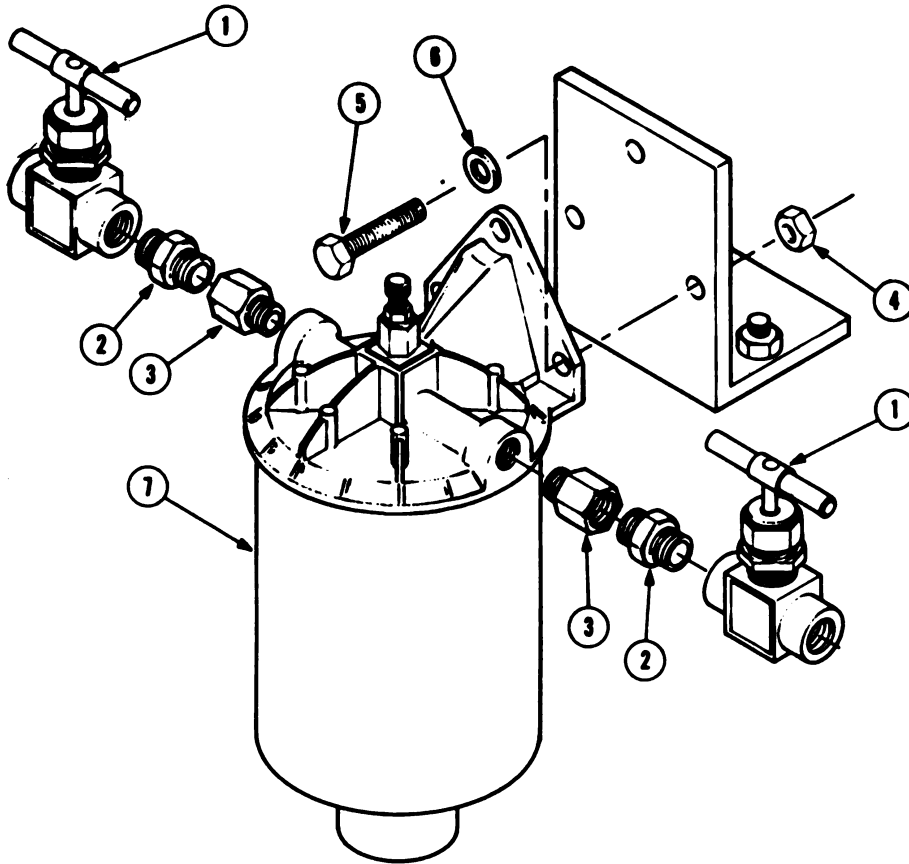
4-28. FUEL FILTER/WATER SEPARATOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	c. Two adapters ③	Attach to fuel filter/ water separator using 7/8-inch combination wrench and 10-inch adjustable wrench.	
	d. Two double- male adapters ②	Attach to adapters ③ using same tools.	
	e. Shutoff valves ①	Attach.	See para- graph 4-27, page 4-81.
	f. Fuel filter/ water separator	Fill fuel filter/water separator body with fuel and attach to fuel filter/water separator cap.	See steps 1f through 1h in this paragraph.

4-28. FUEL FILTER/WATER SEPARATOR - MAINTENANCE INSTRUCTIONS - Continued



- 1 SHUTOFF VALVES
- 2 NUT
- 3 SQUARE WASHER
- 4 FUEL FILTER/WATER SEPARATOR BODY
- 5 GASKET
- 6 FUEL FILTER ELEMENT

28. FUEL FILTER/WATER SEPARATOR - MAINTENANCE INSTRUCTIONS - Continued



- 1 SHUTOFF VALVES
- 2 DOUBLE-MALE ADAPTER
- 3 ADAPTER
- 4 NUT

- 5 CAPSCREW
- 6 FLAT WASHER
- 7 FUEL FILTER/WATER SEPARATOR

4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Install

INITIAL SETUP

Test Equipment

None

Equipment Conditions

Cable racks down

Tools and Special Tools

- General mechanic's tool kit,
5180-00-177-7033
- Flat-tip screwdriver
- 7/8-inch combination wrench
- Putty knife
- 9/16-inch socket, 1/2-inch drive
- Cross-tip screwdriver
- 1/2-inch drive ratchet
- 5-inch extension, 1/2-inch drive
- 5/8-inch socket, 1/2-inch drive
- Pocket knife
- 1-7/16 inch open-end wrench
- 3/4-inch drive ratchet handle
5120-00-249-1076
- 2-inch extension, 3/4-inch drive
- 1-1/2-inch regular socket
5120-00-243-0094
- Truck wrecker, 5-ton, M816
2320-00-051-0489
- Spreader bar and sling assembly

Special Environmental Conditions

None

General Safety Instructions

WARNING

Generator can cause serious injury if it swings or falls while being lifted. Do not stand under generator during hoisting operation.

WARNING

Electric shock can cause severe injury or death. Do not allow cable ends or tools to touch battery terminals.

Material/Parts

- Guy lines
- Silicone conductive adhesive
(Item 5, appendix E)
- Seal, electromagnetic interference
shield, 13222E9696

Personnel Required

- Three turbine engine driven
generator repairmen, MOS 52F
- One wrecker operator, MOS 63B

4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
<u>CAUTION</u>			
Make sure that fuel inlet line is positioned horizontally to prevent damage to fuel line.			
REMOVE			
1. Curbside platform	Cable rack assembly	Lower cable rack next to generator.	
2. Platforms	Stanchions and safety strap assemblies	Remove from both sides of generators.	
3. Generator	a. Fuel line ①	Disconnect from generator at quick-disconnect coupling.	See figure page 4-100.
	b. Fuel line coupling ②	Disconnect fuel line coupling using 7/8-inch open-end wrench.	
	c. Fuel vent line coupling ③	Disconnect fuel vent coupling using 7/8-inch open-end wrench.	
<u>WARNING</u>			
Do not allow wrench or cable ends to come in contact with battery terminals. Electric shock can cause severe injury or death.			
<u>CAUTION</u>			
Observe and note cable markings to insure proper installation on new generator set.			
	d. Four screws ① and four flat washers ②	Remove using flat-tip screwdriver.	See figure, page 4-101.
	e. Two covers ③	Remove.	
	f. Six nuts ④, six lockwashers ⑤, and six flat washers ⑥	Remove using 5/8-inch socket and extension on 1/2-inch drive ratchet	

4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
<u>CAUTION</u>			
<p>Power and control cables can be damaged if forced into the bellows. If cables cannot be pushed easily into the bellows, remove generator battery (see TM 5-6115-598-12) to get easier access to bellows.</p>			
	g. Six power cables (7)	Tag and remove from contactor.	
	h. Two control cables (8) and (9)	Unscrew grips and disconnect cables from socket.	
	i. Nut (10), lockwasher (11), flat washer (12), and ground cable (13)	Using 9/16-inch socket and extension on 1/2-inch drive ratchet remove nut. Remove lockwasher, flat washer, and ground wire from stud.	
	j. Deleted		
	k. Power cables (7), control cables (8) and (9), and ground cable (13)	Tape all cables together. Tape rope to end of bundle of cables. Slide bundle of cables carefully through bellows.	
	1. Four nuts (1), four capscrews, (2), and eight flat washers (3) holding generator to platform	Use the 1-1/2-inch combination wrench to grip the nut and the 1-1/2-socket and extension on the ratchet to remove the capscrews.	Two persons are needed to do this job. See figure, page 4-102.
<u>WARNING</u>			
<p>Generator can cause serious injury if it swings or falls while being lifted. Do not stand under generator during hoisting operations.</p>			
4. Generator frame	Spreader bar and sling assembly	Attach lifting sling cables to lifting rings at each corner of the generator mounting skid.	See figure, page 4-103.

4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
5. Generator	a. Guy lines	Attach guy lines to right front and left rear corners of generator.	Use guy lines to control movement of generator.
	<u>CAUTION</u>		
Make sure that the power cables disconnected from contactor do not get damaged while the generator set is being removed or replaced.			
6. Center platform	b. Generator	Using the truck wrecker, lift the generator from the truck chassis frame.	See figure, page 4-104.
	<u>NOTE</u>		
Check electromagnetic shield on top of bellows for cracks, tears, or shrinkage. If there is no damage, go to step 8. If there is damage go to next step.			
7. Bellows	a. Four panhead screws (1) holding bellows to platform	Remove using cross-tip screwdriver.	See figure, page 4-105.
	b. Bellows (2)	Remove.	
8. Bellows	Two electromagnetic seals (3)	(1) Inspect for cracks, tears, or shrinkage. (2) If damaged, remove shields and gently scrape old adhesive from bellows using the putty knife.	
INSTALL			
8. Bellows	Two electromagnetic seals (3) and bellows (2)	If replacing bellows or shields, cut new shields to proper length. Apply adhesive to grooves in bellows and install flat side of shield onto bellows.	See figure, page 4-105.

4-96 Change 4

All data on page 4-96.1/4-96.2 is deleted.

4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
5. Generator	a. Guy lines	Attach guy lines to right front and left rear corners of generator.	Use guy lines to control movement of generator.
CAUTION			
Make sure that the power cables disconnected from contactor do not get damaged while the generator set is being removed or replaced.			
	b. Generator	Using the truck wrecker, lift the generator from the truck chassis frame.	See figure, page 4-104.
NOTE			
Check electromagnetic shield on top of bellows for cracks, tears, or shrinkage. If there is no damage, go to step 8. If there is damage go to next step.			
6. Center platform	a. Four panhead screws ① holding bellows to platform	Remove using cross-tip screwdriver.	See figure, page 4-105.
	b. Bellows ②	Remove.	
7. Bellows	Two electromagnetic seals ③	(1) Inspect for cracks, tears, or shrinkage. (2) If damaged, remove shields and gently scrape old adhesive from bellows using the putty knife.	
INSTALL			
8. Bellows	Two electromagnetic seals ③ and bellows ②	If replacing bellows or shields, cut new shields to proper length. Apply adhesive to grooves in bellows and install flat side of shield onto bellows.	See figure, page 4-105.

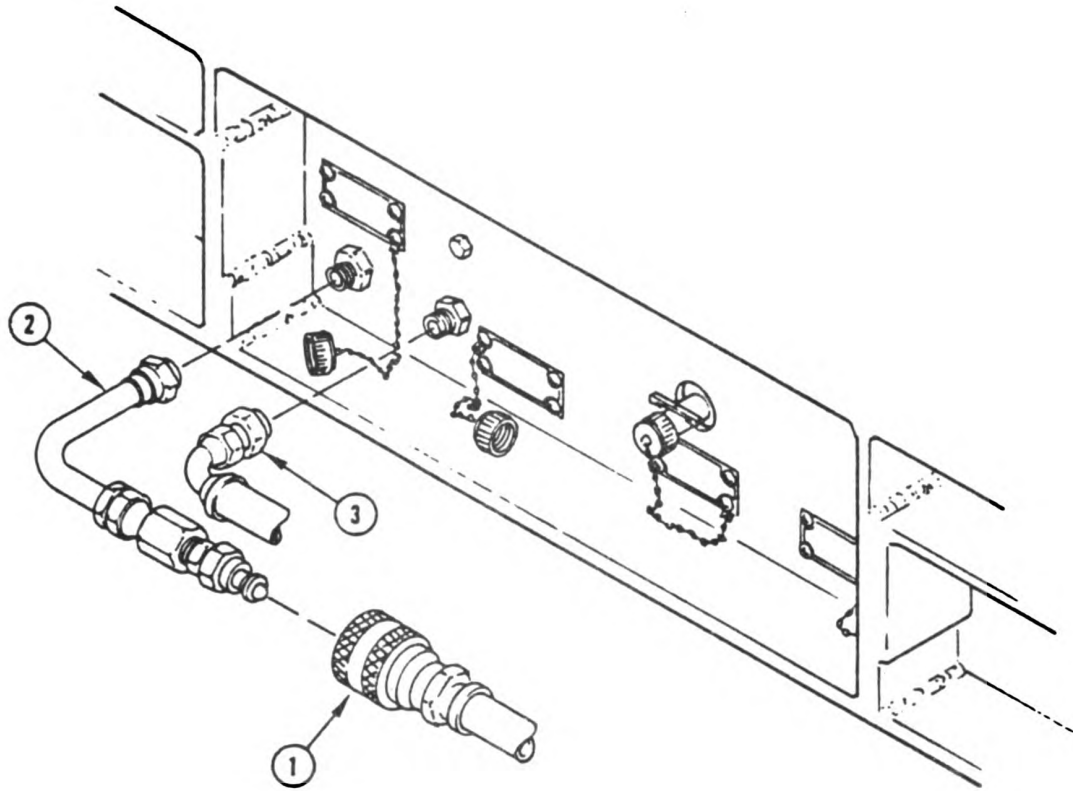
4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
9. Center platform	Bellows (2) and four panhead screws (1)	Attach bellows to center platform with screws using cross-tip screwdriver.	
10. Generator	a. Generator	Attach lifting sling cables at each corner of the generator mounting skid.	Use guy lines to control movement of generator.
	b. Guy lines	Tie guy lines to right front and left rear corners of generator.	
<p>WARNING</p> <p>Generator can cause serious injury if it swings or falls while lifted. Do not stand under generator during hoisting operations.</p>			
	c. Generator	Lift generator and position on mounting guide pins on generator platform.	See figure, page 4-102.
	d. Spreader bar and lift sling assembly	Disconnect from generator.	
	e. Eight flat washers (3), capscrews (2), and four nuts (1)	Insert capscrew through flat washers, generator mounting skid, and truck frame. Attach nut. Tighten using 1-1/2-inch socket on extension and ratchet and 1-1/2-inch combination wrench.	
	f. Ground cable (13), flat washer (12), lockwasher (11), and nut (10)	Attach grounding wire to stud with nut, lockwasher, and flat washer using 9/16-inch socket and extension on 1/2-inch drive ratchet.	

-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued			
CATION	ITEM	ACTION	REMARKS
	<u>WARNING</u>		
	Electric shock can cause severe injury or death. Do not allow cable ends or tools to touch battery terminals.		
	g. Two control cables ⑧ and ⑨	Pull up through bellows and attach to proper sockets.	
	h. Six power cables ⑦	Pull up through bellows and install on proper terminals of contactor.	
	i. Six flat washers ⑧, six lockwashers ⑤, and six nuts ④	Place one flat washer and one lockwasher on each terminal. Secure in place with nut using 9/16-inch combination wrench.	
	j. Two covers ③, four flat washers ②, and four screws ①	Attach covers to contactor with flat washers and screws using the flat-tip screwdriver.	
	k. Fuel vent line coupling ③	Connect fuel vent line coupling using 7/8-inch open-end wrench.	See figure, page 4-100.
	l. Fuel line coupling ②	Connect fuel line coupling using 7/8-inch open-end wrench.	
	m. Fuel line ①	Connect to generator at quick-disconnect coupling.	
1. Platforms	Stanchions and safety strap assemblies.	Install on both sides of generators.	
2. Curbside platform	Cable rack assembly	Raise to transport position.	

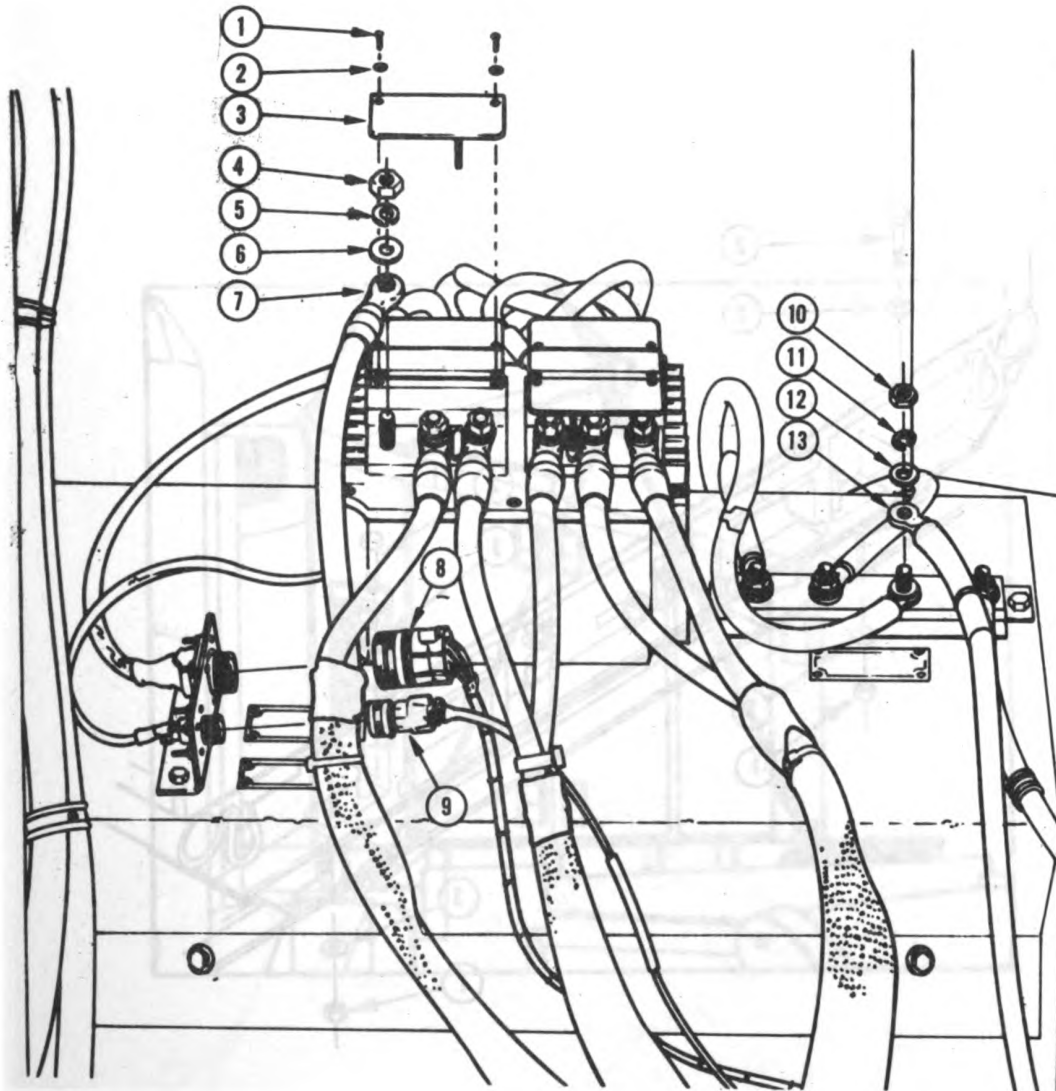
4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
11. Platforms	Stanchions and safety strap assemblies	Install on both sides of generator.	
12. Curbside platform	Cable rack assembly	Raise to transport position.	
13. Generator	Day tank	Insure that tanks are properly fueled.	See generator TM 5-6115-598-12 for refill procedures.

4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued



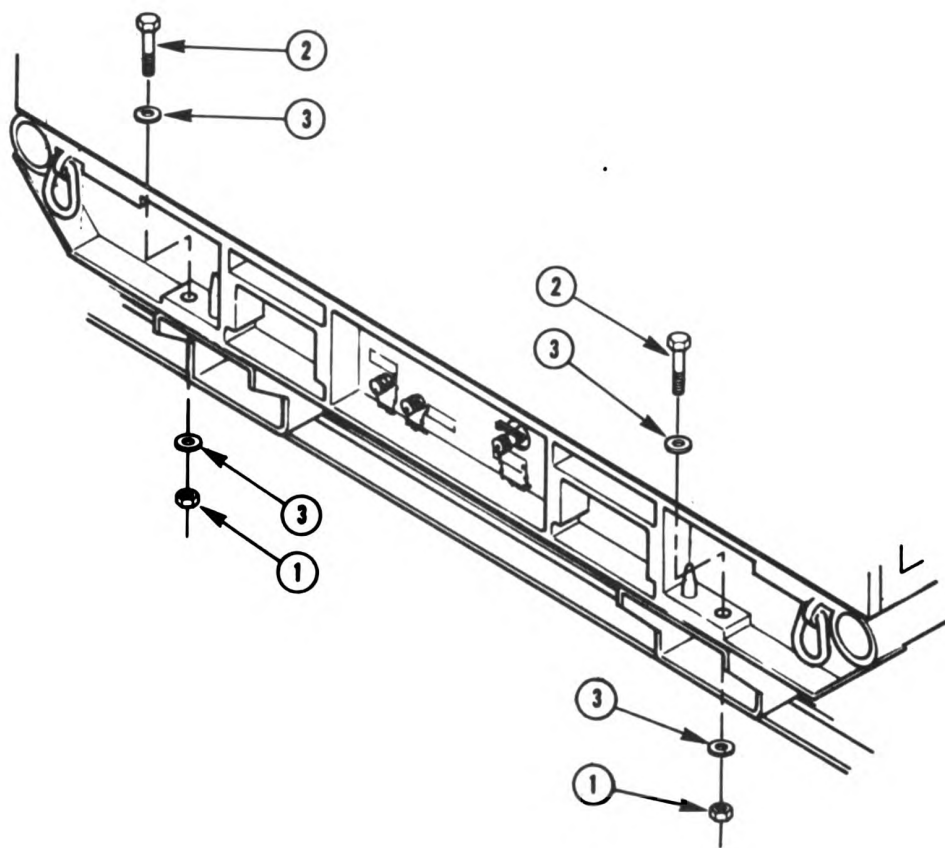
- 1 FUEL LINE
- 2 FUEL LINE COUPLING
- 3 FUEL VENT LINE COUPLING

4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued



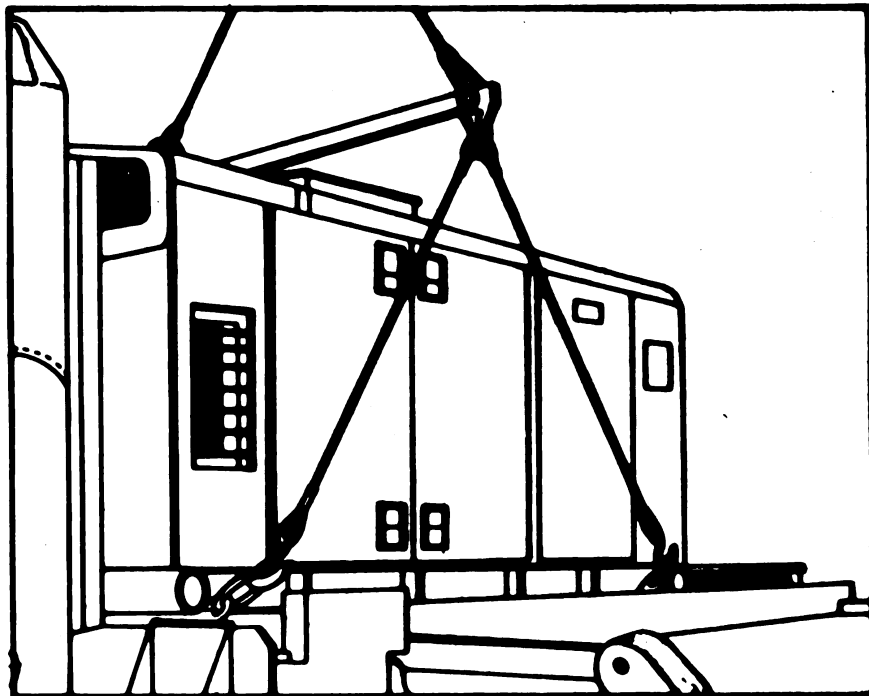
- | | | | | | |
|---|--------------|---|---------------|----|---------------|
| 1 | SCREWS | 5 | LOCKWASHERS | 9 | CONTROL CABLE |
| 2 | FLAT WASHERS | 6 | FLAT WASHERS | 10 | NUT |
| 3 | COVERS | 7 | POWER CABLES | 11 | LOCKWASHER |
| 4 | NUTS | 8 | CONTROL CABLE | 12 | FLAT WASHER |
| | | | | 13 | GROUND CABLE |

4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued

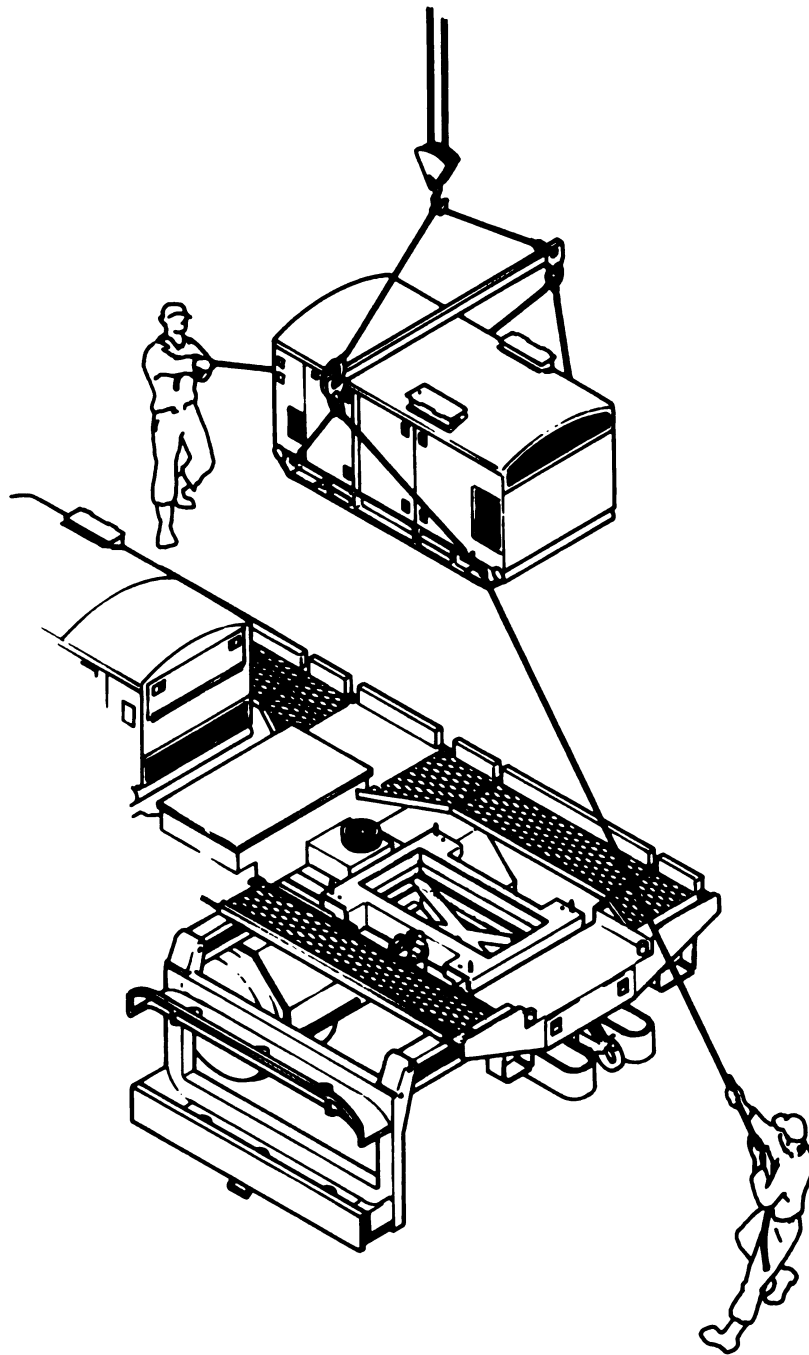


- 1 NUTS
- 2 CAPSCREWS
- 3 FLAT WASHERS

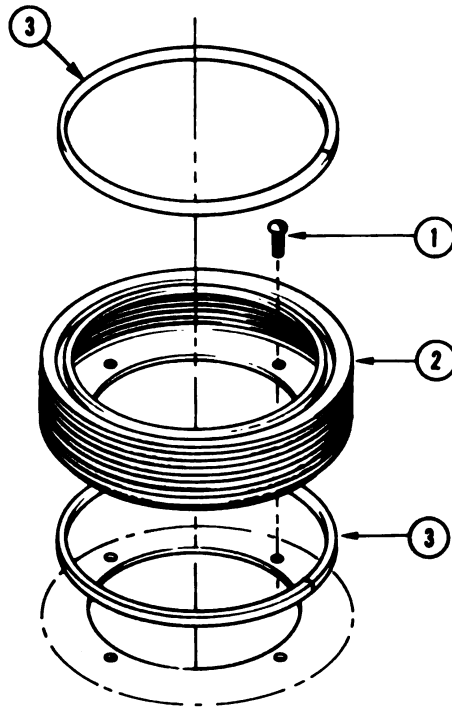
4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued



4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued



4-29. GENERATOR SET - MAINTENANCE INSTRUCTIONS - Continued



- 1 PANHEAD SCREWS
- 2 BELLOWS
- 3 ELECTROMAGNETIC SHIELDS

Section VI. PREPARATION FOR STORAGE OR SHIPMENT

4-30. INTRODUCTION. Certain actions must be taken to protect the equipment while it is being transported or when it is being held in storage. These actions will prevent structural damage, corrosion, and component deterioration, and will insure that equipment is not misplaced due to incorrect markings.

Refer to TM 740-90-1 and TB 740-97-2 for details of storage requirements. Also refer to TM 9-2320-260-20 and TM 5-6115-598-12 for truck and generator set storage requirements.

CHAPTER 5

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE

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

Repair parts; special tools; test, measurement, and diagnostic equipment (TMDE); and special support equipment are listed in appendix F of this manual.

Section II. SERVICE UPON RECEIPT

5-1. GENERAL. The Electric Power Plant II (EPP II) will be received fully assembled. Perform the steps shown in table 5-1 that follows.

Table 5-1. Service Upon Receipt (Electric Power Plant II)

LOCATION	ITEM	ACTION	REMARKS
1. Generators	Control panel	See TM 5-6115-598-12 for service upon receipt of generator sets.	
2. Cable racks	a. Latches	Inspect latches to insure they can be released by handles.	
	b. Springs	Check that springs are in place and adjusted. Check for damage.	
3. Cables	Plugs	Check cables and plugs for dents, bare wires, and cut or cracked insulation.	
4. Platforms	Stanchions	Check for damage to stanchions and chains.	
5. Power distribution unit	Center platform	(1) Check that protective cover to power distribution unit (PDU) is not bent. Make sure rubber and RF gasket are not damaged and there is no water in PDU.	
		(2) Inspect controls to determine if there is physical damage.	
6. Fuel tank assemblies	a. Tanks, hoses, and couplings	Inspect all tanks, fuel lines, and couplings for damage.	See PMCS table 2-3 page 2-12.
	b. Fuel sight gages	Inspect for damage. Replace if necessary.	
7. Truck			See TM 9-2320-260-20.

5-2. SITE AND SHELTER REQUIREMENTS

a. **Siting.** The Electric Power Plant II must be located in terrain that will provide maximum range and visibility for the associated radar. The location must not introduce screening, signal reflections, ground clutter, and other undesirable conditions for the radar transmitters and receivers.

b. **Shelter Requirements.** Since the Electric Power Plant II is basically a mobile unit, no shelter requirements exist.

5-3. SERVICE UPON RECEIPT OF MATERIEL

a. **Unpacking.** There are no specific unpacking instructions that pertain to the EPP II.

b. **Installation Instructions.** Installation consists of lowering cable racks of the EPP II, unwinding power cables, and making power cable connections from the power distribution unit (PDU) to the engagement control station (ECS) and radar station (RS). Details of these functions may be found in paragraph 2-6.

NOTE

Ensure that cable plugs are firmly seated since power cables contain interlock circuits.

To complete the installation, the EPP II must be grounded.

c. **Preliminary Servicing and Adjustment of Equipment.** Preliminary servicing and adjustment of the EPP II 150 kW generator sets are given in TM 5-6115-598-12.

Section III. DIRECT SUPPORT/GENERAL SUPPORT TROUBLESHOOTING

5-4. **INTRODUCTION.** This section contains checks and corrective actions to be performed by direct support/general support (DS/GS) maintenance as indicated in the maintenance allocation chart (MAC), appendix B. The troubleshooting chart (see table 5-2) lists troubles for each item or group of items in the MAC, followed by a series of tests or inspections, and corrective actions. Foldouts FO-1 through FO-5 show the wiring diagrams to be used in troubleshooting and maintenance procedures. This table cannot list all troubles that may arise, nor all possible tests and corrective actions. If a problem arises which is not listed on the troubleshooting table, notify your supervisor.

NOTE

The following procedure is to be followed when reference is made to the power source jumper cables.

The jumper cables are to be manufactured in the field. Refer to appendix G of this technical manual for a list of parts and instructions for fabricating these cables.

WARNING

Don't be misled by the 24 Vdc as being low voltage and therefore safe. Injury may occur if the 24-Vdc jumpers are not used correctly.

WARNING

Metal objects can cause severe burns even at low voltage. Remove dog tags, rings, watches and other jewelry before working inside the PDU.

The cables are to be connected to the M811 truck batteries. This is to supply the 24-Vdc power to operate the PDU control circuits without the 150 KW generators running. The proper hookup is as follows:

- a. Remove PDU cover.
- b. Disconnect (+) wire from 50-amp converter at TB1-4.
- c. Verify that this is correct wire by running a resistance test. Set multi-meter on ohms R X 10 scale and touch probes to disconnected wire and the positive terminal of 50-amp converter. Meter should read zero. If any other reading is obtained, reconnect the wire and disconnect the other wire on TB1-4.
- d. Attach brown and white striped wire from fuse holder (+) of jumper cables to TB1-4.
- e. Disconnect (-) wire from 50-amp converter at TB1-15.
- f. Verify that this is correct wire by running a resistance test. Set multi-meter on ohms R X 10 scale and touch probes to disconnected wire and negative terminal of 50-amp converter. Meter should read zero. If any other reading is obtained, reconnect the wire and disconnect the other wire on TB1-15.
- g. Attach black and white striped wire (-) of jumper cables to TB1-15.
- h. Connect black lead (-) of jumper cables to truck chassis ground.
- i. Connect red lead (+) of jumper cables to (+) terminal on battery.

WARNING

If jumpers are to be used to defeat the control cable interlock a tag must be attached to the opposite end of the cable warning that the interlock is defeated and a severe electrical hazard exists.

j. If power and control cables are not attached to ECS and RS, the 24-volt interlocks must be jumped. Attach jumpers to pins B and D on W1 through W4; and to pins Q, R, and T on control cable.

WARNING

Do not attempt to operate generator set with jumper cables installed on cable interlocks except in emergency necessary to complete mission. Severe electrical hazard will result.

k. When troubleshooting is completed, disconnect jumper cables and return PDU wiring to proper configuration.

Table 5-2. DS/GS Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. PANEL LAMPS INOPERATIVE.	<p>Step 1. Verify the malfunction.</p> <p>Step 2. Turn off generator set.</p> <p>Step 3. Hook up the power source jumper cables (page 5-4). Use a multimeter set to the 50 volts dc scale and the wiring schematic, FO-1, and wiring diagram, FO-2, to troubleshoot the wiring harnesses between CBl, the panel light switch, and the panel lights.</p>	<p>Repair or replace defective wiring harness, as required.</p>
2. INDICATOR LAMP DOES NOT LIGHT WHEN PRESSED TO TEST.	<p>Step 1. Verify the malfunction.</p> <p>Step 2. Turn off generator set.</p> <p>Step 3. Hook up the power source jumper cables (page 5-4). Use a multimeter set to the 50 volts dc scale and the wiring schematic, FO-1, and wiring diagram, FO-2, to troubleshoot the wiring harnesses between CBl and the indicator lamp(s).</p>	<p>Repair or replace defective wiring harness, as required.</p>
3. NO 24 VDC POWER - GENERATOR ONLINE.	<p>Step 1. Verify the malfunction.</p> <p>Step 2. Turn off generator set.</p> <p>Step 3. Hook up the power source jumper cables (page 5-4). Disconnect PDU control panel cable from PDU. Use the multimeter on the 50 volts dc scale to check for power coming out of the PDU, at J1, pins B(-) and Y(+).</p>	<p>If power is available, troubleshoot wiring harness Pl in PDU control panel.</p> <p>Repair or replace wiring as required.</p> <p>If no power is available, go to step 4.</p>

Table 5-2. DS/GS Troubleshooting - Continued

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION
<p>Step 4. Use wiring schematic, FO-1, and wiring diagram, FO-2, to troubleshoot wiring harness P-23.</p> <p style="padding-left: 40px;">If harness is defective, replace.</p> <p style="padding-left: 40px;">If harness is not defective, replace 50-amp converter (paragraph 5-12).</p>
<p>4. POWER FAULT LIGHT COMES ON REPEATEDLY.</p>
<p style="padding-left: 40px;">Step 1. Verify the malfunction.</p>
<p style="padding-left: 40px;">Step 2. Turn off generator set.</p>
<p style="padding-left: 40px;">Step 3. Check the RS or ECS for malfunction which would have caused the overload.</p>
<p style="padding-left: 80px;">If malfunctions are found, repair and resume operation.</p>
<p style="padding-left: 80px;">If no RS or ECS malfunctions are found, go to step 4.</p>
<p style="padding-left: 40px;">Step 4. Check the appropriate overcurrent sensing contactor (K3, K4, K5, K6). Without power, set multi-meter to Ohms R X 10 scale and touch probes to A1 and A2, B1 and B2, and C1 and C2. Multimeter should read infinity on all three tests. Hook up the power source jumper cables. Retest all three positions. Multimeter should read zero.</p>
<p style="padding-left: 80px;">If proper readings are not obtained, replace contactor.</p>
<p style="padding-left: 80px;">If proper readings are obtained, go to step 5.</p>
<p style="padding-left: 40px;">Step 5. Disconnect and check the appropriate power cable. With power off, use the multimeter on the Ohms R X 10 scale to test the four large pins of the connector. The multimeter should read infinity for all combinations. Also test each pin to chassis ground. Again, the multimeter should read infinity.</p>
<p style="padding-left: 80px;">If any other reading is obtained, replace the power cable.</p>
<p style="padding-left: 80px;">If cable is good, go to step 6.</p>
<p style="padding-left: 40px;">Step 6. Hook up the power source jumper cables, and use the wiring schematic, FO-1, and wiring diagram, FO-2, to isolate faulty PDU wiring.</p>

Table 5-2. DS/GS Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. POWER ON LIGHT GOES OFF, POWER FAULT LIGHT DOES NOT COME ON.	Step 1. Verify the malfunction.	
	Step 2. Turn off generator set.	
	Step 3. Check the appropriate overcurrent sensing contactor (K3, K4, K5, K6). Without power, set multimeter to Ohms R X 10 scale and touch probes to A1 and A2, B1 and B2, and C1 and C2. Multimeter should read infinity on all three tests. Hook up the power source jumper cables. Retest all three positions. Multimeter should read zero.	If proper readings are not obtained, replace contactor.
		If proper readings are obtained, go to step 4.
	Step 4. Check the appropriate power cable. With power off, use the multimeter on the Ohms R X 10 scale to test the four large pins of the connector. The multimeter should read infinity for all combinations. Also test each pin to chassis ground. Again, the multimeter should read infinity.	If any other reading is obtained, replace the power cable.
		If cable is good, go to step 5.
	Step 5. Check relays.	If indicator is on K3, K4, or K5, replace K11 with new relay; if on K6, replace K10 with new relay.
		If the malfunction is corrected, resume operation.
		If malfunction is not corrected, use the wiring schematic, FO-1, and wiring diagram, FO-2, to isolate faulty wiring.
6. ALL THREE RS POWER ON LIGHTS GO OFF OR DO NOT LIGHT.	Step 1. Verify the malfunction.	
	Step 2. Turn off generator set.	
	Step 3. Check RS and ECS for overloads.	

Table 5-2. DS/GS Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
Step 4. Replace relay K11 with a new relay.	If malfunction is corrected, resume operation.	If malfunction is not corrected, go to step 5.
Step 5. Test control cable. Using the multimeter on the Ohms R X 10 scale, run a continuity check on the cable.	If cable is faulty, replace it.	If cable is not faulty, use the wiring schematic, FO-1, and wiring diagram, FO-2, to isolate faulty wiring.
7. ALL FOUR POWER ON LIGHTS GO OFF OR DO NOT LIGHT - GENERATOR CONTINUES RUNNING.	Step 1. Verify the malfunction.	Step 2. Turn off generator set.
	Step 3. Test the main line contactor associated with the online generator. With power off, set multimeter to Ohms R X 10 scale and touch probes to A1 and A2, B1 and B2, and C1 and C2. Multimeter should read infinity on all three tests. Hook up the power source jumper cables (page 5-4) and again touch probes to A1 and A2, B1 and B2, and C1 and C2. Multimeter should read zero.	If proper readings are not obtained, replace contactor.
	If proper readings are obtained, use wiring schematic, FO-1, and wiring diagram, FO-2, to isolate faulty wiring.	
8. SYSTEM WILL NOT GO INTO BATTLE SHORT STATUS.	Step 1. Verify the malfunction.	Step 2. Turn off generator set.
	Step 3. With the power source off check K8 by replacing with a new relay. Hook up the power source jumper cables to energize the relay.	If malfunction is corrected, replace defective relay.
	If malfunction is not corrected, go to step 4.	

Table 5-2. DS/GS Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	<p>Step 4. With the power source jumper cables temporarily disconnected, check K12 by replacing with new relay. Reconnect power source jumper cables.</p>	<p>If malfunction is corrected, replace defective relay.</p> <p>If malfunction is not corrected, go to step 5.</p>
	<p>Step 5. Test control cable (W5). Using the multimeter on the Ohms R X 10 scale, run a continuity check on the cable.</p>	<p>If cable is faulty, replace it.</p> <p>If cable is not faulty, use the wiring schematic, FO-1, and wiring diagram, FO-2, to isolate faulty wiring.</p>
<p>9. EMERGENCY SHUTDOWN INOPERATIVE, BATTLE SHORT OFF.</p>	<p>Step 1. Verify the malfunction.</p> <p>Step 2. Turn off generator set.</p> <p>Step 3. With the power off, check relay K9 by replacing with new relay. Hook up power source jumper cables to energize the relay.</p>	<p>If malfunction is corrected, replace defective relay.</p> <p>If malfunction is not corrected, go to step 4.</p>
	<p>Step 4. With the power source jumper cables temporarily disconnected, check relay K12 by replacing with new relay. Reconnect power source jumper cables.</p>	<p>If malfunction is corrected, replace defective relay.</p> <p>If malfunction is not corrected, go to step 5.</p>
	<p>Step 5. Test control cable (W5). Using the multimeter on the Ohms R X 10 scale, run a continuity check on the cable.</p>	<p>If cable is faulty, replace it.</p> <p>If cable is not faulty, use the wiring schematic, FO-1, and wiring diagram, FO-2, to isolate faulty wiring.</p>

Table 5-2. DS/GS Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
10. FUEL LEVEL SWITCH MALFUNCTIONS.	Step 1. Verify the malfunction.	
	Step 2. Turn off generator set.	
	Step 3. Check the appropriate diode (CR2 for roadside; CR3 for curb-side). Unsolder one end of diode. Set multimeter on Ohms R X 10 scale and touch probes to either end of diode, then reverse probes and touch ends again. Multimeter should read zero in one direction and give a resistance reading in the other.	If proper readings are not obtained, replace diode.
		If proper readings are obtained, go to step 4.
	Step 4. Test control cable (W5). Using the multimeter on the Ohms R X 10 scale, run a continuity check on the cable.	If cable is faulty, replace it.
		If cable is not faulty, use the wiring schematic, FO-1, and wiring diagram, FO-2, to isolate faulty wiring.

Section IV. MAINTENANCE PROCEDURES

5-5. GENERAL. This section provides step-by-step instructions for performing direct support and general support maintenance of the Electric Power Plant II (EPP II) as allocated by the maintenance allocation chart (MAC).

5-6. SERVICING.

a. Fuel. Refer to appendix E, Expendable Supplies and Materials List, for the type of fuel required by the EPP II. Fuel supplies are monitored by fuel level lamps in the engagement control station (ECS).

b. Oil. Instructions for servicing the EPP II with oil are given in TM 5-6115-598-12 and TM 9-2320-260-20.

c. Tire Pressure. See TM 9-2320-260-10 for tire pressures.

d. Ground Handling. Lowering and raising of cable racks requires great care, particularly during extreme cold. When removing and rewinding power cables, do not allow connectors to touch the ground as damage may occur. Do not drag cable connectors. Standard towing, jacking, and parking procedures should be used when moving and installing the EPP II. To insure satisfactory performance of the EPP II, always refer to the operator's portion of this manual, as well as TM 5-6115-598-12, for generator starting, running, and shutdown procedures.

5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Inspect
- c. Install

INITIAL SETUP

Test Equipment

None

Equipment Conditions

Cable racks locked in the up position, cables on rack.

Tools and Special Tools

Truck wrecker, M816,
2320-00-051-0489
Contact truck, 4940-00-294-9518
1/4-inch flat-tip screwdriver
4-inch shaft
Ball peen hammer, 8 oz
3/4-inch combination wrench
3/4-inch socket
1/2-inch drive ratchet
3/4-inch combination wrench
Cross-tip screwdriver
Tapered punch
3/8-inch combination wrench
6-inch adjustable wrench
Electric drill
1/8-inch drill bit
3/32-inch allen wrench

Special Environmental Conditions

None

General Safety Instructions

WARNING

Cable rack spring is under tension and can cause injury if it snaps. Handle with care. Cable rack can swing or fall when supported by wrecker. Use care when removing cable rack assembly.

Materials/Parts

E-rings, MS 16634-4098
1/2-inch nylon rope

Personnel Required

Two turbine engine driven generator repairmen, MOS 52F
One vehicle operator
One wrecker operator, MOS 63B

5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	NOTE		
	In order to remove rear cable rack assembly, it is necessary to remove the left tail light of the truck. See TM 9-2320-260-20 for instructions.		
REMOVE LOCK ASSEMBLY			
1. Cable rack frame	a. Setscrew (1), handle (2), and washer (3)	Use 3/32-inch allen wrench to loosen setscrew, and remove handle and washer from square shaft.	See figure page 5-16. 3
	b. Cotter pin (4) and square shaft (5)	Use tapered punch and ball peen hammer to drive out cotter pin, then remove shaft.	
	c. Two cotter pins (6) and two washers (7)	Remove cotter pins, spring clip and washers from actuator.	
	d. Setscrews (8) and rods (9)	Use adjustable wrench to loosen setscrews, and remove rod from flush bolt and lock actuator.	
	e. Two screws (10), two washers (11), and flush bolt (12)	Use 3/32-inch allen wrench to remove screws. Remove flush bolt.	
	f. Four screws (13), four nuts (14), and lock actuator (15)	Remove using 3/32-inch allen wrench and 3/8-inch combination wrench	

5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
INSTALL LOCK ASSEMBLY			
2. Cable rack frame			
NOTE			
Step a applies only if a new lock actuator is being installed. If an old actuator is being reinstalled, proceed to step b.			
	a. Lock actuator	Remove and discard two cotter pins. Use elec- tric drill with 1/8-inch bit to enlarge holes to 1/8-inch circular.	
	b. Lock actuator ⑮, four nuts ⑭, and four screws ⑬	Attach actuator to cable rack frame using 3/32-inch allen wrench and 3/8-inch combina- tion wrench.	
	c. Flush bolt ⑫, two washers ⑪, and two screws ⑩	Attach flush bolt to cable rack with screws and washers using cross-tip screw drive.	
	d. Rods ⑨ and setscrews ⑧	Insert rod into flush bolt and tighten set- screw with 3/32-inch allen wrench.	
	e. Rods ⑨, lock actuator ⑮, washers ⑦, and cotter pins ⑥	Attach rods to actuator with washers, spring clip and cotter pins.	
	f. Square shaft ⑤ and spring pin ④	Insert shaft through cable rack frame into actuator mechanism and drive spring pin through shaft with ball peen hammer.	

5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued

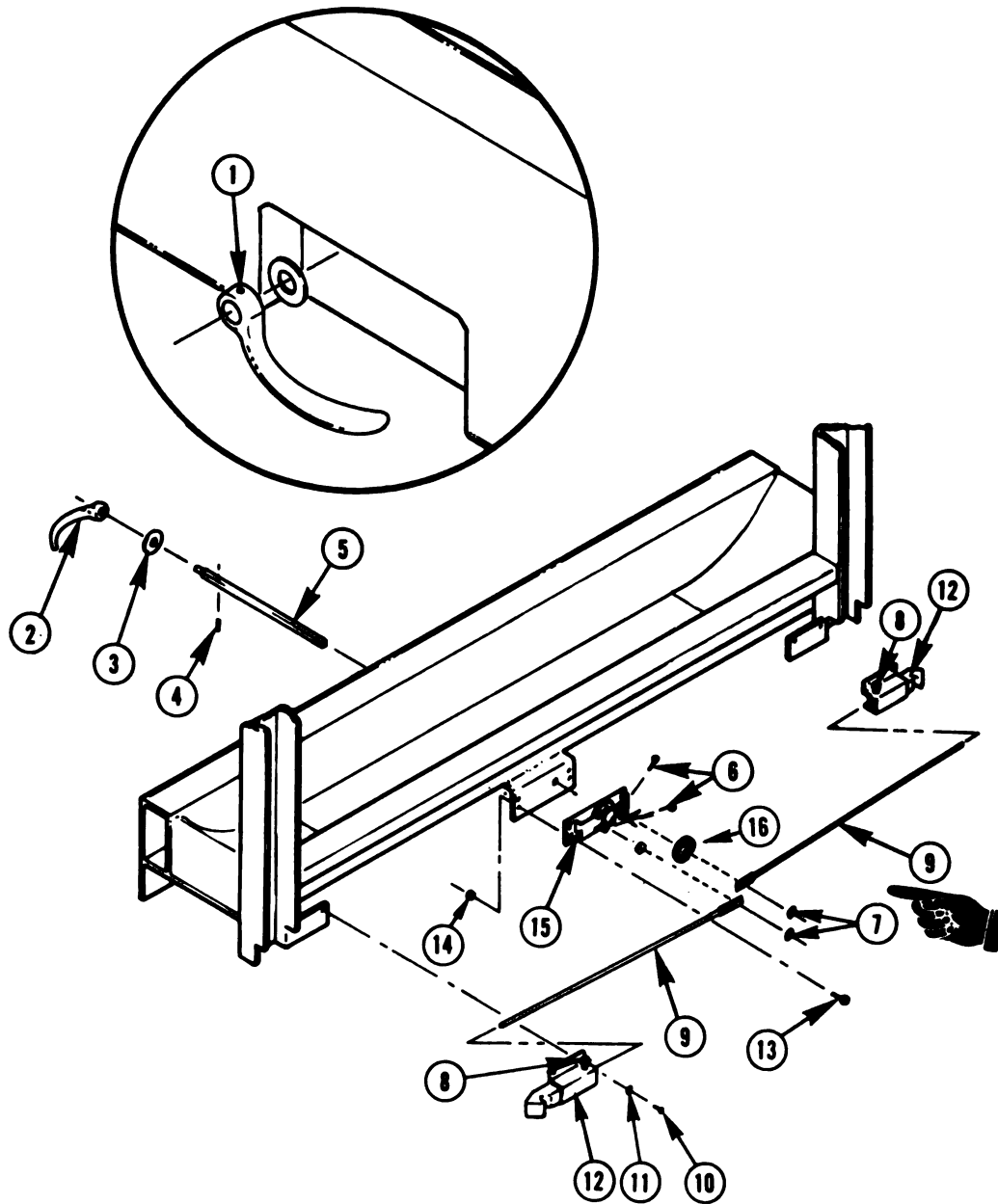
LOCATION	ITEM	ACTION	REMARKS
<p>REMOVE CABLE RACK</p> <p>3. Cable storage rack</p>	<p>g. Washer ³, handle ², and setscrew ¹</p>	<p>Place washer and handle on square shaft and secure by tightening setscrew with 3/32-inch allen wrench.</p>	
	<p>a. E-rings ¹</p>	<p>Attach 1/2-inch rope to center of cable storage rack. Using truck wrecker, take all slack out of sling.</p> <p>Using flat-tip screwdriver, remove E-rings from each lower arm outer pivot rod.</p>	<p>See figure, page 5-17. Discard E-rings.</p>
	<p>b. Two Pivot rods ²</p>	<p>(1) Drive lower arm outer pivot rods two-thirds of the way through to release upper end of rack springs.</p> <p>(2) Release the cable rack and use the truck wrecker to lower the rack to the down position.</p> <p>(3) Remove rope. Remove cables. Then reattach rope.</p>	<p>Remove cable rack locking pins. 16</p>
<p>CAUTION</p> <p>There are two lengths of pivot rods. Tag all pivot rods as they are removed to insure proper installation.</p>			
	<p>c. Pivot rods ²</p>	<p>Remove and tag lower arm outer pivot rods</p>	

5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	d. E-rings (3)	Remove E-rings from each upper arm outer pivot rod.	Discard E-rings.
	e. Pivot rods (4) and cable rack (5)	Support weight of the cable rack using truck wrecker and remove pivot rods. Remove cable rack.	
	f. E-rings (6)	(1) Using flat-tip screwdriver, remove E-rings from all four inner pivot rods. (2) Raise cable rack platform to up position.	Discard E-rings. See detail, page 5-18.
	g. Pivot rods (7) and lower arms (8)	Drive out lower pivot pins toward center of cable rack and remove lower arms. Tag pivot rods.	
	h. Pivot rods (9)	Remove upper arm inner pivot rods by driving toward center of cable rack. Tag pivot rods.	
	i. Spring (10)	Remove.	
	j. Spring adjust retainer (11)	Slide off spring.	
	k. Two nuts (12) and two screws (13)	Use 3/4-inch combination wrench and 3/4-inch socket on ratchet to remove nuts from screws.	
	l. Two screws (13), spring adjust retainer (11), and spring pivot (14)	Remove screws from spring adjust retainer and spring pivot.	
	m. Cable rack platform (15)	Remove from frame	

5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
INSPECT CABLE RACK 4. Cable storage rack	a. Platform and cable rack	Check for rust and broken welds. Reweld and repaint as needed.	
	b. Screws and nuts	Check for rusted or damaged thread on nuts or screws. Replace damaged parts.	
	c. Pivot rods	Check for excessive wear. Replace if damaged.	
INSTALL CABLE RACK 5. Cable storage rack	a. Cable rack platform (15)	Lay in place on the EPP II frame.	
	b. Two pivot rods (9) and springs (10)	Insert upper arm inner pivot rods through platform, arms, and springs.	
	c. E-rings (6)	Secure pivot rods in place using an E-ring on each end.	
	d. Spring pivot (14), spring adjust retainer (11), two screws (13), and two nuts (12)	(1) Insert screws through spring pivot and spring adjust retainer. (2) By hand, place nuts onto screws about 1/2 inch. (3) Slide spring adjust retainer onto spring.	
	e. Lower arms (8) and pivot rods (7)	Attach lower arms to frame with pivot rods.	
	f. E-rings (6)	Secure lower arm pivot rods in place using an E-ring on each side.	

