

**TECHNICAL MANUAL**

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

**POWER UNIT, DIESEL ENGINE DRIVEN,  
1 TON TRAILER MOUNTED,  
10 kW, 60 Hz, PU-798  
(NSN 6115-01-319-9032)**

**POWER UNIT, DIESEL ENGINE DRIVEN,  
1 TON TRAILER MOUNTED,  
10 kW, 400 Hz, PU-799  
(NSN 6115-01-313-4283)**

**POWER PLANT, DIESEL ENGINE DRIVEN,  
1 1/2 TON TRAILER MOUNTED,  
10 kW, 60 Hz, AN/MJQ-37  
(NSN 6115-01-299-6035)**

**POWER PLANT, DIESEL ENGINE DRIVEN,  
1 1/2 TON TRAILER MOUNTED,  
10 kW, 400 Hz, AN/MJQ-38  
(NSN 6115-01-313-4214)**

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**OPERATOR  
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**OPERATOR  
LUBRICATION**

**UNIT MAINTENANCE**

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SPECIAL TOOLS LIST  
(RPSTL)**

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HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 15 July 1996

NO. 3

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

**Power Unit, Diesel Engine Driven, 1 Ton Trailer Mounted,  
10 kW, 60 Hz, PU-789 (NSN 6115-01-319-9032)**

**Power Unit, Diesel Engine Driven, High Mobility Trailer Mounted,  
10 kW, 60 Hz, PU-789A (NSN 6115-01-413-3818)**

**Power Unit, Diesel Engine Driven, 1 Ton Trailer Mounted,  
10 kW, 400 Hz, PU-799 (NSN 6115-01-313-4283)**

**Power Unit, Diesel Engine Driven, High Mobility Trailer Mounted,  
10 kW, 400 Hz, PU-799A (NSN 6115-01-413-3819)**

**Power Plant, Diesel Engine Driven, 1 1/2 Ton Trailer Mounted,  
10 kW, 60 Hz, AN/MJQ-37 (NSN 6115-01-290 C035)**

**Power Plant, Diesel Engine Driven, 1 1/2 Ton Trailer Mounted,  
10 kW, 400 Hz, AN/MJQ38 (NSN 6115-01-313-4214)**

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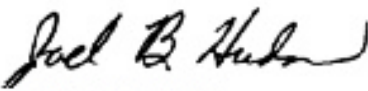
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10 kW, 60 Hz, AN/MJQ-37 (NSN 6115-01-299-6035)**

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10 kW, 400 Hz, AN/MJQ-38 (NSN 6115-01-313-4214)**

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Operator, Unit, and Direct Support  
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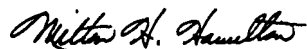
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***NOTE***

The warnings in the generator set technical manuals and the trailer technical manuals must also be considered.

**WARNING**

Dry cleaning solvent used to clean parts is potentially dangerous to personnel and property. Clean parts in a well-ventilated area. Avoid inhalation of solvent fumes. Wear goggles and rubber gloves to protect eyes and skin. Wash exposed skin thoroughly. Do not smoke or use near open flame or excessive heat. Failure to observe this warning could result in severe personal injury or death.

**WARNING**

Before performing any maintenance that requires climbing on or under trailer, make sure that trailer handbrakes are set, and front and rear trailer support legs are lowered. Failure to observe this warning could result in severe personal injury or death.

**WARNING**

Before removing trailer rear leveling-support jack, support rear of trailer. Failure to observe this warning could result in severe injury or death.

**WARNING**

Hot refueling of generators while they are operating poses a safety hazard and should not be attempted. Hot engine surfaces and sparks produced by the engine and generator circuitry are possible sources of ignition. Failure to observe this warning could result in severe personal injury or death.

**WARNING**

The fuels in this generator set are highly explosive. Do not smoke or use open flames when performing maintenance. Failure to observe this warning could result in severe personal injury or death.

**WARNING**

Never attempt to start generator set if it is not properly grounded. Failure to observe this warning could result in severe personal injury or death by electrocution.

**WARNING**

Make sure generator sets are shut down before performing any maintenance. Failure to observe this warning could result in severe personal injury or death.

**WARNING**

When lifting generator set, use lifting equipment with a minimum lifting capacity of 1750 lb. Do not stand under generator set while it is being lifted. Do not permit generator to swing. Failure to observe this warning could result in severe personal injury or death.

**WARNING**

Trailer brakes must be set and trailer front landing leg/support leg must be down before disconnecting trailer from towing vehicle. Failure to observe this warning can allow the trailer to up-end or roll and could result in severe personal injury or death.

Refer to FM 21-11 for first aid.





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WASHINGTON, D.C., 15 OCTOBER 1993

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**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

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

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## HOW TO USE THIS MANUAL

### DESCRIPTION OF THE MANUAL.

**Manual Organization.** This manual is designed to help you operate and maintain the 10 kW Power Plants and Power Units, AN/MJQ-37, AN/MJQ-38, PU-798, PU-798A, PU-799, and PU799A. Warning pages are located in the front of this manual. Read the warnings before operating or doing maintenance on the equipment.

The major elements of this manual are its chapters and appendices. Each chapter has one or more sections. The Table of Contents, beginning on page i, is provided for quick reference to the subjects covered by each chapter, section, and appendix. Each chapter also has a chapter index which lists the chapter sections and paragraphs. Appendix F also has a table of contents to help you locate the items listed in that appendix.

The front cover of this manual has an index that lists the most important areas of the manual. Each item indexed on the front cover has a black box at the edge of the cover. There is a corresponding black box on the first text page for each subject listed on the cover index.

A glossary follows the last appendix. The glossary lists and explains the special or unique abbreviations and the unusual terms used in this manual.

An alphabetical index follows the glossary. That index is for use in locating specific items of information.

**Chapters.** This manual has five chapters and eight appendices. Each chapter is divided into sections. Each section is divided into descriptive paragraphs. The paragraphs have specific information about the power plants and power units and their major components.

**Paragraph Numbering.** All paragraphs are numbered. This helps you find what you need when you need it. USE THE TABLE OF CONTENTS OR ALPHABETICAL INDEX TO FIND THE SECTION OR PARAGRAPH YOU NEED. Some paragraphs have a related illustration, to show the items discussed in the paragraph. Also, some paragraphs have a related table that provides a detailed list of items introduced by the paragraph. Each primary paragraph, illustration, and table is identified by the number of the chapter in which it appears, followed by a dash and another number. The number after the dash indicates the sequence in which the paragraph, illustration, or table appears in the chapter. Some paragraphs are further divided into subparagraphs. Subparagraphs are identified by the number of the primary paragraph followed by a decimal number, as follows:

Examples:      4-5. is the fifth paragraph in chapter 4.  
                   4-5.1 is the first subparagraph of paragraph 4-5.  
                   4-5.2 is the second subparagraph of paragraph 4-5.  
                   4-5.2.1 is the first subparagraph under 4-5.2.  
                   Figure 3-3. is the third illustration in chapter 3.  
                   Table 2-1. is the first table in chapter 2.

**Appendices.** Each appendix covers a specific subject; sometimes general, such as the list of references in Appendix A; or sometimes very detailed, such as the repair parts and special tools list in Appendix F.

### CHAPTER 1 - INTRODUCTION.

Chapter 1 provides an introduction to the power plants and power units. It is divided into three sections, as follows:

**Section I - General Information.** This section provides general information about this manual and the related forms and records. Instructions are provided for making equipment improvement recommendations. Coverage includes a reference to the TM that contains instructions on destruction of materiel to prevent enemy use. Also, a nomenclature cross-reference list is provided.

**Section II - Equipment Description.** This section describes power plant and power unit capabilities, characteristics, and features. It provides basic equipment data and shows the locations of major power plant and power unit components. Descriptions of the major components are also provided.

**Section III - Principles of Operation.** This section provides functional descriptions of the power plants and power units.

## CHAPTER 2 - OPERATING INSTRUCTIONS.

Chapter 2 provides instructions for operating the power plants and power units. The chapter is divided into four sections, as follows:

**Section I - Description and Use of Operator's Controls and Indicators.** This section provides references to the applicable generator set technical manuals and trailer technical manuals. Those references contain information on operator's controls and indicators for the generator sets and trailers. Detailed coverage is provided for the power plant switch box controls and indicators.

**Section II - Operator Preventive Maintenance Checks and Services (PMCS).** This section contains detailed instructions for the before, during, and after operation preventive maintenance checks and services that the operator must perform. Coverage includes all operator PMCS for the generator sets and trailers that make up the power plants and power unit. Operator PMCS for the switch box used on the power plants is also covered.

**Section III - Operation Under Usual Conditions.** This section contains instructions for preparing the power plants and power unit for use and operating them under normal conditions. Coverage includes instructions for connecting power plant load to the switch box and operating the switch box. Instructions for connecting power unit load to the generator set are also covered. This section also covers preparation of the power plant or power unit for movement to a new worksite.

**Section IV - Operation Under Unusual Conditions.** This section provides references to the applicable generator set and trailer technical manuals.

## CHAPTER 3 - OPERATOR MAINTENANCE.

Chapter 3 covers maintenance of the power plants and power units that is to be performed by the operator. Its purpose is to provide you with the information you need to keep the equipment in good operating condition. The chapter is divided into three sections, as follows:

**Section I - Operator Lubrication.** This section provides references to the applicable lubrication instructions.

**Section II - Troubleshooting.** This section covers troubleshooting procedures and corrective actions that are to be performed by the operator. This section also provides references to the applicable generator set and trailer technical manuals.

**Section III - Maintenance Procedures.** This section refers the operator to the preventive maintenance checks and services required by section II of chapter 2.

## CHAPTER 4 - UNIT MAINTENANCE.

Chapter 4 provides instructions covering the power plant and power unit maintenance that must be performed at unit level. The chapter is divided into seven sections, as follows:

**Section I - Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment.** This section lists references that contain the required information.

**Section II - Service Upon Receipt.** This section contains instructions for inspecting and servicing each power plant and power unit when it is received. It includes instructions for unpacking the equipment when it is received. The instructions include unpacking and stowing the basic issue items that accompany the power plant or power unit. Also included are instructions on positioning the power plant or power unit for operation and connecting an external fuel source.

**Section III - Unit Lubrication.** This section lists the applicable references that contain lubrication instructions for the generator sets and trailers. It also contains specific lubrication instructions for power plant/power unit components not covered in the generator set or trailer references.

**Section IV - Unit Preventive Maintenance Checks and Services (PMCS).** This section contains instructions covering the PMCS that must be performed at the unit maintenance level. A table provides information on maintenance intervals and actions required.

**Section V - Troubleshooting.** This section covers troubleshooting procedures and corrective actions that are to be performed at the unit maintenance level.

**Section VI - Maintenance Procedures.** This section lists the applicable references that cover unit maintenance of the generator sets and trailers. It also contains detailed instructions on unit level maintenance of the power plant and power unit components that are not covered in the generator set and trailer references.

**Section VII - Administrative Storage.** This section provides information on short term, intermediate term, and long term storage of Power Plants and Power Units.

## CHAPTER 5 - DIRECT SUPPORT MAINTENANCE.

Chapter 5 provides instructions for the maintenance actions designated to be performed at the direct support maintenance level. The chapter is divided into three sections, as follows:

**Section I - Repair Parts; Special Tools Test, Measurement, and Diagnostic Equipment; and Support Equipment.** This section lists the documents that contain the needed information.

**Section II - Troubleshooting.** This section covers troubleshooting procedures and corrective actions that are to be performed at direct support maintenance level.

**Section III - Maintenance Procedures.** This section lists the references that contain direct support maintenance instructions for the generator sets and trailers. In addition, it contains detailed instructions for direct support maintenance of power plant and power unit components not covered in the generator set and trailer references.

## APPENDICES.

**Appendix A - References.** This appendix lists all publications that are referenced in the various chapters of the technical manual. The listing includes the title of each publication.

**Appendix B - Maintenance Allocation Chart (MAC).** This appendix has four sections, as follows:

**Section I - Introduction.** This section explains what is covered in the maintenance allocation chart.

**Section II - Maintenance Allocation Chart.** This section contains a tabular listing that assigns maintenance functions to specific maintenance levels. It lists the work time needed to perform each maintenance function at the assigned level. It also contains a column that has entries keyed to the tools and equipment listed in section III. Another column with entries keyed to the remarks in section IV.

**Section III - Tool and Test Equipment Requirements.** This section contains complete identification information for the items referenced in the tools and equipment column of section II.

**Section IV - Remarks.** This section provides additional information for each entry in the remarks column of section II.

**Appendix C - Components of End Item (COEI) and Basic Issue Items (BII) Lists.** This appendix lists the items that are usually packaged separately but needed for installation and operation of the power plants and power units. The appendix has three sections, as follows:

**Section I - Introduction.** This section explains what is covered in section II and section III.

**Section II - Components of End Item.** The power plants and power units are normally shipped fully assembled, so this section is not applicable.

**Section III - Basic Issue Items.** This section contains a list of the accessories needed for installation and operation of the power plants and power units.

**Appendix D - Additional Authorization List (AAL).** This appendix lists additional items you are authorized for support of the power plant/power unit.

**Appendix E - Expendable and Durable Items List.** This appendix lists expendable/durable supplies and materials needed to operate and maintain the power plants and power units. The appendix contains two sections, as follows:

**Section I - Introduction.** This section explains the entries in section II.

**Section II - Expendable and Durable Supplies and Materials List.** The list indicates the maintenance level that needs each item and identifies the items by National Stock Number, description, and unit of measure.

**Appendix F - Repair Parts and Special Tools List (RPSTL).** This appendix lists and authorizes the repair parts and special tools needed to perform unit, direct support, and general support maintenance of the power plants and power units. It contains four sections, as follows:

**Section I - Introduction.** This section explains what is covered in sections II, III, and IV.

**Section II - Repair Parts List.** This section contains illustrations and lists. The illustrations aid in identification of the parts. The lists include information that tells which maintenance levels are authorized to use the part, the part number that identifies the part, the name of the part, and the quantity used.

**Section III - Special Tools List.** This section informs the user that no special tools are needed.

**Section IV - Cross-Reference Indexes.** This section contains two indexes, a national stock number index and a part number index. Each index lists all of the parts contained in section II. The national stock number index is in National Item Identification Number (NIIN) sequence. The part number index is in alphanumeric part number sequence.

**Appendix G - Illustrated List of Manufactured Items.** This appendix provides instructions for making the items authorized to be manufactured or fabricated at the unit maintenance level and direct support maintenance level.

**Appendix H - Torque Limits.** This appendix lists standard torque values for bolts and screws used in the power plants and power units.

**Glossary.** The Glossary has two sections, as follows:

**Section I - Abbreviations.** This section lists the special or unique abbreviations used in this technical manual. Special or unique abbreviations are those not listed in MIL-STD-12D.

**Section II - Definition of Unusual Terms.** This section lists and defines the terms used in this technical manual that are not listed in the Army dictionary (AR 310-25).

## INDEX.

An alphabetical index at the back of this technical manual provides a listing of subjects covered, cross-referenced to the applicable paragraph.

## HOW TO FIX A POWER PLANT OR POWER UNIT MALFUNCTION.

**Determining the Cause.** Finding the cause of a malfunction, troubleshooting, is the first step in fixing the power plant or power unit and returning it to operation. Follow these simple steps to determine the root of the problem:

- a. Turn to the Table of Contents in this manual (page i).
- b. Locate "Troubleshooting" under the chapter that covers your level of maintenance. Turn to the page indicated.
- c. For operator troubleshooting, follow the instructions in the references listed in Chapter 3.
- d. For troubleshooting at the unit maintenance level, find the malfunction listing in the troubleshooting symptom index. Follow the instructions in the figure (troubleshooting chart) indicated by the symptom index.

**Preparing for a Task.** Be sure that you understand the entire maintenance procedure before beginning any maintenance task. Make sure that all parts, materials, and tools are handy. Read through all steps before beginning. Prepare to do the task as follows:

- a. Carefully read the entire task before starting. It tells you what you will need and what you have to know to start the task. **DO NOT START THE TASK UNTIL:**
  - (1) You know what is needed
  - (2) You have everything you need

(3) You understand what to do

- b. If parts are listed, they can be drawn from technical supply. Before you start the task, check to make sure you can get the needed parts. National stock numbers (NSNs) and part numbers for generator set parts are listed in the generator Repair Parts and Special Tools List (RPSTL) manual, TM 9-6115-642-24P, and the engine RPSTL manual, TM 9-2815-253-24P. NSNs and part numbers for the 1-ton trailer chassis parts are listed in TM 9-2330-202-14&P. NSNs and part numbers for the 1 1/2-ton trailer chassis parts are listed in TM 9-2330-213-14&P. NSNs and part numbers for the high mobility trailer chassis parts are listed in TM 9-2330-392-14&P. NSNs and part numbers for the next higher assembly (the power plant or power unit, less generator set(s) and trailer chassis) are listed in Appendix F.
- c. If expendable/durable supplies or materials are needed, get them before starting the task. Refer to Appendix E for the correct nomenclature and NSN.

**How to do the Task.** Before starting, read the entire task. Be sure that you understand the entire procedure before you begin the task. As you read, remember the following:

- a. PAY ATTENTION TO WARNINGS, CAUTIONS, AND NOTES.
- b. Use the GLOSSARY if you do not understand the special abbreviations or unusual terms used in this manual.
- c. The following are standard maintenance practices. Instructions about these practices are usually not included in task steps. When standard maintenance practices do not apply, the task steps will tell you. The standard maintenance practices are:
  - (1) Tag electrical wiring before disconnecting it.
  - (2) Discard used preformed packing, retainers, gaskets, cotter pins, lock washers, and similar items. Install new parts to replace the discarded items.
  - (3) Coat packings before installation, in accordance with the task instructions.
  - (4) Disassembly procedures describe the disassembly needed for total authorized repair. You may not need to disassemble an item as far as described in the task. Follow the disassembly steps only as far as needed to repair/replace worn or damaged parts.
  - (5) Clean the assembly, subassembly, or part before inspecting it.
  - (6) Before installing components having mating surfaces, inspect the mating surfaces to make sure they are in serviceable condition.
  - (7) Hold the bolt (or screw) head with a wrench (or screwdriver) while tightening or loosening a nut on the bolt (or screw).
  - (8) Torque to the special torque cited when the task instructions include the words "torque to." Use standard torques at all other times.
  - (9) When a cotter pin is required, align the cotter pin holes within the allowable torque range.
  - (10) Inspect for foreign objects after performing maintenance.

## CHAPTER 1

## INTRODUCTION

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Section I General Information . . . . .	1-2
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1-3 Destruction of Army Materiel to prevent Enemy Use . . . . .	1-2
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**Section I. GENERAL INFORMATION**

**1-1 SCOPE.**

This manual is for your use in operating and maintaining the Power Plants; AN/MJQ-37 and AN/MJQ-38 (figure 1-1); Power Units, PU-798, and PU-799 (figure 1-2); and Power Units, PU-798A and PU-799A (figure 1-2.1). The manual covers operating instructions and operator, unit, and direct support maintenance requirements for the power plants and power units. It also contains a Repair Parts and Special Tools List (RPSTL) for the power plants and power units. The power plants and power units are mobile. The power plants and power units may be used to supply electric power to any system or equipment requiring up to 10 kW of 60 Hz or 400 Hz power.

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

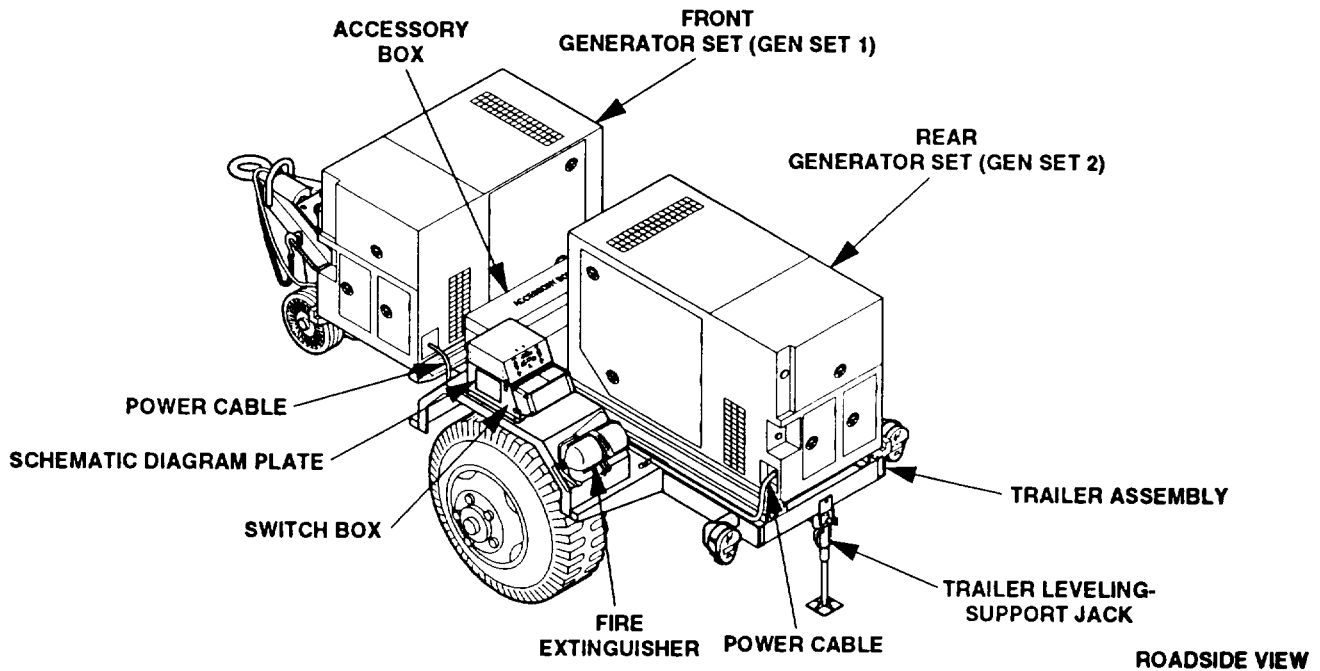
Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750 (The Army Maintenance Management System (TAMMS)) (Maintenance Management UPDATE).

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

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

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

Refer to Chapter 4 Section VII.



*Figure 1-1. Features of AN/MJQ-37 and AN/MJQ-38.*

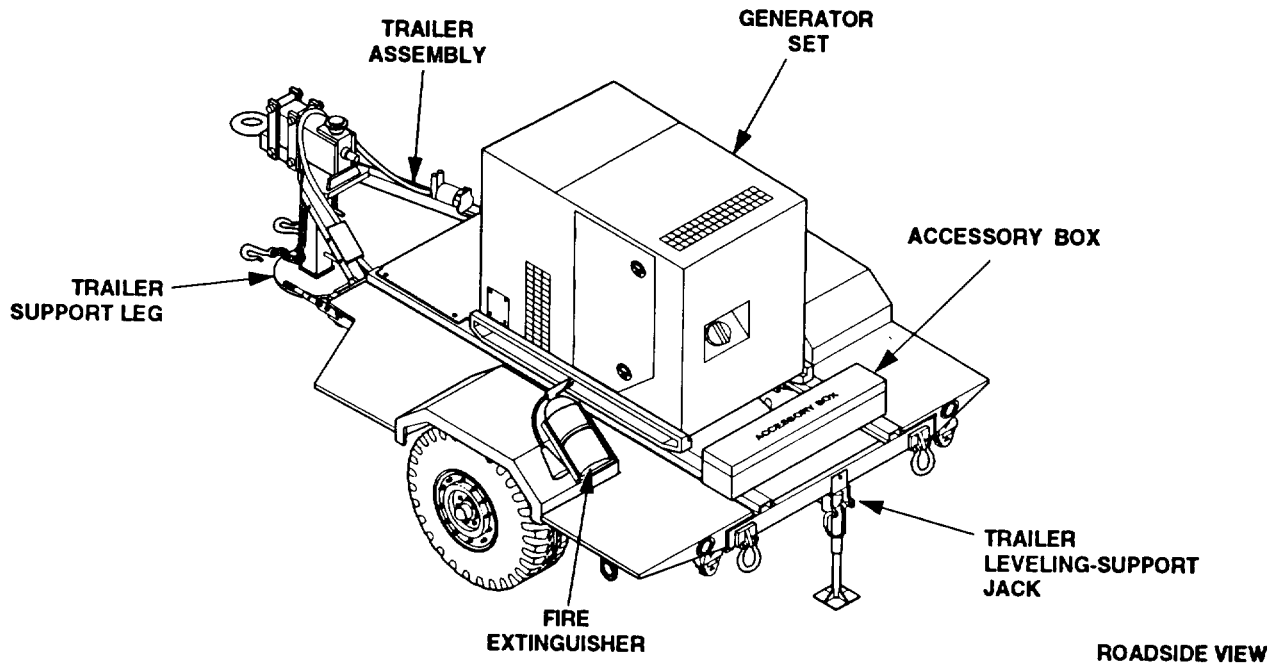


Figure 1-2. Features of PU-798 and PU-799.

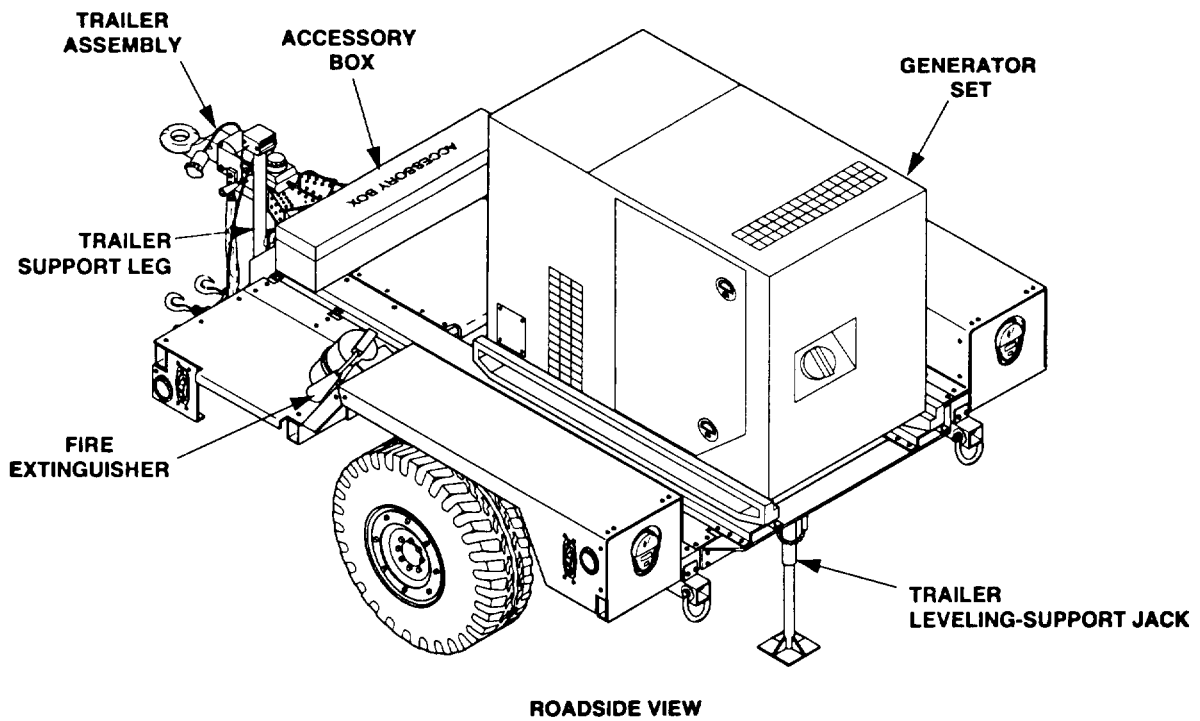


Figure 1-2.1 Features of PU-798A and PU-799A

**1-5 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATION (EIR). \_**

If your power plant or power unit 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 SF 368 (Product Quality Deficiency Report). Mail it to us at Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MDO, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. We will send you a reply.

**1-6 NOMENCLATURE CROSS-REFERENCE LIST.**

Refer to table 1-1 for nomenclature cross-reference list.

**Table 1-1. Nomenclature Cross-Reference List**

Common Name	Official Nomenclature
AN/MJQ-37	Power Plant, Diesel Engine Driven, 1 1/2 Ton Trailer Mounted, 10 kW, 60 Hz
AN/MJQ-38	Power Plant, Diesel Engine Driven, 1 1/2 Ton Trailer Mounted, 10 kW, 400 Hz
PU-798	Power Unit, Diesel Engine Driven, 1 Ton Trailer Mounted, 10 kW, 60 Hz
PU-799	Power Unit, Diesel Engine Driven, 1 Ton Trailer Mounted, 10 kW, 400 Hz
PU-798A	Power Unit, Diesel Engine Driven, High Mobility Trailer Mounted, 10 kW, 60 Hz
PU-799A	Power Unit, Diesel Engine Driven, High Mobility Trailer Mounted, 10 kW, 400 Hz
MEP-803A	Generator Set, 10 kW, 60 Hz
MEP-813A	Generator Set, 10 kW, 400 Hz
M103A3	Chassis, Trailer: 1 1/2 Ton, 2 Wheel (altered)
M116A3	Chassis, Trailer: 1 Ton, 2 Wheel (altered)
HMT	Chassis, Trailer: High Mobility, 2 Wheel (altered)

**1-7 LIST OF ABBREVIATIONS/ACRONYMS.**

Refer to the glossary at the back of this manual.

**1-8 GLOSSARY.**

Refer to the glossary at the back of this manual.

**Section II. EQUIPMENT DESCRIPTION**

**1-9 EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.**

**19.1 Characteristics.** The power plants and power units consist of one or two DOD Model MEP803A or Model MEP813A Tactical Quiet Generator Sets mounted on modified M116A3, 1 ton, M103A3, 1 1/2 ton, or high mobility trailers. Refer to TM 9233020214&P for detailed equipment characteristics about the M116A3, TM 9233021314&P for information about the M103A3, and TM 9233039214&P for information about the high mobility trailer. The modifications to the trailers include generator mounting rails, special lifting rings, special fenders, accessory box, fire extinguisher brackets, and rear leveling support jack. Each generator set is a liquid-cooled, diesel engine driven unit operating at 60 or 400 Hz with a load capacity of 10 kW. Refer to TM 9611564210 for detailed equipment characteristics about the generator set.

**1-9.1.1 Power Plants AN/MJQ-37 and AN/MJ-38.** Each of these power plants has two generator sets and a switch box mounted on a modified 1 1/2 ton trailer.

**1-9.1.2 Power Units PU-798 and PU-799.** Each of these power units has one generator set mounted on a modified 1 ton trailer.

**1-9.1.3 Power Units PU-798A and PU-799A.** Each of these power units has one generator set mounted on a modified high mobility trailer.

**1-9.2 Capabilities and Features.**

**1-9.2.1 Power Plant AN/MJQ-37.**

TOWING VEHICLE .....	2 1/2 ton 6x6 or 5 ton 6x6
TIRE PRESSURE (Highway).....	35 psi (241.3 kPa)
ELECTRICAL OUTPUT - 60 Hz:	
120 volts, single phase, 2 wire.....	104 amps
120/240 volts, single phase, 3 wire.....	52 amps
120/208 volts, three phase, 4 wire.....	34 amps

**1-9.2.2 Power Plant AN/MJQ-38.**

TOWING VEHICLE .....	2 1/2 ton 6x6 or 5 ton 6x6
TIRE PRESSURE (Highway) .....	35 psi (241.3 kPa)
ELECTRICAL OUTPUT .....	
120 volts, sine phase, 2 wire.....	104 amps
120/240 volts, single phase, 3 wire.....	52 amps
120/208 volts, three phase, 4 wire .....	34 amps

**1-9.2.3 Power Units PU-798 and PU-798A.**

TOWING VEHICLE	
PU-798 .....	CUCV or HMMWV
PU-798A.....	HMMWV

TIRE PRESSURE (Highway) ..... 35 psi (241.3 kPa)

ELECTRICAL OUTPUT - 60 Hz:

120 volts, sine phase, 2 wire..... 104 amps  
 120/240 volts, single. phase, 3 wire..... 52 amps  
 120/208 volts, three phase, 4 wire..... 34 amps

**1-9.2.3 Power Units PU-799 and PU-99A.**

TOWING VEHICLE

PU-799..... CUCV or HMMWV  
 PU-799A ..... HMMWV

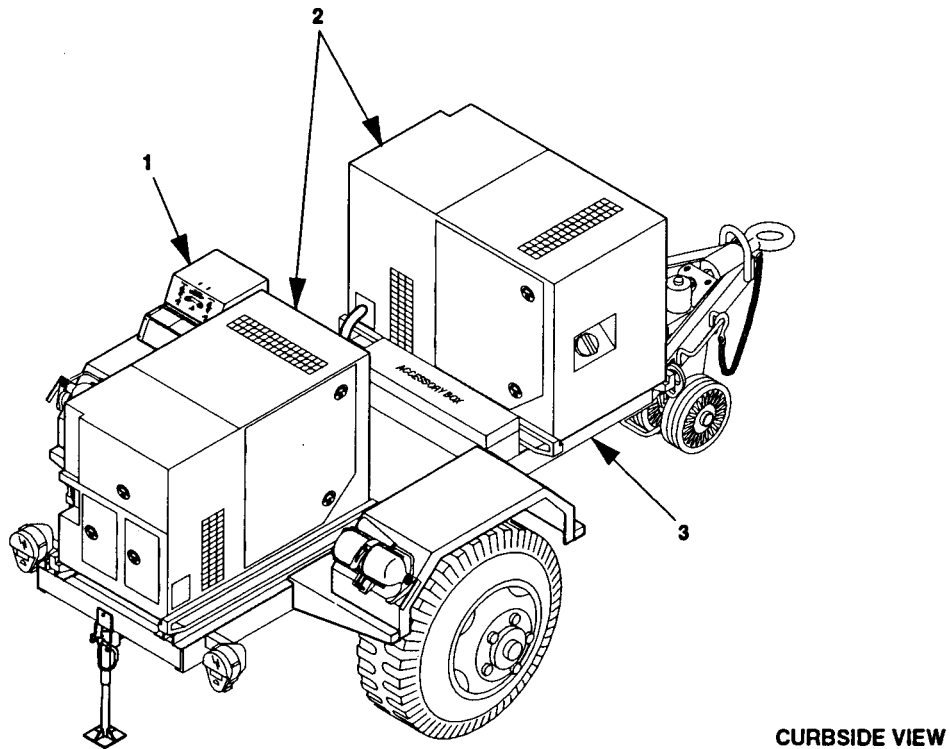
TIRE PRESSURE (Highway) ..... 35 psi (241.3 kPa)

ELECTRICAL OUTPUT - 400 Hz:

120 volts, sine phase, 2 wire..... 104 amps  
 120/240 volts, single phase, 3 ..... wire 52 amps  
 120/208 volts, three phase, 4 wire..... 34 amps

**1-10 LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.**

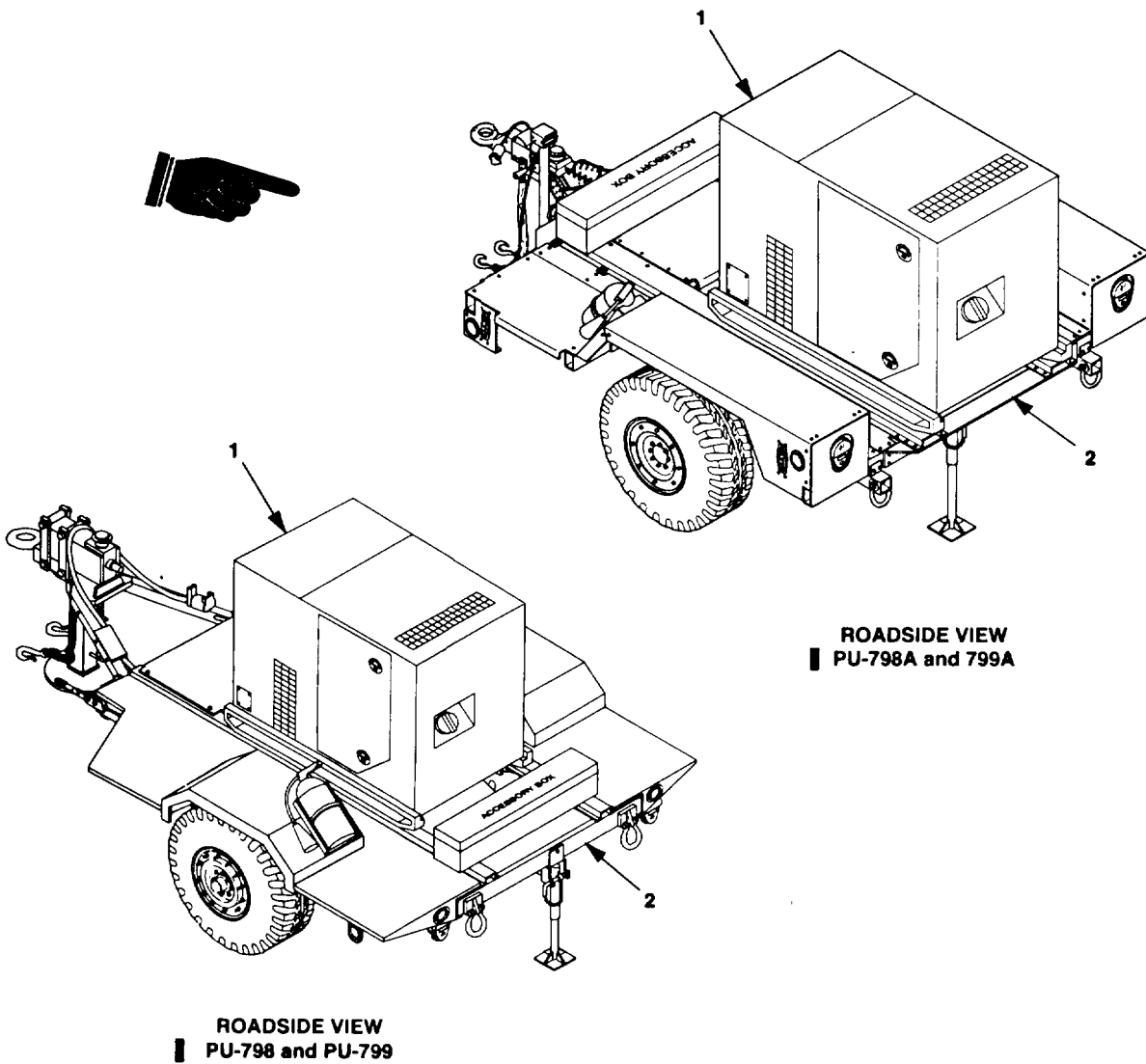
Refer to figures 1-4, 1-5 and tables 1-2, and 1-3.



*Figure 1-3. Location of Major Components, AN/MJQ- 37 and AN/MJQ-38.*

**Table 1-2. Description of Major Components, AN/MJQ-7 And AN/MJQ-38**

Item No	Item Name	Description
1	SWITCH BOX	Connects output of generator set to the load, and permits switching between generators without power loss.
2	GENERATOR SETS	Supplies power to the load. Refer to TM 9-6115-642-10 for major components of generator set.
3	TRAILER ASSEMBLY	Provides support and mounting for switch box, generator sets, and accessory box.



**Figure 1-4. Location of Major Component, PU-798, PU-798A, PU-799 and PU-799A.**

**Table 1-3. Description of Major Components, PU-798, PU-798A, PU-799 and PU-799A**

Item No	Item Name	Description
1	GENERATOR SET.	Supplies power to the load Refer to TM 9-6115-642-10 for major components of generator set.
2	TRAILER ASSEMBLY	Provides support and mounting for generator set and accessory box.

**1-11 DIFFERENCES BETWEEN MODELS.**

Differences between the ANMJQ37, AN/MJQ38, PU798, PU798A, PU799 and PU799A are identified in table 14. A number (quantity) under the applicable power plant or power unit column heading indicates that the item is a component of that power plant or power unit.

**Table 1-4. Differences between Models**

Component	AN/MJQ-37	AN/MJQ-38	PU-798	PU-799	PU-98A	PU-799A
Generator Set, 60 Hz	2		1		1	
Generator Set 400 Hz		2		1		1
Switch Box	1	1				
Trailer Chassis, 1 Ton, M116A3			1	1		
Trailer Chassis, 1 1/2 Ton, M103A3	1	1				
Trailer Chassis, High Mobility					1	1

**1-12 EQUIPMENT DATA.**

**1-12.1 Generator Set.** Refer to TM 9-6115-642-10.

**1-12.2 Trailer Chassis.**

**1-12.2.1 AN/MJQ- 37 and ANMJQ-38, 1 1/2 Ton Trailer Chassis.** Refer to TM 9-2330-213-14&P.

**1-12.2.2 PU-798 and PU-799 1 Ton Trailer Chassis.** Refer to TM 9-2330-202-14&P.

**1-12.2.3 PU-798A and PU-799A High Mobility** Trailer Chassis. Refer to TM 9-2330-392-14&P.

**1-12.3 Tabulated Data for Power Plants/Power Units.**

**Table 1-5. Tabulated Data for Power Plants/Power Units**

Data	AN/MJQ-37	AN/MJQ-38	PU-798	PU-799
Overall length, inches (cm)	165.0 (419.1)	165.0 (419.1)	147.0 (373.4)	147.0 (373.4)
Overall width, inches (cm)	83.0 (210.8)	83.0 (210.8)	83.5 (212.1)	83.5 (212.1)
Overall height, inches (cm)	70.2 (178.3)	70.2 (178.3)	76.0 (193.0)	76.0 (193.0)
Operational weight, pounds (kg)	4334 (1965.9)	4350 (1973.1)	2457 (1114.5)	2469 (1119.9)
Shipping weight, pounds (kg)	4540 (2059.3)	4550 (2063.9)	2660 (1206.6)	2670 (1211.1)

**Table 1-5. Tabulated Data for Power Plants/Power Units - continued**

Data	PU-798A	PU-799A
Overall length, inches (cm)	135.0 (342.9)	135.0 (342.9)
Overall width, inches (cm)	86.0 (218.4)	86.0 (218.4)
Overall height, inches (cm)	66.3 (168.4)	66.3 (168.4)
Operational weight, pounds (kg)		
Shipping weight, pounds (kg)	2480 (1124.9)	2510 (1138.5)

### Section III. PRINCIPLES OF OPERATION

#### 1-13. FUNCTIONAL DESCRIPTION.

**1-13.1. Power Plant Functional Description.** The Power Plants are mobile. The power source for the AN/MJQ-37 power plant is two DOD Model MEP-803A, 60 Hz, Tactical Quiet, 10 kW Generator Sets. The power source for the AN/MJQ-38 power plant is two DOD Model MEP-813A, 400 Hz, Tactical Quiet 10 kW Generator Sets. Generators for each power plant are mounted on a single modified M103A3 2-wheel 1 1/2 ton trailer. Each generator set consists of a liquid-cooled diesel engine, brushless generator, excitation system, speed governing system, fuel system, 24-volt direct current starting system, control system, and malfunction protection system. The generator set has a voltage reconnection switch that allows either of three output configurations: 120-volt, single phase, 2-wire; 120/240-volt, single phase, 3-wire; or 120/208-volt, three phase, 4-wire. Electrical power to the supported system or equipment is supplied through a switch box assembly. The switch box assembly is connected between the two generator sets by power cables. The switch box enables transfer of the load from one generator set to the other without interruption of power. The system or equipment load cable may be connected to the switch box by either of two arrangements. One way is to connect a load cable to the switch box output connector. The other way is to connect a load cable to the switch box load terminals.

**1-13.2 Power Unit Functional Description.** The Power Units are mobile. PU-798 and PU-798A each use one DOD Model MEP-803A, Tactical Quiet, 60 Hz, 10 kW Generator Set. PU-799 and PU-799A each use one DOD Model MEP-813A, Tactical Quiet, 400 Hz, 10 kW Generator Set. The generator set for each power unit is mounted on a modified M116A3, 2-wheel, 1-ton trailer (PU-798 and PU-799) or a modified high mobility, 2-wheel trailer (PU-798A and PU-799A). The generator sets consist of a liquid-cooled diesel engine, brushless generator, excitation system, speed governing system, fuel system, 24-volt direct current starting system, control system, and malfunction protection system. The generator set has a voltage reconnection switch that allows either of three output configurations: 120-volt, single phase, 2-wire; 120/240-volt, single phase, 3-wire; or 120/208-volt, three phase, 4-wire. System or equipment load cables are to be connected to the load terminals on the generator set output panel.

#### 1-14. RELATED TECHNICAL MANUALS.

Refer to Appendix A for related technical manuals and lubrication orders.





## CHAPTER 2

### OPERATING INSTRUCTIONS

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Section I. DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS

2-1 OPERATOR CONTROLS AND INDICATORS.

2-1.1 Generator Set. Refer to TM 9-6115-642-10.

2-1.2 Trailer. Refer to TM 9-2330-202-14&P for PU-798 and PU-799, TM 9-2330-392-14&P for PU-798A and PU-799A, and TM 9-2330-213-14&P for AN/MJQ-37 and AN/MJQ-38.

2-1.3 Power Plant Switch Box Controls. Refer to figure 2-1 and table 2-1 for operator controls and indicators.

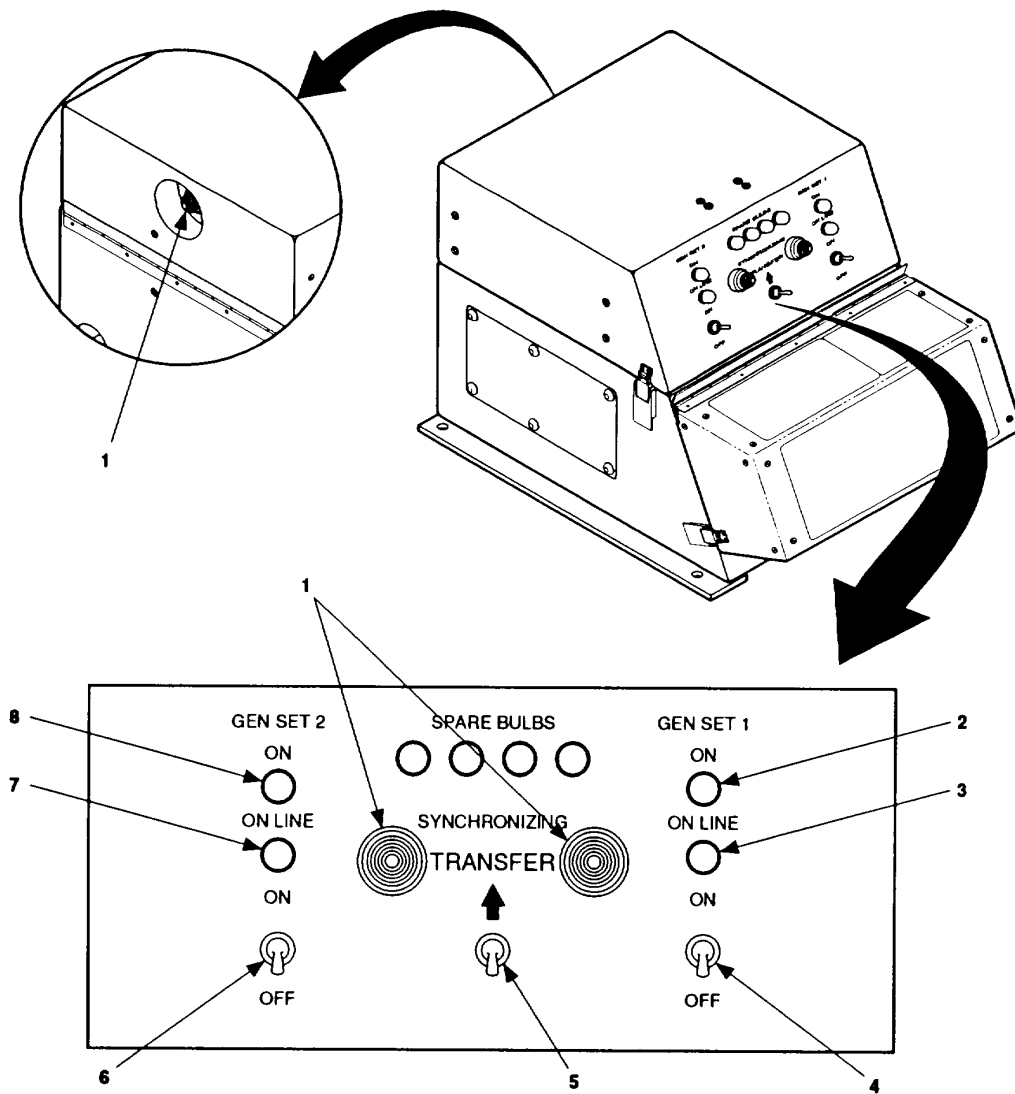


Figure 2-1. Switch Box Controls and Indicators.

**Table 2-1. Description of Switch Box Controls and Indicators**

Item No.	Description	Function
1	SYNCHRONIZING light	Used to synchronize generator sets for transferring load. All three lights are dark when only one generator set is operating. The lights simultaneously go from bright to dark and back to bright in repeated cycles after TRANSFER switch (5) is engaged while one generator set is on line and other is ready to go on line. All three are again dark after load has been transferred.
2	ON light for GEN SET 1 (front generator set)	Lights when front generator set is supplying power to switch box.
3	ON LINE light for GEN SET 1 (front generator set)	Lights when front generator set is supplying power to the load.
4	ON/OFF switch for GEN SET 1 (front generator set)	Toggle switch, used to place front generator set on line when generator set is ready or take it off line before shutting it down.
5	TRANSFER switch	Toggle switch, used to transfer load when one generator set is on line and SYNCHRONIZING lights (1) indicate that other generator set is ready to go on line.
6	ON/OFF switch for GEN SET 2 (rear generator set)	Toggle switch, used to place rear generator set on line when generator set is ready or take it off line before shutting it down.
7	ON LINE light for GEN SET 2 (rear generator set)	Lights when rear generator set is supplying power to the load.
8	ON light for GEN SET 2 (rear generator set)	Lights when rear generator set is supplying power to switch box.

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

### 2-2 INTRODUCTION TO OPERATOR PMCS TABLE.

Table 2-2 (PMCS table) has been provided so you can keep your equipment in good operating condition and ready for its primary mission.

**2-2.1 Warnings, Cautions, and Notes.** Always observe the **WARNINGS**, **CAUTIONS**, and **NOTES** appearing in your PMCS table. Warnings and cautions appear before applicable procedures. You must observe **WARNINGS** to prevent serious injury to yourself and others. You must observe **CAUTIONS** to prevent your equipment from being damaged. You must observe **NOTES** to ensure procedures are performed properly.

### **2-2.2 Explanation of Table Entries.**

**2-2.2.1 Item No. Column.** Numbers in this column are for reference. When completing DA Form 2404 (Equipment Inspection and Maintenance Worksheet), include the item number for the check/service indicating a fault. Item numbers also appear in the order that you must do checks and services for the intervals listed.

**2-2.2.2 Interval Column.** This column tells you when you must do the procedure in the procedure column. "Before" procedures must be done before you operate the power plant or power unit for its intended mission. "During" procedures must be done during the time you are operating the power plant or power unit for its intended mission. "After" procedures must be done immediately after you have operated a power plant, immediately after shutting down one of the generator sets on a power plant, or immediately after you have operated a power unit. Perform "Weekly" procedures at the listed interval.

**2-2.2.3 Location, Item to Check/Service Column.** This column lists the location and the item to be checked or serviced. The item location is underlined.

**2-2.2.4 Procedure Column.** This column gives the procedure for checking or servicing the item listed in the location, item to check/service column. You must perform the procedure to know if the power plant or power unit is ready or available for its intended mission or operation. You must do the procedure at the time stated in the interval column.

**2-2.2.5 Not Fully Mission Capable if: Column.** Information in this column tells you what faults will keep your power plant or power unit from being capable of performing its primary mission. If you make checks or services that show faults listed in this column, do not operate the power plant or power unit.

**2-2.3 Other Table Entries.** Be sure to observe all special information and notes that appear in your table.

**2-2.4 Special Instructions.** Preventive maintenance is not limited to performing the checks and services listed in the PMCS table. Covering unused receptacles, stowing unused accessories, and other routine procedures such as equipment inventory, cleaning components, and touch-up painting are not listed in the table. These are things you should do any time you see that they need to be done. If a routine check is listed in the PMCS table, it is because experience has shown that problems may occur with this item. Take along tools and cleaning cloths needed to perform the required checks and services. Use the information in the following paragraphs to help you identify problems at any time.

**2-2.4.1 Trailer PMCS.** Trailer checks and services in the PMCS table are described as performed on a specific model trailer. Refer to table 1-3 to determine appropriate model number.

**2-2.4.2 Generator Set PMCS.** Generator set checks and services in the PMCS table are described as performed on a single generator set. The procedures must be performed on each of the generator sets that make up a power plant.

**2-2.4.3 Routine Inspections.** Use the following information to help identify potential problems before and during checks and Services.

**WARNING**

Dry cleaning solvent used to clean parts is potentially dangerous to personnel and property. Clean parts in a well-ventilated area. Avoid inhalation of solvent fumes. Wear goggles and rubber gloves to protect eyes and skin. Wash exposed skin thoroughly. Do not smoke or use near open flame or excessive heat. Failure to observe this precaution can cause injury to personnel or damage to equipment.

**CAUTION**

Keep cleaning solvents, gasoline, and lubricants away from rubber or soft plastic parts. They will deteriorate material.

- a. Keep it clean. Dirt, grease, and oil get in the way and may cover up a serious problem. Use dry cleaning solvent to clean metal surfaces.
- b. Use soap and water to clean rubber or plastic parts and material.
- c. Check all bolts, nuts, and screws to make sure they are not loose, missing, bent, or broken. Do not try to check them all with a tool, but look for chipped paint, bare metal, or rust around bolt heads. If you find one loose, tighten it or report it to unit level maintenance.
- d. Inspect welds. Look for loose or chipped paint, rust, or gaps where parts are welded together. If a broken weld is found, report it to unit level maintenance.
- e. Inspect electrical wires, connectors, terminals, and receptacles. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and make sure wires are in good condition. Examine terminals and receptacles for service ability. If deficiencies are found, report them to unit level maintenance.
- f. Inspect hoses and fluid lines. Look for wear, damage, and leaks. Make sure that clamps and fittings are tight. Wet spots and stains around a fitting or connector can mean a leak. If a leak comes from a loose connector, or if something is broken or worn out, report it to unit level maintenance.

**2-2.5 Leakage Definitions.** You must know how fluid leakage affects the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment, Learn and be familiar with them. When in doubt, ***notify your supervisor.***

<u>Leakage Class</u>	<u>Leakage Definition</u>
Class I	Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

Class II Leakage of fluid great enough to form drops, but not enough to cause drops to drip from the item being checked/inspected.

Class III Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

### **2-2.6 Operation of Power Plant/Power Unit with Minor Leaks.**

#### **CAUTION**

Equipment operation is allowable with minor leakage (Class I or II) of any fluid except fuel. Fluid capacity must be considered before deciding to continue operation of the equipment with minor leaks. When operating with Class I or II leaks, fluid level must be checked more often than required by the PMCS table. Parts without fluid will stop working and or cause equipment damage.

- a. Consider the equipment's capacity for the fluid that is leaking. If the capacity is small, the fluid level may soon become too low for continued operation. If in doubt, notify your supervisor.
- b. Check the fluid level more often than required in the PMCS table. Add fluid as needed.

**2-2.7 Corrosion Prevention and Control (CPC).** CPC of Army materiel is of continuing concern. It is important that any corrosion problems with the power plant or power unit be reposed so that the problem can be corrected and improvements can be made to prevent the problem in future items. While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem. If a corrosion problem is identified, it can be reported using Standard Form 368, Product Quality Deficiency Report. Use of key words such as "corrosion," "rust," "deterioration," or "racking" will ensure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA Pam 738-750.

**2-2.8 Order in Which PMCS Will be Done.** Figures 2-2, 2-3, and 2-3.1 show the order in which you are to perform your before operation PMCS. Figure 2-2 is for the AN/MJQ-37 and AN/MJQ-38, figure 2-3 is for PU-798 and PU-799, and figure 2-3.1 is for PU-798A and PU-799A. The number callouts on figures 2-2, 2-3, and 2-3.1 correspond to the numbers in the Item No. column of table 2-2. Callouts on figure 2-2 for one Power Plant generator set apply to both of the Power Plant generator sets.

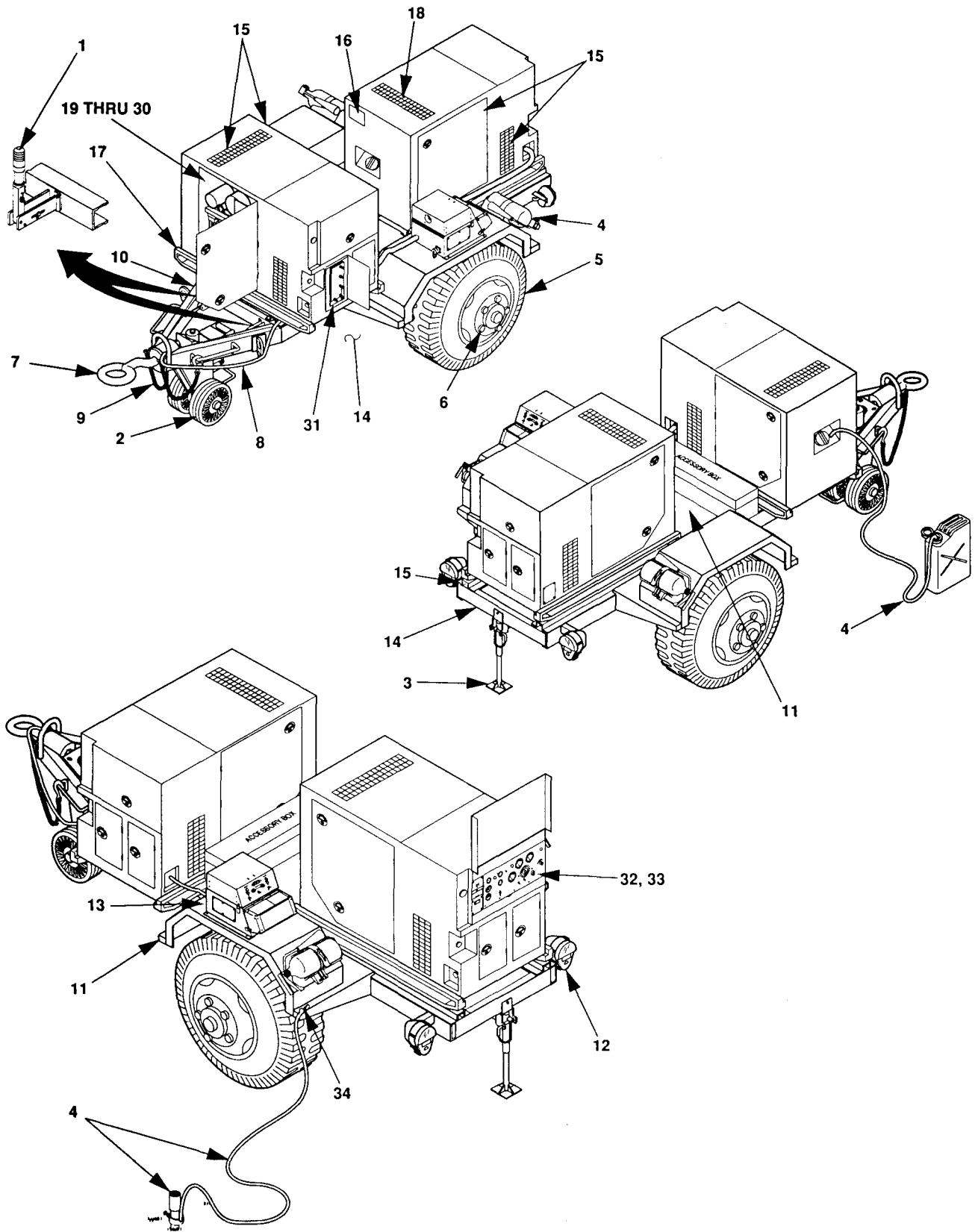


Figure 2-2. Power Plant Operator PMCS Routing Diagram (Typical).



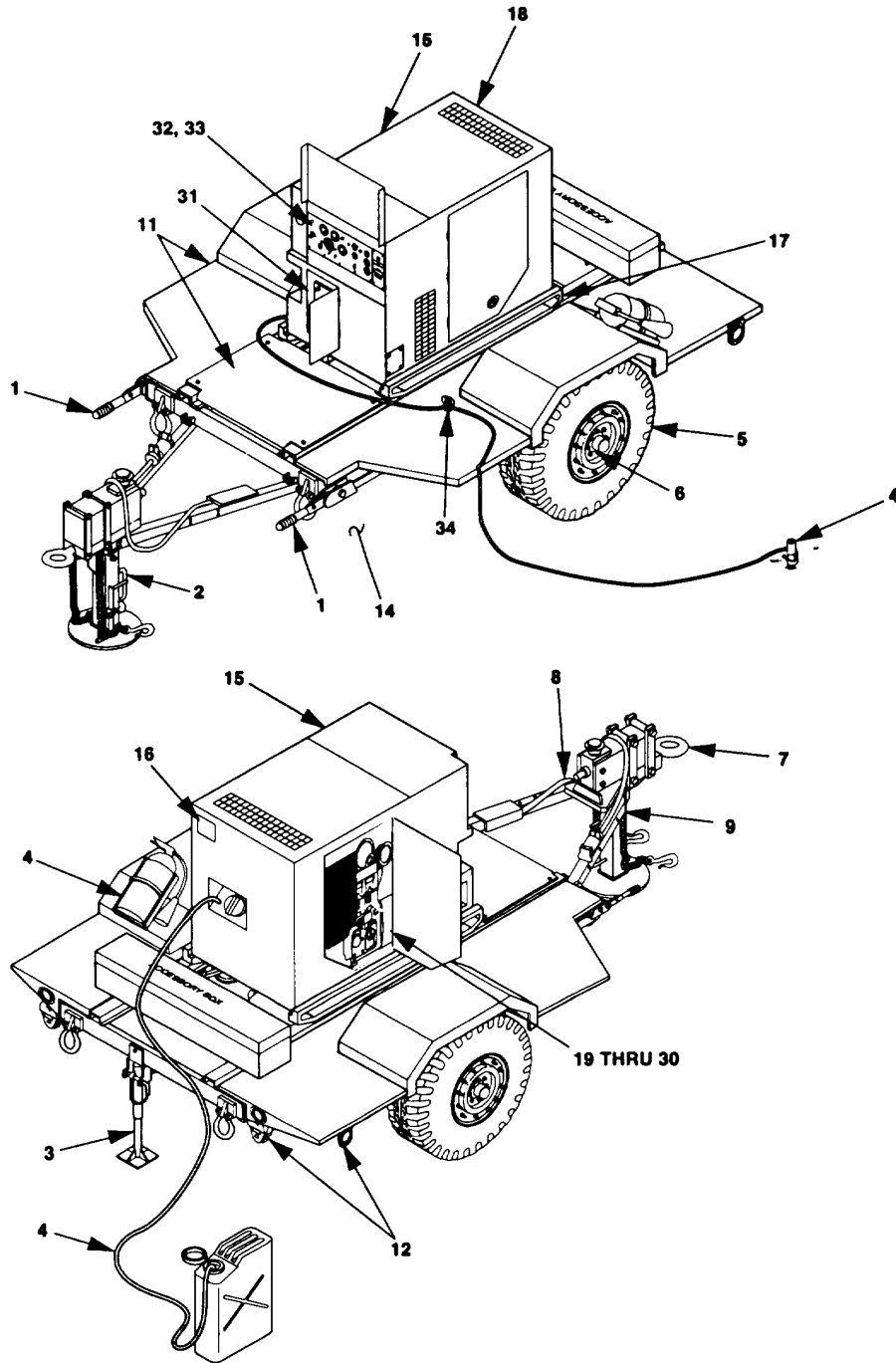


Figure 2-3. Power Unit Operator PMCS Routing Diagram (PU-798 and PU-799).

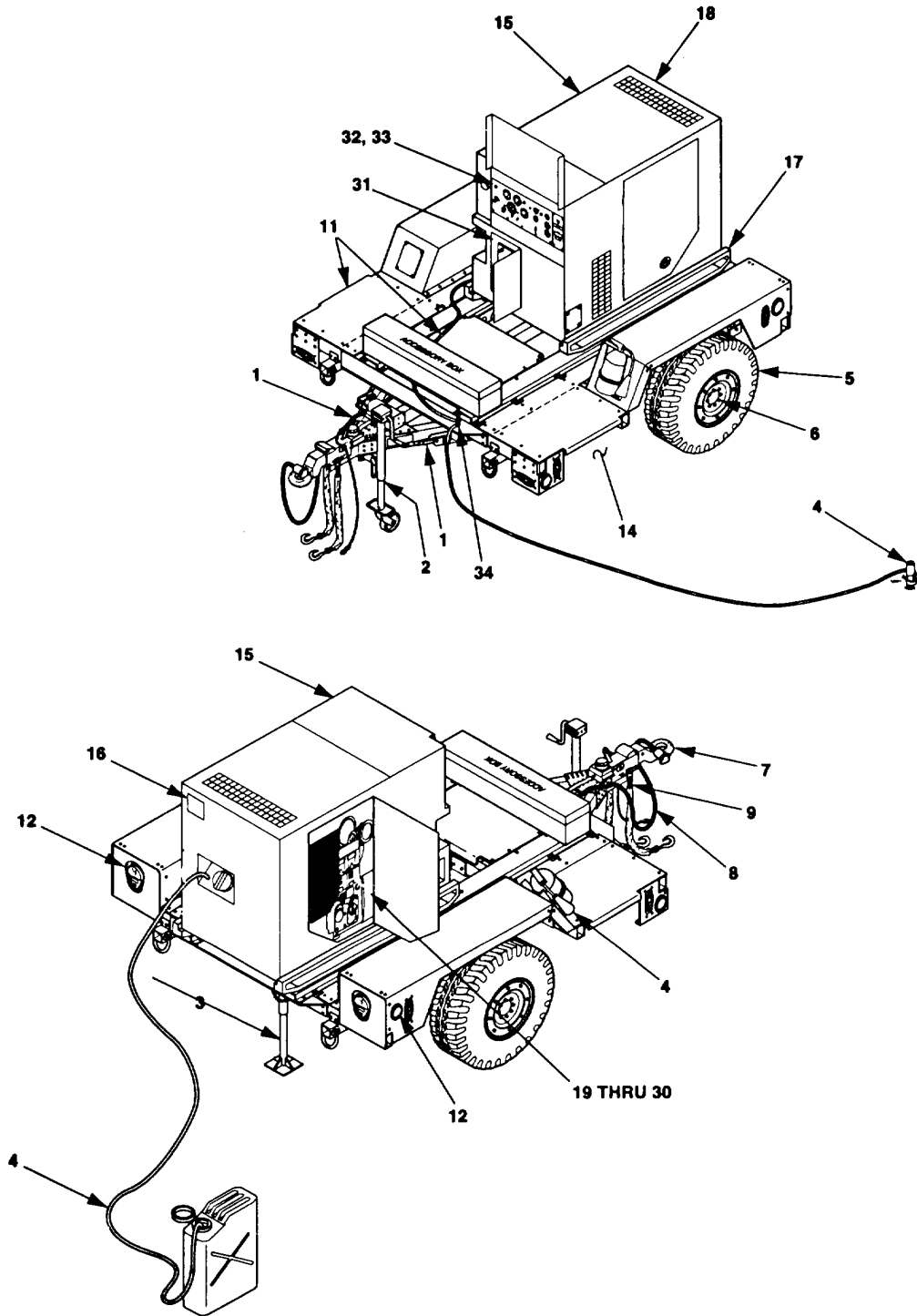
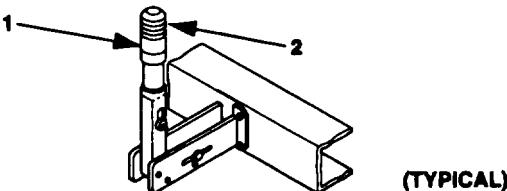


Figure 2-3. 1. Power Unit Operator PMCS Routing Diagram (PU-798A and PU-799A).

**Table 2-2. Operator Preventive Maintenance Checks and Services**

**NOTE**

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

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
Item No.	Interval	Location Item to Check Service	Procedure	Not Fully Mission Capable if:
1	Before	<b>TRAILER</b> HANDBRAKES	<p style="text-align: center;"><b><u>WARNING</u></b></p> <p>Before performing any maintenance that requires climbing on or under trailer, make sure that trailer handbrakes are set, and front and rear trailer support legs are lowered. Failure to observe this <i>WARNING</i> could result in severe personal injury or death.</p> <p>a Check for proper operation of handbrake lever (1). Handbrake lever should move freely throughout its entire travel.</p> <p>b Check for proper adjustment of handbrake lever (1) is properly adjusted when additional force is required to move handbrake lever beyond two-thirds distance of travel toward the applied position. If improperly adjusted, refer to step d.</p> <p>c With trailer hooked to towing vehicle, set the handbrake lever (1). Move the trailer slightly to see if the handbrakes hold the wheels. If not, proceed to step d.</p>	<p>Handbrake lever (1 or 2) is locked in the applied position.</p> <p>Handbrake lever</p>
			 <p style="text-align: right;">(TYPICAL)</p>	

**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
			<u><b>WARNING</b></u>	
			<p>If trailer is not coupled to towing vehicle, ensure that wheels are securely chocked. Failure to do so may cause trailer to roll, resulting in injury to personnel or damage to equipment.</p> <p style="text-align: center;"><b>NOTE</b></p> <p>Both handbrake levers (1) are adjusted the same way. This procedure covers one handbrake lever.</p>	
2	Before	LANDING LEG ASSEMBLY	<p>d Handbrake Lever Adjustment</p> <p>(1) Release handbrake lever (1).</p> <p>(2) Turn adjustment knob (2) clockwise to tighten or counterclockwise to loosen. If unable to adjust, or adjustment has been used up, refer to Unit Level Maintenance.</p> <p>(3) Check adjustment (Refer to step b). Repeat steps (1) and (2) as required. Repeat step c.</p> <p>a With trailer connected to towing vehicle, check landing leg assembly (3) for ease of operation</p> <p>b Check landing leg assembly (3) for proper mounting, alignment, and general condition.</p> <p>c Ensure landing leg assembly (3) can be locked in stored and support positions.</p> <p>d Ensure locking lever (4) moves freely.</p> <p>e Ensure landing leg foot or wheels (5) can be adjusted up and down.</p>	Landing leg assembly will not secure in stored position or will not support trailer.

Table 2-2. Operator Preventive Maintenance Checks and Services - continued

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:	
		Item to Check/Service			
		<p>(AN/MJQ-37 AND AN/MJQ-38)</p>	<p>(PU-798 AND PU-799)</p>	<p>(PU-798A AND PU-799A)</p>	
3	Before	REAR LEVELING-SUPPORT JACK	<ul style="list-style-type: none"> <li>a Check rear leveling-support jack (6) for ease of operation stored position or</li> <li>b Check rear leveling-support jack (6) for secure mounting</li> <li>c Ensure rear leveling-support jack can be locked in stored and support positions.</li> <li>d Ensure locking pin (7) is attached to leg with chain (8).</li> <li>e Ensure leveling-support jack foot can be adjusted up and down.</li> </ul>	<p>Rear support leg will not secure in</p> <p>will not support trailer.</p>	

Table 2-2. Operator Preventive Maintenance Checks and Services - continued

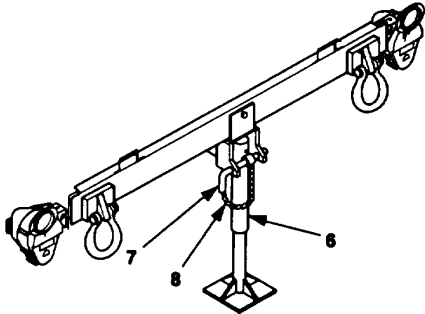
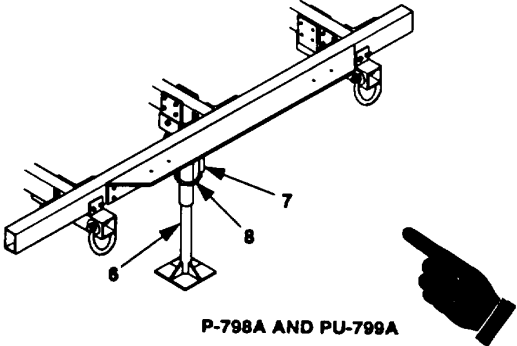
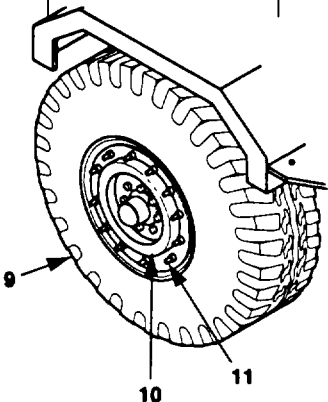
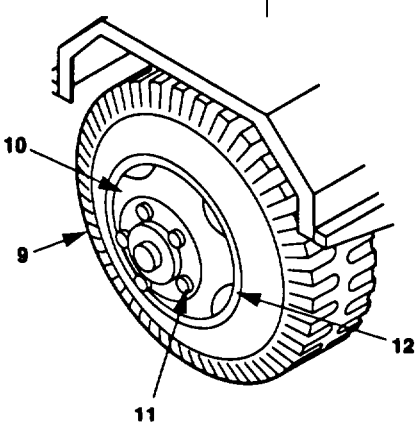
Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:	
		Item to Check/Service			
4	Before	 		<p>Check that following accessories are not missing or damaged:</p> <p>Auxiliary fuel hose(s) (stored in storage box inside right access door under control box on generator).</p> <p>Fire extinguisher(s), check seal (stored in fire extinguisher bracket on fender) broken.</p> <p>Check accessory box for damage or missing parts.</p> <p style="text-align: center;"><b>NOTE</b></p> <p>Remaining accessories are stored in accessory box.</p> <ul style="list-style-type: none"> <li>Container adapter</li> <li>Ground rod</li> <li>Hammer, 8 lb</li> <li>Load terminal wrench</li> <li>Slide hammer</li> <li>Ground cable</li> </ul>	<p>Fire extinguisher is missing, seal is</p>
		ACCESSORIES			

Table 2-2. Operator Preventive Maintenance Checks and Services - continued

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
5	Before	TIRES	<p>a Check tires (9) for cuts, bruises, bulges, or unusual tread wear. Remove any foreign objects from between treads.</p> <p>b Check tire pressure when tires are cool, as follows:</p> <p style="text-align: center;">Power Plant Power Unit                      AN/MJQ-37 PU-798                      AN/MJQ-38 PU-799                      PU-798A                      PU-799A</p> <p>Highway      35 psi      35 psi                      (241.3 kPa) (241.3 kPa)</p>	<p>One tire is missing or unserviceable.</p> <p>Tire will not hold air pressure.</p>
			<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>(PU-798 AND PU-799) (PU-798A AND PU799A)</p> </div> <div style="text-align: center;">  <p>(AN/MJO-37 AND AVMJQ-38)</p> </div> </div>	
6	Before	WHEELS	<p>a Check wheels (10) for damage</p> <p>b Check if stud nuts (11) are loose or missing</p>	<p>Wheel is damaged.</p> <p>One stud nut is loose or missing.</p>
			<p style="text-align: center;"><b><u>WARNING</u></b></p> <p>Do not attempt to seat a locking when tire is inflated. Improperly seated locking could fly off. Serious injury or death will result.</p>	<p>c Model AN/MJQ-37 and AN/MJQ-38 only, check for proper mounting of wheel assembly locking (12).</p>

**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
7	Before	DRAWBAR RING	Check drawbar ring (13) for secure mounting and obvious damage	Ring is loose or bent.
8	Before	INTERVEHICULAR CABLE	a. Check intervehicular cable (14) for cuts and breaks	Cable is severed or missing.
9	Before	SAFETY CHAINS	b. Open protective cover (15) broken, missing, and burnt pins (16). Check safety chains (17) for secure mounting and obvious damage	Inspect for Chain is missing or unsecured.
10	Before	AIR HOSE AND COUPLER (AN/MJQ-37 AND AN/MJQ-38 ONLY)	a. With trailer hooked to towing vehicle, check air hose (18) for leaks, cuts, and abrasions. show. b. Check coupler body (19) for damage Check if seal (20) is missing or damaged	Air leaks are found or hose is cut deep enough for cords to  Coupler body is cracked or broken. Seal is missing.

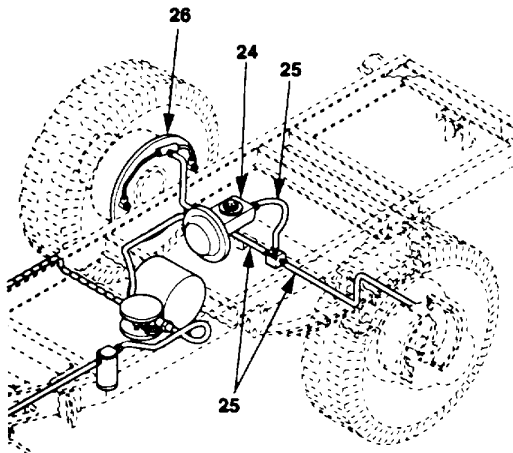


**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

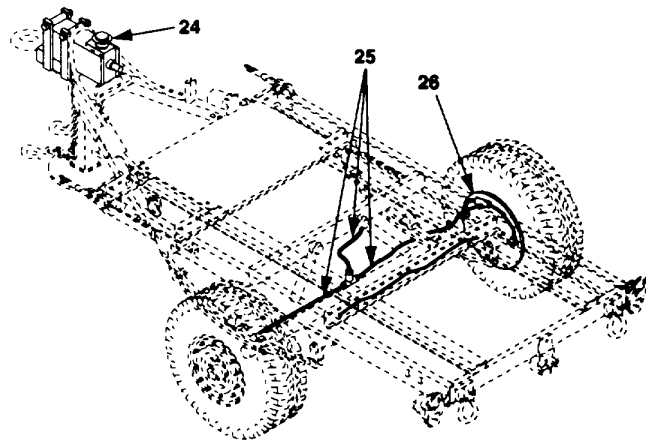
Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
11	Before	FENDERS AND PLATFORMS	Check for damaged, loose, or missing hardware.	Lights are not serviceable.
12	Before	LIGHTS AND REFLECTORS	<p>a Check for obvious damage or looseness of lights, lenses, and reflectors</p> <p style="text-align: center;"><b>NOTE</b></p> <p>An assistant is required while checking the brake lights.</p> <p>b Connect the intervehicular cable (21) to the towing vehicle.</p> <p>c Operate the vehicle light switch through all settings and check the lights (22).</p> <p>d Check for damage and presence of reflectors (23).</p>	

**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
13	Before	SWITCH BOX ASSEMBLY (AN/MJQ-37 AND AN/MJQ-38 ONLY)	<ul style="list-style-type: none"> <li>a Check for loose or missing mounting hardware.</li> <li>b Check for damaged indicator lights.</li> <li>c Check hinges and clamping catches.</li> <li>d Check for loose or damaged switches.</li> <li>e Check output terminals and connectors for damaged or missing hardware</li> </ul>	<p>Two or more mounting bolts missing.</p> <p>Indicator lights are damaged.</p> <p>Switches loose or damaged.</p> <p>Output terminals or connectors will not properly secure load cables.</p>
14	Before	HYDRAULIC BRAKES	Check for leakage of brake fluid from master cylinder (24), hydraulic brake lines and fittings (25), and backing plates (26).	Brake system any leak.



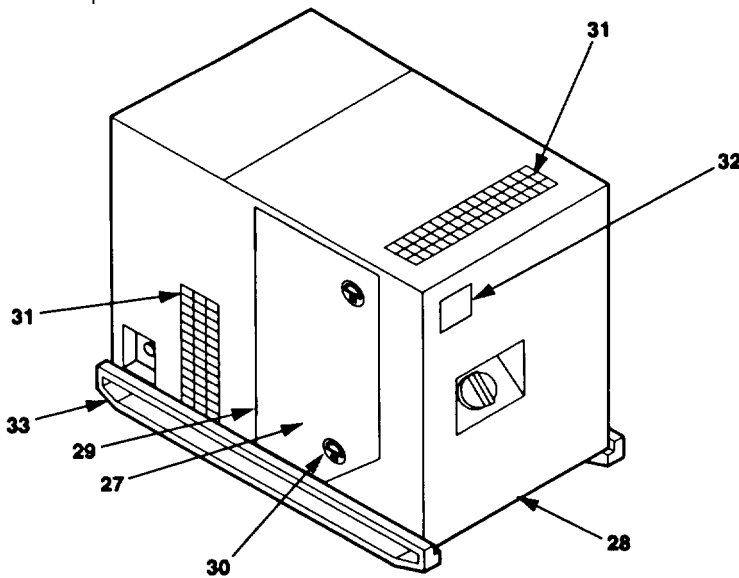
(AN/MJQ-37 AND AN/MJQ-38)



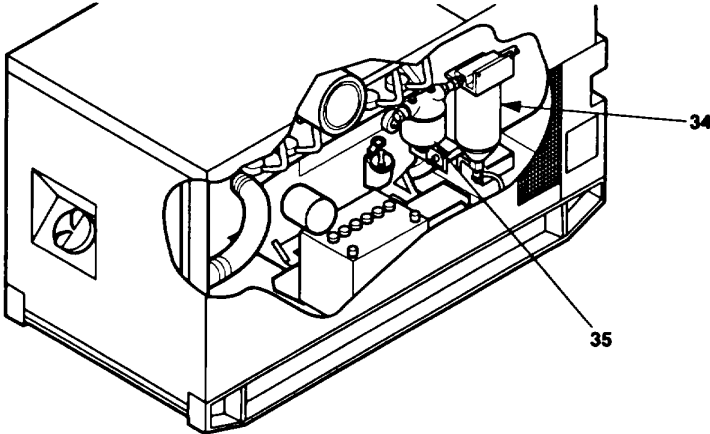
(PU-798 AND PU-799)  
■ (PU-798A AND PU-799A)

**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
		<b><u>GENERATOR SET ASSEMBLY</u></b>		
<p><b>NOTE</b></p> <p>If the equipment must be kept in continuous operation, check and service only those items that can be checked and serviced without disrupting operations. Complete all checks and services when equipment is shut down.</p>				
15	Before	HOUSING	<p>a Check doors (27), panels (28), hinges (29), and latches (30) for damaged, loose, or corroded items.</p> <p>b Inspect air intake and exhaust grills (31) for debris.</p> <p style="text-align: center;"><b>NOTE</b></p> <p style="text-align: center;">Check all data plates.</p>	Cannot secure door.
16	Before	IDENTIFICATION PLATES	Check to ensure identification plates (32) are secure and legible.	Skid base is cracked or shows signs of structural damage.
17	Before	SKID BASE	Inspect skid base (33) for cracks and corrosion.	

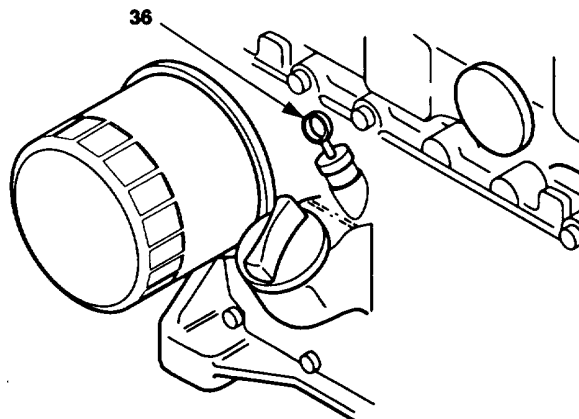
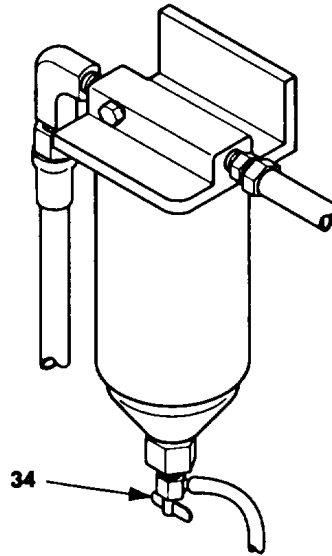


**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
18	Before	ACOUSTICAL MATERIAL	<p>Ensure acoustical materials, located in the grill areas and under the engine, are secure, not damaged, or missing.</p> <p style="text-align: center;"><b><u>WARNING</u></b></p> <p>With any access door open, the noise level of this generator set when operating could cause hearing damage. Hearing protection must be worn when working near the generator set while running.</p> <p style="text-align: center;"><b><u>WARNING</u></b></p> <p>The fuels used in this generator set are highly explosive. Do not smoke or use open flame when performing maintenance. Flames and explosion can occur resulting in severe personal injury or death.</p>	
19	Before	ENGINE ASSEMBLY	<p>Check for loose or damaged hardware.</p> <div style="text-align: center;">  <p>The diagram shows an exploded view of the engine assembly. Callout 34 points to the fuel filter/water separator, and callout 35 points to the fuel filter. The engine is shown in a cutaway view, revealing internal components like the fuel system and engine block.</p> </div>	
20	Before	FUEL SYSTEM	<p>Inspect for leaks, damaged, loose, or missing hardware</p>	<p>Any fuel leaks, damaged, loose, or missing parts. Any fuel leaks.</p>
21	Before	FUEL FILTER/WATER SEPARATOR	<p>a Inspect fuel filter/water separator (34) and fuel filter (35) for leaks, proper mounting, cracks, damage, or missing parts.</p>	

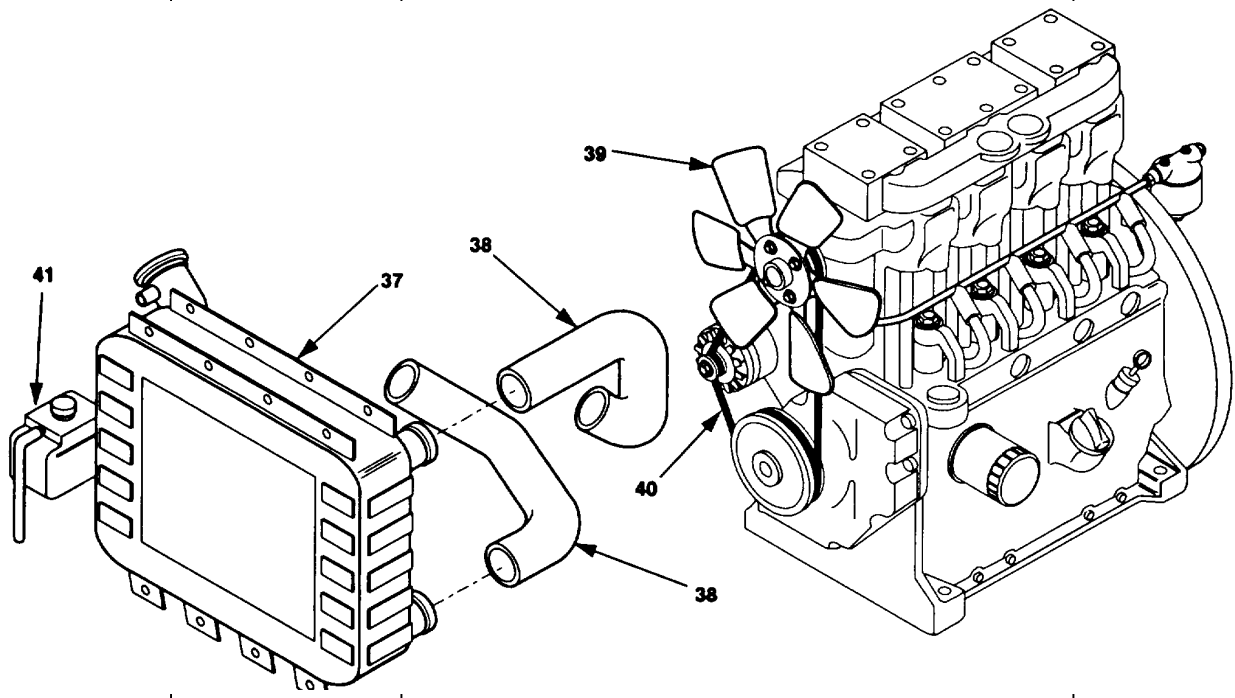
**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
		FUEL FILTER/WATER SEPARATOR (continued)	b Drain water from fuel filter/water separator (34).	
22		SYSTEM	<p>damaged, loose, or missing parts</p> <p>b Check oil level (36)</p> <p>c Check engine oil for contamination</p>	<p>leaks, damaged, loose, or missing parts.</p> <p>Add as necessary.</p> <p>Engine oil shows signs of contamination.</p>



**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
<p><b><u>WARNING</u></b></p> <p>Cooling system operates at high temperatures. Personal injury or death from burns or scalding can result from contact with high pressure steam and/or liquid.</p>				
23	Before	RADIATOR	Check radiator (37) for leaks, damaged, or missing parts	Class III leaks. Radiator cap missing.
24	Before	HOSES	Check hoses (38) for leaks and cracks	Class III leaks.
25	Before	COOLING FAN	Check fan (39) for damage or looseness	Damaged or loose.
26	Before	FAN BELT	Inspect belt (40) for cracks, fraying, or looseness.	Broken belt.



