

# **\*TM 11-6110-251-13&P**

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## **TECHNICAL MANUAL**

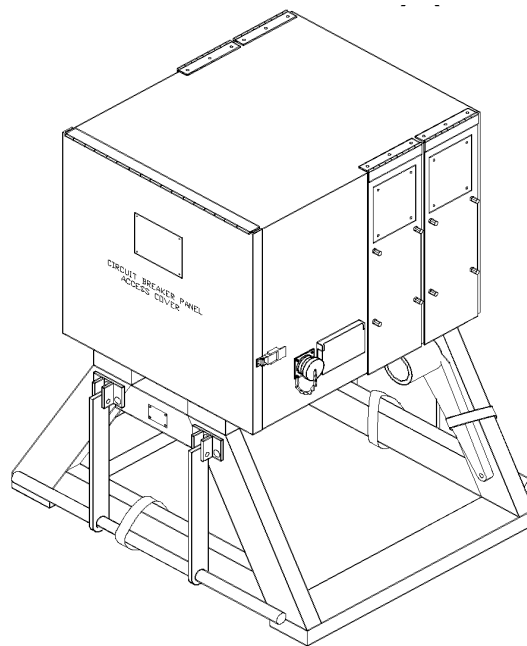
### **OPERATOR AND FIELD MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST**

#### **FOR**

### **POWER DISTRIBUTION BOX**

**PP-8440/ASM (NSN 6110-01-423-8822) (EIC N/A)**

**PP-8440A/ASM (NSN 6110-01-550-9613) (EIC N/A)**



\*TM 11-6110-251-13&P dated 15 April 2014 superseded TM 11-6110-251-13&P dated 1 October 2003, including all changes.

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**HEADQUARTERS, DEPARTMENT OF THE ARMY**  
**15 JUNE 2014**



## WARNING SUMMARY

### FIRST AID

For First Aid information, refer to FM 4-25.11.



**5**

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

**1**

DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

**2**

IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

**3**

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

**4**

SEND FOR HELP AS SOON AS POSSIBLE

**5**

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

## **WARNING SUMMARY – CONTINUED**

### **WARNING AND CAUTION STATEMENTS**

Warning and Caution statements have been strategically placed throughout this text prior to operating procedures, practices, or conditions considered essential to the protection of personnel (WARNING) or equipment and property (CAUTION).

A WARNING or CAUTION will apply each time the related step is repeated. Prior to starting any task the WARNINGS or CAUTIONS included in the text for that task must be reviewed and understood. Refer to the materials list at the beginning of the appropriate manual section for materials used during maintenance of this equipment. This warning summary contains the WARNINGS included in the manual.

### **WARNING**

High voltage is used in the operation of this equipment. DEATH ON CONTACT may result if personnel fail to observe safety precautions.

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

### **WARNING**

When possible, shut off power supply to equipment before beginning work on equipment. Take particular care to ground every capacitor that could potentially store a dangerous electrical charge. Turn off power when working inside equipment. Always ground every part of equipment before touching it.

### **WARNING**

Be careful to not contact high-voltage connections or 115 VAC input connections when installing or operating equipment. DEATH or SEVERE injury may result.

### **WARNING**

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

### **WARNING**

Do not be misled by the term "low voltage." Under adverse conditions, potentials as low as 50 volts may cause death.

### **WARNING**

The PP-8440/ASM is designed for use with the following Electronic Shops ONLY: AN/ASM-146( ), AN/ASM-147( ), AN/ASM-189( ) and the AN/ASM-190( ). Attempting to operate the Power Distribution Box on unauthorized systems is forbidden. Improper connection and use of this commodity can result in DEATH or SERIOUS INJURY.

### **WARNING**

The PP-8440A/ASM is designed as a stand-alone piece of equipment for use with various types of systems. Follow applicable procedures for the particular type system being connected to the PDB. Improper connection and use of this commodity can result in DEATH or SERIOUS INJURY.

## **WARNING SUMMARY – CONTINUED**

### **WARNING**

PP-8440/ASM Circuits No. 1 and No. 2 outputs are designed to be connected to the AN/ASM-189 ( ) van inputs only. Never connect any other shelter to Circuit No. 1 or Circuit No. 2. Improper connection and use of this commodity can result in DEATH or SERIOUS INJURY.

### **WARNING**

High voltage is present in this equipment. Do not perform hook-up procedures with PDB connected to power source. To prevent SEVERE INJURY or DEATH, ensure circuit breakers are set to OFF.

### **WARNING**

High voltage is present in this equipment. Your PDB supports equipment using 120/208 VAC. Do not perform PMCS with the power connected. DEATH or SERIOUS INJURY may result.

### **WARNING**

High voltage is present in this equipment. Your PDB supports equipment using 120/208 VAC. Do not rely on color coding. The insulation on the wire inside the cable jacket may vary, depending on the supplier. Wires will be color coded to designate the phases. If the wire color coding cannot be determined, notify next higher level of maintenance to perform continuity test. Perform a continuity test to verify correct phase designation IAW identified color.

### **WARNING**

High voltage is present in this equipment. Do not make continuity checks with power applied to PDB. DEATH or SERIOUS INJURY may result.

### **WARNING**

Use four people to lift and remove the stored Power Distribution Box. Improper lifting can result in injury to personnel. Use four people to lift and remove the main power cable. Improper lifting can result in injury to personnel.

### **WARNING**

Do not connect any power cables to Power Distribution Box PP-8440/ASM until the following grounding procedures are performed. SERIOUS INJURY or DEATH may result.

### **WARNING**

Do not attempt to ground equipment with generator or commercial power source connected to PDB. Ensure PDB is disconnected from source power when performing grounding procedures. Ensure circuit breakers are set to OFF.

### **WARNING**

Never attach ground to any pipe or container used for gasoline or other flammable gasses or liquids. DEATH or SERIOUS INJURY may result.

### **WARNING**

During thunderstorms, lighting flashover or arcing can occur between two or more unconnected or poorly connected adjacent metal structures. Flashover can cause LETHAL VOLTAGE on the ground in vicinity of these objects.

## **WARNING SUMMARY – CONTINUED**

### **WARNING**

- Before applying power, be sure all circuit breakers at the PDB are set to OFF.
- Ensure the PDB and generator are grounded. DEATH or SEVERE INJURY may result if you do not properly ground the PDB and generator.

### **WARNING**

Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

### **WARNING**

Ground rod installation (generator and PDB) and hook-up must be completed before generator is started and before power is applied to PDB. Before operating this equipment, familiarize yourself with TB SIG 291. Failure to follow these requirements can result in INJURY or DEATH.

### **WARNING**

Connect the PDB to a power source that provides circuit breaker overload protection. The circuit breaker on the supply side MUST be rated at 250 amps, 3 phase (MAX). Never connect the PDB to a source that does not provide this circuit breaker protection. DEATH or SEVERE INJURY may result.

### **WARNING**

Connect the PDB to 60 kW or less, 120/208 VAC, 50/60 HZ Generator. Never connect the PDB to a generator rated higher. SERIOUS INJURY or DEATH may result.

### **WARNING**

Connect the PDB to a commercial power source rated at 120/208 VAC, 3 phase, 50/60 Hz. Never connect the PDB to a source rated higher. SEVERE INJURY or DEATH may result.

### **WARNING**

The PDB 50 ft. main power cable assembly weighs 250 lb. Use four people to lift and position this cable. Failure to do so may cause SEVERE INJURY to personnel.

### **WARNING**

Use only the power cable supplied with the PDB (P/N A3254554) for this connection. Connect the PDB to 60 kW or less, 120/208 VAC, 50/60 Hz generator. Never connect the PDB to a generator rated higher. SERIOUS INJURY or DEATH may result.

### **WARNING**

The commercial power source that is to be used must provide circuit breaker protection rated less than 250 amps, 3 phase (MAX). SEVERE INJURY or DEATH may result if this protection is not provided. Also, damage to the equipment can result.

### **WARNING**

Make sure commercial power source and PDB are properly grounded prior to connecting to commercial power source. SEVERE INJURY or DEATH may result.

## **WARNING SUMMARY – CONTINUED**

### **WARNING**

- If commercial power source utilizes a ganged 3-pole circuit breaker, all three poles will trip during an overload condition. Extreme caution must be exercised. SEVERE INJURY or DEATH may result.
- If commercial power source utilizes 3 separate fuses, only one or two poles may open during an overload or fault condition. Extreme caution must be exercised. SEVERE INJURY or DEATH may result.
- If fuses have opened during operation extreme caution must be exercised. SEVERE INJURY or DEATH may result.

### **WARNING**

High voltage is present in this equipment. Be careful not to contact high voltage connections when taking voltage measurements. DEATH or SERIOUS INJURY may result.

### **WARNING**

Ensure power source is OFF if not in use. Set all circuit breakers to OFF on front panel of PDB.

Ground rod installation (generator and PDB) and hook-up must be completed before generator is started and before power is applied to PDB. If not completed, do so at this time.

Ensure that your van/shelter is properly grounded IAW applicable shelter TM prior to connecting power cable.

Failure to perform these checks may result in DEATH or SERIOUS INJURY.

### **WARNING**

Ensure that your shelter is properly grounded IAW applicable shelter TM prior to connecting power cable. SEVERE INJURY or DEATH may result if shelter is not properly grounded.

### **WARNING**

Connect AN/ASM-189 ( ) van/shelters to Circuit No.'s 1 or 2 only. Connecting to other circuits will not provide enough output to properly operate users equipment or may cause DEATH or SERIOUS INJURY to personnel. If no other circuits are energized, set all PDB front panel circuit breakers to OFF. If other circuits are connected, set circuit breaker No. 1 or 2 to OFF.

### **WARNING**

Set all circuit breakers to OFF on front panel of PDB if other circuits are not being used. If other circuits are being utilized, set circuit breaker No. 4 to OFF. Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

### **WARNING**

High voltage is present in this system. Do not attempt to disconnect equipment with power source ON. DEATH or SERIOUS INJURY may result.

### **WARNING**

Lethal voltages are present in this system/equipment. Properly ground the generator set and PDB. DEATH or SEVERE INJURY may result if you do not properly ground the generator set. Observe all caution and warning plates.

## **WARNING SUMMARY – CONTINUED**

### **WARNING**

Use extreme caution when connecting equipment to the Power Distribution terminal posts. SERIOUS INJURY or DEATH may result from contact with these connections.

### **WARNING**

High voltage is present in this equipment. Do not attempt to decontaminate equipment with liquid chemicals with power applied. DEATH or SEVERE INJURY may result.

### **WARNING**

Do not use decontamination spray on personnel. DEATH or SERIOUS INJURY may result.

### **WARNING**

Ensure all front panel circuit breakers are in the OFF position and generator or source power is OFF prior to connecting or disconnecting the main power cable from or to the PDB. DEATH or SERIOUS INJURY can result.

### **WARNING**

The circuit breaker protective boot must be replaced if torn, damaged or defective. Normal operation of the PDB can become extremely hazardous without protective boots installed. SERIOUS INJURY or DEATH may result.

### **WARNING**

The terminal posts safety caps must be replaced if torn, damaged or defective. Normal operation of the PDB can become extremely hazardous without safety covers installed. SERIOUS INJURY or DEATH may result.

### **WARNING**

Take special precautions to ensure that the correct circuit breaker on front panel is set to OFF before disconnecting power cable from PDB. Be sure not to deenergize other circuits if they are being used. SERIOUS INJURY or DEATH may result.

### **WARNING**

Before operating this equipment, familiarize yourself with TB SIG 291. Failure to follow these requirements can result in INJURY or DEATH.

### **WARNING**

Do not rely on the color of the wire insulation for phase color coding. The color of the insulation on the wires inside the cable jacket may vary, depending on the supplier. Perform a continuity test to verify correct phase in accordance with identified color. Incorrect phase identification can cause a short circuit condition which may cause damage to the equipment and/or wiring, and possibly even DEATH or SEVERE INJURY.

### **WARNING**

Do not submerge cables or cable connectors in water. DEATH or SEVERE INJURY may result.



## LIST OF EFFECTIVE PAGES / WORK PACKAGES

**NOTE:** TM 11-6110-251-13&P dated 15 June 2014 superseded TM 11-6110-251-13&P dated 1 October 2003, including all changes. Zero in the "Change No." column indicates an original page or work package.

Date of issue for the original manual is:

Original 15 June 2014

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WASHINGTON, DC  
15 JUNE 2014

TECHNICAL MANUAL  
OPERATOR AND FIELD MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST  
FOR

POWER DISTRIBUTION BOX  
PP-8440/ASM (NSN 6110-01-423-8822) (EIC N/A)  
PP-8440A/ASM (NSN 6110-01-550-9613) (EIC N/A)

**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) located in the back of this manual, directly to: Commander, U.S. Army Communications-Electronics Command, ATTN: AMSEL-LCL-ECM, 6001 Combat Drive, Aberdeen Proving Ground, MD 21005-1846. You may also send in your recommended changes via electronic mail or by fax. Our fax number is 443-861-5521, DSN 848-5521. Our e-mail address is [usarmy.APG.cecom.mbx.amsel-lc-leo-pubs-chg@mail.mil](mailto:usarmy.APG.cecom.mbx.amsel-lc-leo-pubs-chg@mail.mil). Our online web address for entering and submitting DA Form 2028s is <http://edm.apg.army.mil/pubs/2028.html>. A reply will be furnished to you.

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## HOW TO USE THIS MANUAL

This manual contains operator and field maintenance instructions for the Power Distribution Box, PP-8440/ASM and PP-8440A/ASM.

### NOTE

Throughout the family of manuals, directional orientation in relation to the equipment is described from the point of view of the operator facing the operator's controls looking out over the equipment. From this perspective, the end of the equipment containing the operator's controls will be referred to as the rear.

This manual provides operating procedures, troubleshooting, maintenance, and supporting information required to operate and maintain the Power Distribution Box. Listed below are some of the features included in this TM to help locate and use the provided information.

### WORK PACKAGES

This TM has been organized using the WP format. Each chapter contains a series of WPs rather than sections and paragraphs. Each WP is designed to stand alone as a complete information module; if the user keeps the section(s) of this TM in a loose-leaf binder, the user will be able to remove just the WP needed to complete a specific task. Here are some WP features of which the user should be aware.

Each WP is numbered using a four-digit number beginning with WP 0001. WPs are numbered sequentially throughout the TM (ex. WP 0016. WP 0020. etc.). The Table of Contents lists each chapter and WP title as well as all figures and tables contained within each. Figures and tables are numbered sequentially for each WP.

The WP number is located at the top right of each page. It is also located at the bottom of the page with the WP page number included (0001-1 would be page 1 of the General Information WP (WP 0001, General Information)).

Each WP starts on a right-hand page. This is done so the user can remove a single WP from the paper TM if needed for a task. Blank pages are assigned a number, but it appears on the preceding or following page. For example, if page 0001-10 of a WP is blank, page 0001-9 will have the number 0001-9/10 blank; or if page 0001-1 of a WP is blank, page 0001-2 will have the number 0001-1 blank/2.

Each WP containing step-by-step maintenance or troubleshooting procedures will end with the words END OF TASK, and each WP ends with the statement END OF WORK PACKAGE. Think of each WP as a small, stand-alone TM.

Typographical conventions are as follows:

[Unload] indicates a soft key or a switch.

[Previous] + [Next] indicates two simultaneous key presses. [ + ] [ - ] indicates two sequential key presses.

References to equipment Data and Description Plates are printed as they appear on the equipment whenever possible.

### Warnings, Cautions and Notes Definitions

Warnings, cautions, notes, chapter titles, and paragraph headings are printed in bold type.

The following definitions apply to WARNINGS, CAUTIONS and NOTES found throughout this publication. Warning, cautions and notes provide supplemental information. Personnel must understand and apply these warnings, cautions and notes during many phases of operation and maintenance to ensure personnel safety and health and the protection of property. Portions of this information may be repeated in certain chapters of this publication for emphasis.

## HOW TO USE THIS MANUAL – CONTINUED

### WARNING

A warning identifies a clear danger to the person doing that procedure.

### CAUTION

A caution identifies a clear danger to the person doing that procedure.

### NOTE

A note highlights essential procedures, conditions, or statements or conveys important instructional data to the user.

## CHAPTER OVERVIEW

### Chapter 1 - General Information, Equipment Description and Theory of Operation

Chapter 1 provides an introduction to the Power Distribution Box. It is divided into three work packages, as follows:

**General Information.** This work package 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 list of abbreviations and acronyms is provided. Also, a nomenclature cross-reference list is provided as well as a list of abbreviations and acronyms.

**Equipment Description and Data.** This work package describes capabilities, characteristics, and features. It provides basic equipment data and shows the locations of major components. Descriptions of the major components are also provided.

**Theory of Operation.** This work package provides functional descriptions of the equipment.

### Chapter 2 - Operator Instructions

Chapter 2 provides instructions for operating the Power Distribution Box. The chapter is divided into three work packages, as follows:

**Description and Use of Operator Controls and Indicators.** This work package provides references to the applicable equipment technical manuals. Those references contain information on operator controls and indicators for the equipment.

**Operation Under Usual Conditions.** This work package contains instructions for preparing the equipment for use and operation under normal conditions. Coverage includes connection instructions and preparation instructions for movement to a new worksite.

**Operation Under Unusual Conditions.** This work package provides unusual operating procedures or references to the applicable accompanying technical manuals.

### Chapter 3 - Operator Troubleshooting Procedures

Chapter 3 covers troubleshooting procedures of the Power Distribution Box to be performed by the operator. The chapter is divided as follows:

**Operator Troubleshooting Index.** This work package provides a troubleshooting introduction and malfunction/symptom index to direct you to the appropriate troubleshooting procedure at the operator level.

**Operator Troubleshooting Procedures.** This work package provides troubleshooting procedures and corrective actions that are to be performed by the operator. It also provides references to the applicable technical manuals.

## HOW TO USE THIS MANUAL – CONTINUED

### Chapter 4 - Operator Maintenance Instructions

Chapter 4 covers maintenance procedures for the Power Distribution Box to be performed by the operator. Its purpose is to provide you with the information that you need to keep the equipment in good operating condition. The chapter is divided as follows:

**Operator PMCS Introduction.** This work package provides a detailed explanation of each table entry in the PMCS table along with applicable warnings, cautions and notes prior to starting on the PMCS procedures.

**Operator PMCS, Including Lubrication Instructions.** This work package contains detailed instructions that the operator must perform before, during, and after preventive maintenance checks and services. Coverage includes all operator PMCS for the equipment. This work package also has a section which provides references to the applicable lubrication instructions.

**Operator Maintenance Procedures.** These work packages refer the operator to the preventive maintenance checks and services required by WP 0010.

### Chapter 5 - Field Troubleshooting Procedures

Chapter 5 covers troubleshooting procedures of the Power Distribution Box to be performed by field level maintenance. The chapter is divided as follows:

**Field Troubleshooting Index.** This work package provides a troubleshooting introduction and malfunction/symptom index to direct you to the appropriate troubleshooting procedure at the field maintenance level.

**Field Troubleshooting Procedures.** This work package covers troubleshooting procedures and corrective actions that are to be performed at the field maintenance level.

### Chapter 6 - Field Maintenance Instructions

Chapter 6 provides instructions covering the Power Distribution Box maintenance that must be performed at field level. The chapter is divided as follows:

**Service Upon Receipt.** This work package contains instructions for inspecting and servicing the equipment when it is received. It includes instructions for unpacking the equipment when it is received. The instructions also include unpacking and stowing the basic issue items that accompany the Power Distribution Box. Also included are instructions on positioning the equipment for operation and connecting an external fuel source.

**Field PMCS Introduction.** This work package provides a detailed explanation of each table entry in the PMCS table along with applicable warnings, cautions and notes prior to starting on the PMCS procedures.

**Field PMCS, Including Lubrication Instructions.** This work package contains instructions covering the PMCS that must be performed at the field maintenance level. A table provides information on maintenance intervals and actions required. This work package also lists the applicable references that contain lubrication instructions for your equipment

**Field Maintenance Procedures.** These work packages list the applicable references that cover field maintenance of the equipment.

**Preparation for Storage or Shipment.** This work package provides information on short-term, intermediate-term, and long-term storage.

**Illustrated List of Manufactured Items.** These work packages provide instructions for making the items authorized to be manufactured or fabricated at the field maintenance level.

### Chapter 7 - Parts Information

This chapter contains Repair Parts and Special Tools Lists (RPSTL) needed to perform operator and field maintenance of the equipment. The chapter is divided as follows:

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## HOW TO USE THIS MANUAL – CONTINUED

**Repair Parts List.** These work packages contain illustrations and lists. The illustrations aid in identifying 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.

**National Stock Number (NSN) Index.** This work package lists all of the parts contained in Repair Parts Lists. The NSN index is in National Item Identification Number (NIIN) sequence.

**Part Number Index.** These work packages lists all of the parts contained in Repair Parts Lists. The part number index is in alphanumeric part number sequence.

### Chapter 8 - Supporting Information

The chapter is divided as follows:

**References.** This work package lists all publications referenced in the various chapters of the technical manual. The listing includes the title and document number of each publication.

**Introduction for Standard Two-Level MAC.** This work package explains what is covered in the maintenance allocation chart.

**Standard Two-Level MAC.** This work package has three sections, as follows:

**Maintenance Allocation Chart (MAC).** Table 1 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 Table 2.

Another column has entries keyed to the remarks in Table 3.

**Tool and Test Equipment Requirements.** Table 2 contains complete identification information for the items referenced in the tools and equipment column of Table 1.

**Remarks.** Table 3 provides additional information for each entry in the remarks column of Table 2.

**Components of End Item (COEI) and Basic Issue Items (BII) Lists.** This work package lists the items usually packaged separately but needed for installation and operation of the equipment. The work package has three sections, as follows:

**Introduction.** This section explains the entries in Tables 1 and 2.

**Components of End Item.** The equipment is normally shipped fully assembled, so this section is not applicable.

**Basic Issue Items.** This section contains a list of the accessories needed for installation and operation of the equipment.

**Additional Authorization List (AAL).** This work package lists additional items you are authorized for support of the equipment. This work package contains two sections, as follows:

**Introduction.** This section explains the entries in Tables 1.

**Additional Authorized Items List.** This table lists the Additional Authorized Items.

**Expendable and Durable Items List.** This work package lists expendable/durable supplies and materials needed to operate and maintain your equipment. The work package contains two sections, as follows:

**Introduction.** This section explains the entries in Tables 1.

**Expendable and Durable Items List.** The list indicates the maintenance level that needs each item and identifies the items by National Stock Number (NSN), description, and unit of measure.

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## HOW TO USE THIS MANUAL – CONTINUED

### HOW TO FIX AN EQUIPMENT MALFUNCTION

#### Determining the Cause

Finding the cause of a malfunction, troubleshooting, is the first step in fixing your equipment and returning it to operation. Follow these simple steps to determine the root of the problem:

1. Turn to the Table of Contents in this manual.
2. Locate "Troubleshooting" under the chapter that covers your level of maintenance. Turn to the page indicated.
3. For operator troubleshooting, follow the instructions in the references listed in Chapter 3.
4. For troubleshooting at the field level, find the malfunction listing in Chapter 5. Follow the instructions provided as 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 all steps before beginning.

Prepare to do the task as follows:

1. 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:**
  - a. You know what is needed
  - b. You have everything you need
  - c. You understand what to do
2. 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 Power Distribution Box parts are listed in the Repair Parts and Special Tools List (RPSTL).

#### 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:

1. **PAY ATTENTION TO WARNINGS, CAUTIONS, AND NOTES.**
2. Use the List of Abbreviations/Acronyms if you do not understand the special abbreviations or unusual terms used in this manual.
3. 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.
  - a. Tag electrical wiring before disconnecting it.
  - b. Discard used preformed packing, retainers, gaskets, cotter pins, lockwashers, and similar items. Install new parts to replace the discarded items.
  - c. Coat packing before installation, in accordance with the task instructions.
  - d. 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.

## HOW TO USE THIS MANUAL – CONTINUED

- e. Clean the assembly, subassembly, or part before inspecting it.
- f. Before installing components having mating surfaces, inspect the mating surfaces to make sure they are in serviceable condition.
- g. Hold the bolt (or screw) head with a wrench (or screwdriver) while tightening or loosening a nut on the bolt (or screw).
- h. Inspect for foreign objects after performing maintenance.

## **CHAPTER 1**

### **OPERATOR AND FIELD GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION**





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**GENERAL INFORMATION**

---

**SCOPE**

This technical manual is designed to aid in operating, testing, troubleshooting, and maintaining the PP-8440/ASM and PP-8440A/ASM Power Distribution Box assemblies, hereinafter referred to as the PDB. The PDB provides the capability to use commercial or tactical (generator) power. The PP-8440/ASM PDB is designed to be used with the following Electronic Shops: AN/ASM-146( ), AN/ASM-147( ), AN/AS-189( ) AND THE AN/ASM-190( ). Refer to Figure 1 and Figure 2 for diagrams of the typical field deployment of each PDB.

**WARNING**

The PP-8440/ASM is designed for use with the following Electronic Shops ONLY: AN/ASM-146( ), AN/ASM-147( ), AN/ASM-189( ) and the AN/ASM-190( ). Attempting to operate the Power Distribution Box on unauthorized systems is forbidden. Improper connection and use of this commodity can result in DEATH or SERIOUS INJURY.

**WARNING**

The PP-8440A/ASM is designed as a stand-alone piece of equipment for use with various types of systems. Follow applicable procedures for the particular type system being connected to the PDB. Improper connection and use of this commodity can result in DEATH or SERIOUS INJURY.

In addition to describing operating instructions, operator and field maintenance instructions, this manual contains a Repair Parts and Special Tools List (RPSTL) for the PP-8440/ASM and PP-8440A/ASM PDB. The RPSTL is contained in Chapter 7.

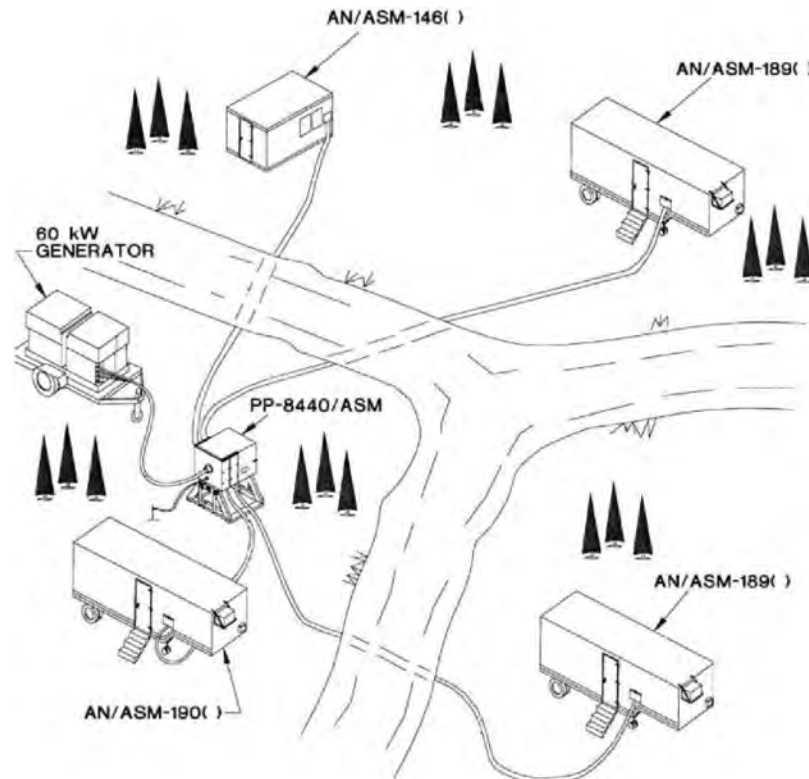
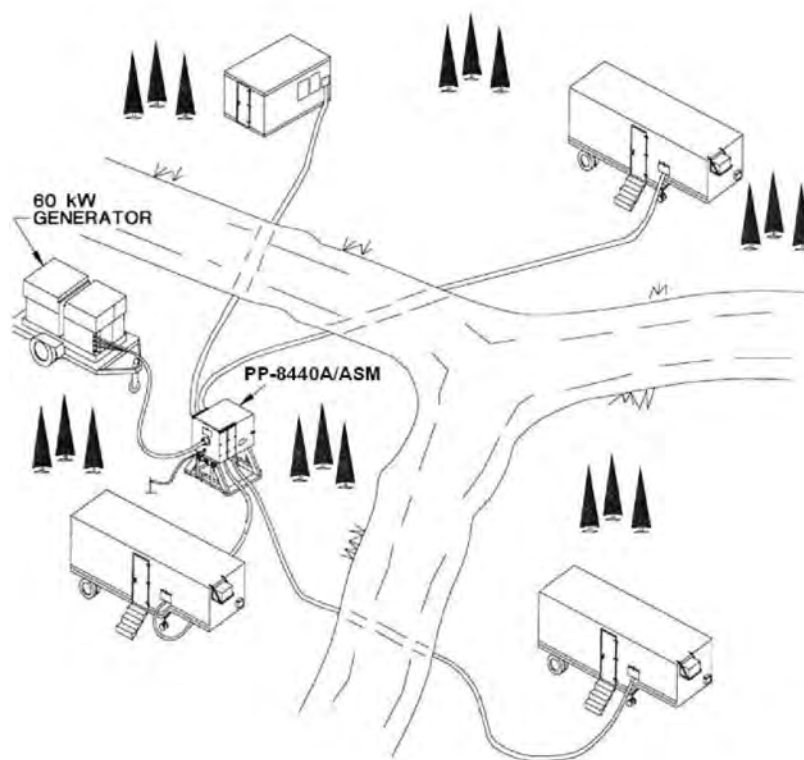


Figure 1. PP-8440/ASM Typical Field Deployment.

## SCOPE – CONTINUED



**Figure 2. PP-8440A/ASM Typical Field Deployment.**

## MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual; DA PAM 738-751, Functional Users Manual for the Army Maintenance Management Systems - Aviation (TAMMS-A); or AR 700-138, Army Logistics Readiness and Sustainability.

## REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your equipment 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. If you have Internet access, the easiest and fastest way to report problems or suggestions is to follow the instructions and links below:

If you have a user's account you can submit the PQDR for ALL CECOM (B16) Warranty, EIR and PQDRs (including those B16 Aviation related) through the Navy's Web Product Quality Deficiency Reporting (PQDR) site, [https://www.pdrep.csd.disa.mil/pdrep\\_files/report\\_tools/pqdr.htm](https://www.pdrep.csd.disa.mil/pdrep_files/report_tools/pqdr.htm). If you do not, either go to EZ PQDR, <https://pdrep.csd.disa.mil/pdrep/ezdr.doc>, and input your PQDR there or establish a new account. New accounts can be established at [https://www.pdrep.csd.disa.mil/pdrep\\_files/accessforms/useraccess.htm](https://www.pdrep.csd.disa.mil/pdrep_files/accessforms/useraccess.htm) and selecting the "User Access Request" link on the left side of the web page.

CECOM (B16) aviation PQDRs will not go to AMCOMs Joint Deficiency Reporting System (JDRS). If AMCOM should get a CECOM aviation PQDR they will re-direct it to the CECOM PQDR Team.

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**REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR) – CONTINUED**

Use the PQDR for Warranties, EIRs and PQDRs. There is a block on the PQDR that can be clicked if it is a Warranty. The originator can still put in the description that they want this investigated as an EIR and then enter what the issue is.

You may also submit your SF 368 (Product Quality Deficiency Report) via email (usarmy.apg.cecom.mbx.lrc-leo-b16-pqdr-support-team@mail.mil), facsimile (443-861-6356) or regular mail (call 443-861-6310 or 443-861-6311 or 443-861-6312) for the current mailing address).

We will send you a reply.

**CORROSION PREVENTION AND CONTROL (CPC)**

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items. Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking. Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically UV) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking. SF Form 368, Product Quality Deficiency Report should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) User's Manual.

**OZONE-DEPLETING SUBSTANCES (ODS)**

The use of Class 1 ODS for new acquisitions has been curtailed by Section 326 of the National Defense Authorization Act of Fiscal Year 1993 (Public Law 102, 484) and related Army Policy.

**DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE**

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

**PREPARATION FOR STORAGE OR SHIPMENT**

Place items in administrative storage for short periods of time when a shortage of maintenance resources exists. It should be possible to place items in a state of mission readiness either within 24 hours or within the time frame that the directing authority may determine. Keep appropriate maintenance records during storage.

Prior to placing the equipment in administrative storage, Army activities perform Preventive Maintenance Checks and Services (PMCS), complete Equipment Serviceability Criteria (ESC) evaluations, correct shortcomings and deficiencies, and complete all Modification Work Orders (MWO). When removing items from administrative storage, the operator performs PMCS to ensure operational readiness.

Inside storage is preferred for items selected for administrative storage. If inside storage is not available, use trucks, vans, or other containers.

**NOMENCLATURE CROSS-REFERENCE LIST**

Common Name	Official Nomenclature
PDB	Power Distribution Box

**LIST OF ABBREVIATIONS/ACRONYMS**

Abbreviation	Definition
AAL	Additional Authorization List

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**LIST OF ABBREVIATIONS/ACRONYMS – CONTINUED**

AC	Alternating Current
AMC	Army Materiel Command
AR	Army Regulations
AWG	American Wire Gauge
BII	Basic Issue Items
BOI	Basis Of Issue
CAGEC	Commercial and Government Entity Code
CB	Circuit Breaker
CNVC	Convenience
COEI	Components of End Item
CPC	Corrosion Prevention Control
CTA	Common Table of Allowances
EIR	Equipment Improvement Recommendation
EMP	Electro-magnetic Pulse
ESC	Equipment Serviceability Criteria
FGC	Functional Group Code
FO	Foldout
GFCI	Ground Fault Circuit Interrupter
GND	Ground
HCI	Hardness Critical Item
HCP	Hardness Critical Procedures
Hz	Hertz
IAW	In Accordance With
JTA	Joint Travel Authorization
MAC	Maintenance Allocation Chart
MOS	Military Occupation Specialty
MTOE	Modified Table of Organization And Equipment
MWO	Modification Work Order
NBC	Nuclear, Biological, Chemical
NC	Normally Closed
NEC	National Electric Code
NSN	National Stock Number

**LIST OF ABBREVIATIONS/ACRONYMS – CONTINUED**

No.	Number
ODS	Ozone Depleting Substances
P/N	Part Number
PAM	Pamphlets
PDB	Power Distribution Box
PMCS	Preventative Maintenance Checks and Services
PQDR	Product Quality Deficiency Report
PWR	Power
Qty	Quantity
ROD	Report of Discrepancy
RPSTL	Repair Parts and Special Tools List
SMR	Source, Maintenance, and Recoverability
SOP	Standard Operating Procedure
SRA	Specialized Repair Activity
TAMMS	The Army Maintenance Management System
TB	Technical Bulletin
TDA	Table of Distribution and Allowances
TK	Tool Kit
TM	Technical Manual
TMDE	Test, Measurement and Diagnostic Equipment
UOC	Usable On Code
UUT	Unit Under Test
VAC	Volts Alternating Current
WCA	Warranty Claim Action
cm	Centimeter
ft	Foot
in	Inch
kW	Kilowatt
kg	Kilogram

**SAFETY, CARE, AND HANDLING**

To prevent personal injury and damage to equipment, obey the following general rules and precautions:

1. Familiarize yourself with the Cautions and Warnings listed in this manual.

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**SAFETY, CARE, AND HANDLING – CONTINUED**

- a. Cautions - Present circumstances, which can cause damage to equipment or loss of mission.
  - b. Warnings - Present circumstances or procedures, which, if not strictly adhered to may cause injury or death.
2. Turn off all power before starting any removal task.
  3. Do not touch connector terminals with any tool, bare hands, or a dirty cloth. Tools will damage the connector. Dirt or sweat will cause corrosion.
  4. Ground your body to discharge static electricity by touching a metal chassis or cabinet before touching an electrical component. A static discharge to an electrical component can destroy internal circuits.
  5. Know where emergency equipment is located. Read instructions on fire extinguisher label.
  6. Make sure hands, hair, clothing, and shoes are clean before working on equipment.

**NUCLEAR HARDNESS**

All Hardness Critical Procedures (HCP) in this manual are marked with the acronym HCP as follows:

1. When the entire task, including all paragraphs and procedures, is considered hardness critical, only the task title will be marked by the acronym HCP, placed before the title.
2. When only certain processes and steps within the work package are hardness critical, only the applicable process and steps will be marked by the placement of the acronym HCP between each applicable step number and the text.

**SUPPORTING INFORMATION FOR REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT**

A listing of Special Tools, Test Measurement and Diagnostic Equipment (TMDE); and Support Equipment is provided in WP 0063, Maintenance Allocation Chart (MAC). Repair parts for the PP-8440/ASM and PP-8440A/ASM Power Distribution Boxes are listed and illustrated in Chapter 7, Repairs Parts and Special Tools List.

**END OF WORK PACKAGE**

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**EQUIPMENT DESCRIPTION AND DATA**

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**EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES****Function and Purpose of PP-8440/ASM Power Distribution Box**

The Power Distribution Box, PP-8440/ASM is designed to distribute power received from a 60 kW generator or a commercial power source to multiple outputs. It is used to split (250 amps, 3 phase) provided from a single source into four circuit breaker protected circuits. This PDB accommodates the new NEC five-wire load connection standard. It is capable of providing output of two each 200 amp services; one each 100 amp and one each 80 amp service at 120/208 VAC, 50/60 Hz. The front panel contains circuit breakers CB1 through CB4; along with various test lights used for testing and to provide a visual aid to operating personnel. The Power Distribution Box has one input connector and four CB protected output compartments. It is water and moisture resistant as long as the access covers and circuit breaker protective boots are in place and properly secured.

**Function and Purpose of PP-8440A/ASM Power Distribution Box**

The Power Distribution Box, PP-8440A/ASM is also designed to distribute power received from a 60 kW generator or a commercial power source to multiple outputs. It is used to split (250 amps, 3 phase) provided from a single source into four circuit breaker protected circuits to operate a wide variety of tactical sheltered systems. The PP-8440A/ASM accommodates the new NEC five-wire load connection standard. It is capable of providing output of two each 200 amp services; one each 100 amp and one each 60 amp service at 120/208 VAC, 50/60 Hz. The front panel contains circuit breakers CB1 through CB4; along with various test lights and meters used for testing and to provide a visual aid to operating personnel. The PP-8440A/ASM has one input connector and four CB protected output compartments. It also contains two each (20 amp) duplex convenience ground-fault circuit interrupt (GFCI) receptacles for electrical capability to power necessary smaller equipment/tools/appliances. It is water and moisture resistant as long as the access covers and circuit breaker protective boots are in place and properly secured.

## LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

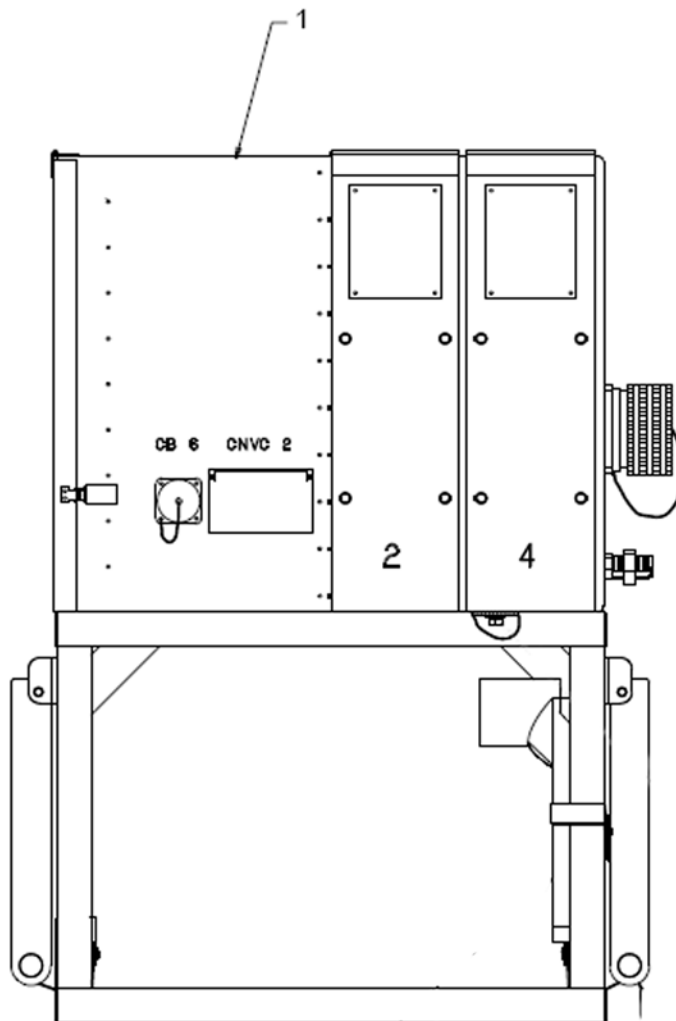


Figure 1. Location of Major Components (Sheet 1 of 3).



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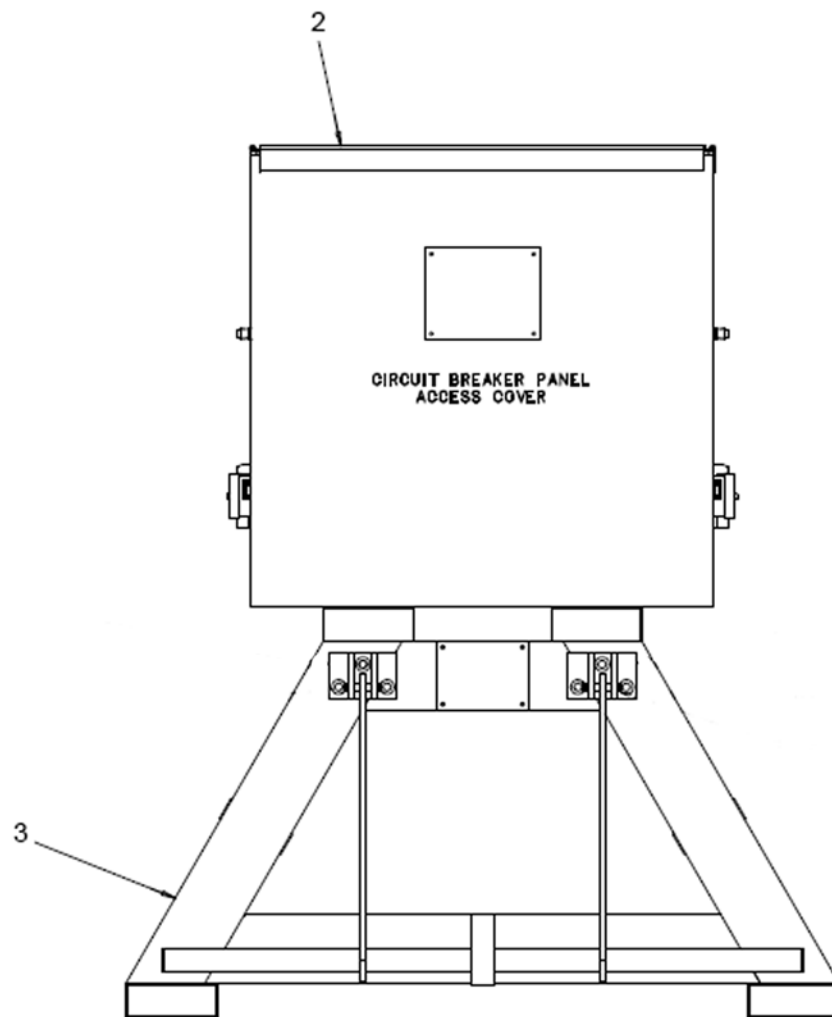
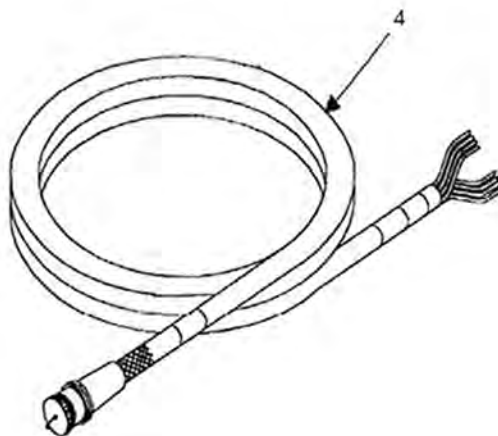
LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Figure 1. Location of Major Components (Sheet 2 of 3).

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**LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED**

**Figure 1. Location of Major Components (Sheet 3 of 3).**

**Power Distribution Box Subassembly (Figure 1, Item 1)**

The Power Distribution Box Subassembly consists of a Main Circuit Breaker (PP-8440A only), a single power cable connector receptacle for input power, a ground terminal, a Circuit Breaker Panel Assembly, four Side Panel Assemblies, two GFCI receptacles, and two GFCI circuit breakers.

**Circuit Breaker Panel Assembly (Figure 1, Item 2)**

The Circuit Breaker Panel Assembly on the PP-8440 consists of four Circuit Breakers, five push-button switches, and 16 indicator lights.

The Circuit Breaker Panel Assembly on the PP-8440A consists of four Circuit Breakers, five push-button switches, 13 indicator lights, a digital voltmeter, and a phase selector switch.

**Base Welded Assembly (Figure 1, Item 3)**

The Base Welded Assembly consists of two lifting handles for ease of transport, a small and a large wrench both mounted on the base of the PDB.

**Power Cable Assembly (Figure 1, Item 4)**

This Power Cable Assembly consists of a 50-foot, 8-wire cable with a receptacle on one end and four green (GND), one white (LO), one blue (L3), one red (L2), and one black lead (L1) on the pigtail end. The Power Cable Assembly is used to connect the PDB to an external 120V (3-phase) power source.

## DIFFERENCE BETWEEN MODELS

The PP-8440/ASM Power Distribution Box is designed to be used with the AN/ASM-146( ), AN/ASM-147( ), AN/ASM-189( ), and the AN/ASM-190( ) Electronic Shops ONLY.

The PP-8440A/ASM Power Distribution Box is designed to be used as a stand-alone item to support various types of equipment, including the Electronic Shops AN/ASM-146( ), AN/ASM-147( ), AN/ASM-189( ), and the AN/ASM-190( ). It also has added functions of a phase selector switch and a digital voltage meter installed on the front circuit breaker panel. A 250 amp main circuit breaker (CB5) has been added to the rear panel.

## EQUIPMENT DATA

**Table 1. Equipment Data for PP-8440/ASM Power Distribution Box with Pedestal.**

DESIGN CHARACTERISTICS	PP-8440/ASM	PP-8440A/ASM
Weight	185 lb. (83. kg)	190 lb. (86.2 kg)
Weight (Power Cable, P/N A3254554)	250 lb. (113.5 kg)	250 lb. (113.5 kg)
Dimensions:		
Height	38 in (96.5 cm)	35.75 in (90.8 cm)
Width	31.23 in (79.3 cm)	29 in (73.7 cm)
Depth	24 in (61 cm)	27 in (68.6 cm)
Power Source (Not Supplied)	60 kW 50/60 Hz Generator Phase Com. 120/208 VAC with 250 Amp Disconnect (Max)	60 kW 50/60 Hz Generator 3 Phase Com. 120/208 VAC with 250 Amp Disconnect (Max)
Maximum Voltage	208 VAC	208 VAC
Minimum Voltage	120 VAC	120 VAC
Output Current	(Circuit No. 1) - 200 amps	(Circuit No. 1) - 200 amps
Output Current	(Circuit No. 2) - 200 amps	(Circuit No. 2) - 200 amps
Output Current	(Circuit No. 3) - 100 amps	(Circuit No. 3) - 100 amps
Output Current	(Circuit No. 4) - 80 amps	(Circuit No. 4) - 60 amps

## NOTE

A generator rated less than 60 kW, 120/208 VAC @ 50/60 Hz can be used as long as the voltage and frequency outputs are the same as above.

## EQUIPMENT CONFIGURATION

## CAUTION

Circuits No. 1 and 2 outputs are designed to be connected to the AN/ASM-189( ) van inputs only. Never connect any other shelter to Circuit No. 1 or Circuit No. 2.

The PP-8440/ASM and Power Distribution Box (hereinafter referred to as the "PDB") design requires that only the specified vans and shelters such as the AN/ASM-146( ), AN/ASM-147( ), AN/ASM-189( ) and the AN/ASM-190( ) electronic field shops be powered up using the PP-8440/ASM PDB. Failure to adhere to the configuration may

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**EQUIPMENT CONFIGURATION – CONTINUED**

result in serious injury and/or damage to the equipment. Since the PDB delivers variable current outputs it is imperative that the operator pays special attention to the PDB output terminal post that he/she connects to, i.e., AN/ASM-146( ), AN/ASM-147( ), AN/ASM-189( ) etc. Refer to Figure 1 in Work Package 0001 for a correct configuration.

The PP-8440A/ASM Power Distribution Box (hereinafter referred to as the "PDB") is designed as a stand-alone equipment that can be used to interface with various types of systems. Failure to adhere to the correct configuration for a particular type of system may result in serious injury and/or damage to the equipment. Since the PDB delivers variable current outputs it is imperative that the operator pays special attention to the PDB output terminal post that he/she connects to. Refer to Figure 1 for a typical configuration.

**END OF WORK PACKAGE**

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## THEORY OF OPERATION

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### PRINCIPLES OF OPERATION FOR PP-8440/ASM POWER DISTRIBUTION BOX

#### NOTE

A generator rated less than 60 kW, 120/208 VAC @ 50/60 Hz can be used as long as the voltage and frequency outputs are the same as above.

The PP-8440/ASM Power Distribution Box is a power distribution system used to provide 3 phase or single phase power to the AN/ASM-146( ), AN/ASM-147( ), AN/ASM-189( ) and the AN/ASM-190( ) semi-trailer mounted electronic field shops and van/shelters. Power is distributed to the various vans/shelters through circuit breakers and cable assemblies to the user's equipment. Source power for distribution is obtained from a 60 kW, 50/60 Hz field generator or a commercial power source rated at 3 phase, 120/208 volt, and 250 amp (max) service. Power input to the PDB is through a power stub/cable assembly that is connected to power input connector J1 on rear panel. The PDB then delivers one (1) - 80 amp service via Circuit No. 4; one (1) - 100 amp service via Circuit No. 3; two (2) - 200 amp services via Circuits No. 1 and No. 2. Circuit breakers mounted on the front panel protect system cables and shelters/equipment from excessive current flow. Two circuit breaker protected Ground Fault Circuit Interrupt (GFCI) convenience receptacles are provided to operate various power tools and test equipment.

### PRINCIPLES OF OPERATION FOR PP-8440A/ASM POWER DISTRIBUTION BOX

#### NOTE

A generator rated less than 60 kW, 120/208 VAC @ 50/60 Hz can be used as long as the voltage and frequency outputs are the same as above. When the amount of power available at the input source is reduced, the total number of systems that can operate from the power distribution box is also limited.

The PP-8440A/ASM Power Distribution Box is a power distribution system used to provide 3 phase or single phase power to various systems including semi-trailer mounted electronic field shops and vans/shelters. Power is distributed to the various vans/shelters through circuit breakers and cable assemblies to the user's equipment. Source power for distribution is obtained from a 60 kW, 50/60 Hz generator, or a commercial power source rated at 3 phase, 120/208 volt, 250 amp (max) service. Power input to the PDB is through a power stub/cable assembly that is connected to the power input connector J1 and 250 amp Main (Master) circuit breaker on the rear panel. The PDB then delivers one (1) - 60 amp service via Circuit No. 4; one (1) - 100 amp service via Circuit No. 3; two (2) - 200 amp services via Circuits No. 1 and No. 2. Circuit breakers mounted on the front panel protect system cables and shelters/equipment from excessive current flow. The main power cables of the vans/shelters, which have "pigtail" ends, are connected to the appropriate one of four terminal compartments. Each compartment allows the appropriate main power cable from the van/shelter to be attached to the PP-8440A/ASM at a stud-terminal design configuration similar to the stud-terminal design of the power generator. If it is required to attach a main power cable that has a connector, a (pigtail/connector) power stub cable is available from the Army Supply System to convert the terminal stud design of the PP-8440A/ASM to accept only cables with connectors. See Appendix E for Additional Authorization List (AAL). Two circuit breaker protected Ground Fault Circuit Interrupt (GFCI) convenience receptacles are provided to operate various power tools and test equipment. The PP-8440A/ASM comes with its own ground cable/ground rod.

### END OF WORK PACKAGE



## **CHAPTER 2**

### **OPERATOR INSTRUCTIONS**





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**OPERATOR MAINTENANCE****DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS**

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**GENERAL**

This work package contains control indicators and connectors used in operation of the PP-8479(V1)/ASM PDB.

**OPERATOR CONTROLS AND INDICATORS**

The operator's controls, indicators, and connectors used in the normal operation of PP-8440/ASM Power Distribution Box (PDB) are described in Tables 1 through 4 and are shown in Figures 1 through 4. Refer to FO-1 and FO-2 for a schematic of the PDB. FO-3 contains a wire data chart. The operator's controls and indicators are located on the front panel and illustrated in Figure 1. The PDB service and ground terminal posts (LØ, L1, L2, L3, and GND) are located on the right and left sides of the PDB and illustrated in Figures 2 and 3. Also located on the right and left sides of the PDB are two GFCI convenience receptacles and their circuit breakers, see Figures 2 and 3. The power input connector (J1) and ground stud (E1) are illustrated in Figure 4.

The operator's controls, indicators, and connectors used in the normal operation of PP-8440A/ASM Power Distribution Box (PDB) are described in this work package and are shown in Figures 5 through 8. Refer to FO-4 and FO-5 for a schematic of the PP-8440A/ASM. FO-6 contains a wire data chart. The operator's controls and indicators are located on the front panel and illustrated in Figure 5. The PDB service and ground terminal posts (LØ1, L1, L2, L3, and GND) are located on the right and left sides of the PDB and illustrated in Figures 6 and 7. Also located on the right and left sides of the PDB are two GFCI convenience receptacles and their circuit breakers, see Figures 6 and 7.

**NOTE**

Prior to equipment mission operation, it is important to test all front panel indicator lamps. Prior to any application of the PDBs, it is essential to ensure all indicator lamps are checked and operational. Perform operational test in IAW WP 0005 (PP-8440/ASM) or (PP-8440A/ASM).

**PP-8440/ASM Power Distribution Box Front Panel Controls/Indicators**

Monitors and distributes van/shelters input power. See Table 1 and Figure 1.

## OPERATOR CONTROLS AND INDICATORS – CONTINUED

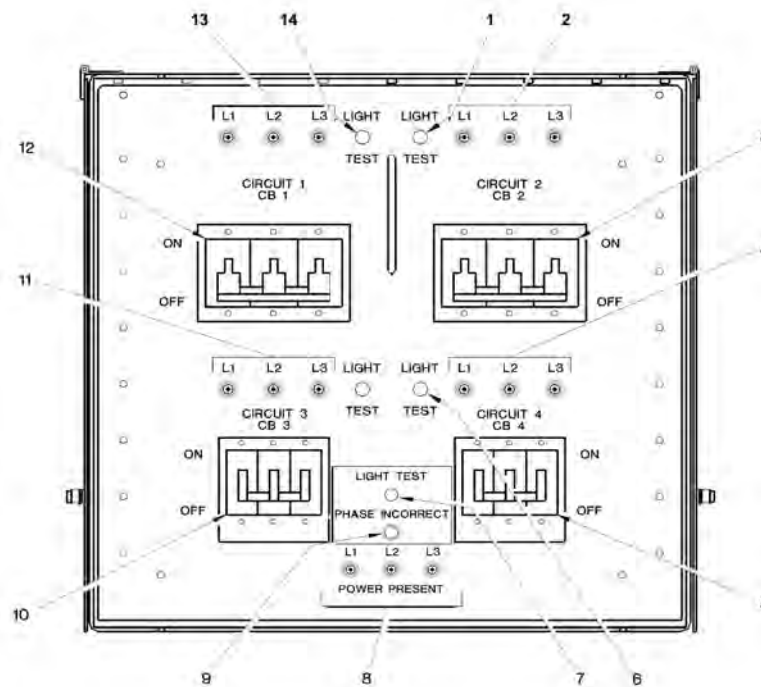


Figure 1. PP-8440/ASM Front Panel Controls/Indicators.

Table 1. PP-8440/ASM Front Panel Controls/Indicators.

KEY	CONTROL/INDICATOR	FUNCTION
1	LIGHT TEST (Circuit No. 2)	Push-button switch verifies the source power is present. Used to test Circuit No. 2 L1, L2, and L3 indicator lamps with CB2 in the "OFF" position.
2	L1, L2, L3 Indicators (Circuit No. 2)	Indicates Circuit No. 2 power is present. Illuminates when Circuit No. 2 "LIGHT TEST" push-button is pressed with CB2 in the "OFF" position. Illuminates when CB2 is in the "ON" position with source power applied.

**OPERATOR CONTROLS AND INDICATORS – CONTINUED****Table 1. PP-8440/ASM Front Panel Controls/Indicators. – Continued**

<b>KEY</b>	<b>CONTROL/INDICATOR</b>	<b>FUNCTION</b>
3	Circuit Breaker No. 2 (CB2)	200 amp circuit breaker that provides overload protection. Must be in the ON position to provide output to Circuit No. 2 terminal posts.
4	L1, L2, L3 Indicators (Circuit No. 4)	Indicates Circuit No. 4 is present. Illuminates when Circuit No. 4 "LIGHT TEST" push-button is pressed with CB4 in "OFF" position to provide output to Circuit No. 2 terminal posts.
5	Circuit Breaker No. 4 (CB4)	80 amp circuit breaker that provides overhead Protection. Must be in "ON" position to provide output to Circuit No. 4 terminal posts.
6	LIGHT TEST (Circuit No. 4)	Push-button switch verifies source power is present. Used to test Circuit No. 4 L1, L2, and L3 indicator lamps with CB4 in "OFF" position.
7	LIGHT TEST (PHASE INCORRECT)	Used to test "PHASE INCORRECT" indicator lamp.
8	L1, L2, L3 Indicators (POWER PRESENT)	Indicates source power is present. Illuminates when source power is connected and turned on.
9	PHASE INCORRECT Indicator	Illuminates to indicate incorrect phase sequence hookup at the source. Illuminates when PHASE INCORRECT "LIGHT TEST" push-button is pressed. Does not identify Incorrect PDB hook-up.
10	Circuit Breaker No. 3 (CB3)	100 amp circuit breaker that provides overload protection. Must be in the "ON" position to provide output to Circuit No. 3 terminal posts.
11	L1, L2, L3 Indicators (Circuit No. 3)	Indicates Circuit No. 3 power is present. Illuminates when Circuit No. 3 "LIGHT TEST" push-button is pressed with CB3 in "OFF" position. Illuminates when CB3 is in the "ON" position with source power applied.
12	Circuit Breaker No. 1 (CB1)	200 amp circuit breaker that provides overload protection. Must be in the ON position to provide output to Circuit No. 1 terminal posts.
13	L1, L2, L3 Indicators (Circuit No. 1)	Indicates Circuit No. 1 power is present. Illuminates when Circuit No. 1 "LIGHT TEST" push-button is pressed with CB1 in "OFF" position. Illuminates when CB1 is in the "ON" position with source power applied.
14	LIGHT TEST (Circuit No. 1)	Push-button switch verifies source power is present. Used to test circuit No. 1 L1, L2, and L3 indicator lamps with CB1 in "OFF" position. Push-button switch verifies source power is present. Used to test circuit No. 1 L1, L2, and L3 indicator lamps with CB1 in "OFF" position.

**PP-8440/ASM POWER DISTRIBUTION BOX RIGHT SIDE PANEL CONNECTORS/INDICATORS**

Provides interconnection location for van or shelter to/from Power Distribution Box. See Table 2 and Figure 2.