5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	g. Cable rack and pivot rods (4) (5)	Attach cable rack to upper arms using pivot rods.	
	h. E-rings (3)	Secure upper arm outer pivot rods with one E-ring on each end.	
	i. Pivot rods (2)	Insert pivot rods one-third of the way through cable rack and lower arms. Wrap cables onto cable rack. Attach 1/2-inch rope to rack and use truck wrecker to lift rack until mounting hole in spring pivot can be aligned with pivot rod holes in arm.	
	j. Pivot rods and spring bolt (14) (2)	Drive pivot rod through arm and spring bolt.	
	k. E-ring (1)	Secure lower arm outer pivot rod with one E-ring on each end. Lock rack up. Remove sling.	
	l. Nuts (12)	Adjust nut as necessary to adjust spring tension so that cable rack moves up and down easily.	

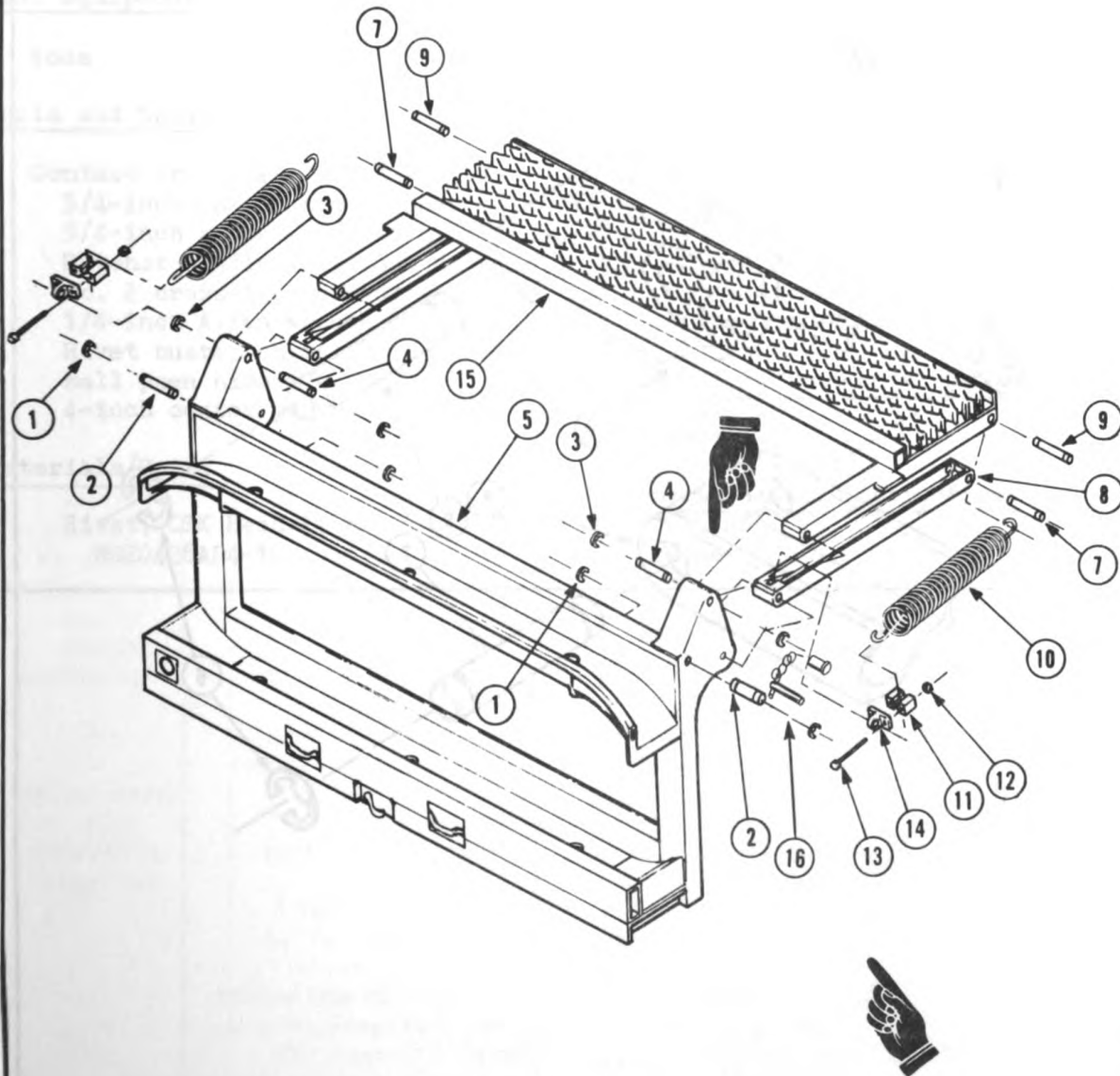
5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued



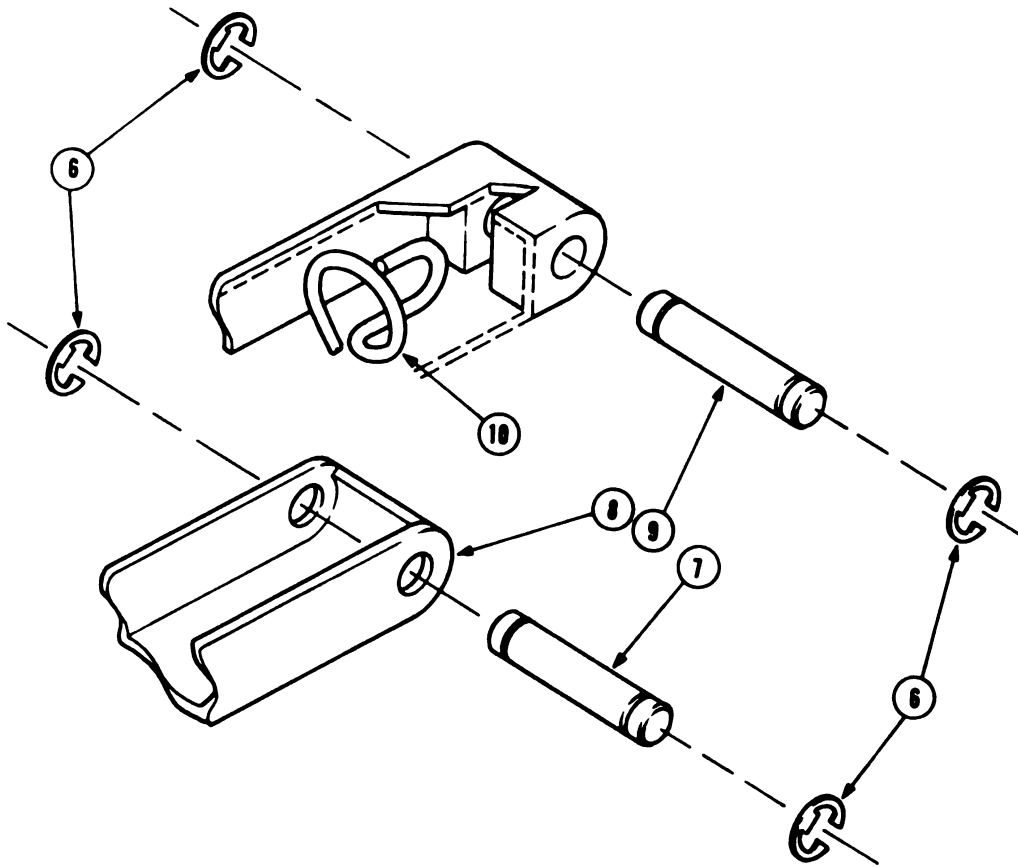
- 1 SETSCREW
- 2 HANDLE
- 3 WASHER
- 4 SPRING PIN
- 5 SQUARE SHAFT
- 6 COTTER PIN
- 7 WASHER
- 8 SETSCREW

- 9 RODS
- 10 SCREWS
- 11 WASHERS
- 12 FLUSH BOLT
- 13 SCREWS
- 14 NUTS
- 15 LOCK ACTUATOR
- 16 SPRING CLIP

5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued



5-7. CABLE STORAGE RACK ASSEMBLY - MAINTENANCE INSTRUCTIONS - Continued



5-8. FRONT PLATFORM - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Install

NOTE

Steps on M811 trucks only

INITIAL SETUP

Test Equipment

None

Personnel Required

Two engineer missile equipment repairmen, MOS 52C

Tools and Special Tools

Contact truck, 4940-00-294-9518
 3/4-inch combination wrench
 3/4-inch socket, 1/2-inch drive
 Ratchet handle, 1/2-inch drive
 No. 2 cross-tip screwdriver
 1/4-inch Allen wrench
 Rivet buster chisel
 Ball peen hammer
 4-inch center punch

Equipment Conditions

Generators shut down
 Front cable storage rack removed
 (see paragraph 5-7)
 Latch assembly removed
 (see paragraph 4-9)

Special Environmental Conditions

None

Materials/Parts

Rivet, CSK Head (1 ea)
 MS20426AD4-10

General Safety Instructions

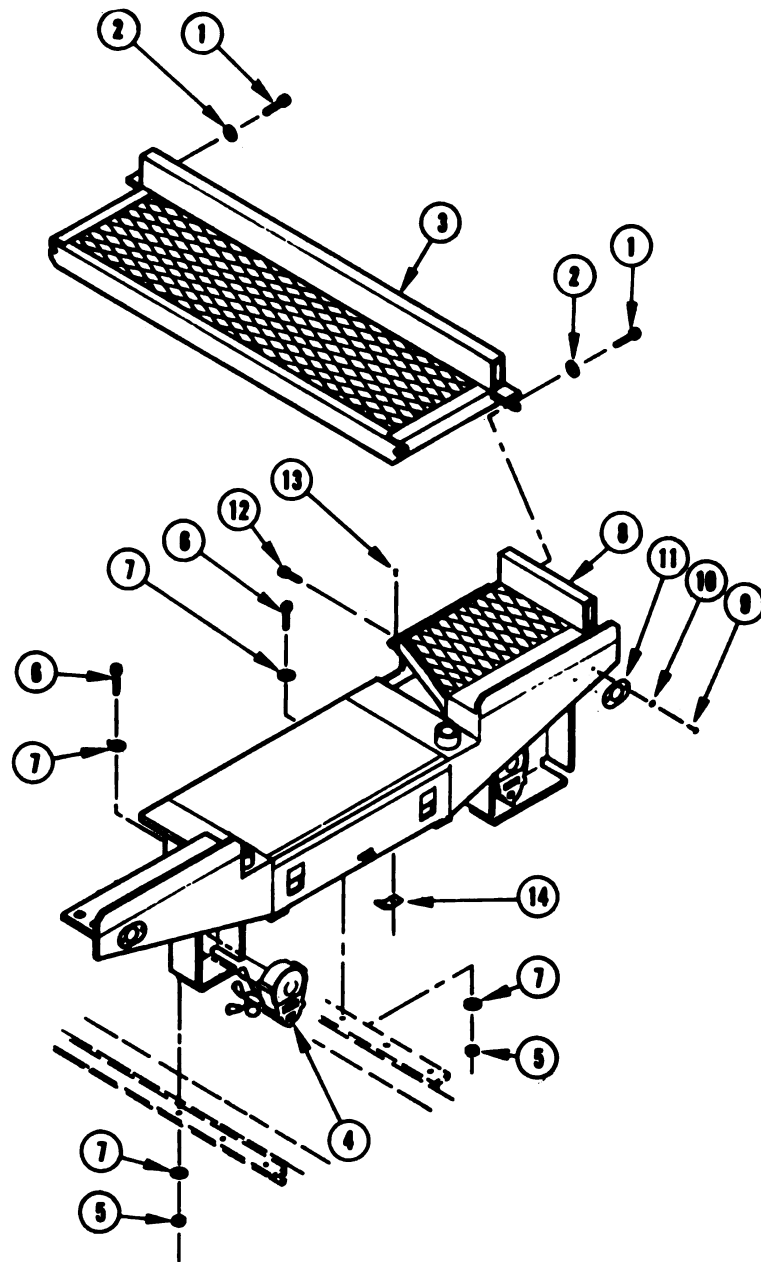
None

5-9. REAR PLATFORM - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
NOTE			
This paragraph describes removal of the rear platform and its components. Remove only those components needing replacement.			
REMOVE			
1. Curbside platform	a. Two capscrews (1) and two flat washers (2)	Remove using 3/4-inch combination wrench.	
	b. Platform (3)	Remove.	
2. Rear platform	a. Two tail lights (4)	Remove.	
	b. Six nuts (5), six capscrews (6), and twelve flat washers	Reach inside rear storage compartment and use 3/4-inch combination wrench and 3/4-inch socket on ratchet to remove nuts and capscrews.	
	c. Rear platform (8)	Remove.	
NOTE			
Perform steps d through f only if installing a new rear platform.			
	d. Two screws (9), two flat washers (10), and reflector (11)	Remove screws using cross-tip screwdriver. Remove reflector.	There are three reflectors, two on the rear of the platform, one on the curbside.
	e. Shoulder bolt (12)	Remove using 1/4-inch Allen wrench.	

5-9. REAR PLATFORM - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
<p>INSTALL</p> <p>3. Rear platform</p>	f. Rivet (13) and platform grounding spring (14)	Remove. Use rivet buster chisel and ball peen hammer to break off rivet head, then use hammer and center punch to drive out rivet.	
	a. Platform grounding spring (14) and rivet (13)	Attach platform grounding spring to rear platform by driving rivet through hole in spring and platform with ball peen hammer.	
	b. Shoulder bolt (12)	Install using 1/4-inch Allen wrench.	
	c. Reflector (11), two flat washers (10), and two screws (9)	Fasten reflector to rear platform with flat washers and screws using cross-tip screwdriver.	
	d. Rear platform (8)	Place on chassis and align mounting holes.	
	e. Six capscrews (6), twelve flat washers (7), and six nuts (5)	Reach inside rear storage compartment and insert capscrews through flat washer, rear platform, and chassis. Fasten with nuts and flat washers using 3/4-inch combination wrench and 3/4-inch socket on ratchet.	
f. Two tail lights (4)	Install.		

5-9. REAR PLATFORM - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
4. Curbside platform	a. Platform ③	Slide notches on platform onto shoulder bolts.	
	b. Two flat washers ② and two capscrews ①	Attach curbside platform to rear and center platforms using 3/4-inch combination wrench.	

5-9. REAR PLATFORM - MAINTENANCE INSTRUCTIONS - Continued



- | | | | |
|---|-------------|----|---------------------------|
| 1 | CAPSCREW | 8 | REAR PLATFORM |
| 2 | FLAT WASHER | 9 | SCREW |
| 3 | PLATFORM | 10 | FLAT WASHER |
| 4 | TAIL LIGHT | 11 | REFLECTOR |
| 5 | NUT | 12 | SHOULDER BOLT |
| 6 | CAPSCREW | 13 | RIVET |
| 7 | FLAT WASHER | 14 | PLATFORM GROUNDING SPRING |

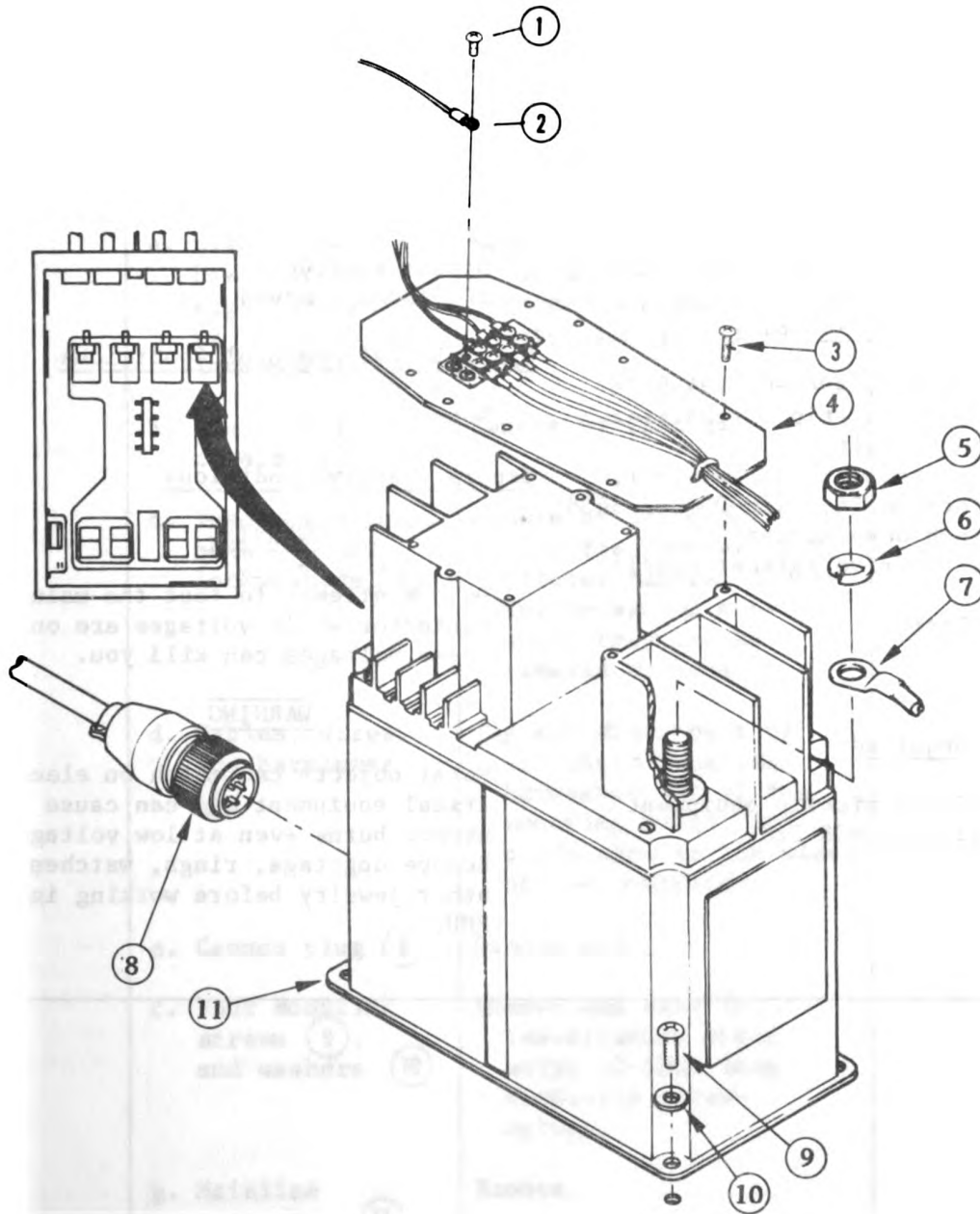
5-10. OVERCURRENT SENSING CONTACTOR - MAINTENANCE INSTRUCTIONS	
<p>This task covers:</p> <ol style="list-style-type: none"> a. Remove b. Install 	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Equipment Conditions</u>
None	System shut down PDU cover removed
<u>Tools and Special Tools</u>	<u>Special Environmental Conditions</u>
Contact truck, 4940-00-294-9518 1/4-inch flat-tip screwdriver, 4-inch shaft No. 3 cross-tip screwdriver, 6-inch shaft No. 2 cross-tip screwdriver, 8-inch shaft, 5120-00-542-3438 5/8-inch deep socket 3/8-inch drive ratchet handle	None
	<u>General Safety Instructions</u>
	<u>WARNING</u>
	Voltages present at this contactor can kill you. Be sure all voltages are off before working on contactor.
<u>Materials/Parts</u>	<u>WARNING</u>
Tags	Metal objects can catch on electrical equipment and can cause severe burns even at low voltage. Remove dog tags, rings, watches, and other jewelry before working in the PDU.
<u>Personnel Required</u>	
Two engineer missile equipment repairmen, MOS 52C	

5-10. OVERCURRENT SENSING CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	NOTE		
	See troubleshooting table, page 5-6 for testing overcurrent sensing contactor.		
REMOVE			
1. PDU	<p>a. Four screws ① and four wires ②</p> <p>b. Four screws ③</p> <p>c. Mounting plate ④</p> <p>d. Six hexagonal nuts ⑤ and six lockwashers ⑥</p>	<p>Using flat-tip screwdriver, remove terminal board screws holding wiring harness and disconnect wires.</p> <p>Remove using the cross-tip screwdriver.</p> <p>Carefully lift mounting plate with terminal board, power cable wires, and contactor cover attached. Move mounting plate to one side to reach the contactor.</p> <p>Remove, using the 5/8-inch deep socket with ratchet handle to loosen the nuts from the mounting bolts in the contactor.</p>	<p>See figure, page 5-31. Save the screws.</p>

5-10. OVERCURRENT SENSING CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
INSTALL 2. PDU	e. Six cables and power leads ⑦	Tag and disconnect. Lift and remove from mounting bolts.	
	f. Cannon plug ⑧	Unscrew and pull from its socket.	
	g. Four mounting screws ⑨ and washers ⑩	Remove, using the cross-tip screwdriver. Save the screws, washers, and nuts.	
	h. Overcurrent sensing contactor ⑪	Remove and lift from PDU chassis.	
	a. Overcurrent sensing contactor ⑪	Replace. Place new contactor in PDU and align contactor holes with screw holes in chassis.	A new contactor requires removal of the cover in order to receive the harnesses and cables. Use the old cover and mounting plate unless damaged.
	b. Four mounting screws ⑨ and washers ⑩	Replace. Place four mounting screws through the holes in washers, contactor, and chassis.	
	c. Cannon plug ⑧	Install.	
	d. Power leads and cables ⑦	Replace. Place power leads and cables on correct mounting bolts within contactor.	

5-10. OVERCURRENT SENSING CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	<u>CAUTION</u>		
	Contactor may be damaged if cables turn during installation. Hold cables straight out from contactor and do not allow them to turn when tightening nuts.		
	e. Six hexagonal nuts ⑤ and lockwashers ⑥	Replace. Hand tighten hexagonal nuts until it becomes necessary to use socket wrench. Hold cables straight out from contactor and do not allow them to turn. Tighten nut using 5/8-inch deep socket on ratchet handle.	Do not over tighten. Stud may move slightly if harness is pulled. Slight movement is allowable.
	f. Mounting plate ④, and four pan-head screws ③.	Replace. Place mounting plate on contactor and insert screws into receiving holes. Use cross-tip screwdriver to tighten screws and cover into final position.	
	g. Four wires ② and screws ①	Attached wires to correct locations on terminal board using flat-tip screwdriver.	

5-10. OVERCURRENT SENSING CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued



- | | | | |
|---|-----------------|----|-------------------------------|
| 1 | SCREWS | 8 | LOCKWASHER |
| 2 | WIRES | 9 | HARNESS |
| 3 | PANHEAD SCREW | 10 | CANNON PLUG |
| 4 | LOCKWASHER | 11 | SCREW |
| 5 | FLAT WASHER | 12 | WASHER |
| 6 | CONTACTOR COVER | 13 | OVERCURRENT SENSING CONTACTOR |
| 7 | HEXAGONAL NUTS | | |

5-11. MAIN LINE CONTACTOR - MAINTENANCE INSTRUCTIONS	
This tasks covers: a. Remove b. Install	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Equipment Conditions</u>
None	System shut down PDU cover removed
<u>Tools and Special Tools</u>	<u>Special Environmental Conditions</u>
Contact truck, 4940-00-294-9518 1/4-inch flat-tip screwdriver, 4-inch shaft No. 2. cross-tip screwdriver, 8-inch shaft, 5120-00-542-3438 5/8-inch deep socket 3/8-inch drive ratchet handle	None
<u>Materials/Parts</u>	<u>General Safety Conditions</u>
Tags	<u>WARNING</u> Do not attempt to test the main line contactor while voltages are on. These voltages can kill you.
<u>Personnel Required</u>	<u>WARNING</u> Metal objects can catch on elec- trical equipment and can cause severe burns even at low voltage. Remove dog tags, rings, watches, and other jewelry before working in the PDU.

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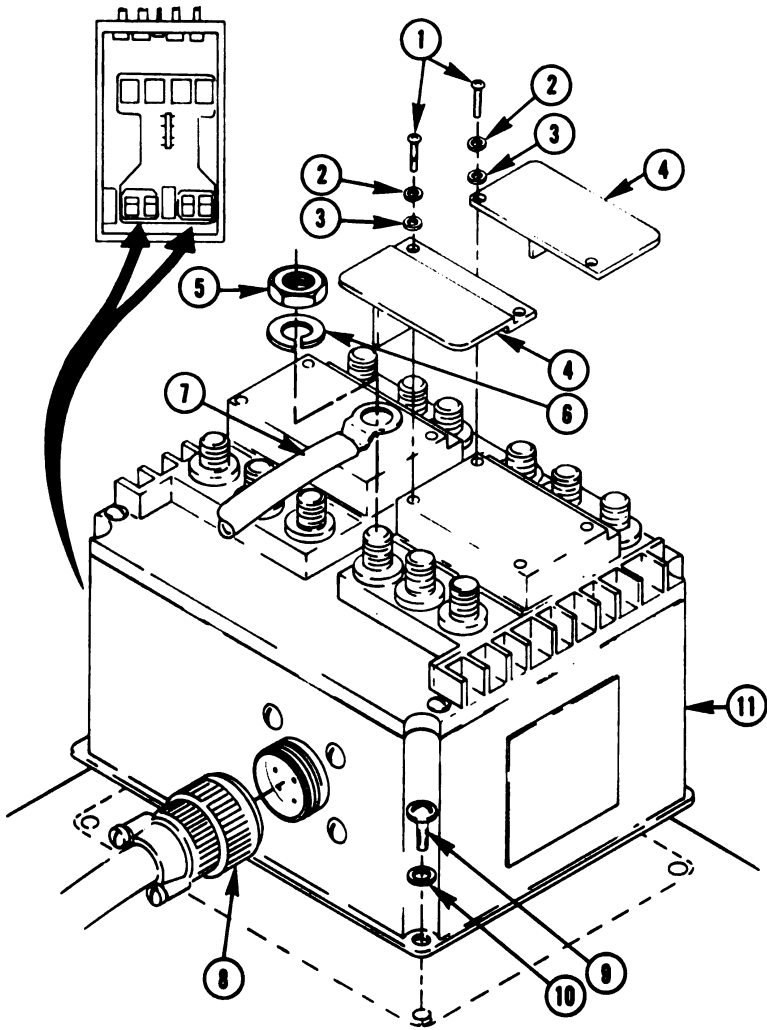
5-11. MAIN LINE CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
NOTE			
See troubleshooting table, page 5-8, for testing main line contactor.			
REMOVE			
1. PDU	<p>a. Eight inner pan-head screws (1), eight washers (2), and eight lockwashers (3)</p> <p>b. Four contactor covers (4)</p> <p>c. Twelve hexagonal nuts (5) and lockwashers (6)</p> <p>d. Cables, wires, and harnesses (7)</p> <p>e. Cannon plug (8)</p> <p>f. Four mounting screws (9), and washers (10)</p> <p>g. Mainline contactor (11)</p>	<p>Remove by using flat-tip screwdriver. Save screws and washers for later installation.</p> <p>Remove by lifting.</p> <p>Remove by using 5/8-inch deep socket with ratchet handle; loosen the hexagonal nuts until they can be removed by hand.</p> <p>Tag and disconnect by lifting the cables/harnesses off of the mounting bolts, and place them to the sides of the contactor.</p> <p>Disconnect.</p> <p>Remove and save for installation phase using 10-inch long cross-tip screwdriver.</p> <p>Remove.</p>	<p>See figure, page 5-35.</p>
INSTALL			
2. PDU	<p>a. Mainline contactor (11)</p>	<p>Replace. Aline new contactor above holes in PDU chassis.</p>	

5-11. MAIN LINE CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	b. Washers (10) and mounting screws (9)	Replace by inserting screws into washers, then into contactor and chassis holes. Tighten using a cross-tip screwdriver.	
	c. Cannon plug (8)	Connect.	
	d. Cables, wires, harnesses (7)	Place on correct mounting bolts.	Ensure that the cables and harnesses are replaced in the exact positions from which they were removed.
<u>CAUTION</u>			
Contactor may be damaged if cables turn during installation. Hold cables straight out from contactor and do not allow them to turn when tightening nuts.			
	e. Twelve lock-washers (6) and hexagonal nuts (5)	Replace. Hand tighten hexagonal nut until it becomes necessary to use the socket wrench. Hold cables straight out from contactor and do not allow them to turn. Tighten nut using 5/8-inch deep socket on ratchet handle.	Studs may move slightly if harness is pulled. Slight movement is allowable.
	f. Contactor cover (4)	Replace. Place the cover onto the contactor and aline the holes.	

5-11. MAIN LINE CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	<p>g. Eight inner panhead screws ①, eight washers ②, and eight lockwashers ③</p>	<p>Replace the eight panhead screws by inserting them through the holes of the washers, contactor cover, and the contactor, in that order. Tighten the screws into place with the flat-tip screwdriver.</p>	

5-11. MAIN LINE CONTACTOR - MAINTENANCE INSTRUCTIONS - Continued



- | | | | |
|---|-----------------|----|--------------------|
| 1 | SCREWS | 7 | WIRES |
| 2 | WASHERS | 8 | CANNON PLUG |
| 3 | LOCKWASHER | 9 | SCREW |
| 4 | CONTACTOR COVER | 10 | WASHER |
| 5 | NUT | 11 | MAINLINE CONTACTOR |
| 6 | LOCKWASHER | | |

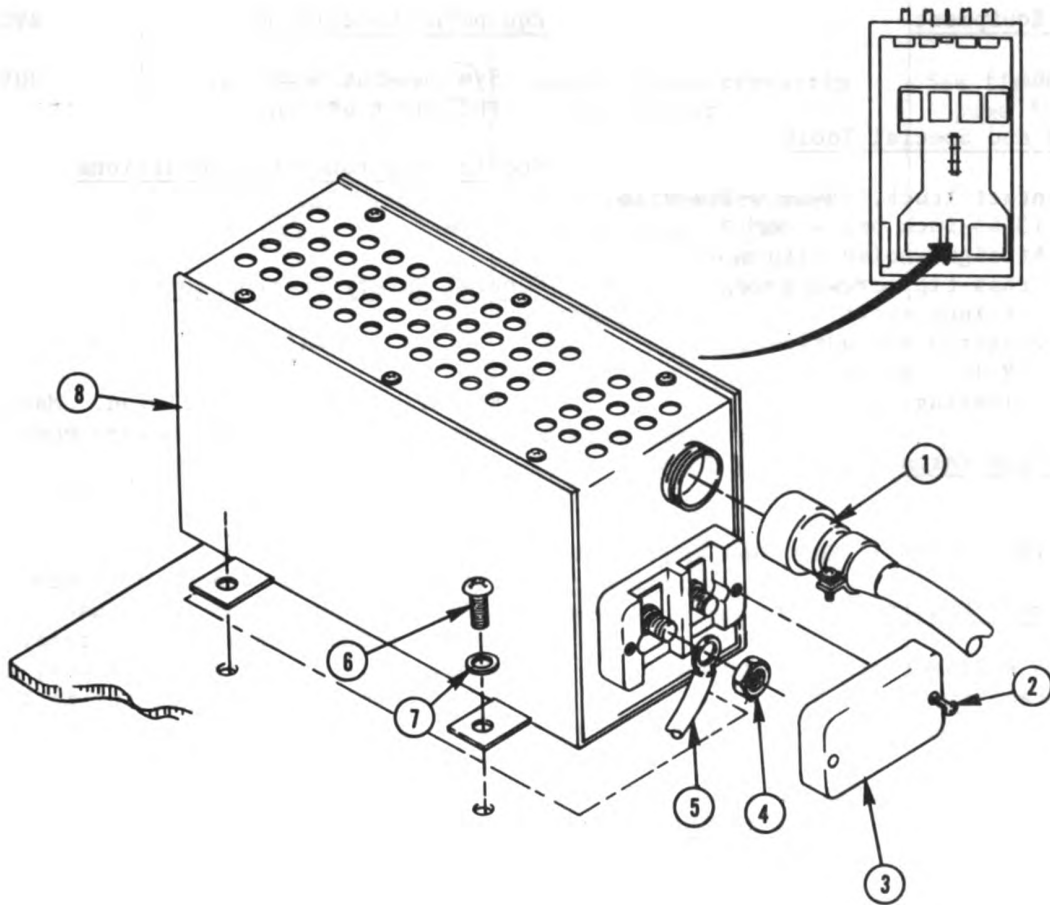
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5-12. 50-AMPERE CONVERTER - MAINTENANCE INSTRUCTIONS	
<p>This tasks covers:</p> <ul style="list-style-type: none"> a. Remove b. Install 	
INITIAL SETUP	
<u>Test Equipment</u>	<u>Equipment Conditions</u>
None	System shut down PDU cover removed
<u>Tools and Special Tools</u>	<u>Special Environmental Conditions</u>
Contact truck, 4940-00-294-9518 Flat-tip screwdriver, 1-inch shaft No. 2 cross-tip screwdriver, 8-inch shaft, 5120-00-542-3438 7/16-inch socket, 3/8-inch drive 3/8-inch drive ratchet	None
	<u>General Safety Instructions</u>
	<u>WARNING</u>
	Electric shock can kill you. Use extreme caution when working on electrical parts.
<u>Materials/Parts</u>	
Tags	<u>WARNING</u>
<u>Personnel Required</u>	
Two engineer missile equipment repairmen, MOS 52C	Metal objects can catch on electrical equipment and can cause severe burns even at low voltage. Remove dog tags, rings, watches, and other jewelry before working in the PDU.

5-12. 50-AMPERE CONVERTER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
<u>WARNING</u>			
The EPP II generates voltages that can kill. Shut power off before replacing converter.			
REMOVE			
1. PDU	a. Input connector ①	Unscrew and unplug from 50-ampere converter.	See figure, page 5-39.
	b. Two screws and cover ② ③	Loosen screws using flat-tip screwdriver. Remove cover.	
	c. Two nuts ④	Remove using 7/16-inch socket on the 3/8-inch drive ratchet handle.	
	d. Output wires ⑤	Tag and disconnect from converter.	
	e. Four mounting screws ⑥ and flat washer ⑦	Remove using cross-tip screwdriver.	
	f. Converter ⑧	Remove.	
INSTALL			
2. PDU	a. Converter ⑧	Place converter on mounting plate.	
	b. Four mounting screws ⑥ and flat washers ⑦	Install through converter and mounting plate. Tighten with cross-tip screwdriver.	
	c. Output wires ⑤ and two nuts ④	Connect wires to converter nuts. Tighten nuts with 7/16-inch socket.	

5-12. 50-AMPERE CONVERTER - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	d. Cover ③, and two screws ②	Attach cover to con- verter with flat washers and screws.	
	e. Input connector ①	Plug in and screw on tight.	

5-12. 50-AMPERE CONVERTER - MAINTENANCE INSTRUCTIONS - Continued



- 1 INPUT CONNECTOR
- 2 SCREW
- 3 COVER
- 4 NUT

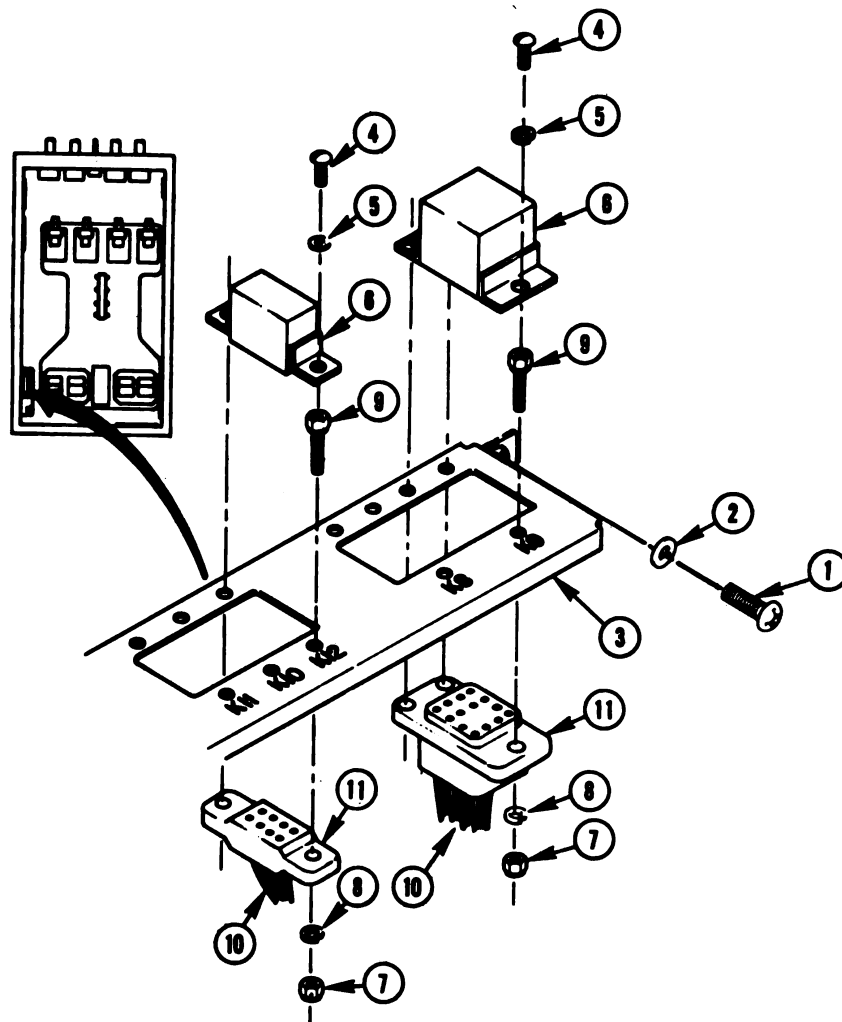
- 5 OUTPUT WIRES
- 6 SCREW
- 7 FLAT WASHER
- 8 CONVERTER

5-13. CONTROL RELAYS - MAINTENANCE INSTRUCTIONS	
This task covers: a. Remove b. Install	
<u>INITIAL SETUP</u>	
<u>Test Equipment</u>	<u>Equipment Conditions</u>
None	System shut down PDU cover off
<u>Tools and Special Tools</u>	<u>Special Environmental Conditions</u>
Contact truck, 4940-00-294-9518 13/64-inch box wrench Straight-noise pliers Cross-tip screwdriver, 6-inch shaft Flat-tip screwdriver, 8-inch shaft Soldering iron	. None
<u>Materials/Parts</u>	<u>General Safety Instructions</u>
Tags Solder (Item 1, appendix E)	<u>WARNING</u> Electric shock can kill you. Make sure generator is off before changing relays.
<u>Personnel Required</u>	<u>WARNING</u> Metal objects can catch on electrical equipment and can cause severe burns even at low voltage. Remove dog tags, rings, watches, and other jewelry before working in the PDU.
Two engineer missile equipment repairmen, MOS 52C	

5-13. CONTROL RELAYS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	NOTE		
	See troubleshooting table, page 5-9, for testing control relays.		
REMOVE			
1. PDU	a. Four screws (1) and four flat washers (2)	Remove using cross-tip screwdriver.	See figure, page 5-43.
	b. Relay chassis (3)	Position chassis away from side of PDU to reach mounting hardware on bottom of the chassis.	
	NOTE		
	Control relays K8 and K9 are mounted with three screws each. K10, K11, and K12 use only two screws each. Removal is the same for both types.		
2. Relay chassis	a. Screws (4) and lockwashers (5)	Remove using flat-tip screwdriver.	
	b. Relay (6)	Remove from socket.	
	NOTE		
	Perform steps 2c through 2e only if replacing the relay sockets.		
	c. Nuts (7), lockwashers (8), and studs (9)	Hold studs with straight-nose pliers, and remove nuts using 13/64-inch box wrench.	
	d. Studs (9)	Remove from relay socket and relay chassis.	
	e. Wires (10) and relay socket (11)	Tag and unsolder wires. Remove socket.	

5-13. CONTROL RELAYS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
INSTALL	NOTE		
	Steps 3a through 3c cover installation of the relay socket. Go to 3d if replacing only the relay.		
3. Relay chassis	a. Relay socket (11) and wires (10)	Use the soldering iron to attach the wires to the proper pins. Double check before removing tags.	
	b. Studs (9)	Insert through relay chassis and relay socket.	
	c. Lockwasher (8) and nut (7)	Attach to stud. Tighten using straight-nose pliers and 13/64-inch box wrench.	
	d. Relay (6)	Install in relay socket.	
	e. Lockwasher (5) and screw (4)	Secure relay into socket with screws and lockwashers using flat-tip screwdriver.	
4. PDU	Relay chassis (3), four flat washers (2), and four screws (1)	Fasten relay chassis to PDU with flat washers and screws, using cross-tip screwdriver.	

5-13. CONTROL RELAYS - MAINTENANCE INSTRUCTIONS - Continued



- | | | | |
|---|---------------|----|--------------|
| 1 | SCREW | 7 | NUT |
| 2 | FLAT WASHER | 8 | LOCKWASHER |
| 3 | RELAY CHASSIS | 9 | STUD |
| 4 | SCREW | 10 | WIRE |
| 5 | LOCKWASHER | 11 | RELAY SOCKET |
| 6 | RELAY | | |

5-14. DIODES CR2 AND CR3 - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Install

INITIAL SETUP

Test Equipment

None

Equipment Conditions

Generators off
PDU cover off

Tools and Special Tools

Contact truck, 4940-00-294-9518
Cross-tip screwdriver
Soldering iron (47-1/2 watts,
maximum)

Special Environmental Conditions

None

General Safety Instructions

Materials/Parts

Solder (Item 1, appendix E)

WARNING

Electric shock from the relay chassis can cause severe injury. Be sure battery cables are disconnected before working on unit.

Personnel Required

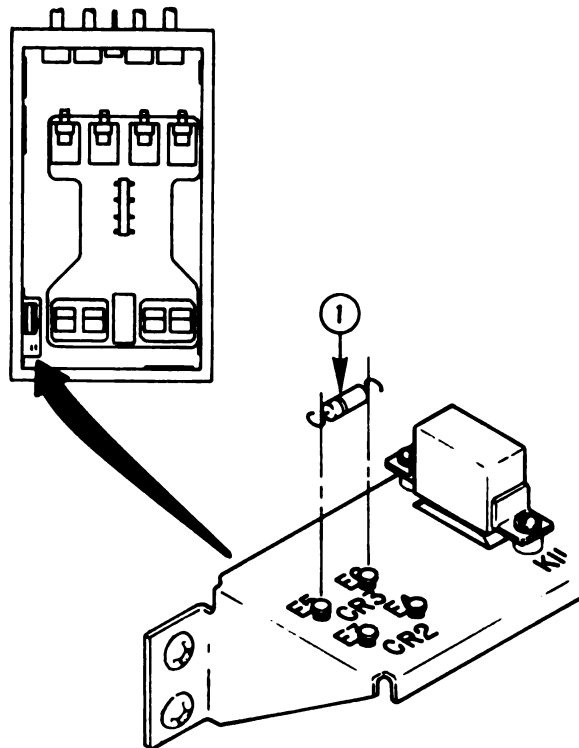
Two engineer missile equipment repairmen, MOS 52C

WARNING

Metal objects can catch on electrical equipment and can cause severe burns even at low voltage. Remove dog tags, rings, watches, and other jewelry before working in the PDU.

5-14. DIODES CR2 AND CR3 - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
NOTE			
See troubleshooting table, page 5-10, for testing diodes.			
REMOVE			
1. Relay chassis	Diode ①	Note polarity of diode and unsolder both ends of diode using soldering iron.	See figure, page 5-46.
INSTALL			
2. Relay chassis	Diode ①	Solder diode into place on standoff. Double-check polarity.	

5-14. DIODES CR2 AND CR3 - MAINTENANCE INSTRUCTIONS - Continued



1 DIODE

5-15. FUEL TANK - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Install

INITIAL SETUP

Test Equipment

None

Equipment Conditions

None

Tools and Special Tools

Contact truck, 4940-00-294-9518
 7/8-inch combination wrench
 11/16-inch socket,
 3/8-inch drive
 3/8-inch drive ratchet
 18-inch pipe wrench
 Flat-tip screwdriver
 3/8-inch combination wrench

Special Environmental Conditions

None

General Safety Instructions

WARNING

Fuel is highly flammable. Keep heat and flame away from tanks at all times. Do not smoke when working on fuel tanks.

Materials/Parts

Suitable container
 Rags

Personnel Required

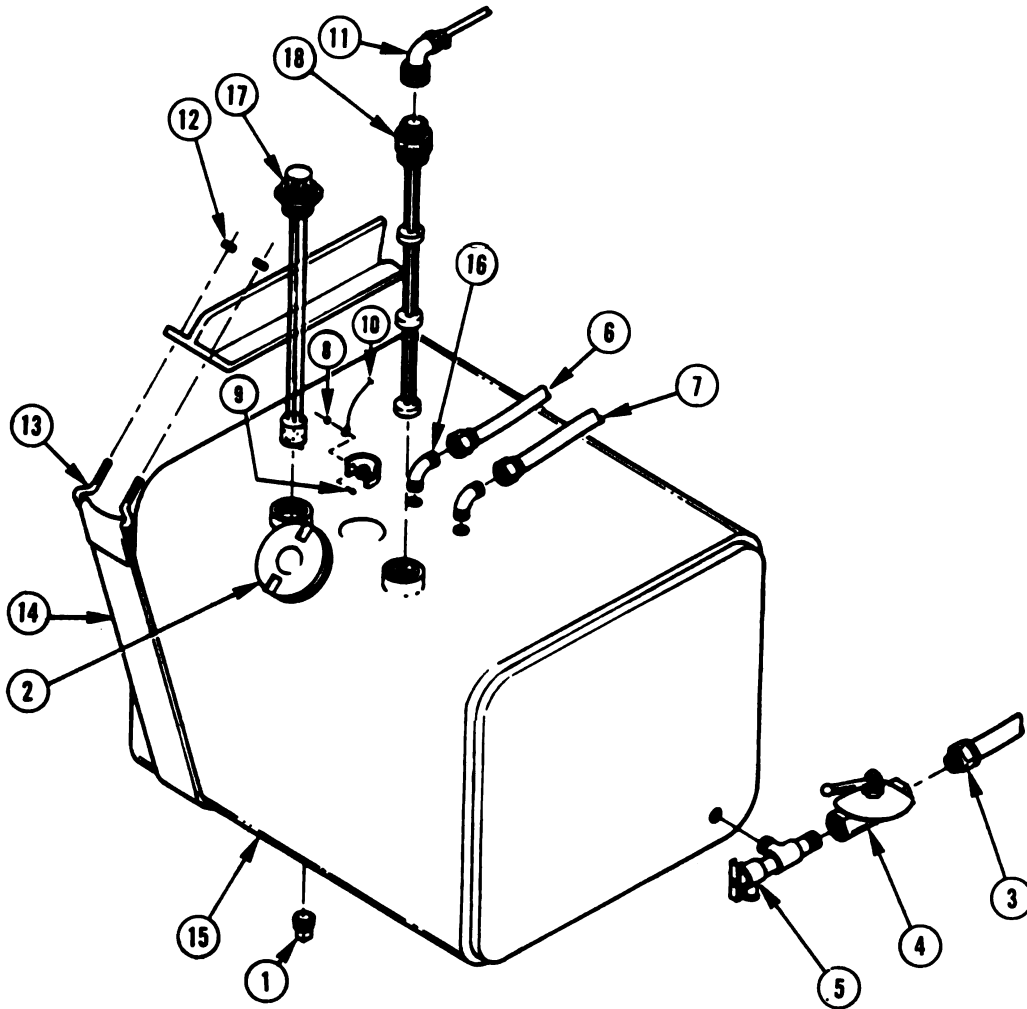
Two engineer missile equipment repairmen, MOS 52C

5-15. FUEL TANK - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
NOTE			
If replacing a fuel tank, close the ball valve on opposite side fuel tank before proceeding. Be sure to open both ball valves upon completion of maintenance.			
REMOVE			
1. Fuel tank	a. Drainplug (1) and cap (2)	Place suitable container under fuel tank, remove plug using 3/8-inch ratchet, and cap, and allow all fuel to drain into suitable container. Replace cap and drainplug.	See figure, page 5-51.
	b. Coupling (3)	Disconnect using 7/8-inch combination wrench.	
	c. Ball valve (4)	Remove.	See paragraph 4-26.
	d. Drain valve (5)	Remove.	
	e. Fuel line (6) and vent line (7)	Disconnect from fuel tank using 7/8-inch combination wrench.	
	f. Nut (8), screw (9), and ground wire (10)	Remove nut and screw, using flat-tip screwdriver and 3/8-inch combination wrench. Remove ground wire.	
	g. Cable (11)	Disconnect from fuel-level switch.	
	h. Four nuts (12) and two U-bolts (13)	Support fuel tank and remove nuts from U-bolts using 11/16-inch socket with ratchet handle.	

5-15. FUEL TANK - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	i. Support straps (14) and fuel tank (15) j. Two elbows (16) k. Fuel-level gage (17) and fuel-level switch (18)	Lower support straps and remove fuel tank from EPP II. Remove. Remove from fuel tank using 18-inch pipe wrench.	
INSTALL			
2. Fuel tank	a. Fuel-level gage (17) and fuel-level switch (18) b. Two elbows (16) c. Fuel tank (15), support straps (14), U-bolt (13), and nuts (12) d. Cable (11) e. Ground wire (10), screw (9), and nuts (8) f. Fuel line (6) and vent line (7)	Install into fuel tank. Tighten using 18-inch pipe wrench Install on fuel tank. Lift fuel tank into position. Bring support straps under bottom and up front of fuel tank. Insert ends of U-bolts through bracket and fasten with nuts. Tighten nuts using 11/16-inch socket with ratchet handle. Attach to fuel-level switch. Attach ground wire to fuel tank with flat-tip screwdriver and 3/8-inch combination wrench. Attach to fuel tank using 7/8-inch combination wrench.	

5-15. FUEL TANK - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	g. Drain valve (5)	Attach to fuel tank.	See paragraph 4-26.
	h. Ball valve (4)	Install	
	i. Coupling (3)	Attach coupling using 7/8-inch combination wrench.	
	j. Ball valves	Open both Ball Valves and check for leakage. Refer to PMCS Table 2-3 for classification.	

5-15. FUEL TANK - MAINTENANCE INSTRUCTIONS - Continued



- 1 DRAINPLUG
- 2 CAP
- 3 COUPLING
- 4 BALL VALVE
- 5 DRAIN VALVE
- 6 FUEL LINE
- 7 VENT LINE
- 8 NUT
- 9 SCREW

- 10 GROUND WIRE
- 11 CABLE
- 12 NUT
- 13 U-BOLT
- 14 SUPPORT STRAP
- 15 FUEL TANK
- 16 ELBOWS
- 17 FUEL-LEVEL GAGE
- 18 FUEL-LEVEL SWITCH

5-16. POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS

NOTE

This task covers:

- a. Remove
- b. Install

This paragraph is effective for serial numbers ME 00001, 00002, 00003, 00005 and 00104. For all George Engine serial numbers (GE 00001-00026), all Gallo Machine serial numbers (GM 00001-00036) and MERADCOM (ME 00004 and 00006) see paragraph 5-17, page 5-56.6.

INITIAL SETUP

Test Equipment

None

Equipment Conditions

Generators off
PDU cover off

Tools and Special Tools

Contact truck, 4940-00-294-9518
Cross-tip screwdriver
18-inch pipe wrench
Diagonal cutting pliers

Special Environmental Conditions

None

Materials/Parts

RTV Adhesive-Sealant
(Item 5, Appendix E)

WARNING

Electric power in PDU can cause severe injury or death. Always shut off generators before removing PDU cover.

Personnel Required

Two engineer missile Equipment repairmen, MOS 52C

WARNING

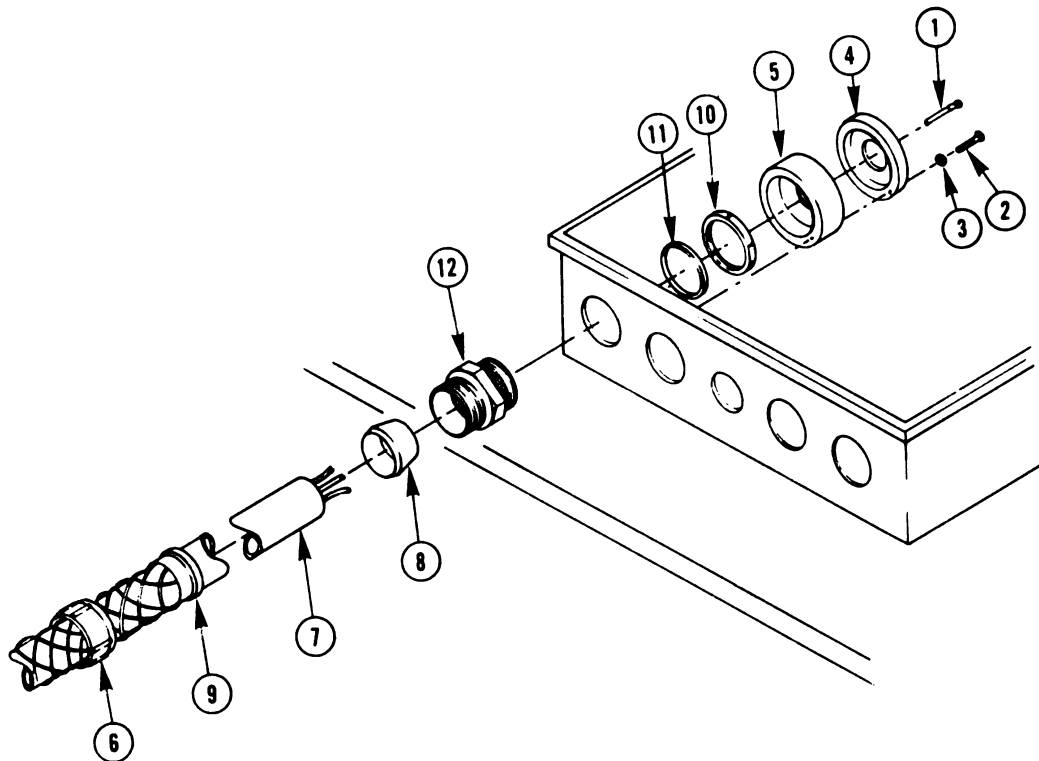
Metal objects can come in contact with electrical equipment and can cause severe burns even at low voltage. Remove dog tags, rings, watches, and other jewelry before working in the PDU.

5-16. POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS - Continued				
LOCATION	ITEM	ACTION	REMARKS	
REMOVE 1. Power Distribution Unit (PDU)	a. Wires ①	Tag and disconnect all wires from contactors and terminal boards.		
	b. Four screws ② and four flat washers ③	Remove using cross tip screwdriver.		
	c. Washer ④ and spacer ⑤	Slide off end of cable.	Insure that braided shield in cable is free of the spacer and will not snag when cable is removed.	
	d. Cable grip nut ⑥	Unscrew using 18-inch pipe wrench and slide down cable.		
	e. Cable ⑦	Pull cable from PDU.		
	f. Rubber bushing ⑧	Remove from cable.		
	g. Wire mesh ⑨	Squeeze mesh together and remove from cable.		
	h. Cable grip nut ⑥	Remove from cable.		
	NOTE			
	Perform steps i and j only if replacing a damaged strain relief assembly.			
	i. Locknut ⑩ and sealing gasket ⑪	Unscrew locknut using 18-inch pipe wrench and remove locknut and gasket.		
	j. Strain relief body ⑫	Remove from PDU.		