**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
27	Before	OVERFLOW BOTTLE	Check overflow bottle (41) for leaks or missing parts	Class III leaks. Check coolant level.
<p><b><u>WARNING</u></b></p> <p>Exhaust discharge contains deadly gases. DO NOT operate generator set in enclosed areas unless exhaust discharge is properly vented outside. Severe personal injury or death due to carbon monoxide poisoning could result.</p>				
28	Before	EXHAUST SYSTEM	Check muffler (42) for leaks and exhaust system for corrosion, damaged, or missing parts.	Muffler or exhaust system damaged or leaking.
29	Before	AIR CLEANER ASSEMBLY	<p>a Inspect air cleaner assembly (43) and piping (44) for loose or damaged connections.</p> <p>b Inspect restriction indicator (45) for clogged element. If indicator shows red, notify next higher level of maintenance.</p>	<p>Loose or missing parts.</p> <p>Clogged element is indicated or piping and connections are loose.</p>

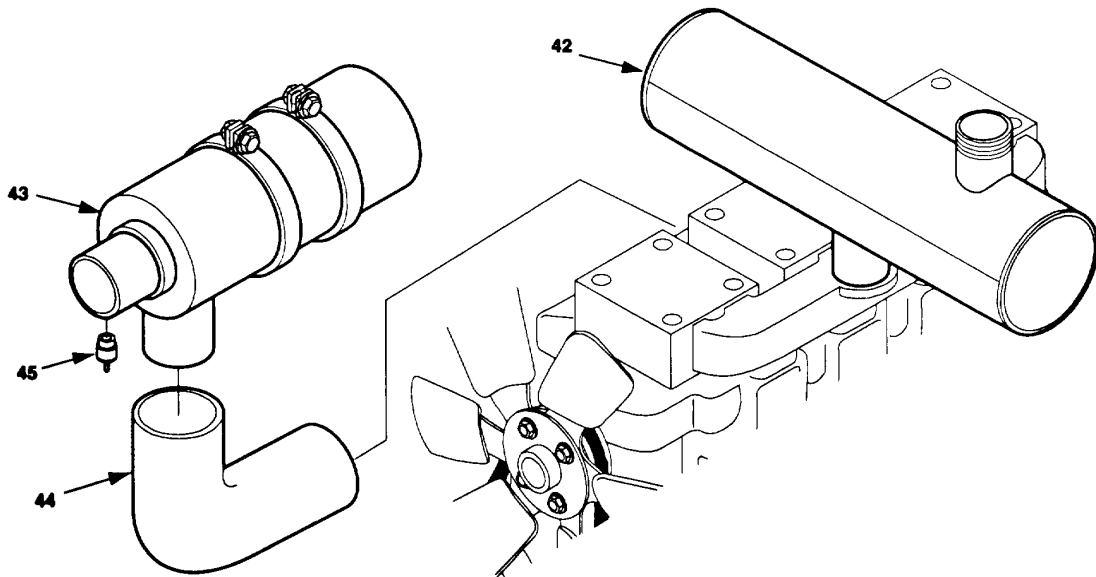


Table 2-2. Operator Preventive Maintenance Checks and Services - continued

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
33	Before	CONTROL BOX HARNESS	Check inside control box for loose or damaged wiring	Loose or damaged wiring.
34	Before	GROUND ROD CABLE AND CONNECTIONS	<ul style="list-style-type: none"> <li>a Inspect for damage, corrosion, and loose connections.</li> <li>b Inspect ground rod and cable for loose connections, breaks, damage and corrosion.</li> </ul>	Cable is missing or damaged.
35	During	TRAILER OPERATION	<ul style="list-style-type: none"> <li>a. Be alert for any unusual noises while towing the trailer. Stop and investigate any unusual noises.</li> <li>b. Ensure that the trailer is tracking/following correctly behind towing vehicle with no side pull.</li> </ul>	
36	During	SWITCH BOX ASSEMBLY	Check indicator lights lights are operating properly.	Ensure indicator
37	During	GENERATOR SET ASSEMBLY HOUSING	<ul style="list-style-type: none"> <li>a Check doors, panels, hinges, and clamping catches for damaged, loose, or door. corroded items.</li> <li>b Inspect air intake and exhaust grills for debris.</li> </ul>	Cannot secure



**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
<p><b><u>WARNING</u></b></p> <p>Noise level of operating generator set with any access doors open may cause hearing damage. Hearing protection should be worn to avoid hearing damage.</p> <p><b><u>WARNING</u></b></p> <p>The fuels used in this generator set are highly explosive. Do not smoke or use open flame when performing maintenance. Flames and explosion can occur resulting in severe injury or death.</p> <p><b><u>WARNING</u></b></p> <p>Exercise extreme caution when performing "During" checks inside engine compartment. Avoid contact with moving or hot engine parts. Failure to observe this <i>WARNING</i> can result in severe personal injury or death.</p>				
38	During	ENGINE ASSEMBLY	Check for loose, damaged, or missing parts.	
39	During	FUEL SYSTEM	Inspect for leaks, and damaged, loose, or missing parts	Any fuel leaks, and damaged or loose parts.
40	During	LUBRICATION SYSTEM	Inspect for leaks, and damaged, loose, or missing parts	Class III leaks, and damaged, or loose parts.
41	During	COOLING FAN	Listen for unusual noise in fan area.	
<p><b><u>WARNING</u></b></p> <p>High voltage is produced when this generator set is in operation. Improper operation could result in severe personal injury or death.</p>				

**Table 2-2. Operator Preventive Maintenance Checks and Services  
for AN/MJQ-37, AN/MJQ-38, PU-798, and PU-799 - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
<p><b><u>WARNING</u></b></p> <p>Noise level of operating generator set with any access doors open may cause hearing damage. Hearing protection should be worn to avoid hearing damage.</p> <p><b><u>WARNING</u></b></p> <p>The fuels used in this generator set are highly explosive. Do not smoke or use open flame when performing maintenance. Flames and explosion can occur resulting in severe injury or death.</p> <p><b><u>WARNING</u></b></p> <p>Exercise extreme caution when performing "During" checks inside engine compartment. Avoid contact with moving or hot engine parts. Failure to observe this warning can result in severe personal injury or death.</p>				
38	During	ENGINE ASSEMBLY	Check for loose, damaged, or missing parts.	
39	During	FUEL SYSTEM	Inspect for leaks, and damaged, loose, or missing parts.	Any fuel leaks, and damaged or loose parts.
40	During	LUBRICATION SYSTEM	Inspect for leaks, and damaged, loose, or missing parts.	Class III leaks, and damaged, or loose parts.
41	During	COOLING FAN	Listen for unusual noise in fan area.	
<p><b><u>WARNING</u></b></p> <p>High voltage is produced when this generator set is in operation. Improper operation could result in severe personal injury or death.</p>				

**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location		Procedure	Not Fully Mission Capable if:
			Item to Check/Service		
42	During	CONTROLS AND INDICATORS		Observe the following indicators and ensure they are operating properly  COOLANT TEMP. 170-200°F (77-93°C) OIL PRESSURE. 25-60 psi (172-414 kPa)  FREQUENCY 60 Hz (AN/MJQ-37, PU-798, and PU-798A); 400 Hz (AN/MJQ-38, PU-799, and PU-799A)  VOLTAGE 120-240 Vac	Frequency or AC voltmeter inoperative.
43	During	GROUND ROD CABLE AND CONNECTIONS		Inspect ground rod and cable for loose connections, breaks, damage and corrosion	Cable is missing or damaged.
44	After	HOUSING		a. Check doors, panels, hinges, and clamping catches for damaged, loose, or corroded items.  b. Inspect air intake and exhaust grills for debris.	Cannot secure doors.
45	After	IDENTIFICATION PLATES		Check to ensure identification plates are secure.	Skid base is cracked or shows signs of structural damage.
46	After	SKID BASE		Inspect skid base for cracks and corrosion	
<b><u>WARNING</u></b>					
The fuels used in this generator set are highly explosive. Do not smoke or use open flame when performing maintenance. Flames and explosion can occur resulting in severe injury or death.					
47	After	ENGINE ASSEMBLY		Check for loose, damaged, or missing hardware.	Any fuel leaks, and damaged, loose, or missing parts.
48	After	FUEL SYSTEM		Inspect fuel system for leaks, and damaged, loose, or missing hardware	

**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
49	After	FUEL FILTER/ WATER SEPARATOR	a Inspect fuel filter/water separator for leaks, cracks, damage, proper mounting, or missing parts.	Any fuel leaks.
50	After	LUBRICATION SYSTEM	b Drain water from fuel filter/water separator. a Inspect lubrication system for leaks, damaged, loose, or missing parts b Check oil level c Check engine oil for contamination	Class III leaks, damaged, loose, or missing parts. Oil level is below add level. Engine oil shows signs of contamination.
<p><b><u>WARNING</u></b></p> <p>Cooling system operates at high temperatures Personal injury or death from burns or scalding can result from contact with high pressure steam and/or liquid.</p>				
51	After	RADIATOR	Check radiator for leaks, damaged, or missing parts	Class III leaks. Radiator cap missing.
52	After	HOSES	Check hoses for leaks, or cracks	Class III leaks.
53	After	FAN BELT	Inspect belts for cracks, fraying, or looseness.	Broken belt.
54	After	OVER-FLOW BOTTLE	Check over-flow bottle for leaks or missing parts	Class III leaks. Check coolant level Coolant level is below cold line.
55	After	CONTROLS AND INDICATORS	Check all controls and indicators for damaged or missing parts	Controls or indicators damaged or missing.

**Table 2-2. Operator Preventive Maintenance Checks and Services - continued**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable if:
		Item to Check/Service		
56	After	<b>TRAILER</b> SWITCH BOX ASSEMBLY (AN/MJQ-37 AND AN/MJQ-38 ONLY)	<ul style="list-style-type: none"> <li>a Check for loose or missing hardware</li> <li>b Check for damaged indicator lights</li> <li>c Check hinges and clamping catches.</li> <li>d Check for loose or damaged switches</li> <li>e Check output terminals and connectors for damaged or missing hardware</li> </ul>	<p>Two or more mounting bolts missing.</p> <p>Indicator lights are damaged.</p> <p>Switches loose or damaged.</p> <p>Output terminals or connectors will not properly secure load cables.</p>

### Section III. OPERATION UNDER USUAL CONDITIONS

#### 2-3 ASSEMBLY AND PREPARATION FOR USE.

**2-3.1 Unpacking the Power Plants/Power Units.** Unpacking must be performed by unit level maintenance personnel.

**2-3.2 Installation.** Before the power plant/power unit is started and operated, it is towed to the worksite and positioned.

##### 2-3.2.1 Positioning Power Plant/Power Unit.

- a. Locate the trailer on as level a surface as possible. This is necessary for efficient operation of the generator set(s).

#### **WARNING**

Do not disconnect trailer from towing vehicle before brakes are set and front landing leg/support leg are lowered. Failure to observe this *WARNING* could result in severe personal injury from trailer tipping or rolling.

- b. Using the two handbrake levers, set trailer brakes securely to prevent any movement.
- c. Refer to TM 9-2330-202-14&P for uncoupling PU-798 or PU-799 trailer from towing vehicle, TM 9-2330-392-14&P for uncoupling PU-798A or PU-799A trailer from towing vehicle, and TM 9-2330-213-14&P for uncoupling AN/MJQ-37 and AN/MJQ-38 trailer from towing vehicle.
- d. Adjust front landing leg using elevation crank to level the trailer.
- e. Pull out pin (1, figure 2-4) that secures rear leveling-support jack (2) in travel position.

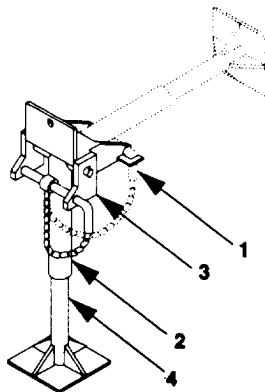


Figure 2-4. Rear Leveling-Support Jack.

- a. Remove ground rod, grounding strap, and slide hammer (figure 2-6) from accessory storage box. Perform assembly steps (1) through (4).

#### **WARNING**

Impact disk must be tightened to end of threads on rod. Also, lock washer and nut must be tightened firmly against impact disk. Failure to observe this *WARNING* could result in severe personal injury and/or death and damage to the equipment.

- f. Pull rear leveling-support jack (2) down. Insert pin (1) in bracket (3) to secure rear leveling-support jack (2) in down position.
- g. Turn leg base (4) until it makes firm contact with ground.

**2-3.2.2 External Fuel Line Connection.** Each generator set has provisions for obtaining fuel from an external source, such as a 5-gallon fuel can or a 55-gallon diesel fuel container. This enables operation for long intervals without frequent refilling of the fuel tank. To use an external fuel source:

**WARNING**

The fuel in this generator set is highly explosive. Do not smoke or use open flame when performing maintenance. Flames and explosion could result in severe personal injury or death.

- a. Place the external fuel source (2, figure 2-5) several feet, but no more than 25 feet, away from the generator set.

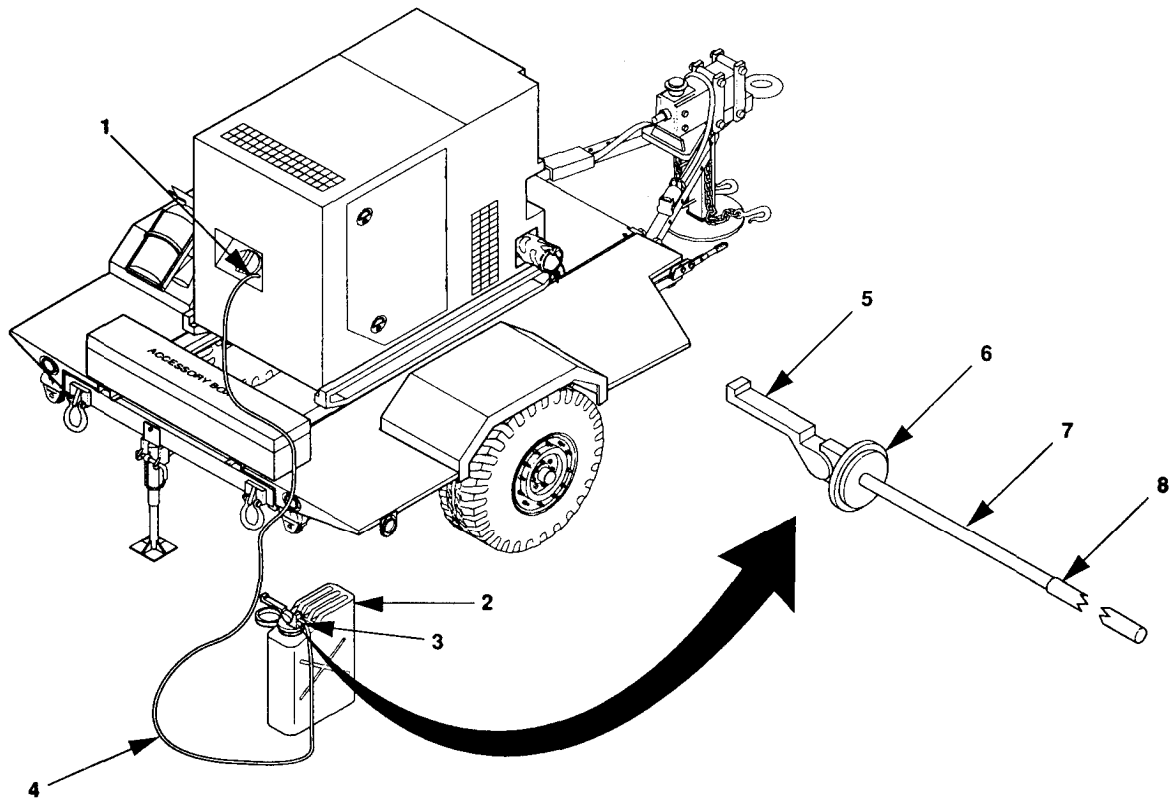


Figure 2-5. Auxiliary Fuel (Typical).

- b. Remove the container adapter (3) from the accessory storage box. If disassembled, remove all components. The components are the assembled clamp and head (5 and 6), a fuel pickup tube (7), and an extension pipe (8). The extension pipe is not needed if the external fuel source is a 5-gallon fuel can (2).

**NOTE**

Make sure that all components are clean.

- c. Thread the fuel pickup tube (7) into the head (6). If the external fuel source is a 55-gallon container, thread the extension pipe (8) onto the fuel pickup tube (7).
- d. Remove the auxiliary fuel hose (4) from its storage location. It is stored in a compartment below the generator set control panel, behind the bottom-right access door.
- e. Thread one end of the auxiliary fuel hose (4) onto the fitting on the container adapter (3). Tighten the connection.
- f. Connect the free end of the auxiliary fuel hose (4) to the generator set external fuel supply connection (1). The connection is located beside the generator set fuel tank filler neck. Tighten the connection.
- g. Insert the container adapter (3) into the external fuel source (2). Secure the container adapter by pressing down on the handle of the clamp (5).

**WARNING**

Never attempt to start the generator set if it is not properly grounded.  
Failure to observe this warning could result in severe personal injury or death by electrocution.

**2-3.3 Grounding of Generator Set.** Ground the equipment in accordance with Army Field Manual FM 20-31. Typical ground rod installations are shown in figure 2-7. If a ground rod is used, install and connect it as follows:

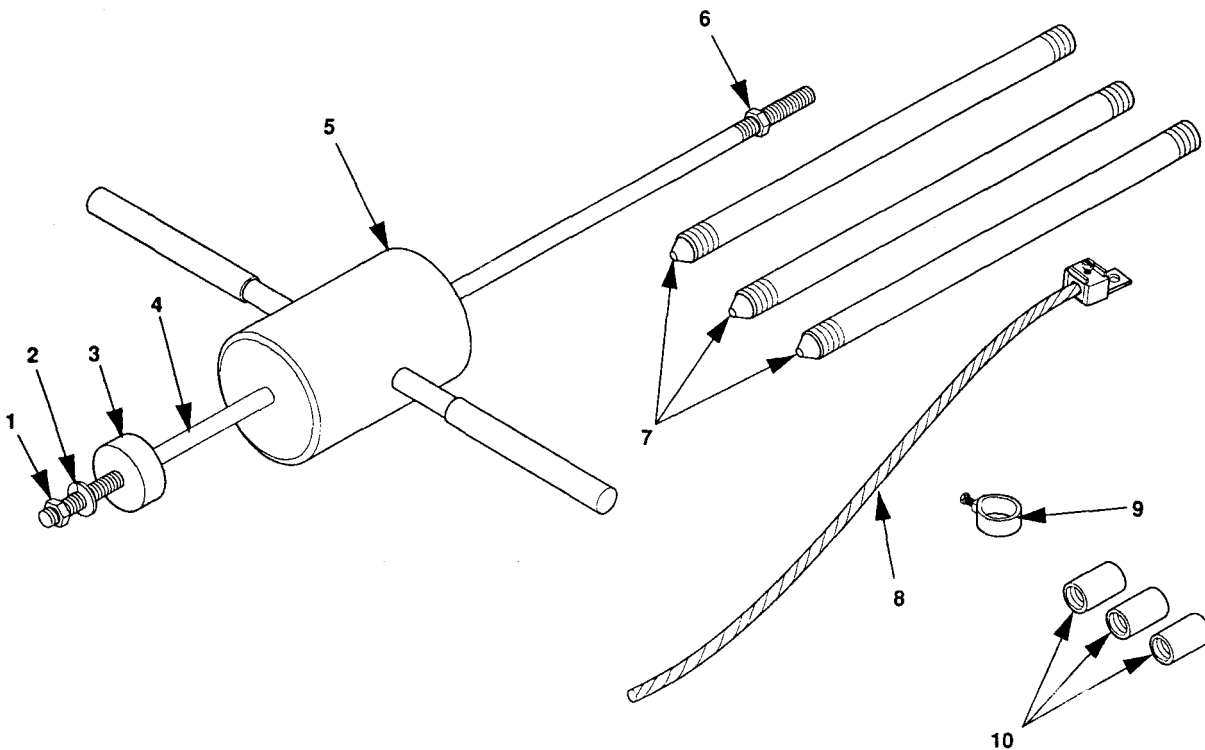


Figure 2-6. Ground Rod and Slide Hammer.



**NOTE**

The terminal lug supplied with the ground rod is too small. Use additional ground strap provided with power unit.

- (1) Install impact disk (3) on rod (4). Tighten impact disk to end of threads on rod (4).
  - (2) Install lock washer (2) and nut (1). Tighten nut (1) and lock washer (2) securely against impact disk (3).
  - (3) If installed, remove nut (6).
  - (4) Position hammer (5) on rod (4). Install nut (6) and tighten to end of threads on rod (4).
- b. Connect ground rod coupling (10) to ground rod (7) and screw slide hammer into coupling (10). Make sure that slide hammer rod (4) seats on ground rod (7).
  - c. Drive ground rod into ground until coupling is just above surface.
  - d. Remove slide hammer assembly and install another section of ground rod (7).
  - e. Install another coupling (10) and the slide hammer assembly. Drive ground rod down until new coupling is just above ground surface.
  - f. Repeat steps d and e until ground rod has been driven eight feet or deeper, providing an effective ground.
  - g. Connect clamp (9) and ground cable (8) to ground rod (7) and tighten clamp screw.
  - h. Connect ground cable (8) to trailer as follows.

**NOTE**

Ground terminal on high mobility trailer is different than one used on other trailers.

- (1) If the high mobility trailer (PU-798A and PU-799A) is being used, perform steps (5) and (6). Otherwise, perform steps (2) through (4).
- (2) Remove and retain wing nut (1, figure 2-7) and flat washer (2) from trailer ground stud (4) and install ground cable terminal lug (3) to ground stud (4).
- (3) Install flat washer (2) on ground stud (4).
- (4) Install wing nut (1) on the ground stud (4) and tighten.
- (5) Loosen nut (5) on high mobility trailer ground terminal (6).
- (6) Insert wire (7) through slot of ground terminal (6) and tighten nut (5).

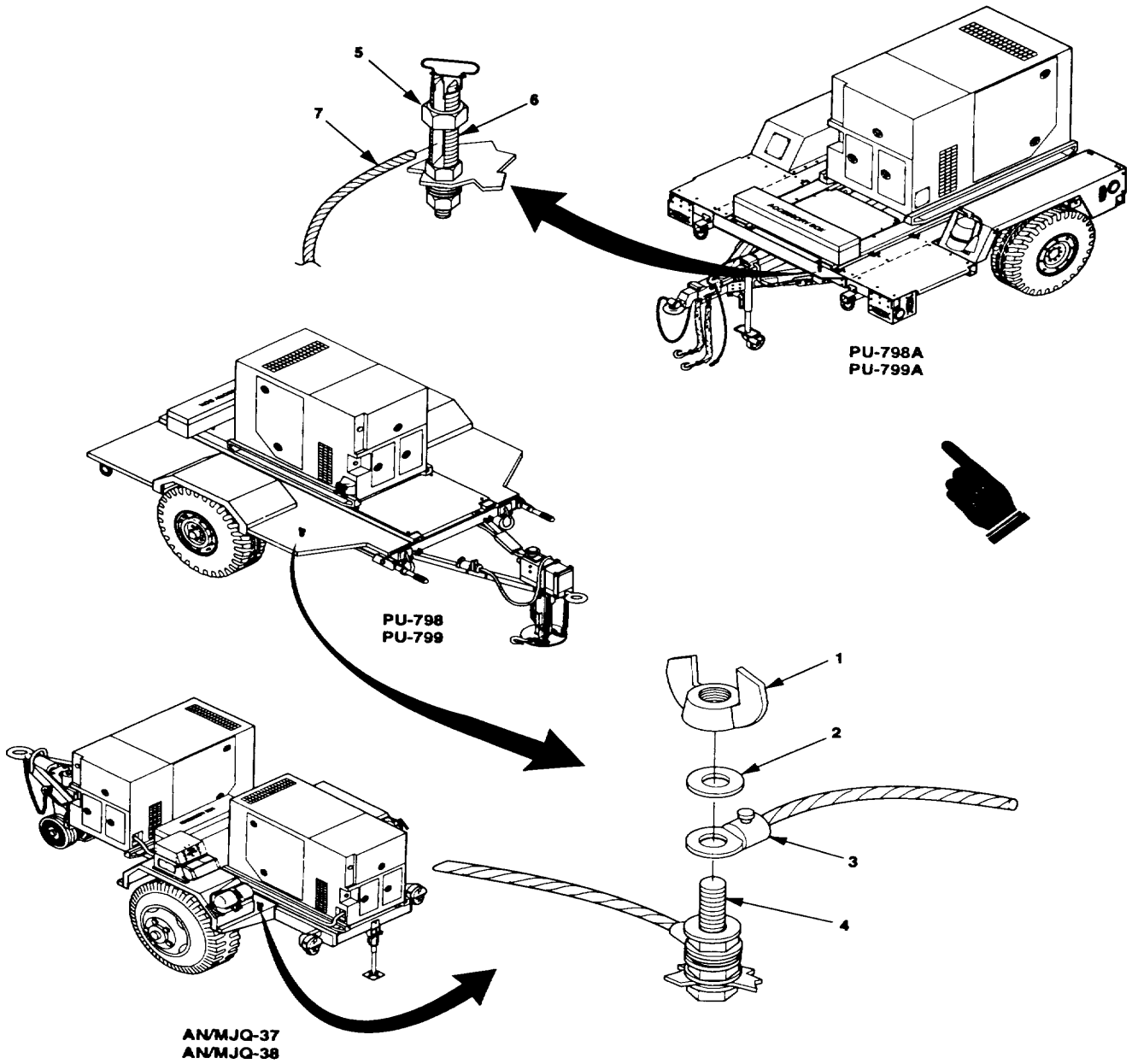


Figure 2-7. Power Plant and Power Unit Ground Connections.

i. Disassemble slide hammer as follows:

- (1) Remove nut (6, figure 2-6) from end of rod (4) and retain.
- (2) Remove hammer (5) from rod (4) and thread nut (6) on end of rod to prevent loss.
- (3) Store hammer (5) and rod (4) with assembled parts in accessory box.

### **2-3.4 Connecting Load.**

**2-3.4.1 Power Plant.** Load cables and instructions for connecting them are normally furnished with the equipment that is to be supplied with electric power. The load may be connected to the switch box (1, figure 2-8) by either of two arrangements. One way is to connect a load cable to the switch box output connector (7). The other way is to connect load cables to the switch box load terminals (3). Before connecting the load, determine voltage requirements of the system or equipment that is to receive electric power.

#### **WARNING**

Make sure generator sets are shut down before connecting load cables.  
Failure to observe this warning can cause severe personal injury or death.

#### **2-3.4.1.1 Connection to Output Connector.**

- a. Remove cap (6, figure 2-8) from output connector (7).
- b. Connect load cable to output connector (7).

#### **WARNING**

Make sure generator sets are shut down before connecting load cables.  
Failure to observe this warning can cause severe personal injury or death.

#### **2-3.4.1.2 Connection to Switch Box Load Terminals.**

- a. Release both clamping catches (4, figure 2-8) and raise load terminal cover (2).
- b. Select required output terminals from table 2-3.

#### **CAUTION**

When using single phase connections, always attempt to balance loads between terminals (do not connect all loads between one terminal and L0).  
Failure to observe this caution can result in damage to generator set.

#### **NOTE**

***In five wire configuration, ground lead will be connected to ground terminal (8).***

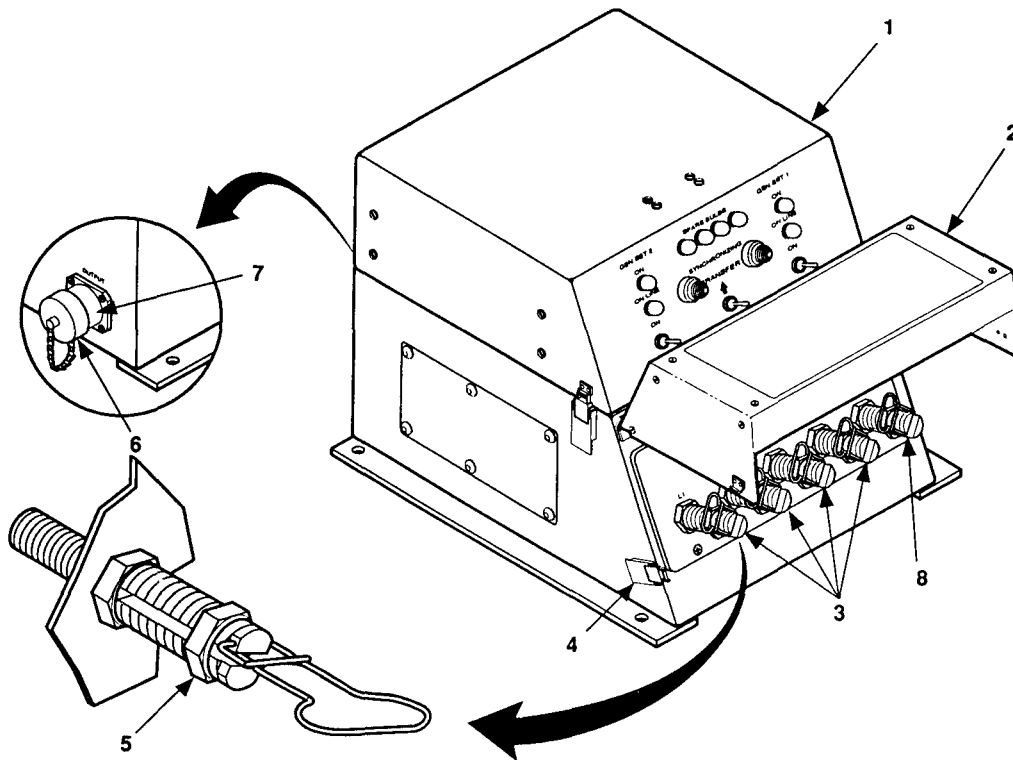


Figure 2-8. Switch Box Load Cable Connections.

Table 2-3. Load Terminal Voltage.

Generator Output	Terminals	Phase	Voltage Reading
120/208V 3PH	L1, L2 L3, L0	L1 - L2 3 PHASE L2 - L3 3 PHASE L3 - L1 3 PHASE L3 - L0 3 PHASE	208 VOLTS 208 VOLTS 208 VOLTS 120 VOLTS
120V 1PH	L3 -L0	L3 - L0 1 PHASE	120 VOLTS
120/240V 1PH	L3 - L1 L3 - L0 OR L1 - L0	L3 - L1 1 PHASE L3 - L0 1 PHASE L1 -L0 1 PHASE	240 VOLTS 120 VOLTS 120 VOLTS

- c. Using load terminal box wrench located in accessory box, loosen terminal nuts (5) on terminals (3) selected in step b.
- d. Insert ends of cables into slots of load terminal studs (3).
- e. Tighten load terminal nuts (5).

**2-3.4.2 Power Unit.** Connect load cables to generator set load terminals. Refer to operating instructions in TM 9-6115-642-10.

**2-3.5 Positioning of Fire Extinguishers.** Remove fire extinguisher(s) from bracket(s) on trailer. Locate fire extinguisher(s) on ground away from power plant/power unit.

**2-4 INITIAL ADJUSTMENTS, CHECKS, AND SELF TEST.**

Refer to table 2-2 and perform all "Before" PMCS. Refer to TM 9-6115-642-10 and perform generator set initial adjustments, checks, and self tests.

**2-5 OPERATING PROCEDURES.**

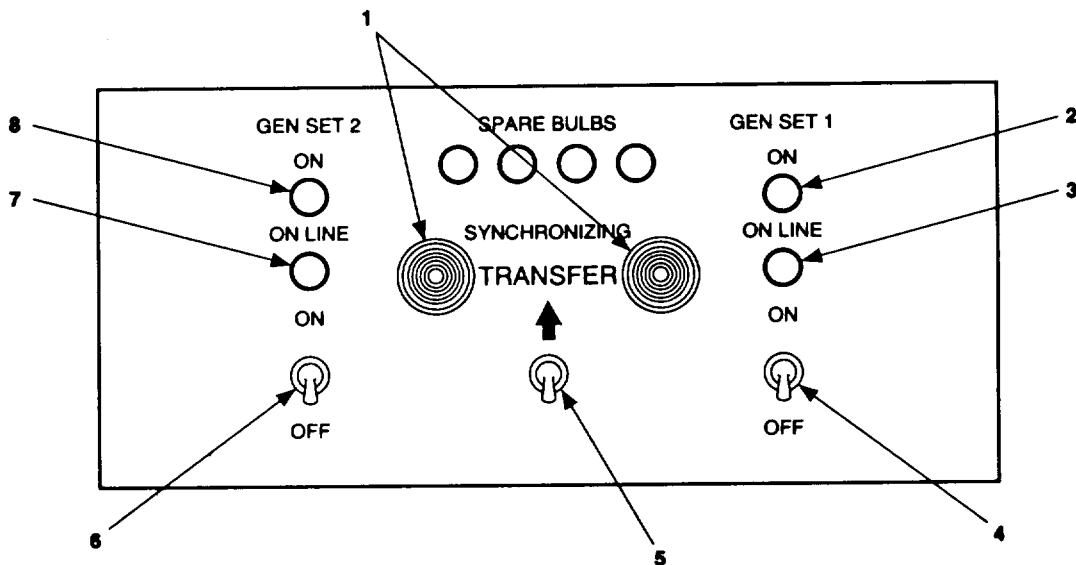
**2-5.1 Generator Set Operating Procedures.** Refer to TM 9-6115-642-10.

**2-5.2 Trailer Operating Procedures.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for PU-798A and PU-799A, and TM 9-2330-213-147P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**2-5.3 Power Plant Switch Box Operating Procedures.**

**2-5.3.1 Operating a Single Generator Set.**

- a. Perform the Preventive Maintenance Checks and Services (PMCS) listed as "Before" in table 2-2.
- b. Check that both ON/OFF switches (4 and 6, figure 2-9) on switch box are at center position.
- c. Check that TRANSFER switch (5) on switch box is at bottom position.



*Figure 2-9. Power Plant Operation.*

- d. Refer to TM 9-6115-642-10 and:
  - (1) Start one of the generator sets.
  - (2) Use generator set VOLTAGE adjustable rheostat to adjust voltage to required value.
  - (3) Using generator set frequency adjust control, adjust frequency to required value.
  - (4) Set AC CIRCUIT INTERRUPTER switch on the operating generator set to CLOSED position.
- e. Check switch box to make sure that GEN SET ON light (8 or 2) is lit for generator set just started.
- f. Set switch box ON/OFF switch (6 or 4) below lit GEN SET ON light to ON position.
- g. Check that switch box ON light (8 or 2) and ON LINE light (7 or 3) for operating generator set are both lit. The generator set is now supplying power to the connected load.
- h. Observe frequency meter and readjust to proper frequency for load if required.
- i. Refer to table 2-2 and perform generator set "During" PMCS.

### **2-5.3.2 Load Transfer.**

- a. For the generator set that is not operating:
  - (1) Refer to table 2-2 and perform the "Before" PMCS.
  - (2) Check that switch box ON/OFF switch (6 or 4) is at center position.
  - (3) Check that switch box TRANSFER switch (5) is at bottom position.
  - (4) Refer to TM 9-6115-642-10 and:
    - (a) Start the generator set.
    - (b) Use generator set VOLTAGE adjustable rheostat to adjust voltage to required value.
    - (c) Using generator set frequency adjust control, adjust frequency to required value.
    - (d) Set AC CIRCUIT INTERRUPTER switch to CLOSED position.
  - (5) Check switch box controls and indicators (figure 2-9) to ensure that:
    - (a) GEN SET ON light (8 or 2) and ON LINE light (7 or 3) is lit for generator set that has been supplying electric power to the load.
    - (b) GEN SET ON light (8 or 2) for generator set just started is lit.
  - (6) Move switch box TRANSFER switch (5) in the direction of the arrow. All SYNCHRONIZING lights (1 and 9) should be going from bright to dark at the same time. If SYNCHRONIZING lights do not begin to function, report problem to next higher level of maintenance.

- (7) Refer to TM 9-6115-642-10 and:
- (a) Slowly increase frequency of generator set that was just started. Continue until SYNCHRONIZING lights (1 and 9) go from bright to dark together at a rate of one or more times per second.
  - (b) Slowly decrease frequency of generator set that was just started. Continue until SYNCHRONIZING lights (1 and 9) blink together at a rate of once every three to four seconds.
- (8) When SYNCHRONIZING lights (1 and 9) are dark, hold the switch box ON/OFF switch (6 or 4 for the generator set that was just started to ON position until ON light remains on. Release the switch. The ON LINE light for the first generator set that was running should immediately go out.
- (9) Check switch box lights, as follows:
- (a) The ON LINE light (7 or 3) should be lit for the generator set that was just started.
  - (b) The ON LINE light (7 or 3) for the other generator set should be off.
- (10) If lights fail to go on or off, repeat steps (7), (8), and (9). If lights do not function properly, report the problem to the next higher level of maintenance.
- b. The second generator set is now supplying electric power to the connected load. All SYNCHRONIZING lights (1 and 9) should be dark.
  - c. Refer to TM 9-6115-642-10 and set AC CIRCUIT INTERRUPTER switch for generator set that is now offline to OPEN position.
  - d. Check that switch box ON/OFF switch (6 or 4) for the off line generator set is at center position.
  - e. Refer to TM 9-6115-642-10 and:
    - (1) Shut down generator set that is now offline.
    - (2) Using generator set VOLTAGE adjustable rheostat, adjust voltage of generator set that is now on line to the desired value.
    - (3) Using generator set frequency adjust control, adjust frequency of generator set that is now on line to desired value.
  - f. Refer to table 2-2 and perform "After" PMCS for the generator set that was shut down.
  - g. For the generator set that is now ON LINE, perform the PMCS listed as "During" in table 2-2.

### **2-5.3.3 Stopping Generator Set.**

- a. Set the switch box ON/OFF switch (6 or 4, figure 2-9) for the generator set to be stopped to OFF position.
- b. Stop the generator set in accordance with TM 9-6115-642-10.
- c. Perform the generator set PMCS listed as "After" in table 2-2.

**2-6 IDENTIFICATION AND INFORMATION PLATES.**

**2-6.1 AN/MJQ-37 Identification/Transportation Data Plate.** Refer to figure 2-10. This plate is located on front of curbside fender.

**2-6.2 AN/MJQ-38 Identification/Transportation Data Plate.** Refer to figure 2-11. This plate is located on front of curbside fender.

**2-6.3 PU-798 Identification/Transportation Data Plate.** Refer to figure 2-12. This plate is located on rear of curbside fender.

**2-6.4 PU-799 Identification/Transportation Data Plate.** Refer to figure 2-13. This plate is located on rear of curbside fender.

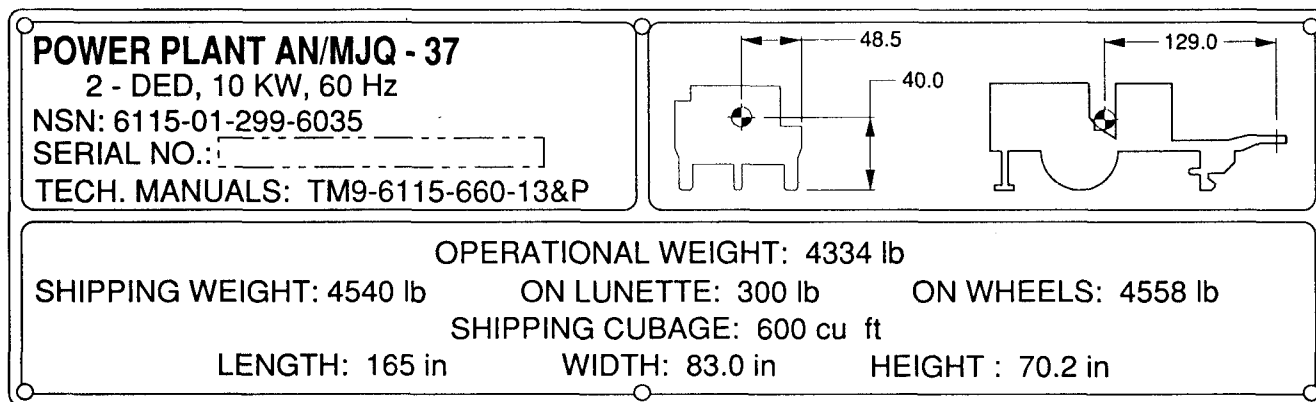


Figure 2-10. AN/MJQ-37 Identification/Transportation Data Plate.

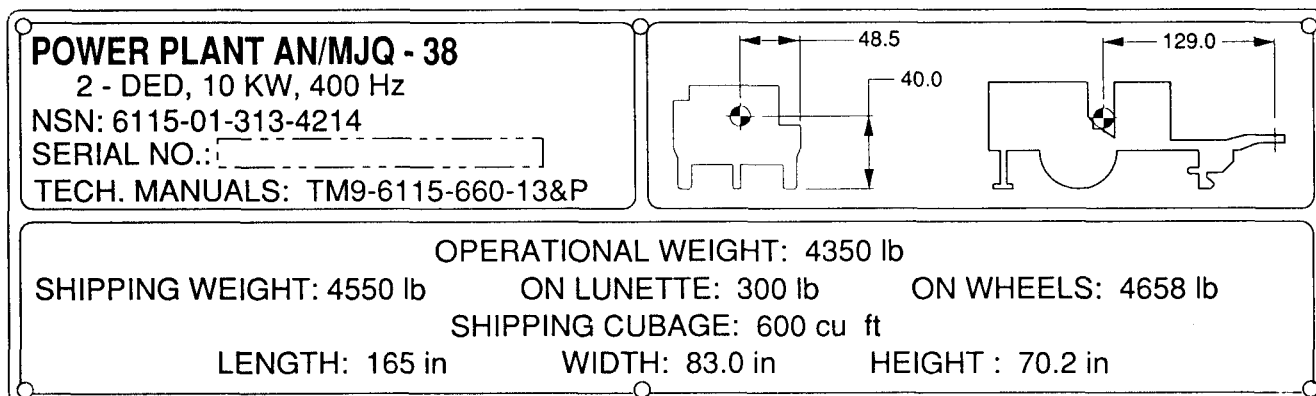


Figure 2-11. AN/MJQ-38 Identification/Transportation Data Plate.



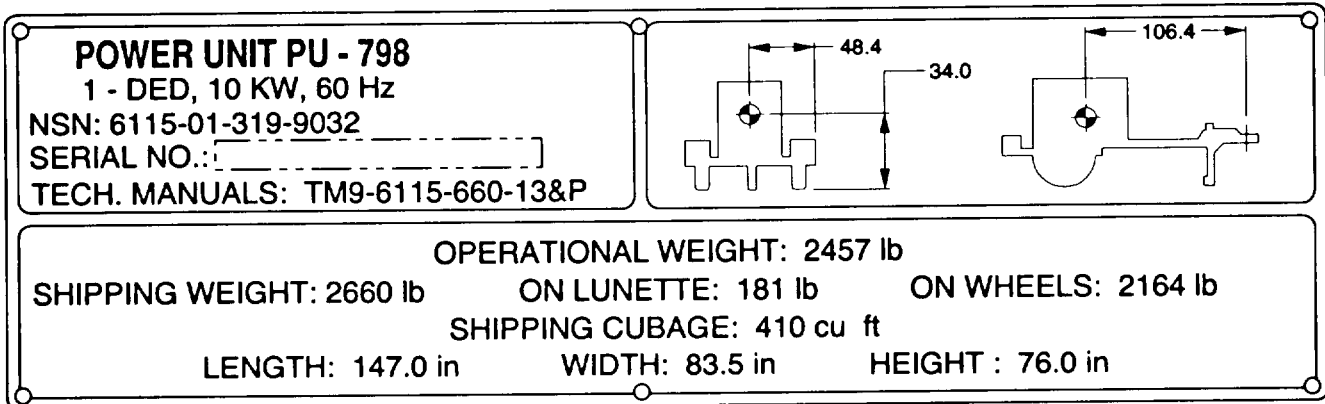


Figure 2-12. PU-798 Identification/Transportation Data Plate.

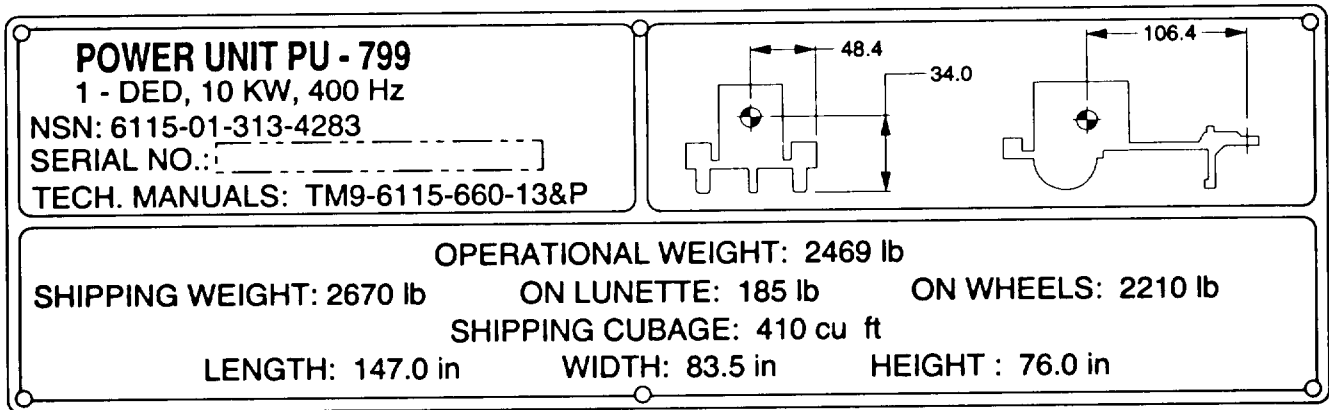


Figure 2-13. PU-799 Identification/Transportation Data Plate.

**2-6.5 Power Plant Instruction Plate.** Refer to figure 2-14. This plate covers operating procedures for power plants AN/MJQ-37 and AN/MJQ-38. It is located on the top of the switch box load terminal cover.

**2-6.6 PU-798A Shipping Data/Identification Plate.** Refer to figure 2-14.1. This plate is located on front of curbside fender.

**2-6.7 PU-799A Shipping Data/Identification Plate.** Refer to figure 2-14.2. This plate is located on front of curbside fender.

**2-6.8 PU-798A and PU-799A Trailer Chassis Identification Plate.** Refer to figure 2-14.3. This plate is located on curbside tow bar.

**POWER PLANT OPERATING PROCEDURES**

**BEFORE OPERATION**

1. CHECK/SERVICE BOTH GEN SETS BEFORE OPERATING. CONNECT "GND" TERMINAL TO GROUND.

**OPERATING PROCEDURES**

1. START EITHER GEN SET. ADJUST VOLTAGE AND FREQUENCY. PUT "CKT BKR" SWITCH IN "CLOSED" POSITION.
2. SWITCH BOX "GEN SET" LIGHT SHOULD LIGHT. IF NOT, REFER TO TM.
3. AT SWITCH BOX, PLACE "ON-OFF SWITCH TO "ON". "ON LINE" LIGHT SHOULD LIGHT. IF NOT, REFER TO TM.

**LOAD TRANSFER PROCEDURES, ONE SET OPERATING AS ABOVE.**

1. START SECOND SET, ADJUST VOLTAGE AND FREQUENCY TO MATCH OPERATING SET.
2. ON SECOND SET, PLACE "CKT BKR" SWITCH IN THE 'CLOSED" POSITION.
3. AT SWITCH BOX, "GEN SET" LIGHT FOR SECOND SET SHOULD LIGHT. IF NOT REFER TO TM.
4. AT SWITCH BOX, PLACE TRANSFER' SWITCH TO 'TRANSFER'. BOTH "SYNCHRONIZING" LIGHTS SHOULD BE GOING FROM BRIGHT TO DARK TOGETHER.
5. ON SECOND SET, INCREASE FREQUENCY UNTIL 'SYNCHRONIZING' LIGHTS BLINK TOGETHER ONE OR MORE TIMES PER SECOND. THEN DECREASE FREQUENCY UNTIL LIGHTS BLINK TOGETHER ONCE EVERY 34 SECONDS.
6. AT SWITCH BOX, WHEN BOTH LIGHTS ARE DARK, PLACE 'ON-OFF" SWITCH FOR SECOND SET TO "ON".
7. 'ON LINE' LIGHT FOR SECOND SET SHOULD LIGHT, 'ON-LINE' LIGHT FOR OTHER SET SHOULD GO OFF. (SECOND SET IS NOW SUPPLYING POWER AND "SYNCHRONIZING" LIGHTS SHOULD BE DARK).
8. AT FIRST SET, PLACE 'CKT BKR' SWITCH TO THE "OPEN' POSITION AND SHUT THE SET DOWN.

*Figure 2-14. Power Plant Instruction Plate.*

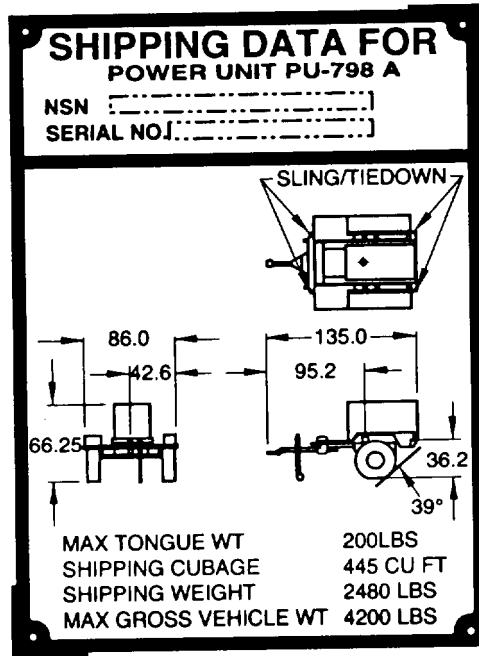


Figure 2-14. 1. PU-798A Shipping Data/identification Plate.

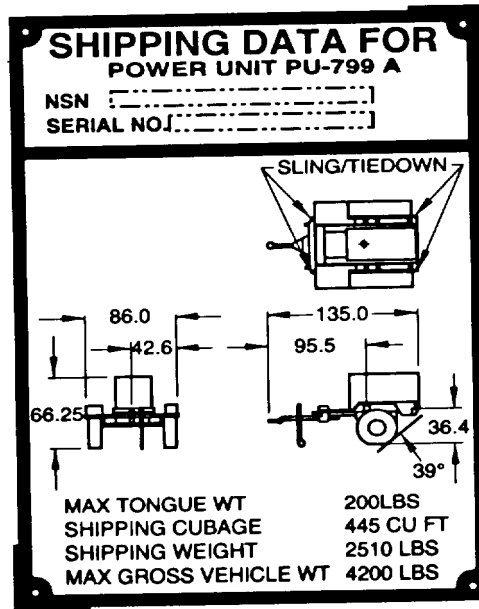


Figure 2-14.2. PU-799A Shipping Data/identification Plate.

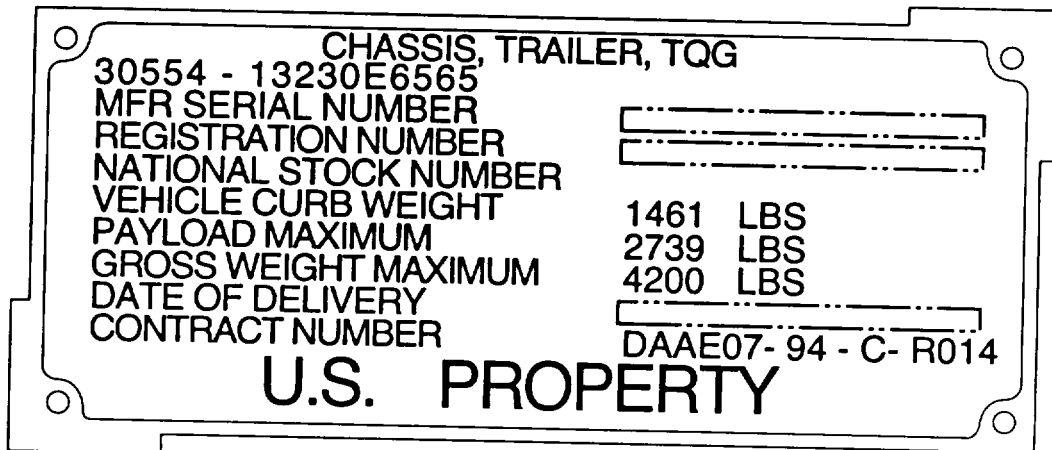


Figure 2-14.3. PU-798A and PU-799A Trailer Chassis Identification Plate.

## 2-7 PREPARATION FOR MOVEMENT.

**2-7.1 Shut Down Power Plant/Power Unit.** If power plant/power unit is operating, stop generator set as follows:

**2-7.1.1 Power Plant.** Refer to paragraph 2-5.3.3.

**2-7.1.2 Power Unit.**

- a. Stop the generator set in accordance with TM 9-6115-642-10.
- b. Perform the generator set PMCS listed as “After” in table 2-2.

**2-7.2 Disconnect Load Cables.**

### **WARNING**

Make sure generator sets are shut down before connecting load cables.  
Failure to observe this warning can cause severe personal injury or death.

- a. For Power Unit configuration, refer to TM 9-6115-642-10 and disconnect load cables.
- b. For Power Plant configuration where load cable is connected to switch box output connector, perform the following.
  - (1) Disconnect load cable from switch box output connector (6, figure 2-8).
  - (2) Install cap (5) on output connector (6).
  - (3) Store load cable with equipment that was being supplied with electric power.
- c. For Power Plant configuration where load cables are connected to switch box load terminals, perform the following:
  - (1) Release both clamping catches (4) and raise load terminal cover (2).
  - (2) Using load terminal box wrench, loosen terminal nuts (1).
  - (3) Disconnect load cables from switch box load terminals (3).
  - (4) Store load cables with equipment that was being supplied with electric power.

**2-7.3 Retrieve Ground Cable and Rod.**

- a. Remove wing nut (1, figure 2-7) and flat washer (2). Remove ground cable (3) from ground stud (4). Reinstall flat washer and wing nut on ground stud.
- b. Loosen clamp (9, figure 2-6) and remove ground cable (8) from clamp.
- c. Store ground cable in accessory box.

d. Remove slide hammer components from accessory box and assemble as follows:

- (1) If installed, remove nut (6, figure 2-6) from rod (4).
- (2) Place hammer (5) on rod (4).
- (3) Install nut (6) on rod (4) and tighten to end of threads.

**WARNING**

Impact disk must be tightened to end of threads on rod. Also, lock washer and nut must be firmly tightened against impact disk. Failure to observe this warning could result in severe personal injury or death and damage to the equipment.

- (4) Check that impact disk (3) is tightened to end of threads on rod (4). Tighten as needed.
- (5) Tighten nut (1) and lock washer (2) securely against impact disk (3).

e. Remove ground rod as follows:

**CAUTION**

Slide hammer rod and ground rod must make firm contact inside ground rod coupler. If not in firm contact, ground rod, coupler and slide hammer could be damaged.

- (1) Refer to figure 2-15 and position slide hammer above ground rod coupling (3). Invert slide hammer so that end having impact disk (1) is up. Connect slide hammer rod (2) to ground rod coupling (3). Tighten so that end of rod (2) makes firm contact with end of ground rod section (4) inside coupling (3).
- (2) Use slide hammer to pull ground rod section (4) out of ground. Pull until second coupling (3) is exposed.
- (3) Disconnect slide hammer from top coupling (3).
- (4) Disconnect top ground rod section (4) from bottom coupling (3).
- (5) Remove clamp (5) from ground rod (4). Store clamp in accessory box.
- (6) Connect slide hammer rod (2) to coupling (3) on ground rod section (4) still in ground.
- (7) Use slide hammer to pull second ground rod section (4) out of ground. Pull ground rod section (4) until third coupling (3) is exposed.
- (8) Repeat steps (3) through (5) for third ground rod section (4).
- (9) Use slide hammer to pull remaining ground rod section (4) out of ground.

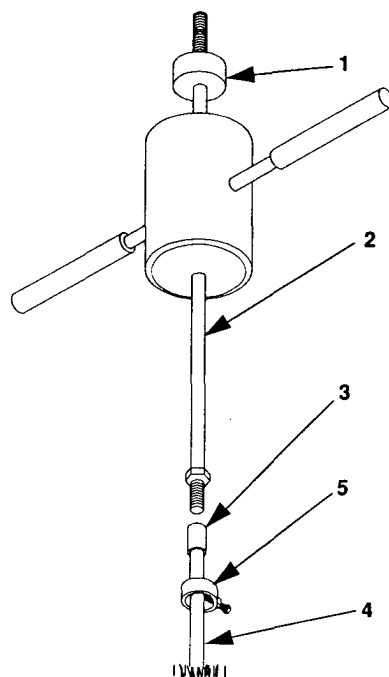


Figure 2-15. Remove Ground Rod.

- (10) Disconnect slide hammer rod (2) from ground rod coupling (3).
- (11) Remove couplings (3) from ground rod sections (4).
- f. Clean the couplings (3) and ground rod sections (4). Store cleaned items in accessory box.
- g. Partially disassemble slide hammer as follows:
  - (1) Remove nut (6, figure 2-6).
  - (2) Remove hammer (5).
  - (3) Loosely install nut (6).
- h. Return slide hammer to its storage location in accessory box.

**2-7.4 Retrieve Fire Extinguisher(s).** Retrieve fire extinguisher(s) and stow in bracket(s) on trailer.

**2-7.5 Disconnect External Fuel Source.** Disconnect auxiliary fuel hose as follows:

- a. Disconnect the auxiliary fuel hose (4, figure 2-16) from the generator set external fuel supply connection (1). Elevate the free end of the auxiliary fuel hose to drain fuel back into the external fuel source (2). Place free end of auxiliary fuel hose on a clean surface.
- b. Disconnect auxiliary fuel hose (4) from fitting on container adapter (3).
- c. Store auxiliary fuel hose in the generator set storage compartment below the generator set control panel, behind the bottom-right access door.
- d. Release the container adapter from the external fuel source by lifting the handle of the clamp (5). Remove the container adapter from the external fuel source. Close the external fuel source and load onto appropriate transportation.
- e. Store the container adapter in the accessory box.

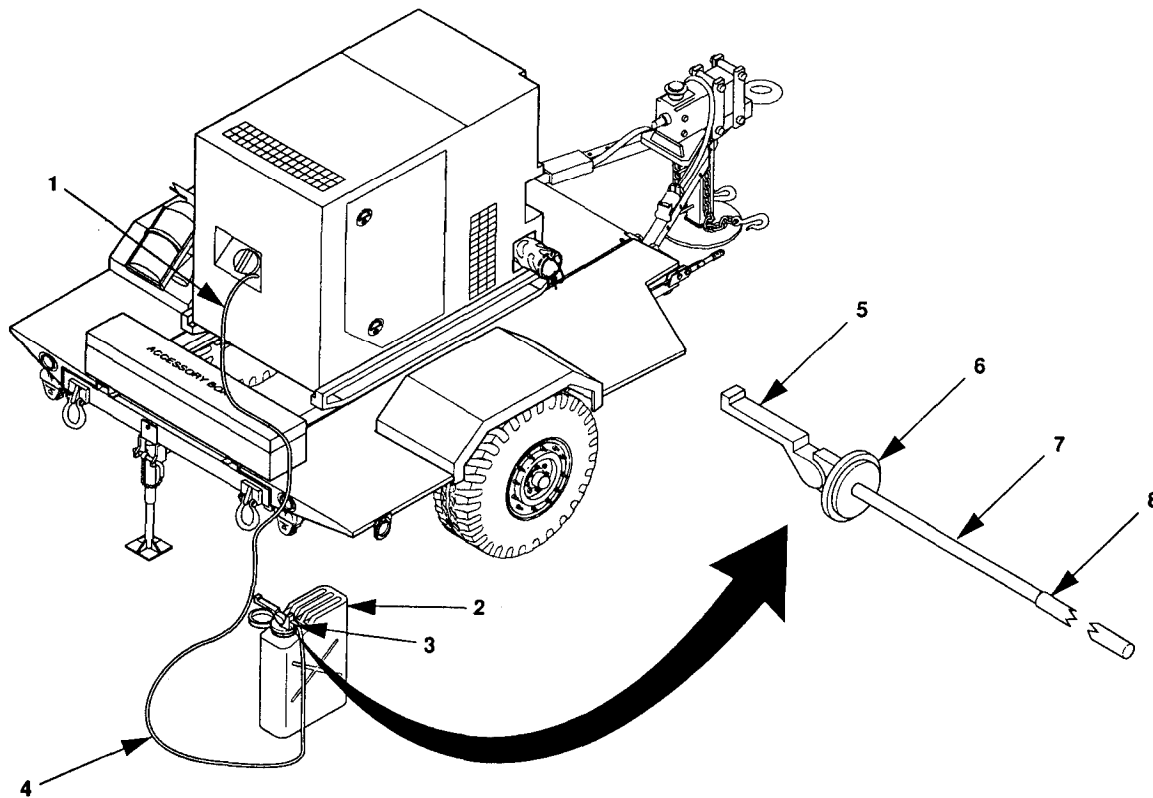


Figure 2-16. Disconnect Auxiliary Fuel (Typical).



**Section IV. OPERATION UNDER UNUSUAL CONDITIONS**

**2-8 GENERATOR SETS.**

Refer to TM 9-6115-642-10.

**2-9 TRAILER.**

Refer to TM 9-2330-202-14&P for Power units PU-798 and PU-799, TM 9-2330-392-14&P for Power Units PU-798A and PU-799A, and TM 9-2330-2 t3-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.



## CHAPTER 3

### OPERATOR MAINTENANCE

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## Section I. OPERATOR LUBRICATION

### 3-1 LUBRICATION.

Lubrication instructions for the generator set and engine are contained in LO 9-6115-642-12. Lubrication instructions for the trailers are contained in TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**Section II. TROUBLESHOOTING**

**3-2 TROUBLESHOOTING.**

**3-2.1 Generator Set.** Refer to TM 9-6115-642-10.

**3-2.2 Trailer.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**3-2.3 Power Plant.** The following symptom index lists faults associated with switch box operation. Figures 3-1, 3-2, and 3-3 provide a go/no-go flowchart of each malfunction. Each malfunction listed includes a reference to the applicable figure that contains a chart that will help you determine probable causes and corrective actions to take. The symptom index cannot list all faults that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or cannot be corrected by listed corrective actions, notify next higher level of maintenance.

**SYMPTOM INDEX**

	Troubleshooting Procedure (Figure)
ON INDICATOR LAMP FAILS TO LIGHT WITH GENERATOR SET RUNNING .....	3-1
ON-LINE INDICATOR LAMP FAILS TO LIGHT WHEN ON/OFF SWITCH IS PLACED IN ON POSITION .....	3-2
SYNCHRONIZING INDICATOR LAMPS FAIL TO LIGHT WHEN TRANSFER SWITCH IS OPERATED .....	3-3
WITH ALL INDICATOR LAMPS WORKING PROPERLY, LOAD WILL NOT TRANSFER .....	3-4
SYNCHRONIZING INDICATOR LAMPS FAIL TO OPERATE IN UNISON WHEN TRANSFER SWITCH IS OPERATED .....	3-5

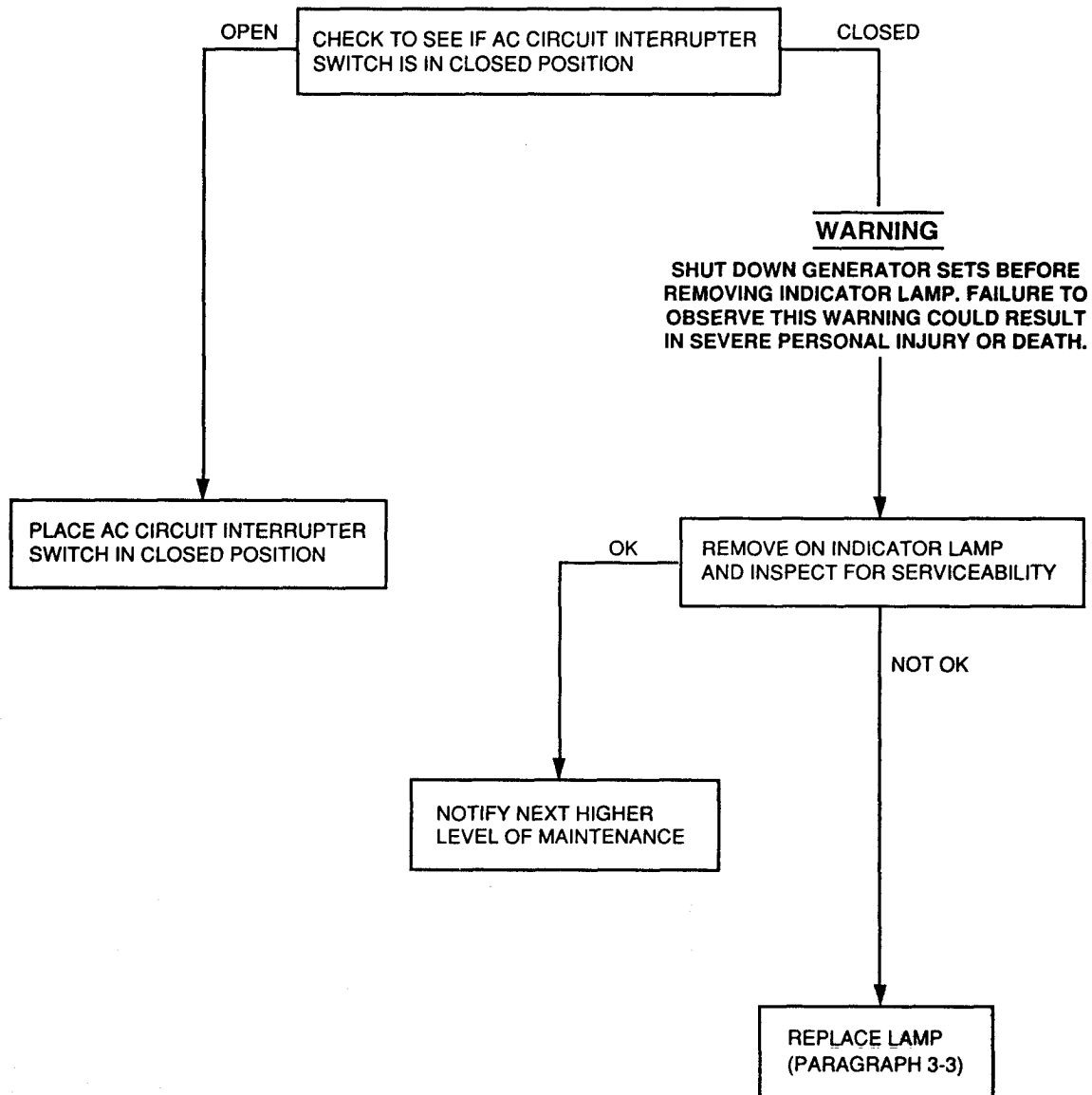


Figure 3-1. ON Indicator Lamp Fails To Light With Generator Set Running.

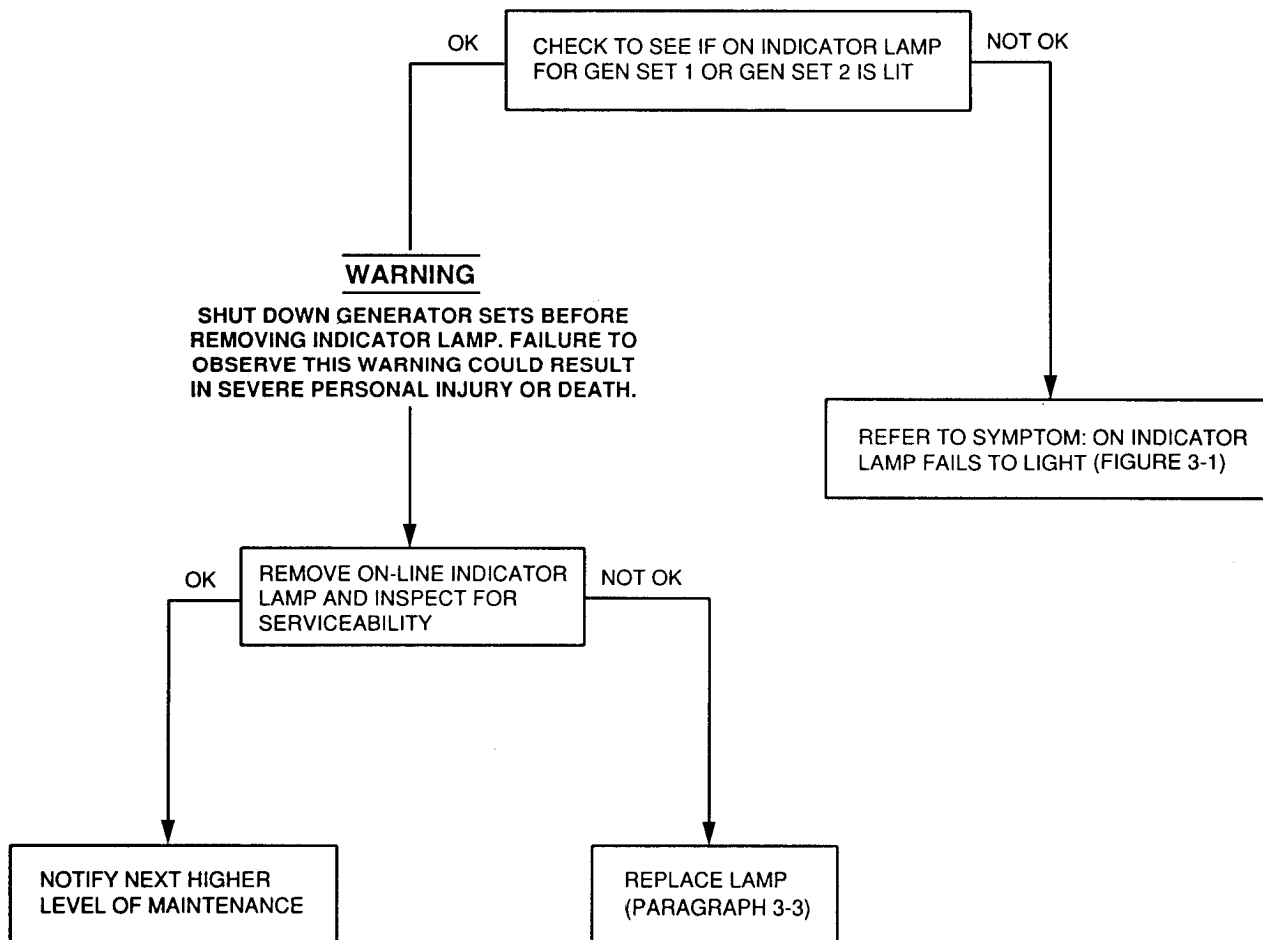


Figure 3-2. ON-LINE Indicator Light Lamp Fails To Light When ON/OFF Switch is Placed In ON Position.

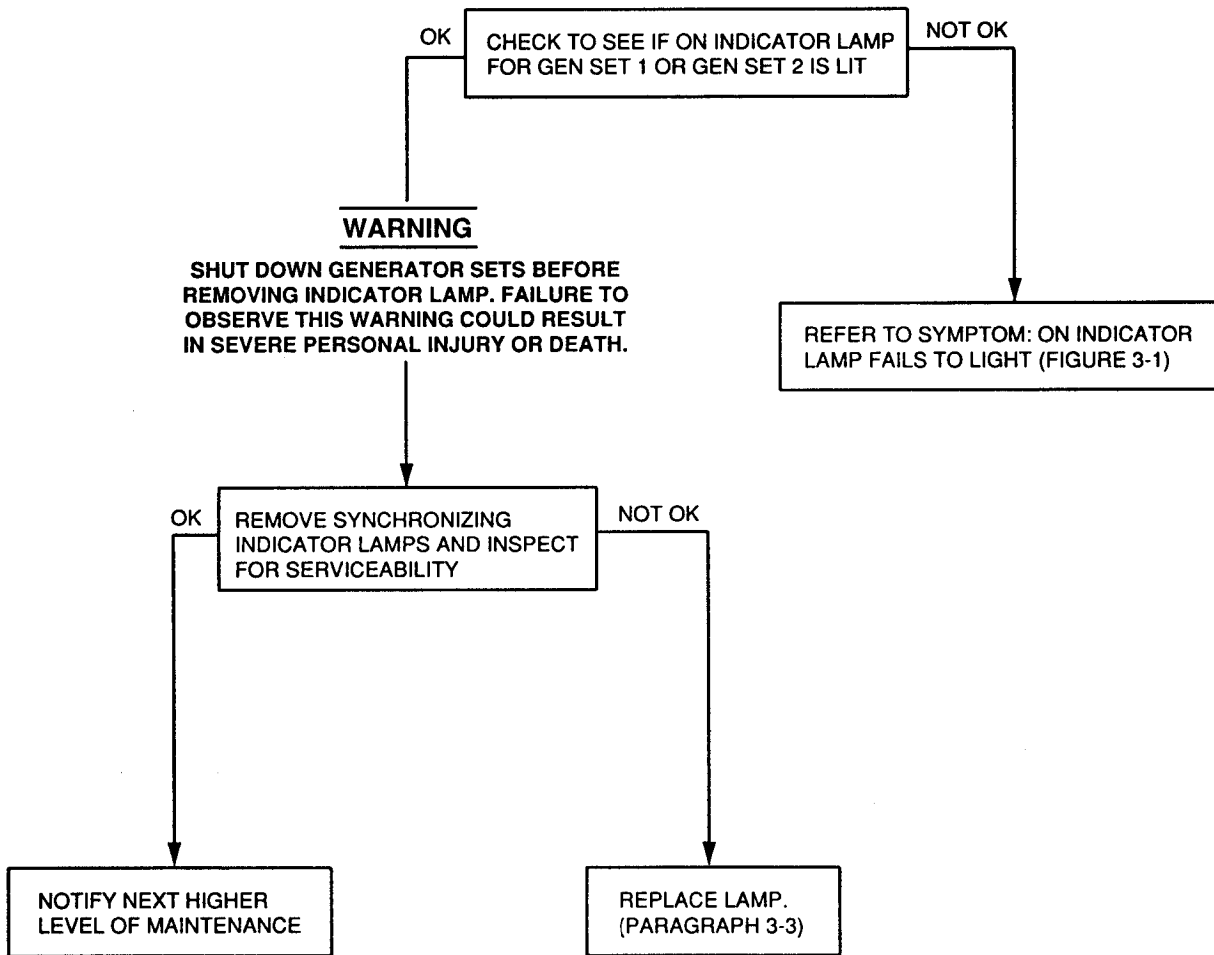
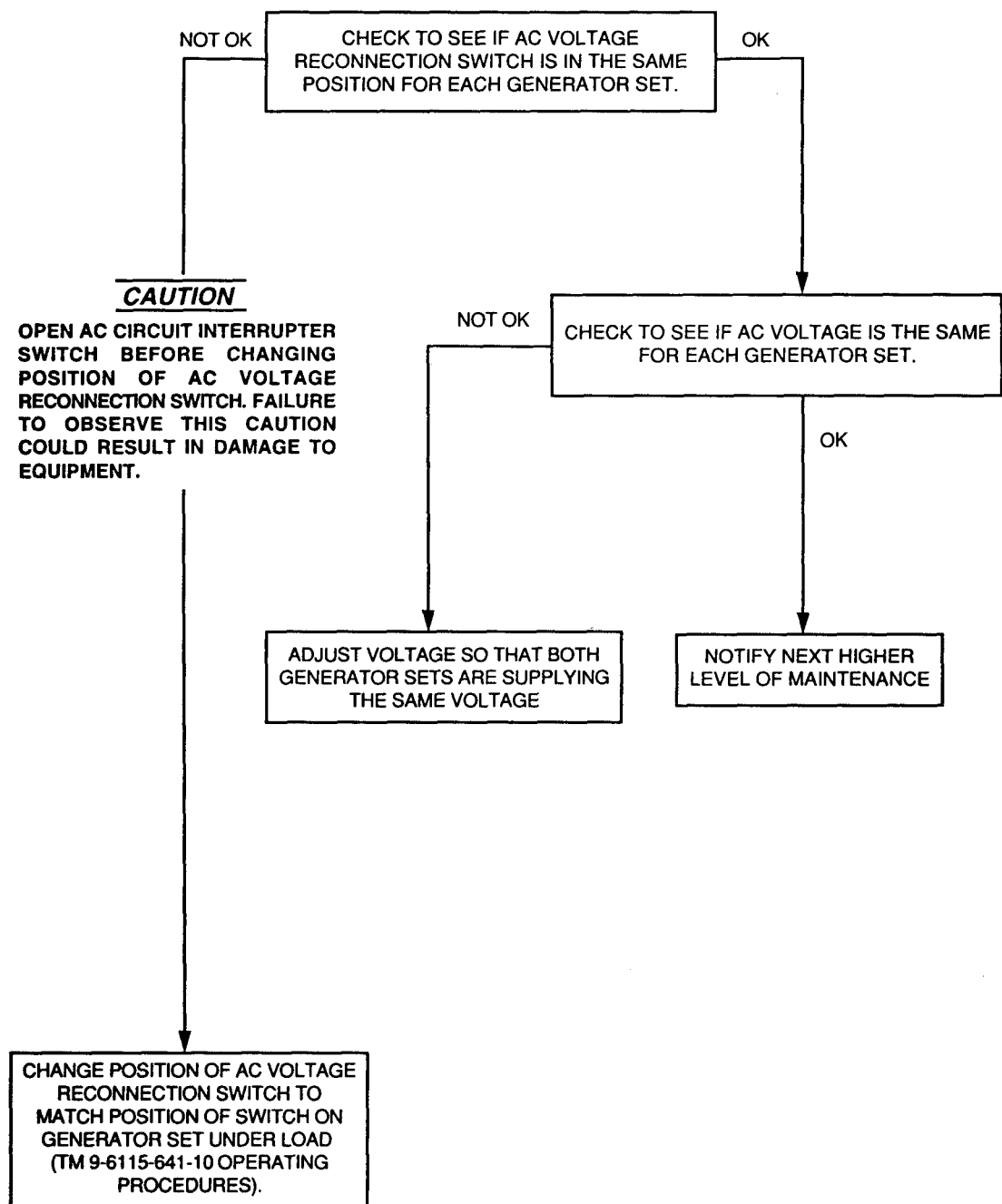


Figure 3-3. SYNCHRONIZING Indicator lamps Fail To Light When TRANSFER Switch Is Operated.





*Figure 3-4. With All Indicator Lamps Working Properly, Load Will Not Transfer.*

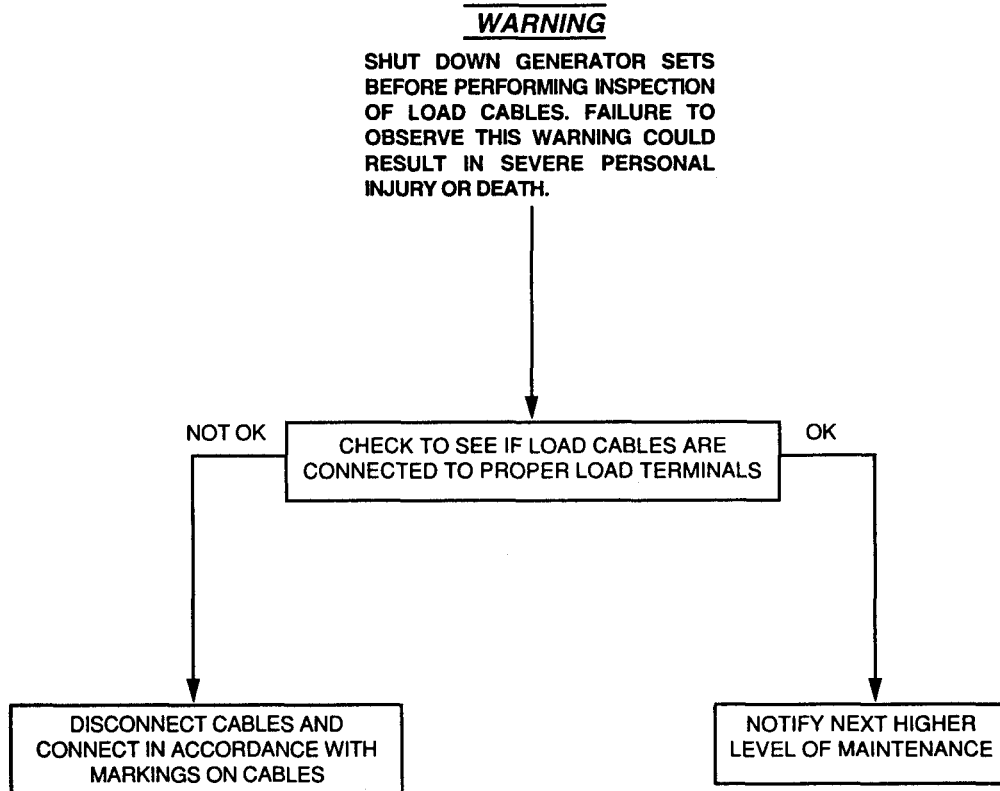


Figure 3-5. SYNCHRONIZING Indicator Lamps Fail To Operate In Unison When Transfer Switch Is Operated.

### Section III. MAINTENANCE PROCEDURES

#### 3-3 Operator Maintenance.

**3-3.1 Generator Set.** Refer to TM 9-6115-642-10.

**3-3.2 Power Plant.** The maintenance functions that the Maintenance Allocation Chart authorizes the operator to perform are the preventive maintenance checks and services listed in table 2-2 and the replacement of indicator lamps located on the switch box. Perform the following steps to replace ON, ON-LINE, and SYNCHRONIZING indicator lamps:

- a. Unscrew lens from lamp housing and remove lamp from lens (ON and ON-LINE lamps) or housing (SYNCHRONIZING lamps).
- b. Install new lamp in housing or lens and screw lens on housing.



**CHAPTER 4**  
**UNIT MAINTENANCE**

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**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 generator set TM 9-6115-642-24P and engine TM 9-2815-253-24P.

**4-3 REPAIR PARTS.**

**4-3.1 Generator Set Repair Parts.** Refer to generator set TM 9-6115-642-24P and engine TM 9-2815-253-24P.

**4-3.2 Trailer Repair Parts.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for Power Units PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**4-3.3 Power Plant/Power Unit Repair Parts.** Power Plant/Power Unit repair parts not covered in the generator, engine, or trailer RPSTL are listed and illustrated in Appendix F.

## Section II. SERVICE UPON RECEIPT

### 4-4 SERVICE UPON RECEIPT OF MATERIEL.

**4-4.1 Unpacking**The generator sets will have been boxed prior to shipment. Unpack the power plant as follows:

- a. Remove and set aside packing list from side of box. Also remove and set aside shortage packing list if there is one.

#### **WARNING**

Steel strapping used in packaging of the power plant/power unit has sharp edges. Use care when cutting and handling steel strapping. Failure to observe this warning could result in severe personal injury or death.

- b. Using metal cutters, carefully cut metal strapping from boxes covering generator sets. Remove metal strapping. Boxes may also be secured by lag screws at each end of box, near bottom. If so, remove lag screws. Remove boxes.
- c. On power plants AN/MJQ-37 and AN/MJQ-38, use metal cutters to carefully cut steel strapping from plywood box covering switch box. Remove plywood box.
- d. Switch box cover and switch box load terminal cover may have been secured with tape. If so, remove tape.

#### **WARNING**

Steel strapping used in packaging of the power plant/power unit has sharp edges. To avoid injury to personnel, use care when cutting and handling steel strapping.

- e. Unpack and secure fire extinguishers in brackets on trailer.
- f. If accessory box is secured with strapping, carefully cut and remove strapping. Open accessory box and remove any packaging/cushioning material from accessories.
- g. Using the packing list(s) removed in step a., inventory the accessories. Check missing items against shortage packing list (if any). Report any discrepancies to your supervisor.

### **4-4.2 Checking Unpacked Equipment.**

- a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on SF 364, Report of Discrepancy (ROD).
- b. Check the equipment against the packing list(s) to see if the equipment is complete. Report all discrepancies in accordance with the instructions in DA Pam 738-750.
- c. Check to see whether the equipment has been modified.



#### **4-4.3 Deprocessing Unpacked Equipment.**

Refer to DA Form 2258, Depreservation Guide for Vehicles and Equipment, packed with the power plant/power unit. The depreservation guide explains what was done to the equipment prior to packaging. It also explains what has to be done before placing the equipment in operation. Perform all depreservation actions required by the depreservation guide.

#### **4-5 INSTALLATION INSTRUCTIONS.**

**4-5.1 Tools, Test Equipment, and Materials Required for Installation.** A general mechanic's tool kit is required for installation of the power plant/power unit.

#### **4-5.2 Assembly of Equipment.**

**4-5.2.1 Assembly of Power Plants.** Refer to figure 4-1 and assemble the AN/MJQ-37 and AN/MJQ-38 Power Plants as follows:

- a. For front generator set, remove stuffing tube locknut (1) from stuffing tube body (7). Slide locknut (1) off power cable leads and ground cable (3).
- b. Loosen compression nut (4). Pull in required length of cable to allow installation of leads on terminal board.
- c. Insert power cable leads (ends without terminal lugs) (3) through generator output plate (2). Slide stuffing tube locknut (1) over power cable leads.
- d. Position stuffing tube body (7) against generator output plate (2). Install and tighten stuffing tube locknut (1).
- e. Connect power cable leads and ground cable as follows:
  - (1) Connect lead marked L1 to generator set load terminal L1.
  - (2) Connect lead marked L2 to generator set load terminal L2.
  - (3) Connect lead marked L3 to generator set load terminal L3.
  - (4) Connect lead marked L0 to generator set load terminal L0.
  - (5) Connect lead marked GND to generator set GND terminal.
- f. Position cable inside two clamps (10) and secure clamps (10) to trailer using two screws (8), flat washers (9), and nuts (11).
- g. Repeat steps a. through f. for rear generator set.
- h. Remove wing nut (12), two flat washers (13), hex nut (14), and flat washer (15).
- i. Position ground cable (16) over ground stud (17).

**WARNING**

Ensure nut (14) is properly secured creating a good ground. Failure to observe this *WARNING* could result in severe personal injury or death.

- j. Install flat washer (15), hex nut (14), two flat washers (13), and wing nut (12). Tighten nut (12).
- k. Unlatch and open switch box load terminal cover (18).
- l. Connect ground wire (16) to switch box ground terminal (19).
- m. Close and latch switch box load terminal cover (18).
- n. Position cable and ground wire inside two clamps (10) and secure clamps to trailer using two screws (8), flat washers (9), and nuts (11).

**4-5.2.3 Assembly of Power Units.** If the ground wire was disconnected for Level A preservation of the generator set, install ground wire as follows:

**NOTE**

Ground stud on PU-798A and PU-799A differs from that used on PU-798 and PU-799.

- a. If the high mobility trailer (PU-798A and PU-799A) is being used, go to step f. For other trailers, perform steps b. through e. and then go to step h.
- b. Remove wing nut (1, figure 4-2), two flat washers (2), hex nut (3), and flat washer (4) from ground stud (6).
- c. Retrieve generator ground wire (5) from accessory box (8).
- d. Place ground wire terminal (7) on ground stud (6).

**WARNING**

Ensure nut on ground terminals are properly secured creating a good ground. Failure to observe this *WARNING* could result in severe personal injury or death.

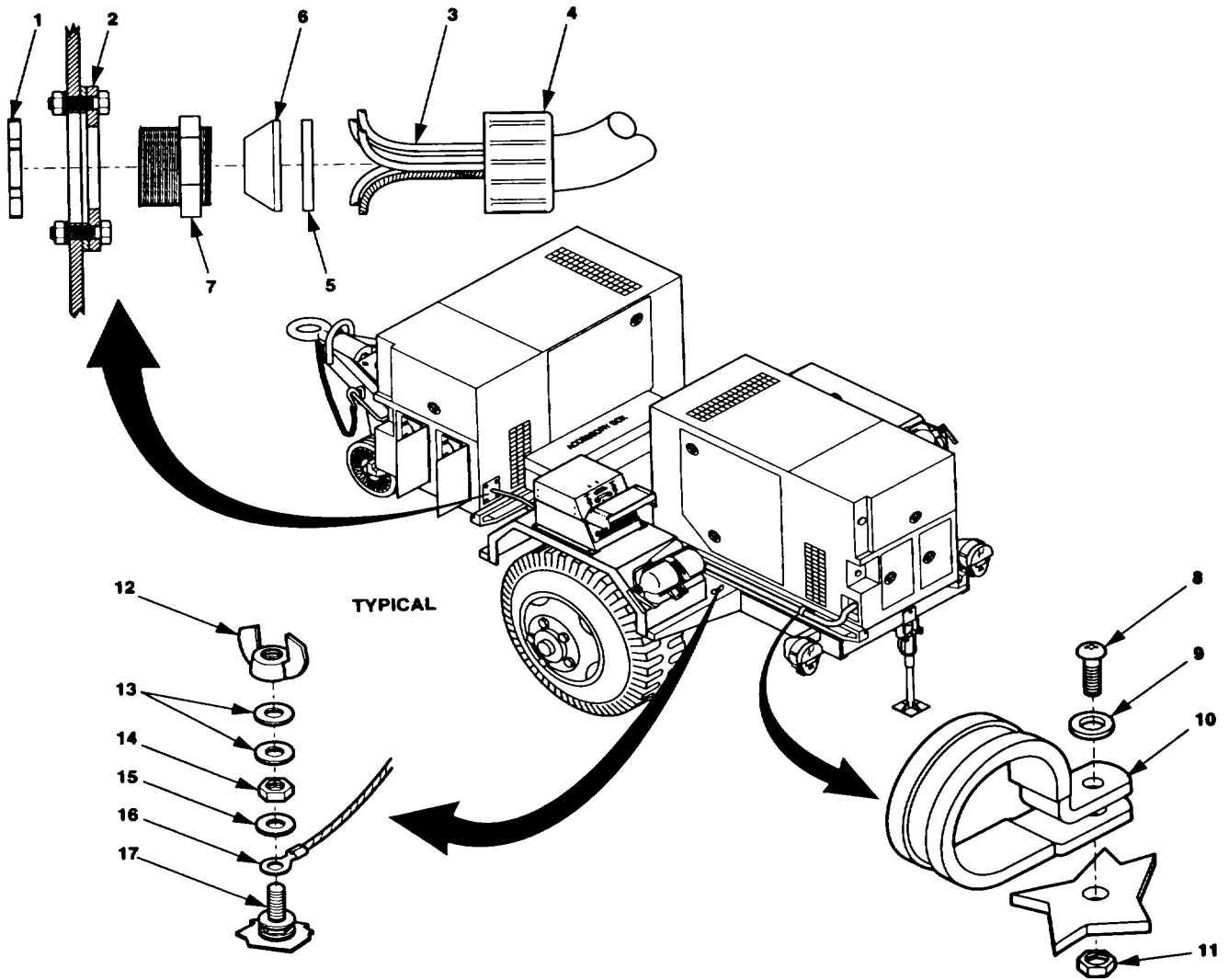
- e. Install flat washer (4), hex nut (3), two flat washers (2), and wing nut (1).
- f. Loosen nut (11) on high mobility trailer ground stud (13).
- g. Insert wire (12) through slot of ground terminal (13) and tighten nut (11).
- h. Open generator load terminal access door (9).
- i. Route loose end of ground wire (5 or 12) through cable access opening and pull loose end until it reaches ground terminal (10).