# PP-8440/ASM POWER DISTRIBUTION BOX RIGHT SIDE PANEL CONNECTORS/INDICATORS – CONTINUED

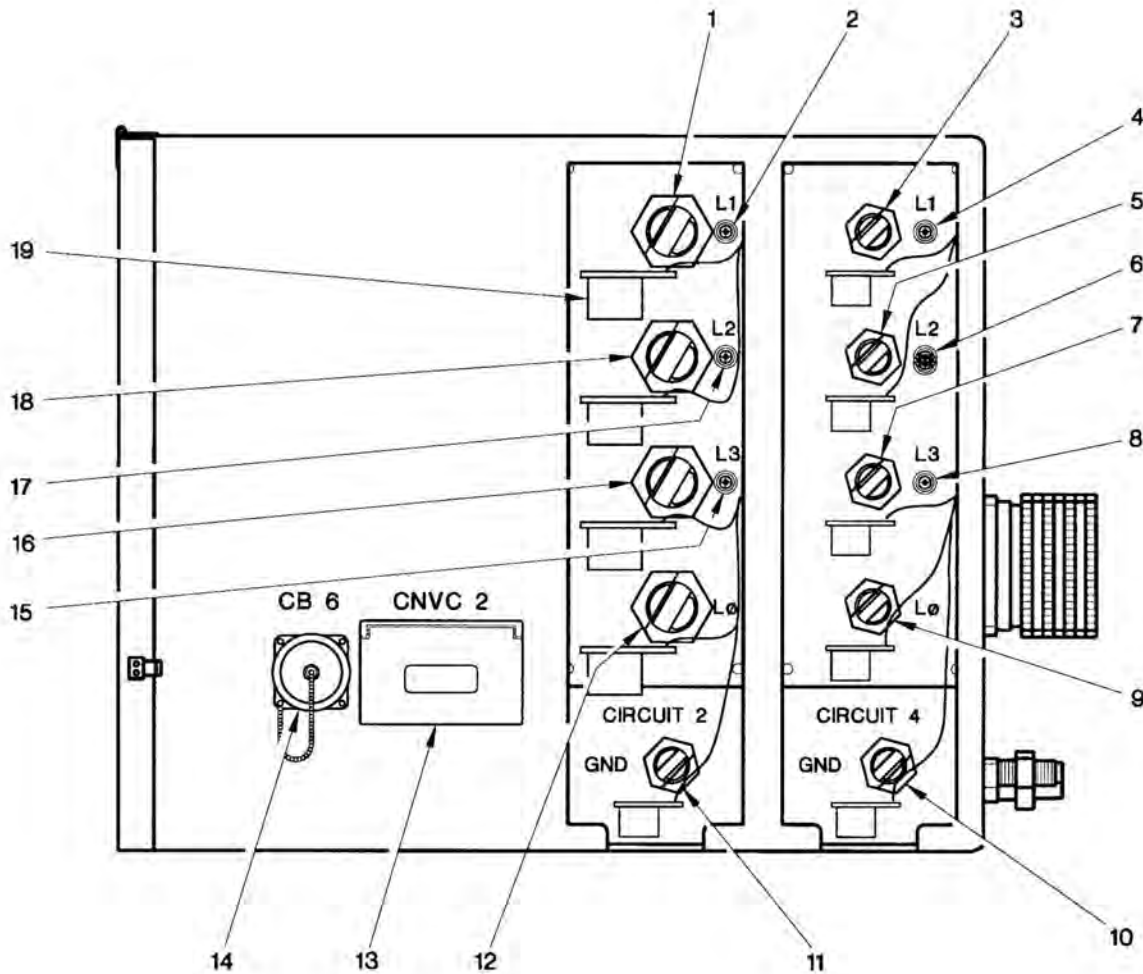


Figure 2. PP-8440/ASM (Right Side) (Circuits No. 2 and No. 4).

Table 2. PP-8440/ASM Right Side (Circuits No. 2 and No. 4).

KEY	CONTROL/INDICATOR	FUNCTION
1	Terminal Post (L1, Circuit No. 2)	Cable connection for Circuit No. 2 "A" phase.
2	Indicator Light (L1, Circuit No. 2)	Indicates power present at Circuit No. 2, L1.
3	Terminal Post (L1, Circuit No. 4)	Cable connection for Circuit No. 4 "A" phase.
4	Indicator Light (L1, Circuit No. 4)	Indicates power present at Circuit No. 4, L1.
5	Terminal Post (L2, Circuit No. 4)	Cable connection for Circuit No. 4 "B" phase.
6	Indicator Light (L2, Circuit No. 4)	Indicates power present at Circuit No. 4, L1.
7	Terminal Post (L3, Circuit No. 4)	Cable connection for Circuit No. 4 "C" phase.

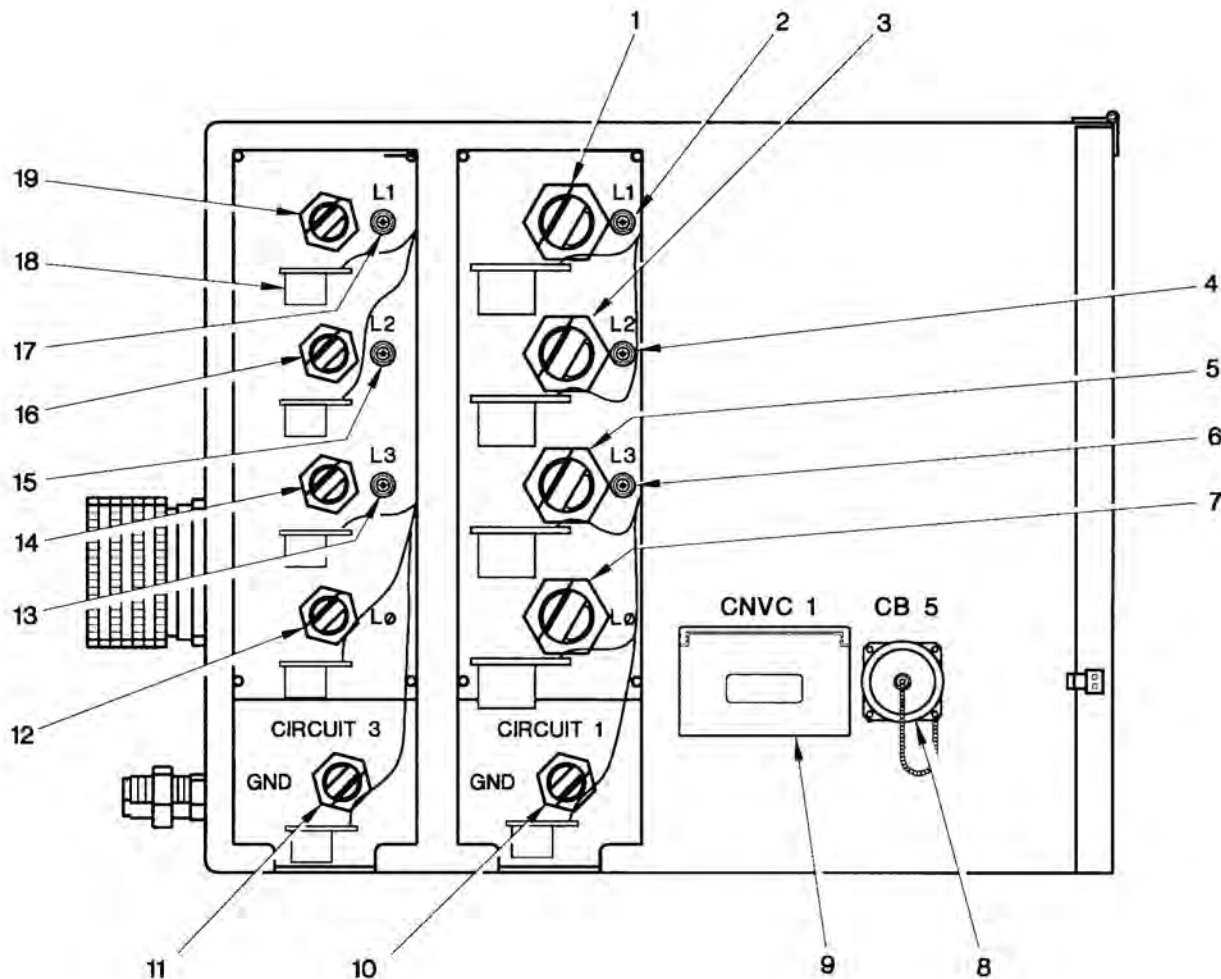
**PP-8440/ASM POWER DISTRIBUTION BOX RIGHT SIDE PANEL CONNECTORS/INDICATORS – CONTINUED****Table 2. PP-8440/ASM Right Side (Circuits No. 2 and No. 4). – Continued**

<b>KEY</b>	<b>CONTROL/INDICATOR</b>	<b>FUNCTION</b>
8	Indicator Light (L3, Circuit No. 4)	Indicates power present at Circuit No. 4, L1.
9	Terminal Post (LØ, Circuit No. 4)	Cable connection for Circuit No. 4, "neutral" phase.
10	Terminal Post (Circuit No. 4, GND)	Cable connection for Circuit No. 4, ground.
11	Terminal Post (Circuit No. 2, GND)	Cable connection for Circuit No. 2, ground.
12	Terminal Post (LØ, Circuit No. 2)	Cable connection for Circuit No. 2, "neutral" phase.
13	GFCI CNVC Receptacle	GFCI convenience receptacle providing exterior power for tools, test equipment etc.
14	Circuit Breaker (CB6)	Push/pull circuit breaker for GFCI receptacle.
15	Indicator Light (L3, Circuit No. 2)	Indicates power present at Circuit No. 4, L3.
16	Terminal Post (L3, Circuit No. 2)	Cable connection for Circuit No. 2, "C" phase.
17	Indicator Light (L2, Circuit No. 2)	Indicates power present at Circuit No. 2, L2.
18	Terminal Post (L2, Circuit No. 2)	Cable connection for Circuit No. 2, "B" phase.
19	Terminal Post Safety Cap	Safety and Weather Cover(s) for all terminal posts.

**PP-8440/ASM POWER DISTRIBUTION BOX LEFT SIDE (CIRCUIT NO. 1 AND NO. 3) PANEL CONNECTORS/INDICATORS**

Provides interconnection location for users van or shelter to/from the Power Distribution Box. See Table 3 and Figure 3.

**PP-8440/ASM POWER DISTRIBUTION BOX LEFT SIDE (CIRCUIT NO. 1 AND NO. 3) PANEL CONNECTIONS/INDICATORS – CONTINUED**



**Figure 3. PP-8440/ASM (Left Side) (Circuits No 1 and No. 3).**

**Table 3. PP-8440/ASM (Left Side) (Circuits No. 1 and No. 3).**

KEY	CONTROL/INDICATOR	FUNCTION
1	Terminal Post (L1, Circuit No. 1)	Cable connection for Circuit No. 1 "A" phase
2	Indicator Light (L1, Circuit No. 1)	Indicates power present at Circuit No. 1, L1.
3	Terminal Post (L2, Circuit No. 1)	Cable connection for Circuit No. 1 "B" phase
4	Indicator Light (L2, Circuit No. 1)	Indicates power present at Circuit No. 1, L2.
5	Terminal Post (L3, Circuit No. 1)	Cable connection for Circuit No. 1, "C" phase
6	Indicator Light (L3, Circuit No. 1)	Indicates power present at Circuit No. 1, L3.
7	Terminal Post (LØ, Circuit No. 4)	Cable connection for Circuit No. 1, "neutral" phase.

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**PP-8440/ASM POWER DISTRIBUTION BOX LEFT SIDE (CIRCUIT NO. 1 AND NO. 3) PANEL CONNECTORS/INDICATORS – CONTINUED**


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**Table 3. PP-8440/ASM (Left Side) (Circuits No. 1 and No. 3). – Continued**

KEY	CONTROL/INDICATOR	FUNCTION
8	Circuit Breaker (CB5)	Push/pull Circuit Breaker for GFCI receptacle.
9	GFCI CNVC Receptacle	GFCI convenience receptacle providing exterior power for tools, test equipment etc.
10	Terminal Post (Circuit No. 1, GND)	Cable connection for Circuit No. 1 ground.
11	Terminal Post (Circuit No. 3, GND)	Cable connection for Circuit No. 3 ground.
12	Terminal Post (LØ, Circuit No. 3)	Cable connection for Circuit No. 3, "neutral" phase.
13	Indicator Light (L3, Circuit No. 3)	Indicates power present at Circuit No. 3, L3.
14	Terminal Post (L3, Circuit No. 3)	Cable connection for Circuit No. 3, "C" phase.
15	Indicator Light (L2, Circuit No. 3)	Indicates power present at Circuit No. 3, L2.
16	Terminal Post (L2, Circuit No. 3)	Cable connection for Circuit No. 3, "B" phase
17	Indicator Light (L1, Circuit No. 3)	Indicates power present at Circuit No. 3, L1.
18	Terminal Post Safety Cap	Safety and Weather Cover(s) for all terminal posts.
19	Terminal Post (L1, Circuit No. 3)	Cable connection for Circuit No. 3, "A" phase

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**PP-8440/ASM POWER DISTRIBUTION BOX REAR PANEL CONNECTOR/INDICATORS**

Provides ground and input connections from power source to Power Distribution Box. See Table 4 and Figure 4.

## PP-8440/ASM POWER DISTRIBUTION BOX REAR PANEL CONNECTOR/INDICATORS – CONTINUED

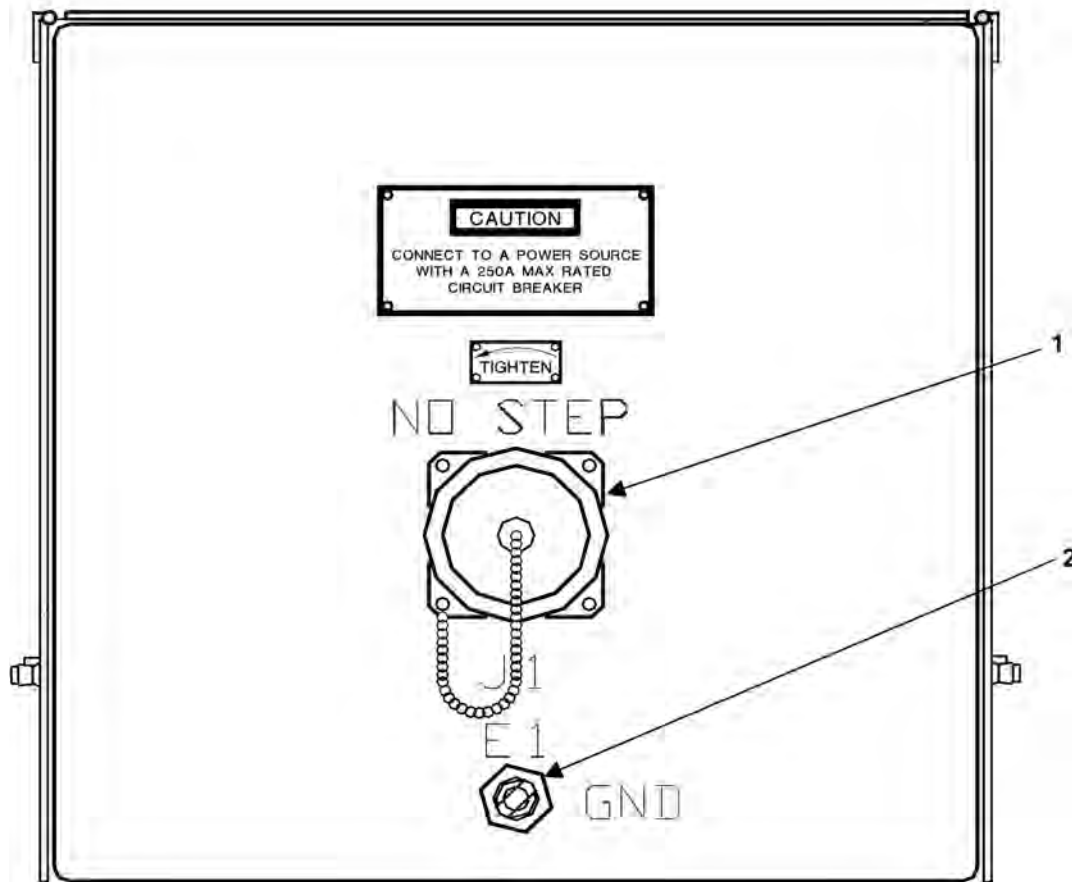


Figure 4. PP-8440/ASM Rear Panel Connectors.

Table 4. PP-8440/ASM Rear Panel Connectors.

KEY	CONTROL/INDICATOR	FUNCTION
1	Connector, Receptacle (J1)	Power input connection for Power Distribution Box.
2	Ground Stud (E1)	Ground wire connection for Power Distribution Box.

## PP-8440A/ASM POWER DISTRIBUTION BOX FRONT PANEL CONTROLS/INDICATORS

Monitors and distributes van/shelters input power. See Table 5 and Figure 5.



## PP-8440A/ASM POWER DISTRIBUTION BOX FRONT PANEL CONTROLS/INDICATORS – CONTINUED

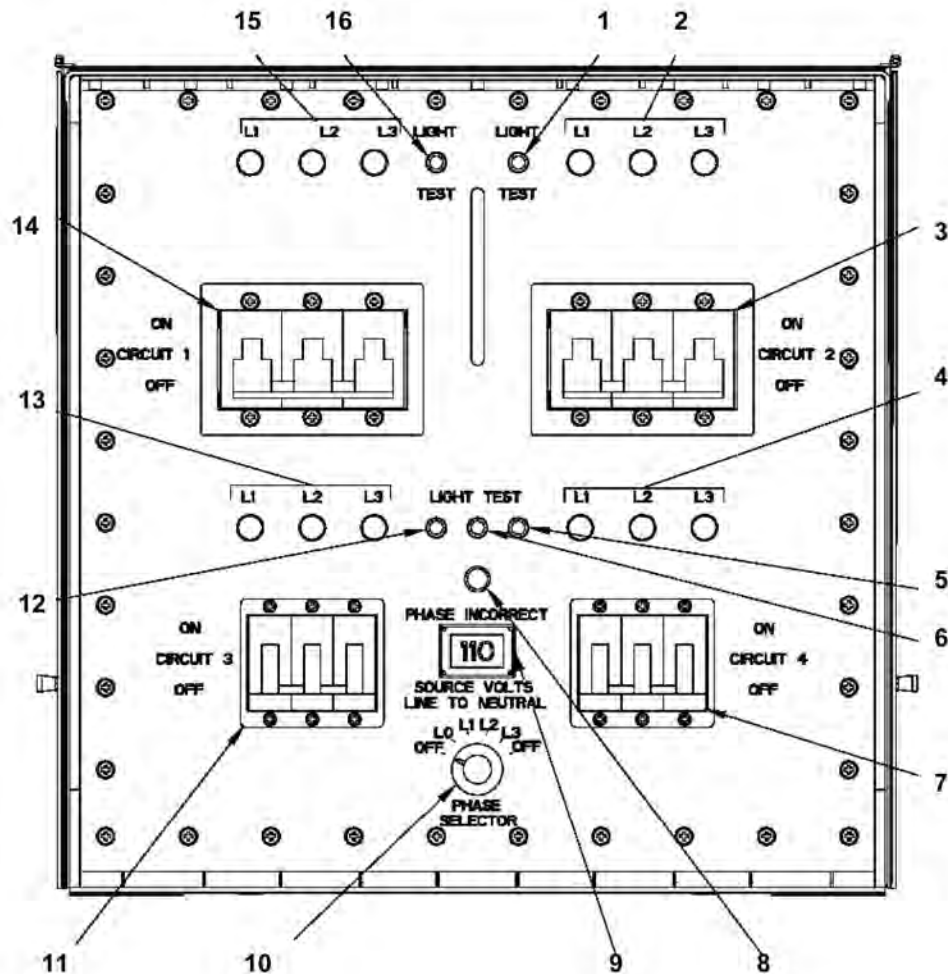


Figure 5. PP-8440A/ASM Front Panel Controls/Indicators.

Table 5. PP-8440A/ASM Front Panel Controls/Indicators.

KEY	CONTROL/INDICATOR	FUNCTION
1	LIGHT TEST (Circuit No. 2)	Push-button verifies the source power is present. Used to test Circuit No. 2 L1, L2, and L3 indicator lamps with CB2 in the "OFF" position.
2	L1, L2, L3 Indicators (Circuit No. 2)	Indicates Circuit No. 2 power is present. Illuminates when Circuit No. 2 "LIGHT TEST" push-button is pressed with CB2 in the "OFF" position. Illuminates when CB2 is in the "ON" position with source power applied.
3	Circuit Breaker No. 2 (CB2)	200 amp circuit breaker that provides overload protection. Must be in the "ON" position to provide output to Circuit No. 2 terminal posts.

**PP-8440A/ASM POWER DISTRIBUTION BOX FRONT PANEL CONTROLS/INDICATORS – CONTINUED****Table 5. PP-8440A/ASM Front Panel Controls/Indicators. – Continued**

<b>KEY</b>	<b>CONTROL/INDICATOR</b>	<b>FUNCTION</b>
4	L1, L2, L3 Indicators (Circuit No. 4)	Indicates Circuit No. 4 is present. Illuminates when Circuit No. 4 "LIGHT TEST" push-button is pressed with CB4 in the "OFF" position. Illuminates when CB4 is in the "ON" position with source power applied.
5	LIGHT TEST (Circuit No. 4)	Push-button switch verifies source power is present. Used to test Circuit No. 4 L1, L2, and L3 indicator lamps with CB4 in "OFF" position.
6	LIGHT TEST (PHASE INCORRECT)	Used to test "PHASE INCORRECT" indicator lamp.
7	Circuit Breaker No. 4 (CB4)	60 amp circuit breaker that provides overhead protection. Must be in "ON" position to provide output to Circuit No. 4 terminal posts.
8	PHASE INCORRECT Indicator	Illuminates to indicate incorrect phase sequence Hook-up at the source. Illuminates when PHASE INCORRECT "LIGHT TEST" push-button is pressed. Does not identify incorrect PDB hook-up.
9	Digital Voltage Meter (Source Voltage Present)	Indicates source power is present for selected phase. Illuminates and reads the source voltage value from LINE TO NEUTRAL for the selected position of the phase selector switch (10) when source power is connected and turned on.
10	PHASE SELECTOR Switch	Rotary dial selects OFF, LØ, L1, L2, L3, and OFF position for Source Power Present readings on Digital Voltage meter.
11	Circuit Breaker No. 3 (CB3)	100 amp circuit breaker that provides overload protection. Must be in the "ON" position to provide output to Circuit No. 3 terminal posts.
12	LIGHT TEST (Circuit No. 3)	Push-button switch verifies source power is present. Used to test Circuit No. 3 L1, L2 and L3 indicator lamps with CB3 in "OFF" position.
13	L1, L2, L3 Indicators (Circuit No. 3)	Indicates circuit No. 3 power is present. Illuminates when Circuit No. 3 "LIGHT TEST" push-button is pressed with CB3 in "OFF" position. Illuminates when CB3 is in the "ON" position with source power applied.
14	Circuit Breaker No. 1 (CB1)	200 amp circuit breaker that provides overload protection. Must be in the "ON" position to provide output to Circuit No. 1 terminal posts.
15	L1, L2, L3 Indicators (Circuit No. 1)	Indicates Circuit No. 1 power is present. Illuminates when Circuit No. 1 "LIGHT TEST" push-button is pressed with CB1 in "OFF" position. Illuminates when CB1 is in the "ON" position with source power applied.
16	LIGHT TEST (Circuit No. 1)	Push-button switch verifies source power is present. Used to test Circuit No. 1 L1, L2, and L3 indicator lamps with CB1 in "OFF" position.

**PP-8440A/ASM POWER DISTRIBUTION BOX RIGHT SIDE (CIRCUITS NO. 2 AND NO. 4) CONNECTORS/INDICATORS**

Provides interconnection location for van or shelter to/from Power Distribution Box. See Table 6 and Figure 6.

# PP-8440A/ASM POWER DISTRIBUTION BOX RIGHT SIDE (CIRCUITS NO. 2 AND NO. 4) CONNECTORS/INDICATORS – CONTINUED

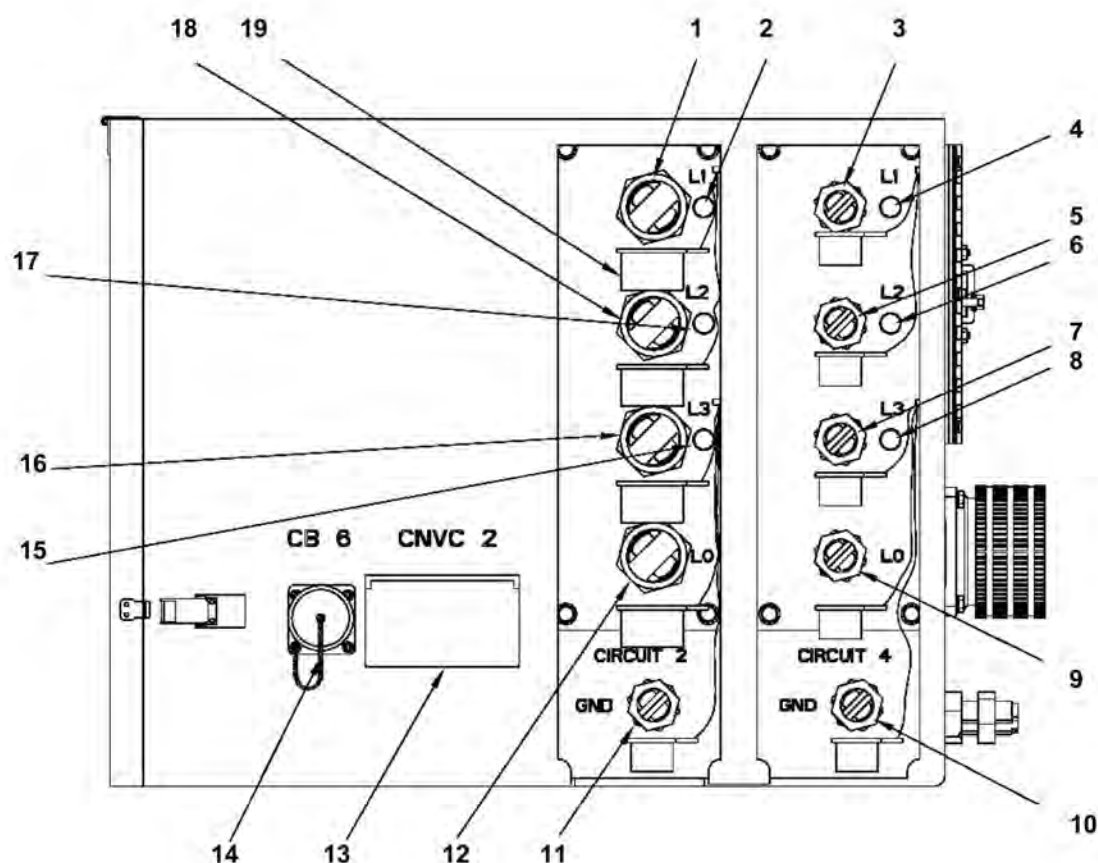


Figure 6. PP-8440A/ASM Power Distribution Box Left Side (Circuits No. 1 and No. 3) Connectors/Indicators.

Table 6. PP-8440A/ASM Right Side (Circuits No. 2 and No. 4) Connectors/Indicators.

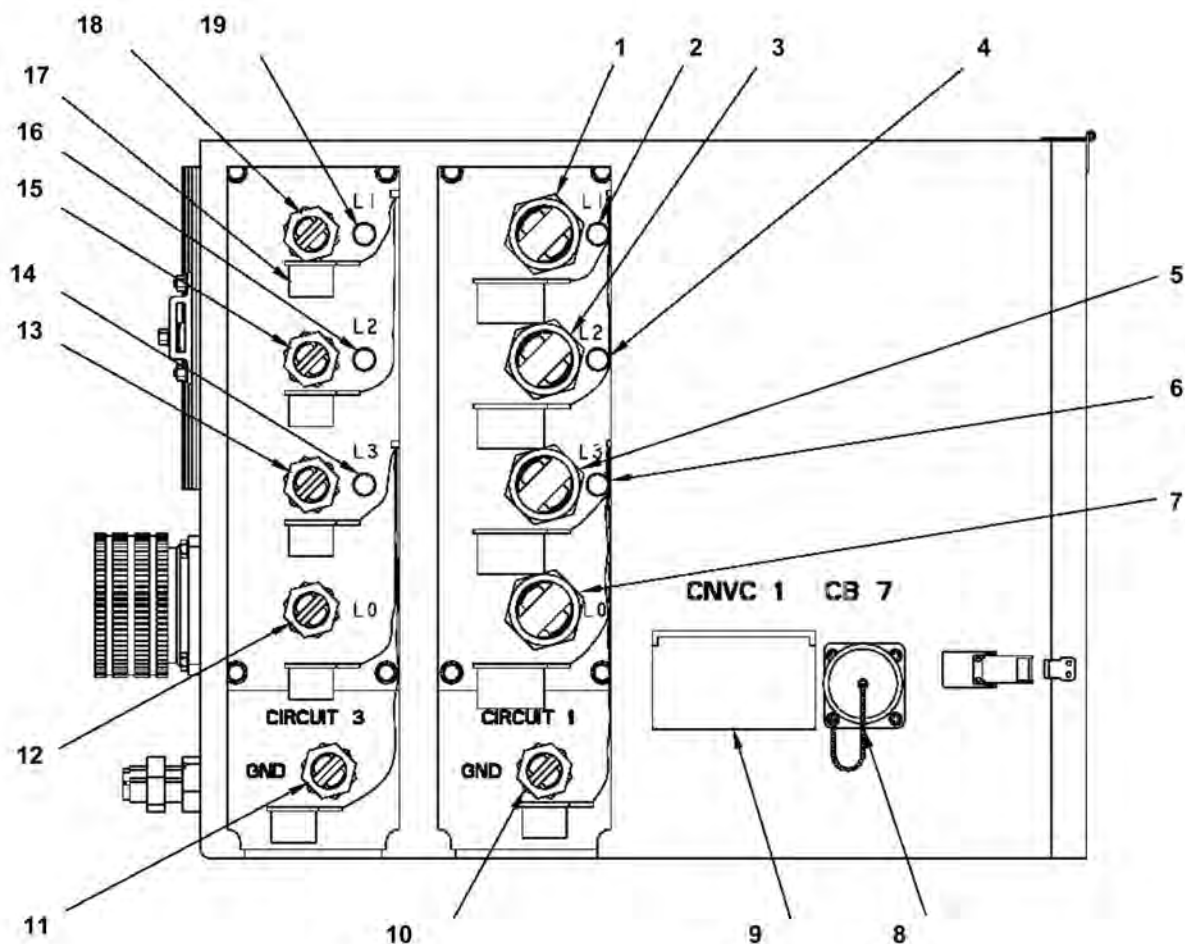
KEY	CONTROL/INDICATOR	FUNCTION
1	Terminal Post (L1, Circuit No. 2)	Cable connection for Circuit No. 2 "A" phase.
2	Indicator Light (L1, Circuit No. 2)	Indicates power present at Circuit No. 2, L1.
3	Terminal Post (L1, Circuit No. 4)	Cable connection for Circuit No. 4 "A" phase.
4	Indicator Light (L1, Circuit No. 4)	Indicates power present at Circuit No. 4, L1.
5	Terminal Post (L2, Circuit No. 4)	Cable connection for Circuit No. 4 "B" phase.
6	Indicator Light (L2, Circuit No. 4)	Indicates power present at Circuit No. 4, L1.

**PP-8440A/ASM POWER DISTRIBUTION BOX RIGHT SIDE (CIRCUITS NO. 2 AND NO. 4) CONNECTORS/INDICATORS – CONTINUED****Table 6. PP-8440A/ASM Right Side (Circuits No. 2 and No. 4) Connectors/Indicators. – Continued**

KEY	CONTROL/INDICATOR	FUNCTION
7	Terminal Post (L3, Circuit No. 4)	Cable connection for Circuit No. 4 "C" phase.
8	Indicator Light (L3, Circuit No. 4)	Indicates power present at Circuit No. 4, L1.
9	Terminal Post (LØ, Circuit No. 4)	Cable connection for Circuit No. 4 "neutral" phase.
10	Terminal Post (Circuit No. 4, GND)	Cable connection for Circuit No. 4, ground.
11	Terminal Post (Circuit No. 2, GND)	Cable connection for Circuit No. 2, ground.
12	Terminal Post (LØ, Circuit No. 2)	Cable connection for Circuit No. 2, "neutral" phase.
13	GFCI CNVC 2 Receptacle	GFCI convenience receptacle providing exterior power for tools, test equipment etc.
14	Circuit Breaker No. 6 (CB6)	Push/pull circuit breaker for GFCI receptacle.
15	Indicator Light (L3, Circuit No. 2)	Indicates power present at Circuit No. 4, L3.
16	Terminal Post (L3, Circuit No. 2)	Cable connection for Circuit No. 2 "C" phase.
17	Indicator Light (L2, Circuit No. 2)	Indicates power present at Circuit No. 2, L2.
18	Terminal Post (L2, Circuit No. 2)	Cable connection for Circuit No. 2 "B" phase.
19	Terminal Post Safety Cap	Safety and weather cover(s) for all terminal posts.

**PP-8440A/ASM POWER DISTRIBUTION BOX LEFT SIDE (CIRCUITS NO. 1 AND NO. 3) CONNECTORS/INDICATORS**

Provides interconnection location for users van or shelter to/from the Power Distribution Box. See Table 7 and Figure 7.

**PP-8440A/ASM POWER DISTRIBUTION BOX LEFT SIDE (CIRCUITS NO. 1 AND NO. 3) CONNECTORS/INDICATORS – CONTINUED**

**Figure 7. PP-8440A/ASM Left Side (Circuits No. 1 and No. 3) Connectors/Indicators.**
**Table 7. PP-8440A/ASM Left Side (Circuits No. 1 and No. 3) Connectors/Indicators.**

KEY	CONTROL/INDICATOR	FUNCTION
1	Terminal Post (L1, Circuit No. 1)	Cable connection for Circuit No. 1, "A" phase.
2	Indicator Light (L1, Circuit No. 1)	Indicates power present at Circuit No. 1, L1.
3	Terminal Post (L2, Circuit No. 1)	Cable connection for Circuit No. 1, "B" phase.
4	Indicator Light (L2, Circuit No. 1)	Indicates power present at Circuit No. 1, L2.
5	Terminal Post (L3, Circuit No. 1)	Cable connection for Circuit No. 1, "C" phase.

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**PP-8440A/ASM POWER DISTRIBUTION BOX LEFT SIDE (CIRCUITS NO. 1 AND NO. 3) CONNECTORS/INDICATORS – CONTINUED**


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**Table 7. PP-8440A/ASM Left Side (Circuits No. 1 and No. 3) Connectors/Indicators. – Continued**


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KEY	CONTROL/INDICATOR	FUNCTION
6	Indicator Light (L3, Circuit No. 1)	Indicates power present at Circuit No. 1, L3.
7	Terminal Post (LØ, Circuit No. 1)	Cable connection for Circuit No. 1, "neutral" phase.
8	Circuit Breaker No. 7 (CB7)	Push/pull circuit breaker for GFCI receptacle.
9	GFCI CNVC 1 Receptacle	GFCI convenience receptacle providing exterior power for tools, test equipment etc.
10	Terminal Post (Circuit No. 1, GND)	Cable connection for Circuit No. 1, ground.
11	Terminal Post (Circuit No. 3, GND)	Cable connection for Circuit No. 3, ground.
12	Terminal Post (LØ, Circuit No. 3)	Cable connection for Circuit No. 3, "neutral" phase.
13	Terminal Post (L3, Circuit No. 3)	Cable connection for Circuit No. 3, "C" phase.
14	Indicator Light (L3, Circuit No. 3)	Indicates power present at Circuit No. 3, L3.
15	Terminal Post (L2, Circuit No. 3)	Cable connection for Circuit No. 3, "B" phase.
16	Indicator Light (L2, Circuit No. 3)	Indicates power present at Circuit No. 3, L2.
17	Terminal Post Safety Cap	Safety and Weather Cover(s) for all terminal posts.
18	Terminal Post (L1, Circuit No. 3)	Cable connection for Circuit No. 3, "A" phase.
19	Indicator Light (L1, Circuit No. 3)	Indicates power present at Circuit No. 3, L1.

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**PP-8440A/ASM POWER DISTRIBUTION BOX REAR PANEL CONNECTORS/INDICATORS**

Provides ground and input connections from power source to Power Distribution Box. See Table 8 and Figure 8.

## PP-8440A/ASM POWER DISTRIBUTION BOX REAR PANEL CONNECTORS/INDICATORS – CONTINUED

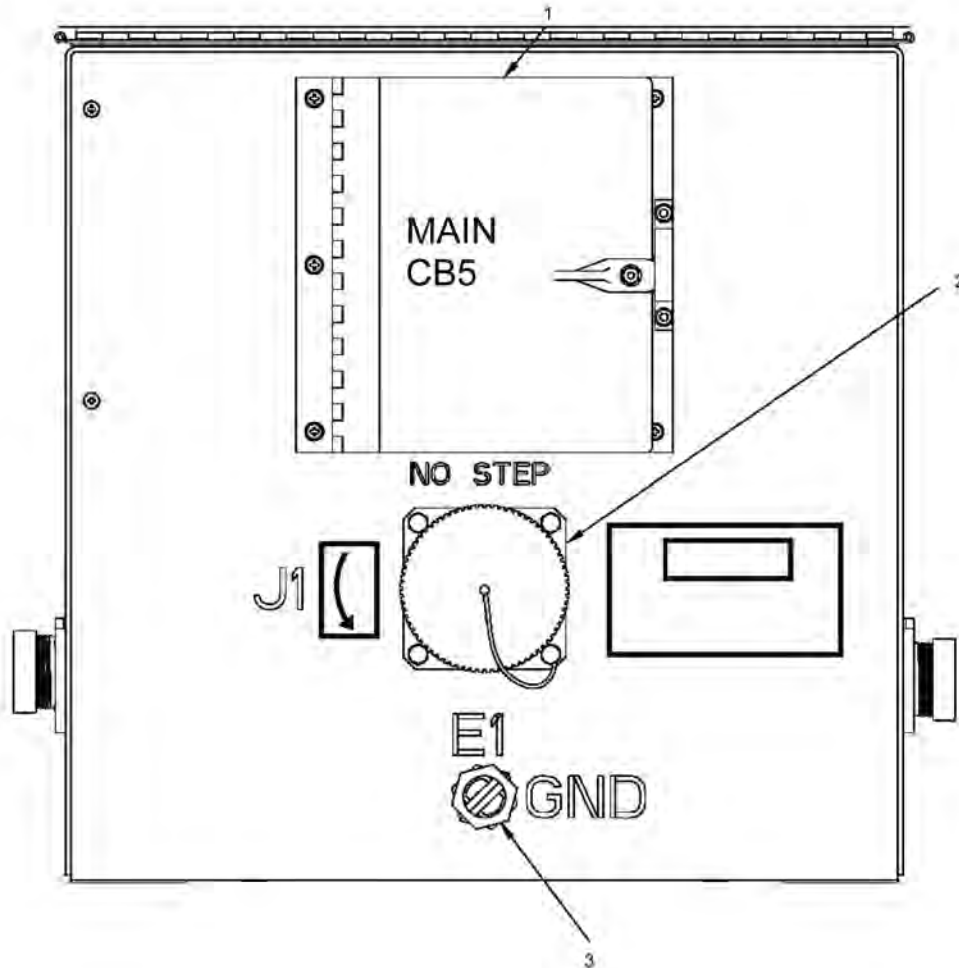


Figure 8. PP-8440A/ASM Left Side (Circuits No. 1 and No. 3) Connectors/Indicators.

Table 8. PP-8440A/ASM Rear Panel Connectors/Indicators.

KEY	CONTROL/INDICATOR	FUNCTION
1	Main Circuit Breaker (CB5)	250 amp circuit breaker provides overload protection at the Power Distribution Box. Must be in "ON" position to provide output to buss bars A1, B1, C1, A2, B2, and C2.
2	Connector, Receptacle (J1)	Power input connection for Power Distribution Box.

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**PP-8440A/ASM POWER DISTRIBUTION BOX REAR PANEL CONNECTORS/INDICATORS – CONTINUED****Table 8. PP-8440A/ASM Rear Panel Connectors/Indicators. – Continued**

<b>KEY</b>	<b>CONTROL/INDICATOR</b>	<b>FUNCTION</b>
3	Ground Stud (E1/GND)	Ground wire connection for Power Distribution Box.

**END OF WORK PACKAGE**



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**OPERATOR MAINTENANCE**  
**OPERATION UNDER USUAL CONDITIONS**

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**INITIAL SETUP:****Materials/Parts**

Power Cable, 50 ft. (WP 0066, Table 1, Item 5)  
Power Cable, 60Hz Main (WP 0066, Table 1, Item 4)  
Power Cable Assembly (WP 0066, Table 1, Item 6)  
Power Cable (WP 0066, Table 1, Item 5)

**References**

SF 364  
TB SIG 291  
TM 750-8  
TM 11-5895-1449-12  
WP 0011  
WP 0013

**Personnel Required**

Operator (4)

**Equipment Condition**

Power Off

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**UNPACKING AND EQUIPMENT INSPECTION**

This paragraph provides unpacking and equipment inspection procedures for the Power Distribution Box, PP-8440/ASM and PP-8440A/ASM.

**WARNING**

Use four people to lift and remove the stored Power Distribution Box. Improper lifting can result in injury to personnel. Use four people to lift and remove the main power cable. Improper lifting can result in injury to personnel.

1. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on SF 364, Report of Discrepancy (ROD).
2. Check the equipment against the packing slip to see if the equipment is complete. Report all discrepancies in accordance with the instructions contained in TM 750-8.

**END OF TASK****IDENTIFY GROUNDING CONDITIONS****WARNING**

Do not connect any power cables to Power Distribution Box PP-8440/ASM until the following grounding procedures are performed. SERIOUS INJURY or DEATH may result.

**WARNING**

Do not attempt to ground equipment with generator or commercial power source connected to PDB. Ensure PDB is disconnected from source power when performing grounding procedures. Ensure circuit breakers are set to OFF.

**NOTE**

- Refer to the applicable technical manual for proper generator grounding procedures.

**IDENTIFY GROUNDING CONDITIONS – CONTINUED**

- The soil conditions are for reference only. Grounding of the PP-8440/ASM PDB and PP-8440A/ASM will depend on the tactical mission and geography of the land that equipment is to be used in. Refer to TM 11-5895-1449-12.
- If there is no moist soil available, drive the rod as deeply as you can, then add one pound of salt per gallon of water and apply to soil. Replace salt that leaches into soil by mixing salt and water at least once a week for the first four weeks. Then use the salt and water mixture at least once a month. Apply salt water as needed.
- Check connection to equipment or shelter every day.
- Clean the ground rod to remove all grease, oil or paint.

**Sandy soils, gravel, stones and soil mixed with gravel or sand**

1. For ground rod installation, dig a hole 1 foot deep and 36 inches in diameter.
2. Using a driving hammer, drive each section of the ground rod through to moist subsoil. Allow about 12 inches of ground rod to protrude above the surface.
3. For ground plates, use a clean, bare metal plate or sheet at least 3 ft. square and 1/8 inch thick. Select a metal bolt, nut and lock washer, then drill a hole in the center of the plate large enough for the bolt. Fasten a ground strap to the plate. Make sure the connection is clean and tight. Bury the plate at least 4 ft under-ground. if possible, dig a hole at least 4 feet deep, large enough to install the plate horizontally.
4. Apply water and salt as described in NOTE above.

**Mountainous Terrain**

1. It may be impossible to penetrate to moist soil or a water table in various mountain terrain. To properly ground your equipment, you must find a site where a ground rod can be installed. Stream beds are ideal locations, if available.
2. Install your ground rod as described above.

**Arctic Conditions**

1. If possible, connect to a buried object such as an underground pipe or a building frame. Otherwise, drive in several ground rods as deeply as possible. Space them at least two rod lengths apart and connect them with #6 AWG or larger bare copper cable or braid. Treat the soil with salt and water.
2. Apply water and salt as described in NOTE above.

**END OF TASK****GROUNDING PROCEDURES**

Perform the following procedures to properly ground your PDB. For more information on grounding procedures used for communication-electronic equipment, refer to TM 11-5895-1449-12. For commercial power source grounding procedure refer to this work package.

**WARNING**

Never attach ground to any pipe or container used for gasoline or other flammable gasses or liquids. DEATH or SERIOUS INJURY may result.

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**GROUNDING PROCEDURES – CONTINUED****WARNING**

During thunderstorms, lighting flashover or arcing can occur between two or more unconnected or poorly connected adjacent metal structures. Flashover can cause LETHAL VOLTAGE on the ground in vicinity of these objects.

**WARNING**

Do not attempt to ground equipment with generator or commercial power source connected to PDB. Ensure PDB is disconnected from source power when performing grounding procedures. Ensure circuit breakers are set to OFF.

**CAUTION**

Ensure that the generator or commercial source is also grounded before performing PDB grounding procedures.

**CAUTION**

Wear gloves to protect hands from sharp metal.

1. PDB disconnected from source power
2. Circuit Breakers set to OFF.
3. Locate 20 ft ground wire and ground rod supplied with Power Distribution Box, PP-8440/ASM or PP-8440A/ASM.

**NOTE**

The ground wire supplied as part of ground rod must be removed and replaced with ground wire supplied with the PP-8440/ASM or PP-8440A/ASM.

4. Connect the ground rod to the PDB terminal post E1 located on rear panel using ground wire provided with the PDB. If you don't have a ground wire, use a piece of the heaviest gauge wire you can find, #4 AWG or larger, preferably copper.
5. Connect the ground wire to the ground rod using the terminal screw on the ground rod. If it is missing or broken, connect the ground strap using a tight fitting clamp.
6. If you can't find a clamp, bind the ground strap to the ground rod with at least 24-36 turns of stripped telephone wire or other bare wire. Tightly twist the ends of the wire together and tape connection to seal from moisture.

**CAUTION**

DO NOT TIE the ground wire to the ground rod or loop it around the rod. A knot or loop will greatly reduce the effectiveness of the ground. The strap must be connected by the terminal screw or clamp or bound with wire to the rod.

7. After connecting to equipment and rod, ensure the wire or strap is as short and straight as possible. Make sure there are no loops or knots and all the connections are tight and clean.
8. Saturate soil around the ground rod to moisten. Add water often as required to keep soil around the ground rod moist. (At least once a day if it doesn't rain).
9. Check ground wire everyday, make sure wire connections are clean and tight.

---

**GROUNDING PROCEDURES – CONTINUED****Commercial Power Source Grounding Procedures****NOTE**

The ground rod and ground wire supplied with the PDB can be used to ground the PDB when using commercial power source. If using the ground rod, refer to this work package and perform the PDB grounding connection procedures. The commercial power source ground lug may also be used to properly ground the PDB. If using this method perform the following steps:

1. Locate the 20 ft. ground wire supplied with the PDB.
2. Attach one end of the ground wire to PDB ground terminal post (E1) located on rear panel.
3. Attach opposite end of ground wire to commercial power source ground lug. Make sure all connections are secure. Perform ground continuity check.

**END OF TASK****POWER HOOK-UP AND OPERATION (GENERATOR AND COMMERCIAL POWER SOURCE)****CAUTION**

The PP-8440/ASM and PP-8440A/ASM Power Distribution Boxes are designed to be used with Generator or commercial power source. For Generator operation, a 60 kW maximum, 3 phase, 120/208 VAC, 50/60 Hz model can be used. Commercial power source that provides circuit breaker protection on the supply side is the only commercial hook-up allowed. This circuit breaker protection must be rated at 250 Amps Maximum.

The Power Distribution Box is supplied with one 50 foot power stub/cable assembly. Before installing power cable, check for any damage to cabling and/or connector. If any damage is observed to the cable or connector, do not attempt connection to the power source. Refer to MAC for disposition. For a typical PP-8440/ASM PDB power hook-up diagram, refer to Figure 1. For a typical PP-8440A/ASM PDB power hook-up diagram, refer to Figure 2. For generator hook-up, refer to this work package. For van/shelter connection procedures, refer to this work package. For commercial power source grounding and hook-up refer to this work package.

**Power Hook-Up (Generator Power Source)****WARNING**

Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

**WARNING**

Ground rod installation (generator and PDB) and hook-up must be completed before generator is started and before power is applied to PDB. Before operating this equipment, familiarize yourself with TB SIG 291. Failure to follow these requirements can result in INJURY or DEATH.

**WARNING**

Before operating this equipment, familiarize yourself with TB SIG 291. Failure to follow these requirements can result in INJURY or DEATH.

---

**POWER HOOK-UP AND OPERATION (GENERATOR AND COMMERCIAL POWER SOURCE) – CONTINUED****WARNING**

Connect the PDB to a power source that provides circuit breaker overload protection. The circuit breaker on the supply side **MUST** be rated at 250 amps, 3 phase (MAX). Never connect the PDB to a source that does not provide this circuit breaker protection. **DEATH** or **SEVERE INJURY** may result.

**WARNING**

The PDB 50 ft. main power cable assembly weighs 250 lb. Use four people to lift and position this cable. Failure to do so may cause **SEVERE INJURY** to personnel.

**NOTE**

This connector end of the power cable is marked "PWR DIST BOX J1". The opposite end is an 8-wire termination that will be connected to power source as described in the following steps.

1. Ensure power source is OFF. Set all circuit breakers to OFF on front panel of PDB.
2. Locate the 50 ft. power cable supplied with the Power Distribution Box.

**WARNING**

Use only the power cable supplied with the PDB (P/N A3254554) for this connection. Connect the PDB to 60 kW or less, 120/208 VAC, 50/60 Hz generator. Never connect the PDB to a generator rated higher. **SERIOUS INJURY** or **DEATH** may result.

**WARNING**

Do not rely on the color of the wire insulation for phase color coding. The color of the insulation on the wires inside the cable jacket may vary, depending on the supplier. Perform a continuity test to verify correct phase in accordance with identified color. Incorrect phase identification can cause a short circuit condition which may cause damage to the equipment and/or wiring, and possibly even **DEATH** or **SEVERE INJURY**.

**WARNING**

Connect the PDB to 60 kW or less, 120/208 VAC, 50/60 HZ Generator. Never connect the PDB to a generator rated higher. **SERIOUS INJURY** or **DEATH** may result.

3. Connect one end (marked J 1) of the 50 ft. Power Cable to J 1 on rear panel of Power Distribution Box Assembly.
4. Secure PDB J1 connector cover to main power cable connector hock.
5. Connect opposite end (Pigtail) of the 50 foot cable to the generator as follows:
  - Green Leads (4) to Generator GND Terminal.
  - White Lead (Phase Ø) to LØ.
  - Orange Lead (Phase C) to L3.
  - Red Lead (Phase B) to L2.
  - Black Lead (Phase A) to L1.

## POWER HOOK-UP AND OPERATION (GENERATOR AND COMMERCIAL POWER SOURCE) – CONTINUED

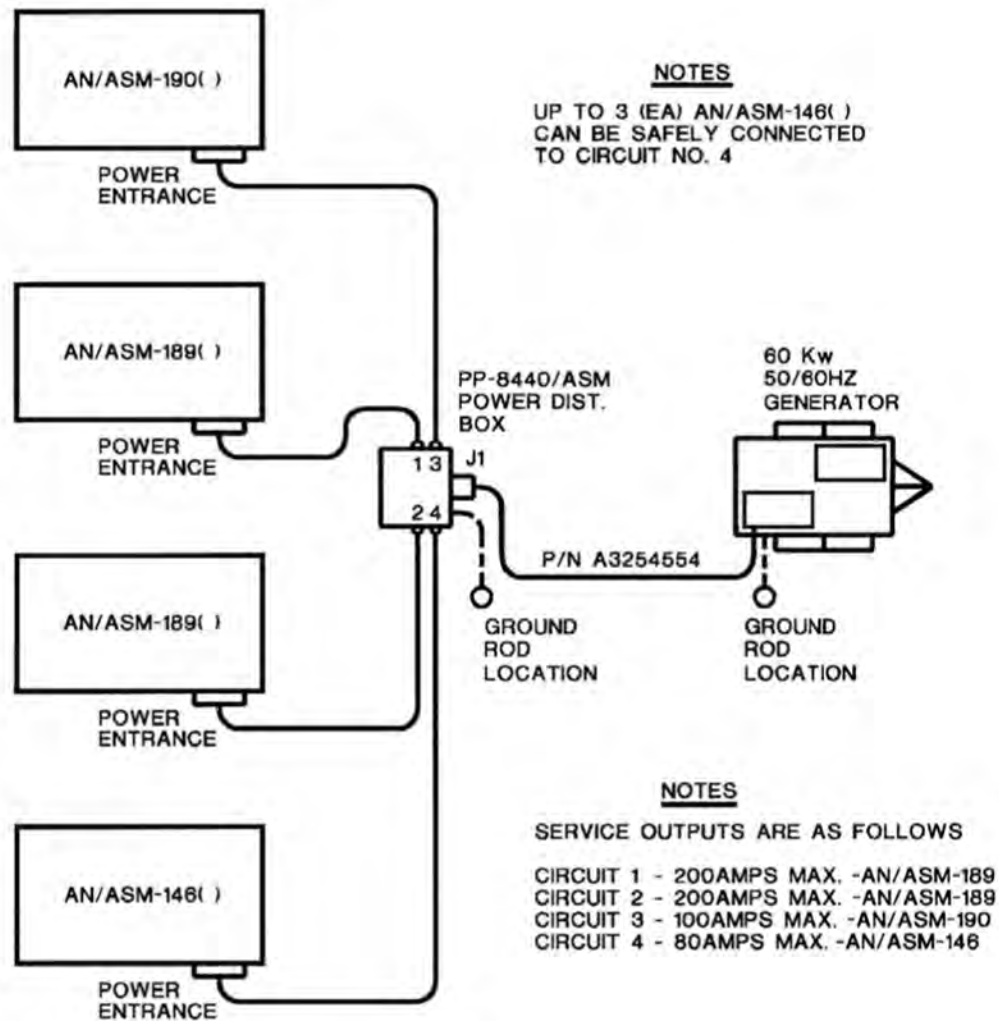


Figure 1. PP-8440/ASM Typical Generator Source Power Hook-up.

## POWER HOOK-UP AND OPERATION (GENERATOR AND COMMERCIAL POWER SOURCE) – CONTINUED

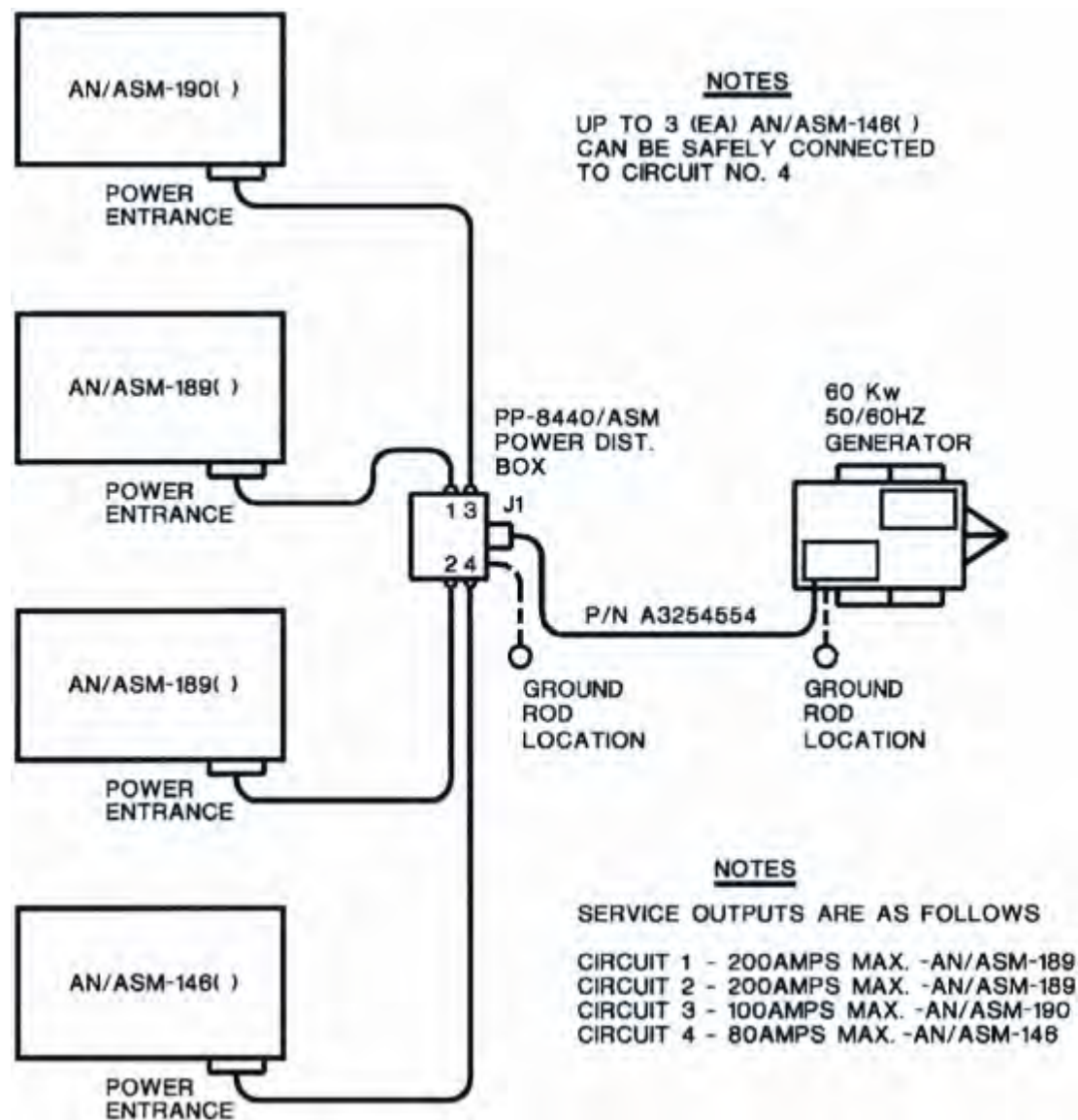


Figure 2. PP-8440A/ASM Typical Generator Source Power Hook-up.

6. Refer to applicable technical manual for 60 kW generator starting and operating procedures.
7. Check generator for correct output of 120/208 VAC.

**Commercial Power Source Hook-Up****WARNING**

Connect the PDB to a power source that provides circuit breaker overload protection. The circuit breaker on the supply side **MUST** be rated at 250 amps, 3 phase (MAX). Never connect the PDB to a source that does not provide this circuit breaker protection. **DEATH** or **SEVERE INJURY** may result.

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**POWER HOOK-UP AND OPERATION (GENERATOR AND COMMERCIAL POWER SOURCE) – CONTINUED****WARNING**

Connect the PDB to a commercial power source rated at 120/208 VAC, 3 phase, 50/60 Hz. Never connect the PDB to a source rated higher. SEVERE INJURY or DEATH may result.

**WARNING**

The PDB 50 ft. main power cable assembly weighs 250 lb. Use four people to lift and position this cable. Failure to do so may cause SEVERE INJURY to personnel.

**WARNING**

Make sure commercial power source and PDB are properly grounded prior to connecting to commercial power source. SEVERE INJURY or DEATH may result.

**NOTE**

This connector end of the power cable is marked "PWR DIST BOX J1". The opposite end is an 8-wire termination that will be connected to power source as described in the following steps.

1. Ensure Power source is OFF. Set all circuit breakers to OFF on Front Panel Of PDB.
2. Locate the 50 ft. Power Cable supplied with the Power Distribution Box.
3. Connect one end (marked J1) of the 50 ft. Power Cable to J1 on rear panel of Power Distribution Box Assembly.
4. Secure PDB J1 connector cover to main power cable connector hock.
5. Connect PDB Main Power Cable pigtail end to commercial power source as follows:
  - Wires marked L1 - (black), L2 - (red), L3 - (orange) to commercial power source "hot" lugs of 3 phase disconnect.
  - Wire marked LØ (white) to Neutral lug or buss.
  - Wire marked GND (green) to ground lug or buss.

**WARNING**

- If commercial power source utilizes a ganged 3-pole circuit breaker, all three poles will trip during an overload condition. Extreme caution must be exercised. SEVERE INJURY or DEATH may result.
- If commercial power source utilizes 3 separate fuses, only one or two poles may open during an overload or fault condition. Extreme caution must be exercised. SEVERE INJURY or DEATH may result.
- If fuses have opened during operation extreme caution must be exercised. SEVERE INJURY or DEATH may result.

**NOTE**

If any of the above mentioned conditions occur, OPEN the disconnect switch to clear all three poles.

6. After performing proper hook-up to PDB, apply power to PDB.
7. On PP-8440/ASM only, verify that the 3 "Power Present" indicators L1, L2, and L3 are illuminated. Press the "PHASE INCORRECT" LIGHT TEST push button to verify indicator lamp is operational.