5-16. POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
INSTALL			
		NOTE	
		Perform steps a and b only if replacing strain relief assembly. If replacing only a cable, go to step c.	
2. PDU	a. Strain relief body (12)	(1) Apply RTV adhesive to PDU around strain relief hole. (2) Insert short section of strain relief body through hole until nut-shaped section is flat against PDU.	
	b. Sealing gasket (11) and locknut (10)	(1) Place sealing gasket on strain relief body inside PDU. (2) Screw on locknut. Tighten using 18-inch pipe wrench.	
	c. Cable grip nut (6)	Slide onto cable.	
	d. Wire mesh (9)	Squeeze mesh together and slide onto cable.	
	e. Rubber bushing (8)	Insert narrow end of bushing into strain relief body outside PDU.	
	f. Cable (7)	Insert cable through strain relief body until 1/4-inch of black rubber insulation extends past strain relief body inside PDU.	
	g. Cable grip nut (6)	Screw onto cable grip body. Tighten using 18-inch pipe wrench.	

5-16. POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS - CONTINUED			
LOCATION	ITEM	ACTION	REMARKS
	<p>h. Spacer (4), and washer (5), four flat washers (3) and four screws (2)</p>	<p>(1) Slide spacer and washer onto end of cable inside PDU. Slide spacer up until flat against PDU frame.</p> <p>(2) Spread cable shield braid against spacer and push washer up to sandwich braid between spacer and washer.</p> <p>(3) Attach washer and spacer to PDU with flat washers and screws using cross-tip screwdriver.</p> <p>(4) Cut off excess braid using diagonal cutting pliers.</p>	
	<p>i. Wires (1)</p>	<p>Attach all wires to correct contactors and terminal boards. Double check all cable connections.</p>	

5-16. POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS - Continued



- | | | | |
|---|----------------|----|--------------------|
| 1 | WIRES | 7 | CABLE |
| 2 | SCREWS | 8 | BUSHING |
| 3 | FLAT WASHERS | 9 | WIRE MESH |
| 4 | WASHER | 10 | LOCKNUT |
| 5 | SPACER | 11 | SEALING GASKET |
| 6 | CABLE GRIP NUT | 12 | STRAIN RELIEF BODY |

5-17. POWER LEADS - MAINTENANCE INSTRUCTIONS

This task covers:

- a. Remove
- b. Manufacture
- c. Install

INITIAL SETUP

Test Equipment

None

Equipment Conditions

System shut down
PDU cover off

Tools and Special Tools

Contact truck, 4940-00-294-9518
Hacksaw
Crimping tool, terminal, hand
Heat gun
5/8-in deep socket
3/8-in drive ratchet
Slip-joint pliers

Special Environmental Conditions

None

General Safety Instructions

WARNING

Electrical shock can kill you.
Use extreme caution when working
on electrical parts.

Materials/Parts

See appendix F, figure F-17 (Sheet
11 of 12)

Personnel Required

One turbine engine driven
generator repairman, MOS 52F

WARNING

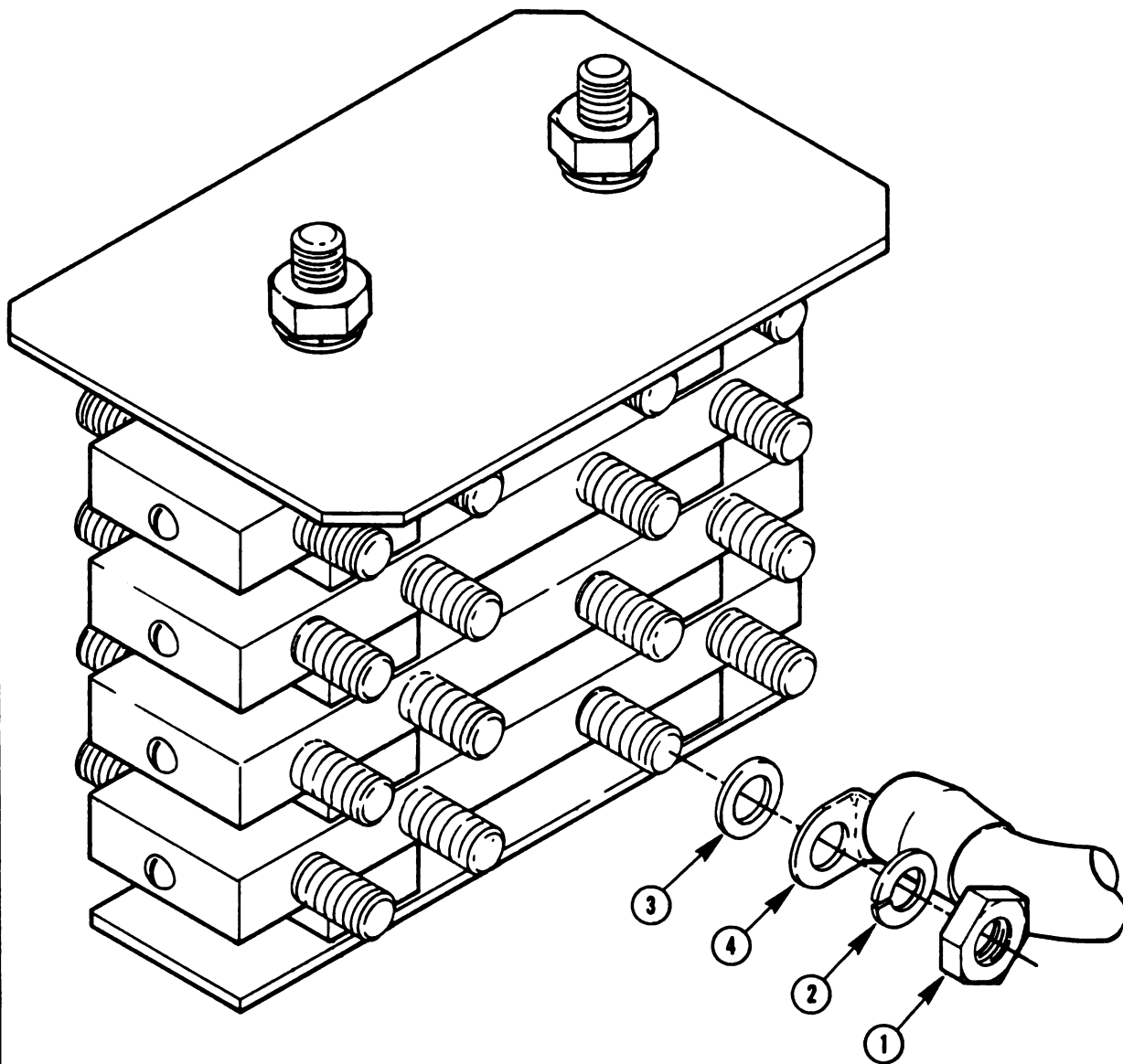
Metal objects can catch on elec-
trical equipment and can cause
severe burns even at low voltage.
Remove dog tags, rings, watches,
and other jewelry before working
in the PDU.

LOCATION	ITEM	ACTION	REMARKS
		NOTE	
<p>There are 39 power leads in the PDU which connect the overcurrent and mainline contactors to the bus bar, the mainline contactors to the generator sets, and the generator and EPP II grounds to the bus bar. Each cable is identified by part number in the Repair Parts and Special Tools List, Appendix F. Refer to appendix F to identify the parts for a faulty power lead.</p>			

5-17. POWER LEADS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
REMOVE		NOTE	
		See paragraph 5-10 for instructions to remove power leads from over-current contactors, paragraph 5-11 to remove power leads from main-line contactors, and paragraph 4-29 to remove power leads from inside the generator sets.	
1. PDU	a. Nut (1), lock-washer (2), and flat washer (3)	Use 5/8-inch deep socket on ratchet to remove nut.	See figure page 56.4
	b. Power lead (4)	Remove.	
2. PDU	a. Wire (5)	Using the old power lead as a guide, cut the wire to the correct length with a hacksaw.	See figure page 56.4
	b. Insulation sleeving (6)	Cut two pieces of insulation sleeving approximately 1 1/2-inch long, mark them with the terminals, and slide them over the wire.	
	c. Terminal lug (7)	Using the crimping tool, attach the right-angle terminal lug to the end of the cable labeled for the bus bar.	
	d. Terminal lug (8)	Using the crimping tool, attach the flat terminal lug to the other end of the cable.	
		NOTE	
		Step e applies only to the manufacture of Pn's 13222E6994-6 and 13222E6994-7. For all other power leads proceed to step f.	
	e. Terminal lugs (7) and (8)	Grasp the flat part of the terminal lug as close to the wire as possible with needlenose pliers. Then, with the	

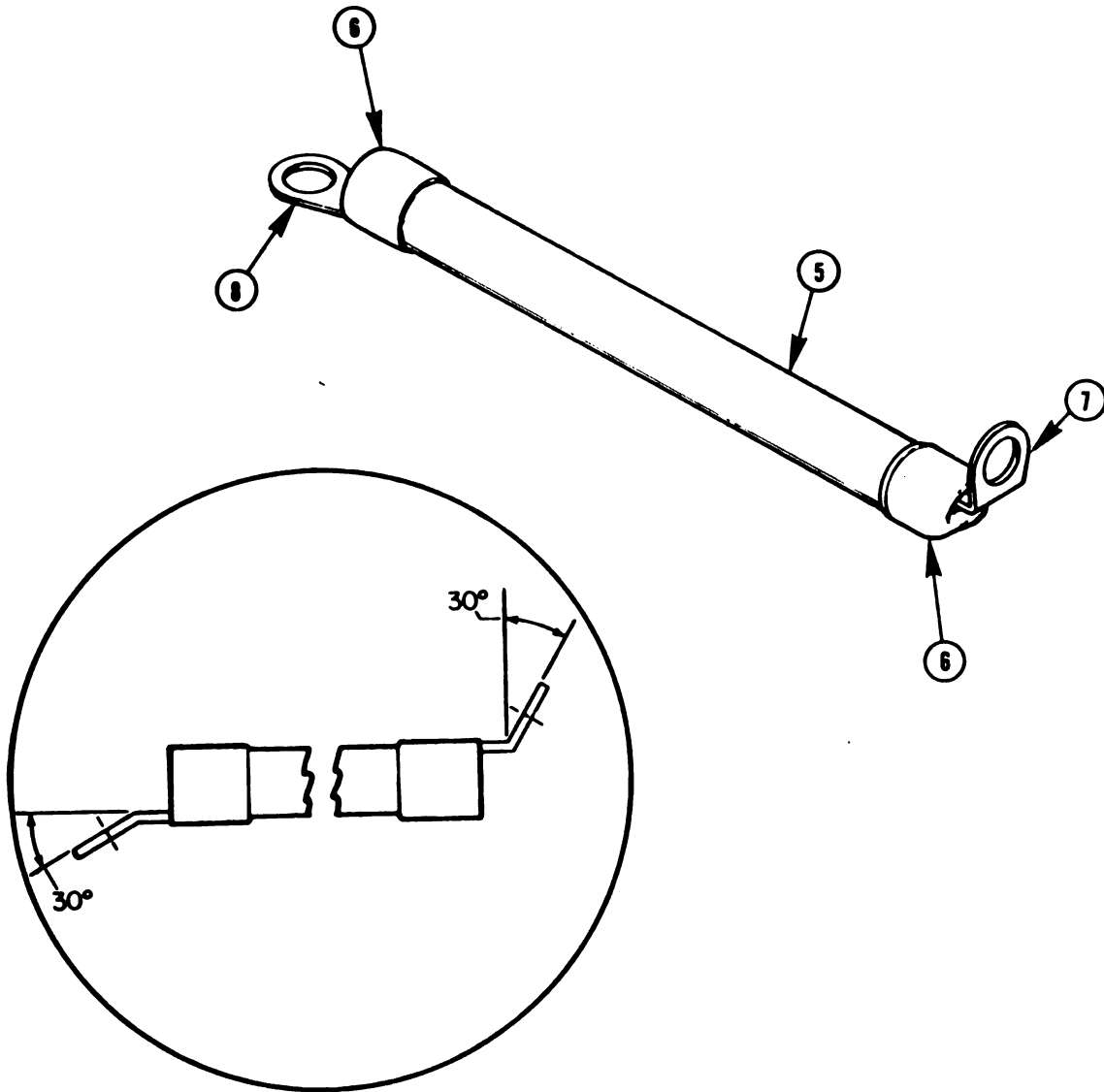
5-17. POWER LEADS - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
INSTALL 3. PDU	f. Insulation sleeving (6)	slip-joint pliers, bend the lugs approximately 30° as shown in the detail drawing on page 56.5. Slide the insulation sleeving over the crimped connection and shrink, using the heat gun.	
	a. Power lead (4), flat washer (3), lockwasher (2), and nut (1)	Attach the right-angle terminal lug of the power lead to the bus bar with the flatwasher, lockwasher, and nut. Tighten nut using a 5/8-inch deep socket on ratchet.	
	b. Power lead (4)	Refer to the appropriate maintenance paragraph to attach the other end of the power lead.	

5-17. POWER LEADS - MAINTENANCE INSTRUCTIONS - Continued



- 1 NUT
- 2 LOCKWASHER
- 3 FLAT WASHER
- 4 POWER LEAD

5-17. POWER LEADS - MAINTENANCE INSTRUCTIONS - Continued



- 5 WIRE
- 6 INSULATION SLEEVING
- 7 RIGHT -ANGLE TERMINAL LUG
- 8 TERMINAL LUG

5-17. POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS

NOTE

This task covers:

- a. Remove
 - b. Install
- This paragraph is effective for all George Engine (GE 00001-00026), Gallo Machine (GM 00001-00036) and MERADCOM (ME Serial Numbers 00004 and 00006). For serial numbers ME 00001, 00002, 00003, 00005 and 00104, see page 5-52, paragraph 5-16.

INITIAL SETUP

Test Equipment

None

Equipment Conditions

Generators off
PDU cover off

Tools and Special Tools

Contact truck, 4940-00-294-9518
10-inch slip-joint pliers (2 ea.)

Special Environmental Conditions

None

General Safety Instructions

Materials/Parts

RTV Adhesive-Sealant
(Item 5, Appendix E)
EMI Gasket 13226E7768-
(-2 power cable, -1 control cable)
Bushing 13226E6162-
(-2 power cable, -1 control cable)

WARNING

Electric power in PDU can cause severe injury or death. Always shut off generators before removing PDU cover.

Personnel Required

Two engineer missile equipment repairmen, MOS 52C

WARNING

Metal objects can come in contact with electrical equipment and can cause severe burns even at low voltage. Remove dog tags, rings, watches, and other jewelry before working in the PDU.

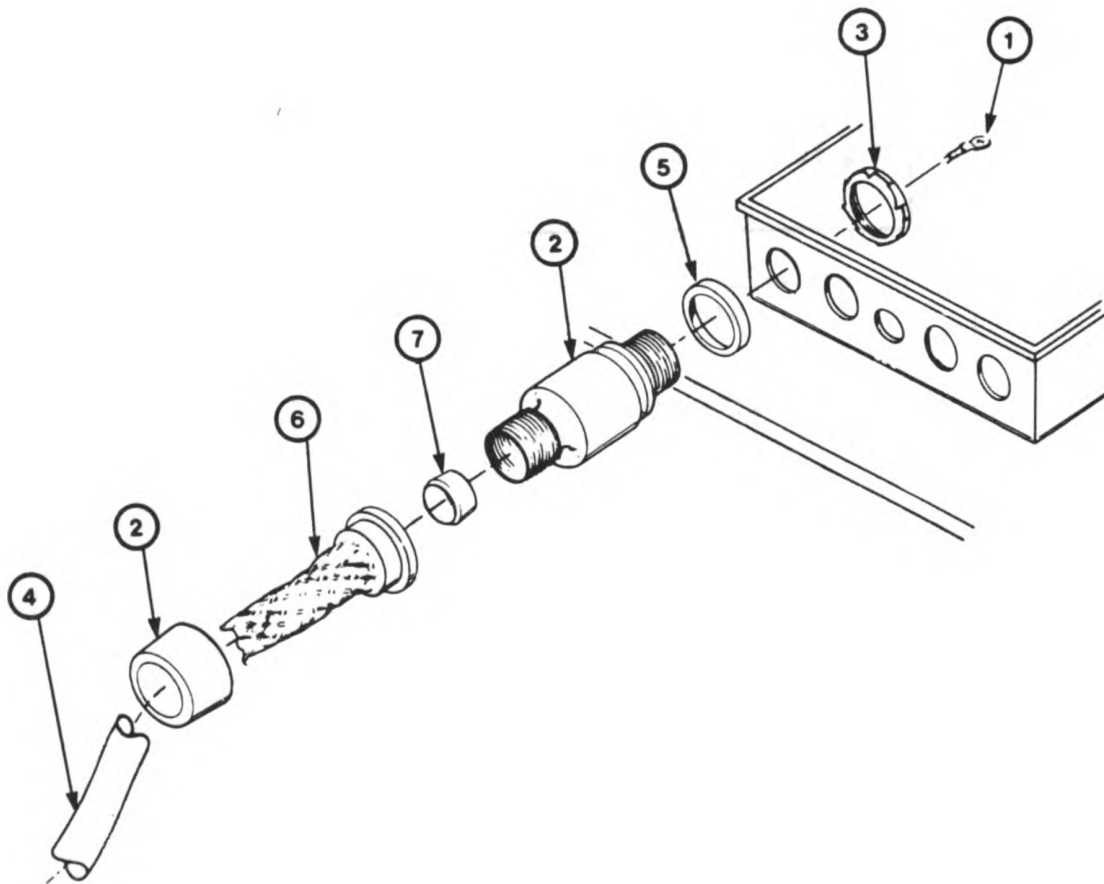
5-17 POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
Remove 1. Power Distribution Unit (PDU)	a. Wires ①	Tag and disconnect all wires from contactors and terminal boards.	
	b. Sealing Cable ②	Loosen rear collar of cable grip using slip joint pliers.	Insure that collar will slide back from cable grip.
	c. Locknut, Conduit ③	Remove locknut using spanner wrench.	
	d. Cable ④	Pull cable from PDU.	
	e. EMI Gasket ⑤	Remove from sealing grip.	Discard gasket.
	f. Cable grip ⑥	Squeeze wire mesh together and slide down cable.	
	g. Sealing Grip,	Slide front housing of sealing grip off the cable.	
	h. Bushing ⑦	Remove bushing from inside sealing grip.	Discard bushing.
	i. Cablegrip ⑥	Squeeze wire mesh together and slide off cable.	

5-17. POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS	
2. Install	J. Sealing cable ②	slide rear collar of cable grip from cable	If installing new cable make sure wires are tagged on new cable before discarding old cable.	
	h. cable ④	Lay cable aside		
	a. Sealing Grip ②	Separate rear collar from main body of sealing grip		
	<p>NOTE</p> <p>When installing new cable sealing grip, insure that original metal bushing that accompanies the grip is discarded.</p>			
	b. Sealing grip cable ②	Slide rear collar of sealing grip over cable		
	c. Cable grip ⑥	Squeeze wire mesh together and slide on cable over edge of cable covering		
d. Bushing ⑦	Install new bushing on cable			
e. Sealing grip, cable ②	Install front housing of sealing grip on cable. Slide until bushing, collar of wire grip and rear collar of sealing grip will align. Tighten rear collar on front housing of sealing grip using slip-joint pliers			
f. EMI Gasket	Install new EMI gasket on sealing grip			

5-17. POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS - Continued			
LOCATION	ITEM	ACTION	REMARKS
	g. Cable Assy ④	Insert cable assy sealing grip thru cutout in PDH.	
	h. Locknut, conduit ③	Attach locknut to sealing grip, cable assembly and tighten using spanner wrench.	
	i. Wires ①	Attach all wires to correct contractors and terminal boards double check all connections.	

5-17 POWER AND CONTROL CABLES - MAINTENANCE INSTRUCTIONS - Continued



- | | |
|-----------------|---------------|
| 1. WIRES | 5. EMI GASKET |
| 2. SEALING GRIP | 6. CABLE GRIP |
| 3. LOCKNUT | 7. BUSHING |
| 4. CABLE | |

Section V. PREPARATION FOR STORAGE OR SHIPMENT

Administrative storage of the Electric Power Plant II will be done by direct support maintenance personnel. This will be done in accordance with TM 740-90-1 (Administrative Storage of Equipment) and PATRIOT standing operating procedures. General support maintenance will prepare the Electric Power Plant II for shipment in accordance with TB 740-97-2 (Preservation of USAMECOM Mechanical Equipment for Shipment or Storage).

APPENDIX A

REFERENCES

A-1. SCOPE. This appendix lists all forms, field manuals, technical manuals, and other printed material that apply to this manual.

A-2. FORMS

- DA Form 2408-1 Equipment Daily or Monthly Log
- DA Form 2404 Equipment Inspection and Maintenance Work Sheet
- DA Form 2407 Maintenance Request
- SF 368 Quality Deficiency Report
- DA Form 2028-2 Recommended Changes to DA Publications
- SF 46 Vehicle Operator's Permit

A-3. TECHNICAL MANUALS

- DA PAM 738-750. The Army Maintenance Management System
- TM 5-6115-598-12 Operator and Organizational Maintenance Manual, Model MEP-D424A Generator Set, Electric, Transportable, Gas Turbine Engine Driven, Skid-Mounted, 150-kW, 400-Hz, Alternating Current, Tactical
- TM 9-2320-260-10 Operator's Manual, Truck M811 or Tractor M818, Organization Maintenance Manual
- TM 9-2320-260-20 Truck M811 or Tractor M818
- TB 5-4200-200-10 Hand Portable Fire Extinguisher Approved for Army Users
- TM 9-213 Painting Instructions for Field Use
- TM 9-2320-272-10 Operator's Manual, Truck M942 or Tractor M932, Organization Maintenance Manual
- TM 9-2320-272-20 Truck M942 or Tractor M932

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL

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

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

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

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

B-2. MAINTENANCE FUNCTIONS. Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

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

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

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

e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

B-1

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

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the 3d position code of the SMR code.

i. Repair. The application of maintenance services¹, including fault₂ location/troubleshooting, removal/installation, and disassembly/assembly³, procedures, and maintenance actions⁴, to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

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

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

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

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

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

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

¹Services - inspect, test, service, adjust, align, calibrate, and/or replace.

²Fault locate/troubleshoot - the process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

³Disassemble/assemble - encompasses the step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least component identified as maintenance significant (i.e., assigned an SMR code) for the category of maintenance under consideration.

⁴Actions - welding, grinding, riveting, straightening, facing, remachining, and/or resurfacing.

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

- C Operator or crew
- O Organizational maintenance
- F Direct Support Maintenance
- H General Support Maintenance
- L Specialized Repair Activity (SRA)
- D Depot maintenance

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

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

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III.

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

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

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

d. Column 4, National Stock Number. The National Stock number of the tool or test equipment.

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

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.

a. Column 2, Reference Code. The code recorded in column 6, Section II.

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

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Section II. MAINTENANCE ALLOCATION CHART

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			C	O	F	H	D		
01	Power Plant								
0101	Generator Set	Replace		2.0				1,2,4,5	A
02	Cable Storage Rack Assembly								
0201	Cable Storage Rack	Inspect Repair Replace	.1	1.0	2.0			2,11 2,11	
0202	Springs	Adjust Replace		.3 2.0				1 1,2,11	
03	Platform Assembly								
0301	Latch Assembly	Inspect Replace Repair	.1	.5 .5				1 1	
0302	Platforms	Inspect Replace Repair	.1	.5	2.5			1 1,11	B F
0303	Fenders	Inspect Replace Repair	.1	.5	.5			1 1,11	B
04	Electrical System								
0401	Chassis Assembly, Power Distribution	Test Inspect Replace Repair		0.1	0.5 2.5				
040101	Contactor, Over- current sensing	Test Replace			.2 .5			1,3,9,11 1,11,16	D
040102	Contactor, Main Line	Test Replace			.2 .5			1,3,9,11 1,11,16	D
040103	Converter, 50 Amp	Replace			.5			1,11	
0402	Chassis Relay Assembly	Test Replace			.1 .2			1,3,9 1,3,6 thru 9	D
0403	Panel Assy, Power Distribution Unit	Inspect Test Replace	.2	.2 1.0				1,3,6,7,8	
0407	Indicator Assy, Fault	Inspect Test Replace	.1	.1 .2				1,3,6,7,8	

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			C	O	F	H	D		
0408	Switches	Test Replace		.1 .3				3 1,6,7,8	
0409	Circuit Breaker 24 vdc	Test Replace		.1 .3				3 1,6	
0410	Harness	Test Replace Repair			.7 3.0 1.0			3 1,6 thru 9	
0411	Cable Assy, Power or Control	Test Replace			.5 3.0			3,13 1,11	
05	Fuel System								
0501	Tanks	Inspect Replace	.1		3.0			1,11	
0502	Gage, Fuel Level	Inspect Replace	.1	.5				1,2,12	
0503	Switch, Liquid Level	Test Replace		.2 .5				3 1,2,12	
0504	Lines and Fittings	Inspect Replace	.2	1.0				1,14	
0505	Valve, Ball	Inspect Replace	.1	.5				1,15	
0506	Fuel Filter/Water Separator	Service Service Replace	.1	.5 1.0				1 1,11	E
0507	Valves, Fuel Shutoff	Inspect Replace	.1	.3				1	
06	Chassis, Truck M811 Chassis, Truck M942								C

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Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

REF. CODE	MAINT. CAT.	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	0	Tool Kit, General Mechanic	5180-00-177-7033	
2	0	Truck, Wrecker 5 Ton 6x6	2320-00-051-0489	
3	0	Multimeter, AN/URM 105		
4	F	Bar, Spreader and Sling Assembly	6625-00-581-2036	23004414
5	0	Iron, solder - 60.0 watt maximum	3439-00-465-1649	
6	0	Pliers, Long Nose - 7 in.	5120-00-293-0032	
7	0	Stripper, Wire	5110-00-268-4220	
8	F	Power Source - Jumper Cables		
9	F	Pliers, Combination	5120-00-223-7379	
10	F	Shop Equipment, Contact Truck	4940-00-294-9518	
11	0	Wrench, Pipe 18-in.	5120-00-277-1479	
12	C	Wrench, Adjustable 6-in.	5120-00-264-3795	
13	0	Vise	5120-00-223-1951	
14	0	3/8-in. Hinged Socket Wrench Handle	5120-00-240-5396	
15	F	No. 2 Cross-tip Screwdriver 8-inch shaft	5120-00-542-3438	

Reference Code	Remarks
A	For all other maintenance functions refer to TM 5-6115-598-12.
B	Repair function is completed by welding only.
C	For all maintenance functions refer to TM 9-2320-260-20 or TM 9-2320-272-20.
D	Power Source - jumper cables modified to be manufactured by user. Refer to appendix G of this manual.
E	Limited to Replacement of filter element every 600 hours.
F	Repair of platforms at organizational level is limited to replacement of the movable step on the front platform and the PDU control panel gasket on the center platform.

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APPENDIX C

ADDITIONAL AUTHORIZATION LIST

SECTION I. INTRODUCTION**C-1. SCOPE**

This appendix lists additional items you are authorized for the support of the EPP II.

C-2. GENERAL

This list identifies items that do not have to accompany the EPP II and that do not have to be turned in with it. These items are authorized to you by CTA, MTOE, TDA, or JTA.

C-3. EXPLANATION OF LISTING

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

SECTION II. ADDITIONAL AUTHORIZATION LIST

NATIONAL STOCK NUMBER	PART NUMBER & FSCM	DESCRIPTION	U/M	QTY AUTH
		MTOE AUTHORIZED ITEMS		
5975-00-878-3791	FSO216B122-1 15277	Ground Rod	EA	1
5120-01-013-1676		Ground Rod Driver	EA	1
2529-00-148-7961		Slave Cable	EA	1
	GGG-W-636 Type III 81348	Wrench, Combination, Open-end and 15° Offset Box Opening, 13/16 Size	EA	
	GGG-W-636 Type III 81348	Wrench, Combination, Open-end and 15° Offset Box Opening, 15/16 Size	EA	1
	GGG-W-636 Type III 81348	Wrench, Combination, Open-end and 15° Offset Box Opening, 1-1/2 Size	EA	1
	GGG-W-641 Type III C12 81348	Wrench, Handle, Ratchet, Reversible, 3/4 Drive	EA	1
	GGG-W-641 Type III Class 1 Style A 81348	Wrench, Socket, Double Hex 6 Point Reg Lg 1-1/2 Size	EA	1

APPENDIX D
COMPONENTS OF END ITEM AND BASIC
ISSUE ITEMS LIST

Not Applicable

Change 4 D-1/(D-2 blank)

APPENDIX E

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

E-1. SCOPE. This appendix lists expendable supplies and materials you will need to operate and maintain the EPP II. These items are authorized to you by CTA 50-970, Expendable Items.

E-2. EXPLANATION OF COLUMNS

a. Column (1) - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material.

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

- C - Operator/crew
- O - Organizational maintenance
- F - Direct support maintenance
- H - General support maintenance

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

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

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

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
1	O		Solder, (81349) SN 60WRP2	EA
2	O		Ink, Marking, Black, (81349) MIL-I-43553BLK	EA
3	O		Compound, Sealant, Anti-sieze (81349) MIL-C-47167	EA
4	F		Enamel, (81349) IT-E-529	EA
5	O		Adhesive-Sealant, Silicone, RTV (81349) MIL-A-46146, Type I	QT
6	O		Adhesive, Silicone 13222E9697	EA
7	C	9140-00-286-5294	Fuel, Regular Diesel, 1 (DF-2) VV-F-800	GA
8	O	9140-00-286-5286	Fuel, Winter Diesel, 1 (DF-1) VV-F-800	GA
9	O	9140-00-286-5283	Fuel, Arctic Diesel, 1 (DF-A) VV-F-800	GA
10	O	9140-00-256-8613	Turbine Fuel, Aviation, (JP-4) MIL-J-5624	GA
11	O	9140-00-273-2379	Turbine Fuel, Aviation, (JP-5) MIL-J-5624	GA
12	O	9140-00-160-1837	Gasoline, Unleaded, (Emergency Only) VV-6-109	GA
13	C		Lubricant, Solid-film: Air-cured, Corrosion-inhibiting, MIL-L-46147, Type II	QT
14	C	8030-00-148-9833	Sealing, Lubrication, and Wicking Compounds: Thread-locking, Anerobic, Single Component, MIL-S-46163, Type II, Grade N	BT

APPENDIX F

ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE

REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

F-1. SCOPE. This appendix lists spare and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of organizational and direct support maintenance of the Electric Power Plant II, AN/MJQ-24. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

F-2. GENERAL. This Repair Parts and Special Tools List (RPSTL) is divided into the following sections:

a. **Section II. Repair Parts List.** A list of spare and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. The parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence. Bulk materials are listed in NSN sequence.

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

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

F-3. EXPLANATION OF COLUMNS

a. **Illustration.** 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.** The number used to identify the item called out in the illustration.

b. **Source, Maintenance, and Recoverability (SMR) Codes**

(1) **Source Code.** Source codes 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:

<u>Source Code</u>	<u>Definition</u>
PA -	Item procured and stocked for anticipated or known usage.
PB -	Item procured and stocked for insurance purposes because essentiality dictates that a minimum quantity be available in the supply system.
PC -	Item procured and stocked 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 outfitting 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 probably discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
KD -	An item of a depot overhaul/repair kit and not purchased separately. Depot kit is defined as a kit that provides items required at the time of overhaul or repair.
KF -	An item of a maintenance kit and not purchased separately. Maintenance kit is defined as a kit that provides an item that can be replaced at organizational 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 organizational level.
MF -	Item to be manufactured or fabricated at the direct support maintenance level.
MH -	Item to be manufactured or fabricated at the general support maintenance level.
MD -	Item to be manufactured or fabricated at the depot maintenance level.

- AO - Item to be assembled at organizational level.
- AF - Item to be assembled at direct support maintenance level.
- AH - Item to be assembled at general support maintenance level.
- 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.

NOTE

Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

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

<u>Maintenance Code</u>	<u>Application/Explanation</u>
C	- Crew or operator maintenance performed within organizational maintenance.
O	- Support item is removed, replaced, and used at the organizational level.
F	- Support item is removed, replaced, and used at the direct support level.
H	- Support item is removed, replaced, and used at the general support level.

- D - Support items that are removed, replaced, and used at depot, mobile depot, or specialized repair activity only.

(b) 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 (that is, all authorized maintenance functions). This position will contain one of the following maintenance codes:

<u>Maintenance Code</u>	<u>Definition</u>
0 -	The lowest maintenance level capable of complete repair of the support item is the organizational level.
F -	The lowest maintenance level capable of complete repair of the support item is the direct support level.
H -	The lowest maintenance level capable of complete repair of the support item is the general support level.
D -	The lowest maintenance level capable of complete repair of the support item is the depot level.
L -	Repair restricted to designated, special 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 Code. 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:

<u>Recoverability Code</u>	<u>Definition</u>
Z -	Nonreparable item. When unserviceable, condemn and dispose of at the level indicated in the third position.
O -	Reparable item. When uneconomically repairable, condemn and dispose of at the organizational level.
F -	Reparable item. When uneconomically repairable, condemn and dispose of at the direct support level.
H -	Reparable item. When uneconomically repairable, condemn and dispose of at the general support level.

- D - Repairable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
- L - Repairable item. Repair, condemnation, and disposal not authorized below depot/specialized repair activity level.
- A - Item requires special handling or condemnation procedures because of specific reasons (that is, precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. National Stock Number. Indicates the NSN assigned to the item which will be used for requisitioning.

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

NOTE

When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a five-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). 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, for example, EA, IN, PR, etc. When the U/M differs from the unit of issue (U/I), the lowest U/I that will satisfy the required U/M will be requisitioned.

h. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column instead of a quantity indicates that no specific quantity is applicable (for example, shims, spacers, etc).

F-4. SPECIAL INFORMATION

- a. Repair Parts Kits and Gasket Sets. Not applicable.
- b. The parts list is indented to show relationship to assemblies.

F-5. HOW TO LOCATE REPAIR PARTS

a. When NSN or part number is unknown:

(1) **First.** Using the manual table of contents, determine the functional group or assembly within which the item belongs. This is necessary since illustrations are prepared for functional groups or assemblies, and listings are divided into the same groups.

(2) **Second.** Find the illustration covering the functional group or assembly to which the item belongs.

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

(4) **Fourth.** Using the repair parts listing, find the figure and item number noted on the illustration.

b. When NSN or part number is known:

(1) **First.** Using the Index of National Stock Numbers and Part Numbers, find the pertinent NSN or part number. This index is in National Item Identification Number sequence followed by a list of part numbers in alphanumeric sequence, cross-referenced to the illustration figure number and item number.

(2) **Second.** After finding the figure and item number, locate the figure and item number in the repair parts list.

F-6. ABBREVIATIONS. Not Applicable

Section II
REPAIR PARTS LIST

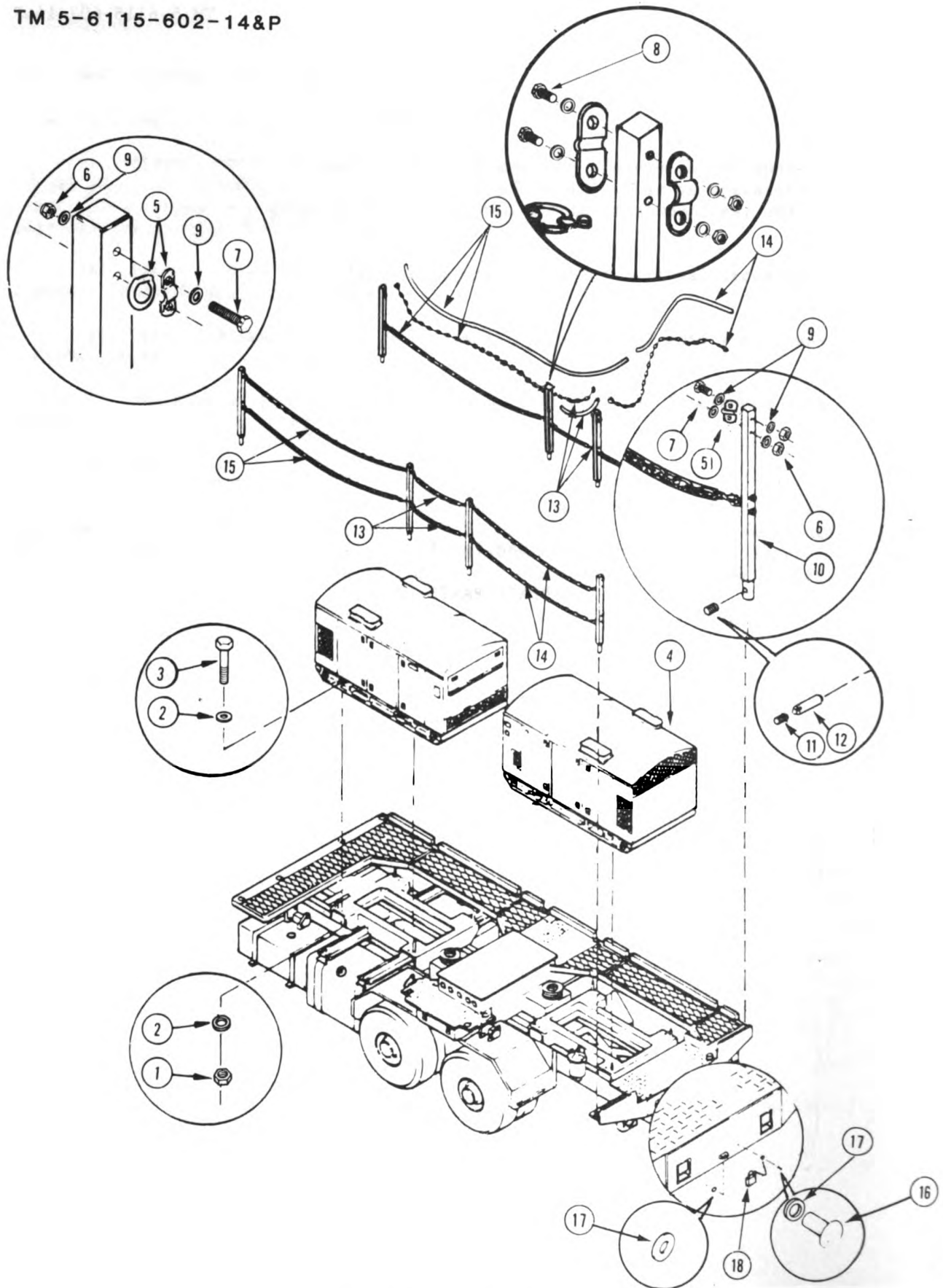


Figure F-1. Power Plant.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 01 - POWER PLANT		
F-1	1	PAFZZ	5310-00-057-7152	MS21045-16	98906	Nut, Self-locking, Hex, 1.0000-12 UNJF-3B	EA	8
F-1	2	PAFZZ	5310-00-809-8541	MS27183-27	98906	Washer, Flat, Round	EA	16
F-1	3	PAFZZ	5305-00-958-8479	MS90726-236	98906	Screw, Hex Hd, 1.000-12 UNF-2A x 3.500 Long	EA	8
F-1	4	POFFH	6115-01-113-1063	13225E8675	97403	Generator Set	EA	2
F-1	5	PAOZZ	5365-01-110-7314	13226E1881	97403	Ring, Dee	EA	24
F-1	6	PAOZZ	5310-00-061-7325	MS21045-4	98906	Nut, Self-locking, Hex .250-28 UNJF-3B	EA	32
F-1	7	PAOZZ	5305-00-276-8983	MS90726-18	98906	Screw, Hex Head, UNF-2A .250-28 x 2.500 Long	EA	16
F-1	8	PAOZZ	5305-00-267-8985	MS90726-18	98906	Screw, Hex Head, UNF-2A .250-28 x 3.000 Long	EA	16
F-1	9	PAOZZ	5310-00-809-4058	MS27183-10	98906	Washer, Flat, UNF-2A .281 ID X .065 Thick	EA	64
F-1	10	XBOOF		13222E7015	97403	Stanchion	EA	8
F-1	11	PAOZZ	5340-00-812-1900	MS21209C8-20	98906	.Insert, Screw, Threaded	EA	1
F-1	12	PAOZZ	5340-01-178-0125	13212E4231-27	97403	.Plunger, Quick Release	EA	1
F-1	13	MOOZZ		13225E8676-1	97403	Chain Assembly	EA	4
F-1		PAOZZ		RR-C-271 TY1 Grade C, Class 4	81348	.Chain, Welded, MFR From: .188 Dia	FT	V
F-1		PAOZZ		RR-C-271 Type III	81348	.Link, Repair, .188 Dia	EA	V
F-1		PAOZZ		13225E8668-5	97403	. Snap Hook	EA	1
F-1		MFFZZ	4010-01-174-4050	13226E1867-1	97403	.Sleeve, Chain 26.00 Inch Long	FT	V
F-1	14	MOOZZ		CHAIN ASSY 93 IN.	19099	Chain Assembly, 93 Inch Long	EA	4
F-1		PAOZZ		RR-C-271, TY1 Grade C, Class 4	81348	.Chain, Welded, .188 Dia	FT	V
F-1		MFFZZ	4010-01-174-4052	13226E1867-2	97403	.Sleeve, Chain	FT	V
F-1		PAOZZ		RR-C-271 Type III	81348	.Link, Repair, .188 Dia	EA	V
F-1	15	MOOZZ		CHAIN ASSY 100 IN.	97403	Chain Assembly, 100 Inch Long MFR from:	EA	4
F-1		PAOZZ		RR-C-271, TY1 Grade C, Class 4	81348	.Chain, Welded, .188 Dia Nom Proof Coil	FT	V

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCN	USABLE ON CODE	U/M	UNIT
F-1		PAOZZ	4010-01-174-4052	13226E1867-3	97403	.Sleeve, Chain	EA	4
F-1		PAOZZ		RR-C-271 TYPE III	81348	.Link, Repair, .188 Dia	EA	V
F-1	16	PAFZZ	5320-00-721-0082	M820470AD6-10	98906	Rivet, Solid, Aluminum, .187 Nominal Dia.	EA	2
F-1	17	PAFZZ	5310-00-014-5850	M827183-42	98906	Washer, Flat, .210 ID x .500 OD X .049 Thick	EA	4
F-1	18	PAFZZ		M820470AD6-10	98906	Rivet, Solid, Aluminum.		

F-10/(F-11 blank) Change 2

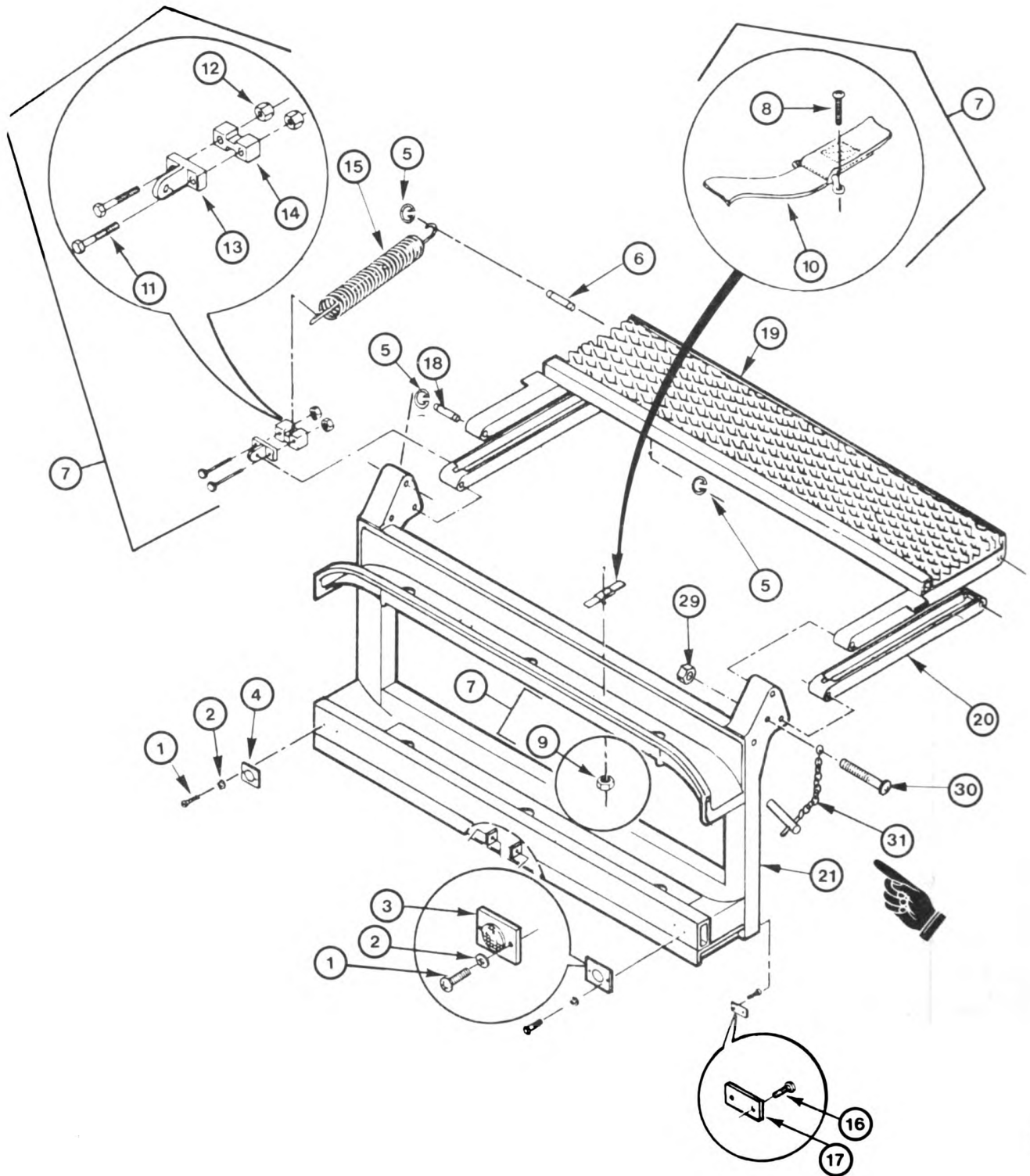


Figure F-2. Cable Storage Rack Assembly (Sheet 1 of 2)

F-12 Change 4

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
IN FIG NO.	(6) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	IN U/M	QTY INC UNIT
F-2	1	PAOZZ	5305-00-993-2463	MS35207-279	96906	GROUP 02—CABLE STORAGE RACK ASSEMBLY Screw, Machine, .250-28 UNF—2A X .500 Long	EA	4
F-2	2	PAOZZ	5310-00-582-5965	MS35338-44	96906	Washer, Lock, .250 Nom Size	EA	4
F-2	3	PAOZZ	9905-00-205-2795	MS35387-1	96906	Reflector, Indicating Clearance	EA	1
F-2	4	PAOZZ	9905-00-202-3639	MS35387-2	96906	Reflector, Indicating Clearance	EA	3
F-2	5	PAOZZ	5365-00-988-3742	MS16633-4098	96906	Ring, Retaining, Flat Eye	EA	16
F-2	6	PAOZZ	5315-01-137-6860	13225E8657-7	97403	Pin, Grooved, Headless	EA	8
F-2	7	PGOFF		13222E7006	97403	Cable Storage Rack	EA	2
F-2	8	PAOZZ	5305-00-989-7435	MS3507-264	96906	•Screw, Machine, .190-32 UNF-2A X .62 Long	EA	28
F-2	9	PAOZZ	5310-00-263-2862	MS21045-C3	96906	•Nut, Self-locking, Hex, .190-32 UNJF-3B	EA	20
F-2	10	PAOZZ		13226E1865	97403	•Stap Assembly	EA	8
F-2	11	PAOZZ		MS90728-125	96906	•Screw, Hex Hd., .500-13 UNC-2A X 4.50 Long	EA	4
F-2	12	PAOZZ	5310-00-225-6983	MS51922-33	96906	•Nut, Self-locking, Hex, .500-13 UNC-2B	EA	2
F-2	13	PAOZZ	5340-01-141-8712	13226E1139	97403	•Pivot, Spring	EA	2
F-2	14	PAOZZ	5340-01-141-8711	13226E1140	97403	•Retainer, Spring	EA	2
F-2	15	XDOZZ		13226E8091	97403	•Spring, Extension	EA	2
F-2	16	PAOZZ		MS24693-S273	96906	•Screw, Machine 100 Cross-recessed, .190-32 X UNF-2A X ¾ Long	EA	4
F-2	17	PAOZZ	5365-01-141-8710	13226E1128-1	97403	•Plate, Spacer	EA	V
F-2	17	PAOZZ	5365-01-141-8709	13226E1128-2	97403	•Plate, Spacer	EA	V
F-2	17	PAOZZ		13226E1128-3	97403	•Plate, Spacer	EA	V
F-2	17	PAOZZ		13226E1128-4	97403	•Plate, Spacer	EA	V
F-2	18	PAOZZ		13222E8657-3	97403	•Rod, Pivot	EA	4
F-2	19	PGFZZ		13222E7055	97403	•Platform, Cable Storage Rack	EA	1
F-2	20	PGFZZ		13222E7056	97403	•Arm, Lower, Cable Storage Rack	EA	2
F-2	21	PGFZZ		13222E7057	97403	•Frame, Cable Storage Rack	EA	1

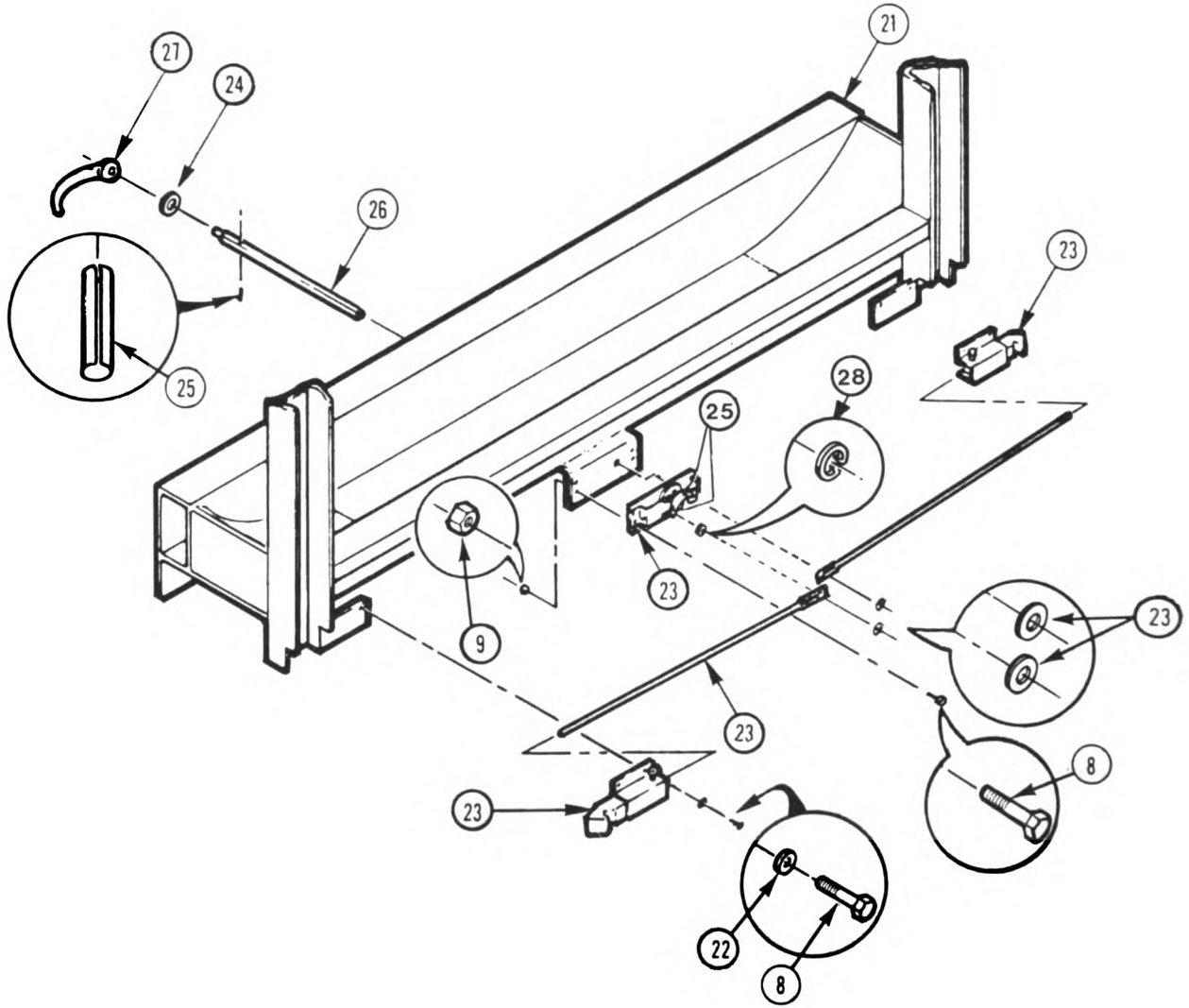


Figure F-2. Cable Storage Rack Assembly (Sheet 2 of 2)

F-14 Change 4

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(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	BMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCN	USABLE ON CODE	U/M	UNIT
F-2	22	PAOZZ	5310-00-933-8120	M835338-138	96906	Washer, Lock-spring, No. 10 Nominal Size	EA	8
F-2	23	PAOZZ	5340-01-182-1981	13226E1143	97403	Lock Assembly	EA	1
F-2	24	PAOZZ	5310-01-006-3019	M651859-10	96906	Washer, Flat, Plastic (Nylon) .500 Nominal Size	EA	1
F-2	25	PAOZZ		M8171528	96906	Pin, Spring, .125 Nominal	EA	3
F-2	26	PAOZZ	3040-01-182-1982	13226E1145	97403	Shaft, Handle	EA	1
F-2	27	PAOZZ	5340-01-182-1983	13226E1144	97403	Handle, Cabinet	EA	1
F-2	28	XAFZZ				Spring Clip	EA	2
F-2	29	PAOZZ		MS35649	96906	Nut, Hex. .190-24 UNC-2B	EA	2
F-2	30	PAOZZ		MS51957-85	96906	Screw, Mech. Pan Hd. .190-24 UNC-2A x .75L	EA	2
F-2	31	PAOZZ		13227E6154	96906	Pin Latch Locking, Gravity		2