- j. Connect ground wire loose end to ground terminal (10).
- k. Close generator load terminal access door (9).

**4-6 PRELIMINARY SERVICING AND ADJUSTMENT OF EQUIPMENT.**

**4-6.1 Generator Set.** Refer to TM 9-6115-642-10, TM 9-6115-642-24, and TM 9-2815-253-24.

**4-6.2 Trailer.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for Power Units PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.



*Figure 4-1. Installation of Power Cables.*

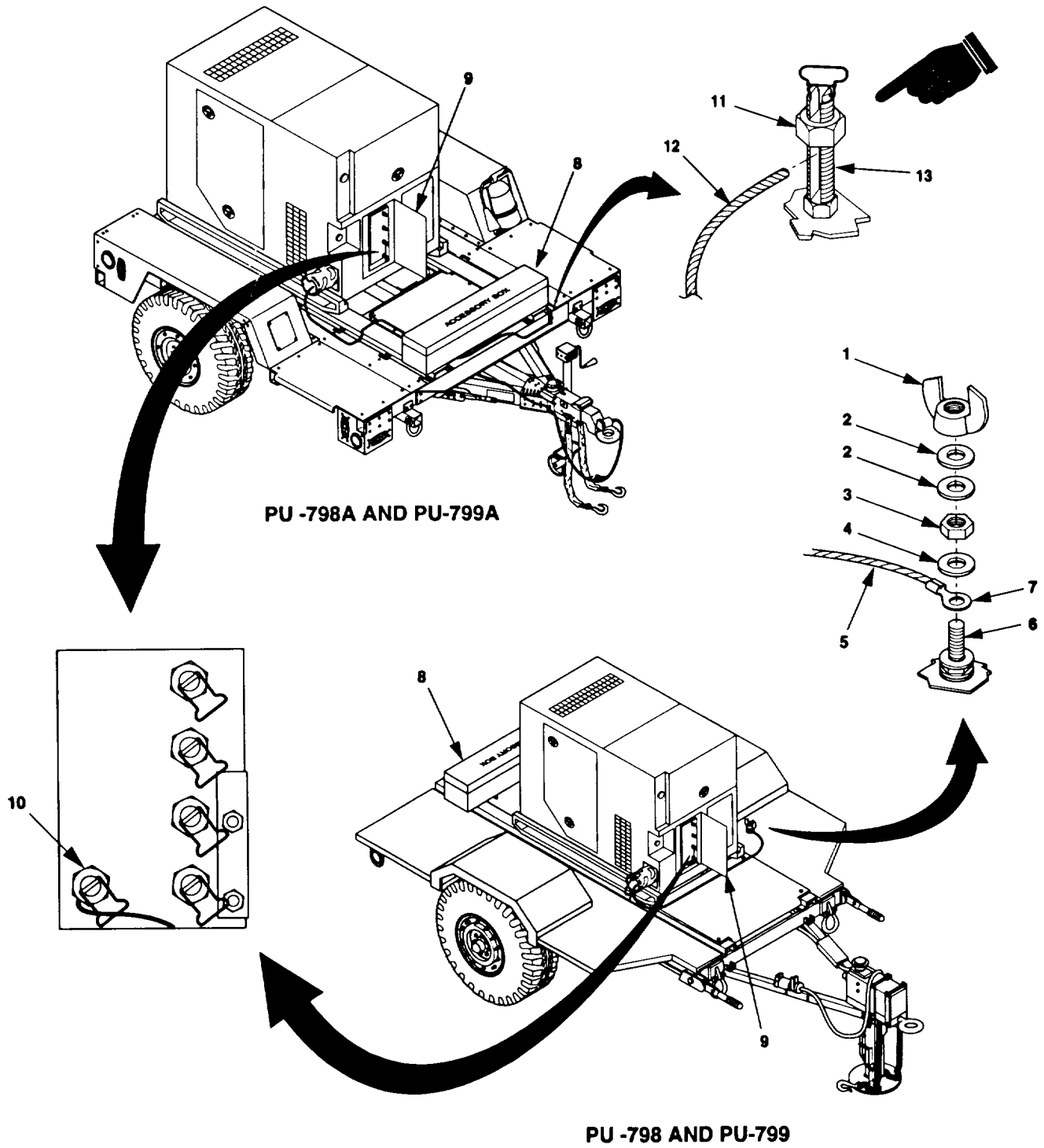


Figure 4-2. Installation of Ground Wire.

### Section III. UNIT LUBRICATION

#### 4-7 POWER PLANT/POWER UNIT LUBRICATION.

Detailed instructions for lubrication of major components of the power plants/power units are contained in the applicable generator set Lubrication Orders (LOs) and trailer TMs. The following paragraphs identify the applicable references and contain lubrication instructions that are not included in the references.

**4-7.1 Generator Set Lubrication.** Refer to LO 9-6115-642-12 for generator set and engine lubrication instructions. See Appendix E for expendable supplies and materials needed for lubrication.

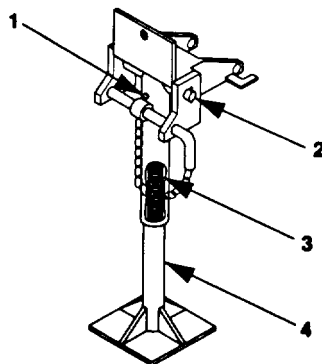
**4-7.2 Trailer Assembly Lubrication.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799 trailer chassis lubrication instructions, TM 9-2330-392-14&P for Power Units PU-798A and PU-799A trailer chassis lubrication instructions, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38 trailer chassis lubrication instructions. See Appendix E for expendable supplies and materials needed for lubrication.

**4-7.3 Rear Leveling-Support Jack Lubrication.** The rear leveling-support jack is a modification to the standard 1 1/2 ton trailer chassis, the standard 1 ton trailer chassis, and the high mobility trailer chassis. Lubrication of this rear leveling-support jack is not covered in the trailer TMs. See figure 4-3 and lubricate the rear leveling-support jack semiannually, as follows:

#### **WARNING**

Dry cleaning solvent used to clean parts is potentially dangerous to personnel and property. Clean parts in a well-ventilated area. Avoid inhalation of solvent fumes. Wear goggles and rubber gloves to protect eyes and skin. Wash exposed skin thoroughly. Do not smoke or use near open flame or excessive heat. Failure to observe this precaution can cause injury to personnel or damage to equipment.

- a. Clean the lubrication fitting (1) with dry cleaning solvent. Expendable supplies and materials needed for lubrication are listed in Appendix E.



**Figure 4-3. Rear Leveling-Support Jack Lubrication Points.**

- b. Inject sufficient GAA grease into lubrication fitting (1) to lubricate screw threads (3) inside leg base (4).
- c. Apply OE lubricating oil to both ends of rear leveling-support jack pivot shaft (2).

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

### 4-8 INTRODUCTION TO UNIT PMCS TABLE.

Table 4-1 (PMCS) table) has been provided so you can keep your equipment in good operating condition and ready for its primary mission.

**4-8.1 Warnings and Cautions.** Always observe the *WARNINGS* and *CAUTIONS* appearing in your PMCS table. *WARNINGS* and *cautions* appear before applicable procedures. You must observe these *WARNINGS* and *CAUTIONS* to prevent serious injury to yourself and others or prevent your equipment from being damaged.

### 4-8.2 Explanation of Table Entries.

**4-8.2.1 Item No. Column.** Numbers in this column are for reference. When completing DA Form 2404 (Equipment Inspection and Maintenance Worksheet), include the item number for the check/service indicating a fault. Item numbers also appear in the order that you must do checks and services for the intervals listed.

**4-8.2.2 Interval Column.** This column tells you when you must do the procedure in the procedure column. Perform procedures such as "Monthly" or "Quarterly" at the listed calendar interval. Perform procedures designated by number of hours when the equipment has been operated for that many hours.

**4-8.2.3 Item to be Checked or Serviced Column.** This column lists the item to be checked or serviced.

**4-8.2.4 Procedure Column.** This column gives the procedures for checking or servicing the item listed in the item to be checked or serviced column. You must perform the procedure to know if the power plant/power unit is ready or available for its intended mission or operation. You must do the procedure at the time stated in the interval column.

**4-8.2.5 Not Fully Mission Capable if: Column.** Information in this column tells you what faults will keep the power plant/power unit from being capable of performing its primary mission. If checks or services show faults listed in this column, do not return the power plant/power unit to service until the faults have been corrected.

**4-8.3 Other Table Entries.** Be sure to observe all special information and notes that appear in the table.

### 4-8.4 Special Instructions.

- a. Trailer, generator, and engine PMCS must be done along with the Power Unit/Power Plant PMCS. Refer to TM 9-2330-213-14&P for AN/MJQ-37 and AN/MJQ-38 trailer PMCS, TM 9-2330-202-14&P for PU-798 and PU-799 trailer PMCS, and TM 9-2330-392-14&P for PU-798A and PU-799A trailer PMCS. Refer to TM 9-6115-642-24 for generator PMCS and TM 9-2815-253-24 for engine PMCS.
- b. Preventive maintenance is not limited to performing the checks and services listed in the PMCS table. Covering unused receptacles, stowing unused accessories, and other routine procedures such as equipment inventory, cleaning components, and touch-up painting are not listed in the table. These are things you should do any time you see that they need to be done. If a routine check is listed in the PMCS table, it is because experience has shown that problems may occur with that item. Take along tools and cleaning cloths needed to perform the required checks and services. Figure 4-4 is a routing diagram that shows the locations of the items to be

checked/serviced. The callout numbers on figure 4-4 correspond to the numbers listed in the Item No. column of table 4-1.

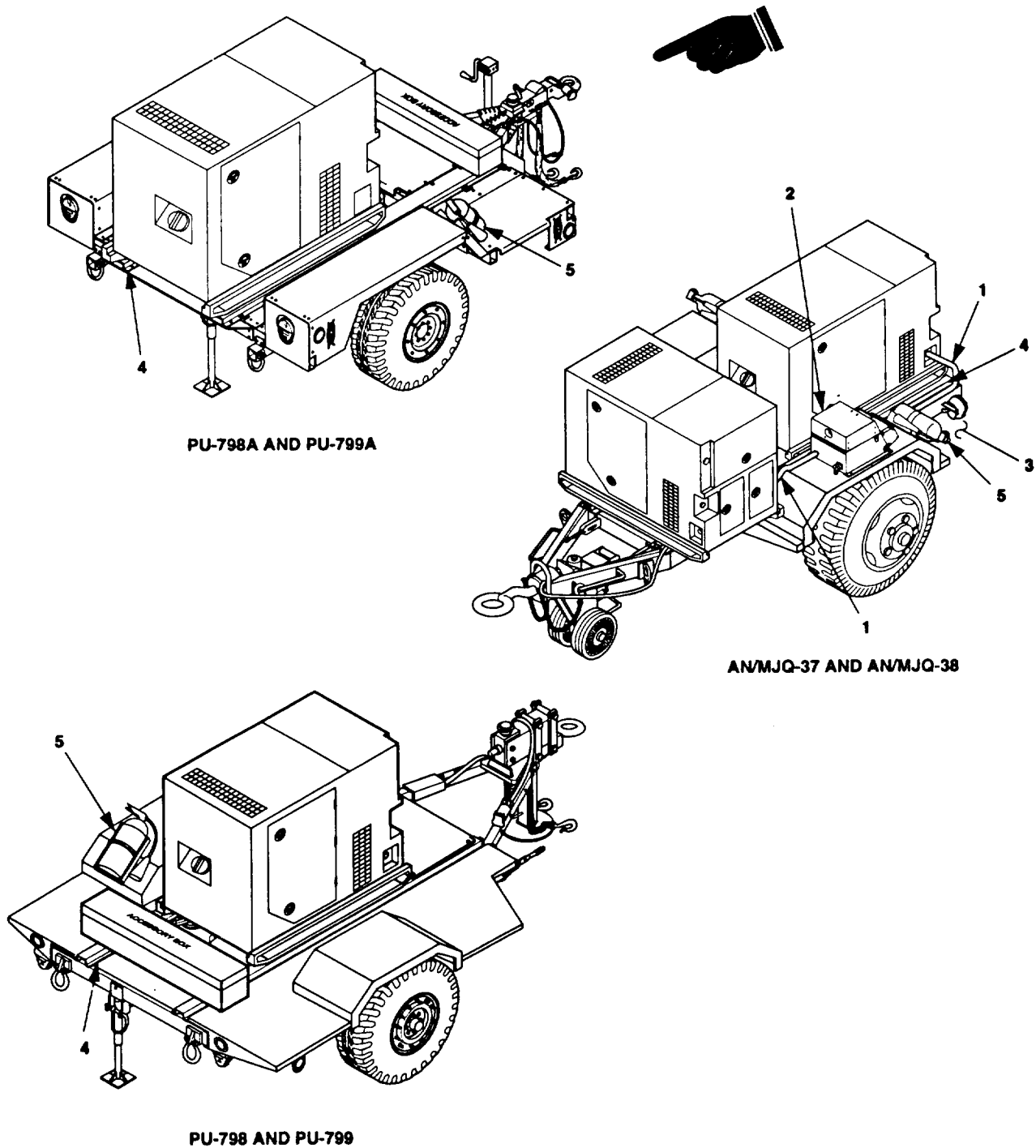


Figure 4-4. Unit PMCS Routing Diagram.

**Table 4-1. Unit Preventive Maintenance Checks and Services**

Item No	Interval	Item to be Checked or Serviced	Procedure	Not Fully Mission Capable if:
<b><u>WARNING</u></b>				
Before performing any maintenance that requires climbing on or under trailer, make sure that trailer handbrakes are set, trailer front landing leg/support leg is lowered, and leveling-support jack is lowered. Injury to personnel could result from trailer suddenly rolling or tipping.				
1	Semi-Annually	POWER CABLES (AN/MJQ-37 AND AN/MJQ-38 ONLY)	Inspect power cables for worn, frayed, or cracked insulation, loose terminal lugs, and loose connections. Tighten as needed.	Power cable is unserviceable.
2	Semi-Annually	SWITCH BOX ASSEMBLY (AN/MJQ-37 AND AN/MJQ-38 ONLY)	Inspect switch box assembly (refer to paragraph 4-13).	
3	Semi-Annually	TRAILER LIFTING RINGS (AN/MJQ-37 AND AN/MJQ-38 ONLY)	Inspect for wear, damage, and loose attaching hardware. Torque to 315-347 lb.-ft. (427-470 N.m).	
4	Semi-Annually	MOUNTING RAILS	Inspect for cracks and deformation	Mounting rail is cracked or deformed.
5	Semi-Annually	FIRE EXTINGUISHER	<p>a. Inspect for broken seal and damage to handle.</p> <p>b. Weigh to determine whether charge is sufficient. Weight is 13 pounds when fully charged. If weight is 12.5 pounds or less, send to specialized activity for recharging.</p>	Fire extinguisher not charged.



**Section V. TROUBLESHOOTING**

**4-9 GENERAL.**

Paragraph 4-9.3 covers troubleshooting procedures for components unique to the power plant/power unit. Refer to the applicable generator set or trailer technical manual, as listed below, for generator and trailer troubleshooting procedures.

**4-9.1 Generator Set Troubleshooting.** Refer to TM 9-6115-642-24 and TM 9-2815-253-24.

**4-9.2 Trailer Troubleshooting.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for Power Units PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**4-9.3 Power Plant Troubleshooting.** The following symptom index contains troubleshooting information for locating and correcting operating troubles that may develop in components unique to the power plant end item. The symptom index lists malfunctions associated with switch box operation. Each malfunction listing includes a reference to the applicable figure that contains a chart. The chart will help you determine probable causes and corrective actions to take. The symptom index 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 listed corrective actions, notify next higher level of maintenance.

**SYMPTOM INDEX**

	Troubleshooting Procedure (Figure)
ON INDICATOR LAMP SERVICEABLE BUT FAILS TO LIGHT WITH GENERATOR SET RUNNING .....	4-5
ON-LINE INDICATOR LAMP SERVICEABLE BUT FAILS TO LIGHT WHEN ON/OFF SWITCH IS PLACED IN ON POSITION .....	4-6
SYNCHRONIZING INDICATOR LAMPS FAIL TO LIGHT WHEN TRANSFER SWITCH IS OPERATED.....	4-7
NO POWER TO LOAD WITH ON-LINE INDICATOR LAMP ON .....	4-8
ALL INDICATOR LAMPS WORKING PROPERLY BUT LOAD WILL NOT TRANSFER .....	4-9

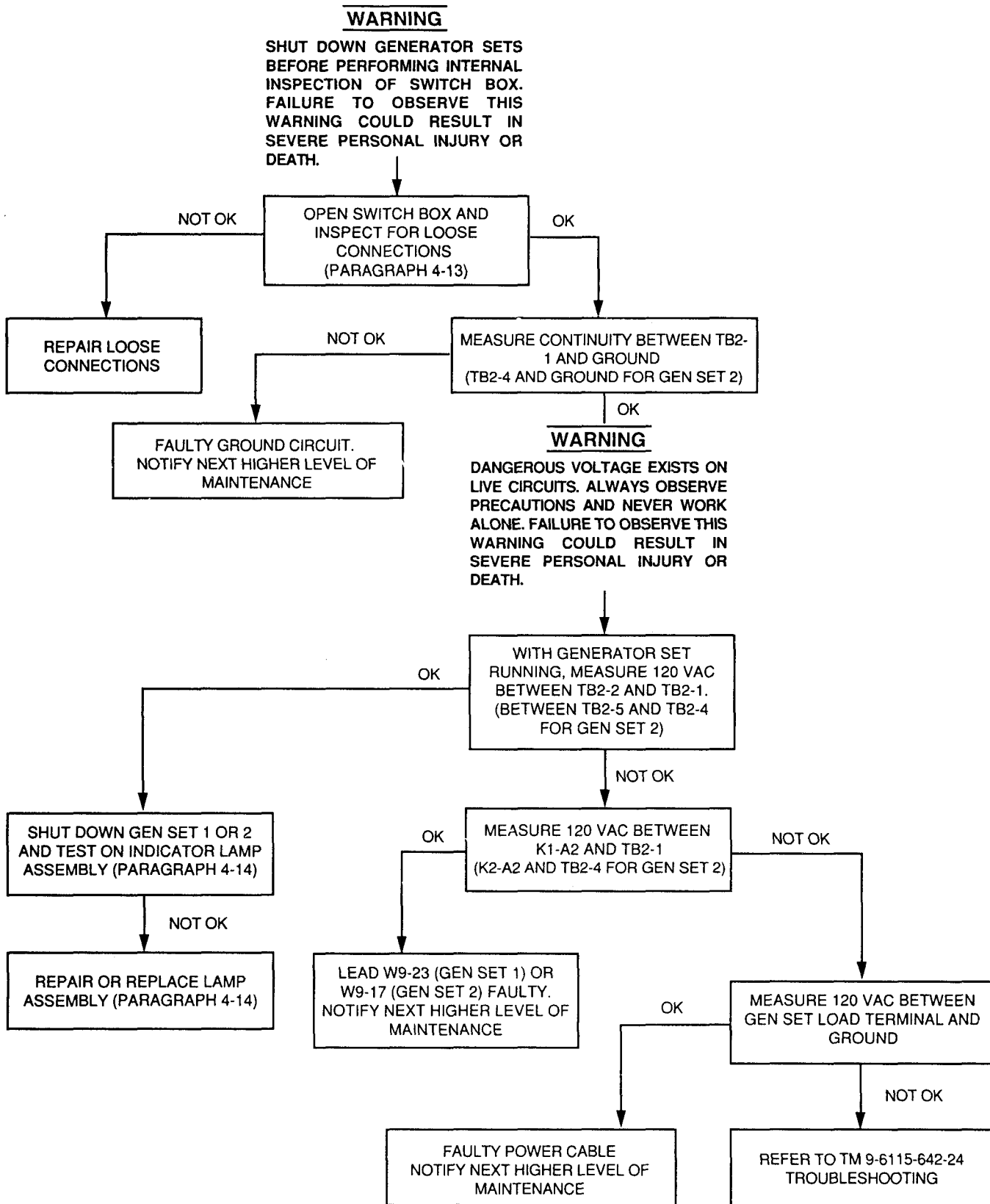


Figure 4-5. ON Indicator Lamp Serviceable But Fails To Light With Generator Set Running.

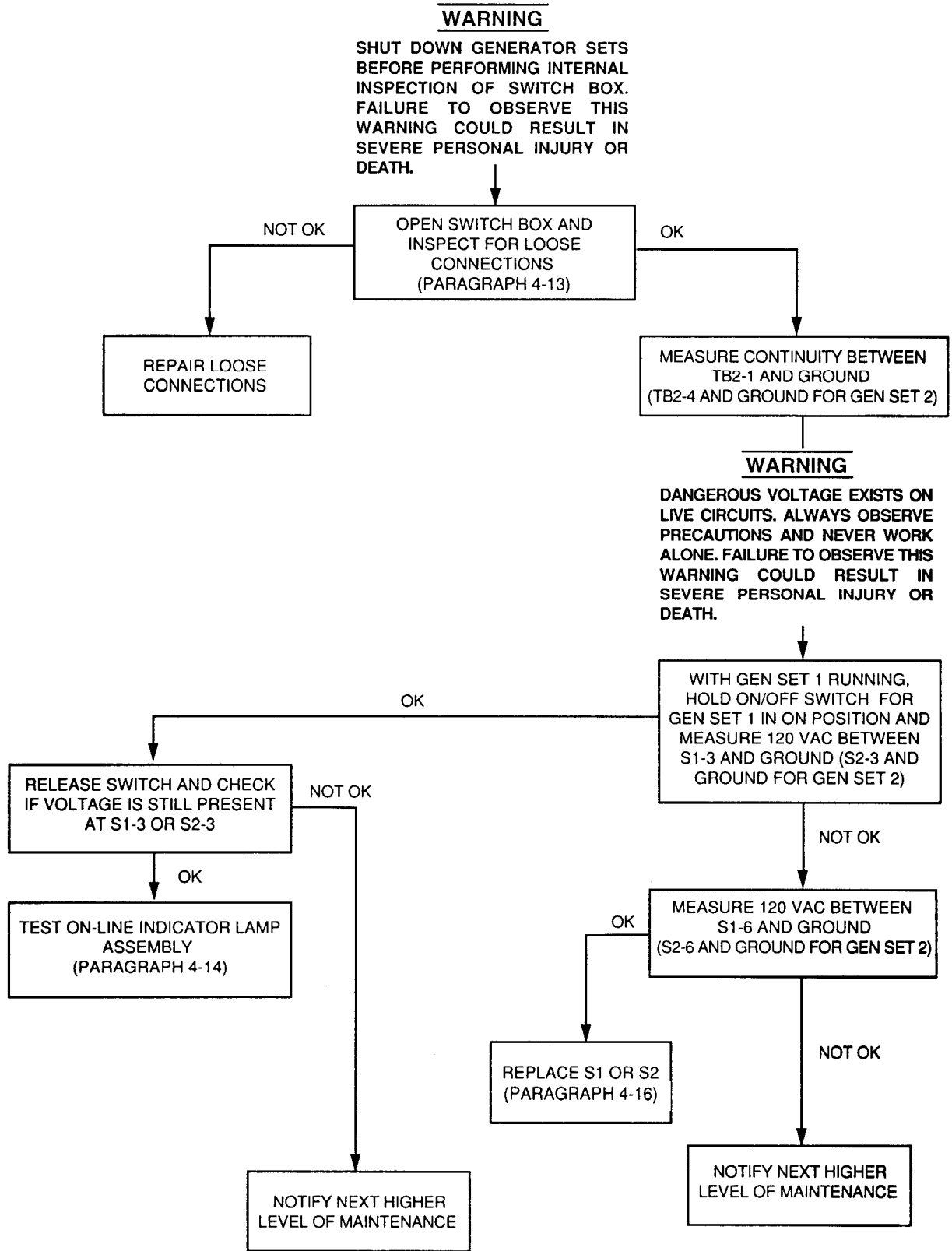


Figure 4-6. ON-LINE Indicator Lamp Serviceable But Fails To Light When ON/OFF Switch Is Placed In ON Position.

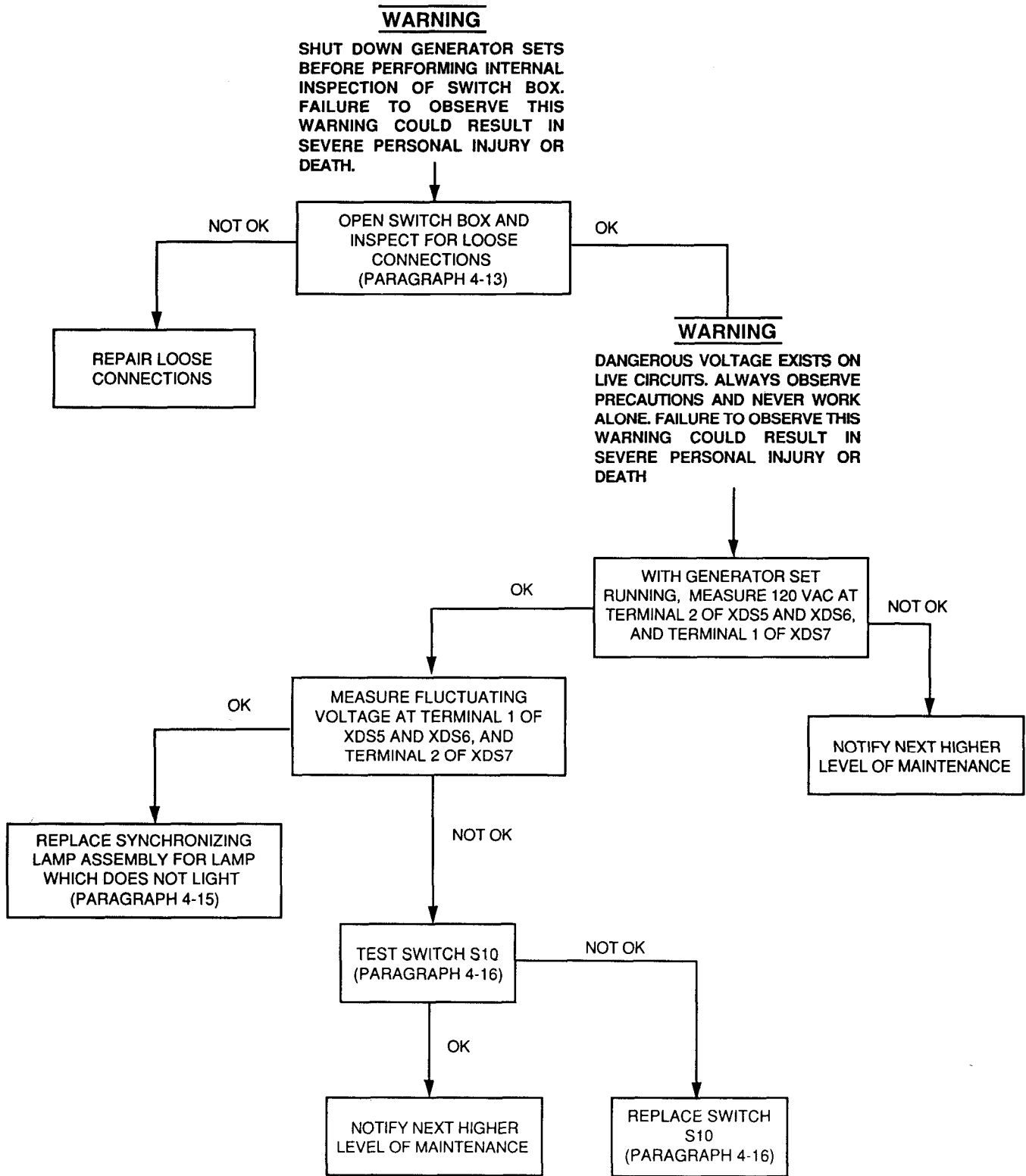


Figure 4-7. SYNCHRONIZING Indicator Lamps Fail To Light When TRANSFER Switch Is Operated.

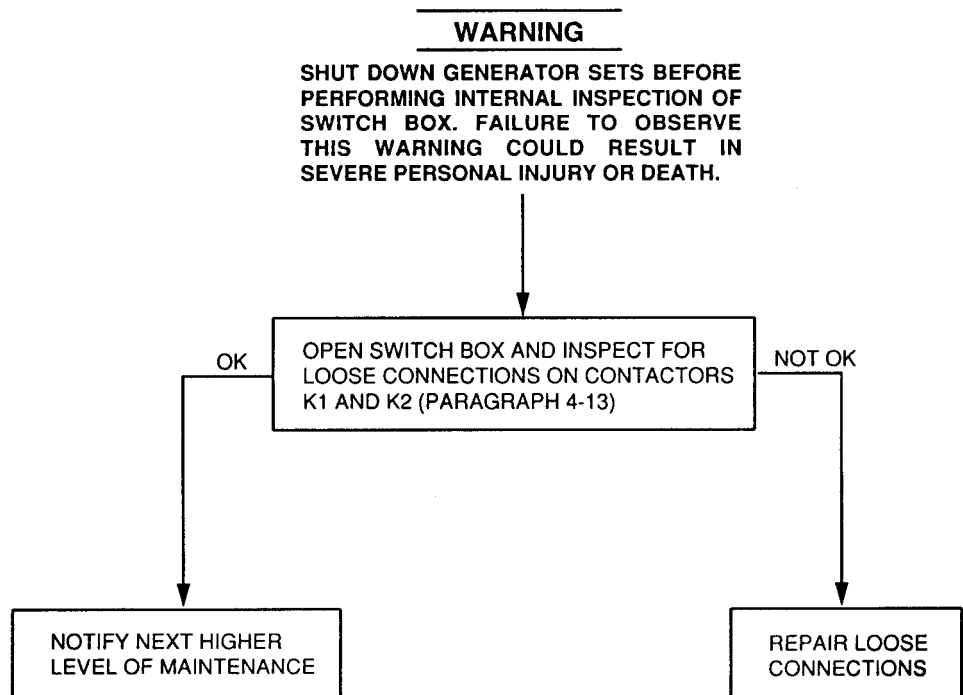


Figure 4-8. No Power To Load With ON-LINE Indicator Lamp On.

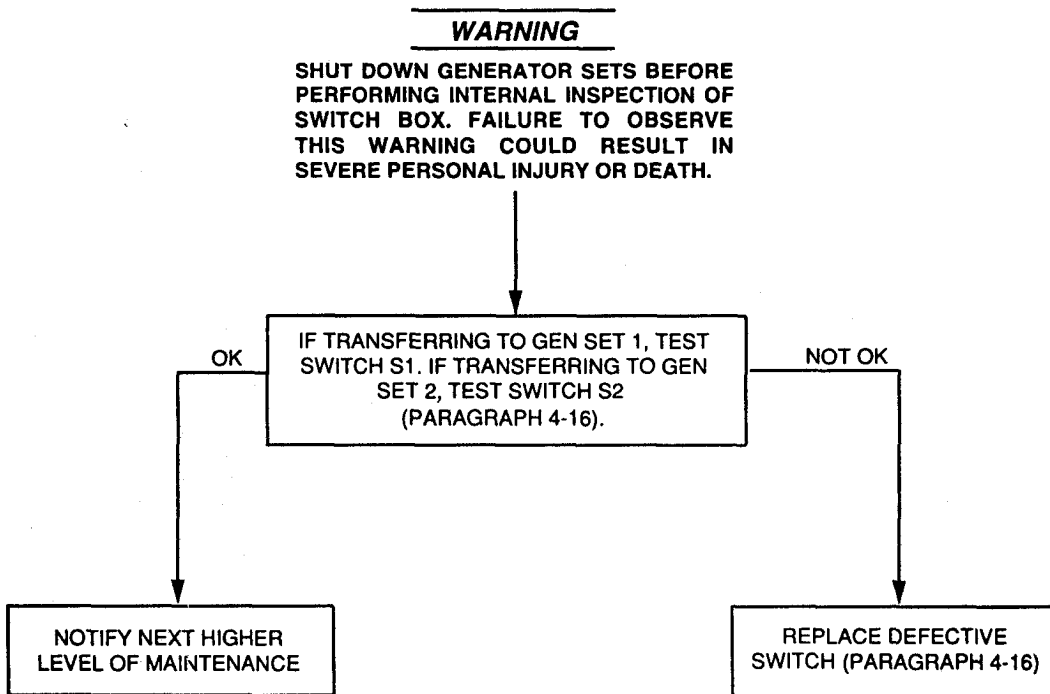


Figure 4-9. All Indicator Lamps Working Properly But Load Will Not Transfer.



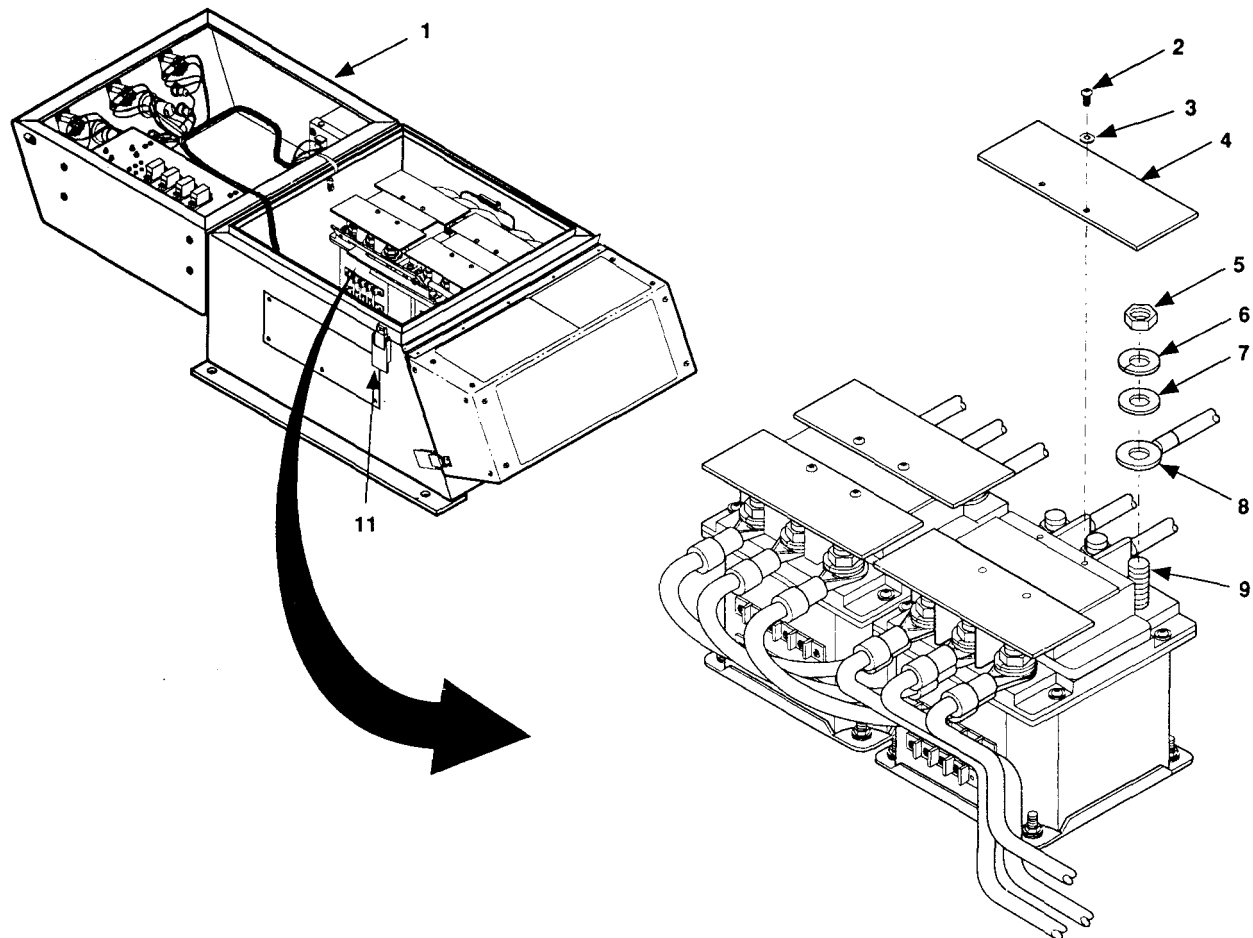


Figure 4-10. Power Cable Connections to Switch Box Contactors.

4. Use multimeter to check for shorts in power cable. Check for continuity between ground and L0, L1, L2, and L3; L0 and L1, L2, and L3; L1 and L2, and L3; and L2 and L3. Continuity in any of these tests indicates a shorted cable which must be replaced.
5. Close switch box cover (1) and secure with clamping catches (11).

#### REMOVAL

1. Disconnect electrical leads and ground lead from generator set.
2. Pull power cable from stuffing tube.
  - a. Remove stuffing tube compression nut (8, figure 4-11) from stuffing tube body (11).



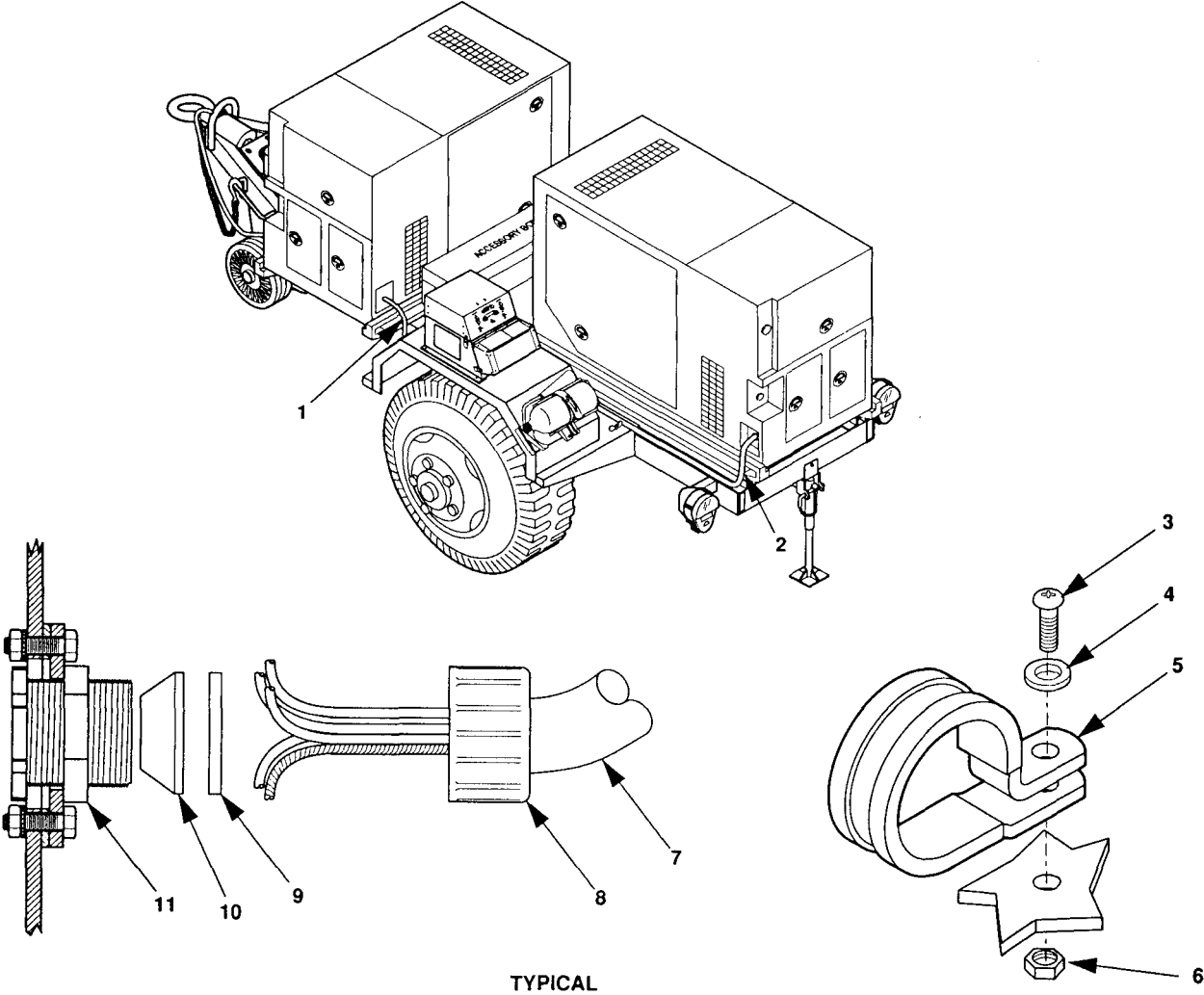


Figure 4-11. Disconnect Power Cable from Generator Set.

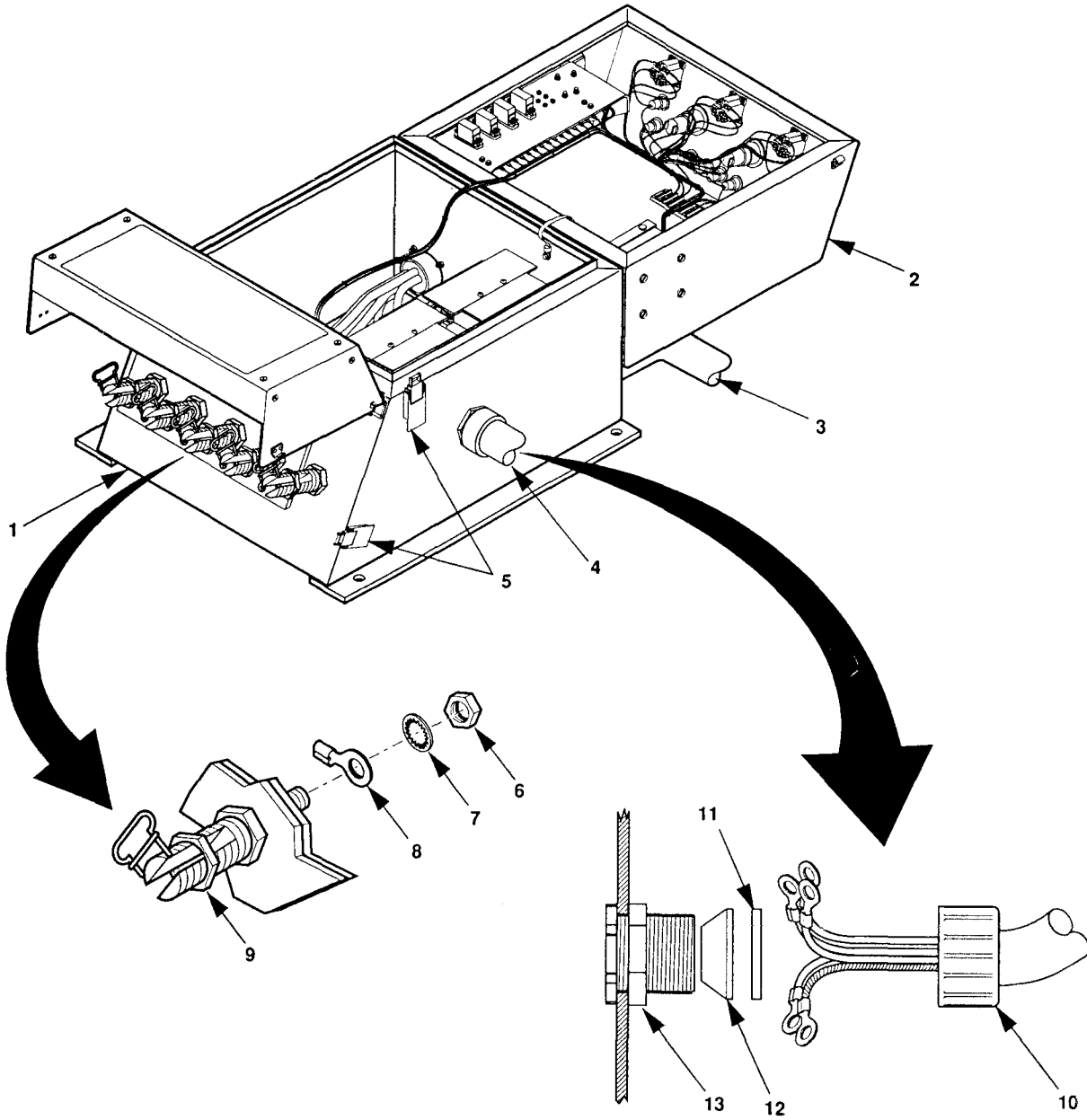


Figure 4-12. Disconnect Power Cable From Switch Box Terminals.

- b. Pull power cable (1 or 2) through stuffing tube until ends of power cable are free of stuffing tube body (11).
  - c. Remove washer (9), seal (10), and stuffing tube compression nut (8) from power cable (1 or 2). Place items back on stuffing tube and tighten.
3. Disconnect power cable from switch box.
- a. Release clamping catches (11, figure 4-10) and open switch box cover (1).
  - b. Remove two screws (2) and lock washers (3) from contactor terminal shield (4) of contactor associated with power cable being removed.
  - c. Remove contactor terminal shield (4).
  - d. Remove nuts (5), lock washers (6), and flat washers (7) from contactor terminals (9).
  - e. Lift terminal leads (8) from contactor terminals (9). Remove only the terminal leads associated with electrical leads of power cable being removed. If necessary to remove other terminal leads to access those for power cable being disconnected, reinstall other terminal leads onto contactor terminals (9).
  - f. Install flat washers (7), lock washers (6), and terminal nuts (5) on contactor terminals (9).
  - g. Remove hex nuts (6, figure 4-12) and internal tooth washers (7) from ground and L0 terminals (9) of switch box.
  - h. Remove only the wire associated with the power cable being replaced. If necessary to remove other terminal leads to access those for power cable, reinstall other terminal leads on terminal (9).
  - i. Place internal tooth washers (7) over the end of terminals (9) and loosely install the hex nuts (6).
  - j. Remove stuffing tube compression nut (10) from stuffing tube body (13).
  - k. Pull power cable (3 or 4) through stuffing tube until ends of power cable are free of stuffing tube body (13).
  - l. Remove washer (11), seal (12), and stuffing tube compression nut (10) from power cable (3 or 4). Place items back on stuffing tube and tighten.
4. Remove power cable from clamps.
- a. Remove self-locking nuts (6, figure 4-11), screws (3), and flat washers (4) securing clamps (5) to trailer. Remove cable (3 or 4).
  - b. Remove clamps (5) off power cable (3 or 4).

## **INSTALLATION**

1. Install stuffing tube compression nut (10, figure 4-12), washer (11), and seal (12) on end of power cable (3 or 4) having leads with terminal lugs.

2. Insert terminal lug end of power cable (3 or 4) into stuffing tube assembly (13) and slide forward until end of power cable outer covering is visible inside switchbox (1).
3. Slide seal (12), washer (11), and stuffing tube compression nut (10) forward and tighten compression nut.
4. Remove hex nut (6) and internal tooth washer (7) from load terminal L0 (9) and install lead marked L0.
5. Install internal tooth washer (7) and hex nut (6). Tighten hex nut.
6. Repeat steps 4 and 5 for ground terminal and ground lead.
7. Remove nuts (5, figure 4-10), lock washers (6), and flat washers (7) from contactor terminal (9) of contactor associated with power cable being installed.
8. Connect power cable lead marked L1 to contactor terminal A2, lead marked L2 to contactor terminal B2, and lead marked L3 to contactor terminal C2.
9. Install flat washers (7), lock washers (6), and nuts (5) on contactor terminals (9). Tighten nuts.
10. Install contactor terminal shield (4), lock washers (3), and screws (2).
11. Close switch box cover (1) and secure with clamping catches (11).
12. Repeat steps 1, 2, and 3 above and install other end of power cable in stuffing tube on generator set.
13. Connect leads to generator set load terminals as follows:

Lead Marked to Generator Set Load Terminal

Ground	Ground
L0	L0
L1	L1
L2	L2
L3	L3

14. Place clamps (5, figure 4-11) on replacement power cable (3 or 4) and existing ground wire going from switch box ground terminal and trailer ground stud, and install flat washers (4), screws (3), and self-locking nuts (6).

---

**4-13 SWITCH BOX MAINTENANCE.**

---

This task covers: a. Inspect  
 b. Repair  
 c. Removal  
 d. Installation

---

**INITIAL SETUP****Tools**

Tool Kit, General Mechanic's  
 (item 1, appendix B)  
 1/4 Inch Drill  
 (item 2, appendix B)  
 Blind Head Riveter  
 (item 5, appendix B)

**Materials/Parts**

Blind Rivets  
 Gasket

**Equipment Conditions**

Reference

Both generator sets shut down, paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing leg lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Power cables and ground disconnected from switch box; paragraph 4-12.

---

**INSPECT**

1. Release clamping catches (5, figure 4-13) and open switch box cover (9).
2. Inspect all leads and wires for worn or deteriorated insulation that reveals bare spots in conductors. If found, notify next higher level of maintenance.
3. Inspect all leads and wires for loose or disconnected terminal lugs. If found, repair and/or notify next higher level of maintenance.
4. Inspect all terminals for looseness. Tighten as needed.
5. Inspect all component mountings for looseness. Tighten as needed.
6. Inspect gasket (10) on switch box. If required, replace gasket (figure G-7, appendix G).
7. Close switch box cover (9) and secure with clamping catches (5).

**REPAIR**

1. CLAMPING CATCH REPLACEMENT.
  - a. Drill out rivets (1) and remove defective clamping catch (2).
  - b. Position new clamping catch (2) and secure with rivets (1).

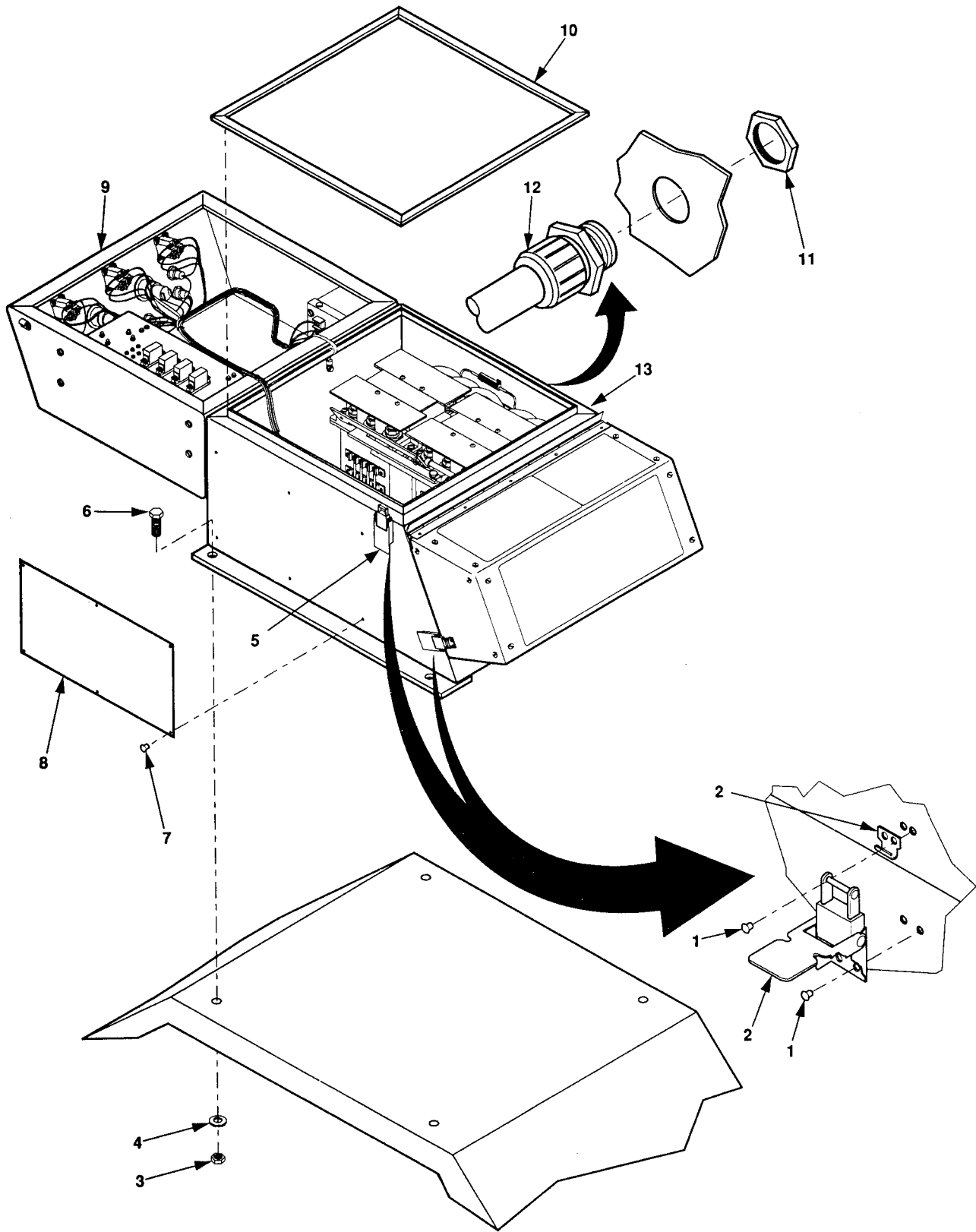


Figure 4-13. Switch Box Repair.

## 2. DATA PLATE REPLACEMENT.

- a. Drill out rivets (7) and remove schematic diagram data plate (8).
- b. Position new schematic diagram data plate (8) and secure with blind rivets (7).

## 3. GASKET REPLACEMENT.

- a. Remove old gasket (10) from switch box and scrape surface to remove old cement.
- b. Cut new gasket material and cement to switch box. Refer to figure G-7, appendix G.

## 4. STUFFING TUBE REPLACEMENT.

- a. Unscrew locknut (11) from stuffing tube body (12) of stuffing tube and remove from switch box.
- b. Insert stuffing tube body (12) through hole in switch box and secure with locknut (11).

### **REMOVAL**

1. Remove power cables and ground cable (paragraph 4-12).
2. Remove four self-locking nuts (3), flat washers (4), and cap screws (6), securing switch box (13) to fender. Remove switch box (13).

### **INSTALLATION**

1. Position switch box (13) on trailer fender.
2. Install four cap screws (6), flat washers (4), and self-locking nuts (3).
3. Connect power cables and ground cable (paragraph 4-12).

---

**4-14 INDICATOR LIGHT ASSEMBLY MAINTENANCE.**

---

This task covers: a. Test  
b. Removal  
c. Repair  
d. Installation

---

**INITIAL SETUP**

**Tools**

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Soldering Gun GT7A-3  
(item 2, appendix B)  
Hand Operated Terminal Crimping Tool  
(item 2, appendix B)

**Equipment Conditions**

Reference  
Both generator sets shut down;  
paragraph 2-5.3.3.  
Switch box cover open.

**Materials/Parts**

Insulation Sleeving, Heat Shrinkable  
Terminal, Lug, Crimp, 22-18 AWG, 0.138 Stud  
Solder

---

**TEST**

1. Measure for continuity between terminals (5, figure 4-14). If continuity exists, replace lamp housing.
2. Measure for continuity of indicator light assembly leads (7) between terminals (5 and 8) in accordance with table 4-2.

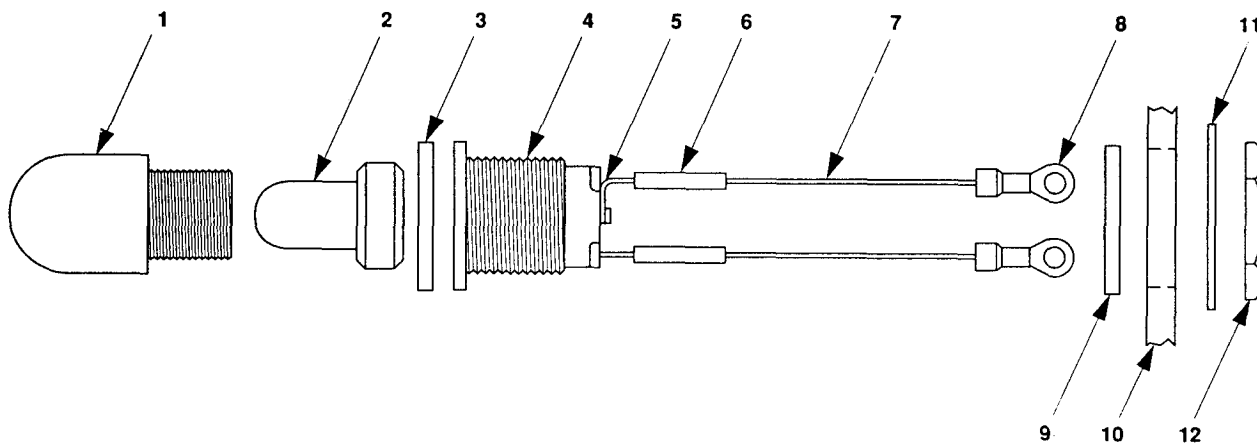


Figure 4-14. Indicator Light Assembly.



Table 4-2. Indicator Light Assembly Test Points

FROM	TO
DS1 (center contact)	TB2-2
DS1 (side contact)	TB2-1
DS2 (side contact)	TB2-4
DS2 (center contact)	TB2-5
DS3 (side contact)	TB2-1
DS3 (center contact)	S1-3
DS4 (side contact)	TB2-4
DS4 (center contact)	S2-3

**REMOVAL**

1. Unscrew lens (1) and remove and save lens (1), lamp (2), and O-ring (3).

***NOTE***

Spare bulb assemblies do not come with leads. Unsolder for removal.

2. Tag and disconnect terminal leads (7) from applicable switch box components.
3. Cut wire ties as required.
4. Remove nut (12) and lock washer (11).
5. Pull housing (4) and attached parts (5 through 8) through opening in switch box cover (10).

**REPAIR**

## 1. DISASSEMBLY

- a. Unscrew and remove lens (1). Do not take O-ring (3) out of lens (1).
- b. Take lamp (2) out of lens (1) or housing (4), as applicable.
- c. Remove O-ring (9).
- d. Cut and remove insulation sleeving (6) from both wire leads (7).
- e. Unsolder and remove wire leads (7) from terminals (5).

## 2. ASSEMBLY

- a. Solder one end of each wire (7) to a housing terminal (5).
- b. Install insulation sleeving (6) over each soldered connection and heat shrink to a firm fit.
- c. Crimp a terminal lug (8) onto end of each wire (7).
- d. Install O-ring (9).

**INSTALLATION**

1. Insert terminal leads (7) through opening in switch box housing (10) and pull through until O-ring (9) rests against switch box cover (10).
2. Install lock washer (11) and mounting nut (12).
3. Connect terminal lugs (8) to switch box components in accordance with table 4-2.
4. Insert lamp (2) and O-ring (3) into lens (1).
5. Install lens (1) into housing (4) and hand tighten.

**4-15 SYNCHRONIZING LIGHT MAINTENANCE.**

This task covers: a. Test  
                           b. Removal  
                           c. Installation

**INITIAL SETUP**

Tools

Tool Kit, General Mechanic's  
 (item 1, appendix B)

Equipment Conditions

Reference

Both generator sets shut down;  
 paragraph 2-5.3.3.  
 Switch box cover open.

Materials/Parts

Solder

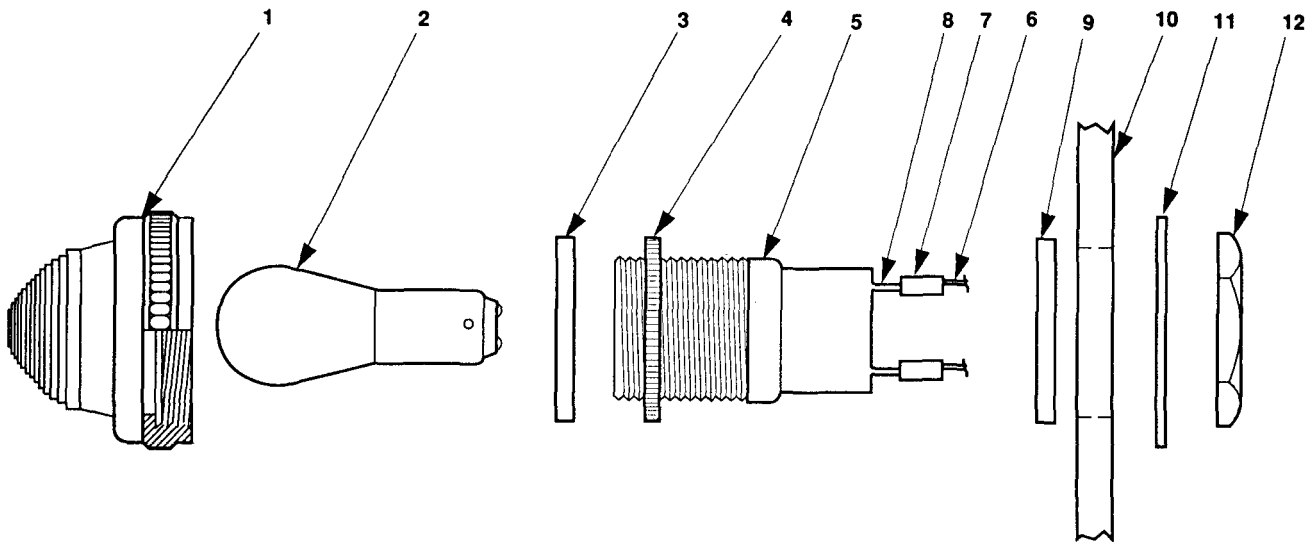


Figure 4-15. Synchronizing Light

**TEST**

Remove lens (1, figure 4-15) and bulb (2) and measure for continuity between terminals (8). If continuity exists, replace lamp housing.

**REMOVAL*****NOTE***

The switch box has three synchronizing lights. Replacement procedures are the same for each synchronizing lights.

1. Cut and remove insulation sleeving (7) from both leads (6).
2. Tag leads (6) and unsolder.
3. Remove mounting nut (12), internal tooth lock washer (11), and housing body (5).

**INSTALLATION**

1. Position rubber gaskets (3 and 9) against mounting collar (4). If necessary, turn mounting collar (4) until proper amount of threads are exposed for installation of lens (1).
2. Insert housing body (5) through opening in switch box cover (10).
3. Place internal tooth lock washer (11) on housing body (5).
4. Install mounting nut (12) on housing body (5). Tighten mounting nut (12) so that rubber gasket (9) seats firmly against switch box (10).
5. Install insulation sleeving (7) on each wire (6).
6. Solder tagged wires (6) to housing terminals (8).
7. Install lamp (2) into housing body (5).
8. Make sure that rubber gasket (3) is in place against mounting collar (4) and install lens (1) on housing body (5).

---

**4-16 TOGGLE SWITCH MAINTENANCE.**

---

This task covers: a. Test  
                           b. Removal  
                           c. Installation

---

**INITIAL SETUP**

**Tools**

Tool Kit, General Mechanic's  
 (item 1, appendix B)  
 Multimeter AN/PSM-45  
 (item 2, appendix B)

**Equipment Conditions**

Reference  
 Both generator sets shut down;  
 paragraph 2-5.3.3.  
 Switch box cover open.

**Materials/Parts**

None

---

**TEST**

***NOTE***

The following procedures apply to all toggle switches.

Set multimeter for continuity test. Test switches in accordance with table 4-3. Replace any switch that fails test.

**Table 4-3. Switch Continuity Test**

	S10 TRANSFER SWITCH		S1 AND S2 ON-LINE SWITCHES	
	Closed Contact	Open Contact	Closed Contact	Open Contact
On Position	1 and 2 4 and 5		2 and 3 5 and 6	
Released Position		1 and 2 4 and 5	2 and 3	5 and 6

**REMOVAL**

1. Tag wires connected to terminals of switch to be replaced and remove screws (9, figure 4-16), flat washers (8), and conductor bus (7).
2. Remove hex nut (1), lock washer (2), locking ring (3), and switch 6.

**INSTALLATION**

1. Remove hex nut (1), lock washer (2), and locking ring (3).
2. Hand tighten hex nut (5) on switch.

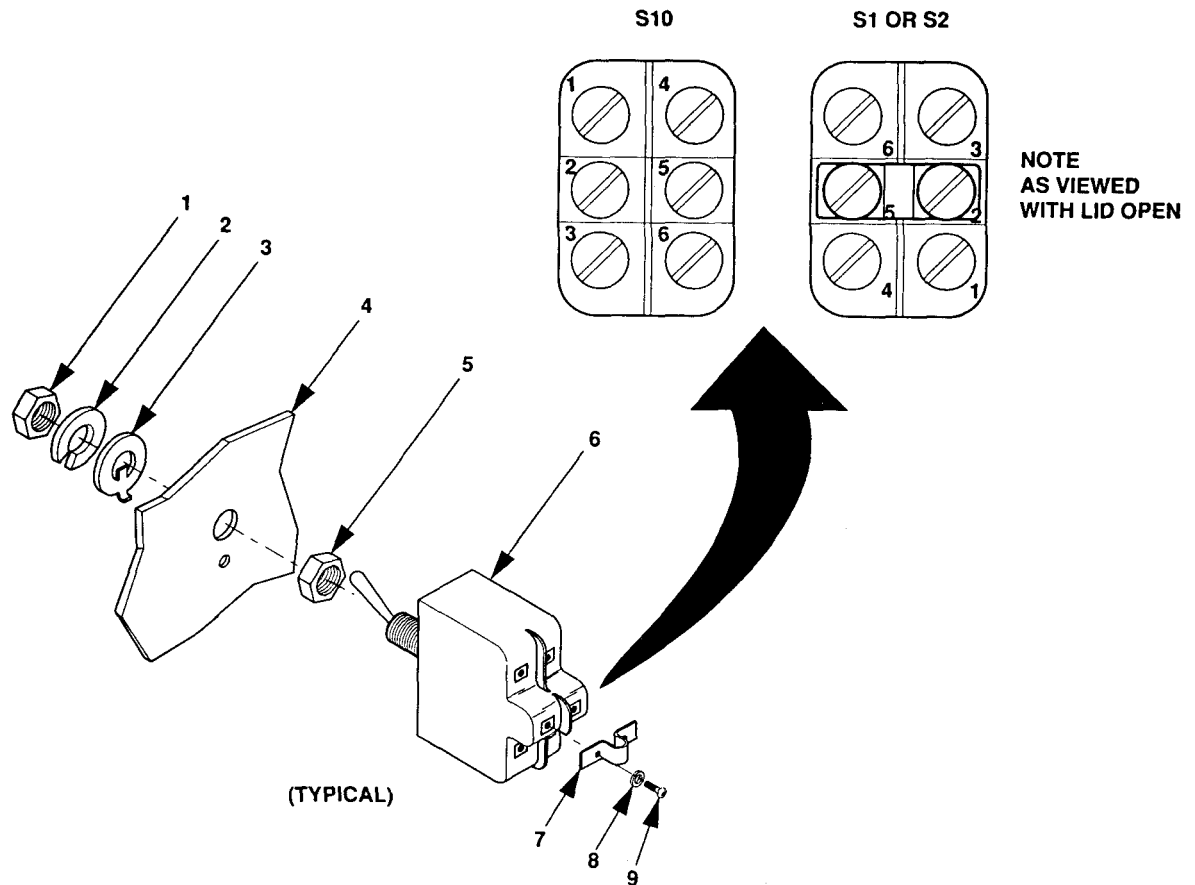


Figure 4-16. Toggle Switch.

**NOTE**

Make sure terminals 3 and 6 of switch S10 and 1 and 4 of switches S1 and S2 are toward the bottom as viewed with switch box open.

3. Insert switch body (6) into mounting hole and position hex nut (5) against mounting plate (4).
4. Install locking ring (3) into keyway of switch until alignment tip goes into mounting plate (4).
5. Install lock washer (2) against locking ring (3).
6. Install hex nut (1) and tighten making sure that locking ring (3) alignment is engaged in mounting plate (4).

**NOTE**

When installing new switch, conductor bus from old switch must be installed on new switch.

7. Remove and retain terminal screws (9) and washers (8) from terminals of new switch.
8. Install wires, conductor bus (7), washers (8), and terminal screws (9).

---

**4-17 SWITCH BOX LOAD TERMINAL MAINTENANCE.**

---

This task covers: a. Removal  
b. Repair  
c. Installation

---

**INITIAL SETUP****Tools**

Tool Kit, General Mechanic's  
(item 1, appendix B)

**Materials/Parts**

Wire, Round Steel, 0.072 inch diameter  
QQ-W-423 Composition 302

**Equipment Conditions**

Reference

Both generator sets shut down, paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing leg lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Lead cable disconnected from switch box load terminals.

---

**REMOVAL**

1. Release clamping catches (12, figure 4-17 sheet 1) and open switch box cover (2).
2. Remove and retain hex nut (3), internal tooth lock washer (4), and leads (5) from defective terminal (8).
3. Remove and retain hex nut (6) that secures the terminal (8) to the mounting plate (7).
4. Remove terminal (8).

**REPAIR*****NOTE***

Repair consists of replacing a missing or damaged terminal clip. Removal of terminal is not required. Any other damage to the terminal requires replacement. The terminal clip is fabricated using bulk wire National Stock Number (NSN) 9505-00-235-5071.

1. Release clamping catch (11) and open switch box load terminal cover (1).
2. Cut two pieces of bulk wire 5 3/4 inches and 1 1/4 inches long.
3. Make sure nut (9) is installed on terminal body (8).
4. Fabricate terminal clip (10) in accordance with figure 4-17 (sheet 2).
5. Install terminal clip (10) on terminal (8), close switch box terminal cover (1) and secure with clamping catch (11).

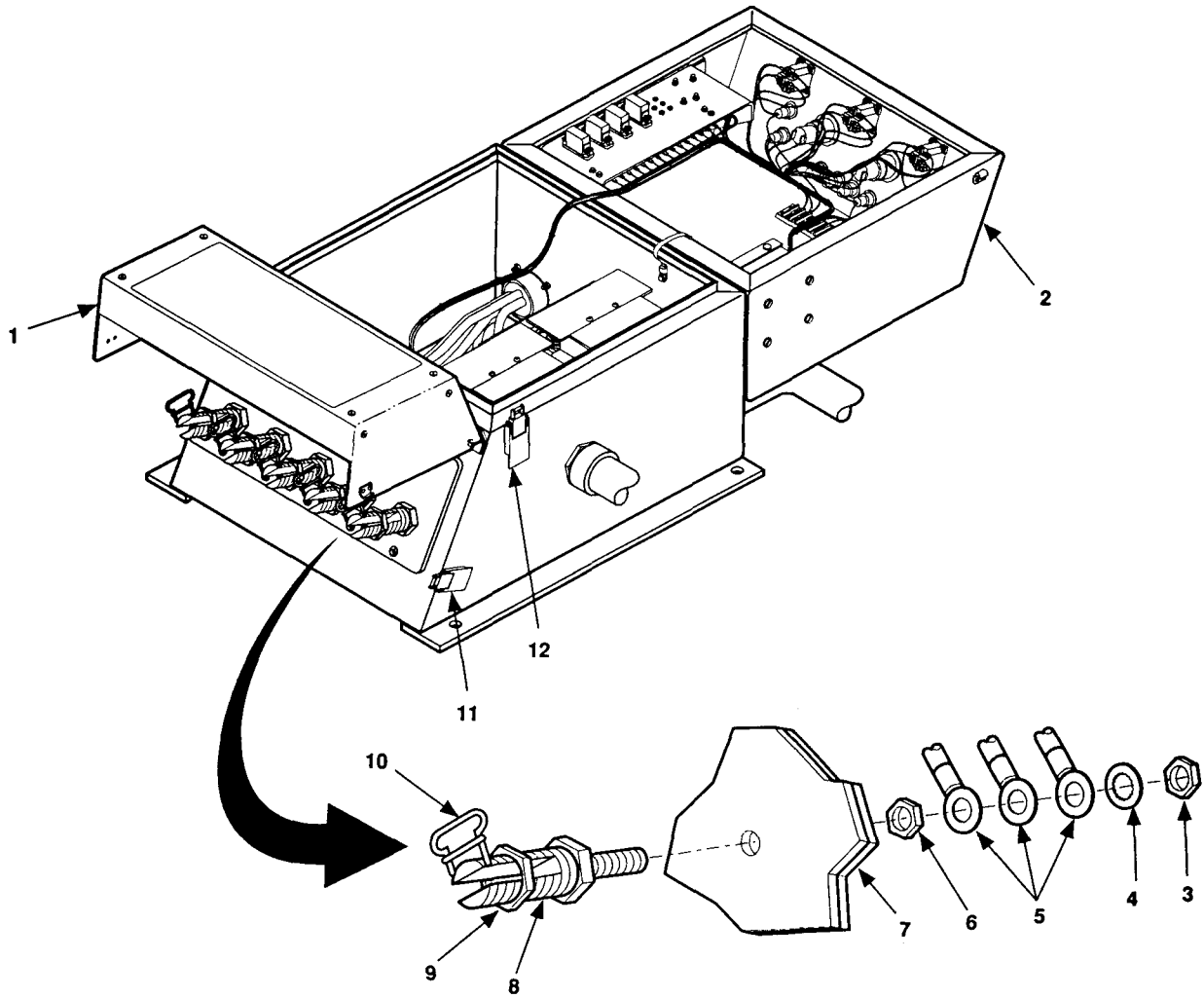


Figure 4-17. Switch Box Load Terminal Maintenance (sheet 1 of 2).

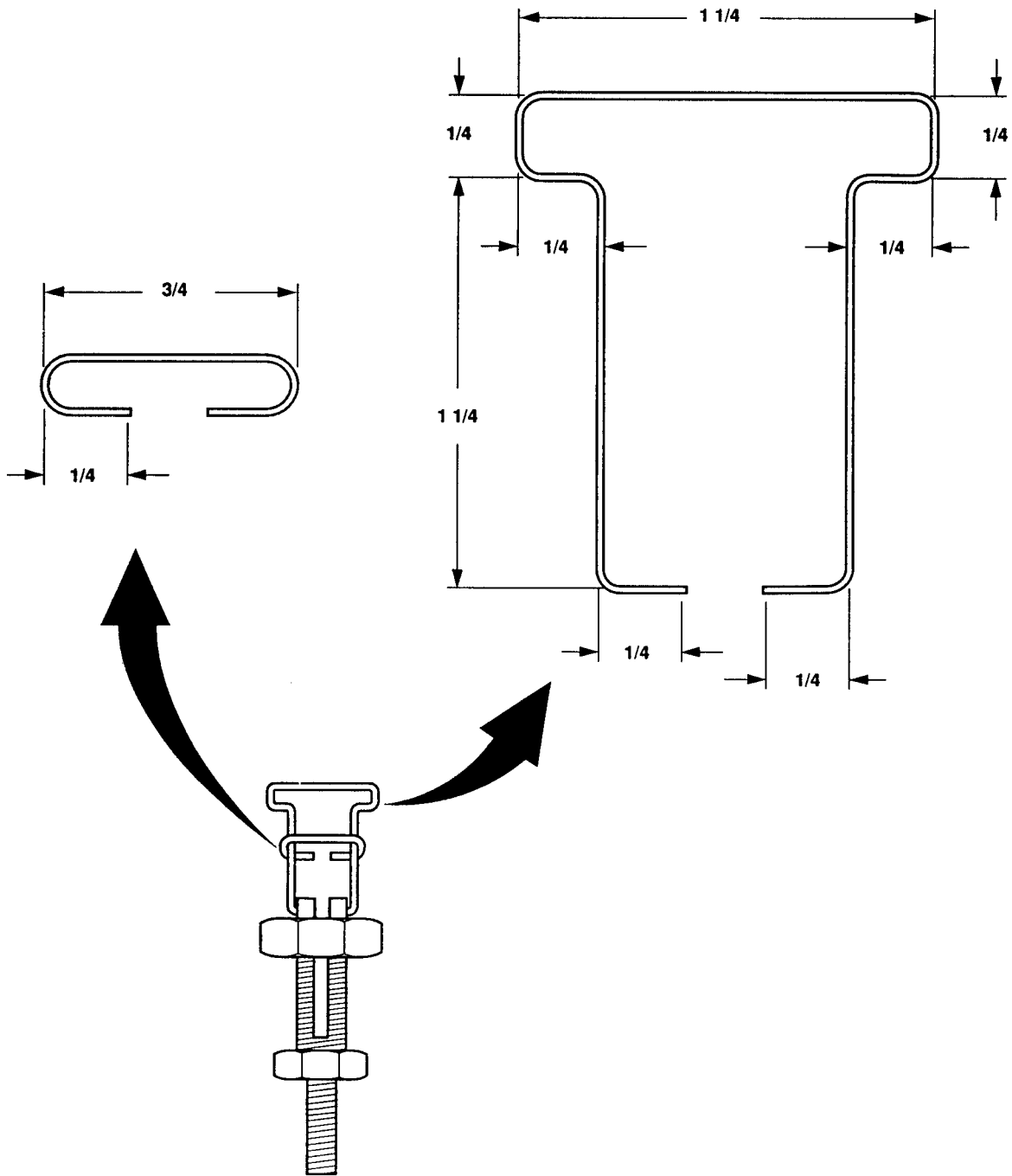


Figure 4-17. Switch Box Load Terminal Maintenance (sheet 2).



**INSTALLATION**

1. Position new load terminal (8, figure 4-17 sheet 1) on mounting plate so that alignment pin fits in hole provided.
2. Install and tighten the hex nut (6).
3. Install the leads (5).
4. Install internal tooth lock washer (4) and thread hex nut (3) on load terminal (8) and tighten.
5. Close switch box terminal cover (1) and switch box cover (2), and secure with clamping catches (11 and 12).

---

**4-18 LOAD TERMINAL COVER MAINTENANCE.**

---

This task covers: a. Removal

b. Installation

---

**INITIAL SETUP**

Tools

Tool Kit, General Mechanic's  
(item 1, appendix B)

Equipment Conditions

Reference

Both generator sets shut down, para 2-5.3.3.

Materials/Parts

None

---

**REMOVAL**

1. Release clamping catches (1, figure 4-18) and open switch box cover (2).
2. Release clamping catches (3) and open load terminal cover (4).
3. Remove six nuts (5), lock washers (6), screws (7), and flat washers (8) and remove load terminal cover (4) and stop (9) from switch box (10).

***NOTE***

If replacing load terminal cover, step 4 must be performed.

4. Remove four rivets (11) and two clamping catch strikes (12). Retain strikes for installation on new cover.

**INSTALLATION**

1. Install load terminal cover (4) and stop (9), on switch box (10) with six screws (7), flat washers (8), lock washers (6), and nuts (5).

2. Close load terminal cover (4) and secure with clamping catches (3).
3. Close switch box cover (2) and secure with two clamping catches (1).

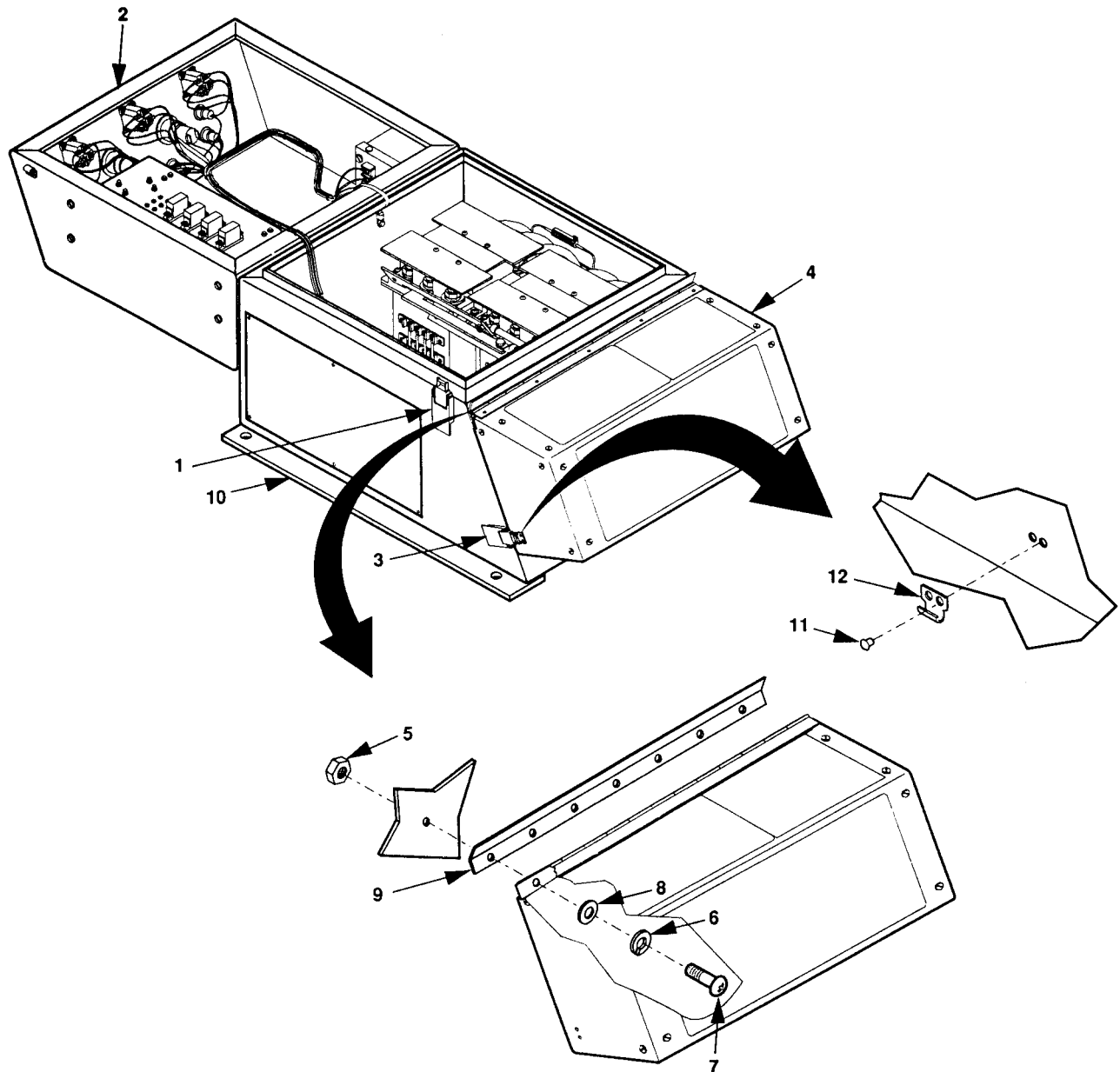


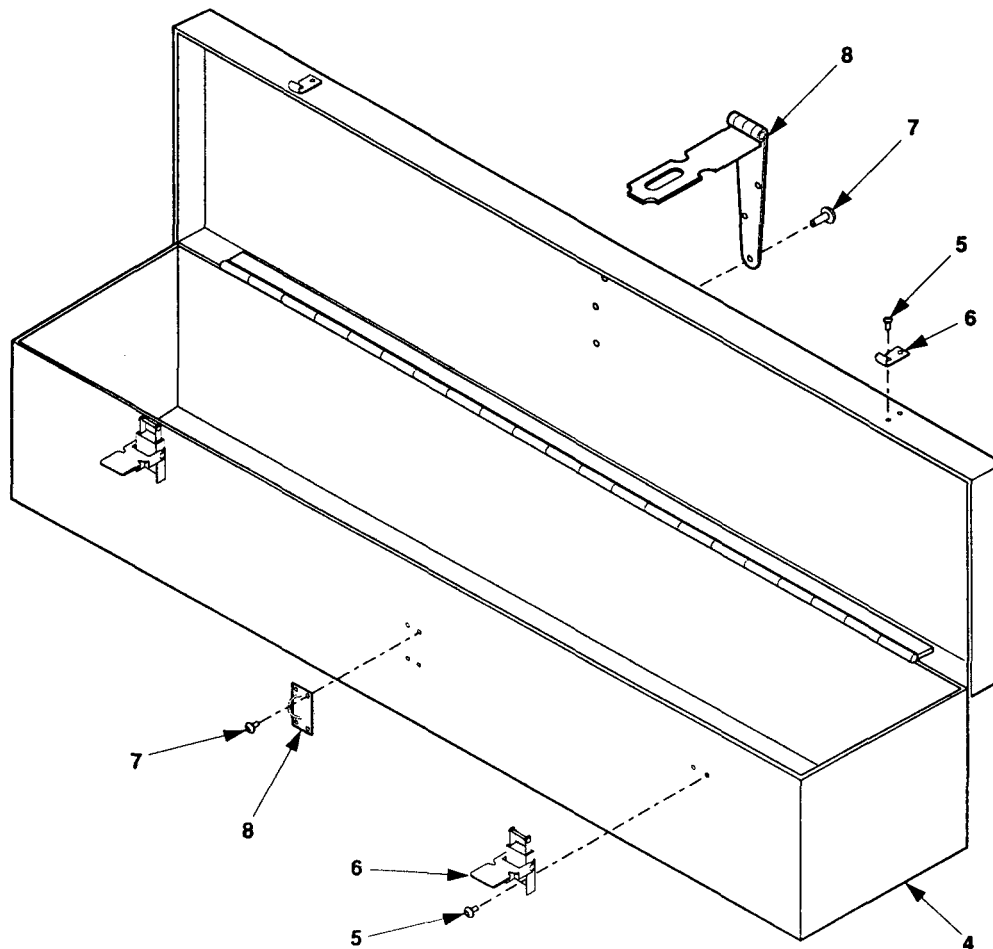
Figure 4-18. Load Terminal Cover.



**REPAIR**

**NOTE**

Unit level maintenance of the accessory box consists of replacing clamping catches and hasp. Other repairs, such as straightening or welding, are performed at next higher level of maintenance.



*Figure 4-20. Repair Accessory Box.*

**1. REPLACE CLAMPING CATCH.**

- a. Drill out rivets (5, figure 4-20) that secure defective clamping catch and strike (6) to accessory box (4) and remove clamping catch and strike (6).
- b. Install new clamping catch and strike (6) on accessory box (4) and secure with rivets (5).



---

**4-21 TRAILER LIFTING RING MAINTENANCE.**

---

This task covers: a. Removal

b. Installation

---

**INITIAL SETUP**

Tools

General Mechanic's Tool Kit  
(item 1, appendix B)  
Wrench, Torque, 800 Newton-Meter  
(item 2, appendix B)

Equipment Conditions

Reference  
Trailer handbrakes set, front support  
leg/landing leg lowered; and rear  
leveling-support jack lowered; paragraph  
2-3.2.1.

Materials/Parts

Nut, Self-locking

Personnel Required

Two

---

**REMOVAL**

1. Remove self-locking nuts (3, figure 4-21), flat washers (2), screws (1) and mounting plate (7); AN/MJQ-37 and AN/MJQ-38 only.

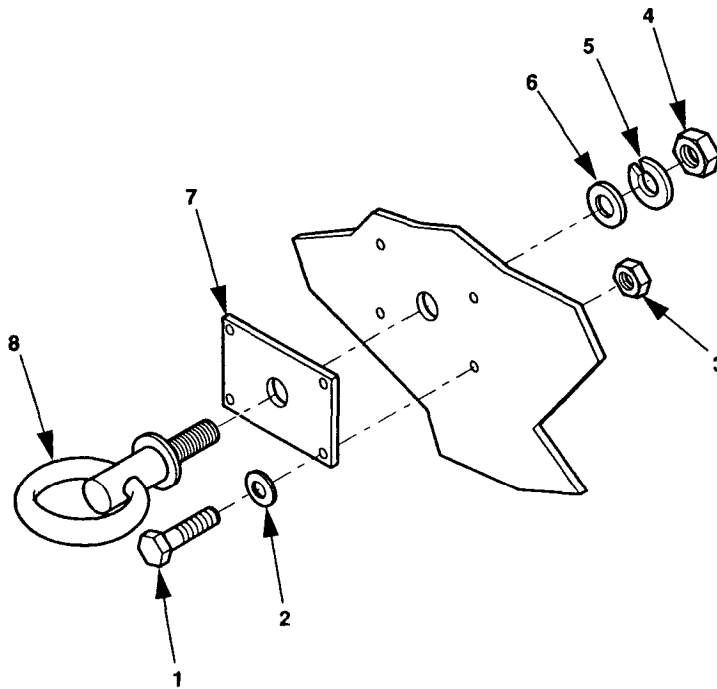


Figure 4-21. Replace Power Plant Trailer Lifting Ring.