**POWER HOOK-UP AND OPERATION (GENERATOR AND COMMERCIAL POWER SOURCE) – CONTINUED**

8. On PP-8440A/ASM only, at Phase Selector Switch (S7), select LØ, L1, L2 and L3 and monitor the results at SOURCE VOLTS Meter (M1). In LØ position, meter should read 0 VAC. In L1, L2 and L3 position, meter should read 120 VAC  $\pm$  6 volts. Press the "PHASE INCORRECT" LIGHT TEST pushbutton to verify indicator lamp is operational.
9. Check front panel "PHASE INCORRECT" indicator. If this indicator is illuminated, it indicates that an improper connection(s) have been connected at the commercial power source. Disconnect at the commercial power source and reverse any two pig-tail "hot" leads, i.e., L1, L2, L3.
10. Apply power to PDB.
11. On PP-8440/ASM only, verify that the "Power Present" indicators L1, L2, and L3 illuminate.
12. On PP-8440A/ASM only, verify power status in each position with phase selector switch and source voltmeter (refer to step h).
13. Verify that the "PHASE INCORRECT" indicator is NOT ILLUMINATED.
14. On front panel, press the "LIGHT TEST" push button for Circuit No.'s 1 - 4. Verify that each time a push button is pressed, the corresponding circuit's phase indicators i.e. L1, L2, and L3 illuminate.
15. To connect to the AN/ASM-190( ) van/shelter; refer to this work package.
16. To connect to the AN/ASM-189( ) van/shelter; refer to this work package.
17. To connect to the AN/ASM-146( ) van/shelter; refer to this work package.
18. After connecting PDB correctly, refer to this work package (PP-8440/ASM) or (PP8440A/ASM) and perform operational test to ensure proper and safe operation.

**END OF TASK****CONNECTION TO PP-8440/ASM OR PP-8440A/ASM****AN/ASM-190( ) Connection**

The following procedures are used to connect a AN/ASM-190( ) van/shelter to the PP-8440/ASM. The procedures can also be used to connect a AN/ASM-190( ) van/shelter to the PP-8440A/ASM.

**WARNING**

- If commercial power source utilizes a ganged 3-pole circuit breaker, all three poles will trip during an overload condition. Extreme caution must be exercised. SEVERE INJURY or DEATH may result.
- If commercial power source utilizes 3 separate fuses, only one or two poles may open during an overload or fault condition. Extreme caution must be exercised. SEVERE INJURY or DEATH may result.
- If fuses have opened during operation extreme caution must be exercised. SEVERE INJURY or DEATH may result.

**WARNING**

Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

**NOTE**

Ground Rod installation (generator and PDB) and hook-up must be completed before generator is started and before power is applied to PDB. If not completed, do so at this time.

**CONNECTION TO PP-8440/ASM OR PP-8440A/ASM – CONTINUED****NOTE**

Ensure that your van/shelter is properly grounded IAW applicable shelter TM prior to connecting power cable.

1. Ensure all circuit breakers in 190 ( ) van/shelter are set to OFF. If other circuits are not in use, ensure all PDB circuit breakers are OFF prior to power connection. Close and secure circuit breaker access cover. If commercial source power is used; refer to this work package.
2. Locate van/shelter main 50 foot power cable.

**WARNING**

Do not rely on the color of the wire insulation for phase color coding. The color of the insulation on the wires inside the cable jacket may vary, depending on the supplier. Perform a continuity test to verify correct phase in accordance with identified color. Incorrect phase identification can cause a short circuit condition which may cause damage to the equipment and/or wiring, and possibly even DEATH or SEVERE INJURY.

**CAUTION**

Connect your AN/ASM-190() van/shelter to Circuit No.'s 3 or 4 terminal posts only. Connecting to Circuit No.'s 1 or 2 can cause damage to equipment and/or wiring.

3. Open side panel access cover for either Circuit No. 3 or 4 only. Remove terminal post safety covers from all terminal posts in either Circuit No. 3 or 4. Connect opposite end (Pigtail) of the cable to Circuit No. 3 or 4 terminal posts as follows:
  - Green Leads (4) to PDB GND Terminal.
  - White Lead (Phase Ø) to LØ.
  - Orange Lead (Phase C) to L3.
  - Red Lead (Phase B) to L2.
  - Black Lead (Phase A) to L1.
4. After making all connections, place terminal post safety covers on all terminal posts. Close side panel access covers.
5. Connect opposite end of the shelter power cable to van/shelter AC Power In connector located on the AN/ASM-190 ( ) power entrance panel.
6. Start the 60 kW generator set in accordance with the applicable TM. If commercial power is used, set circuit breaker for commercial source to ON.

**CAUTION**

If "Phase Incorrect" indicator on front panel is lit, improper hookup has been performed at the commercial source. Stop all actions. Check all connections to PDB and power source. Correct any improper connections identified and repeat the above steps.

7. Press the "Test Light" push button for applicable Circuit No. (3 or 4). Verify that corresponding indicator lights L1, L2, and L3 are illuminated.
8. Starting at the Power Distribution Box circuit breaker panel, set circuit breaker No. 3 or 4 to ON. Verify Circuit No. 3 or 4 phase indicators L1, L2, and L3 illuminate.
9. Open Circuit No. 3 or 4 side panel access cover and verify side panel indicators L1, L2, and L3 are illuminated. Close and secure applicable side access cover panel.
10. In van/shelter, set all Power Distribution Box circuit breakers to "ON". Power is now available for van/shelter equipment.

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**CONNECTION TO PP-8440/ASM OR PP-8440A/ASM – CONTINUED****Cable Preparation for the AN/ASM-189 ( ) Power Cable**

The following procedures are to be used to step-back the power cables from the AN/ASM-189 maintenance shops when connecting to the PP-8440/ASM or PP-8440A/ASM. These cables must be stepped back in order to operate the PP-8440/ASM or PP-8440A/ASM with the circuit access covers closed and secured.

**NOTE**

The L1, L2, L3 and LØ conductors of the 189( ) power cable must be positioned as shown in Figure 1. This positioning of the leads is critical, for it allows the operator to completely close and secure the side panel access covers while PDB is operational.

**NOTE**

Cable preparation required prior to connection of AN/ASM 189( ).

1. See Figure 3. Open and secure Circuit No. 1 or no. 2 circuit access cover. Connect all four green ground wires to the circuit ground terminal.
2. Position the other leads in the compartment and take the L1 conductor and position it across L1 terminal post. If the L1 conductor lead is too long, the excess must be cut-off. See Figure 3. After trimming L1 conductor lead, tin pig-tail end of cable in accordance with procedures. Secure conductor lead to the terminal post.
3. After securing L1, position the other leads in the compartment and take the L2 conductor and position it across L2 terminal post. If the L2 conductor lead is too long, the excess must be cut-off. See Figure 3. After trimming L2 conductor lead, tin pig-tail end of cable in accordance with procedures. Secure conductor lead to the terminal post.
4. After securing L1 and L2, position the other leads in the compartment and take the L3 conductor and position it across L3 terminal post. If the L3 conductor lead is too long, the excess must be cut-off. See Figure 3. After trimming L3 conductor lead, tin pig-tail end of cable in accordance with procedures. Secure conductor lead to the terminal post.
5. After securing L1, L2, and L3, position the other leads in the compartment and take the LØ conductor and position it across LØ terminal post. If the LØ conductor lead is too long, the excess must be cut-off. See Figure 3. After trimming LØ conductor lead, tin pig-tail end of cable in accordance with procedures. Secure conductor lead to the terminal post.
6. Ensure all conductor leads are properly trimmed and tinned. Make sure that the side access covers are closed and secured prior to applying power to PDB.

**AN/ASM-189 ( ) Connection**

The following procedures are used to connect a AN/ASM-189 ( ) van/shelter to the PP- 8440/ASM. The procedures can also be used to connect a AN/ASM-189 ( ) van/shelter to the PP-8440A/ASM.

## CONNECTION TO PP-8440/ASM OR PP-8440A/ASM – CONTINUED

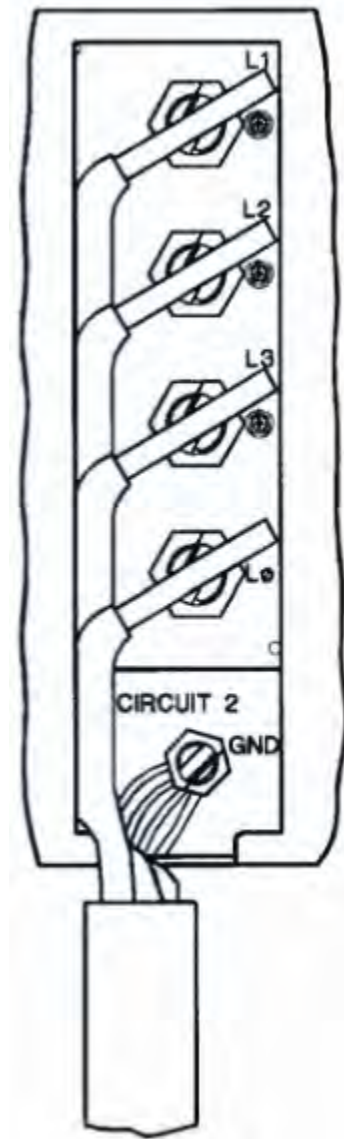


Figure 3. AN/ASM-189 ( ) Power Cable Connection.

**WARNING**

Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

**WARNING**

Ensure that your shelter is properly grounded IAW applicable shelter TM prior to connecting power cable. SEVERE INJURY or DEATH may result if shelter is not properly grounded.

**CAUTION**

- If other vans/shelters are connected to the PDB, do not disconnect from the power source. Leave circuit breaker for energized equipment in the ON position, this will ensure no interruption in mission.

**CONNECTION TO PP-8440/ASM OR PP-8440A/ASM – CONTINUED**

- Connect 189 ( ) van/shelters to Circuit No.'s 1 or 2 only. Connecting to other circuits will not provide enough output to properly operate users' equipment.
  - If no other circuits are energized, set all PDB front panel circuit breakers to OFF.
  - If other circuits are connected, set circuit breaker No. 1 or No. 2 to OFF.
  - Ground rod installation (generator and PDB) and hook-up must be completed before generator is started and before power is applied to PDB.
1. Ensure all circuit breakers in 189 ( ) van/shelter are set to OFF. Ensure PDB circuit breakers No. 1 and/or 2 are OFF prior to power connection. Close and secure circuit breaker access cover. If commercial source power is used; refer to this work package.
  2. Locate van/shelter main 50 foot power cable.

**WARNING**

Do not rely on the color of the wire insulation for phase color coding. The color of the insulation on the wires inside the cable jacket may vary, depending on the supplier. Perform a continuity test to verify correct phase in accordance with identified color. Incorrect phase identification can cause a short circuit condition which may cause damage to the equipment and/or wiring, and possibly even DEATH or SEVERE INJURY.

**CAUTION**

Connect your AN/ASM-189 ( ) van/shelter to Circuit No. 1 or 2 terminal posts only. Connecting to Circuit No. 3 or 4 will not provide enough output to properly operate all equipment in the AN/ASM-1 89 ( ) van/shelter. See Figures 2 or 3.

3. Open side panel access cover for either Circuit No. 1 or 2 only. Remove terminal post safety covers from all terminal posts in either Circuit No. 1 or 2. Connect (Pigtail) end of the cable to Circuit No. 1 or 2 terminal posts as follows:
  - Green Leads (4) to PDB GND Terminal.
  - White Lead (Phase Ø) to LØ.
  - Orange Lead (Phase C) to L3.
  - Red Lead (Phase B) to L2.
  - Black Lead (Phase A) to L1.
4. After making all connections, place terminal post safety covers on all terminal posts. Close side panel access covers.
5. Connect one end of the shelter power cable to van/shelter AC Power IN connector located on the power entrance panel.
6. Start the 60 kW generator set in accordance with the applicable TM. If commercial power is used, set circuit breaker for commercial source to ON.

**CAUTION**

If "Phase Incorrect" indicator on front panel is lit, improper hookup has been performed at the commercial source. Stop all actions. Check all connections to PDB and power source. Correct any improper connections identified and repeat the above steps.

7. Press the "Test Light" push button for applicable Circuit No. (1 or 2). Verify that corresponding indicator lights L1, L2, and L3 are illuminated.

**CONNECTION TO PP-8440/ASM OR PP-8440A/ASM – CONTINUED**

8. Starting at the Power Distribution Box circuit breaker panel, set circuit breaker No. 1 or 2 to ON. Verify Circuit No. 1 or 2 phase indicators L1, L2, and L3 illuminate.
9. Open Circuit No. 1 or 2 side panel access cover and verify side panel indicators L1, L2, and L3 are illuminated. Close and secure applicable side access cover panel.
10. In van/shelter, set all Power Distribution Box circuit breakers to "ON". Power is now available for van/shelter equipment.

**AN/ASM-146( ) Connection to PP-8440/ASM or PP-8440A/ASM**

The following procedures are used to connect a AN/ASM-146( ) van/shelter to the PP-8440/ASM. The procedures can also be used to connect a AN/ASM-146( ) van/shelter to the PP-8440A/ASM.

**WARNING**

Set all circuit breakers to OFF on front panel of PDB if other circuits are not being used. If other circuits are being utilized, set circuit breaker No. 4 to OFF. Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

**WARNING**

Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

**WARNING**

Ground rod installation (generator and PDB) and hook-up must be completed before generator is started and before power is applied to PDB. Before operating this equipment, familiarize yourself with TB SIG 291. Failure to follow these requirements can result in INJURY or DEATH.

**WARNING**

Set all circuit breakers to OFF on front panel of PDB if other circuits are not being used. If other circuits are being utilized, set circuit breaker No. 4 to OFF. Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

1. Ensure all circuit breakers in 146 ( ) van/shelter are set to OFF. Ensure PDB circuit breakers No. 4 is OFF prior to power connection. If commercial source power is used, refer to procedures in this work package for Commercial Source Grounding and Commercial Source Power Hook-Up.
2. Locate shelter 100 ft. single phase, 60Hz main power cable with power stub.

**WARNING**

Do not rely on the color of the wire insulation for phase color coding. The color of the insulation on the wires inside the cable jacket may vary, depending on the supplier. Perform a continuity test to verify correct phase in accordance with identified color. Incorrect phase identification can cause a short circuit condition which may cause damage to the equipment and/or wiring, and possibly even DEATH or SEVERE INJURY.

**CONNECTION TO PP-8440/ASM OR PP-8440A/ASM – CONTINUED****CAUTION**

Connect your AN/ASM-146 ( ) van/shelter to Circuit No.'s 4 terminal posts only. Connecting to Circuit No. 1, 2, or 3 can damage wiring.

3. Connect one end of the shelter power cable to van/shelter AC Power In connector located on the power entrance panel.
4. Open side panel access cover for either Circuit No. 4 only. Remove terminal post safety covers from L1, L2, and L3 terminal posts in Circuit No. 4. Also remove terminal post safety covers from neutral and ground terminal posts. Connect (Pigtail) end of the cable to Circuit No. 4 terminal posts as follows:
  - Green Lead or Ground Lead to PDB GND Terminal Post.
  - White Lead or Neutral Lead (Phase Ø) to LØ.
  - Orange Lead (Phase C) to L3
  - Red Lead (Phase B) to L2
  - Black Lead (Phase A) to L1
5. After making all connections, place terminal post safety covers on all terminals posts. Close side panel access covers.
6. Start the 60 kW generator set in accordance with the applicable TM. If commercial power is used, set circuit breaker for commercial source to ON.

**CAUTION**

If "Phase Incorrect" indicator on front panel is lit, improper hookup has been performed at the commercial source. Stop all actions. Check all connections to PDB and power source. Correct any improper connections identified and repeat the above steps.

7. Press the "Test Light" push button for applicable Circuit No. 4. Verify that corresponding indicator lights L1, L2, and L3 are illuminated.
8. Starting at the Power Distribution Box circuit breaker panel, set circuit breaker No. 4 to ON. Verify phase indicators for Circuit No. 4 L1, L2, and L3 illuminate.
9. Open Circuit No. 4 side panel access cover and verify side panel indicators L1, L2, and L3 are illuminated. Close and secure applicable side access cover panel.
10. In van/shelter, set all Power Distribution Box circuit breakers to "ON". Power is now available for van/shelter equipment.

**AN/ASM-147( ) Connection to PP-8440/ASM or PP-8440A/ASM**

The following procedures are used to connect a AN/ASM-147( ) van/shelter to the PP-8440/ASM. The procedures can also be used to connect a AN/ASM-147( ) van/shelter to the PP-8440A/ASM.

**WARNING**

Set all circuit breakers to OFF on front panel of PDB if other circuits are not being used. If other circuits are being utilized, set circuit breaker No. 4 to OFF. Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

**WARNING**

Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

**CONNECTION TO PP-8440/ASM OR PP-8440A/ASM – CONTINUED****WARNING**

Ground rod installation (generator and PDB) and hook-up must be completed before generator is started and before power is applied to PDB. Before operating this equipment, familiarize yourself with TB SIG 291. Failure to follow these requirements can result in INJURY or DEATH.

**WARNING**

Set all circuit breakers to OFF on front panel of PDB if other circuits are not being used. If other circuits are being utilized, set circuit breaker No. 4 to OFF. Lethal voltages are present in this equipment. Do not connect cables to the generator with the power set to ON. DEATH or SEVERE INJURY may result.

**NOTE**

The AN/ASM-147( ) van/shelter require single phase operation. The power cable for the AN/ASM-147( ) van/shelter has only three leads on the pigtail end of the cable i.e. hot, neutral, and ground.

**NOTE**

Up to three AN/ASM-147( ) van/shelters can be connected to Circuit No. 4 simultaneously. See Figure 4.

1. Ensure all circuit breakers in 147 ( ) van/shelter are set to OFF. Ensure PDB circuit breakers No. 4 is OFF prior to power connection. If commercial source power is used, refer to procedures in this work package for Commercial Source Grounding and Commercial Source Power Hook-Up.
2. Locate shelter 100 ft. single phase, 60Hz main power cable with power stub.

**WARNING**

Do not rely on the color of the wire insulation for phase color coding. The color of the insulation on the wires inside the cable jacket may vary, depending on the supplier. Perform a continuity test to verify correct phase in accordance with identified color. Incorrect phase identification can cause a short circuit condition which may cause damage to the equipment and/or wiring, and possibly even DEATH or SEVERE INJURY.

**CAUTION**

Connect your AN/ASM-147 ( ) van/shelter to Circuit No.'s 4 terminal posts only. Connecting to Circuit No. 1, 2, or 3 can damage wiring. To connect three -147 vans/shelters, see Figure 4.

3. Connect one end of the shelter power cable to van/shelter AC Power In connector located on the power entrance panel.
4. Open side panel access cover for either Circuit No. 4 only. Remove terminal post safety covers from L1 or L2, or L3 terminal posts in Circuit No. 4. Also remove terminal post safety covers from neutral and ground terminal posts. Connect (Pigtail) end of the cable to Circuit No. 4 terminal posts as follows:
  - Green Lead or Ground Lead to PDB GND Terminal Post.
  - White Lead or Neutral Lead (Phase Ø) to LØ.
  - Black Lead or Hot (Phase A) to L1, L2, or L3.
5. After making all connections, place terminal post safety covers on all terminals posts. Close side panel access covers.



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**CONNECTION TO PP-8440/ASM OR PP-8440A/ASM – CONTINUED**

6. Start the 60 kW generator set in accordance with the applicable TM. If commercial power is used, set circuit breaker for commercial source to ON.

**CAUTION**

If "Phase Incorrect" indicator on front panel is lit, improper hookup has been performed at the commercial source. Stop all actions. Check all connections to PDB and power source. Correct any improper connections identified and repeat the above steps.

7. Press the "Test Light" push button for applicable Circuit No. 4. Verify that corresponding indicator lights L1, L2, and L3 are illuminated.
8. Starting at the Power Distribution Box circuit breaker panel, set circuit breaker No. 4 to ON. Verify phase indicators for Circuit No. 4 L1, L2, and L3 illuminate.
9. Open Circuit No. 4 side panel access cover and verify side panel indicators L1, L2, and L3 are illuminated. Close and secure applicable side access cover panel.
10. In van/shelter, set all Power Distribution Box circuit breakers to "ON". Power is now available for van/shelter equipment.

**END OF TASK****OPERATIONAL TEST****PP-8440/ASM Operational Test****NOTE**

Maintenance personnel should refer to WP 0013 for applicable continuity test in the event voltage is not obtained.

Equipment required for operational test:

- 1 each, Generator (60 kW 3-phase or a 3-phase 120/208 VAC 50/60 Hz commercial source with 250 Amp (Max) disconnect)
- 1 each, Digital Multimeter (AN/PSM-45 or equivalent)

**WARNING**

- Before applying power, be sure all circuit breakers at the PDB are set to OFF.
  - Ensure the PDB and generator are grounded. DEATH or SEVERE INJURY may result if you do not properly ground the PDB and generator.
1. Physically check that the generator and PP-8440/ASM are properly grounded. Refer to applicable TM for correct generator grounding procedures. Refer to this work package for PDB grounding procedures.
  2. Connect PDB to generator as described in this work package. For commercial hook-up refer to this work package. Perform procedures in those paragraphs before continuing if using commercial power.
  3. Start the Generator Set. Refer to applicable TM for proper generator operating procedures.
  4. Notify the users that the system is operational. Ensure all PDB circuit breakers are in "OFF" position.
  5. Verify that L1, L2, and L3 above "Power Present" are illuminated.
  6. Press the "PHASE INCORRECT" button located on the front panel. Verify that the indicator illuminates.
  7. Press the "TEST LIGHT" button for Circuit No. 1 located on the upper left side of the front panel. Verify that L1, L2, and L3 for Circuit No. 1 illuminate.

**OPERATIONAL TEST – CONTINUED**

8. Press the "TEST LIGHT" button for Circuit No. 2 located on the upper right side of the front panel. Verify that L1, L2, and L3 for Circuit No. 2 illuminate
9. Press the "TEST LIGHT" button for Circuit No. 3 located on the lower left side of the front panel. Verify that L1, L2, and L3 for Circuit No. 3 illuminate.
10. Press the "TEST LIGHT" button for Circuit No. 4 located on the lower right side of the front panel. Verify that L1, L2, and L3 for Circuit No. 4 illuminate.
11. Circuit breaker No. 1 to the "ON" position. Verify that L1, L2, and L3 for Circuit No. 1 illuminate.

**CAUTION**

A circuit breaker in the tripped position (midway between ON and OFF positions) indicates the circuit breaker has been subjected to an overload condition. Wait two minutes before resetting the circuit breaker. To reset the circuit breaker, place in ON position. If the circuit breaker trips again after resetting, the overload or fault must be cleared before safe operation can be resumed.

12. Open Circuit No. 1 side panel cover and swing upward to secure. Verify that L1, L2, and L3 illuminate.
13. Using the appropriate multimeter, measure the voltage between terminal posts L1 and L2 (Circuit No. 1). Verify a reading of 208 VAC  $\pm$  10.4 is obtained.
14. Measure the voltage between Terminal Posts L2 and L3 (Circuit No. 1). Verify reading of 208 VAC  $\pm$  10.4 volts is obtained.
15. Measure the voltage between Terminal Posts L3 and L1 (Circuit No. 1). Verify reading of 208 VAC  $\pm$  10.4 volts is obtained.
16. Using the appropriate multimeter, measure the voltage between Terminal Posts L1 and L $\pm$ , (Circuit No. 1.) Verify a reading of 120 VAC  $\pm$  6 volts is obtained. Measure the voltage between Terminal Posts L2 and LØ (Circuit No. 1). Verify reading of 120 VAC  $\pm$  6 volts is obtained.
17. Measure the voltage between Terminal Posts L3 and LØ (Circuit No. 1). Verify reading of 120 VAC  $\pm$  6 volts is obtained.
18. Close and secure Circuit No. 1 side panel cover. Turn OFF circuit breaker No.1 on the PDB front panel.
19. Switch circuit breaker No. 2 to the "ON" position. Verify that L1, L2, and L3 for Circuit No. 2 illuminate.
20. Open Circuit No. 2 side panel cover and swing upward to secure. Verify that L1, L2, and L3 illuminate.

**WARNING**

High voltage is present in this equipment. Be careful not to contact high voltage connections when taking voltage measurements. DEATH or SERIOUS INJURY may result.

21. Using the appropriate multimeter, measure the voltage between Terminal Posts L1 and L2 (Circuit No. 2). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
22. Measure the voltage between Terminal Posts L2 and L3 (Circuit No. 2). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
23. Measure the voltage between Terminal Posts L3 and L1 (Circuit No. 2). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
24. Using the appropriate multimeter, measure the voltage between Terminal Posts L1 and LØ (Circuit No. 2). Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
25. Measure the voltage between Terminal Posts L2 and LØ (Circuit No. 2). Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
26. Measure the voltage between Terminal Posts L3 and LØ (Circuit No. 2). Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
27. Close and secure Circuit No. 2 side panel cover. Turn OFF circuit breaker No. 2.

**OPERATIONAL TEST – CONTINUED**

28. Switch circuit breaker No. 3 to the "ON" position. Verify that L1, L2, and L3 for Circuit No. 3 illuminate.
29. Open Circuit No. 3 side panel cover and swing upward to secure. Verify that L1, L2, and L3 illuminate.

**WARNING**

High voltage is present in this equipment. Be careful not to contact high voltage connections when taking voltage measurements. DEATH or SERIOUS INJURY may result.

30. Using the appropriate multimeter, measure the voltage between Terminal Posts L1 and L2, (Circuit No. 3). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
31. Measure the voltage between Terminal Posts L2 and L3 (Circuit No. 3). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
32. Measure the voltage between Terminal Posts L3 and L1 (Circuit No. 3). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
33. Using the appropriate multimeter, measure the voltage between Terminal Posts L1 and LØ (Circuit No. 3). Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
34. Measure the voltage between Terminal Posts L2 and LØ (Circuit No. 3). Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
35. Measure the voltage between Terminal Posts L3 and LØ (Circuit No. 3). Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
36. Close Circuit No. 3 side panel cover. Turn OFF circuit breaker No. 3.
37. Switch circuit breaker No. 4 to the "ON" position. Verify that L1, L2, and L3 for Circuit No. 4 illuminate.
38. Open Circuit No. 4 side panel cover and swing upward to secure. Verify that L1, L2, and L3 for Circuit No. 4 illuminate.

**WARNING**

High voltage is present in this equipment. Be careful not to contact high voltage connections when taking voltage measurements. DEATH or SERIOUS INJURY may result.

39. Using the appropriate multimeter, measure the voltage between Terminal Posts L1 and L2, (Circuit No. 4). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
40. Measure the voltage between Terminal Posts L2 and L3 (Circuit No. 4). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
41. Measure the voltage between Terminal Posts L3 and L1 (Circuit No. 4). Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained.
42. Using the appropriate multimeter, measure the voltage between Terminal Posts L1 and LØ (Circuit No. 4). Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
43. Measure the voltage between Terminal Posts L2 and LØ (Circuit No. 4). Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
44. Measure the voltage between Terminal Posts L3 and LØ (Circuit No. 4). Verify a reading of 120 VAC  $\pm$  6 volts is obtained. Close Circuit No. 4 side panel cover. Turn OFF circuit breaker No. 4.
45. Push circuit breaker No. 5 to ON position. Measure voltage at GFCI convenience receptacle 1. Verify a reading of 120 VAC is obtained. On GFCI convenience receptacle 1, press the "TEST" push button. Measure voltage across GFCI convenience receptacle 1. Verify a reading of 0 volts is obtained.
46. Press "Reset" button on GFCI convenience receptacle 1. Measure voltage at GFCI convenience receptacle 1. Verify a reading of 120 VAC is obtained. Place cover on circuit breaker.
47. Push circuit breaker No. 6 to ON position. Measure voltage at GFCI convenience receptacle 2. Verify a reading of 120 VAC is obtained. On GFCI convenience receptacle 2, press the "TEST" push button. Measure voltage across GFCI convenience receptacle 2. Verify a reading of 0 volts is obtained.

**OPERATIONAL TEST – CONTINUED**

48. Press "Reset" button on GFCI convenience receptacle 2. Measure voltage at GFCI convenience receptacle 2. Verify a reading of 120 VAC is obtained. Place cover on circuit breaker.
49. Check to make sure that circuit breakers CB1 through CB4 are in the "OFF" position. If not, place all front panel circuit breakers in the OFF position.
50. Refer to applicable TM for generator shut down procedures. Perform generator shutdown.

**PP-8440A/ASM Operational Test****NOTE**

Maintenance personnel should refer to WP 0013 for applicable continuity test in the event voltage is not obtained.

Equipment required for operational test:

- 1 each, Generator (60 kW 3-phase or a 3-phase 120/208 VAC 50/60 Hz commercial source with 250 Amp (Max) disconnect)
- 1 each, Digital Multimeter (AN/PSM-45 or equivalent)

**WARNING**

- Before applying power, be sure all circuit breakers at the PDB are set to OFF.
  - Ensure the PDB and generator are grounded. DEATH or SEVERE INJURY may result if you do not properly ground the PDB and generator.
1. Physically check that the generator and PP-8440A/ASM are properly grounded. Refer to applicable TM for correct generator grounding procedures. Refer to this work package for PDB grounding procedures.
  2. Connect PDB to generator as described in this work package. For commercial hook-up refer to this work package. Perform procedures in this work package before continuing if using commercial power.
  3. Ensure all PDB circuit breakers are in OFF position. Refer to applicable TM for proper generator operating procedures.
  4. Start the Generator Set. Notify the users that the system is operational.
  5. Place S7 Selector Switch to position L1 (Source Voltage Phase 1) and verify that M1 voltage meter above SOURCE VOLTS is illuminated and indicates 120 VAC  $\pm$  6 volts. Repeat for positions L2 and L3 (Source Voltage Phases 2 and 3). When positioned to L0 (Neutral to Ground) or OFF, verify no illuminated voltage indication.
  6. Press the PHASE INCORRECT button located on the front panel. Verify that the indicator light glows ORANGE while the switch is pushed.
  7. Switch the Main Circuit Breaker (CB5) to the ON position. Verify that all lights MUST be OFF.
  8. Press TEST LIGHT button for Circuit No. 1 located on the upper left side of the front panel. Verify that L1, L2, and L3 for Circuit No. 1 illuminate GREEN while switch is pushed and all other lights are OFF.
  9. Switch Circuit Breaker No. 1 to the ON position. Verify that front panel indicator lights L1, L2, and L3 for Circuit No. 1 illuminate GREEN and all other lights are OFF.

**CAUTION**

Circuits No. 1 and 2 outputs are designed to be connected to the AN/ASM-189 ( ) van inputs only. Never connect any other shelter to Circuit No. 1 or Circuit No. 2.

10. Open Circuit No. 1 side panel cover and swing upward to secure. Verify that L1, L2, and L3 illuminate ORANGE.

**OPERATIONAL TEST – CONTINUED****WARNING**

High voltage is present in this equipment. Be careful not to contact high voltage connections when taking voltage measurements. DEATH or SERIOUS INJURY may result.

11. Using the appropriate multimeter (AC scale), make sure that Circuit No. 1 terminal posts L0 and Ground are at the same potential before proceeding.
12. Measure the voltage between Circuit No. 1 terminal posts L1 - L2, L2 - L3, and L3 - L1. Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained between each.
13. Measure the voltage between Circuit No. 1 terminal posts L1 - L0, L2 - L0, and L3 - L0. Verify a reading of 120 VAC  $\pm$  6 volts is obtained between each.
14. Measure the voltage between Circuit No. 1 terminal posts L1 - GND, L2 - GND, and L3 - GND. Verify reading of 120 VAC  $\pm$  6 volts is obtained.
15. Open Circuit No. 2, 3, and 4 side panel covers and swing upward to secure. Using the appropriate multimeter, verify that voltage is not present (5 VAC or less) at Circuit No. 2, 3, and 4 terminal posts L1, L2, L3 referenced to L0. Close and secure covers.
16. Turn OFF Circuit Breaker No. 1 on the PDB front panel. Verify that all Circuit No. 1 indicator lights are OFF on front and side panels.
17. Using the appropriate multimeter, verify that voltage is not present at Circuit No. 1 terminal posts L1, L2, L3 referenced to L0.
18. Close and secure Circuit No. 1 side panel over.
19. Press the TEST LIGHT button for Circuit No. 2 located on the upper right side of the front panel. Verify that L1, L2, and L3 for Circuit No. 2 illuminate GREEN while switch is pushed and all other lights are OFF.
20. Switch Circuit Breaker No. 2 to the ON position. Verify that front panel indicator lights L1, L2, and L3 for Circuit No. 2 illuminate GREEN and all other lights are OFF.

**CAUTION**

A circuit breaker in the tripped position (midway between ON and OFF positions) indicates the circuit breaker has been subjected to an overload condition. Wait two minutes before resetting the circuit breaker. To reset the circuit breaker, place in ON position. If the circuit breaker trips again after resetting, the overload or fault must be cleared before safe operation can be resumed.

21. Open Circuit No. 2 side panel cover and swing upward to secure. Verify that L1, L2, and L3 illuminate ORANGE.

**WARNING**

High voltage is present in this equipment. Be careful not to contact high voltage connections when taking voltage measurements. DEATH or SERIOUS INJURY may result.

22. Using the appropriate multimeter (AC scale), make sure that Circuit No. 2 terminal posts L0 and Ground are at the same potential before proceeding.
23. Measure the voltage between Circuit No. 2 terminal posts L1 - L2, L2 - L3, and L3 - L1. Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained between each.
24. Measure the voltage between Circuit No. 2 terminal posts L1 - L0, L2 - L0, and L3 - L0. Verify a reading of 120 VAC  $\pm$  6 volts is obtained between each.
25. Measure the voltage between Circuit No. 2 terminal posts L1 - GND, L2 - GND, and L3 - GND. Verify reading of 120 VAC  $\pm$  6 volts is obtained.
26. Open Circuit No. 1, 3, and 4 side panel covers and swing upward to secure. Using the appropriate multimeter, verify that voltage is not present (5 VAC or less) at Circuit No. 1, 3, and 4 side panel terminal posts L1, L2, L3 referenced to L0. Close and secure covers.

**OPERATIONAL TEST – CONTINUED**

27. Turn OFF Circuit Breaker No. 2 on the PDB front panel. Verify that all Circuit No. 2 indicator lights are OFF on front and side panels.
28. Using the appropriate multimeter, verify that voltage is not present at Circuit No. 2 terminal posts L1, L2, L3 referenced to L0.
29. Close and secure Circuit No. 2 side panel cover.

**NOTE**

Maintenance personnel should refer to WP 0013 for applicable continuity test in the event voltage is not obtained.

30. Press the TEST LIGHT button for Circuit No. 3 located on the mid-left side of the front panel. Verify that L1, L2, and L3 for Circuit No. 3 illuminate GREEN while switch is pushed and all other lights are OFF.
31. Switch Circuit Breaker No. 3 to the ON position. Verify that front panel indicator lights L1, L2, and L3 for Circuit No. 3 illuminate GREEN and all other lights are OFF.

**CAUTION**

A circuit breaker in the tripped position (midway between ON and OFF positions) indicates the circuit breaker has been subjected to an overload condition. Wait two minutes before resetting the circuit breaker. To reset the circuit breaker, place in ON position. If the circuit breaker trips again after resetting, the overload or fault must be cleared before safe operation can be resumed.

32. Open Circuit No. 3 side panel cover and swing upward to secure. Verify that L1, L2, and L3 illuminate ORANGE.

**WARNING**

High voltage is present in this equipment. Be careful not to contact high voltage connections when taking voltage measurements. DEATH or SERIOUS INJURY may result.

33. Using the appropriate multimeter (AC scale), make sure that Circuit No. 3 terminal posts L0 and Ground are at the same potential before proceeding.
34. Measure the voltage between Circuit No. 3 terminal posts L1 - L2, L2 - L3, and L3 - L1. Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained between each.
35. Measure the voltage between Circuit No. 3 terminal posts L1 - L0, L2 - L0, and L3 - L0. Verify a reading of 120 VAC  $\pm$  6 volts is obtained between each.
36. Measure the voltage between Circuit No. 3 terminal posts L1 - GND, L2 - GND, and L3 - GND. Verify reading of 120 VAC  $\pm$  6 volts is obtained.
37. Open Circuit No. 1, 2, and 4 side panel covers and swing upward to secure. Using the appropriate multimeter, verify that voltage is not present (5 VAC or less) at Circuit No. 1, 2, and 4 side panel terminal posts L1, L2, L3 referenced to L0. Close and secure covers.
38. Turn OFF Circuit Breaker No. 3 on the PDB front panel. Verify that all Circuit No. 3 indicator lights are OFF on front and side panels.
39. Using the appropriate multimeter, verify that voltage is not present at Circuit No. 3 terminal posts L1, L2, L3 referenced to L0.
40. Close and secure Circuit No. 3 side panel cover.
41. Press the TEST LIGHT button for Circuit No. 4 located on the mid-right side of the front panel. Verify that L1, L2, and L3 for Circuit No. 4 illuminate GREEN while switch is pushed and all other lights are OFF.
42. Switch Circuit Breaker No. 4 to the ON position. Verify that front panel indicator lights L1, L2, and L3 for Circuit No. 4 illuminate GREEN and all other lights are OFF.

---

**OPERATIONAL TEST – CONTINUED****CAUTION**

A circuit breaker in the tripped position (midway between ON and OFF positions) indicates the circuit breaker has been subjected to an overload condition. Wait two minutes before resetting the circuit breaker. To reset the circuit breaker, place in ON position. If the circuit breaker trips again after resetting, the overload or fault must be cleared before safe operation can be resumed.

43. Open Circuit No. 4 side panel cover and swing upward to secure. Verify that L1, L2, and L3 illuminate ORANGE.

**WARNING**

High voltage is present in this equipment. Be careful not to contact high voltage connections when taking voltage measurements. DEATH or SERIOUS INJURY may result.

44. Using the appropriate multimeter (AC scale), make sure that Circuit No. 4 terminal posts L0 and Ground are at the same potential before proceeding.
45. Measure the voltage between Circuit No. 4 terminal posts L1 - L2, L2 - L3, and L3 - L1. Verify a reading of 208 VAC  $\pm$  10.4 volts is obtained between each.
46. Measure the voltage between Circuit No. 4 terminal posts L1 - L0, L2 - L0, and L3 - L0. Verify a reading of 120 VAC  $\pm$  6 volts is obtained between each.
47. Measure the voltage between Circuit No. 4 terminal posts L1 - GND, L2 - GND, and L3 - GND. Verify reading of 120 VAC  $\pm$  6 volts is obtained.
48. Open Circuit No. 1, 2, and 3 side panel covers and swing upward to secure. Using the appropriate multimeter, verify that voltage is not present (5 VAC or less) at Circuit No. 1, 2, and 3 side panel terminal posts L1, L2, L3 referenced to L0. Close and secure covers.
49. Turn OFF Circuit Breaker No. 4 on the PDB front panel. Verify that all Circuit No. 4 indicator lights are OFF on front and side panels.
50. Using the appropriate multimeter, verify that voltage is not present at Circuit No. 4 terminal posts L1, L2, L3 referenced to L0.
51. Close and secure Circuit No. 4 side panel cover.
52. Open covers on Circuit Breaker No. 7 and convenience receptacle. CNVC No. 1 on left side of PDB.
53. Push Circuit Breaker No. 7 to ON position. Measure voltage at GFCI convenience receptacle 1. Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
54. Press the TEST push-button on GFCI convenience receptacle 1. Measure voltage across GFCI convenience receptacle 1. Verify a reading of 0 volts is obtained.
55. Press RESET button on GFCI convenience receptacle 1. Measure voltage at GFCI convenience receptacle 1. Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
56. Pull Circuit Breaker No. 7 to OFF position. Close covers on Circuit Breaker No. 7 and convenience receptacle CNVC No. 1.
57. Open covers on Circuit Breaker No. 6 and convenience receptacle. CNVC No. 2 on right side of PDB.
58. Push Circuit Breaker No. 6 to ON position. Measure voltage at GFCI convenience receptacle 2. Verify a reading of 120 VAC  $\pm$  6 volts is obtained.
59. Press the TEST push-button on GFCI convenience receptacle 2. Measure voltage across GFCI convenience receptacle 2. Verify a reading of 0 volts is obtained.
60. Press RESET button on GFCI convenience receptacle 2. Measure voltage at GFCI convenience receptacle 2. Verify a reading of 120 VAC  $\pm$  6 volts is obtained.

**OPERATIONAL TEST – CONTINUED**

61. Pull Circuit Breaker No. 6 to OFF position. Close covers on Circuit Breaker No. 6 and convenience receptacle CNVC No. 2.
62. Check to make sure that circuit breakers CB1 - CB4 are in the OFF position. Place Main Circuit Breaker (CB5) to the OFF position. Verify that all lights MUST be OFF.
63. Turn OFF power at the source. Refer to applicable TM for generator shut down procedures. Perform generator shutdown.

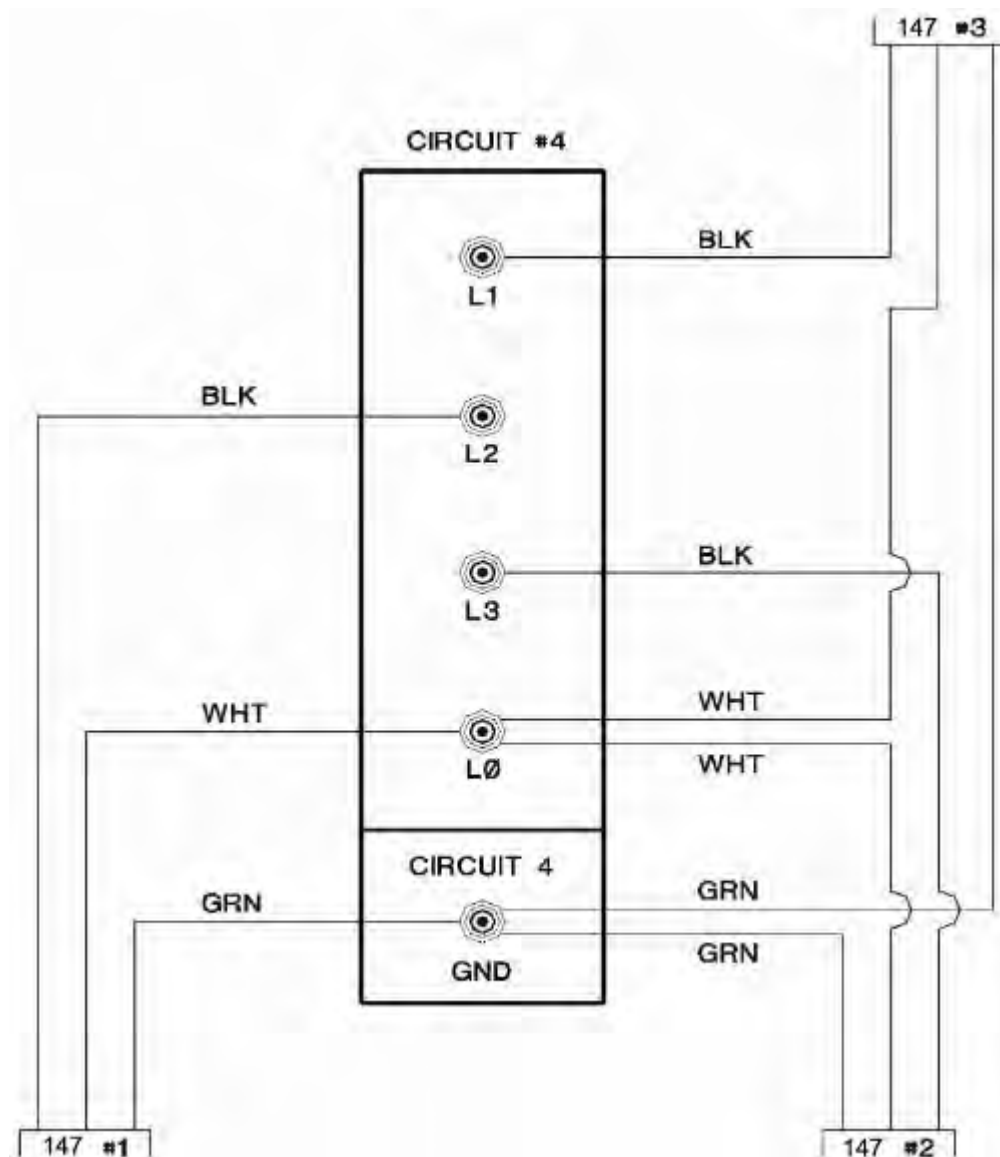


Figure 4. AN/ASM-147( ) Hook-up (3 Shelter Connection) .

END OF TASK



**VAN/SHELTER SHUTDOWN****AN/ASM-190( ) Shutdown****NOTE**

Maintenance personnel should refer to WP 0013 for applicable continuity test in the event voltage is not obtained.

1. Set all van/shelter circuit breakers to OFF.
2. Set PDB front panel circuit breaker No. 3 or 4 to OFF. Verify corresponding circuit indicators L1, L2, and L3 turn OFF.

**WARNING**

Take special precautions to ensure that the correct circuit breaker on front panel is set to OFF before disconnecting power cable from PDB. Be sure not to deenergize other circuits if they are being used.

3. If other circuits are not being used, shut down generator in accordance with appropriate TM. If other circuits are being used, do not shut generator down.
4. Only if other circuits are NOT being used, disconnect PDB main power input cable from generator.
5. At the van/shelter power entrance panel, disconnect van/shelter main power cable from van/shelter Power In connector J1.
6. On the PDB, open side access cover for Circuit No.'s 3 or 4 and remove terminal post safety covers. Verify that indicators L1, L2, and L3 are extinguished. Disconnect power cable from terminal posts.
7. If no other van/shelter(s) are connected to PDB, disconnect PDB main power cable from PDB rear panel connector J1. Disconnect ground wire and ground rod.

**AN/ASM-189 ( ) Shutdown****NOTE**

Maintenance personnel should refer to WP 0013 for applicable continuity test in the event voltage is not obtained.

1. Set all van/shelter circuit breakers to OFF.
2. Set PDB front panel circuit breaker No. 1 or 2 to OFF. Verify corresponding circuit indicators L1, L2, and L3 turn OFF.

**WARNING**

Take special precautions to ensure that the correct circuit breaker on front panel is set to OFF before disconnecting power cable from PDB. Be sure not to deenergize other circuits if they are being used.

3. If other circuits are not being used, shut down generator in accordance with appropriate TM. If other circuits are being used, do not shut generator down.
4. Only if other circuits are NOT being used, disconnect PDB main power input cable from generator.
5. At the van/shelter power entrance panel, disconnect van/shelter main power cable from van/shelter Power In connector J1.
6. On the PDB, open side access cover for Circuit No.'s 1 or 2 and remove terminal post safety covers. Verify that indicators L1, L2, and L3 are extinguished. Disconnect power cable from terminal posts.
7. If no other van/shelter (s) are connected to PDB, disconnect PDB main power cable from PDB rear panel connector J1. Disconnect ground wire and ground rod.

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**VAN/SHELTER SHUTDOWN – CONTINUED****AN/ASM-146( ) Shutdown****NOTE**

Maintenance personnel should refer to WP 0013 for applicable continuity test in the event voltage is not obtained.

1. Set all van/shelter circuit breakers to OFF.
2. Set PDB front panel circuit breaker No. 4 to OFF. Verify corresponding circuit indicators L1, L2, and L3 turn OFF.

**WARNING**

Take special precautions to ensure that the correct circuit breaker on front panel is set to OFF before disconnecting power cable from PDB. Be sure not to deenergize other circuits if they are being used.

3. If other circuits are not being used, shut down generator in accordance with appropriate TM. If other circuits are being used, do not shut generator down.
4. Only if other circuits are NOT being used, disconnect PDB main power input cable from generator.
5. At the van/shelter power entrance panel, disconnect van/shelter main power cable from van/shelter power in connector J1.
6. On the PDB, open side access cover for Circuit No. 4 and remove terminal post safety covers. Verify that indicators L1, L2, and L3 are extinguished. Disconnect power cable from terminal posts.
7. If no other van/shelter (s) are connected to PDB, disconnect PDB main power cable from PDB rear panel connector J1.

**END OF TASK****PREPARATION FOR MOVEMENT****WARNING**

Lethal voltages are present in this system/equipment. Properly ground the generator set and PDB. DEATH or SEVERE INJURY may result if you do not properly ground the generator set. Observe all caution and warning plates.

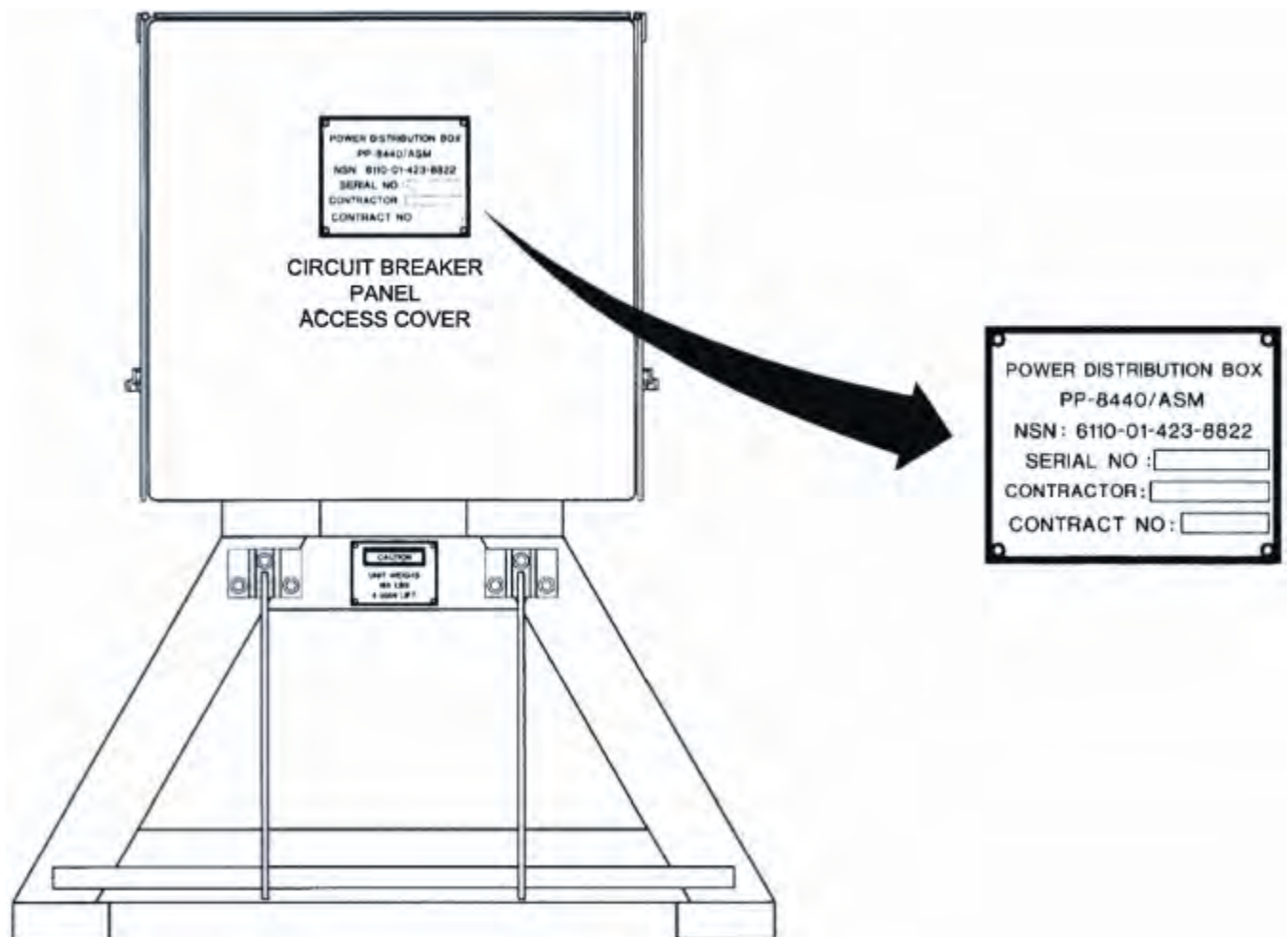
**CAUTION**

Ensure dirt and debris do not contaminate connector receptacles or sockets. Secure caps on all cable connectors and PDB power terminals when disassembling the equipment.

1. Check to make sure all circuit breakers on PDB are set to OFF.
2. Make sure the power source connected to the Power Distribution Box is "OFF".
3. Disconnect Pigtail end of power stub from source.
4. Disconnect opposite end of Power Stub from PDB connector J1.
5. Starting at the van/shelter power entrance panel, disconnect the power cables.
6. Install connector caps and perform AFTER preventive maintenance checks and services in WP 0011.
7. At the Power Distribution Box, disconnect van/shelter power cables from terminal studs for Circuit No. 1 through Circuit No. 4. Store cables according to their shelter TM.

**PREPARATION FOR MOVEMENT – CONTINUED**

8. Secure all terminal stud nuts by completely tightening them.
9. Secure all covers on front and side panels of Power Distribution Box.
10. Securely store the Power Distribution Box, ground rod, ground wire and power cable w/power stub in either an available 5 ton truck or inside a van/shelter. Restrain PDB from sliding or tipping on end of step.

**END OF TASK****OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES****Decals and Instruction Plates for PP-8440/ASM**

**Figure 5. PP-8440/ASM Front Panel Information Plates.**

Figure 5 shows the location of "Nomenclature" data plate for the Power Distribution Box located on front circuit breaker access cover.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

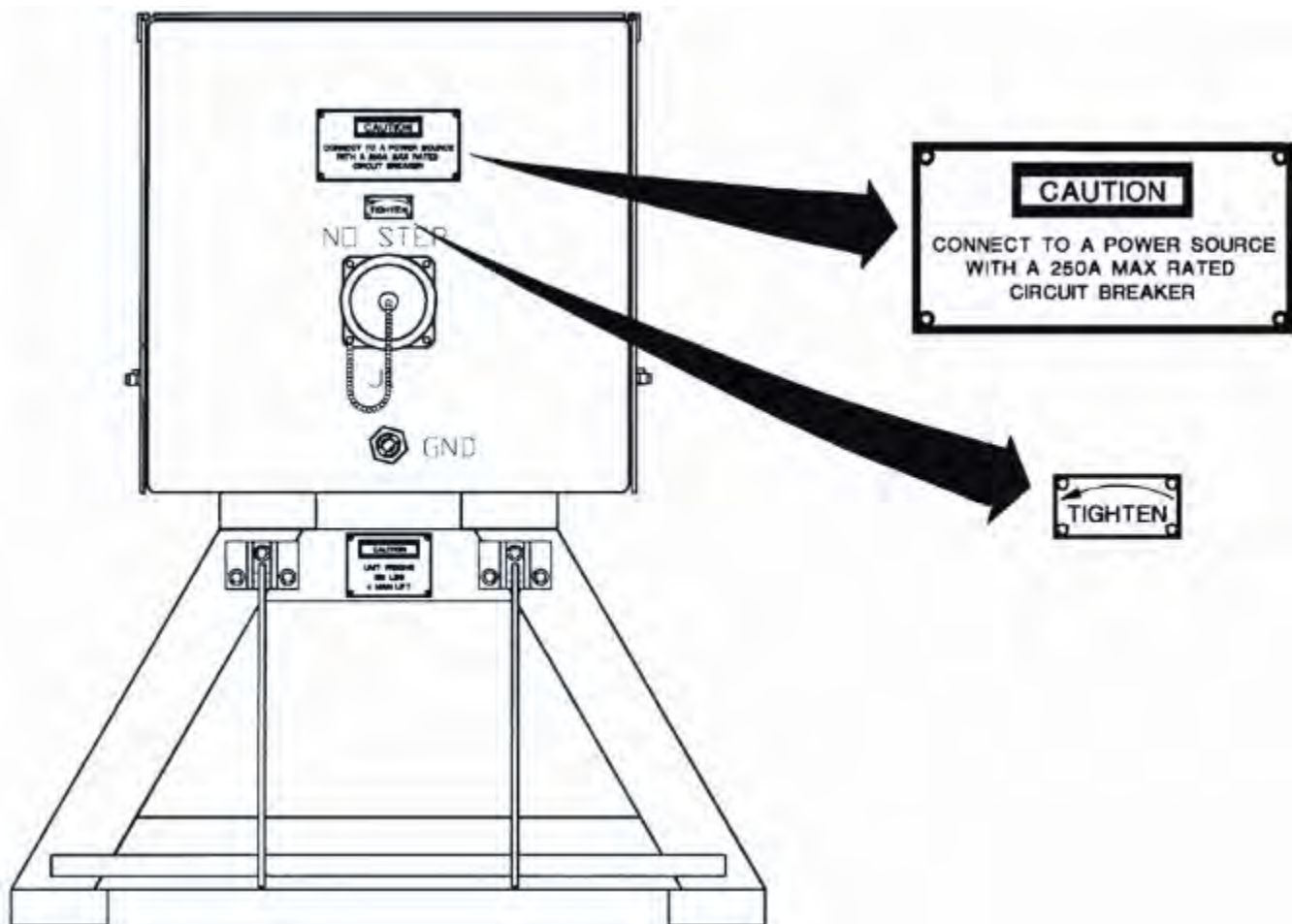


Figure 6. PP-8440/ASM Rear Panel Information Plates.

Figure 6 shows the location of "CAUTION" data plates for the Power Input Connector J1 located on rear panel of the Power Distribution Box.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

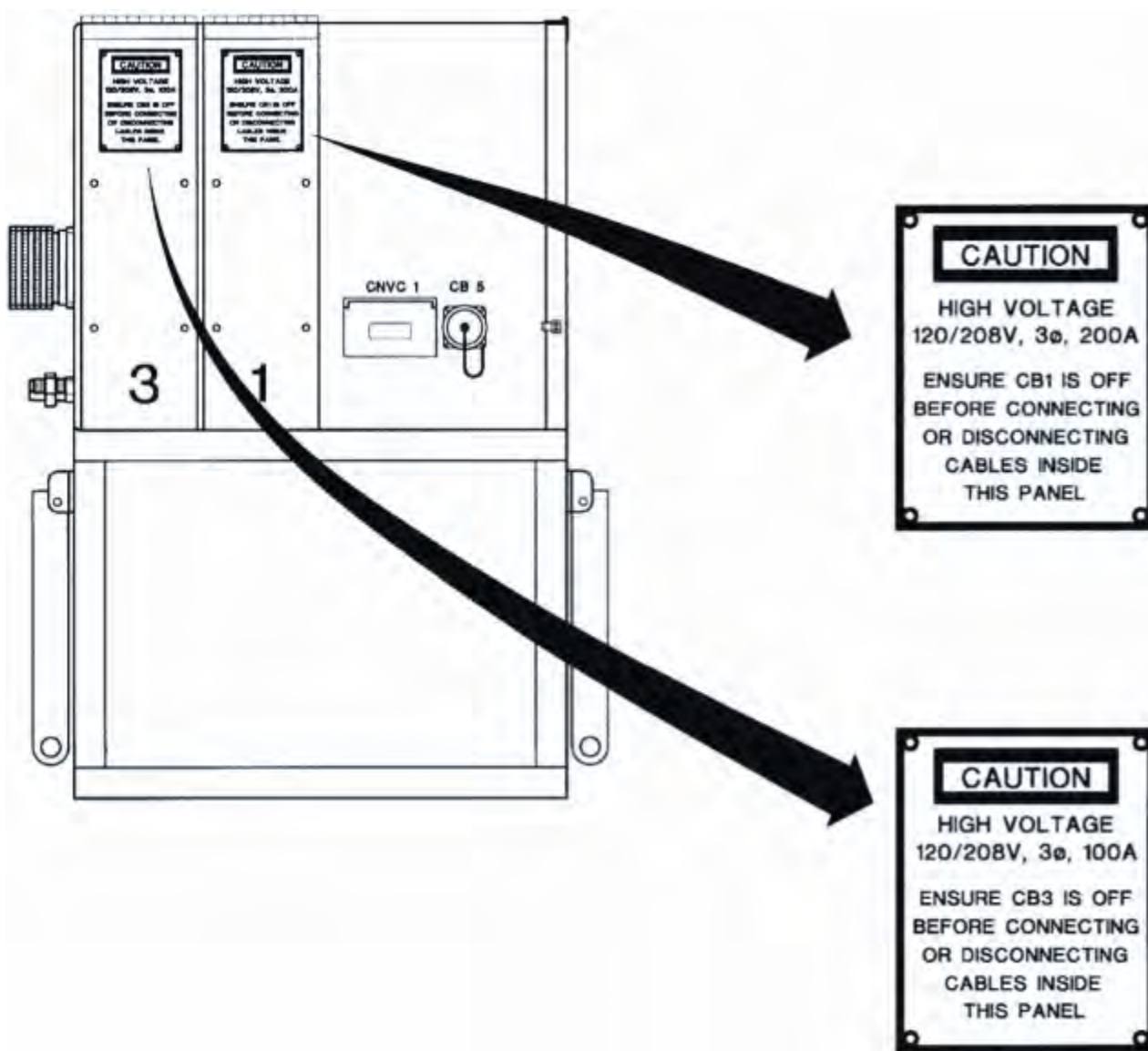


Figure 7. PP-8440/ASM Left side Caution Plates.