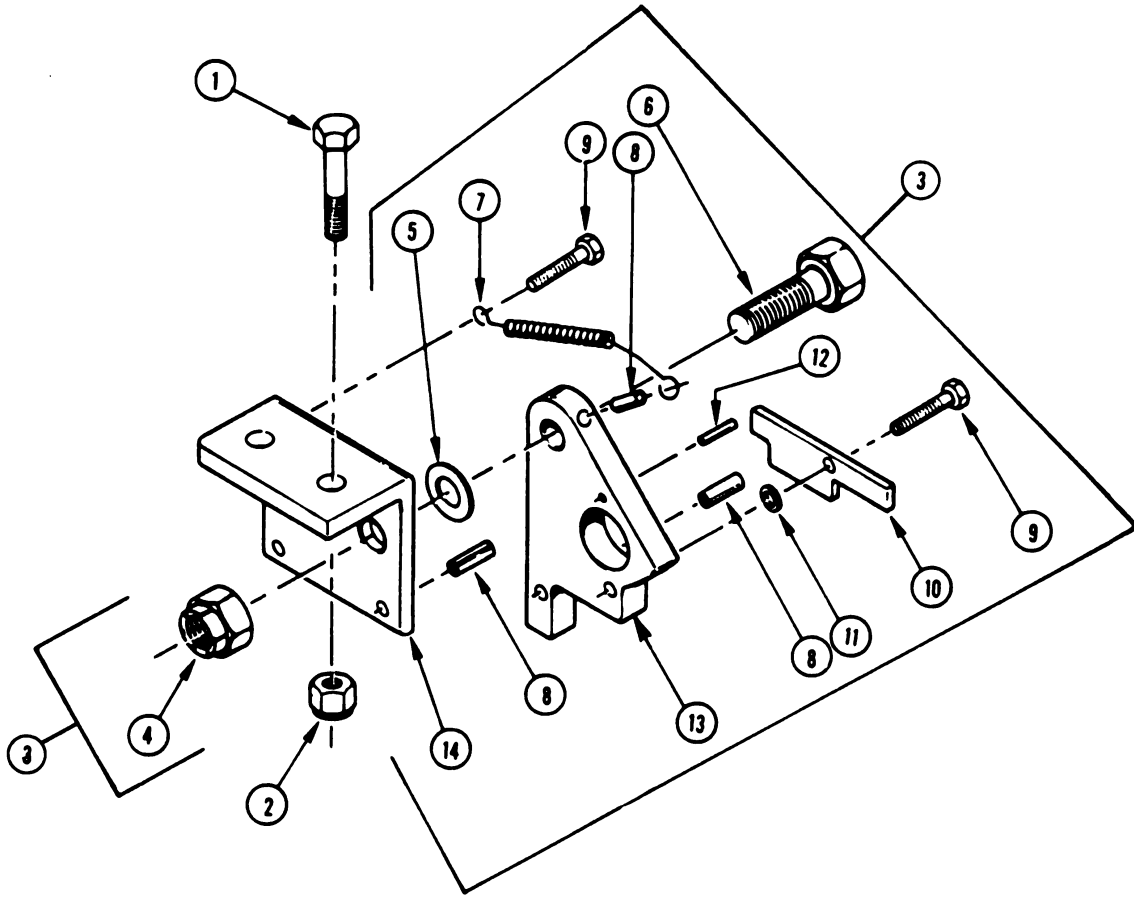


Figure F-3. Left Hand Latch Assembly.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 03 - PLATFORM ASSEMBLY		
F-3	1	PAOZZ	5305-00-269-2808	MS90726-65	96906	Screw, Hex Head .375-24 UNF-2A X 1.75 Long	EA	2
F-3	2	PAOZZ	5310-00-982-4908	MS21045-6	96906	Nut, Self-locking Hex, .375-24 UNJF-3B	EA	2
F-3	3	PAOOO		13225E8369	97403	Latch Assembly, Left Hand	EA	2
F-3	4	PAOZZ	5310-00-982-5009	MS21045-10	96906	Nut, Self-locking Hex, .625-18 UNJF-3B	EA	1
F-3	5	PAOZZ	5310-00-614-3505	MS15795-820	96906	Washer, Flat, Round .625 Basic ID	EA	1
F-3	6	PAOZZ	5305-00-726-2552	MS90727-165	96906	Capacrew, Hex Head .625-18 UNF-2A X 2.250 Long	EA	1
F-3	7	PAOZZ	5360-01-137-3171	13225E8364	97403	Spring	EA	1
F-3	8	PAOZZ	5315-00-823-8742	MS16562-252	96906	Pin, Spring, Tubular, .250 Nominal Dia X 1.0 Long	EA	3
F-3	9	PAOZZ	5305-00-071-2242	MS90728-9	96906	Capacrew, Hex Head, .250-20 UNC-2A X 1.12 Long	EA	2
F-3	10	PAOZZ	5340-01-137-3194	13225E8363	97403	Lever, Lock Release	EA	1
F-3	11	PAOZZ	5310-00-582-5677	MS15795-810	96906	Washer, Flat, Round .281 Basic ID	EA	1
F-3	12	PAOZZ	5315-00-753-3893	MS16562-226	96906	Pin, Spring, Tubular, .125 Nominal Dia X 1.0 Long	EA	1
F-3	13	PAOFF	3040-01-137-7000	13225E8365	97403	Detent Plate	EA	1
F-3		PAFZZ	5340-00-057-1226	MS21209C4-25	96906	Insert, Screw Thread	EA	2
F-3	14	PAOFF	5340-01-137-3010	13225E8367	97403	Bracket, Angle	EA	1
F-3		PAFZZ	5340-00-754-0847	MS21209C4-15	96906	Insert, Screw Thread	EA	1

Change 2 F-17

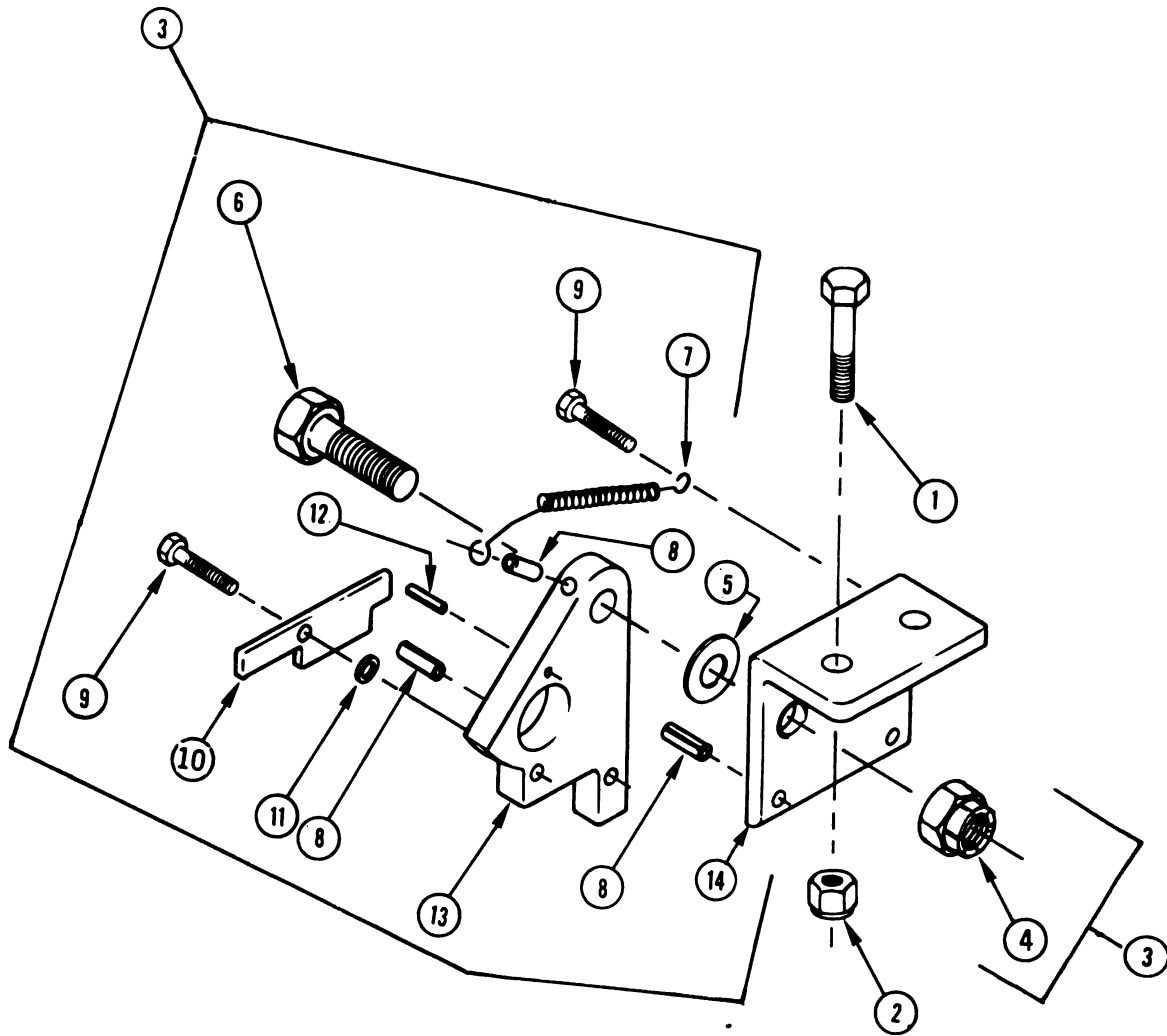


Figure F-4. Right Hand Latch Assembly.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/I
						GROUP 03 - PLATFORM ASSEMBLY	
F-4	1	PAOZZ	5305-00-269-2808	MS90726-65	98900	Screw, Hex Head, .375-24 UNF-2A X 1.75 Long	E
F-4	2	PAOZZ	5310-00-982-4908	MS21045-6	98900	Nut, Self-locking Hex, .375-24 UNJF-3B	E
F-4	3	PAO00	5340-01-174-4053	13225E8368	97403	Latch Assembly, Right Hand	E
F-4	4	PAOZZ	5310-00-982-5009	MS21045-10	98900	.Nut, Self-locking Hex, .625-18 UNJF-3B	E
F-4	5	PAOZZ	5310-00-614-3505	MS15795-820	98900	.Washer, Flat, Round .656 Basic ID	E
F-4	6	PAOZZ	5305-00-726-2552	MS90727-165	98900	.Capcrew, Hex Head .625-18 UNF-2A X 2.250 Long	E
F-4	7	PAOZZ	5360-01-137-3171	13225E8364	97403	.Spring	E
F-4	8	PAOZZ	5315-00-823-8742	MS16562-252	98900	.Pin, Spring, Tubular, .250 Nominal Dia X 1.0 Long	E
F-4	9	PAOZZ	5305-00-071-2242	MS90728-9	98900	.Capcrew, Hex Head, .250 -20 UNC-2A x 1.125 Long	E
F-4	10	PAOZZ	5340-01-137-3194	13225E8363	97403	.Lever, Lock Release	E
F-4	11	PAOZZ	5310-00-582-5677	MS15795-810	98900	.Washer, Flat, Round .281 Basic ID	E
F-4	12	PAOZZ	5315-00-753-3893	MS16562-226	98900	.Pin, Spring, Tubular, .125 Nominal Dia X 1.0 Long	E
F-4	13	PAOFF	3040-01-137-7000	13225E8365	97403	.Detent Plate	E
F-4		PAFZZ	5340-01-057-1228	MS21209C4-25	98900	..Insert, Screw Thread	E
F-4	14	PAOFF	5340-01-137-3010	13225E8367	97403	.Bracket, Angle	E
F-4		PAFZZ	5340-00-754-0847	MS21209C4-15	98900	..Insert, Screw Thread	E

Change

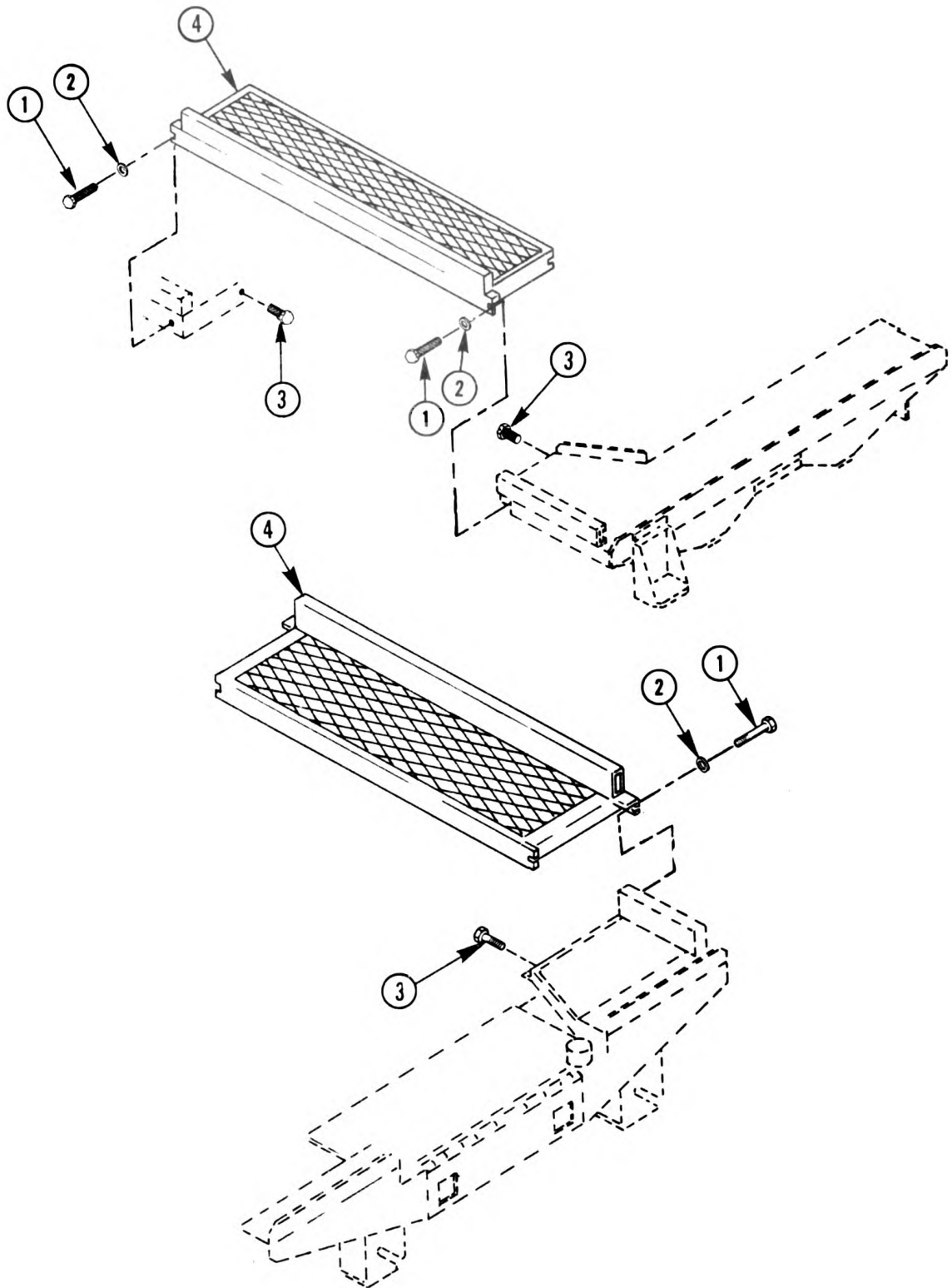


Figure F-5. Curbside Platforms.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-5	1	PAOZZ	5305-00-725-4183	M890726-113	96906	GROUP 03 - PLATFORM ASSEMBLY Capscrew, Hex Head .500-20 UNF-2A X 1.500 Long	EA	4
F-5	2	PAOZZ	5310-00-809-5998	M827183-18	96906	Washer, Flat, Round .531 Basic ID	EA	4
F-5	3	PAOZZ	5305-00-577-5435	M851975-33	96906	Screw, Shoulder, Sch. Hex, .500 Nominal X 2.000 Long	EA	4
F-5	4	XBOZZ		13222E7014	97403	Platform, Curbside	EA	2

Change 2 F-21

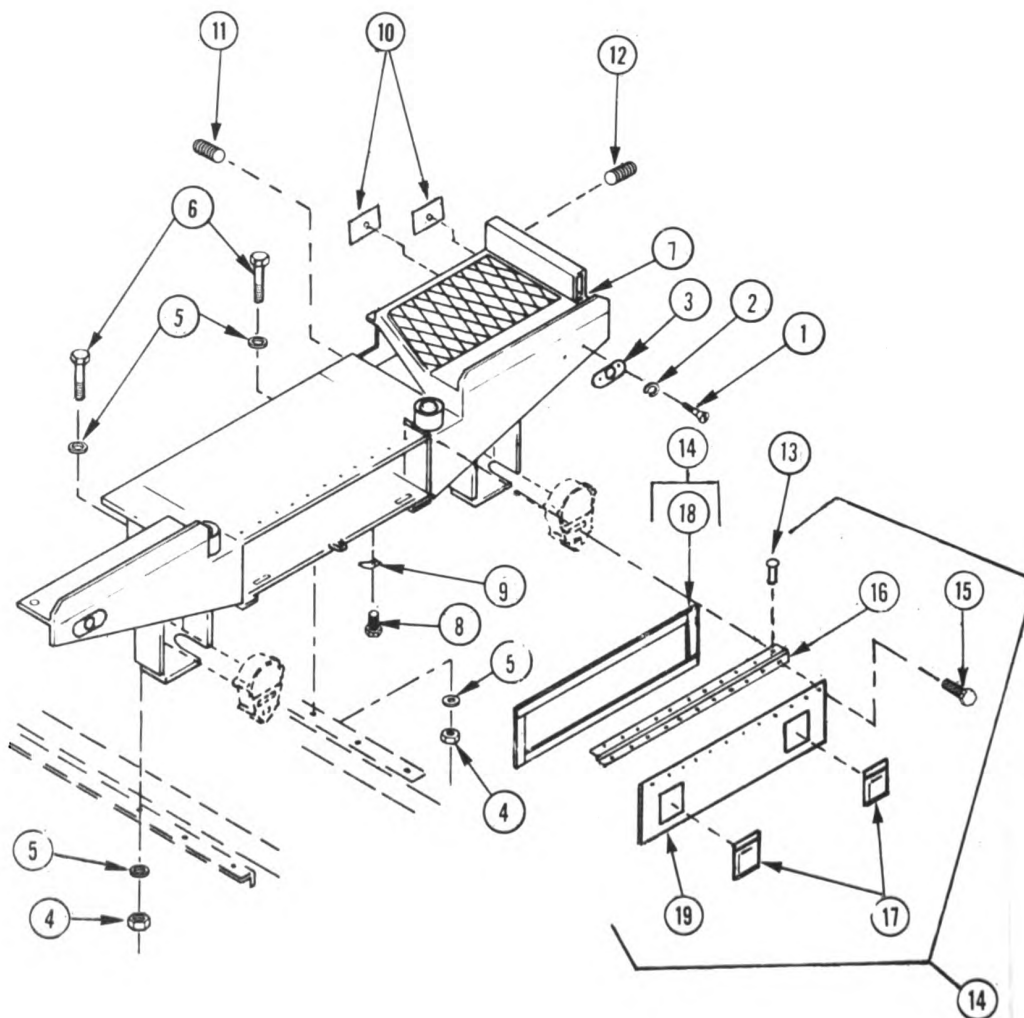


Figure F-6. Rear Platform Assembly.

F-22 Change 2

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 03 - PLATFORM ASSEMBLY		
F-6	1	PAOZZ	5305-00-993-2463	MS35207-279	96906	Screw, Machine, .250-28 UNF-2A X .500 Long	EA	6
F-6	2	PAOZZ	5310-00-582-5985	MS35338-44	96906	Washer, Lock, .250 Nominal Size	EA	6
F-6	3	PAOZZ	9905-00-205-2795	MS35387-1	96906	Reflector, Indicator, Clearance	EA	3
F-6	4	PAOZZ	5310-00-062-4954	MS21045-6	96906	Nut, Self-Locking, Hex, .500-20 UNJF-3B	EA	6
F-6	5	PAOZZ	5310-00-790-2990	31905	97403	Washer, Flat, Heavy Duty	EA	12
F-6	6	PAOZZ	5305-00-716-3182	MS90726-117	96906	Capcrew, Hex Head, .500-20 UNF-A X 1.500 Long	EA	6
F-6	7	XBOFF		13222E7017	97403	Platform, Rear	EA	1
F-6	8	PAFZZ	5320-00-117-6832	854433	18876	.Rivet, Solid, .125 Dia X .625 Long	EA	1
F-6	9	XBFZZ		13222E7023	97403	.Spring, Platform Grounding	EA	1
F-6	10	PAFZZ	5310-01-047-0402	MS27130-A105	96906	.Nut, Plain, Blind Rivet, .250-28 UNF-3B	EA	6
F-6	11	PAFZZ	5340-00-210-3935	MS21209C6-10	96906	.Insert, Screw Thread .375-16 Dia Coarse Thread X 1 Long	EA	4
F-6	12	PAOZZ	5340-00-678-3309	MS21209F8-15	96906	.Insert, Screw Thread .500-20 Dia Fine Thread X 1.50 Long	EA	1
F-6	13	PAFZZ	5310-00-117-6832	MS20470AD4-10	96906	Rivet, Solid, .125 Dia X .625 Long	EA	20
F-6	14	XBFFF		13222E9872	97403	Door Assembly, Rear, Storage	EA	1
F-6	15	PAFZZ	5320-00-117-6828	MS20470AD4-6	96906	.Rivet, Solid .125 Dia X .375 Long	EA	20
F-6	16	PAFZZ	5340-01-055-4193	MS35825-12C	96906	.Hinge, Butt	EA	1
F-6	17	PAOZZ	5340-01-137-6992	13222E9877-2	97403	.Catch, Flush	EA	2
F-6	18	PAOZZ	9320-00-684-7728	MIL-R-6130 Type 2, Grade A	81349	.Rubber, Cellular, .19 Thick	FT	V
F-6	19	XBOZZ		13222E9871	97403	.Door, Rear Storage	EA	1

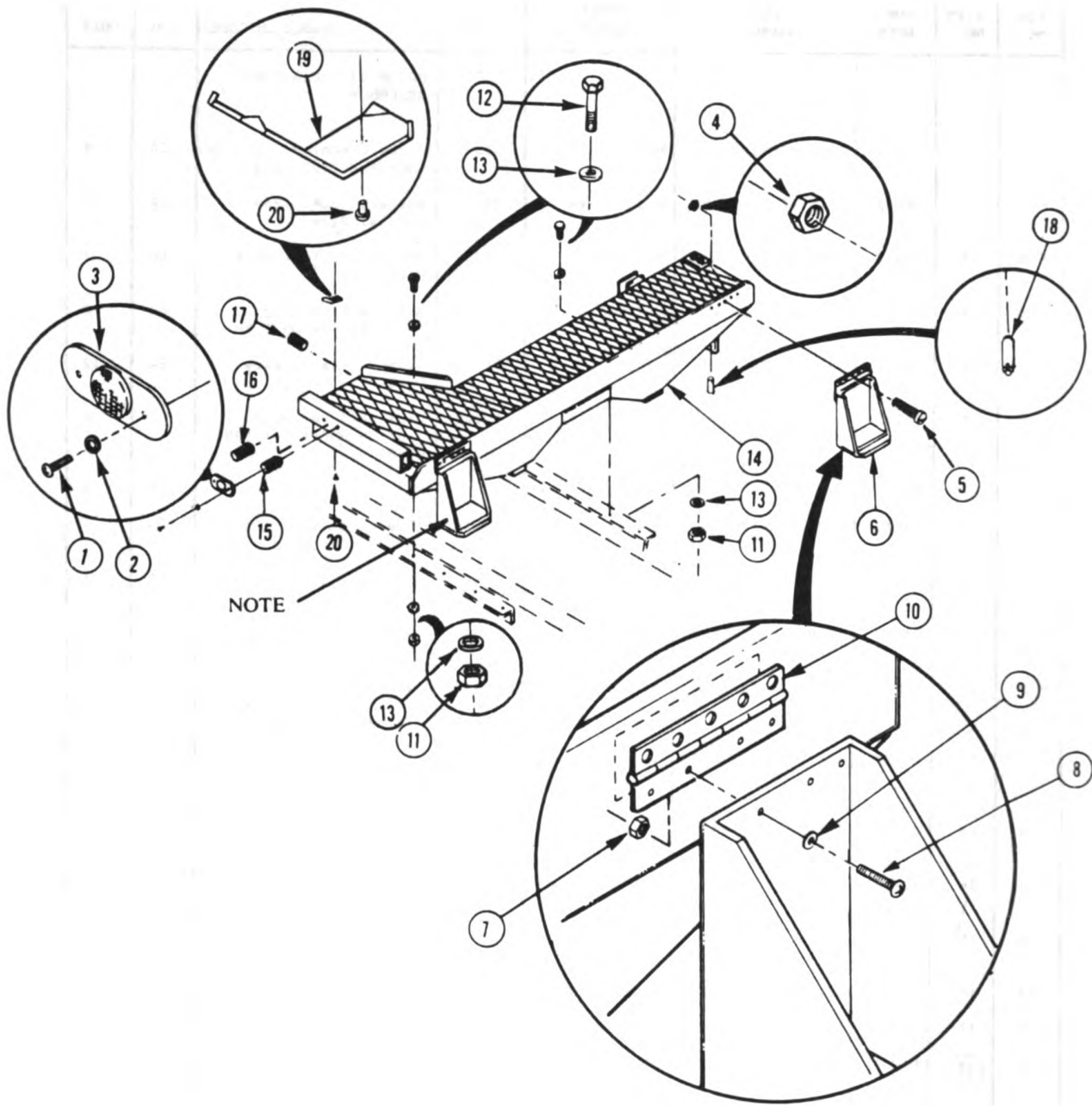


Figure F-7. Front Platform Assembly

NOTE
Steps on M811 Only
Items (5) and (6)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 03 - PLATFORM ASSEMBLY		
F-7	1	PAOZZ	5305-00-993-2463	MS35207-279	96906	Screw, Machine, .250-28, UNF-2A X .500 Long	EA	2
F-7	2	PAOZZ	5310-00-582-5865	MS35338-44	96906	Washer, Lock, .250 Nominal Size	EA	2
F-7	3	PAOZZ	9905-00-202-3639	MS35387-2	96906	Reflector, Indicating	EA	1
F-7	4	PAOZZ	5310-00-061-7326	MS21045-3	96906	Nut, Self-locking Hex, .190-32 UNJF-3B	EA	10
F-7	5	PAOZZ	5305-00-989-7434	MS24207-263	96906	Screw, Machine, 10-32 UNF-2A X .500 Long	EA	10
F-7	6	XBOZZ		13222E7022	97403	Step, Front Platform	EA	2
F-7	7	PAOZZ	5310-00-061-7326	MS21045-3	96906	.Nut, Self-Locking, Hex 10-32 UNJF-3B	EA	4
F-7	8	PAOZZ	5305-00-993-1848	M535207-265	96906	.Screw, Machine, 10-32 UNF-2A X .750 Long	EA	4
F-7	9	PAOZZ	5310-00-014-5850	MS27183-42	96906	.Washer, Flat round, .219 ID X .500 OD X .049 Thick Basic	EA	4
F-7	10	PAOZZ	5340-01-055-4193	M535625-12C	96906	.Hinge, Butt, Continuous	EA	1
F-7	11	PAOZZ	5310-00-062-4954	MS21045-8	96906	Nut, Self-locking, Hex, .500-20 UNJF-3B	EA	20
F-7	12	PAOZZ	5305-00-716-8182	MS90726-117	96906	Capscrew, Hex Head, .500-20 UNF-2A X 2.50 Long	EA	6
F-7	13	PAOZZ	5310-00-790-2990	31905	97403	Washer, Flat, Heavy Duty	EA	12
F-7	14	XBOFF		13222E7020	97403	Platform, Front Assembly	EA	1
F-7	15	PAOZZ	5310-01-047-0402	NAS1330A4-151	80205	.Nut, Plain, Blind .Rivet, .250-28 UNF-3B	EA	2
F-7	16	PAOZZ	5340-00-721-7915	MS21209F8-15	96906	.Insert, Screw Thread	EA	1
F-7	17	PAOZZ	5340-00-812-1900	MS21209C8-20	96906	.Insert, Screw Thread .500-13 Coarse Thread Dia Nominal X .200 Long	EA	1
F-7	18	PAOZZ		13212E4231-27	97403	Spring Plunger	EA	1
F-7	19	PAOZZ		13222E7023	97403	.Spring, Platform Grounding	EA	1
F-7	20	PAOZZ	5320-00-117-6832	MS20426AD4-10	96906	.Rivet, Solid, .124 Dia X .825 Long	EA	1

Change 2 R-25

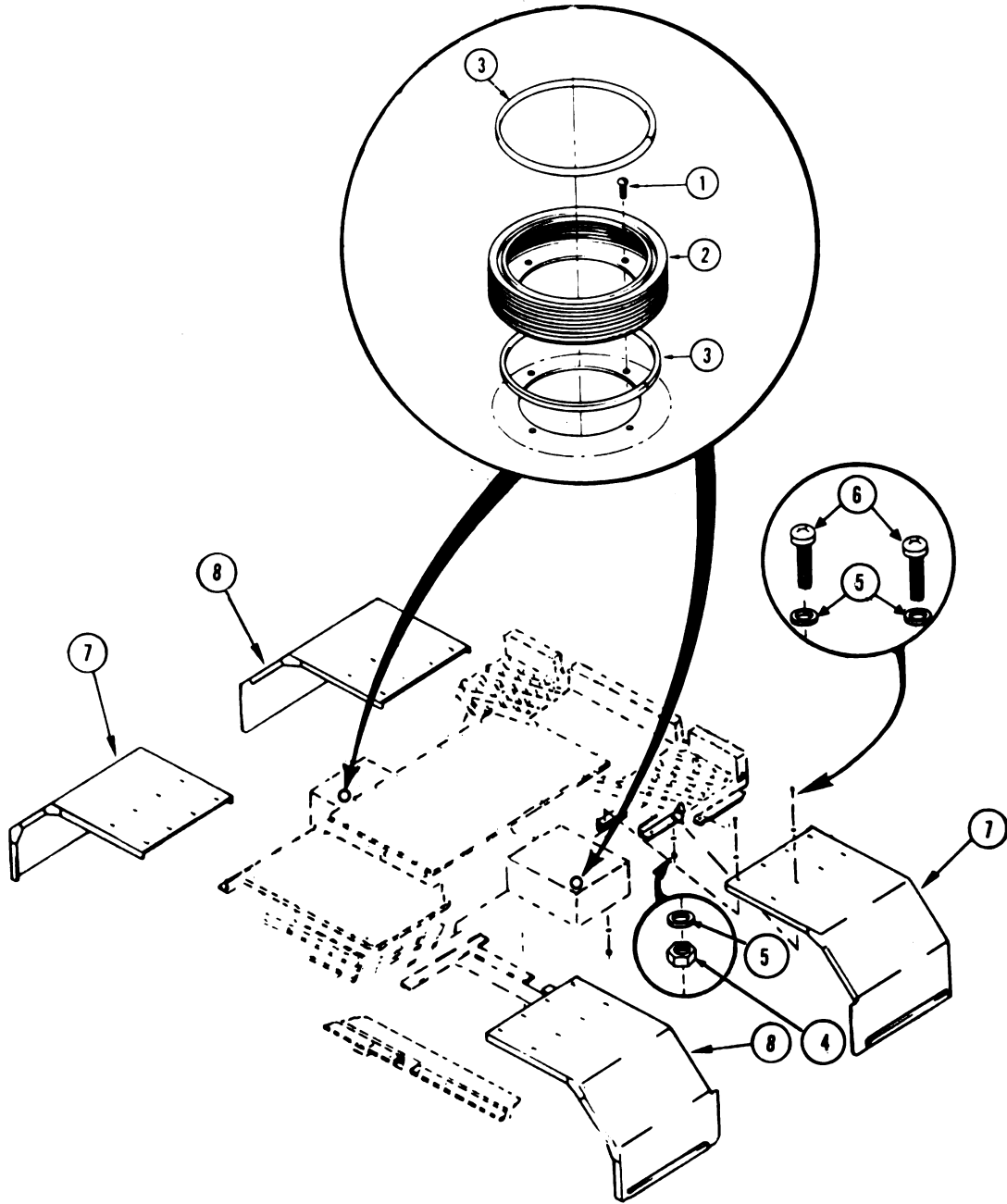


Figure F-8. Fenders and Bellows.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 03 - PLATFORM ASSEMBLY		
F-8	1	PAOZZ	5305-00-993-1848	MS35207-265	96906	Screw, Machine, .190-32 UNF-2A X 0.75 Long	EA	8
F-8	2	PAOZZ	8115-01-137-3015	13222E0084	97403	Bellows Assembly	EA	2
F-8	3	PAOZZ	5999-01-137-8824	13222E0698	97403	.Seal, Electromagnetic Interference Shield	FT	V
F-8	4	PAOZZ	5310-00-061-7325	MS21045-4	96906	Nut, Self-locking Hex, .250-28 UNJF-3B	EA	40
F-8	5	PAOZZ	5310-00-809-4058	MS27183-10	96906	Washer, Flat, .281 ID X .625 OD X .065 Thick	EA	76
F-8	6	PAOZZ	5305-00-068-0507	MS90726-7	96906	Screw, Cap, Hex, .250-28 UNF-2A X .875 Long	EA	40
F-8	7	XDOZZ		13222E7035	97403	Fender	EA	2
F-8	8	XDOZZ		13222E0682	97403	Fender	EA	2

Change 2 F-27

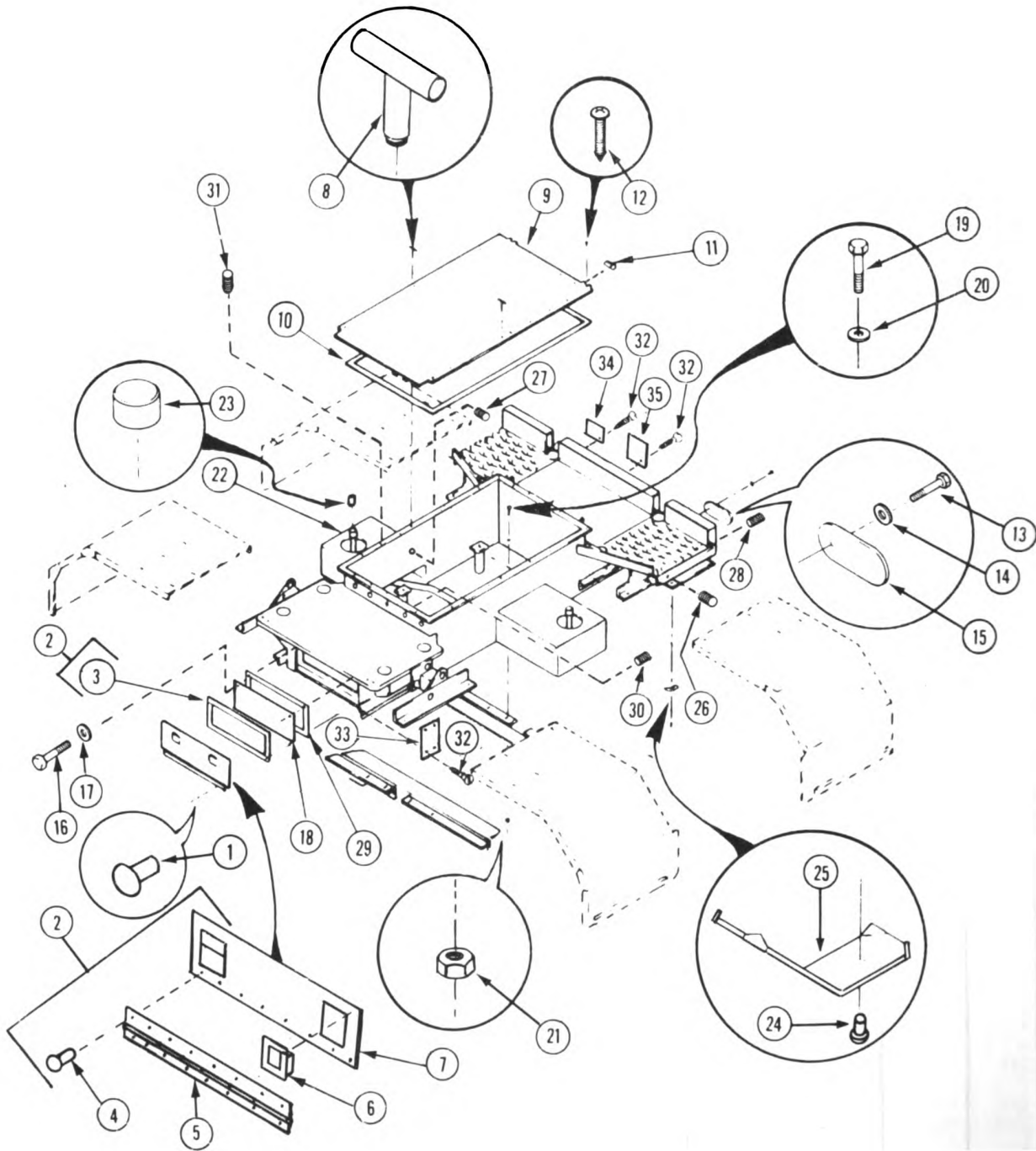


Figure F-9. Center Platform Assembly.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-9	1	PAFZZ	5320-00-721-9082	MS20470AD4-10	98908	GROUP 03 - PLATFORM ASSEMBLY Rivet. Solid. Universel. Head. .125 Dia X .825 Long	EA	9
F-9	2	XBFFF		13222E7004	97403	Center Access Door Assembly	EA	1
F-9	3	PAOZZ	9320-00-884-7726	MIL-R-6130 Type 2. Grade A	81349	.Rubber. Cellular	FT	V
F-9	4	PAFZZ	5320-00-117-8828	MS20470AD4-6	98908	.Rivet. Solid	EA	9
F-9	5	PAFZZ	5340-01-055-4193	MS35825-12C	98908	.Hinge. Butt	EA	1
F-9	6	PAOZZ	5340-01-053-2585	13222E9877-1	97403	.Catch. Flush	EA	2
F-9	7	XBFFZ		13222E7007	97403	.Panel. Door	EA	1
F-9	8	PAOZZ		13222E9889	97403	Handle. Tee	EA	2
F-9	9	XBFFF		13222E7073	97403	Cover Assembly. Power Distribution Unit	EA	1
F-9	10	PAOZZ		13222E9895-1	97403	.Wire Mesh. Knitted	FT	V
F-9	11	PAOZZ	5315-00-984-2645	MS171692	98908	.Pin. Spring. .312 Dia X 2.00 Long	EA	2
F-9	12	AOZZ		13222E9888	97403	Fastener. Captive	EA	28
F-9		PAOZZ	5305-01-143-1224	58-24-114-24	94222	.Screw	EA	28
F-9		PAOZZ	5380-00-827-2529	28C802-700	04880	.Spring. Helical. Compression	EA	28
F-9		PAOZZ	5385-00-956-9491	58-41-4-24	94222	.Ring. Retaining	EA	28
F-9	13	PAOZZ	5305-00-993-2463	MS35207-279	98908	Screw. Machine. .250- 28 UNF-2A X .500 Long	EA	4
F-9	14	PAOZZ	5310-00-582-5965	MS35338-44	98908	Washer. Lock. .250 Nominal Size	EA	4
F-9	15	PAOZZ	9905-00-202-3639	MS35387-2	98908	Reflector. Indicating. Yellow	EA	2
F-9	16	PAOZZ	5305-00-989-7435	MS35207-264	98908	Screw. Machine	EA	16
F-9	17	PAOZZ	5310-00-014-5850	MS27183-42	98908	Washer. Flat	EA	16
F-9	18	AFOOF		13222E7070	97403	Panel Assembly. Power Distribution Unit (See Figure F-14 for Breakdown)	EA	1
F-9	19	PAFZZ	5305-00-716-8182	MS90726-117	98908	Capscrew. Hex Head. .500-20 UNF-2A X 2.500 Long	EA	8
F-9	20	PAFZZ		31905	94882	Washer. Flat. Heavy Duty	EA	16

(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) UNIT
5310-00-082-4954	MS21045-8	98908	Nut, Self-locking Hex. .500-20 UNJF-3B	EA	8
	13222E7019	97403	Platform, Center	EA	1
	13222E7032	97403	.Bushing	EA	2
5320-00-619-4093	MS20426AD4-9	98908	.Rivet, Solid, 1.25 Dia X .562 Long	EA	2
	13222E7023	97403	.Spring, Plate, Grounding	EA	2
5340-00-210-3935	MS21209C8-10	98908	.Insert, Screw Thread .375-16 Dia Coarse Thread X 1 Long	EA	2
5340-00-884-9501	MS21209F1-10	98908	.Insert, Screw Thread .190-32 Nominal Thread Size X 1 Dia Nominal	EA	42
5340-00-721-7915	MS21209F8-20	98908	.Insert, Screw Thread .500-20 X 2.00 Long	EA	2
5999-01-137-3191	13222E9895-1	97403	.Wire Mesh, Knitted	FT	V
5340-00-245-5195	MS21209C0610	98908	.Insert, Screw Thread .138-32 Fine Thread X 1 Long	EA	4
5340-00-288-8800	MS124658	98908	.Insert, Screw Thread .250-28 Fine Thread X 1 Long	EA	26
	MS21318-15	98908	.Screw, Drive	EA	10
	13217E2005	97403	.Plate, Identification, Ground Terminal	EA	1
	13218E2159	97403	.Plate, Identification	EA	1
	13226E2248	97403	.Plate, Date, Handling	EA	1

Change 2

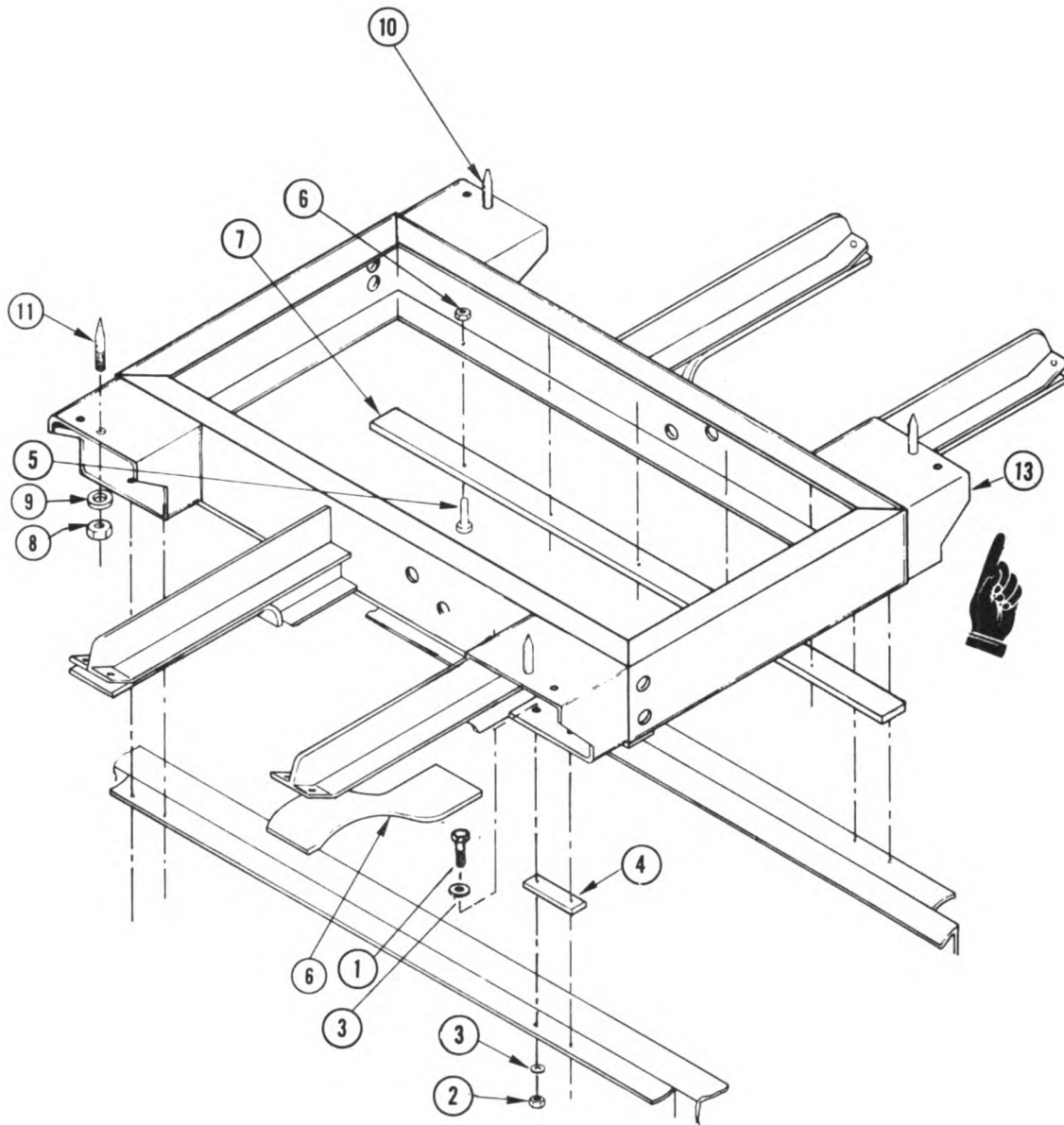


Figure F-10. Generator Mounting Frames (Sheet 1 of 2)

F-32 Change 4

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 03 - PLATFORM ASSEMBLY		
F-10	1	PAOZZ	5305-00-726-2555	MS90727-168	96906	Capscrew, Hex Head, .615-18 UNF-2A X 3.00 Long	EA	16
F-10	2	PAOZZ	5310-00-982-5009	MS21045-10	96906	Nut, Self-locking Hex, .625-18 UNJF-3B	EA	16
F-10	3	PAOZZ	5310-00-951-7209	MS27183-22	96906	Washer, Flat, Round .688 Basic ID	EA	32
F-10	4	XBOZZ		13222E9669	97403	Spacer, 2 Holes	EA	8
F-10	5	PAOZZ	5305-00-733-3046	MS24693-S303	96906	Screw, Machine .250-28 UNF-2A X 1.625 Long	EA	20
F-10	6	PAFZZ	5310-00-061-7325	MS21045-4	96906	Nut, Self-locking Hex, .250-28 UNJF-3B	EA	20
F-10	7	XBOZZ		13222E7027	97403	Sill, Generator Frame	EA	4
F-10	8	PAOZZ	5310-00-982-5012	MS21045-12	96906	Nut, Self-locking Hex, .750-16 UNJF-3B	EA	8
F-10	9	PAOZZ	5310-00-809-8533	MS27183-23	96906	Washer, Flat, Round, Cadmium Plated	EA	8
F-10	10	XBOZZ		13222E7026-2	97403	Pin, Locating	EA	6
F-10	11	XBOZZ		13222E7026-1	97403	Pin, Locating	EA	2
F-10	12	XDFZZ		13222E7030	97403	Pad, Fuel Tank	EA	4
F-10	13	XBOZZ		13222E7025	97403	Frame, Generator Mounting, Front	EA	1

Change 2 F-33

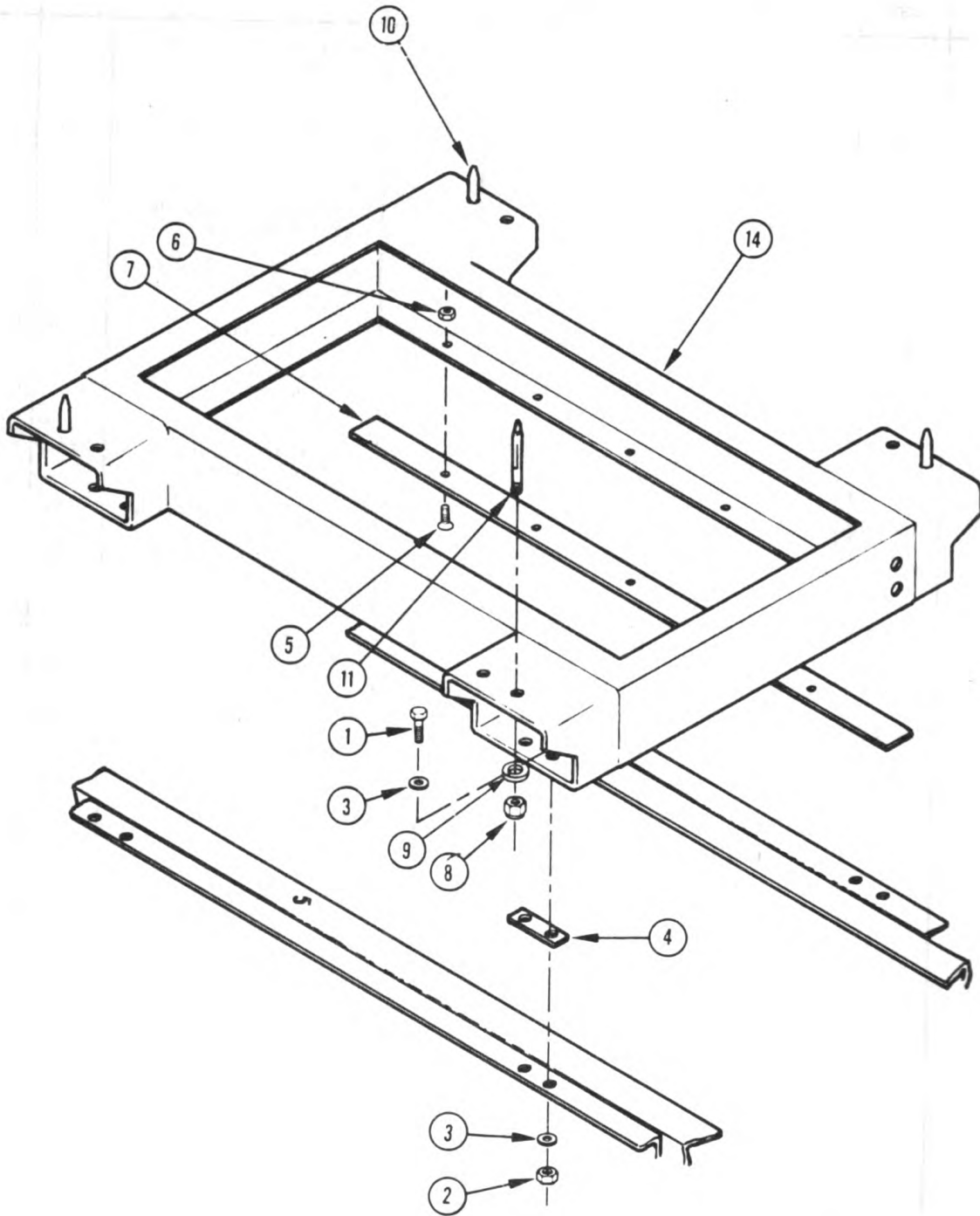


Figure F-10. Generator Mounting Frames (Sheet 2 of 2).

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(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-10	14	XBOZZ		13225E8358	97403	Frame, Generator Mounting, Rear	EA	1

Change 2 F-35

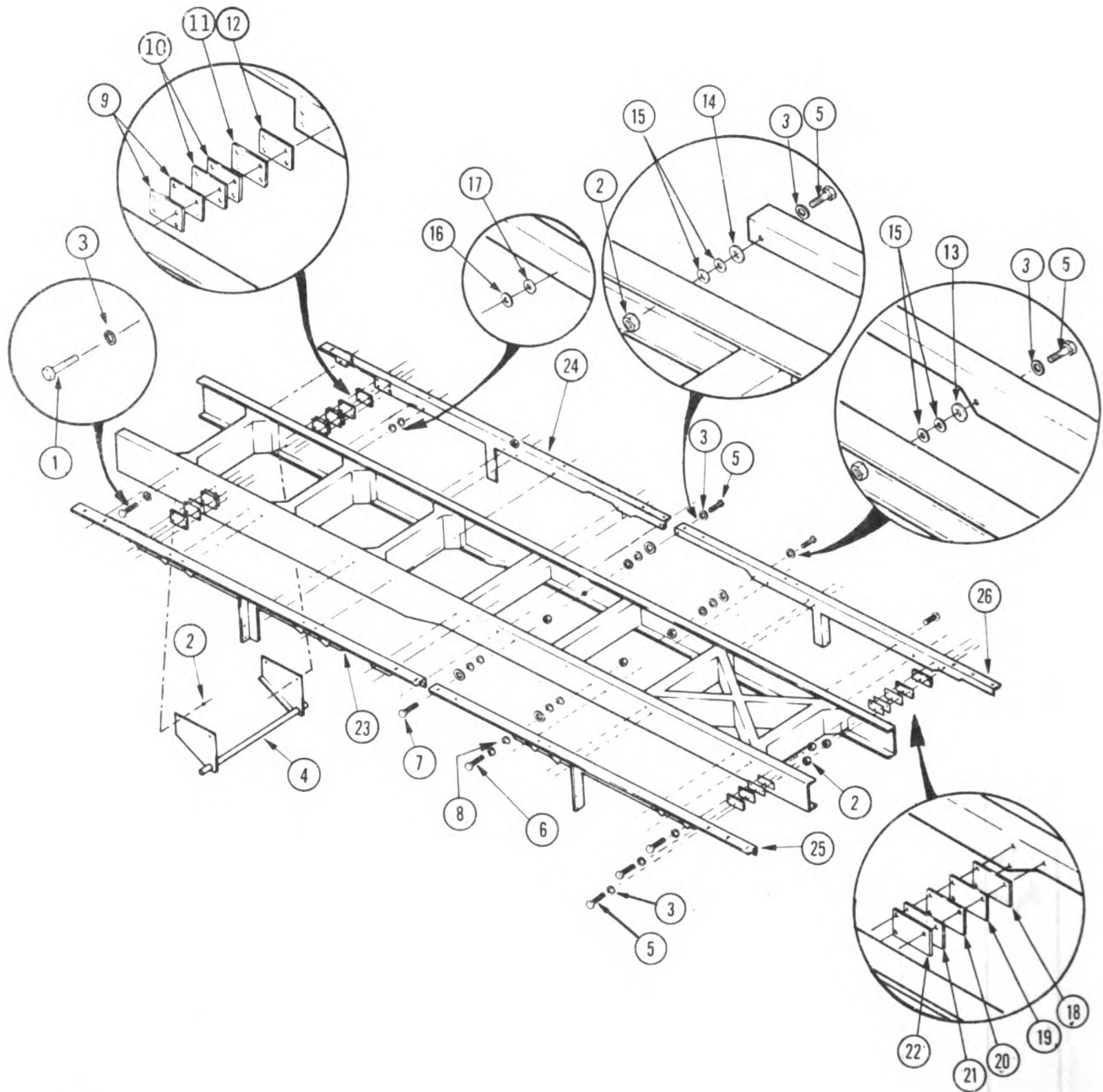


Figure F-11. Chassis Rail Assembly.