INSTALLATION

1. Install lifting ring (8), flat washer (6), lock washer (5), and nut (4) on mounting plate (7) and torque to 315-347 lb. ft (420-470 N-m).
2. Install mounting plate (7), screws (1), flat washers (2), and self-locking nuts (3).

**4-22 DATA PLATE AND REFLECTOR MAINTENANCE.**

This task covers: Replacement

INITIAL SETUP

Tools

Tool Kit, General Mechanic's  
 (item 1, appendix B)  
 Drill, 1/4-inch (item 2, appendix B)  
 Drill, Twist, 3/16 (item 2, appendix B)  
 Riveter, Blind Hand (item 5, appendix B)

2-3.2.1.

Materials/Parts

Plate, Identification/Transportation Data  
 Screws, Drive  
 Rivets (item 3, appendix I)

Equipment Conditions

Reference  
 Trailer handbrakes set, front support  
 leg/landing leg lowered, and rear  
 leveling-support jack lowered; paragraph

REPLACEMENT

1. REPLACE DATA PLATE.

**NOTE**

For PU-798 and PU-799 data plates, refer to trailer chassis TM 9-2330-202-14&P. For AN/MJQ-37 and AN/MJQ-38 data plates, refer to trailer chassis TM 9-2330-213-14&P. For PU-798A and PU-799A data plates, refer to trailer chassis TM 9-2330-392-14&P.

- a. Drill out rivets (4, figure 4-22) and remove data plate (3).
- b. Position data plate (3) on trailer and install rivets (4).

2. REPLACE REFLECTORS

**NOTE**

For replacement of reflectors on PU-798A and PU-799A, refer to TM 9-2330-392-14&P.

- a. Remove self-locking nuts (5), flat washers (6), screws (8), and reflector (7) from trailer (PU-798 and PU-799, and rear of AN/MJQ-37 and AN/MJQ-38 only).

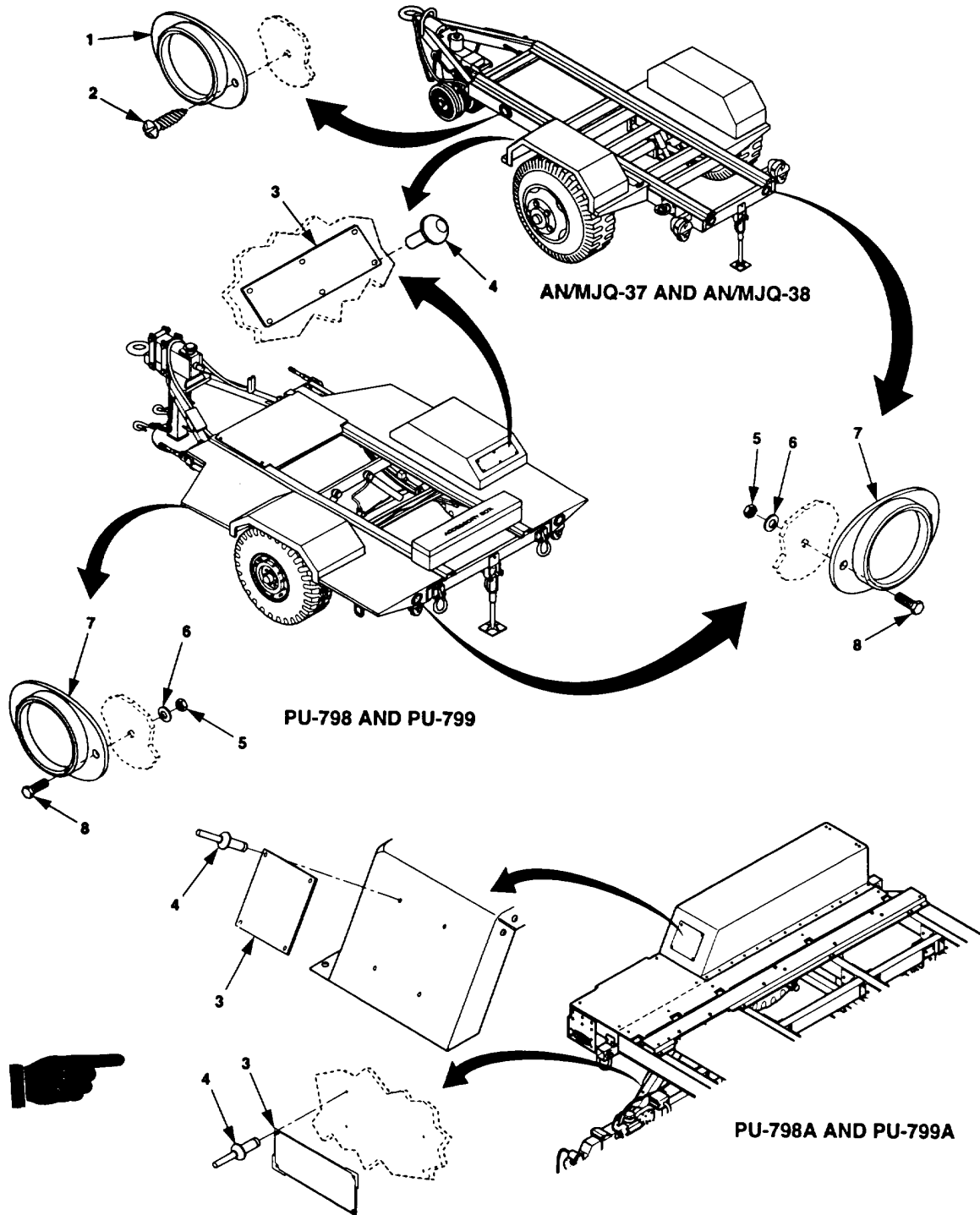


Figure 4-22. Identification/Transport on Data Plate and Reflector Replacement.



- b. Remove self-tapping screws (2) and reflector (1) from front of trailer (AN/MJQ-37 and AN/MJQ-38 only).
- c. Install reflector, (7) screws (8), flat washers (6), and self-locking nuts (5) on trailer.
- d. Install reflector (1) and self-tapping screws (2) on front of trailer (AN/MJQ-37 and AN/MJQ-38 only).

**4-23 AN/MJQ-37, ANIMJQ-38, PU-798, AND PU-799 TRAILER PLATFORM MAINTENANCE.**

This task covers:      a. Removal      b. Installation

INITIAL SETUP

Tools

Tool Kit, General Mechanic's  
(item 1, appendix)

Materials/Parts

Nuts, Self-locking      2-3.2.1.

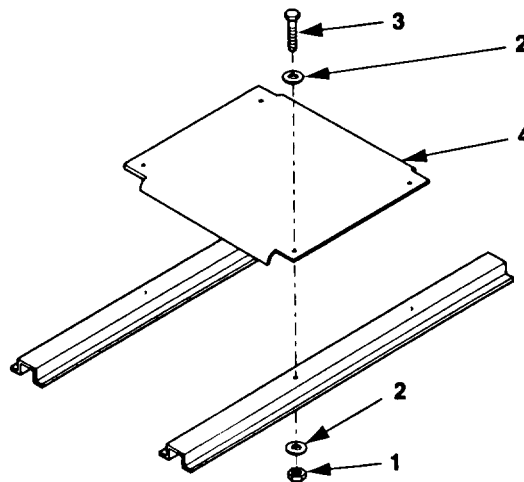
Equipment Conditions

Reference

Trailer handbrakes set, front support leg/landing leg lowered, and rear leveling-support jack lowered; paragraph

Both generator sets shut down; paragraph 2-5.3.3.

Accessory box removed; paragraph 4-19 (AN/MJQ-37 and AN/MJQ-38 only).



**Figure 4-23. Power Plant/Power Unit Trailer Platform Replacement.**

## **REMOVAL**

Remove four self-locking nuts (1, figure 4-23), eight flat washers (2), four screws (3), and trailer platform (4).

## **INSTALLATION**

Install platform (4), four screws (3), eight flat washers (2), and four self-locking washers (1).

---

### **4-24 PU-789 AND PU-799 FENDER MAINTENANCE.**

---

This task covers: a. Removal  
b. Repair

c. Installation

---

## **INITIAL SETUP**

### **Tools**

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Drill, 1/4-inch  
(item 2, appendix B)

### **Materials/Parts**

Nuts, Self-locking  
Washer, Lock, Split-ring  
Covering, Deck

### **Equipment Conditions**

Reference

Trailer handbrakes set, front support leg/landing leg lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1.

Both generator sets shut down; paragraph 2-5.3.3.

---

## **REMOVAL**

1. Remove wing nut (8, figure 4-24), two flat washers (9), nut (10), flat washer (11), ground cable (12), and flat washer (13).

### ***NOTE***

If fender is being replaced, fire extinguisher bracket, data plate, ground stud, and reflectors must be removed and retained for installation on new fender. If replacing roadside fender, perform steps 2, 3, 5, and 6. If replacing curbside fender, perform steps 4, 5, and 6.

2. Remove two nuts (14), lock washers (15), internal tooth lock washers (16), and ground stud (18).

3. Remove fire extinguisher bracket (paragraph 4-20) and reflectors (paragraph 4-22).

4. Remove data plate and reflectors (paragraph 4-22).

5. Remove ten self-locking nuts (5), twenty flat washers (4), and ten cap screws (6).

6. Remove five self-locking nuts (3), ten flat washers (2), five cap screws (1), and fender (7).

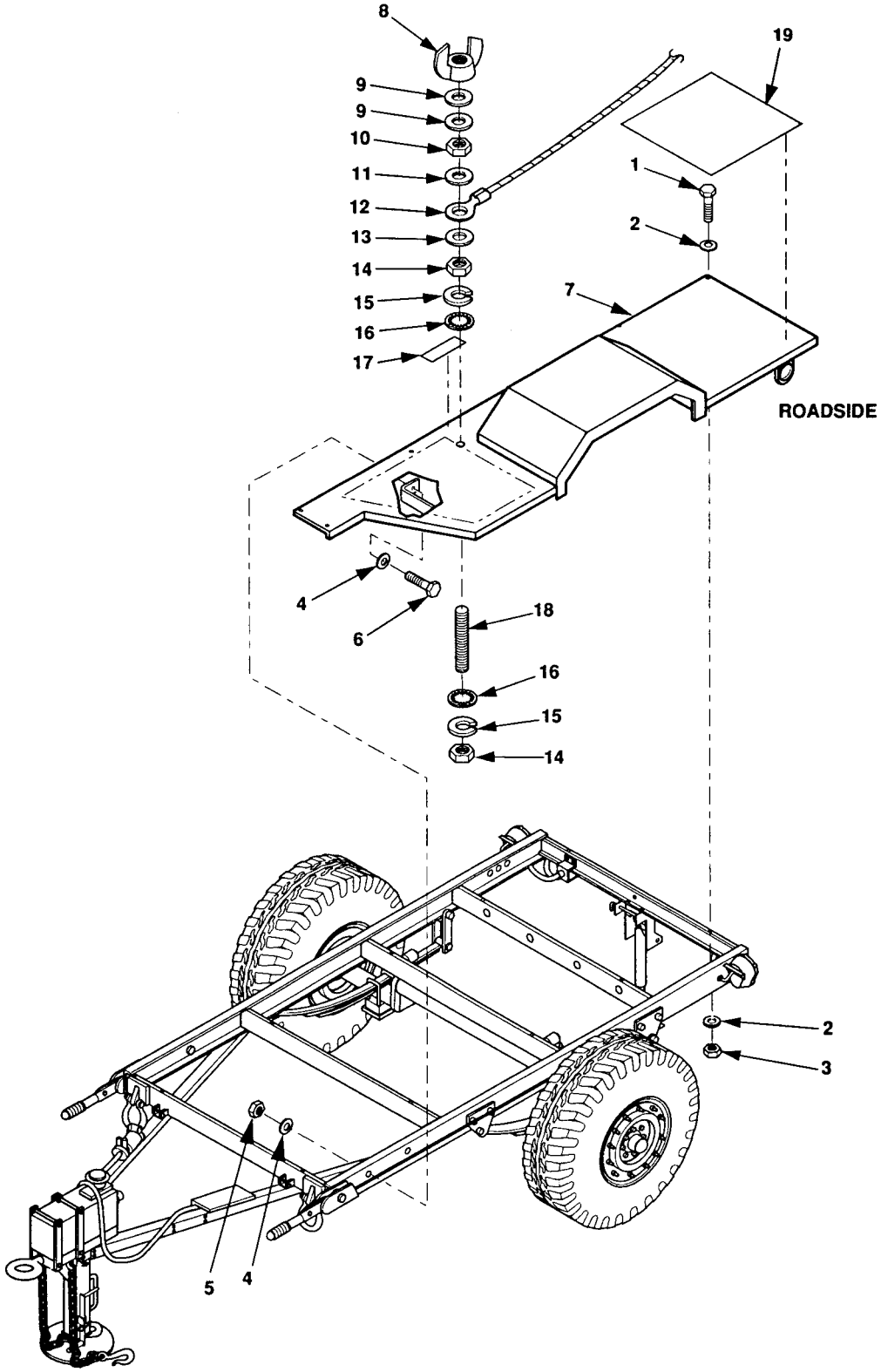


Figure 4-24. PU-798 and PU-799 Fender Replacement.

## **REPAIR**

### ***NOTE***

Repair is limited to replacement of deck covering (19). Refer to figure G-6, appendix G.

## **INSTALLATION**

1. Position fender (7) on trailer chassis and loosely install five cap screws (1), ten flat washers (2), and five self-locking nuts (3).
2. Install and tighten ten cap screws (6), twenty flat washers (4), and ten self-locking nuts (5).
3. Tighten five self-locking nuts (3).

### ***NOTE***

If new fender(s) are being installed, fire extinguisher bracket, data plate, ground stud, and reflectors removed during removal procedures must be installed. If replacing roadside fender, perform steps 4, 5, and 6. If not, proceed to step 8. If replacing curbside fender, perform steps 6 and 7.

4. Install fire extinguisher bracket (paragraph 4-20).
5. Install ground stud (18), two internal tooth lock washers (16), lock washers (15), nuts (14), and ground data plate (17).
6. Install reflectors (paragraph 4-22).
7. Install data plates (paragraph 4-22).
8. Install flat washer (13), ground wire (12), flat washer (11), nut (10), two flat washers (9), and wing nut (8).



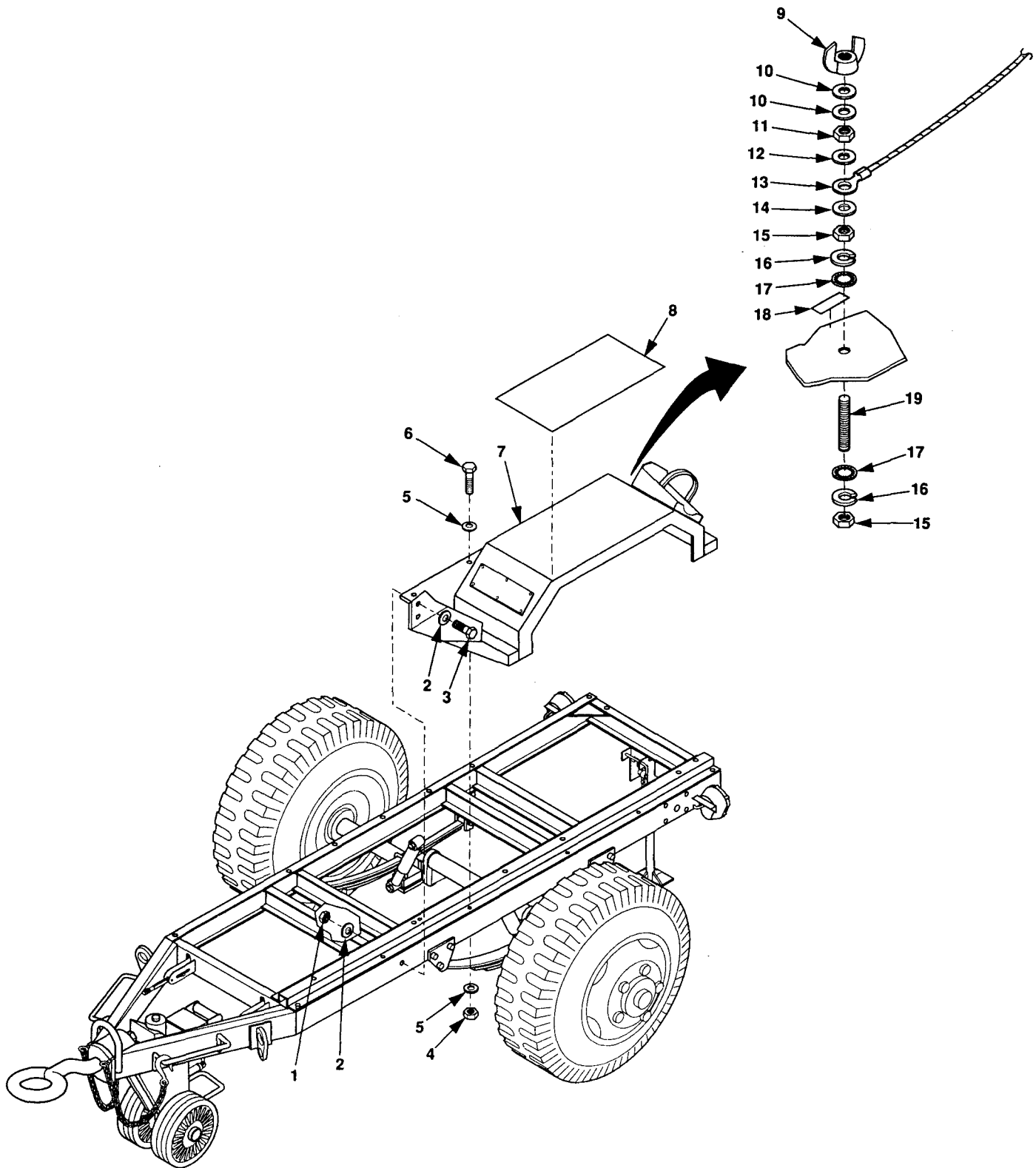


Figure 4-25. AN/MJQ-37 and AN/MJQ-38 Fender Replacement.

**REPAIR****NOTE**

Repair is limited to replacement of non-skid material (8). Refer to figure G-7, appendix G.

**INSTALLATION**

1. Loosely install fender (7), five screws (6), ten flat washers (5), and five self-locking nuts (4).
2. Install and tighten four cap screws (3), eight flat washers (2), and four self-locking nuts (1).
3. Tighten five self-locking nuts (4).

**NOTE**

If replacing fender(s), fire extinguisher bracket, and/or data plate, and ground stud removed during removal procedures must be reinstalled. If replacing roadside fender, perform steps 4, 5, 6, and 7. If replacing curbside fender, perform step 4.

4. Install fire extinguisher bracket (paragraph 4-20).
5. Install data plate (paragraph 4-22).
6. Install ground stud (19), two internal tooth lock washers (17), lock washers (16), nuts (15), and ground data plate (18).
7. Install flat washer (14), ground wire (13), flat washer (12), nut (11), two flat washers (10), and wing nut (9).

---

**4-26 1 TON TRAILER REAR LEVELING-SUPPORT JACK MAINTENANCE.**

---

This task covers: a. Removal  
b. Repair

c. Installation

---

**INITIAL SETUP**

**Tools**

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Jack Stand (item 2, appendix B)  
Vise (item 2, appendix B)

**Equipment Conditions**

Reference  
Trailer handbrakes set and front support  
leg/landing leg lowered; paragraph 2-3.2.1.

**Materials/Parts**

Pin, Cotter  
Nut, Self-locking, General Purpose  
Pin, Spring  
Fitting, Lubrication (if needed)  
Grease, GAA (item 2, Appendix E)

Both generator sets shut down; paragraph  
2-5.3.3

---

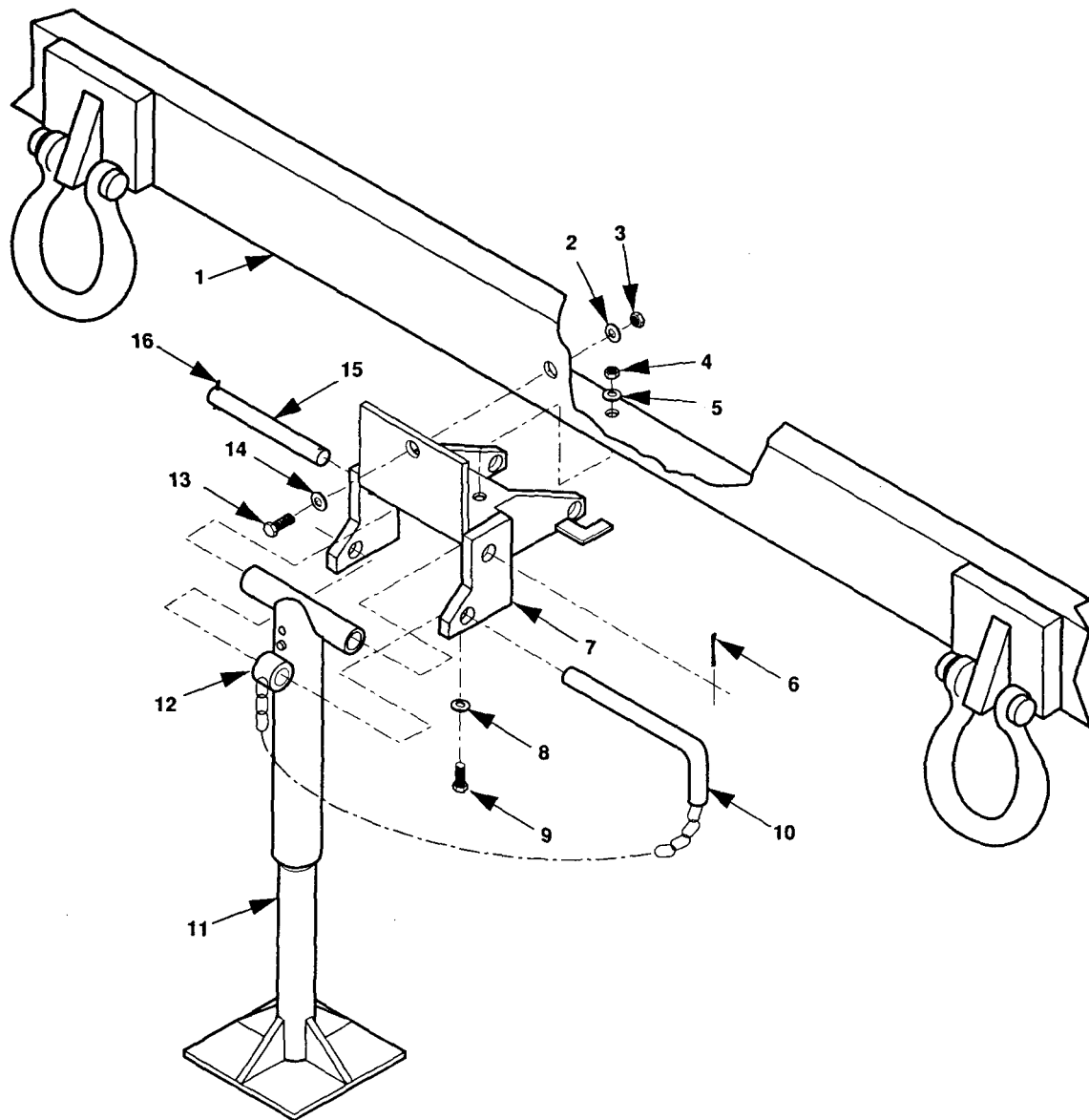
**REMOVAL**

**WARNING**

Before removing trailer leveling-support jack, support rear of trailer with jack stands.  
Failure to observe this warning can cause severe personal injury or death.

1. Support rear of trailer with jack stands.
2. Turn leg base (11, figure 4-26) to take weight off leg prop.
3. Remove either one of two cotter pins (16 or 6) from pivot shaft (15) and discard.
4. Hold leg base (11) steady and remove pivot shaft (15) with remaining cotter pin (16 or 6) in place.
5. Lift leg base (11) slightly to take weight off retaining pin (10) and remove retaining pin (10). Move leg base (11) and attached parts out of bracket (7).
6. Remove two self-locking nuts (4), four flat washers (5 and 8), and two cap screws (9).
7. Remove self-locking nut (3), two flat washers (2 and 14), and cap screw (13). Remove bracket (7) from trailer chassis (1).





**Figure 4-26. Rear Leveling-Support Jack Replacement; 1 Ton Trailer.**

## REPAIR

### WARNING

Before removing trailer rear leveling-support jack, support rear of trailer with jack stands. Failure to observe this warning can cause severe personal injury or death.

### NOTE

Disassemble the trailer rear leveling-support jack only to the extent necessary to replace worn, defective, or damaged parts.

1. Disassemble trailer rear leveling-support jack.
  - a. Clamp leg assembly in a vise with spring pin (2, Figure 4-27) facing up.
  - b. Drive the spring pin (2) out of upper leg (1) and remove leg base (4).
  - c. If defective, remove lubrication fitting (3).
  - d. Inspect upper leg (1) and leg base (4) for damage. If either needs to be replaced, replace entire trailer rear leveling-support jack.

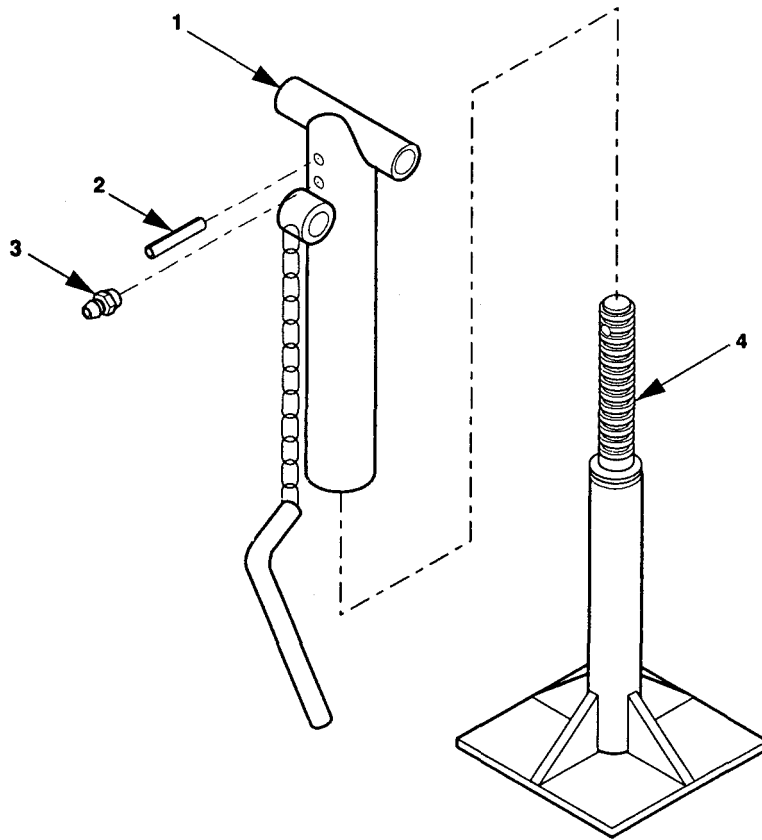
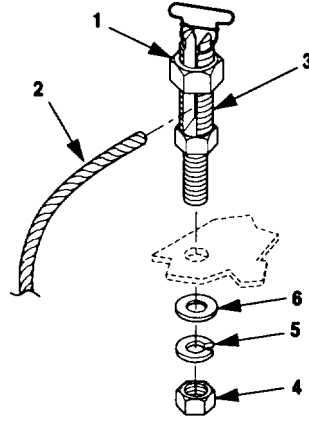


Figure 4-27. Rear Leveling-Support Jack Repair; 1 Ton Trailer.

2. Assemble trailer rear leveling-support jack.
  - a. If removed in disassembly, install lubrication fitting (3).
  - b. Clamp upper leg (1) in a vise with spring pin hole facing up.
  - c. Insert leg base (4), align hole and install a new spring pin (2).

INSTALLATION

1. Install ground terminal (3), flat washer (6), lock washer (5), and nut (4). Tighten nut (4).
2. Install ground wire (2) in slot of ground terminal (3) and tighten nut (1).



**Figure 4-28. PU-798A and PU-799A Ground Stud Replacement.**

**Section VII. ADMINISTRATIVE STORAGE****4-28 ADMINISTRATIVE STORAGE.**

**4-28.1 Short Term Storage.** This type of storage is used when the power plant/power unit is expected to be stored from 1 to 45 days. The storage may be at destination after domestic shipment, or may be administrative storage when there is a shortage of maintenance manpower. For administrative storage:

- a. Perform current maintenance services and serviceability criteria evaluations before placing power plant/power unit in administrative storage. Correct shortcomings and deficiencies and check that all modification work orders have been applied.
- b. If possible, select an inside storage site. If inside storage is not available, a truck, van, conex container, or other container may be used.
- c. When in administrative storage, the power plant/power unit should be capable of being made mission ready within 24 hours unless a different time frame is directed by the approving authority.

**4-28.2 Intermediate Term Storage.** This type of storage is used when the power plant/power unit is expected to be stored from 45 to 180 days.

**4-28.3 Long Term Storage.** This type of storage is used when the power plant/power unit is expected to be stored for more than 180 days.

**Section IV. OPERATION UNDER UNUSUAL CONDITIONS**

**2-8 GENERATOR SETS.**

Refer to TM 9-6115-642-10.

**2-9 TRAILER.**

Refer to TM 9-2330-202-14&P for Power units PU-798 and PU-799, TM 9-2330-392-14&P for Power Units PU-798A and PU-799A, and TM 9-2330-2 t3-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

## Section I. OPERATOR LUBRICATION

### 3-1 LUBRICATION.

Lubrication instructions for the generator set and engine are contained in LO 9-6115-642-12. Lubrication instructions for the trailers are contained in TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**Section II. TROUBLESHOOTING**

**3-2 TROUBLESHOOTING.**

**3-2.1 Generator Set.** Refer to TM 9-6115-642-10.

**3-2.2 Trailer.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**3-2.3 Power Plant.** The following symptom index lists faults associated with switch box operation. Figures 3-1, 3-2, and 3-3 provide a go/no-go flowchart of each malfunction. Each malfunction listed includes a reference to the applicable figure that contains a chart that will help you determine probable causes and corrective actions to take. The symptom index cannot list all faults that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or cannot be corrected by listed corrective actions, notify next higher level of maintenance.

**SYMPTOM INDEX**

	Troubleshooting Procedure (Figure)
ON INDICATOR LAMP FAILS TO LIGHT WITH GENERATOR SET RUNNING .....	3-1
ON-LINE INDICATOR LAMP FAILS TO LIGHT WHEN ON/OFF SWITCH IS PLACED IN ON POSITION .....	3-2
SYNCHRONIZING INDICATOR LAMPS FAIL TO LIGHT WHEN TRANSFER SWITCH IS OPERATED .....	3-3
WITH ALL INDICATOR LAMPS WORKING PROPERLY, LOAD WILL NOT TRANSFER .....	3-4
SYNCHRONIZING INDICATOR LAMPS FAIL TO OPERATE IN UNISON WHEN TRANSFER SWITCH IS OPERATED .....	3-5

CHAPTER 5

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

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Section I	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment ..... 5-2
5-1	Common Tools and Equipment ..... 5-2
5-2	Special Tools, TMDE, and Support Equipment ..... 5-2
5-3	Repair Parts ..... 5-2
Section II	Troubleshooting ..... 5-3
5-4	General ..... 5-3
Section III	Maintenance Procedures ..... 5-8
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5-6	Generator Set Maintenance ..... 5-8
5-7	Electrical Leads W3 - W8 Maintenance ..... 5-13
5-8	Switch Box Harness W9 Maintenance ..... 5-15
5-9	Relay Board Harness W11 Maintenance ..... 5-21
5-10	Output Connector Harness W10 Maintenance ..... 5-23
5-11	Relays K3-K6 Maintenance ..... 5-26
5-12	Permissive Paralleling Relay ..... 5-28
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5-17	AN/MJQ-37, AN/MJQ-38, PU-798, and PU-799 Trailer Fender Repair ..... 5-40
5-18	AN/MJQ-37 and AN/MJQ-38 Generator Mounting Rail Maintenance ..... 5-40
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5-20	PU-798A and PU-799A Generator Mounting Rail Replacement ..... 5-43
5-21	High Mobility Trailer Rear Leveling-Support Jack Maintenance ..... 5-45



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

**5-1 COMMON TOOLS AND EQUIPMENT.**

For authorized common tools and equipment refer to the Modified Table of Organization and Equipment(MTOE) applicable to your unit.

**5-2 SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.**

Refer to generator set TM 9-6115-642-24P, engine TM 9-2815-253-24P, 1-ton trailer TM 9-2330-202-14&P, high mobility trailer TM 9-2330-392-14&P, and 1 1/2 ton trailer TM 9-2330-213-14&P.

**5-3 REPAIR PARTS.**

**5-3.1 Generator Set Repair Parts.** Refer to generator set TM 9-6115-642-24P and engine TM 9-2815-253-24P.

**5-3.2 Trailer Repair Parts.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for Power Units PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**5-3.3 Power Plant/Power Unit Repair Parts.** Power Plant/Power Unit repair parts not covered in the generator, engine, or trailer RPSTL are listed and illustrated in Appendix F.

**Section II. TROUBLESHOOTING**

**5-4 GENERAL.**

Paragraph 5-4.3 covers troubleshooting procedures for components unique to the power plant/power unit. Refer to the applicable generator set or trailer technical manual, as listed below, for generator and trailer troubleshooting procedures.

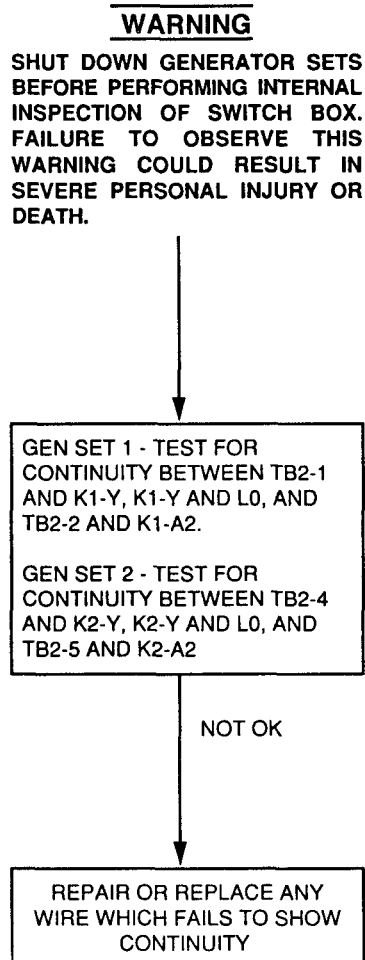
**5-4.1 Generator Set Troubleshooting.** Refer to TM 9-6115-642-24 and TM 9-2815-253-24.

**5-4.2 Trailer Troubleshooting.** Refer to TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for Power Units PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

**5-4.3 Power Plant Troubleshooting.** The following symptom index contains troubleshooting information for locating and correcting operating troubles that may develop in components unique to the power plant end item. The symptom index lists malfunctions associated with switch box operation. Each malfunction listing includes a reference to the applicable figure that contains a chart. The chart will help you determine probable causes and corrective actions to take. The symptom index 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 listed corrective actions, notify next higher level of maintenance.

**SYMPTOM INDEX**

	Troubleshooting Procedure (Figure)
ON INDICATOR LAMP ASSEMBLY TESTS GOOD, BUT ON INDICATOR LAMP FAILS TO LIGHT WITH GENERATOR SET RUNNING .....	5-1
ON-LINE INDICATOR LAMP ASSEMBLY AND ON/OFF SWITCH SERVICEABLE, BUT ON-LINE INDICATOR LAMP FAILS TO LIGHT WHEN ON/OFF SWITCH IS PLACED IN ON POSITION .....	5-2
SYNCHRONIZING INDICATOR LAMP ASSEMBLY AND TRANSFER SWITCH SERVICEABLE, BUT SYNCHRONIZING INDICATOR LAMPS FAIL TO LIGHT WHEN TRANSFER SWITCH IS CLOSED AND THEN RELEASED .....	5-3
ALL INDICATOR LAMPS WORKING PROPERLY, BUT LOAD WILL NOT TRANSFER.....	5-4



*Figure 5-1. ON Indicator Lamp Assembly Tests Good, But On Indicator Lamp Fails To Light With Generator Set Running.*

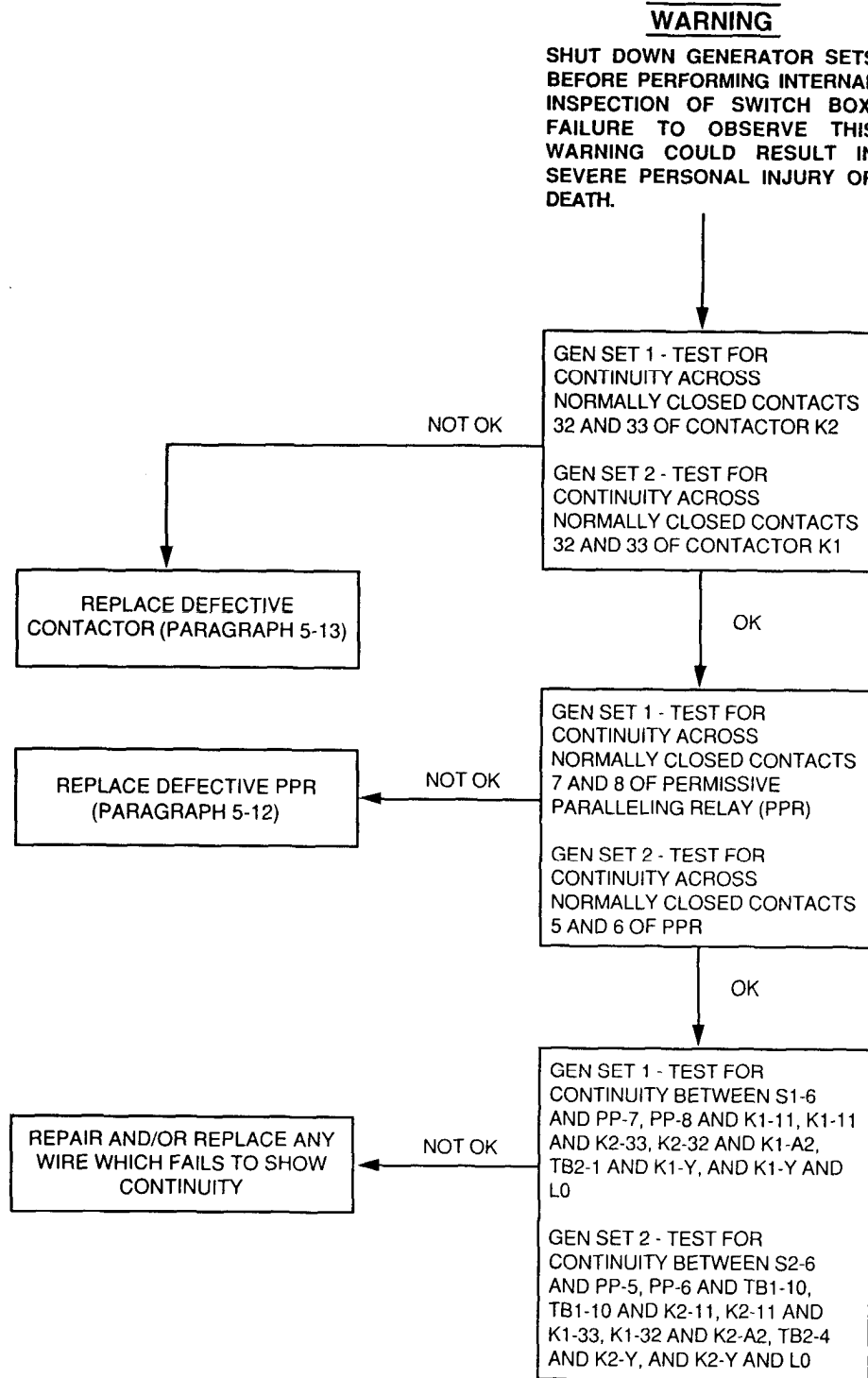


Figure 5-2. ON-LINE Indicator Lamp Assembly And ON/OFF Switch Serviceable, But ON-LINE Indicator Lamp Fails To Light When ON/OFF Switch Is Placed In ON Position.

**WARNING**

SHUT DOWN GENERATOR SETS BEFORE PERFORMING INTERNAL INSPECTION OF SWITCH BOX. FAILURE TO OBSERVE THIS WARNING COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

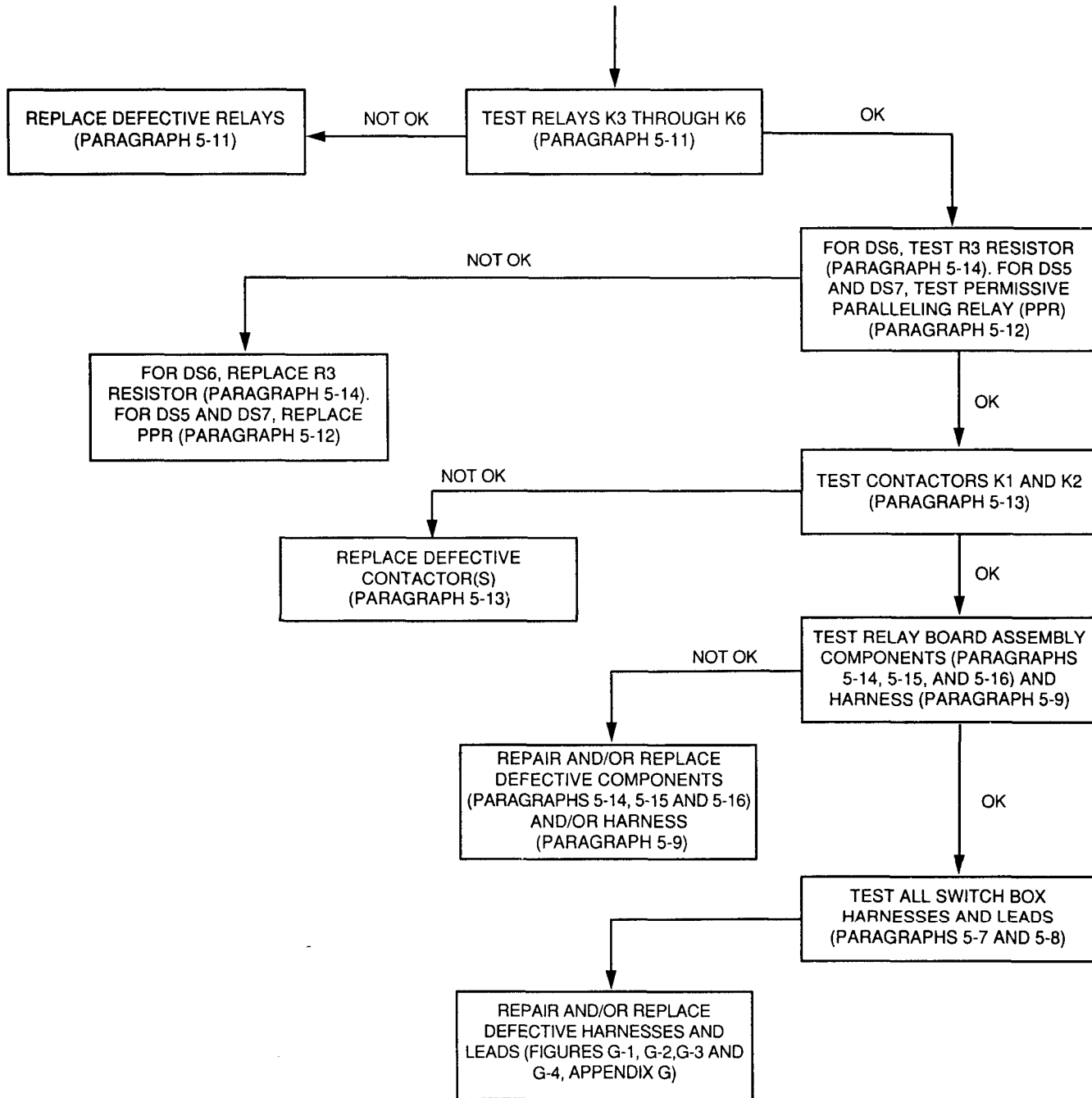


Figure 5-3. SYNCHRONIZING Indicator Lamps And Transfer Switch Serviceable, But SYNCHRONIZING Indicator Lamps Fail To Light When TRANSFER Switch is Closed And Then Released.

**WARNING**

DANGEROUS VOLTAGE EXISTS ON LIVE CIRCUITS. ALWAYS OBSERVE PRECAUTIONS AND NEVER WORK ALONE. FAILURE TO OBSERVE THIS WARNING COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

NOTE:

GEN SET 1 OR 2 IS SUPPLYING POWER TO LOAD. OPERATOR STARTS AND BRINGS ON LINE EITHER GEN SET. TRANSFER SWITCH IS CLOSED AND THEN RELEASED.

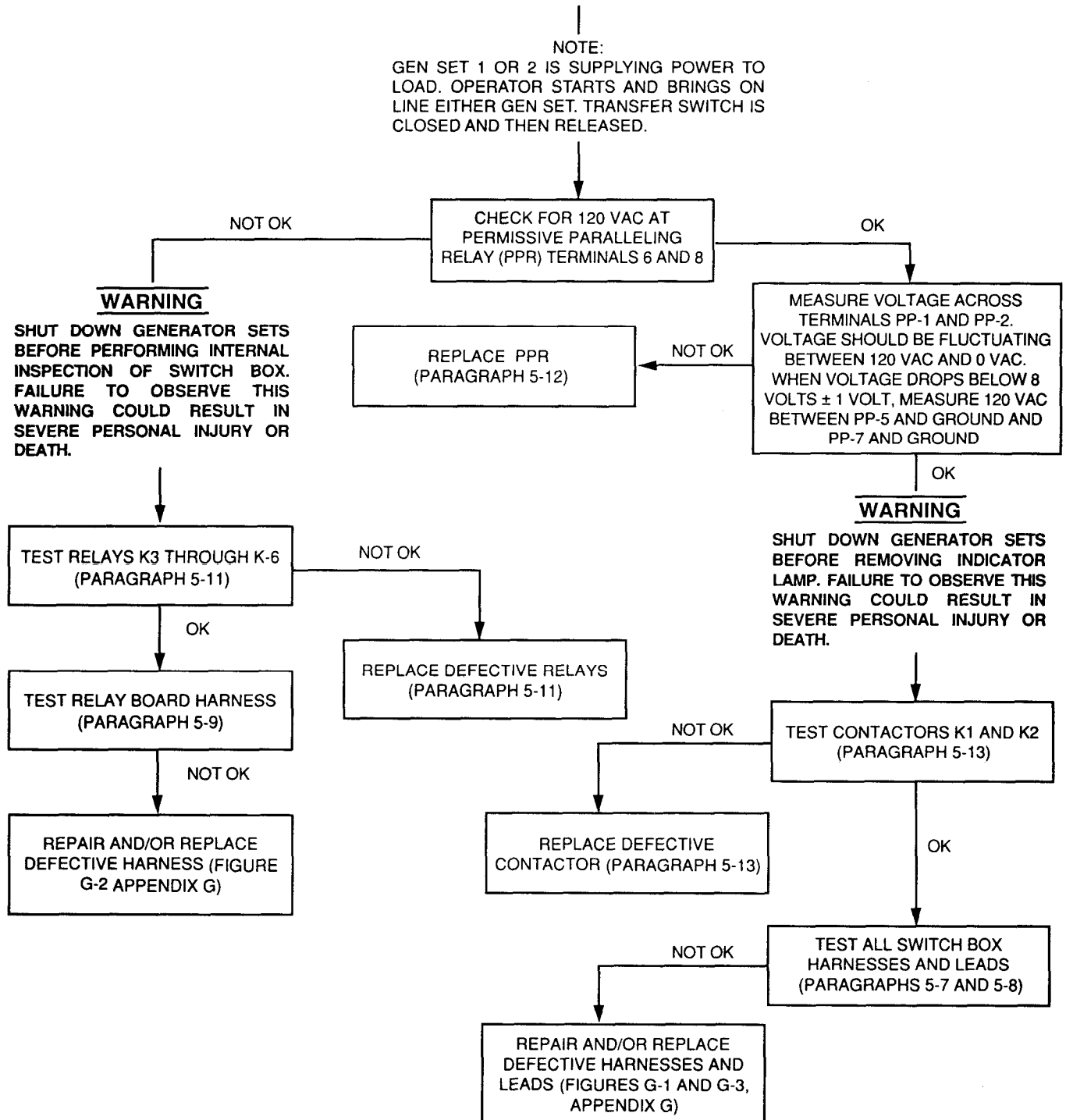
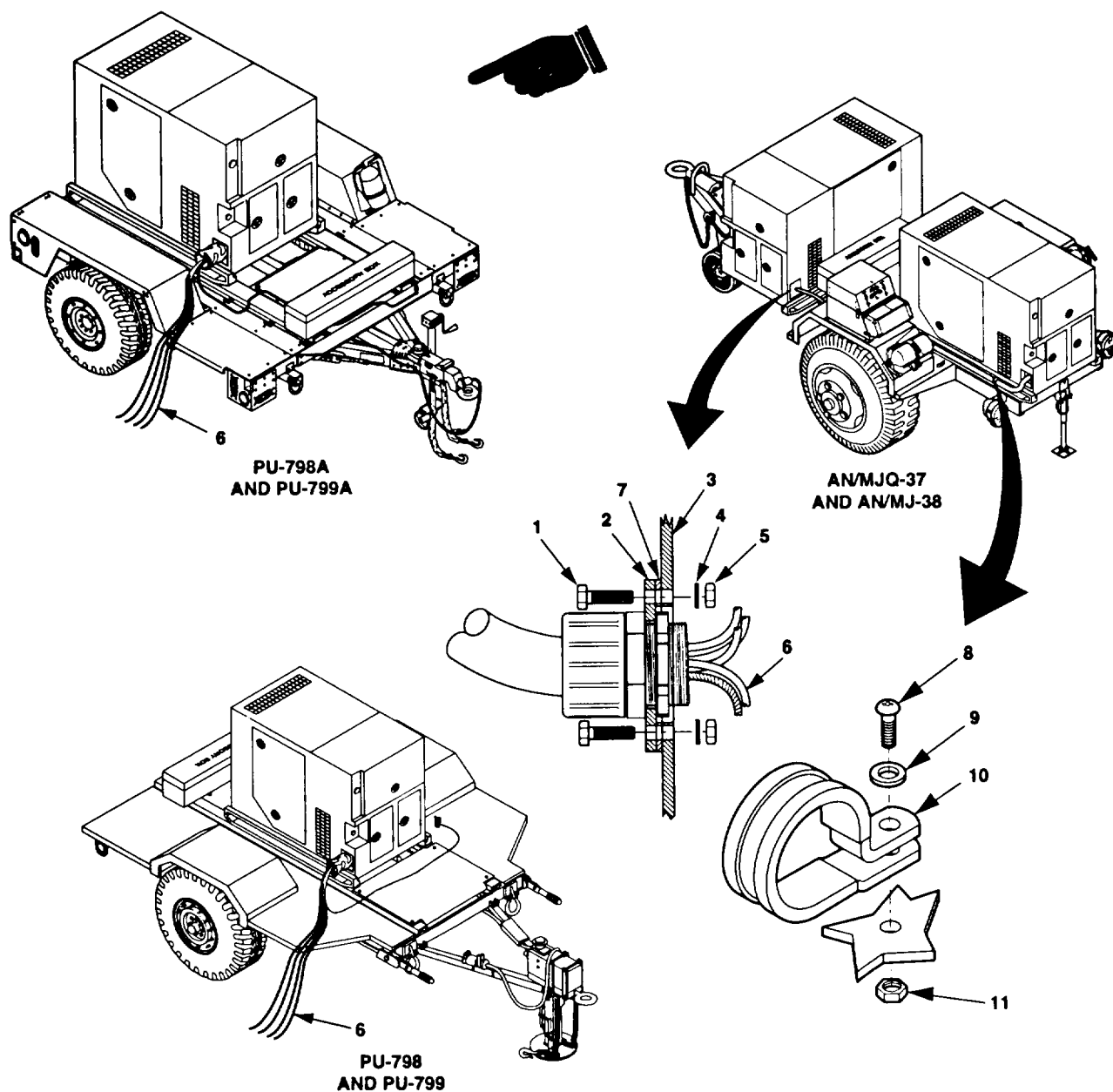


Figure 5-4. All Indicator Lamps Working Properly, But Load Will Not Transfer.





**Figure 5-5. Power/Load Cable Removal.**

3. Remove self-locking nuts (11), flat washers (9), screws (8), and power cable clamps (10).

**NOTE**

Hardware holding generator sets on trailers differs between configurations. When removing generator sets, refer to figure 5-6 to determine hardware used.

4. Remove self-locking or plain nuts (1, figure 5-6), flat washers (2), lock washers (4), and cap screws (3).



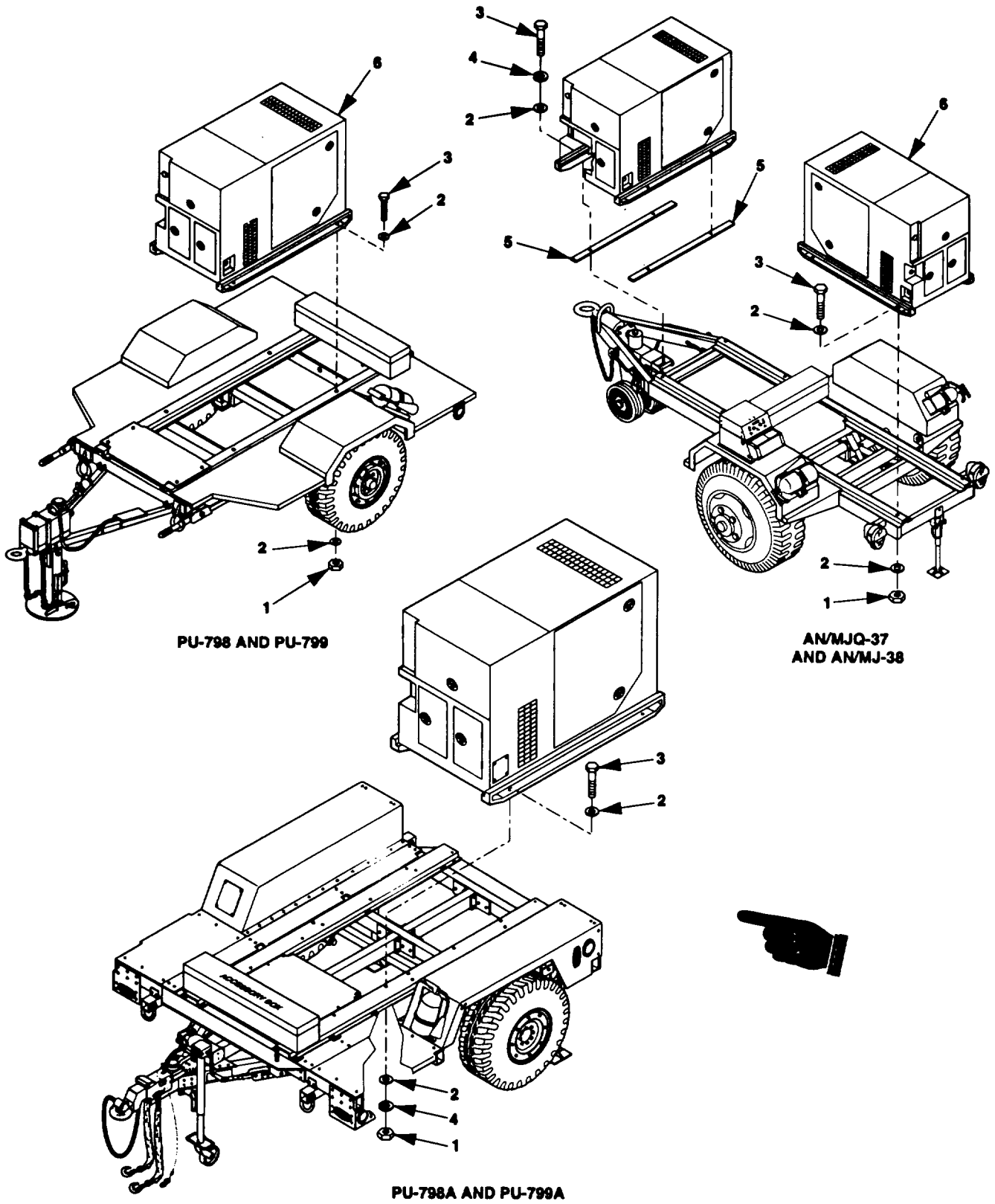


Figure -6. Removing Generator Set Mounting Hardware.

5. Attach a four-leg sling to the four lifting/tiedown rings at the corners of the generator set skid base. The sling must meet the dimension requirements shown on the generator set lifting and tiedown diagram plate.

**WARNING**

When lifting generator set, use lifting equipment with minimum lifting capacity of 2500 pounds (1134.0 kg). Do not stand or put arms, legs, or any part of body under hoisted load. Do not permit generator set to swing. Failure to observe this *WARNING* can result in severe personal injury or death to personnel or damage to equipment.

6. Using a wrecker, crane, or other lifting device having a lifting capacity of at least 2500 lb (1134.0 kg) and sufficient lifting height, lift generator set from trailer.

**INSTALLATION**

1. Using the same sling as in removal step 4, attach sling to generator set lifting/tiedown rings.
2. Using the same lifting device as in removal step 5, lift generator set and position it on trailer.

***NOTE***

Hardware holding generator sets on trailers differs between configurations. When installing generator sets, refer to figure 5-7 to determine hardware used. Position lock washers as noted in disassembly. Plain nuts are used on PU-798A and PU-799A. All other models use self-locking nuts.

3. Install self-locking nuts (1, figure 5-6), flat washers (2), lock washers (4), and cap screws (3). Torque to 80-88 lb-ft (108.5-119.3 Nm).
4. Install cable clamps (10, figure 5-5), screws (8), flat washers (9), and self-locking nuts (11).
5. Insert power cable electrical leads and ground cable through generator set access opening from which generator output plate was removed in removal step 1.
6. Position generator output plate (2, AN/MJQ-37 and AN/MJQ-38 only) with gasket (7) against generator set housing (3). Secure with four cap screws (1), lock washers (4), and nuts (5).
7. Refer to TM 9-6115-642-10 and connect power cable ends (6) to generator set load terminals as follows:
  - (1) Lead marked L1 to L1
  - (2) Lead marked L2 to L2
  - (3) Lead marked L3 to L3
  - (4) Lead marked LO to LO
  - (5) Ground cable to GND terminal

**NOTE**

Maintenance of switch box assembly consists of testing, removal, and installation of switch box wiring and other switch box components. Figure 5-7, Switch Box Components, is provided as an aid in performing the following maintenance procedures.

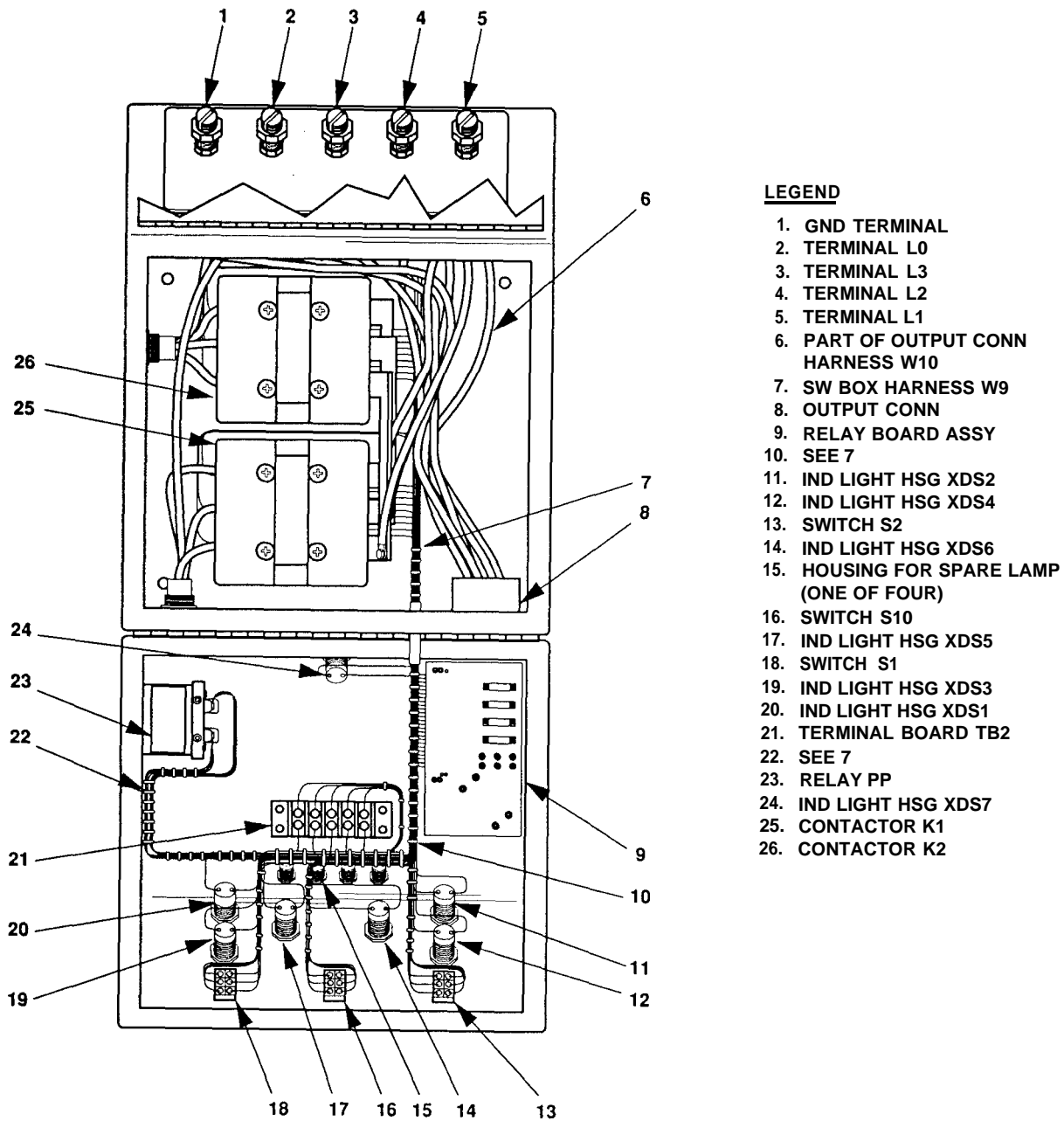


Figure 5-7. Switch Box Components.

---

**5-7 ELECTRICAL LEADS W3 - W8 MAINTENANCE.**

---

This task covers: a. Test  
 b. Removal  
 c. Repair  
 d. Installation

---

**INITIAL SETUP****Tools**

Tool Kit, General Mechanic's  
 (item 1, appendix B)  
 Multimeter (item 3, appendix B)  
 Crimping Tool, Hydraulic  
 (item 4, appendix B)

**Materials/Parts**

Lock washers

---

**Equipment Conditions**

Reference

Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing leg lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

**TEST**

1. Check continuity of lead W3 between contactor terminal K1-A1 and switch box load terminal L1.
2. Check continuity of lead W4 between contactor terminal K1-B1 and switch box load terminal L2.
3. Check continuity of lead W5 between contactor terminal K1-C1 and switch box load terminal L3.
4. Check continuity of lead W6 between contactor terminals K1-A1 and K2-A1.
5. Check continuity of lead W7 between contactor terminals K1-B1 and K2-B1.
6. Check continuity of lead W8 between contactor terminals K1-C1 and K2-C1.
7. Repair or replace any lead that does not have continuity (figure G-1, appendix G).

**REMOVAL*****NOTE***

Figure 5-8, Detail A, shows connections at K1 or K2. Detail B shows connections at switch box load terminals.

1. Locate W3-W8 connections to terminals A1, B1, and C1 of contractors (13, figure 5-8 Detail A) and remove four screws (5), lock washers (6), and contactor shield (7).

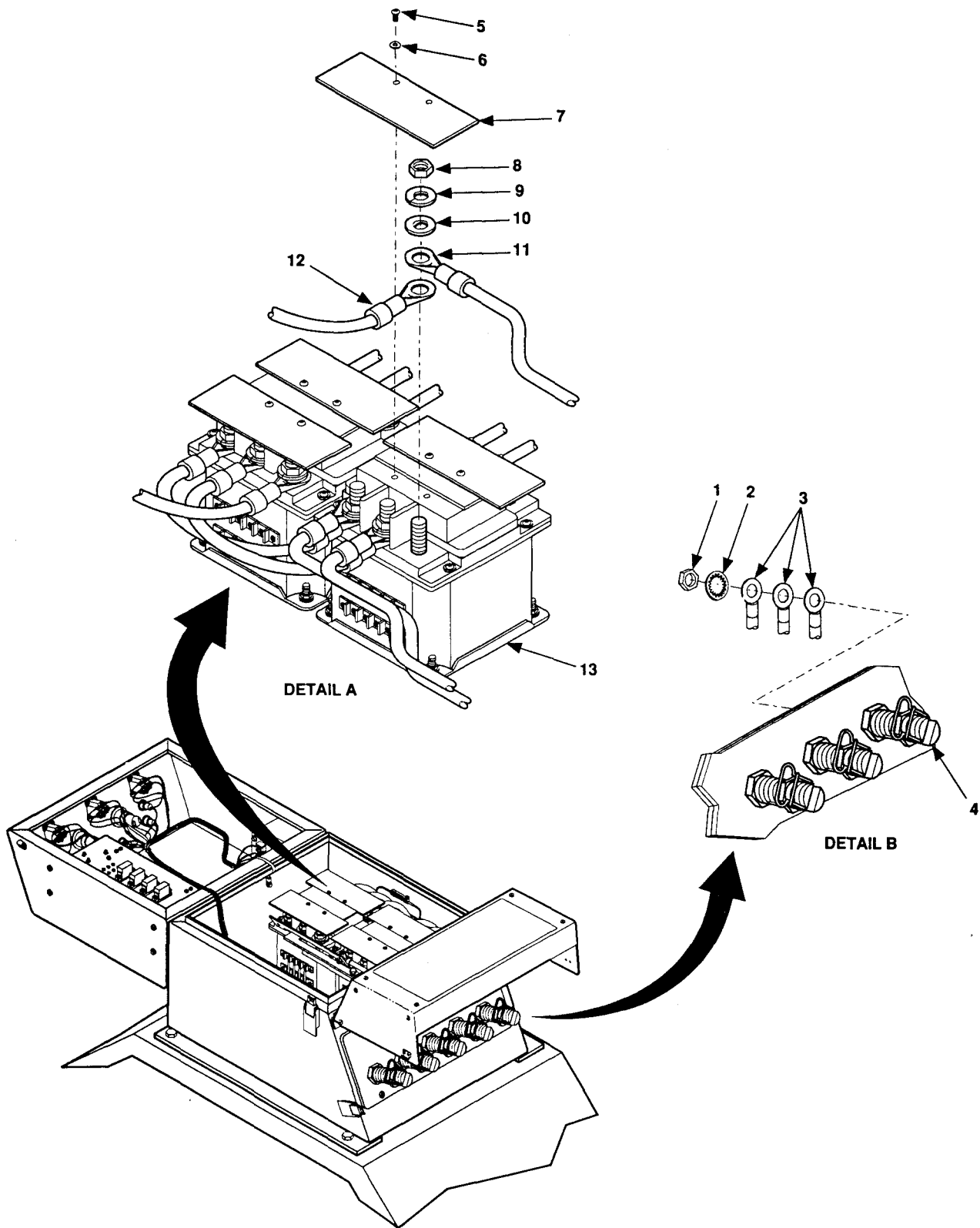


Figure 5-8. Switch Box Lead Connections.

2. Remove nuts (8), lock washers (9), flat washers (10), and leads (11 and 12).
3. Locate W3-W5 connections to switch box load terminals L1, L2, and L3 (4, Detail B).
4. Remove nuts (1), internal tooth washers (2), and leads (3) from load terminal (4).

---

**REPAIR**

Refer to figure G-1, appendix G.

---

**INSTALLATION**

1. Install leads W3, W4, and W5 (3), internal tooth washers (2), and nuts (1) on switch box load terminals and tighten.
2. Install other end of leads W3-W6 (11 and 12), flat washers (10), lock washers (9), and nuts (8) on contractors (13).
3. Install contactor shield (7), lock washer (6), and screw (5).

---

**5-8 SWITCH BOX HARNESS W9 MAINTENANCE.**

---

This task covers: a. Test  
                           b. Removal  
                           c. Repair  
                           d. Installation

---

**INITIAL SETUP**

**Tools**

Tool Kit, General Mechanic's  
 (item 1, appendix B)  
 Solder Gun (item 3, appendix B)  
 Crimping Tool, Hand (item 3, appendix B)  
 Multimeter (item 3, appendix B)

**Equipment Conditions**

Reference  
 Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support Leg/landing leg lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

**Materials/Parts**

Lock washers  
 Solder  
 Insulation sleeving

---

**TEST**

1. Remove four screws (2, figure 5-9), lock washers (3), and flat washers (4), and invert relay board assembly (1).

***NOTE***

Disconnect wire being checked at one end to isolate wire for continuity check.

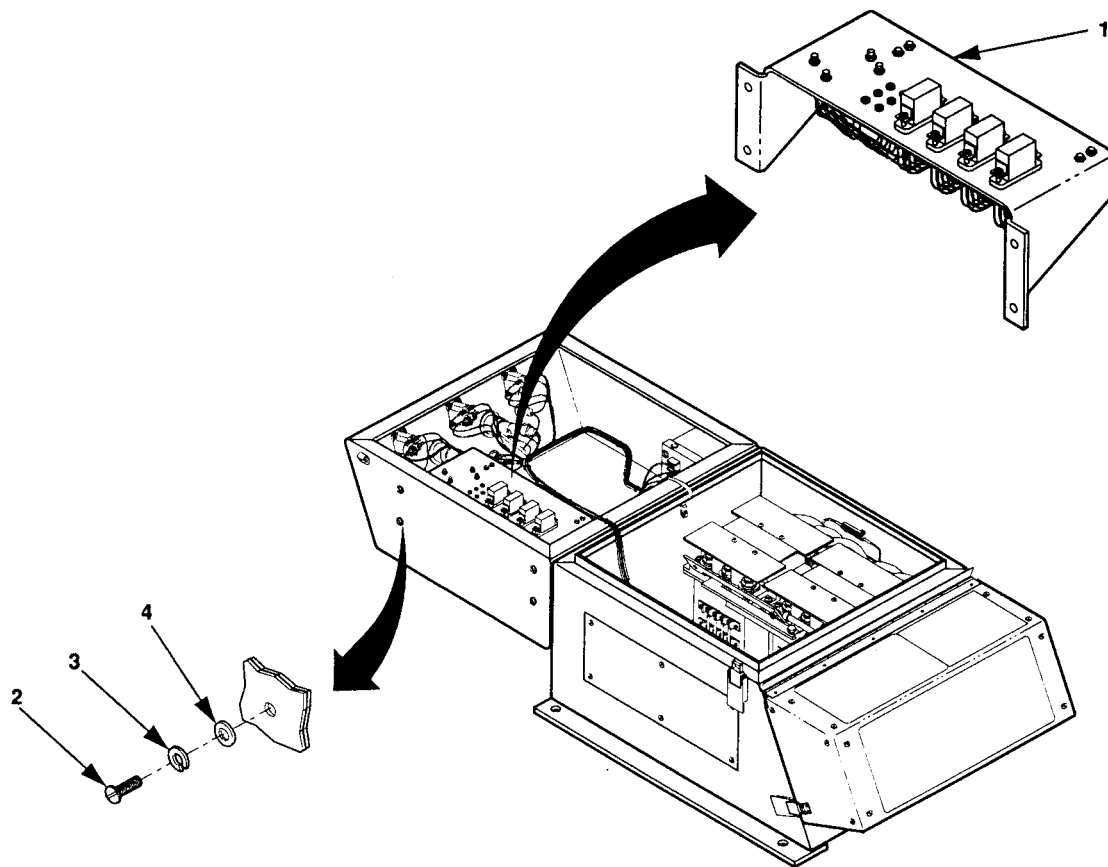


Figure 5-9. Switch Box Relay Board Assembly.

Table 5-1. Switch Box Harness Wire List

WIRE NO.	FROM	TO	WIRE NO.	FROM	TO
W9-1	TB1-17	S10-2	W9-28	S1-6	PP-7
W9-2	TB1-2	PP-4	W9-29	S1-2	S10-1
W9-3	TB1-3	PP-3	W9-30	S1-5	K1-12
W9-4	TB1-4	K2-C2	W9-31	S2-6	PP-5
W9-5	TB1-5	XDS6-2	W9-32	-----	-----
W9-6	TB1-6	K2-22	W9-33	S2-5	K2-12
W9-7	TB1-7	K1-A2	W9-34	K1-11	PP-8
W9-8	TB1-8	K1-21	W9-35	PP-4	L0
W9-9	TB1-9	K1-C2	W9-36	XDS7-2	PP-1
W9-10	TB1-10	K2-11	W9-37	XDS7-1	L3
W9-11	TB1-10	PP-6	W9-38	K1-22	K2-32
W9-12	TB1-11	PP-8	W9-39	K2-32	K1-A2
W9-13	TB1-12	K2-21	W9-40	K2-22	K2-A2
W9-14	TB1-13	K1-22	W9-41	K1-32	K2-A2
W9-15	TB1-16	S10-5	W9-42	K1-33	K2-11
W9-16	-----	-----	W9-43	K2-Y	L0
W9-17	TB2-5	K2-A2	W9-44	K2-X	S2-3
W9-18	-----	-----	W9-45	K2-33	K1-11
W9-19	TB2-4	K2-Y	W9-46	K1-X	S1-3
W9-20	XDS6-1	R3-1	W9-47	K1-Y	L0
W9-21	XDS5-2	PP-2	W9-48	K1-Y	TB2-1
W9-22	XDS5-1	PP-1	W9-49	K2-A1	R3-2
W9-23	TB2-2	K1-A2	W9-50	PP-2	PP-3
W9-24	-----	-----	W9-51	TB1-18	TB2-3
W9-25	S2-2	S10-4	W9-52	TB2-3	<b>Ground</b>
W9-26	-----	-----			

2. Measure continuity of switch box harness W9 as listed in table 5-1. Refer to figure 5-7 and wiring diagram (figure FO-1).
3. If any wire fails continuity check, repair or replace switch box harness.
4. If all wires pass continuity check, install relay board assembly (1), four flat washers (4), screws (7), lock washers (3), and screws (2).

### REMOVAL

#### **NOTE**

Other leads removed during removal of W9 harness leads must be replaced with any attaching hardware.

1. Remove two screws (1, figure 5-10), lock Washers (2), and contactor shields (3) that cover contactor terminals A2, B2, and C2 of contactor K1 and K2, and terminal A1 of contactor K2.
2. Refer to table 5-1 and wiring diagram (figure FO-1), tag leads, and remove nut (4), lock washer (5), and flat washer (6) from contactor terminals (9) and remove W9 leads.
3. Tag and remove leads (12) from terminals (13) by removing screws (11).



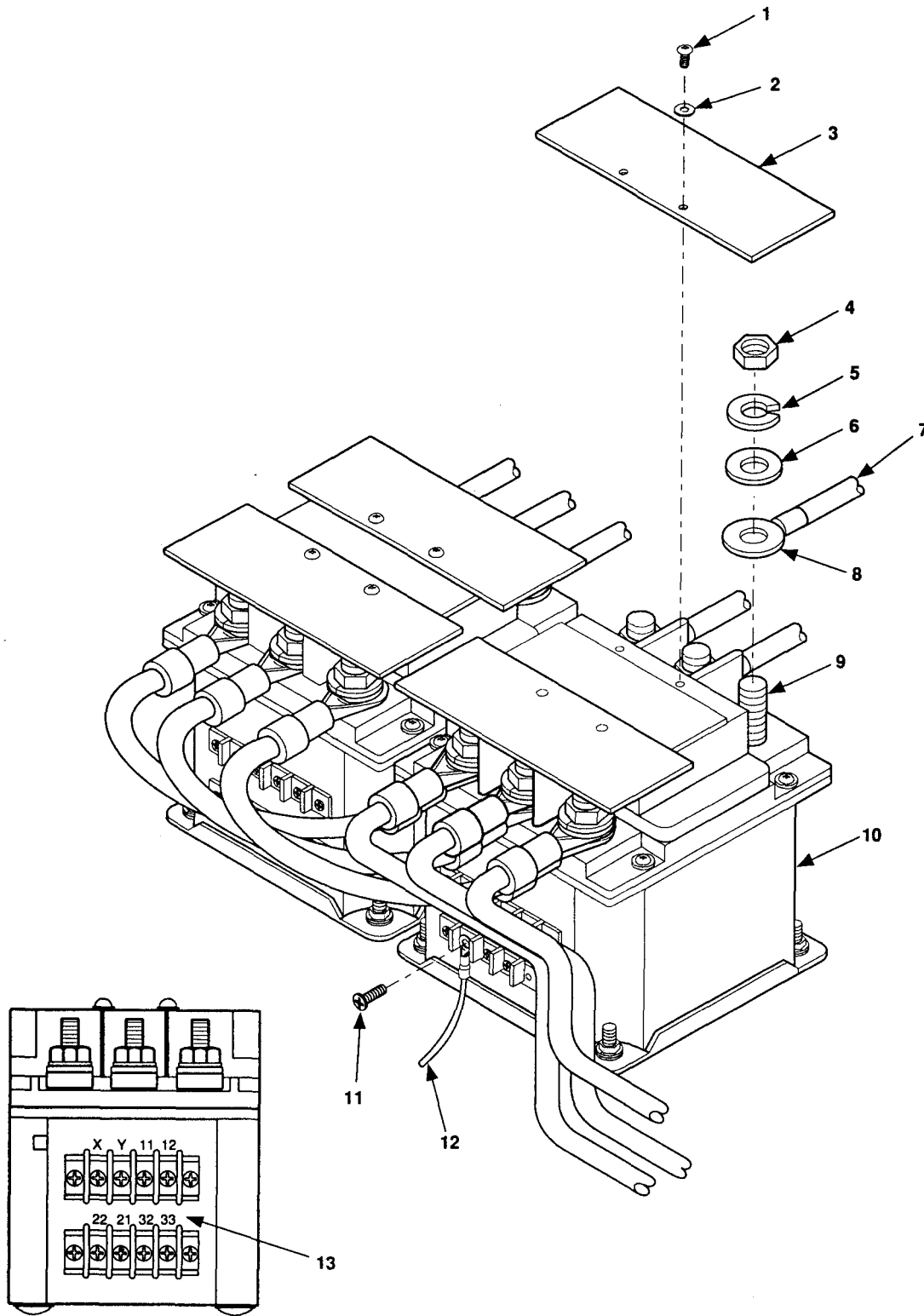


Figure 5-10. Disconnet Swifch Box Harness W9 From Contactor.

3. Remove insulation from W9-20 and W9-49 connections to resistor R3 and unsolder harness leads.
4. Remove nut (1, figure 5-11), internal tooth washer (2), and W9 harness lead (3) from load terminals L0 and L3 (4).

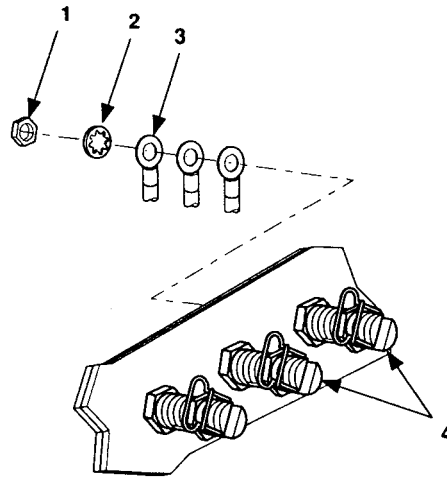


Figure 5-11. Switch Box Load Terminals.

5. Remove four screws (1, figure 5-12), internal tooth washers (2), and flat washers (3), and invert relay board assembly (4).

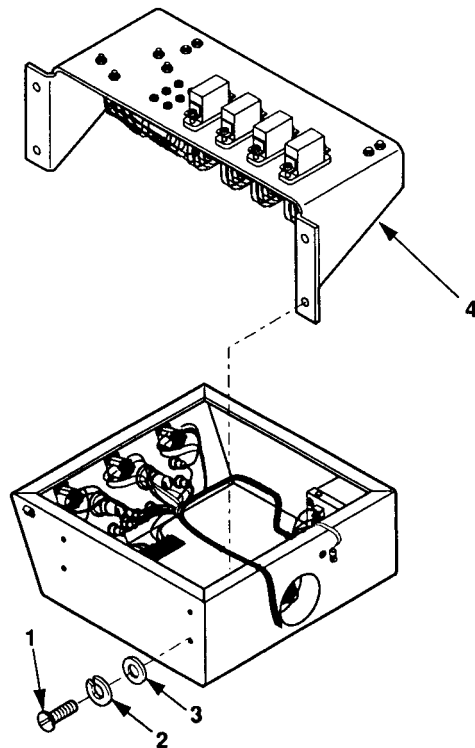


Figure 5-12. Relay Board Assembly Removal.

6. Refer to table 5-1 and tag and disconnect all W9 wires from terminal board TB1 and TB2.
7. Refer to table 5-1 and wiring diagram (figure FO-1), and tag and disconnect all W9 wires from switches S1, S2, and S10; indicator light housings XDS1 through XDS7; and permissive paralleling relay PP.
8. Remove switch box wiring harness W9 from switch box.

### **REPAIR**

Refer to figure G-3, appendix G.

### **INSTALLATION**

1. Position harness in switch box.
2. Using figures 5-7 and figure FO-1 as a reference, connect wires to switches S1, S2, and S10; indicator light housings XDS1-XDS7; and permissive paralleling relay PP.
3. Refer to table 5-1 and connect all W9 leads to terminal boards TB-1 and TB-2.
4. Position relay board (4, figure 5-12) and install four flat washers (3), lock washers (2), and screws (1).
5. Install W9 harness leads (3, figure 5-11), internal tooth washer (2), and nut (1) on load terminals L0 and L3 (4).
6. Place insulation sleeving on leads W9-20 and W9-49 and solder leads to resistor R3.
7. Slide sleeving over solder joint and heat shrink.
8. Refer to table 5-1 and install W9 wires (7, figure 5-10), flat washers (6), lock washers (5), and nuts (4) on contactor terminals (9).
9. Refer to table 5-1 and install W9 leads (12) on terminals (13) using screws (11).
10. Install contactor shield (3), two lock washers (2), and screws (1) over contactor terminals A2, B2, and C2.

**5-9 RELAY BOARD HARNESS W11 MAINTENANCE.**

This task covers: a. Test  
 b. Removal  
 c. Repair  
 d. Installation

**INITIAL SETUP**

**Tools**

General Mechanic's Tool Kit  
 (item 1, appendix B)  
 Solder Gun (item 3, appendix B)  
 Crimping Tool, Hand (item 3, appendix B)  
 Multimeter (item 3, appendix B)

**Materials/Parts**

Solder  
 Lock washers

**Equipment Conditions**

Reference  
 Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

**TEST**

1. Remove four screws (1, figure 5-13), lock washers (2), and flat washers (3), and invert relay board assembly (4).
2. Refer to wiring diagram (figure FO-1) and table 5-2, and perform continuity check of relay board harness W11.

*Table 5-2. Relay Board Harness Wire List*

WIRE NO.	FROM	TO
W11-1	XK3-2	TB1-1
W11-2	XK3-3	TB1-4
W11-3	XK3-4	TB1-5
W11-4	XK3-5	TB1-3
W11-5	XK3-6	TB1-6
W11-6	XK3-7	TB1-2
W11-7	XK5-2	TB1-1
W11-8	XK5-3	TB1-8
W11-9	XK5-4	TB1-10
W11-10	XK5-5	TB1-17
W11-11	XK5-6	TB1-6
W11-12	E-7	E-6
W11-13	XK4-2	TB1-14
W11-14	XK4-3	TB1-9
W11-15	XK4-4	TB1-5
W11-16	XK4-5	TB1-3
W11-17	XK4-6	TB1-7
W11-18	XK4-7	TB1-15

WIRE NO.	FROM	TO
W11-19	R1-1	TB1-17
W11-20	XK6-3	TB1-12
W11-21	XK6-4	TB1-11
W11-22	XK6-5	TB1-16
W11-23	XK6-6	TB1-13
W11-24	XK6-7	TB1-15
W11-25	R1-2	E6
W11-26	R2-2	E3
W11-27	E5	TB1-1
W11-28	E4	TB1-2
W11-29	R2-1	TB1-16
W11-30	E2	TB1-15
W11-31	E1	E4
W11-32	XK5-7	TB1-2
W11-33	E1	TB1-14
W11-34	E8	TB1-18
W11-35	XK6-2	TB1-14
W11-36	E9	E3

**NOTE**

Wire being checked must be disconnected at one location to isolate wire for continuity check.

3. If any wire fails continuity check, repair or replace relay board harness.
4. If all wires pass continuity check, install relay board assembly (4), four flat washers (3), lock washers (2), and screws (1).

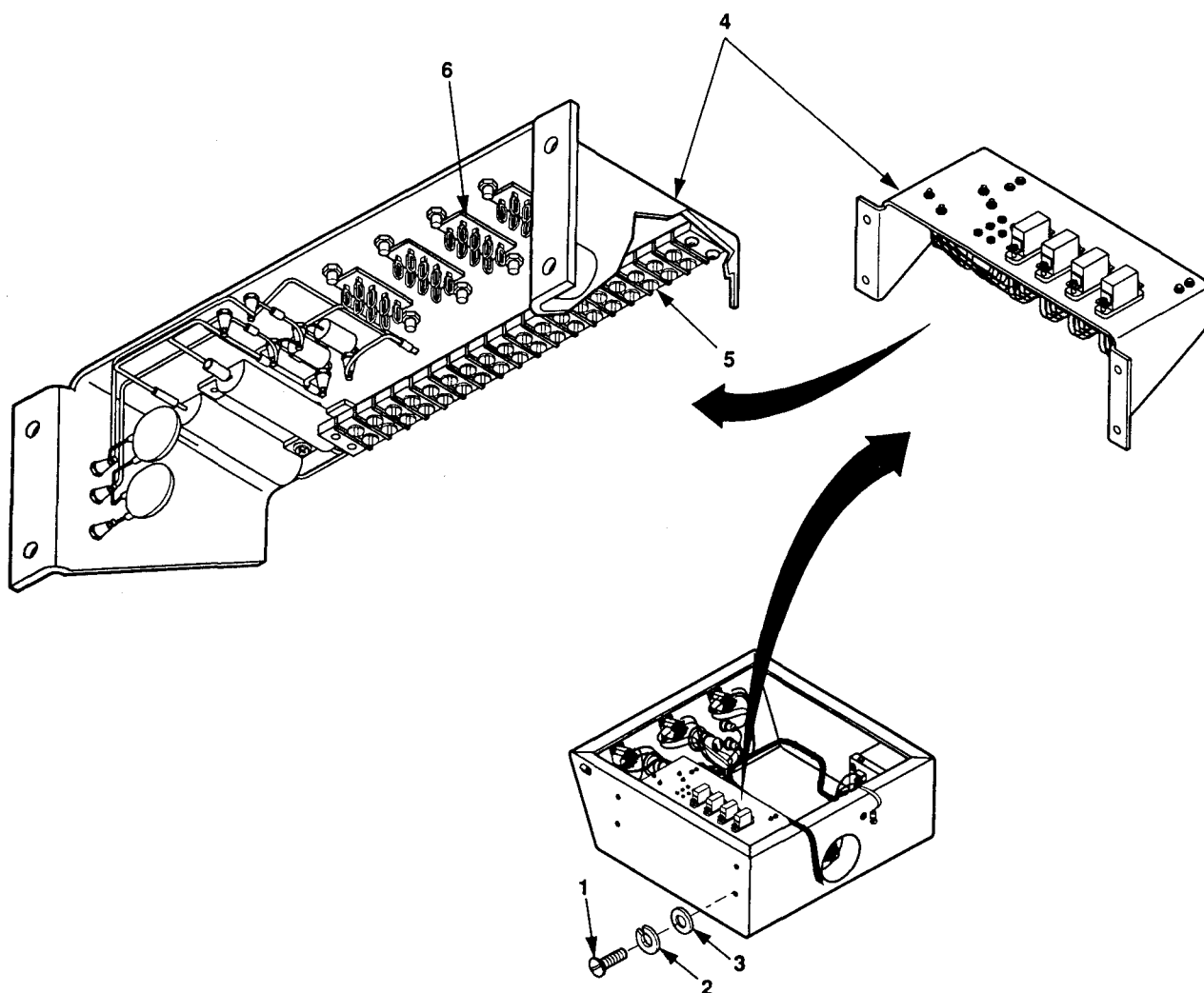


Figure 5-13. Relay Board Harness Assembly W11 Removal.