Figure 7 shows the location of "CAUTION" data plates for Circuit No.'s 1 and 3 terminal posts, located on the left side of the Power Distribution Box.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

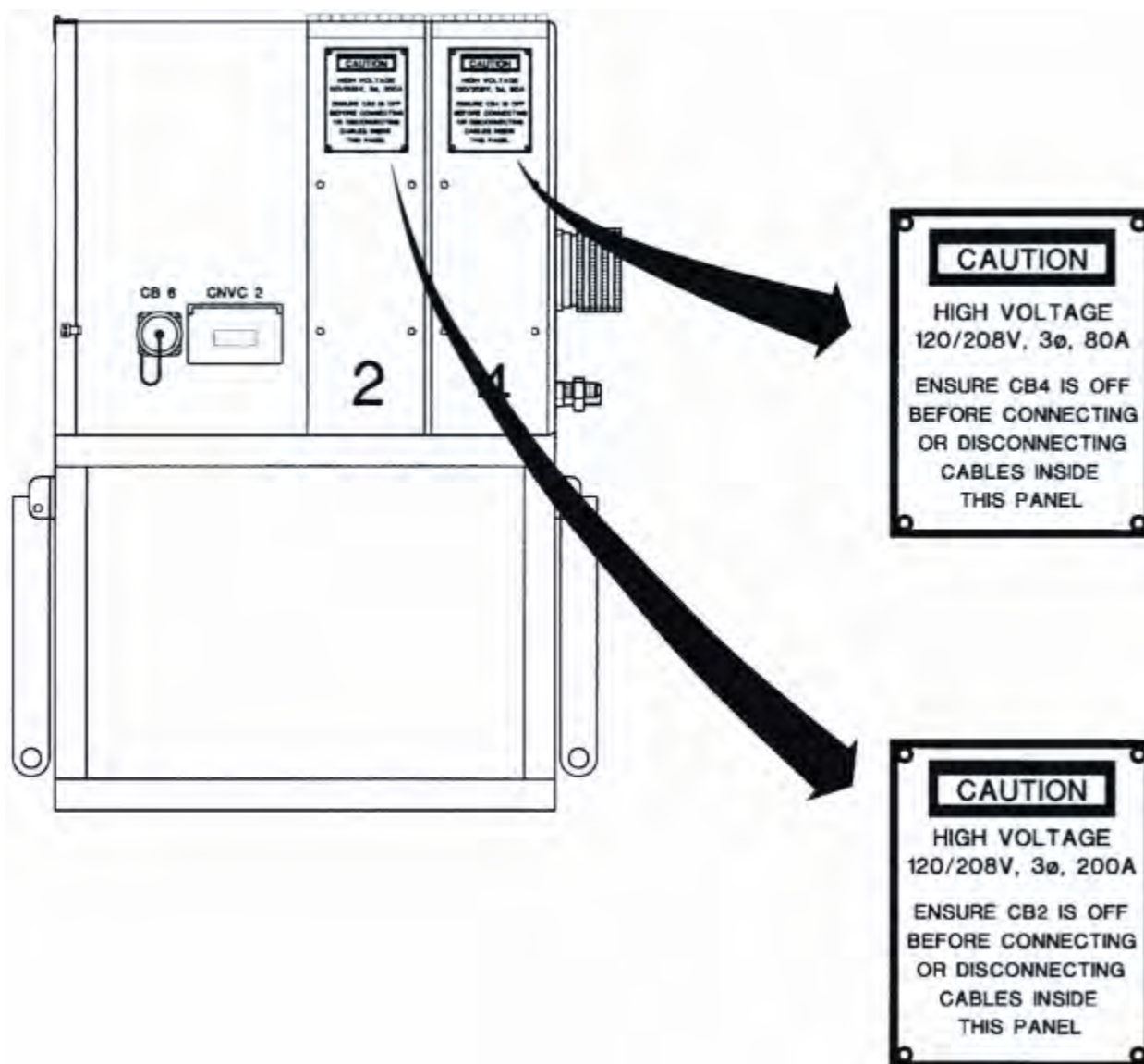
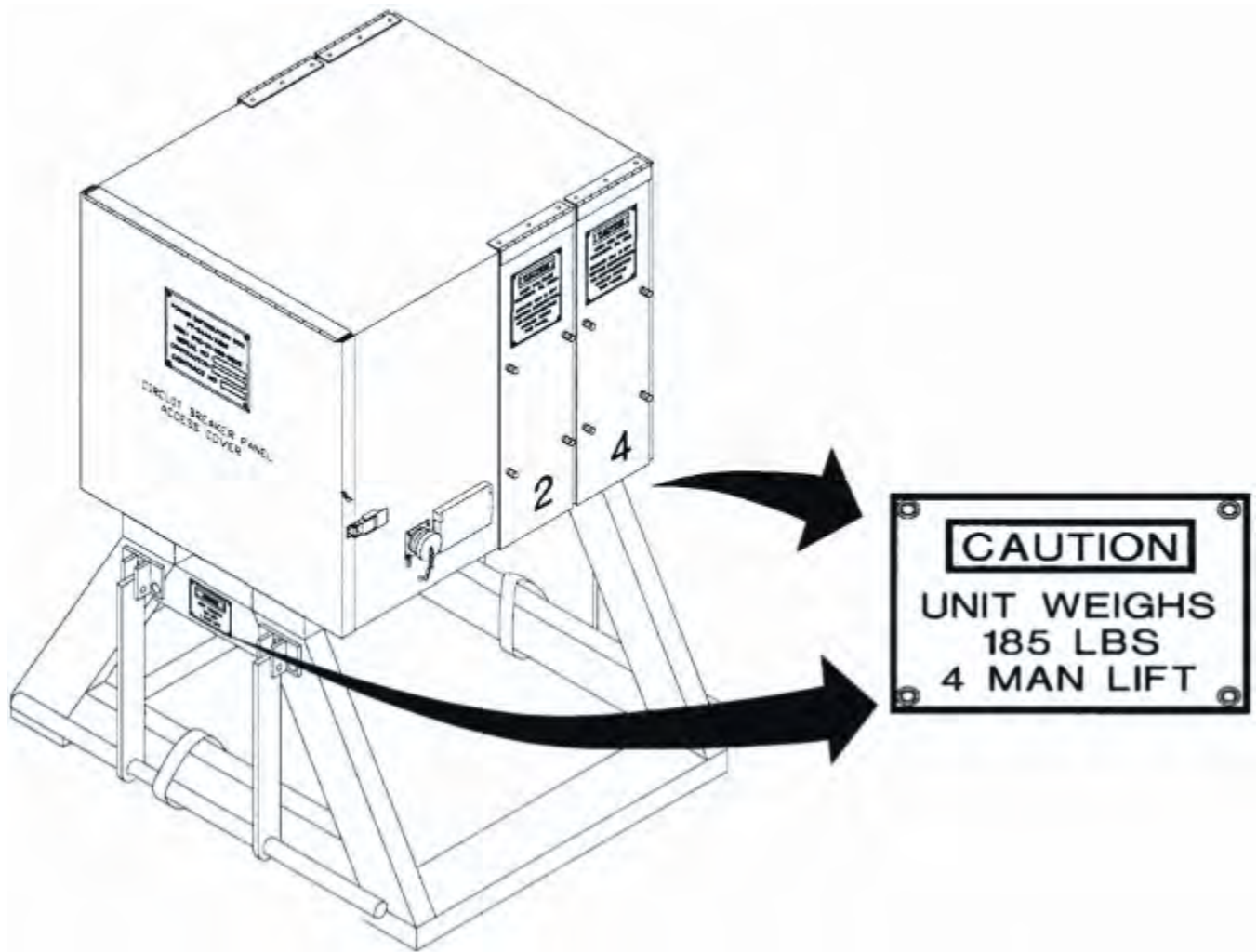


Figure 8. PP-8440/ASM Right Side Caution Plates.

Figure 8 shows the location of "CAUTION" data plates for Circuit No.'s 2 and 4 terminal posts, located on the right side of the Power Distribution Box.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

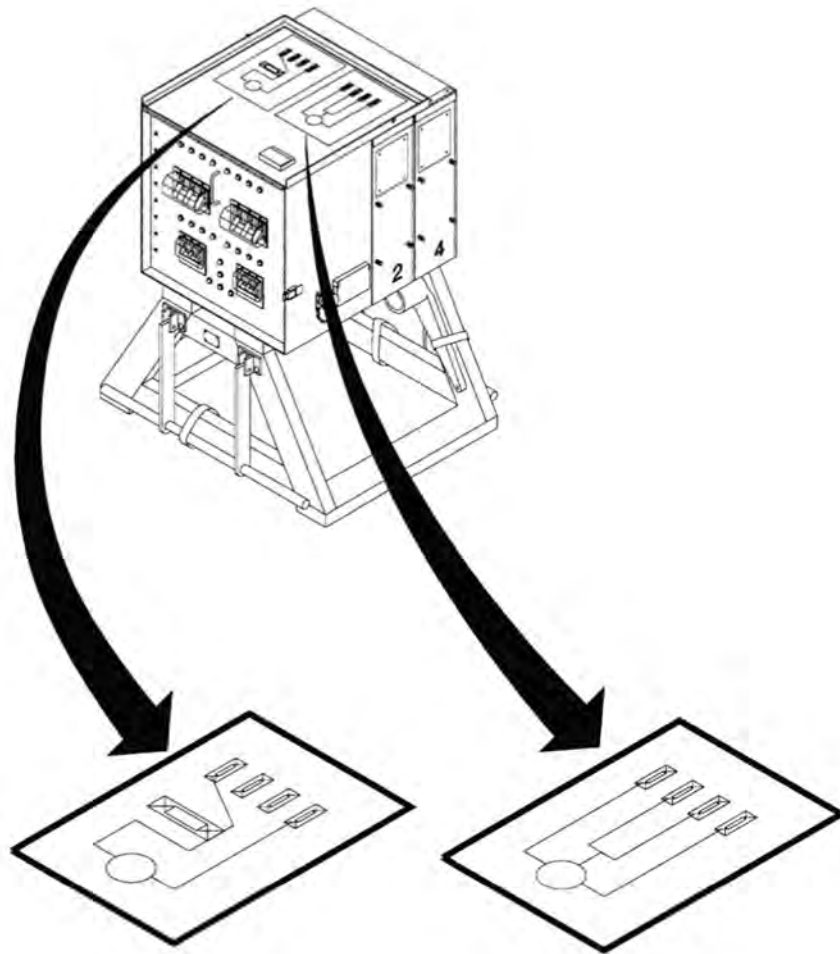


**Figure 9. PP-8440/ASM Pedestal 4-Man Lift Caution Plates.**

Figure 9 shows the location of "CAUTION" 4-man lift data plates for the Power Distribution Box located on the right and left sides of the pedestal.



## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED



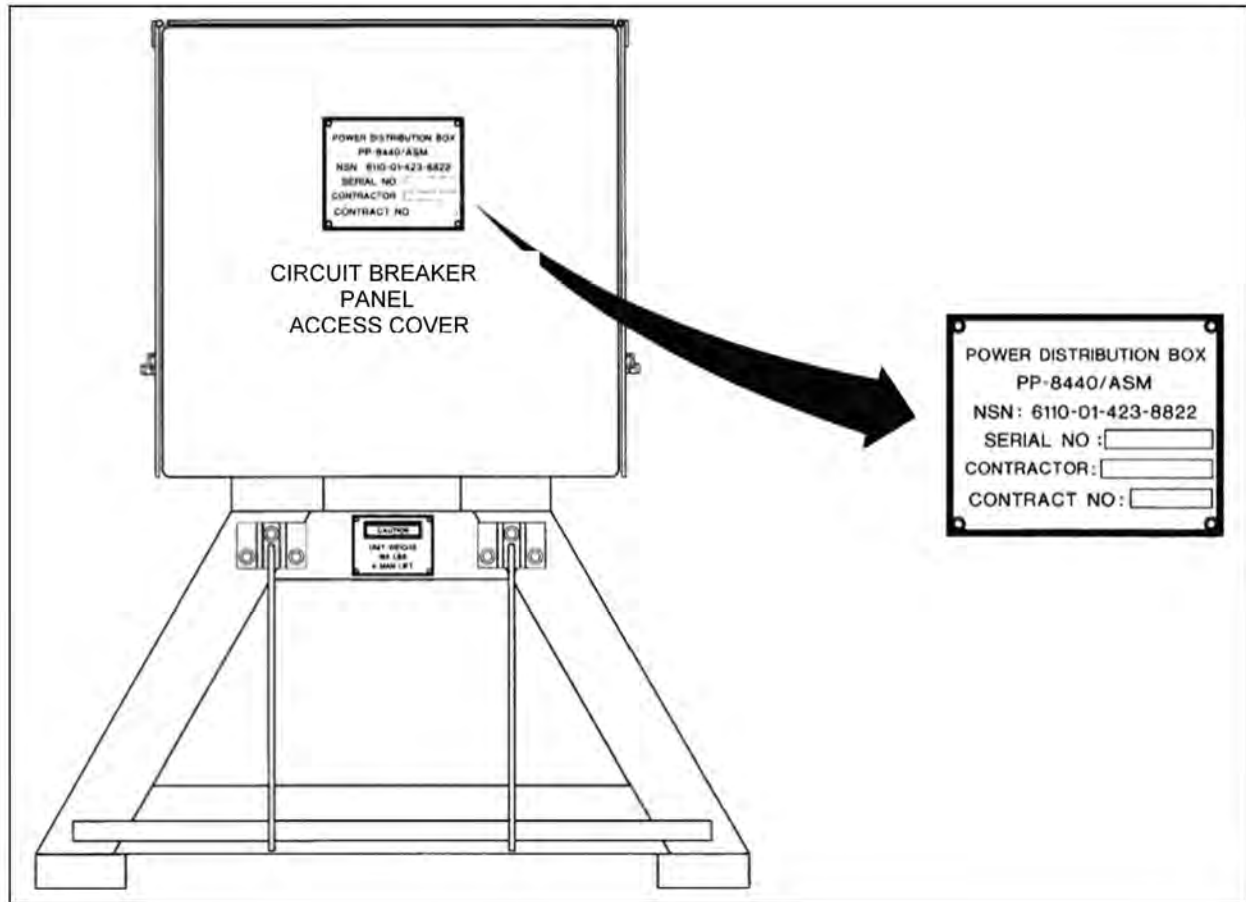
**Figure 10. PP-8440/ASM Access Cover Schematic Data Plates.**

Figure 10 shows the location of schematic data plate for the Power Distribution Box located on the underside of front panel rain cover.



## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

## Decals and Instruction Plates for PP-8440A/ASM



**Figure 11. PP-8440A/ASM Front Panel Information Plates.**

Figure 11 shows the location of "Nomenclature" data plate for the Power Distribution Box located on front circuit breaker access cover.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

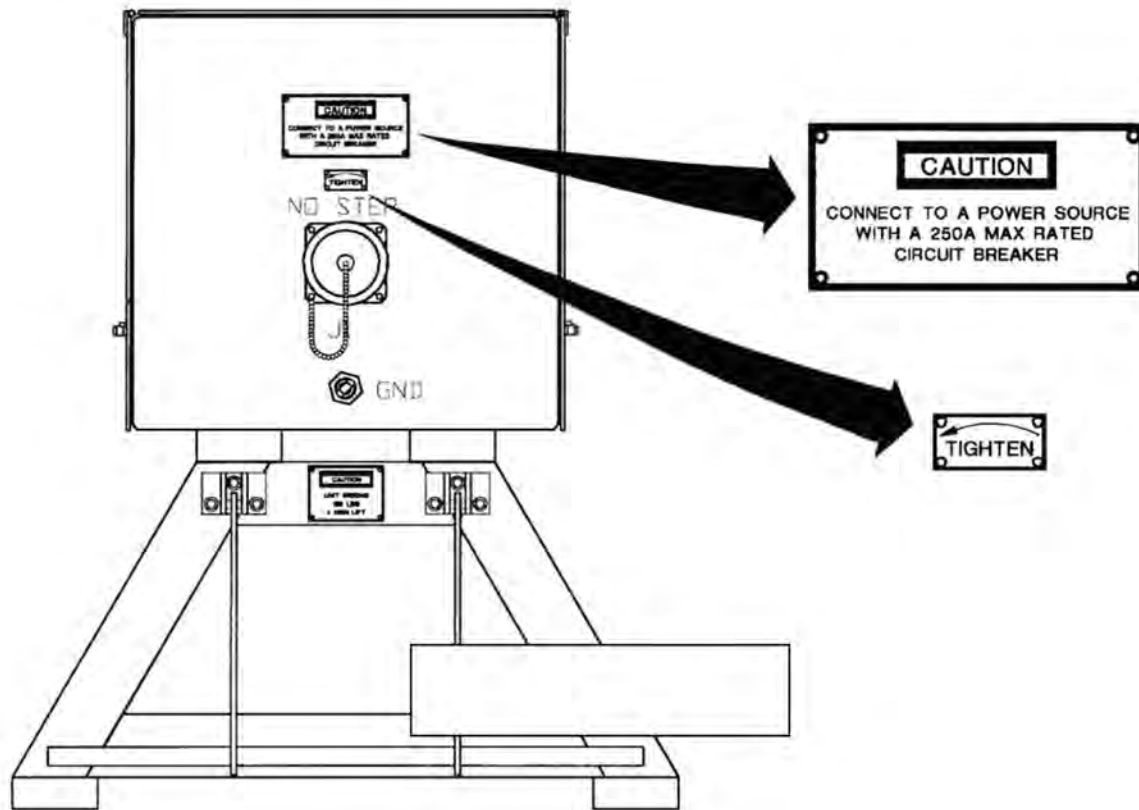


Figure 12. PP-8440A/ASM Rear Panel Information Plates.

Figure 12 shows the location of "CAUTION" data plates for the Power Input Connector J1 located on rear panel of the Power Distribution Box.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

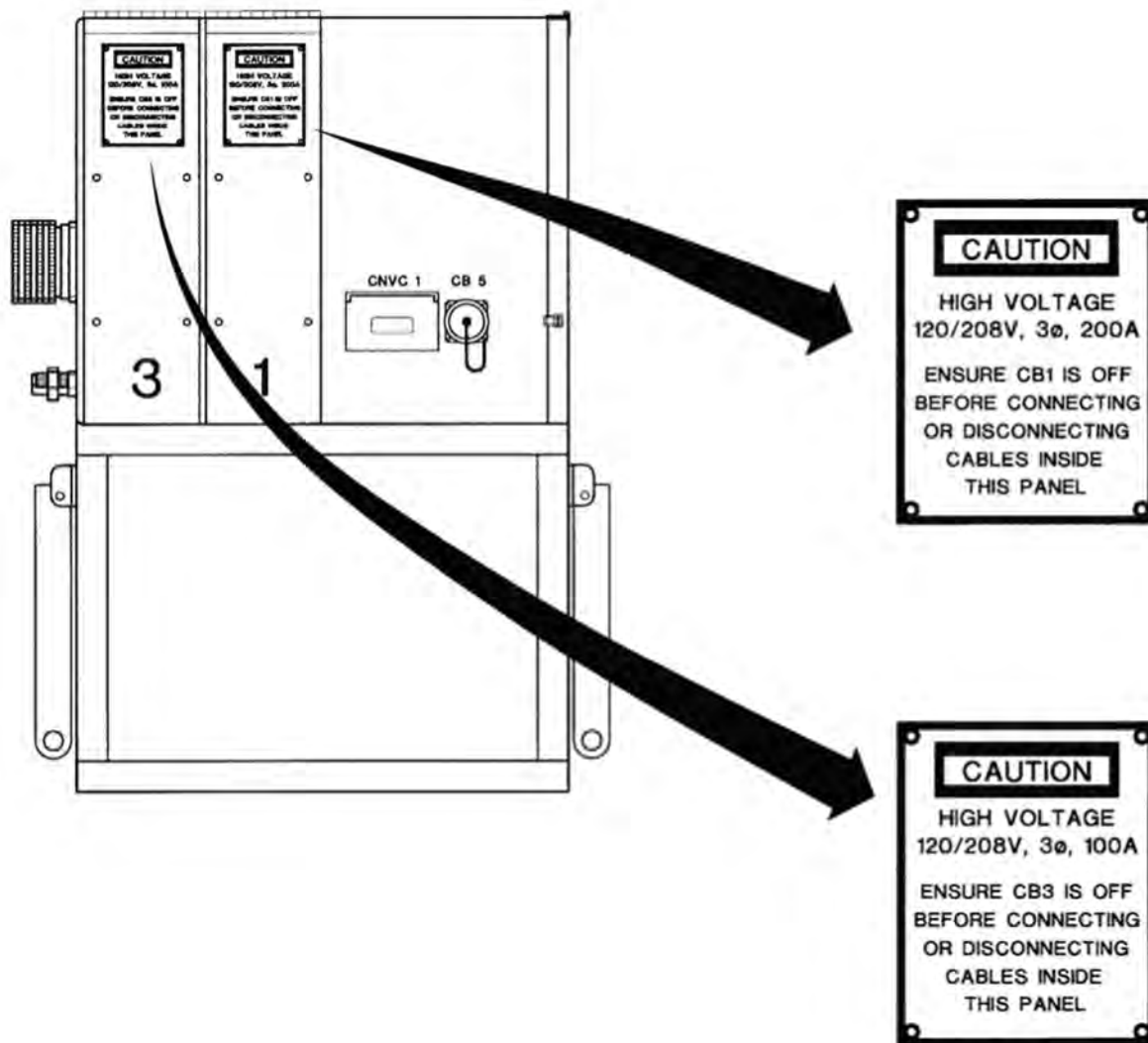


Figure 13. PP-8440A/ASM Left Side Caution Plates.

Figure 13 shows the location of "CAUTION" data plates for Circuit No.'s 1 and 3 terminal posts, located on the left side of the Power Distribution Box.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

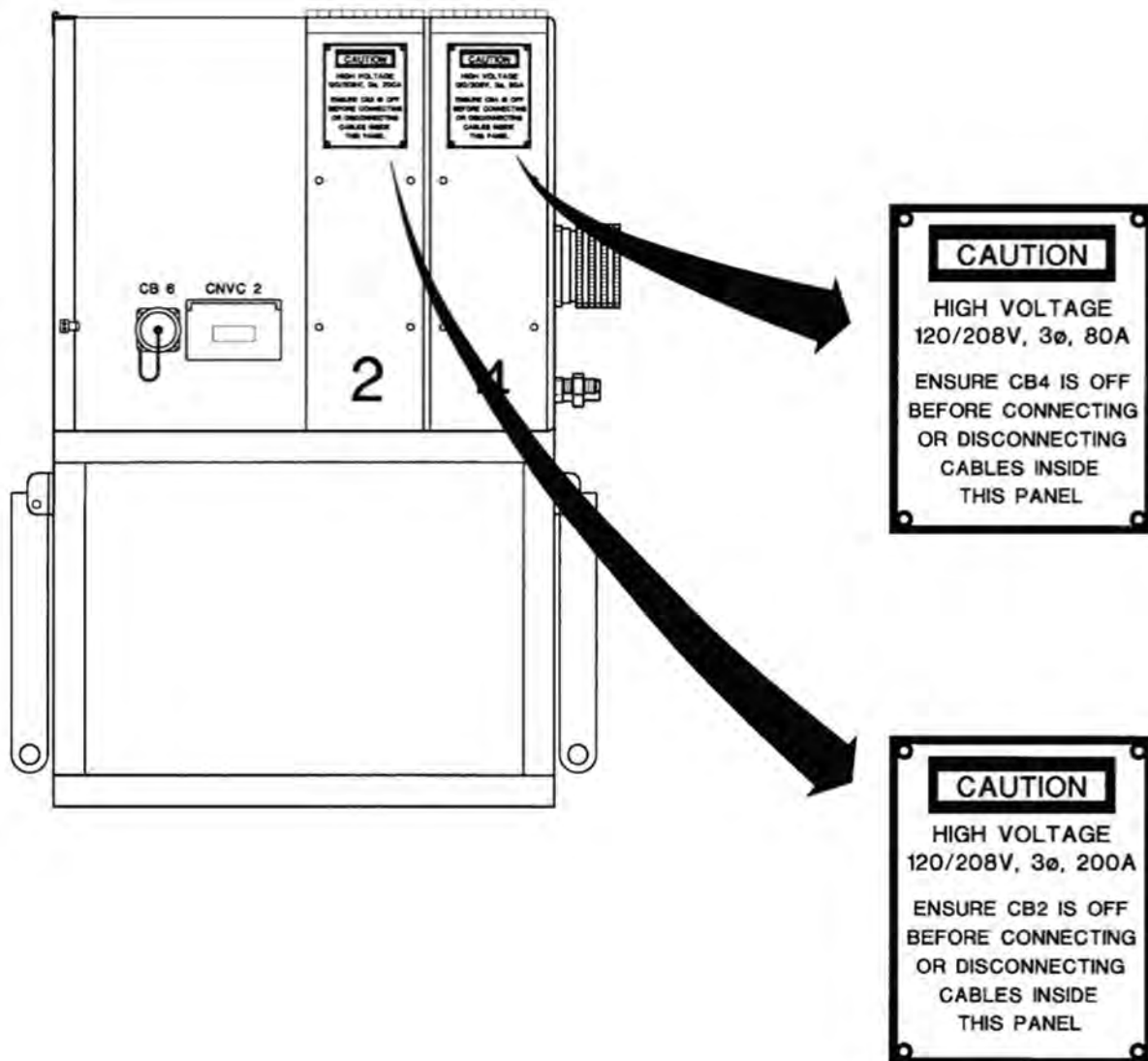


Figure 14. PP-8440A/ASM Right Side Caution Plates.

Figure 14 shows the location of "CAUTION" data plates for Circuit No.'s 2 and 4 terminal posts, located on the right side of the Power Distribution Box.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED

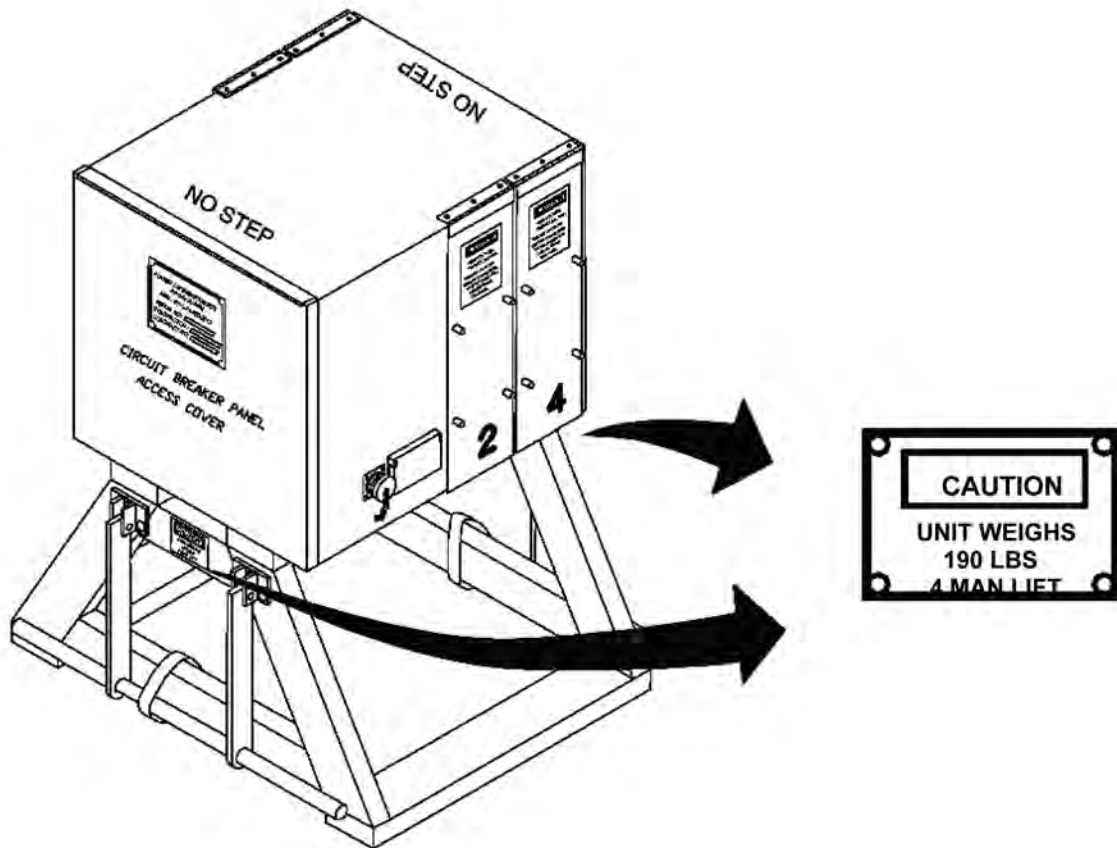
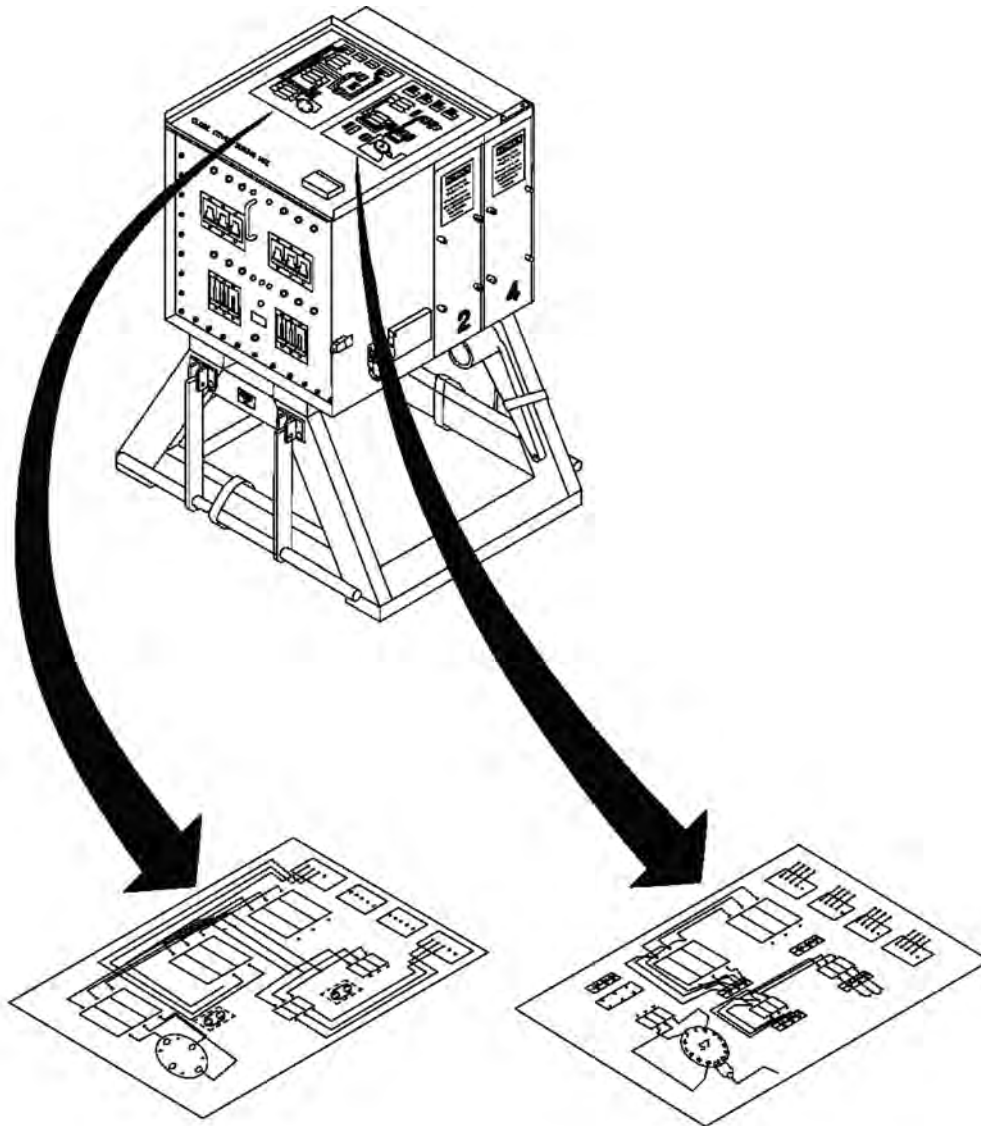


Figure 15. PP-8440A/ASM Pedestal 4-Man Lift caution Plates.

Figure 15 shows the location of "CAUTION" 4-man lift data plates for the Power Distribution Box located on the right and left sides of the pedestal.

## OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES – CONTINUED



**Figure 16. PP-8440A/ASM Access Cover Schematic Data Plates.**

Figure 16 shows the location of schematic data plate for the Power Distribution Box located on the underside of front panel rain cover.

**END OF TASK**

**END OF WORK PACKAGE**

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**OPERATOR MAINTENANCE**  
**OPERATION UNDER UNUSUAL CONDITIONS**

---

**INITIAL SETUP:****Materials/Parts**

Rags, Wiping (WP 0066, Table 1, Item 8)

**Personnel Required**

Operator

**References**

FM 3-4

FM 3-5

WP 0005

**Equipment Condition**

Power Off

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**UNUSUAL ENVIRONMENT/WEATHER****WARNING**

Lethal voltages are present in this system/equipment. Properly ground the generator set and PDB. DEATH or SEVERE INJURY may result if you do not properly ground the generator set. Observe all caution and warning plates.

**WARNING**

Do not rely on the color of the wire insulation for phase color coding. The color of the insulation on the wires inside the cable jacket may vary, depending on the supplier. Perform a continuity test to verify correct phase in accordance with identified color. Incorrect phase identification can cause a short circuit condition which may cause damage to the equipment and/or wiring, and possibly even DEATH or SEVERE INJURY.

**WARNING**

Do not submerge cables or cable connectors in water. DEATH or SEVERE INJURY may result.

**WARNING**

Use extreme caution when connecting equipment to the Power Distribution terminal posts. SERIOUS INJURY or DEATH may result from contact with these connections.

**NOTE**

See WP 0005 for safe grounding procedures in poor soil conditions.

**Operation Under Adverse Climatic Conditions**

The Power Distribution Boxes PP-8440/ASM and PP-8440A/ASM are designed to operate over a full spectrum of climatic conditions including extreme heat and cold. The Field Shop van/shelters provide protection from the elements for operating personnel; however, the following paragraphs provide precautions that must be observed in extreme environmental conditions.

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**UNUSUAL ENVIRONMENT/WEATHER – CONTINUED****Operation In Extreme Cold**

1. Extreme cold conditions cause power cables and field wires to become hard, brittle, and difficult to handle. Be careful when handling the cables and field wires during connecting procedures so that kinks and unnecessary loops will not result in permanent damage.
2. When coiling cables, form large loops. Cables are difficult to coil in sub-zero temperatures.
3. Be sure the terminal posts, binding posts and cable receptacles on outside of equipment are free from frost, snow, and ice by replacing the receptacle covers and securing the covers on the distribution box when these items are not being used.
4. Replace all power connector covers as soon as the cables are disconnected from the equipment. Never drop or drag or place an uncovered cable connector/pigtail in the snow or water. If possible, provide shelter for the PDB.
5. Observe all low-temperature operating procedures provided in the applicable TM's for all equipment.
6. Cap all unused connectors to protect against moisture. Close and latch all access covers on PDB when not in use.

**Operation in Rainy/Damp Conditions****WARNING**

High voltage is present in this system. Do not attempt to disconnect equipment with power source ON. DEATH or SERIOUS INJURY may result.

1. Take special precautions to keep Power Distribution Box dry. If possible, provide a shelter for the PDB. If a sheltered area is not available, cover the PDB with a canvas cover.
2. In warm, damp climates, the equipment is subject to damage from moisture and fungi. Wipe all moisture and fungi from the exterior of the equipment with a clean, dry cloth.
3. All electrical contact surfaces are susceptible to corrosion which will cause a high electrical contact resistance area. Wipe all surfaces with a clean, dry cloth before performing any connecting procedures.
4. Close and latch all entrance covers to prevent against moisture when not in use.

**Operation in Dusty and/or Sandy Areas**

1. Shield the Power Distribution Box from blowing dust and/or sand. If possible, take advantage of any natural barriers which offer sand or dust.
2. Cap and/or cover unused connectors to protect against sand and dirt.
3. Close and latch terminal post covers when not in use to protect against sand and dust.

**Operation in Extreme Heat**

1. If possible, place the PDB in the shade or a shaded area. If no shade is available, use a tarp/wood cover to provide a thermal barrier from direct sunlight.
2. To reduce the effects of heat absorption, place PDB on shady side of a building, or shelter, under canvas or camouflage, or in a tent. If possible, provide ventilation to equipment.
3. In hot, dry climates, connectors, binding posts are subject to damage from dust and dirt. Close the covers on the PDB and replace connector covers when these items are not in use. Never drag or place an uncovered cable connector on the ground.

**END OF TASK**



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**INTERIM NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DECONTAMINATION PROCEDURES****General****WARNING**

High voltage is present in this system. Do not attempt to disconnect equipment with power source ON. DEATH or SERIOUS INJURY may result.

**WARNING**

Do not use decontamination spray on personnel. It can cause serious injury.

**NOTE**

For detailed decontamination procedures, refer to FM 3-5, Nuclear, Biological, and Chemical Decontamination, and FM 3-4, Nuclear, Biological, and Chemical Protection.

1. If exposure to a decontamination agent is suspected or known, use M258A1 kit and clean exposed skin, clothing and personal gear, in that order. Use the buddy system. Wash exposed skin and thoroughly decontaminate as soon as tactical situation permits.
2. If the M8 or M9 paper indicates that liquid chemical agent is present on the Power Distribution Box surface, use the ABC-M11 decontamination apparatus partial decontamination of the surface of the equipment. Spray only surfaces that will be touched.
3. Decontamination procedures take considerable time. Do as much as you can based on the tactical situation.

**END OF TASK****END OF WORK PACKAGE**



## **CHAPTER 3**

# **OPERATOR TROUBLESHOOTING PROCEDURES**



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**OPERATOR MAINTENANCE  
TROUBLESHOOTING INDEX**

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**INTRODUCTION**

WP 0008 contains troubleshooting information for the operator to use to locate and correct malfunctions for the PDB. The operator may observe these malfunctions during PMCS and during normal equipment operation.

1. Troubleshooting consists of isolating the component(s) in which a malfunction occurs, and locating the defective component, using testing devices and tools identified in the Maintenance Allocation Chart.
2. Any problems encountered that are beyond the user's capability to correct shall be referred to the next higher level maintenance.

**OPERATOR TROUBLESHOOTING**

1. The Troubleshooting Table lists the common malfunctions that may occur during operation or maintenance of the PDB. You should perform the tests/inspections and corrective actions in the order listed.
2. This manual cannot list all malfunctions that may theoretically occur, or all tests or inspections and corrective actions. If a malfunction occurs and is not listed or is not corrected by listed corrective actions, notify your immediate supervisor.

**SYMPTOM TROUBLESHOOTING PROCEDURES INDEX**

Malfunction/Symptom	Troubleshooting Procedure
1. Circuit Breaker(s) (CB1 through CB4) Repeatedly Trips .....	WP 0008, Symptom
2. Front Panel Indicator Lights Stays Illuminated with Associated Circuit Breaker Off .....	WP 0008, Symptom
3. Source Volts Meter (M1) Not Responding Properly to Phase Selector Switch (S7). (PP-8440A/ASM Only). .....	WP 0008, Symptom
4. User's Equipment Will Not Operate .....	WP 0008, Symptom

**END OF WORK PACKAGE**



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## OPERATOR MAINTENANCE TROUBLESHOOTING PROCEDURES

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### INITIAL SETUP:

#### Personnel Required

Operator

#### References

WP 0007

WP 0013

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### TROUBLESHOOTING PROCEDURE(S)

#### **WARNING**

High voltage is present in this system. Do not attempt to disconnect equipment with power source ON. DEATH or SERIOUS INJURY may result.

#### **SYMPTOM**

1. User's Equipment Will Not Operate.

#### **TEST OR INSPECTION**

#### **WARNING**

- If commercial power source utilizes a ganged 3-pole circuit breaker, all three poles will trip during an overload condition. Extreme caution must be exercised. SEVERE INJURY or DEATH may result.
- If commercial power source utilizes 3 separate fuses, only one or two poles may open during an overload or fault condition. Extreme caution must be exercised. SEVERE INJURY or DEATH may result.
- If fuses have opened during operation extreme caution must be exercised. SEVERE INJURY or DEATH may result.

#### **NOTE**

First, identify which van/shelter/system is affected.  
Check power connection at the applicable van/shelter/system.

#### **CORRECTIVE ACTION**

- STEP 1. If connected properly, proceed to next Test or Inspection.
- STEP 2. If not connected properly, shut down power at appropriate circuit breaker and perform connection again.

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**TROUBLESHOOTING PROCEDURES – CONTINUED****TEST OR INSPECTION**

PP-8440A/ASM Only. At the PDB, check main circuit breaker (CB5) and verify breaker is ON (handle is in up position).

**CORRECTIVE ACTION**

- STEP 1. If ON, proceed to next Test or Inspection.
- STEP 2. If OFF, turn ON.

**TEST OR INSPECTION**

At the PDB circuit breaker panel, verify applicable circuit breaker (CB1 - CB4) is ON and panel indicator lights L1, L2, L3 are illuminated green.

**CORRECTIVE ACTION**

- STEP 1. If ON, proceed to next Test or Inspection.
- STEP 2. If OFF, turn ON. If tripped, reset it. If circuit breaker trips again, go to Symptom 2.
- STEP 3. If still no power to PDB, shut down power at source and check generator or source hook-up in accordance with applicable TM. If necessary, refer to next high level of maintenance to perform continuity check on power cable in accordance with Table 3, WP 0013.

**TEST OR INSPECTION**

Open applicable circuit side panel cover and verify that L1, L2 and L3 are illuminated.

**CORRECTIVE ACTION**

- STEP 1. If so, proceed to the next Test or Inspection.
- STEP 2. If not and circuit breaker is not tripped, notify next level of maintenance.

**SYMPTOM**

- 2. Circuit Breaker(s) (CB1 through CB4) Repeatedly Trips.

**TEST OR INSPECTION**

Re-evaluate load requirements for circuit that repeatedly trips.

**CORRECTIVE ACTION****CAUTION**

Do not block circuit breakers to ON position. Excessive current can damage both the PDB and the user equipment.

**CAUTION**

A circuit breaker in the tripped position (midway between ON and OFF positions) indicates the circuit breaker has been subjected to an overload condition. Wait two minutes before



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**TROUBLESHOOTING PROCEDURES – CONTINUED**

resetting the circuit breaker. To reset the circuit breaker, place in ON position. If the circuit breaker trips again after resetting, the overload or fault must be cleared before safe operation can be resumed.

- STEP 1. If user's total requirements exceed the circuit breaker rating, recalculate user's requirements. Make sure they are within the service limits. If the problem still occurs notify next level maintenance.
- STEP 2. If users' load requirements are less than the circuit breakers rating and the circuit breaker continues to trip, notify next level of maintenance.

**SYMPTOM**

3. Front Panel Indicator Lights Stays Illuminated with Associated Circuit Breaker Off.

**TEST OR INSPECTION****CAUTION**

A defective circuit breaker or light test switch may become intermittent in operation, but pose a potential safety hazard and should be replaced as soon as possible.

Open applicable side panel access and verify corresponding circuit's indicator lights are illuminated.

**CORRECTIVE ACTION**

If side panel indicator lamps are still illuminated, notify next level of maintenance for replacement of the applicable circuit breaker.

**TEST OR INSPECTION**

Check if the front panel indicator lamp stays illuminated, but the associated side panel indicator lamps are not illuminated.

**CORRECTIVE ACTION**

Notify next level maintenance to replace the applicable light test switch, i.e., S1, S2, S3, or S4.

**SYMPTOM**

4. Source Volts Meter (M1) Not Responding Properly to Phase Selector Switch (S7). (PP-8440A/ASM Only).

**TEST OR INSPECTION**

Make sure source power is connected properly to PDB and is turned ON.

**CORRECTIVE ACTION**

- STEP 1. At PDB front panel, move S7 to each position. The following conditions should result:
- S7 in OFF, M1 should not illuminate.

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**TROUBLESHOOTING PROCEDURES – CONTINUED**

- S7 in LO, M1 should not illuminate.
- S7 in L1, M1 should illuminate and read 120 VAC  $\pm$  6V.
- S7 in L2, M1 should illuminate and read 120 VAC  $\pm$  6V.
- S7 in L3, M1 should illuminate and read 120 VAC  $\pm$  6V.
- S7 in OFF, M1 should not illuminate.

STEP 2. If any of the above is not met, notify next level maintenance.

**END OF WORK PACKAGE**

## **CHAPTER 4**

### **OPERATOR MAINTENANCE INSTRUCTIONS**



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**OPERATOR MAINTENANCE****PMCS INTRODUCTION**

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**INITIAL SETUP:****Personnel Required**

Operator

**References**

DA PAM 750-8  
WP 0010  
WP 0063

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**INTRODUCTION**

1. General. Your Preventative Maintenance Checks and Services (PMCS) table (WP 0010, Table 1) has been provided so you can keep your equipment in good operating condition and fully mission capable. The PMCS contains those checks and services authorized to the operator by the Maintenance Allocation Chart (MAC) under "inspection and service" functions contained in WP 0063.
2. Warnings and Cautions. Always observe the WARNINGS and CAUTIONS appearing in your PMCS TABLE BEFORE, DURING and AFTER you operate the equipment. The WARNINGS and CAUTIONS appear before certain procedures. You must observe these WARNINGS and CAUTIONS to prevent serious injury to yourself and others to prevent your equipment from being damaged.
3. Explanation of Tables Entries.
  - a. 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.
  - b. Interval Column. This column tells you when you must do the procedure in the column. BEFORE procedures must be done before you operate the equipment for its intended mission. DURING procedure must be done during the time you are operating or using the equipment for its intended mission. AFTER procedures must be done immediately after you have operated or used the equipment.
  - c. Item To Be Checked Or Serviced Column. This column provides the location and the item to be checked or serviced. The item location is underlined and will be exterior or interior to the PDB Assembly.
  - d. Procedure Column. This column gives the procedure you must do to check or service the item listed in the Check/Service column to know if the equipment is ready or available for its intended mission or operation. You must do the procedure at the time stated in the interval column.
  - e. Equipment Not Ready/Available If: Column. Information in this column tells you what faults will keep your equipment from being capable of performing its primary mission. If you make check and service procedures that show faults listed in this column, do not operate the equipment. Follow Standard Operating Procedure (SOP) for maintaining the equipment or reporting equipment failure.
4. Routine checks such as equipment inventory, cleaning, checking for frayed, cracked or broken cables, loose or missing connectors, proper operation of all control knobs, circuit breakers, and indicators are not listed as PMCS. These are routine things that you should do anytime you see that they must be done.

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**INTRODUCTION – CONTINUED****NOTE**

If your equipment must be kept in continuous operation, do only the procedures that can be done without disturbing operation. Make complete checks and services when equipment is shut down.

**NOTE**

If your PDB does not perform as required, refer to Chapters 3 under Troubleshooting for possible problems. Report any malfunctions or failures on the proper DA Form 2404, Equipment Inspection and Maintenance Worksheet or refer to DA PAM 750-8.

5. Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with your PDB be reported as soon as possible so that the problem can be corrected and improvements can be made to prevent the problem from occurring 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 to 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. The form should be submitted to the address specified in DA Pam 750-8. Corrosion can be prevented and controlled by performing PMCS procedures and cleaning the equipment after operations.

**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE**  
**PMCS, INCLUDING LUBRICATION INSTRUCTIONS**

**INITIAL SETUP:****Personnel Required**

Operator

**References**

WP 0010

**Table 1. Operator Preventive Maintenance Checks and Services.**

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/ AVAILABLE IF:</b>
1	Before	Power Distribution Box Assembly	Visually check that unused connector is capped and side access covers are functional. Check PDB input connector for damage.	
2	Before	Circuit Breakers: CB1 through CB7	Check for damaged circuit breaker. Ensure mounting hardware is secure. Ensure protective boots are not damaged. Notify Field maintenance.	Circuit breakers or protective boots are damaged to the extent so as to affect the function or safety.
3	Before	Connector	Check for damaged connectors. Ensure all pins and connector lugs are serviceable. Notify Field maintenance.	Connectors are damaged, burnt, broken or missing.
4	Before	Terminal Studs; Circuit No. 1 - Circuit No. 4	Check for damaged lug and/or missing nut.	Terminal posts are damaged, nut missing.
5	Before	Ground Rod and Ground Wire	Check for damaged or unserviceable ground rod. Make sure ground wire attaching hardware is in place. Check for damage to ground wire. Perform ground continuity check.	Ground rod damaged or corroded. Ground wire cut, damaged or corroded.
6	Before	Cable Assembly (Power)	Check pigtail cable for damage or corrosion. Ensure all ground wires are functional. Check connectors, ensure all pins and connector lugs are serviceable. Check for exposed wiring, split, cut or damaged insulation. Notify Field maintenance.	Pigtail cable has frayed or missing wires. Corrosion is present. Wiring is exposed, insulation cut, split.
7	Before	Phase Indicator Lights	Check for damaged or inoperable light/light socket.	Phase indicator lamps are defective or inoperable.
8	Before	Source Volts Meter	Check for damaged or inoperable meter.	Meter is defective or inoperable.
9	Before	Lug Wrench	Check for missing or damaged lug wrench.	Lug wrench is damaged or missing.

Table 1. Operator Preventive Maintenance Checks and Services. – Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	During	Front Panel Indicator Lights (All)	Check for damaged lights and/or light sockets.	Indicator lamps are defective or inoperable.
11	During	Indicator Lights (Side Panels Circuits 1 through 4)	Check for damaged lights and/or light sockets.	Indicator lamps are defective or inoperable.
12	During	Source Volts Meter	Check for damaged or inoperable meter.	Meter is defective or inoperable.
13	Before	Power Cables, (System)	Inspect cable layouts to ensure they do not create a dangerous situation to vehicles and personnel. Reposition if needed.	
14	After - Monthly	Exterior Covers	Lubricate cover hinges. Inspect for cracked weld joints, missing or damaged hardware. Check cover gaskets for damage and wear.	Front and side panels are damaged. Fasteners or latches are damaged or missing.
15	Before	Circuit Breaker Protective Boots	Check for damage. Check to make sure mounting hardware is secure.	Damaged, loose or torn protective boots.
16	Before	GFCI Duplex Receptacles (ONLY applicable to Versions (V)1, (V)3, & (V)4)	Check for damaged receptacle and weather cover. Any deficiencies identified, notify Field maintenance.	Weather cover is missing or damaged.
17	Before	Terminal Post Safety Covers	Check for missing or damaged safety covers. Ensure secured properly.	Damaged, torn or missing.

**MANDATORY REPLACEMENT PARTS**

There are no replacement parts required for these PMCS procedures.

**LUBRICATION INSTRUCTIONS**

There are no lubrication instructions required for these PMCS procedures.

**END OF WORK PACKAGE**



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**OPERATOR MAINTENANCE**  
**OPERATOR GENERAL MAINTENANCE**

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**INITIAL SETUP:****Personnel Required**

Operator

**References**

WP 0010

WP 0011

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**GENERAL**

Operator maintenance is not applicable. Refer to WP 0010 and WP 0011 for Operator PMCS instructions.

**END OF WORK PACKAGE**



## **CHAPTER 5**

### **FIELD TROUBLESHOOTING PROCEDURES**



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**FIELD MAINTENANCE**  
**TROUBLESHOOTING INDEX**

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**INTRODUCTION**

WP 0013 contains troubleshooting information for the field maintainer to use to locate and correct malfunctions for the PDB. The operator may observe these malfunctions during PMCS and during normal equipment operation.

1. Troubleshooting consists of isolating the component(s) in which a malfunction occurs, and locating the defective component, using testing devices and tools identified in the Maintenance Allocation Chart.
2. Any problems encountered that are beyond the user's capability to correct shall be referred to the next higher level maintenance.

**FIELD TROUBLESHOOTING**

1. The Troubleshooting Table lists the common malfunctions that may occur during operation or maintenance of the PDB. You should perform the tests/inspections and corrective actions in the order listed.
2. This manual cannot list all malfunctions that may theoretically occur, or all tests or inspections and corrective actions. If a malfunction occurs and is not listed or is not corrected by listed corrective actions, notify your immediate supervisor.

**SYMPTOM TROUBLESHOOTING PROCEDURES INDEX**

Malfunction/Symptom	Troubleshooting Procedure
1. User's Equipment Operates Erratically or Too Slowly .....	WP 0013, Symptom
2. GFCI Receptacle Not Providing Output. ....	WP 0013, Symptom
3. Electrical Fault .....	WP 0013, Symptom

**END OF WORK PACKAGE**



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**FIELD MAINTENANCE**  
**TROUBLESHOOTING PROCEDURES**

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**INITIAL SETUP:****Tools and Special Tools**

Multimeter (WP 0063, Table 2, Item 4)

**References**

WP 0005

WP 0010

WP 0016

**Personnel Required**

MOS 52D

**Equipment Condition**Power OFF

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**SCOPE**

This work package contains troubleshooting information for field maintenance personnel to locate and correct malfunctions for the PP-8440/ASM and PP-8440A/ASM PDB. The operator may observe these malfunctions during PMCS and during normal operation of equipment, or by field maintenance personnel while performing their PMCS.

Troubleshooting consists of isolating the defective component, using testing devices and tools listed in the Maintenance Allocation Chart (MAC).

**TROUBLESHOOTING PROCEDURE(S)****SYMPTOM**

1. User's Equipment Operates Erratically or Too Slowly.

**TEST OR INSPECTION**

Check generator for proper output.

**CORRECTIVE ACTION**

Refer to proper TM and adjust generator.

**TEST OR INSPECTION**

Check output voltages at the appropriate circuit no.'s terminal post in accordance with Operational Test.

**CORRECTIVE ACTION**

Refer to WP 0005.

**TEST OR INSPECTION**

Check cables and connectors for damage and proper connections.

**CORRECTIVE ACTION**

If damaged, notify next level maintenance.

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**TROUBLESHOOTING PROCEDURES – CONTINUED****SYMPTOM**

2. GFCI Receptacle Not Providing Output.

**TEST OR INSPECTION**

GFCI CNVC Receptacle No. 1 Not Providing Output.

**CORRECTIVE ACTION**

- STEP 1. On PP-8440/ASM, push Circuit Breaker No. 5 to ON position. On PP-8440A/ASM, push Circuit Breaker No. 7 to ON position.
- STEP 2. Measure voltage at GFCI convenience receptacle 1. Verify a reading of 120 VAC is obtained.
- STEP 3. Press the "TEST" push button on GFCI convenience receptacle 1.
- STEP 4. Measure voltage across GFCI convenience receptacle 1. Verify a reading of 0 volts is obtained.
- STEP 5. Press "RESET" button on GFCI convenience receptacle 1.
- STEP 6. Measure voltage at GFCI convenience receptacle 1. Verify a reading of 120 VAC is obtained. Place cover on circuit breaker. If readings are not within specified tolerances, notify next level maintenance for replacement.

**TEST OR INSPECTION**

GFCI CNVC Receptacle No. 2 Not Providing Output.

**CORRECTIVE ACTION**

- STEP 1. Push Circuit Breaker No. 6 to ON position.
- STEP 2. Measure voltage at GFCI convenience receptacle 2. Verify a reading of 120 VAC is obtained.
- STEP 3. Press the "TEST" push button on GFCI convenience receptacle 2.
- STEP 4. Measure voltage across GFCI convenience receptacle 2. Verify a reading of 0 volts is obtained.
- STEP 5. Press "RESET" button on GFCI convenience receptacle 2.
- STEP 6. Measure voltage at GFCI convenience receptacle 2. Verify a reading of 120 VAC is obtained. Place cover on circuit breaker. If readings are not within specified tolerances, notify next level maintenance for replacement.

**SYMPTOM**

3. Electrical Fault

**TEST OR INSPECTION**

Identify the model PDB exhibits the electrical fault.

**CORRECTIVE ACTION**

- STEP 1. If PP-8440/ASM, refer to Table 1.
- STEP 2. If PP-8440A/ASM, refer to Table 2.



## TROUBLESHOOTING

Table 1 lists the common malfunction which may occur during normal operation or maintenance of the PDB.

For more information on troubleshooting the PP-8440/ASM, refer to Table 1. To aid in troubleshooting, perform Operational Test contained in WP 0005.

For more information on troubleshooting the PP-8440A/ASM, refer to Tables 2 and 3. To aid in troubleshooting, perform Operational Test contained in WP 0005.

This manual cannot list all possible malfunctions, nor all tests or inspections and corrective actions. If a malfunction is not listed or corrected by specific corrective actions, notify the next higher level of maintenance.

### PP-8440/ASM ELECTRICAL FAULT ISOLATION

To properly isolate a short or open circuit, use a multimeter and refer to the troubleshooting guide and the equipment continuity checklist. If a measurement of continuity is obtained, it indicates a short circuit. When performing continuity testing, refer to FO-1, FO-2 for a wiring diagram of the PDB. See FO-3 for a wire data chart.

### NOTE

LOAD side readings check OUTPUT side. LINE side readings check INPUT side. Make all continuity checks with circuit breakers OFF.

### WARNING

High voltage is present in this equipment. Do not make continuity checks with power applied to PDB. DEATH or SERIOUS INJURY may result.

**Table 1. PP-8440/ASM Power Distribution Box Continuity Checks.**

FROM	TO	TO	TO
J1-A	Buss Bar A1 CB5	Buss Bar A2 CNVC 1-Hot	DS1, S1, S2, S3, S4 (Hot)
J1-B	Buss Bar B1	Buss Bar B2	DS2, S1, S2, S3, S4, S5 (Hot)
J1-C	Buss Bar C1 CB6	Buss Bar C2 CNVC 2-Hot	DS3, S1, S2, S3, S4, S5 (Hot)
J1-N	Circuit No. 1, LØ	Circuit No. 2, LØ CNVC 1 and 2 (Neutral)	Circuit No. 3, LØ, Circuit No. 4, LØ, ALL Lights (Neutral)
CB1-LOAD A	Circuit No. 1-L1	S1-1 - NC	DS4, DS16 (Hot)
CB1-LOAD B	Circuit No. 1-L2	S1-2 - NC	DS5, DS17 (Hot)
CB1 -LOAD C	Circuit No. 1-L3	S1-3 - NC	DS6, DS18 (Hot)
CB2-LOAD A	Circuit No. 2-L1	S2-1 - NC	DS7, DS19 (Hot)
CB2-LOAD B	Circuit No. 2-L2	S2-2 - NC	DS8, DS20 (Hot)
CB2-LOAD C	Circuit No. 2-L3	S2-3 - NC	DS9, DS21 (Hot)
CB3-LOAD A	Circuit No. 3-L1	S3-1 - NC	DS10, DS22 (Hot)
CB3-LOAD B	Circuit No. 3-L2	S3-2 - NC	DS11, DS23 (Hot)

## TROUBLESHOOTING – CONTINUED

Table 1. PP-8440/ASM Power Distribution Box Continuity Checks. – Continued

FROM	TO	TO	TO
CB3-LOAD C	Circuit No. 3-L3	S3-3 - NC	DS12, DS24 (Hot)
CB4-LOAD A	Circuit No. 4-L1	S4-1 - NC	DS13, DS25 (Hot)
CB4-LOAD B	Circuit No. 4-L2	S4-2 - NC	DS14, DS26 (Hot)
Circuit No. 3, LØ	DS16, DS17, DS18, DS22, DS23, DS24 (Neutral)	DS4, DS5, DS6, DS10, DS11, DS12 (Neutral)	
Circuit No. 4, LØ	DS19, DS20, DS21, DS25, DS26, DS27 (Neutral)	DS1, DS2, DS3, DS7, DS8, DS9 (Neutral)	DS13, DS14 DS15

## PP-8440A/ASM ELECTRICAL FAULT ISOLATION

To properly isolate a short or open circuit, use a multi-meter and refer to the applicable equipment continuity checklist. If a measurement of continuity is obtained, it indicates a short circuit. When performing continuity testing, refer to FO-4, FO-5 for a wiring diagram of the PDB. See FO-6 for a wire data chart.

**WARNING**

High voltage is present in this equipment. Do not make continuity checks with power applied to PDB. DEATH or SERIOUS INJURY may result.

**NOTE**

LOAD side readings check OUTPUT side. LINE side readings check INPUT side. Make all continuity checks with circuit breakers OFF.

Table 2. PP-8440A/ASM Power Distribution Box Continuity Checks.