F-36 Change 2

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 03 - PLATFORM ASSEMBLY		
F-11	1	PAOZZ	5305-00-725-4183	MS90726-113	98906	Capacrew, Hex Head, .500-20 UNF-2A X 1.500 Long	EA	4
F-11	2	PAOZZ	5310-00-062-4954	MS21045-8	98906	Nut, Self-locking Hex, .500-20 UNJF-3B	EA	50
F-11	3	PAOZZ	5310-00-809-5998	MS27183-18	98906	Washer, Flat, Round .531 Basic ID	EA	4
F-11	4	XBOZZ		13225E8658	97403	Frame, Generator Mounting	EA	1
F-11	5	PAOZZ	5305-00-716-8181	MS90726-118	98906	Screw, Cap, Hex Head .500-20 UNF-2A X 2.750 Long	EA	26
F-11	6	PAOZZ	5305-00-716-8179	MS90726-121	98906	Screw, Cap, Hex Head .500-20 UNF-2A X 3.500 Long	EA	4
F-11	7	PAFZZ	5305-00-246-6586	MS90726-120	98906	Screw, Cap, Hex Head .500-20 UNF-2A X 3.250 Long	EA	16
F-11	8	PAFZZ	5310-00-790-2990	31905	97403	Washer, Flat	EA	46
F-11	9	XDFZZ		13222E7043-1	97403	Spacer, 4 Holes	EA	2
F-11	10	XDFZZ		13222E7043-2	97403	Spacer, 4 Holes	EA	V
F-11	11	XDFZZ		13222E7043-3	97403	Spacer, 4 Holes	EA	V
F-11	12	XDFZZ		13222E7043-4	97403	Spacer, 4 Holes	EA	V
F-11	13	XDFZZ		13222E7044-1	97403	Spacer, Round	EA	20
F-11	14	XDFZZ		13222E7044-2	97403	Spacer, Round	EA	12
F-11	15	XDFZZ		13222E7044-3	97403	Spacer, Round	EA	V
F-11	16	XDFZZ		13222E7044-5	97403	Spacer, Round	EA	V
F-11	17	XDFZZ		13222E7044-6	97403	Spacer, Round	EA	V
F-11	18	XDFZZ		13222E7042-1	97403	Spacer, 3 Holes	EA	2
F-11	19	XDFZZ		13222E7042-2	97403	Spacer, 3 Holes	EA	2
F-11	20	XDFZZ		13222E7042-3	97403	Spacer, 3 Holes	EA	4
F-11	21	XDFZZ		13222E7042-4	97403	Spacer, 3 Holes	EA	V
F-11	22	XDFZZ		13222E7042-5	97403	Spacer, 3 Holes	EA	V
F-11	23	XBFZZ		13222E7040	97403	Rail, Chassis, 3.250 Long, Streetside, Front	EA	1
F-11	24	XBFZZ		13222E9679	97403	Rail, Chassis, Curbside, Front	EA	1
F-11	25	XBFZZ		13222E7041	97403	Rail, Chassis, Streetside, Rear	EA	1

Change 2 F-37

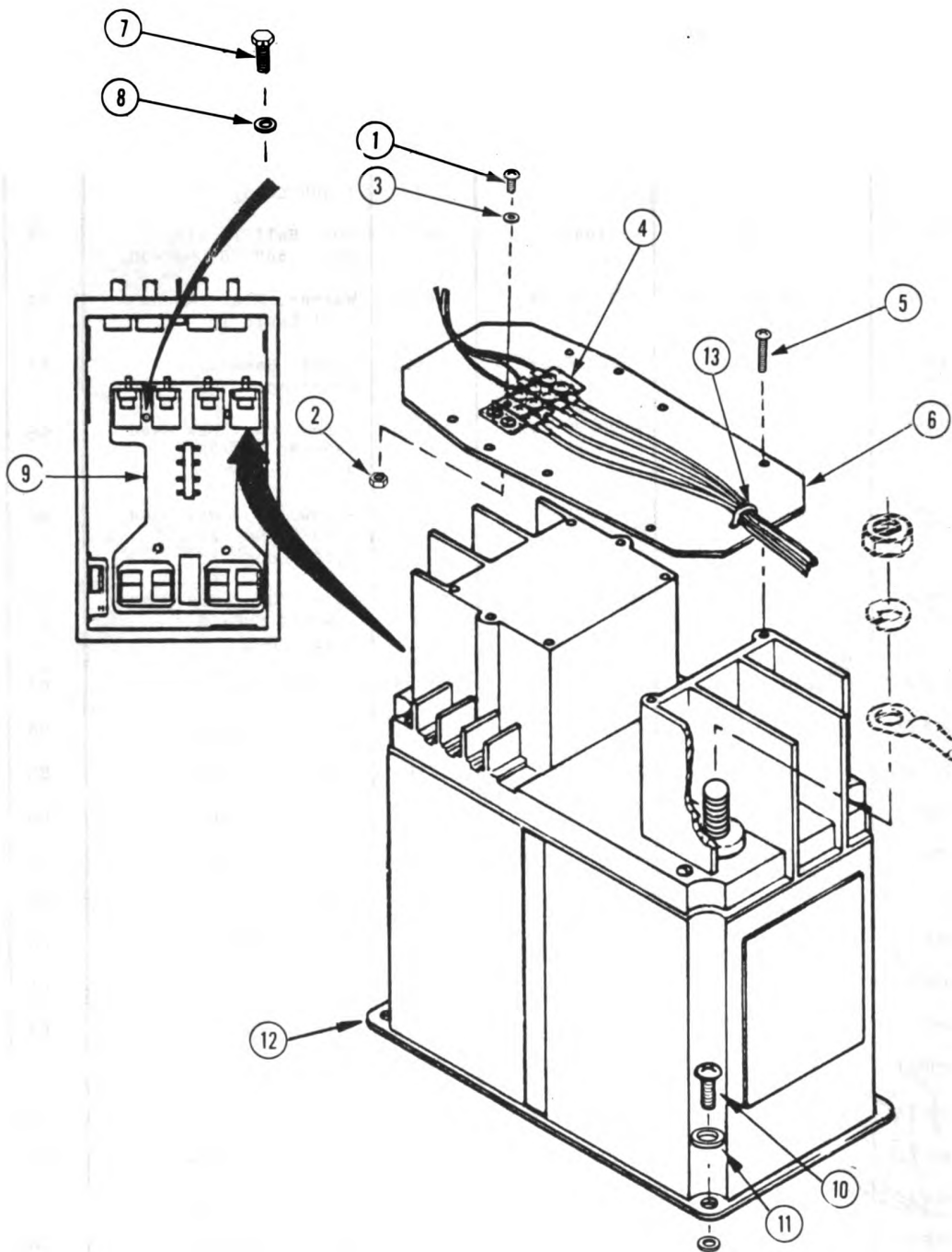


Figure F-12. Chassis Assembly (Sheet 1 of 3)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 04 - ELECTRICAL SYSTEM		
F-12	1	PAFZZ	5305-00-984-4993	MS35206-233	98906	Screw, Machine No. 8-32 UNC-2A X .875 Long	EA	16
F-12	2	PAFZZ	5310-00-889-2544	MS21045-6	98906	Nut, Self-locking, Hex .138-32 UNJC-3B	EA	16
F-12	3	PAFZZ	5310-00-983-8483	MS27183-5	98906	Washer, Flat	EA	16
F-12	4	PAFZZ		MIL-T-55164/1	81349	Terminal Board, Screw Type	EA	4
F-12	5	PAFZZ	5305-00-889-2098	MS35206-216	98906	Screw, Machine No. 4-40 UNC-2A X .438 Long	EA	16
F-12	6	PAFZZ	9905-01-169-0926	13226E4301	97403	Plate, Instruction, K3 Terminal Board Mount	EA	1
F-12	6	PAFZZ	9905-01-169-0925	13226E4302	97403	Plate, Instruction, K4 Terminal Board Mount	EA	1
F-12	6	PAFZZ	9905-01-169-0927	13226E4303	97403	Plate, Instruction, K5 Terminal Board Mount	EA	1
F-12	6	PAFZZ	5940-01-182-1986	13226E4304	97403	Plate, Instruction, K6 Terminal Board Mount	EA	1
F-12	7	PAFZZ	5306-00-225-9086	MS90726-31	98906	Bolt, Machine .3124-24 UNF-2A X .625 Long	EA	4
F-12	8	PAFZZ	5310-00-081-4219	MS27183-12	98906	Washer, Flat .344 Basic ID	EA	4
F-12	9	XBFZZ		13222E7060	97403	Chassis Assembly, Power Distribution Unit	EA	1
F-12	10	PAFZZ	5306-00-989-6266	MS35207-262	98906	.Screw, Machine, .190-32 UNF-2A X .438 Long	EA	20
F-12	11	PAFZZ	5310-00-014-5850	MS27183-42	98906	.Washer, Flat, Round .219 Basic ID	EA	28
F-12	12	PAFZZ	6948-01-129-2706	13220E0776	97403	.Relay, Solid State	EA	4
F-12	13	PAFZZ	6976-00-074-2072	MS3387-1-9	98906	Strap, Tiedown, Electrical	EA	4

Change 2 R-39

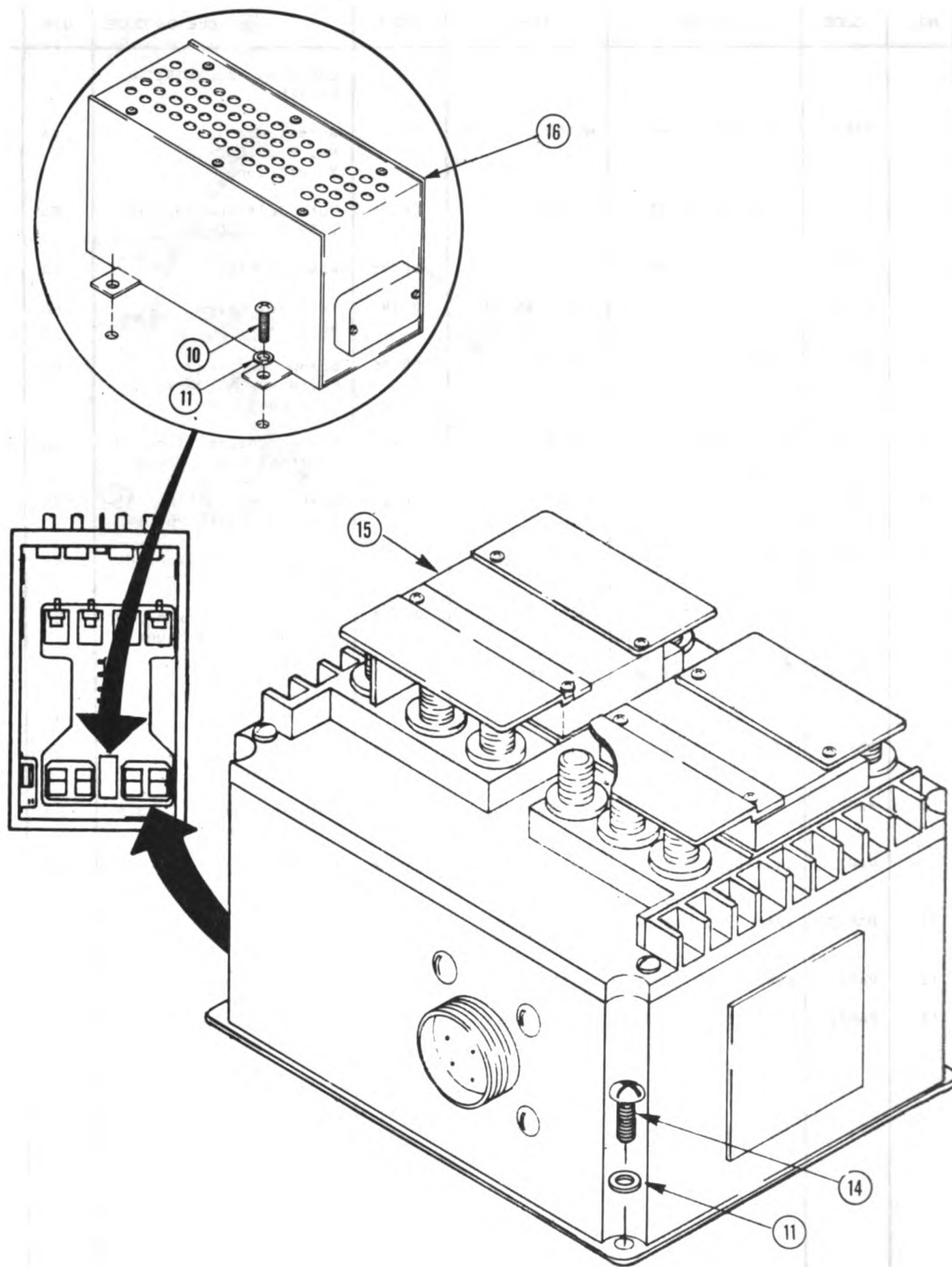


Figure F-12. Chassis Assembly (Sheet 2 of 3)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-12	14	PAFZZ	5305-00-989-7434	MS35207-283	98906	.Screw, Machine, .190-32 UNF-2A X .500 Long	EA	8
F-12	15	PAFZZ		13222E9885	97403	.Contactor, Mainline	EA	2
F-12	16	PAFZZ	6130-00-083-8812	MS28133-1	98906	.Transformer, Rectifier	EA	1

Change 2 F-41

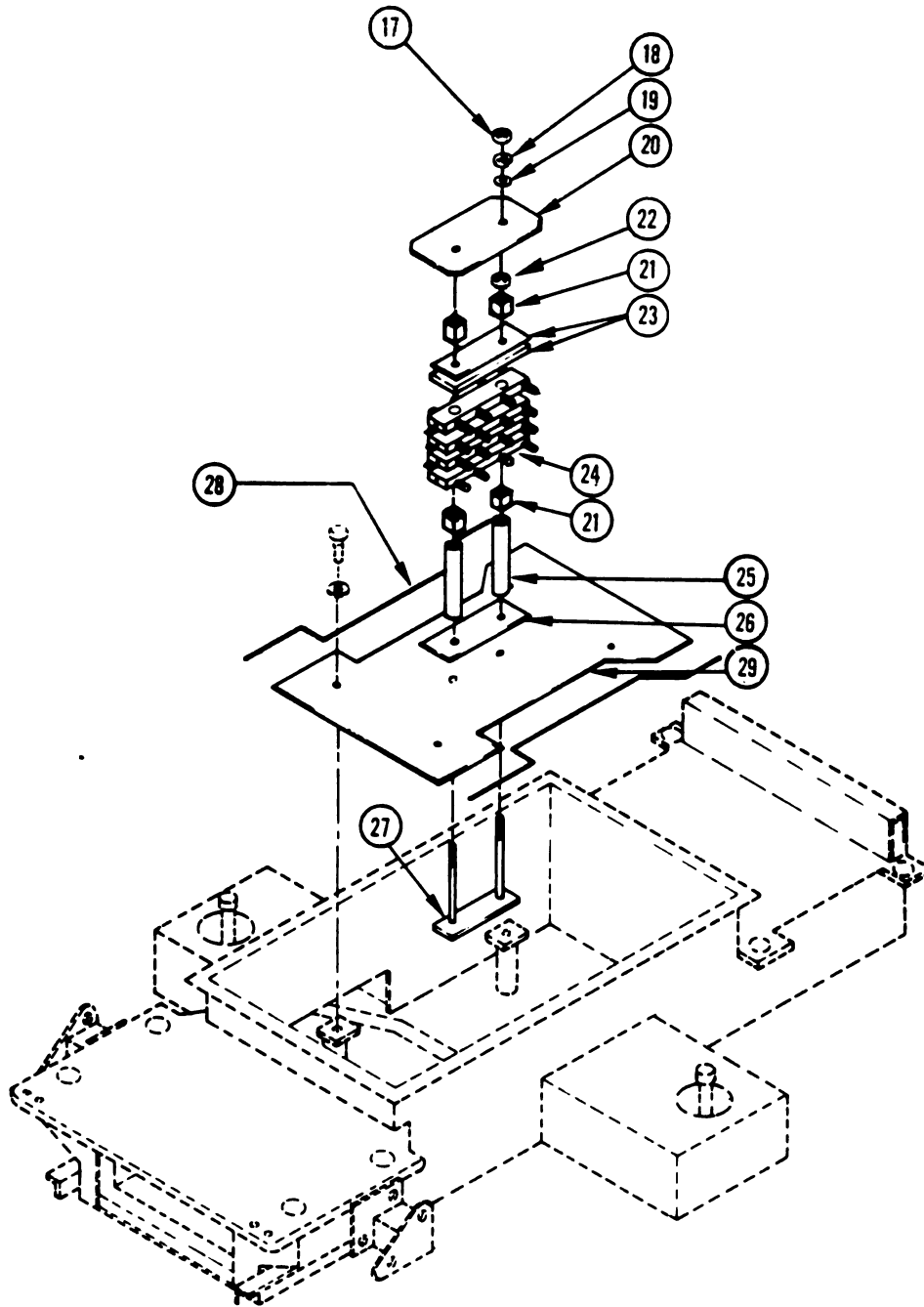


Figure F-12. Chassis Assembly (Sheet 3 of 3).

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-12	17	PAFZZ	5310-00-058-1828	MS35650-3382	98906	.Nut, Plain, Hex, .375- 24 UNF-2B	EA	2
F-12	18	PAFZZ	5310-00-837-9541	MS35338-46	98906	.Washer, Lock, Spring .375 Nominal ID	HD	2
F-12	19	PAFZZ	5310-00-080-6004	MS27183-14	98906	.Washer, Flat, Round .408 Basic ID	HD	2
F-12	20	XBFZZ		13222E7066	97403	.Cover, Protective	EA	1
F-12	21	PAFZZ	5970-01-137-3016	13220E0672	97403	.Spacer, Insulating	EA	10
F-12	22	PAFZZ	5310-00-982-4908	MS21045-6	98906	.Nut, Self-locking Hex, .375-24 UNJF-3B	EA	2
F-12	23	PAFZZ	5970-01-137-3188	13222E7063-1	97403	.Insulator, Plate	EA	2
F-12	24	PAFZZ	6150-01-137-3912	13221E9298	97403	.Buss, Conductor	EA	4
F-12	25	PAFZZ		MIL-P-22296	97403	.Tubing, Non-metallic	EA	2
F-12	26	PAFZZ	5970-01-137-3188	13222E7063-2	97403	.Insulator, Plate	EA	1
F-12	27	PAFZZ	5975-01-141-7544	13222E7062	97403	.Mount, Buss Bar	EA	1
F-12	28	PAFZZ	5325-00-783-4754	MB21266-5N	98906	.Grommet, Non-metallic	FT	V
F-12	29	XBFZZ		13222E7061	97403	.Plate, Mounting	EA	1

Change 2 F-43

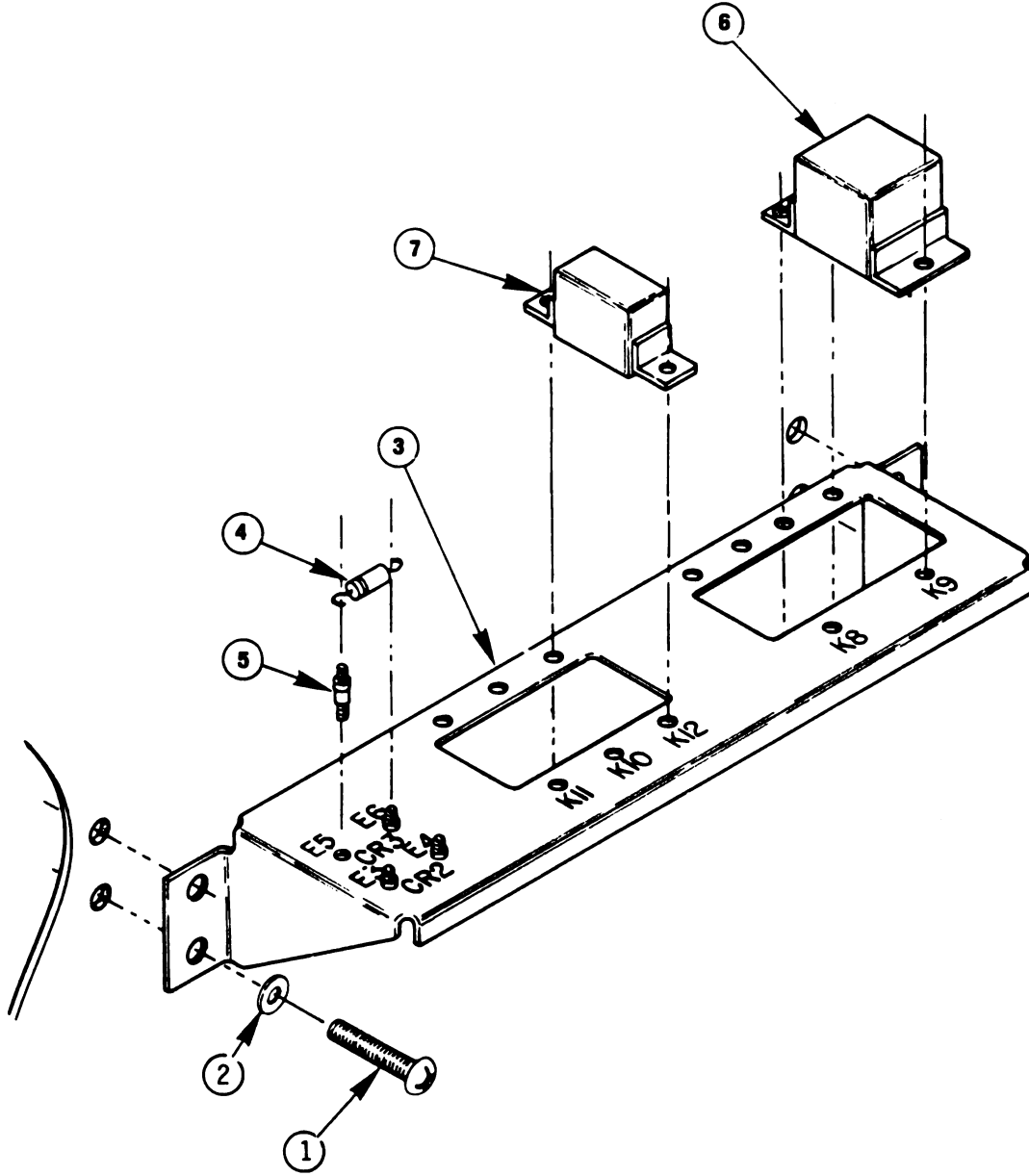


FIGURE F-13. CHASSIS RELAY ASSEMBLY

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-13	1	PAFZZ	5305-00-993-1848	MS35207-265	96908	GROUP 04 - ELECTRICAL SYSTEM Screw, Machine, .190-32 UNF-2A X .750 Long	EA	4
F-13	2	PAFZZ	5310-00-809-8546	M827183-8	96908	Washer, Flat, Round .219 Basic ID	EA	4
F-13	3	XBFZZ		13222E7067	97403	Chassis Relay Assembly	EA	2
F-13	4	PAFZZ	5961-00-506-6434	IN5624	81349	Semiconductor Device, Diode	EA	2
F-13	5	PAFZZ		13226E1136	97403	Terminal, Feed Thru (Insulated)	EA	4
F-13	6	PAFZZ	5945-01-015-0355	M827400-10	96908	Relay, Permanent Mag Drive, 10 Amp	EA	2
F-13	7	PAFZZ	5945-00-435-1833	M5757/23-003	81349	Relay, Electrical Hermetically Sealed	EA	3

Change 2 R-45

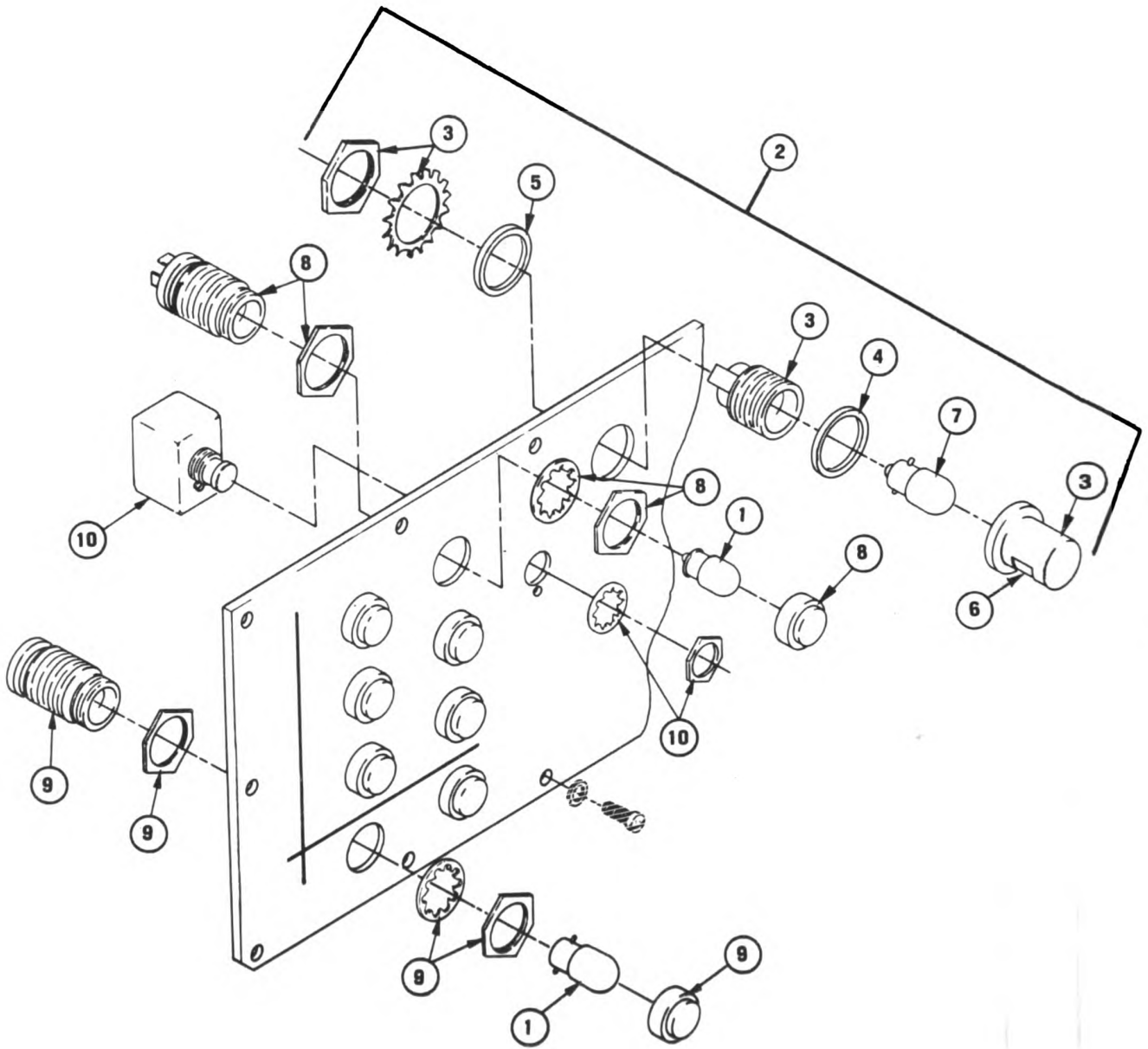


FIGURE F-14. CONTROL PANEL (SHEET 1 OF 2)

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(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-14		AFOOF		13222E7070	97403	GROUP 04 - ELECTRICAL SYSTEM Panel Assembly, Power Distribution Unit	EA	1
F-14	1	PAOZZ	8240-00-080-2012	MS25237-327AS15	98908	.Lamp, Incandescent, Single Contact	EA	8
F-14	2	PAOZZ	8220-01-173-5782	13225E8877	97403	.Lamp Assembly, Panel	EA	2
F-14	3	XAOZZ		900-200	71744	..Hood and Body	EA	1
F-14	4	XAOZZ	5330-01-137-8952	208-806-95	71744	..Gasket, Neoprene	EA	1
F-14	5	XAOZZ	5330-01-137-3173	208-815-95	71744	..Gasket	EA	1
F-14	6	XAOZZ	8240-01-137-3011	229-300-80C	71744	..Lens	EA	1
F-14	7	PAOZZ	8240-01-137-3183	CM1818	71744	..Lamp	EA	2
F-14	8	PAOZZ	8210-00-519-0448	MS25041-8	98908	.Light, Indicator, with Red Lens	EA	4
F-14	9	PAOZZ	8210-00-553-1076	MS25401-7	98908	.Light, Indicator, with Green Lens	EA	2
F-14	10	PAOZZ	5930-00-018-8823	M8805/23-002	81349	.Switch, Push, 5 Amps, UNSE	EA	1

Change 2 F-47

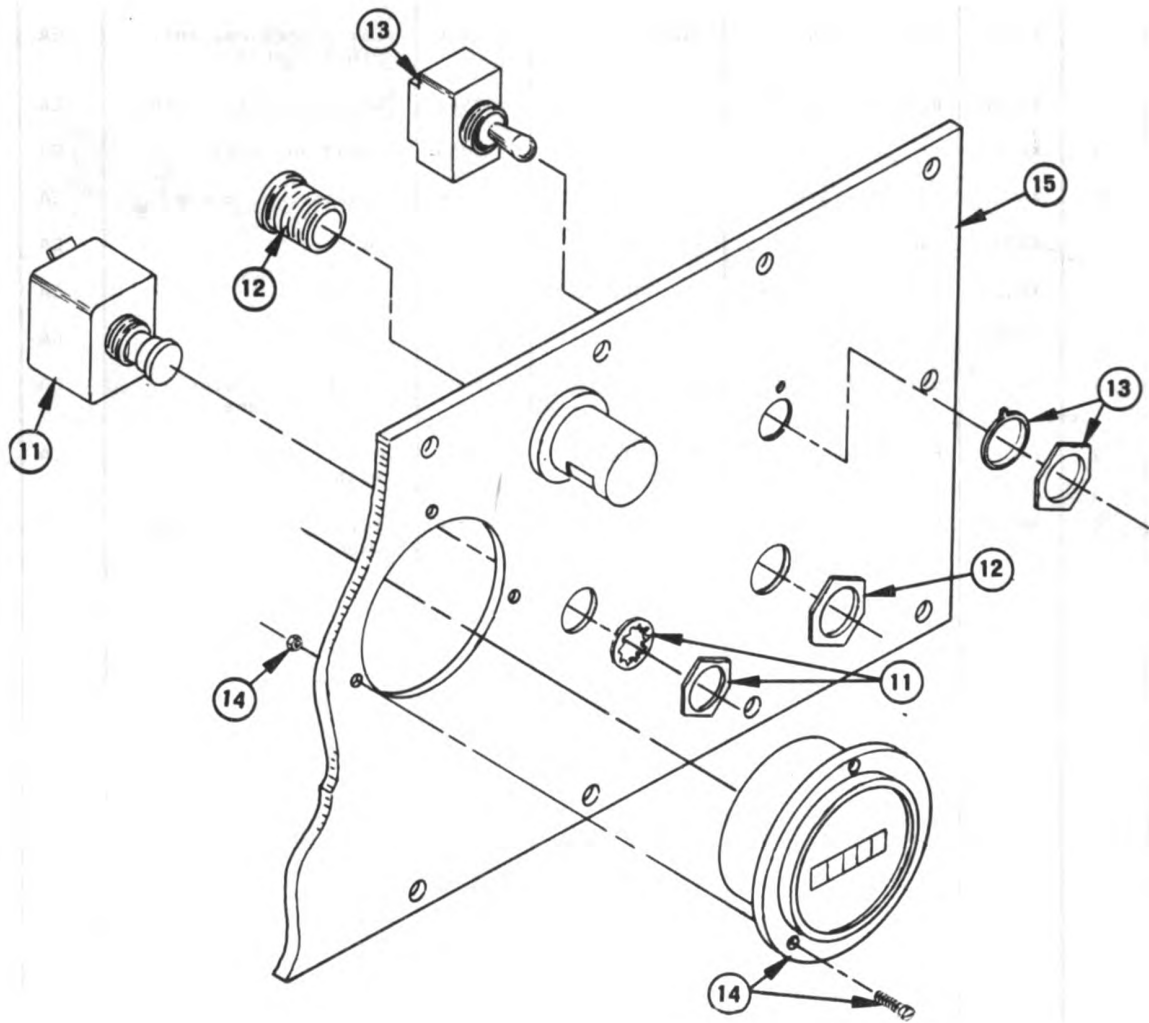


FIGURE F-14. CONTROL PANEL (SHEET 2 OF 2)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-14	11	PAOZZ	5925-00-882-4015	MS25244-20	96906	GROUP 04 - ELECTRICAL SYSTEM Circuit Breaker, Trip- Free, Push-Pull	EA	1
F-14	12	PAOZZ	5935-00-883-2746	M641-8-1	81349	Jack, Telephone, Type JJ-034	EA	1
F-14	13	PAOZZ	5930-00-036-8710	MS27734-22	96906	Switch, Toggle, One Pole, Solder Terminal	EA	1
F-14	14	PAOZZ	6645-00-089-8842	M3971/1-5	81349	Meter, Time Totalizing 4-40 Volt, Grade B, Screw Terminals	EA	1
F-14	15	XAOZZ		13222E7071	97403	Panel, Control, Power Distribution	EA	1

Change 2 F-49

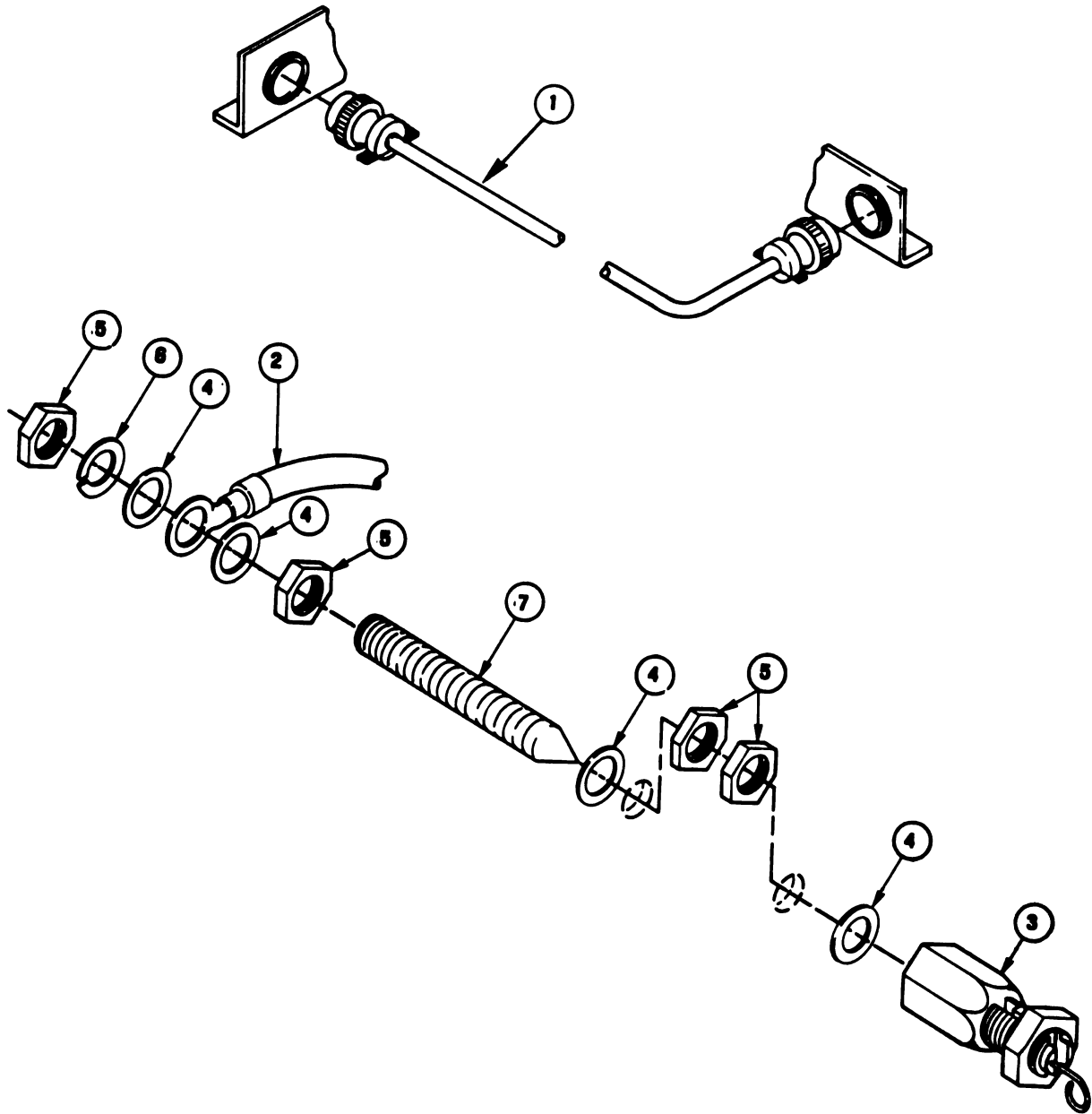


FIGURE F-15. WIRING HARNESSES AND CABLES(SHEET 1 OF 10)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 04 - ELECTRICAL SYSTEM		
F-15	1	PAFFF	0115-01-130-0200	13222E7407	07403	Cable Assembly, Parallel- ing (W10)	EA	1
F-15		PAFZZ	5035-00-501-7520	MS3100F10SL3P	00000	.Connector, Plug	EA	2
F-15		PAFZZ	0145-01-100-0007	M10070/40JE0	01340	.Wire, Electrical	FT	V
F-15		PAFZZ	5070-00-052-3297	M23053/5-100-0	01340	.Insulation Sleeving	FT	V
F-15		PAFZZ	0145-00-022-1300	13220E6/15-2	01340	.Cable, Power, Electrical	FT	V
F-15	2	MFFFF		13222E0004-33	07403	Lead, Power, Electrical MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0035	MS25030-130	00000	.Terminal Lug	EA	1
F-15		PAFZZ	5040-01-140-0700	13222E0000-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	0145-00-204-1403	MIL-W-10070/0	01340	.Wire, Electrical	FT	V
F-15		PAFZZ	5070-00-057-3545	M23053/5-100-4	01340	.Insulation, Sleeving	FT	V
F-15	3	PAFZZ		13222E7010-0	07403	Reducer, Tube	FA	1
F-15	4	PAOZZ	5310-00-107-2413	AN001-010T	00044	Washer, Flat, Electrical	EA	4
F-15	5	PAOZZ	5310-00-410-3023	MS35040-2300	00000	Nut, Plain, Hex, UNC-20 3/8-10	EA	4
F-15	6	PAOZZ	5310-00-022-0047	MS35333-110	00000	Washer, Lock, 3/8 Nominal Size	EA	1
F-15	7	PAFZZ	5307-00-045-0172	50A0350-1	07403	Stud	EA	1

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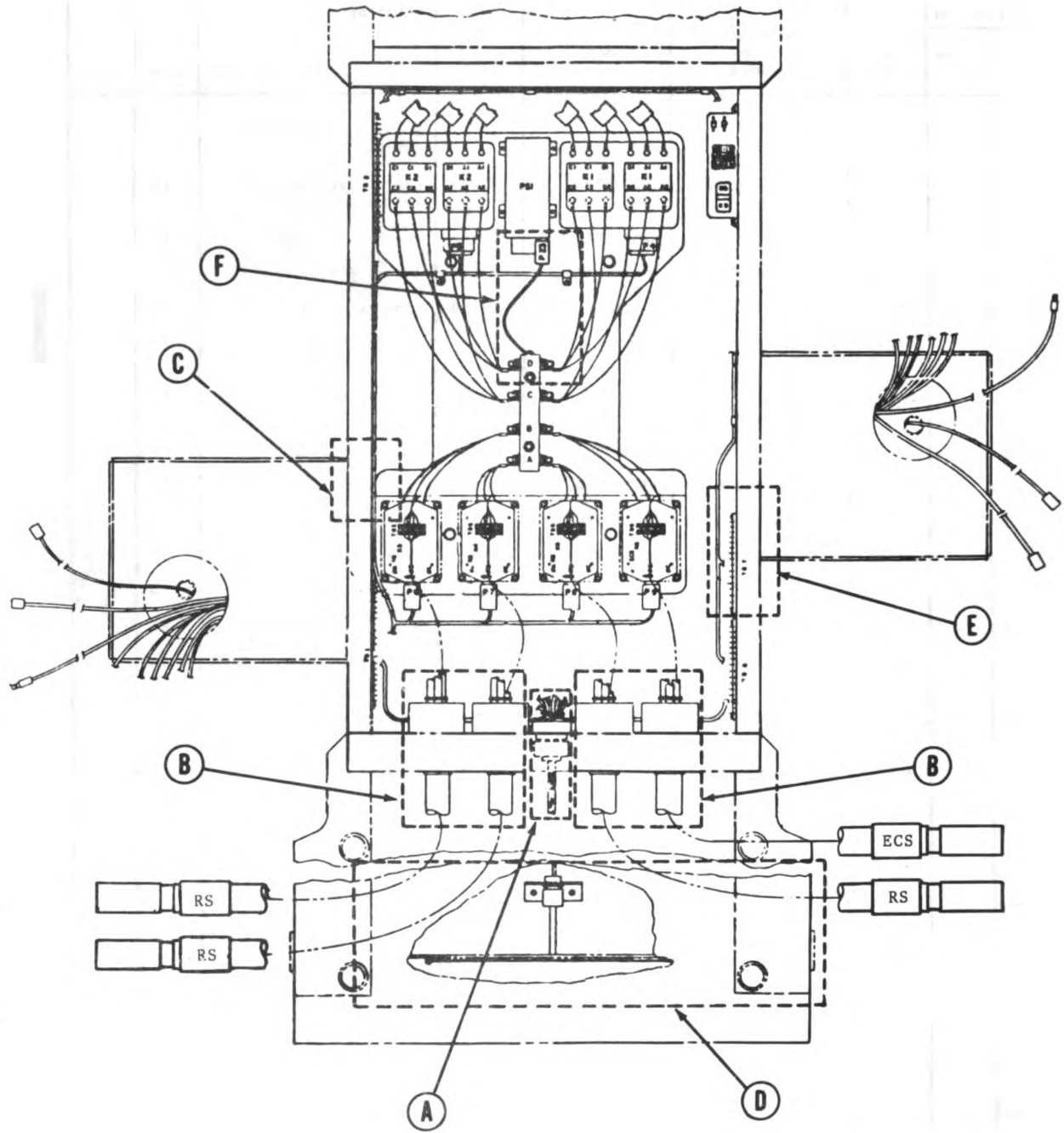


Figure F-15. Wiring Harnesses and Cables (Sheet 2 of 10)

F-52/(F-52.1 blank) Change 4

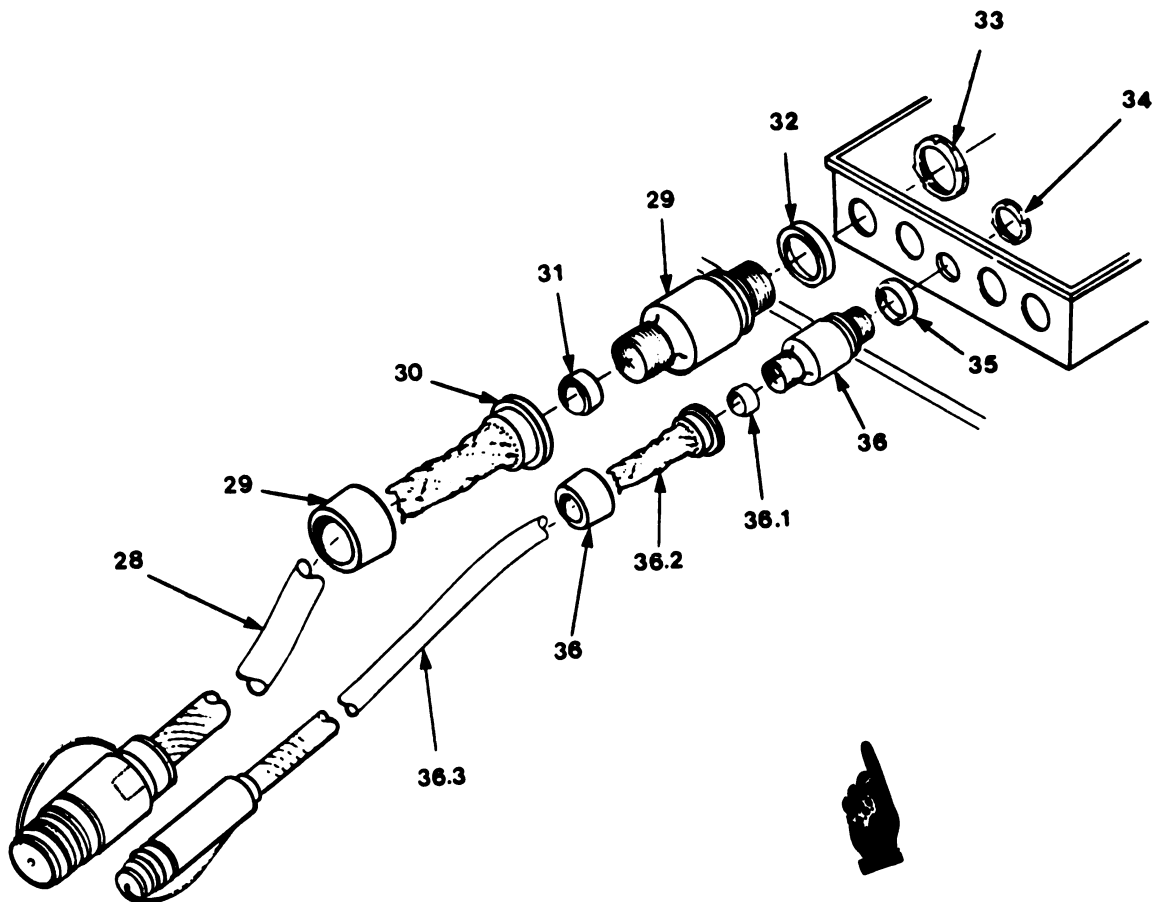


Figure F-15.1. Wiring Harnesses and Cables (Sheet 2.1 of 10)

F-52.2 Change 4

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	28	MDFZZ		13222E8996	97403	Power Cable Assembly	EA	4
		PADZZ		13226E1440	97403	Connector, Elec., Plug	EA	1
		PADZZ		13222E8995	97403	Cable, Power	EA	1
		PADZZ		MS25036-106	96906	Terminal Lug, Crp, Insul	EA	4
		PADZZ		MS25036-122	96906	Terminal Lug, Crp, Insul	EA	1
		PADZZ		MS25036-130	96906	Terminal Lug, Crp, Insul	EA	3
		PADZZ		M23053/5-109-4	81349	Insulation, Sleeving, Elec, Shrink	EA	4
F-15	29	PAFZZA		13226E9502-1	97403	Sealing, Grip, Cable, EMI, Bulkhead	EA	4
F-15	30	PAFZZ		13226E9503-2	97403	Grip, Cable	EA	4
F-15	31	PAFZZ		13226E6162-2	97403	Bushing	EA	4
F-15	32	PAZFF		13226E7768-2	97403	EMI Gasket, Feed thru Connector	EA	4
F-15	33	PAZFF		13215E7892-6	97403	Locknut, Conduit	EA	4
F-15	34	PAZFF		13215E7892-3	97403	Locknut, Conduit	EA	1
F-15	35	PAZFF		13226E7768-1	97403	EMI Gasket, Feed thru Connector	EA	1
F-15	36	PAFFF		13226E9502-2	97403	Sealing Grip, Cable Bulkhead	EA	1

Change 4 F-52.3

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	U/M	UNIT
F-15	36.1	PAFZZ		13226E6162-1	97403	Bushing	EA	1
F-15	36.2	PAFZZ		13226E9503-1	97403	Grip, Calbe	EA	1
F-15	36.3	MDFZZ		13225E8640	97403	Cable, Control, Power Distribution Unit to Generator	EA	1
		PADZZ		M23053/5-111-0	81349	Insulation, Sleeving	EA	1
		PADZZ		MS25036-102	96906	Terminal Lug, Crp, Insul.	EA	13
		PADZZ		M23056/5-104-9	81349	Insulation, Sleeving, Elec, Shrink	EA	1
		PADZZ		MIS-20045/1- 015	81349	Connector, Elec, Plug	EA	1
		PADZZ		MIS-20076/1- 005	81349	Cable	EA	1
		PADZZ		M23053/5-113-0	81349	Insulation, Sleeving Elec. Shrink	EA	1

F-52.4/(F-53 blank) Change 4

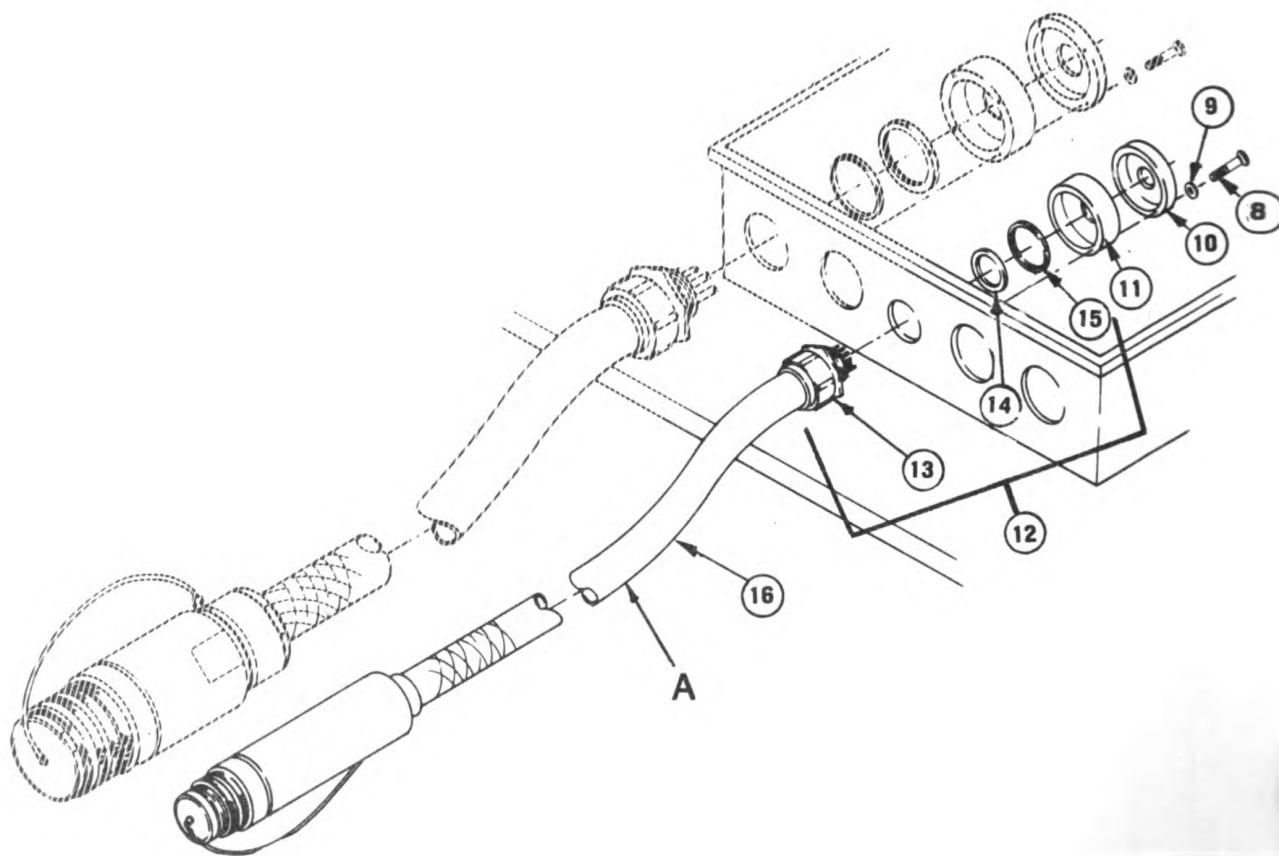
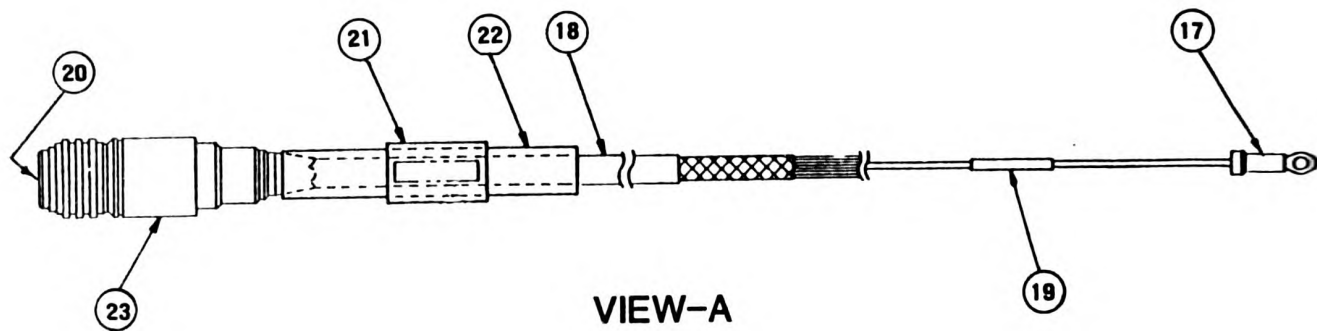
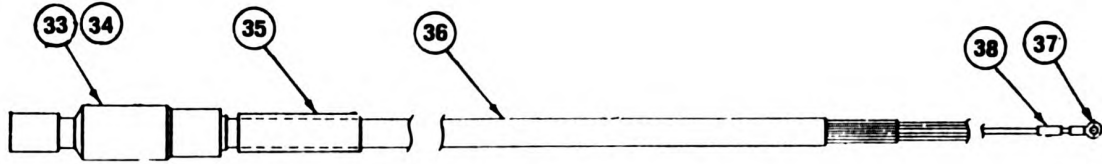


FIGURE F-15. WIRING HARNESSES AND CABLES(SHEET 3 OF 10)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	8	PAFZZ	5305-00-995-3440	MS35207-270	99906	Screw, Machine, .190-32 UNF-2A X 1.750 Long	EA	20
F-15	9	PAFZZ	5310-00-809-8546	MS27183-8	99906	Washer, Flat	EA	44
F-15	10	PAFZZ	6115-01-137-5486	13225E8671	97403	Washer, Power Cable	EA	1
F-15	11	PAFZZ	6115-01-137-3012	13225E8670	97403	Spacer, Power Cable	EA	1
F-15	12	AFFZZ		13225E8356	97403	Strain Relief Assembly	EA	1
F-15	13	PAFZZ	5075-01-084-6334	074-01-023	74545	.Box Connector, Electrical	EA	1
F-15	14	PAFZZ	5330-01-141-8705	205-09-003	81992	.Sealing Gasket	EA	1
F-15	15	PAFZZ	5310-01-141-8704	003-22-003	81992	.Locknut	EA	1
F-15	16	MOFFF	6115-01-137-3007	13225E8640	97403	Cable, Power Distribution Unit to Generator MFR from:	EA	1
F-15	17	PAFZZ	5940-00-204-8966	MS25036-102	99906	.Terminal Lug	EA	13
F-15	18	PAFZZ		MIS20076/1-005	81349	.Cable	FT	V
F-15	19	PAFZZ	5970-00-088-2975	M23053/5-104-0	81349	.Insulation Sleeving	FT	V
F-15	20	PAFZZ		MIS20045/1-015	81349	.Connector, Plug, Electrical	EA	1
F-15	21	PAFZZ	5970-00-812-1358	M23053/5-111-0	81349	.Insulation Sleeving	FT	V
F-15	22	PAFZZ		13226E1336-3	97403	.Sleeve, Cable	EA	1
F-15	23	PAFZZ		M23053/5-113-0	81349	.Insulation Sleeving	FT	V