**REMOVAL**

1. Remove four screws (1), lock washers (2), flat washers (3), and invert relay board assembly (4).

***NOTE***

Other leads removed during removal of W11 harness leads must be replaced with any attaching hardware.

2. Refer to relay board harness wire list (table 5-2), and tag and disconnect all W11 leads from terminal board (5) and relay sockets (6).
3. Remove relay board harness W11.

**REPAIR**

Refer to figure G-2, appendix G.

**INSTALLATION**

1. Position wiring harness W11 on relay board so that wire ends having terminal lugs are near TB1 terminals (5).
2. Refer to table 5-2 and connect all W11 leads.
3. Position relay board assembly (4), and install four flat washers (3), lock washers (2), and screws (1).

---

**5-10 OUTPUT CONNECTOR HARNESS W10 MAINTENANCE.**

---

This task covers: a. Test  
                           b. Removal  
                           c. Repair  
                           d. Installation

---

**INITIAL SETUP**

**Tools**

Tool Kit, General Mechanic's  
 (item 1, appendix B)  
 Solder Gun (item 3, appendix B)  
 Crimping Tool, Hydraulic (item 4, appendix B)  
 Multimeter (item 3, appendix B)

**Materials/Parts**

Solder  
 Lock washers

---

**Equipment Conditions**

Reference  
 Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

**TEST**

1. Check continuity of output connector harness as listed in table 5-3.

*Table 5-3. Output Connector Harness Continuity Check*

FROM	TO	CONTINUITY	NO CONTINUITY
L0	L1		X
L0	L2		X
L0	L3		X
L0	GND	X	
L1	L2		X
L1	L3		X
L1	GND		X
L2	L3		X
L2	GND		X
L3	GND		X
J1-A	L1	X	
J1-B	L2	X	
J1-C	L3	X	
J1-N		X	
J1-G	GND	X	

2. If any wire fails continuity check, repair or replace output connector harness.

**REMOVAL**

1. Remove nuts (8, figure 5-14), and internal tooth washers (9), from switch box load terminals (11).

***NOTE***

Other leads removed during removal of W11 harness leads must be replaced with any attaching hardware.

2. Tag and remove output connector leads (10) from switch box load terminals (11).
3. Remove four nuts (7) lock washers (6), eight flat washers (2), chain (3) attached to dust cover, four screws (1), and output connector (4).

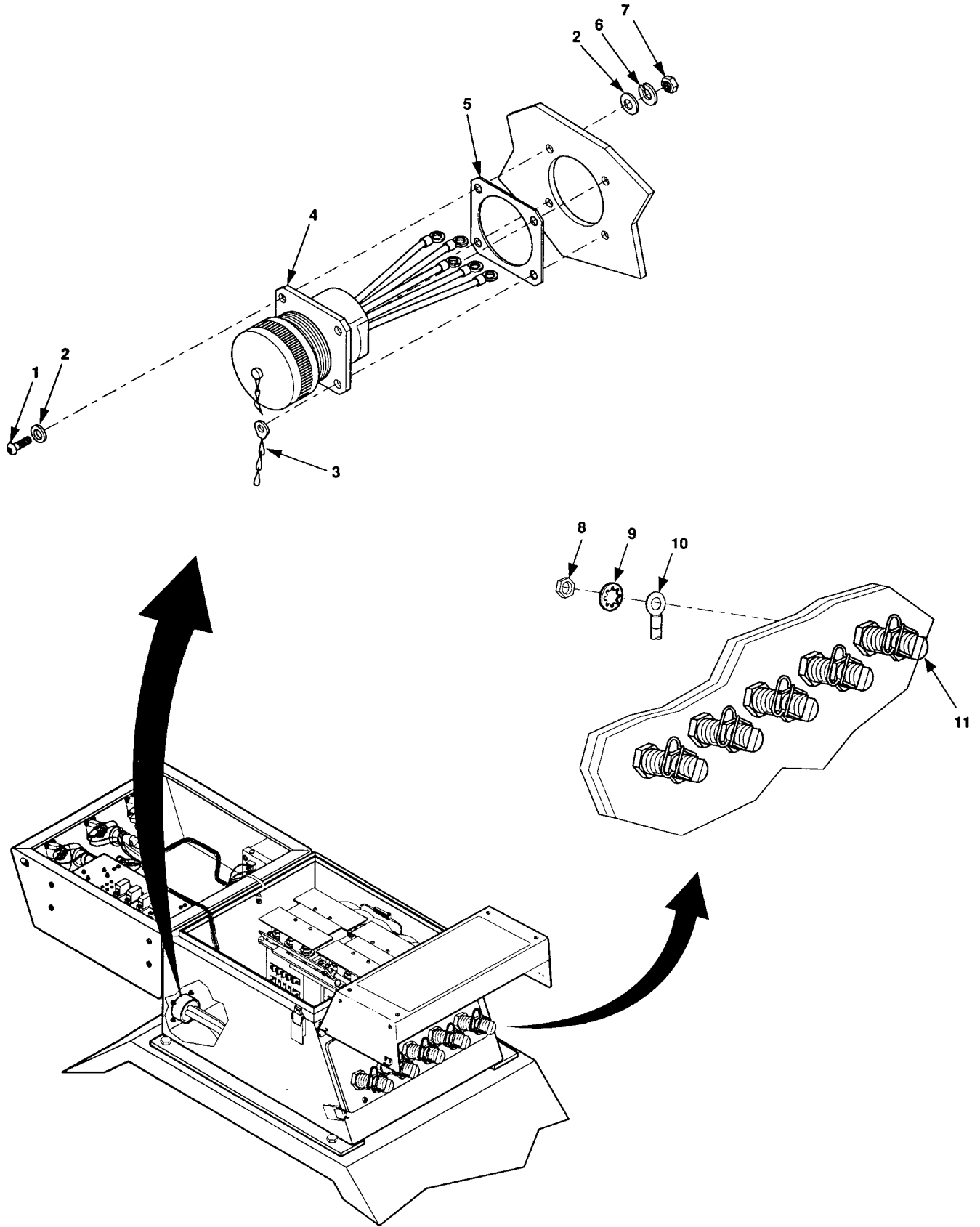


Figure 5-14. Output Connector Harness.



**REPAIR**

Refer to figure G-4, appendix G.

**INSTALLATION**

1. Install output connector (4), chain (3) attached to dust cover, four screws (1), eight flat washers (2), four lock washers (6), and nuts (7).
2. Refer to wiring diagram (figure FO-1) and tags placed on leads during removal, and install leads (10), internal tooth washers (9), and nuts (8) on load terminals (11).

---

**5-11 RELAYS K3-K6 MAINTENANCE.**

---

This task covers: a. Removal  
b. Test

c. Installation

---

**INITIAL SETUP**

**Tools**

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Multimeter (item 3, appendix B)  
24 VDC Power Source (item 3, appendix B)

**Equipment Conditions**

Reference  
Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

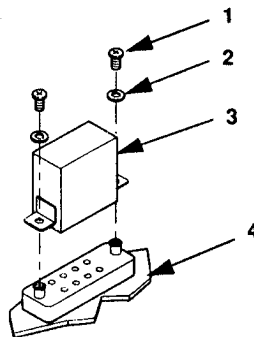
**Materials/Parts**

Lock washers

---

**REMOVAL**

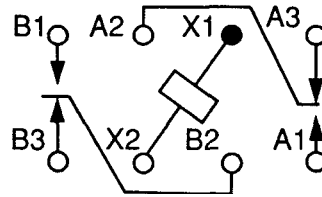
Remove two screws (1), washers (2), and relays (3) from relay sockets (4).



*Figure 5-15. Relay K3-K6 Removal.*

**TEST**

1. Repeat removal step above.
2. Refer to figure 5-16 and check continuity of relay coil between pins X1 and X2.



COIL DEENERGIZED

Figure 5-16. Relay K3-K6 Schematic.

**WARNING**

Dangerous voltage exists on live circuits. Always observe precautions and never work alone. Failure to observe this warning could result in severe personal injury or death.

3. Attach 24 VDC power source across pins X1 and X2 of relay and check continuity of relay contacts before and after relay is energized as listed in table 5-4.

Table 5-4. Relay Operation

RELAY STATUS	CONTINUITY BETWEEN PINS	NO CONTINUITY BETWEEN PINS
Power NOT Applied	A2 and A3 B2 and B3	A1 and A2 B1 and B2
Power Applied	A1 and A2 B1 and B2	A2 and A3 B2 and B3

4. If all multimeter indications are correct, perform installation procedures.
5. If any multimeter indication is not as listed in table 5-4 perform installation with new relay.

**INSTALLATION**

Install relay (3, figure 5-15) in relay socket (4) and secure with two washers (2) and screws (1).

---

**5-12 PERMISSIVE PARALLELING RELAY MAINTENANCE.**

---

This task covers: a. Removal  
b. Test

c. Installation

---

**INITIAL SETUP**

Tools

- Tool Kit, General Mechanic's (item 1, appendix B)
- Multimeter (item 3, appendix B)
- Power Oscillator, 50-420 Hz (item 3, appendix B)

Equipment Conditions

Reference

Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

Materials/Parts

Lock washers

---

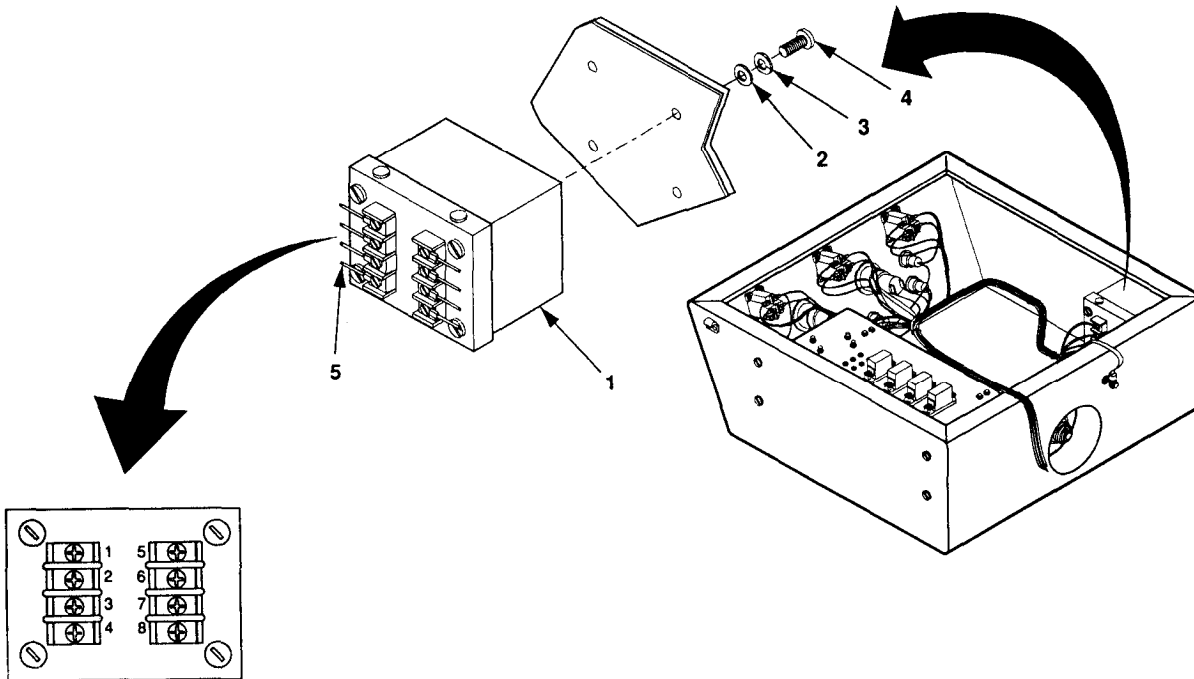


Figure 5-17. Permissive Paralleling Relay.

**REMOVAL**

Tag and disconnect leads (5, figure 5-17). Remove four screws (4), lock washers (3), flat washers (2), and permissive paralleling relay (1).

**TEST**

1. Perform removal procedure above and position permissive paralleling relay (1) on work surface. Connect a variable AC voltage, 50-420 Hz, power oscillator across terminals 1 and 2.
2. Connect multimeter across terminals 5 and 6 and check for continuity. If continuity exists, leave multimeter connected for remainder of test. If no continuity exists, replace relay.
3. Connect a variable AC voltage, 50-420 Hz power oscillator, across terminals 1 and 2.
4. Apply 120 volts AC across terminals 3 and 4.
5. Adjust the oscillator output for 60 Hz (AN/MJQ-37) or 400 Hz (AN/MJQ-38).
6. Increase the oscillator output to a value of 20 volts. Multimeter should indicate no continuity. Slowly decrease the oscillator output until continuity is observed. Oscillator output voltage should be  $8 \pm 1$  VAC.
7. Increase the oscillator output until multimeter shows no continuity. Oscillator voltage should be no more than 1 volt above previous voltage reading.
8. Perform steps 6. and 7. with multimeter connected across terminals 7 and 8.
9. Perform installation procedure using new relay if it fails to meet the requirements of steps 6. through 8.
10. If relay meets the requirements of steps 6. through 8., perform installation procedures.

**INSTALLATION**

Position permissive paralleling relay (1) in switch box and install flat washer (2), lock washer (3), and screw (4). Connect leads (5).

---

**5-13 CONTACTORS K1 AND K2 MAINTENANCE.**

---

This task covers: a. Removal  
                          b. Test  
                          c. Installation

---

**INITIAL SETUP****Tools**

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Multimeter (item 3, appendix B)

**Equipment Conditions**

Reference  
  
Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

**Materials/Parts**

Lock washers

---

**REMOVAL**

1. Remove four screws (1, figure 5-18), lock washers (2) and terminal shields (3) from contactor (10).
2. Remove nuts (4), lock washers (5), and flat washers (6) from all contactor terminals (9).

***NOTE***

Leads W3, W4, and W5 (13, 14, and 15) must be removed along with leads W6, W7, and W8 when contactor K1 is being removed.

3. Tag and remove power cable leads (7) from contactor terminals A2, B2, and C2 (8), and ends of leads W6, W7, and W8 (10, 11, and 12) from contactor terminals A1, B1, and C1 (9).
4. Tag and disconnect terminal lugs of W9 wires from contactor (9) terminals (16) X, Y, 11, 12, 21, 22, 32, and 33.
5. Remove four nuts (17), lock washers (18), flat washers (19), and contactor (9).

**TEST**

1. Check for continuity between contactor terminals X and Y. If no continuity, replace contactor.

**WARNING**

Dangerous voltage exists on live circuits. Always observe precautions and never work alone. Failure to observe this warning could result in severe personal injury or death.

2. Attach 115 VAC power source across pins x and y of contactor and check continuity of relay contacts before and after contactor is energized as listed in table 5-5.

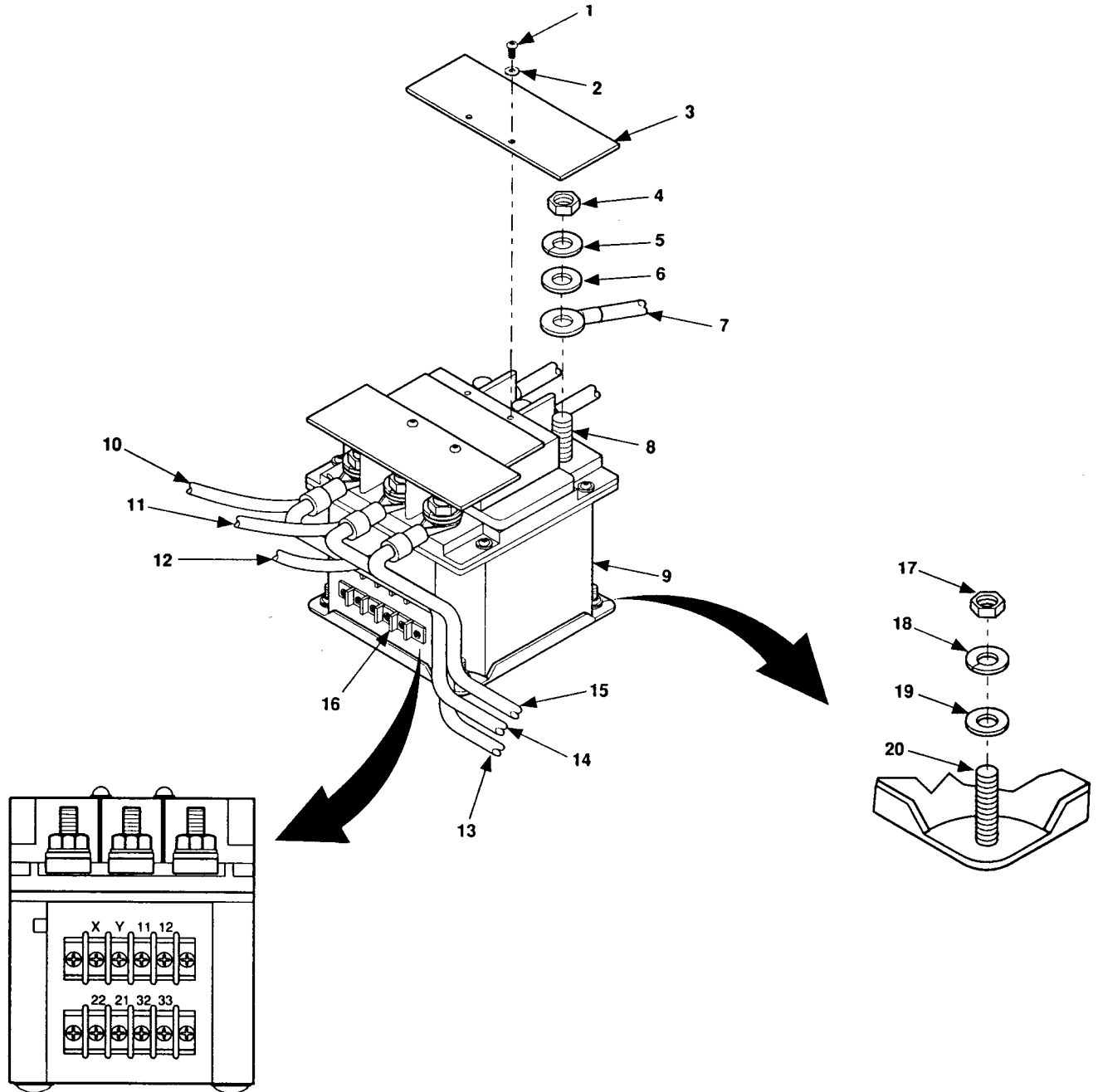


Figure 5-18. Replace Contactor.

**Table 5-5. Contactor Operation**

CONTACTOR STATUS	CONTINUITY BETWEEN PINS	NO CONTINUITY BETWEEN PINS
Power NOT Applied	32 and 33	21 and 22 11 and 12 A1 and A2 B1 and B2 C1 and C2
Power Applied	21 and 22 11 and 12 A1 and A2 B1 and B2 C1 and C2	32 and 33

3. If all multimeter indications are correct, install contactor terminal shield (3), four flat washers (2), and screws (1).
4. Replace contactor if any multimeter indication is not as listed in table 5-5,

**INSTALLATION**

1. Position contactor K1 or K2 (9) on studs (20).
2. Install four flat washers (19), lock washers (18), and nuts (17).
3. Refer to wiring diagram (figure FO-1) and tags installed in removal. Connect applicable terminal lugs of W9 wires to contactor terminals (16) X, Y, 11, 12, 21, 22, 32, and 33. Remove tags.
4. If terminal shields (3) of contactor are installed, remove four screws (1), lock washers (2) and terminal shields (3).
5. Remove nuts (4), lock washers (5), and flat washers (6) from contactor terminals (8) A1, B1, C1, A2, B2, and C2.

**NOTE**

Leads W3, W4, and W5 (13, 14, and 15) must be installed along with leads W6, W7, and W8 when contactor K1 is being installed.

6. Place free ends of jumpers W6, W7, and W8 (10, 11, and 12) on contactor K1 (15) terminals (16) A1, B1, and C1.
7. Install flat washer (6), lock washer (5), and nut (4) on terminals (8) for A1, B1, and C1. Tighten nuts (4).
8. Place power cable leads (7) on contactor terminals (8) A2, B2, and C2. Remove tags.
9. Install flat washers (6), lock washers (5), and nuts (4) on contactor terminals (8) A2, B2, and C2.
10. Install terminal shields (3), two lock washers (2) and screws (1) on contactor (9).





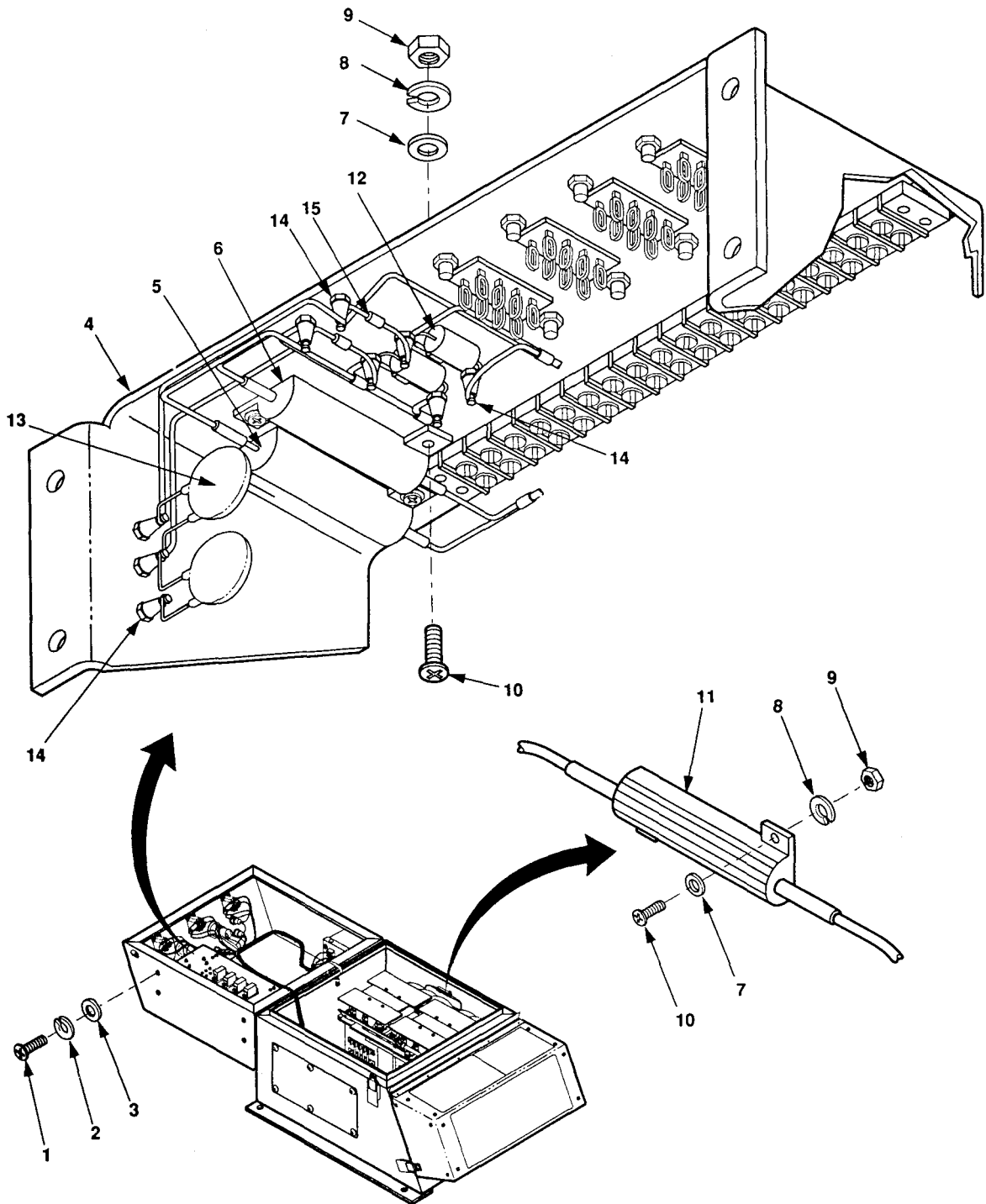


Figure 5-19. Resistors, Capacitors, and Diodes.

**INSTALLATION**

1. Install resistor (5, 6, or 11), two screws (10), flat washers (7), lock washers (8), and nuts (9).
2. Solder leads to resistor.
3. Position relay board assembly (4) and install four flat washers (3), lock washers (2), and screws (1).

**5-15 CAPACITORS C1-C4 MAINTENANCE.**

This task covers: a. Test  
b. Removal  
c. Installation

**INITIAL SETUP****Tools**

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Multimeter (item 3, appendix B)  
Soldering Gun (item 3, appendix B)

**Materials/Parts**

Solder

**Equipment Conditions**

Reference

Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

**TEST**

1. Remove four screws (1, figure 5-19), lock washers (2), and flat washers (3) and invert relay board assembly (4).
2. Discharge capacitors C1 and C2 (12) and C3 and C4 (13) by shorting across terminals.
3. Isolate capacitors C1 and C2 at E5 and E2 respectively. Tag and remove wire W11-34 at TB1-18 to isolate capacitors C3 and C4.
4. Disconnect one end of capacitor and check continuity between terminals, using a multimeter in the 200 kohms range. The meter needle should deflect and return to infinity within a few seconds. (If using a digital meter, the readout should run upscale to infinity).
5. If capacitor fails test, replace it. Refer to removal and installation procedures.
6. If capacitor passes test, place relay board assembly (4) in position and secure with four flat washers (3), lock washers (2), and screws (1).

**REMOVAL**

1. Remove four screws (1), lock washers (2), and flat washers (3) and invert relay board assembly (4).
2. Unsolder capacitor (12 or 13) leads from stud terminals (14) and remove capacitor,

## INSTALLATION

### CAUTION

Refer to wiring diagram (figure FO-1) and observe polarity of capacitors C1 and C2 before installing. Failure to observe this caution could result in damage to capacitors.

1. Solder capacitor (12 or 13) leads to terminal studs (14) as applicable.
2. Invert relay board assembly (4) and install four flat washers (3), lock washers (2), and screws (1).

---

## 5-16 DIODES CR1-CR4 MAINTENANCE.

---

This task covers: a. Test  
                          b. Removal  
                          c. Installation

---

## INITIAL SETUP

### Tools

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Multimeter (item 3, appendix B)  
Soldering Gun (item 3, appendix B)

### Equipment Conditions

Reference  
Both generator sets shut down; paragraph 2-5.3.3. Trailer handbrakes set, front support leg/landing lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1. Switch box cover open.

### Materials/Parts

Solder

---

## TEST

1. Remove four screws (1, figure 5-19), lock washers (2), and flat washers (3) and invert relay board assembly (4).
2. Unsolder one end of diode (15) to be tested.
3. Set multimeter on R x 1 range, and measure the resistance between diode terminals. Reverse multimeter leads and measure again. Resistance should be infinity in one direction and less than 30 ohms in the other.

## REMOVAL

1. Remove four screws (1), lock washers (2), and flat washers (3) and invert relay board assembly (4).
2. Unsolder diode (15) from stud terminal (14) and remove diode.

INSTALLATION

1. Refer to wiring diagram (figure FO-1) and solder diode leads to terminal studs (14) as applicable.
2. Invert relay board assembly (4) and install four flat washers (3), lock washers (2), and screws (1). 5-16.1 PU-798A AND PU-799A FLOOR AND FENDER MAINTENANCE.

---

**5-16.1 PU-798A AND PU-799A FLOOR AND FENDER MAINTENANCE.**

---

- This task covers:
- |            |  |                 |
|------------|--|-----------------|
| a. Removal |  | c. Installation |
| b. Repair  |  |                 |
- 

INITIAL SETUP

Tools

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Rivet Gun (item 8, appendix B)

Equipment Conditions

Reference  
  
Generator set shut down; paragraph 2-5.3.3.

Materials/Parts

Rivets (items 6 and 7, appendix I)

Trailer handbrakes set, front support  
leg/landing lowered, and rear leveling-support  
jacks lowered; paragraph 2-3.2.1.

Accessory box removed; paragraph 4-19.

---

REMOVAL

1. Floors.

**NOTE**

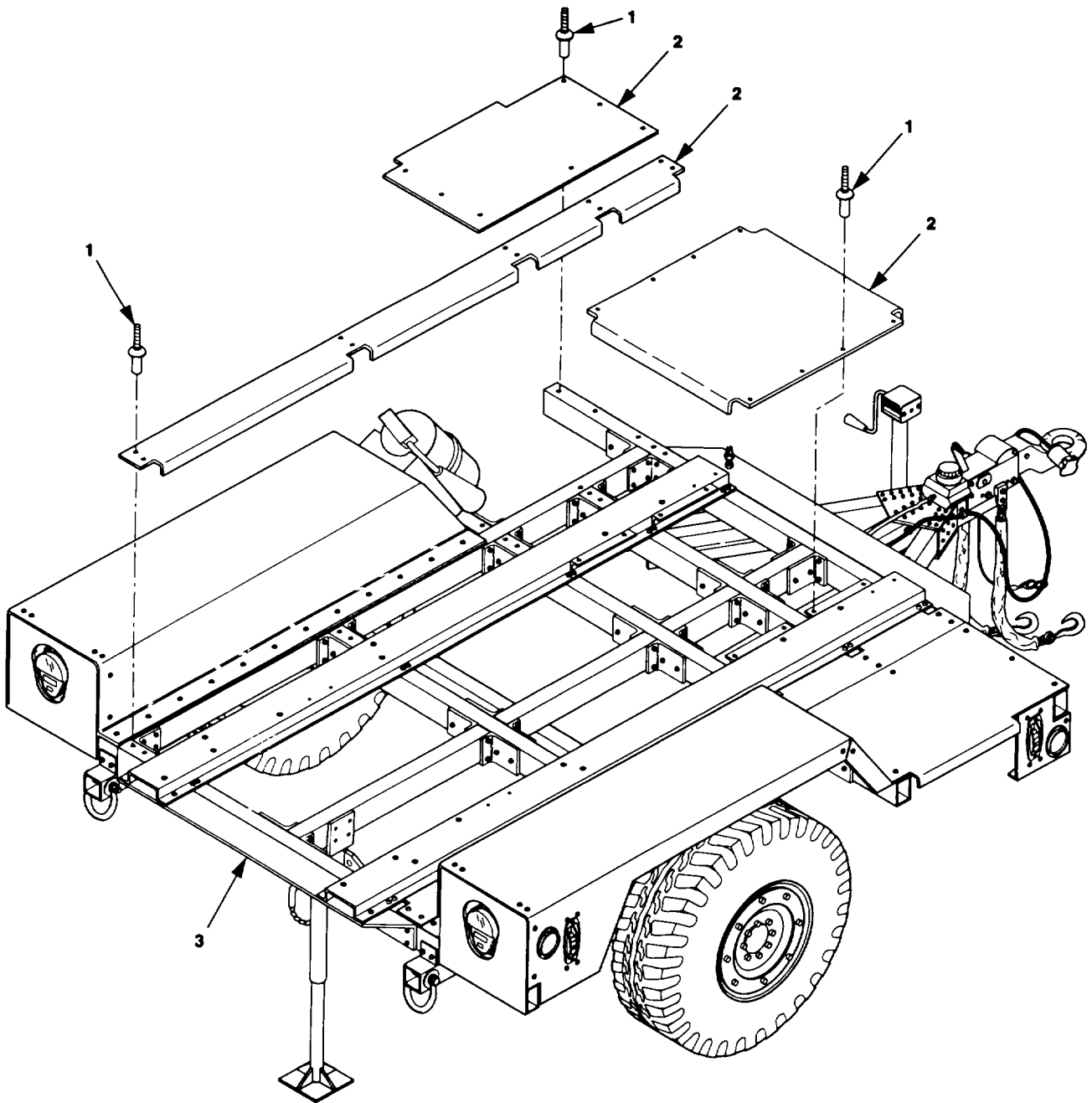
PU-798A and PU-799A trailers have center and side floors or platforms riveted to the trailer. The side floors are in two sections.

1. Remove rivets (1, figure 5-20) and floor sections (2) from trailer chassis (3).
2. Fenders.
  - a. If necessary, remove the following:
    - (1) Data plate (paragraph 4-22).
    - (2) Fire extinguisher and bracket (paragraph 4-20).
    - (3) Side marker light and reflector (TM 9-2330-392-14&P).
  - b. Remove rivets (1, figure 5-21) and fender (2) from trailer chassis (3).

REPAIR

1. Floors.

Repair of floors consists of welding, straightening, and spot painting as required.



*Figure 5-20. PU-798A and PU-799A Floor Replacement.*

2. Fenders.

Repair of fenders consists of welding, straightening, and spot painting as required, and replacement of rivets (4), fender angle support (5), and tail light bracket (6).

INSTALLATION

1. Floors.

Place floor section (2, figure 5-20) on trailer chassis (3) and secure with rivets (1).

2. Fenders.

a. Place fender (2, figure 5-21) on trailer chassis (3) and secure with rivets (5).

b. If removed, install the following:

- (1) Data plate (paragraph 4-22).
- (2) Fire extinguisher and bracket (paragraph 4-20).
- (3) Side marker light and reflector (TM 9-2330-392-14&P).

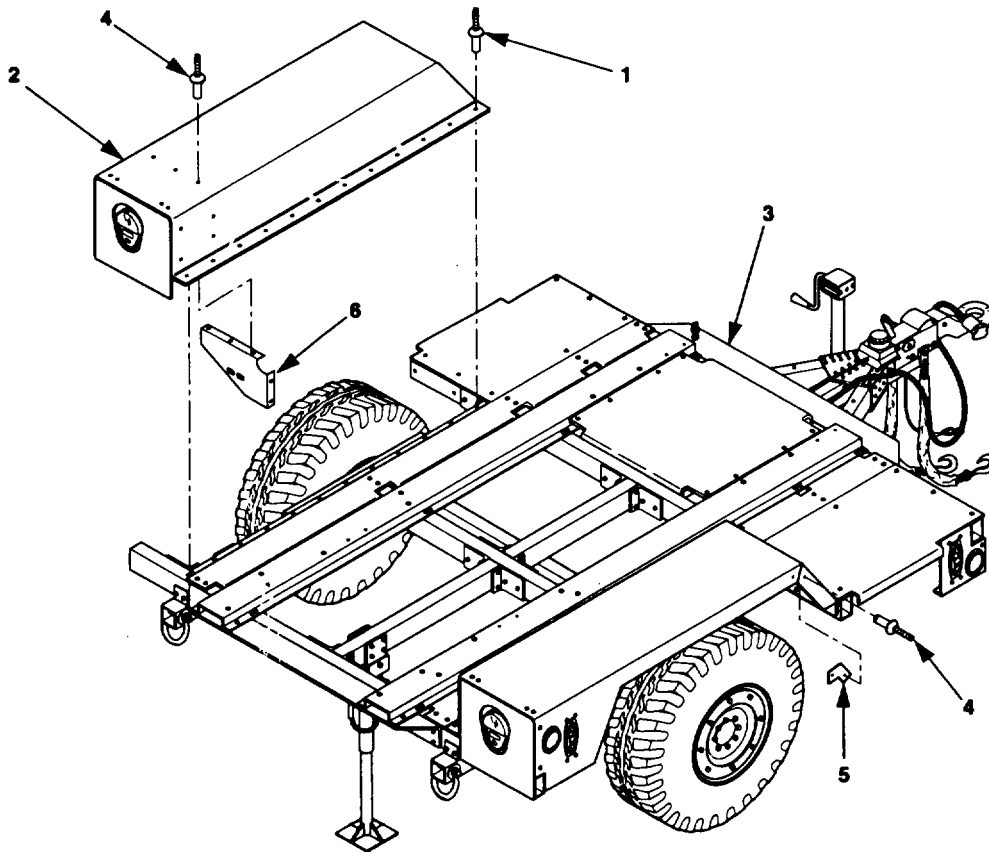


Figure 5-21. PU-798A and PU-799A Fender Replacement.



REMOVAL**NOTE**

Rails may be shimmed; note location and quantity. Mounting hardware quantity may vary depending on mounting rail being removed. Longer bolts are used at front end of mounting rails.

Remove self-locking nuts (1, figure 5-22), flat washers (2), cap screws (3), and mounting rail (4).

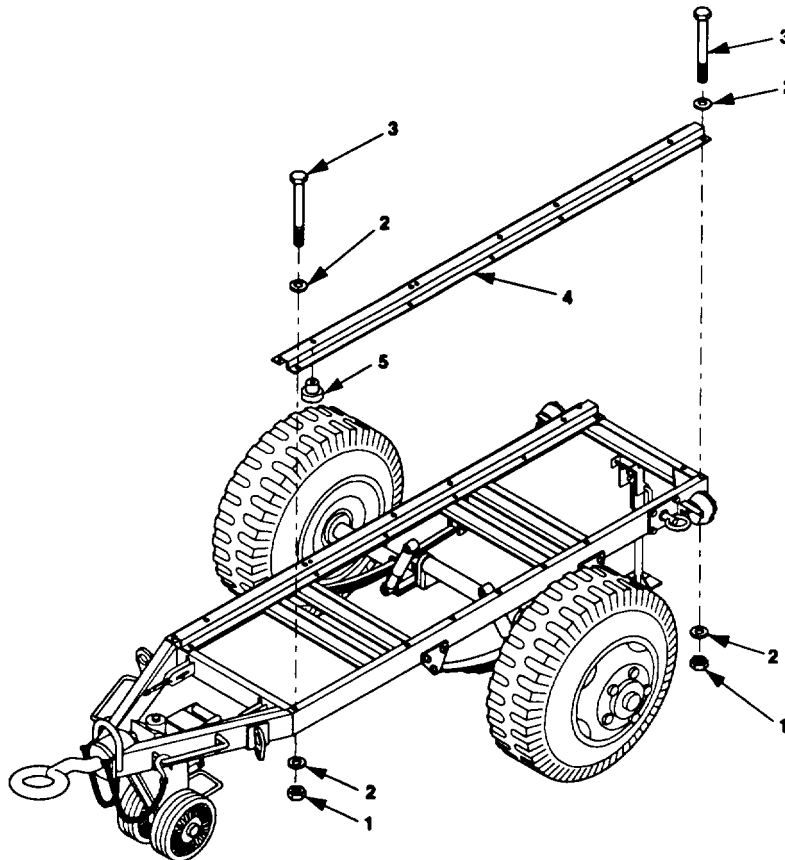
REPAIR**NOTE**

Blind nuts are located at front end of both mounting rails.

Repair of mounting rails consists of replacing blind nuts (5). Refer to instructions supplied with blind nut tool.

INSTALLATION

Position mounting rail (4) on trailer and loosely install cap screws (3), flat washers (2), self-locking nuts (1), then tighten.



*Figure 5-22. Replace AN/MiQ-37 and AN/IMJQ-38 Generator Mounting Rails.*



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**5-19 PU-798 AND PU-799 GENERATOR MOUNTING RAIL MAINTENANCE.**

---

This task covers: a. Removal

b. Installation

---

INITIAL SETUP

Tools

Tool Kit, General Mechanic's  
(item 1, appendix B)

Materials/Parts

Nuts, Self-locking

Equipment Conditions

Reference

Trailer handbrakes set, front support leg/landing leg lowered, and rear leveling-support jack lowered; paragraph 2-3.2.1.

Generator set removed; paragraph 5-6.  
Accessory box removed; paragraph 4-19.  
Front platform removed; paragraph 4-24.

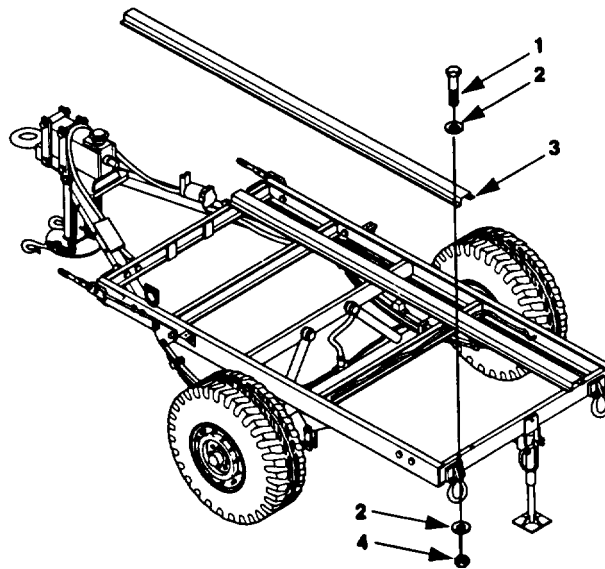
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REMOVAL

Remove self-locking nuts (4, figure 5-23), flat washers (2), cap screws (1), and mounting rail (3).

INSTALLATION

Install mounting rail (3), cap screws (1), flat washers (2), and self-locking nuts (4).



**Figure 5-23. Replace PU-798 and PU-799 Generator Mounting Rail.**

---

### 5-20 PU-798A AND PU-799A GENERATOR MOUNTING RAIL MAINTENANCE.

---

This task covers:	a. Removal	c. Installation
	b. Repair	

---

#### INITIAL SETUP

##### Tools

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Rivet Gun (item 8, appendix B)

##### Materials/Parts

Rivets (items 8, 9, and 10, appendix I)

##### Equipment Conditions

##### Reference

Trailer handbrakes set, front support leg/landing leg lowered, and rear leveling-support jacks lowered; paragraph 2-3.2.1. Accessory box removed; paragraph 4-19. Generator set removed; paragraph 5-6. Center floor removed; paragraph 5-16.1.

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#### REMOVAL

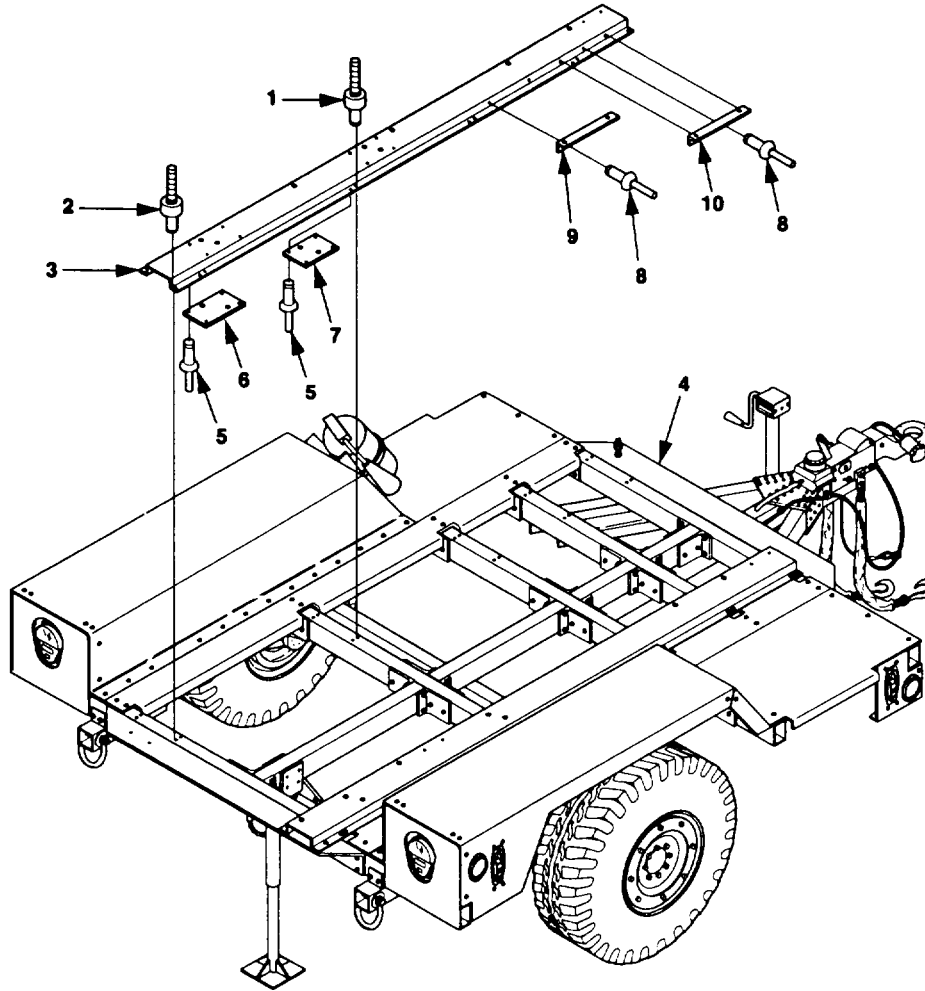
Remove rivets (1 and 2, figure 5-24) and mounting rail (3) from trailer chassis (4).

#### REPAIR

Repair of generator mounting rails consists of replacing rivets (5) and doubler plates (6 and 7), and rivets (8) and angle supports (9 and 10).

#### INSTALLATION

Place mounting rail (3) on trailer chassis (4) and secure with rivets (1 and 2).



*Figure 5-24. PU-798A and PU-799A Generator Mounting Rail Replacement.*

---

**5-21 HIGH MOBILITY TRAILER REAR LEVELING-SUPPORT JACK MAINTENANCE.**

---

This task covers: a. Removal  
b. Repair  
c. Installation

---

**INITIAL SETUP****Tools**

Tool Kit, General Mechanic's  
(item 1, appendix B)  
Jack Stand (item 2, appendix B)

**Materials/Parts**

Pin, Cotter  
Pin, Spring  
Fitting, Lubrication (if needed)  
Grease, GAA (item 2, Appendix E)  
Rivets (item 11, appendix I)

**Equipment Conditions**

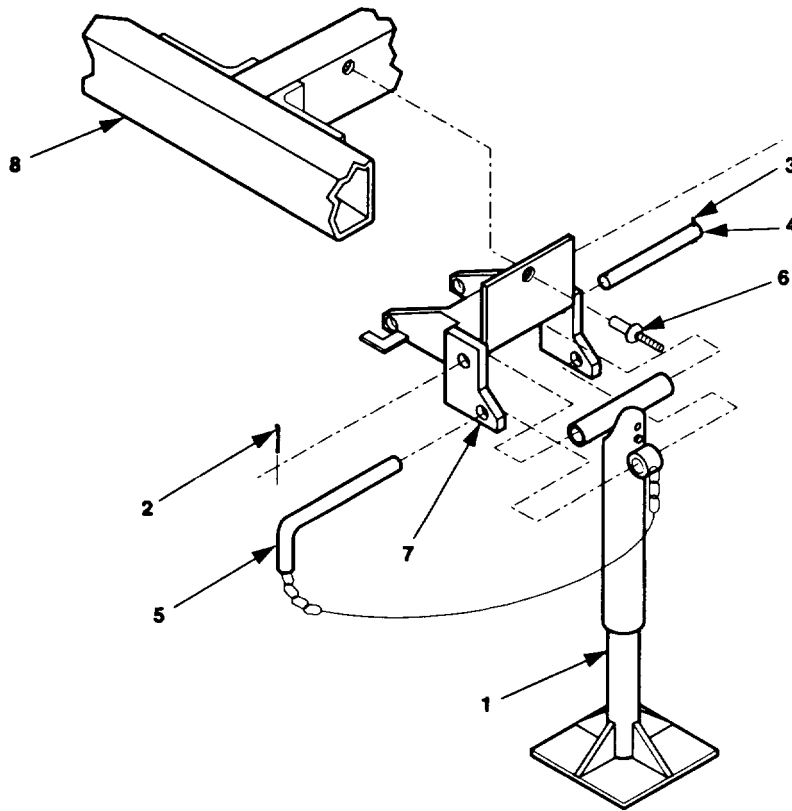
Reference  
Trailer handbrakes set and front support  
leg/landing leg lowered; paragraph 2-3.2.1.  
Both generator sets shut down; paragraph  
2-5.3.3

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**REMOVAL****WARNING**

Before removing trailer leveling-support jack, support rear of trailer with jack stands. Failure to observe this *WARNING* can cause severe personal injury or death.

1. Support rear of trailer with jack stands.
2. Turn leg base (1, figure 5-25) to take weight off leg prop.
3. Remove either one of two cotter pins (2 or 3) from pivot shaft (4) and discard cotter pin.
4. Hold leg base (1) steady and remove pivot shaft (4) with remaining cotter pin in place.
5. Lift leg base (1) slightly to take weight off retaining pin (5) and remove retaining pin. Move leg base (1) and attached parts out of bracket (7).
6. Remove three rivets (6) and bracket (7) from trailer chassis (8).



*Figure 5-25. Rear Leveling-Support Jack Replacement; High Mobility Trailer.*

REPAIR

Refer to paragraph 4-26.

INSTALLATION

1. Install bracket (7) on trailer chassis (8), with three rivets (6).
2. Position leg base (1) and attached parts in bracket (7) and install retaining pin (5).
3. Position leg base (1) and install pivot shaft (4).
4. Install new cotter pin (2 or 3) in pivot shaft (4).
5. Lube rear leveling-support jack.

## APPENDIX A

### REFERENCES

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**A-1 SCOPE.**

This appendix lists all forms, regulations, pamphlets, specifications, standards, technical manuals, lubrication orders, and field manuals referenced in this manual.

**A-2 FORMS.**

Recommended Changes to Publications and Blank Forms . . . . .	DA Form 2028
Recommended Changes to Equipment Technical Publications. . . . .	DA Form 2028-2
Depreservation Guide for Vehicles and Equipment . . . . .	DA Form 2258
Equipment Inspection and Maintenance Worksheet . . . . .	DA Form 2404
Packaging Improvement Report . . . . .	DD Form 6
Product Quality Deficiency Report . . . . .	SF 368

**A-3 ARMY REGULATIONS.**

Dictionary of United States Army Terms . . . . .	AR 310-25
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**A-4 DEPARTMENT OF THE ARMY PAMPHLETS.**

The Army Maintenance Management System (TAMMS) . . . . .	DA PAM 738-750
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**A-5 MILITARY SPECIFICATIONS.**

Preservation, Methods of . . . . .	MIL-P-116
Barrier Materials, Transparent, Flexible, Heat Sealable . . . . .	MIL-B-22191
Generator Sets, Mobile Electric Power; Packaging of . . . . .	MIL-G-28554

**A-6 FEDERAL SPECIFICATIONS.**

Plywood, Flat Panel . . . . .	NN-P-530
Paperboard, Wrapping and Cushioning . . . . .	PPP-P-291
Boxes, Wood, Cleated Plywood . . . . .	PPP-B-601
Tape, Packaging, Paper (for Carton Sealing) . . . . .	PPP-T-76

**TM 9-6115-660-13&P**

Strapping, Steel, and Seals ..... QQ-S-781

**A-7 MILITARY STANDARDS.**

Abbreviations for Use on Drawings, and in Specifications, Standards and  
Technical Documents ..... MILSTD-12

Marking for Shipment and Storage ..... MIL-STD-129

Standard Requirements for Soldered Electrical and Electronic Assemblies ..... MILSTD-2000

**A-8 TECHNICAL MANUALS.**

Operator's, Organizational, Direct Support and General Support Maintenance  
Manual (Including Repair Parts and Special Tools Lists),  
Trailer: Cargo 3/4-Ton, 2-Wheel,  
M101 (NSN 2330-00-738-9509)  
M100A1 (NSN 2330-00-898-6779)  
M10A2 (NSN 2330-01-101-4697)  
Chassis: Trailer 3/4-Ton, 2-Wheel,  
M116 (NSN 2330-00-542-5987)  
M116A1 (NSN 2330-00-898-6780)  
M116A2 (NSN 2330-01-101-8434) ..... TM 9-2330-202-14&P

Operator's, Organizational, Direct Support and General Support Maintenance  
Manual (Including Repair Parts and Special Tools List),  
Chassis Trailer: 1 1/2-Ton, 2-wheel,  
M103A1 (NSN 2330-00-835-8629),  
M103A2 (NSN 2330-00-049-8050),  
M103A3 (NSN 2330-00-141-8052),  
M103A3C (NSN 2330-00-542-2181),  
M103A4 (NSN 2330-00-141-8051)  
Trailer, Cargo: 11/2-ton, 2-wheel,  
M105A1 (NSN 2330-00-835-8631),  
M105A2 (NSN 2330-00-141-8050),  
M105A2C (NSN 2330-00-542-5689)  
Trailer, Tank, Water: 1 1/2-ton, 2-wheel, 400-gallon,  
M107A1 (NSN 2330-00-835-8633),  
M107A2 (NSN 2330-00-141-8049),  
M107A2C (NSN 2330-00-542-5688)  
Trailer, Van, Shop: Folding Sides, 1 1/2-ton, 2-wheel,  
M448 (NSN 2330-00-631-5692) ..... TM 9-2330-213-14&P

Operator's, Organizational, Direct Support and General Support Maintenance  
Manual (Including Repair Parts and Special Tools List),  
Trailer, Cargo: 2000 Pounds, 2-wheel, M1101 (NSN 2330-01-387-5443)  
Trailer, Cargo: 2800 Pounds, 2-wheel, M1102 (NSN 2330-01-387-5426)  
Trailer, Chassis: 3072 Pounds, 2-wheel, (NSN 2330-01-387-5424) ..... TM 9-2330-392-14&P

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

Unit, Direct Support and General Support Maintenance Instructions, Diesel  
Engine, Model No. DN4M, 4 Cylinder 1.9 Liter ..... TM 9-2815-253-24

**A-2 Change 2**

Operator's Manual, Generator Set, Skid Mounted, Tactical Quiet, 10 kW, 60/400 Hz  
MEP-803A (60 Hz) 6115-01-275-5061  
MEP-813A (400 Hz) 6115-01-274-7392 ..... TM 9-6115-642-10

Unit, Direct Support and General Support Maintenance Manual, Generator Set,  
Skid Mounted, Tactical Quiet, 10 kW, 60/400 Hz  
MEP-803A (60 Hz) 6115-01-275-5061  
MEP-813A (400 Hz) 6115-01-274-7392..... TM 9-6115-642-24

Repair Parts and Special Tools List: Generator Set, Tactical Quiet,  
10 kW, 60/400 Hz ..... TM 9-6115-642-24P

Repair Parts and Special Tools List: Diesel Engine, Model No..... DN4M,  
4 Cylinder, 1.9 Liters ..... TM 9-2815-253-24P

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

**A-9 LUBRICATION ORDERS.**

Lubrication Order: Generator Set, Skid Mounted, Tactical Quiet, 5 kW,  
MEP-803A (60 Hz), MEP-813A (400 Hz)..... LO 9-6115-642-12

Lubrication Order: Diesel Engine, Model No.: DN4M, 4 Cylinder 1.8 Liter..... LO 9-2815-253-12

**A-10 FIELD MANUALS.**

Electrical Power Generation in the Field ..... FM 20-31

First Aid ..... FM 21-11





## APPENDIX B

# MAINTENANCE ALLOCATION CHART

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### SECTION I

#### INTRODUCTION

##### **B-1 GENERAL.**

**B-1.1 This** section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

**B-1.2** 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 levels.

**B-1.3** 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.

**B-1.4** 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:

**B-2.1 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-2.2 Test.** To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

**B-2.3 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.

**B-2.4 Adjust.** To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

**B-2.5 Aline.** To adjust specified variable elements of an item to bring about optimum or desired performance.

**B-2.6 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-2.7 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.

**B-2.8 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.

**B-2.9 Repair.** The application of maintenance services<sup>1</sup>, including fault location/troubleshooting<sup>2</sup>, removal/installation, and disassembly/assembly<sup>3</sup> procedures, and maintenance actions<sup>4</sup> 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.

**B-2.10 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 publication (i.e., DMWR). Overhaul does not normally return an item to like new condition.

**B-2.11 Rebuild.** Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurement (hour/miles, etc.) considered in classifying Army equipment/components.

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

**B-3.1 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-3.2 Column 2, Component/Assembly.** Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

**B-3.3 Column 3, Maintenance Function.** Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2.)

**B-3.4 Column 4, Maintenance Level.** Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the level 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 level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work time figures will be shown for each level. 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

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<sup>1</sup>Services - inspect, test, service, adjust, aline, calibrate, and/or replace.

<sup>2</sup>Fault 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).

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

<sup>4</sup>Actions - welding, grinding, riveting, straightening, facing remachinery, and for resurfacing.

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 levels are as follows:

- C ..... Operator or crew
- O ..... Unit Maintenance
- F ..... Direct Support Maintenance
- H ..... General Support Maintenance
- L ..... Specialized Repair Activity (SRA)<sup>5</sup>
- D ..... Depot maintenance

**B-3.5 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.

**B-3.6 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.**

**B-4.1 Column 1, Reference Code.** The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.

**B-4.2 Column 2, Maintenance Level.** The lowest level of maintenance authorized to use the tool or test equipment.

**B-4.3 Column 3, Nomenclature.** Name or identification of the tool or test equipment.

**B-4.4 Column 4, National Stock Number.** The National stock number of the tool or test equipment.

**B-4.5 Column 5, Tool Number.** The manufacturer's part number.

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

**B-5.1 Column 1, Reference Code.** The code recorded in Column 6, Section II.

**B-5.2 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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<sup>5</sup>This maintenance level is not included in Section II, column (4) of the Maintenance Allocation Chart. To identify functions to this category of maintenance, enter a work time figure in the "H" column of Section II, column (4), and use an associated reference code in the Remarks column (6). Key the code to Section W, Remarks, and explain the SRA complete repair application there. The explanatory remark(s) shall reference the specific Repair Parts and Special Tools List (RPSTL) TM which contains additional SRA criteria and the authorized spare/repair parts.

**Section II. MAINTENANCE ALLOCATION CHART  
FOR  
POWER UNITS AND POWER PLANTS**

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
00	POWER PLANT/ POWER UNIT	INSPECT	0.2						A,B,C A,D
0100	GENERATOR SET	INSPECT	0.2	0.5					A
		TEST		1.0	1.0				F,G
		SERVICE	0.3	0.3					E,F,G
		ADJUST		0.3					F,G
		REPAIR		1.5	1.5				E,F,G
		REMOVE/INSTALL			1.5			1,3	
		REPLACE			1.5			1,3	J
0200	ELECTRICAL SYSTEM								B,C
0201	POWER CABLES	INSPECT		0.1					A
		TEST		0.3				1,2	
		REMOVE/INSTALL		0.5				1	
		REPAIR			1.1			1,3,4	K
		REPLACE		0.5				1	J
0202	SWITCH BOX ASSEMBLY	INSPECT	0.1	0.1					A
		REMOVE/INSTALL		0.5				1	
		REPAIR		0.3				1,5	
		REPLACE			0.5			1	J
020201	RELAY BOARD ASSEMBLY	TEST			1.0			1,3	
		REPAIR			1.0			1,3	
02020101	RELAYS	TEST			0.2			1,3	
		REMOVE/INSTALL			0.1			1	
		REPLACE			0.1			1	J
020202	RELAY, PERMISSIVE PARALLELING	TEST			1.0			1,3	
		REMOVE/INSTALL			0.5			1	
		REPLACE			0.5			1	J
020203	LIGHTS/LAMPS	TEST	0.2					1,2	
		REMOVE/INSTALL	0.2					1	
		REPAIR	0.3					1,2	
		REPLACE	0.2					1	J
020204	SWITCHES	TEST	0.2					1,2	
		REMOVE/INSTALL	0.2					1	
		REPLACE	0.2					1	J
020205	LEADS/HARNESSES	TEST			0.3			1,3	
		REMOVE/INSTALL			0.4			1	
		REPAIR			0.9			1,3,4	
		REPLACE			0.4			1	J

**MAINTENANCE ALLOCATION CHART  
FOR  
POWER UNITS AND POWER PLANTS (continued)**

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
020206	TERMINAL,LOAD	INSPECT	0.1	0.1				1	A
		REMOVE/INSTALL		0.5				1	
		REPAIR		0.2				1	J
		REPLACE		0.5				1	
020207	CONTACTOR	TEST			0.2			1,3	
		REMOVE/INSTALL			0.5			1	
		REPLACE			0.5			1	J
020208	RESISTORS	TEST			0.2			1,3	
		REPLACE			0.4			1	
0300	ACCESSORIES	INSPECT	0.1						A,B,C,D, L
0301	BOX, ACCESSORY	INSPECT	0.1						A
		REMOVE/INSTALL		0.2				1	
		REPAIR		0.5	1.5				
		REPLACE		0.2				1	J
0302	FIRE EXTINGUISHER/ BRACKET	INSPECT	0.1	0.1					A
		REMOVE/INSTALL		0.2				1	
		REPLACE		0.2				1	J
0400	TRAILER ASSEMBLY	INSPECT	0.2	0.2					A,H,I,M
0401	FENDERS	REMOVE/INSTALL		1.5				1	D
				3.0				1	B,C
		REPAIR			2.0			1,8	L
					2.0			1,6,7	D,L
		REPLACE		1.5	4.0			1,6,7	B,C
				3.0				1	D,J
0402	TRAILER LEVELLING- SUPPORT JACK	INSPECT	0.1						A
		SERVICE		0.2				1	A
		REMOVE/INSTALL		0.3				1	B,C,D
					0.5			1,8	L
		REPAIR		0.8				1	
		REPLACE		0.3	0.5			1	J

**Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS  
FOR  
POWER UNITS AND POWER PLANTS**

(1) TOOL OR TEST EQUIPMENT REF CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL/NATO STOCK NUMBER	(5) TOOL NUMBER
1	O,F	TOOL KIT, GENERAL MECHANIC'S	5180-00177-7033	SC 5180-90-CL-N26
2	O	SHOP EQUIPMENT, AUTOMOTIVE MAINTENANCE AND REPAIR: ORGANIZATIONAL MAINTENANCE COMMON #1, LESS POWER	4910-00-754-0654	SC 4910-95-CL-A74
3	F	SHOP EQUIPMENT, ELECTRICAL REPAIR, SEMITRAILER MOUNTED:	494000-294-9517	SC 4940-95-CL-B05
4	F	CRIMPING TOOL, HYDRAULIC, WIRE SIZE 8 THRU 4/0	5130-00 762-9100	
5	O	RIVETER, BLIND HEAD	5120-00-148-5847	
6	F	TOOL KIT, BODY AND FENDER REPAIR	5180-00-357-7731	SC 5180-90-CL-N62
7	F	SHOP EQUIPMENT, WELDING, FIELD	3470-00-357-7268	SC 3470-95-CL-A08
8	F	RIVET GUN, PNEUMATIC		

Section IV. REMARKS

(1) REFERENCE CODE	(2) REMARKS
A	Preventive Maintenance Checks and Service (PMCS).
B	AN/MJQ37 only.
C	AN/MJQ-38 only.
D	PU-798 and PU-799 only.
E	Refer to TM 9-6115-642-10 for generator set operator maintenance.
F	Refer to TM 9-6115-642-24 for generator set unit and higher level maintenance.
G	Refer to TM 9-2815-253-24 for engine maintenance.
H	Refer to TM 9-2330-202-14&P for 1 ton trailer maintenance.
I	Refer to TM 9-2330-213-14&P for 1 1/2 ton trailer maintenance.
J	Replace is the same as Removal and Installation.
K	Refer to Appendix G for repair.
L	PU-798A and PU-799A only
M	Refer to TM 9-2330-392-14&P for high mobility trailer maintenance.



**APPENDIX C  
COMPONENTS OF END ITEM (COEI)  
AND BASIC ISSUE ITEMS (BII) LISTS**

---

**Section I. INTRODUCTION**

**C-1 SCOPE.**

This appendix lists components of the end items and basic issue items for the power plant/power unit to help you inventory the items for safe and efficient operation of the equipment.

**C-2 GENERAL.**

The Components of End Item and Basic Issue Items (BII) Lists are divided into the following sections:

**C-2.1 Section II, Components of End Item.** This listing is for information purposes only, and is not authority to requisition replacements. These items are part of the power plant/power unit, but they are to be removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Illustrations are furnished to help you find and identify the items.

**C-2.2 Section III, Basic Issue Items.** These essential items are required to place the power plant/power unit in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the power plant/power unit during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE. Illustrations are furnished to help you find and identify the items.

**C-3 EXPLANATION OF COLUMNS.**

**C-3.1 Column (1).** Column (1), Illus Number, gives you the number of the item illustrated.

**C-3.2 Column (2).** Column (2), National Stock Number, identifies the stock number of the item to be used for requisitioning purposes.

**C-3.3 Column (3).** Column (3), Description and Usable On Code, identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGEC (commercial and Government entity code) (in parenthesis) and the part number. If the item you need is not the same for different models of the equipment, a Usable On Code will appear on the right side of the description column on the same line as the part number. These codes are identified below:

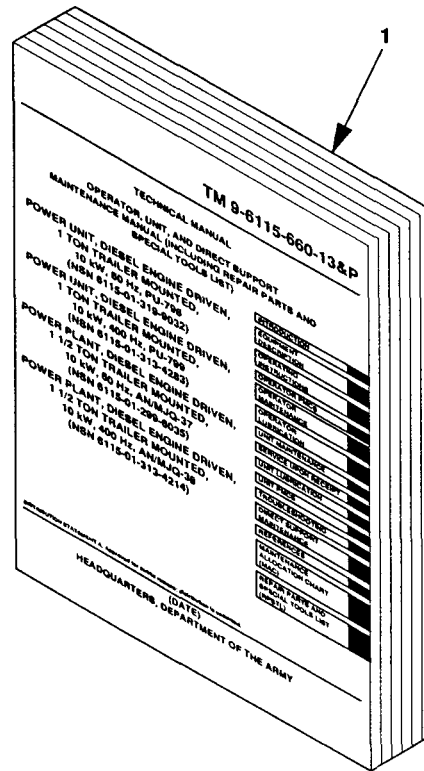
<u>CODE</u>	<u>USED ON</u>
EVU	AN/MJQ-37
EVS	AN/MJQ-38
EVT	PU-798
ESR	PU-799
FMJ	PU-798A
FMH	PU-799A

**C-3.4 Column (4).** Column (4), U/I (unit of issue), indicates how the item is issued for the National Stock Number shown in column two.

**C-3.5 Column (5).** Column (5), Qty Reqd, indicates the quantity required.

SECTION II. COMPONENTS OF END ITEM				
(1)	(2)	(3)	(4)	(5)
Illus Number	National Stock Number	Description CAGEC and Part Number	Usable On Code	U/I Qty Reqd
		This section is not applicable to the power plants and power units.		

SECTION III. BASIC ISSUE ITEMS



(1) Illus Number	(2) National Stock Number	(3) Description CAGEC and Part Number	(4) Usable On Code U/I	(5) Qty Reqd
1		Manual, Technical, TM 9-6115-660-13&P	EA	1



**APPENDIX D  
ADDITIONAL AUTHORIZATION UST**

**Section I. INTRODUCTION**

**D-1 SCOPE.**

This appendix lists additional items you are authorized for the support of the power plant/power unit.

**D-2 GENERAL.**

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

**D-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. If the item you require differs between serial numbers of the same model, effective serial numbers are shown in the last line of the description. If item required differs for different models of this equipment, the model is shown under the "Usable on" heading in the description column. These codes are identified as:

<u>CODE</u>	<u>USED ON</u>
EVU	AN/MJQ-37
EVS	AN/MJQ-38
EVT	PU-798
ESR	PU-799
FMJ	PU-798A
FMH	PU-799A

**SECTION II. ADDITIONAL AUTHORIZED ITEMS LIST**

(1) National Stock Number	(2) Description  Usable On Code CAGEC and Part Number	(3) U/I	(4) Qty Recm
5120-00-494-1911	WRENCH, PLIER, CURVED JAW (81348) GGG-W-00649, TYPE 1, CLASS 2, STYLE B	EA	2
7240-00-222-3088	CAN, GASOLINE, MILITARY (80372) 42-D-1280	EA	1
7240-00-177-6154	SPOUT, CAN, FLEXIBLE (81349) MIL-S-1285	EA	1



**APPENDIX E  
EXPENDABLE AND DURABLE ITEMS LIST**

---

**Section I. INTRODUCTION**

**E-1 SCOPE.**

This appendix lists expendable and durable items that you will need to operate and maintain Power Plants AN/MJQ-37 and AN/MJQ-38, and Power Units PU-798, PU-798A, PU-799 and PU-799NA. This listing is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-790, Expendable/Durable Items (except medical, class V repair parts, and heraldic items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

**E-2 EXPLANATION OF COLUMNS.**

**E-2.1 Column 1 Item Number.** This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item (e.g. "Use drycleaning solvent A-A-711, item 1, Appendix E").

**E-2.2 Column 2. Level.** This column identifies the lowest level of maintenance that requires the item.

**E-2.3 Column 3. National Stock Number.** This is the national stock number assigned to the item, which you can use to requisition it.

**E-2.4 Column 4. Item Name, Description, Commercial and Government Entity Code (CAGEC), and Part Number.** This provides the other information you need to identify the item.

**E-2.5 Column 5. Unit of Measure.** This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

(1)	SECTION II. EXPENDABLE AND DURABLE ITEMS LIST			(5)
ITEM NUMBER	LEVEL	STOCK NUMBER	ITEM NAME, DESCRIPTION CAGEC, PART NUMBER	U/M
1	C	6850-00-369-2474	DRYCLEANING SOLVENT,TYPE III,5 GALLONS:(81349) P-D-680	GL
2	C	6850-01-369-2475	DRYCLEANING SOLVENT,TYPE III,55 GALLONS:(81349) P-D-680	GL
3	O	9150-00-190-0904	GREASE,AUTOMOTIVE/ARTILLERY GAA (81349) MIL-G-10924	LB
4	O	9150-00-189-6727	OIL,LUBRICATION OE/HDO-10 (81349) MIL-D-2104	QT
5	O,F		SOLDER,SN60PB40 (81348)	SL
6	O,F	8040-00-664-4318	ADHESIVE,9995460 (18876)	PT



**APPENDIX F  
UNIT AND DIRECT SUPPORT MAINTENANCE  
REPAIR PARTS AND SPECIAL TOOLS LIST**

---

**Section I. INTRODUCTION**

**F-1 SCOPE.**

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of unit and direct support maintenance of the AN/MJQ-37 and AJQ-38 Power Plants and PU-798, PU-798& PU-799 and PU-799A Power Units. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

**F-2 GENERAL.**

In addition to Section I, Introduction, the Repair Parts and Special Tools List is divided into the following sections:

**F-2.1 Section II. Repair Parts List.** A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed by item name FIG BULK at tie end of the section. Repair parts kits or sets are listed separately in their own functional group within Section II.

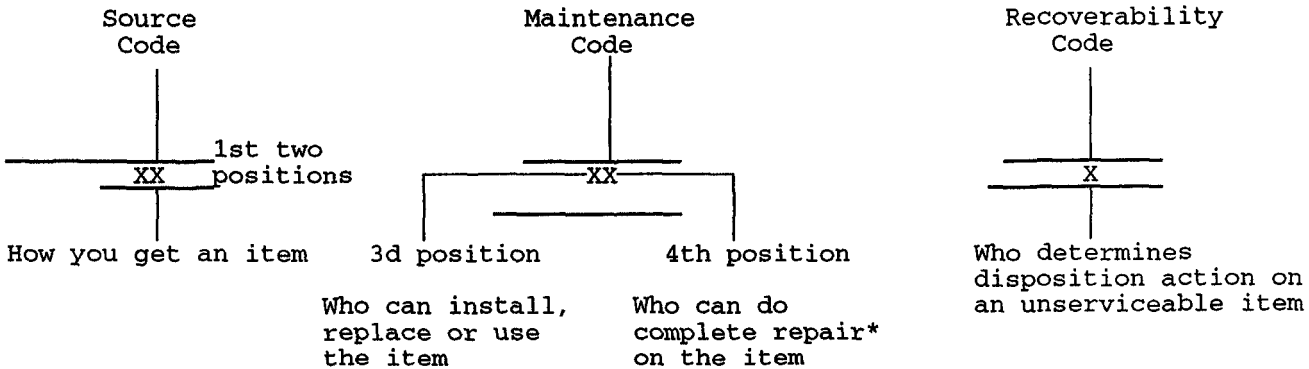
**F-2.2 Section III Special Tools List.** A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE (UOC) column) for the performance of maintenance. (There are no special tools for the Power Plants/Power Units.)

**F-2 Section IV. Cross-reference Indexes.** A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listings, followed by a list in alphanumeric sequence of all part numbers appearing in the housing. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. The figure and item number index lists figure and item number in alphanumeric sequence and cross-references NSN, CAGEC and part number.

**F-3 EXPLANATION OF COLUMNS (SECTIONS II and III).**

**F-3.1 ITEM NO. (Column (1)).** Indicates the number used to identify items called out in the illustration.

**F-3.2 SMR CODE (Column (2)).** The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



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

**F-3.2.1 Source Code.** The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follows:

Code	Explanation															
PA	Stocked items; use the applicable NSN to request/requisition items with these codes. They are authorized to the maintenance level indicated by the code entered in the 3d position of the SMR code.															
PB																
PC																
PD																
PE																
PF																
PG																
	**NOTE: Items coded PC are subject to deterioration.															
<table border="1"> <tr> <td> <table border="1"> <tr> <td>KD</td> <td> </td> </tr> <tr> <td>KF</td> <td>&gt;</td> </tr> <tr> <td>KB</td> <td> </td> </tr> </table> </td> <td>Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.</td> </tr> </table>	<table border="1"> <tr> <td>KD</td> <td> </td> </tr> <tr> <td>KF</td> <td>&gt;</td> </tr> <tr> <td>KB</td> <td> </td> </tr> </table>	KD		KF	>	KB		Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.								
<table border="1"> <tr> <td>KD</td> <td> </td> </tr> <tr> <td>KF</td> <td>&gt;</td> </tr> <tr> <td>KB</td> <td> </td> </tr> </table>	KD		KF	>	KB		Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.									
KD																
KF	>															
KB																
<table border="1"> <tr> <td>MO-</td> <td>(Made at Unit/ AVUM Level)</td> <td> </td> </tr> <tr> <td>MF-</td> <td>(Made at DS/ AVUM Level)</td> <td> </td> </tr> <tr> <td>MH-</td> <td>(Made at GS Level)</td> <td>&gt;</td> </tr> <tr> <td>ML-</td> <td>(Made at Specialized Repair Act (SRA))</td> <td> </td> </tr> <tr> <td>MD-</td> <td>(Made at Depot)</td> <td> </td> </tr> </table>	MO-	(Made at Unit/ AVUM Level)		MF-	(Made at DS/ AVUM Level)		MH-	(Made at GS Level)	>	ML-	(Made at Specialized Repair Act (SRA))		MD-	(Made at Depot)		Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE Bulk Material group of the repair parts list in the (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.
MO-	(Made at Unit/ AVUM Level)															
MF-	(Made at DS/ AVUM Level)															
MH-	(Made at GS Level)	>														
ML-	(Made at Specialized Repair Act (SRA))															
MD-	(Made at Depot)															

Code	Explanation
AO-	(Assembled by Unit AVUM Level)
AF-	(Assembled by DS AVUM Level)
AH-	(Assembled by GS Level)
AL-	(Assembled by SRA)
AD-	(Assembled by Depot)

Items with these codes are not to be requested/ requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.

- XA - Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)
- XB - If an "XB" item is not available from salvage, order it using the CAGEC and part number given.
- XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
- XD - Item is not stocked. Order an "XD"-coded item through normal supply channels using the CAGEC and part number given, if no NSN is available.

NOTE: Cannibalization or controlled exchange, when authorized, maybe used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 700-42.

**F-3.2.2 Maintenance Code.** Maintenance codes tells you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:

F-3.2.2.1 The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance.

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

**F-3.2.2.2** The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions.) (NOTE: Some limited repair maybe done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.) This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	-Unit or (aviation unit) is the lowest level that can do complete repair of the item.
F	-Direct support or aviation intermediate is the lowest level that can do complete repair of the item.
H	-General support is the lowest level that can do complete repair of the item.
L	-Specialized repair activity (none designated for power plants/power units) is the lowest level that can do complete repair of the item.
D	-Depot is the lowest level that can do complete repair of the item.
Z	-Nonreparable. No repair is authorized.
B	-No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item). However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

**F-3.2.3 Recoverability Code.** Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

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

**F-3.3 CAGEC (Column (3)).** The Commercial and Government Entity Code (CAGEC) is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

**F-3.4 PART NUMBER (Column (4)).** Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, end inspection requirements to identify an item or range of items.

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

**F-3.5 DESCRIPTION AND USABLE ON CODE (UOC) (Column (5)).** This column includes the following information:

- a. The Federal item name and, when required, a minimum description to identify the item.
- b. Items that are included in kits and sets are listed below the name of the kit or set.
- c. Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.
- d. Part numbers for bulk materials are referenced in this column in the line entry for the item to be manufactured/fabricated.
- e. When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC).
- f. The usable on code, when applicable.
- g. The statement "END OF FIGURE" appears just below the last item description in Column 5 for a given figure in both Section II and Section III.

**F-3.6 QTY (Column (6)).** The QTY (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

#### F-4 EXPLANATION OF COLUMNS (SECTION IV).

##### F-4.1 National Stock Number (NSN) Index.

**F-4.1.1 STOCK NUMBER column.** This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN

(i.e.,  $\overbrace{5305-01-674-1467}^{\text{NSN}}$ ). When using this column to locate an item, ignore the first 4 digits of the NSN.  
NIIN

However, the complete NSN should be used when ordering items by stock number.

**F-4.1.2 FIG. column.** This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section III.

**F-4.1.3 ITEM column.** The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

letter or digit of each group in order A through Z, followed the numbers 0 through 9 and each following letter or digit in like order).

**F-4.2.1 CAGEC column.** The Commercial and Government Entity Code (CAGEC) is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

**F-4.2.2 PART NUMER column.** Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

**F-4.2.3 STOCK NUMBER column.** This column lists the NSN of the figure for the associated part number and manufacture identified in the PART NUMBER and CAGEC columns to the left.

**F-4.2.4 FIG. column.** This column lists the number of the figure where the item is identified/located in Section II and III.

**F-4.2.5 ITEM column.** The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

**F-4.3 Figure and Item Number Index.**

**F-4.3.1 FIG. Column.** The column lists the number of the figure where the item is identified/located in Section II and III.

**F-4.3.2 ITEM Column.** The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

**F-4.3.3 STOCK NUMBER Column.** This column lists the NSN for the item.

**F-4.3.4 CAGEC Column.** The Commercial and Government Entity Code (CAGEC) is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

**F-4.3.5 PART NUMBER Column.** Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

**F-5 SPECIAL INFORMATION.**

**F-5.1 Usable on Code.** The usable on code appears in the lower left corner of the Description Column heading. Usable on codes are shown as "UOC . . ." in the Description Column justified left) on the first line below the last line of the applicable item description/nomenclature. Uncoded items are applicable to all models. Identification of the usable on codes used in this manual are:

<u>CODE</u>	<u>USED ON</u>
EVU	AN/MJQ-37
EVS	AN/MJQ-38
EVT	PU-798
ESR	PU-799
FMJ	PU-798A
FMH	PU-799A

**F-5.2 Fabrication Instructions.** Bulk materials required to manufacture items are listed in the Bulk Material Functional Group of this RPSTL. Part numbers for bulk materials are also referenced in the description column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for the items source coded to be manufactured or fabricated are found in Appendix G.

**F-5.3 Index Numbers.** Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is used as a cross-reference between the National Stock Number/Part Number Index and the bulk material list in Section II.

## **F-6 HOW to LOCATE REPAIR PARTS.**

### **F-6.1 When National Stock Number or Part Number is Not Known.**

**F-6.1.1 First.** Using the table of contents, determine the assembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

**F-6.1.2 Second.** Find the figure covering the assembly group or subassembly group to which the item belongs.

**F-6.1.2 Third.** Identify the item on the figure and use the Figure and Item Number Index to find the NSN.

### **F-6.2 When National Stock Number or Part Number is Known.**

**F-6.2.1 First.** Using the National Stock Number or the Part Number Index, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN) sequence (see F-4.1.1). The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see F-4.2). Both indexes cross-reference you to the illustration/figure and item number of the item you are looking for.

**F-6.2.2 Second.** Turn to the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

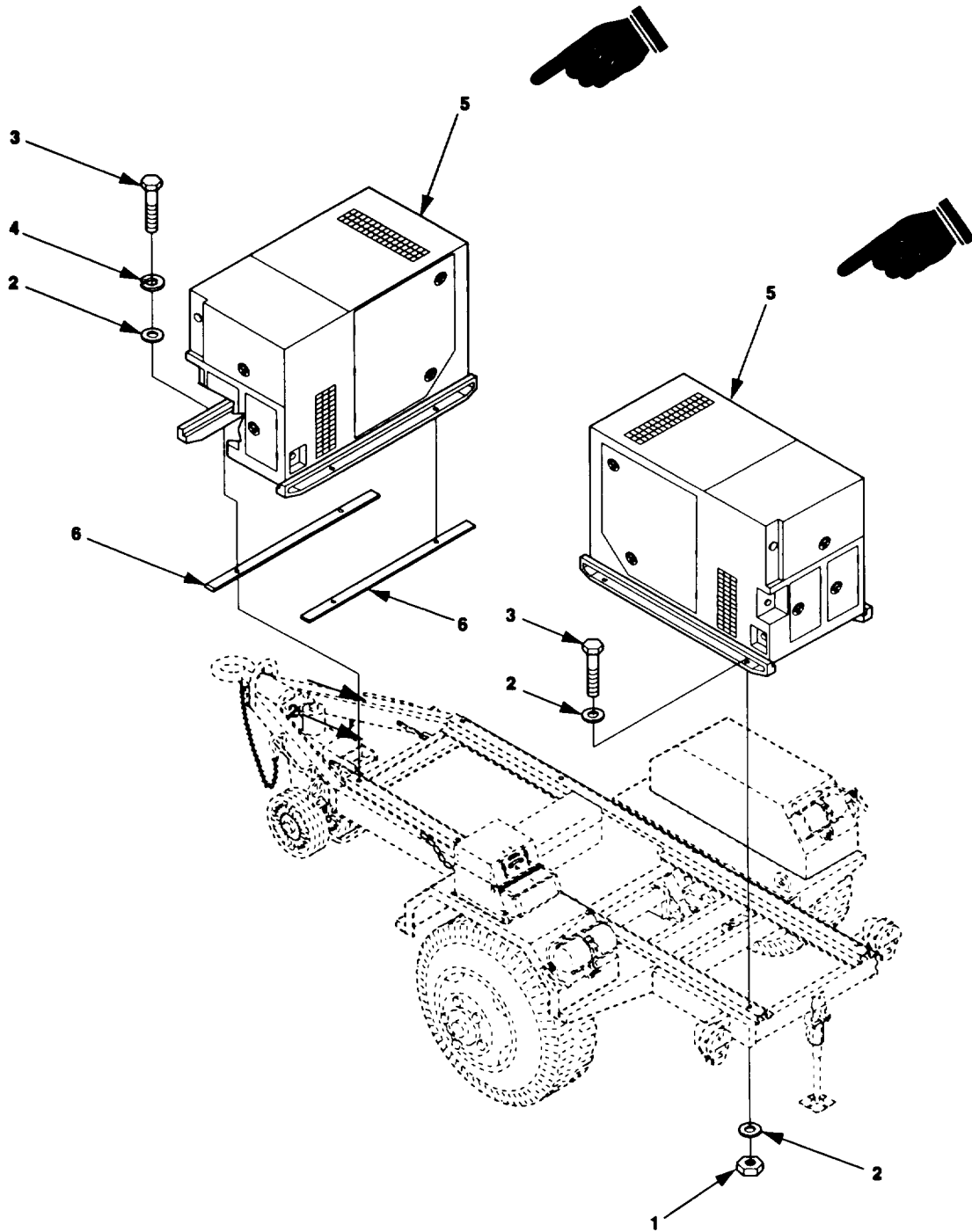
## **F-7 ABBREVIATIONS.**

The glossary at the back of this manual contains a list of abbreviations that are used in this manual and not listed in MIL-STD-12D.









**Figure F-1. Generator Set Installation**

TM 9-6115-660-13&P C 02

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 01 GENERATOR SET	
				FIG. 1 GENERATOR SET INSTALLATION	
1	PAFZZ	96906	MS51922-33	NUT, SELF-LOCKING, HE ..... UOC: EVS, EVU	6
2	PAFZZ	96906	MS51412-9	WASHER, FLAT ..... UOC: EVS, EVU	14
3	PAFZZ	80204	B1821BH050C175N	SCREW, CAP, HEXAGON H ..... UOC: EVS, EVU	8
4	PAFZZ	96906	MS51415-9	WASHER, LOCK ..... UOC: EVS, EVU	2
5	PDFHH	30554	MEP 803A	GENERATOR SET, DIESEL ..... UOC: EVU	2
5	PDFHH	30554	MEP 813A	GENERATOR SET, DIESEL ..... UOC: EVS	2
6	XDFZZ	97403	13229E9635	PLATE, SUPPORT ..... UOC: EVS, EVU	2

END OF FIGURE

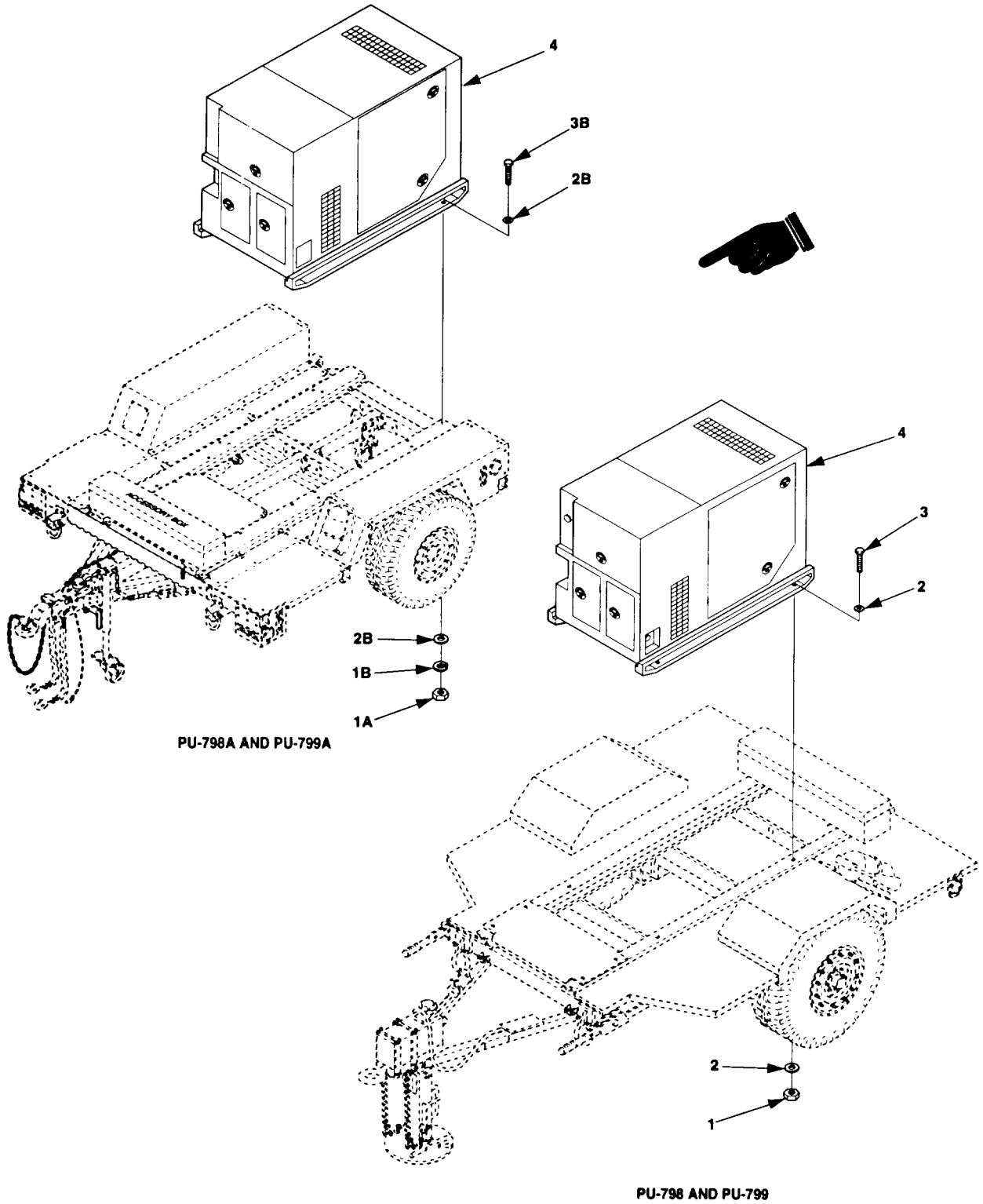


Figure F-1. Generator Set Installation.