FROM	TO	TO	TO
With Phase Selector Switch in L1 Position: J1 - A	CB5 -A LINE	S7-3, PS1	
With Phase Selector Switch in L1 Position: S7-C	M1	TB-3 L0	
With Phase Selector Switch in L2 Position: J1 - B	CB5 -B LINE	S7-10, S6	
With Phase Selector Switch in L2 Position: S7-C	M1	TB-3 L0	
With Phase Selector Switch in L3 Position: J1 - C	CB5 -C LINE	S7-5, S6	

## PP-8440A/ASM ELECTRICAL FAULT ISOLATION – CONTINUED

Table 2. PP-8440A/ASM Power Distribution Box Continuity Checks. – Continued

FROM	TO	TO	TO
With Phase Selector Switch in L3 Position: S7- C	M1	TB-3 L0	
J1 - N	Circuit No. 1, L0, Circuit No. 3, L0	Circuit No. 4, L0 CNVC 1 Neutral	Circuit No. 2, L0 CNVC 2 Neutral
J1 - Pin: G1, G2	Circuit No. 3 - GND	Circuit No. 1 - GND	E-1 (GND) CNVC 1 GND
J1 - Pin: G3, G4	Circuit No. 4 - GND	Circuit No. 2 - GND	E-1 (GND) CNVC 2 GND
CB5 -A LOAD	BUSS BAR A1	BUSS BAR A2, CB1 -A LINE, CB2 -A LINE	CB3 -A LINE, CB4 -A LINE, CB7 -LINE
CB5 -B LOAD	BUSS BAR B1	BUSS BAR B2, CB1 -B LINE, CB2 -B LINE	CB3 -B LINE, CB4 -B LINE
CB5 -C LOAD	BUSS BAR C1	BUSS BAR C2, CB1 -C LINE, CB2 -C LINE	CB3 -C LINE, CB4 -C LINE, CB6 -LINE
CB1-LOAD A	TB 1-L1	S1-1 - NC	DS4, DS16 (Hot)
CB1-LOAD B	TB 1-L2	S1-2 - NC	DS5, DS17 (Hot)
CB1 -LOAD C	TB 1-L3	S1-3 - NC	DS6, DS18 (Hot)
CB2-LOAD A	TB 2-L1	S2-1 - NC	DS7, DS19 (Hot)
CB2-LOAD B	TB 2-L2	S2-2 - NC	DS8, DS20 (Hot)
CB2-LOAD C	TB 2-L3	S2-3 - NC	DS9, DS21 (Hot)
CB3-LOAD A	TB 3-L1	S3-1 - NC	DS10, DS22 (Hot)
CB3-LOAD B	TB 3-L2	S3-2 - NC	DS11, DS23 (Hot)
CB3-LOAD C	TB 3-L3	S3-3 - NC	DS12, DS24 (Hot)
CB4-LOAD A	TB 4-L1	S4-1 - NC	DS13, DS25 (Hot)
CB4-LOAD B	TB 4-L2	S4-2 - NC	DS14, DS26 (Hot)
CB4-LOAD C	TB 4-L3	S4-3 - NC	DS15, DS27 (Hot)
CB7-LOAD	CNVC 1-Hot		
CB6-LOAD	CNVC 2-Hot		
S1	DS4, DS5, DS6 (Neutral)	DS16, DS17, DS18 (Neu- tral)	
S2	DS7, DS8, DS9 (Neutral)	DS19, DS20, DS21 (Neu- tral)	
S3	DS10, DS11, DS12 (Neu- tral)	DS22, DS23, DS24 (Neu- tral)	
S4	DS13, DS14, DS15 (Neu- tral)	DS25, DS26, DS27 (Neu- tral)	

**WARNING**

High voltage is present in this system. The PP-8440A/ASM Power Distribution Box supports equipment using 120/208 VAC. Do not rely on the color of the wire insulation for phase color coding. The insulation on the wires inside the jacket may vary depending on supplier. Wires will be color coded to designate the phases. Perform a continuity test to verify phase designation. Failure to check proper wiring may result in DEATH or SERIOUS INJURY.

X - Indicates continuity

O - Indicates no continuity

**NOTE**

If tags are missing, perform continuity checks and tag wires according to appropriate color code.

**Table 3. Main Power Cable Assembly Continuity Checks (Both Models) (J1 - CONNECTOR PINS).**

PIGTAIL LEADS	FROM: J1: P1-A	P1-B	P1-C	P1-N	P1-G1	P1-G2	P1-G3	P1-G4
TO:								
Black Lead	X	O	O	O	O	O	O	O
Red Lead	O	X	O	O	O	O	O	O
Blue Lead	O	O	X	O	O	O	O	O
White Lead	O	O	O	X	O	O	O	O
Green Bare 1	O	O	O	O	X	O	O	O
Green Bare 2	O	O	O	O	O	X	O	O
Green Bare 3	O	O	O	O	O	O	X	O
Green Bare 4	O	O	O	O	O	O	O	X

**END OF WORK PACKAGE**

## **CHAPTER 6**

### **FIELD MAINTENANCE INSTRUCTIONS**



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**FIELD MAINTENANCE  
SERVICE UPON RECEIPT**

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**INITIAL SETUP:****Personnel Required**

MOS 52D

**References**

WP 0005  
DA PAM 750-8  
SF 368

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**SERVICE UPON RECEIPT OF MATERIEL****NOTE**

MOS 52D, Power Generator Equipment Repairer is authorized to perform all Field maintenance on the Power Distribution Box.

Refer to Table 1 and perform the actions listed.

**Table 1. Service Upon Receipt Checklist.**

<b>ITEM</b>	<b>LOCATION</b>	<b>ACTION</b>	<b>REMARKS</b>
1	Power Distribution Box	<p>Inspect exterior for surface damage.</p> <p>Inspect all PDB weather covers to ensure they are intact and operable.</p> <p>Inspect for damaged test/selector switches.</p> <p>Inspect GFCI CNVC receptacles for damage and missing hardware.</p> <p>Inspect ground rod and wire for damage.</p> <p>Inspect circuit breaker switches for freedom of movement.</p> <p>Inspect Main Input connector for missing cover and damage or corrosion.</p> <p>Inspect Main Input connector for missing or damaged pins.</p> <p>Inspect all Indicator lights (front and side panels) for missing or damaged bulbs/covers.</p> <p>Inspect for damaged meter.</p> <p>Inspect for missing or damaged latches.</p> <p>Ensure circuit breaker protective boots are in place and not torn or damaged.</p> <p>Ensure terminal post safety covers are in place and not torn or damaged.</p> <p>Ensure all caution and information plates are in place and not damaged.</p>	

**SERVICE UPON RECEIPT OF MATERIEL – CONTINUED****Table 1. Service Upon Receipt Checklist. – Continued**

<b>ITEM</b>	<b>LOCATION</b>	<b>ACTION</b>	<b>REMARKS</b>
2	Power-In Cable Assembly	Inspect for damaged/corroded pigtail end of cable. Inspect for missing connector cover. Inspect for damaged connector. Inspect for split, cut, or damaged insulation. Check for frayed wire.	
3	Pedestal (Stand)	Inspect for structural damage. Check for missing/damaged lug wrenches. Ensure wrench standoff is secure. Inspect for missing/bent bezel pin. Inspect for missing/damaged handle. Ensure caution plates are present and secure.	

**Checking Unpacked Equipment**

1. Inspect your equipment for damage incurred during shipment. If your equipment has been damaged, report the damage on SF Form 364, Report of Discrepancy (ROD).
2. Check the equipment against the packing list to see if the shipment is complete. Report all discrepancies in accordance with the instructions of DA PAM 750-8.
3. Check current publications to determine if equipment has been modified or projects to be modified.

**INSTALLATION**

The Power Distribution Box should be properly installed upon receipt of materiel. Refer to the Service Upon Receipt Checklist and the packing list to ensure the shipment is complete. For grounding and power hook-up procedures, refer to WP 0005.

**END OF TASK****END OF WORK PACKAGE**



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## FIELD MAINTENANCE

### PMCS INTRODUCTION

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**INITIAL SETUP:****Personnel Required**

MOS 52D

**References**

DA Form 2404

**References - cont'd**

DA PAM 750-8

WP 0013

WP 0016

WP 0064

**INTRODUCTION**

1. General. Your Preventative Maintenance Checks and Services (PMCS) table (WP 0016, Table 1) has been provided so you can keep your equipment in good operating condition and fully mission capable. The PMCS contains those checks and services authorized to field maintenance personnel by the Maintenance Allocation Chart (MAC) under "inspection and service" functions contained in WP 0064.
2. Warnings and Cautions. Always observe the "WARNINGS AND CAUTIONS" appearing in your PMCS table BEFORE, DURING and AFTER you operate the equipment. The WARNINGS and CAUTIONS appear before certain procedures. You must observe these WARNINGS and CAUTIONS to prevent serious injury to yourself and others to prevent your equipment from being damaged.
3. Explanation of Tables Entries.
  - a. Item Number 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.
  - b. Interval Column. This column tells you when you must do the procedure in the column.
  - c. Item to be Checked or Serviced Column. This column provides the location and the item to be checked or serviced. The item location is underlined and will be exterior or interior to the PDB Assembly.
  - d. Procedure Column. This column gives the procedure you must do to check or service the item listed in the Check/Service column to know if the equipment is ready or available for its intended mission or operation. You must do the procedure at the time stated in the interval column.
  - e. Equipment Not Ready/Available If: Column. Information in this column tells you what faults will keep your equipment from being capable of performing its primary mission. If you make check and service procedures that show faults listed in this column, do not operate the equipment. Follow Standard Operating Procedure (SOP) for maintaining the equipment or reporting equipment failure.
4. Other Table Entries. Information other than Warnings, Cautions, and Notes appear in the PMCS table. Be sure to observe all special information appearing in your table.

**NOTE**

If your equipment must be kept in continuous operation, do only the procedures that can be done without disturbing operation. Make complete checks and services when equipment is shut down.

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**INTRODUCTION – CONTINUED****NOTE**

If your PDB does not perform as required, refer to WP 0013 Troubleshooting for possible problems. Report any malfunctions or failures on the proper DA Form 2404, Equipment Inspection and Maintenance Worksheet or refer to DA PAM 750-8.

5. Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with your PDB be reported as soon as possible so that the problem can be corrected and improvements can be made to prevent the problem from occurring 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 to 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. The form should be submitted to the address specified in DA Pam 750-8. Corrosion can be prevented and controlled by performing PMCS procedures and cleaning the equipment after operations.

**END OF WORK PACKAGE**

**FIELD MAINTENANCE**  
**PMCS, INCLUDING LUBRICATION INSTRUCTIONS**

**INITIAL SETUP:****Personnel Required**

MOS 52D

**References**

WP 0015

**Table 1. Field Preventive Maintenance Checks and Services.**

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
<p style="text-align: center;"><b>WARNING</b></p> <p>High voltage is present in this equipment. Your PDB supports equipment using 120/208 VAC. Do not perform PMCS with the power connected. DEATH or SERIOUS INJURY may result.</p>				
1	Semi-Annually	Power Distribution Box Assembly	Check internal wiring for secure connections. Check for burnt insulation and signs of overheating.	Wires not secured by lugs. Burnt insulation/wires.
2	Semi-Annually	Circuit Breakers: CB1 - CB6; CB7 (PP-8440A/ASM only)	Check for secure mounting.	Circuit breakers not secured.
3	Semi-Annually	Meter, M1	Check for secure mounting.	Meter not secured.
4	Semi-Annually	Selector Switch	Check for secure mounting.	Switch is not secure.
5	Semi-Annually	Internal Surfaces	Check for corrosion and mildew.	
6	Annually	Buss Bars	Check for secure mounting and signs of damage.	Mounting hardware loose or missing. Buss bar is broken.
7	Semi-Annually	Connector	Check for missing gasket or hardware and secure mounting.	Connectors are damaged or hardware is missing or unserviceable.
8	Weekly	Front Panel Meter	<p style="text-align: center;"><b>WARNING</b></p> <p>High voltage is present in this equipment. Your PDB supports equipment using 120/208 VAC. Do not perform PMCS with the power connected. DEATH or SERIOUS INJURY may result.</p>	

Table 1. Field Preventive Maintenance Checks and Services. – Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			<p><b>WARNING</b></p> <p>Do not rely on the color of the wire insulation for phase color coding. The color of the insulation on the wires inside the cable jacket may vary, depending on the supplier. Perform a continuity test to verify correct phase in accordance with identified color. Incorrect phase identification can cause a short circuit condition which may cause damage to the equipment and/or wiring, and possibly even DEATH or SEVERE INJURY.</p> <p>Check for secure mounting, missing or broken lens cover.</p>	Meter is inoperable or damaged.
9	Weekly	Front Panel Selector Switch	Check for secure mounting, missing or broken dial.	Switch is inoperable or damaged.
10	Weekly	Front Panel Indicator Lights (All)	Check for secure mounting, missing or broken bulbs, and missing or broken lens covers.	Indicator lights are inoperable or damaged.
11	Weekly	Indicator Lights (Side Panels Circuits 1 through 4)	Check for secure mounting, missing or broken bulbs, and missing or broken lens covers.	Indicator lights are inoperable or damaged.

**MANDATORY REPLACEMENT PARTS**

There are no replacement parts required for these PMCS procedures.

**LUBRICATION INSTRUCTIONS**

There are no lubrication instructions required for these PMCS procedures.

**END OF WORK PACKAGE**

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**FIELD MAINTENANCE****TERMINAL POST CAP AND LANYARD ASSEMBLY: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

**Personnel Required**MOS 52D

---

**REPLACEMENT**

To remove and replace the terminal post safety caps and lanyards, refer to Figure 1 and perform the following procedure:

**WARNING**

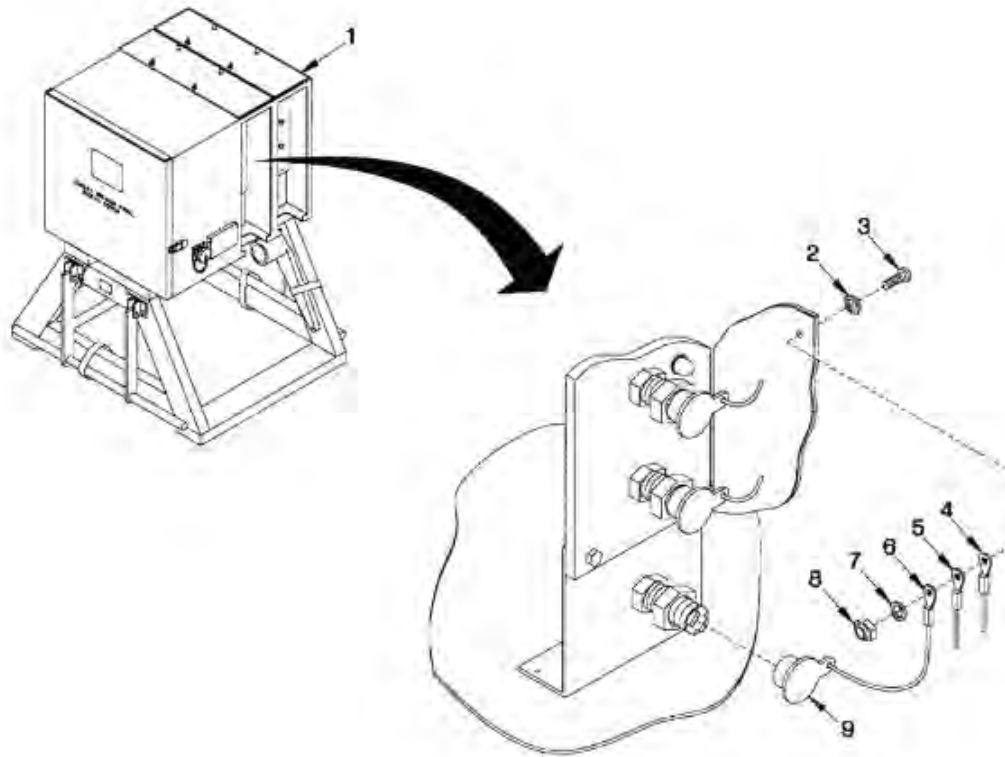
- High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. **SERIOUS INJURY** or **DEATH** may result.
- The terminal post safety caps must be replaced if torn, damaged or defective. Normal operation of the PDB can become extremely hazardous without safety covers installed. **SERIOUS INJURY** or **DEATH** may result.

**NOTE**

The following procedure is used to remove terminal post safety covers and lanyards for all circuits. The following procedures address the removal and installation of 3 ea. lanyard installations (5, 7, and 10 in.). To replace the other two lanyard configurations, refer to this work package.

1. Open circuit breaker panel access cover (Figure 1, Item 1), (Circuit No.'s 1, 2 or 3). Secure it in open position.
2. Remove terminal post safety cap (Figure 1, Item 9) from terminal post by grasping and pulling off.
3. Remove 5 inch lanyard (Figure 1, Item 6), 7 inch lanyard (Figure 1, Item 5) or 10 inch lanyard (Figure 1, Item 4) from PDB by removing screw (Figure 1, Item 3), flat washer (Figure 1, Item 2), lock washer (Figure 1, Item 7) and locknut (Figure 1, Item 8). Retain hardware for installation of new lanyard.
4. To install a new safety cap (Figure 1, Item 9) and lanyard, position cap on terminal post and secure.
5. Secure 5 inch lanyard (Figure 1, Item 6), 7 inch lanyard (Figure 1, Item 5) or 10 inch lanyard (Figure 1, Item 4) from PDB by installing screw (Figure 1, Item 3), flat washer (Figure 1, Item 2), lock washer (Figure 1, Item 7) and locknut (Figure 1, Item 8).
6. Close side panel access cover (Figure 1, Item 1) and secure latch assemblies.

## REPLACEMENT – CONTINUED



**Figure 1. Terminal Post Safety Cap and Lanyard (3 Lanyard).**

To remove and replace terminal post safety caps and lanyards, refer to Figure 2 and perform the following procedure:

### WARNING

- High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.
- The terminal post safety caps must be replaced if torn, damaged or defective. Normal operation of the PDB can become extremely hazardous without safety covers installed. SERIOUS INJURY or DEATH may result.

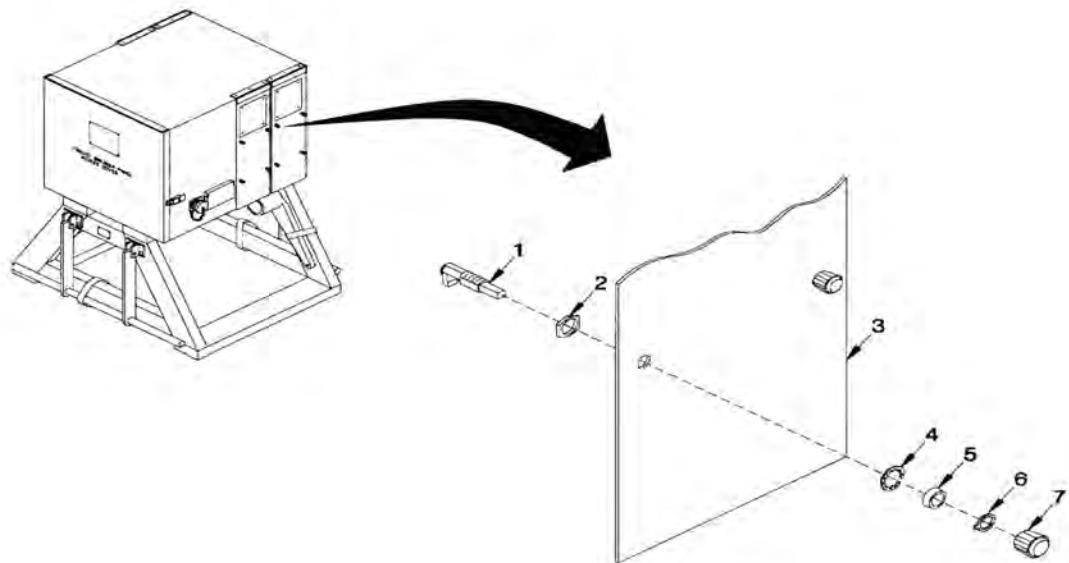
### NOTE

The following procedure is used to remove terminal post safety covers and lanyards for all circuits. The following procedures address the removal and installation of 3 ea. lanyard installations (5, 7, and 10 in.). To replace the other two lanyard configurations, refer to this work package.

1. Open circuit breaker panel access cover (Figure 2, Item 1) Circuit No. 4. Secure it in open position.
2. Remove terminal post safety cap (Figure 2, Item 7) from terminal post by grasping and pulling off.

**REPLACEMENT – CONTINUED**

3. Remove 5 inch lanyard (Figure 2, Item 4) or 7 inch lanyard (Figure 2, Item 3) from PDB by removing countersunk screw (Figure 2, Item 2), flat washer (Figure 2, Item 5) and locknut (Figure 2, Item 6). Retain hardware for installation of new lanyard.
4. To install a new safety cap (Figure 2, Item 7) and lanyard, position cap on terminal post and work cover on until secure.
5. Secure 5 inch lanyard (Figure 2, Item 4) and/or 7 inch lanyard (Figure 2, Item 3) from PDB by installing countersunk screw (Figure 2, Item 2), flat washer (Figure 2, Item 5) and locknut (Figure 2, Item 6).
6. Close side panel access cover (Figure 2, Item 1) and secure latch assemblies.



**Figure 2. Terminal Post Safety Cap and Lanyard (2 Lanyard).**

**END OF TASK**

**END OF WORK PACKAGE**





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**FIELD MAINTENANCE****SIDE ACCESS COVER PAWL FASTENER: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

**Equipment Condition**

Power OFF

**Personnel Required**MOS 52D

---

**REPLACEMENT**

To replace a defective side access cover pawl fastener, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Remove black plastic cap (Figure 1, Item 7) by grasping with pliers and pull off.
2. Remove fastener washer (Figure 1, Item 6). Remove fastener locking collar (Figure 1, Item 5) by turning counterclockwise.
3. On inside of access cover (Figure 1, Item 4), remove fastener body (Figure 1, Item 1) by tapping until free.
4. Remove lock washer (Figure 1, Item 3). Remove nut (Figure 1, Item 2) by turning counterclockwise.
5. Place nut (Figure 1, Item 2) and lock washer (Figure 1, Item 3) on fastener body (Figure 1, Item 1).
6. Position fastener body (Figure 1, Item 1) on inside of access cover (Figure 1, Item 4) and slide through hole.
7. Place locking collar (Figure 1, Item 5) and fastener washer (Figure 1, Item 6) on fastener body (Figure 1, Item 1) and tighten nut (Figure 1, Item 2).
8. Position black plastic cap (Figure 1, Item 7) on body and press until seated.

## REPLACEMENT – CONTINUED

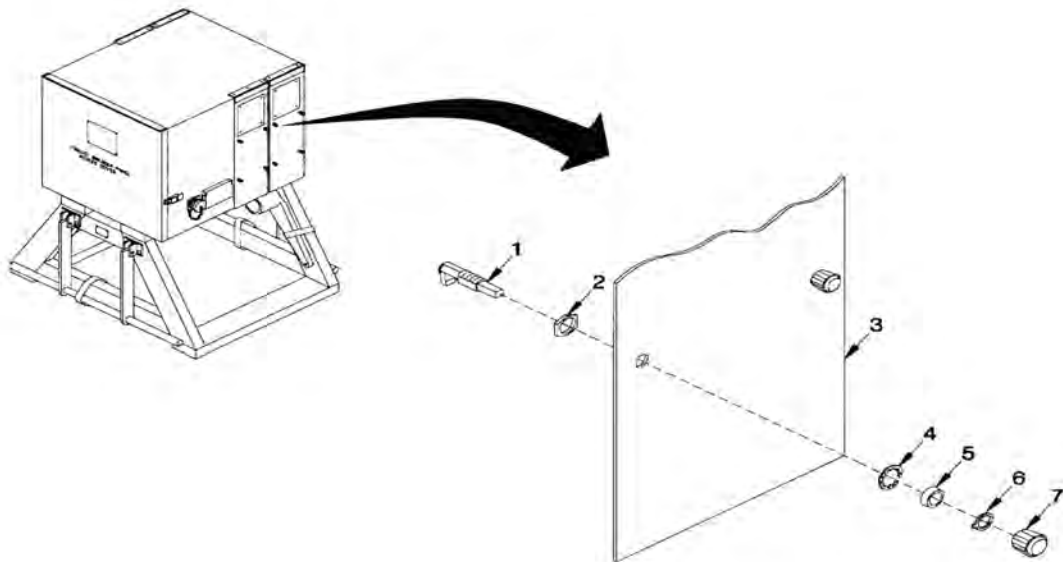


Figure 1. Side Access Cover Pawl Fastener.

END OF TASK

END OF WORK PACKAGE

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**FIELD MAINTENANCE**

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**REAR ACCESS COVER LATCH AND KEEPER ASSEMBLY (PP-8440A ONLY): REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

**Equipment Condition**

Power OFF

**Personnel Required**MOS 52D

---

**REPLACEMENT****Rear Access Cover Latch**

To replace a defective rear access cover latch, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Remove self-locking nut (Figure 1, Item 12), flat washer (Figure 1, Item 8), and spring washer (Figure 1, Item 11) from latch stud (Figure 1, Item 7) and retain for later use.
2. Remove latch (Figure 1, Item 9), bushing (Figure 1, Item 10), and flat washer (Figure 1, Item 8) as necessary from stud (Figure 1, Item 7) on rear access cover (Figure 1, Item 6).
3. Place flat washer (Figure 1, Item 8), bushing (Figure 1, Item 10), and latch (Figure 1, Item 9) on stud (Figure 1, Item 7) on rear access cover (Figure 1, Item 6).
4. Place spring washer (Figure 1, Item 11), flat washer (Figure 1, Item 8), and self-locking nut (Figure 1, Item 12) on stud (Figure 1, Item 7). Tighten nut (Figure 1, Item 12).

**Rear Access Keeper**

To replace a defective rear access cover keeper, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Remove two self-locking nuts (Figure 1, Item 1) and two flat washers (Figure 1, Item 2) from keeper studs (Figure 1, Item 4) on rear entrance panel (Figure 1, Item 5) and retain for later use.
2. Remove keeper (Figure 1, Item 3) from studs (Figure 1, Item 4) on rear entrance panel (Figure 1, Item 5).
3. Place keeper (Figure 1, Item 3) on studs (Figure 1, Item 4) on rear entrance panel (Figure 1, Item 5).
4. Place two flat washers (Figure 1, Item 2), and self-locking nuts (Figure 1, Item 1) on studs (Figure 2, Item 4) on rear entrance panel (Figure 1, Item 5). Tighten nuts (Figure 1, Item 1).

## REPLACEMENT – CONTINUED

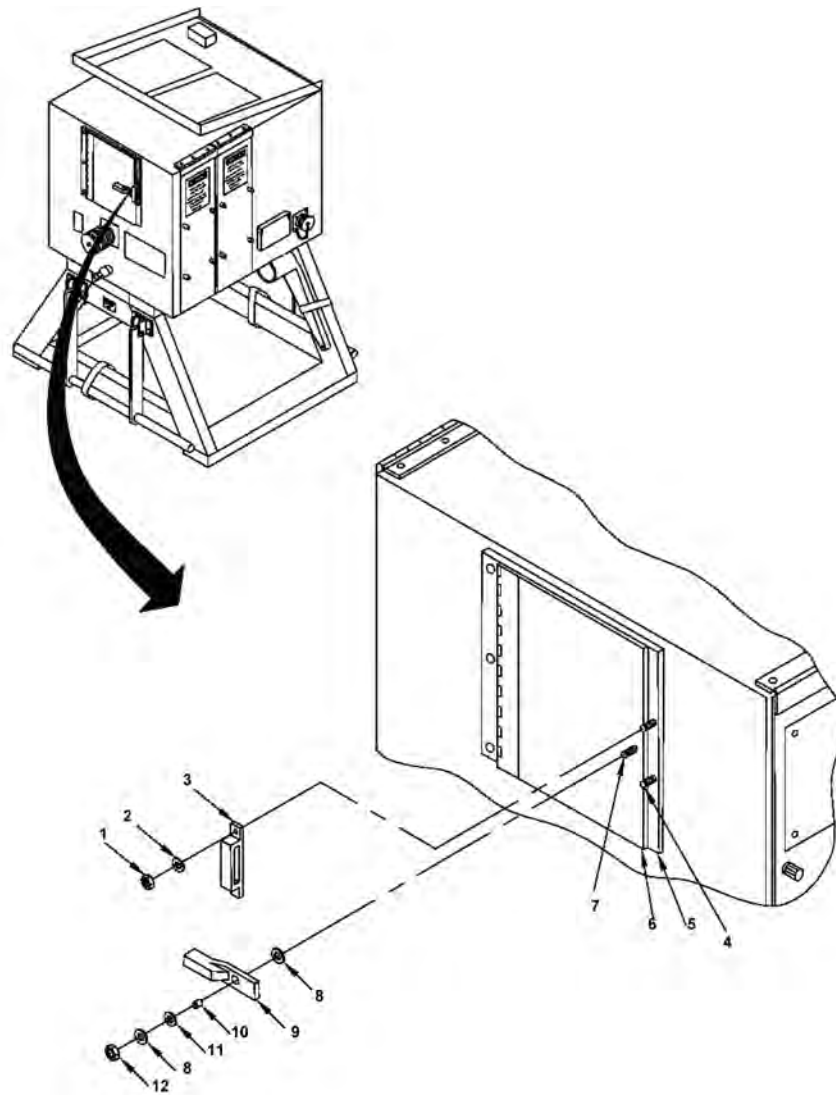


Figure 1. Rear Access Cover Latch and Keeper.

END OF TASK

END OF WORK PACKAGE

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**FIELD MAINTENANCE****CIRCUIT BREAKER PANEL COVER (PP-8440A ONLY): REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)  
Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**Personnel Required**

MOS 52D

**Equipment Condition**

Power OFF

---

**REPLACEMENT**

To replace a defective panel cover, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Unlatch left and right fasteners on sides of PDB (Figure 1, Item 3) that secure circuit breaker panel cover (Figure 1, Item 1).
2. Remove nine screws (Figure 1, Item 2) from circuit breaker panel cover hinge.
3. Remove circuit breaker panel cover (Figure 1, Item 1) from PDB (Figure 1, Item 3).
4. Position circuit breaker panel cover (Figure 1, Item 1) on top of PDB (Figure 1, Item 3) and align holes in hinge with holes on PDB.
5. Install nine screws (Figure 1, Item 2) to secure circuit breaker panel cover (Figure 1, Item 1) on top of PDB (Figure 1, Item 3).
6. Close and latch left and right fasteners on sides of PDB (Figure 1, Item 3) to secure circuit breaker panel cover (Figure 1, Item 1).

## REPLACEMENT – CONTINUED

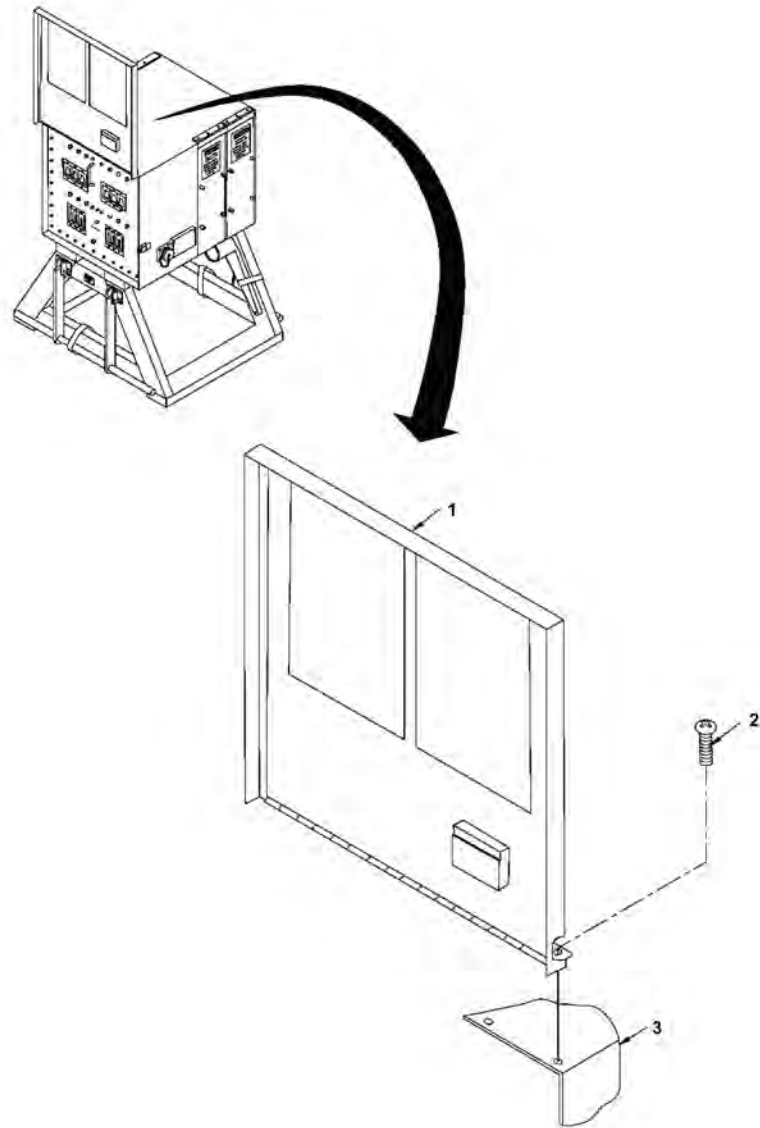


Figure 1. Circuit Breaker Panel Cover.

END OF TASK

END OF WORK PACKAGE

---

**FIELD MAINTENANCE**  
**SIDE ACCESS COVER: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)  
Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**Personnel Required**

MOS 52D

**Equipment Condition**

Power OFF

---

**REPLACEMENT**

To replace a defective access cover, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Turn four fasteners (Figure 1, Item 3) counterclockwise to unlatch and open side access cover (Figure 1, Item 2).
2. Remove three screws (Figure 1, Item 1) from side access cover hinge.
3. Remove side access cover (Figure 1, Item 2) from PDB (Figure 1, Item 4).
4. Position side access cover (Figure 1, Item 2) on top of PDB (Figure 1, Item 4) and align holes in hinge with holes on PDB.
5. Install three screws (Figure 1, Item 1) to secure side access cover (Figure 1, Item 2) on top of PDB (Figure 1, Item 4).
6. Close and latch four fasteners (Figure 1, Item 3) on sides access cover (Figure 1, Item 2) by turning them clockwise.

## REPLACEMENT – CONTINUED

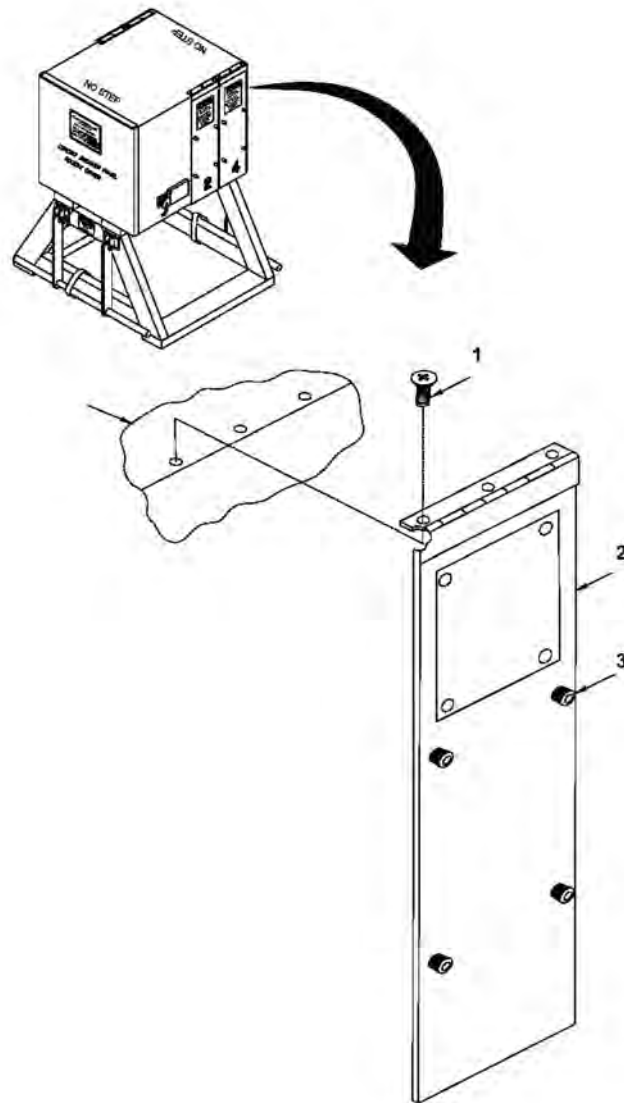


Figure 1. Side Access Cover.

END OF TASK

END OF WORK PACKAGE



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**FIELD MAINTENANCE**  
**POWER CABLE (PIGTAIL) ASSEMBLY: REPAIR**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)  
 Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**Personnel Required**

MOS 52D

**References**

TM 55-1500-323-24  
 WP 0013

**Materials/Parts**

Denatured alcohol (WP 0066, Table 1, Item 2)  
 Power Cable (WP 0066, Table 1, Item 4)  
 Water-white rosin (WP 0066, Table 1, Item 10)

**Equipment Condition**

Power OFF

---

**REPAIR****Power Cable Assembly (P/N A3254554) (Pigtail End) Repair**

Repair of the Power Cable Assembly is limited to cutting and tinning the source end of power cable. Perform a continuity check of cable assembly in accordance with WP 0013. For tinning with solder pot refer to this WP. For additional information, see TM 55-1500-323-24.

1. Carefully cut and remove 4 inches of outer cable jacket from end of each cable conductor.
2. Cut and remove any insulation on wire. Leave 4-5 inches of bare wire exposed.
3. Cut cable length (bare wire) so that 4-5 inches of bare wire are exposed. Cut any frayed or damaged wire from end of cable.
4. Attach a small heat sink approximately 3 inches below end of cable. Select a soldering iron having suitable heating capability for wire size.

**NOTE**

Tin as much as possible of conductor end. Rotate and tin as needed until conductor is completely covered with tin 1 1/2 inch from end.

5. Tin the ends of each cable conductor with solder from end of conductor to 1 1/2 inch from end.

**Power Cable Assembly Tinning (Using Solder Pot)**

Properly prepare flux by mixing eight ounces of denatured alcohol with one ounce of water-white rosin and thoroughly mix together. Maintain temperature of the solder pot between 450 and 500 degrees Fahrenheit to maintain a liquid consistency. Dip tin wire sizes No. 6 and larger individually.

**CAUTION**

During tinning operations, take care not to melt, scorch or burn the insulation.

**NOTE**

If your unit has access to a solder pot for tinning purposes, perform following procedures to tin the power cable assembly.

1. Ensure that exposed end of wire is clean and free from oil, grease and dirt. Strip dirty wire.

**REPAIR – CONTINUED**

2. Grasp wire firmly and dip into dish of prepared flux to depth of one half inch.
3. Remove wire and gently shake off excess flux.
4. Immediately dip into molten solder. Dip only half of stripped conductor length into solder.
5. Manipulate wire slowly in solder bath until thoroughly tinned. Do not keep solder in bath longer than necessary.
6. Remove wire and shake off excess.

**END OF TASK****END OF WORK PACKAGE**

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**FIELD MAINTENANCE****PEDASTAL HANDLE AND MOUNTING BRACKET ASSEMBLY: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Pliers  
Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**Personnel Required**

MOS 52D

**Equipment Condition**

Power OFF

---

**REPLACEMENT**

To replace a defective handle, bracket pin and/or mounting bracket, perform the following procedure:

1. Remove bracket pin (Figure 1, Item 4) by removing retaining ring (Figure 1, Item 3). Grasp retaining ring with pliers and pull away from bracket pin (Figure 1, Item 4). Remove bracket pin.
2. Remove opposite bracket pin and retaining ring using procedures contained in step 1 above. Handle (Figure 1, Item 5) should be free. Remove handle.
3. To remove the handle mounting bracket (Figure 1, Item 6), remove and retain three screws (Figure 1, Item 1) securing mounting bracket (Figure 1, Item 6) to mounting base (Figure 1, Item 2). Remove mounting bracket.
4. To replace the mounting bracket (Figure 1, Item 6), position mounting bracket on base (Figure 1, Item 2) and secure by installing three screws (Figure 1, Item 1).
5. Position handle (Figure 1, Item 5) in mounting bracket (Figure 1, Item 6) and slide bracket pin (Figure 1, Item 4) through holes in mounting bracket (Figure 1, Item 6) and handle (Figure 1, Item 5). Install retaining rings (Figure 1, Item 3) on bracket pin.
6. Replace opposite bracket pin and retaining ring using Steps 1-3 above.

## REPLACEMENT – CONTINUED

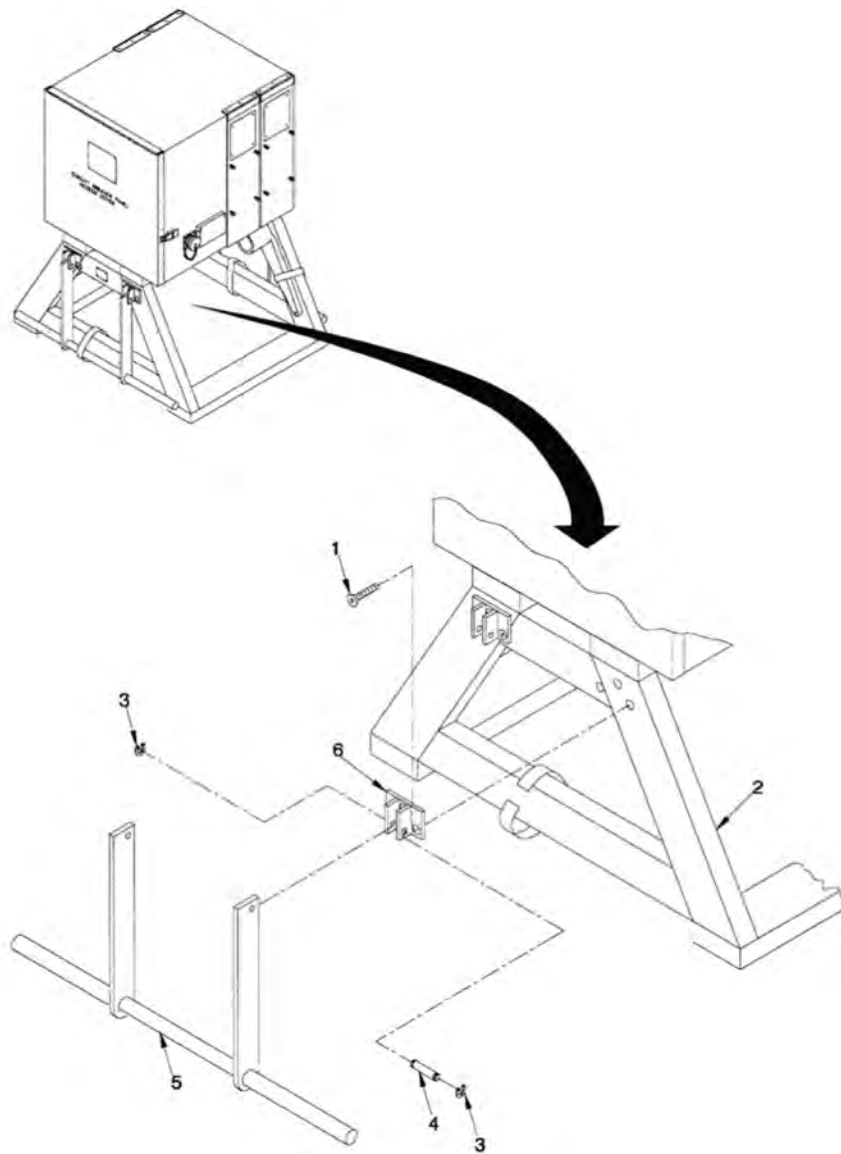


Figure 1. Pedestal Handle and Mounting Bracket Assembly.

END OF TASK

END OF WORK PACKAGE

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**FIELD MAINTENANCE****WRENCH STANDOFF AND FASTENER TAPE: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Hand Riveter  
Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**Personnel Required**

MOS 52D

**Equipment Condition**

Power OFF

**Materials/Parts**

Velcro Tape (WP 0066, Table 1, Item 9)

---

**REPLACEMENT**

To replace damaged fastener tape, perform the following procedure:

1. Release fastener tape (Velcro) (Figure 1, Item 2) from wrench (Figure 1, Item 9) and remove wrench from standoff (Figure 1, Item 1).
2. To remove fastener tape (Figure 1, Item 2), drill head off rivet (Figure 1, Item 4) securing fastener tape to pedestal (Figure 1, Item 1). Tap out rivet using a punch. Retain washer (Figure 1, Item 3) installed with rivet securing tape to pedestal (Figure 1, Item 5).
3. Release fastener tape (Velcro) (Figure 1, Item 2) from wrench (Figure 1, Item 9) and remove wrench from standoff (Figure 1, Item 5).
4. Remove standoff (Figure 1, Item 5) by removing one each bolt (Figure 1, Item 8), one lockwasher (Figure 1, Item 7), and one each flat washer (Figure 1, Item 6), securing standoff (Figure 1, Item 5) to pedestal (Figure 1, Item 1). Retain hardware for installation of new standoff.
5. Install fastener tape (Velcro) (Figure 1, Item 2) by lining up rivet (Figure 1, Item 4) with washer (Figure 1, Item 3) over hole on pedestal (Figure 1, Item 5). Install rivnut using hand riveter.
6. Place wrench (Figure 1, Item 6) on standoff (Figure 1, Item 1) and secure it by securing fastener tape (Figure 1, Item 2) on handle of wrench.
7. Install fastener tape (Velcro) (Figure 1, Item 2) by lining up rivet (Figure 1, Item 4) with washer (Figure 1, Item 3) over hole on pedestal (Figure 1, Item 1). Install rivnut using hand riveter.
8. Position standoff (Figure 1, Item 5) and secure it by installing one each flat washer (Figure 1, Item 6), one lock-washer (Figure 1, Item 7) and one each bolt (Figure 1, Item 8).
9. Place wrench (Figure 1, Item 9) on standoff (Figure 1, Item 5) and secure it by securing fastener tape (Figure 1, Item 2) on handle of wrench.

## REPLACEMENT – CONTINUED

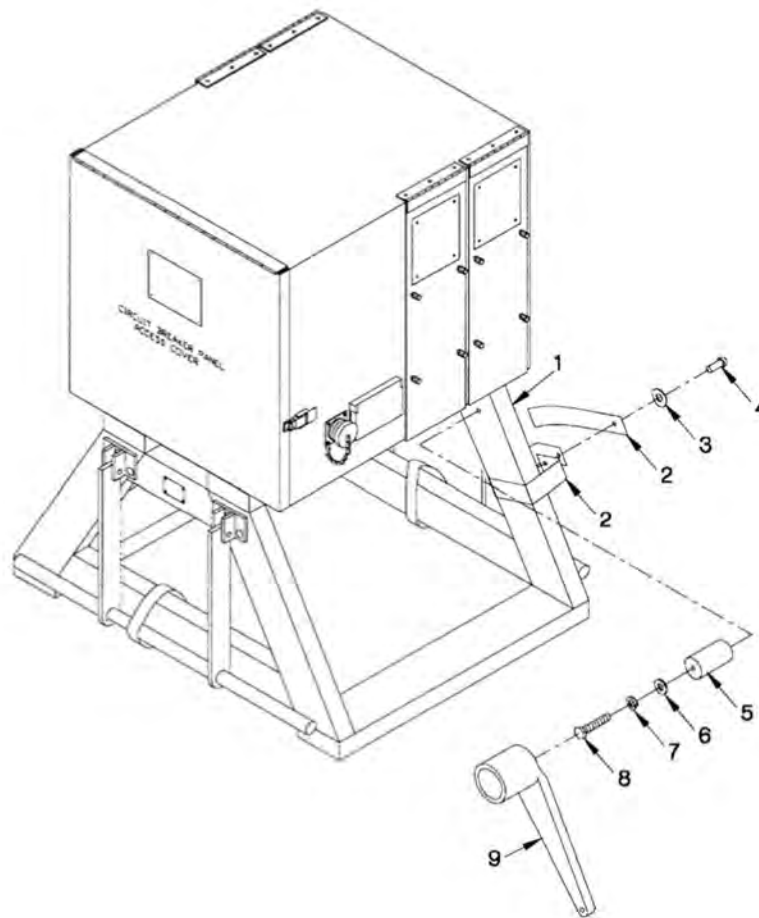


Figure 1. Wrench Standoff and Fastener Tape.

END OF TASK

END OF WORK PACKAGE

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**FIELD MAINTENANCE****PROTECTIVE BOOT, CIRCUIT BREAKER CB1 - CB-4: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)

**Equipment Condition**

Power OFF

**Personnel Required**MOS 52D

---

**REPLACEMENT**

To replace a protective boot, perform the following procedure:

**WARNING**

- High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.
- The circuit breaker protective boot must be replaced if torn, damaged or defective. Normal operation of the PDB can become extremely hazardous without protective boots installed. SERIOUS INJURY or DEATH may result.

1. Open circuit breaker panel access cover (Figure 1, Item 1) by lifting upward.

**CAUTION**

Remove one and only one circuit breaker protective boot or bezel at a time. Failure to follow these instructions can result in damage to the equipment.

2. Remove six screws (Figure 1, Item 3), six lock washers (Figure 1, Item 4) and six flat washers (Figure 1, Item 5) securing the boot bezel (Figure 1, Item 6) and protective boot (Figure 1, Item 7) to the circuit breaker panel (Figure 1, Item 2). Retain hardware for installation of new boot.
3. Remove protective boot bezel (Figure 1, Item 6) and protective boot (Figure 1, Item 7). Retain boot bezel (Figure 1, Item 6).
4. Close and secure circuit breaker access cover (Figure 1, Item 1).

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

5. Open circuit breaker panel access cover (Figure 1, Item 1), by lifting upward.
6. Position protective boot (Figure 1, Item 7) and boot bezel (Figure 1, Item 6) on circuit breaker panel (Figure 1, Item 2). Secure it by installing six flat washers (Figure 1, Item 5), six lock washers (Figure 1, Item 4) and six screws (Figure 1, Item 3).
7. Lower circuit breaker access cover (Figure 1, Item 1) and secure it.

## REPLACEMENT – CONTINUED

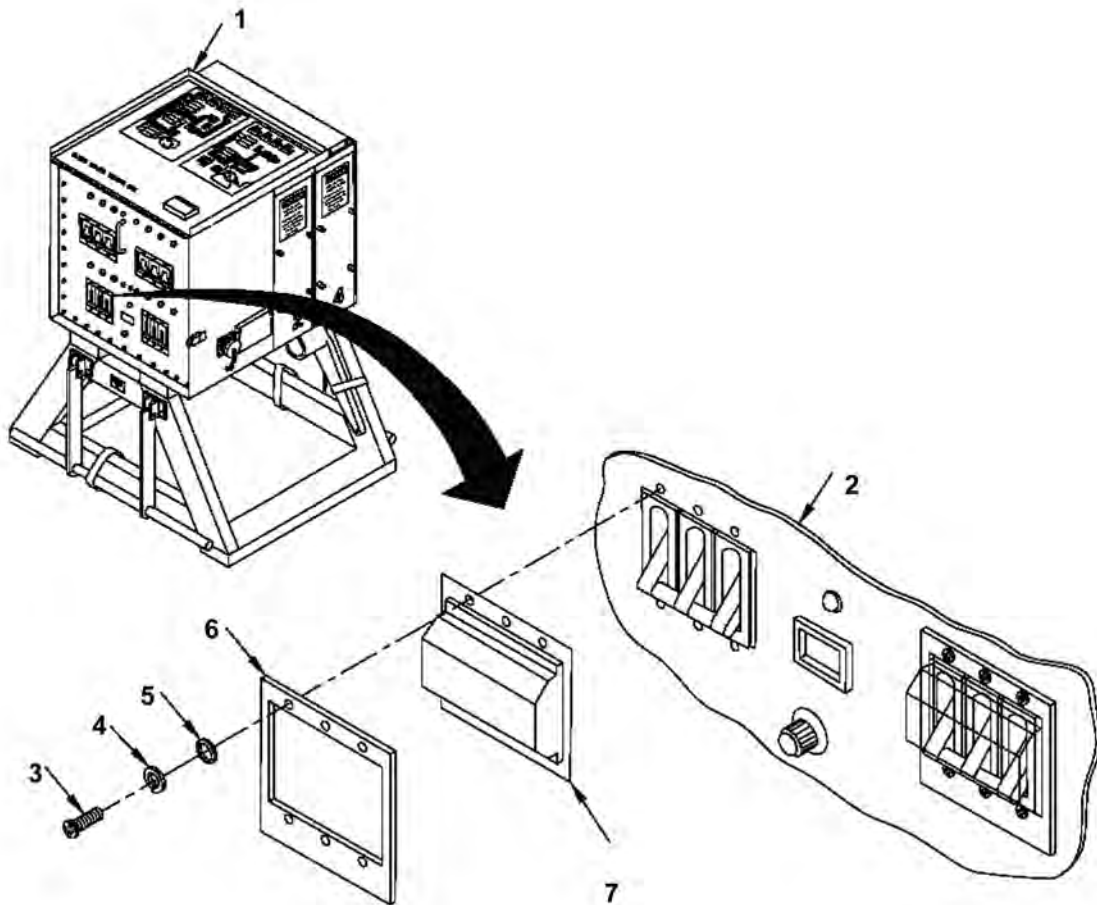


Figure 1. Protective Boot Circuit Breaker CB1 - CB4 .

END OF TASK

END OF WORK PACKAGE



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**FIELD MAINTENANCE****PROTECTIVE BOOT, CIRCUIT BREAKER CB5 (PP-8440A ONLY): REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

**Equipment Condition**

Power OFF

**Personnel Required**MOS 52D

---

**REPLACEMENT**

To replace a defective protective boot, perform the following procedure:

**WARNING**

- High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.
- The circuit breaker protective boot must be replaced if torn, damaged or defective. Normal operation of the PDB can become extremely hazardous without protective boots installed. SERIOUS INJURY or DEATH may result.

1. Unlatch and open rear access cover (Figure 1, Item 6) on rear panel and secure in open position.
2. Remove six screws (Figure 1, Item 1), six lock washers (Figure 1, Item 2) and six flat washers (Figure 1, Item 3) securing boot bezel (Figure 1, Item 4) and protective boot (Figure 1, Item 5) to the rear entrance panel (Figure 1, Item 7). Retain hardware for installation of new boot.
3. Remove boot bezel (Figure 1, Item 4) and boot (Figure 1, Item 5).

**NOTE**

Refer to Illustrated List of Manufactured Items for protective boot trimming procedure.

4. Unlatch and open rear access cover (Figure 1, Item 6), on rear panel and secure in open position.
5. Position protective boot (Figure 1, Item 5) and boot bezel (Figure 1, Item 4) on rear entrance panel (Figure 1, Item 7) and secure it by installing six flat washers (Figure 1, Item 3), six lock washers (Figure 1, Item 2) and six screws (Figure 1, Item 1).
6. Close and latch rear access cover (Figure 1, Item 6).

## REPLACEMENT – CONTINUED

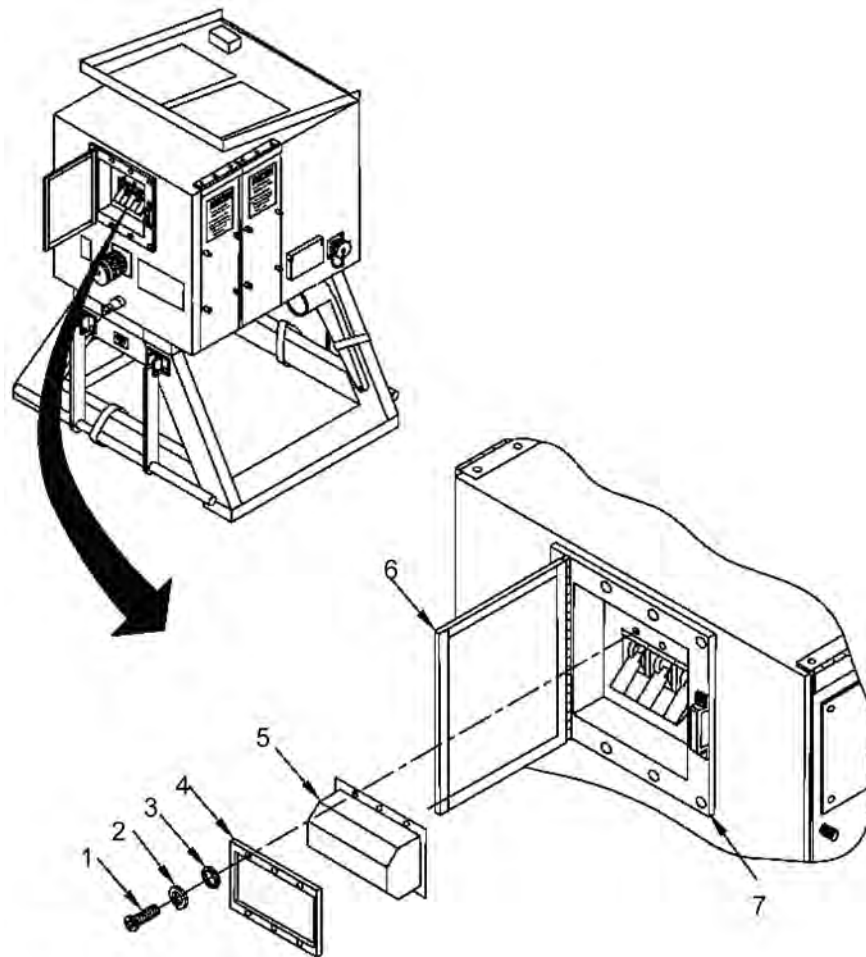


Figure 1. Protective Boot, Circuit Breaker CB5.

END OF TASK

END OF WORK PACKAGE

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**FIELD MAINTENANCE**  
**CIRCUIT BREAKER PANEL: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)  
Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**Personnel Required**

MOS 52D

**Equipment Condition**

Power OFF

---

**REPLACEMENT**

To replace a damaged circuit breaker panel, perform the following procedure:

**PP-8440/ASM****WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

**NOTE**

The PP-8440/ASM can not be fully removed at this level. The panel is lowered for access to internal PDB components.

1. Open circuit breaker access cover (Figure 1, Item 1) on front panel and secure it in open position.
2. Remove and retain 26 screws (Figure 1, Item 4), lock washers (Figure 1, Item 3) and flat washers (Figure 1, Item 2) on top and sides of circuit breaker panel (Figure 1, Item 5) that secure panel to Power Distribution Box.
3. Open circuit breaker panel (Figure 1, Item 5) downward until lanyards are fully extended.
4. Close circuit breaker panel (Figure 1, Item 5) and secure it by installing 26 ea. flat washers (Figure 1, Item 2), lock washers (Figure 1, Item 3) and screws (Figure 1, Item 4) on top and sides of panel. (PP-8440A requires 36 ea.)
5. Attach lanyards if removed.
6. Close access cover (Figure 1, Item 1) and secure it by locking latches.

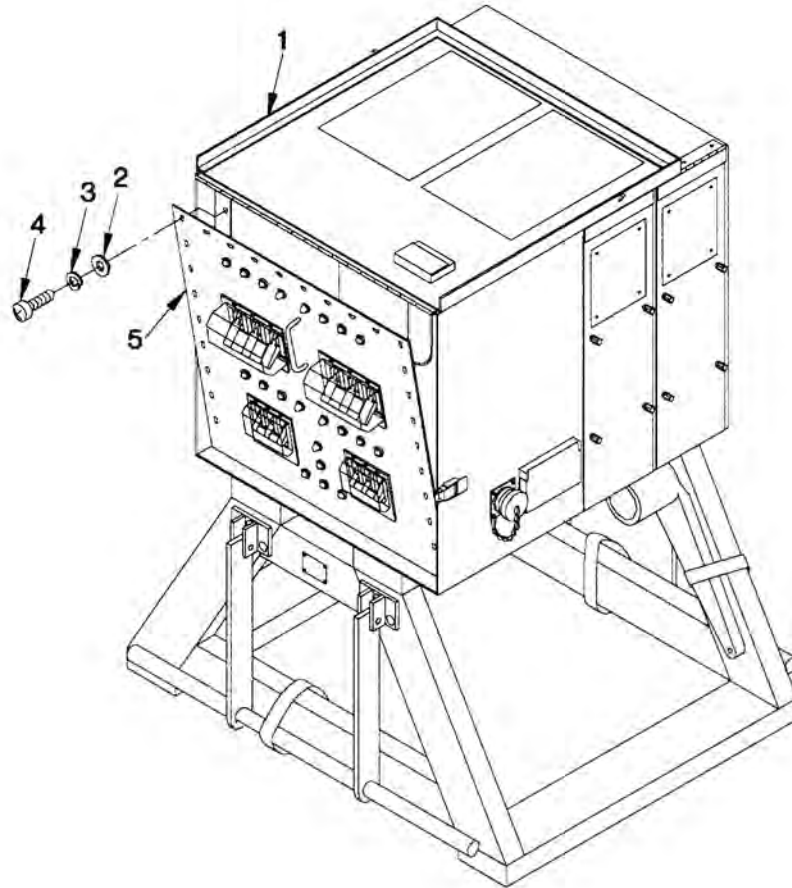
**PP-8440A/ASM****WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Open circuit breaker access cover (1) on front panel and secure it in open position.
2. Remove and retain 36 screws (Figure 1, Item 4), lock washers (Figure 1, Item 3) and flat washers (Figure 1, Item 2) on top, bottom, and sides of circuit breaker panel (Figure 1, Item 5) that secure panel to Power Distribution Box.