VIEW-B

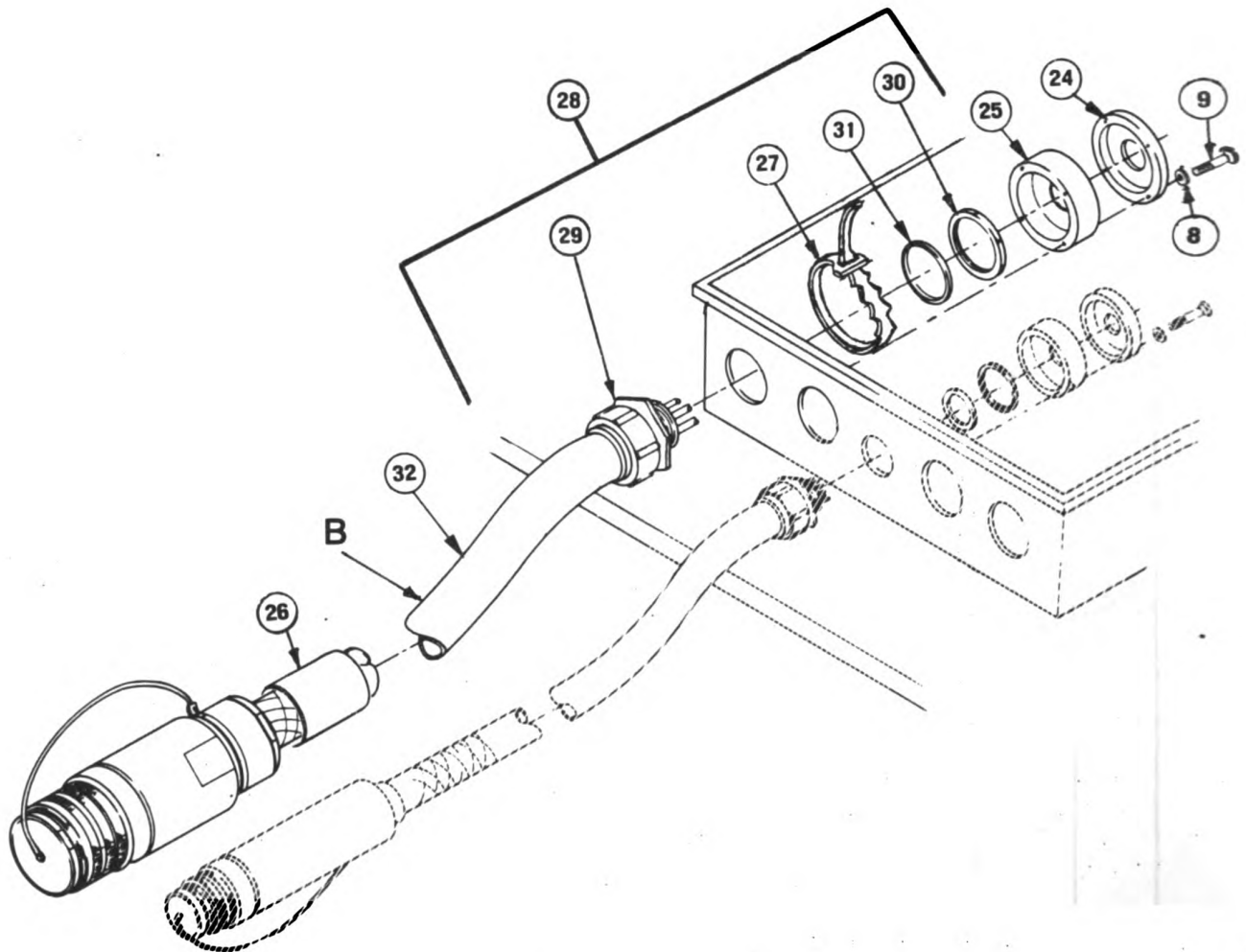


FIGURE F-15. WIRING HARNESSES AND CABLES(SHEET 4 OF 10)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	24	PAFZZ		13222E7077	97403	Washer, Power Cable	EA	4
F-15	25	PAFZZ		13222E7076	97403	Spacer, Power Cable	EA	4
F-15	26	PAFZZ	5975-01-174-4062	13226E4308-1	97403	Sleeve, Marker Cable Used on RS Cables	EA	3
F-15	26	PAFZZ	5975-01-174-4063	13226E4308-2	97403	Sleeve, Marker Cable Used on ECS Cable	EA	1
F-15	27	PAFZZ	5975-00-074-2072	MS3367-1-9	96906	Strap, Tiedown, Electrical	EA	4
F-15	28	PAFZZ		13225E8355	97403	Strain Relief Assembly	EA	4
F-15	29	PAFZZ	5975-01-141-8708	074-01-034	81992	.Grip, Cord	EA	1
F-15	30	PAFZZ	5310-01-155-7156	003-22-006	81992	.Locknut	EA	1
F-15	31	PAFZZ	5330-01-141-8706	205-09-006	81992	.Sealing Gasket	EA	1
F-15	32	MDFZZ		13222E8996	97403	Power Cable Assembly MFR from:	EA	1
F-15	33	PAFZZ	5935-01-136-9896	13225E9043-1	97403	.Connector, Plug	EA	1
F-15	34	PAFZZ		M23053/5-114-0	81349	.Insulation Sleeving	FT	V
F-15	35	PAFZZ		13226E1336-2	97403	.Sleeve, Cable	EA	1
F-15	36	PAFZZ		13222E8995	97403	.Cable, Power	V	F
F-15	37	PAFZZ	5940-00-283-5280	MS25036-106	96906	.Terminal, Lug	EA	4
F-15	37	PAFZZ	5940-00-113-8190	MS25036-122	96906	.Terminal, Lug	EA	1
F-15	37	PAFZZ	5940-00-115-5007	MS25036-130	96906	.Terminal, Lug	EA	3
F-15	38	PAFZZ		M23053/5-106-4	81349	.Insulation Sleeving, .250 ID	FT	V
F-15	38	PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving, .750 ID	FT	V

Change 4 F-57

VIEW-C

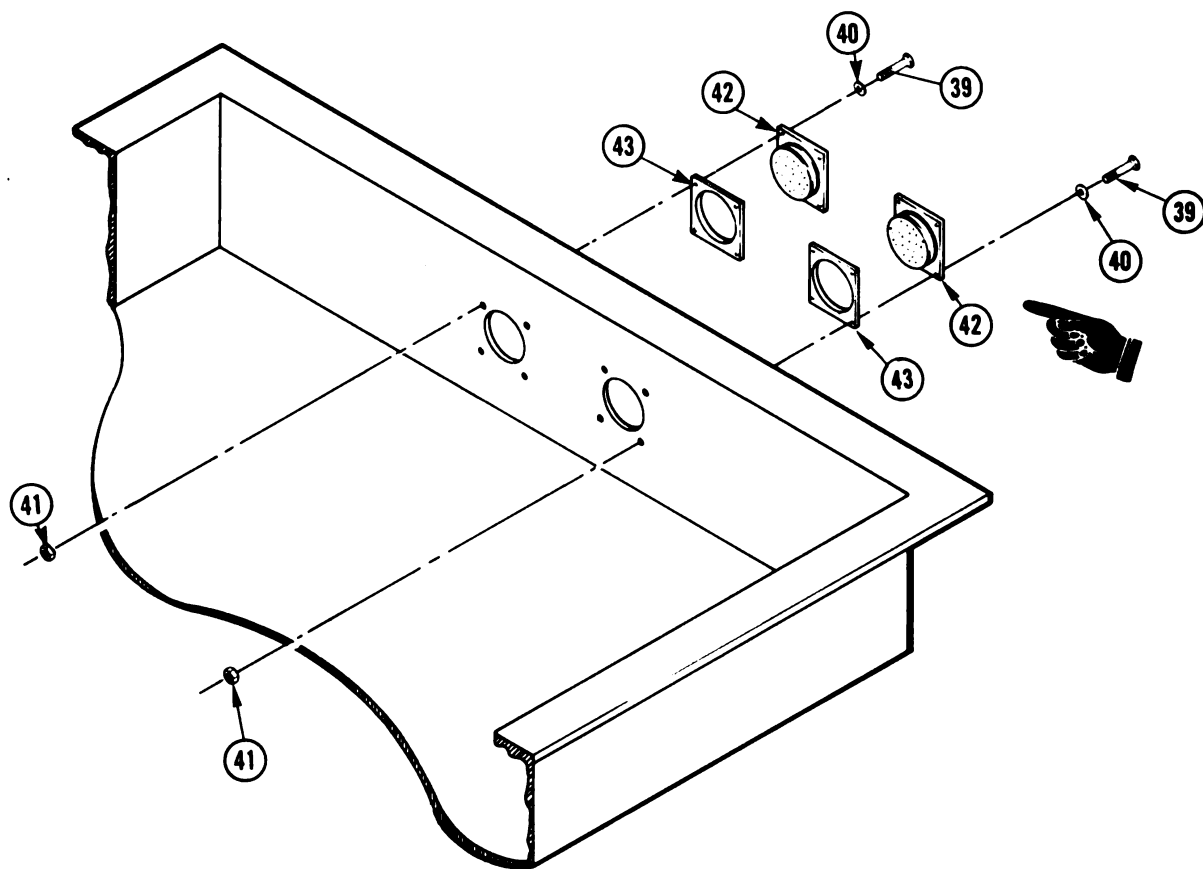


Figure F-15. Wiring Harnesses and Cables (Sheet 5 of 10)

F-58 Change 4

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	39	PAOZZ	5305-00-984-4976	MS35206-219	99906	Screw, Machine, .112-40 UNC-2A X .750 Long	EA	8
F-15	40	PAOZZ	5310-00-950-1310	MS27183-4	99906	Washer, Flat, Round, .125 Basic ID	EA	8
F-15	41	PAOZZ	5310-00-889-2543	MS21045-04	99906	Nut, Self-locking Hex, .112-40 UNJC-3B	EA	8
F-15	42	PAFZZ	5935-00-866-4889	13222E6997-1	97403	Adapter, Connector	EA	2
F-15	43	PAFZZ	5999-00-845-1687	13222E6998-4	97403	Gasket, Shielding	EA	2

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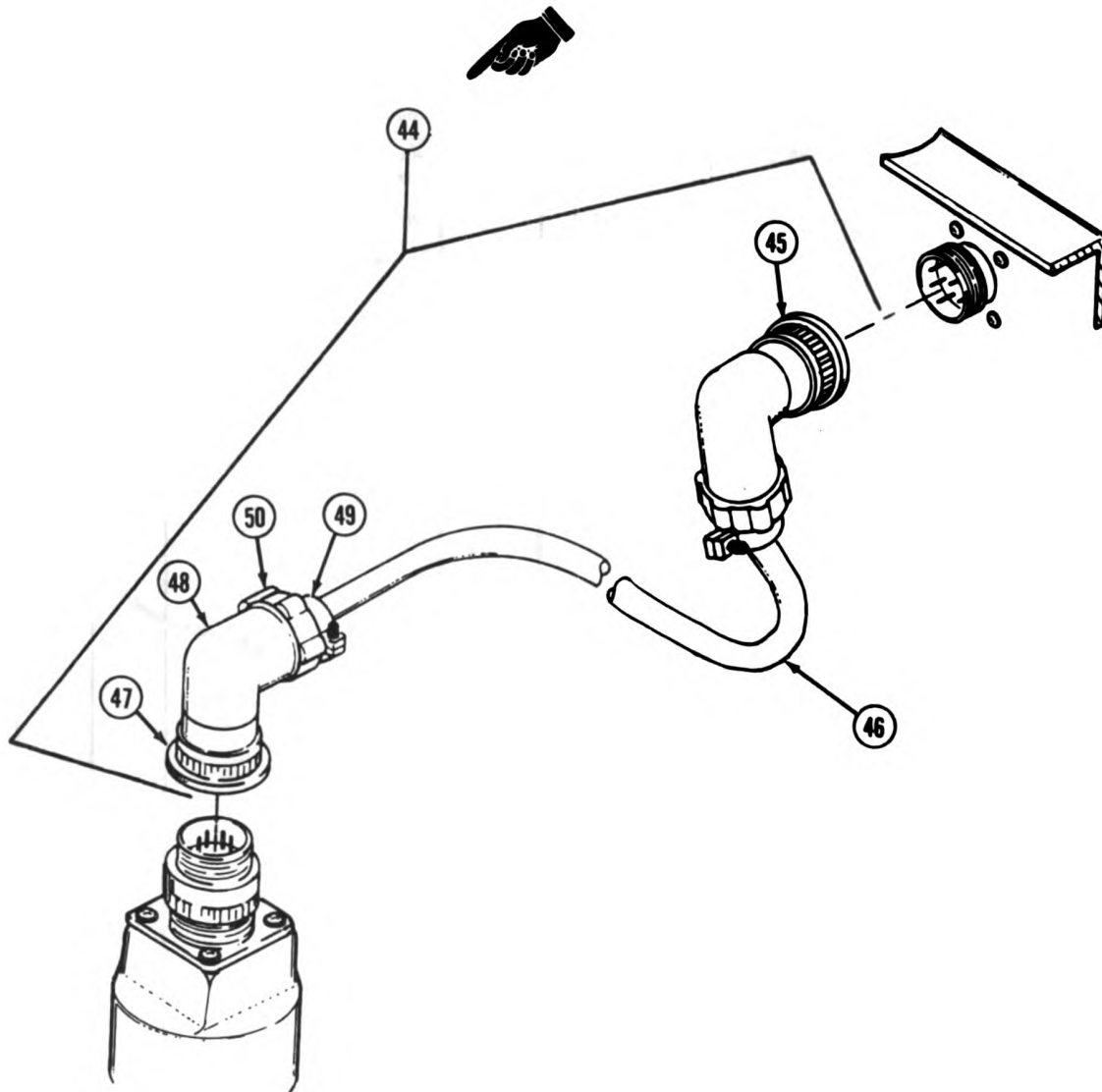


Figure F-15. Wiring Harnesses and Cables (Sheet 6 of 10)

F-60 Change 4

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	44	MFFFF	8115-01-130-8289	13222E7480-1	97403	Cable Assembly, Fuel Sensor (W12) MFR from:	EA	2
F-15	45	PAFZZ	5935-00-803-8848	M83108R148-2S	98908	.Connector, Plug, Electrical	EA	1
F-15	46	PAFZZ	8145-00-984-5210	48BUC1920NJA10	90484	.Cable	FT	V
F-15	47	PAFZZ	5935-00-835-4887	M83108R148-2P	98908	.Connector, Plug, Electrical	EA	1
F-15	48	PAFZZ	5385-00-820-4535	M83420-8	81348	.Bushing, Rubber	EA	2
F-15	49	PAFZZ	5935-00-280-2195	M83057-6A	98908	.Clamp, Cable, Electrical	EA	2
F-15	50	PAFZZ	5975-00-284-8940	AN3111-3	88044	.Ring, Bonding, Electrical	EA	2

Change 4 F-61

VIEW D

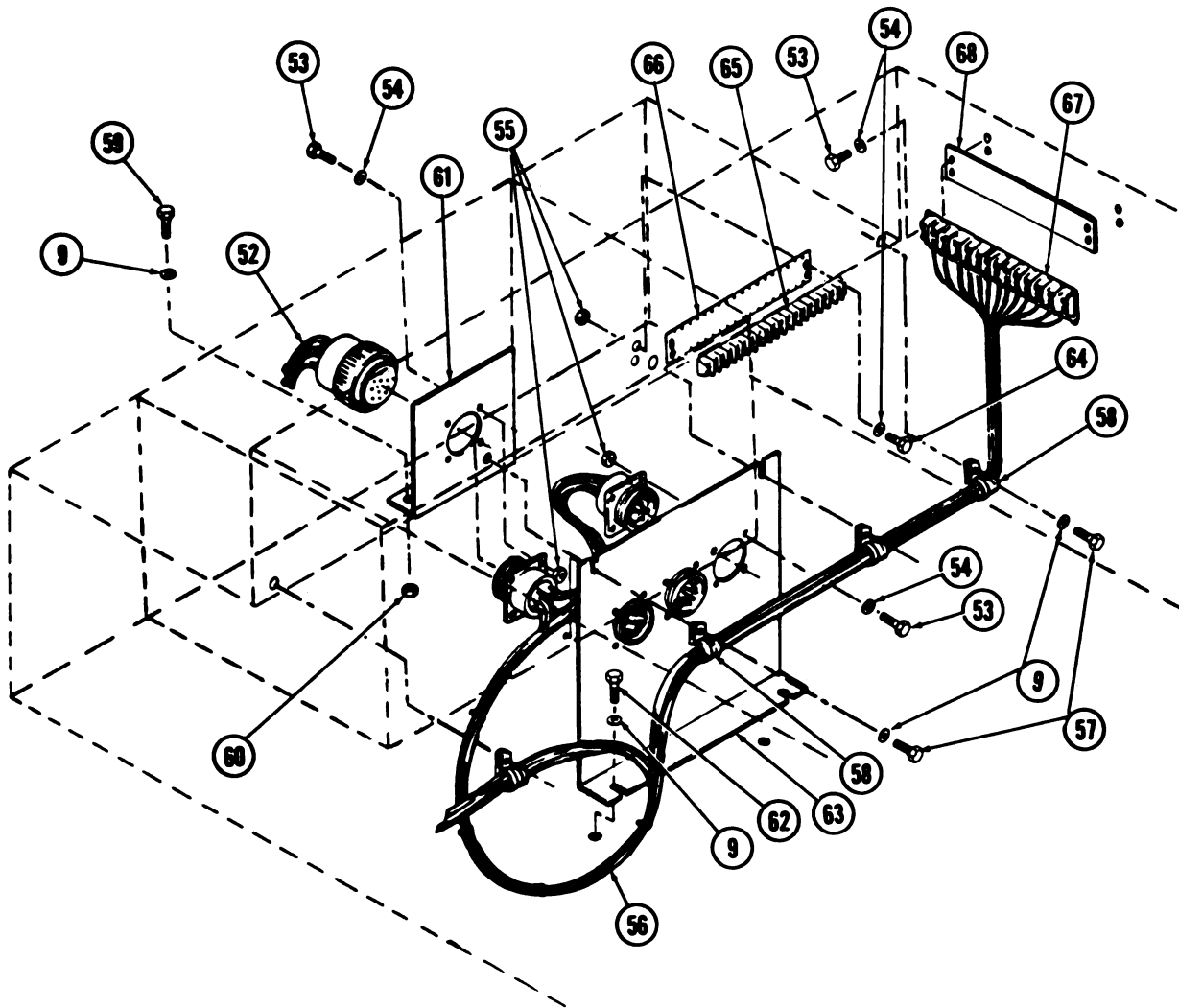


Figure F-15. Wiring Harnesses and Cables (Sheet 7 of 10)

F-62 Change 2

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	52	PAFFF	6115-01-139-6292	13222E9694	97403	Wiring Harness, P1 (See Figure F-16 for breakdown)	EA	1
F-15	53	PAFZZ	5305-00-889-3001	MS35206-231	96906	Screw, Machine, .138-32 UNC-2A X .625 Long	EA	28
F-15	54	PAFZZ	5310-00-082-1404	MS27183-8	96906	Washer, Flat, Round .156 Basic ID	EA	24
F-15	55	PAFZZ	5310-00-889-2544	MS21045-08	96906	Nut, Self-locking Hex, .138-32 UNJC-3B	EA	16
F-15	56	PAFFF	6115-01-139-6295	13222E7481	97403	Wiring Harness (J1, 2, 3, 10) (See Figure F-17 for breakdown)	EA	1
F-15	57	PAFZZ	5305-00-989-7435	MS35207-264	96906	Screw, Machine, .190- 32 UNF-2A X .825 Long	EA	17
F-15	58	PAFZZ	5340-00-050-2740	MS21333-99	96906	Clamp, Loop, Cushioned, .750 Nominal Dia	EA	19
F-15	59	PAFZZ	5305-00-993-1848	MS35207-265	96906	Screw, Machine, No-32 UNF-2A X .750 Long	EA	2
F-15	60	PAFZZ	5310-00-061-7326	MS21045-3	96906	Nut, Self-locking, Hex	EA	2
F-15	61	XBFZZ		13222E7033	97403	Bracket, Connector, Mounting	EA	1
F-15	62	PAFZZ	5305-00-989-7434	MS35207-263	96906	Screw, Machine, .190- 32 UNF-2A X .500 Long	EA	2
F-15	63	XBFZZ		13222E7034	97403	Bracket, Connector Mounting	EA	1
F-15	64	PAFZZ	5305-00-438-8682	MS35206-328	96906	Screw, Machine, No. 6-32 UNC-2A X 1.125 Long	EA	4
F-15	65	XBFZZ	5040-00-983-6059	37TB18	81349	Terminal Board	EA	3
F-15	66	XBFZZ		13222E9687-2	97403	Marker Strip	EA	3
F-15	67	XBFZZ		13222E7468-4	97403	Terminal Block	EA	2
F-15	68	XBFZZ		13222E9687-1	97403	Marker Strip	EA	2

VIEW E

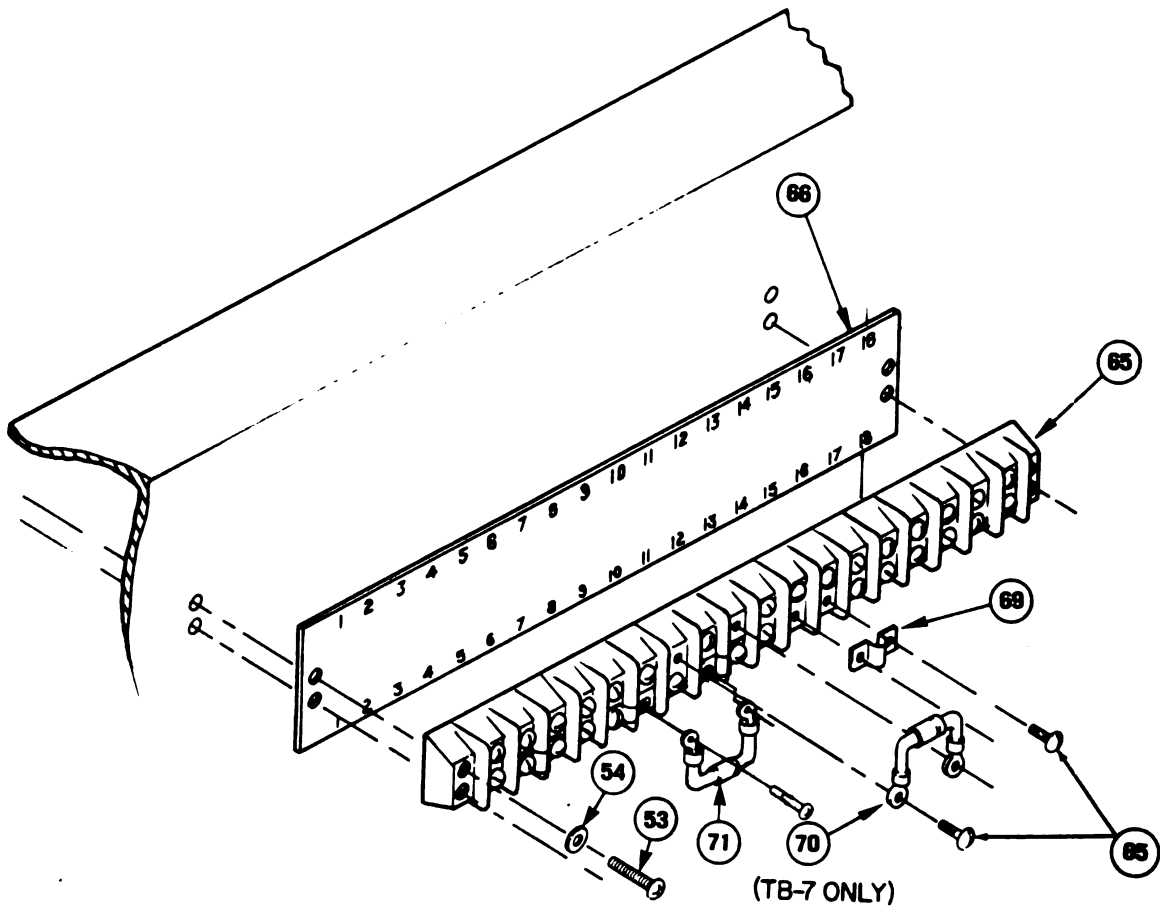


FIGURE F-15, WIRING HARNESSSES AND CABLES(SHEET 8 OF 10)

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(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	69	PAFZZ	6150-00-632-7234	69-651-1	30554	Link, Terminal Connector	EA	20
F-15	70	MFFFF		13225E8672-1	97403	Diode Assembly TB-7 Only MFR From:	EA	1
F-15		PAFZZ	5940-00-681-8185	MS35430-4	96906	.Terminal Lug, Solder Type	EA	2
F-15		PAFZZ	5970-01-109-3903	M23053/18- 001-0	81349	.Insulation Sleeving, Electrical	FT	V
F-15		PAFZZ	5961-00-957-6865	JAN1N3611	81349	.Semiconductor Device	EA	1
F-15	71	MFFFF		13225E8672-2	97403	Diode Assembly MFR From:	EA	1
F-15		PAFZZ	5940-00-681-8185	MS35430-4	96906	.Terminal Lug, Solder Type	EA	2
F-15		PAFZZ	5970-01-109-3903	M23053/18-	81349	.Insulation Sleeving, Electrical	FT	V
F-15		PAFZZ	5961-00-957-6865	JAN1N3611	81349	.Semiconductor Device	EA	1

Change 2 F-65

VIEW F

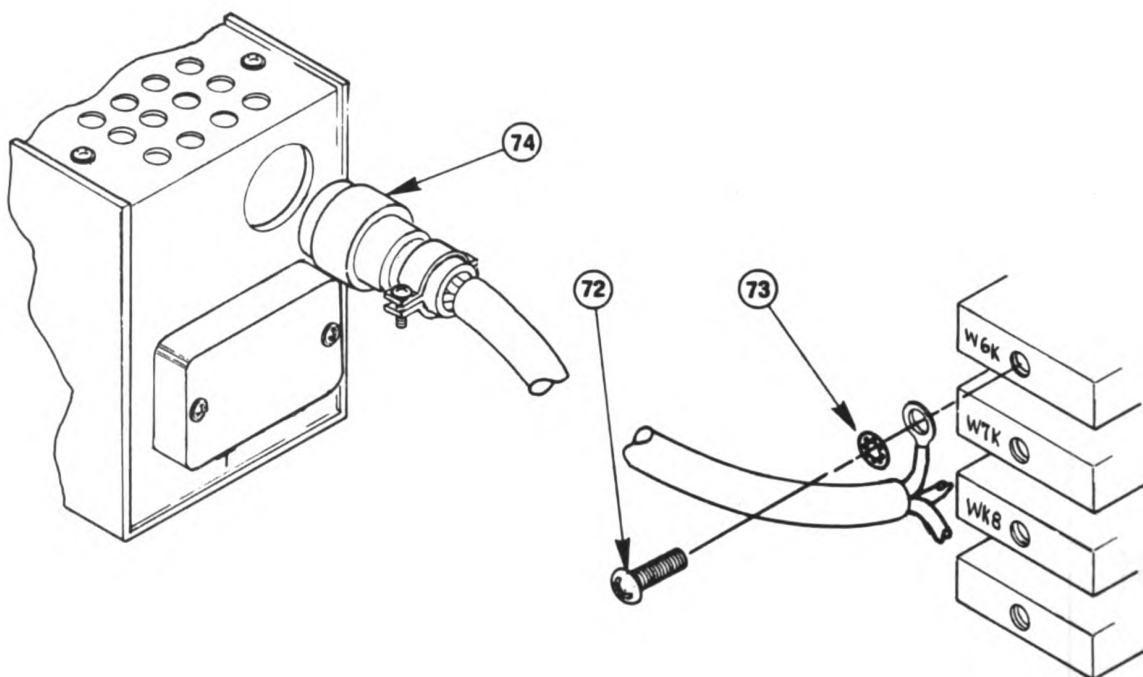


FIGURE F-15. WIRING HARNESSES AND CABLES(SHEET 9 OF 10)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	72	PAFZZ	5305-00-059-0280	M835214-55	96900	Screw, Machine, .190-24 UNC-2A X .500 Long	EA	4
F-15	73	PAFZZ	5310-00-019-0672	M835333-107	96900	Lockwasher, Tooth, .190 Nom Size	EA	4
F-15	74	MFFFF		13222E7484	97403	Wiring Harness, P23 (See Figure F-18 for breakdown)	EA	1

Change 2 F-67

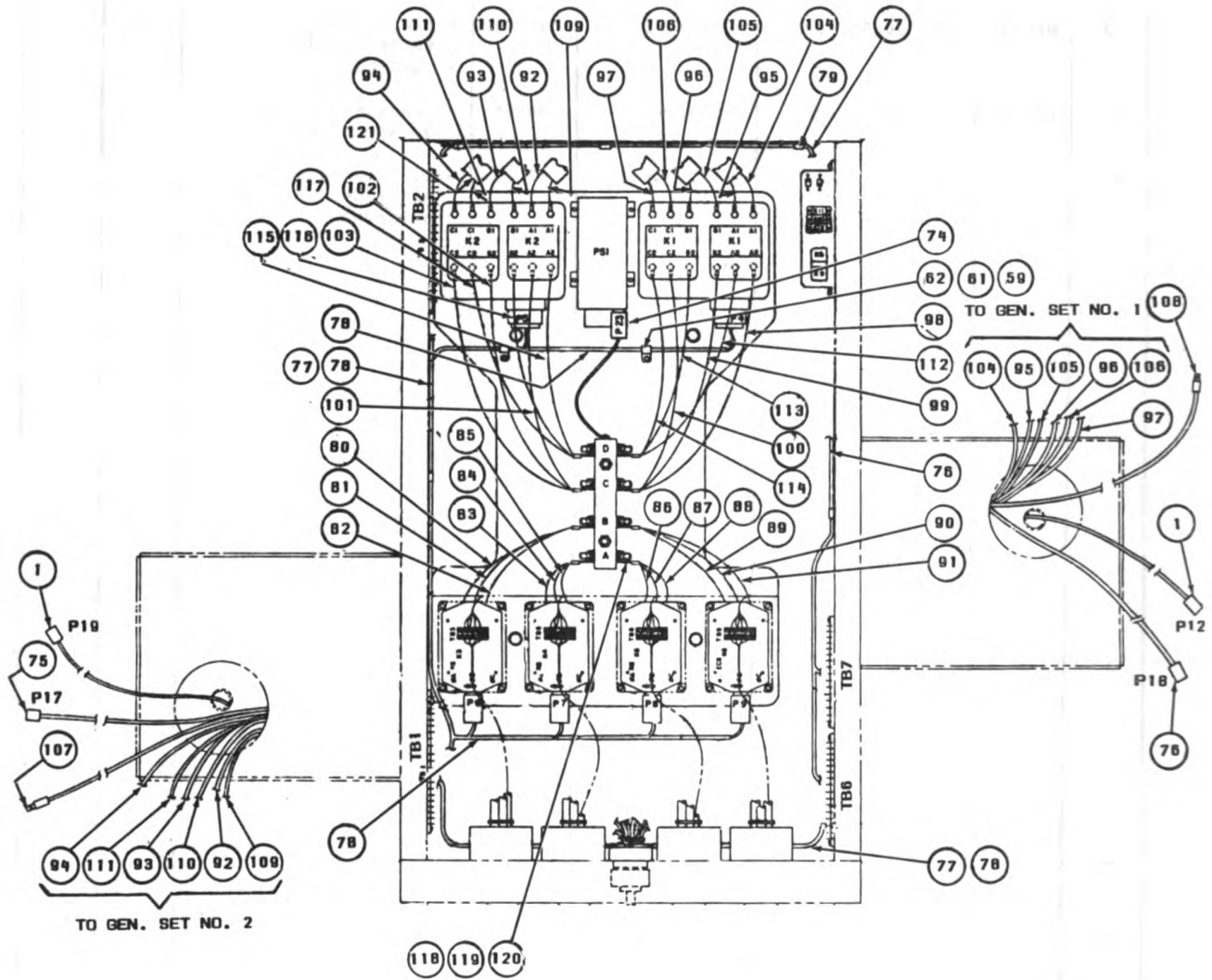


FIGURE F-15. WIRING HARNESSES AND CABLES(SHEET 10 OF 10)

F-68 Change 2

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	75	PAFFF		13222E7483	97403	Wiring Harness Assem- bly, P17 (See Figure F-19 for breakdown)	EA	1
F-15	76	PAFFF		13222E7078	97403	Wiring Harness Assem- bly, P18 (See Figure F-20 for breakdown)	EA	1
F-15	77	PAFFF	6115-01-139-6293	13222E7084	97403	Wiring Harness Assem- bly, P13 and P15 (See Figure F-21 for breakdown)	EA	1
F-15	78	PAFFF	6115-01-139-6294	13222E7085	97403	Wiring Harness Assem- bly P2-P9 (See Figure F-22 for breakdown)	EA	1
F-15	79	PAOZZ	5340-00-764-7051	MS21333-69	96906	Clamp, Loop	EA	4
F-15	80	MFFFF		13222E6994-1	97403	Power Lead Assembly MFR from:	EA	1
F-15		PAFZZ	5940-00-113-9835	MS25036-136	96906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9699-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5- 109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16678/8	81349	.Wire, Electrical	FT	V
F-15	81	MFFFF		13222E6994-2	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	96906	.Terminal Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9699-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5- 109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16678/8	81349	.Wire, Electrical	FT	V
F-15	82	MFFFF		13222E6994-3	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	96906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9699-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5- 109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16678/8	81349	.Wire, Electrical	FT	V

Change 2 F-6

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	83	MFFFF		13222E6994-4	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9699-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	84	MFFFF		13222E6994-5	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9699-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	85	MFFFF		13222E6994-6	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9699-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	86	MFFFF		13222E6994-7	97403	Lead, Power, MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9699-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	87	MFFFF		13222E6994-8	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9699-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	88	MFFFF		13222E0004-9	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	96906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E0009-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	89	MFFFF		13222E0004-10	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	96906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E0009-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	90	MFFFF		13222E0004-11	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	96906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E0009-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	91	MFFZZ		13222E0004-12	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-115-5004	MS20659-120	96906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E0009-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	92	MFFFF		13222E0004-13	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-113-9835	MS25036-136	96906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E0009-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	V	B

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(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	103	MFFFF		13222E6994-24	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-113-9835	MS25036-136	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9899-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	104	MFFFF		13222E6994-25	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-113-9835	MS25036-136	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9899-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	105	MFFFF		13222E6994-26	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-113-9835	MS25036-136	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9899-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	106	MFFFF		13222E6994-27	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-113-9835	MS25036-136	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9899-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V
F-15	107	MFFFF		13222E6994-28	97403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5940-00-113-9835	MS25036-136	98906	.Terminal, Lug	EA	1
F-15		PAFZZ	5940-01-140-6708	13222E9899-1	97403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5970-00-057-3545	M23053/5-109-4	81349	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81349	.Wire, Electrical	FT	V

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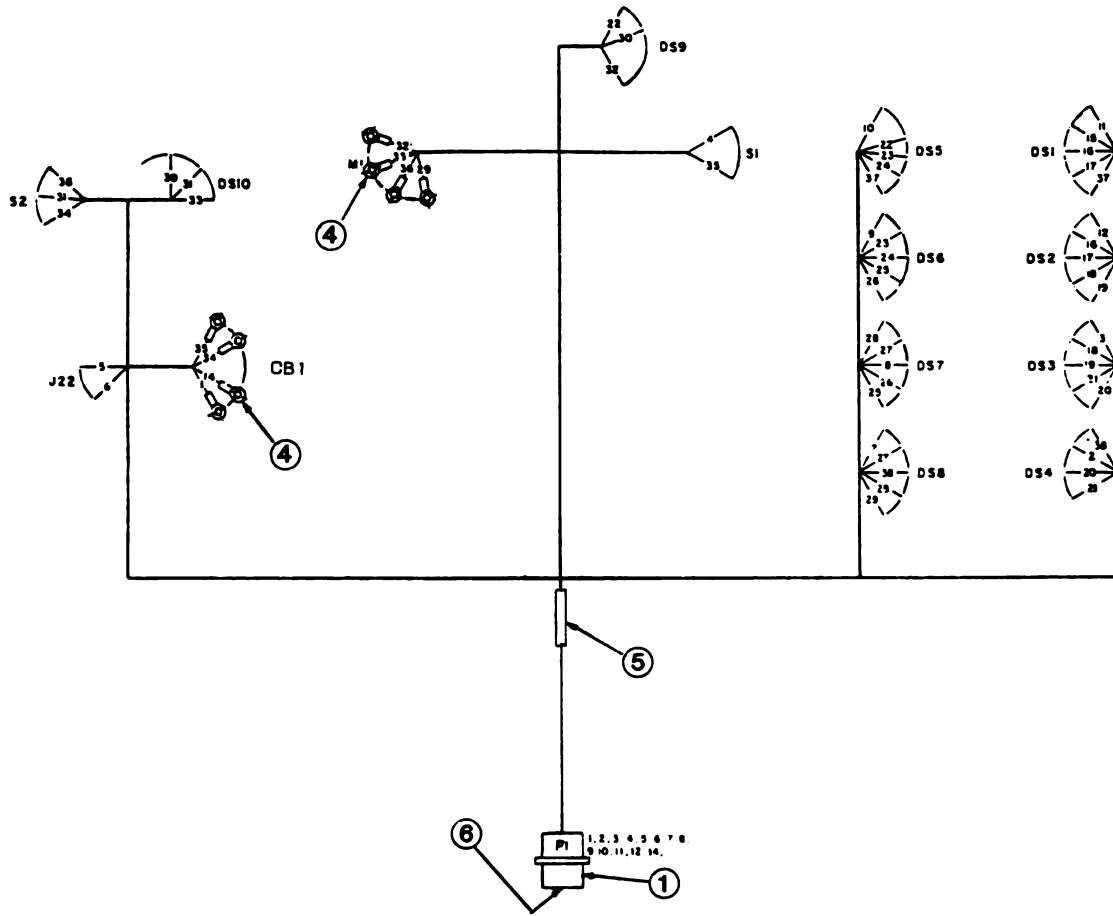
(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	98	MFFFF		13222E0004-10	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0035	MS25036-136	00000	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-0708	13222E0000-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	01340	.Insulation Sleeving	FT	V
F-15		PAFZZ	0145-00-204-1403	MIL-W-10078/8	01340	.Wire, Electrical	FT	V
F-15	99	MFFFF		13222E0004-20	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0035	MS25036-136	00000	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-0708	13222E0000-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	01340	.Insulation Sleeving	FT	V
F-15		PAFZZ	0145-00-204-1403	MIL-W-10078/8	01340	.Wire, Electrical	FT	V
F-15	100	MFFFF		13222E0004-21	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0035	MS25036-136	00000	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-0708	13222E0000-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	01340	.Insulation Sleeving	FT	V
F-15		PAFZZ	0145-00-204-1403	MIL-W-10078/8	01340	.Wire, Electrical	FT	V
F-15	101	MFFFF		13222E0004-22	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0035	MS25036-136	00000	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-0708	13222E0000-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	01340	.Insulation Sleeving	FT	V
F-15		PAFZZ	0145-00-204-1403	MIL-W-10078/8	01340	.Wire, Electrical	FT	V
F-15	102	MFFFF		13222E0004-23	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0035	MS25036-136	00000	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-0708	13222E0000-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	01340	.Insulation Sleeving	FT	V
F-15		PAFZZ	0145-00-204-1403	MIL-W-10078/8	01340	.Wire, Electrical	FT	V

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	113	MFFFF		13222E0004-35	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0835	MS25036-136	06006	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-6708	13222E0009-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	81340	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81340	.Wire, Electrical	FT	V
F-15	114	MFFFF		13222E0004-36	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0835	MS25036-136	06006	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-6708	13222E0009-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	81340	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81340	.Wire, Electrical	FT	V
F-15	115	MFFFF		13222E0004-37	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0835	MS25036-136	06006	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-6708	13222E0009-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	81340	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81340	.Wire, Electrical	FT	V
F-15	116	MFFFF		13222E0004-38	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0835	MS25036-136	06006	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-6708	13222E0009-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	81340	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81340	.Wire, Electrical	FT	V
F-15	117	MFFFF		13222E0004-39	07403	Lead, Power MFR from:	EA	1
F-15		PAFZZ	5040-00-113-0835	MS25036-136	06006	.Terminal, Lug	EA	1
F-15		PAFZZ	5040-01-140-6708	13222E0009-1	07403	.Terminal, Right Angle	EA	1
F-15		PAFZZ	5070-00-057-3545	M23053/5-109-4	81340	.Insulation Sleeving	FT	V
F-15		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81340	.Wire, Electrical	FT	V

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(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SBR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-15	118	PAFZZ	5310-01-026-5824	MS16203-39	98906	Nut, Plain, Hexagon	EA	32
F-15	119	PAFZZ	5310-00-913-9776	MS35338-91	98906	Washer, Lock	EA	32
F-15	120	PAFZZ	5310-01-004-9129	AN961-616S	88044	Washer, Flat	EA	32
F-15	121	XDFZZ	5970-01-141-8707	13225E8674	97403	Sleeve, Braid, Sleeve	EA	V

Change 2 R-77



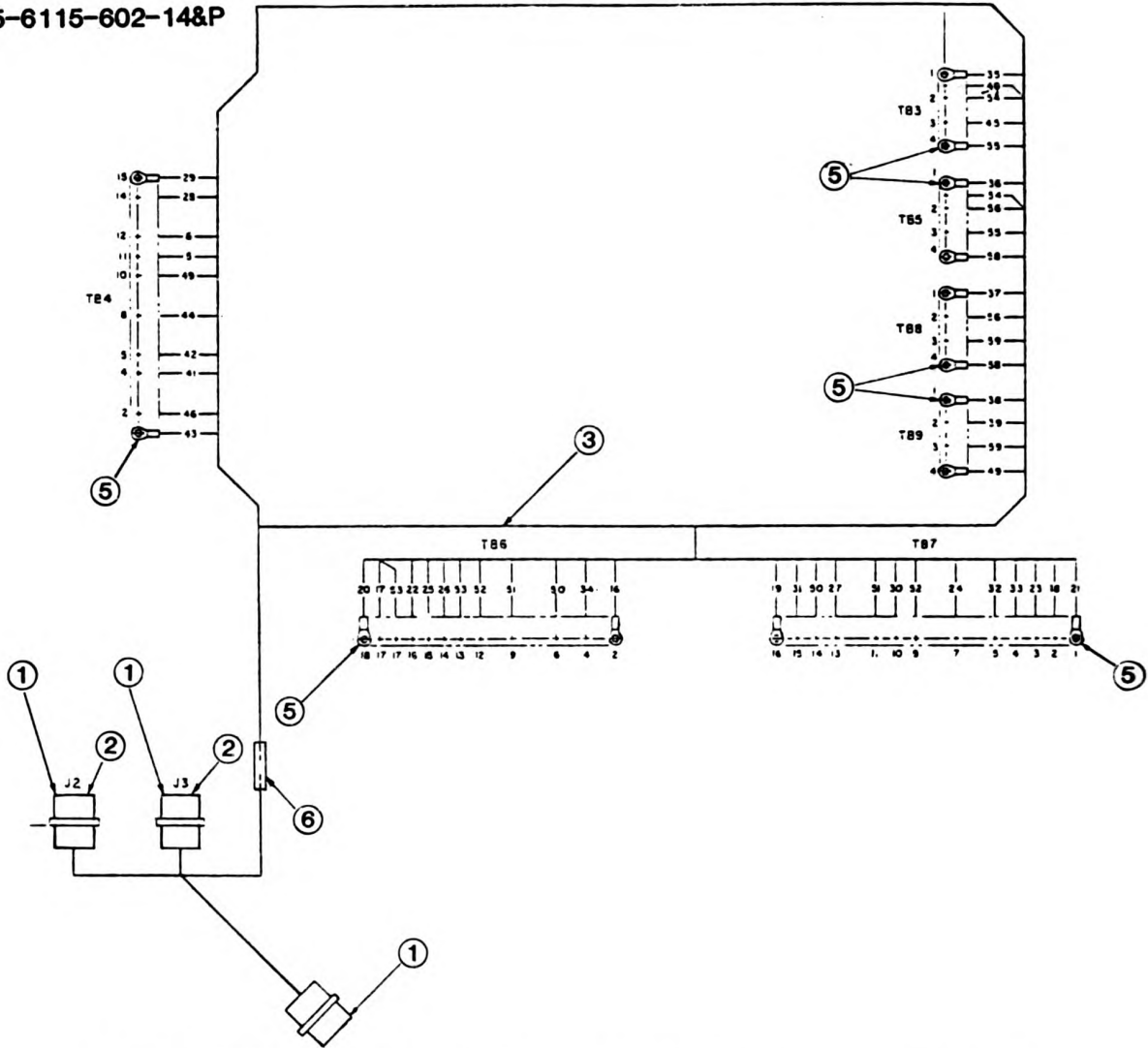
WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.	
1	PI-B	—	CB1-1	4	2
2	PI-T	—	DS4-2	—	3
3	PI-S	—	DS3-2	—	3
4	PI-L	—	S1-N0	—	3
5	PI-M	—	J22-1	—	3
6	PI-N	—	J22-2	—	3
7	PI-Q	—	DS8-2	—	3
8	PI-K	—	DS7-2	—	3
9	PI-V	—	DS6-2	—	3
10	PI-U	—	DS5-2	—	3
11	PI-C	—	DS1-2	—	3
12	PI-R	—	DS2-2	—	3
14	PI-Y	—	CB1-2	—	2
15	PI-Z	—	DS1-1	—	2
16	DS1-1	—	DS2-1	—	2
17	DS1-3	—	DS2-3	—	2
18	DS2-1	—	DS3-1	—	2
19	DS2-3	—	DS3-3	—	2

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.	
20	DS3-1	—	DS4-1	—	2
21	DS3-3	—	DS4-3	—	2
22	DS5-1	—	DS9-2	—	2
23	DS5-1	—	DS6-1	—	2
24	DS5-3	—	DS6-3	—	2
25	DS6-1	—	DS7-1	—	2
26	DS6-3	—	DS7-3	—	2
27	DS7-1	—	DS8-1	—	2
28	DS7-3	—	DS8-3	—	2
29	DS8-3	—	M1-(+)	4	2
30	DS9-1	—	DS10-1	—	2
31	DS10-1	—	S2-3	—	2
32	DS9-2	—	M1-(-)	4	2
33	DS10-2	—	M1-(-)	4	2
34	CB1-2	4	S2-2	—	2
35	CB1-2	4	S1-C	—	2
36	S2-2	—	M1-(+)	4	2
37	DS5-3	—	DS1-3	—	2
38	DS4-1	—	DS8-1	—	2

FIGURE F-16. P1 WIRING HARNESS

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 04 - ELECTRICAL SYSTEM		
F-16		PAFFF	6115-01-139-8292	13222E9894	97403	Wiring Harness, PI	EA	1
F-16	1	PAFZZ	5935-00-811-8064	MS3106R24-285	98906	.Connector, Plug, Electrical	EA	1
F-16	2	PAFZZ	6145-01-108-6907	M16878/4BJE9	81348	.Wire, Electrical	FT	V
F-16	3	PAFZZ	6145-00-500-3079	M16878/4BHB9	81348	.Wire, Electrical	FT	V
F-16	4	PAFZZ	5940-00-143-4774	MS25036-153	98906	.Terminal, Lug	EA	8
F-16	5	PAFZZ	5970-00-954-1624	M23053/5-107-0	81349	.Insulation Sleeving	FT	V
F-16	6	PAFZZ	5935-00-823-5322	MS25251-16	98906	.Plug, End Seal	EA	10
F-16		PAFZZ	5975-00-074-2072	MS3367-1-9	98906	.Strap, Tiedown, Electrical	EA	V

Change 2 R-79



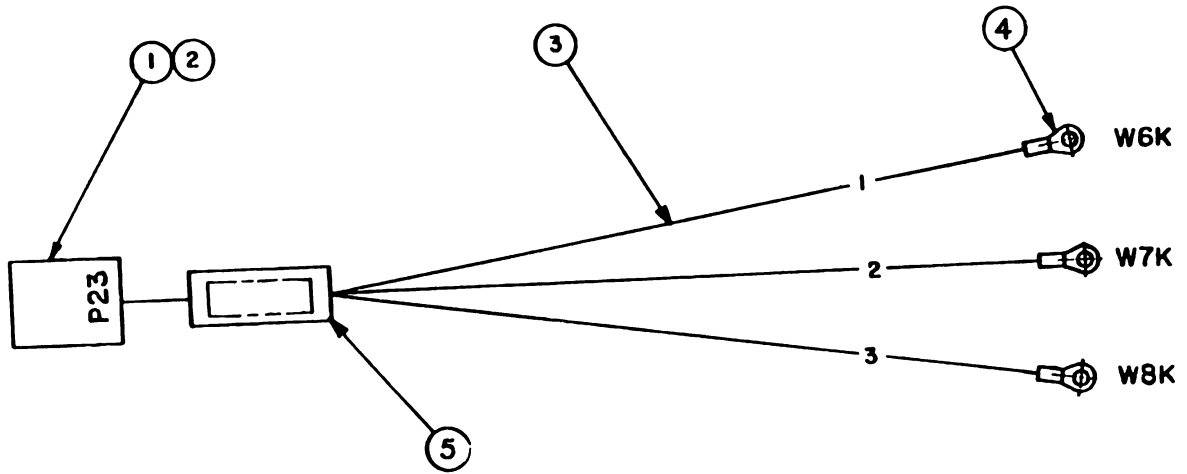
WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.	
1	J1-B	---	J3-U	---	3
2	J1-C	---	J3-Q	---	3
3	J1-K	---	J3-K	---	3
4	J1-L	---	J3-N	---	3
5	J1-M	---	TB4-11	5	3
6	J1-N	---	TB4-12	5	3
7	J1-Q	---	J3-L	---	3
8	J1-R	---	J3-R	---	3
9	J1-S	---	J3-S	---	3
10	J1-T	---	J3-T	---	3
11	J1-U	---	J3-E	---	3
12	J1-V	---	J3-H	---	3
13					
14	J1-Y	---	J3-Z	---	4
15	J1-Z	---	J3-W	---	3
16	J2-A	---	TB6-2	5	3
17	J2-B	---	TB6-17	5	3
18	J2-C	---	TB7-2	5	3
19	J2-D	---	TB7-18	5	3
20	J2-E	---	TB6-18	5	3
21	J2-F	---	TB7-1	5	3
22	J2-G	---	TB6-16	5	3
23	J2-H	---	TB7-3	5	3
24	J2-J	---	TB7-7	5	3
25	J2-IM	---	TB6-15	5	3
26	J2-N	---	TB6-14	5	3
27	J2-R	---	TB7-13	5	3
28	J2-T	---	TB6-14	5	3
29	J2-U	---	TB4-15	5	3
30	J2-V	---	TB7-10	5	3

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.	
31	J2-W	---	TB7-15	5	3
32	J2-X	---	TB7-5	5	3
33	J2-Y	---	TB7-4	5	3
34	J2-Z	---	TB6-4	5	3
35	J3-A	---	TB3-1	5	3
36	J3-B	---	TB5-1	5	3
37	J3-C	---	TB8-1	5	3
38	J3-D	---	TB9-1	5	3
39	J3-F	---	TB9-2	5	3
40	J3-G	---	TB3-2	5	3
41	J3-J	---	TB4-6	5	3
42	J3-M	---	TB4-5	5	3
43	J3-P	---	TB4-1	5	3
44	J3-Y	---	TB4-8	5	3
45	J3-X	---	TB3-3	5	3
46	J3-Y	---	TB4-2	5	3
47					
48					
49	TB8-4	---	TB4-10	5	3
50	TB8-8	---	TB7-14	5	3
51	TB8-9	---	TB7-11	5	3
52	TB6-12	---	TB7-8	5	3
53	TB8-13	---	TB6-17	5	3
54	TB3-2	---	TB9-2	5	3
55	TB3-4	---	TB5-3	5	3
56	TB5-2	---	TB8-2	5	3
57					
58	TB5-4	---	TB8-4	5	3
59	TB8-3	u	TB8-3	5	3

F-80 Change 2 FIGURE F-17. J1, J2 AND J3 WIRING HARNESS

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-17		PAFFF	6115-01-139-8295	13222E7481	97403	Wiring Harness, J1, J2 and J3	EA	1
F-17	1	PAFZZ	5935-00-721-0708	MS3102R24-28P	98906	.Connector, Receptacle	EA	3
F-17	2	PAFZZ	5935-00-823-5322	MS25251-18	98906	.Plug, End Seal, Electrical	EA	15
F-17	3	PAFZZ	6145-00-500-3079	M16878/4BHB9	81349	.Wire, Electrical	FT	V
F-17	4	PAFZZ	6145-01-108-8907	M16878/4BJE9	81349	.Wire, Electrical	FT	V
F-17	5	PAFZZ	5940-00-204-8966	MS25036-102	98906	.Terminal, Lug	EA	45
F-17	6	PAFZZ	5970-00-914-3118	M23053/5- 109-0	81349	.Insulation Sleeving	FT	V
F-17		PAFZZ	5975-00-074-2072	MS3387-1-9	98906	.Strap, Tiedown, Electrical	EA	V

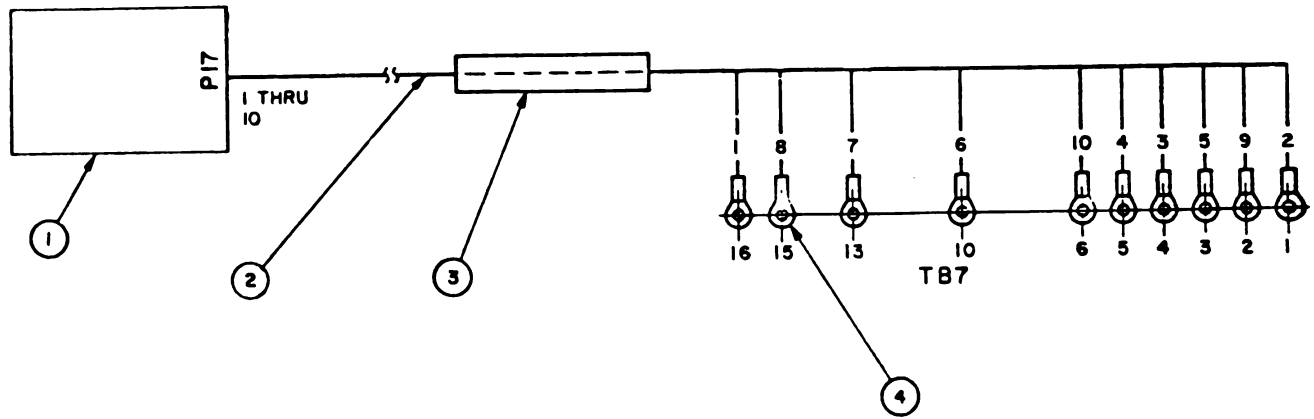
Change 2 F-81



WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.	LENGTH
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.		
1	P23-A	-	W6-K	4	3	16.75
2	P23-B	-	W7-K	4	3	15.50
3	P23-C	-	W8-K	4	3	14.25

FIGURE F-18. P23 WIRING HARNESS

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-18		MFFFF		13222E7484	97403	GROUP 04 - ELECTRICAL SYSTEM Wiring, Harness, P23 MFR from:	EA	1
F-18	1	PAFZZ	5935-00-781-8785	MS3116F14-58	96906	.Connector, Plug, Electrical	EA	1
F-18	2	PAFZZ	5970-00-812-2969	M23053/5- 104-0	81349	.Insulation Sleeving	FT	V
F-18	3	PAFZZ	6145-01-108-6907	M16878/48JE9	81349	.Wire, Electrical	FT	V
F-18	4	PAFZZ	5940-00-143-4780	MS25036-108	96906	.Terminal, Lug	EA	3
F-18	5	PAFZZ		M23053/5-105-0	81349	.Insulation Sleeving	FT	V



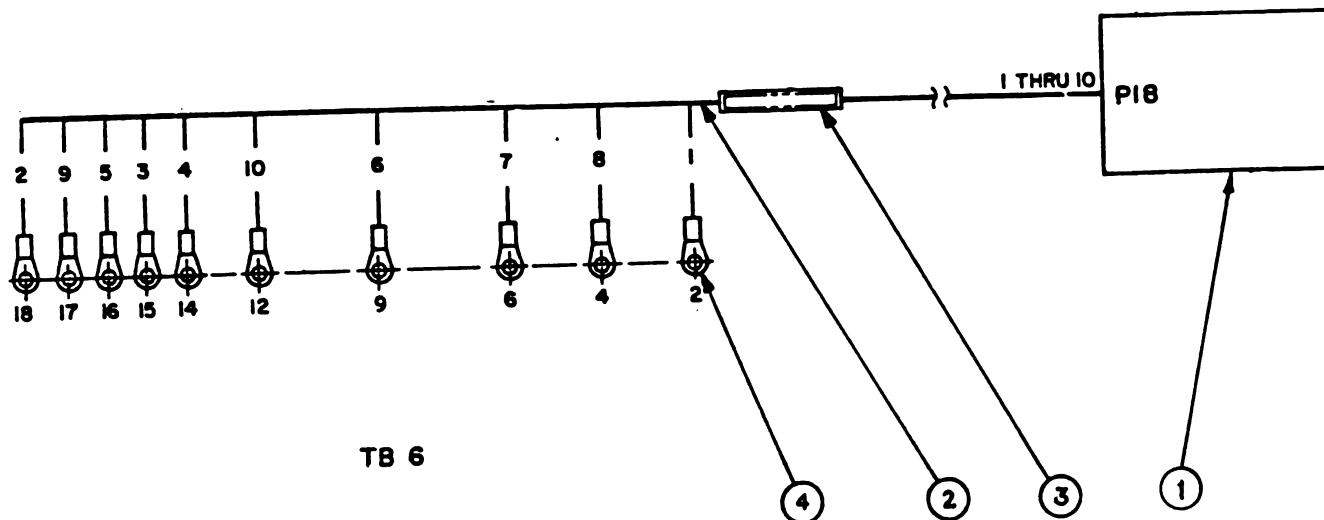
WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.	
1	P17-A	1	TB7-16	4	2
2	P17-B	1	TB7-1	4	2
3	P17-C	1	TB7-4	4	2
4	P17-D	1	TB7-5	4	2
5	P17-E	1	TB7-3	4	2
6	P17-G	1	TB7-10	4	2
7	P17-H	1	TB7-13	4	2
8	P17-L	1	TB7-15	4	2
9	P17-M	1	TB7-2	4	2
10	P17-P	1	TB7-6	4	2

FIGURE F-19. P17 WIRING HARNESS.