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 01 GENERATOR SET FIG. 2 GENERATOR SET, POWER UNIT	
1	PAFZZ	96906	MS5192243	NUT, SELF-LOCKING, HE ..... UOCESREVT	4
1A	PAFZZ	96906	MS51971-5	NUT, PLAIN, HEX HEAD ..... UOC:FMH,FMJ	4
1B	PAFU	96906	MS35338143	WASHER, LOCK ..... UOC:FMH,FMJ	4
2	PAFZZ	96906	MS514124	WASHER, FLAT ..... UOC:ESR,EVT	8
2A	PAFZZ	96906	MS15795-817	WASHER, FLAT ..... UOC:FMH,FMJ	8
3	PAFZZ	80204	B1821BH050 C138N	SCREW, CAP, HEXAGON H ..... UOC:ESR,EVT	4
3A	PAFZZ	96906	MS35307-414	SCREW, CAP, HEX HEAD ..... UOC:FMH,FMJ	4
4	PAFZZ	30554	MEP 803A	GENERATOR SET, DIESE ..... UOC:EVT,FMJ	1
4	PAFZZ	30554	MEP 813A	GENERATOR SET, DIESE ..... UOC:ESRIFMH	1

END OF FIGURE

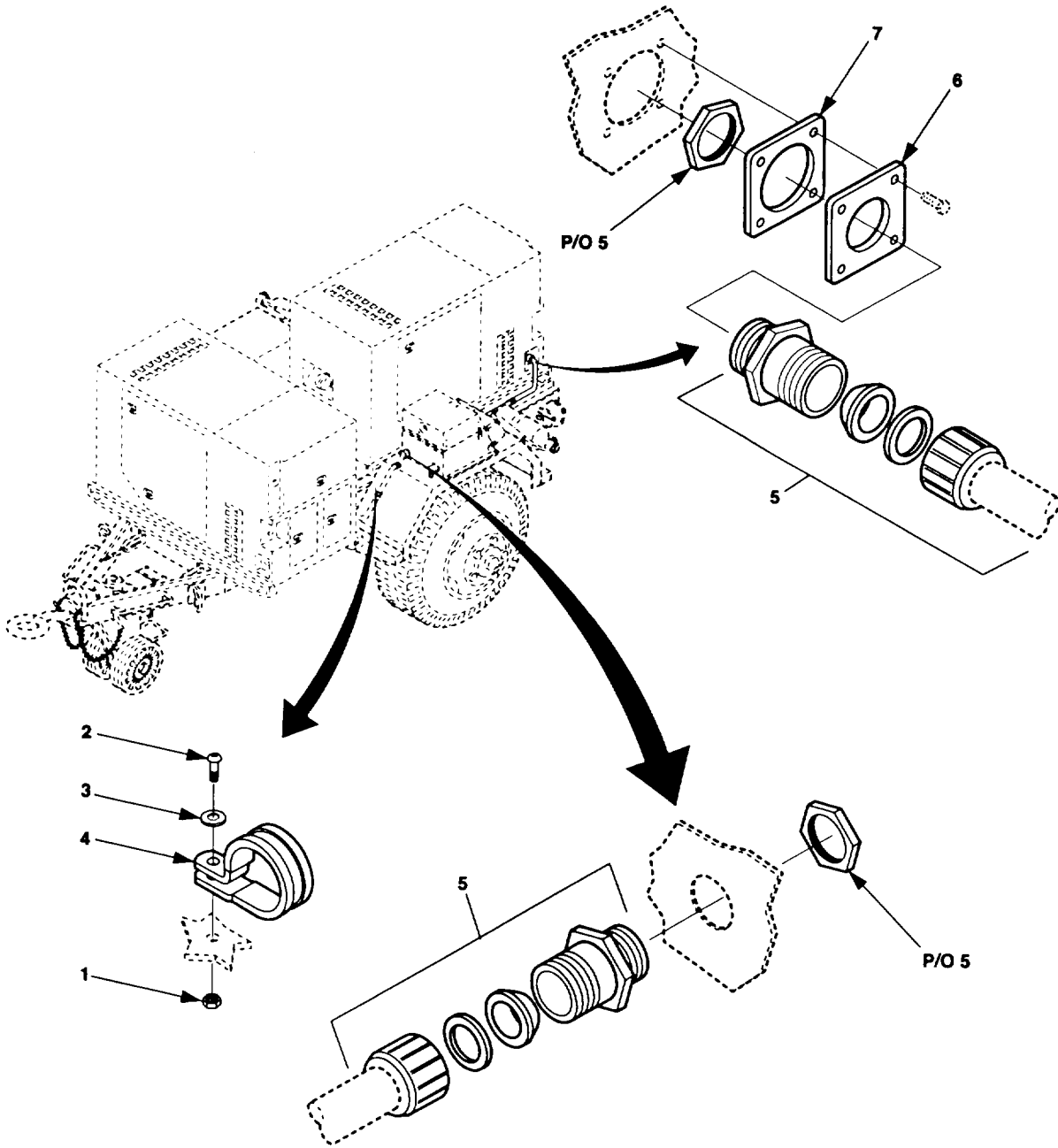


Figure F-3. Power Cables.

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SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 02 ELECTRICAL SYSTEM	
				FIG. 3 POWER CABLES	
1	PAOZZ 96906	MS35650302		NUT,PLAIN,HEXAGON ..... UOC:EVS,EVU	4
2	PAOZZ 96906	MS35207-67		SCREW,MACHINE ..... UOC:EVS,EVU	4
3	PAOZZ 96906	MS51412-2		WASHER,FLAT ..... UOC:EVS,EVU	4
4	PAOZZ 96906	MS2191 9WCG21		CLAMP,LOOP ..... UOCEVS,EVU	4
5	PAOZZ 97403	13218E5149-		TUBE,STUFFING ..... UOC:EVS,EVU	4
6	XDOZZ 97403	13229E5827		PLATE,GEN OUTPUT ..... UOC:EVS,EVU	2
7	PAOZZ 97403	M3BE510		GASKET,RUBBER ..... UOC:EVS,EVU	2

END OF FIGURE

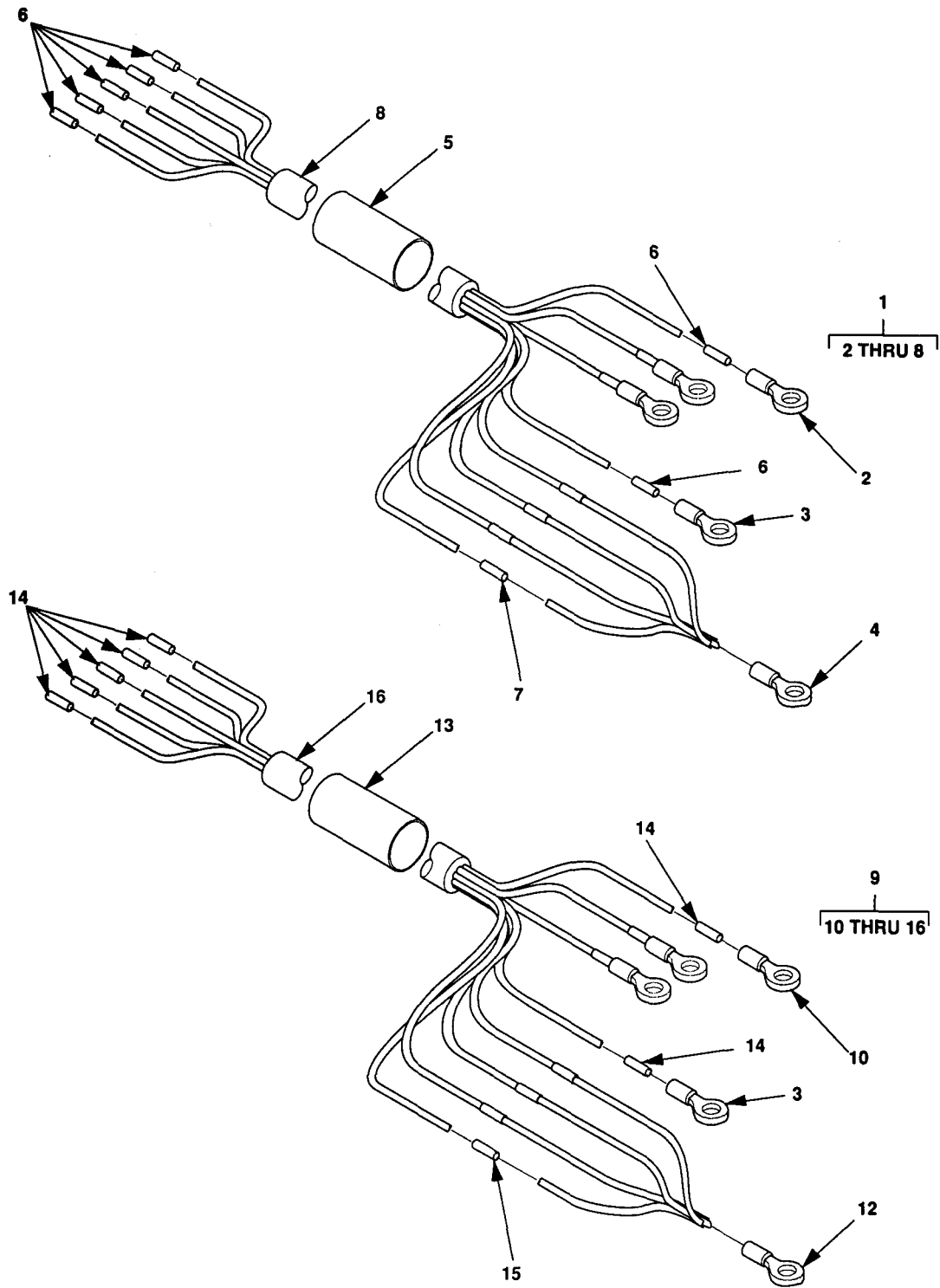


Figure F-4. Cable Assembly



SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG. 4 CABLE ASSEMBLY					
1	AFOFF	97403	13229E5836-3	CABLE ASSEMBLY FRONT CABLE UOC: EVS, EVU	1
2	PAFZZ	96906	MS25036-125	TERMINAL, LUG UOC: EVS, EVU	3
3	PAFZZ	96906	MS20659-145	TERMINAL, LUG UOC: EVS, EVU	1
4	PAFZZ	96906	MS20659-143	TERMINAL, LUG UOC: EVS, EVU	1
5	MFFZZ	19099	13229E5836-3-5	INSULATION SLEEVING MAKE FROM P/ N M23053/5-111-0 (81349), 3 IN. REQUIRED UOC: EVS, EVU	1
6	MFFZZ	19099	13229E5836-3-6	INSULATION SLEEVING MAKE FROM P/ N M23053/5-107-9 (81349), AS REQUIRED UOC: EVS, EVU	9
7	MFFZZ	19099	13229E5836-3-7	INSULATION SLEEVING MAKE FROM P/ N M23053/5-105-9 (81349), AS REQUIRED UOC: EVS, EVU	4
8	MFFZZ	19099	13229E5836-3-1	CABLE, POWER MAKE FROM P/N CO- 04HDE (4/4-4/12R)1290 (81349), 83.5 IN. REQUIRED UOC: EVS, EVU	1
9	AFOFF	97403	13229E5836-4	CABLE ASSEMBLY REAR CABLE UOC: EVS, EVU	1
10	PAFZZ	96906	MS25036-125	TERMINAL, LUG UOC: EVS, EVU	3
11	PAFZZ	96906	MS20659-145	TERMINAL, LUG UOC: EVS, EVU	1
12	PAFZZ	96906	MS20659-143	TERMINAL, LUG UOC: EVS, EVU	1
13	MFFZZ	19099	13229E5836-4-5	INSULATION SLEEVING MAKE FROM P/ N M23053/5-111-0 (81349), 3 IN. REQUIRED UOC: EVS, EVU	1
14	MFFZZ	19099	13229E5836-4-6	INSULATION SLEEVING MAKE FROM P/ N M23053/5-107-9 (81349), AS REQUIRED UOC: EVS, EVU	9
15	MFFZZ	19099	13229E5836-4-7	INSULATION SLEEVING MAKE FROM P/ N M23053/5-105-9 (81349), AS REQUIRED UOC: EVS, EVU	4
16	MFFZZ	19099	13229E5836-4-1	CABLE, POWER MAKE FROM P/N CO- 04HDE (4/4-4/12R)1290 (81349), 111 IN. REQUIRED UOC: EVS, EVU	1
END OF FIGURE					

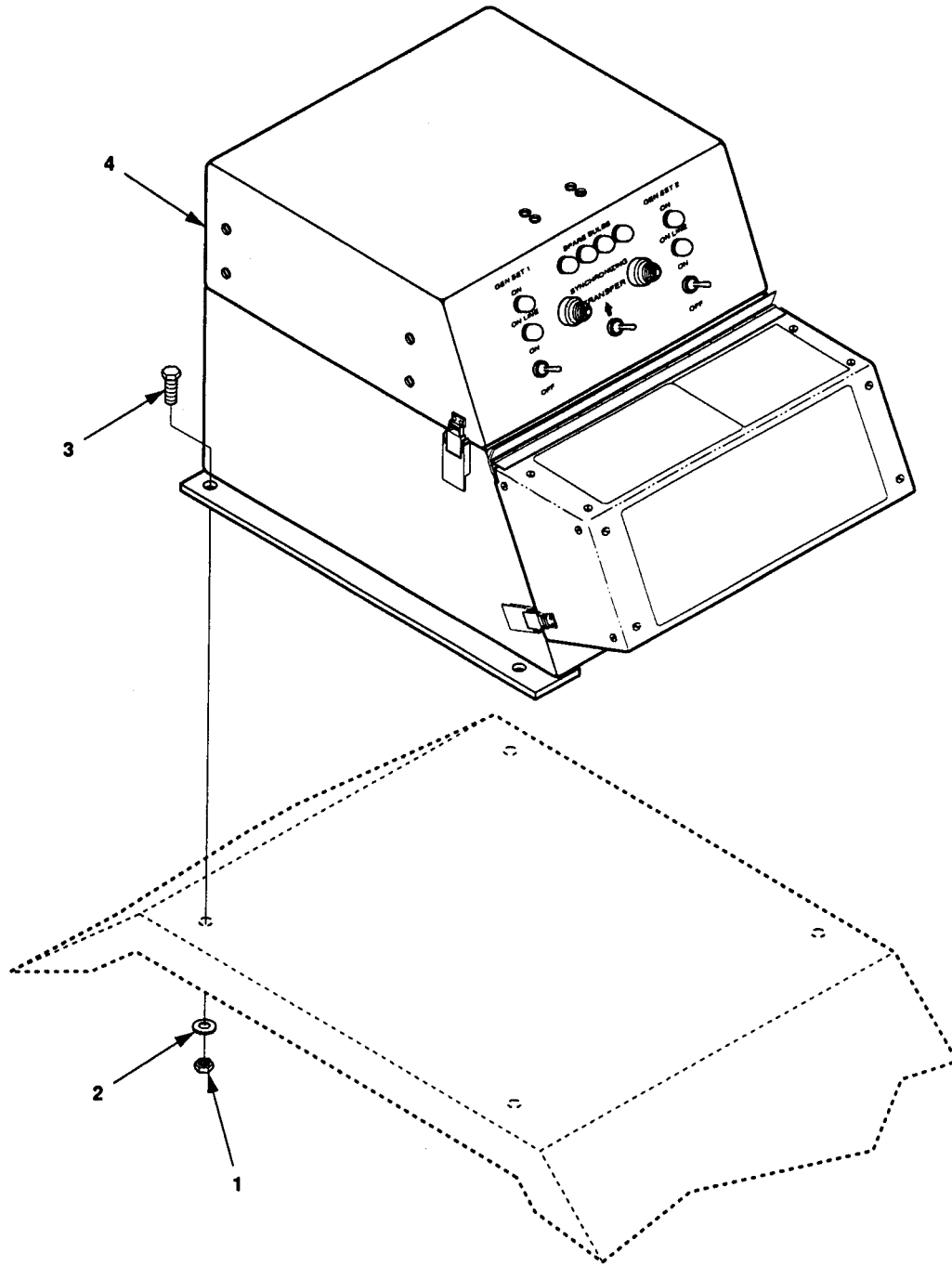


Figure F-5. Switch Box Installation

SECTION II (1)	SMR (2)	CAGEC (3)	PART (4)	DESCRIPTION AND USABLE ON CODES (UOC) (5)	QTY (6)
NO	CODE		NUMBER		
GROUP 02 ELECTRICAL SYSTEM					
FIG. 5 SWITCH BOX INSTALLATION					
1	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE UOC: EVS, EVU	4
2	PAOZZ	96906	MS51412-7	WASHER, FLAT UOC: EVS, EVU	4
3	PAOZZ	80204	B1821BH038C150N	SCREW, CAP, HEXAGON H UOC: EVS, EVU	4
4	XDFFF	97403	13229E5820-1	SWITCHBOX ASSEMBLY UOC: EVU	1
4	XDFFF	97403	13229E5820-2	SWITCHBOX ASSEMBLY UOC: EVS	1
END OF FIGURE					





WIRE LIST					
WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	ITEM NO.	TO	TERMINAL ITEM NO.	
1	XK3-2		TB1-1	20	23
2	XK3-3		TB1-4	20	23
3	XK3-4		TB1-5	20	23
4	XK3-5		TB1-3	20	23
5	XK3-6		TB1-6	20	23
6	XK3-7		TB1-2	20	23
7	XK5-2		TB1-1	20	23
8	XK5-3		TB1-8	20	23
9	XK5-4		TB1-10	20	23
10	XK5-5		TB1-17	20	23
11	XK5-6		TB1-6	20	23
12	E-7		E-6	-	23
13	XK4-2		TB1-14	20	23
14	XK4-3		TB1-9	20	23
15	XK4-4		TB1-5	20	23
16	XK4-5		TB1-3	20	23
17	XK4-6		TB1-7	20	23
18	XK4-7		TB1-15	20	23
19	R1-1		TB1-17	20	23
20	XK6-3		TB1-12	20	23
21	XK6-4		TB1-11	20	23
22	XK6-5		TB1-16	20	23
23	XK6-6		TB1-13	20	23
24	XK6-7		TB1-15	20	23
25	R1-2		E6	-	23
26	R2-2		E3	-	23
27	E5		TB1-1	20	23
28	E4		TB1-1	20	23
29	R2-1		TB1-16	20	23
30	E3		TB1-15	20	23
31	E-1		E4	-	23
32	XK5-7		TB1-2	20	23
33	E-1		TB1-14	20	23
34	E8		TB1-8	20	23
35	XK6-2		TB1-14	20	23
36	E9		E3		23

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG. 6 RELAY BOARD HARNESS ASSY					
1	PAFZZ	96906	MS51957-46	SCREW, MACHINE UOC: EVS, EVU	4
2	PAFZZ	96906	MS35338-137	WASHER, LOCK UOC: EVS, EVU	4
3	PAFZZ	96906	MS15795-841	WASHER, FLAT UOC: EVS, EVU	4
4	XDFFF	97403	13229E5830	RELAY BOARD ASSEMBL UOC: EVS, EVU	1
5	PAFZZ	96906	MS35649-244	NUT, PLAIN, HEXAGON UOC: EVS, EVU	6
6	PAFZZ	96906	MS35338-135	WASHER, LOCK UOC: EVS, EVU	6
7	PAFZZ	88044	AN960-C4	WASHER, FLAT UOC: EVS, EVU	6
8	PAFZZ	96906	MS51957-18	SCREW, MACHINE UOC: EVS, EVU	6
9	PAFZZ	81349	RER75F2490P	RESISTOR, FIXED, WIRE UOC: EVS, EVU	2
10	PAOZZ	81349	M5757/23-003	RELAY, ELECTROMAGNET UOC: EVS, EVU	4
11	PAFZZ	97403	13222E9686	SOCKET, PLUG-IN ELEC UOC: EVS, EVU	4
12	PAFZZ	96906	MS51957-27	SCREW, MACHINE UOC: EVS, EVU	9
13	PAFZZ	96906	MS35338-136	WASHER, LOCK UOC: EVS, EVU	9
14	PAFZZ	96906	MS51412-1	WASHER, FLAT UOC: EVS, EVU	9
15	PAFZZ	81349	M55155/199G03	TERMINAL, STUD UOC: EVS, EVU	9
16	PAFZZ	60705	565C10GAP10	CAPACITOR UOC: EVS, EVU	2
17	PAFZZ	81349	JANTX1N5619	SEMICONDUCTOR DEVIC UOC: EVS, EVU	4
18	PAFZZ	81349	M39006/22-0631	CAPACITOR, FXD, ELEC UOC: EVS, EVU	2
19	XDFFF	97403	13229E5829	HARNESS ASSEMBLY UOC: EVS, EVU	1
20	PAFZZ	96906	MS25036-101	TERMINAL, LUG UOC: EVS, EVU	31
21	MFFZZ	19099	13229E5829-3	INSULATION SLEEVING MAKE FROM P/N M23053/5-107-4 (81349), 1.5 IN. REQUIRED UOC: EVS, EVU	1
22	MFFZZ	19099	13229E5829-6	INSULATION SLEEVING MAKE FROM P/N M23053/5-105-4 (81349), 1.5 IN. REQUIRED UOC: EVS, EVU	70

SECTION II (1)	SMR (2)	CAGEC (3)	PART (4)	DESCRIPTION AND USABLE ON CODES (UOC) (5)	QTY (6)
23	MFFZZ	19099	13229E5829-1	WIRE,EELCTRICAL MAKE FROM P/N M22759/16-20-9 (81349),AS REQUIRED UOC:EVS,EVU	1
24	PAFZZ	96906	MS3367-4-9	STRAP,TIEDOWN,ELECT UOC:EVS,EVU	V
25	MFFZZ	19099	13229E5830-9	INSULATION SLV MAKE FROM P/N M23053/5-104-0 (81349),AS REQUIRED UOC:EVS,EVU	1
26	XDFZZ	81349	37TB18B	TERMINAL BOARD UOC:EVS,EVU	1
27	PAFZZ	81349	MSA37TB18	MARKER STRIP,TERMIN UOC:EVS,EVU	1
28	XDFFF	97403	13229E5823	BRACKET UOC:EVS,EVU	1
29	PAFZZ	81349	M45938/1-13C	NUT,PLAIN,CLINCH UOC:EVS,EVU	4

END OF FIGURE





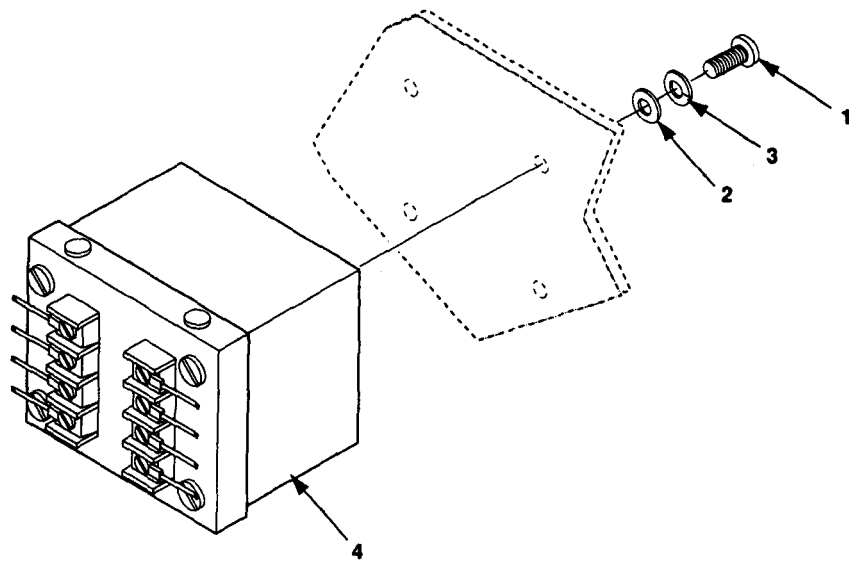


Figure F-7. Permissive Paralleling Relay

SECTION II (1)	ITEM (2)	(3)	TM9-6115-660-13&P (4)	C01 (5)	(6)
NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG. 7 PERMISSIVE PARALLELING RELAY					
1	PAFZZ	96906	MS51957-46	SCREW, MACHINE UOC: EVS, EVU	4
2	PAFZZ	96906	MS15795-841	WASHER, FLAT UOC: EVS, EVU	4
3	PAFZZ	96906	MS35338-137	WASHER, LOCK UOC: EVS, EVU	4
4	PAFZZ	60177	11500	RELAY, PERMISSIVE PR UOC: EVS, EVU	1
END OF FIGURE					

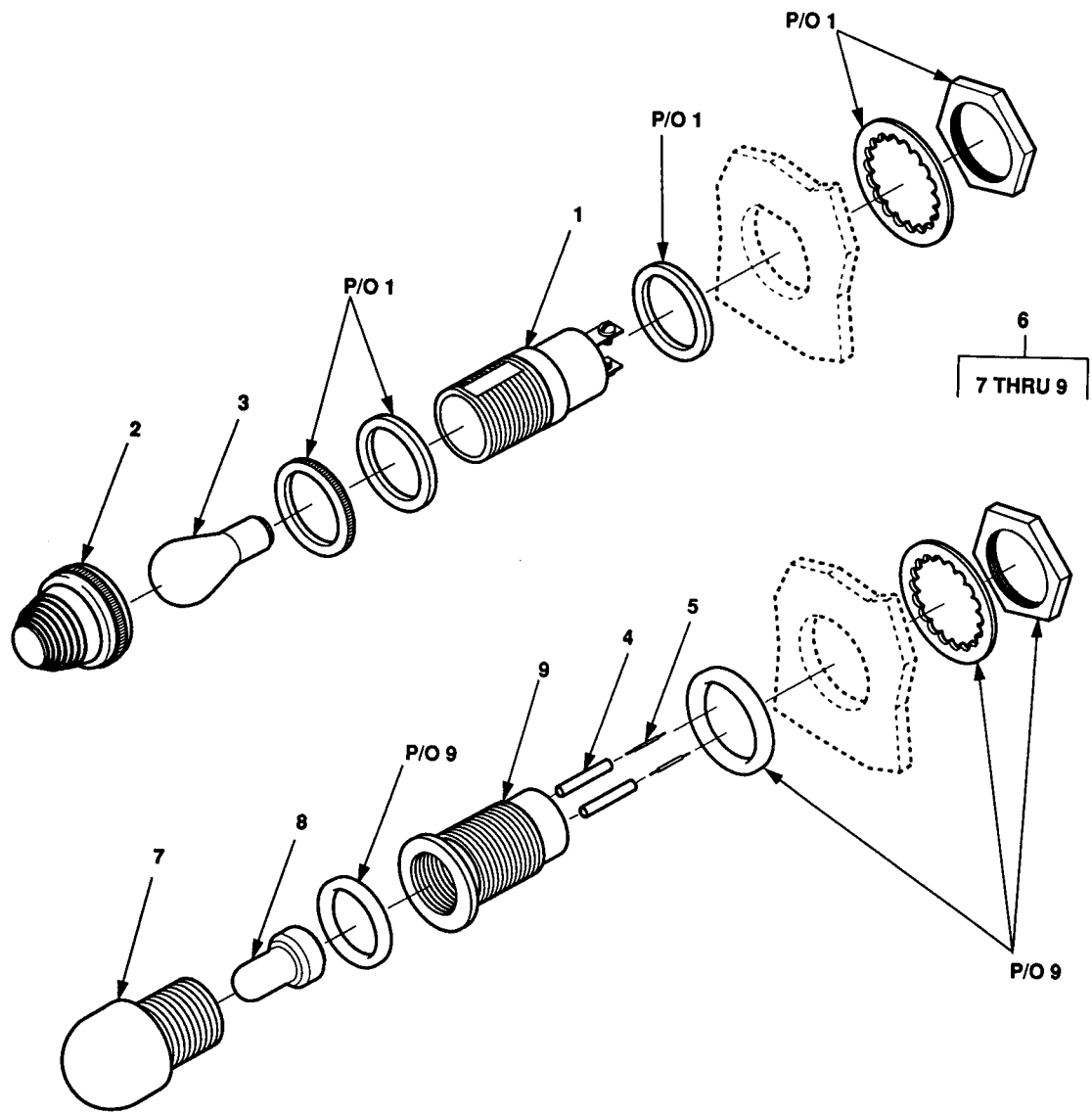


Figure F-8. Indicator Lights

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG. 8 INDICATOR LIGHTS					
1	PAOZZ	81349	LH80/1	LIGHT,INDICATOR UOC:EVS,EVU	3
2	PAOZZ	81349	LC21CN3	LENS,LIGHT UOC:EVS,EVU	3
3	PAOZZ	96906	MS15567-2	LAMP,INCANDESCENT UOC:EVS,EVU	3
4	MOOZZ	19099	13229E5820-44	INSULATION SLEEVING MAKE FROM P/ N M23053/5-107-9 (81349),AS REQUIRED UOC:EVS,EVU	1
5	MOOZZ	19099	13229E5820-43	WIRE,ELECTRICAL MAKE FROM P/N M22759/16-16-9 (81349),AS REQUIRED UOC:EVS,EVU	1
6	PAOOO	97403	13214E1391	LIGHT,INDICATOR UOC:EVS,EVU	4
7	PAOZZ	72619	181-0931-001	LENS CLEAR UOC:EVS,EVU	1
8	PAOZZ	58224	G9B	LAMP UOC:EVS,EVU	1
9	PAOZZ	72619	181-8836-09-553	LIGHT,INDICATOR UOC:EVS,EVU	1
END OF FIGURE					

1  
2 THRU 8

5  
6 THRU 8

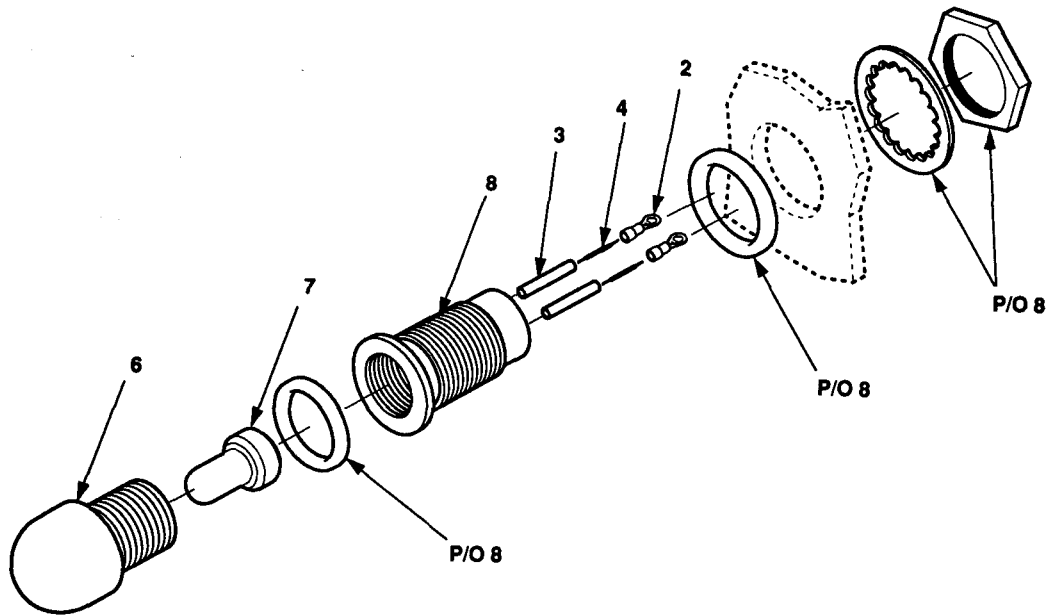


Figure F-9. Light Assembly

TM 9-6115-660-13&P C03

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 02 ELECTRICAL SYSTEM	
				FIG 9 LIGHT ASSEMBLY	
1	A0000	97403	13229E5764-2	LIGHT AND WIRE ..... UOC:EVS,EVU	4
2	PA0ZZ	96906	MS 6-101	TERMINAL, LUG..... UOC:EVS.EVU	2
3	MOOZZ	19099	13229E57642-2	INSULATION SLEEVING MAKE FROM P/N..... M23053-104-9 (81349), 1 IN REQUIRED UOC: EVS,EVU	2
4	MOOZZ	19099	13229E5764-2-3	WIRE, ELECTRICAL MAKE FROM P/N..... M50862-18-9 (81349), 8 IN REQUIRED UOC: EVS,EVU	2
5	PA000	97403	13214E1391	LIGHT, INDICATOR..... UOC:EVS,EVU	1
6	PAOZZ	72619	181-0931-001	LENS CLEAR..... UOC:EVS.EVU	1
7	PAOZZ	58224	G9B (GRC)	LAMP..... UOC:EVS,EVU	1
8	PAOZZ	72619	181-8836-09-553	LIGHT, INDICATOR..... UOC:EVS,EVU	1
				END OF FIGURE	

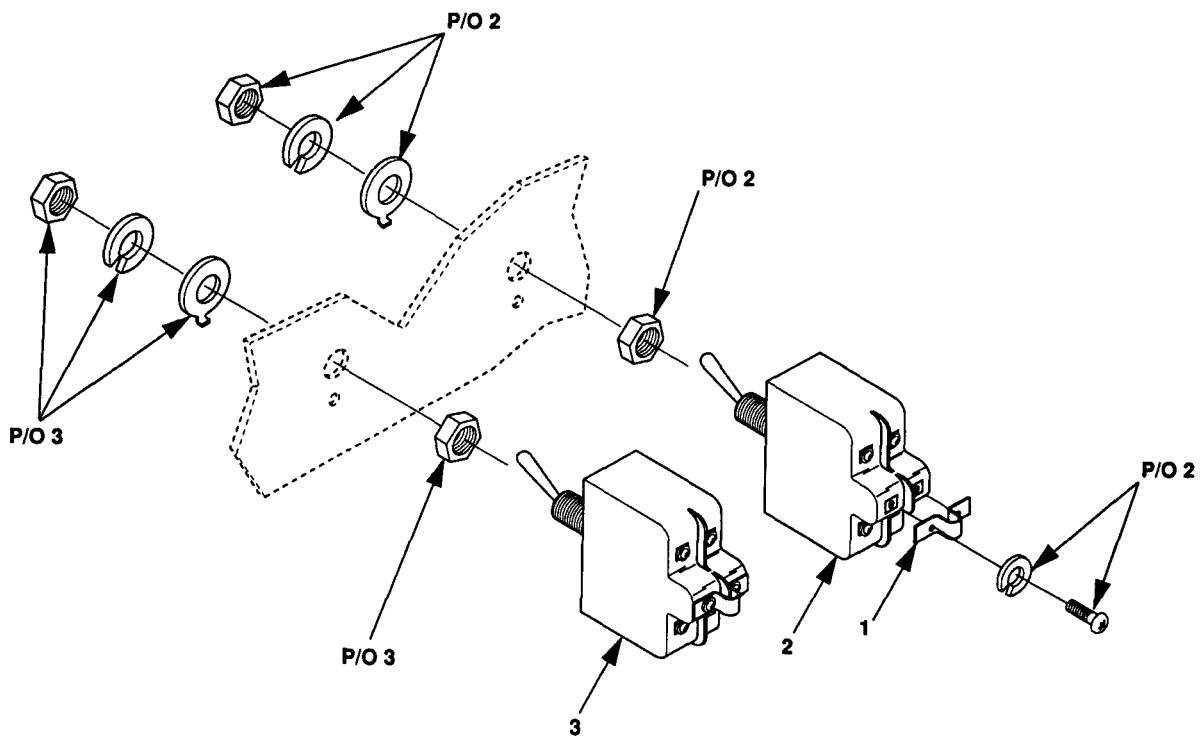


Figure F-10. Switches



SECTION II (1)	SMR (2)	CAGEC (3)	PART (4)	DESCRIPTION AND USABLE ON CODES (UOC) (5)	QTY (6)
ITEM NO	CODE		PART NUMBER		
TM9-6115-660-13&P C01					
GROUP 02 ELECTRICAL SYSTEM					
FIG. 10 SWITCHES					
1	PAOZZ	81349	TBJA	BUS, CONDUCTOR UOC: EVS, EVU	2
2	PAOZZ	96906	MS27407-3	SWITCH, TOGGLE ON LINE SWITCH UOC: EVS, EVU	2
3	PAOZZ	96906	MS24524-30	SWITCH, TOGGLE TRANSFER SWITCH UOC: EVS, EVU	1
END OF FIGURE					

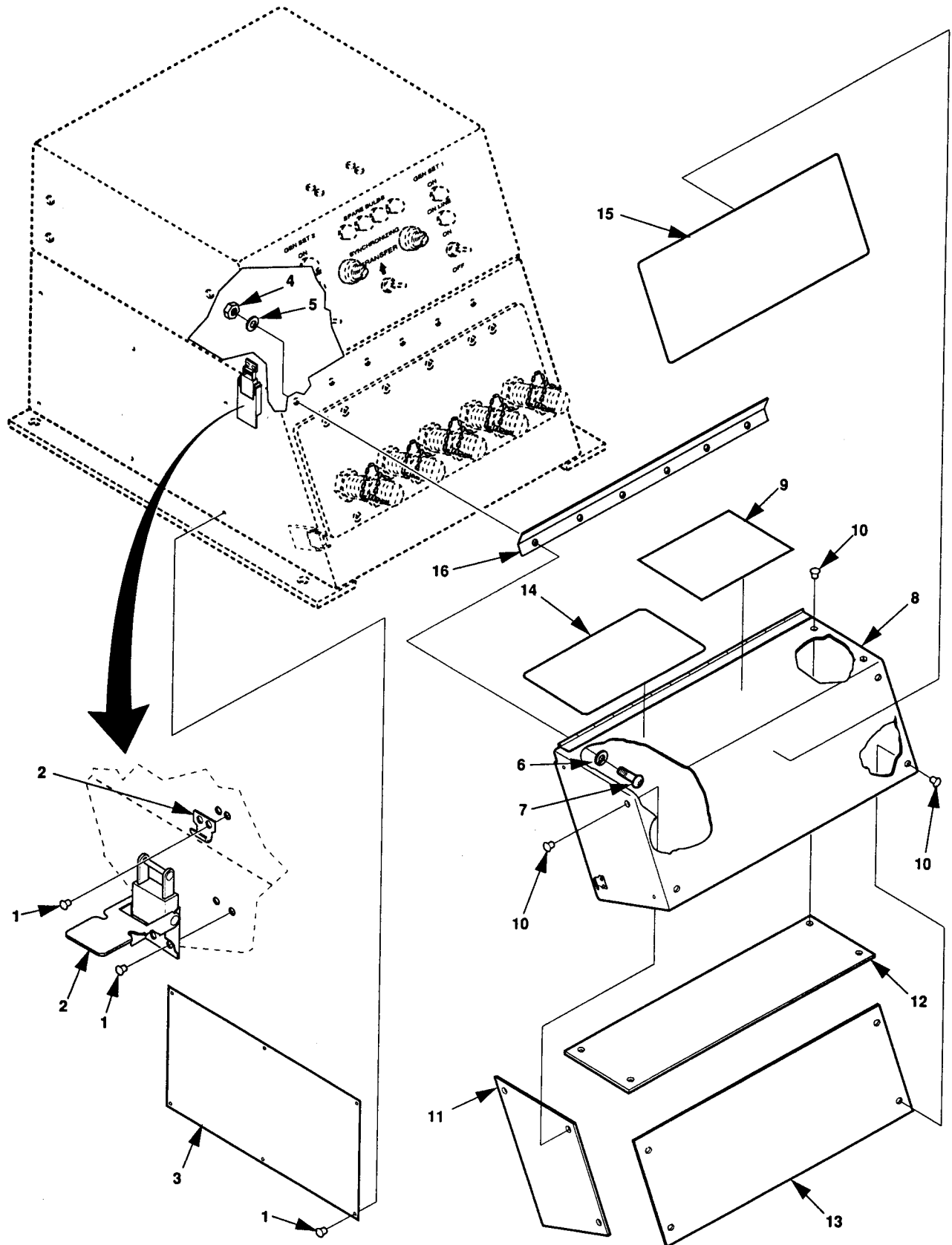


Figure F-11. Load Terminal Cover

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG. 11 LOAD TERMINAL COVER					
1	PAOZZ	96906	MS20600AD4W3	RIVET,BLIND UOC:EVs, EVU	22
2	PAOZZ	96906	MS18015-1	CATCH,CLAMPING UOC:EVs, EVU	4
3	MDOZZ	97403	13229E5819-1	PLATE,IDENTIFICATIO SCHEMATIC UOC:EVU	1
3	MDOZZ	97403	13229E5819-2	PLATE,IDENTIFICATIO SCHEMATIC UOC:EVs	1
4	PAOZZ	96906	MS35649-284	NUT,PLAIN,HEXAGON UOC:EVs, EVU	6
5	PAOZZ	96906	MS35338-137	WASHER,LOCK UOC:EVs, EVU	6
6	PAOZZ	96906	MS15795-841	WASHER,FLAT UOC:EVs, EVU	6
7	PAOZZ	96906	MS51957-46	SCREW,MACHINE UOC:EVs, EVU	6
8	XDOFF	97403	13229E5649-1	COVER,LOAD TERMINAL UOC:EVs, EVU	1
9	MDOZZ	97403	13229E5728-1	MARKER,WARNING UOC:EVs, EVU	1
10	PAOZZ	96906	MS20600AD3W3	RIVET,BLIND UOC:EVs, EVU	18
11	MFFZZ	19099	13229E5649-1-6	SHEET,PLASTIC MAKE FROM P/N M24768/2-S-7 (81349),4.5X6.5 IN. REQUIRED UOC:EVs, EVU	2
12	MFFZZ	19099	13229E5649-1-12	SHEET,PLASTIC MAKE FROM P/N M24768/2-S-7 (81349),5X13.5 IN. REQUIRED UOC:EVs, EVU	1
13	MFFZZ	19099	13229E5649-1-13	SHEET,PLASTIC MAKE FROM P/N M24768/2-S-7 (81349),4.75X13.5 IN. REQ UOC:EVs, EVU	1
14	MDOZZ	97403	13229E5654-1	PLATE,IDENTIFICATIO POWER PLANT OPERATING PROCEDURES UOC:EVs, EVU	1
15	MDOZZ	97403	13229E5654-2	PLATE,IDENTIFICATIO LOAD TRANSFER PROCEDURES UOC:EVs, EVU	1
16	XDOZZ	97403	13229E9630	STOP,TERMINAL COVER UOC:EVs, EVU	1
END OF FIGURE					

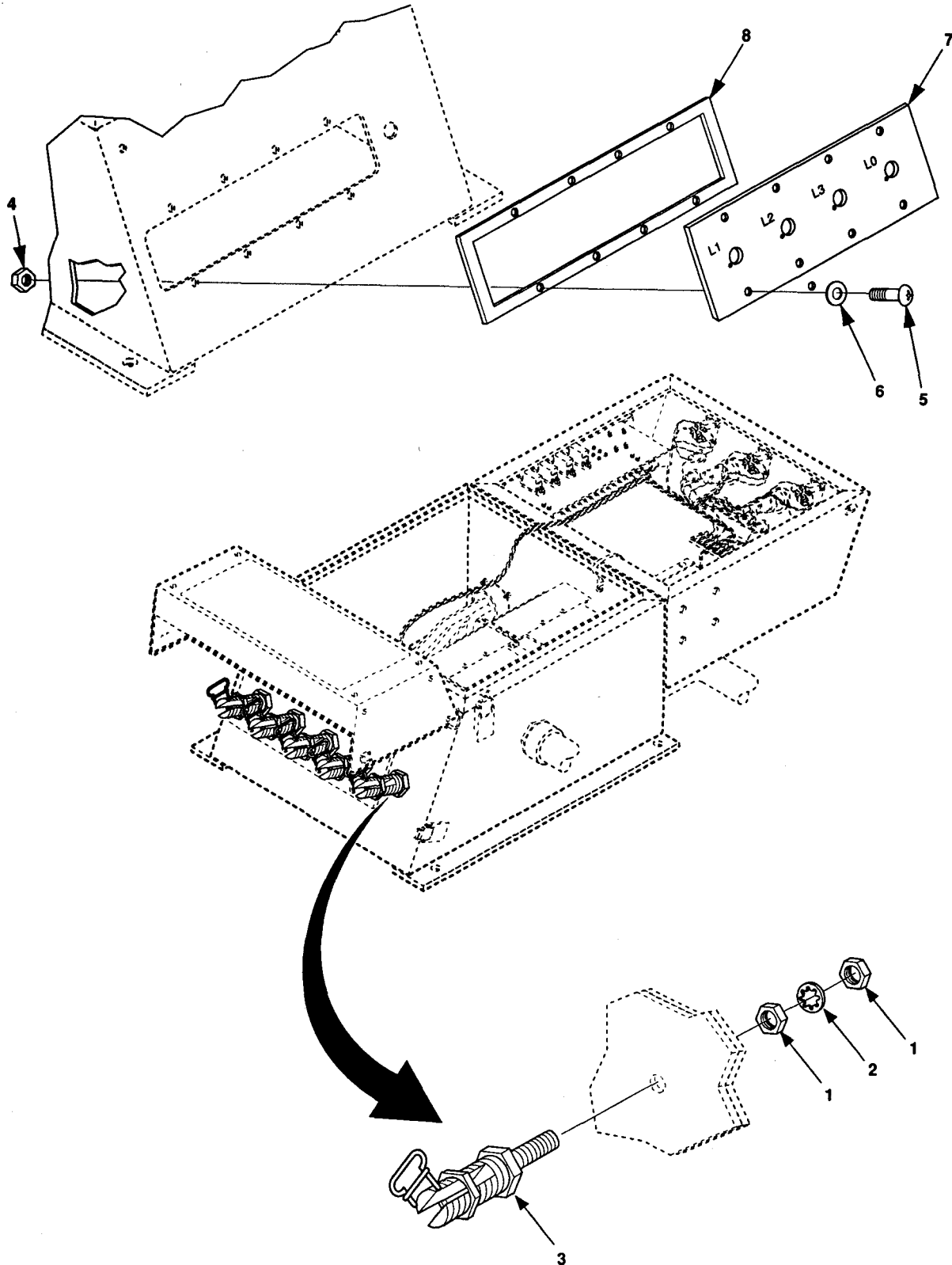


Figure F-12. Load Terminal

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC) GROUP 02 ELECTRICAL SYSTEM FIG. 12 LOAD TERMINAL	(6) QTY
1	PAOZZ	96906	MS35691-35	NUT, PLAIN, HEXAGON UOC: EVS, EVU	10
2	PAOZZ	96906	MS35333-113	WASHER, LOCK UOC: EVS, EVU	5
3	PAOOO	96906	MS39347-4	TERMINAL, LOAD UOC: EVS, EVU	5
4	PAOZZ	96906	MS51858-5	NUT, PLAIN, HEXAGON UOC: EVS, EVU	8
5	PAOZZ	96906	MS18212-65	SCREW, MACHINE UOC: EVS, EVU	8
6	PAOZZ	96906	MS51859-5	WASHER, FLAT UOC: EVS, EVU	8
7	XDOZZ	97403	13229E5833	PANEL, LOAD TERMINAL UOC: EVS, EVU	1
8	XDOZZ	97403	13229E9631	GASKET, LOAD TERMINA UOC: EVU	1
END OF FIGURE					

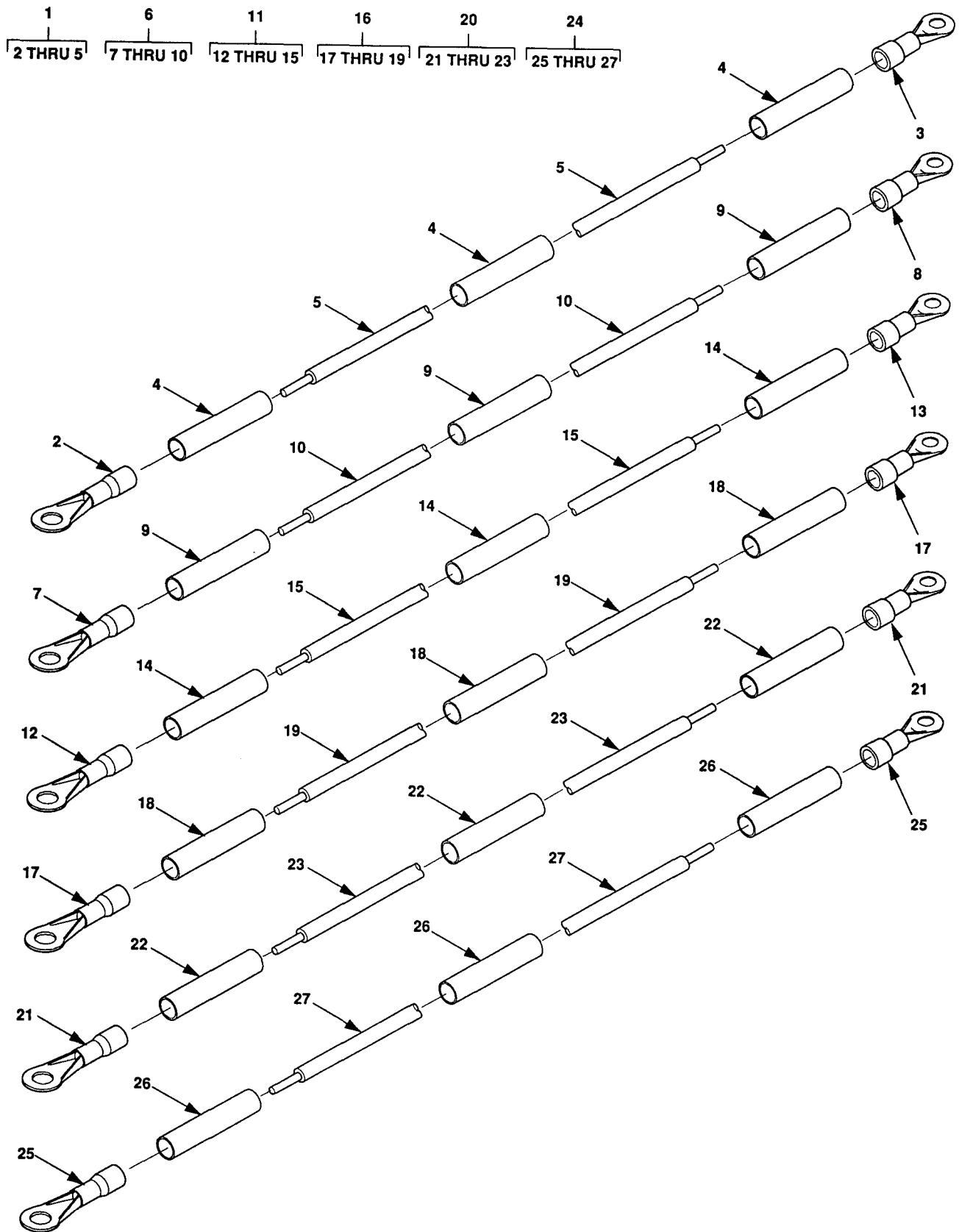


Figure F-13. Electrical Leads

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG. 13 ELECTRICAL LEADS					
1	AFFFF	97403	13229E5828-1	LEAD,ELECTRICAL UOC:EV,S,EVU	1
2	PAFZZ	96906	MS20659-145	TERMINAL,LUG UOC:EV,S,EVU	1
3	PAFZZ	96906	MS25036-125	TERMINAL,LUG UOC:EV,S,EVU	1
4	MFFZZ	19099	13229E5828-1-4	INSULATION SLEEVING MAKE FROM P/ N M23053/5-108-4(81349),2.5 IN. REQUIRED UOC:EV,S,EVU	3
5	MFFZZ	19099	13229E5828-1-2	WIRE,ELECTRICAL MAKE FROM P/N M5086/2-4-9 (81349),16 INCHES REQUIRED UOC:EV,S,EVU	1
6	AFFFF	97403	13229E5828-2	LEAD,ELECTRICAL UOC:EV,S,EVU	1
7	PAFZZ	96906	MS20659-145	TERMINAL,LUG UOC:EV,S,EVU	1
8	PAFZZ	96906	MS25036-125	TERMINAL,LUG UOC:EV,S,EVU	1
9	MFFZZ	19099	13229E5828-2-4	INSULATION SLEEVING MAKE FROM P/ N M23053/5-108-4 (81349),2.5 IN. REQUIRED UOC:EV,S,EVU	3
10	MFFZZ	19099	13229E5828-2-2	WIRE,ELECTRICAL MAKE FROM P/N M5086/2-4-9 (81349),18 IN. REQUIRED UOC:EV,S,EVU	1
11	AFFFF	97403	13229E5828-3	LEAD,ELECTRICAL UOC:EV,S,EVU	1
12	PAFZZ	96906	MS20659-145	TERMINAL,LUG UOC:EV,S,EVU	1
13	PAFZZ	96906	MS25036-125	TERMINAL,LUG UOC:EV,S,EVU	1
14	MFFZZ	19099	13229E5828-3-4	INSULATION SLEEVING MAKE FROM P/ N M23053/5-108-4 (81349),2.5 IN. REQUIRED UOC:EV,S,EVU	3
15	MFFZZ	19099	13229E5828-3-2	WIRE,ELECTRICAL MAKE FROM P/N M5086/2-4-9 (81349),23 INCHES REQUIRED UOC:EV,S,EVU	1
16	AFFFF	97403	13229E5828-4	LEAD,ELECTRICAL UOC:EV,S,EVU	1
17	PAOZZ	96906	MS20659-145	TERMINAL,LUG UOC:EV,S,EVU	2
18	MFFZZ	19099	13229E5828-4-4	INSULATION SLEEVING MAKE FROM P/ N M23053/5-108-4 (81349),2.5 IN. REQUIRED	3

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
19	MFFZZ	19099	13229E5828-4-2	UOC: EVS, EVU WIRE, ELECTRICAL MAKE FROM P/N M5086/2-4-9 (81349), 12 INCHES REQUIRED	1
20	AFFFF	97403	13229E5828-5	UOC: EVS, EVU LEAD, ELECTRICAL	1
21	PAOZZ	96906	MS20659-145	UOC: EVS, EVU TERMINAL, LUG	2
22	MFFZZ	19099	13229E5828-5-4	UOC: EVS, EVU INSULATION SLEEVING MAKE FROM P/ N M23053/5-108-4 (81349), 2.5 IN. REQUIRED	3
23	MFFZZ	19099	13229E5828-5-2	UOC: EVS, EVU WIRE, ELECTRICAL MAKE FROM P/N M5086/2-4-9 (81349), 12 INCHES REQUIRED	1
24	AFFFF	97403	13229E5828-6	UOC: EVS, EVU LEAD, ELECTRICAL	1
25	PAOZZ	96906	MS20659-145	UOC: EVS, EVU TERMINAL, LUG	2
26	MFFZZ	19099	13229E5828-6-4	UOC: EVS, EVU INSULATION SLEEVING MAKE FROM P/ N M23053/5-108-4 (81349), 2.5 IN. REQUIRED	3
27	MFFZZ	19099	13229E5828-6-2	UOC: EVS, EVU WIRE, ELECTRICAL MAKE FROM P/N M5086/2-4-9 (81349), 12 INCHES REQUIRED	1

UOC: EVS, EVU

END OF FIGURE





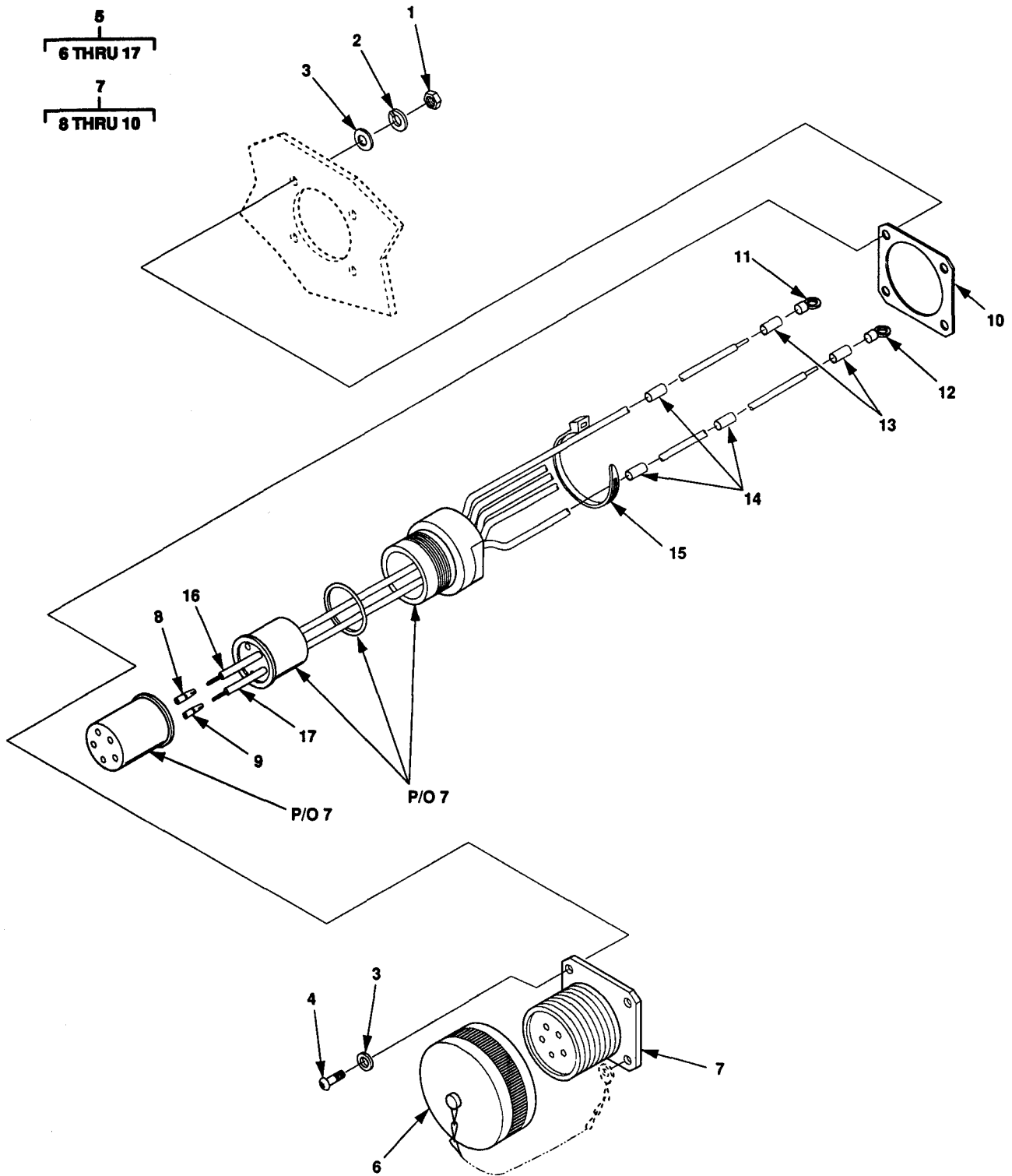


Figure F-14. Output Connector Harness Assembly

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG. 14 OUTPUT CONNECTOR HARNESS ASSEMBLY					
1	PAOZZ	96906	MS35650-304	NUT, PLAIN, HEXAGON UOC: EVS, EVU	4
2	PAOZZ	96906	MS35338-138	WASHER, LOCK UOC: EVS, EVU	4
3	PAOZZ	96906	MS15795-848	WASHER, FLAT UOC: EVS, EVU	8
4	PAOZZ	96906	MS51958-67	SCREW, MACHINE UOC: EVS, EVU	4
5	XDFFF	97403	13229E5832-1	HARNESS ASSEMBLY OUTPUT CONNECTOR 60HZ UOC: EVU	1
5	XDFFF	97403	13229E5832-2	HARNESS ASSEMBLY OUTPUT CONNECTOR 400HZ UOC: EVS	1
6	PAOZZ	96906	MS90563-3C	COVER, ELECTRICAL CO UOC: EVS, EVU	1
7	PAFZZ	96906	MS90555C32413S	CONNECTOR, RECEPTACL UOC: EVU	1
7	PAFZZ	96906	MS90555C32413SY	CONNECTOR, RECEPTACL UOC: EVS	1
8	PAFZZ	81349	M39029/49-331	CONTACT, ELECTRICAL UOC: EVS, EVU	4
9	PAFZZ	81349	M39029/49-329	CONTACT, ELECTRICAL UOC: EVS, EVU	1
10	PAFZZ	59501	10-33675-36	GASKET UOC: EVS, EVU	1
11	PAFZZ	96906	MS20659-145	TERMINAL, LUG UOC: EVS, EVU	4
12	PAFZZ	96906	MS20659-143	TERMINAL, LUG UOC: EVS, EVU	1
13	MFFZZ	19099	13229E5832-1-6	INSULATION SLEEVING MAKE FROM P/ N M23053/5-108-0 (81349), 1 IN. REQUIRED UOC: EVS, EVU	5
14	MFFZZ	19099	13229E5832-1-8	INSULATION SLEEVING MAKE FROM P/ N M23053/5-108-4 (81349), AS REQUIRED UOC: EVS, EVU	6
15	PAFZZ	96906	MS3367-1-9	STRAP, TIEDOWN, ELECT UOC: EVS, EVU	V
16	MFFZZ	19099	13229E5832-1-2	WIRE, ELECTRICAL MAKE FROM P/N M5086/2-4-9 (81349), 82 INCHES REQUIRED UOC: EVS, EVU	1
17	MFFZZ	19099	13229E5832-1-3	WIRE, ELECTRICAL MAKE FROM P/N M5086/2-6-9 (81349), 26 INCHES REQUIRED UOC: EVS, EVU	1

END OF FIGURE



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2 THRU 9

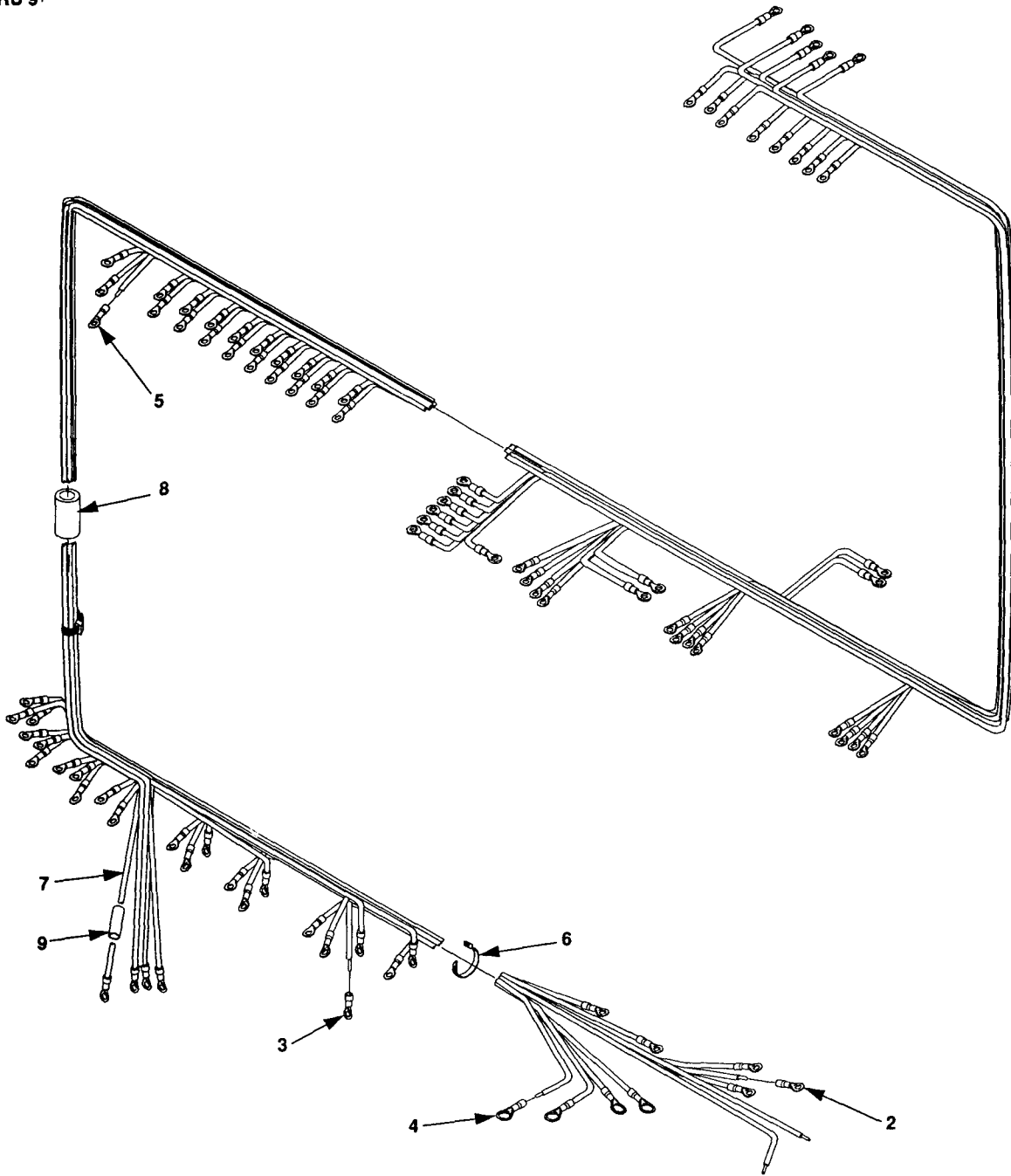


Figure F-15. Switch Box Harness Assembly (Sheet 1 of 2)

TM 9-6115-660-13&P C01

WIRE LIST					
WIRE NO.	TERMINATION		TERMINATION		WIRE ITEM NO.
	FROM	ITEM NO.	TO	TERMINAL ITEM NO.	
1	TB1-17	3	S10-2	3	7
2	TB1-2	3	PP-4	3	7
3	TB1-3	3	PP-3	3	7
4	TB1-4	3	K2-C2	2	7
5	TB1-5	3	XDS6-2	-	7
6	TB1-6	3	K2-22	3	7
7	TB1-7	3	K1-A2	2	7
8	TB1-8	3	K1-21	3	7
9	TB1-9	3	K1-C2	2	7
10	TB1-10	3	K2-11	3	7
11	TB1-10	3	PP-6	3	7
12	TB1-11	3	PP-8	3	7
13	TB1-12	3	K2-21	3	7
14	TB1-13	3	K1-22	3	7
15	TB1-16	3	S10-5	3	7
16	-	-	-	-	-
17	TB2-5	-	K2-A2	2	7
18	-	-	-	-	-
19	TB2-4	3	K2-Y	3	7
20	XDS6-1	-	R3-1	-	-
21	XDS5-2	-	PP-3	3	7
22	XDS5-1	-	PP-1	3	7
23	TB2-2	3	K1-A2	2	7
24	-	-	-	-	-
25	S2-2	3	S10-4	3	7
26	-	-	-	-	-
27	-	-	-	-	-
28	S1-6	3	PP-7	3	7
29	S1-2	3	S10-1	3	7
30	S1-5	3	K1-12	3	7
31	S2-6	3	PP-5	3	7
32	-	-	-	-	-
33	S2-5	3	K2-12	3	7
34	K1-11	3	PP-8	3	7
35	PP-4	3	LO	4	7
36	XDS7-2	-	PP-1	3	7
37	XDS7-1	-	L3	4	7
38	K1-22	3	K2-32	3	7
39	K2-32	3	K1-A2	2	7
40	K2-22	3	K2-A2	2	7
41	K1-32	3	K2-A2	2	7
42	K1-33	3	K2-11	3	7
43	K2-Y	3	LO	4	7
44	K2-X	3	S2-3	3	7
45	K2-33	3	K1-11	3	7
46	K1-X	3	S1-3	3	7
47	K1-Y	3	LO	4	7
48	K1-Y	3	TB2-1	3	7
49	K2-A1	2	R3-2	-	7
50	PP-2	3	PP-3	3	7
51	TB1-18	3	TB2-3	3	7
52	G	5	TB2-3	3	7

Figure F-15. Switch Box Harness Assembly (Sheet 2 of 2)

SECTION II (1)	SMR (2)	CAGEC (3)	TM9-6115-660-13&P PART (4)	C01 (5)	(6)
ITEM NO	CODE		NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG.15 SWITCH BOX HARNESS ASSY					
1	XDFFF	97403	13229E5831	HARN ASSY, SWITCHBOX UOC: EVS, EVU	1
2	PAOZZ	96906	MS25036-110	TERMINAL, LUG UOC: EVS, EVU	9
3	PAOZZ	96906	MS25036-106	TERMINAL, LUG UOC: EVS, EVU	70
4	PAOZZ	96906	MS25036-155	TERMINAL, LUG UOC: EVS, EVU	4
5	PAOZZ	96906	MS25036-108	TERMINAL, LUG UOC: EVS, EVU	1
6	PAOZZ	96906	MS3367-4-9	STRAP, TIEDOWN, ELECT UOC: EVS, EVU	V
7	MFFZZ	19099	13229E5831-1	WIRE, ELECTRICAL MAKE FROM P/N M22759/16-16-9 (81349), AS REQUIRED UOC: EVS, EVU	1
8	MFFZZ	19099	13229E5831-7	INSULATION SLEEVING MAKE FROM P/ N M23053/5-107-4 (81349), 1.5 IN. REQUIRED UOC: EVS, EVU	1
9	MFFZZ	10900	13229E5831-9	INSULATION SLEEVING MAKE FROM P/ N M23053/5-105-4 (81349), AS REQUIRED UOC: EVS, EVU	104
END OF FIGURE					

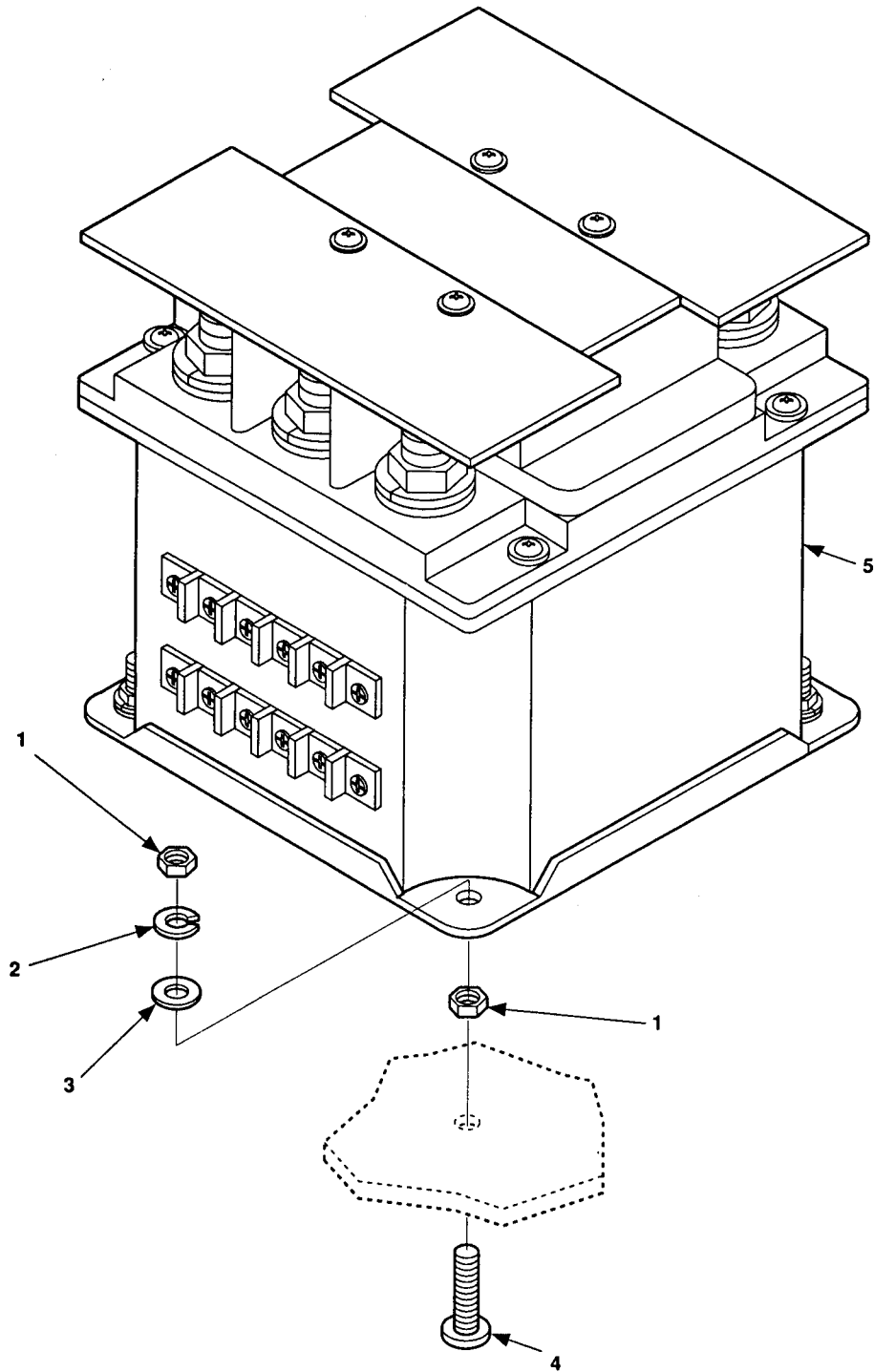


Figure F-16. Contactor



SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG.16 CONTACTOR					
1	PAFZZ	96906	MS35650-304	NUT, PLAIN, HEXAGON UOC: EVS, EVU	16
2	PAFZZ	96906	MS35338-138	WASHER, LOCK UOC: EVS, EVU	8
3	PAFZZ	96906	MS15795-848	WASHER, FLAT UOC: EVS, EVU	8
4	PAFZZ	96906	MS51958-67	SCREW, MACHINE UOC: EVS, EVU	8
5	PAFZZ	7E656	JCG-6026	CONTACTOR UOC: EVS, EVU	2
END OF FIGURE					

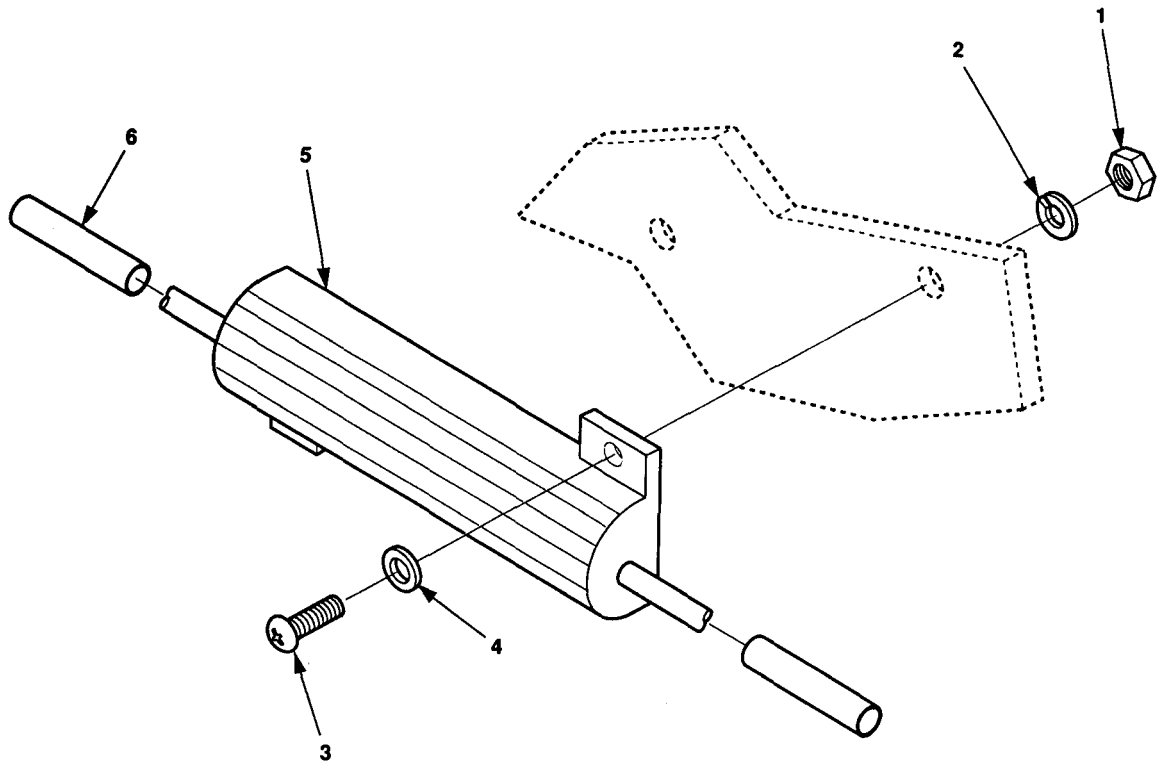


Figure F-17. Resistor R3

SECTION II (1)	SMR (2)	CAGEC (3)	PART (4)	DESCRIPTION AND USABLE ON CODES (UOC) (5)	QTY (6)
NO	CODE		NUMBER		
TM9-6115-660-13&P					
C01					
GROUP 02 ELECTRICAL SYSTEM					
FIG. 17 RESISTOR R3					
1	PAFZZ	96906	MS35649-244	NUT, PLAIN, HEXAGON UOC: EVS, EVU	2
2	PAFZZ	96906	MS35338-135	WASHER, LOCK UOC: EVS, EVU	2
3	PAFZZ	96906	MS51957-16	SCREW, MACHINE UOC: EVS, EVU	2
4	PAFZZ	88044	AN960-C4	WASHER, FLAT UOC: EVS, EVU	2
5	PAFZZ	81349	RER75F2491P	RESISTOR UOC: EVS, EVU	1
6	MFFZZ	19099	13229E5820-51	INSULATION SLEEVING MAKE FROM P/ N M23053/5-105-0 (81349), .75 IN. REQUIRED UOC: EVS, EVU	2
END OF FIGURE					

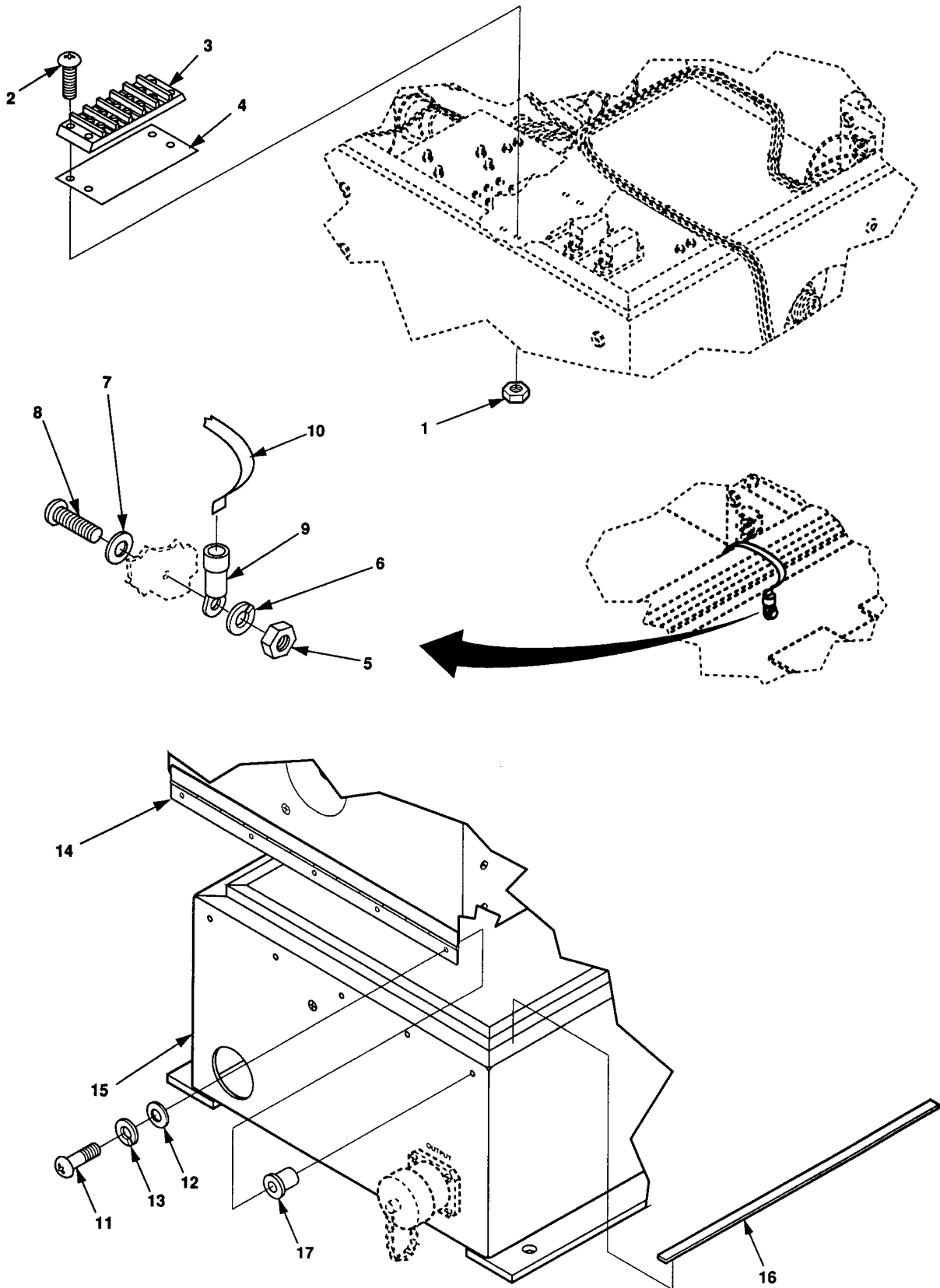


Figure F-18. Switch Box Assembly

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 02 ELECTRICAL SYSTEM					
FIG. 18 SWITCH BOX ASSEMBLY					
1	PAOZZ	96906	MS35649-264	NUT, PLAIN, HEXAGON UOC: EVS, EVU	4
2	PAOZZ	96906	MS51957-31	SCREW, MACHINE UOC: EVS, EVU	4
3	PAOZZ	81349	37TB5	TERMINAL BOARD UOC: EVS, EVU	1
4	PAOZZ	81349	MSA37TB5	MARKER STRIP, TERMIN UOC: EVS, EVU	1
5	PAOZZ	96906	MS35650-304	NUT, PLAIN, HEXAGON UOC: EVS, EVU	2
6	PAOZZ	96906	MS35338-138	WASHER, LOCK UOC: EVS, EVU	2
7	PAOZZ	96906	MS15795-848	WASHER, FLAT UOC: EVS, EVU	2
8	PAOZZ	96906	MS51958-64	SCREW, MACHINE UOC: EVS, EVU	2
9	PAOZZ	96906	MS25036-119	TERMINAL, LUG UOC: EVS, EVU	2
10	MOOZZ	19099	13229E5820-48	BRAID, WIRE MAKE FROM P/N QQB575F30T0437 (81348), 8 INCHES REQUIRED UOC: EVS, EVU	1
11	PAFZZ	96906	MS51957-46	SCREW, MACHINE UOC: EVS, EVU	5
12	PAFZZ	96906	MS15795-841	WASHER, FLAT UOC: EVS, EVU	5
13	PAFZZ	96906	MS35338-137	WASHER, LOCK UOC: EVS, EVU	5
14	XDFZZ	97403	13229E5822	COVER, SWITCHBOX UOC: EVS, EVU	1
15	XDFFF	97403	13229E5821	ENCLOSURE, SWITCHBOX UOC: EVS, EVU	1
16	MOOZZ	19099	13229E5821-4	STRIP, RUBBER MAKE FROM P/N 2B2B2C1F2 (81346), 14 INCHES REQUIRED UOC: EVS, EVU	4
17	PAFZZ	96906	MS27130-CR93	NUT, PLAIN, BLIND RIV UOC: EVS, EVU	5
END OF FIGURE					

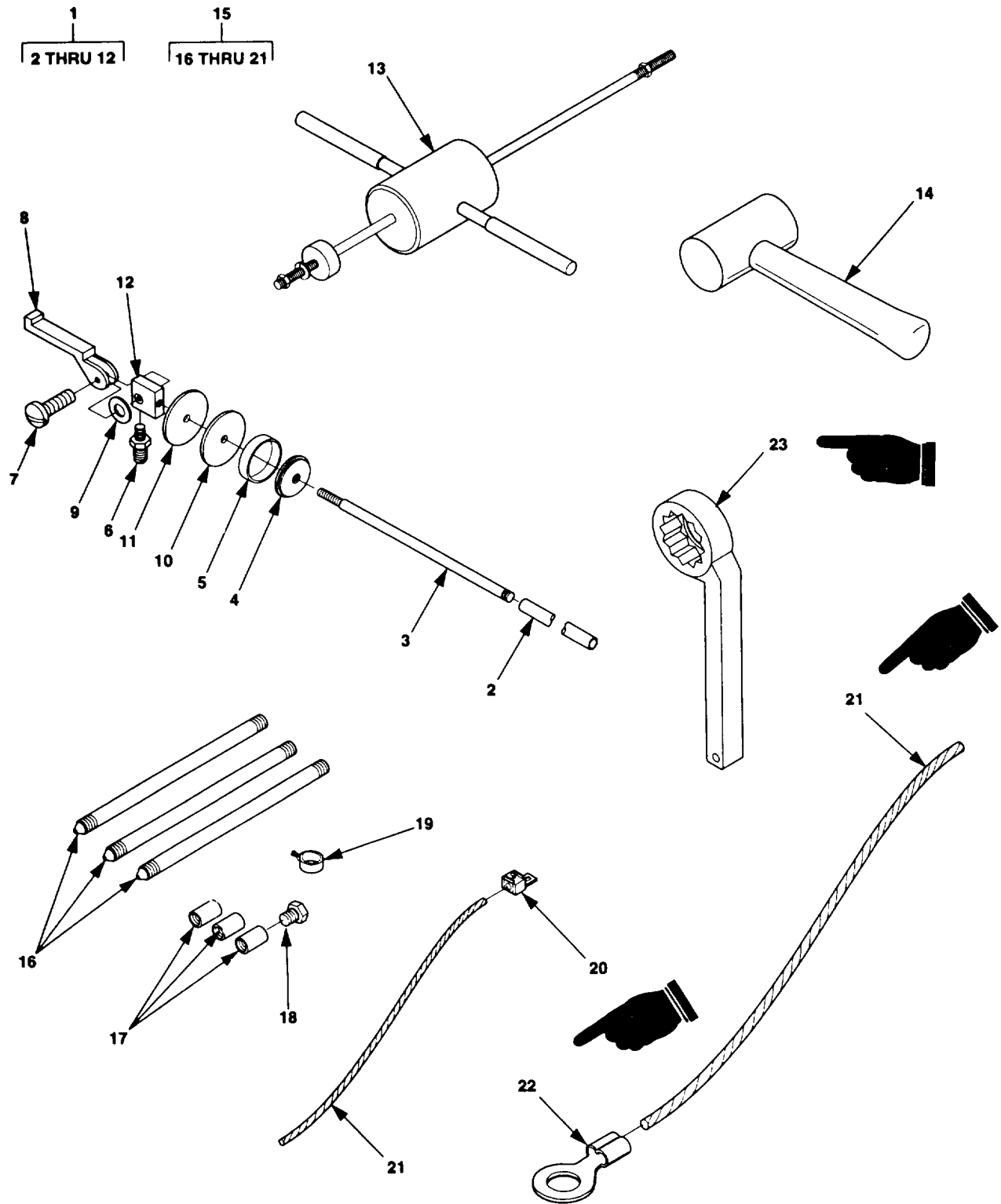


Figure F-19. Accessories.