**REPLACEMENT – CONTINUED**

3. Open circuit breaker panel (Figure 1, Item 5) downward until lanyards are fully extended or remove lanyards for full access as required.
4. Close circuit breaker panel (Figure 1, Item 5) and secure it by installing 36 ea. flat washers (Figure 1, Item 2), lock washers (Figure 1, Item 3) and screws (Figure 1, Item 4) on top and sides of panel.
5. Attach lanyards if removed.
6. Close access cover (Figure 1, Item 1) and secure it by locking latches.



**Figure 1. Protective Boot, Circuit Breaker Panel.**

**END OF TASK**

**END OF WORK PACKAGE**

---

## FIELD MAINTENANCE

### PUSH-BUTTON SWITCH, LIGHT TEST: REPLACEMENT

---

#### INITIAL SETUP:

##### Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 1)  
 Tool Kit, Electronic (WP 0063, Table 2, Item 2)

##### References

WP 0027

##### Personnel Required

MOS 52D

##### Equipment Condition

Power OFF

---

#### REPLACEMENT

To remove a damaged/faulty push-button switch, perform the following procedure:

#### WARNING

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

#### NOTE

The following procedure is to be used for all 5 LIGHT TEST push-button switches contained on the PDB circuit breaker panel. The only difference between the switches are the number of wires soldered on back of the switch. Six wires are attached to the rear of the PHASE INCORRECT switch and nine wires are attached to the remaining four switches (Circuit No.'s 1 - 4).

1. Open circuit breaker access panel (Figure 1, Item 1) on front panel and secure it in open position.
2. Determine which "LIGHT TEST" switch(es) are to be replaced. The front panel contains five of these switches.
3. To gain access to rear circuit breaker panel (Figure 1, Item 5), perform steps contained in WP 0027.
4. On rear of circuit breaker panel (Figure 1, Item 5), tag and disconnect nine wires (Figure 1, Item 3) connected to rear of switch (Figure 1, Item 2).
5. Using a 9/16 deep well socket, remove and retain switch boot (Figure 1, Item 8), one nut (Figure 1, Item 7), one lock washer (Figure 1, Item 6) and one non-rotating washer (Figure 1, Item 4). Remove switch (Figure 1, Item 2) through back of circuit breaker panel.
6. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 5).
7. To gain access to rear of circuit breaker panel (Figure 1, Item 5), perform steps contained in WP 0027.
8. Secure push-button switch (Figure 1, Item 2) to circuit breaker panel (Figure 1, Item 5) by positioning it through rear of panel and installing one non-rotating washer (Figure 1, Item 4) so the washer fits into slot on rear of panel. Install one lock washer (Figure 1, Item 6) and one nut (Figure 1, Item 7). Secure nut (Figure 1, Item 7) using a 9/16 inch deep well socket.
9. Apply heat shrink to wire prior to soldering. Solder and untag all wires (Figure 1, Item 3) connected to rear of switch. On front of circuit breaker panel (Figure 1, Item 5), install switch boot (Figure 1, Item 8) on switch.
10. Secure circuit breaker panel (Figure 1, Item 5) by performing steps contained in WP 0027.

**REPLACEMENT – CONTINUED**

11. Close and secure circuit breaker access cover (Figure 1, Item 1).

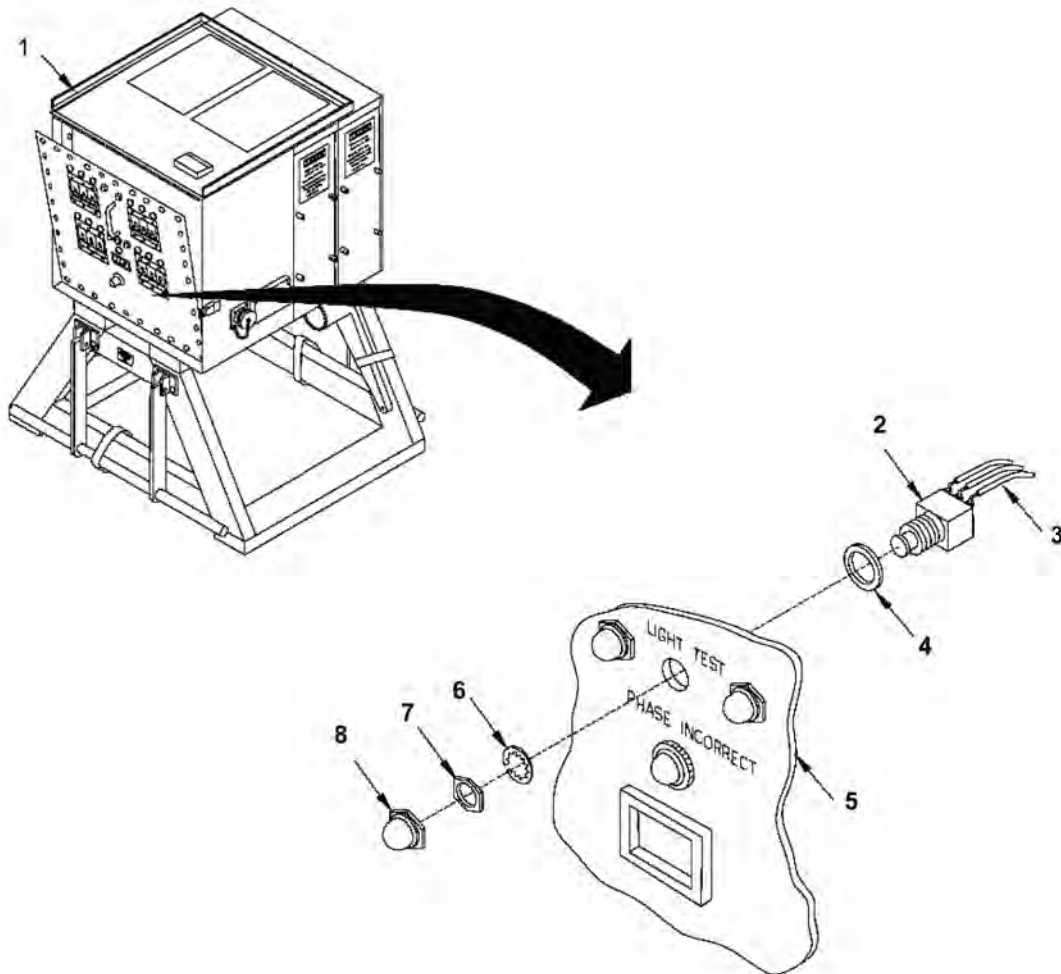


Figure 1. Push-Button Switch, LIGHT TEST.

END OF TASK

END OF WORK PACKAGE

## FIELD MAINTENANCE

## LAMPHOLDER, FRONT PANEL (CIRCUITS 1-4): REPLACEMENT

## INITIAL SETUP:

## Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 2)

## References

WP 0027

## Personnel Required

MOS 52D

## Equipment Condition

Power Off

## REPLACEMENT

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

To replace a damaged lampholder, perform the following procedure:

1. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 1).
2. Remove applicable lens cover (Figure 1, Item 6) and bulb (Figure 1, Item 5) by grasping and turning counterclockwise until free.
3. Release lampholder (Figure 1, Item 4) from front panel (Figure 1, Item 1) by loosening one mounting nut (Figure 1, Item 3). Using a 9/16 deep well socket, remove and retain nut (Figure 1, Item 3) and one lock washer (Figure 1, Item 2).
4. Tag and unsolder two wires connected to rear of lampholder (Figure 1, Item 4). Remove lampholder (Figure 1, Item 4) through front of circuit breaker panel (Figure 1, Item 1).
5. Secure circuit breaker panel (Figure 1, Item 1) by performing steps contained in WP 0027.
6. Perform steps contained in WP 0028 to access rear of circuit breaker panel (Figure 1, Item 1).
7. Position and secure lampholder (Figure 1, Item 4) on circuit breaker panel (Figure 1, Item 1) using a 9/16 deep well socket. Install lock washer (Figure 1, Item 2) and mounting nut (Figure 1, Item 3) on rear of lampholder (Figure 1, Item 4).
8. Solder wires to posts on rear of lampholder (Figure 1, Item 4). Remove tags from wires.
9. To install a new bulb, insert bulb (Figure 1, Item 5) into lens cover (Figure 1, Item 6).
10. Place lens cover (Figure 1, Item 6) with bulb (Figure 1, Item 5) inserted into lampholder (Figure 1, Item 4) and turn clockwise until tight. Do not over tighten.
11. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 1).
12. Close and secure circuit breaker access cover.

## REPLACEMENT – CONTINUED

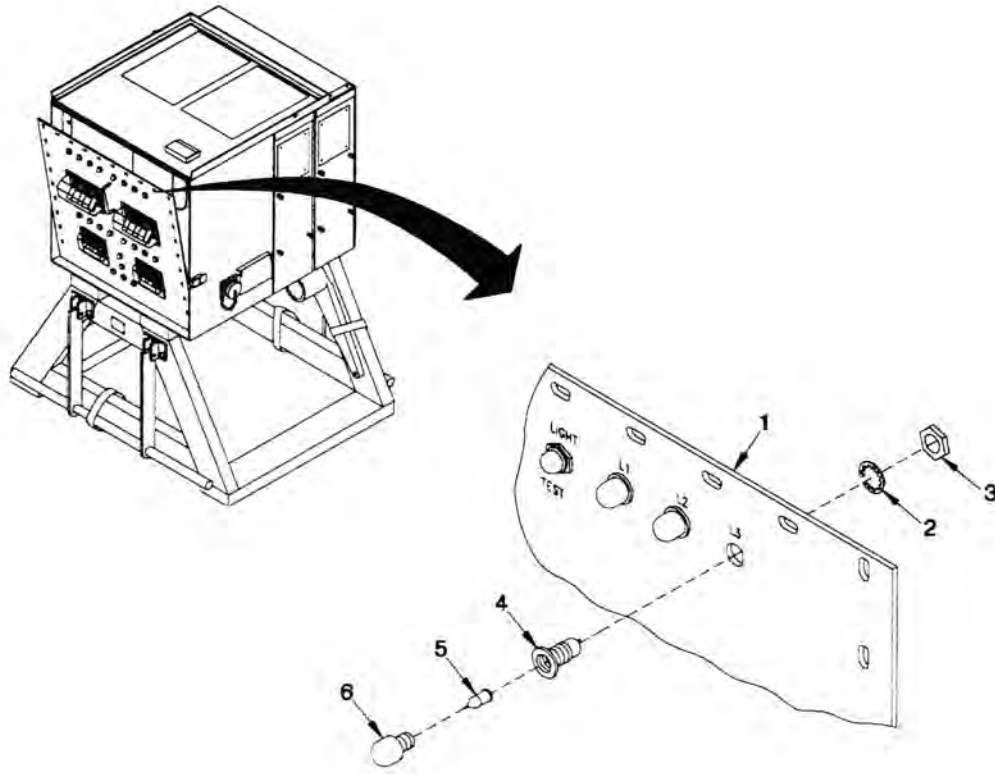


Figure 1. Lamp-holder, Front Panel (Circuits 1-4).

END OF TASK

END OF WORK PACKAGE



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**FIELD MAINTENANCE****LAMPHOLDER, PHASE INCORRECT INDICATOR: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)

**References**

WP 0027

**Personnel Required**

MOS 52D

**Equipment Condition**Power OFF

---

**REPLACEMENT****WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

**NOTE**

The "PHASE INCORRECT" lamp assembly does not allow the replacement of the bulb and/or lens cover. If either the bulb or lens cover is defective, the lamp assembly itself must be replaced.

To replace a damaged lampholder, perform the following procedure:

1. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 1).
2. Release lampholder (Figure 1, Item 4) from circuit breaker panel (Figure 1, Item 1) by loosening one mounting nut (Figure 1, Item 2). Remove and retain one nut (Figure 1, Item 2) and one lock washer (Figure 1, Item 3). Cut and remove two wire ties (Figure 1, Item 5) securing wires to lamp.
3. Pull lampholder body through front panel. Tag and disconnect three wires connected to rear of lampholder (Figure 1, Item 4).
4. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 1).
5. Position and secure lampholder (Figure 1, Item 4) on circuit breaker panel (Figure 1, Item 1) by installing one lock washer (Figure 1, Item 3) and one mounting nut (Figure 1, Item 2) on rear of lampholder (Figure 1, Item 4). Position wires along body of lampholder and secure with two wire ties (Figure 1, Item 5).
6. Solder three wires to posts on rear of lampholder (Figure 1, Item 4). Remove tags from wires.
7. Secure circuit breaker panel (Figure 1, Item 1) by performing procedures in WP 0027.

## REPLACEMENT – CONTINUED

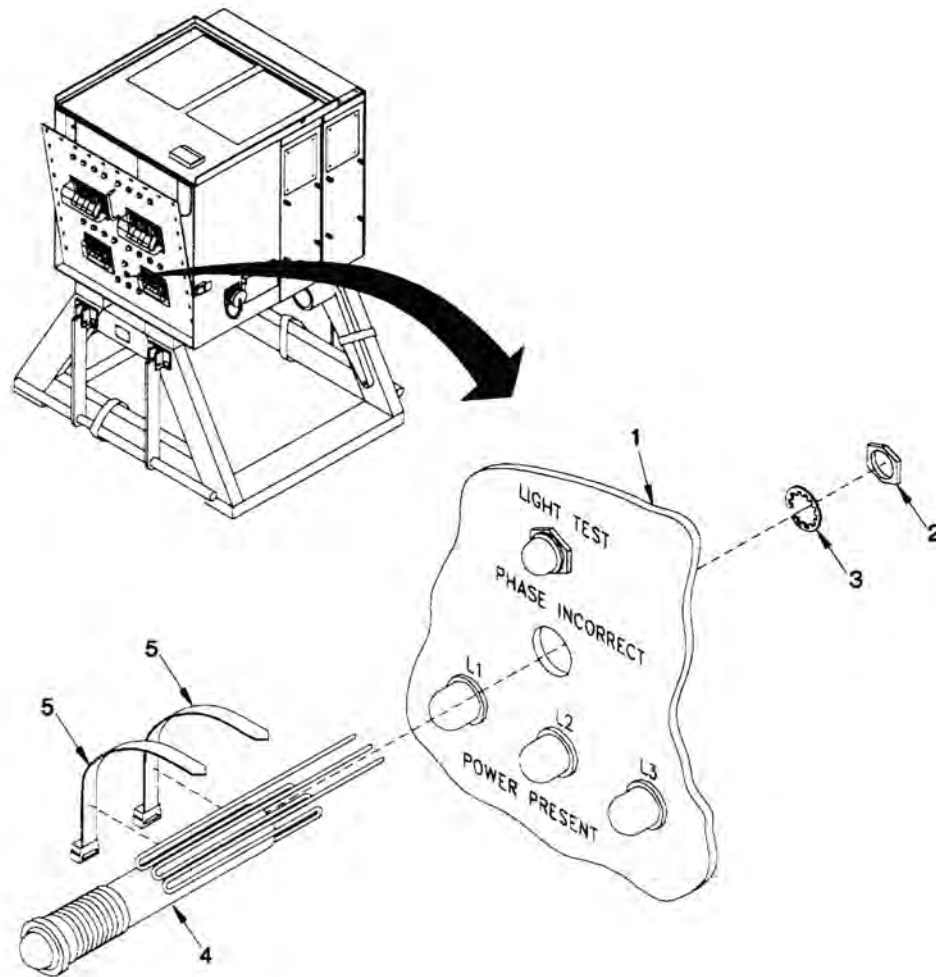


Figure 1. Lamp-holder, Phase Incorrect Indicator (Circuits 1-4).

END OF TASK

END OF WORK PACKAGE

## FIELD MAINTENANCE

## CIRCUIT BREAKER CB1 AND CB2 (PP-8440 ONLY): REPLACEMENT

## INITIAL SETUP:

## Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

## References

WP 0025

WP 0027

## Personnel Required

MOS 52D

## Equipment Condition

Power OFF

## REPLACEMENT

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

**NOTE**

Circuit Breakers CB1 and CB2 are both 200 amp breakers. Procedures are the same for both.

To replace a defective circuit breaker, perform the following procedure:

1. Perform steps contained in WP 0025 to access rear of circuit breaker panel (Figure 1, Item 24).
2. Ensure all wires disconnected are properly tagged. To disconnect buss bar C1 (Figure 1, Item 18) from circuit breaker/CB1 (Figure 1, Item 25) and CB2, remove and retain two nuts (Figure 1, Item 16), four flat washers (Figure 1, Item 13), two wires (Figure 1, Item 14) and two locking star washers (Figure 1, Item 15). Do not disconnect wire (Figure 1, Item 17) from buss bar C1 (Figure 1, Item 18).
3. Ensure all wires disconnected are properly tagged. To disconnect buss bar B1 (Figure 1, Item 12) from circuit breaker/CB1 (Figure 1, Item 25) and CB2, remove and retain two nuts (Figure 1, Item 10), four flat washers (Figure 1, Item 7), two wires (Figure 1, Item 8) and two locking star washers (Figure 1, Item 9). Do not disconnect wire (Figure 1, Item 11) from buss bar B1 (Figure 1, Item 12).
4. Ensure all wires disconnected are properly tagged. To disconnect buss bar A1 (Figure 1, Item 6) from circuit breaker/CB1 (Figure 1, Item 25) and CB2, remove and retain two nuts (Figure 1, Item 4), four flat washers (Figure 1, Item 1), two wires (Figure 1, Item 2) and two locking star washers (Figure 1, Item 3). Do not disconnect wire (Figure 1, Item 5) from buss bar A1 (Figure 1, Item 6).
5. Remove circuit breaker boot in accordance with WP 0025.
6. Tag and disconnect three wires (Figure 1, Item 23) from bottom of circuit breaker (Figure 1, Item 25) by removing three nuts (Figure 1, Item 22), three locking star washers (Figure 1, Item 21), six indicator wires (Figure 1, Item 20) and six flat washers (Figure 1, Item 19). Remove circuit breaker (Figure 1, Item 25).
7. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 24).
8. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 24).
9. Place circuit breaker/CB1 (Figure 1, Item 25) in circuit breaker panel (Figure 1, Item 24) through back side of panel.
10. Install protective boot and boot bezel on front of circuit breaker by performing procedures contained in WP 0025.

---

**REPLACEMENT – CONTINUED**

11. Position buss bars C1, B1, and A1 on circuit breaker lugs before securing buss bars to circuit breakers.
12. Connect three wires (Figure 1, Item 23) to rear of circuit breaker (Figure 1, Item 25) by installing six flat washers (Figure 1, Item 19), three locking star washers (Figure 1, Item 21), six indicator wires (Figure 1, Item 20) and three nuts (Figure 1, Item 22). Remove all tags.
13. Connect buss bar C1 (Figure 1, Item 18) to CB1 (Figure 1, Item 25) and CB2 by installing four flat washers (Figure 1, Item 13), two nuts (Figure 1, Item 16), two indicator wires (Figure 1, Item 14) and two locking star washers (Figure 1, Item 15). Ensure wire (Figure 1, Item 17) on rear of buss bar (Figure 1, Item 18) is securely attached.
14. Connect buss bar B1 (Figure 1, Item 12) to CB1 (Figure 1, Item 25) and CB2 by installing four flat washers (Figure 1, Item 7), two nuts (Figure 1, Item 10), two indicator wires (Figure 1, Item 8) and two locking star washers (Figure 1, Item 9). Ensure wire (Figure 1, Item 11) on rear of buss bar (Figure 1, Item 12) is securely attached.
15. Connect buss bar A1 (Figure 1, Item 6) to CB1 (Figure 1, Item 25) and CB2 by installing four flat washers (Figure 1, Item 1), two nuts (Figure 1, Item 4), two indicator wires (Figure 1, Item 2) and two locking star washers (Figure 1, Item 3). Ensure wire (Figure 1, Item 5) on rear of buss bar (Figure 1, Item 6) is securely attached. Ensure all connections correspond to correct power phase. Remove all tags.
16. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 24).

## REPLACEMENT – CONTINUED

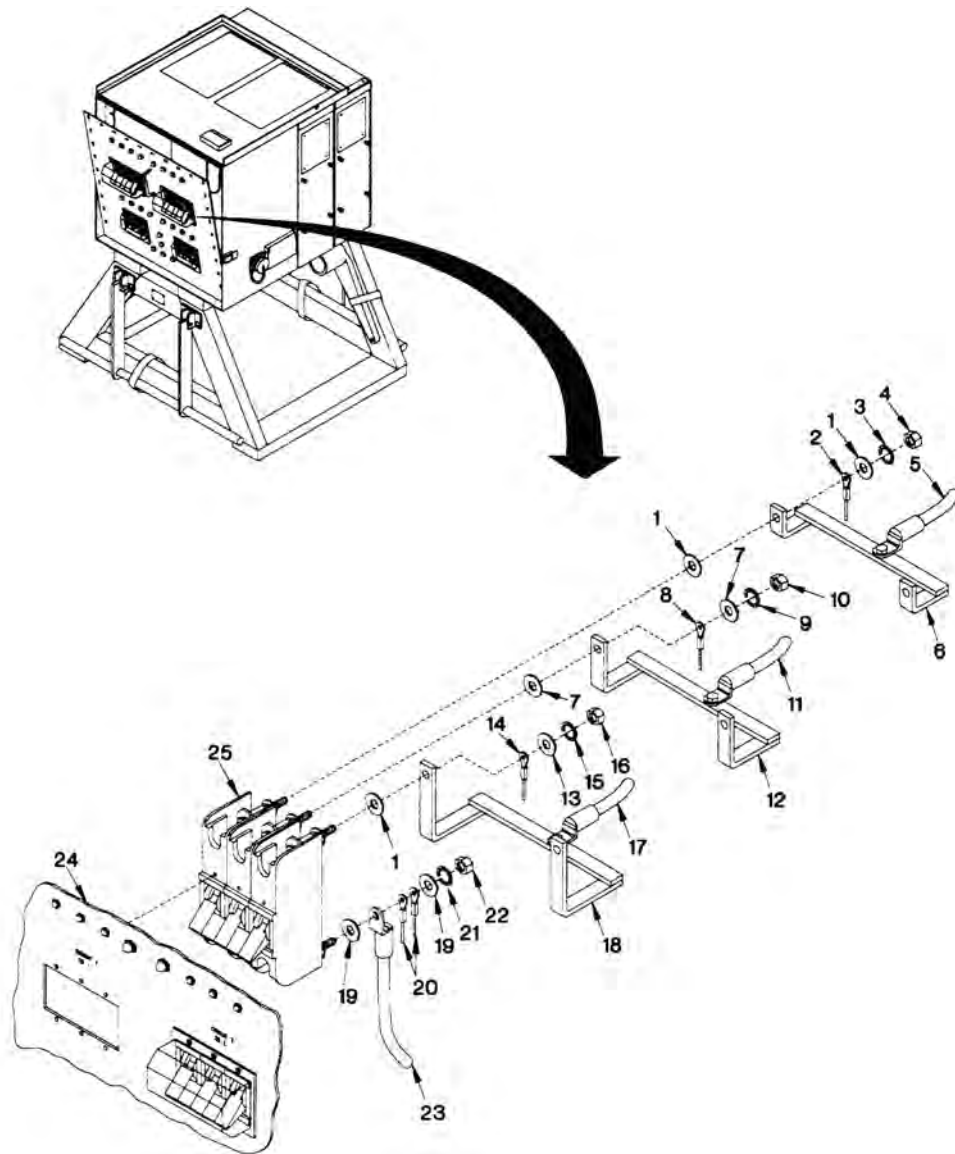


Figure 1. Circuit Breaker CB1 and CB2 (PP-8440/ASM Only).

END OF TASK

END OF WORK PACKAGE



## FIELD MAINTENANCE

## CIRCUIT BREAKER CB3 (PP-8440 ONLY): REPLACEMENT

## INITIAL SETUP:

## Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 2)  
 Tool Kit, Electronic (WP 0063, Table 2, Item 3)

## References

WP 0025  
 WP 0027

## Personnel Required

Maintainer

## Equipment Condition

Power OFF

## REPLACEMENT

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

**NOTE**

Circuit Breaker/CB3 is a 100 amp circuit breaker.

**NOTE**

Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 24).

1. Ensure all disconnected wires are properly tagged. To disconnect buss bar C2 (Figure 1, Item 18) from circuit breaker/CB3 (Figure 1, Item 25) and CB4, remove and retain four nuts (Figure 1, Item 16), four flat washers (Figure 1, Item 13), six indicator wires (Figure 1, Item 14) and two locking star washers (Figure 1, Item 15). Do not disconnect wire (Figure 1, Item 17) from buss bar C2 (Figure 1, Item 18).
2. Ensure all disconnected wires are properly tagged. To disconnect buss bar B2 (Figure 1, Item 12) from circuit breaker/CB3 (Figure 1, Item 25) and CB4, remove and retain two nuts (Figure 1, Item 10), four flat washers (Figure 1, Item 7), six indicator wires (Figure 1, Item 8) and two locking star washers (Figure 1, Item 9). Do not disconnect wire (Figure 1, Item 11) from buss bar B2 (Figure 1, Item 12).
3. Ensure all disconnected wires are properly tagged. To disconnect buss bar A2 (Figure 1, Item 6) from circuit breaker/CB3 (Figure 1, Item 25) and CB4, remove and retain two nuts (Figure 1, Item 4), four flat washers (Figure 1, Item 1), six indicator wires (Figure 1, Item 2) and two locking star washers (Figure 1, Item 3). Do not disconnect wire (Figure 1, Item 5) from buss bar A2 (Figure 1, Item 6).
4. Remove circuit breaker boot in accordance with WP 0025.
5. Tag and disconnect three wires (23) from bottom of circuit breaker (Figure 1, Item 25) by removing three nuts (Figure 1, Item 22), three locking star washers (Figure 1, Item 21), three indicator wires (Figure 1, Item 20) and six flat washers (Figure 1, Item 19). Remove circuit breaker (Figure 1, Item 25).
6. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 24).
7. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 24).
8. Place circuit breaker/CB3 (Figure 1, Item 25) in circuit breaker panel (Figure 1, Item 24) through back side of panel.
9. Install protective boot and boot bezel on front of circuit breaker by performing procedures contained in WP 0025.

**REPLACEMENT – CONTINUED**

10. Position buss bars C2, B2, and A2 on circuit breaker lugs before securing buss bars to circuit breakers.

**CAUTION**

Special attention should be given to the correct phase connection. Buss bars C2 to L3; B2 to L2; A2 to L1. Ensure all wires are correctly connected.

11. Connect three wires (Figure 1, Item 23) to rear of circuit breaker/CB3 (Figure 1, Item 25) by installing six flat washers (Figure 1, Item 19), three locking star washers (Figure 1, Item 21), three indicator wires (Figure 1, Item 20) and three nuts (Figure 1, Item 22). Remove all tags.
12. Connect buss bar C2 (Figure 1, Item 18) to CB3 (Figure 1, Item 25) and CB4 by installing four flat washers (Figure 1, Item 13), two nuts (Figure 1, Item 16), six indicator wires (Figure 1, Item 14) and two locking star washers (Figure 1, Item 15). Ensure wire (Figure 1, Item 17) on rear of buss bar (Figure 1, Item 18) is securely attached.
13. Connect buss bar B2 (Figure 1, Item 12) to CB4 (Figure 1, Item 25) and CB2 by installing four flat washers (Figure 1, Item 7), two nuts (Figure 1, Item 10), six indicator wires (Figure 1, Item 8) and two locking star washers (Figure 1, Item 9). Ensure wire (Figure 1, Item 11) on rear of buss bar (Figure 1, Item 12) is securely attached.
14. Connect buss bar A2 (Figure 1, Item 6) to CB1 (Figure 1, Item 25) and CB2 by installing four flat washers (Figure 1, Item 1), two nuts (Figure 1, Item 4), six indicator wires (Figure 1, Item 2) and two locking star washers (Figure 1, Item 3). Ensure wire (Figure 1, Item 5) on rear of buss bar (Figure 1, Item 6) is securely attached. Ensure all connections correspond to correct power phase. Remove all tags.
15. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 24).



## REPLACEMENT – CONTINUED

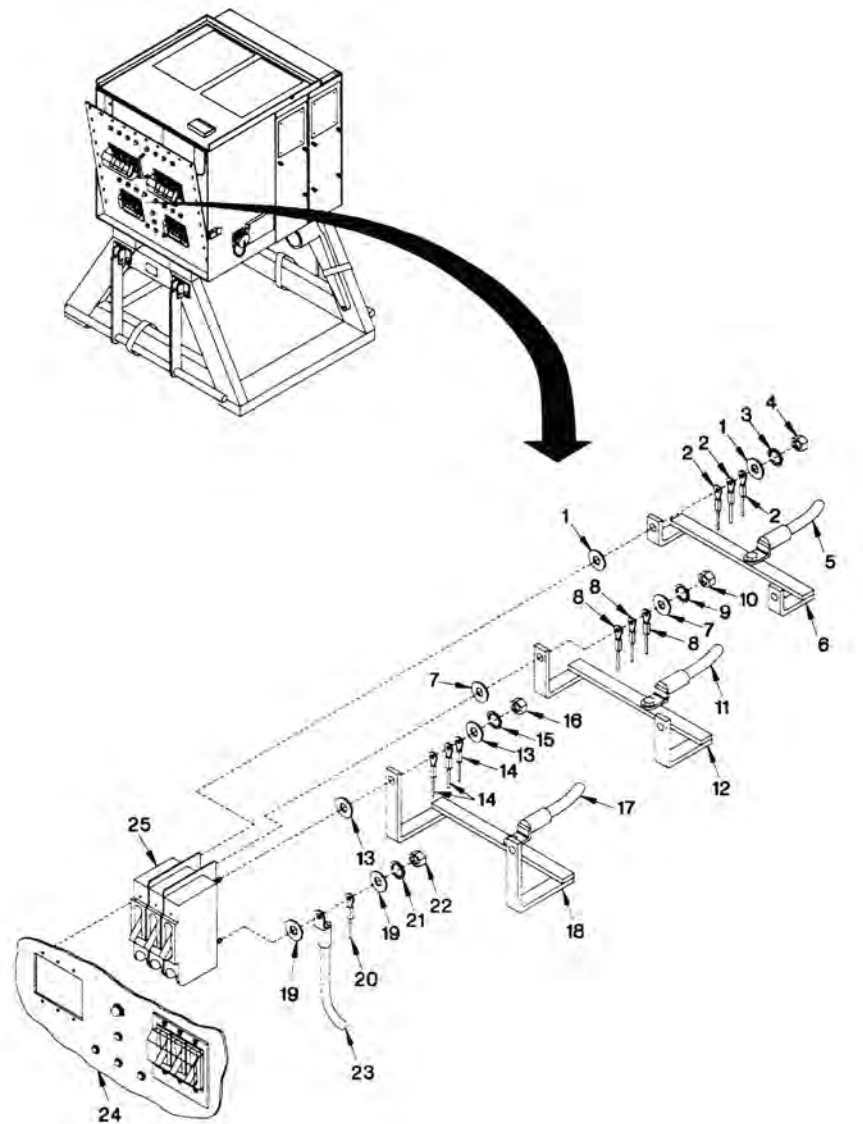


Figure 1. Circuit Breaker CB3 (PP-8440/ASM Only).

END OF TASK

END OF WORK PACKAGE



## FIELD MAINTENANCE

## CIRCUIT BREAKER CB4 (PP-8440 ONLY): REPLACEMENT

## INITIAL SETUP:

## Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 1)  
 Tool Kit, Electronic (WP 0063, Table 2, Item 2)

## References

WP 0025  
 WP 0027

## Personnel Required

MOS 52D

## Equipment Condition

Power OFF

## REPLACEMENT

To replace Circuit Breaker 4, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

**NOTE**

Circuit Breaker/CB4 is a 80 amp circuit breaker.

1. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 19).
2. Ensure all disconnected wires are properly tagged. To disconnect buss bar C2 (Figure 1, Item 12) from circuit breaker/CB4 (Figure 1, Item 18) and CB3, remove and retain two nuts (Figure 1, Item 9), four flat washers (Figure 1, Item 8), four indicator wires (Figure 1, Item 11) and two locking star washers (Figure 1, Item 10). Do not disconnect wire (Figure 1, Item 7) from buss bar C2 (Figure 1, Item 12).
3. Ensure all disconnected wires are properly tagged. To disconnect buss bar B2 (Figure 1, Item 6) from circuit breaker/CB4 (Figure 1, Item 18) and CB3, remove and retain two nuts (Figure 1, Item 2), four flat washers (Figure 1, Item 4), two wires (Figure 1, Item 5) and two locking star washers (Figure 1, Item 3). Do not disconnect wire (Figure 1, Item 1) from buss bar B2 (Figure 1, Item 6).
4. Ensure all disconnected wires are properly tagged. To disconnect buss bar A2 (Figure 1, Item 21) from circuit breaker/CB4 (Figure 1, Item 18) and CB3, remove and retain two nuts (Figure 1, Item 25), four flat washers (Figure 1, Item 20), four indicator wires (Figure 1, Item 23) and two locking star washers (Figure 1, Item 24). Do not disconnect wire (Figure 1, Item 22) from buss bar A2 (Figure 1, Item 21).
5. Tag and disconnect three wires (Figure 1, Item 17) from bottom of circuit breaker (Figure 1, Item 18) by removing three nuts (Figure 1, Item 13), three locking star washers (Figure 1, Item 14), three indicator wires (Figure 1, Item 16) and six flat washers (Figure 1, Item 15). Ensure all wires are properly tagged.
6. Remove circuit breaker protective boot in accordance with WP 0025.
7. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 19).

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

8. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 19).

---

**REPLACEMENT – CONTINUED**

9. Place circuit breaker/CB4 (Figure 1, Item 18) in circuit breaker panel through back side of panel. Install protective boot and boot bezel on front of circuit breaker by performing procedures contained in WP 0025.
10. Connect three wires (Figure 1, Item 17) to rear of circuit breaker CB4 (Figure 1, Item 18) by installing six flat washers (Figure 1, Item 15), three locking star washers (Figure 1, Item 14), three indicator wires (Figure 1, Item 16) and three nuts (Figure 1, Item 13). Remove all tags.
11. Position buss bars C2, B2 and A2 on circuit breaker lugs before securing buss bars to circuit breakers.

**CAUTION**

Special attention should be given to the correct phase connection. Buss bars C2 to L3; B2 to L2; A2 to L1. Ensure all wires are correctly connected.

12. Connect buss bar C2 (Figure 1, Item 12) to CB4 (Figure 1, Item 18) and CB3 by installing four flat washers (Figure 1, Item 8), two nuts (Figure 1, Item 9), four indicator wires (Figure 1, Item 5) and two locking star washers (Figure 1, Item 10). Ensure wire (Figure 1, Item 7) on rear of buss bar (Figure 1, Item 12) is securely attached.
13. Connect buss bar A2 (Figure 1, Item 21) to CB4 (Figure 1, Item 18) and CB3 by installing four flat washers (Figure 1, Item 20), two nuts (Figure 1, Item 25), four indicator wires (Figure 1, Item 23) and two locking star washers (Figure 1, Item 24). Ensure wire (Figure 1, Item 22) on rear of buss bar (Figure 1, Item 21) is securely attached.
14. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 19).

## REPLACEMENT – CONTINUED

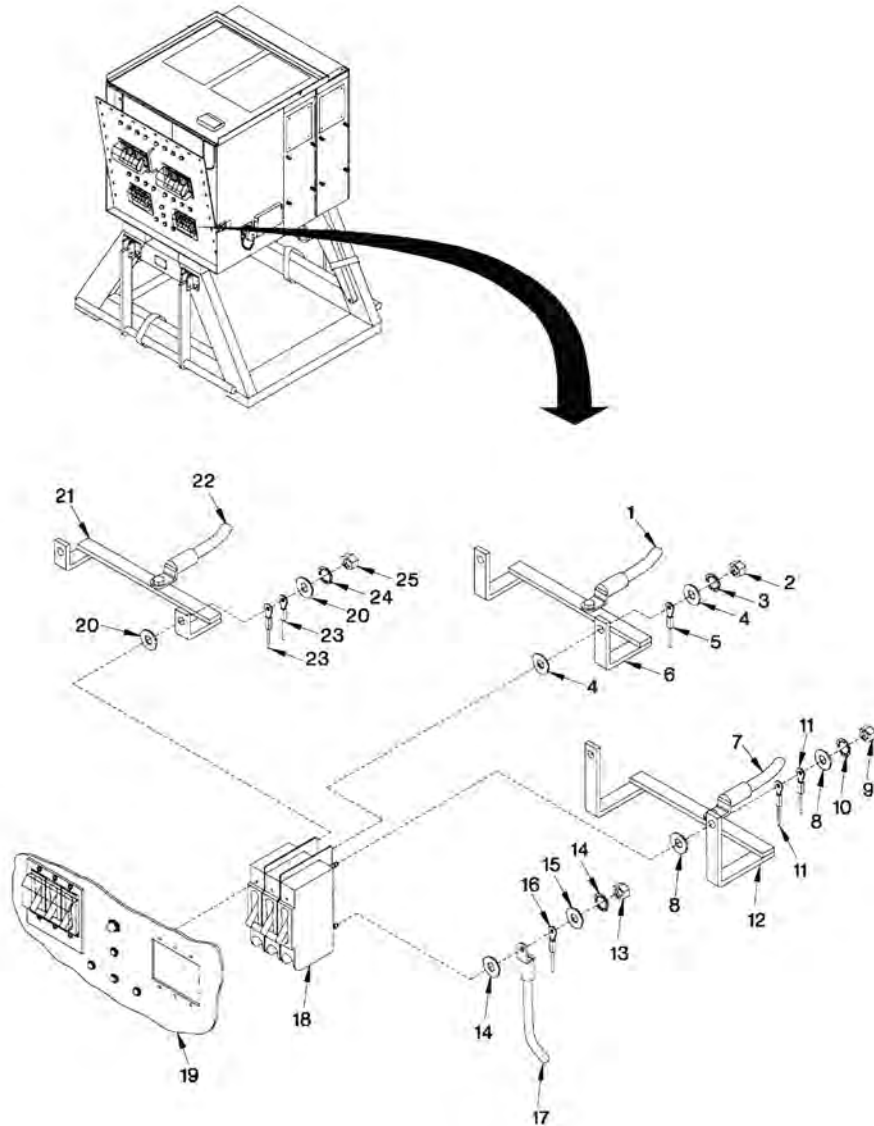


Figure 1. Circuit Breaker, CB4 (PP-8440/ASM Only).

END OF TASK

END OF WORK PACKAGE



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**FIELD MAINTENANCE****CIRCUIT BREAKER CB5 AND CB6 (PP-8440/ASM ONLY): REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)  
Tool Kit, Electronic (WP 0063, Table 2, Item 2)

**References**

WP 0027

**Equipment Condition**

Power OFF

**Personnel Required**

Maintainer

---

**REPLACEMENT**

To replace circuit breaker, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. **SERIOUS INJURY or DEATH** may result.

**NOTE**

Circuit breaker/CB5 is located on the right side of PDB. Circuit breaker/CB6 is located on the left side of PDB. Both are 20 amp circuit breakers. To remove and replace either breaker use following procedure.

1. Perform steps contained in WP 0027 to access rear of circuit breaker panel.
2. Unscrew circuit breaker protective cover (Figure 1, Item 6) by turning counterclockwise. To replace the circuit breaker weather cover (Figure 1, Item 3), remove and retain four screws (Figure 1, Item 5), four flat washers (Figure 1, Item 4) and four locknuts (Figure 1, Item 7).
3. Remove nut (Figure 1, Item 2) and locking star washer (Figure 1, Item 1) securing circuit breaker (Figure 1, Item 8) to panel.
4. Tag and disconnect wires (Figure 1, Item 9) attached to circuit breaker (Figure 1, Item 8). Remove circuit breaker (Figure 1, Item 8).
5. Perform steps contained in WP 0027 to access rear of circuit breaker panel.
6. Position circuit breaker (Figure 1, Item 8) through inside of box. Secure circuit breaker (Figure 1, Item 8) to side panel by installing locking star washer (Figure 1, Item 1) and nut (Figure 1, Item 2).
7. Connect two wires (Figure 1, Item 9) to rear circuit breaker (Figure 1, Item 8) and secure wires. Remove tags from wires.
8. Install circuit breaker weather cover (Figure 1, Item 3) by installing four screws (Figure 1, Item 5), four flat washers (Figure 1, Item 4) and four locknuts (Figure 1, Item 7).
9. Secure protective cap (Figure 1, Item 6) on cover by turning clockwise.
10. Perform procedures in WP 0027 to secure circuit breaker panel.

## REPLACEMENT – CONTINUED

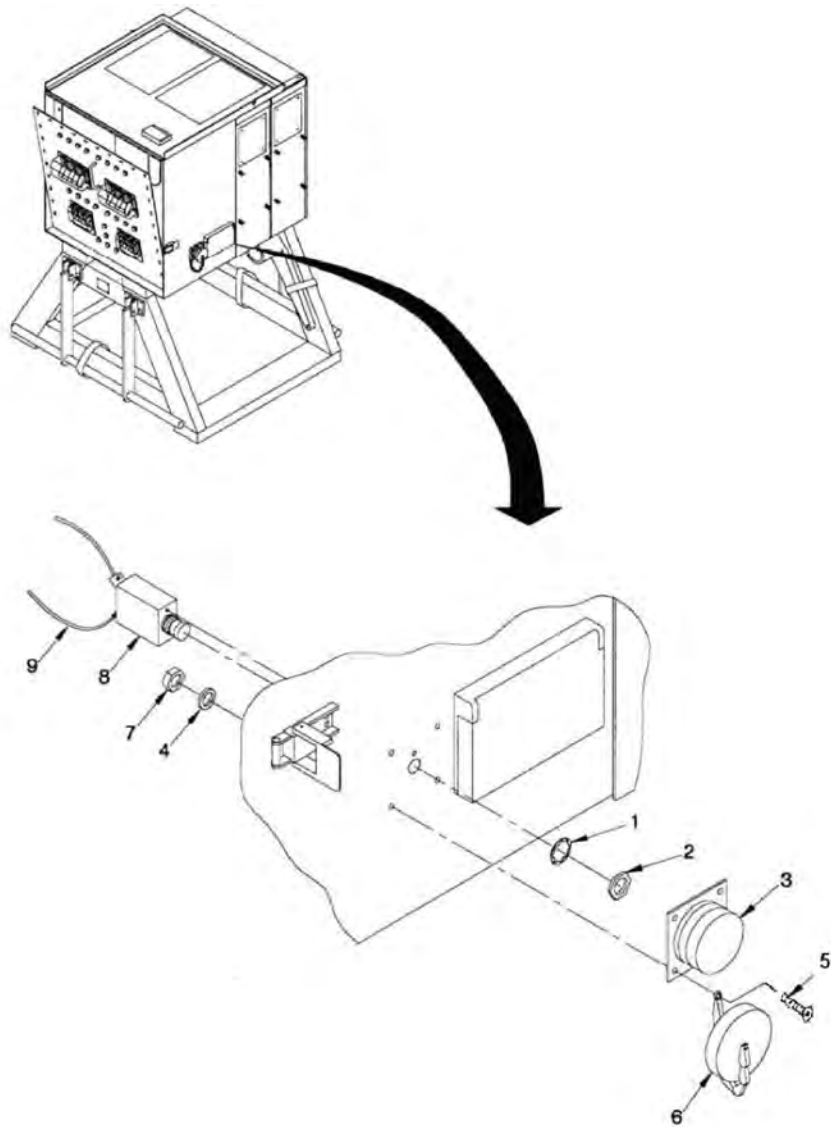


Figure 1. Circuit Breaker CB5 and CB6 (PP-8440/ASM Only).

END OF TASK

END OF WORK PACKAGE



---

**FIELD MAINTENANCE**  
**CIRCUIT BREAKER CB1 AND CB2 (PP-8440A ONLY): REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

**References**

WP 0025

WP 0027

WP 0035

**Personnel Required**

MOS 52D

**Equipment Condition**

Power OFF

---

**REPLACEMENT**

To replace a damaged or defective circuit breaker, perform the following:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

**NOTE**

Circuit Breakers CB1 and CB2 are both 200 amp circuit breakers. Removal/Installation procedures contained in WP 0036 are to be used for both circuit breakers CB1 and CB2.

1. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 33).
2. Ensure all wires disconnected are properly tagged. To disconnect buss bar C1 (Figure 1, Item 25) from circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32), remove and retain two nuts (Figure 1, Item 20), two locking star washers (Figure 1, Item 21), four flat washers (Figure 1, Item 22) and two wires (Figure 1, Item 23). Do not disconnect wire (Figure 1, Item 24) from buss bar C1 (Figure 1, Item 25).
3. Ensure all wires disconnected are properly tagged. To disconnect buss bar B1 (Figure 1, Item 19) from circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32), remove and retain two nuts (Figure 1, Item 14), two locking star washers (Figure 1, Item 15), four flat washers (Figure 1, Item 16) and two wires (Figure 1, Item 17). Do not disconnect wire (Figure 1, Item 18) from buss bar B1 (Figure 1, Item 19).
4. Ensure all wires disconnected are properly tagged. To disconnect buss bar A1 (Figure 1, Item 11) from circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32), remove and retain two nuts (Figure 1, Item 7), two locking star washers (Figure 1, Item 6), four flat washers (Figure 1, Item 4) and two wires (Figure 1, Item 5). Do not disconnect wire (Figure 1, Item 10) from buss bar A1 (Figure 1, Item 11).
5. Tag and disconnect three wires (Figure 1, Item 29) from bottom of circuit breaker (Figure 1, Item 31 or 32) by removing three nuts (Figure 1, Item 26), three locking star washers (Figure 1, Item 27), six indicator wires (Figure 1, Item 30) and six flat washers (Figure 1, Item 28).
6. Remove circuit breaker boot and boot bezel in accordance with WP 0025.
7. To remove two retainer brackets (Figure 1, Item 1) from circuit breaker (Figure 1, Item 31 or 32), remove four self-locking nuts (Figure 1, Item 3) and four flat washers (Figure 1, Item 2) from studs. Remove circuit breaker (Figure 1, Item 31 or 32).
8. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 33).

---

**REPLACEMENT – CONTINUED**

9. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 33).
10. Place circuit breaker/CB1 (Figure 1, Item 31) or circuit breaker/CB2 (Figure 1, Item 32) in circuit breaker panel (Figure 1, Item 33) through backside of panel.
11. Position two retainer brackets (Figure 1, Item 1) on studs and secure with four flat washers (Figure 1, Item 2) and four self-locking nuts (Figure 1, Item 3).
12. Install protective boot and boot bezel on front of circuit breaker by performing procedures contained in WP 0025.
13. Connect three wires (Figure 1, Item 29) to rear of circuit breaker (Figure 1, Item 31 or 32) by installing six flat washers (Figure 1, Item 28), three locking star washers (Figure 1, Item 27), six indicator wires (Figure 1, Item 30) and three nuts (Figure 1, Item 26). Remove all tags.
14. Position buss bars C1 (Figure 1, Item 25), B1 (Figure 1, Item 19), and A1 (Figure 1, Item 11) on circuit breaker lugs before securing buss bars to circuit breakers.
15. Connect buss bar C1 (Figure 1, Item 25) to circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32) by installing four flat washers (Figure 1, Item 22), two indicator wires (Figure 1, Item 23), two locking star washers (Figure 1, Item 21) and two nuts (Figure 1, Item 20). Ensure wire (Figure 1, Item 24) on rear of buss bar (Figure 1, Item 25) is securely attached.
16. Connect buss bar B1 (Figure 1, Item 19) to circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32) by installing four flat washers (Figure 1, Item 16), two indicator wires (Figure 1, Item 17), two locking star washers (Figure 1, Item 15) and two nuts (Figure 1, Item 14). Ensure wire (18) on rear of buss bar (Figure 1, Item 19) is securely attached.
17. Connect buss bar A1 (Figure 1, Item 11) to circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32) by installing four flat washers (Figure 1, Item 4), two indicator wires (Figure 1, Item 5), two locking star washers (Figure 1, Item 6) and two nuts (Figure 1, Item 7). Ensure wire (Figure 1, Item 10) on rear of buss bar (Figure 1, Item 11) is securely attached. Ensure all connections correspond to correct power phase. Remove all tags.
18. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 33).

## REPLACEMENT – CONTINUED

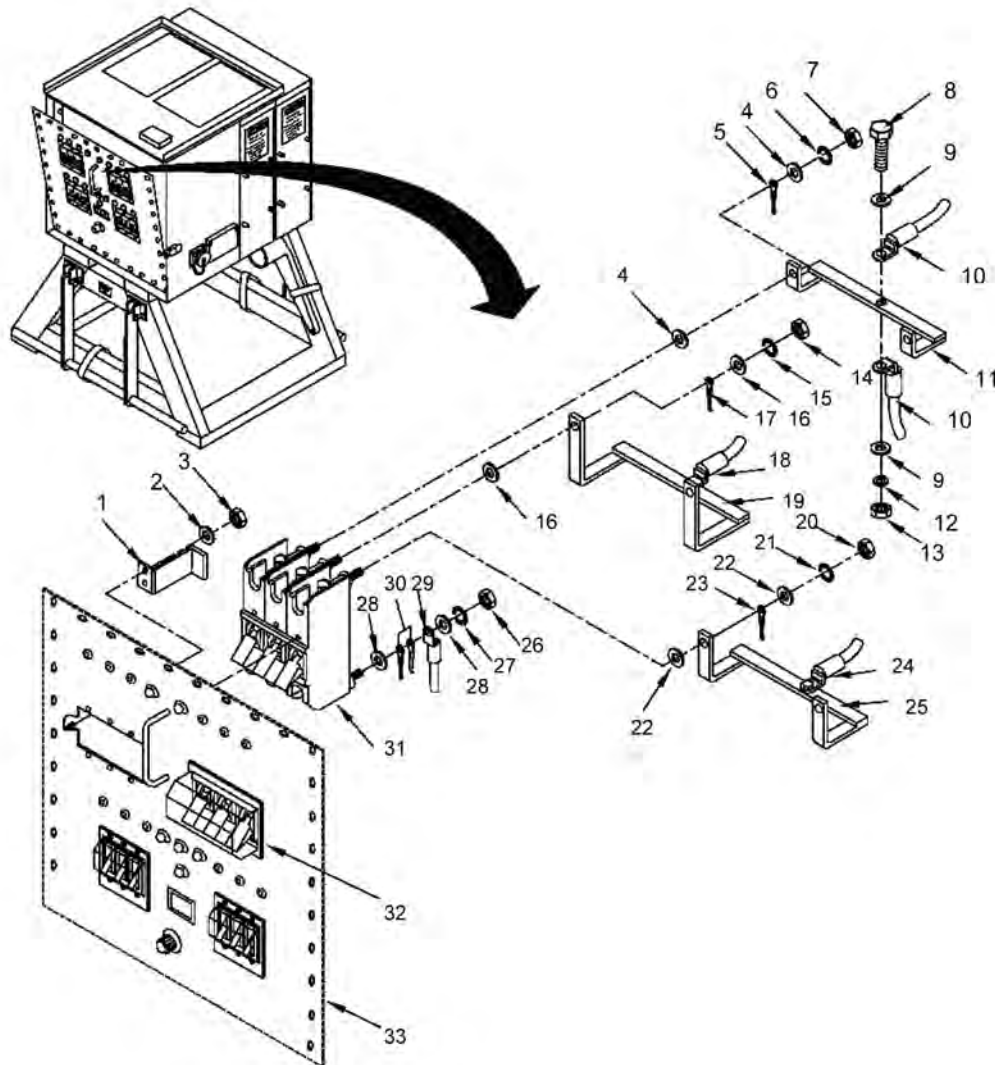


Figure 1. Circuit Breaker CB1 and CB2 (PP-8440A Only).

END OF TASK

END OF WORK PACKAGE



## FIELD MAINTENANCE

## BUSS BARS, A1, B1, AND C1 (PP-8440A ONLY): REPLACEMENT

## INITIAL SETUP:

## Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

## References

WP 0027

WP 0035

## Personnel Required

MOS 52D

## Equipment Condition

Power OFF

## REPLACEMENT

To replace damaged or defective buss bar, perform the following procedure:

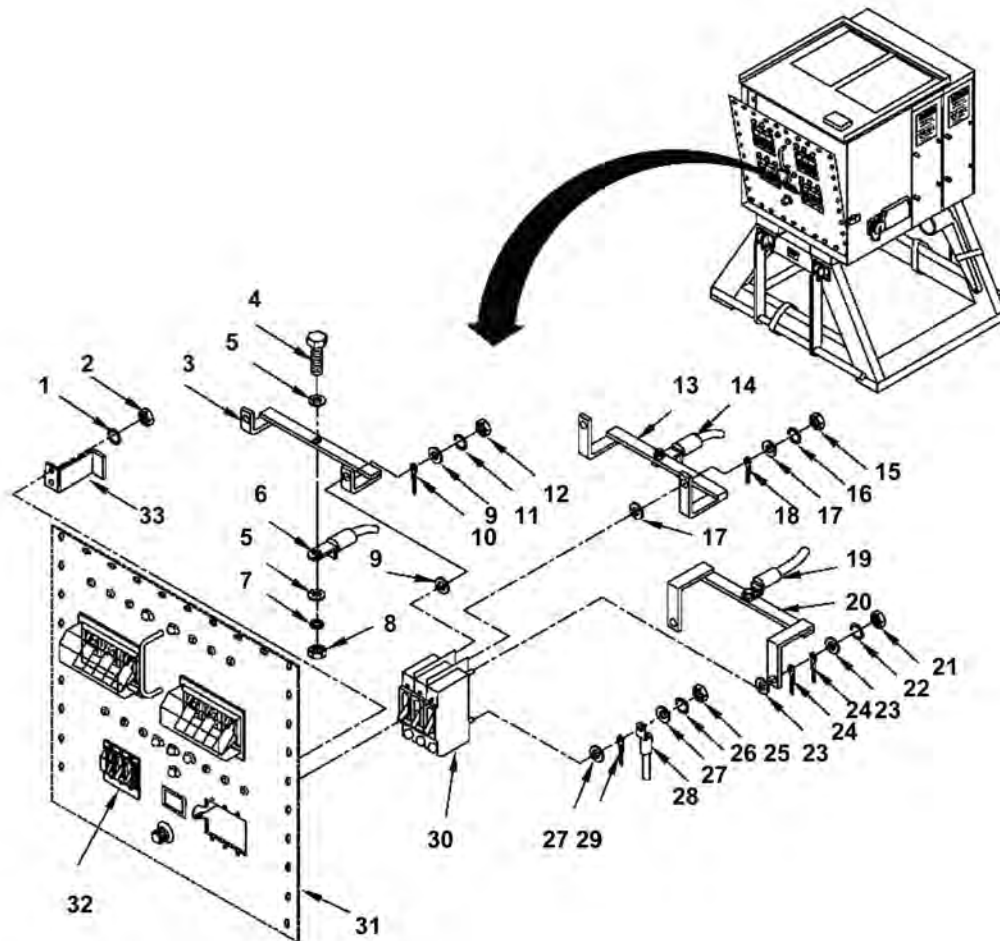
**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 33).
2. Ensure all wires disconnected are properly tagged. To disconnect buss bar A1 (Figure 1, Item 11) from circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32), remove and retain two nuts (Figure 1, Item 7), two locking star washers (Figure 1, Item 6), four flat washers (Figure 1, Item 4), and two wires (Figure 1, Item 5).
3. Remove and retain one nut (Figure 1, Item 13), one locking star washer (Figure 1, Item 12), one flat washer (Figure 1, Item 9) and one wire (Figure 1, Item 10) from bolt (Figure 1, Item 8), then remove bolt (Figure 1, Item 8), one flat washer (Figure 1, Item 9), and one wire (Figure 1, Item 10). Remove buss bar A1 (Figure 1, Item 11).
4. To disconnect buss bars B1 (Figure 1, Item 19) or C1 (Figure 1, Item 25) from circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32), repeat procedure (steps 2 and 3) used for buss bar A1 (Figure 1, Item 11).
5. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 33).
6. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 33).
7. Attach one bolt (Figure 1, Item), one flat washer (Figure 1, Item 9), and one wire (Figure 1, Item 10) to buss bar A1 (Figure 1, Item 11) by inserting through hole on top of buss bar. Attach one wire (Figure 1, Item 10), one flat washer (Figure 1, Item 9), one locking star washer (Figure 1, Item 12) and one nut (Figure 1, Item 13) to 1 bolt.
8. Connect buss bar A1 (Figure 1, Item 11) to circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32) by installing four flat washers (Figure 1, Item 4), two indicator wires (Figure 1, Item 5), two locking star washers (Figure 1, Item 6) and two nuts (Figure 1, Item 7). Ensure wire (Figure 1, Item 10) on rear of buss bar (Figure 1, Item 11) is securely attached. Ensure all connections correspond to correct power phase. Remove all tags.
9. To connect buss bars B1 (Figure 1, Item 19) or C1 (Figure 1, Item 25) to circuit breaker/CB1 (Figure 1, Item 31) and circuit breaker/CB2 (Figure 1, Item 32), repeat procedure (steps b and c) used for buss bar A1 (Figure 1, Item 11).

**REPLACEMENT – CONTINUED**

10. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 33).



**Figure 1. Bus Bars A1, B1, and C1 (PP-8440A Only).**

**END OF TASK**

**END OF WORK PACKAGE**

## FIELD MAINTENANCE

## CIRCUIT BREAKER CB3 AND CB4 (PP-8440A ONLY): REPLACEMENT

## INITIAL SETUP:

## Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 1)  
 Tool Kit, Electronic (WP 0063, Table 2, Item 2)

## References

WP 0025  
 WP 0027

## Personnel Required

MOS 52D

## Equipment Condition

Power OFF

## REPLACEMENT

To replace damaged or defective circuit breakers, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 31).
2. Ensure all wires disconnected are properly tagged. To disconnect buss bar C2 (Figure 1, Item 20) from circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32), remove and retain two nuts (Figure 1, Item 21), two locking star washers (Figure 1, Item 22), four flat washers (Figure 1, Item 23) and four wires (Figure 1, Item 24). Do not disconnect wire (Figure 1, Item 19) from buss bar C2 (Figure 1, Item 20).
3. Ensure all wires disconnected are properly tagged. To disconnect buss bar B2 (Figure 1, Item 13) from circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32), remove and retain two nuts (Figure 1, Item 15), two locking star washers (Figure 1, Item 16), four flat washers (Figure 1, Item 17) and two wires (Figure 1, Item 18). Do not disconnect wire (Figure 1, Item 14) from buss bar B2 (Figure 1, Item 13).
4. Ensure all wires disconnected are properly tagged. To disconnect buss bar A2 (Figure 1, Item 3) from circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32), remove and retain two nuts (Figure 1, Item 12), two locking star washers (Figure 1, Item 11), four flat washers (Figure 1, Item 9) and two wires (Figure 1, Item 10). Do not disconnect wire (Figure 1, Item 6) from buss bar A2 (Figure 1, Item 3).
5. Tag and disconnect three wires (Figure 1, Item 28) from bottom of circuit breaker (Figure 1, Item 30 or 32) by removing three nuts (Figure 1, Item 25), three locking star washers (Figure 1, Item 26), three indicator wires (Figure 1, Item 29) and six flat washers (Figure 1, Item 27).
6. Remove circuit breaker boot and boot bezel in accordance with WP 0025.
7. To remove two retainer brackets (Figure 1, Item 33) from circuit breaker (Figure 1, Item 30 or 32), remove four self-locking nuts (Figure 1, Item 2) and four flat washers (Figure 1, Item 1) from studs. Remove circuit breaker (Figure 1, Item 30 or 32).
8. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 31).
9. Perform steps contained in paragraph WP 0027 to access rear of circuit breaker panel (Figure 1, Item 31).
10. Place circuit breaker/CB4 (Figure 1, Item 30) or circuit breaker/CB3 (Figure 1, Item 32) in circuit breaker panel (Figure 1, Item 31) through backside of panel.