F-84 Change 2

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-19		MFFFF		13222E7483	97403	Group 04 - ELECTRICAL SYSTEM Wiring Harness. P17 MFR from:	EA	1
F-19	1	PAFZZ	5935-00-725-8233	MS3106R20-28S	96906	.Connector, Plug Electrical	EA	1
F-19	2	PAFZZ	6145-00-500-3079	M16878/4BHB9	81349	.Wire, Electrical	FT	V
F-19	3	PAFZZ	5970-00-954-1624	M23053/5- 107-0	81349	.Insulation Sleeving	FT	V
F-19	4	PAFZZ	5940-00-204-8966	MS25036-102	96906	.Terminal, Lug	EA	10
F-19		PAFZZ	5975-00-074-2072	MS3367-1-9	96906	.Strap, Tiedown, Electrical	EA	V
F-19		PAFZZ	5935-00-884-1621	MS25251-20	96906	.Plug, End Seal	EA	7

Change 2 R-85



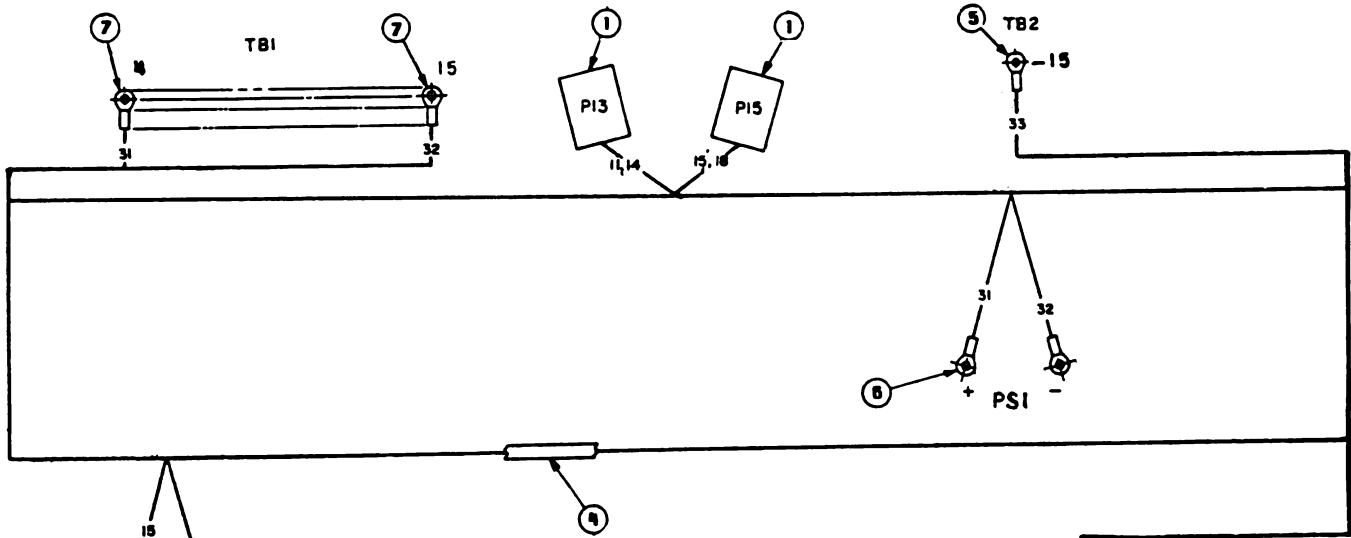
TB 6

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM FIND NO.	TO	TERM FIND NO.	
1	P18-A	—	TB6-2	4	2
2	P18-B	—	TB6-10	4	2
3	P18-C	—	TB6-15	4	2
4	P18-D	—	TB6-14	4	2
5	P18-E	—	TB6-16	4	2
6	P18-G	—	TB6-9	4	2
7	P18-H	—	TB6-5	4	2
8	P18-L	—	TB6-4	4	2
9	P18-N	—	TB6-17	4	2
10	P18-P	—	TB6-12	4	2

FIGURE F-20. P18 WIRING HARNESS

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M
F-20		MFFFF	8115-01-139-8291	13222E7078	97403	GROUP 04 - ELECTRICAL SYSTEM Wiring Harness Assembly, P18 MFR from:	EA
F-20	1	PAFZZ	5935-00-725-8233	MS3106R20-29S	98906	.Connector, Plug, Electrical	EA
F-20	2	PAFZZ	8145-00-500-3079	M16878/48HB9	81349	.Wire, Electrical	FT
F-20	3	PAFZZ	5970-00-954-1624	M23053/5- 107-0	81349	.Insulation Sleeving	FT
F-20	4	PAFZZ	5940-00-204-8966	MS25038-102	98906	.Terminal, Lug	EA
F-20		PAFZZ	5975-00-074-2072	MS3367-1-9	98906	.Strap, Tiedown, Electrical	EA
F-20		PAFZZ	5935-00-823-5322	MS25251-16	98906	.Plug, End Seal, Electrical	EA

Change



WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11	P13-A	—	TB7-2	5	2
12					
13					
14	P13-D	—	E5	—	2
15	P15-A	—	TB6-13	5	2
16					
17					
18	P15-D	—	E4	—	2
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31	TB1-4	7	PS1(+)	6	3
32	TB1-15	7	PS1(-)	6	3
33	TB2-15	5	E6	—	2
34					
35					
36					
37	E6	—	E3	—	2

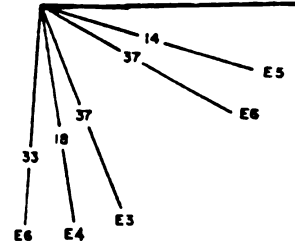


FIGURE F-21. P13 AND P15 WIRING HARNESS

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(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
						GROUP 04 - ELECTRICAL SYSTEM		
F-21		MFFFF	6115-01-139-8243	13222E7064	97403	Wiring Harness, P13 and P15 MFR from:	EA	1
F-21	1	PAFZZ	5935-00-803-8846	MS3108R14S- -2S	98906	.Connector, Plug, Electrical	EA	2
F-21	2	PAFZZ	6145-00-500-3079	M16876/4BHB9	81349	.Wire, Electrical	FT	V
F-21	3	PAFZZ	6145-01-108-6907	M16876/4BJE9	81349	.Wire, Electrical	FT	V
F-21	4	PAFZZ	5970-00-812-2987	M23053/5- 108-0	81349	.Insulation Sleeving	FT	V
F-21	5	PAFZZ	5940-00-204-8966	MS25036-102	98906	.Terminal, Lug	EA	3
F-21	6	PAFZZ	5940-00-230-0515	MS25036-154	98906	.Terminal, Lug	EA	2
F-21	7	PAFZZ	5940-00-283-5280	MS25036-106	98906	.Terminal, Lug	EA	2
F-21		PAFZZ	5975-00-074-2072	MS3367-1-9	98906	.Strap, Tiedown, Electrical	EA	V
F-21		PAFZZ	5935-00-823-5322	MS25251-16	98906	.Plug, End Seal, Electrical	EA	4

F-89 Change 2

TM5-6115-602-14&P

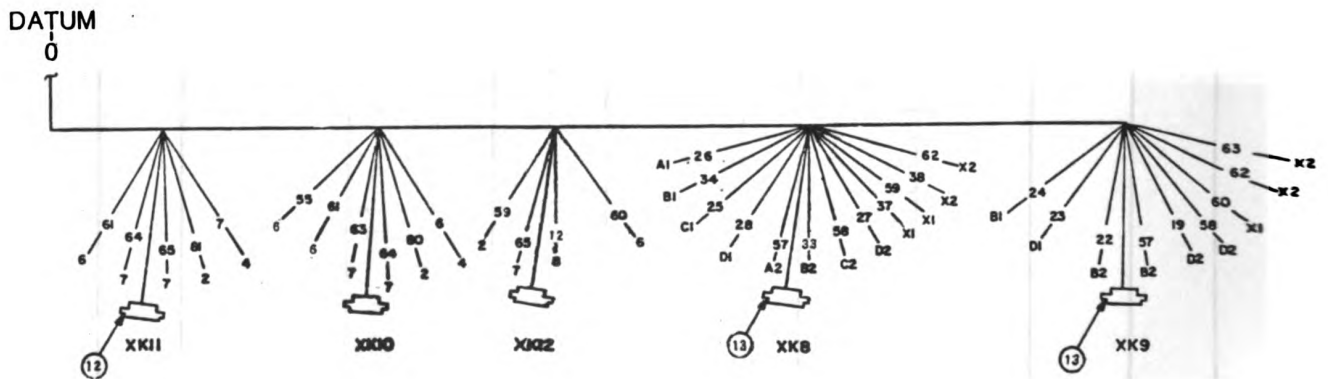
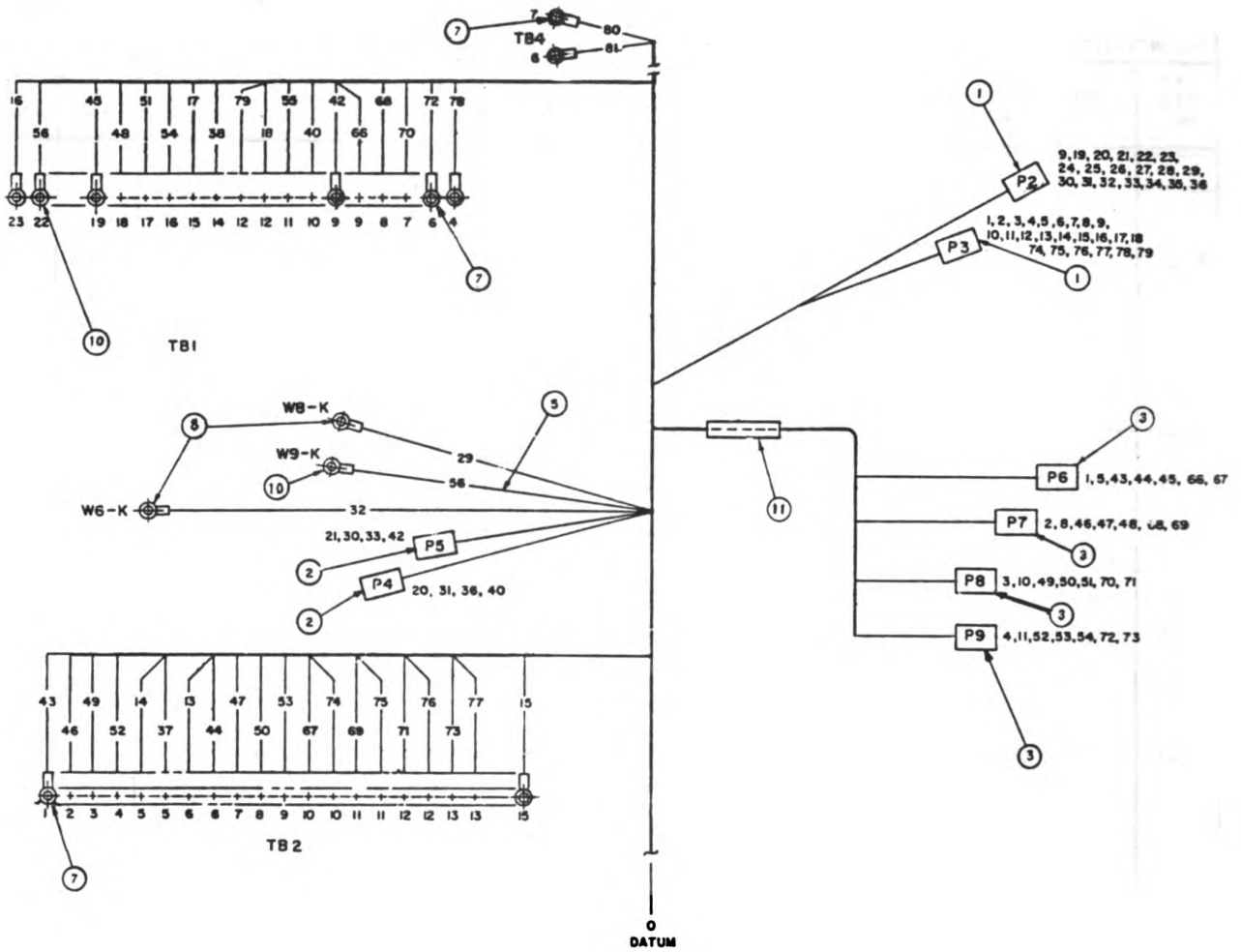


FIGURE F-22. P2-P9 WIRING HARNESS (SHEET 1 OF 2)

F-90 Change 2

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.	
1	P3-A	1	P6-U	3	6
2	P3-B	1	P7-U	3	6
3	P3-C	1	P8-U	3	6
4	P3-D	1	P9-U	3	6
5	P3-E	1	P6-T	3	6
6	P3-F	1	XK10-4	12	4
7	P3-G	1	XK11-4	—	4
8	P3-H	1	P7-T	3	6
9	P3-J	1	P2-J	1	4
10	P3-K	1	P8-T	3	6
11	P3-L	1	P9-T	3	6
12	P3-M	1	XK12-8	12	4
13	P3-N	1	T82-6	7	4
14	P3-P	1	T82-5	7	4
15	P3-V	1	T82-15	7	4
16	P3-W	1	T81-23	7	4
17	P3-X	1	T81-15	7	4
18	P3-Y	1	T81-12	7	4
19	P2-A	1	XK9-02	13	4
20	P2-B	1	P4-A	2	4
21	P2-C	1	P5-A	2	4
22	P2-D	1	XK9-82	13	4
23	P2-E	1	XK9-01	13	4
24	P2-F	1	XK9-81	13	4
25	P2-G	1	XK8-C1	13	4
26	P2-H	1	XK8-A1	13	4
27	P2-M	1	XK8-D2	13	4
28	P2-N	1	XK8-D1	13	4
29	P2-R	1	W8-K	8	4
30	P2-T	1	P5-D	2	4
31	P2-U	1	P4-D	2	4
32	P2-V	1	W6-K	8	4
33	P2-W	1	P5-B	2	4
34	P2-X	1	XK8-B1	13	4
35	P2-Y	1	XK8-B2	13	4
36	P2-Z	1	P4-B	2	4
37	XK3-X1	13	T82-5	7	4
38	XK3-X2	13	T81-14	7	4
40	P4-C	2	T81-10	7	4
41					
42	P5-C	2	T81-9	7	4

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	TERM. FIND NO.	TO	TERM. FIND NO.	
43	P6-S	3	T82-1	7	6
44	P6-X	3	T82-6	7	6
45	P6-Y	3	T81-19	7	6
46	P7-S	3	T82-2	7	6
47	P7-X	3	T82-7	7	6
48	P7-Y	3	T81-18	7	6
49	P8-S	3	T82-3	7	6
50	P8-X	3	T82-8	7	6
51	P8-Y	3	T81-17	7	6
52	P9-S	3	T82-4	7	6
53	P9-X	3	T82-9	7	6
54	P9-Y	3	T81-16	7	6
55	XK10-6	12	T81-11	7	4
56	W9-K	9	T81-22	10	5
57	XK8-A2	13	XK9-82	13	4
58	XK8-C2	13	XK9-02	13	4
59	XK8-X1	13	XK12-2	12	4
60	XK9-X1	13	XK12-6	12	4
61	XK10-6	12	XK11-6	12	4
62	XK3-X2	13	XK9-X2	13	4
63	XK9-X2	13	XK10-7	12	4
64	XK10-7	12	XK11-7	12	4
65	XK11-7	12	XK12-7	12	4
66	P8-D	3	T81-9	7	6
67	P6-F	3	T82-10	7	6
68	P7-D	3	T81-8	7	6
69	P7-F	3	T82-11	7	6
70	P8-D	3	T81-7	7	6
71	P8-F	3	T82-12	7	6
72	P9-D	3	T81-6	7	6
73	P9-F	3	T82-13	7	6
74	P3-Q	1	T82-10	7	4
75	P3-R	1	T82-11	7	4
76	P3-S	1	T82-12	7	4
77	P3-T	1	T82-13	7	4
78	P3-U	1	T81-4	7	4
79	P3-Z	1	T81-12	7	4
80	XK10-2	12	T84-7	7	4
81	T84-6	7	XK11-2	12	4

FIGURE F-22. P2-P9 WIRING HARNESS (SHEET 2 OF 2)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-22		MFFFF	6115-01-139-6294	13222E7065	97403	GROUP 04 - ELECTRICAL SYSTEM Wiring Harness Assembly, P2-P9 MFR from:	EA	1
F-22	1	PAFZZ	5935-00-811-8064	MS3106R24-28S	96906	.Connector, Plug Electrical	EA	2
F-22	2	PAFZZ	5935-00-725-8233	MS3106R20-29S	96906	.Connector, Plug. Electrical	EA	2
F-22	3	PAFZZ	5935-00-903-3512	MS3116F16-26S	96906	.Connector, Plug Electrical	EA	4
F-22	4	PAFZZ	6145-00-500-3079	M16878/48HB9	81349	.Wire, Electrical	FT	V
F-22	5	PAFZZ	6145-01-108-6907	M16878/48JE9	81349	.Wire, Electrical	FT	V
F-22	6	PAFZZ	6145-00-295-2810	M16878/48FB9	81349	.Wire, Electrical	FT	V
F-22	7	PAFZZ	5940-00-204-8966	MS25036-102	96906	.Terminal, Lug	EA	39
F-22	8	PAFZZ	5940-00-143-4771	MS25036-103	96906	.Terminal, Lug	EA	2
F-22	9	PAFZZ	5940-00-143-4780	MS25036-108	96906	.Terminal, Lug	EA	1
F-22	10	PAFZZ	5940-00-283-5280	MS25036-106	96906	.Terminal, Lug	EA	1
F-22	11	PAFZZ	5970-00-812-2967	M23053/5-108-0	81349	.Insulation Sleeving	FT	V
F-22	12	PAFZZ	5935-01-042-7579	13222E9686	97403	.Socket, Plug-In	EA	3
F-22	13	PAFZZ		13226E1130	97403	.Socket, Relay	EA	2
F-22		PAFZZ	5975-00-074-2072	MS3367-1-9	96906	.Strap, Tiedown Electrical	EA	V
F-22		PAFZZ	5935-00-823-5322	MS25251-16	96906	.Plug, End Seal	EA	107

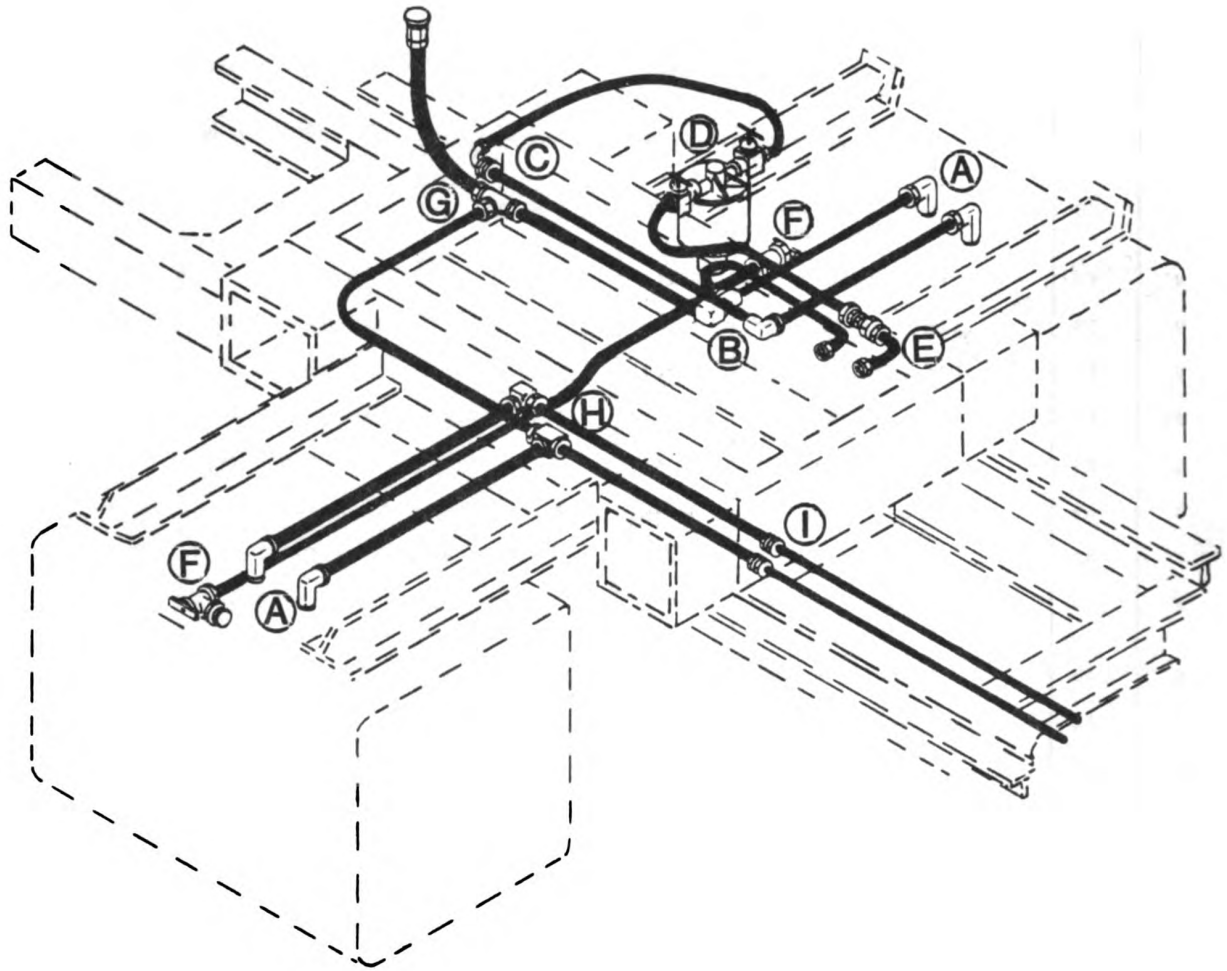


FIGURE F-23. FUEL SYSTEM (SHEET 1 OF 11)

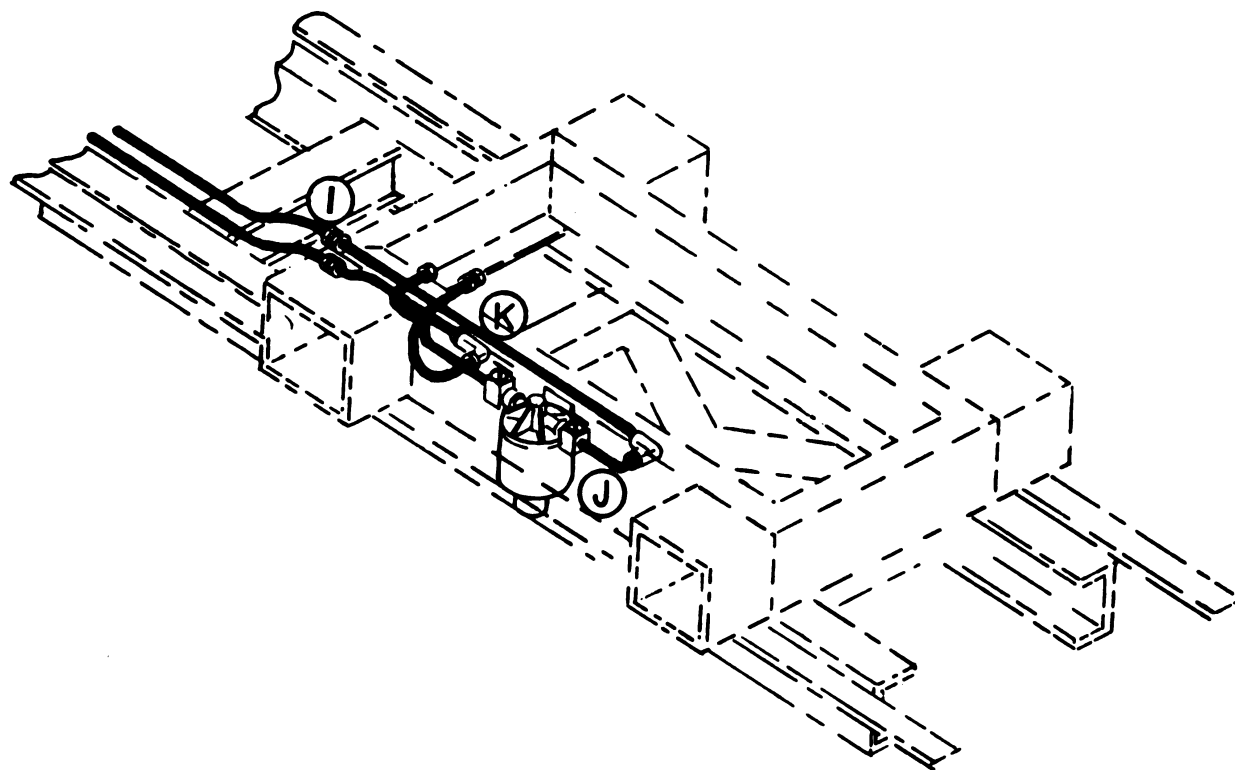


FIGURE F-23. FUEL SYSTEM (SHEET 2 OF 11)

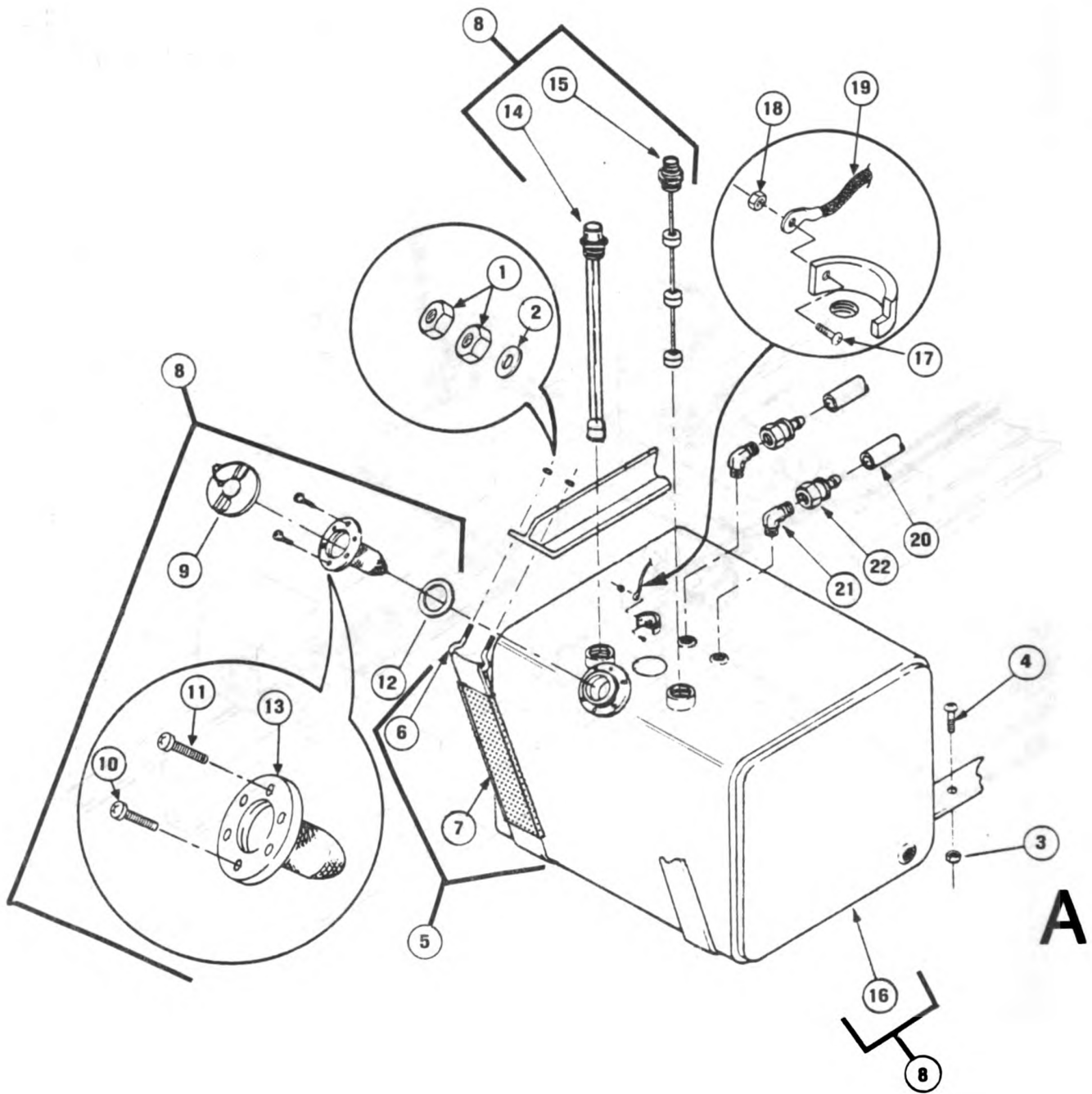


FIGURE F-23. FUEL SYSTEM (SHEET 3 OF 11)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	IN UM
GROUP 05—FUEL SYSTEM							
F-23	1	PAFZZ	5310-00-274-9364	MS21045-7	96906	Nut, Self-locking, .4375-20 UNJF-3B	EA
F-23	2	PAFZZ	5310-00-809-4085	MS21783-16	96906	Washer, Flat	EA
F-23	3	PAFZZ	5310-00-062-4954	MS21045-8	96906	Nut, Self-locking .500-20 UNJF-3B	EA
F-23	4	PAFZZ	5305-00-716-8179	MS90726-121	96906	Screw, Cap, Hex Hd .500-20 UNF-2A X 3.500 long	EA
F-23	5	XDFZZ		13222E6987	97403	Strap, Mounting,	EA
F-23	6	PAFZZ	5306-01-108-3747	810	98440	•Bolt, U	EA
F-23	7	PAFZZ	8305-01-018-8743	13213E9520	97403	•Webbing, Textile	EA
F-23	8	XBFZZ		13222E6990	97403	Fuel Tank Assembly	EA
F-23	9	PAOZZ	2910-00-459-8447	MS53075-1	96906	•Cap, Filler Opening	EA
F-23	10	PAFZZ	5305-00-989-6265	MS35207-262	96906	•Screw, Machine, .190-32 UNF-2A X .438 Long	EA
F-23	11	PAFZZ	5305-00-993-1848	MS35207-265	96906	•Screw, Machine, .190-32 UNF-2A X .750 Long	EA
F-23	12	PAFZZ	5330-01-137-3172	13222E6988	97403	•Gasket, Filler Neck	EA
F-23	13	XBFZZ	2910-01-186-0596	13222E9698	97403	•Filler Neck	EA
F-23	14	PAOZZ		8660-L22.85	09393	•Gage, Liquid Quantity	EA
F-23	15	PAOZZ		13226E6114	97403	•Switch, Float, Liquid	EA
F-23	16	XDFZZ		13222E6989	97403	•Tank, Fuel, 70 Gallon	EA
F-23	17	PAOZZ	5305-00-989-7435	MS35207-264	96906	Screw, Machine, .190-32 UNF-2A X .625 Long	EA
F-23	18	PAOZZ	5310-00-061-7326	MS21045-3	96906	Nut, Self-locking, .190-32 UNJF-3B	EA
F-23	19	MFFZZ		13222E9702	97403	Wire, Static Ground MFR from:	EA
F-23		PAFZZ	5940-00-114-1300	MS20659-105	96906	•Terminal, Lug	EA
F-23		PAFZZ	6145-00-194-9830	QQ-B-575	81348	•Braid, Wire	FT
F-23	20	PAOZZ	4720-00-670-6037	MIL-H-13444 Type 1	81349	Hose, Non-metallic	FT
F-23	21	PAOZZ		13226E1492-16	97403	Elbow, Male	EA
F-23	22	PAOZZ	4730-00-542-2807	13222E7029-3	97403	Adapter, Straight, Tube	EA

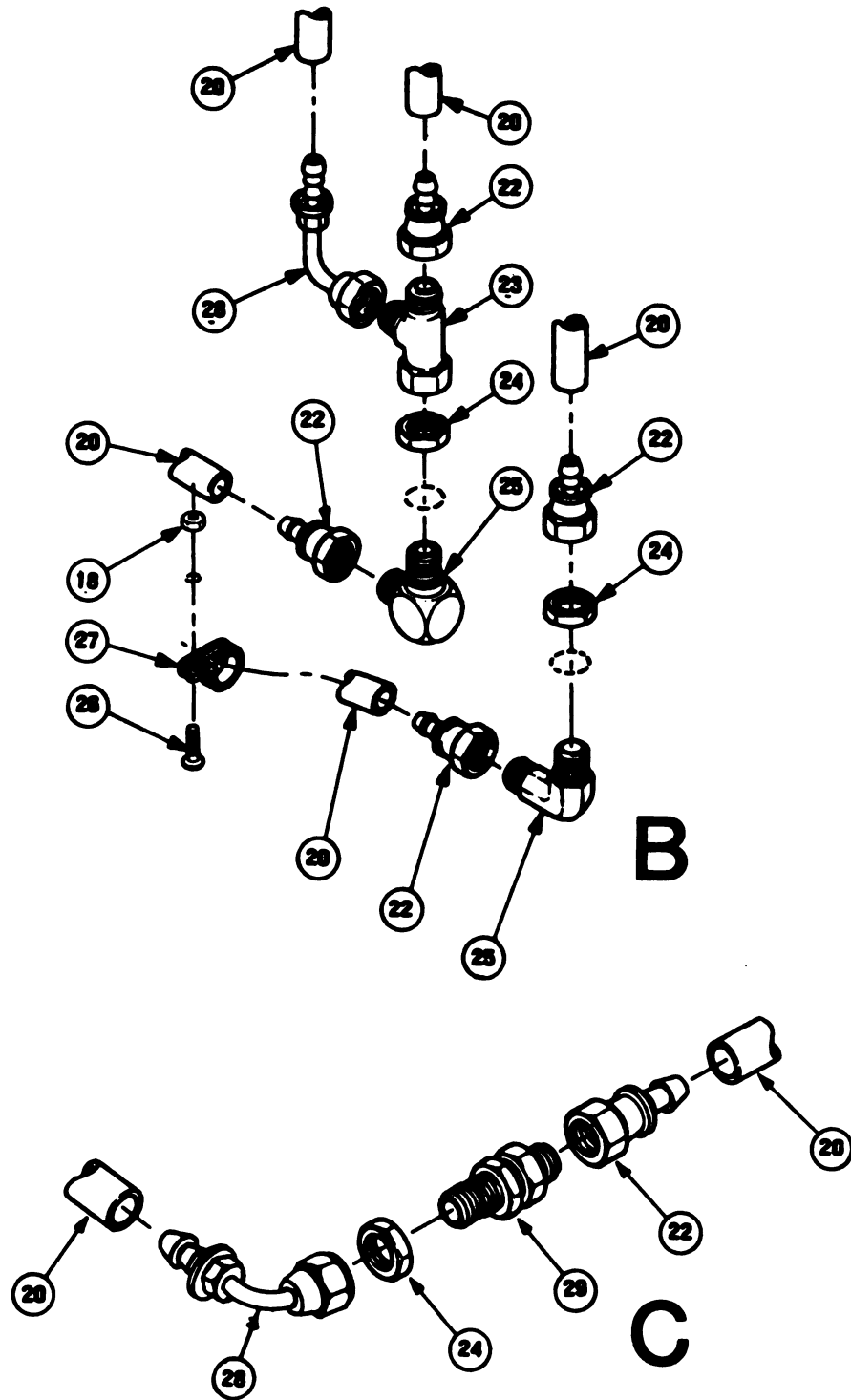


FIGURE F-23. FUEL SYSTEM (SHEET 4 OF 11)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M
F-23	23	PAOZZ	4730-01-141-8587	MS51523A8Z	06000	Tee, Tube to Swivel on Run, 37 Degree Flared	EA
F-23	24	PAOZZ	4730-01-143-9017	MS51880-56Z	06000	Locknut, Tube Fitting, 37 Degree Flared	EA
F-23	25	PAOZZ	4730-01-142-7878	MS51507A8Z	06000	Elbow, Tube, 90 Degree Bulkhead 37 Degree Flared	EA
F-23	26	PAOZZ	5305-00-993-1848	MS35207-265	06000	Screw, Machine, .190-32 UNF-2A X .750 Long	EA
F-23	27	PAOZZ	5340-00-050-2740	MS21333-75	06000	Clamp, Loop	EA
F-23	28	PAOZZ	4710-01-137-0999	13222E9706-3	07403	Tube Assembly, Metal	EA
F-23	29	PAOZZ	4730-01-155-5763	MS51520A8Z	06000	Nipple, Tube	EA

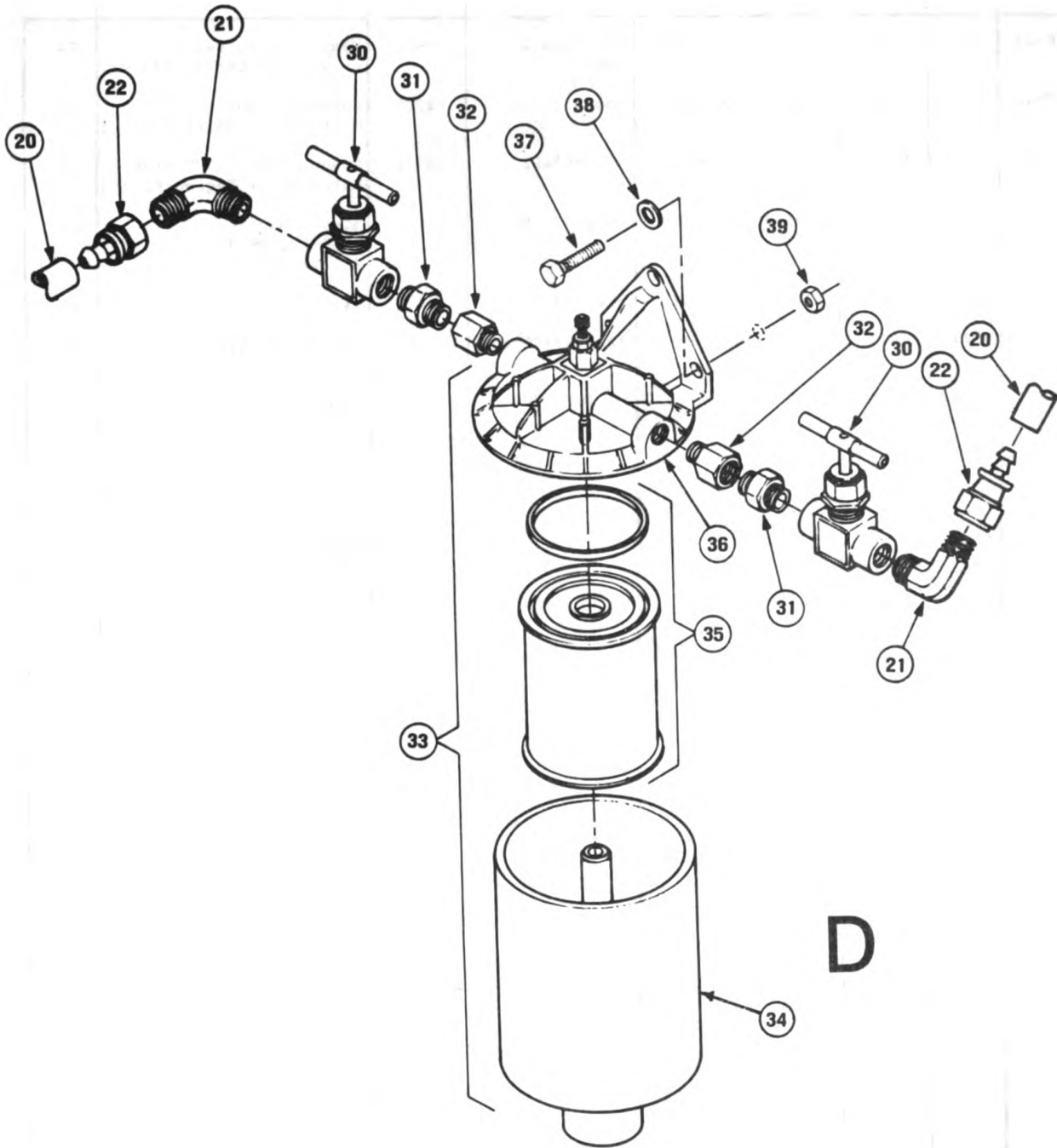


FIGURE F-23. FUEL SYSTEM (SHEET 5 OF 11)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-23	30	PAOZZ	4820-01-137-3095	S-18KF8	12823	Valve, Shut-off	EA	4
F-23	31	PAOZZ	4730-00-314-1738	2083-8-8S	01278	Nipple, Pipe	EA	7
F-23	32	PAOZZ	4730-01-086-2528	2086-8-10S	01278	Adapter, Straight	EA	4
F-23	33	PAOZZ	4930-00-477-8278	256546	33457	Separator, Water Liquid	EA	2
F-23	34	XAOZZ		256424S	33457	.Shell Assembly	EA	1
F-23	35	PAOZZ	2910-00-163-5752	FS-1201	33457	.Filter Element, Fluid	EA	1
F-23	36	XAOZZ		255343S	33457	.Head Assembly	EA	1
F-23	37	PAOZZ	5305-00-269-2808	MS90726-65	96906	Screw, Cap Hex Hd, .375-24 UNF-2A X 1.750 Long	EA	6
F-23	38	PAOZZ	5310-00-950-1310	MS27183-4	96906	Washer, Flat .406 ID X .065 Thick	EA	6
F-23	39	PAOZZ	5310-00-950-0039	MS21044N6	96906	Nut, Self-locking, Hex	EA	6

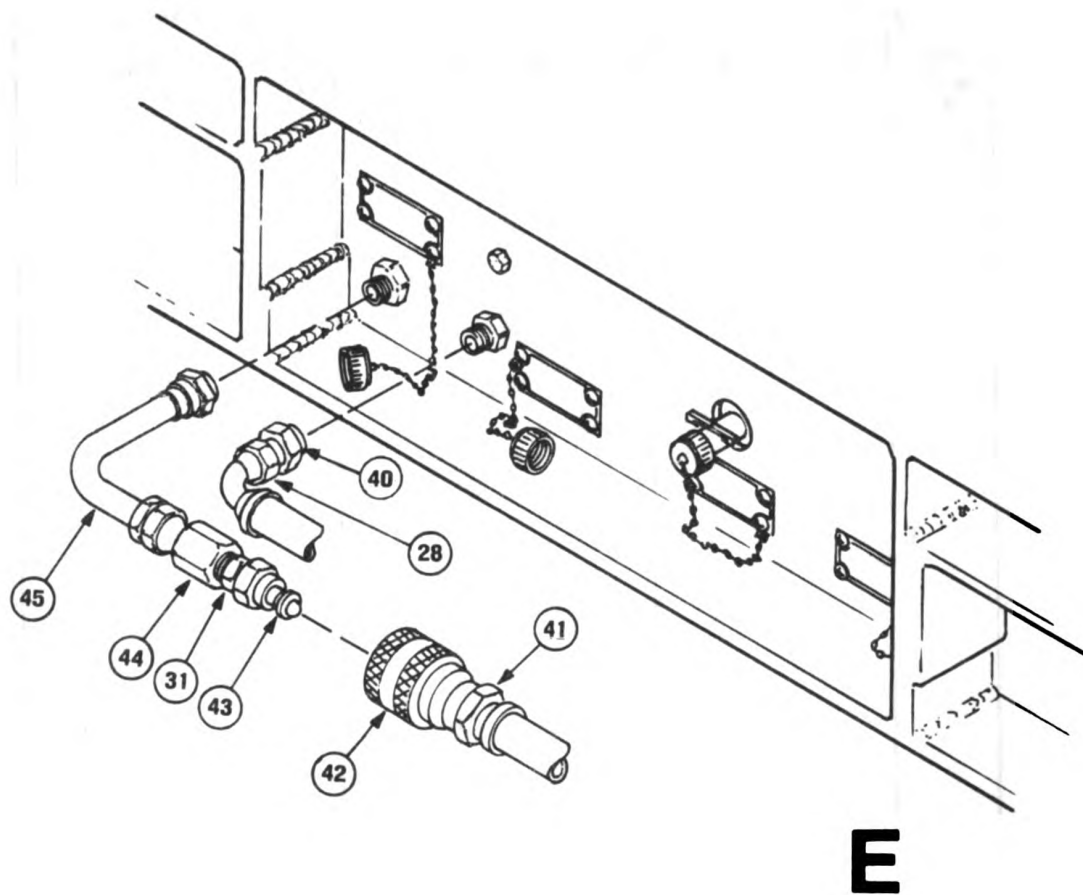


FIGURE F-23. FUEL SYSTEM (SHEET 6 OF 11)

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCN	USABLE ON CODE	U/M	UNIT
F-23	40	PAOZZ	4730-01-137-6988	13222E7010-3	97403	Reducer, Tube	EA	2
F-23	41	PAOZZ	4730-00-080-4005	4738-8-88	01278	Adapter, Straight	EA	4
F-23	42	PAOZZ	4730-00-434-8321	13205E3847-1	97403	Coupling Half, Quick Disconnect	EA	2
F-23	43	PAOZZ		13222E6983-3	97403	Insert, Quick Disconnect	EA	2
F-23	44	PAOZZ	4730-01-036-3105	2242-8-88	97403	Adapter, Straight	EA	2
F-23	45	PAOZZ	4710-01-137-6998	13222E6999-1	97403	Tube Assembly, Metal	EA	5

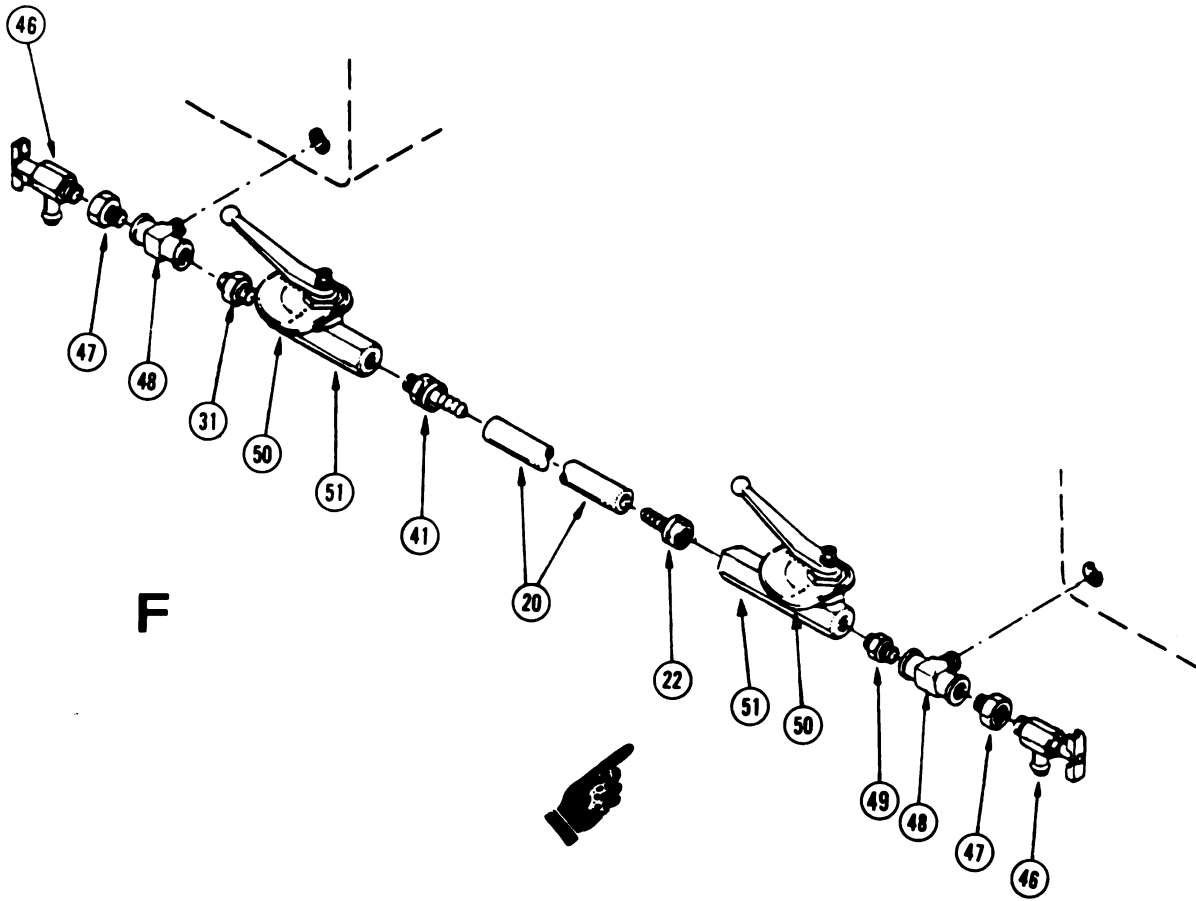


Figure F-23. Fuel System (Sheet 7 of 11)

F-104 Change 4

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)	
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	USABLE ON CODE	IN U/M	QTY INC UNIT
F-23	46	PAOZZ	4820-00-465-1589	13213E9243	97403	Cock, Drain		EA	2
F-23	47	PAOZZ	4730-01-138-2592	8-6-1400140	81343	Reducer, Bushing		EA	2
F-23	48	PAOZZ	4730-01-195-8490	8-8-8-14025B	81343	Tee, Pipe, Steel		EA	2
F-23	49	PAOZZ		13226E1335-2	97403	Adapter		EA	1
F-23	50	XDOZZ		13225E8673	97403	Plate, Instruction		EA	2
F-23	51	PAOZZ	4820-01-137-3193	13225E8362	97403	Valve, Ball		EA	2