TM 9-6115-660-13&P C 02

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 03 ACCESSORIES	
				FIG. 19 ACCESSORIES	
1	PAOOO	97403	13211E7541	..ADAPTER,CONTAINER.....	1
2	PAOZZ	97403	13211E7542	..PIPE,METALLIC.....	1
3	PAOZZ	97403	13211E7543	..PIPE,METALLIC.....	1
4	XAOZZ	97403	13211E7544	..WASHER,RECESSED.....	1
5	PAOZZ	97403	13211E7546	..GASKET.....	1
6	PAOZZ	88044	AN816-5-4	..ADAPTER,STRAIGHT,PI.....	1
7	PAOZZ	00141	4328	..SCREW,SHOULDER.....	2
8	XAOZZ	97403	13200E6363	..CLAMP,STRAINER.....	1
9	PAOZZ	96906	MS35335-60	..WASHER,LOCK.....	2
10	XAOZZ	97403	13211E7547	..WASHER,FLAT.....	1
11	XAOZZ	97403	13200E6361	..WASHER,FLAT.....	1
12	XAOZZ	97403	13211E7548	..HEAD.....	1
13	PAOZZ	97403	13226E7741	..SLIDE HAMMER,GROUND.....	1
14	PAOZZ	80244	GGG-H-86,TY10CL1	..HAMMER,HAND.....	1
15	PAOZZ	15277	FS0216B122-1	..ROD,GROUND WITH ATTACHMENTS.....	1
16	ZAOZZ	56681	HLP1053A	..ROD,GROUND.....	3
17	PAOZZ	OBKK8	GRC 58	..COUPLING,GROUND ROD.....	3
18	PAOZZ	73616	GRB58	..DRIVE HEAD.....	1
19	PAOZZ	04655	70-801074	..CLAMP,ELECTRICAL.....	1
20	PAOZZ	01667	CBA-70	..TERMINAL,LUG.....	1
21	MOOZZ	81348	QQW343CO6B1B	..WIRE,ELECTRICAL,6 FEET REQUIRED.....	2
22	PAOZZ	96906	MS25036-122	..TERMINAL,LUG.....	1
				UOC:ESR,EVS,EVT,EVU	
23	PAOZZ	30554	72-2029-1	..WRENCH, BOX.....	1

END OF FIGURE

4  
5 THRU 8

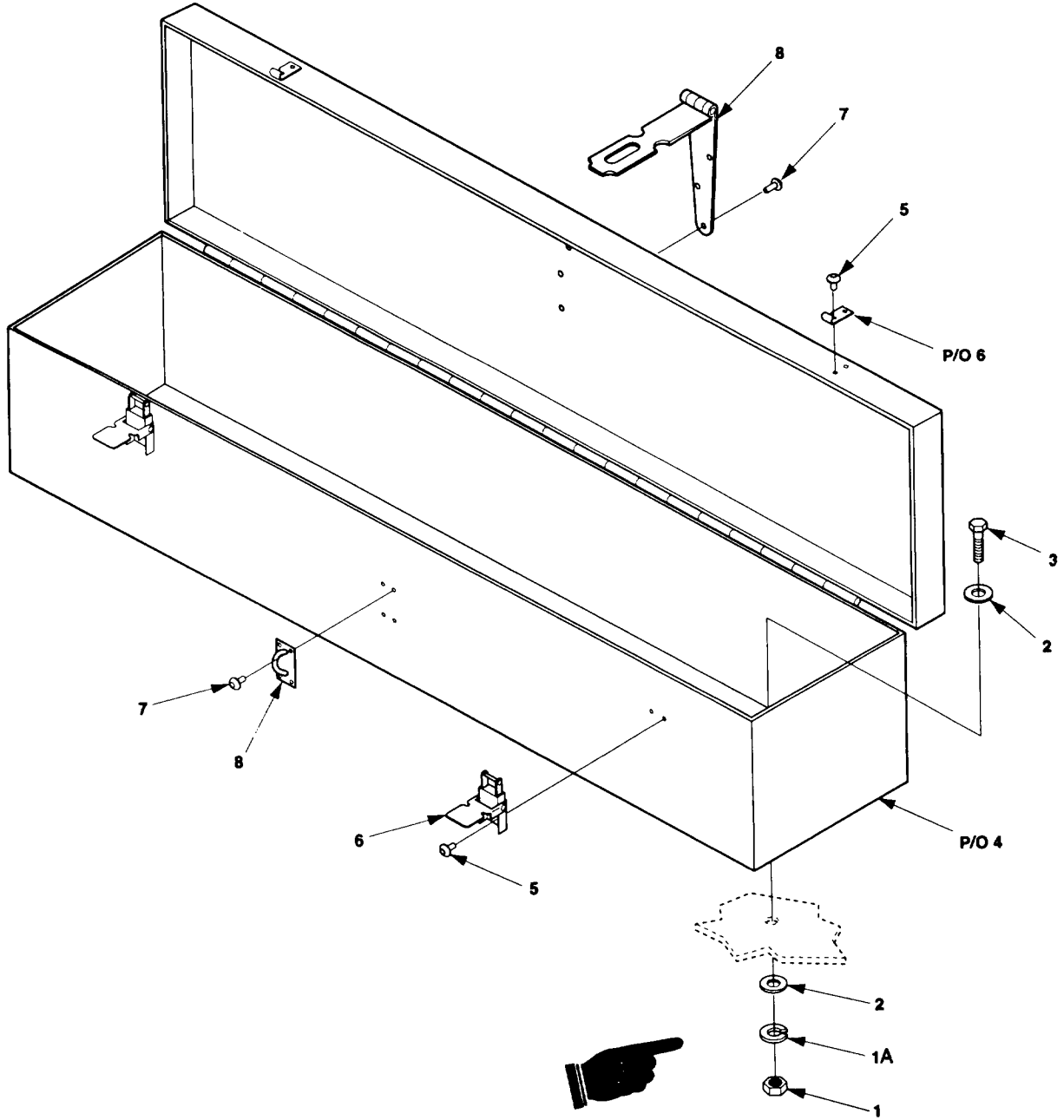


Figure F-20. Accessory Box.



TM 9-6115-660-13&P C 02

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 03 ACCESSORIES	
				FIG. 20 ACCESSORY BOX	
1	PAOZZ	96906	MS51922-9	.NUT,SELF-LOCKING,HE ..... UOC:ESRVS,EVT, EVU	4
1	PAOZZ	96906	MS356503314	.NUT,PLAIN,HEX ..... UOC:FMH,FMJ	4
1A	PAOZZ	96906	MS35338-140	.WASHER,LOCK..... UOC:FMH,FMJ	4
2	PAOZZ	96906	MS51412-25	.WASHER, FLAT..... UOC:EVS,EVU	8
2	PAOZZ	96906	MS51412-25	.WASHER,FLAT ..... UOC:ES,EVT	4
2	PAOZZ	96906	MS15795-812	.WASHER,FLAT ..... UOC:FMH,FMJ	8
3	PAOZZ	80204	B1821BHO31C100N	.BOLT,MACHINE ..... UOC:ESR,EVS,EVT,EVU	4
3	PAOZZ	96906	MS35308-34	.BOLTMACHINE ..... UOC:FMH,FMJ	2
3	PAOZZ	96906	MS35308-338	.BOLT,MACHINE ..... UOC:FMH,FMJ	2
4	XDOFF	97403	13229E7946	.BOX,ACCESSORY .....	1
5	PAFZZ	96906	MS20613-4P5	..RVETSOD .....	8
6	PAFZZ	96906	MS18015-1	..CATCH,CLAMPING .....	2
7	PAFZZ	96906	MS20427-4C6	..RIVET, SOLID.....	8
8	PAFZZ	96906	MS27969-4	..HASP,HINGED.....	1

END OF FIGURE

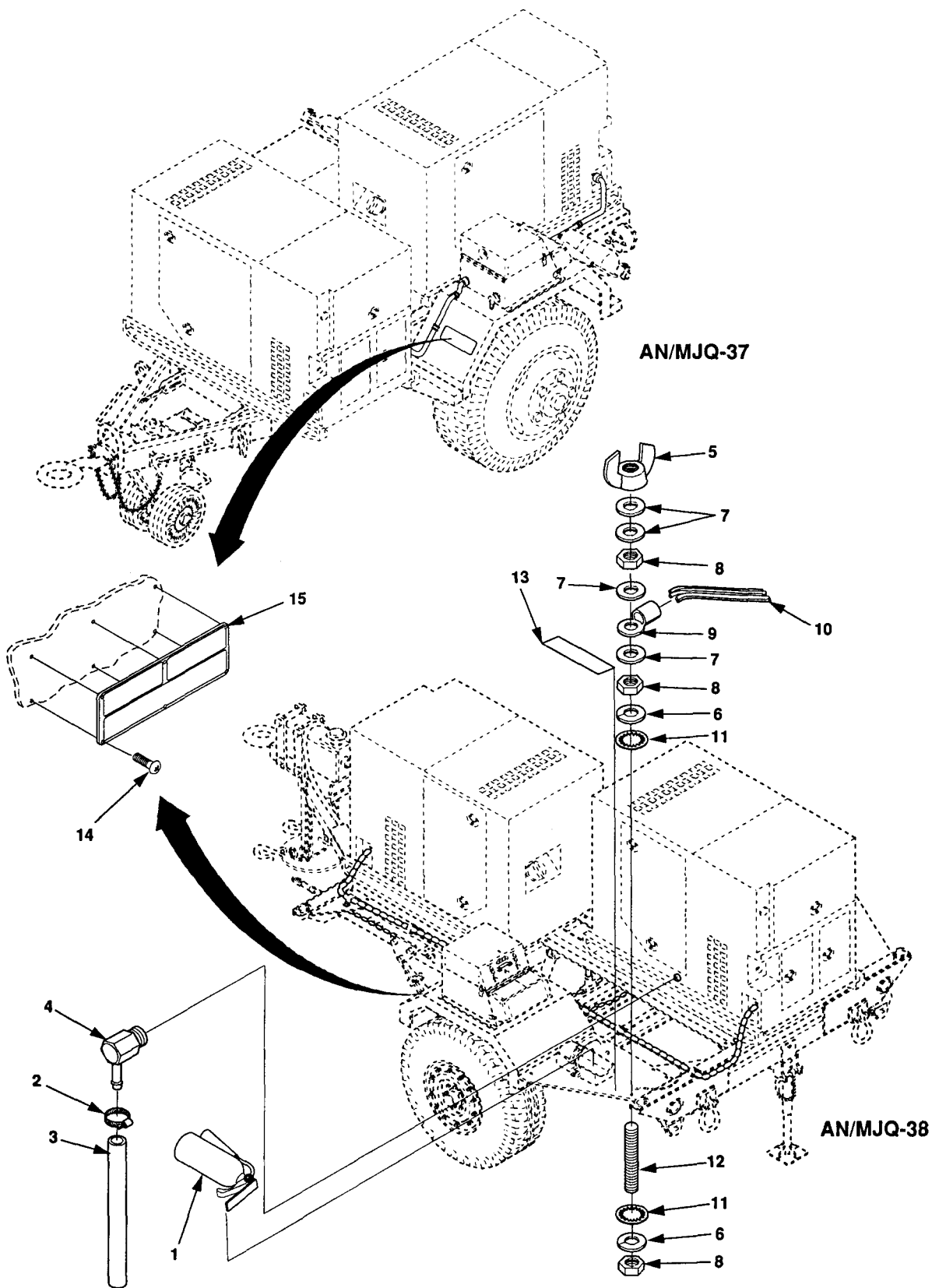
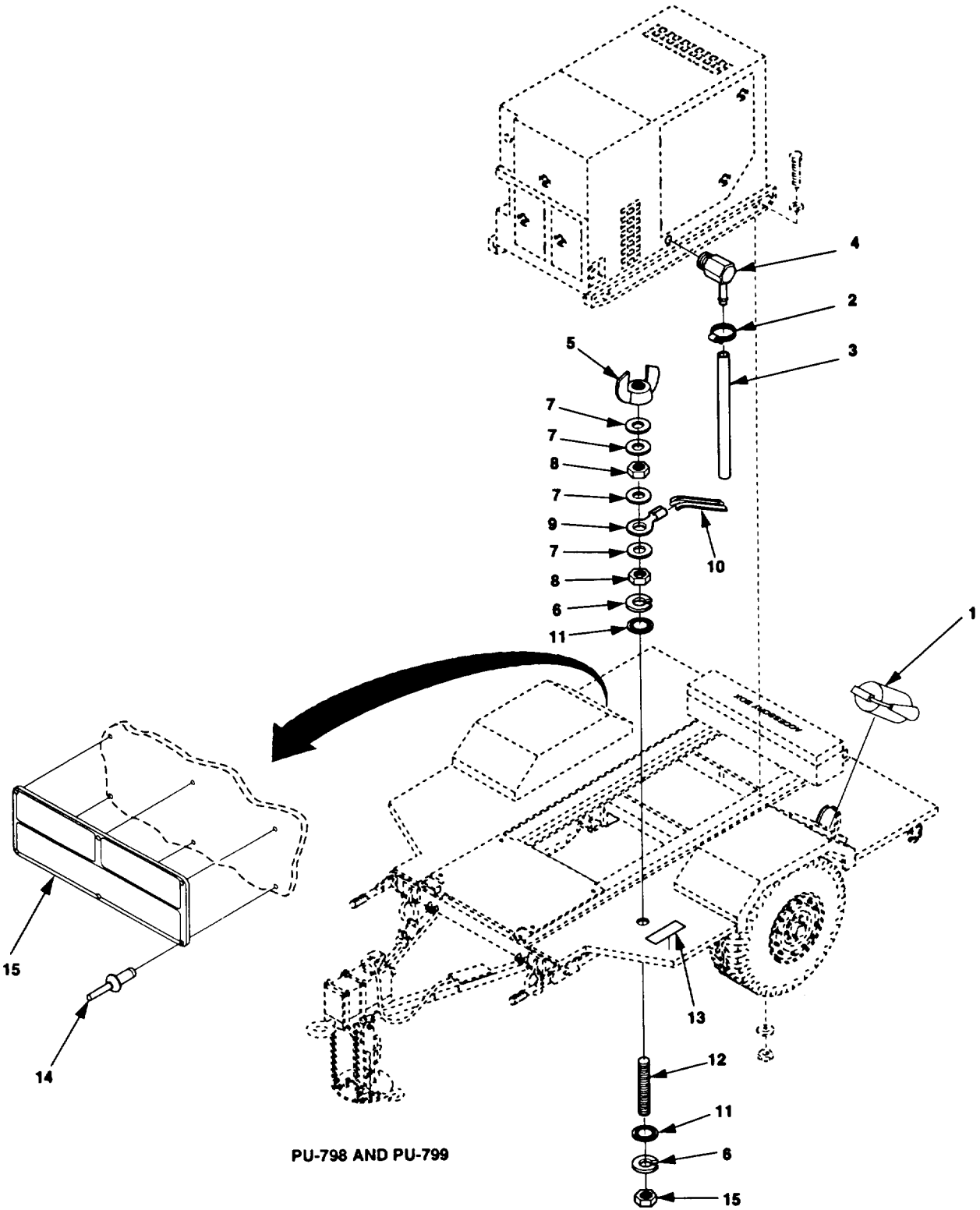


Figure F-21. Power Plant Fire Extinguisher, Oil Drain and Ground Wire

SECTION II (1)	(2)	(3)	TM9-6115-660-13&P (4)	C01 (5)	(6)
ITEM NO	SMR CODE	CAGEC CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
GROUP 03 ACCESSORIES					
FIG. 21 POWER PLANT FIRE EXTINGUISHER, OIL DRAIN AND GROUND WIRE					
1	PAOZZ	99251	3304695-1	EXTINGUISHER, FIRE UOC: EVS, EVU	2
2	PAOZZ	96906	MS35842-11	CLAMP, HOSE UOC: EVS, EVU	1
3	MOOZZ	19099	13229E5670-41	HOSE, NONMETALLIC MAKE FROM P/N M6000E00200 (81349), 20 INCHES REQUIRED UOC: EVS, EVU	1
4	PAOZZ	96906	MS24519-7	ELBOW, PIPE TO HOSE UOC: EVS, EVU	1
5	PAOZZ	96906	MS35425-75	NUT, PLAIN, WING UOC: EVS, EVU	1
6	PAOZZ	96906	MS35338-103	WASHER, LOCK UOC: EVS, EVU	2
7	PAOZZ	88044	AN961-616T	WASHER, FLAT UOC: EVS, EVU	4
8	PAOZZ	96906	MS16203-27	NUT, PLAIN, HEXAGON UOC: EVS, EVU	3
9	PAOZZ	96906	MS25036-122	TERMINAL, LUG UOC: EVS, EVU	1
10	MOOZZ	19099	13229E5670-24	WIRE, ELECTRICAL MAKE FROM P/N QQW343C06B1B (81348), AS REQUIRED UOC: EVS, EVU	1
11	PAOZZ	96906	MS35333-110	WASHER, LOCK UOC: EVS, EVU	2
12	PAOZZ	97403	13214E1223	STUD, CONTINUOUS THR UOC: EVS, EVU	1
13	MDOZZ	97403	13205E4918	PLATE, IDENTIFICATIO UOC: EVS, EVU	1
14	PAOZZ	81349	M24243/1B403	RIVET, BLIND UOC: EVS, EVU	6
15	MDOZZ	97403	13229E5666-3	PLATE, IDENTIFICATIO TRANSPORTATION DATA UOC: EVU	1
15	MDOZZ	97403	13229E5666-4	PLATE, IDENTIFICATIO TRANSPORTATION DATA UOC: EVS	1

END OF FIGURE



PU-798 AND PU-799

Figure F-22. Power Unit Fire Extinguisher, Oil Drain and Ground Wire.  
(Sheet 2 of 2)

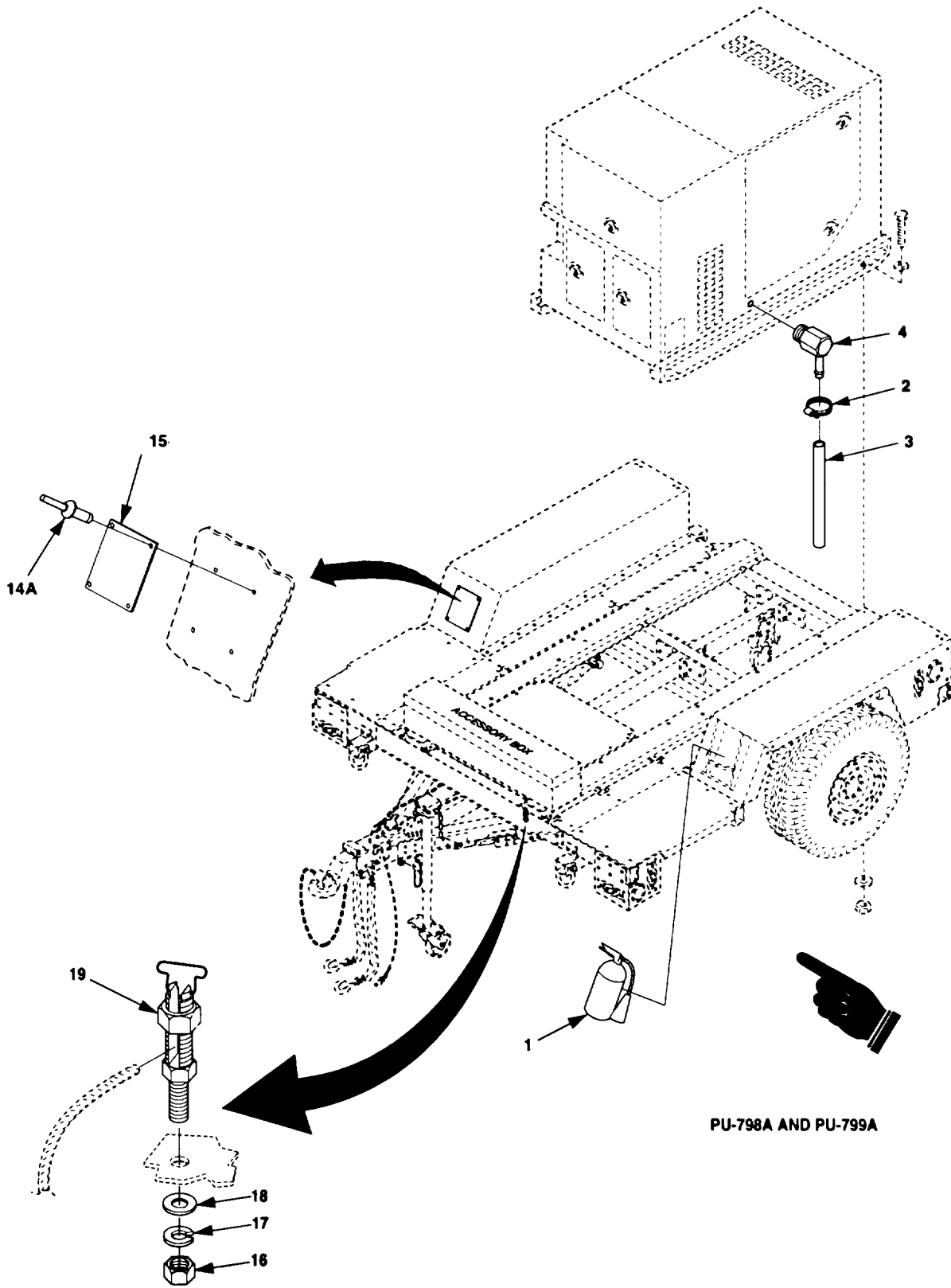


Figure F-22. Power Unit Fire Extinguisher, Oil Drain and Ground Wire.  
(Sheet 2 of 2).

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SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 03 ACCESSORIES					
FIG. 22 POWER UNIT FIRE EXTINGUISHER, OIL DRAIN AND GROUND WIRE					
1	PAOZZ	58536	A-A-1106	.EXTINGUISHER,FIRE ..... UOC:ESR,EVT,FMH, FMJ	1
2	PAOZZ	96906	MS35842-11	.CLAMP,HOSE..... UOC:ESR,EVT,FMH, FMJ	1
3	MOOZZ	81349	M6000E00200	.HOSE,NONMETALLIC,201NCHES REQUIRED..... UOC:ESR,EVT,FMH,FMJ	1
4	PAOZZ	96906	MS24519-7	.ELBOW,PIPE TO HOSE..... UOC:ESR,EVT,FMH,FMJ	1
5	PAOZZ	96906	MS35425-75	. NUT,PLAIN,WING ..... UOC:ESR, EVT	1
6	PAOZZ	96906	MS35338-103	.WASHER,LOCK..... UOC:ESR, EVT	2
7	PAOZZ	88044	AN961-616T	.WASHER,FLAT ..... UOC:ESR, EVT	4
8	PAOZZ	96906	MS16203-27	.NUT,PLAIN,HEXAGON ..... UOC:ESR, EVT	3
9	PAOZZ	96906	MS25036-122	.TERMINAL,LUG..... UOC:ESR, EVT	1
10	MOOZZ	81348	QQW343C06B1B	.WIRE,ELECTRICAL,MAKE AS REQUIRED..... UOC:ESR, EVT	1
11	PAOZZ	96906	MS35333-110	.WASHER,LOCK..... UOC:ESR, EVT	2
12	PAOZZ	97403	13214E1223	.STUD,CONTINUOUS THR..... UOC:ESR, EVT	1
13	MDOZZ	97403	13205E4918	.PLATE,IDENTIFICATION ..... UOC:ESR, EVT	1
14	PAOZZ	81349	M24243/1B403	.RIVET,BLIND ..... UOC:ESR, EVT	6
14A	PAOZZ	07707	AD45ABS	.RIVET,BLIND ..... UOC:FMH, FMJ	4
15	MDOZZ	97403	13229E5666-14	.PLATE,IDENTIFICATION TRANSPORTATION DATA UOC:EVT .....	1

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SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
15	MDOZZ 97403	13229E5666-15		.PLATE, IDENTIFICATION TRANSPORTATION DATA..... UOC: ESR	1
15	MDOZZ 30554	13230E6531		.PLATE,SHIPPING DATA/IDENTIFICATION ..... UOC: FMJ	1
15	MDOZZ 30554	13230E6541		.PLATE,SHIPPING DATA/IDENTIFICATION ..... UOC: FMH	1
16	PAOZZ 96906	MS35691-3		.NUT,PLAIN,HEXAGON ..... UOC:FMH, FMJ	1
17	PAOZZ 96906	MS35338-158		.WASHER,LOCK..... UOC:FMH, FMJ	1
18	PAOZZ 96906	MS15795-810		.WASHER,FLAT ..... UOC:FMH, FMJ	1
19	PAOZZ 96906	MS39347-2		.TERMINAL,STUD ..... UOC:FMH, FMJ	1

END OF FIGURE

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 04 TRAILER ASSEMBLY					
FIG. 23 PLATFORMS					
1	PAOZZ	96906	MS51922-17	.NUT,SELF-LOCKING,HE .....	4
2	PAOZZ	96906	MS51412-7	.WASHER,FLAT .....	8
2A	PAOZZ	96906	MS51412-27	UOC:EVS, EVU .WASHER,FLAT .....	4
3	PAOZZ	80204	B1821BH038 C1OON	.SCREW,CAP,HEXAGON .....	4
4	XDOZZ	97403	13229E9621-1	UOC:ESR, EVT .PLATFORM.....	1
5	XDOZZ	97403	13229E9621-2	UOC:EVS, EVU .PLATFORM.....	1
6	PAFZZ	17446	MGLP-R8-10	UOC:ESR, EVT .RIVET,BLIND .....	42
7	XDFZZ	30554	13230E6568	UOC:FMH, FMJ .FLOOR,CENTER .....	1
8	XDFZZ	30554	13230E6567-1	UOC:FMH, FMJ .FLOOR,SIDE,RH .....	1
9	XDFZZ	30554	13230E6564-1	UOC:FMH, FMJ .FLOOR,SIDE,INNER,RH .....	1
10	XDFZZ	30554	13230E6567-2	UOC:FMH, FMJ .FLOOR,SIDE,LH .....	1
11	XDFZZ	30554	13230E6564-2	UOC:FMH, FMJ .FLOOR,SIDE,INNER,LH.....	1

END OF FIGURE



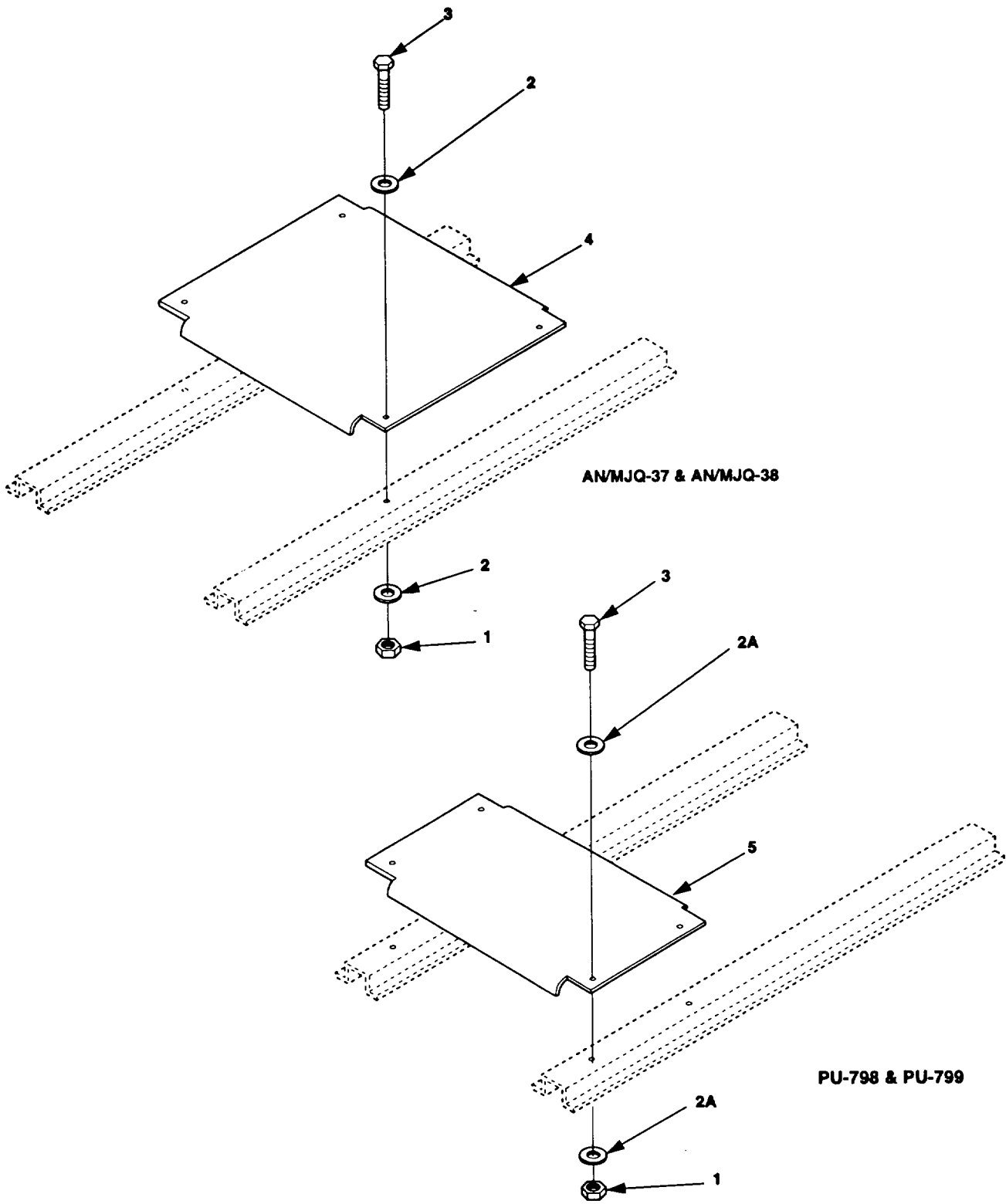


Figure F-23. Platforms (Sheet 1 of 2).

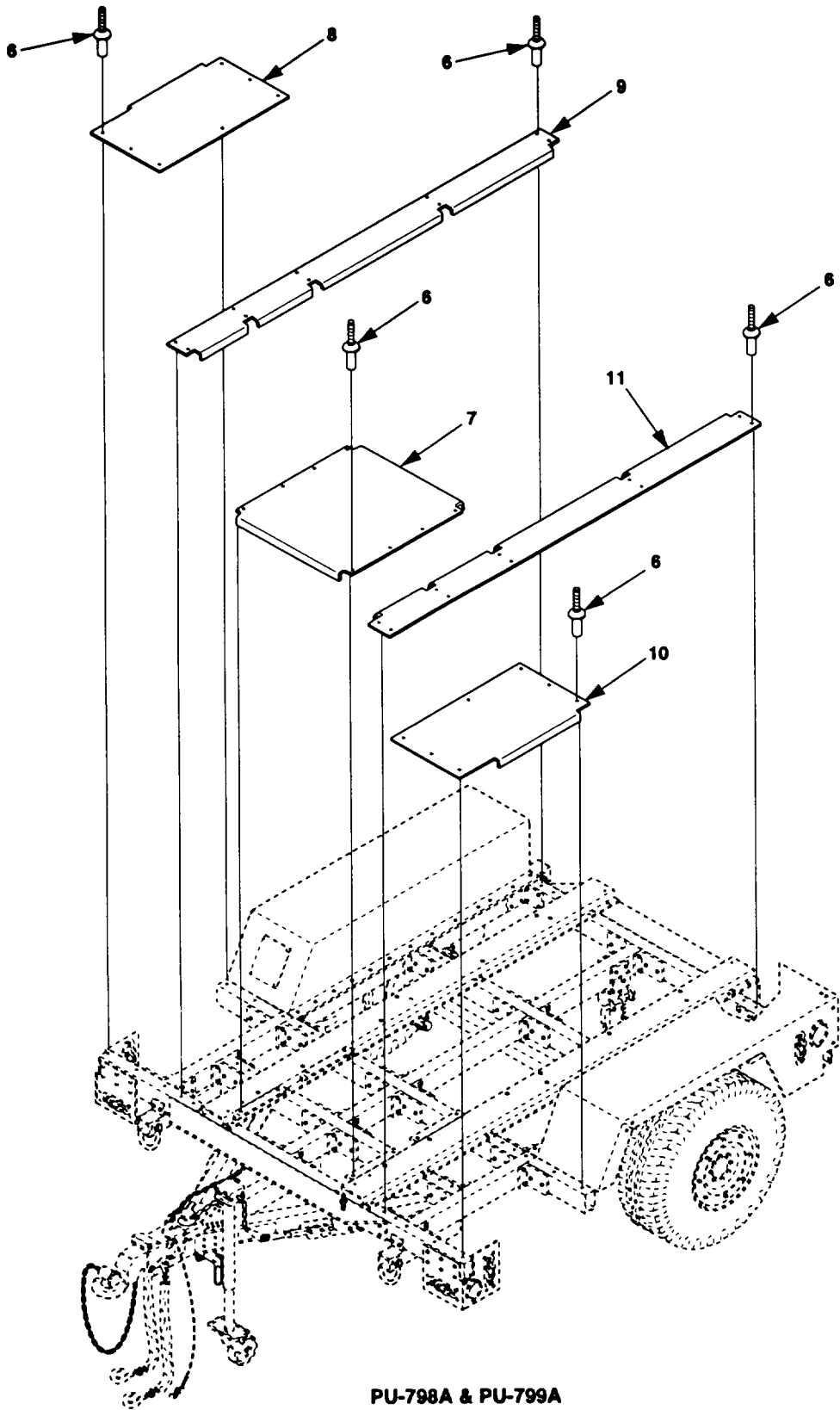


Figure F-23. Platforms (Sheet 2 o 2).

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 04 TRAILER ASSEMBLY					
FIG. 24 POWER PLANT/POWER UNIT TRAILER ASSEMBLY					
1	PBFFF	97403	13229E5825	TRAILER, GENERATOR UOC: EVS, EVU	1
1	PBFFF	97403	13229E5749-2	TRAILER, GENERATOR UOC: ESR, EVT	1
2	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE UOC: EVS, EVU	8
2	PAOZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE UOC: ESR, EVT	4
3	PAOZZ	96906	MS51412-7	WASHER, FLAT UOC: EVS, EVU	8
3	PAOZZ	96906	MS51412-27	WASHER, FLAT UOC: ESR, EVT	4
4	PAOZZ	80204	B1821BH038C100N	SCREW, CAP, HEXAGON H UOC: EVS, EVU	8
4	PAOZZ	80204	B1821BH038C075N	SCREW, CAP, HEXAGON H UOC: ESR, EVT	4
5	PAOZZ	97403	13214E1235	BRACKET, FIRE EXTING UOC: EVS, EVU	2
5	PAOZZ	97403	13214E1235	BRACKET, FIRE EXTING UOC: ESR, EVT	1
6	PAOZZ	96906	MS51922-1	NUT, SELF-LOCKING, HE UOC: EVS, EVU	8
6	PAOZZ	96906	MS51922-1	NUT, SELF-LOCKING, HE UOC: ESR, EVT	12
7	PAOZZ	96906	MS51412-4	WASHER, FLAT UOC: EVS, EVU	8
7	PAOZZ	96906	MS51412-4	WASHER, FLAT UOC: ESR, EVT	12
8	PAOZZ	80204	B1821BH025C075N	SCREW, CAP, HEXAGON H UOC: EVS, EVU	8
8	PAOZZ	80204	B1821BH025C088N	SCREW, CAP, HEXAGON H UOC: ESR, EVT	12
9	PAOZZ	96906	MS35387-1	REFLECTOR, INDICATING RED UOC: ESR, EVT	4
10	PAOZZ	96906	MS35387-2	REFLECTOR, INDICATING AMBER UOC: ESR, EVT	2
11	PAOZZ	96906	MS51861-37	SCREW, TAPPING UOC: EVS, EVU	4

END OF FIGURE

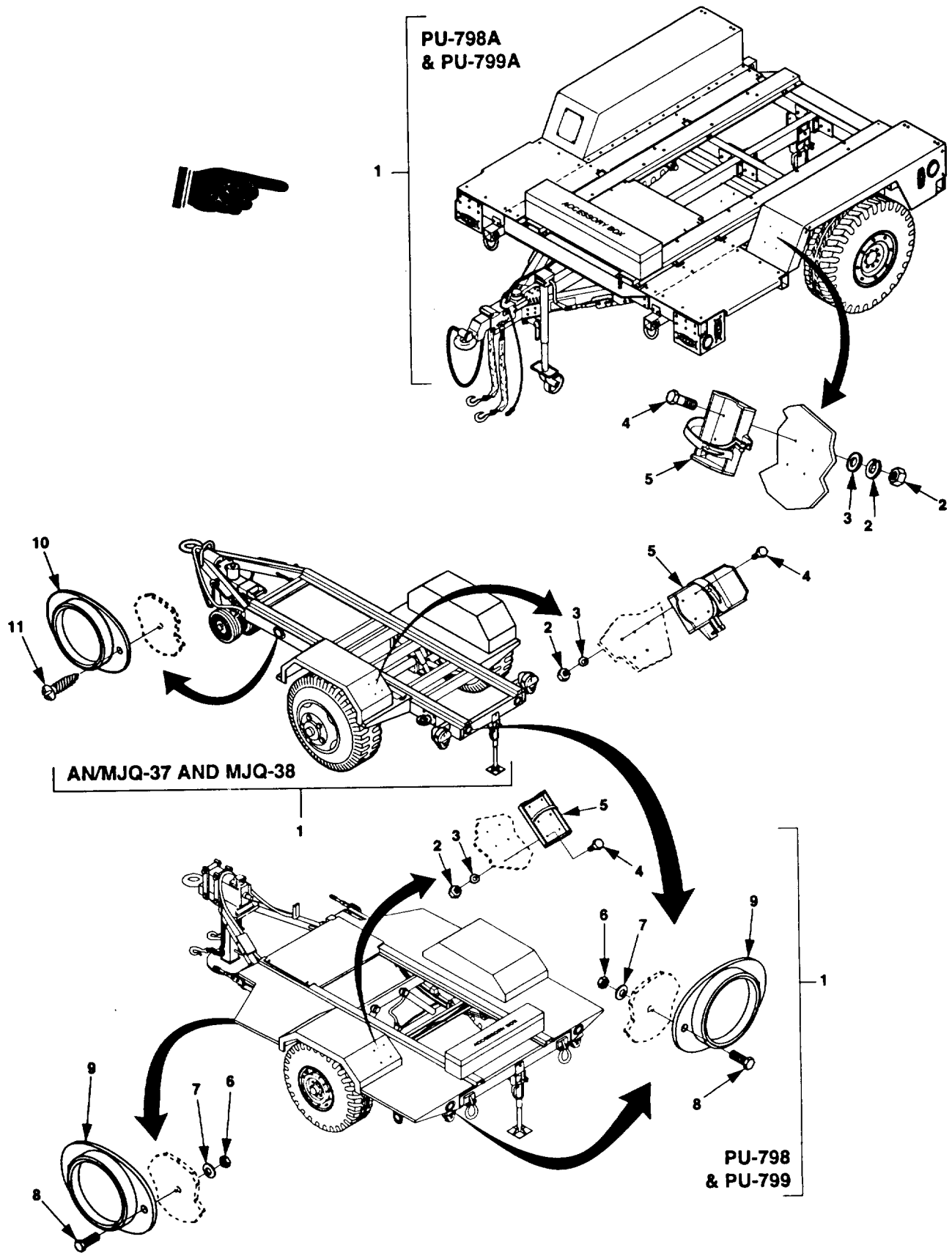


Figure F-24. Power Plant/Power Unit Trailer Assembly (Sheet 1 of 2)

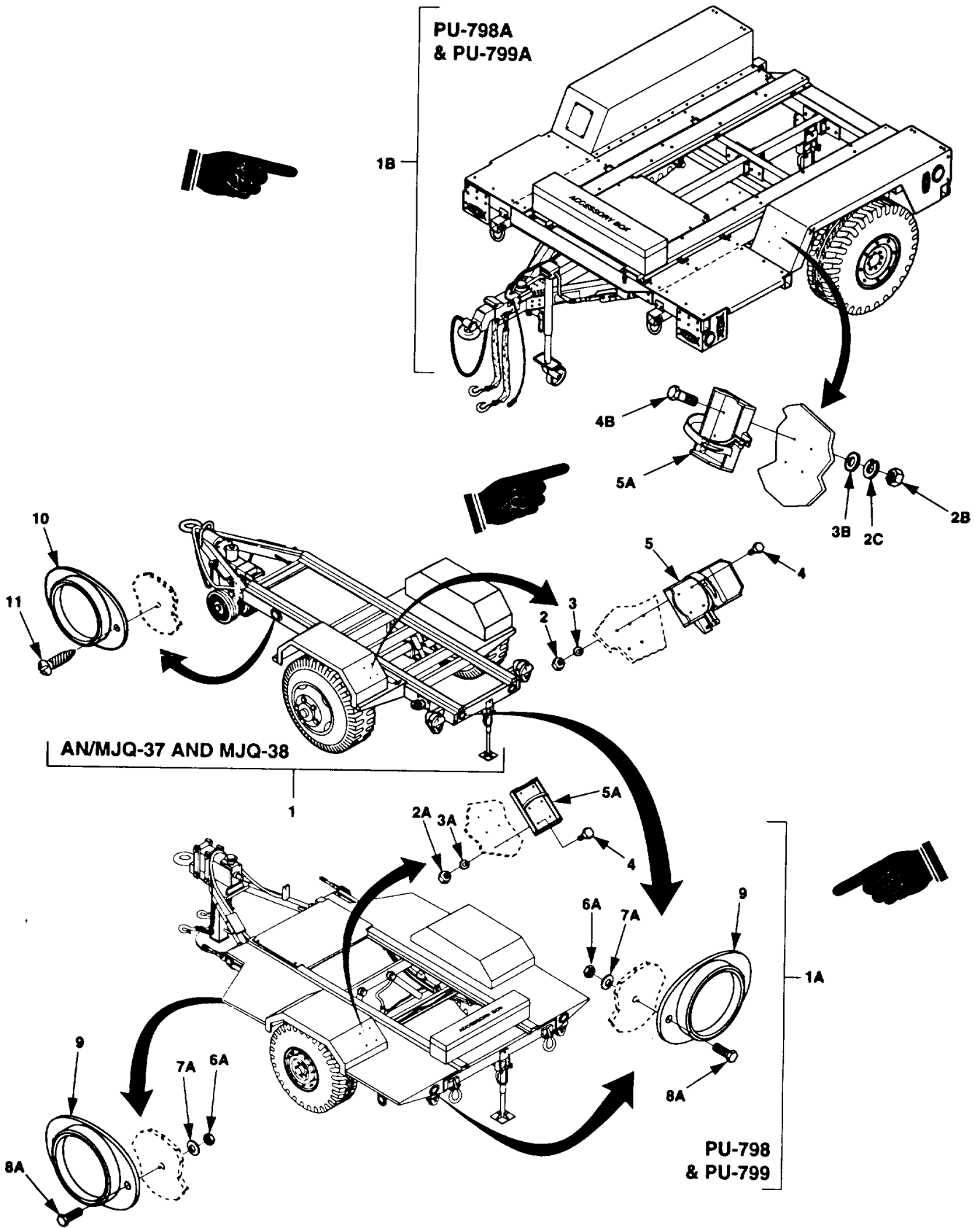


Figure F-24. Power Plant/Power Unit Trailer Assembly (Sheet 2 of 2)

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 04 TRAILER ASSEMBLY					
FIG. 24 POWER PLANT/POWER UNIT TRAILER ASSEMBLY					
1	PBFFF	97403	13229E5825	.TRAILER,GENERATOR ..... UOC:EVS, EVU	1
1A	PBFFF	97403	13229E5749-2	.TRAILER,GENERATOR ..... UOC:ESR, EVT	1
1B	PBFFF	30554	13230E6565	.TRAILER,ASSEMBLY..... UOC:FMH, FMJ	1
2	PAOZZ	96906	MS51922-17	.NUT,SELF-LOCKING,HE ..... UOC: EVSEVU	8
2A	PAOZZ	96906	MS51922-17	.NUT,SELF-LOCKING,HE ..... UOC:ESR, EVT	4
2B	PAOZZ	96906	MS35650-3384	.NUT,PLAIN,HEXAGON ..... UOC:FMH, FMJ	4
2C	PAOZZ	96906	MS35338-141	.WASHER,LOCK..... UOC:FMH, FMJ	4
3	PAOZZ	96906	MS51412-7	.WASHER,FLAT ..... UOC:EVS, EVU	8
3A	PAOZZ	96906	MS51412-27	.WASHER,FLAT..... UOC:ESR, EVT	4
3B	PAOZZ	96906	MS15795-813	.WASHER,FLAT ..... UOC:FMH, FMJ	8
4	PAOZZ	80204	B1821BH038C100N	.SCREW,CAP,HEXAGON H..... UOC:EVS, EVU	8
4A	PAOZZ	80204	B1821BH038C075N	.SCREW,CAP,HEXAGON H..... UOC:ESR, EVT	4
4B	PAOZZ	96906	MS35308-360	.SCREW,CAP,HEXAGON H..... UOC:FMH, FMJ	4
5	PAOZZ	97403	13214E1235	.BRACKET,FIRE EXTING..... UOC:EVS, EVU	2
5A	PAOZZ	97403	13214E1235	.BRACKET,FIRE EXTING..... UOC:ESR,EVT,FMH, FMJ	1
6	PAOZZ	96906	MS51922-1	.NUT,SELF-LOCKING,HE ..... UOC:EVS, EVU	8
6A	PAOZZ	96906	MS51922-1	.NUT,SELF-LOCKING,HE ..... UOC:ESR, EVT	12
7	PAOZZ	96906	MS51412-4	.WASHER,FLAT ..... UOC:EVS, EVU	8
7A	PAOZZ	96906	MS51412-4	.WASHER,FLAT..... UOC:ESR, EVT	12
8	PAOZZ	80204	B1821BH025C075N	.SCREW,CAP,HEXAGON H..... UOC:EVS, EVU	8
8A	PAOZZ	80204	B1821BH025C088N	.SCREW,CAP,HEXAGON H..... UOC:ESR, EVT	12

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SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
9	PAOZZ	96906	MS35387-1	.REFLECTOR,INDICATIN RED..... UOC:ESR, EVT	4
10	PAOZZ	96906	MS35387-2	.REFLECTOR,INDICATIN AMBER..... UOC:ESR, EVT	2
11	PAOZZ	96906	MS51861-37	.SCREW, TAPPING ..... UOC:EVS, EVU	4

END OF FIGURE

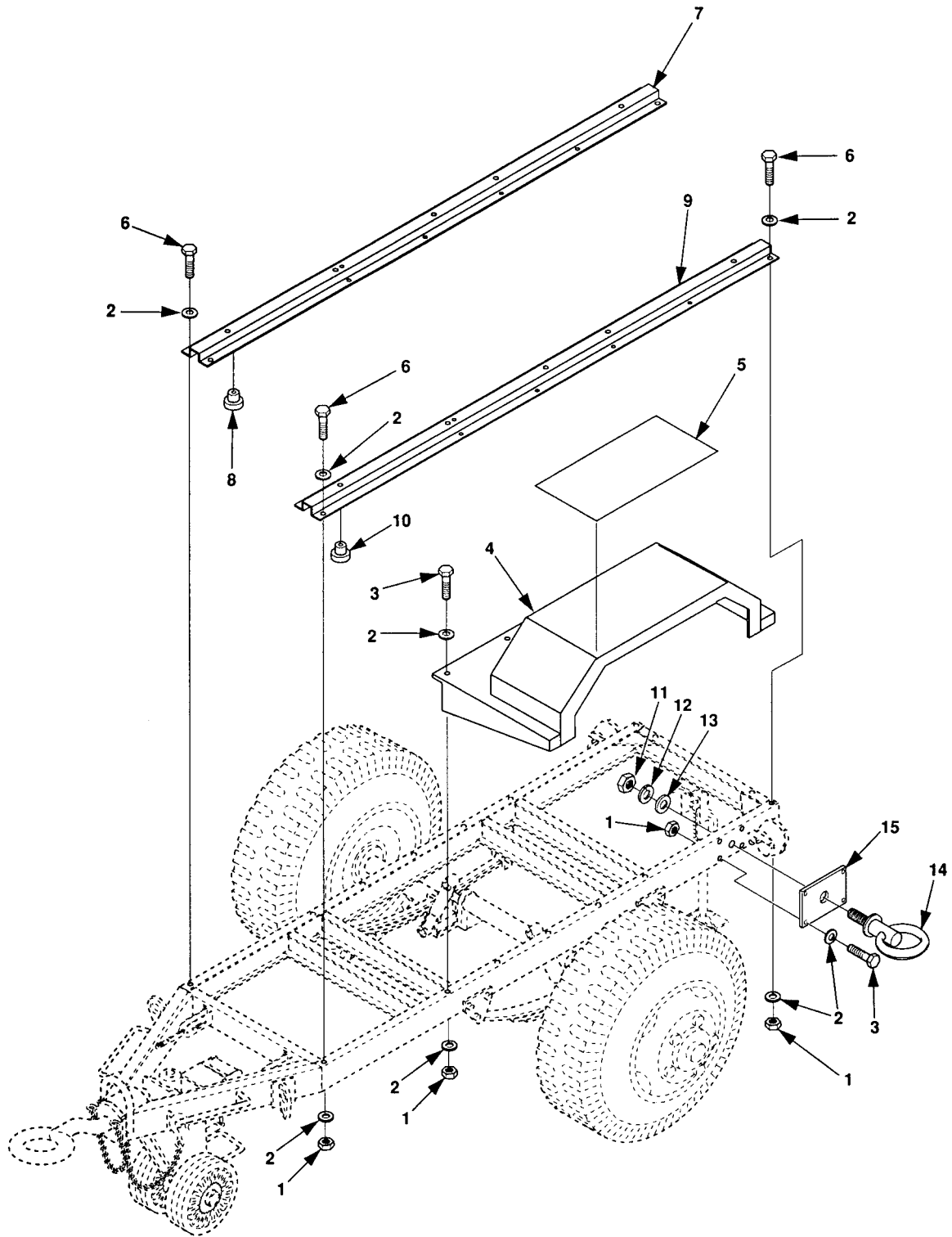


Figure F-25. 1 1/2 Ton Trailer, AN/MJQ-36 Fender



SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 04 TRAILER ASSEMBLY					
FIG. 25 1 1/2 TON TRAILER, AN/MJQ-36 FENDER					
1	PAFZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE UOC: EVS, EVU	42
2	PAFZZ	96906	MS51412-7	WASHER, FLAT UOC: EVS, EVU	76
3	PAFZZ	80204	B1821BH038C125N	SCREW, CAP, HEXAGON H UOC: EVS, EVU	38
4	XDFFF	97403	13229E5817	FENDER UOC: EVS, EVU	2
5	MOOZZ	19099	13229E5817-6	DECK COVERING MAKE FROM P/N 22806-000-00 (88900), AS REQUIRED UOC: EVS, EVU	1
6	PAFZZ	80204	B1821BH038C600N	SCREW, CAP, HEXAGON H UOC: EVS, EVU	4
7	XDFFF	97403	13229E5677	RAIL, MOUNTING CURBSIDE UOC: EVS, EVU	1
8	PAFZZ	96906	MS27130-CR68	NUT, BLIND, RIVET UOC: EVS, EVU	1
9	XDFFF	97403	13212E5748	RAIL, MOUNTING ROADSIDE UOC: EVS, EVU	1
10	PAFZZ	96906	MS27130-CR68	NUT, BLIND, RIVET UOC: EVS, EVU	1
11	PAOZZ	96906	MS51968-23	NUT, PLAIN, HEXAGON UOC: EVS, EVU	2
12	PAOZZ	96906	MS51415-11	WASHER, LOCK UOC: EVS, EVU	2
13	PAOZZ	96906	MS51412-13	WASHER, FLAT UOC: EVS, EVU	2
14	PAOZZ	97403	13229E9629-4	RING, LIFTING UOC: EVS, EVU	2
15	XDOZZ	97403	13229E5818	BRKT, TIEDOWN UOC: EVS, EVU	2

END OF FIGURE

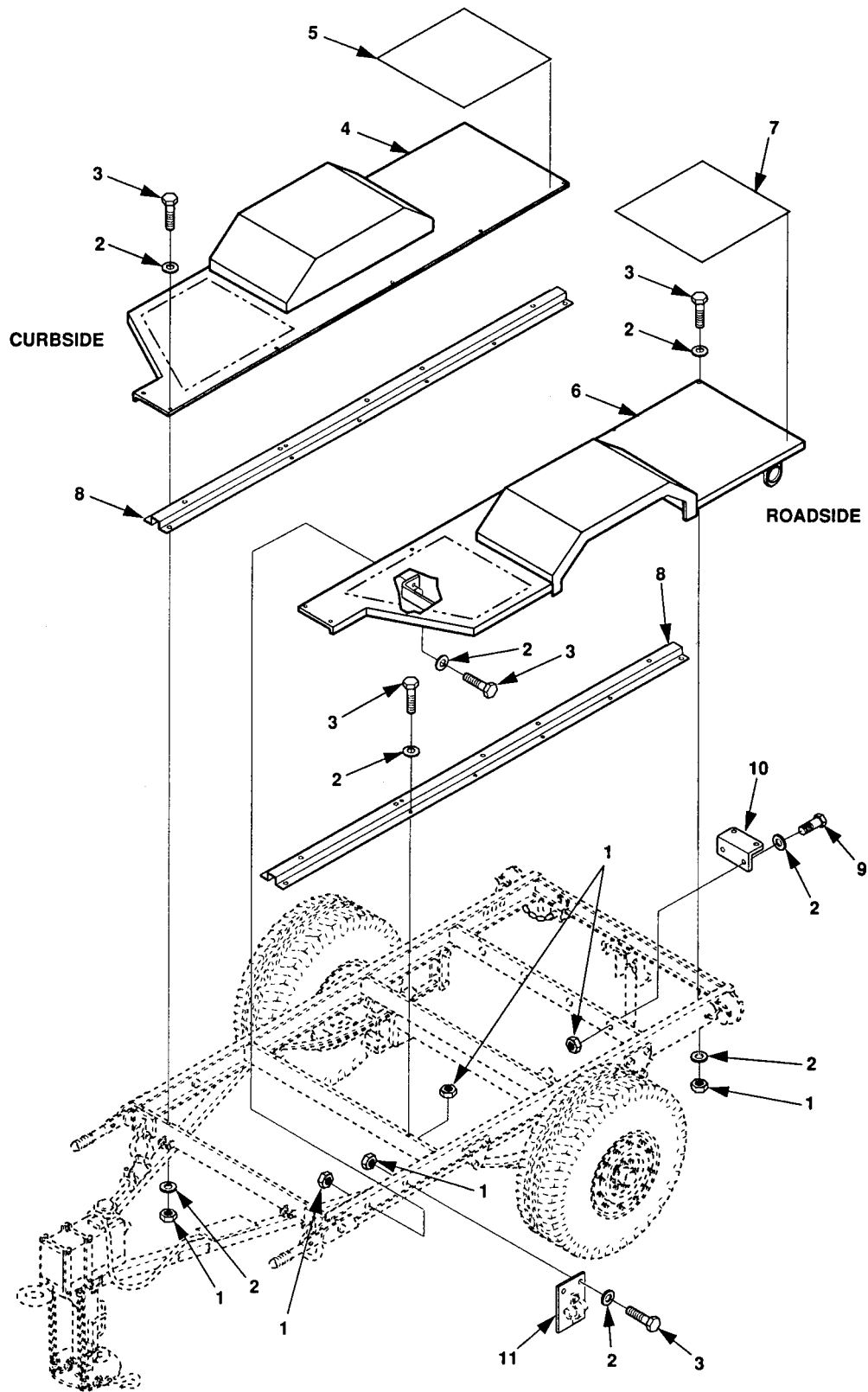


Figure F-26. One Ton Trailer, Fenders, PU-798, PU-799

SECTION II (1)	ITEM (2)	(3)	TM9-6115-660-13&P (4)	C01 (5)	(6)
NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
GROUP 04 TRAILER ASSEMBLY					
FIG. 26 ONE TON TRAILER, FENDERS PU-798, PU-799					
1	PAFZZ	96906	MS51922-17	NUT, SELF-LOCKING, HE UOC: ESR, EVT	60
2	PAFZZ	96906	MS27183-27	WASHER, FLAT UOC: ESR, EVT	104
3	PAFZZ	80204	B1821BH038C150N	SCREW, CAP, HEXAGON H UOC: ESR, EVT	56
4	XDFFF	97403	13229E9619-1	FENDER CURBSIDE UOC: ESR, EVT	1
5	MOOZZ	19099	13229E9619-1-7	DECK COVERING MAKE FROM P/N 22806-000-00 (88900), AS REQUIRED UOC: ESR, EVT	1
6	XDFFF	97403	13229E9620-1	FENDER ROADSIDE UOC: ESR, EVT	1
7	MOOZZ	19099	13229E9620-1-7	DECK COVERING MAKE FROM P/N 22806-000-00 (88900), AS REQUIRED UOC: ESR, EVT	1
8	XDFZZ	97403	13229E5743-2	RAIL, MOUNTING UOC: ESR, EVT	2
9	PAFZZ	80204	B1821BH038C225N	SCREW, CAP, HEXAGON H UOC: ESR, EVT	4
10	XDFZZ	97403	13229E5758	BRACKET, RAIL MOUNTI UOC: ESR, EVT	2
11	XDOZZ	97403	13229E2308	PLATE, RELOCATING UOC: ESR, EVT	2
END OF FIGURE					

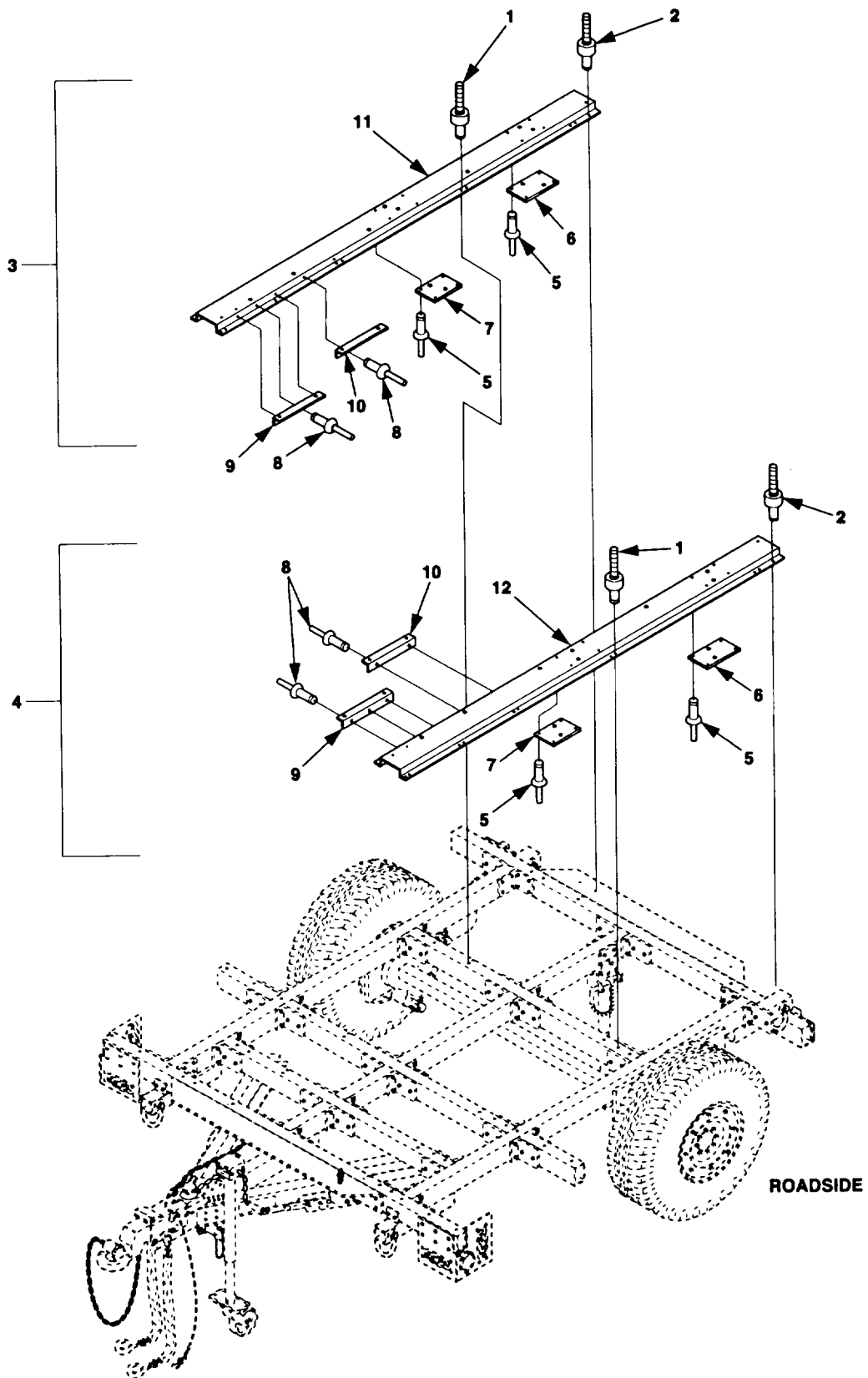


Figure F-27. High Mobility Trailer, Mounting Rails and Fenders, (PU 798A and PU 799A).  
(Sheet 1 of 2).

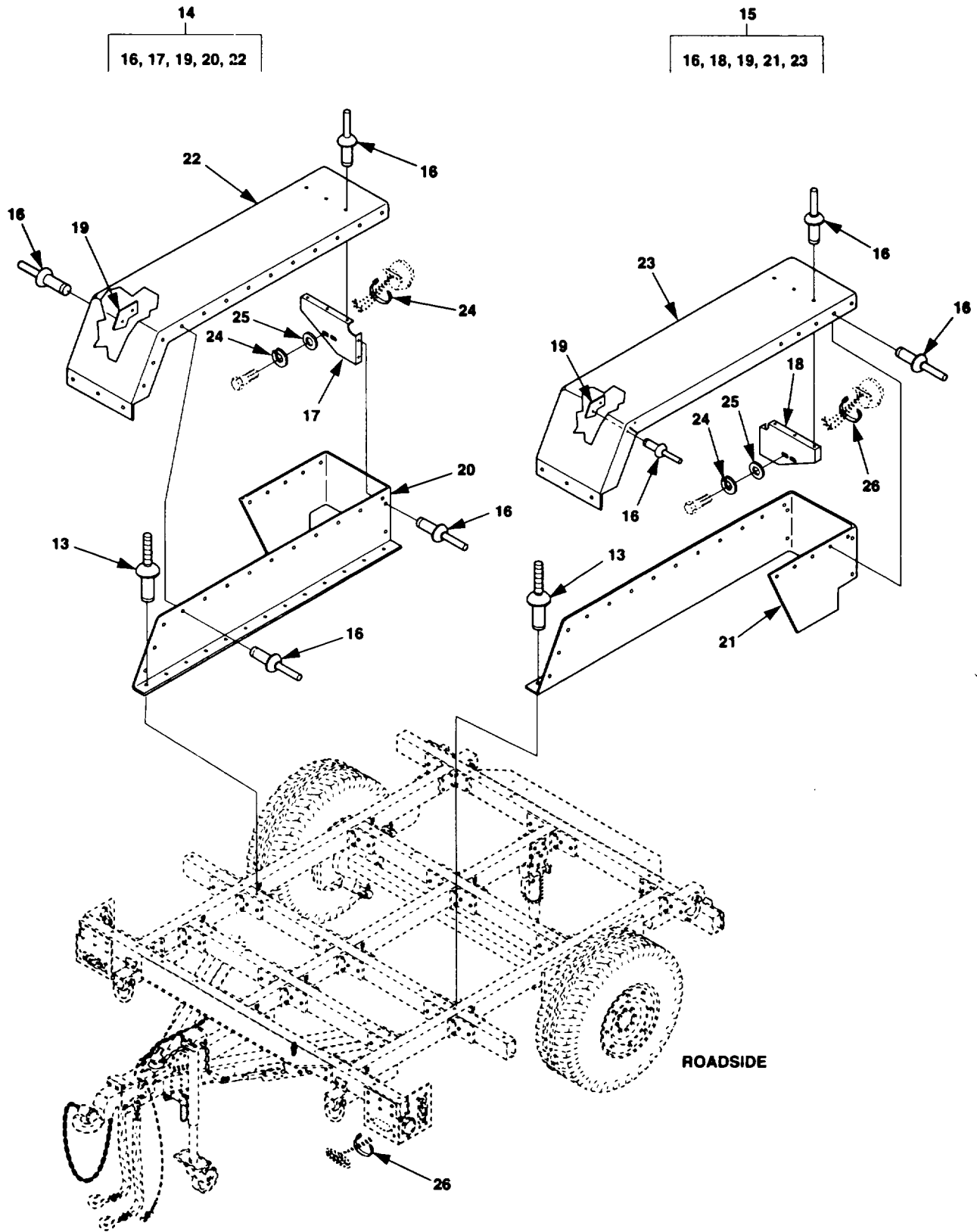


Figure F-27. High Mobility Trailer, Mounting Rails and Fender, (PU 798A and PU799A).  
(Sheet 2 of 2).

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 04 TRAILER ASSEMBLY					
FIG. 27 HMT, MOUNTING RAILS AND FENDERS, PU798A, PU799A					
1	PAFZZ	9K475	BOM-R8-8	.RIVET,BLIND ..... UOC:FMH, FMJ	40
2	PAFZZ	9K475	BOM-R8-10	.RIVET, BLIND ..... UOC:FMH, FMJ	4
3	XDFFF	30554	13230E6569-1	.RAIL ASSY,MTG,RH..... UOC: FMH, FMJ	1
4	XDFFF	30554	13230E6569-2	.RAIL ASSY,MTG,LH ..... UOC:FMH, FMJ	1
5	PAFZZ	17446	MGL100-R6-9	..RIVET,BLIND ..... UOC:FMH, FMJ	16
6	XDFZZ	30554	13230E6527	..PLATE,DOUBLER,MTG R ..... UOC:FMH, FMJ	2
7	XDFZZ	30554	13230E6576	..PLATE,DOUBLER,MTG R ..... UOC:FMH, FMJ	2
8	PAFZZ	17446	MGLP-R8-10	..RIVET,BLIND ..... UOC:FMH, FMJ	10
9	XDFZZ	30554	13230E6577	..ANGLE,SUPPORT,MTG R ..... UOC:FMH, FMJ	2
10	XDFZZ	30554	13230E6526	..ANGLE,SUPPORT,MTG R ..... UOC:FMH, FMJ	2
11	XDFZZ	30554	13230E6578-1	..RAIL,MOUNTING GEN,R-H ..... UOC:FMH, FMJ	1
12	XDFZZ	30554	13230E6578-2	..RAIL,MOUNTING GEN,L-H ..... UOC:FMH, FMJ	1
13	PAFZZ	17446	MGLP-R8-6	.RIVET,STEEL SHANK..... UOC:FMH, FMJ	38
14	XDFFF	30554	13230E6571-1	.FENDER,ASSEMBLY,RH..... UOC:FMH, FMJ	1
15	XDFFF	30554	13230E6571-2	.FENDER,ASSEMBLY,LH..... UOC:FMH, FMJ	1
16	PAFZZ	17446	MGLP-R8-6	..RIVET,STEEL SHANK..... UOC:FMH, FMJ	58
17	XDFZZ	30554	13230E6582-1	..BRACKET,INSIDE FEND..... UOC:FMH, FMJ	1
18	XDFZZ	30554	13230E6582-2	..BRACKET,INSIDE FEND..... UOC:FMH, FMJ	1
19	XDFZZ	30554	13230E6579	..ANGLE,SUPPORT,FENDE ..... UOC:FMH, FMJ	2

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SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
20	XDFZZ	30554	13230E6583-1	..FENDER,SIDE,TRAILER..... UOC:FMH, FMJ	1
21	XDFZZ	30554	13230E6583-2	..FENDER,SIDE,TRAILER..... UOC:FMH, FMJ	1
22	XDFZZ	30554	13230E6580-1	..FENDER, TOP, TRAILER..... UOC:FMH, FMJ	1
23	XDFZZ	30554	13230E6580-2	..FENDER, TOP, TRAILER..... UOC:FMH, FMJ	1
24	PAOZZ	96906	MS35338-141	.WASHER, LOCK..... UOC:FMH, FMJ	4
25	PAOZZ	96906	MS15795-813	.WASHER, FLAT..... UOC:FMH, FMJ	4
26	PAOZZ	96906	MS3367-1-0	.STRAP, TIEDOWN, ELECT ..... UOC:FMH, FMJ	4

END OF FIGURE

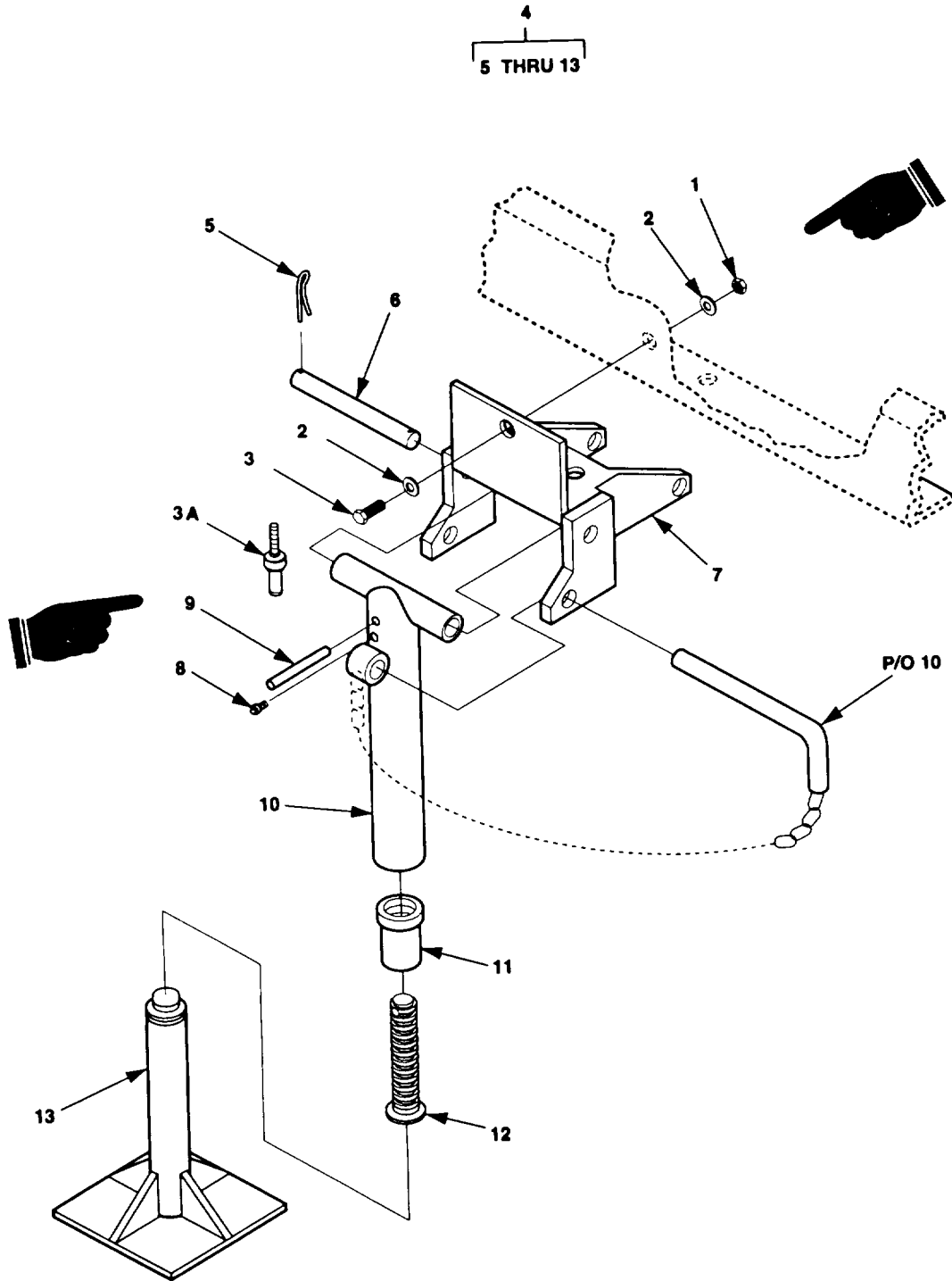


Figure F-28. Jack Leveling-Support Assembly.



SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 04 TRAILER ASSEMBLY					
FIG. 28 JACK LEVELING-SUPPORT ASSEMBLY					
1	PAOZZ	96906	MS51922-17	.NUT,SELF-LOCKING,HE .....	3
2	PAOZZ	96906	MS51412-7	.WASHER,FLAT .....	6
UOC:EVS, EVU					
2	PAOZZ	96906	MS51412-27	.WASHER,FLAT .....	3
UOC:ESR, EVT					
3	PAOZZ	80208	B1821GH038	.SCREW,CAP,HEXAGON H .....	3
C150N					
UOC:EVS, EVU					
3	PAOZZ	80204	B1821BH038	.SCREW,CAP,HEXAGON H .....	3
C125N					
UOC:ESR, EVT					
3A	PAOZZ	17446	BOM-R12-8	.RIVET BLIND .....	3
UOC:FMH, FMJ					
4	PAOZZ	97403	13214E1206-1	.JACK,LEVELING-SUPPO .....	1
UOC:EVS,EVU,ESR, EVT					
4	PAOZZ	30554	13214E1206-2	.JACK,LEVELING-SUPPO .....	1
UOC:FMH, FMJ					
5	PAOZZ	96906	MS24665-353	..PIN,COTTER .....	2
6	PBOZZ	97403	13214E1209	..PIN,STRAIGHT,HEADLE .....	1
7	XAOZZ	97403	13214E1207	..BRACKET .....	1
8	PAOZZ	96906	MS15006-1	..FITTING,LUBRICATION .....	1
9	PAOZZ	96906	MS16562-66	..PIN,SPRING .....	1
10	XAOZZ	97403	13214E1208-1	..CHAIN,PIN RETAINING .....	1
11	XAOZZ	97403	13214E1211	..NUT,SLEEVE .....	1
12	XAOZZ	97403	13214E1210	..SCREW .....	1
13	PBOZZ	97403	13214E1212-1	..SUPPORT BASE,LEG .....	1

END OF FIGURE

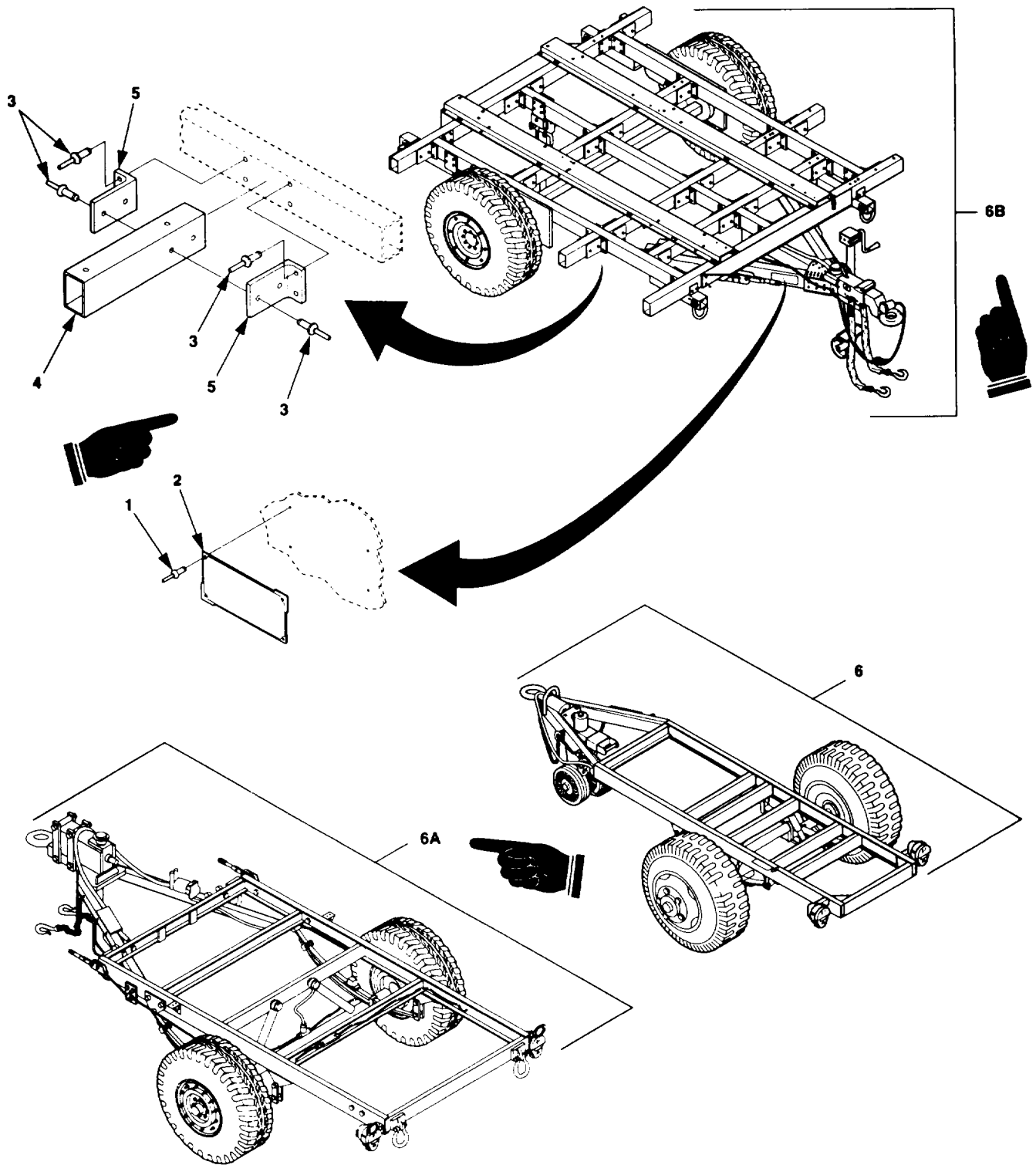


Figure F-29. Power Plant/Power Unit Trailer Assembly.

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 04 TRAILER ASSEMBLY					
FIG. 29 POWER PLANT/POWER UNIT TRAILER CHASSIS ASSEMBLY					
1	PAOZZ 07707	AD45ABS		.RIVET,BLIND ..... UOC:FMH, FMJ	4
2	MDOZZ 30554	13230E6572		.PLATE, IDENTIFICATION CHASSIS VARIANT ..... UOC:FMH, FMJ	1
3	PAFZZ 17446	BOM-R8-8		.RIVET,BLIND ..... UOC:FMH, FMJ	16
4	XDFZZ 30554	13230E6514		.STRUCTURAL SECTION ..... UOC:FMH, FMJ	2
5	XDFZZ 30554	13230E6524		.CLIP,FRAME,CORNER ..... UOC:FMH, FMJ	4
6	XAFFF 97403	13229E5824		.CHASSIS ASSEMBLY ..... UOC:EVS, EVU	1
6A	XAFFF 97403	13229E5746		.CHASSIS ASSEMBLY ..... UOC:ESR, EVT	1
6B	XAFFF 19207	12450001		.CHASSIS,TRAILER-HMT ..... UOC:FMH, FMJ	1

END OF FIGURE

SECTION II (1) ITEM NO	(2) SMR CODE	(3) CAGEC	TM9-6115-660-13&P (4) PART NUMBER	C01 (5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 05 BULK MATERIALS					
FIG. BULK					
1	PAFZZ	81348	QQB575F30T0437	BRAID,WIRE UOC: EVS, EVU	V
2	PAFZZ	81349	CO-04HDE(4/4-4/1 2R) 1290	CABLE, POWER UOC: EVS, EVU	V
3	PAOZZ	88900	22806-000-00	DECK COVERING, LIGHT	V
4	PAOZZ	96906	MS35822-9A	HINGE, BUTT UOC: EVS, EVU	V
5	PAOZZ	96906	MS35823-6A	HINGE, BUTT	V
6	PAOZZ	81349	M6000E00200	HOSE, NONMETALLIC	V
7	PAFZZ	81349	M23053/5-111-0	INSULATION SLEEVING UOC: EVS, EVU	V
8	PAFZZ	81349	M23053/5-107-9	INSULATION SLEEVING UOC: EVS, EVU	V
9	PAFZZ	81349	M23053/5-104-0	INSULATION SLEEVING UOC: EVS, EVU	V
10	PAFZZ	81349	M23053/5-108-0	INSULATION SLEEVING UOC: EVS, EVU	V
11	PAFZZ	81349	M23053/5-105-9	INSULATION SLEEVING UOC: EVS, EVU	V
12	PAFZZ	81349	M23053/5-105-0	INSULATION SLEEVING	V
13	PAFZZ	81349	M24768/2-S-7	INSULATION SHEET, EL	V
14	PAFZZ	81349	M23053/5-108-4	INSULATION SLEEVING UOC: EVS, EVU	V
15	PAOZZ	81346	2B2B2C1F2	STRIP, RUBBER UOC: EVS, EVU	V
16	PAFZZ	81349	M22759/16-20-9	WIRE, ELECTRICAL UOC: EVS, EVU	V
17	PAFZZ	81349	M5086/2-4-9	WIRE, ELECTRICAL UOC: EVS, EVU	V
18	PAFZZ	81349	M5086/2-6-9	WIRE, ELECTRICAL UOC: EVS, EVU	V
19	PAFZZ	81349	M22759/16-16-9	WIRE, ELECTRICAL UOC: EVS, EVU	V
20	PAOZZ	81348	QQW343C06B1B	WIRE, ELECTRICAL	V
END OF FIGURE					

BULK-1



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### **Section III**

#### **Special Tools List (Not Applicable)**



TM 9-6115-660-13&P C 02

SECTION IV

CROSS- REFERENCE-INDEXES  
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5999-00-014-0952	14	9	5940-00-115-4996	13	21
5940-00-021-3321	22	18		13	25
5306-00-021-3912	20	3		14	11
5306-00-021-4065	20	3	5310-00-138-4315	12	6
5310-00-022-8847	21	11	5940-00-143-4780	15	5
	22	11	5940-00-143-4793	15	2
5310-00-042-4229	12	2	4730-00-172-0049	28	8
5310-00-044-6477	20	2	5310-00-184-8971	21	6
5320-00-052-1972	22	14A		22	6
	29	1	4710-00-185-6948	19	3
5305-00-054-5650	17	3	5999-00-186-3912	9	19
5305-00-054-5652	6	8	5310-00-187-2413	21	7
5305-00-054-6651	6	12		22	7
5305-00-054-6655	18	2	9905-00-202-3639	24	10
5305-00-054-6671	6	1	4210-00-202-7858	22	1
	7	1	9905-00-205-2795	24	9
	11	7	5310-00-209-1239	19	9
	18	11	4210-00-223-4857	24	5A
5305-00-059-3660	18	8	5310-00-225-5328	6	3
5305-00-059-3663	14	4		7	2
	16	4		11	6
5340-00-066-1235	19	1		18	12
5305-00-068-0508	24	8	5310-00-225-6993	1	1
5305-00-068-0510	23	3		2	1
	24	4	5306-00-226-4827	20	3
5305-00-068-0511	25	3	5307-00-227-1741	21	12
	28	3		22	12
5305-00-071-2068	2	3	5340-00-234-8422	20	8
5305-00-071-2070	1	3	5310-00-245-3612	24	2B
5305-00-071-2505	24	8A	5310-00-252-8748	20	1
5975-00-074-2072	14	15	4210-00-270-4512	21	1
5970-00-082-3942	BULK	11	5940-00-271-9504	19	20
5310-00-087-4652	5	1	4730-00-277-5115	19	6
	23	1	5940-00-283-5280	15	3
	24	2	5330-00-402-5125	19	5
	24	2A	5305-00-432-4172	24	11
	25	1	5945-00-435-1833	6	10
	26	1	5320-00-483-0558	27	1
	28	1			
5310-00-088-1251	24	6A	15305-00-543-4372	24	4A
5940-00-113-8190	19	22	5940-00-557-4338	4	2
	21	9		4	10
	22	9		13	3
5940-00-114-1310	18	9		13	8
5935-00-114-8061	14	6	5940-00-115-4996	13	13
5940-00-115-2676	4	4	6145-00-578-6594	BULK	18
	4	12	6145-00-578-6595	BULK	17
	14	12	5320-00-582-3305	11	1
5940-00-115-4996	4	3	5320-00-582-5677	22	18
	4	11	5310-00-584-7995	21	8
5940-00-115-4996	13	12		22	8
	13	17			



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SECTION IV

CROSS- REFERENCE-INDEXES  
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
4710-00-597-8731	19	2	5310-00-934-9761	18	1
5310-00-614-3506	2	2	5310-00-934-9765	14	1
5310-00-625-5756	20	2		16	1
5305-00-638-8920	26	9		18	5
5940-00-660-3633	15	4	5970-00-954-1622	BULK	12
5305-00-680-4262	24	4B	5310-00-974-6623	20	1A
5305-00-725-2317	5	3	5340-00-975-2126	11	2
	26	3		20	6
	27	3	5940-00-983-6046	18	3
5975-00-727-5153	6	24	5310-00-984-3806	20	1
	15	6	5975-00-984-6582	27	26
5305-00-727-6804	2	3A	5310-00-984-7042	24	2C
5970-00-740-2971	BULK	8		27	24
6210-00-753-2289	8	1	5310-00-989-0908	22	16
5320-00-753-3830	20	5	5310-00-989-5945	12	1
5310-00-763-8901	25	11	5305-00-993-1851	3	2
5310-00-768-0321	2	1	5310-01-012-7400	12	4
5310-00-802-4701	24	3B	5120-01-013-1676	19	13
	27	25	5120-01-019-9564	19	23
5310-00-809-8541	26	2	6145-01-042-4621	BULK	16
5970-00-812-1356	BULK	7	5935-01-042-7579	6	11
5970-00-812-2967	BULK	10	6145-01-044-8799	BULK	19
5970-00-812-2969	BULK	9	5340-01-053-7127	BULK	5
5940-00-813-0698	6	20	5340-01-054-4934	BULK	4
	9	2	5310-01-078-5996	21	5
5315-00-838-4584	27	9		22	5
5315-00-839-5822	27	5	5999-01-091-3187	14	8
5305-00-841-2681	19	7	5320-01-140-1479	27	2
5975-00-878-3791	19	15	5310-01-141-6672	6	7
5310-00-883-9417	22	17		17	4
6210-00-900-9423	8	6	5315-01-162-0143	28	6
	9	5	2590-01-167-8596	28	13
5320-00-904-4136	21	14	5310-01-180-7157	2	1B
	22	14	5310-01-216-7390	1	4
4730-00-908-3194	21	2	6210-01-230-1851	8	9
	22	2		9	8
5975-00-924-9927	19	18	5340-01-242-4554	3	4
5310-00-929-6395	6	13	5310-01-257-7590	5	2
5310-00-933-8118	6	6		23	2
	17	2		24	3
5310-00-933-8119	6	2		25	2
	7	3		28	2
	11	5	5310-01-266-4641	1	2
	18	13		2	2
5310-00-933-8120	14	2	6115-01-274-7392	1	5
	16	2		2	4
	18	6	6115-01-275-5061	1	5
5310-00-934-9748	6	5		2	4
	17	1	5310-01-303-4701	6	14
5310-00-934-9751	3	1	6240-01-355-4422	8	3
5310-00-934-9759	11	4			

SECTION IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX  
PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
58536	A-A-1106	4210-00-202-7858	22	1
07707	AD45ABS	5320-00-052-1972	22	14A
			29	1
88044	AN816-5-4	4730-00-277-5115	19	6
88044	AN960-C4	5310-01-141-6672	6	7
			17	4
88044	AN961-616T	5310-00-181-2413	21	7
			22	7
17446	BOM-R8-8	5320-00-483-0558	27	1
			29	3
9K475	BOM-R8-10	5320-01-140-1470	27	2
17446	BOM-R12-8		28	3A
80204	B1821BH025C075N	5305-00-068-0508	24	8
80204	B1821BH025C088N	5305-00-071-2505	24	8A
80204	B1821BH031C100N	5306-00-226-4827	20	3
80204	B1821BH038C075N	5305-00-543-4372	24	4A
80204	B1821BH038C100N	5305-00-068-0510	23	3
			24	4
80204	B1821BH038C125N	5305-00-068-0511	25	3
			28	3
80204	B1821BH038C150N	5305-00-725-2317	5	3
			26	3
			28	3
80204	B1821BHO38C225N	5305-00-638-8920	26	9
80204	B1821BH038C600N		25	6
80204	B1821BH050C138N	5305-00-071-2068	2	3
80204	B1821BH050C175N	5305-00-071-2070	1	3
01667	CBA-70	5940-00-271-9504	19	20
81349	CO-04HDE(4/4-4/1 2R)1290		BULK	2
15277	FS0216B122-1	5975-00-878-3791	19	15
80244	GGG-H-86,TY1 OCLI		19	14
73616	GRB58	5975-00-924-9927	19	18
OBKK8	GRC 58		19	17
58224	G9B		8	8
			9	7
56681	HLP1053A		19	16
81349	JANTXIN5619		6	17
7E656	JCG-6026		16	5
81349	LC21CN3		8	2
81349	LH80/1	6210-00-753-2289	8	1
30554	MEP 803A	6115-01-275-5061	1	5
			2	4
30554	MEP 813A	6115-01-274-7392	1	5
			2	4
17446	MGL100.R6-9		27	5
17446	MGLP-R8-6		27	16
17446	MGLP-R8-10		23	6
			27	8
81349	MSA37TB 18		6	27
81349	MSA37TB5		18	4

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SECTION IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX  
PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS 15006-1	4730-00-172-0049	28	8
96906	MS15567-2	6240-01-355-4422	8	3
96906	MS15795-810	5310-00-582-5677	22	18
96906	MS 15795-812	5310-00-625-5756	20	2
96906	MS15795-813	5310-00-802-4701	24	3B
			27	25
96906	MS 15795-817	5310-00-614-3506	2	2A
96906	MS15795-841	5310-00-225-5328	6	3
			7	2
			11	6
			18	12
96906	MS15795-848		14	3
			16	3
			18	7
96906	MS16203-27	5310-00-584-7995	21	8
			22	8
96906	MS 16562-66	5315-00-838-4584	28	9
96906	MS18015-1	5340-00-975-2126	11	2
			20	6
96906	MS 18212-65		12	5
96906	MS20427-4C6		20	7
96906	MS20600AD3W3		11	10
96906	MS20600AD4W3	5320-00-582-3305	11	1
96906	MS20613-4P5	5320-00-753-3830	20	5
96906	MS20659-143	5940-00-115-2676	4	4
			4	12
			14	12
96906	MS20659-145	5940-00-115-4996	4	3
			4	11
			13	2
			13	7
			13	12
			13	17
			13	21
			13	25
			14	11
96906	MS21919WCG21	5340-01-242-4554	3	4
96906	MS24519-7		21	4
			22	4
96906	MS24524-30		10	3
96906	MS24665-353	5315-00-839-5822	28	5
96906	MS25036-101	5940-00-813-0698	6	20
			9	2
96906	MS25036-106	5940-00-283-5280	15	3
96906	MS25036-108	5940-00-143-4780	15	5
96906	MS25036-110	5940-00-143-4793	15	2
96906	MS25036-119	5940-00-114-1310	18	9
96906	MS25036-122	5940-00-113-8190	19	22
			21	9
			22	9