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**REPLACEMENT – CONTINUED**

11. Position two retainer brackets (Figure 1, Item 33) on studs and secure with four flat washers (Figure 1, Item 1) and four self-locking nuts (Figure 1, Item 2).
12. Install protective boot and boot bezel on front of circuit breaker by performing procedures contained in WP 0025.
13. Connect three wires (Figure 1, Item 28) to rear of circuit breaker (Figure 1, Item 30 or 32) by installing six flat washers (Figure 1, Item 27), three locking star washers (Figure 1, Item 26), three indicator wires (Figure 1, Item 29) and three nuts (Figure 1, Item 25). Remove all tags.
14. Position buss bars C2 (Figure 1, Item 20), B2 (Figure 1, Item 13), and A2 (Figure 1, Item 3) on circuit breaker lugs before securing buss bars to circuit breakers.
15. Connect buss bar C2 (Figure 1, Item 20) to circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32) by installing four flat washers (Figure 1, Item 23), four indicator wires (Figure 1, Item 24), two locking star washers (Figure 1, Item 22) and two nuts (Figure 1, Item 21). Ensure wire (Figure 1, Item 19) on rear of buss bar (Figure 1, Item 20) is securely attached.
16. Connect buss bar B2 (Figure 1, Item 13) to circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32) by installing four flat washers (Figure 1, Item 17), two indicator wires (Figure 1, Item 18), two locking star washers (Figure 1, Item 16) and two nuts (Figure 1, Item 15). Ensure wire (Figure 1, Item 14) on rear of buss bar (Figure 1, Item 13) is securely attached.
17. Connect buss bar A2 (Figure 1, Item 3) to circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32) by installing four flat washers (Figure 1, Item 9), two indicator wires (Figure 1, Item 10), two locking star washers (Figure 1, Item 11) and two nuts (Figure 1, Item 12). Ensure wire (Figure 1, Item 6) on rear of buss bar (Figure 1, Item 3) is securely attached. Ensure all connections correspond to correct power phase. Remove all tags.
18. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 31).



## REPLACEMENT – CONTINUED

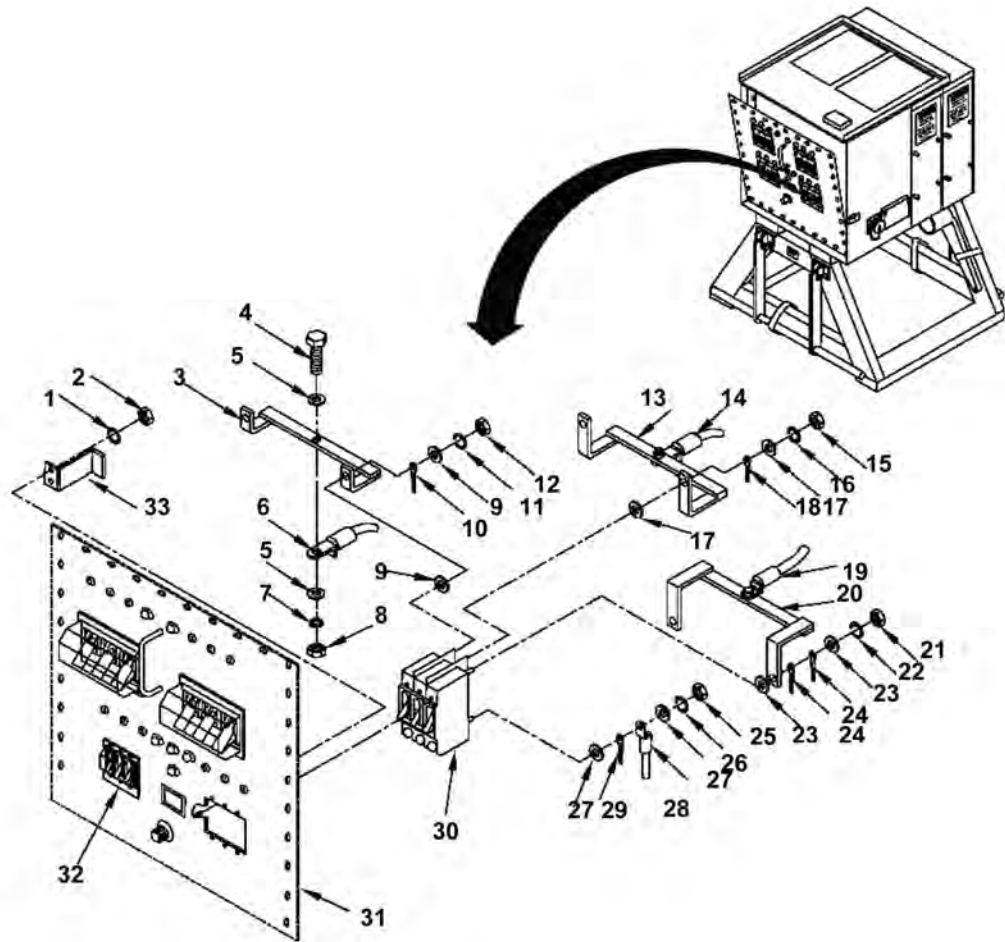


Figure 1. Circuit Breaker CB3 and CB4 (PP-8440A Only).

END OF TASK

END OF WORK PACKAGE



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**FIELD MAINTENANCE**
**BUSS BARS A2, B2, AND C2 (PP-8440A ONLY): REPLACEMENT**


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**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

**References**

WP 0027

**Personnel Required**

MOS 52D

**Equipment Condition**

Power OFF

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**REPLACEMENT**

To replace damaged or defective buss bar, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0028 to access rear of circuit breaker panel (Figure 1, Item 31).
2. Ensure all wires disconnected are properly tagged. To disconnect buss bar A2 (Figure 1, Item 3) from circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32), remove and retain two nuts (Figure 1, Item 12), two locking star washers (Figure 1, Item 11), four flat washers (Figure 1, Item 9) and two wires (Figure 1, Item 10).
3. Remove and retain one nut (Figure 1, Item 8), one locking star washer (Figure 1, Item 7), one flat washer (Figure 1, Item 5) and one wire (Figure 1, Item 6) from bolt (Figure 1, Item 4), then remove bolt (Figure 1, Item 4) and one flat washer (Figure 1, Item 5). Remove buss bar A2 (Figure 1, Item 3).
4. To disconnect buss bars B2 (Figure 1, Item 13) or C2 (Figure 1, Item 20) from circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32), repeat procedure (steps b and c) used for buss bar A2.
5. Perform procedures in WP 0028 to secure circuit breaker panel (Figure 1, Item 31).
6. Perform steps contained in WP 0027 to access rear of circuit breaker panel (Figure 1, Item 31).
7. Attach one bolt (Figure 1, Item 4) and one flat washer (Figure 1, Item 5) to buss bar A2 (Figure 1, Item 3) by inserting through hole on top of buss bar. Attach one wire (Figure 1, Item 6), one flat washer (Figure 1, Item 5), one locking star washer (Figure 1, Item 7) and one nut (Figure 1, Item 8) to bolt.
8. Connect buss bar A2 (Figure 1, Item 3) to circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32) by installing four flat washers (Figure 1, Item 9), two indicator wires (Figure 1, Item 10), two locking star washers (Figure 1, Item 11) and two nuts (Figure 1, Item 12). Ensure wire (Figure 1, Item 6) on buss bar (Figure 1, Item 3) is securely attached. Ensure all connections correspond to correct power phase. Remove all tags.
9. To connect buss bars B2 (Figure 1, Item 13) or C2 (Figure 1, Item 20) to circuit breaker/CB4 (Figure 1, Item 30) and circuit breaker/CB3 (Figure 1, Item 32), repeat procedure (steps b and c) used for buss bar A2 (Figure 1, Item 3).
10. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 31).

## REPLACEMENT – CONTINUED

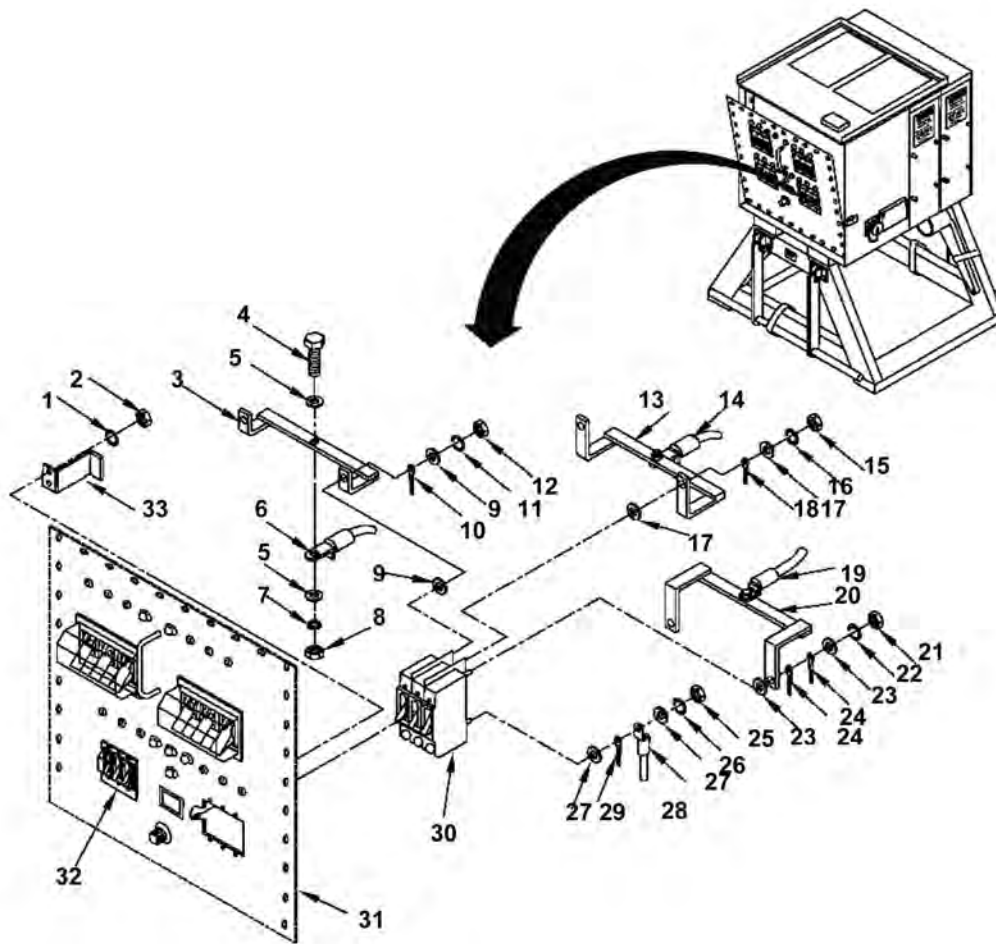


Figure 1. Bus Bars A1, B1, and C1 (PP-8440A Only).

END OF TASK

END OF WORK PACKAGE

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**FIELD MAINTENANCE**  
**CIRCUIT BREAKER CB5 (PP-8440A ONLY): REPLACEMENT**

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**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)  
 Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**References**

WP 0019  
 WP 0026

**Personnel Required**

MOS 52D

**Equipment Condition**

Power OFF

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**REPLACEMENT**

To replace damaged or defective circuit breaker, perform the following procedure:

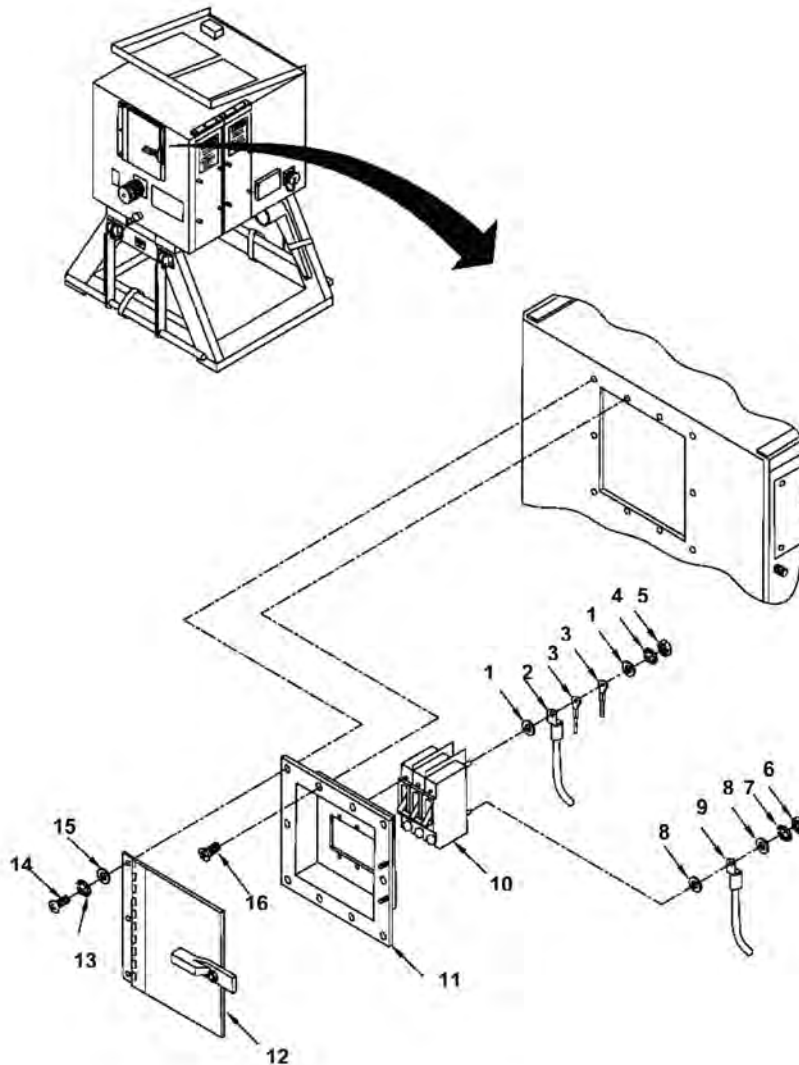
**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Unlatch and open rear access cover (Figure 1, Item 12) on rear of PDB.
2. Remove and retain three screws (Figure 1, Item 14), three lock washers (Figure 1, Item 13) and three flat washers (Figure 1, Item 15) from rear access cover (Figure 1, Item 12) and remove and store cover and hardware for later use.
3. Remove rear access cover keeper. See WP 0019 for removal procedures.
4. Remove and retain seven screws (Figure 1, Item 16) from rear entrance panel (Figure 1, Item 11) and pull forward and out to gain access to rear of rear entrance panel (Figure 1, Item 11).
5. Ensure all wires disconnected are properly tagged. Remove three nuts (Figure 1, Item 5), three lock washers (Figure 1, Item 4), six flat washers (Figure 1, Item 1), six wires (Figure 1, Item 3) and three wires (Figure 1, Item 2) from top studs on circuit breaker/CB5 (Figure 1, Item 10). Retain hardware for later use.
6. Ensure all wires disconnected are properly tagged. Remove three nuts (Figure 1, Item 6), three lock washers (Figure 1, Item 7), six flat washers (Figure 1, Item 8) and three wires (Figure 1, Item 9) from bottom studs on circuit breaker/CB5 (Figure 1, Item 10). Retain hardware for later use.
7. Remove circuit breaker boot and boot bezel. See WP 0026 for removal procedures.
8. Remove circuit breaker/CB5 (Figure 1, Item 10) from rear entrance panel (Figure 1, Item 11).
9. Perform steps a through d in this work package to gain access to rear of rear entrance panel (Figure 1, Item 11).
10. Place circuit breaker/CB5 (Figure 1, Item 10) in rear entrance panel (Figure 1, Item 11) through backside of panel.
11. Install circuit breaker boot and boot bezel. See WP 0026 for installation procedures.
12. Install six flat washers (Figure 1, Item 8), three wires (Figure 1, Item 9), three lock washers (Figure 1, Item 7) and three nuts (Figure 1, Item 6) on bottom studs of circuit breaker/CB5 (Figure 1, Item 10).
13. Install six flat washers (Figure 1, Item 1), three wires (Figure 1, Item 2), six wires (Figure 1, Item 3), three lock washers (Figure 1, Item 4) and three nuts (Figure 1, Item 5) on top studs of circuit breaker/CB5 (Figure 1, Item 10).

**REPLACEMENT – CONTINUED**

14. Install rear access cover keeper. See WP 0019 for installation procedures.
15. Place rear entrance panel (Figure 1, Item 11) in position on rear of PDB and install seven screws (Figure 1, Item 16) to secure it to PDB.
16. Place rear access cover (Figure 1, Item 12) in position on rear entrance panel (Figure 1, Item 11) and install three flat washers (Figure 1, Item 15), three lock washers (Figure 1, Item 13) and three screws (Figure 1, Item 14) to secure it to PDB.
17. Close and latch rear access cover (Figure 1, Item 12).



**Figure 1. Circuit Breaker CB5 (PP-8440A Only).**

**END OF TASK**

**END OF WORK PACKAGE**

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**FIELD MAINTENANCE****CIRCUIT BREAKER CB6 AND CB7 (PP-8440A ONLY): REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)  
Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**References**

WP 0027

**Equipment Condition**

Power OFF

**Personnel Required**

MOS 52D

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**REPLACEMENT**

To replace damaged or defective circuit breaker, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

**NOTE**

Circuit breaker/CB6 is located on the right side of PDB. Circuit breaker/CB7 is located on the left side of PDB. Both are 20 amp circuit breakers.

1. Perform steps contained in WP 0027 to access rear of circuit breaker panel.
2. Unscrew circuit breaker protective cover (Figure 1, Item 7) by turning counterclockwise. To replace the circuit breaker weather cover (Figure 1, Item 4) and gasket (Figure 1, Item 3), remove and retain four screws (Figure 1, Item 6), eight flat washers (Figure 1, Item 5) and four locknuts (8).
3. Remove nut (Figure 1, Item 2) and locking star washer (Figure 1, Item 1) securing circuit breaker (Figure 1, Item 9) to side panel.
4. Tag and disconnect wires (Figure 1, Item 10) attached to circuit breaker (Figure 1, Item 9). Remove circuit breaker (Figure 1, Item 9).
5. Perform steps contained in WP 0027 to access rear of circuit breaker panel.
6. Position circuit breaker (Figure 1, Item 9) through inside of box. Secure circuit breaker (Figure 1, Item 9) to side panel by installing locking star washer (Figure 1, Item 1) and nut (Figure 1, Item 2).
7. Connect two wires (Figure 1, Item 10) to rear circuit breaker (Figure 1, Item 9) and secure wires. Remove tags from wires.
8. Install circuit breaker weather cover (Figure 1, Item 4) and gasket (Figure 1, Item 3) by installing four screws (Figure 1, Item 6), eight flat washers (Figure 1, Item 5) and four locknuts (Figure 1, Item 8).
9. Secure protective cap (Figure 1, Item 7) on cover by turning clockwise.
10. Perform procedures in WP 0027 to secure circuit breaker panel.

## REPLACEMENT – CONTINUED

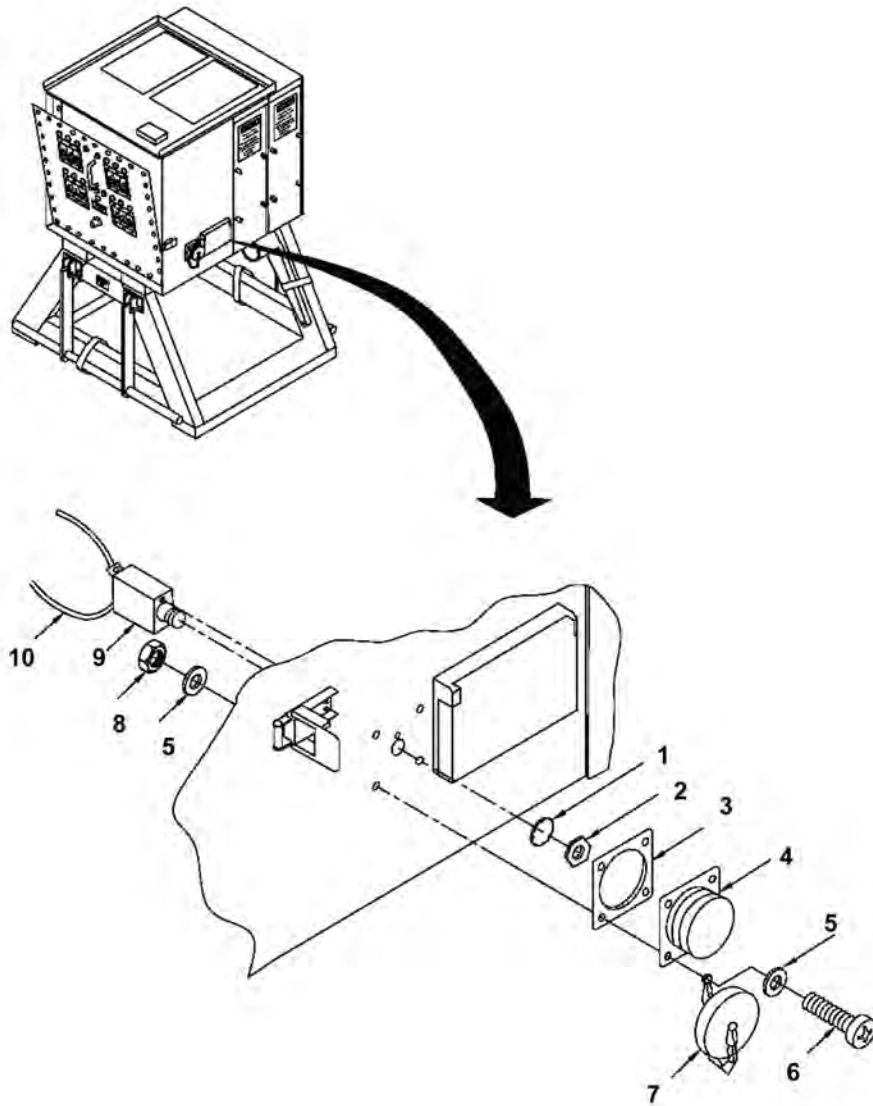


Figure 1. Circuit Breakers CB6 and CB7 (PP-8440A Only).

END OF TASK

END OF WORK PACKAGE



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**FIELD MAINTENANCE**  
**TERMINAL POST: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

**References**

WP 0027

**Personnel Required**

MOS 52D

**Equipment Condition**Power OFF

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**REPLACEMENT**

To replace damaged or defective terminal post, perform the following procedure:

**Circuit No.'s 1 and 2 Terminal Post****WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

**NOTE**

The PP-8440/ASM Power Distribution Box contains 3 different size terminal posts. The 200 amp service terminal posts (Circuit No.'s 1 and 2) use P/N MS39347-6. The 80 amp (Circuit No. 4) and 100 amp (Circuit No. 3) service terminal posts and all circuit grounds use P/N MS39347-4. The rear panel ground terminal post (E1) uses P/N MS39347-2.

**NOTE**

The PP-8440A/ASM Power Distribution Box contains 2 different size terminal posts. The 200 amp service terminal posts (Circuit No.'s 1 and 2) use P/N MS39347-6. The 60 amp (Circuit No. 4) and 100 amp (Circuit No. 3) service terminal posts and all circuit grounds, including rear panel ground terminal post (E1), use P/N MS39347-4.

**NOTE**

Remove safety clip from all new terminal posts prior to installation.

1. Perform steps contained in paragraph WP 0027 to gain access to rear of terminal post mounting plate (Figure 1, Item 8).
2. Open circuit no. 1 or 2 side panel access cover (Figure 1, Item 1) and secure it in open position.
3. Locate rear of terminal post (Figure 1, Item 3) to be removed. Tag any wire(s) connected to terminal post.
4. Using a 1 and 1/8 inch deep well socket, remove and retain one nut (Figure 1, Item 7), one lock washer (Figure 1, Item 6), securing wire(s) to terminal post (Figure1, Item 3). Remove wire(s). Ensure wires are tagged.
5. On PP-8440/ASM, remove remaining nut (Figure1, Item 7), two lock washers (Figure1, Item 6) and one flat washer (Figure 1, Item 5) securing terminal post (Figure1, Item 3) to terminal post mounting plate (Figure1, Item 8). On PP-8440A/ASM, remove remaining nut (Figure1, Item 7), one lock washer (Figure1, Item 6) and two flat washers (Figure1, Item 5) securing terminal post (Figure1, Item 3) to terminal post mounting plate (Figure1, Item 8).

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**REPLACEMENT – CONTINUED**

6. On front of terminal post mounting plate (Figure1, Item 8), remove safety cap (Figure 1, Item 4). Remove terminal post (Figure1, Item 3).
7. Perform procedures in WP 0027 to secure circuit breaker panel.

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

8. Perform steps contained in WP 0027 to gain access to rear of terminal post mounting plate (8).
9. Open circuit no. 1 or 2 side panel access cover (Figure1, Item 1) and secure it in open position.
10. Slide terminal post (Figure1, Item 3) through front of terminal post mounting plate (Figure1, Item 8). Align terminal post so that terminal post anti-rotation stud (Figure1, Item 2) fits into pre-cut hole in mounting plate. On rear of terminal post mounting plate (Figure1, Item 8) on PP-8440/ASM, install one flat washer (Figure1, Item 5), two lock washers (Figure1, Item 6) and one nut (Figure1, Item 7). Tighten nut (Figure1, Item 7). On rear of terminal post mounting plate (Figure1, Item 8) on PP-8440A/ASM, install two flat washers (Figure1, Item 5), one lock washer (Figure1, Item 6) and one nut (Figure1, Item 7). Tighten nut (Figure1, Item 7).
11. Place tagged wire(s) on terminal post (Figure1, Item 3) and secure wires by installing one lock washer (Figure1, Item 6) and one nut (Figure1, Item 7). Remove tag(s) from wire.
12. On front of terminal post mounting plate (Figure1, Item 8), place terminal post safety cover (Figure1, Item 4) on terminal post.
13. Close and secure side panel access cover (Figure1, Item 1).
14. Perform procedures in WP 0027 to secure circuit breaker panel.

## REPLACEMENT – CONTINUED

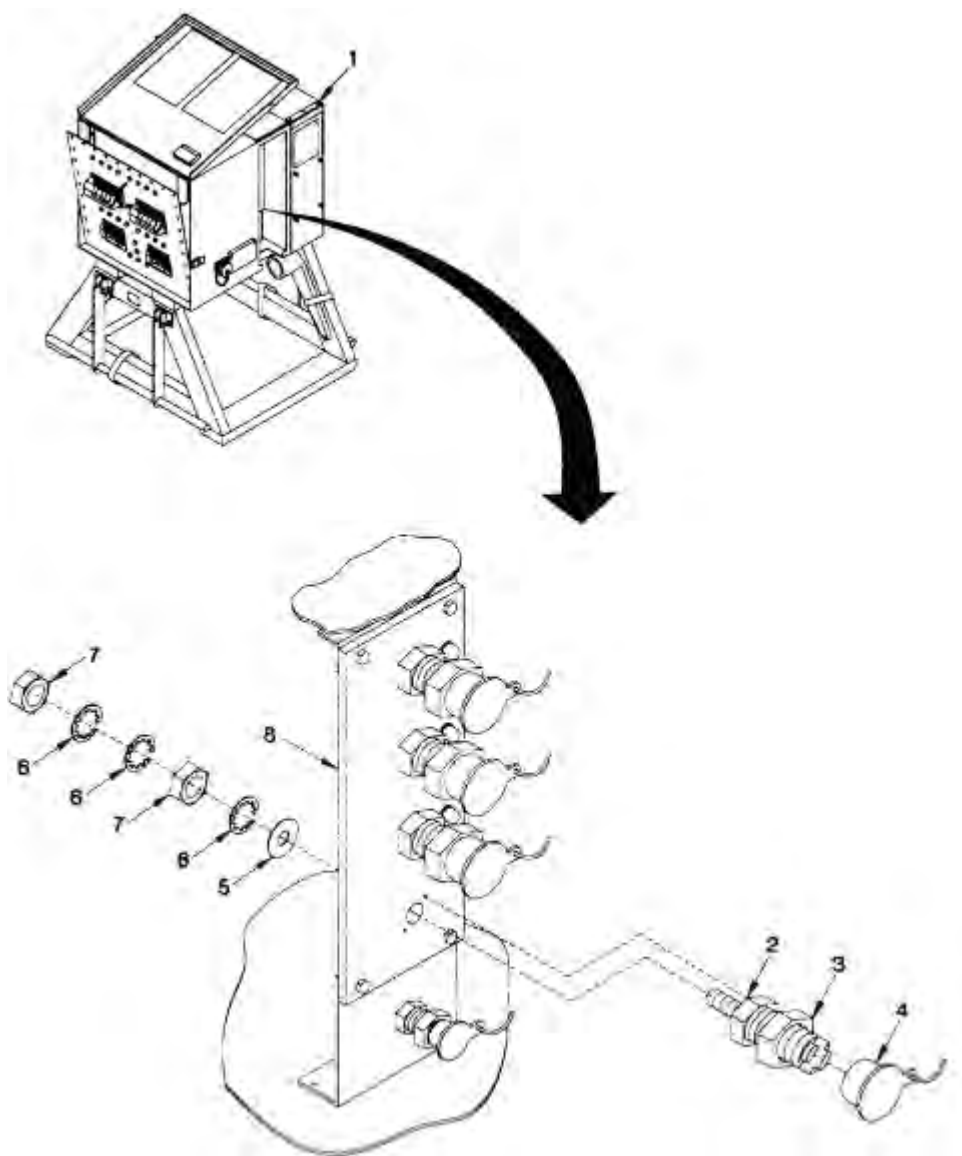


Figure 1. Circuit No.'s 1 and 2 Terminal Post.

## Circuit No.'s 3 and 4 Terminal Post

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in paragraph WP 0027 to gain access to rear of terminal post mounting plate (Figure 2, Item 8).
2. Open circuit no. 3 or 4 side panel access cover (Figure 2, Item 1) and secure it in open position.
3. Locate rear of terminal post (Figure 2, Item 3) to be removed. Tag any wire(s) connected to terminal post.

**REPLACEMENT – CONTINUED**

4. Using a 3/4 inch deep well socket, remove and retain one nut (Figure 2, Item 7), one lock washer (Figure 2, Item 6), securing wire(s) to terminal post (Figure 2, Item 3). Remove wire(s). Ensure wires are tagged.
5. On PP-8440/ASM, remove remaining nut (Figure 2, Item 7), two lock washers (Figure 2, Item 6) and one flat washer (Figure 2, Item 5) securing terminal post (Figure 2, Item 3) to terminal post mounting plate (Figure 2, Item 8). On PP-8440A/ASM, remove remaining nut (Figure 2, Item 7), one lock washer (Figure 2, Item 6) and two flat washers (Figure 2, Item 5) securing terminal post (Figure 2, Item 3) to terminal post mounting plate (Figure 2, Item 8).
6. On front of terminal post mounting plate (Figure 2, Item 8), remove safety cap (Figure 2, Item 4). Remove terminal post (Figure 2, Item 3).
7. Perform procedures in paragraph WP 0027 to secure circuit breaker panel.

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

8. Perform steps contained in WP 0027 to gain access to rear of terminal post mounting plate (Figure 2, Item 8).
9. Open circuit no. 3 or 4 side panel access cover (Figure 2, Item 1) and secure it in open position.
10. Slide terminal post (Figure 2, Item 3) through front of terminal post mounting plate (Figure 2, Item 8). Align terminal post so that terminal post anti-rotation stud (Figure 2, Item 2) fits into pre-cut hole in mounting plate. On rear of terminal post mounting plate (Figure 2, Item 8) on PP-8440/ASM, install one flat washer (Figure 2, Item 5), two lock washers (Figure 2, Item 6) and one nut (Figure 2, Item 7). Tighten nut (Figure 2, Item 7). On rear of terminal post mounting plate (Figure 2, Item 8) on PP-8440A/ASM, install two flat washers (Figure 2, Item 5), one lock washer (Figure 2, Item 6) and one nut (Figure 2, Item 7). Tighten nut (Figure 2, Item 7).
11. Place tagged wire(s) on terminal post (Figure 2, Item 3) and secure wires by installing one lock washer (Figure 2, Item 6) and one nut (Figure 2, Item 7). Remove tag(s) from wire.
12. On front of mounting plate (Figure 2, Item 8), place terminal post safety cover (Figure 2, Item 4) on terminal post.
13. Close and secure side panel access cover (Figure 2, Item 1).
14. Perform procedures in WP 0027 to secure circuit breaker panel.

## REPLACEMENT – CONTINUED

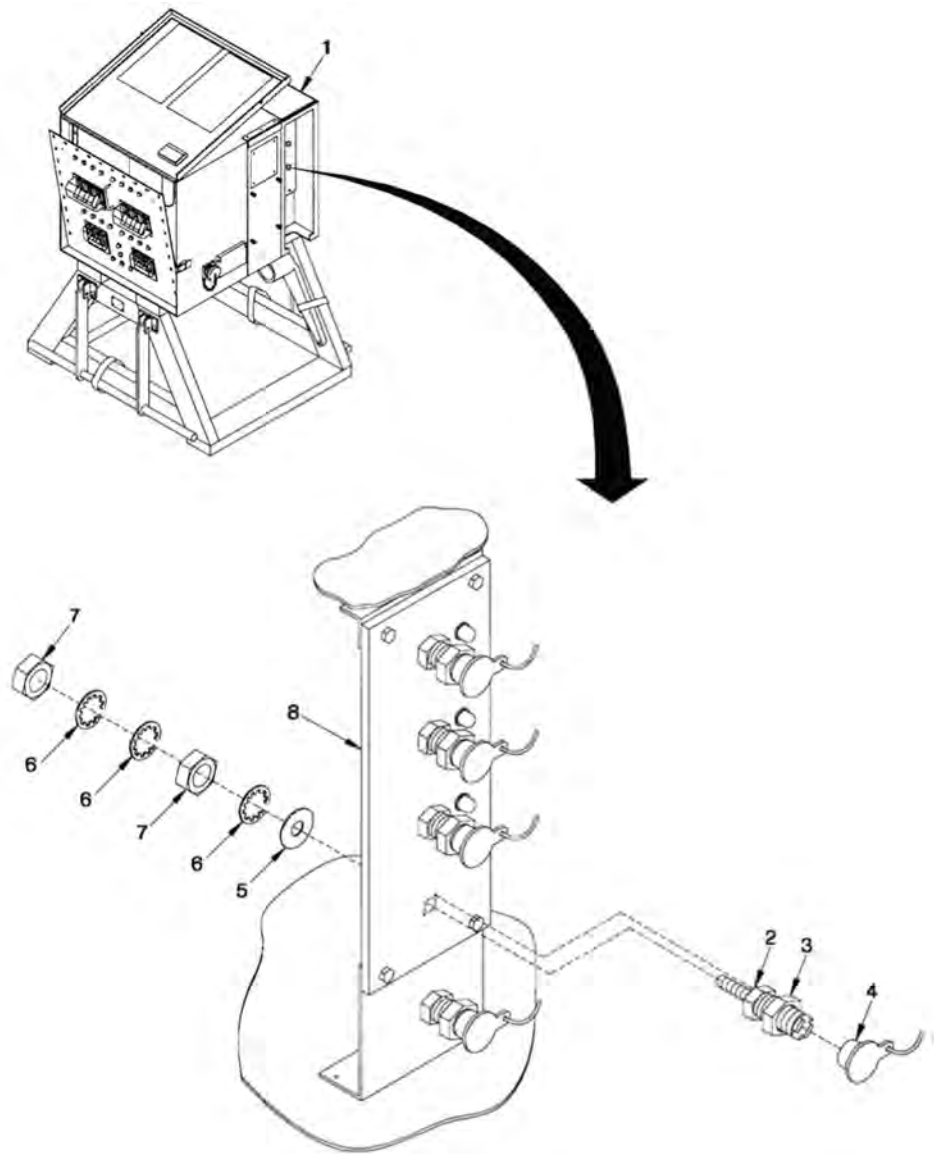


Figure 2. Circuit No.'s 3 and 4 Terminal Post.

## Rear Panel Ground Terminal Post (E1)

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access inside of PDB.
2. Locate PDB ground terminal post (Figure 3, Item 9). Tag any wire(s) connected to terminal post.
3. Remove and retain one nut (Figure 3, Item 7), and one lock washer (Figure 3, Item 8) securing wire(s) to terminal post (Figure 3, Item 9). Remove wire(s). Ensure wires are properly tagged.

**REPLACEMENT – CONTINUED**

4. On PP-8440/ASM, remove retaining nut (Figure 3, Item 1), two lock washers (Figure 3, Items 2 and 3), one locking nut (Figure 3, Item 4), and an additional lock washer (Figure 3, Item 5) securing terminal post (Figure 3, Item 9) to PDB. On PP-8440A/ASM, remove retaining nut (Figure 3, Item 1), two lock washers (Figure 3, Items 2 and 3) and one flat washer (Figure 3, Item 6) securing terminal post (Figure 3, Item 9) to PDB.
5. Perform procedures in paragraph WP 0027 to secure circuit breaker panel.

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

6. Perform steps contained in WP 0027 to access inside the PDB. Remove terminal post safety clip.
7. Slide terminal post (Figure 3, Item 9) through front of rear panel. Align terminal post so that the terminal post fits into pre-cut hole in PDB. On PP-8440/ASM install lock washer (Figure 3, Item 5), locking nut (Figure 3, Item 4), two lock washers (Figure 3, Items 2 and 3) and one retaining nut (Figure 3, Item 1). Tighten both nuts (Figure 3, Items 4 and 1). On PP-8440A/ASM install one flat washer (Figure 3, Item 6), two lock washers (Figure 3, Items 2 and 3) and one retaining nut (Figure 3, Item 1). Tighten nut (Figure 3, Item 1).
8. Place tagged wire(s) on terminal post (Figure 3, Item 9) and secure wires by installing one lock washer (Figure 3, Item 8) and one nut (Figure 3, Item 7). Remove tag(s) from wire(s).
9. Perform procedures in WP 0027 to secure circuit breaker panel.

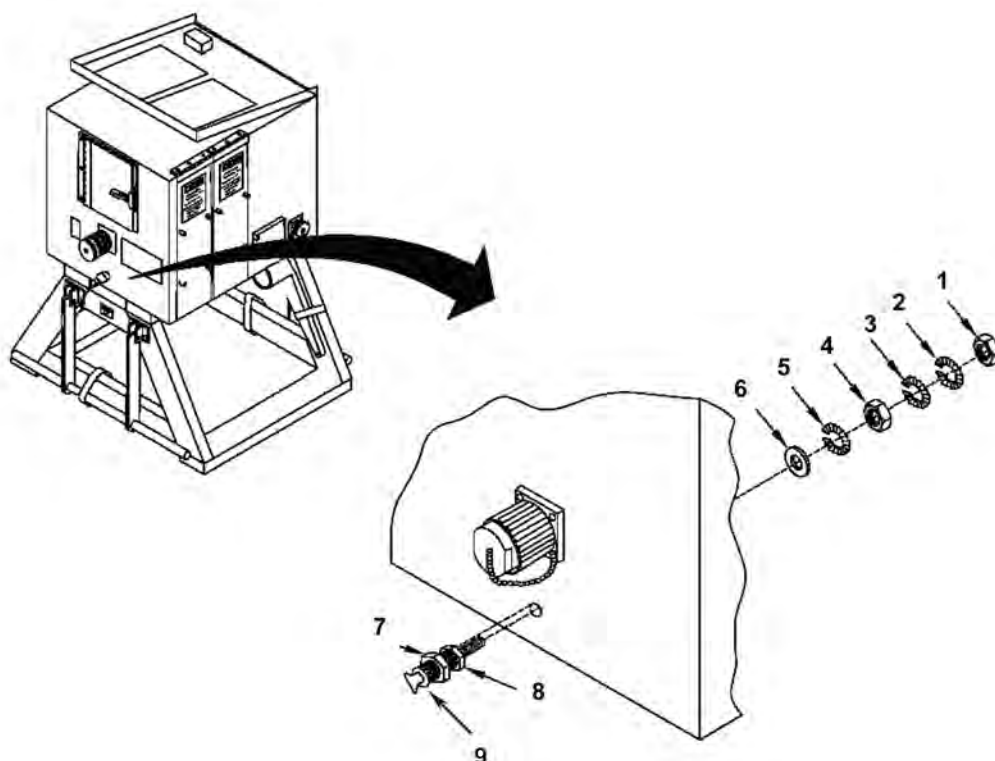


Figure 3. Rear Panel Ground Terminal Post (E1).

END OF TASK

END OF WORK PACKAGE





## FIELD MAINTENANCE

## VOLTAGE METER M1 (PP-8440A ONLY): REPLACEMENT

## INITIAL SETUP:

## Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 2)

## References

WP 0027

## Personnel Required

MOS 52D

## Equipment Condition

Power OFF

## REPLACEMENT

To replace a defective meter, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access inside the PDB.
2. Remove one screw (Figure 1, Item 9), one white wire (Figure 1, Item 10), one screw (Figure 1, Item 2) and one black wire (Figure 1, Item 1) from meter (Figure 1, Item 11).
3. Remove four screws (Figure 1, Item 5), four lock washers (Figure 1, Item 4) and four flat washers (Figure 1, Item 3) from rear of circuit breaker panel (Figure 1, Item 6).
4. Remove bezel (Figure 1, Item 8) and gasket (Figure 1, Item 7) from front of circuit breaker panel (Figure 1, Item 6).
5. Remove meter (Figure 1, Item 11) from front of circuit breaker panel (Figure 1, Item 6).
6. Perform procedures in WP 0027 to secure circuit breaker panel.

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

7. Perform steps contained in WP 0027 to access inside the PDB.
8. Position meter (Figure 1, Item 11) in front cutout on circuit breaker panel (Figure 1, Item 6).
9. Place bezel (Figure 1, Item 8) and gasket (Figure 1, Item 7) over meter (Figure 1, Item 11) on front of circuit breaker panel (Figure 1, Item 6).
10. Secure bezel (Figure 1, Item 8) to circuit breaker panel (Figure 1, Item 6) by installing four flat washers (Figure 1, Item 3), four lock washers (Figure 1, Item 4) and four screws (Figure 1, Item 5) at rear of circuit breaker panel (Figure 1, Item 6).
11. Install one white wire (Figure 1, Item 10) with one screw (Figure 1, Item 9) and one black wire (Figure 1, Item 1) with one screw (Figure 1, Item 2) on rear of meter (Figure 1, Item 11).
12. Perform procedures in WP 0027 to secure circuit breaker panel.

## REPLACEMENT – CONTINUED

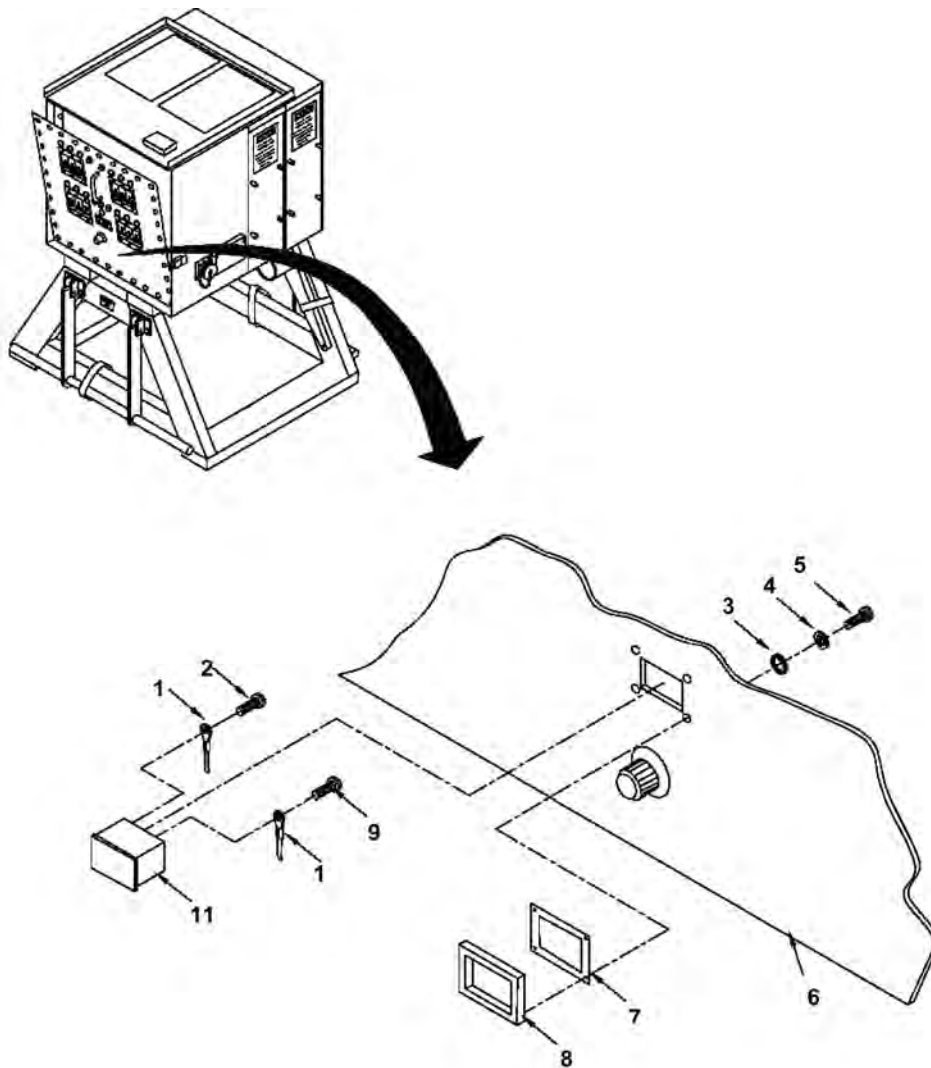


Figure 1. Voltmeter M1 (PP-8440A Only).

END OF TASK

END OF WORK PACKAGE

---

**FIELD MAINTENANCE****DUPLEX RECEPTACLE (GFCI) AND PROTECTIVE COVER: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**References**

WP 0027

**Personnel Required**

MOS 52D

**Equipment Condition**Power OFF

---

**REPLACEMENT**

To replace a defective duplex receptacle and/or a GFCI protective cover, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access inside the PDB.
2. Remove GFCI protective cover (Figure 1, Item 3) and gasket (Figure 1, Item 5) by removing four screws (Figure 1, Item 4), four flat washers (Figure 1, Item 6) and four lock nuts (Figure 1, Item 7). Retain hardware.
3. Remove duplex receptacle (Figure 1, Item 1) by removing two screws (Figure 1, Item 2), two flat washers (Figure 1, Item 9) and two locknuts (Figure 1, Item 8). Retain screws (Figure 1, Item 2).
4. Tag and disconnect two wires attached to rear of receptacle (Figure 1, Item 1).
5. Perform procedures in WP 0027 to secure circuit breaker panel.

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

6. Perform steps contained in WP 0027 to access inside the PDB.
7. Position GFCI receptacle (Figure 1, Item 1) and secure to PDB by installing two screws (Figure 1, Item 2), two flat washers (Figure 1, Item 9) and two lock nuts (Figure 1, Item 8).
8. Attach two wires to rear receptacle (Figure 1, Item 1) and remove tags.
9. Position gasket (Figure 1, Item 5) and weather cover (Figure 1, Item 3) and secure by installing four screws (Figure 1, Item 4), four flat washers (Figure 1, Item 6) and four lock nuts (Figure 1, Item 7).
10. Perform procedures in WP 0027 to secure circuit breaker panel.

## REPLACEMENT – CONTINUED

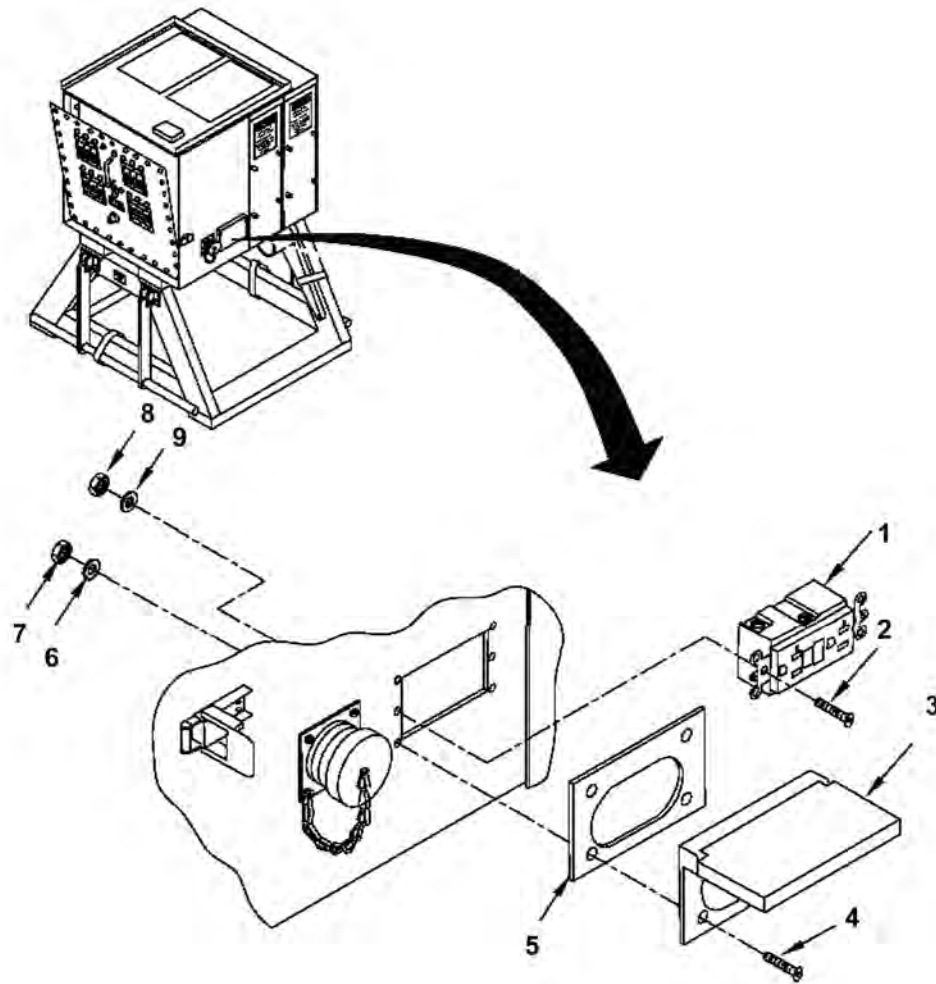


Figure 1. Duplex Receptacle (GFCI) and Protective Cover.

END OF TASK

END OF WORK PACKAGE

---

**FIELD MAINTENANCE****HANDLE, CIRCUIT BREAKER PANEL: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 3)

**References**

WP 0027

**Personnel Required**

MOS 52D

**Equipment Condition**Power OFF

---

**REPLACEMENT**

To replace a defective circuit breaker panel handle, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access inside the PDB.
2. On rear of circuit breaker panel (Figure 1, Item 4), remove and retain two screws (Figure 1, Item 1), two flat washers (Figure 1, Item 3) and two lock washers (Figure 1, Item 2), securing handle (Figure 1, Item 5) to circuit breaker panel (Figure 1, Item 4). Remove handle (Figure 1, Item 5).
3. Position handle (Figure 1, Item 5) on circuit breaker panel (Figure 1, Item 4) and secure it by installing two flat washers (Figure 1, Item 3), two lock washers (Figure 1, Item 2) and two screws (Figure 1, Item 1).
4. Locate rear of terminal post (Figure 1, Item 3) to be removed. Tag any wire(s) connected to terminal post.
5. Perform procedures in WP 0027 to secure circuit breaker panel (Figure 1, Item 4).

## REPLACEMENT – CONTINUED

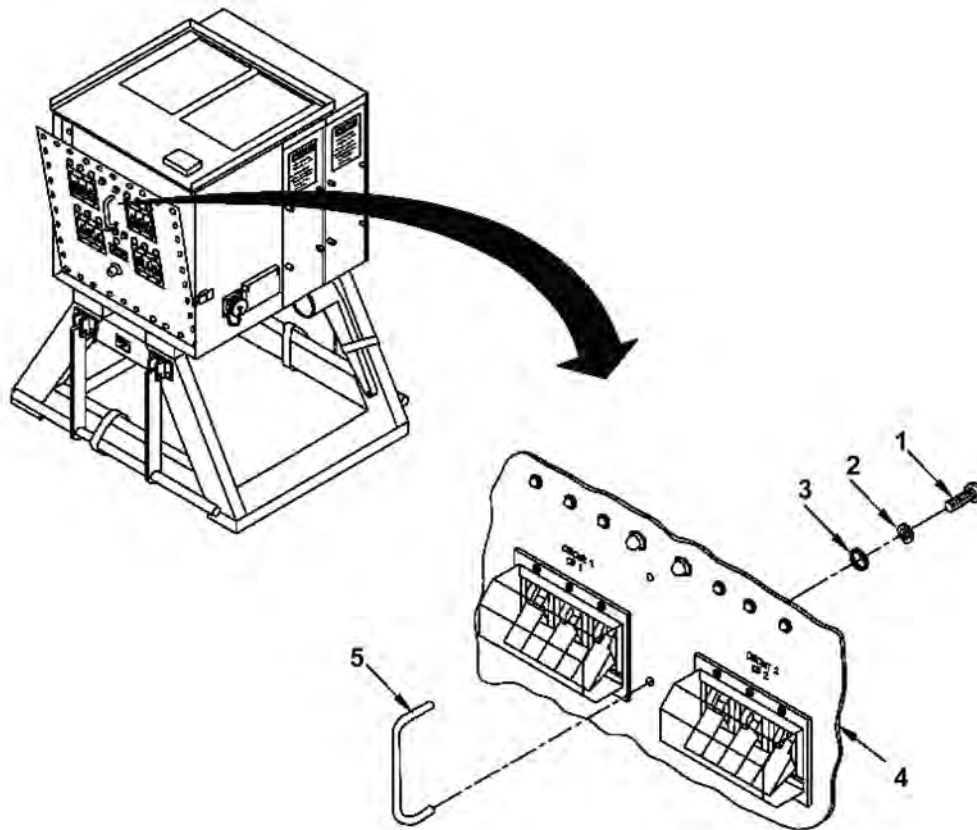


Figure 1. Handle, Circuit Breaker Panel.

END OF TASK

END OF WORK PACKAGE

---

**FIELD MAINTENANCE****LANYARD, CIRCUIT BREAKER PANEL: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)

**References**

WP 0027

**Personnel Required**

MOS 52D

**Equipment Condition**Power OFF

---

**REPLACEMENT**

To replace a defective circuit breaker panel lanyard, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access inside the PDB.
2. Remove and retain, two lock nuts (Figure 1, Item 1) and two flat washers (Figure 1, Item 3) securing lanyard (Figure 1, Item 2) to mounting studs (Figure 1, Item 5). Remove lanyard (Figure 1, Item 2).

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

3. Position lanyard (Figure 1, Item 2) and secure it to the mounting studs (Figure 1, Item 5) by installing two flat washers (Figure 1, Item 3) and two lock nuts (Figure 1, Item 1).
4. Perform steps contained in WP 0027 to secure circuit breaker panel (Figure 1, Item 4).

## REPLACEMENT – CONTINUED

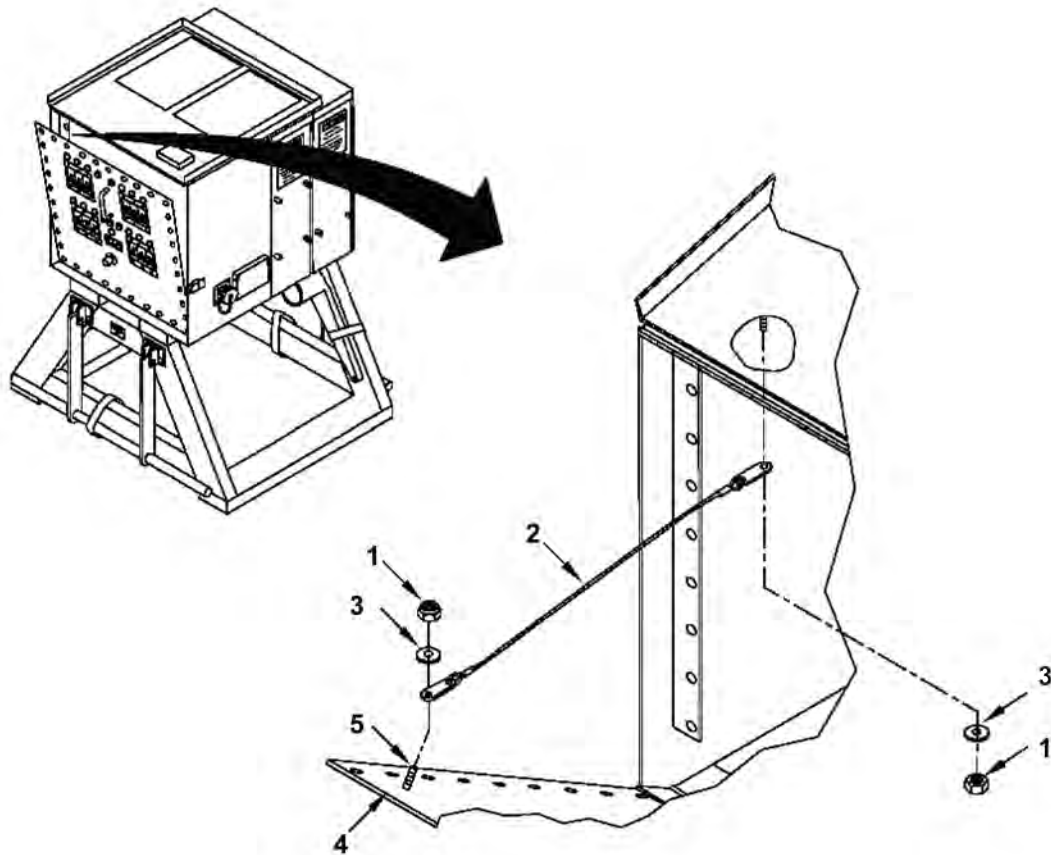


Figure 1. Lanyard, Circuit Breaker Panel.

END OF TASK

END OF WORK PACKAGE



---

**FIELD MAINTENANCE****GROUND STRAP, CIRCUIT BREAKER PANEL: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)

**References**

WP 0027

**Personnel Required**

MOS 52D

**Equipment Condition**Power OFF

---

**REPLACEMENT**

To replace a defective circuit breaker panel ground strap, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access inside the PDB.
2. Remove and retain, two lock nuts (Figure 1, Item 1) and two flat washers (Figure 1, Item 2) securing ground strap (Figure 1, Item 3) to mounting studs (Figure 1, Item 4). Remove ground strap (Figure 1, Item 3).

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

3. Position ground strap (Figure 1, Item 3) on mounting studs (Figure 1, Item 4) and secure it to the Power Distribution Box by installing two flat washers (Figure 1, Item 2) and lock nuts (Figure 1, Item 1).
4. Perform steps contained in WP 0027 to secure circuit breaker panel (Figure 1, Item 5).

## REPLACEMENT – CONTINUED

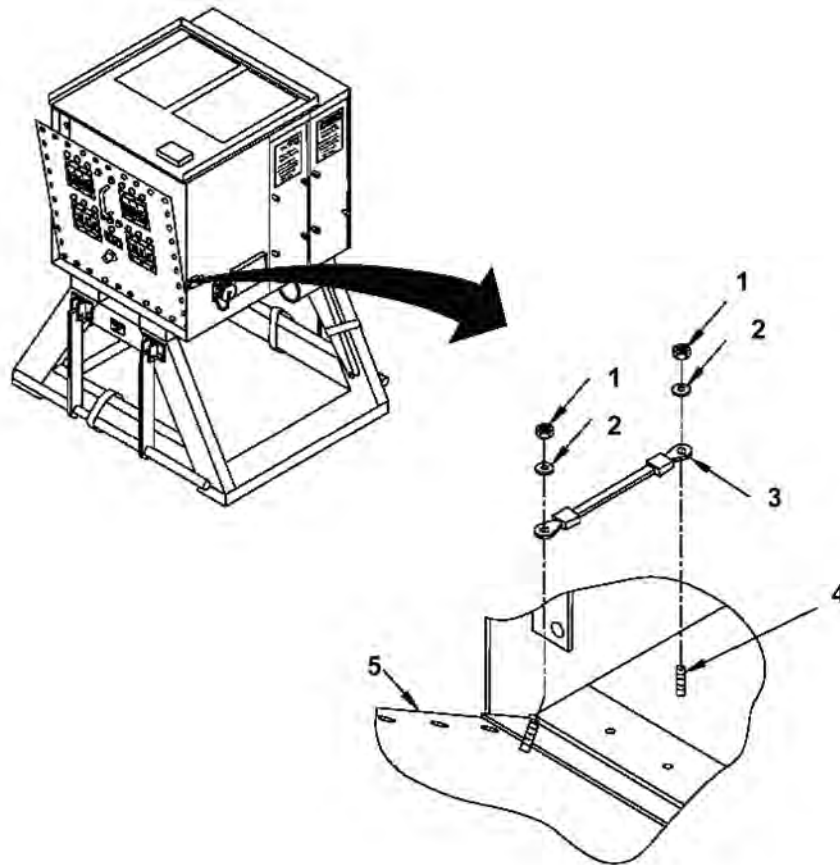


Figure 1. Ground Strap, Circuit Breaker Panel.