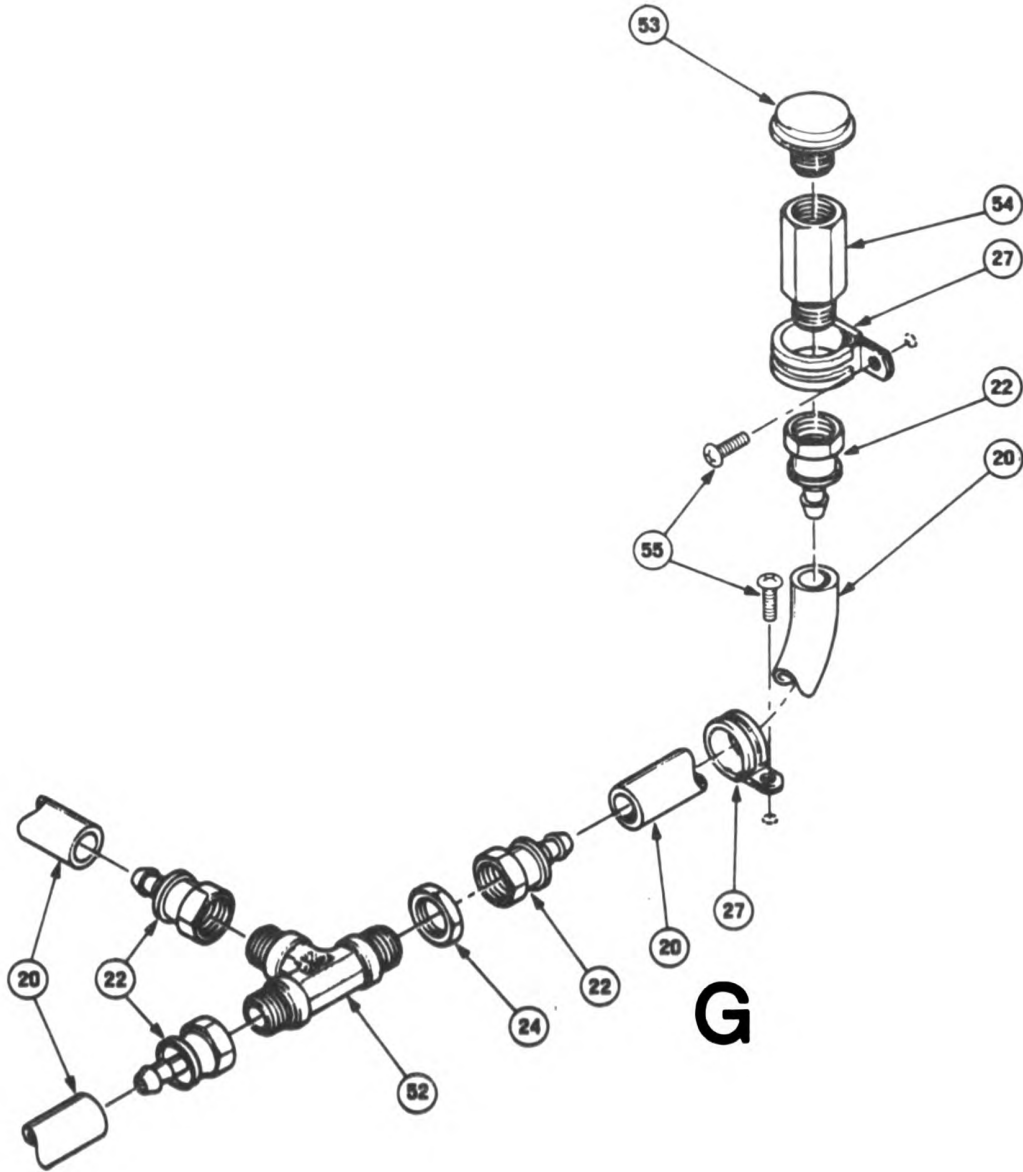
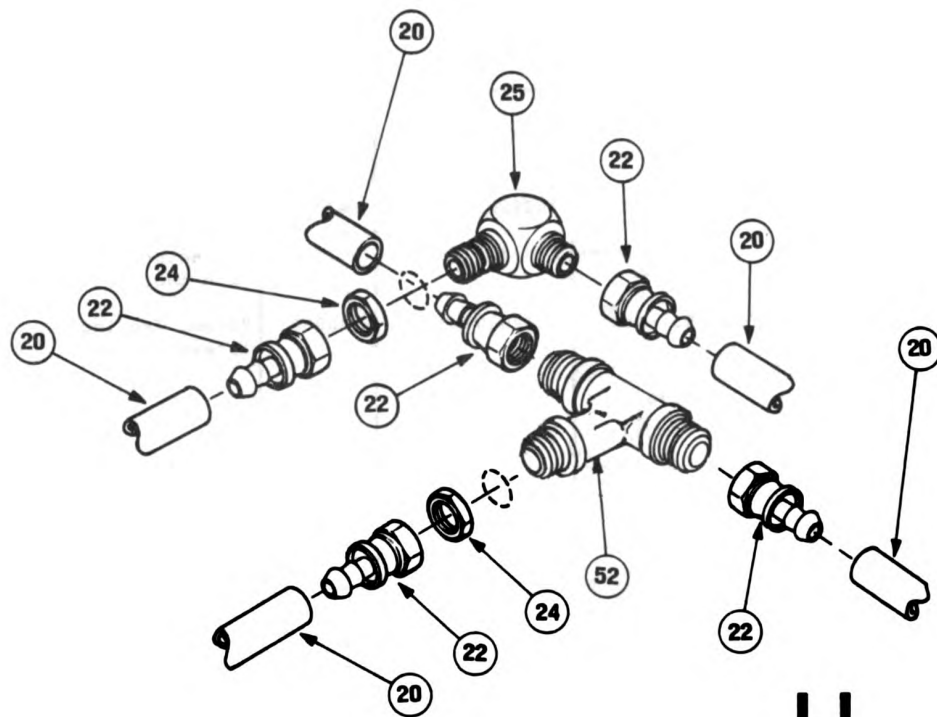


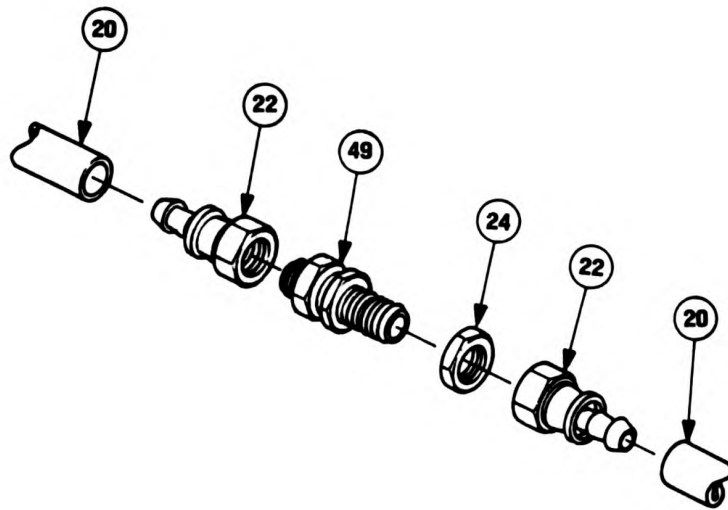
Figure F-23. Fuel System (Sheet 8 of 11)

F-106 Change 2

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	UNIT
F-23	52	PAOZZ		MS51515A8Z	98906	Tee, Bulkhead Run, Steel	EA	1
F-23	53	PAOZZ		13212E5937	97403	Breather, Air	EA	1
F-23	54	PAOZZ		6-8-070103	81343	Connector, Female Pipe End	EA	1
F-23	55	PAOZZ	5305-00-951-5817	MS24630-46	98906	Screw, Tapping, Thread	EA	2



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FIGURE F-23. FUEL SYSTEM (SHEET 9 OF 11)

F-108 Change 2

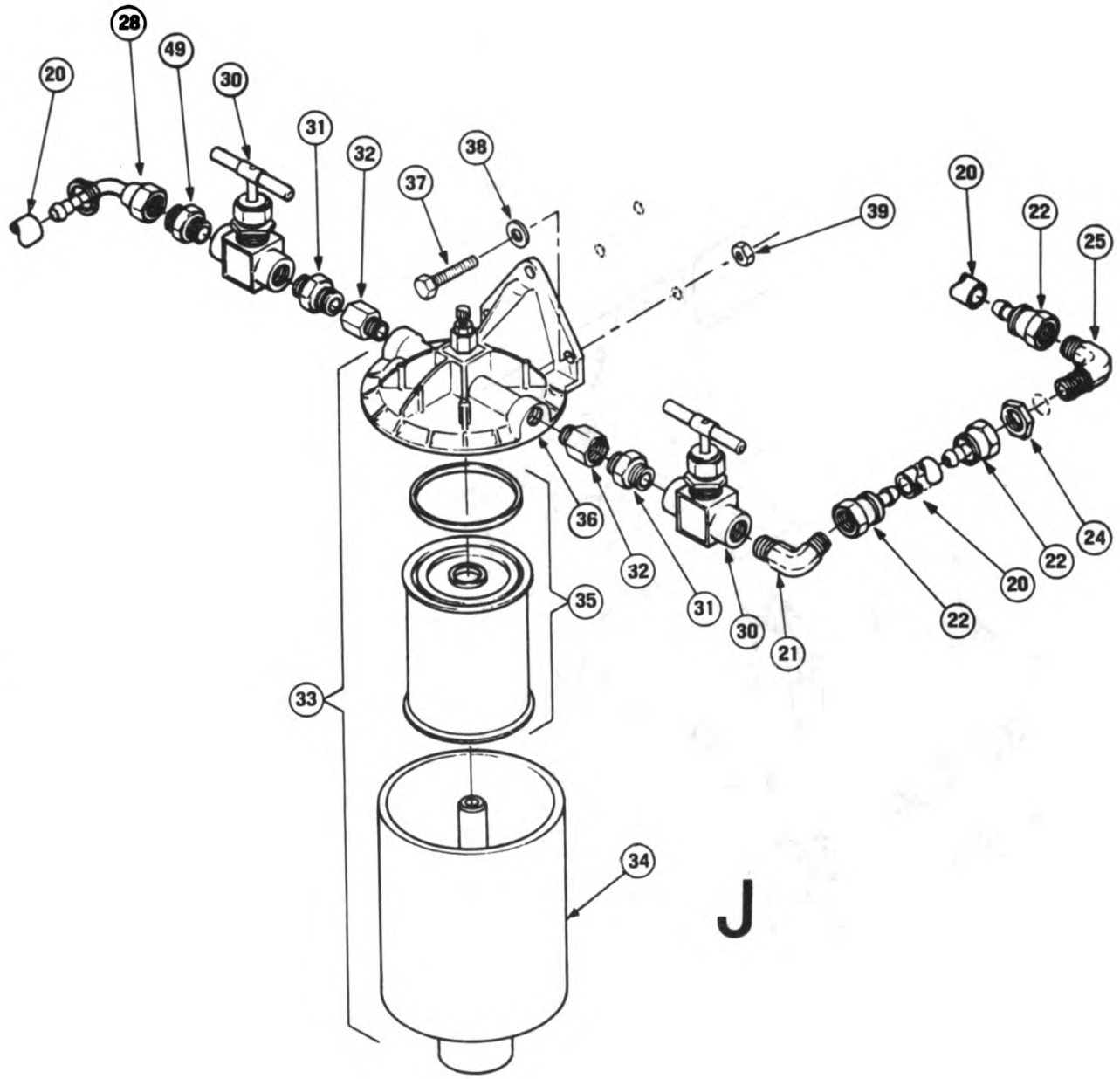


FIGURE F-23. FUEL SYSTEM (SHEET 10 OF 11)

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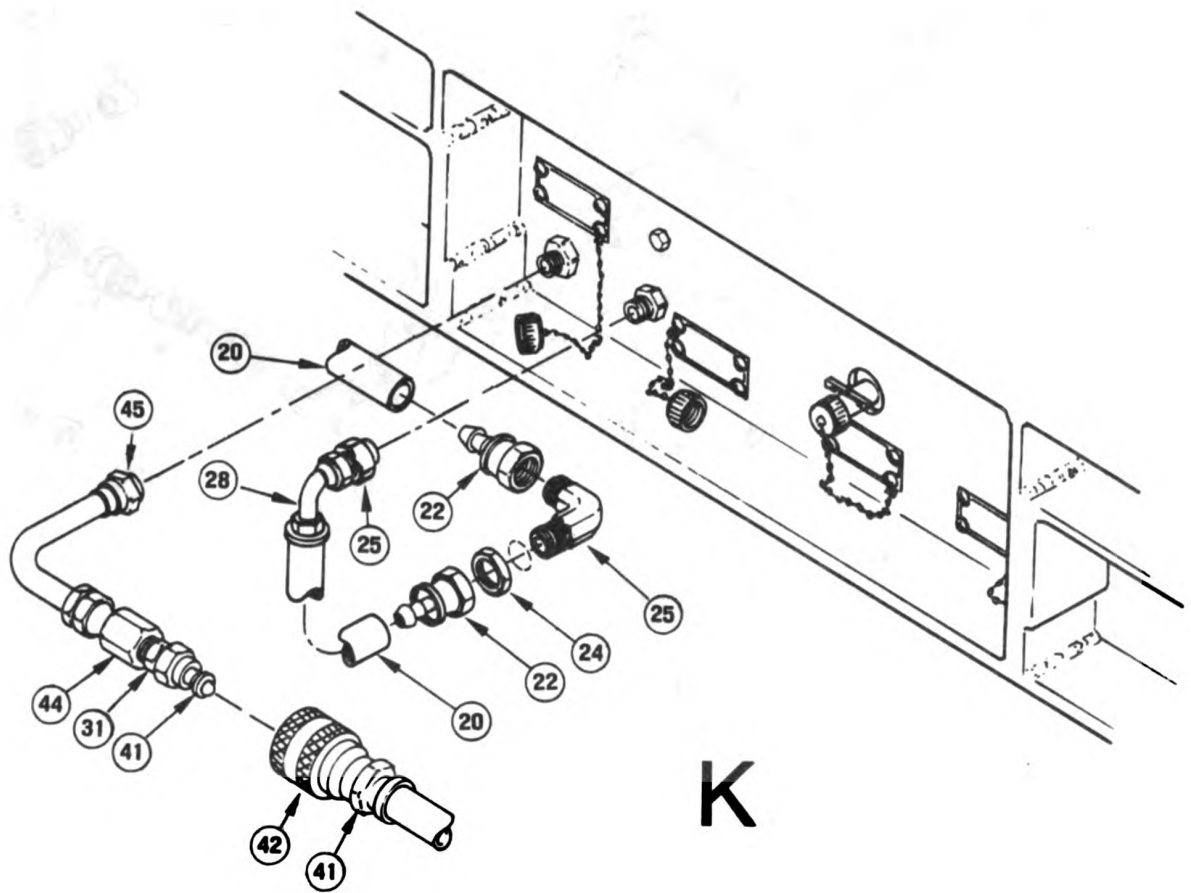


FIGURE F-23. FUEL SYSTEM (SHEET 11 OF 11)

F-110/(F-111 blank) Change 2

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCN	USABLE ON CODE	U/M	UNIT
						GROUP 06 - BULK ITEMS		
BULK		PAOZZ	4720-00-670-6037	MIL-H-13444, Type 1	81348	Hose, Non-metallic	FT	V
BULK		PAFZZ	5325-00-783-4754	M821268-5N	88806	Grommet, Non-metallic	FT	V
BULK		PAFZZ	5970-00-052-3297	M23053/5- 107-4	81348	Insulation Sleeving	FT	V
BULK		PAFZZ	5970-00-057-3545	M23053/5- 108-4	81348	Insulation Sleeving	FT	V
BULK		PAFZZ	5970-00-812-2867	M23053/5- 108-0	81348	Insulation Sleeving	FT	V
BULK		PAFZZ	5970-00-812-2888	M23053/5- 104-0	81348	Insulation Sleeving	FT	V
BULK		PAFZZ	5970-00-814-3118	M23053/5- 108-0	81348	Insulation Sleeving	FT	V
BULK		PAFZZ	5970-00-854-1824	M23053/5- 107-0	81348	Insulation Sleeving	FT	V
BULK		PAFZZ	5970-01-108-3903	M23053/16- 001-0	81348	Insulation, Sleeving	FT	V
BULK		PAOZZ	5999-01-137-3191	13222E9885-1	97403	Wire Mesh, Knitted	FT	V
BULK		PAOZZ	5999-01-137-8824	13222E9888	97403	Seal, Electromagnetic .Interference Shield	FT	V
BULK		PAFZZ	6145-00-194-9830	QQ-B-575	81348	Braid, Wire	FT	V
BULK		PAFZZ	6145-00-284-1493	MIL-W-16878/8	81348	Wire, Electrical	FT	V
BULK		PAFZZ	6145-00-295-2810	M16878/4BFB9	81348	Wire, Electrical	FT	V
BULK		PAFZZ	6145-00-500-3078	M16878/4BHB9	81348	Wire, Electrical	FT	V
BULK		PAFZZ	6145-00-822-1398	MIL-W-16878/1	81348	Cable, Power, Electrical	FT	V
BULK		PAFZZ	6145-00-884-5210	4SBUC1929NJA10	90484	Cable	FT	V
BULK		PAFZZ	6145-01-108-8907	M16878/4BJE9	81348	Wire, Electrical	FT	V
BULK		PAOZZ	9320-00-884-7728	MIL-R-8130, Type 2, Grade A	81348	Rubber, Cellular .18 Inch Thick	FT	V

Section IV
National Stock Number
and
Part Number Index

TM 5-6115-602-14&P

NSN	FIGURE NO.	ITEM NO.	NSN	FIGURE NO.	ITEM NO.
2910-00-163-5752	F-23	35	5305-00-725-4183	F-5	1
2910-00-459-8447	F-23	9	5305-00-725-4183	F-11	1
2910-01-186-0596	F-23	13	5305-00-726-2552	F-3	6
3040-01-137-7000	F-3	13	5305-00-726-2552	F-4	6
3040-01-137-7000	F-4	13	5305-00-726-2555	F-10	1
4010-01-174-4050	F-1		5305-00-733-3046	F-10	5
4010-01-174-4052	F-1		5305-00-889-2998	F-12	5
4710-01-137-6998	F-23	45	5305-00-889-3001	F-15	53
4710-01-137-6999	F-23	28	5305-00-951-5617	F-23	55
4720-00-670-6037	F-23	20	5305-00-958-8479	F-1	3
4720-00-670-6037	BULK		5305-00-948-4976	F-15	39
4730-00-080-4005	F-23	41	5305-00-984-4993	F-12	1
4730-00-314-1738	F-23	31	5305-00-989-6265	F-12	10
4730-00-434-6321	F-23	42	5305-00-989-6265	F-23	10
4730-00-542-2807	F-23	22	5305-00-989-7434	F-7	5
4730-01-036-3105	F-23	44	5305-00-989-7434	F-12	14
4730-01-066-2528	F-23	32	5305-00-989-7434	F-15	62
4730-01-137-6966	F-23	40	5305-00-989-7435	F-2	8
4730-01-138-2592	F-23	47	5305-00-989-7435	F-9	16
4730-01-141-8587	F-23	23	5305-00-989-7435	F-15	57
4730-01-142-7878	F-23	25	5305-00-989-7435	F-23	17
4730-01-143-9017	F-23	24	5305-00-993-1848	F-7	8
4730-01-155-5763	F-23	29	5305-00-993-1848	F-8	1
4730-01-195-8490	F-23	48	5305-00-993-1848	F-13	1
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4820-01-137-3095	F-23	30	5305-00-993-1848	F-23	11
4820-01-137-3193	F-23	51	5305-00-993-1848	F-23	26
4930-00-477-8276	F-23	33	5305-00-993-2463	F-2	1
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5305-00-068-0507	F-8	6	5305-00-993-2463	F-7	1
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5305-00-246-6566	F-11	7	5305-01-143-1224	F-9	12
5305-00-267-8985	F-1	8	5306-00-225-9086	F-12	7
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5310-00-061-7326	F-23	18	5310-00-982-4908	F-12	22
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5310-00-809-8546	F-13	2	5340-00-210-3935	F-6	11
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5310-00-889-2543	F-15	41	5340-00-245-5195	F-9	30
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5310-00-913-9776	F-15	119	5340-00-684-9501	F-9	27
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5310-00-950-1310	F-15	40			

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5340-00-754-0847	F-4	14	5935-00-823-5322	F-21	
5340-00-764-7051	F-15	79	5935-00-823-5322	F-22	
5340-00-812-1900	F-1	11	5935-00-835-4987	F-15	47
5340-00-812-1900	F-7	17	5935-00-884-1621	F-19	
5340-01-053-2585	F-9	6	5935-00-903-3512	F-22	3
5340-01-055-4193	F-9	5	5935-01-042-7579	F-22	12
5340-00-055-4193	F-7	10	5935-01-136-9896	F-15	33
5340-01-055-4193	F-6	16	5940-00-113-8190	F-15	37
5340-01-057-1226	F-4	13	5940-00-113-9835	F-15	
5340-01-137-3010	F-3	14	5940-00-114-1300	F-23	
5340-01-137-3010	F-4	14	5940-00-115-5004	F-15	
5340-01-137-3194	F-3	10	5940-00-115-5007	F-15	37
5340-01-137-3194	F-4	10	5940-00-143-4771	F-22	8
5340-01-137-6992	F-6	17	5940-00-143-4774	F-16	4
5340-01-141-8711	F-2	14	5940-00-143-4780	F-18	4
5340-01-141-8712	F-2	13	5940-00-143-4780	F-22	9
5340-01-174-4053	F-4	3	5940-00-204-8966	F-15	17
5340-01-178-0125	F-1	12	5940-00-204-8966	F-17	5
5340-01-182-1983	F-2	27	5940-00-204-8966	F-19	4
5360-00-827-2529	F-9	12	5940-00-204-8966	F-20	4
5360-01-137-3171	F-3	7	5940-00-204-8966	F-21	5
5360-01-137-3171	F-4	7	5940-00-204-8966	F-22	7
5365-00-820-4535	F-15	48	5940-00-230-0515	F-21	6
5365-00-965-9491	F-9	12	5940-00-283-5280	F-15	37
5365-00-988-3742	F-2	5	5940-00-283-5280	F-21	7
5365-01-110-7314	F-1	5	5940-00-283-5280	F-22	10
5365-01-141-8709	F-2	17	5940-00-681-8185	F-15	
5365-01-141-8710	F-2	17	5940-00-983-6059	F-15	65
5925-00-682-4015	F-14	11	5940-01-140-6708	F-15	
5930-00-018-8823	F-14	10	5940-01-182-1986	F-12	6
5920-00-036-8716	F-14	13	5945-00-435-1833	F-13	7
5935-00-280-2195	F-15	49	5945-01-015-0355	F-13	6
5935-00-581-7520	F-15		5945-01-123-2705	F-12	12
5935-00-666-4869	F-15	42	5961-00-506-6434	F-13	4
5935-00-683-2746	F-14	12	5961-00-957-6865	F-15	
5935-00-721-0708	F-17	1	5970-00-052-3297	F-15	
5935-00-725-8233	F-19	1	5970-00-052-3297	BULK	
5935-00-725-8233	F-20	1	5970-00-057-3545	F-15	
5935-00-725-8233	F-22	2	5970-00-057-3545	BULK	
5935-00-781-8765	F-18	1	5970-00-088-2975	F-15	19
5935-00-803-8846	F-15	45	5970-00-812-1358	F-15	21
5935-00-803-8846	F-21	1	5970-00-812-2967	BULK	
5935-00-811-8064	F-16	1	5970-00-812-2967	F-21	4
5935-00-811-8064	F-22	1			
5935-00-823-5322	F-16	6			

NSN	FIGURE NO.	ITEM NO.	NSN	FIGURE NO.	ITEM NO.
5970-00-812-2967	F-22	11	6115-01-139-6294	F-15	78
5970-00-812-2969	F-18	2	6115-01-139-6294	F-22	
5970-00-812-2969	BULK		6115-01-139-6295	F-15	56
5970-00-914-3118	F-17	6	6115-01-139-6295	F-17	
5970-00-914-3118	BULK		6130-00-083-8812	F-12	16
5970-00-954-1624	F-16	5	6145-00-194-9830	F-23	
5970-00-954-1624	F-19	3	6145-00-194-9830	BULK	
5970-00-954-1624	F-20	3	6145-00-284-1493	F-15	
5970-00-954-1624	BULK		6145-00-284-1493	BULK	
5970-01-109-3903	F-15		6145-00-295-2810	F-22	6
5970-01-109-3903	BULK		6145-00-295-2810	BULK	
5970-01-137-3016	F-12	21	6145-00-500-3079	F-16	3
5970-01-141-8707	F-15	121	6145-00-500-3079	F-17	3
5970-01-137-3186	F-12	26	6145-00-500-3079	F-19	2
5970-01-137-3188	F-12	23	6145-00-500-3079	F-20	2
5975-00-074-2072	F-12	13	6145-00-500-3079	F-21	2
5975-00-074-2072	F-15	27	6145-00-500-3079	F-22	4
5975-00-074-2072	F-16		6145-00-500-3079	BULK	
5975-00-074-2072	F-17		6145-00-822-1399	F-15	
5975-00-074-2072	F-19		6154-00-822-1399	BULK	
5975-00-074-2072	F-20		6145-00-984-5210	F-15	46
5975-00-074-2072	F-21		6145-00-984-5210	BULK	
5975-00-074-2072	F-22		6145-01-108-6907	F-15	
5975-00-284-8940	F-15	50	6145-01-108-6907	F-16	2
5975-01-084-6334	F-15	13	6145-01-108-6907	F-17	4
5975-01-141-7544	F-12	27	6145-01-108-6907	F-18	3
5975-01-141-8708	F-15	29	6145-01-108-6907	F-21	3
5975-01-174-4062	F-15	26	6145-01-108-6907	BULK	
5975-01-174-4063	F-15	26	6150-00-632-7234	F-15	69
5999-00-845-1687	F-15	43	6150-01-137-2912	F-12	24
5999-01-137-3191	F-9	29	6210-00-519-0448	8	
5999-01-137-3191	BULK		6210-00-553-1076	F-14	9
5999-01-137-6824	F-8	3	6220-01-173-5782	F-14	2
5999-01-137-6824	BULK		6240-00-080-2012	F-14	1
6115-01-113-1093	F-1	4	6240-01-137-3011	F-14	6
6115-01-137-3007	F-15	16	6240-01-137-3163	F-14	7
6115-01-137-3012	F-15	11	6645-00-089-8842	F-14	14
6115-01-137-3015	F-8	2	8305-01-018-8743	F-23	7
6115-01-137-5486	F-15	10	9320-00-684-7726	F-6	18
6115-01-139-6243	F-21		9320-00-684-7726	BULK	
6115-01-139-6288	F-15	1	9320-00-684-7728	F-9	3
6151-01-139-6289	F-15	44	9905-00-202-3639	F-2	4
6115-01-139-6291	F-20		9905-00-202-3639	F-7	3
6115-01-139-6292	F-15	52	9905-00-202-3639	F-9	15
6115-01-139-6292	F-16				
6115-01-139-6293	F-15	77			

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NSN	FIGURE NO.	ITEM NO.	NSN	FIGURE NO.	ITEM NO.
9905-00-205-2795	F-6	3			
9905-01-169-0925	F-12	6			
9905-01-169-0926	F-12	6			
9905-01-169-0927	F-12	6			

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REFERENCE NUMBER	FSCM	FIG. NO.	ITEM NO.	REFERENCE NUMBER	FSCM	FIG. NO.	ITEM NO.
AN3111-3	88044	F-15	50	MS21045-04	96906	F-10	6
AN 961-616S	88044	F-15	120	MS21045-04	96906	F-15	41
AN 961-616T	88044	F-15	4	MS21045-06	96906	F-15	55
CM1818	71744	F-14	7	MS21045-06	96906	F-3	2
FS-1201	33457	F-23	35	MS21045-06	96906	F-4	2
JAN1N3611	81349	F-15		MS21045-06	96906	F-12	2
MIL-H-13444 TYPE 1	81348	F-23	20	MS21045-06	96906	F-12	22
MIL-H-13444 TYPE 1	81349	BULK		MS21045-07	96906	F-23	2
MIL-P-22296	97403	F-12	25	MS21045-08	96906	F-6	4
MIL-R-6130	81349	F-6	18	MS21045-08	96906	F-7	11
MIL-R-6130	81349	F-9	3	MS21045-08	96906	F-9	21
MIL-R-6130 TYPE 2, GRADE A	81349	BULK		MS21045-08	96906	F-11	2
				MS21045-10	96906	F-3	4
MIL-T-55164/1	81349	F-12	4	MS21045-10	96906	F-4	4
MIL-W-16878/1	81349	F-15		MS21045-10	96906	F-10	2
MIL-W-16878/1	81349	BULK		MS21045-12	96906	F-10	8
MIL-W-16878/8	81349	F-15		MS21045-16	96906	F-1	1
MIL-W-16878/8	81349	BULK		MS21209C0610	96906	F-9	30
MIS20045/1-015	81349	F-15	20	MS21209C4-15	96906	F-3	14
MIL20076/1-005	81349	F-15	18	MS21209C4-15	96906	F-4	14
MS124656	96906	F-9	31	MS21209C4-25	96906	F-3	13
MS15795-810	96906	F-3	11	MS21209C4-25	96906	F-4	13
MS15795-810	96906	F-4	11	MS21209C6-10	96906	F-6	11
MS15795-820	96906	F-3	5	MS21209C6-10	96906	F-9	26
MS15795-820	96906	F-4	5	MS21209C8-20	96906	F-1	11
MS16203-39	96906	F-15	118	MS21209C8-20	96906	F-7	17
MS16562-226	96906	F-3	12	MS21209F1-10	96906	F-9	27
MS16562-226	96906	F-4	12	MS21209F8-15	96906	F-6	12
MS16562-252	96906	F-3	8	MS21209F8-15	96906	F-7	16
MS16562-252	96906	F-4	8	MS21209F8-20	96906	F-9	28
MS171692	96906	F-9	11	MS21266-5N	96906	F-12	28
MS20426AD4-09	96906	F-9	24	MS21266-5N	96906	BULK	
MS20426AD4-10	96906	F-7	20	MS21318-15	96906	F-9	32
MS20470AD4-06	96906	F-6	15	MS21333-69	96906	F-15	79
MS20470AD4-06	96906	F-9	4	MS21333-75	96906	F-23	27
MS20470AD4-10	96906	F-6	13	MS21333-99	96906	F-15	58
MS20470AD4-10	96906	F-9	1	MS24207-263	96906	F-7	5
MS20659-105	96906	F-23		MS24630-46	96906	F-23	55
MS20659-120	96906	F-15		MS24693-9303	96906	F-10	5
MS21044N6	96906	F-23	39	MS25036-102	96906	F-15	17
MS21045-03	96906	F-7	4	MS25036-102	96906	F-17	5
MS21045-03	96906	F-7	7	MS25036-102	96906	F-19	4
MS21045-03	96906	F-15	60	MS25036-102	96906	F-20	4
MS21045-03	96906	F-23	18	MS25036-102	96906	F-21	5
MS21045-04	96906	F-1	6	MS25036-102	96906	F-22	7
MS21045-04	96906	F-8	4	MS25036-103	96906	F-22	8

REFERENCE NUMBER	FSCM	FIG. NO.	ITEM NO.	REFERENCE NUMBER	FSCM	FIG. NO.	ITEM NO.
MS25036-106	96906	F-15	37	MS3106R20-29S	96906	F-20	1
MS25036-106	96906	F-21	7	MS3106R20-29S	96906	F-22	2
MS25036-106	96906	F-22	10	MS3106R24-28S	96906	F-16	1
MS25036-108	96906	F-18	4	MS3106R24-28S	96906	F-22	1
MS25036-108	96906	F-22	9	MS3108R14S-2P	96906	F-15	47
MS25036-122	96906	F-15	37	MS3108R14S-2S	96906	F-15	45
MS25036-130	96906	F-15	37	MS3108R14S-25	96906	F-21	
MS25036-136	96906	F-15		MS3116F14-5S	96906	F-18	1
MS25036-153	96906	F-16	4	MS3367-1-9	96906	F-12	13
MS25036-154	96906	F-21	6	MS3367-1-9	96906	F-15	27
MS25041-6	96906	F0-14	8	MS3367-1-9	96906	F-16	
MS25237-327AS15	96906	F-14	1	MS3367-1-9	96906	F-17	
MS25244-20	96906	F-14	11	MS3367-1-9	96906	F-19	
MS25251-16	96906	F-16	6	MS3367-1-9	96906	F-20	
MS25251-16	96906	F-17	2	MS3367-1-9	96906	F-21	
MS25251-16	96906	F-20		MS3367-1-9	96906	F-22	
MS25251-16	96906	F-21		MS3420-6	81348	F-15	48
MS25251-16	96906	F-22		MS35206-216	96906	F-12	5
MS25401-7	96906	F-14	9	MS35206-219	96906	F-15	39
MS27130-A105	96906	F-6	10	MS35206-231	96906	F-15	53
MS27183-04	96906	F-15	40	MS35206-233	96906	F-12	1
MS27183-04	96906	F-23	38	MS35206-328	96906	F-15	64
MS27183-05	96906	F-12	3	MS35207-262	96906	F-12	10
MS27183-06	96906	F-15	54	MS35207-262	96906	F-23	10
MS27183-08	96906	F-13	2	MS35207-263	96906	F-12	14
MS27183-08	96906	F-15	9	MS35207-263	96906	F-15	62
MS27183-10	96906	F-1	9	MS35207-264	96906	F-9	16
MS27183-10	96906	F-8	5	MS35207-264	96906	F-15	57
MS27183-12	96906	F-12	8	MS35207-265	96906	F-23	
MS27183-14	96906	F-12	19	MS35207-265	96906	F-7	8
MS27183-16	96906	F-23	2	MS35207-265	96906	F-8	1
MS27183-18	96906	F-5	2	MS35207-265	96906	F-13	1
MS27183-18	96906	F-11	3	MS35207-265	96906	F-13	1
MS27183-22	96906	F-10	3	MS35207-265	96906	F-15	59
MS27183-23	96906	F-10	9	MS35207-265	96906	F-23	11
MS27183-27	96906	F-1	2	MS35207-265	96906	F-23	26
MS27183-42	96906	F-7	9	MS35207-270	96906	F-15	8
MS27183-42	96906	F-9	17	MS35207-279	96906	F-6	1
MS27183-42	96906	F-12	11	MS35207-279	96906	F-7	1
MS27400-10	96906	F-13	6	MS35207-279	96906	F-9	13
MS27734-22	96906	F-14	13	MS35214-55	96906	F-15	72
MS28133-01	96906	F-12	16	MS35333-107	96906	F-15	73
MS3057-6A	96906	F-15	49	MS35333-110	96906	F-15	6
MS3102R24-28P	96906	F-17	1	MS35338-44	96906	F-6	2
MS3106F10SL3P	96906	F-15		MS35338-44	96906	F-7	2
MS3106R20-29S	96906	F-19	1	MS35338-44	96906	F-9	14

REFERENCE NUMBER	FSCM	FIG. NO.	ITEM NO.	REFERENCE NUMBER	FSCM	FIG. NO.	ITEM NO.
MS35338-46	96906	F-12	18	M16878/4BHB9	81349	F-21	2
MS35338-91	96906	F-15	119	M16878/4BJE9	81348	F-16	2
MS35387-1	96906	F-6	3	M16878/4BJE9	81349	F-15	
MS35387-2	96906	F-7	3	M16878/4BJE9	81349	F-17	4
MS35387-2	96906	F-9	15	M16878/4BJE9	81349	F-18	3
MS35430-4	96906	F-15		M16878/4BJE9	81349	F-22	5
MS35649-2386	96906	F-15	5	M16878/4BJE9	81349	BULK	
MS35650-3382	96906	F-12	17	M23053/16-001-0	81349	F-15	
MS35825-12C	96906	F-6	16	M23053/16-001-0	81349	BULK	
MS35825-12C	96906	F-7	10	M23053/5-104-0	81349	F-18	2
MS35825-12C	96906	F-9	5	M23053/5-104-0	81349	BULK	
MS51507A8Z	96906	F-23	25	M23053/5-104-9	81349	F-15	19
MS51515A8Z	96906	F-23	52	M23053/5-105-0	81349	F-18	5
MS51520A8Z	96906	F-23	29	M23053/5-106-4	81349	F-15	38
MS51523A8Z	96906	F-23	23	M23053/5-107-0	81349	F-16	5
MS51860-56Z	96906	F-23	24	M23053/5-107-0	81349	F-19	3
MS51975-33	96906	F-5	3	M23053/5-107-0	81349	F-20	3
MS53075-1	96906	F-23	9	M23053/5-107-0	81349	BULK	
MS90726-113	96906	F-5	1	M23053/5-107-4	81349	F-15	
MS90726-113	96906	F-11	1	M23053/5-107-4	81349	BULK	
MS90726-117	96906	F-6	6	M23053/5-108-0	81349	F-21	4
MS90726-117	96906	F-7	12	M23053/5-108-0	81349	F-22	11
MS90726-117	96906	F-9	19	M23053/5-108-0	81349	BULK	
MS90726-118	96906	F-11	5	M23053/5-109-0	81349	F-17	6
MS90726-120	96906	F-11	7	M23053/5-109-0	81349	BULK	
MS90726-121	96906	F-11	6	M23053/5-109-4	81349	F-15	
MS90726-121	96906	F-23	4	M23053/5-109-4	81349	BULK	
MS90726-16	96906	F-1	7	M23053/5-113-0	81349	F-15	23
MS90726-18	96906	F-1	8	M23053/5-111-9	81349	F-15	21
MS90726-236	96906	F-1	3	M23053/5-114-0	81349	F-15	34
MS90726-31	96906	F-12	7	M3971/1-5	81349	F-14	14
MS90726-65	96906	F-3	1	M5757/23-003	81349	F-13	7
MS90726-65	96906	F-4	1	M641-6-1	81349	F-14	12
MS90726-65	96906	F-23	37	M8805/23-002	81349	F-14	10
MS90726-7	96906	F-8	6	NAS1330A4-151	80205	F-7	15
MS90727-165	96906	F-3	6	QQ-B-575	81348	F-23	
MS90727-165	96906	F-4	6	QQ-B-575	81348	BULK	
MS90727-168	96906	F-10	1	RR-C-271TY1	81348	F-1	
MS90728-9	96906	F-3	9	Grade C Class 4			
MS90728-9	96906	F-4	9	RR-C-271 TYPE III	81348	F-1	
M16878/4BFB9	81349	F-22	6	S-18KF8	12623	F-23	30
M6878/4BFB9	81349	BULK		003-22-003	81992	F-15	15
M16878/4BHB9	81348	F-16	3	003-22-006	81992	F-15	30
M16878/4BHB9	81349	F-17	3	074-01-023	74545	F-15	13
M16878/4BHB9	81349	F-19	2	074-01-034	81992	F-15	29
M16878/4BHB9	81349	F-20	2	1N5624	81349	F-13	4

REFERENCE NUMBER	FSCM	FIG. NO.	ITEM NO.	REFERENCE NUMBER	FSCM	FIG. NO.	ITEM NO.
13205E3847-1	97403	F-23	42	13222E6994-30	97403	F-15	109
13212E4231-27	97403	F-1	12	13222E6994-31	97403	F-15	110
13212E4231-27	97403	F-7	18	13222E6994-32	97403	F-15	111
13212E5937	97403	F-23	53	13222E6994-33	97403	F-15	2
13213E9243	97403	F-23	46	13222E6994-34	97403	F-15	112
13213E9520	97403	F-23	7	13222E6994-35	97403	F-15	113
13216E2159	97403	F-9	34	13222E6994-36	97403	F-15	114
13217E2005	97403	F-9	33	13222E6994-37	97403	F-15	115
13220E0672	97403	F-12	21	13222E6994-38	97403	F-15	116
13220E0775	97403	F-12	12	13222E6994-39	97403	F-15	117
13221E9298	97403	F-12	24	13222E6997-1	97403	F-15	42
13222E6983-3	97403	F-23	43	13222E6998-4	97403	F-15	43
13222E6984	97403	F-8	2	13222E6999-1	97403	F-23	45
13222E6987	97403	F-23	5	13222E7004	97403	F-9	2
13222E6988	97403	F-23	12	13222E7007	97403	F-9	7
13222E6989	97403	F-23	16	13222E7010-3	97403	F-15	3
13222E6990	97403	F-23	8	13222E7010-3	97403	F-23	40
13222E6994-01	97403	F-15	80	13222E7014	97403	F-5	4
13222E6994-02	97403	F-15	81	13222E7015	97403	F-1	10
13222E6994-03	97403	F-15	82	13222E7017	97403	F-6	7
13222E6994-04	97403	F-15	83	13222E7019	97403	F-9	22
13222E6994-05	97403	F-15	84	13222E7020	97403	F-7	14
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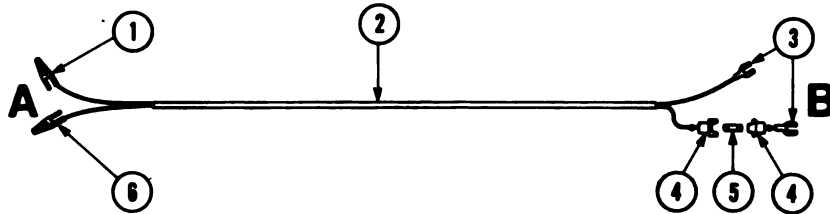
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APPENDIX G

ILLUSTRATED LIST OF MANUFACTURED ITEMS

POWER SOURCE JUMPER CABLE



1	Clip, electrical test (black)	5999-00-186-8935	1 ea.
2	Cable, 2-conductor	13222E1425	25 ft.
3	Spade lugs		2 ea.
4	Fuse, cartridge	5920-00-043-8604	1 ea.
5	Fuse, 5a slobber	5920-00-270-5179	1 ea.
6	Clip, electrical test (red)	5999-00-220-9767	1 ea.

- a. Strip and tin both wires on cable 2, end A.
- b. Solder black clip 1 on wire with black stripe and tag it (-).
- c. Solder red clip 6 on wire with brown stripe and tag it (+).
- d. Strip wire with black stripe on cable 2, end B, and tin.
- e. Crimp and solder lug 3 on wire with black stripe and tag it (-).
- f. Measure length of fuse cartridge 4 with associated wires.
- g. Cut that length off wire with brown stripe from cable end B.
- h. Strip and tin wire.
- i. Solder one end of fuse cartridge wire and brown striped wire together.
- j. Solder other end of fuse cartridge wire to lug 3 and tag it (+).
- k. Insert fuse 5 into fuse cartridge 4 and connect cartridge. The power source jumper cable is now ready for use in troubleshooting the EPP II 24 vdc control circuits. Refer to page 5-4 for how-to-use procedures.

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APPENDIX H
TORQUE LIMITS

Table H-1. Full Engagement Torque			
Thread Size	Minimum/Maximum Torque (ft-lb)	Thread Size	Minimum/Maximum Torque (ft-lb)
5/16 X 18	6 - 19	9/16 X nom	30 - 90
1/2 X 13	20 - 75	3/4 X 10	60 - 190

Note: This table is based on externally threaded members being of ASTM A-325 (SAE grade 5) or better.

Table H-2. Self-locking Nut Breakaway Torque			
Thread Size	Minimum/Maximum Torque (ft-lb)	Thread Size	Minimum/Maximum Torque (ft-lb)
5/16 X 18	TBS	9/16 X nom	TBS
1/2 X 13	TBS	3/4 X 10	TBS

NOTE

To determine the serviceability of a self-locking nut, determine its breakaway torque before reuse. To obtain breakaway torque, thread nut onto screw or bolt until at least two threads are showing. Nut shall not make contact with another mating part. Stop turning the nut. Torque necessary to begin turning nut again, either on or off, is the breakaway torque. Do not reuse self-locking nuts that do not meet minimum breakaway torque shown in table H-2 on previous page.

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GLOSSARY

Use of terms not familiar to all readers is necessary at times for preciseness and clarity. To insure all users understand those terms as intended by the originator, this glossary defines those specific terms as applied to the EPP II.

AAL	Additional Authorization List
ADA	Air Defense Artillery (battery)
AMG	Antenna Mast Group
BIIL	Basic Issue Items List
COEIL	Components of End Item List
ECS	Engagement Control Station
EIR	Equipment Improvement Recommendation
EPP II	Electric Power Plant II (AN/MJQ-24)
LSAR	Logistic Support Analysis Record
MAC	Maintenance Allocation Chart
MEP D424A	Nomenclature of generators used with EPP II
MTOE	Modified Table of Organization and Equipment
PDU	Power Distribution Unit
PLL	Petroleum, Lubes, and Lubricants
PMCS	Preventive Maintenance Checks and Services
RCM	Reliability Centered Maintenance
RPSTL	Repair Parts and Special Tools List
RS	Radar Station
SMR	Source, Maintenance, and Recoverability (Codes)
TMDE	Test, Measurement, and Diagnostic Equipment
TOE	Table of Organization and Equipment

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By Order of the Secretary of the Army:

Official:

E. C. MEYER
General, United States Army
Chief of Staff

ROBERT M. JOYCE
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-25D, Operator Maintenance Requirements for Generator Sets, Engine Driven: 150 KW 400 HZ Precise Power.

FILL IN YOUR
UNIT'S ADDRESS

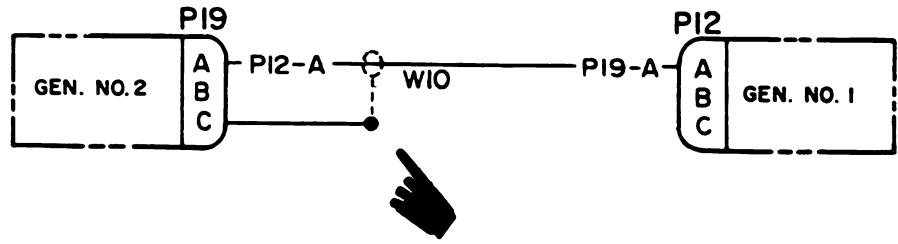
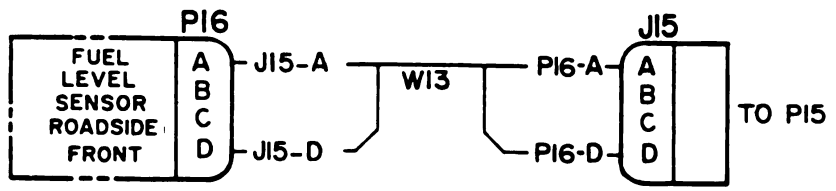
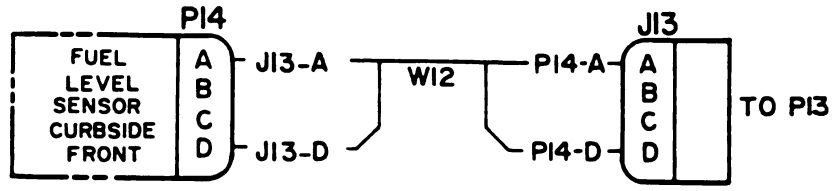
FOLD BACK

DEPARTMENT OF THE ARMY

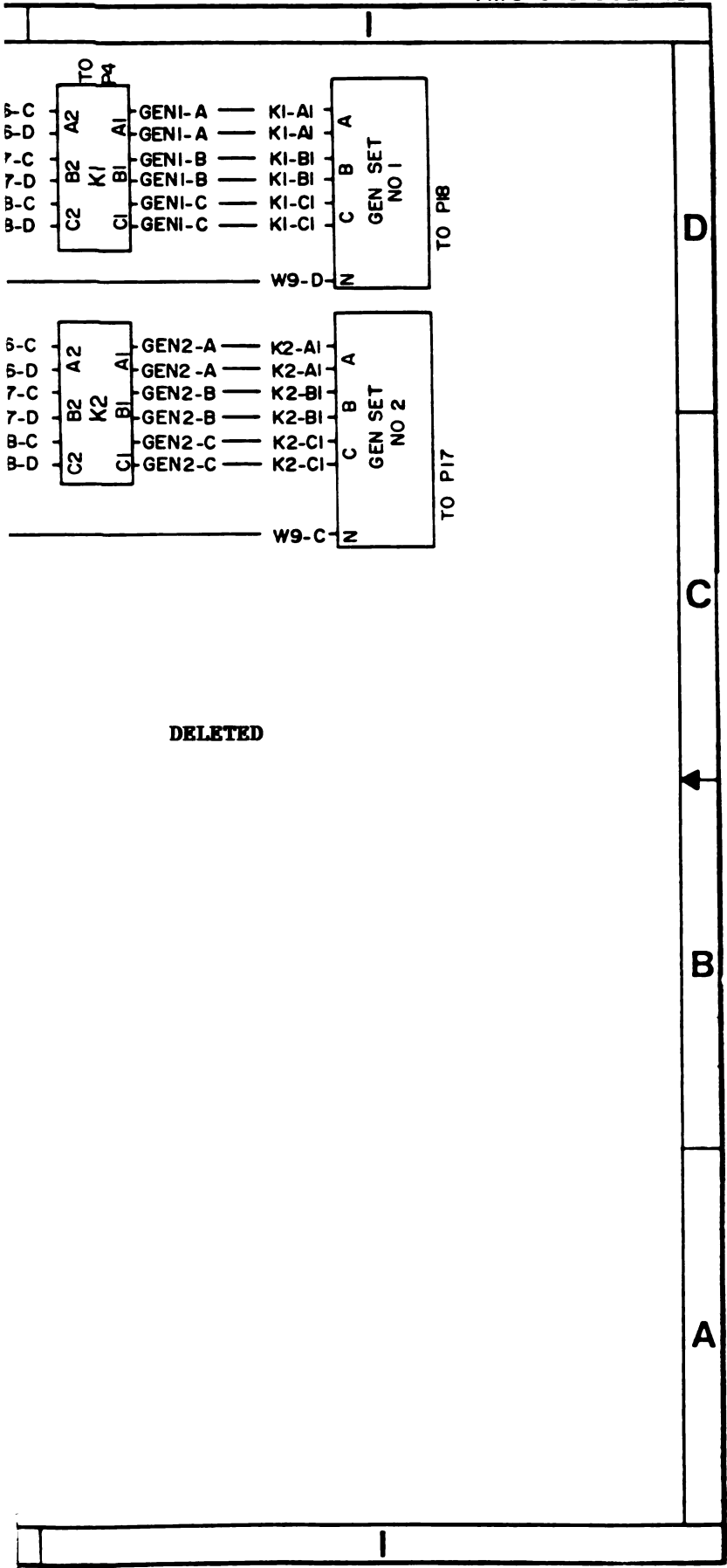
OFFICIAL BUSINESS

COMMANDER
U S ARMY SUPPORT AND AVIATION MATERIEL READINESS COMMAND
ATTN: DRSTS-MPSD
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MO 63120

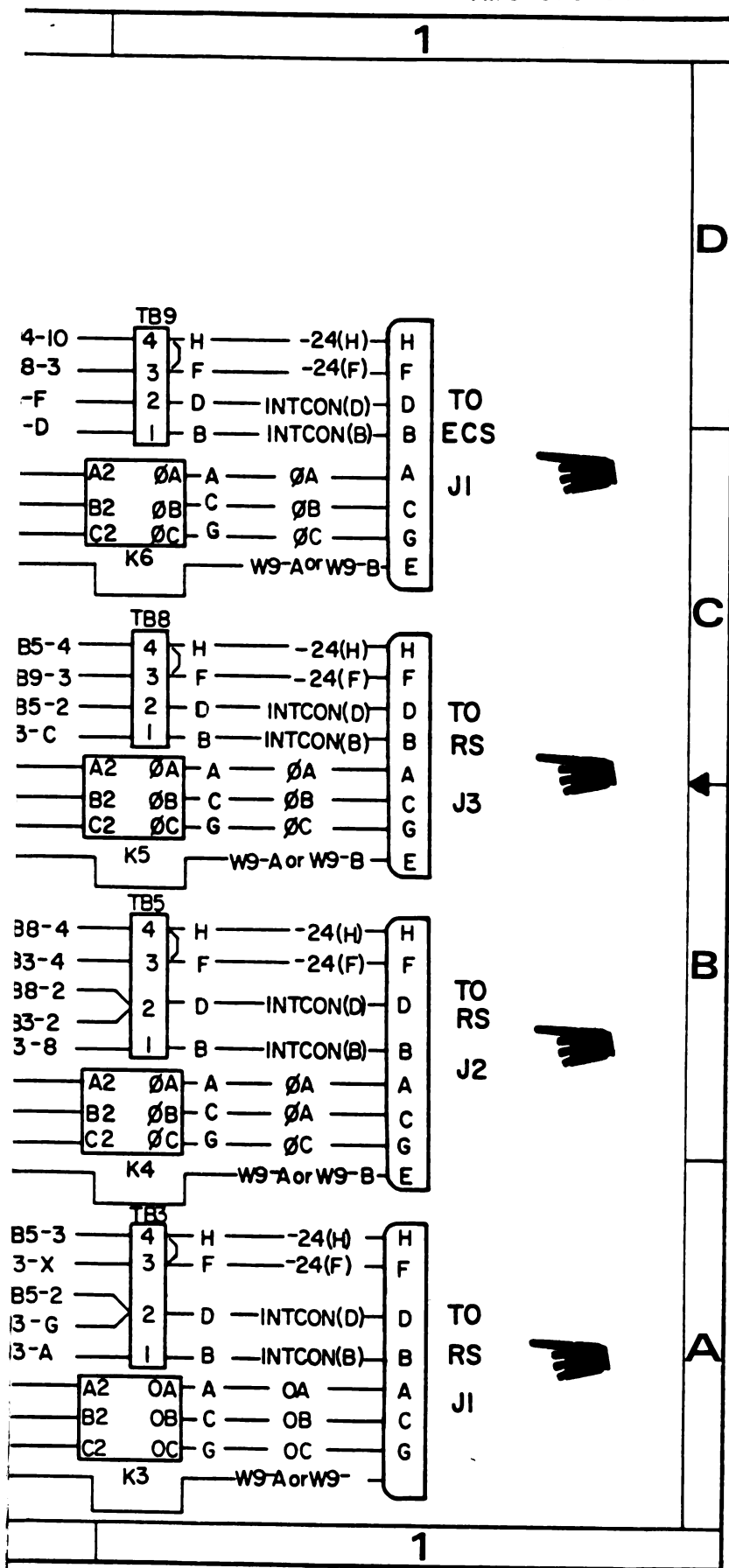
TEAR ALONG PERFORATED LINE



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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 decigrams = .035 ounce
- 1 dekagram = 10 grams = .35 ounce
- 1 hectogram = 10 dekagrams = 3.52 ounces
- 1 kilogram = 10 hectograms = 2.2 pounds
- 1 quintal = 100 kilograms = 220.46 pounds
- 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

- 1 centiliter = 10 milliliters = .338 fluid ounce
- 1 deciliter = 10 centiliters = 3.38 fluid ounces
- 1 liter = 10 deciliters = 33.81 fluid ounces
- 1 dekaliter = 10 liters = 2.64 gallons
- 1 hectoliter = 10 dekaliters = 26.42 gallons
- 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

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

Cubic Measure

- 1 cu. centimeter = 1,000 cubic millimeters = .06 cubic inch
- 1 cu. decimeter = 1,000 cubic centimeters = 61.02 cubic inches
- 1 cu. meter = 1,000 cubic decimeters = 35.31 cubic 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	1.365	metric tons	short tons	1.102
pound-inches	newton-meters	.11375			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F