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SECTION IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX  
PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS25036-125	5940-00-557-4338	4	2
			4	10
			13	3
			13	8
96906	MS25036-155	5940-00-660-3633	13	13
			15	4
			25	8
96906	MS27130-CR68		25	10
96906	MS27130-CR93		18	17
96906	MS27183-27	5310-00-809-8541	26	2
96906	MS27407-3		10	2
96906	MS27969-4	5340-00-234-8422	20	8
96906	MS3367-1-0	5975-00-984-6582	27	26
96906	MS3367-1 -9	5975-00-074-2072	14	15
96906	MS3367-4-9	5975-00-727-5153	6	24
			15	6
96906	MS35207-267	5305-00-993-1851	3	2
96906	MS35307-414	5305-00-727-6804	2	3A
96906	MS35308-334	5306-00-021-3912	20	3
96906	MS35308-338	5306-00-021-4065	20	3
96906	MS35308-360	5305-00-680-4262	24	4B
96906	MS35333-110	5310-00-022-8847	21	11
			22	11
96906	MS35333-113	5310-00-042-4229	12	2
96906	MS35335-60	5310-00-209-1239	19	9
96906	MS35338-103	5310-00-184-8971	21	6
			22	6
96906	MS35338-135	5310-00-933-8118	6	6
			17	2
96906	MS35338-136	5310-00-929-6395	6	13
96906	MS35338-137	5310-00-933-8119	6	2
			7	3
			11	5
			18	13
96906	MS35338-138	5310-00-933-8120	14	2
			16	2
			18	6
96906	MS35338-140	5310-00-974-6623	20	1A
96906	MS35338-141	5310-00-984-7042	24	2C
			27	24
96906	MS35338-143	5310-01-180-7157	2	1B
96906	MS35338-158	5310-00-883-9417	22	17
96906	MS35387-1	9905-00-205-2795	24	9
96906	MS35387-2	9905-00-202-3639	24	10
96906	MS35425-75	5310-01-078-5996	21	5
			22	5
96906	MS3561-3	5310-00-989-0908	22	16
96906	MS35649-244	5310-00-934-9748	6	5
			17	1
96906	MS35649-264	5310-00-934-9761	18	1
96906	MS35649-284	5310-00-934-9759	11	4
96906	MS35650-302	5310-00-934-9751	3	1

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SECTION IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX  
PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS35650-304	5310-00-934-9765	14	1
			16	1
			18	5
96906	MS35650-3314	5310-00-252-8748	20	1
96906	MS35650-3384	5310-00-245-3612	24	2
96906	MS35691-35	5310-00-989-5945	12	1
96906	MS35822-9A	5340-01-054-4934	BULK	4
96906	MS35823-6A	5340-01-053-7127	BULK	5
96906	MS35842-11	4730-00-908-3194	21	2
			22	2
			12	3
96906	MS39347-2	5940-00-021-3321	22	19
96906	MS39347-4		12	3
96906	MS51412-1	5310-01-303-4701	6	14
96906	MS51412-13		25	13
96906	MS51412-2		3	3
96906	MS51412-25	5310-00-044-6477	20	2
96906	MS51412-27		23	2A
			24	3A
			28	2
96906	MS51412-4		24	7A
96906	MS51412-7	5310-01-257-7590	5	2
			23	2
			24	3
			25	2
			28	2
96906	MS51412-9	5310-01-266-4641	1	2
			2	2
96906	MS51415-11		25	12
96906	MS51415-9	5310-01-216-7390	1	4
96906	MS51858-5	5310-01-012-7400	12	4
96906	MS51859-5	5310-00-138-4315	12	6
96906	MS51861-37	5305-00-432-4172	24	11
96906	MS51922-1	5310-00-088-1251	24	6A
96906	MS51922-17	5310-00-087-4652	5	1
			23	1
			24	2
			24	2A
			25	1
			26	1
			28	1
96906	MS51922-33	5310-00-225-6993	1	1
			2	1
96906	MS51922-9	5310-00-984-3806	20	1
96906	MS51957-16	5305-00-054-5650	17	3
96906	MS51957-18	5305-00-054-5652	6	8
96906	MS51957-27	5305-00-054-6651	6	12
96906	MS51957-31	5305-00-054-6655	18	2
96906	MS51957-46	5305-00-054-6671	6	1
			7	1
			11	7
96906	MS51957-46	5305-00-054-6671	18	11

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CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS51958-64	5305-00-059-3660	18	8
96906	MS51958-67	5305-00-059-3663	14	4
			16	4
96906	MS51968-23	5310-00-763-8901	25	11
96906	MS51971-5	5310-00-768-0321	2	1A
96906	MS90555C32413S		14	7
96906	MS90555C32413SY		14	7
96906	MS90563-3C	5935-00-114-8061	14	6
81349	M22759/16-16-9	6145-01-044-8799	BULK	19
81349	M22759/16-20-9	6145-01-042-4621	BULK	16
81349	M23053/5-104-0	5970-00-812-2969	BULK	9
81349	M23053/5-105-0	5970-00-954-1622	BULK	12
81349	M23053/5-105-9	5970-00-082-3942	BULK	11
81349	M23053/5-107-9	5970-00-740-2971	BULK	8
81349	M23053/5-108-0	5970-00-812-2967	BULK	10
81349	M23053/5-108-4		BULK	14
81349	M23053/5-111-0	5970-00-812-1356	BULK	7
81349	M24243/1B403	5320-00-904-4136	21	14
			22	14
81349	M24768/2-S-7		BULK	13
97403	M3BE510		3	7
81349	M39006/22-0631		6	18
81349	M39029/49-329	5999-00-014-0952	14	9
81349	M39029/49-331	5999-01-091-3187	14	8
81349	M45938/1-13C		6	29
81349	M5086/2-4-9	6145-00-578-6595	BULK	17
81349	M5086/2-6-9	6145-00-578-6594	BULK	18
81349	M55155/199G03		6	15
81349	M5757/23-003	5945-00-435-1833	6	10
81349	M6000E00200		BULK	6
			22	3
81348	QQB575F30T0437		BULK	1
81348	QQW343C06B1B		BULK	20
			19	21
			22	10
81349	RER75F2490P		6	9
81349	RER75F2491P		17	5
81349	TBJA		10	1
59501	10-33675-36		14	10
60177	11500		7	4
19207	12450001		29	6B
97403	13200E6361		19	11
97403	13200E6363		19	8
97403	13205E4918		21	13
			22	13
97403	13211E7541	5340-00-066-1235	19	1
97403	13211E7542	4710-00-597-8731	19	2
97403	13211E7543	4710-00-185-6948	19	3
97403	13211E7544		19	4
97403	13211E7546	5330-00-402-5125	19	5
97403	13211E7547		19	10
97403	13211E7548		19	12

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CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
97403	13212E5748		25	9
97403	13214E1206-1		28	4
30554	13214E1206-2		28	4
97403	13214E1207		28	4
97403	13214E1208-1		28	10
97403	13214E1209	5315-01-162-0143	28	6
97403	13214E1210		28	12
97403	13214E1211		28	11
97403	13214E1212-1	2590-01-167-8596	28	13
97403	13214E1223	5307-00-227-1741	21	12
			22	12
97403	13214E1235	4210-00-223-4857	24	5A
97403	13214E1391	6210-00-900-9423	8	6
			9	5
97403	13218E5149-8		3	5
97403	13222E9686	5935-01-042-7579	6	11
97403	13226E7741	5120-01-013-1676	19	13
97403	13229E2308		26	11
97403	13229E5649-1		11	8
19099	13229E5649-1-12		11	12
19099	13229E5649-1-13		11	13
19099	13229E5649-1-6		11	11
97403	13229E5654-1		11	14
97403	13229E5654-2		11	15
97403	13229E5666-14		22	15
97403	13229E5666-15		22	15
97403	13229E5666-3		21	15
97403	13229E56664		21	15
19099	13229E5670-24		21	10
19099	13229E567041		21	3
97403	13229E5677		25	7
19099	13229E5715-22		22	3
97403	13229E5743-2		26	8
97403	13229E5746		29	6
97403	13229E5749-2		24	1
97403	13229E5758		26	10
97403	13229E5764-2		9	1
19099	13229E5764-2-2		9	3
19099	13229E5764-2-3		9	4
97403	13229E5817		25	4
19099	13229E5817-6		25	5
97403	13229E5818		25	15
97403	13229E5819-1		11	3
97403	13229E5819-2		11	3
97403	13229E5820-1		5	4
97403	13229E5820-2		5	4
19099	13229E582043		8	5
19099	13229E582044		8	4
19099	13229E582048		18	10
19099	13229E5820-51		17	6
97403	13229E5821		18	15
19099	13229E58214		18	16

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CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
97403	13229E5822		18	14
97403	13229E5823		6	28
97403	13229E5824		29	6
97403	13229E5825		24	1
97403	13229E5827		3	6
97403	13229E5828-1		13	1
19099	13229E5828-1-2		13	5
19099	13229E5828-1-4		13	4
97403	13229E5828-2		13	6
19099	13229E5828-2-2		13	10
19099	13229E5828-2-4		13	9
97403	13229E5828-3		13	11
19099	13229E5828-3-2		13	15
19099	13229E5828-34		13	14
97403	13229E58284		13	16
19099	13229E58284-2		13	19
19099	13229E582844		13	18
97403	13229E5828-5		13	20
19099	13229E5828-5-2		13	23
19099	13229E5828-54		13	22
97403	13229E5828-6		13	24
19099	13229E5828-6-2		13	27
19099	13229E5828-64		13	26
97403	13229E5829		6	19
19099	13229E5829-1		6	23
19099	13229E5829-3		6	21
19099	13229E5829-6		6	22
97403	13229E5830		6	4
19099	13229E5830-9		6	25
97403	13229E5831		15	1
19099	13229E5831-1		15	7
19099	13229E5831-7		15	8
10900	13229E5831-9		15	9
97403	13229E5832-1		14	5
19099	13229E5832-1-2		14	16
19099	13229E5832-1-3		14	17
19099	13229E5832-1-6		14	13
19099	13229E5832-1-8		14	14
97403	13229E5832-2		14	5
97403	13229E5833		12	7
97403	13229E5836-3		4	1
19099	13229E5836-3-1		4	8
19099	13229E5836-3-5		4	5
19099	13229E5836-3-6		4	6
19099	13229E5836-3-7		4	7
97403	13229E5836-4		4	9
19099	13229E58364-1		4	16
19099	13229E5836-4-5		4	13
19099	13229E58364-6		4	14
19099	13229E58364-7		4	15
97403	13229E7946		20	4
97403	13229E961 9-1		26	4



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CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19099	13229E9619-1-7		26	5
97403	13229E9620-1		26	6
19099	13229E9620-1-7		26	7
97403	13229E9621-1		23	4
97403	13229E9621-2		23	5
97403	13229E9629-4		25	14
97403	13229E9630		11	16
97403	13229E9631		12	8
97403	13229E9635		1	6
30554	13230E6514		29	4
30554	13230E6524		29	5
30554	13230E6526		27	10
30554	13230E6527		27	6
30544	13230E6530-26		22	3
30554	13230E6531		22	15B
30554	13230E6541		22	15C
30554	13230E6564-1		23	9
30554	13230E6564-2		23	11
30554	13230E6565		24	1B
30554	1 3230E6567-1		23	8
30554	13230E6567-2		23	10
30554	13230E6568		23	7
30554	13230E6569-1		27	3
30554	13230E6569-2		27	4
30554	13230E6571-1		27	14
30554	13230E6571-2		27	15
30554	13230E6572		29	2
30554	13230E6576		27	7
30554	13230E6577		27	9
30554	13230E6579		27	19
30554	13230E6582-1		27	17
30554	13230E6582-2		27	18
30554	13230E6578-1		27	11
30554	13230E6578-2		27	12
30554	13230E6580-1		27	22
30554	13230E6580-2		27	23
30554	13230E6583-1		27	20
30554	13230E6583-2		27	21
72619	181-0931-001		8	7
			9	6
72619	181-8836-09-553	6210-01-230-1851	8	9
			9	8
81346	2B2B2C1F2		BULK	15
88900	22806-000-00		BULK	3
99251	3304695-1	4210-00-270-4512	21	1
			22	1
81349	37TB18B		6	26
81349	37TB5	5940-00-983-6046	18	3
00141	4328	5305-00-841-2681	19	7
60705	565C10OGAP10		6	16
04655	70-801074	5999-00-186-39112	19	19
30554	72-2029-1	5120-01-019-9564	19	23

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FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
BULK	1		81348	QQB575F30T0437
BULK	2		81349	CO-04HDE(4/4-/12R)1
290				
BULK	3		88900	22806-000-00
BULK	4	5340-01-054-4934	96906	MS35822-9A
BULK	5	5340-01-053-7127	96906	MS35823-6A
BULK	6		81349	M6000E00200
BULK	7	5970-00-812-1356	81349	M23053/5-111-0
BULK	8	5970-00-740-2971	81349	M23053/5-107-9
BULK	9	5970-00-812-2969	81349	M23053/5-104-0
BULK	10	5970-00-812-2967	81349	M23053/5-108-0
BULK	11	5970-00-082-3942	81349	M23053/5-105-9
BULK	12	5970-00-954-1622	81349	M23053/5-105-0
BULK	13		81349	M24768/2-S-7
BULK	14		81349	M23053/5-108-4
BULK	15		81346	2B2B2C1F2
BULK	16	6145-01-042-4621	81349	M22759/16-20-9
BULK	17	6145-00-578-6595	81349	M5086/2-4-9
BULK	18	6145-00-578-6594	81349	M5086/2-6-9
BULK	19	6145-01-044-8799	81349	M22759/16-16-9
BULK	20		81348	QQW343CO6B1B
1	1	5310-00-225-6993	96906	MS51922-33
1	2	5310-01-266-4641	96906	MS51412-9
1	3	5305-00-071-2070	80204	B1821BH050C175N
1	4	5310-01-216-7390	96906	MS51415-9
1	5	6115-01-275-5061	30554	MEP 803A
1	5	6115-01-274-7392	30554	MEP 813A
1	6		97403	13229E9635
2	1	5310-00-225-6993	96906	MS51922-33
2	1A	5310-00-768-0321	96906	MS51971-5
2	1B	5310-01-180-7157	96906	MS35338-143
2	2	5310-01-266-4641	96906	MS51412-9
2	2A	5310-00-614-3506	96906	MS15795-817
2	3	5305-00-071-2068	96906	B1821BH050C138N
2	3A	5305-00-727-6804	96906	MS35307-414
2	4	6115-01-275-5061	30554	MEP 803A
2	4	6115-01-274-7392	30554	MEP 813A
3	1	5310-00-934-9751	96906	MS35650-302
3	2	5305-00-993-1851	96906	MS35207-267
3	3		96906	MS51412-2
3	4	5340-01-242-4554	96906	MS21919WCG21
3	5		97403	13218E5149-8
3	6		97403	13229E5827
3	7		97403	M3BE510
4	1		97403	13229E5836-3
4	2	5940-00-557-4338	96906	MS25036-125
4	3	5940-00-115-4996	96906	MS20659-145
4	4	5940-00-115-2676	96906	MS20659-143
4	5		19099	13229E5836-3-5
4	6		19099	13229E5836-3-6
4	7		19099	13229E5836-3-7
4	8		19099	13229E5836-3-1
4	9		97403	13229E5836-4
4	10	5940-00-557-4338	96906	MS25036-125
4	11	5940-00-115-4996	96906	MS20659-145
4	12	5940-00-115-2676	96906	MS20659-143

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FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
4	13		19099	13229E5836-4-5
4	14		19099	13229E5836-4-6
4	15		19099	13229E5836-4-7
4	16		19099	13229E5836-4-1
5	1	5310-00-087-4652	96906	MS51922-17
5	2	5310-01-257-7590	96906	MS51412-7
5	3	5305-00-725-2317	80204	B1821BH038C150N
5	4		97403	13229E5820-1
5	4		97403	13229E5820-2
6	1	5305-00-054-6671	96906	MS51957-46
6	2	5310-00-933-8119	96906	MS35338-137
6	3	5310-00-225-5328	96906	MS15795-841
6	4		97403	13229E5830
6	5	5310-00-934-9748	96906	MS35649-244
6	6	5310-00-933-8118	96906	MS35338-135
6	7	5310-01-141-6672	88044	AN960-C4
6	8	5305-00-054-5652	96906	MS51957-18
6	9		81349	RER75F2490P
6	10	5945-00-435-1833	81349	M5757/23-003
6	11	5935-01-042-7579	97403	13222E9686
6	12	5305-00-054-6651	96906	MS51957-27
6	13	5310-00-929-6395	96906	MS35338-136
6	14	5310-01-303-4701	96906	MS51412-1
6	15		81349	M55155/199G03
6	16		60705	565C10GAP10
6	17		81349	JANTX1N5619
6	18		81349	M39006/22-0631
6	19		97403	13229E5829
6	20	5940-00-813-0698	96906	MS25036-101
6	21		19099	13229E5829-3
6	22		19099	13229E5829-6
6	23		19099	13229E5829-1
6	24	5975-00-727-5153	96906	MS3367-4-9
6	25		19099	13229E5830-9
6	26		81349	37TB18B
6	27		81349	MSA37TB18
6	28		97403	13229E5823
6	29		81349	M45938/1-13C
7	1	5305-00-054-6671	96906	MS51957-46
7	2	5310-00-225-5328	96906	MS15795-841
7	3	5310-00-933-8119	96906	MS35338-137
7	4		60177	11500
8	1	6210-00-753-2289	81349	LH80/1
8	2		81349	LC21CN3
8	3	6240-01-355-4422	96906	MS15567-2
8	4		19099	13229E5820-44
8	5		19099	13229E5820-43
8	6	6210-00-900-9423	97403	13214E1391
8	7		72619	181-0931-001
8	8		58224	G9B
8	9	6210-01-230-1851	72419	181-8836-09-553

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FIGURE AND ITEM NUMBER INDEX				
FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
9	1		97403	13229E5764-2
9	2	5940-00-813-0698	96906	MS25036-101
9	3		19099	13229E5764-2-2
9	4		19099	13229E5764-2-3
9	5	6210-00-900-9423	97403	13214E1391
9	6		72619	181-0931-001
9	7		58224	G9B
9	8	6210-01-230-1851	72619	181-8836-09-553
10	1		81349	TBJA
10	2		96906	MS27407-3
10	3		96906	MS24524-30
11	1	5320-00-582-3305	96906	MS20600AD4W3
11	2	5340-00-975-2126	96906	MS18015-1
11	3		97403	13229E5819-1
11	3		97403	13229E5819-2
11	4	5310-00-934-9759	96906	MS35649-284
11	5	5310-00-933-8119	96906	MS35338-137
11	6	5310-00-225-5328	96906	MS15795-841
11	7	5305-00-054-6671	96906	MS51957-46
11	8		97403	13229E5649-1
11	9		97403	13229E5728-1
11	10		96906	MS20600AD3W3
11	11		19099	13229E5649-1-6
11	12		19099	13229E5649-1-12
11	13		19099	13229E5649-1-13
11	14		97403	13229E5654-1
11	15		97403	13229E5654-2
11	16		97403	13229E9630
12	1	5310-00-989-5945	96906	MS35691-35
12	2	5310-00-042-4229	96906	MS35333-113
12	3		96906	MS39347-4
12	4	5310-01-012-7400	96906	M251858-5
12	5		96906	MS18212-65
12	6	5310-00-138-4315	96906	MS51859-5
12	7		97403	13229E5833
12	8		97403	13229E9631
13	1		97403	13229E5828-1
13	2	5940-00-115-4996	96906	MS20659-145
13	3	5940-00-557-4338	96906	MS25036-125
13	4		19099	13229E5828-1-4
13	5		19099	13229E5828-1-2
13	6		97403	13229E5828-2
13	7	5940-00-115-4996	96906	MS20659-145
13	8	5940-00-557-4338	96906	MS25036-125
13	9		19099	13229E5828-2-4
13	10		19099	13229E5828-2-2
13	11		97403	13229E5828-3
13	12	5940-00-115-4996	96906	MS20659-145
13	13	5940-00-557-4338	96906	MS25036-125
13	14		19099	13229E5828-3-4
13	15		19099	13229E5828-3-2

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FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX		PART NUMBER
		STOCK NUMBER	CAGEC	
13	16		97403	13229E5828-4
13	17	5940-00-115-4996	96906	MS20659-145
13	18		19099	13229E5828-4-4
13	19		19099	13229E5828-4-2
13	20		97403	13229E5828-5
13	21	5940-00-115-4996	96906	MS20659-145
13	22		19099	13229E5828-5-4
13	23		19099	13229E5828-5-2
13	24		97403	13229E5828-6
13	25	5940-00-115-4996	96906	MS20659-145
13	26		19099	13229E5828-6-4
13	27		19099	13229E5828-6-2
14	1	5310-00-934-9765	96906	MS35650-304
14	2	5310-00-933-8120	96906	MS35338-138
14	3		96906	MS15795-848
14	4	5305-00-059-3663	96906	MS51958-67
14	5		97403	13229E5832-1
14	5		97403	13229E5832-2
14	6	5935-00-114-8061	96906	MS90563-3C
14	7		96906	MS90555C32413S
14	7		96906	MS90555C32413SY
14	8	5999-01-091-3187	91349	M39029/49-331
14	9	5999-00-014-0952	91349	M39029/49-329
14	10		59501	10-33675-36
14	11	5940-00-115-4996	96906	MS20659-145
14	12	5940-00-115-2676	96906	MS20659-143
14	13		19099	13229E5832-1-6
14	14		19099	13229E5832-1-8
14	15	5975-00-074-2072	96906	MS3367-1-9
14	16		19099	13229E5832-1-2
14	17		19099	13229E5832-1-3
15	1		97403	13229E5831
15	2	5940-00-143-4793	96906	MS25036-110
15	3	5940-00-283-5280	96906	MS25036-106
15	4	5940-00-660-3633	96906	MS25036-155
15	5	5940-00-143-4780	96906	MS25036-108
15	6	5975-00-727-5153	96906	MS3367-4-9
15	7		19099	13229E5831-1
15	8		19099	13229E5831-9
15	9		10900	13229E5831-9
16	1	5310-00-934-9765	96906	MS35650-304
16	2	5310-00-933-8120	96906	MS35338-138
16	3		96906	MS15795-848
16	4	5305-00-059-3663	96906	MS51958-67
16	5		7E656	JCG-6026
17	1	5310-00-934-9748	96906	MS35649-244
17	2	5310-00-933-8118	96906	MS35338-135
17	3	5305-00-054-5650	96906	MS51957-16
17	4	5310-01-141-6672	88044	AN960-C4
17	5		81349	RER75F2491P
17	6		19099	13229E5820-51

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SECTION IV

CROSS REFERENCE INDEXES  
FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
18	1	5310-00-934-9761	96906	MS35649-264
18	2	5305-00-054-6655	96906	MS51957-31
18	3	5940-00-983-6046	81349	37TB5
18	4		81349	MSA37TB5
18	5	5310-00-934-9765	96906	MS35650-304
18	6	5310-00-933-8120	96906	MS35338-138
18	7		96906	MS 15795-848
18	8	5305-00-059-3660	96906	MS51958-64
18	9	5940-00-114-1310	96906	MS25036-119
18	10		19099	13229E5820-48
18	11	5305-00-054-6671	96906	MS51957-46
18	12	5310-00-225-5328	96906	MS15795-841
18	13	5310-00-933-8119	96906	MS35338-137
18	14		97403	13229E5822
18	15		97403	13229E5821
18	16		19099	13229E5821-4
18	17		96906	MS27130-CR93
19	1	5340-00-066-1235	97403	13211E7541
19	2	4710-00-597-8731	97403	13211E7542
19	3	4710-00-185-6948	97403	13211E7543
19	4		97403	13211E7544
19	5	5330-00-402-5125	97403	13211E7546
19	6	4730-00-277-5115	88044	AN816-5-4
19	7	5305-00-841-2681	00141	4328
19	8		97401	13200E6363
19	9	5310-00-209-1239	96906	MS35335-60
19	10		97403	13211E7547
19	11		97403	13200E6361
19	12		97403	13211E7548
19	13	5120-01-013-1676	97403	13226E7741
19	14		80244	GGG-H-46,TY10CL1
19	15	5975-00-878-3791	15277	FS0216B122-1
19	16		56681	HLP1053A
19	17		OBKKB	GRC 58
19	18	5975-00-924-9927	73616	GRB58
19	19	5999-00-186-3912	04655	70-801074
19	20	5940-00-271-9504	01667	CBA-70
19	21		81348	QQW343C06B1 B
19	22	5940-00-113-8190	96906	MS26036-122
19	23	5120-01-019-9564	30554	72-2029-1
20	1	5310-00-984-3806	96906	MS51922-9
20	1	5310-00-252-8748	96906	MS35650-3314
20	1A	5310-00-974-6623	96906	MS35338-140
20	2	5310-00-044-6477	96906	MS51412-25
20	2	5310-00-044-6477	96906	MS51412-25
20	2	5310-00-625-5756	96906	MS 15795-812
20	3	5306-00-226-4827	80204	B1821BH031C10ON
20	3	5306-00-021-3912	96906	MS35308-334
20	3	5306-00-021-4065	96906	MS35308-338
20	4		97403	13229E7946

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SECTION IV

CROSS REFERENCE INDEXES  
FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
20	5	5320-753-3830	96906	MS2061 3-4P5
20	6	5340-00-975-2126	96906	MS18015-1
20	7		96906	MS20427-4C6
20	8	5340-00-234-8422	96906	MS27969-4
21	1	4210-00-270-4512	99251	3304695-1
21	2	4730-00-908-3194	96906	MS35842-11
21	3		19099	13229E5670-41
21	4		96906	MS24519-7
21	5	5310-01-078-5996	96906	MS35425-75
21	6	5310-00-184-8971	96906	MS35338-103
21	7	5310-00-187-2413	88044	AN961-616T
21	8	5310-00-584-7995	96906	MS16203-27
21	9	5940-00-113-8190	96906	MS25036-122
21	10		19099	13229E5670-24
21	11	5310-00-022-8847	96906	MS35333-110
21	12	5307-00-227-1741	97403	13214E1223
21	13		97403	13205E4918
21	14	5320-00-904-4136	81349	M24243/1B403
21	15		97403	13229E5666-3
21	15		97403	13229E5666-4
22	1	4210-00-202-7858	58536	A-A-1106
22	2	4730-00-908-3194	96906	MS35842-11
22	3		81349	M6000E00200
22	4		96906	MS24519-7
22	5	5310-01-078-5996	96906	MS35425-75
22	6	5310-00-184-8971	96906	MS35338-103
22	7	5310-00-187-2413	88044	AN961-616T
22	8	5310-00-584-7995	96906	MS16203-27
22	9	5940-00-113-8190	96906	MS25036-122
22	10		19099	13229E5715-32
22	11	5310-00-022-8847	96906	MS35333-110
22	12	5307-00-227-1741	97403	13214E1223
22	14	5320-00-904-4136	81349	M24243/1B403
22	14A	5320-00-052-1972	07707	AD45ABS
22	15		97403	13229E5666-14
22	15A		97403	13229E5666-15
22	15B		30554	13230E6531
22	15C		30554	13230E6541
22	16	5310-00-989-0908	96906	MS35691-3
22	17	5310-00-883-9417	96906	MS35338-158
22	18	5310-00-582-5677	96906	MS15795-810
22	19	5940-00-021-3321	96906	MS39347-2
23	1	5310-00-087-4652	96906	MS51922-17
23	2	5310-01-257-7590	96906	MS51412-7
23	2A		96906	MS51412-27
23	3	5305-00-068-0510	80204	B1821BH038C100N
23	4		97403	13229E9621-1
23	5		97403	13229E9621-2
23	6		17446	MGLP-R8-10
23	7		30554	13230E6568
23	8		30554	13230E6567-1

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SECTION IV

CROSS REFERENCE INDEXES  
FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
23	9		30554	13230E6564-1
23	10		30554	13230E6567-2
23	11		30554	13230E6564-2
24	1		97403	13229E5825
24	1A		97403	13229E5749-2
24	1B		30554	13230E6565
24	2	5310-00-087-4652	96906	MS51922-17
24	2A	5310-00-087-4652	96906	MS51922-17
24	2B	5310-00-245-3612	96906	MS35650-3384
24	2C	5310-00-984-7042	96906	MS35338-141
24	3	5310-01-257-7590	96906	MS51412-7
24	3A		96906	MS51412-27
24	3B	5310-00-802-4701	96906	MS15795-813
24	4	5305-00-068-0510	80204	B1821BH038C100N
24	4A	5305-00-543-4372	80204	B1821BH038C075N
24	4B	5305-00-680-4262	96906	MS35308-360
24	5	4210-00-223-4857	97403	13214E1235
24	5A	4210-00-223-4857	97403	13214E1235
24	6	5310-00-088-1251	96906	MS51922-1
24	6A	5310-00-088-1251	96906	MS51922-1
24	7		96906	MS51412-4
24	7A		96906	MS51412-4
24	8	5305-00-068-0508	80204	B1821BH025C075N
24	8A	5305-00-071-2505	80204	B1821BHO25C088N
24	9	9905-00-205-2795	96906	MS35387-1
24	10	9905-00-202-3639	96906	MS35387-2
24	11	5305-00-432-4172	96906	MS51861-37
25	1	5310-00-087-4652	96906	MS51922-17
25	2	5310-01-257-7590	96906	MS51412-7
25	3	5305-00-068-0511	80204	B1821BH038C125N
25	4		97403	13229E5817
25	5		19099	13229E5817-6
25	6		80204	B1821BH038C600N
25	7		97403	13229E5677
25	8		96906	MS271 30-CR68
25	9		97403	13212E5748
25	10		96906	MS27130-CR68
25	11	5310-00-763-8901	96906	MS51968-23
25	12		96906	MS51415-11
25	13		96906	MS51412-13
25	14		97403	13229E9629-4
25	15		97403	13229E5818
26	1	5310-00-087-4652	96906	MS51922-17
26	2	5310-00-809-8541	96906	MS27183-27
26	3	5305-00-725-2317	80204	B1821BH038C150N
26	4		97403	13229E9616-1
26	5		19099	13229E9619-1-7
26	6		97403	13229E9620-1
26	7		19099	13229E9620-1-7
26	8		97403	13229E5743-2
26	9	5305-00-638-8920	80204	B1821BH038C225N



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SECTION IV

CROSS REFERENCE INDEXES  
FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
26	10		97403	13229E5758
26	11		97403	13229E2308
27	1	5320-00-483-0558	9K475	BOM-R8-8
27	2	5320-01-140-1479	9K475	BOM-R8-10
27	3		30554	13230E6569-1
27	4		30554	13230E6569-2
27	5		17446	MGL100-R6-9
27	6		30554	13230E6527
27	7		30554	13230E6576
27	8		17446	MGLP-R8-10
27	9		30554	13230E6577
27	10		30554	13230E6526
27	11		30554	13230E6578-1
27	12		30554	13230E6578-2
27	13		17446	MGLP-R8-6
27	14		30554	13230E6571-1
27	15		30554	13230E6571-2
27	16		17446	MGLP-R8-6
27	17		30554	13230E6582-1
27	18		30554	13230E6582-2
27	19		30554	13230E6579
27	20		30554	13230E6583-1
27	21		30554	13230E6583-2
27	22		30554	13230E6580-1
27	23		30554	13230E6580-2
27	24	5310-00-984-7042	96906	MS35338-141
27	25	5310-00-802-4701	96906	MS15795-813
27	26	5975-00-984-6582	96906	MS3367-1-0
28	1	5310-00-087-4652	96906	MS51922-17
28	2	5310-01-257-7590	96906	MS51412-7
28	2		96906	MS51412-27
28	3	5305-00-725-2317	80204	B1821BHO38C150N
28	3	5305-00-068-0511	80204	B1821BH038C125N
28	3A		17446	BOM-R12-8
28	4		97403	13214E1206-1
28	4		30554	13214E1206-2
28	5	5315-00-839-5822	96906	MS24665-353
28	6	5315-01-162-0143	97403	13214E1209
28	7		96403	13214E1207
28	8	4730-00-172-0049	96906	MS15006-1
28	9	5315-00-838-4584	96906	MS 16562-66
28	10		97403	13214E1208-1
28	11		97403	13214E1211
28	12		97403	13214E1210
28	13	2590-01-167-8596	97403	13214E1212-1

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SECTION IV

**CROSS REFERENCE INDEXES  
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
29	1	5320-00-052-1972	07707	AD45ABS
29	2		30554	13230E6572
29	3	5320-00-483-0558	17446	BOM-R8-8
29	4		30554	13230E6514
29	5		30554	13230E6524
29	6		97403	13229E5824
29	6A		97403	13229E5746
29	6B		19207	12450001

## APPENDIX G ILLUSTRATED LIST OF MANUFACTURED ITEMS

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### G-1 INTRODUCTION.

This appendix includes complete instructions for making items authorized to be manufactured or fabricated at unit maintenance level and direct support maintenance level.

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

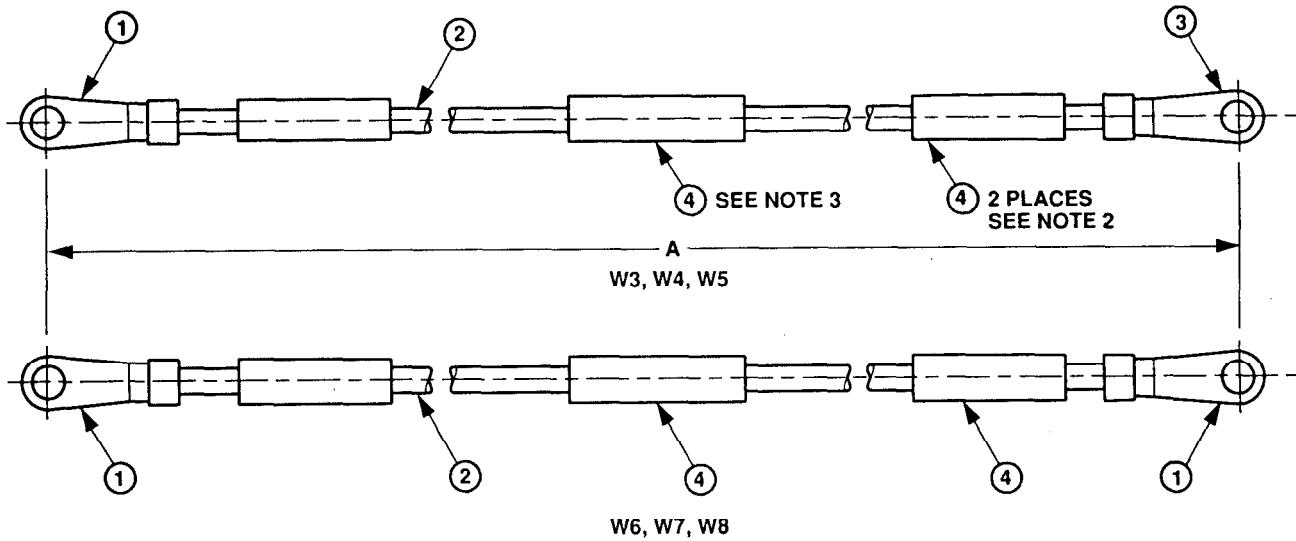
All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

### G-2 MANUFACTURED ITEMS PART NUMBER INDEX.

Part Number of Manufactured Item	Applicable Figure
13229E5828	G-1
13229E5829	G-2
13229E5831	G-3
13229E5832	G-4
13229E5836	G-5
22806-000-00	G-6
2B2B2C1F2	G-7

### G-3 GENERAL INSTRUCTIONS

The manufacture of items listed above consists of cutting wires to length specified on figures and soldering terminal lugs or connectors on appropriate wires. Use standard shop procedures in the manufacture of these items.



**NOTES:**

1. CRIMPED CONNECTIONS SHALL BE IN ACCORDANCE WITH MIL-STD-454, REQUIREMENT 19.
2. HOT STAMP LEGEND A, INDICATED IN TABULATION, USING .09-.16 HIGH BLACK CHARACTERS, IN TWO PLACES (180° APART) ON INSULATION SLEEVING, FIND NO. 4, IN ACCORDANCE WITH MIL-M-60903, WITHIN 2.50 INCHES OF TERMINAL LUG.
3. HOT STAMP LEGEND B, INDICATED IN TABULATION, AND "97403-13229E5828- "WITH APPROPRIATE DASH NUMBER 2 ON INSULATION, FIND NO. 4, IN ACCORDANCE WITH MIL-M-60903. LOCATE APPROXIMATELY AT CENTER OF LEAD.

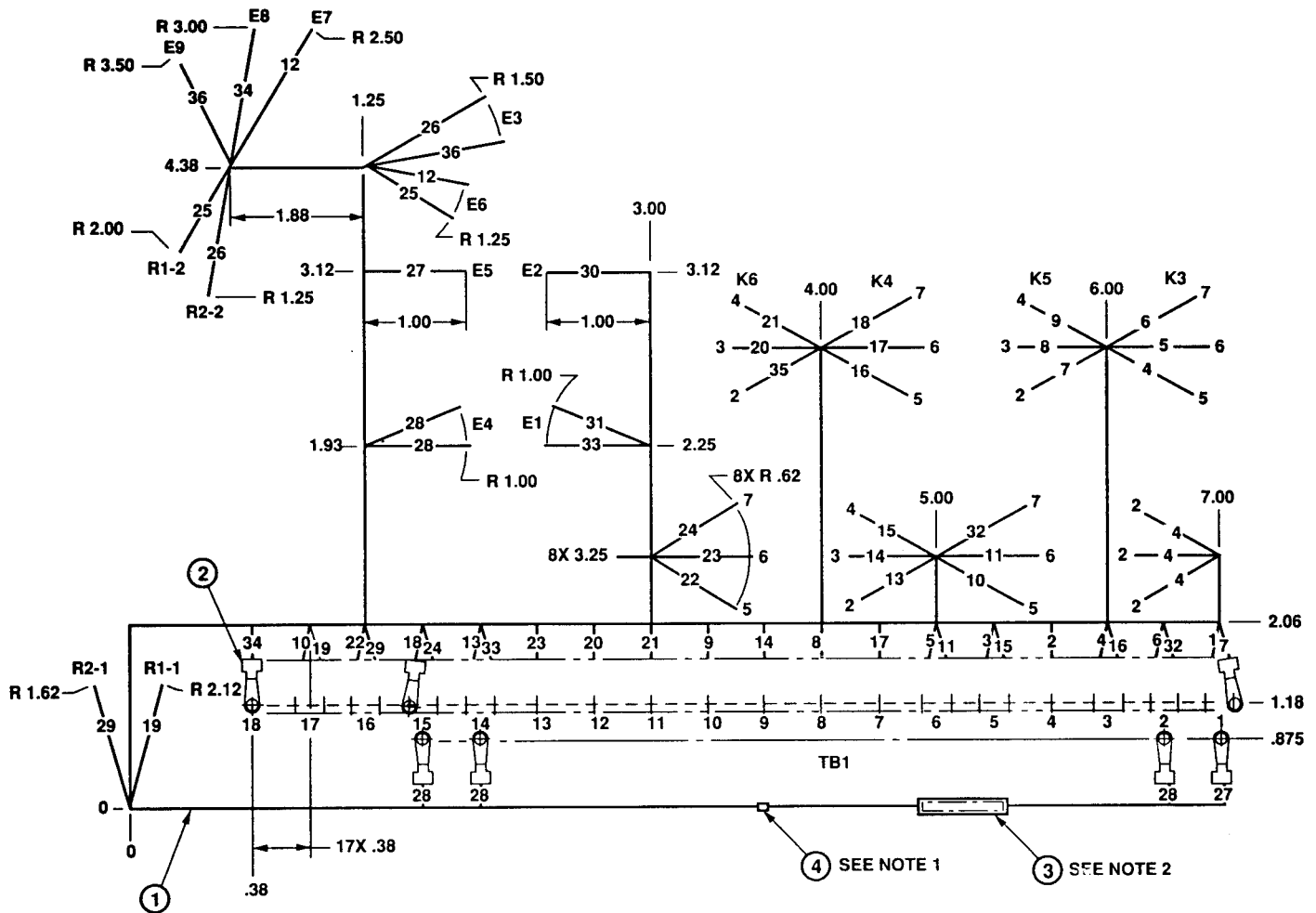
**DIMENSIONS**

DASH NO.	DIMENSION A +/- 0.50	MARKING	
		LEGEND A	LEGEND B
-1	16.00	K1-A1 - L1	W3
-2	18.00	K1-B1 - L2	W4
-3	23.00	K1-C1 - L3	W5
-4	12.00	K1-C1 - K2-C1	W6
-5	12.00	K1-B1 - K2-B1	W7
-6	12.00	K1-A1 - K2-A1	W8

**PARTS LIST**

FIND NO.	PART NO.	QUANTITY REQUIRED						DESCRIPTION	SPECIFICATION
		-1	-2	-3	-4	-5	-6		
1	MS25036-125	1	1	1	2	2	2	TERMINAL LUG, 4 AWG, .375 STUD SIZE	
2	M5086/2-4-9	AR	AR	AR	AR	AR	AR	WIRE, ELECTRICAL, 4 AWG, WHT	MIL-W-5086/2
3	MS20659-145	1	1	1	-	-	-	TERMINAL LUG, 4 AWG, .500 STUD SIZE	
4	M23053/5-108-4	3	3	3	3	3	3	INSULATION SLEEVING, HEAT SHRINKABLE, .50 ID AS SUPPLIED X 2.50 LONG	MIL-I-23053/5

Figure G-1. Electrical Leads W3, W4, W5, W6, W7, and W8.



PARTS LIST

FIND NO.	PART NO.	QUANTITY REQUIRED	DESCRIPTION	SPECIFICATION
1	M22759/16-20-9	AR	WIRE, ELECTRICAL, 20 AWG, WHITE	MIL-W-22759/16
2	MS25036-101	31	TERMINAL LUG, CRIMP STYLE, INSULATED, 22-18 TERMINAL SIZE, .138 STUD SIZE	
3	M23053/5-107-4	1	INSULATION SLEEVING, .375 ID X 1.50 L	MIL-I-23053/5
4	MS3367-4-9	AR	STRAP, TIEDOWN	
5	Sn60Pb40	AR	SOLDER	QQ-S-571
6	M23053/5-105-4	70	INSULATION SLEEVING, .187 ID X 1.50 L	MIL-I-23053/5

Figure G-2. Relay Board Harness Assembly W11 (Sheet 1 of 2).

NOTES:

1. BUNDLE WIRE HARNESS AT EACH BREAKOUT AND AT 3.00 MAX INTERVALS USING TIEDOWN STRAP, FIND NO.4.
2. HOT STAMP "97403-13229E5829" IN ACCORDANCE WITH MIL-M-60903 ON SLEEVING FIND NO. 3.
3. EACH WIRE SHALL BE IDENTIFIED BY HOT STAMPING ADDRESS DESIGNATIONS USING .09-.16 HIGH BLACK CHARACTERS ON INSULATION SLEEVING, FIND NO.6, IN ACCORDANCE WITH MIL-M-60903. ATTACH WITHIN TWO INCHES OF BOTH END TERMINATIONS. APPROPRIATE ADDRESS SHALL CONSIST OF THE FROM TERMINATION, A DOUBLE HEADED ARROW AND THE TO TERMINATION.
4. STRIP AND TIN WIRES IN ACCORDANCE WITH MIL-STD-2000, USING SOLDER, FIND NO. 5.
5. CRIMPED CONNECTIONS SHALL BE IN ACCORDANCE WITH MIL-STD-454, REQUIREMENT 19.

WIRE LIST

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	FIND NO.	TO	FIND NO.	
1	XK3-2		TB1-1	2	1
2	XK3-3		TB1-4	2	1
3	XK3-4		TB1-5	2	1
4	XK3-5		TB1-3	2	1
5	XK3-6		TB1-6	2	1
6	XK3-7		TB1-2	2	1
7	XK5-2		TB1-1	2	1
8	XK5-3		TB1-8	2	1
9	XK5-4		TB1-10	2	1
10	XK5-5		TB1-17	2	1
11	XK5-6		TB1-6	2	1
12	E-7		E-6		1
13	XK4-2		TB1-14	2	1
14	XK4-3		TB1-9	2	1
15	XK4-4		TB1-5	2	1
16	XK4-5		TB1-3	2	1
17	XK4-6		TB1-7	2	1
18	XK4-7		TB1-15	2	1

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	FIND NO.	TO	FIND NO.	
19	R1-1		TB1-17	2	1
20	XK6-3		TB1-12	2	1
21	XK6-4		TB1-11	2	1
22	XK6-5		TB1-16	2	1
23	XK6-6		TB1-13	2	1
24	XK6-7		TB1-15	2	1
25	R1-2		E-6		1
26	R2-2		E-3		1
27	E-5		TB1-1	2	1
28	E-4		TB1-2	2	1
29	R2-1		TB1-16	2	1
30	E-2		TB1-15	2	1
31	E-1		E-4		1
32	XK5-7		TB1-2	2	1
33	E-1		TB1-14	2	1
34	E-8		TB1-18	2	1
35	XK6-2		TB1-14	2	1

Figure G-2. Relay Board Harness Assembly W11 (Sheet 2).

Figure G-3. Switch Box Harness Assembly W9 (Sheet 1 of 4).

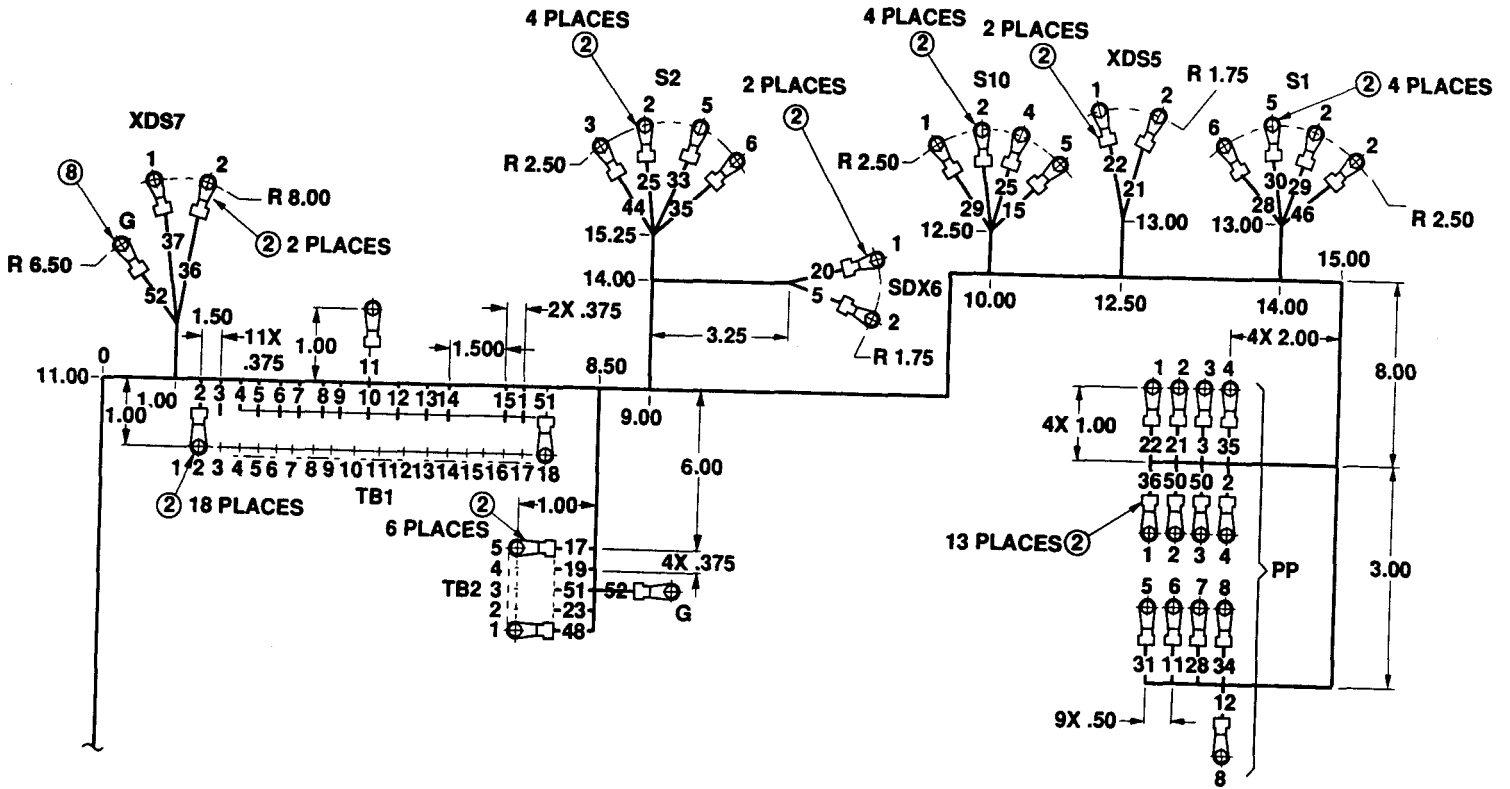
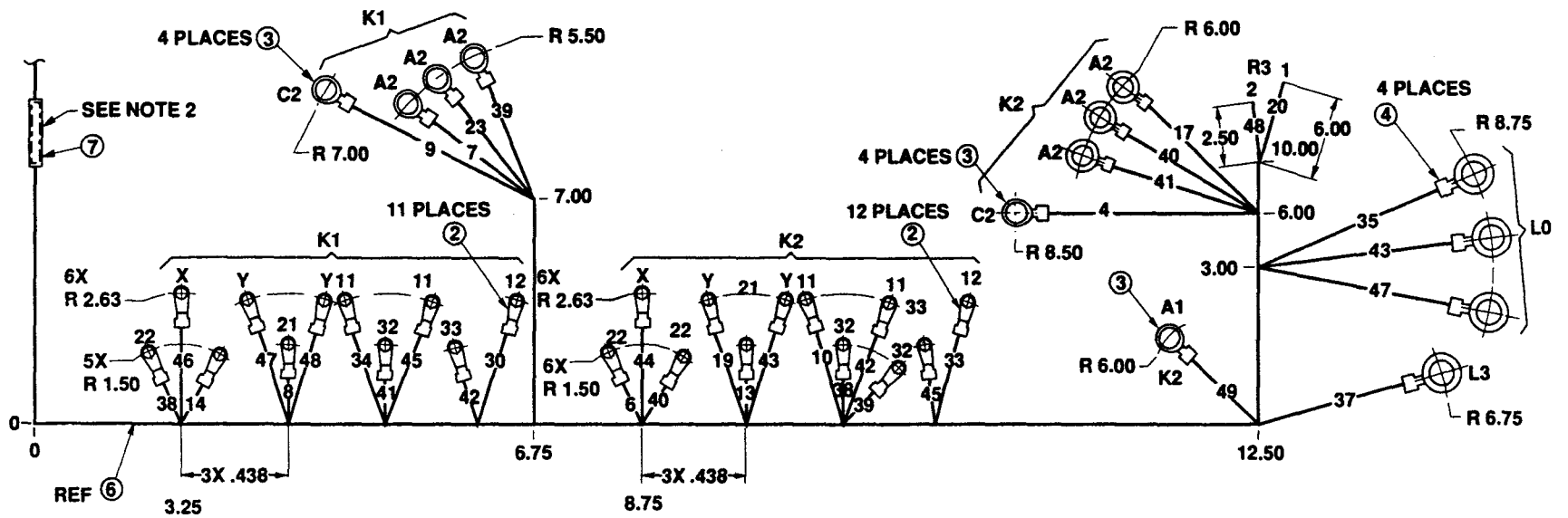


Figure G-3: Switch Box Harness Assembly W9 (Sheet 2).





## PARTS LIST

FIND NO.	PART NO.	QUANTITY REQUIRED	DESCRIPTION	SPECIFICATION
1	M22759/16-16-9	AR	WIRE, ELECTRICAL, 16 AWG, WHITE	MIL-W-22759/16
2	MS25036-106	70	TERMINAL LUG, CRIMP STYLE, INSULATED, 16-14 AWG TERMINAL SIZE, .138 STUD SIZE	
3	MS25036-110	9	TERMINAL LUG, CRIMP STYLE, INSULATED, 16-14 AWG TERMINAL SIZE, .375 STUD SIZE	
4	MS25036-155	4	TERMINAL LUG, CRIMP STYLE, INSULATED, 16-14 AWG TERMINAL SIZE, .500 STUD SIZE	
5	Sn60Pb40	AR	SOLDER	QQ-s-571
6	MS3367-4-9	AR	STRAP, TIEDOWN	
7	M23053/5-107-4	1	INSULATION SLEEVING, .375 ID X 1.50 L	MIL-I-23053/5
8	MS25036-108	1	TERMINAL LUG, CRIMP STYLE, INSULATED, 16-14 AWG TERMINAL SIZE, .190 STUD SIZE	
9	MS23053/5-105-4	104	INSULATION SLEEVING, .187 ID X L AS REQUIRED	MIL-I-23053/5

## NOTES:

1. BUNDLE WIRE HARNESS AT EACH BREAKOUT AND AT 3.00 MAX INTERVALS USING TIEDOWN STRAP, FIND NO.6.
2. HOT STAMP "97403-13229E5831" IN ACCORDANCE WITH MIL-M-60903 ON SLEEVING FIND NO. 3.
3. EACH WIRE SHALL BE IDENTIFIED BY HOT STAMPING ADDRESS DESIGNATIONS USING .09-.16 HIGH BLACK CHARACTERS ON INSULATION SLEEVING, FIND NO.9, IN ACCORDANCE WITH MIL-M-60903. ATTACH WITHIN TWO INCHES OF BOTH END TERMINATIONS. APPROPRIATE ADDRESS SHALL CONSIST OF THE FROM TERMINATION, A DOUBLE HEADED ARROW AND THE TO TERMINATION.
4. STRIP AND TIN WIRES IN ACCORDANCE WITH MIL-STD-2000, USING SOLDER, FIND NO. 5.
5. CRIMPED CONNECTIONS SHALL BE IN ACCORDANCE WITH MIL-STD-454, REQUIREMENT 19.

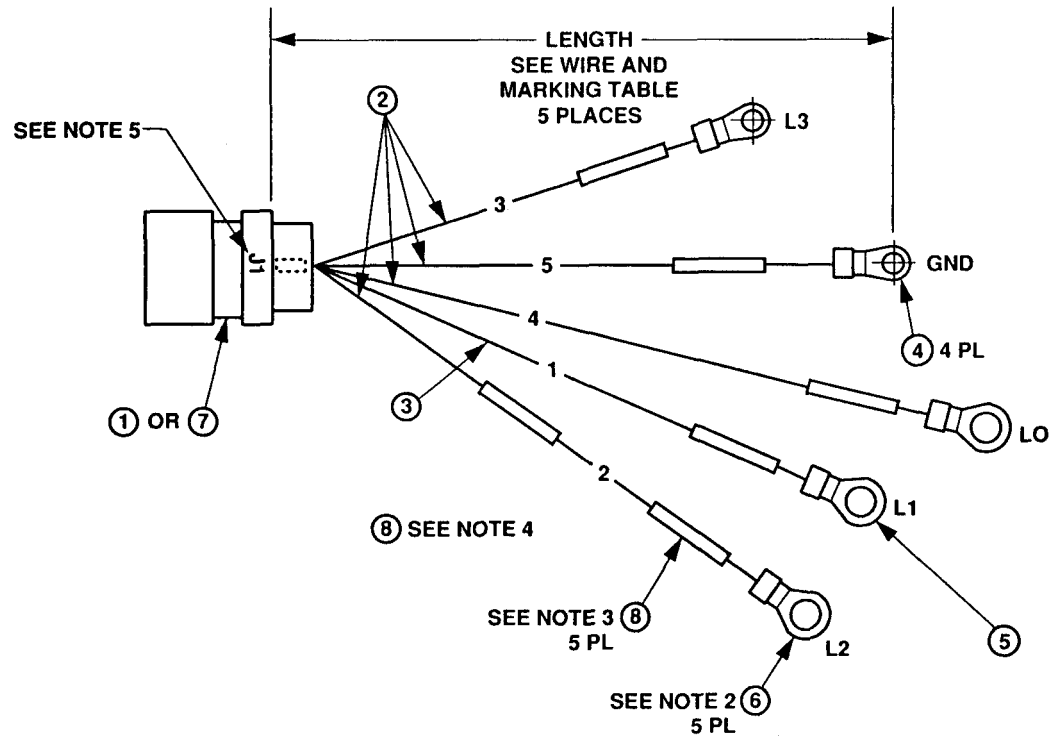
Figure G-3. Switch Box Harness Assembly W9 (Sheet 3).

**WIRE LIST**

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	FIND NO.	TO	FIND NO.	
1	TB1-17	2	S10-2	2	1
2	TB1-2	2	PP-4	2	1
3	TB1-3	2	PP-3	2	1
4	TB1-4	2	K2-C2	3	1
5	TB1-5	2	XDS6-2		1
6	TB1-6	2	K2-22	2	1
7	TB1-7	2	K1-A2	3	1
8	TB1-8	2	K1-21	2	1
9	TB1-9	2	K1-C2	3	1
10	TB1-10	2	K2-11	2	1
11	TB1-10	2	PP-6	2	1
12	TB1-11	2	PP-8	2	1
13	TB1-12	2	K2-21	2	1
14	TB1-13	2	K1-22	2	1
15	TB1-16	2	S10-5	2	1
16	-	-	-	-	-
17	K2-5	-	K2-A2	3	1
18					
19	TB2-4	2	K2-Y	2	1
20	XDS6-1	-	R3-1	-	1
21	XDS5-2	-	PP-2	2	1
22	XDS5-1	-	PP-2	2	1
23	TB2-2	2	K1-A2	3	1
24	-	-	-	-	-
25	S2-2	2	S10-4	2	1
26	-	-	-	-	-

WIRE NO.	TERMINATION		TERMINATION		WIRE FIND NO.
	FROM	FIND NO.	TO	FIND NO.	
27	-	-	-	-	-
28	S1-6	2	PP-7	2	1
29	S1-2	2	S10-1	2	1
30	S1-5	2	K1-12	2	1
31	S2-6	2	PP-5	2	1
32	-	-	-	-	-
33	S2-5	2	K2-12	2	1
34	K1-11	2	PP-8	2	1
35	PP-4	2	L0	4	1
36	XDS7-2	-	PP-1	2	1
37	XDS7-1	-	L3	2	1
38	K1-22	2	K2-32	2	1
39	K2-32	2	K1-A2	3	1
40	K2-22	2	K2-A2	3	1
41	K1-32	2	K2-A2	3	1
42	K1-33	2	K2-11	2	1
43	K2-Y	2	L0	4	1
44	K2-X	2	S2-3	2	1
45	K2-33	2	K1-11	2	1
46	K1-X	2	S1-3	2	1
47	K1-Y	2	L0	4	1
48	K1-Y	2	TB2-1	2	1
49	K2-A1	3	R3-2	-	1
50	PP-2	2	PP-3	2	1
51	TB1-18	2	TB2-3	2	1
62	G	8	TB2-3	2	1

Figure G-3. Switch Box Harness Assembly W9 (Sheet 4).



NOTES:

1. CRIMP CONNECTIONS SHALL BE IN ACCORDANCE WITH MIL-E-45782.
2. INSTALL INSULATION SLEEVING, FIND NO. 6, OVER TERMINALS, FIND NO. 4 AND 5, AND HEAT SHRINK TO A FIRM FIT.
3. HOT STAMP EACH WIRE, WITHIN 2.50 +/- .12 OF TERMINAL, WITH MARKINGS SPECIFIED IN TABULATION. MARKINGS SHALL BE IN ACCORDANCE WITH MIL-M-60903, ON SLEEVING, FIND NO. 8.
4. HOT STAMP "W10" AND "97403-13229E5832-" WITH APPROPRIATE DASH NO. IN ACCORDANCE WITH MIL-M-60903, ON SLEEVING, FIND NO. 8. APPLY SINGLE MARKING APPROXIMATELY CENTERED ON ANY ONE WIRE.
5. MARK REFERENCE DESIGNATION IN .12 MIN. HIGH CHARACTERS IN ACCORDANCE WITH MIL-STD-130, METHOD OPTIONAL.

Figure G-4. Output Connector Harness Assembly W10 (Sheet 1 of 2).

*PARTS LIST*

FIND NO.	PART NO.	QUANTITY REQUIRED		DESCRIPTION	SPECIFICATION
		-1	-2		
1	MS90555C32413S	1	-	CONNECTOR, RECEPTACLE ELECTRICAL	
2	M5086/2-4-9	AR	AR	WIRE, ELECTRICAL, 4 AWG	MIL-W-5086/2
3	M5086/2-6-9	AR	AR	WIRE, ELECTRICAL, 6 AWG	MIL-W-5086/2
4	MS20659-145	4	4	TERMINAL, 4 AWG, .50 STUD SIZE	
5	MS20659-143	1	1	<b>TERMINAL, 6 AWG, .50 STUD SIZE</b>	
6	M23053/5-108-9	5	5	INSULATION SLEEVING, HEAT SHRINKABLE, .50 MIN ID AS SUPPLIED, 1.00 L	MIL-I-23053/5
7	MS90555C32413SY	1	-	CONNECTOR, RECEPTACLE ELECTRICAL	
8	M23053/5-108-4	6	6	INSULATION SLEEVING, HEAT SHRINKABLE, .50 MIN ID AS SUPPLIED, L AS REQUIRED	

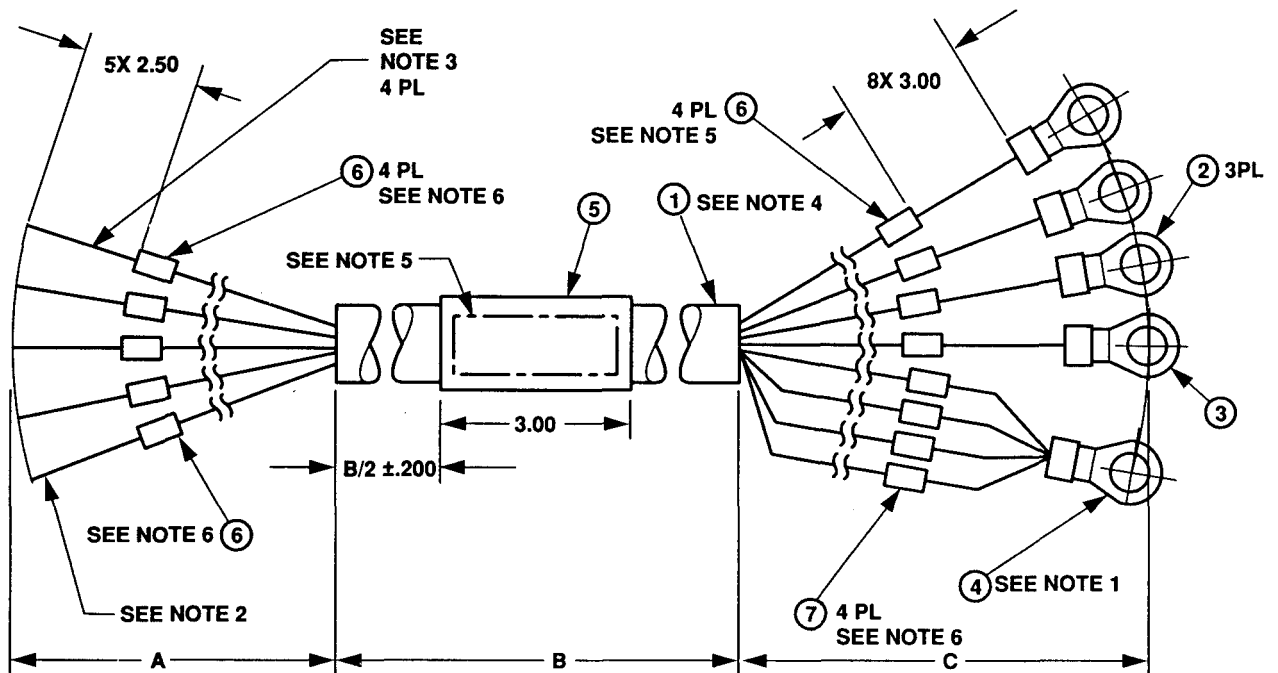
*WIRING AND MARKING TABLE*

WIRE NO.	FROM	MARKING	LENGTH
			+ .50 - .00
1	J1-A	L1	37.38
2	J1-B	L2	40.00
3	J1-C	L3	42.62
4	J1-N	L0	45.26
6	J1-G	GND	50.00

*APPLICATION CODE*

DASH NO.	APPLICATION
-1	FOR 60 Hz SYSTEMS
-2	FOR 400 Hz SYSTEMS

Figure G-4. Output Connector Harness Assembly W10 (Sheet 2).



**PARTS LIST**

FIND NO.	PART NO.	QUANTITY REQUIRED	DESCRIPTION	SPECIFICATION
1	CO-04HDE	AR	CABLE, POWER	MIL-C-3432
2	MS25036-125	3	TERMINAL LUG, 4 AWG, .375 STUD SIZE	
3	MS20659-145	1	TERMINAL LUG, 4 AWG, .500 STUD SIZE	
4	MS20659-143	1	TERMINAL LUG, 6 AWG, .500 STUD SIZE	
5	M23953/5-111-0	1	INSULATION SLEEVING, HEAT SHRINKABLE, BLK	MIL-I-23053/5
6	M23953/5-107-9	9	INSULATION SLEEVING, HEAT SHRINKABLE, WHT	MIL-I-23053/5
7	M23953/5-105-9	4	INSULATION SLEEVING, HEAT SHRINKABLE, WHT	MIL-I-23053/5
8	Sn60Pb40	AR	SOLDER	QQ-S-571

Figure G-5. Cable Assembly W1 and W2 (Sheet 1 of 2).

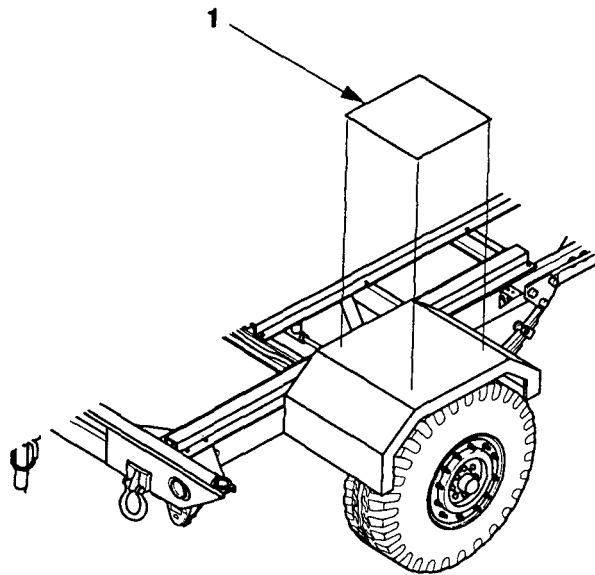
NOTES:

1. REMOVE BRAID FROM FOUR GROUND WIRES (12 AWG). TWIST TOGETHER AND INSTALL TERMINAL LUG, FIND NO. 4, AS SHOWN. TERMINAL SHALL BE INSTALLED IN ACCORDANCE WITH MIL-STD-454, REQUIREMENT 19.
2. AT PIGTAIL END OF CABLE, THE FOUR 12 AWG GROUNDING CONDUCTORS SHALL BE TWISTED TOGETHER, STARTING AT THE JACKET. CONDUCTORS SHALL BE SOLDER COATED FOR A LENGTH OF .25 FROM END USING SOLDER, FIND NO. 8.
3. AT PIGTAIL END OF CABLE, EACH INSULATED CONDUCTOR SHALL BE STRIPPED 1.25 FROM END AND HAVE THEIR INDIVIDUAL STRANDS TWISTED TOGETHER. SOLDER COAT FOR A LENGTH OF .12 FROM END USING SOLDER, FIND NO. 8.
4. INSULATION COLORS, IN ACCORDANCE WITH WIRE LIST, SHALL BE INCLUDED AS PART OF THE ORDERING DATA.
5. HOT STAMP "97403-13229F5836-" WITH APPROPRIATE DASH NO., AND "W-" IN .23-.39 HIGH CHARACTERS ON INSULATION SLEEVING, FIND NO. 5, IN ACCORDANCE WITH MIL-M-60903.
6. HOT STAMP WITH TERMINAL DESIGNATION. AS SHOWN ON WIRE LIST. USING .12-.22 HIGH CHARACTERS, IN TWO PLACES APPROXIMATELY 180° APART ON INSULATION SLEEVING, FIND NO. 6 AND 7, IN ACCORDANCE WITH MIL-M-60903.

WIRE LIST - AN/MJQ-37 AND AN/MJQ-38 -60 AND 400 Hz

DASH NO.	WIRE	TERMINATION		TERMINATION		WIRE FIND NO.	DIMENSION			CABLE REF DES
		FROM	FIND NO.	TO	FIND NO.		A	B	c	
-5	BLACK	G1-L1	-	K1-A2	2	1	23.50	44.00	4.00	W1
	RED	G1-L2	-	K1-B2	2	1	25.50	44.00	4.00	
	BLUE	G1-L3	-	K1-C2	2	1	27.50	44.00	4.00	
	WHITE	G1-L0	-	L0	3	1	21.50	44.00	22.50	
	GREEN	G1-GND	-	GND	4	1	24.50	44.00	19.50	
	GREEN	G1-GND	-	GND	4	1	24.50	44.00	19.50	
	GREEN	G1-GND	-	GND	4	1	24.50	44.00	19.50	
	GREEN	G1-GND	-	GND	4	1	24.50	44.00	19.50	
-6	BLACK	G2-L1	-	K2-A2	2	1	14.00	37.00	4.00	W2
	RED	G2-L2	-	K2-B2	2	1	12.00	37.00	4.00	
	BLUE	G2-L3	-	K2-C2	2	1	11.00	37.00	4.00	
	WHITE	G2-L0	-	L0	3	1	11.00	37.00	17.00	
	GREEN	G2-GND	-	GND	4	1	9.00	37.00	14.00	
	GREEN	G2-GND	-	GND	4	1	9.00	37.00	14.00	
	GREEN	G2-GND	-	GND	4	1	9.00	37.00	14.00	
	GREEN	G2-GND	-	GND	4	1	9.00	37.00	14.00	

Figure G-5. Cable Assembly W1 and W2 (Sheet 2).



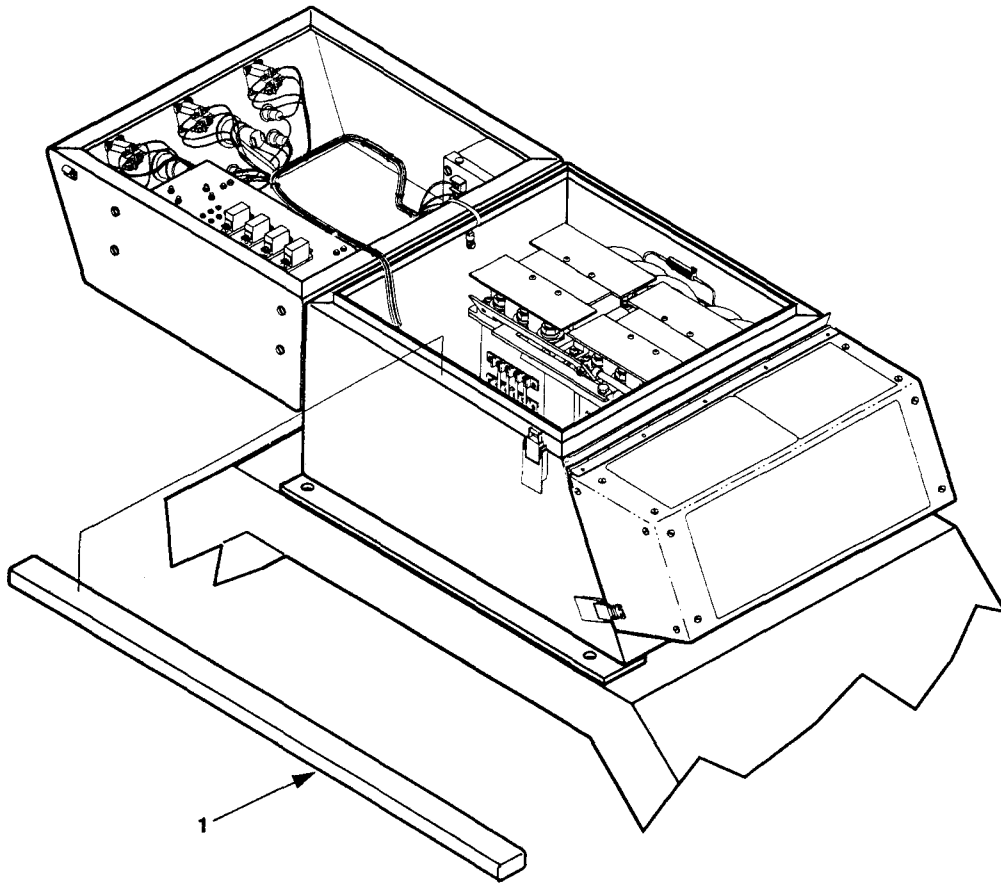
NOTES:

1. Remove old deck covering and clean area.
2. Cut deck covering material (1) to desired length.
3. Remove protective cover from pressure-sensitive adhesive backing and apply to area to be covered.

**PARTS LIST**

FIND NO.	PART NO.	QUANTITY REQUIRED	DESCRIPTION	SPECIFICATION
1	22806-000-00	AR	Deck Covering, Lightweight, Nonslip	MIL-D-17951E

Figure G-6. Deck Covering.



**NOTES:**

1. Remove damaged gasket material from switch box and clean thoroughly.
2. Measure switch box for required length and cut rubber gasket material (1).
3. Apply Type II adhesive (item 6, appendix E) to switch box and install gasket material.

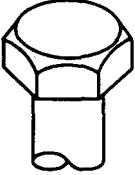
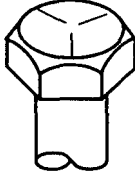


**PARTS LIST**

FIND NO.	PART NO.	QUANTITY REQUIRED	DESCRIPTION	SPECIFICATION
1	2B2B2C1F2	AR	Strip, Rubber	ASTM D1056

Figure G-7. Switch Box Gasket.



## APPENDIX H TORQUE LIMITS

SAE Grade Number	1 or 2	5	6 or 7	8
Quality of Material	Indeterminate	Minimum Commercial	Medium Commercial	Best Commercial
Capscrew Head Markings				
<b>NOTE</b> Head marking may vary with different manufacturers.				
Capscrew Body Size (Inches) - (Thread)	Torque Ft Lb (N.m)	Torque Ft Lb (N.m)	Torque Ft Lb (N.m)	Torque Ft Lb (N.m)
1/4      20	5      (7)	8      (11)	10     (14)	12     (16)
	6      (8)	10     (14)		14     (19)
5/16     18	11     (15)	17     (23)	19     (26)	24     (33)
	13     (18)	19     (26)		27     (37)
3/8      16	18     (24)	31     (42)	34     (46)	44     (60)
	20     (27)	35     (47)		49     (66)
7/16     14	28     (38)	49     (66)	55     (75)	70     (95)
	30     (41)	55     (75)		78     (106)
1/2      13	39     (53)	75     (102)	85     (115)	105    (142)
	41     (56)	85     (115)		120    (163)
9/16     12	51     (69)	110    (149)	120    (163)	155    (210)
	55     (75)	120    (163)		170    (231)
5/8      11	83     (113)	150    (203)	167    (226)	210    (285)
	95     (129)	170    (231)		240    (325)
3/4      10	105    (142)	270    (366)	280    (380)	375    (508)
	115    (156)	295    (400)		420    (569)
7/8      9	160    (217)	395    (536)	440    (597)	605    (820)
	175    (237)	435    (590)		675    (915)
1        8	235    (319)	590    (800)	660    (895)	910    (1234)
	250    (339)	660    (895)		990    (1342)

**CAUTION**

If replacement capscrews are of a higher grade than originally supplied, use torque specifications for that placement. This will prevent equipment damage due to over torquing.

**NOTE**

Always use the torque values listed above when specific torque values are not available.

**APPENDIX I  
MANDATORY REPLACEMENT PARTS**

**Section I. INTRODUCTION**

**D-1 SCOPE.**

This appendix lists all parts used on the high mobility trailer that must be discarded when removed during maintenance and installed new.

**D-2 GENERAL.**

All mandatory replacement parts are listed by Item Number, Nomenclature, and Part Number.

<b>SECTION II. MANDATORY REPLACEMENT PARTS LIST.</b>		
(1) Item Number	(2)  Nomenclature	(3)  Part Number
1	Washer, Lock (5/16)	MS35338-140
2	Washer, Lock (3/8)	MS35338-141
3	Rivet	AD45ABS
4	Washer, Lock (1/4)	MS35338-158
5	Washer, Lock (1/2)	MS35338-143
6	Rivet, Steel Shank (1/4 .350-.625)	MGLP-R8-10
7	Rivet, Steel Shank (1/4 .080-.375)	MGLP-R8-6
8	Rivet, Blind (1/4 .470-.531)	BOM-R8-8
9	Rivet, Blind (1/4 .595-.656)	BOM-R8- 10
10	Rivet, Blind (3/16 .305-.500)	MGL100-R6-9
11	Rivet, Blind (3/8 .438-.562)	BOM-R12-8
12	Strap, Tiedown, Electrical Component	MS-3367-1-0
13	Washer, Lock (3/8)	MS35338-141

GLOSSARY

Section I. ABBREVIATIONS

COMMON ABBREVIATIONS.

The common abbreviations used in this manual are in accordance with MIL-STD-12D.

SPECIAL OR UNIQUE ABBREVIATIONS.

The following are abbreviations and symbols that are used in this manual and not listed in MILSTD-12D.

AAL.....	additional authorization list
BII.....	basic issue item
BOI.....	basis of issue
OC.....	degrees Celsius
CAGE.....	commercial and government entity
CAGEC.....	commercial and government entity code
conex.....	container express
COEI.....	components of end item
CPC.....	corrosion prevention and control
CTA.....	common table of allowance
CUCV.....	commercial utility cargo vehicle
DOD.....	Department of Defense
EIR.....	equipment improvement recommendation
°F.....	degrees Fahrenheit
HMMWV.....	high mobility multipurpose wheeled vehicle
HMT.....	high mobility trailer
Hz.....	hertz
JTA.....	joint table of allowances
kg.....	kilogram
kPa.....	kilopascals
kph.....	kilometers per hour
kW.....	kilowatt
lbf ft.....	foot pound-force
m.....	meter (metric measure)
MAC.....	maintenance allocation chart
MTOE.....	modification table of organization and equipment
NIIN.....	national item identification number
N.m.....	newton meter
NSNs.....	national stock numbers
PMCS.....	preventive maintenance checks and services
PPR.....	permissive paralleling relay
RPSTL.....	repair parts and special tools list
SMR.....	source, maintenance, and recoverability
TAMMS.....	The Army Maintenance Management System
TDA.....	table of distribution and allowances
TMDE.....	test, measurement, and diagnostic equipment
UOC.....	usable on code

**Section II. DEFINITION OF UNUSUAL TERMS**

**UNUSUAL TERMS.**

The following are terms that are used in this manual and not listed in the Army dictionary (AR 310-25).

None.

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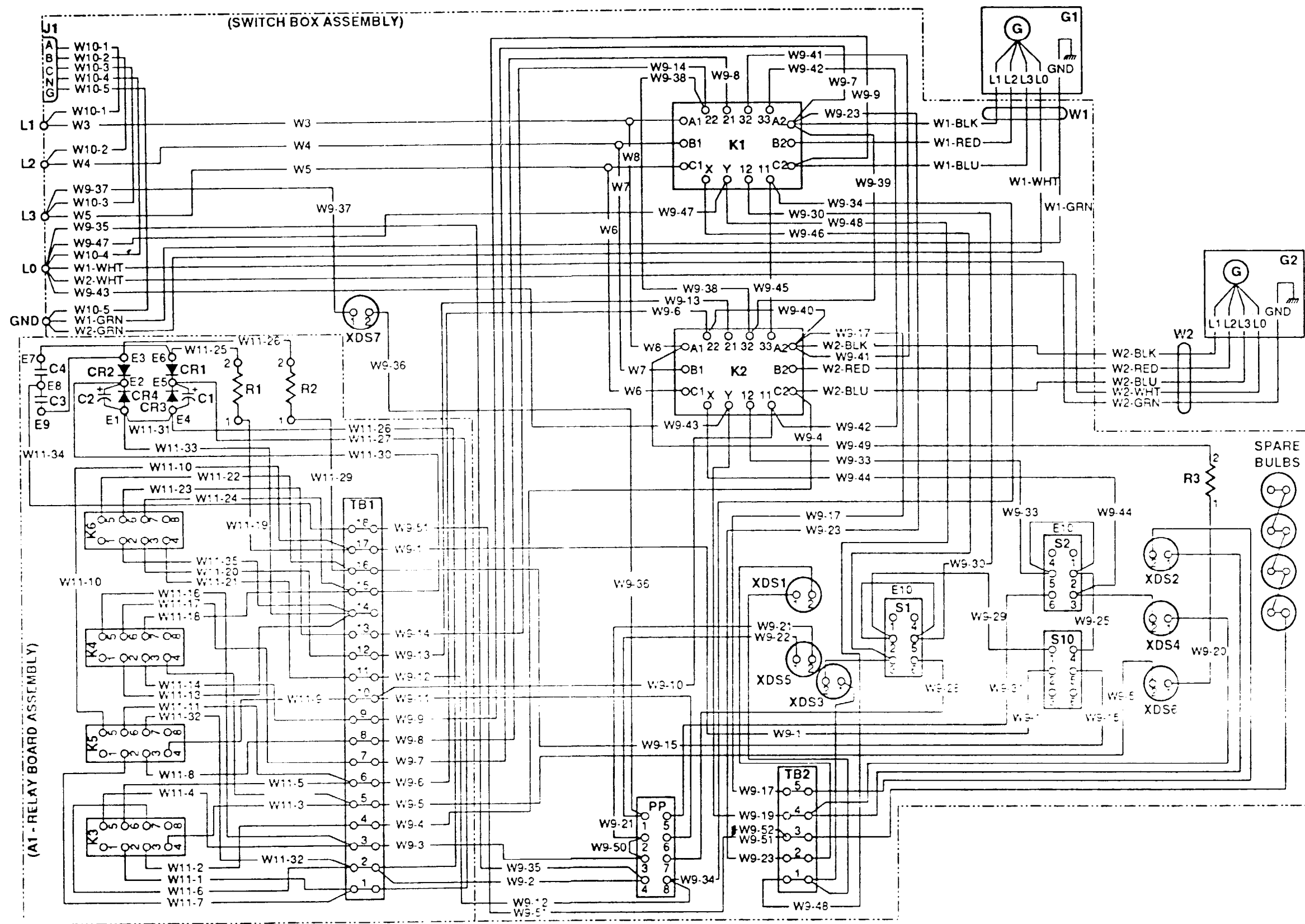
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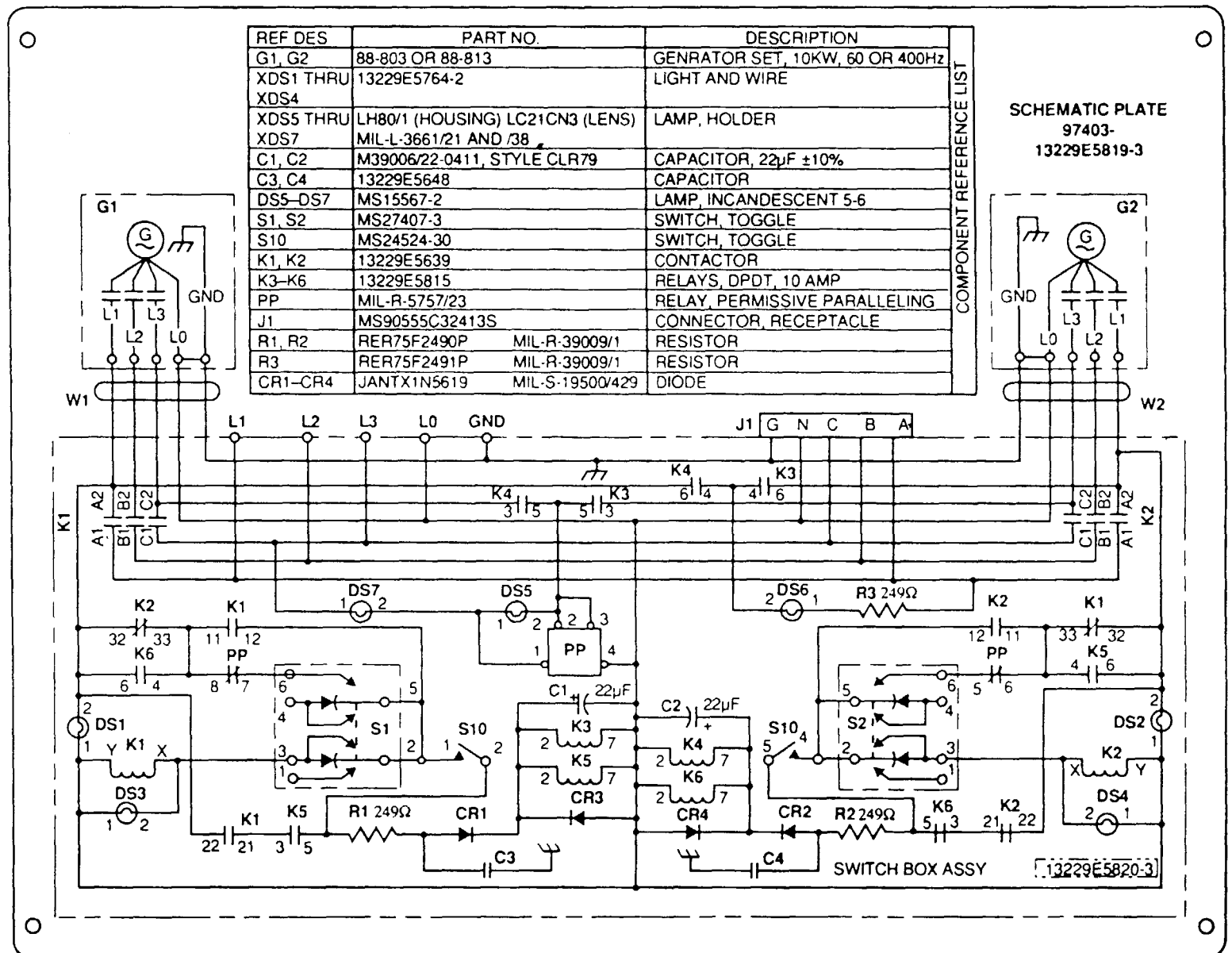
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COMPONENT REFERENCE LIST		
REF DES	PART NO.	DESCRIPTION
XDS1-XDS4	13229E5764-2	LIGHT AND WIRE
XDS5-XDS7	LH80/1 (HOUSING) LC22CN3 (LENS) MIL-L-3661/38 A/D/22	LAMP HOLDER
DS5-DS7	6E6DC (120) A-A-50452	LAMP, INCANDESCENT
E1-E9	M55155/199G03	TERMINAL, STUD
E10	STYLE TBJA M:L-T-55164/28	BUS CONTACTOR
K1, K2	13229E5639	CONTACTOR
K3, K4 K5, K6	M:757/23-003 M:L-R-5757/23	RELAY, DPDT
PP	13229E5653	RELAY, PERMISSIVE, PARALLELING
S1, S2	MS27407-3	SWITCH, TOGGLE
S10	MS24524-30	SWITCH, TOGGLE
G1, G2	SEE TABULATION	SEE TABULATION
L0-L3, GND	MS39347-4	TERMINAL POST, SERVICE AND GROUND
J1	SEE TABULATION	CONNECTOR, RECEPTACLE
R1, R2	RFR75F2490P M:L-R-39009/1	RESISTOR
R3	RFR75F2491P M:L-R-39009/1	RESISTOR
CR1, CR2, CR3, CR4	JANTX1N55/9 M:L-S-19500 429	DIODE
XK3-XK6	13229E5656	SOCKET RELAY
W1	SEE TABULATION	CABLE ASSEMBLY
W2	SEE TABULATION	CABLE ASSEMBLY
W3	13229E5828-1	LEAD, ELECTRICAL
W4	13229E5828-2	LEAD, ELECTRICAL
W5	13229E5828-3	LEAD, ELECTRICAL
W6, W8	13229E5672	JUMPER, ELECTRICAL
W7	13229E5656	JUMPER, ELECTRICAL
W9	13229E5639	HARNESS ASSEMBLY, SWITCH-BOX
W10	SEE TABULATION	HARNESS ASSEMBLY, OUTPUT CONNECTOR
W11	13229E5829	HARNESS ASSEMBLY, RELAY BOARD
A1	13229E5830	RELAY BOARD ASSEMBLY
TB1	3/TB18B M:L-T-55164/1	TERMINAL BOARD
TB2	3/TB5E M:L-T-55164/1	TERMINAL BOARD
C1, C2	M39006/22-04/1 M:L-C-39006/22	CAPACITOR
C3, C4	13229E5648	CAPACITOR

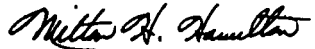
Figure FO-1. Power Plant Wiring Diagram



FO-2. Power Plant Schematic

By Order of the Secretary of the Army:

Official:



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

05590

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TM 9-6115-660-13&P

PUBLICATION DATE

15 Oct 1993

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BE EXACT... PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.
6	2-1 a		
B1		4-3	
125	line 20		

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

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

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

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

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# The Metric System and Equivalents

## Linear Measure

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

## Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce  
 1 deciliter = 10 centiliters = 3.38 fl. ounces  
 1 liter = 10 deciliters = 33.81 fl. ounces  
 1 dekaliter = 10 liters = 2.64 gallons  
 1 hectoliter = 10 dekaliters = 26.42 gallons  
 1 kiloliter = 10 hectoliters = 264.28 gallons

## 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

## Square Measure

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

## Cubic Measure

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

# Approximate Conversion Factors

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

# Temperature (Exact)

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