END OF TASK

END OF WORK PACKAGE

---

**FIELD MAINTENANCE****LATCH ASSEMBLY, CIRCUIT BREAKER ACCESS COVER: REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 2)

**Equipment Condition**

Power OFF

**Personnel Required**MOS 52D

---

**REPLACEMENT**

To replace a damaged latch assembly, perform the following procedure:

1. Open circuit breaker access cover (Figure 1, Item 1). Drill off rivet heads (Figure 1, Item 4) securing latch catch (Figure 1, Item 5). Drill off rivet heads (Figure 1, Item 2) securing latch assembly (Figure 1, Item 3).
2. Using a punch, drive out the rest of the rivets.
3. Remove latch assembly (Figure 1, Item 3) and latch catch (Figure 1, Item 5).
4. Position latch assembly (Figure 1, Item 3) over hole on side panel. Install rivets (Figure 1, Item 2) into holes and fasten with a hand riveter.
5. On circuit breaker access cover (Figure 1, Item 1) position latch catch (Figure 1, Item 5) and install rivets (Figure 1, Item 4) into holes with hand riveter.
6. Close circuit breaker access cover (Figure 1, Item 1).

## REPLACEMENT – CONTINUED

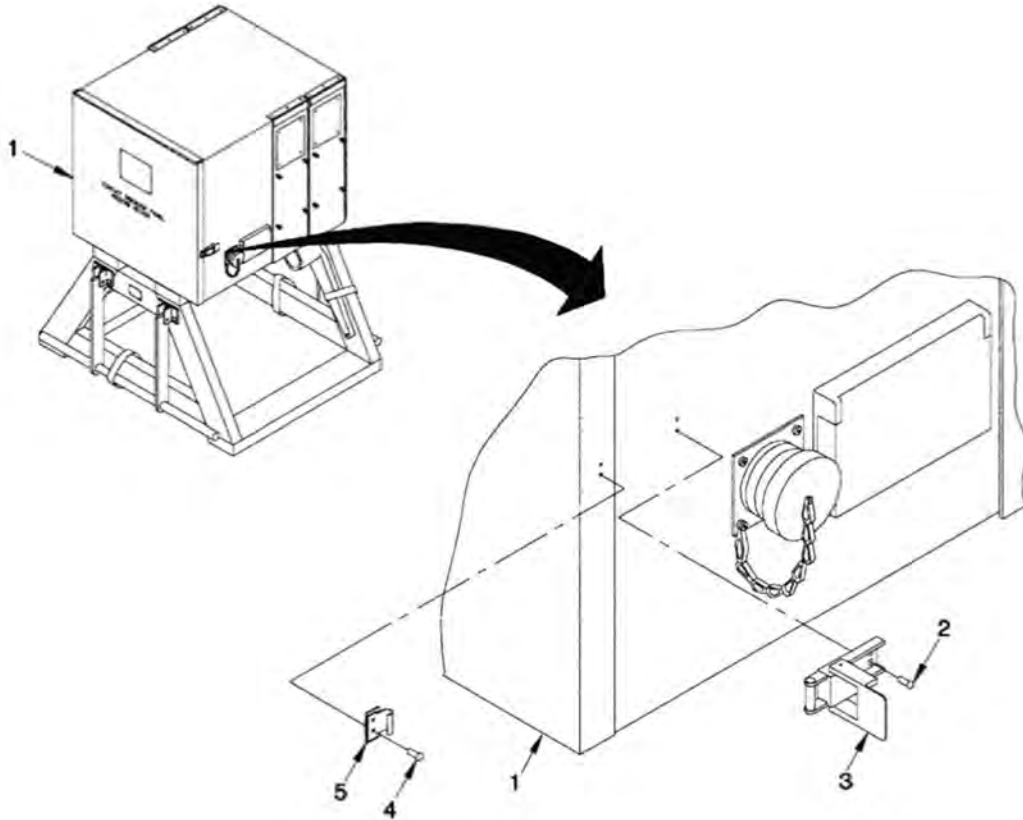


Figure 1. Latch Assembly, Circuit Breaker Access Cover.

END OF TASK

END OF WORK PACKAGE

---

**FIELD MAINTENANCE****PHASE SELECTOR SWITCH S7 (PP-8440A ONLY): REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Electronic (WP 0063, Table 2, Item 1)  
Tool Kit, Electronic (WP 0063, Table 2, Item 2)

**References**

WP 0027

**Equipment Condition**

Power OFF

**Personnel Required**

MOS 52D

---

**REPLACEMENT**

To replace a defective switch, perform the following procedure:

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access inside the PDB.
2. At rear of circuit breaker panel (Figure 1, Item 2), tag and cut wires from switch (Figure 1, Item 1).
3. At front of circuit breaker panel (Figure 1, Item 2), loosen setscrew on dial (Figure 1, Item 5) and remove dial (Figure 1, Item 5) from switch (Figure 1, Item 1).
4. Remove nut (Figure 1, Item 4) and lock washer (Figure 1, Item 3) from switch (Figure 1, Item 1) then remove switch (Figure 1, Item 1) through rear of circuit breaker panel (Figure 1, Item 2).
5. Perform procedures in WP 0027 to secure circuit breaker panel.

**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

6. Perform steps contained in WP 0027 to access inside the PDB.
7. Place switch (Figure 1, Item 1) in circuit breaker panel (Figure 1, Item 2) through rear and secure with lock washer (Figure 1, Item 3) and nut (Figure 1, Item 4).
8. Install dial (Figure 1, Item 5) on switch (Figure 1, Item 1) and tighten setscrew on dial (Figure 1, Item 5) to secure dial.
9. Solder wires to switch (Figure 1, Item 1) and remove tags.
10. Perform procedures in paragraph WP 0027 to secure circuit breaker panel.

## REPLACEMENT – CONTINUED

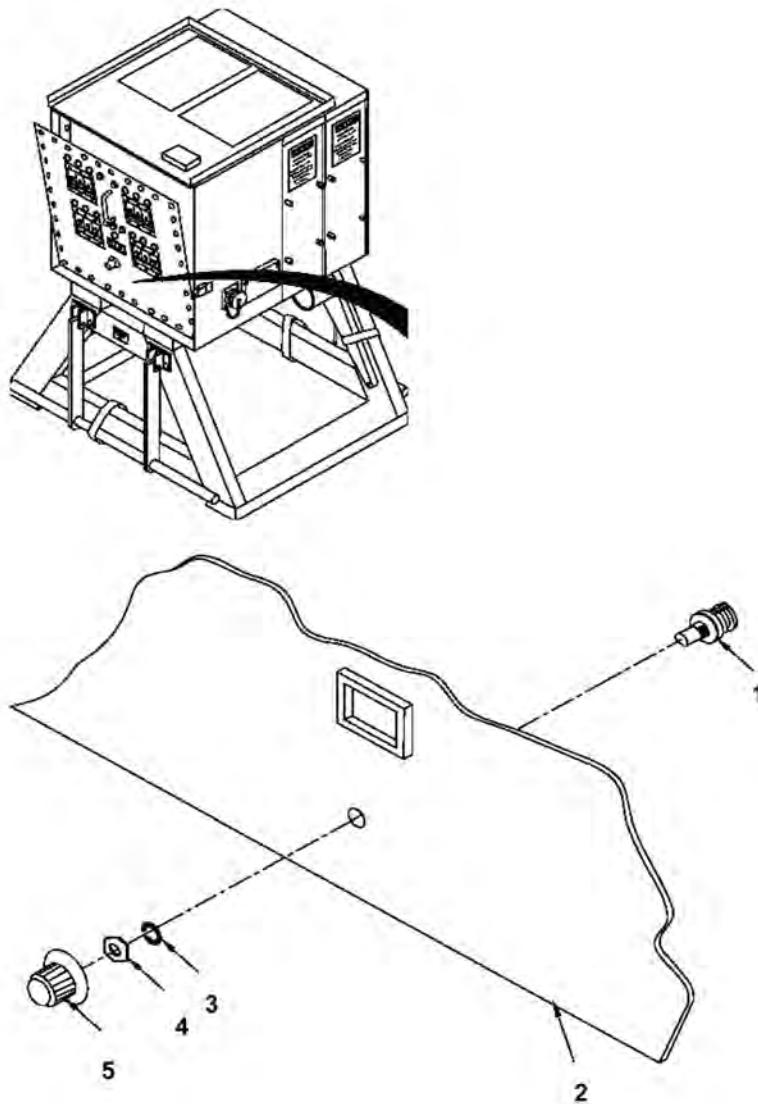


Figure 1. Phase Selector Switch S7.

END OF TASK

END OF WORK PACKAGE

## FIELD MAINTENANCE

## CIRCUIT BREAKER PANEL (PP-8440A ONLY): REPLACEMENT

## INITIAL SETUP:

## Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 1)  
 Tool Kit, Electronic (WP 0063, Table 2, Item 3)

## Personnel Required

MOS 52D

## References

WP 0027  
 WP 0028  
 WP 0029  
 WP 0031

## References - cont'd

WP 0035  
 WP 0037  
 WP 0042  
 WP 0044  
 WP 0045  
 WP 0046  
 WP 0048

## Equipment Condition

Power OFF

## REPLACEMENT

To replace a circuit breaker panel, perform the following procedure:

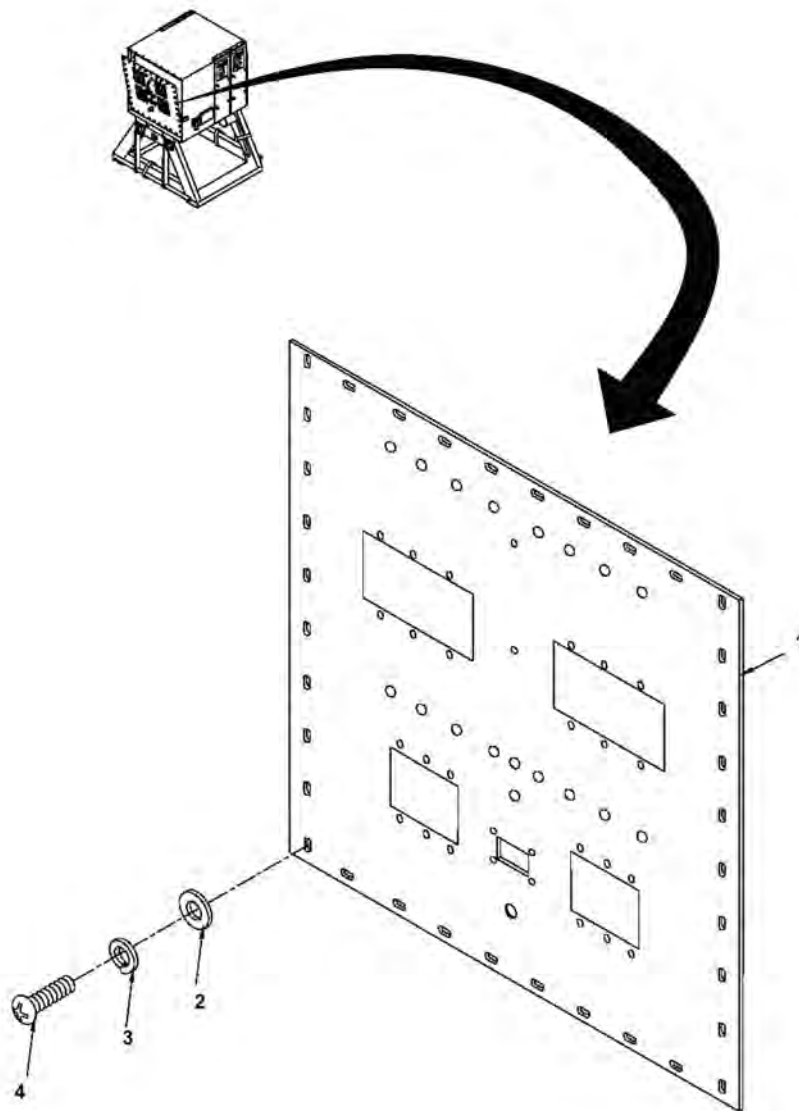
**WARNING**

High voltage is present in this equipment. Do not perform maintenance procedures with PDB connected to power source. SERIOUS INJURY or DEATH may result.

1. Perform steps contained in WP 0027 to access inside the PDB.
2. Remove LIGHT TEST push-button switches. (See WP 0028).
3. Remove LIGHT TEST lampholders. (See WP 0029).
4. Remove PHASE INCORRECT indicator lampholder. (See WP 0031).
5. Remove circuit breakers CB1 and CB2. (See WP 0035).
6. Remove circuit breakers CB3 and CB4. (See WP 0037).
7. Remove voltmeter (M1). (See WP 0042).
8. Remove PHASE SELECTOR switch (S7). (See WP 0048).
9. Remove circuit breaker panel handle. (See WP 0044).
10. Remove circuit breaker panel lanyards. (See WP 0045).
11. Remove circuit breaker panel ground straps. (See WP 0046).
12. Remove 10 ea. machine screws (Figure 1, Item 4), lock washers (Figure 1, Item 3) and flat washers (Figure 1, Item 2) securing circuit breaker panel (Figure 1, Item 1) to hinge on PDB. Remove circuit breaker panel (Figure 1, Item 1).
13. Position circuit breaker panel (Figure 1, Item 1) on hinge on PDB and secure using 10 ea. flat washers (Figure 1, Item 2), lock washers (Figure 1, Item 3) machine screws (Figure 1, Item 4).
14. Install circuit breaker panel ground straps. (See WP 0046).
15. Install circuit breaker panel lanyards. (See WP 0045).

**REPLACEMENT – CONTINUED**

16. Remove circuit breaker panel handle. (See WP 0044).
17. Install PHASE SELECTOR switch (S7). (See WP 0048).
18. Install voltmeter (M1). (See WP 0042).
19. Install circuit breakers CB3 and CB4. (See WP 0037).
20. Install circuit breakers CB1 and CB2. (See WP 0035).
21. Install PHASE INCORRECT indicator lampholder. (See WP 0030).
22. Install LIGHT TEST lampholder. (See WP 0029).
23. Install LIGHT TEST push-button switches. (See WP 0028).
24. Perform procedures in WP 0027 to secure circuit breaker panel.



**Figure 1. Circuit Breaker Panel.**



END OF TASK

END OF WORK PACKAGE



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**FIELD MAINTENANCE**  
**PREPARATION FOR STORAGE OR SHIPMENT**

---

**INITIAL SETUP:****Materials/Parts**

Masking Tape (WP 0065, Item 5)

**References**

SB 740-91-001

TM 38-230-2

TM 43-0139

WP 0010

WP 0015

**Personnel Required**

MOS 52D

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**SCOPE**

1. Instructions in this work package apply to the PP-8440/ASM and PP-8440A/ASM Power Distribution Boxes to prepare it for storage and shipment.
2. Instructions pertaining to administrative storage are covered in SB 740-91-001, Storage Serviceability Standard for CECOM materiel.
3. Placement of equipment in administrative storage should be for short periods of time when a shortage of maintenance effort exists. Items should be in mission readiness within 24 hours or within the item factors as developed by the directing authority. During the storage period appropriate maintenance records will be kept.
4. Before placing equipment in administrative storage, current maintenance services and Equipment Serviceable Criteria (ESC) evaluations should be completed. Shortcomings and deficiencies should be corrected, and all Modification Work Orders (MWOs) should be applied.
5. Storage site selection. Items selected for administrative storage should be preferably stored inside. If inside storage is not available, trucks, van/shelters, CONEX containers and other containers may be used.

**PREPARATION FOR STORAGE OR SHIPMENT**

1. Inspection. Perform preventative maintenance checks and services listed in WP 0010 and WP 0016. Ensure all terminal stud nuts are tight.
2. Repair. Correct deficiencies noted during inspection. Refer repairs beyond the scope of Field maintenance to Sustainment Maintenance personnel.
3. Cleaning. Refer to operator PMCS (WP 0010) for cleaning instructions.
4. Painting.
  - a. Remove rust, corrosion, and flaked and peeling paint. Ensure surfaces to be painted are dry. Refer to TM 38-230-1, Packaging of Materiel: Preservation.
  - b. Mask connectors and data plates that are not to be painted with masking tape.
  - c. Paint surface as required to protect against deterioration. Refer to TM 43-0139, Painting Instructions for Army Materiel.
5. Packaging. Refer to TM 38-230-2, Packing of Materiel: Preservation.

**END OF TASK****END OF WORK PACKAGE**



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**FIELD MAINTENANCE**  
**ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION**

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**ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION****Scope**

WP 0052 includes complete instructions for making items authorized to be manufactured or fabricated at the field.

**How to Use the Index of Manufactured Items**

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

**Explanation of the Illustrations of Manufactured Items**

All instructions needed by maintenance personnel to manufacture the item are included on the illustrations. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

**INDEX OF MANUFACTURED ITEMS**

<b>P/N AND/OR DWG NO</b>	<b>PART DESCRIPTION</b>	<b>REFERENCE</b>
006-10055	Flexible Foam Boot	WP 0052, Figure 1

**END OF WORK PACKAGE**



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FIELD MAINTENANCE

FLEXIBLE FOAM BOOT

---

INITIAL SETUP:

Tools and Special Tools

Tool Kit, Electronic (WP 0063, Table 2, Item 1)

References

MIL-HDBK-454B  
TM 9-4120-404-24P

Materials/Parts

CB3 and CB4 Boot P/N 006-10055

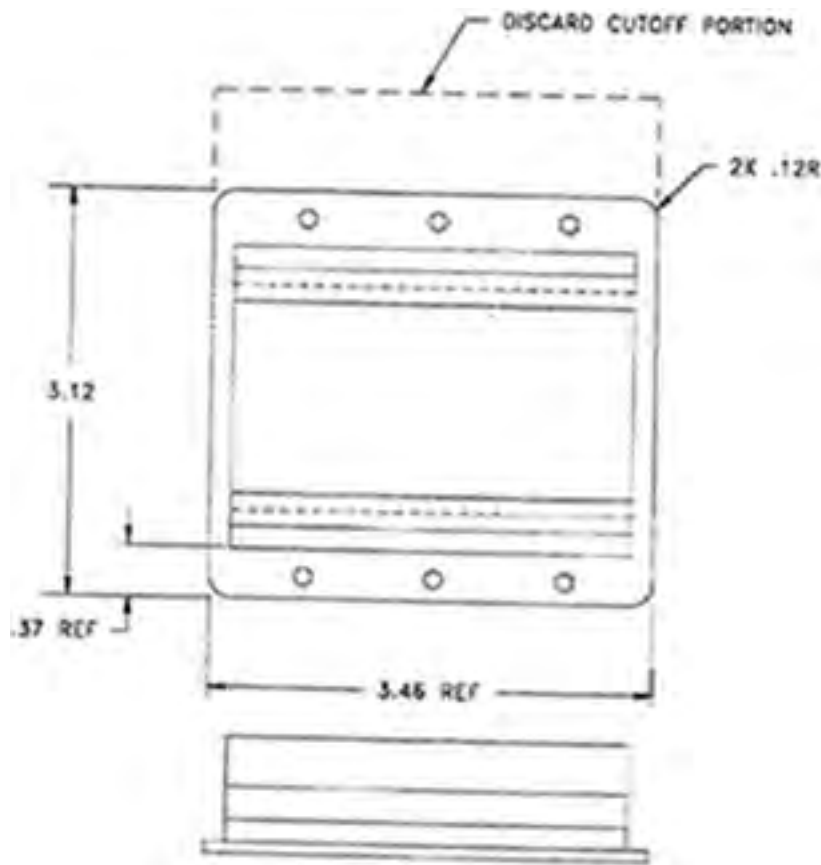
Equipment Condition

Grounded, Off and Operational

Personnel Required

MOS 52D

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## PROCEDURE

Alter item from part number 006-10055, CAGEC - 74193. Workmanship shall be in accordance with MIL-HDBK-454B.

Boot shall be placed in suitable container and marked "80064, A3261173".

Mark manufacturers code identification with prefix "MFR" per MIL-STD-130N.

Data provided on Figure 1 shall be sufficient to fabricate item. Alternate methods of fabrication are permitted, provided that the performance data, and design requirements are met to satisfy the design of the end item.

## List of Bulk Materials

DESCRIPTION	QUANTITY	IDENTIFYING NUMBER	REFERENCE INFORMATION
BOOT, DUST AND MOISTURE SEAL	1	P/N 006-10055	

Figure 1. Circuit Breaker (CB3 and CB4) Protective Boot Preparation.

END OF WORK PACKAGE



## **CHAPTER 7**

### **OPERATOR AND FIELD PARTS INFORMATION**



## OPERATOR AND FIELD MAINTENANCE

### INTRODUCTION

## INTRODUCTION

### 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 operator and field maintenance of the Electric Power Plant III. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

### GENERAL

In addition to the Introduction work package, this RPSTL is divided into the following work packages.

1. **Repair Parts List Work Packages.** Work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include 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. Sending units, brackets, filters, and bolts are listed with the component they mount on. Bulk materials are listed by item name in FIG. BULK at the end of the work packages. Repair parts kits are listed separately in their own functional group and work package. Repair parts for reparable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.
2. **Special Tools List Work Packages.** Work packages containing lists of special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column). Tools that are components of common tool sets and/or Class VII are not listed.
3. **Cross-Reference Indexes Work Packages.** There are two cross-reference indexes work packages in this RPSTL: the National Stock Number (NSN) Index work package and the Part Number (P/N) Index work package. The National Stock Number Index work package refers you to the figure and item number. The Part Number Index work package refers you to the figure and item number.

## EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES

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

SMR CODE (Column (2)). The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout. This entry may be subdivided into 4 subentries, one for each service.

**Table 1. SMR Code Explanation.**

<b>SOURCE</b>		<b>MAINTENANCE</b>		<b>RECOVERABILITY</b>	
<b>CODE</b>		<b>CODE</b>		<b>CODE</b>	
<b>XX</b>		<b>XX</b>		<b>X</b>	
1st two positions:	3rd position:	4th position:	5th position:		
How to get an item.	Who can install, replace, or use the item.	Who can do complete repair* on the item	Who determines disposition action on unserviceable items.		

\*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.

## INTRODUCTION – CONTINUED

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

SOURCE CODE	APPLICATION/EXPLANATION
PA	
PB	
PC	
PD	
PE	
PF	
PG	
PH	
PR	
PZ	
KD	
KF	
KB	
MF-Made at field	
MH-Made at below depot/sustainment level	
ML-Made at SRA	
MD-Made at depot	
MG-Navy only	
AF-Assembled by field	
AH-Assembled by below depot/sustainment level	
AL-Assembled by SRA	
AD-Assembled by depot	
AG-Navy only	
XA	
XB	
XC	
XD	

**NOTE**

Items coded PC are subject to deterioration.

Stock items; use the applicable NSN to requisition/request items with these source codes. They are authorized to the level indicated by the code entered in the third position of the SMR code.

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 third position of the SMR code. The complete kit must be requisitioned and applied.

Items with these codes are not to be requisitioned/requested individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk material group work package of the RPSTL. If the item is authorized to you by the third position code of the SMR code, but the source code indicates it is made at higher level, order the item from the higher level of maintenance.

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 third position 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.

Do not requisition an "XA" coded item. Order the next higher assembly. (Refer to NOTE below.)

If an item is not available from salvage, order it using the CAGEC and part number.

Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's part number.

Item is not stocked. Order an XD-coded item through local purchase or normal supply channels using the CAGEC and part number given, if no NSN is available.

**INTRODUCTION – CONTINUED****NOTE**

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

Maintenance Code. Maintenance codes tell 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:

Third Position. 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 the following levels of maintenance:

<b>MAINTENANCE CODE</b>	<b>APPLICATION/EXPLANATION</b>
C -	Crew
F -	Field maintenance can remove, replace, and use the item.
H -	Below depot/sustainment level can remove, replace, and use the item.
L -	Specialized repair activity can remove, replace, and use the item.
G -	Afloat and ashore intermediate maintenance can remove, replace, and use the item (Navy only)
K -	Contractor facility can remove, replace, and use the item
Z -	Item is not authorized to be removed, replace, or used at any maintenance level
D -	Depot can remove, replace, and use the item

**NOTE**

Army will use C in the third position. However, for joint service publications, other services may use O.

Fourth Position. The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (perform all authorized repair functions).

**NOTE**

Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

<b>MAINTENANCE CODE</b>	<b>APPLICATION/EXPLANATION</b>
C -	Crew (operator) is the lowest class that can do complete repair.
F -	Field is the lowest level that can do complete repair of the item.
H -	Below depot/sustainment level is the lowest level that can do complete repair of the item.
L -	Specialized repair activity (enter specialized repair activity or TASMG designator) 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.

**INTRODUCTION – CONTINUED**

<b>MAINTENANCE CODE</b>	<b>APPLICATION/EXPLANATION</b>
G -	Both afloat and ashore intermediate levels are capable of complete repair of item. (Navy only)
K -	Complete repair is done at contractor facility
Z -	Nonreparable. No repair is authorized.
B -	No repair is authorized. No parts or special tools are authorized for maintenance of "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

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

<b>RECOVERABILITY CODE</b>	<b>APPLICATION/EXPLANATION</b>
Z -	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
F -	Reparable item. When uneconomically repairable, condemn and dispose of the item at the field level.
H -	Reparable item. When uneconomically repairable, condemn and dispose of the item at the below depot/sustainment level.
D -	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are 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 (such as precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.
G -	Filed level repairable item. Condemn and dispose at either afloat or ashore intermediate levels. (Navy only)
K -	Reparable item. Condemnation and disposal to be performed at contractor facility

NSN (Column (3)). The NSN for the item is listed in this column.

CAGEC (Column (4)). The Commercial and Government Entity Code (CAGEC) is a five-digit code which is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

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

**NOTE**

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

DESCRIPTION AND USABLE ON CODE (UOC) (Column (6)). This column includes the following information:

1. The federal item name, and when required, a minimum description to identify the item.

**INTRODUCTION – CONTINUED**

2. Part numbers of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description in column (6) for a given figure in both the repair parts list and special tools list work packages.

QTY (Column (7)). 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 instead of a quantity indicates that the quantity is variable and quantity may change from application to application.

**EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS**

1. National Stock Number (NSN) Index Work Package. NSN's in this index are listed in National Item Identification Number (NIIN) sequence.  
 STOCK NUMBER Column. This column lists the NSN in NIIN sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number.  
 For example, if the NSN is 5385-01-574-1476, the NIIN is 01-574-1476.  
 FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.  
 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.
2. Part Number (P/N) Index Work Package. Part numbers in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combinations which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).  
 PART NUMBER Column. Indicates the part number assigned to the item.  
 FIG. Column. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.  
 ITEM Column. The item number is the number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

**SPECIAL INFORMATION**

UOC. The UOC 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 under the applicable item/nomenclature. Uncoded items are applicable to all models. Identification of the UOCs used in the RPSTL are:

<b>CODE</b>	<b>USED ON</b>
LDD	Model PP-8440/ASM
6AX	Model PP-8440A/ ASM

Fabrication Instructions. Bulk materials required to manufacture items are listed in the bulk material functional group of this RPSTL. Part numbers for bulk material are also referenced in the Description Column of the line item entry for the item to be manufactured/fabricated.

## INTRODUCTION – CONTINUED

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 a cross-reference between the NSN / Part Number (P/N) Index work packages and the bulk material list in the repair parts list work package.

Illustrations List. The illustrations in this RPSTL contain field authorized items. The tabular list in the repair parts list work package contains only those parts coded "F" in the third position of the SMR code, therefore, there may be a break in the item number sequence.

## HOW TO LOCATE REPAIR PARTS

### 1. When NSNs or Part Numbers Are Not Known

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 lists are divided into the same groups.

Second. Find the figure covering the functional group or the subfunctional group to which the item belongs.

Third. Identify the item on the figure and note the number(s). Fourth. Look in the repair parts list work packages for the figure and item numbers. The NSNs and part numbers are on the same line as the associated item numbers.

### 2. When NSN is Known

First. If you have the NSN, look in the STOCK NUMBER column of the NSN index work package. The NSN is arranged in NIIN sequence. Note the figure and item number next to the NSN.

Second. Turn to the figure and locate the item number. Verify that the item is the one you are looking for.

### 3. When Part Number Is Known

First. If you have the part number and not the NSN, look in the PART NUMBER column of the part number index work package. Identify the figure and item number.

Second. Look up the item on the figure in the applicable repair parts list work package.

## ABBREVIATIONS

Abbreviation	Explanation
A	AMPERE
AC	ALTERNATING CURRENT
AP	ATTACHING PART
AR	AS REQUIRED
AS	DRIVING SIDE
BL	BLUE
BR	BROWN
D	DIAMETER
DC	DIRECT CURRENT
ES	EXCITER SIDE
FIG	FIGURE
GRD	GROUND



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**INTRODUCTION – CONTINUED**

Hz	HERTZ
INC	INCORPORATED
L	LITER
LH	LEFT HAND
M	METER
N	NEUTRAL
NI	NOT ILLUSTRATED
NO.	NUMBER
NR	NUMBER
NSN	NATIONAL STOCK NUMBER
P/O	PART OF
PDU	POWER DISTRIBUTION UNIT
PH	PHASE
QTY	QUANTITY
RH	RIGHT HAND
SEC	SECONDS
SW	BLACK
V	VOLT
VA	VOLTAMPERE
W	WATT
WT	WHITE
kW	KILOWATT
k $\Omega$	KILOHM
mV	MILLIVOLT
mm	MILLIMETER
$\mu$ F	MICROFARAD

**END OF WORK PACKAGE**



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**OPERATOR AND FIELD MAINTENANCE**  
**GROUP 00 PP-8440/ASM AND PP-8440A/ASM POWER DISTRIBUTION BOX**

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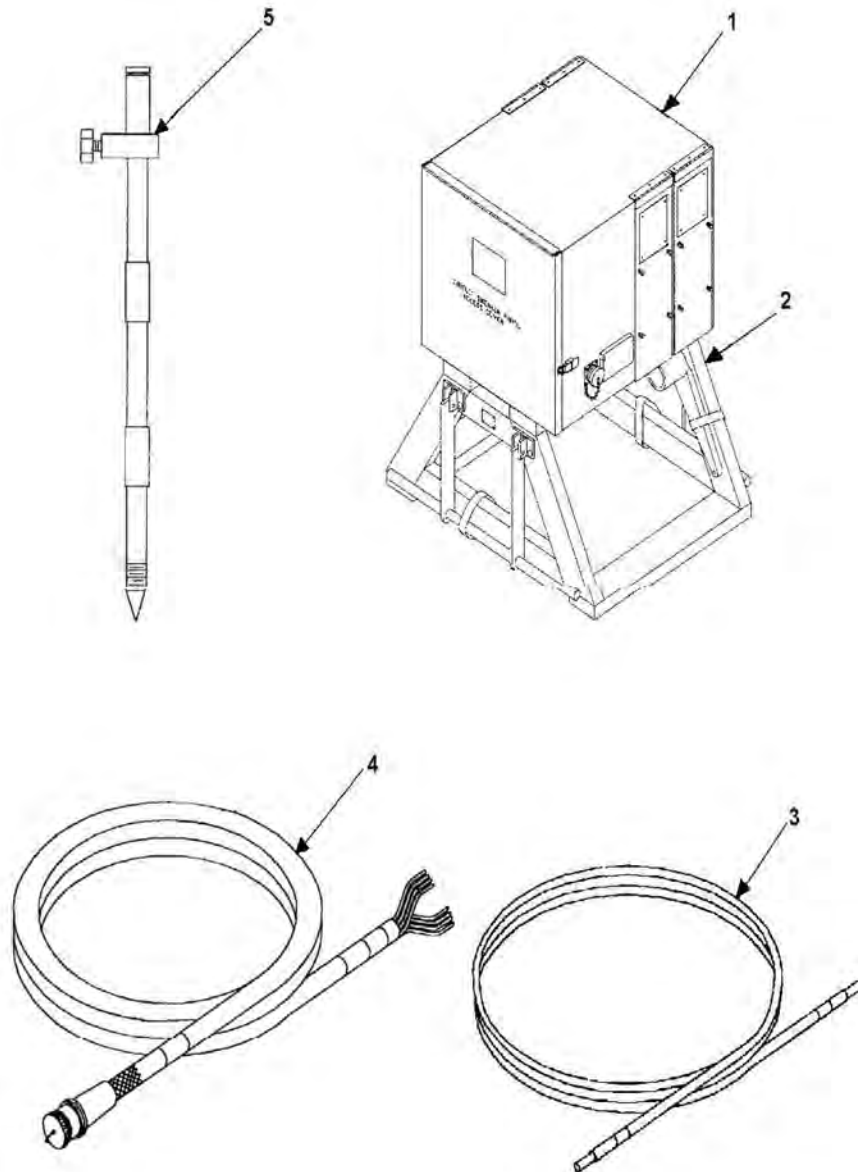


Figure 1. PP-8440/ASM and PP-8440A/ASM Power Distribution Box (Sheet 1 of 2).

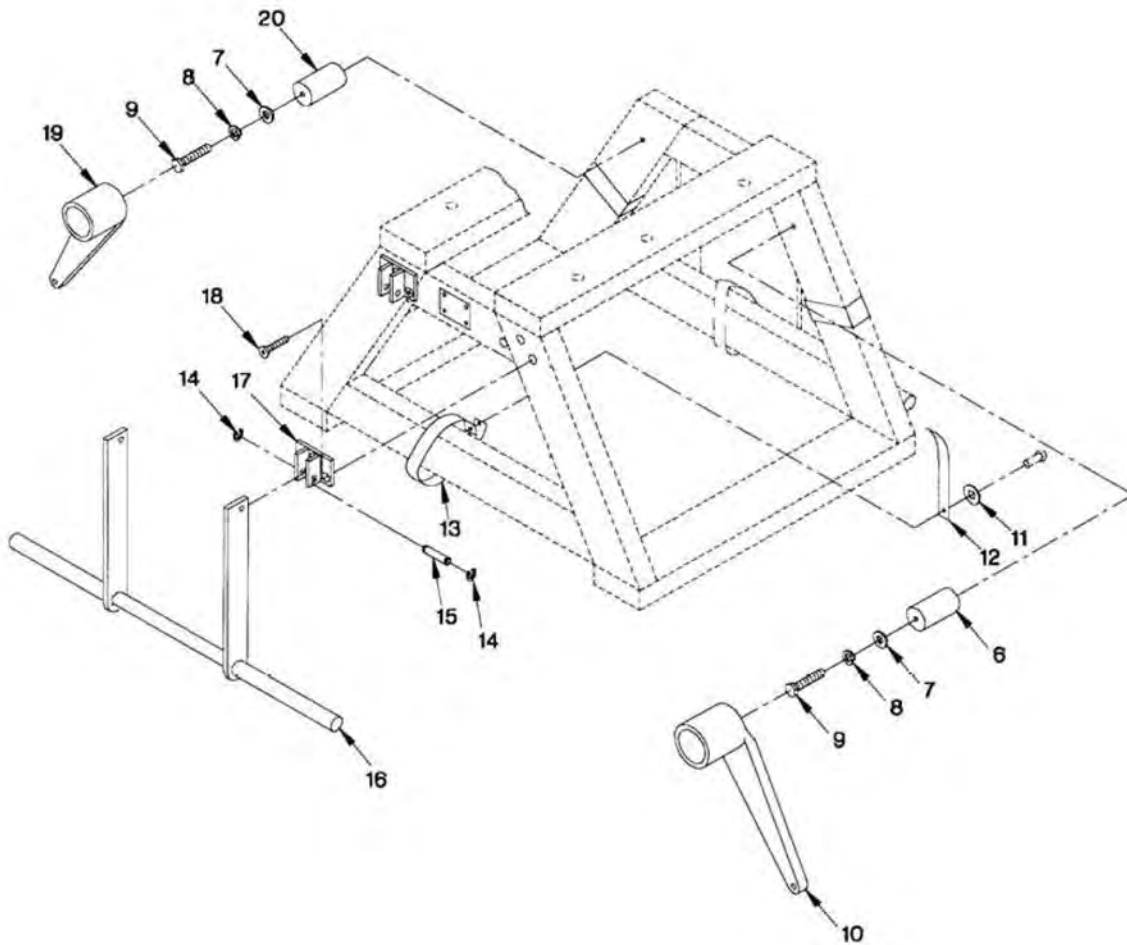


Figure 1. PP-8440/ASM and PP-8440A/ASM Power Distribution Box (Sheet 2 of 2).

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
<b>GROUP 00 PP-8440/ASM AND PP-8440A/ASM POWER DISTRIBUTION BOX</b> <b>FIGURE 1 PP-8440/ASM AND PP-8440A/ASM POWER DISTRIBUTION BOX</b>						
1	XBFDD	6110-01-423-8822	14850	A3254545	PP-8440/ASM POWER DISTRIBUTION BOX SUBASSEMBY (SEE FIGURE 2 FOR BREAKDOWN) UOC: LDD .....	1
1	XBFDD	6110-01-550-9613	14850	A3317506	PP-8440A/ASM POWER DISTRIBUTION BOX SUBASSEMBY (SEE FIGURE 3 FOR BREAKDOWN) UOC: 6AX .....	1
2	XBFDD		80063	A3254548	. BASE, WELDED ASSEMBLY UOC: LDD .....	1
2	XBFDD		80063	A3317508	. BASE, WELDED ASSEMBLY UOC: 6AX .....	1
3	PAFZZ	5990-01-433-8637	14850	A3254560	. STRIP, ELECTRICAL GROUNDING UOC: LDD .....	1
3	PAFZZ		14850	A3273285	. STRIP, ELECTRICAL GROUNDING UOC: 6AX .....	1
4	PAFDD	5995-01-433-5322	14850	A3254554	. CABLE ASSEMBLY, POWER, ELECTRICAL .....	1
5	PAFZZ	5975-00-878-3791	58536	AA55804-3B 9FT	. ROD, GROUND .....	1
6	XBFZZ		80063	A3254565-2	. STANDOFF, WRENCH .....	1
7	PAFZZ	5310-01-389-6965	80205	MS15795-812	. WASHER, FLAT .....	2
8	PAFZZ	5310-00-974-6623	80205	MS35338-140	. WASHER, LOCK .....	2
9	PAFZZ	5306-00-958-1148	96906	MS35307-348	. BOLT, MACHINE .....	2
10	PAFZZ	5120-01-046-4948	79343	00364-0354	. WRENCH, BOX .....	1
11	PAFZZ	5310-00-883-9384	80205	MS15795-842	. WASHER, FLAT .....	4
12	PAFZZ	8315-00-106-5973	81337	6-1-5876	. FASTENER TAPE, HOOK .....	4
13	PAFZZ	8315-00-106-5974	81349	5-4-1695-4	. FASTNER TAPE, PILE .....	4
14	PAFZZ	5365-00-584-0618	96906	MS90707-4037	. RING, RETAINING .....	8
15	XBFZZ		80063	A3254563	. PIN, BRACKET .....	4
15	XBFZZ		80063	A3273288	. PIN, BRACKET .....	4

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
16	XBFZZ		80063	A3254562	. HANDLE, WELDED ASSEMBLY UOC: LDD .....	2
16	XBFZZ		80063	A3273287	. HANDLE, WELDED ASSEMBLY UOC: 6AX .....	2
17	XBFZZ		80063	A3254561	. BRACKET OUC: LDD .....	4
17	XBFZZ		80063	A3273286	. BRACKET OUC: 6AX .....	4
18	PAFZZ	5305-00-455-9960	96906	MS24693-C1 20	. SCREW, MACHINE .....	12
19	PAFZZ	5120-01-019-9564	30554	72-2029-1	. WRENCH, BOX .....	1
20	XBFZZ		80063	A3254565-1	. STANDOFF, WRENCH .....	1
END OF FIGURE						

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**OPERATOR AND FIELD MAINTENANCE**  
**GROUP 01 PP-8440/ASM POWER DISTRIBUTION BOX**

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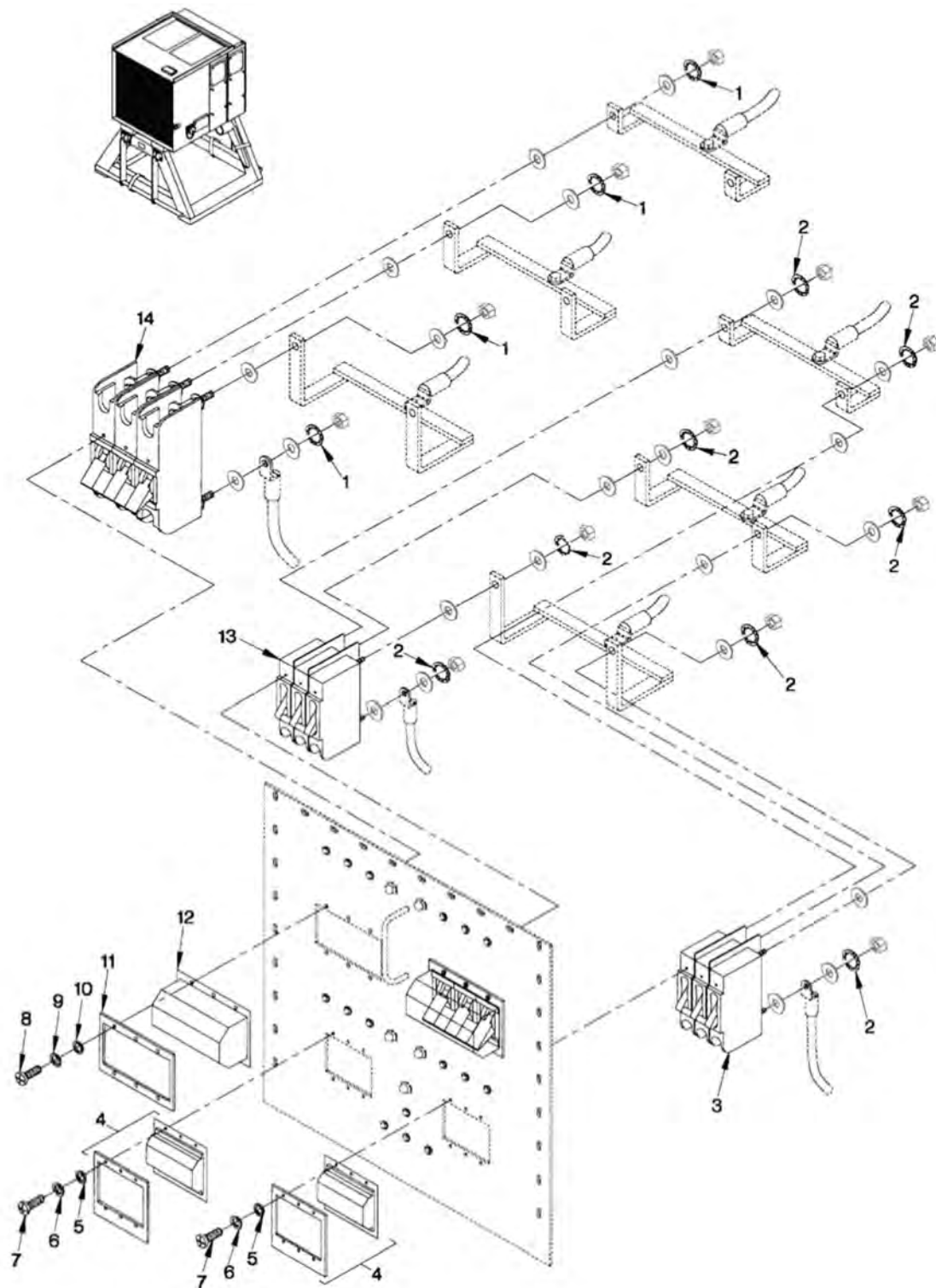


Figure 2. PP-8440/ASM Power Distribution Box Subassembly (Sheet 1 of 6).

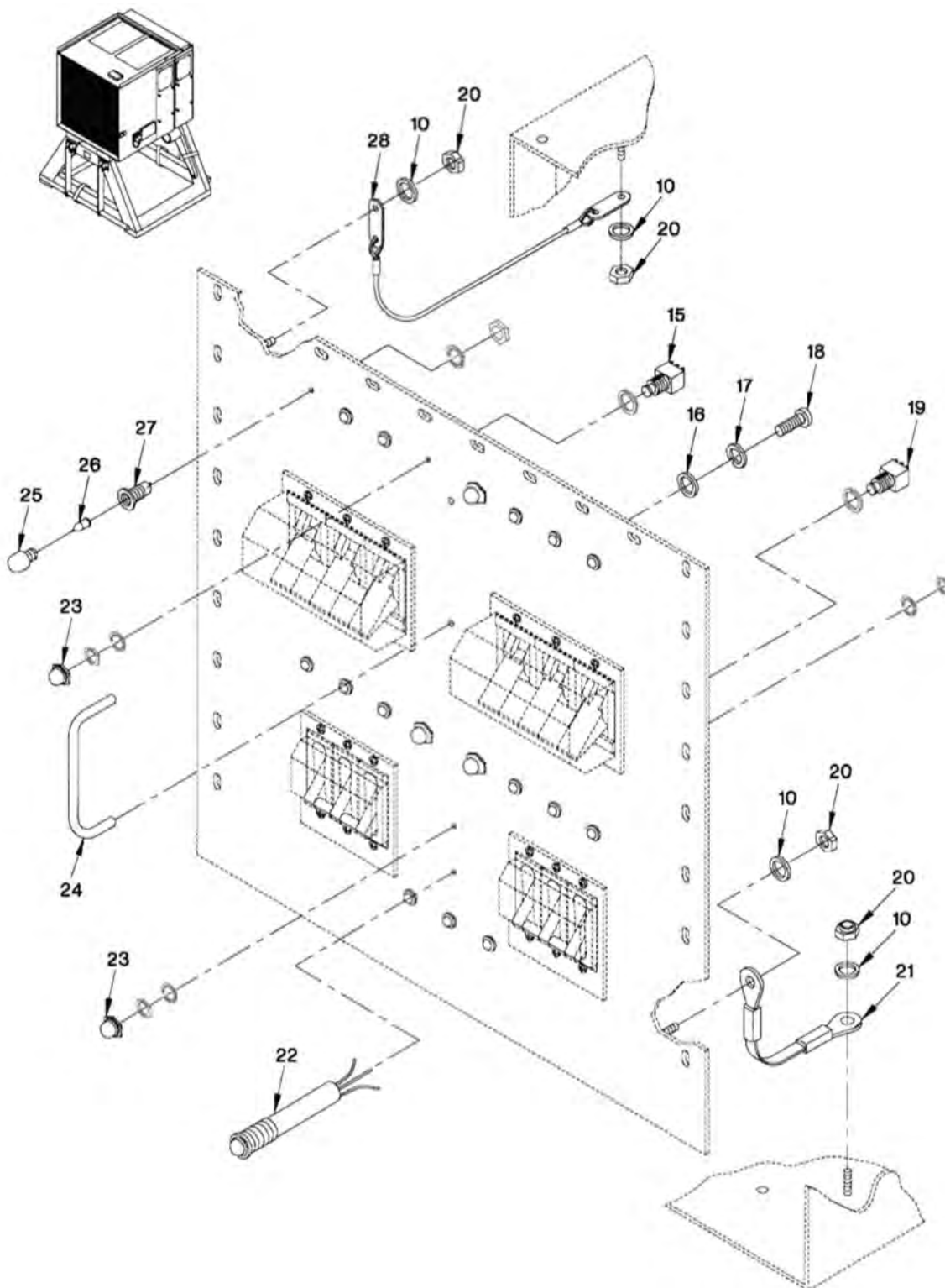


Figure 2. PP-8440/ASM Power Distribution Box Subassembly (Sheet 2 of 6).



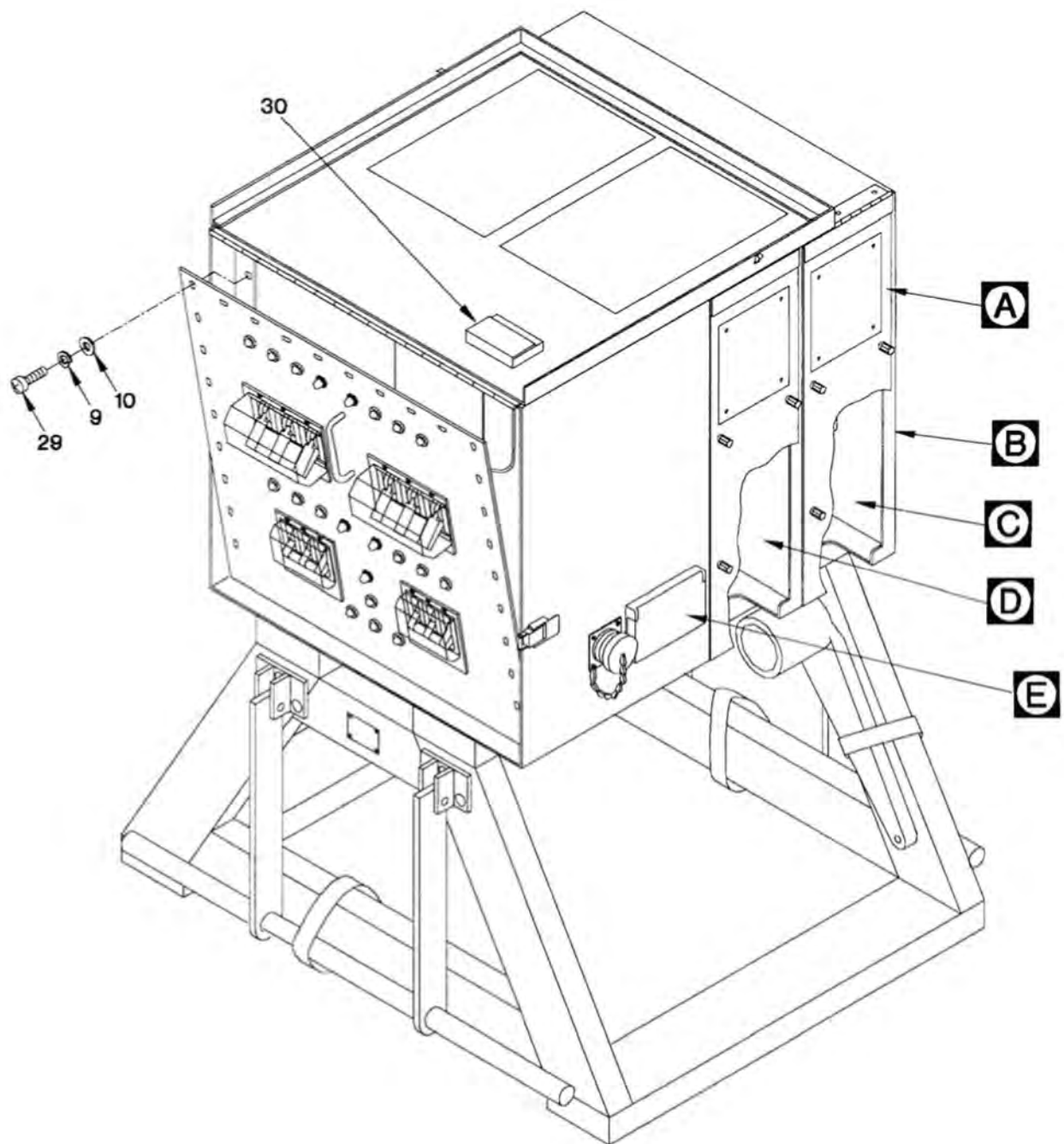


Figure 2. PP-8440/ASM Power Distribution Box Subassembly (Sheet 3 of 6).

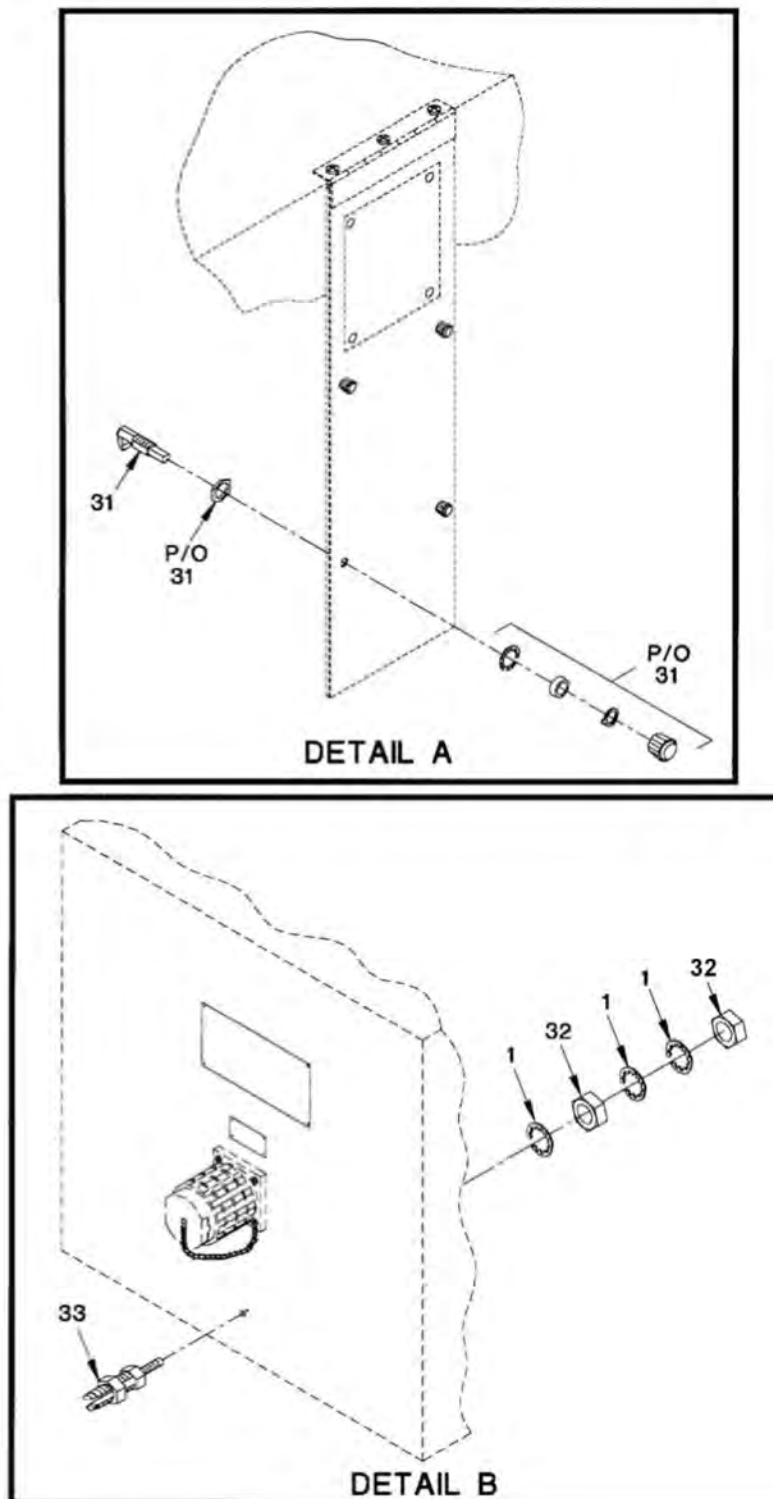


Figure 2. PP-8440/ASM Power Distribution Box Subassembly (Sheet 4 of 6).

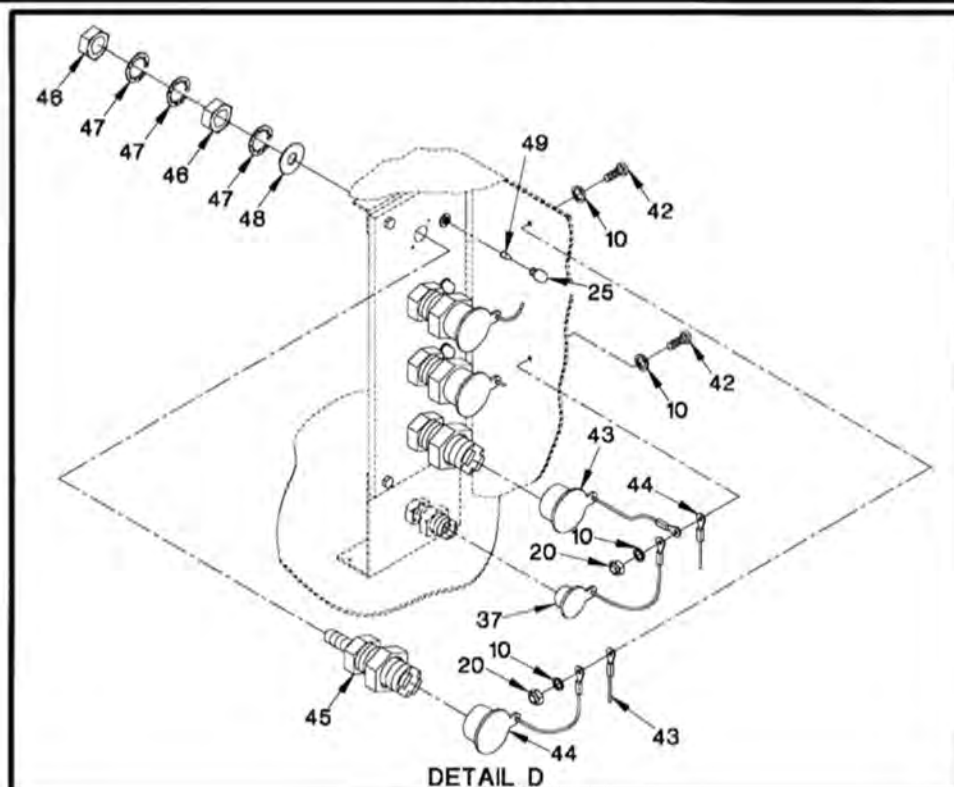
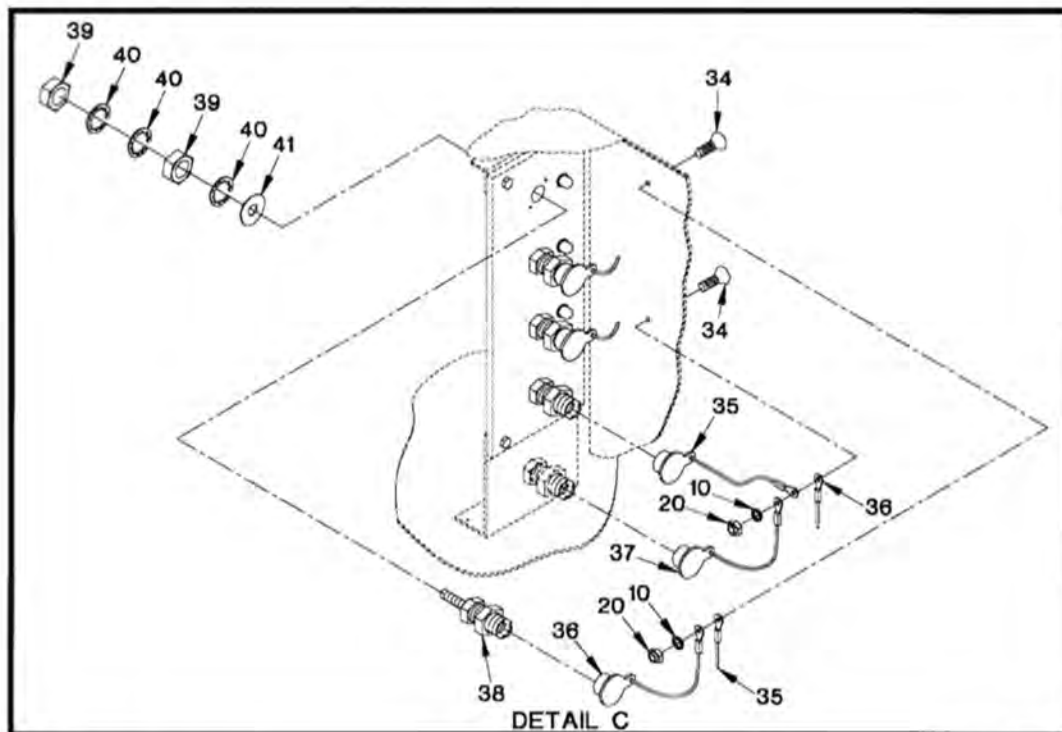


Figure 2. PP-8440/ASM Power Distribution Box Subassembly (Sheet 5 of 6).

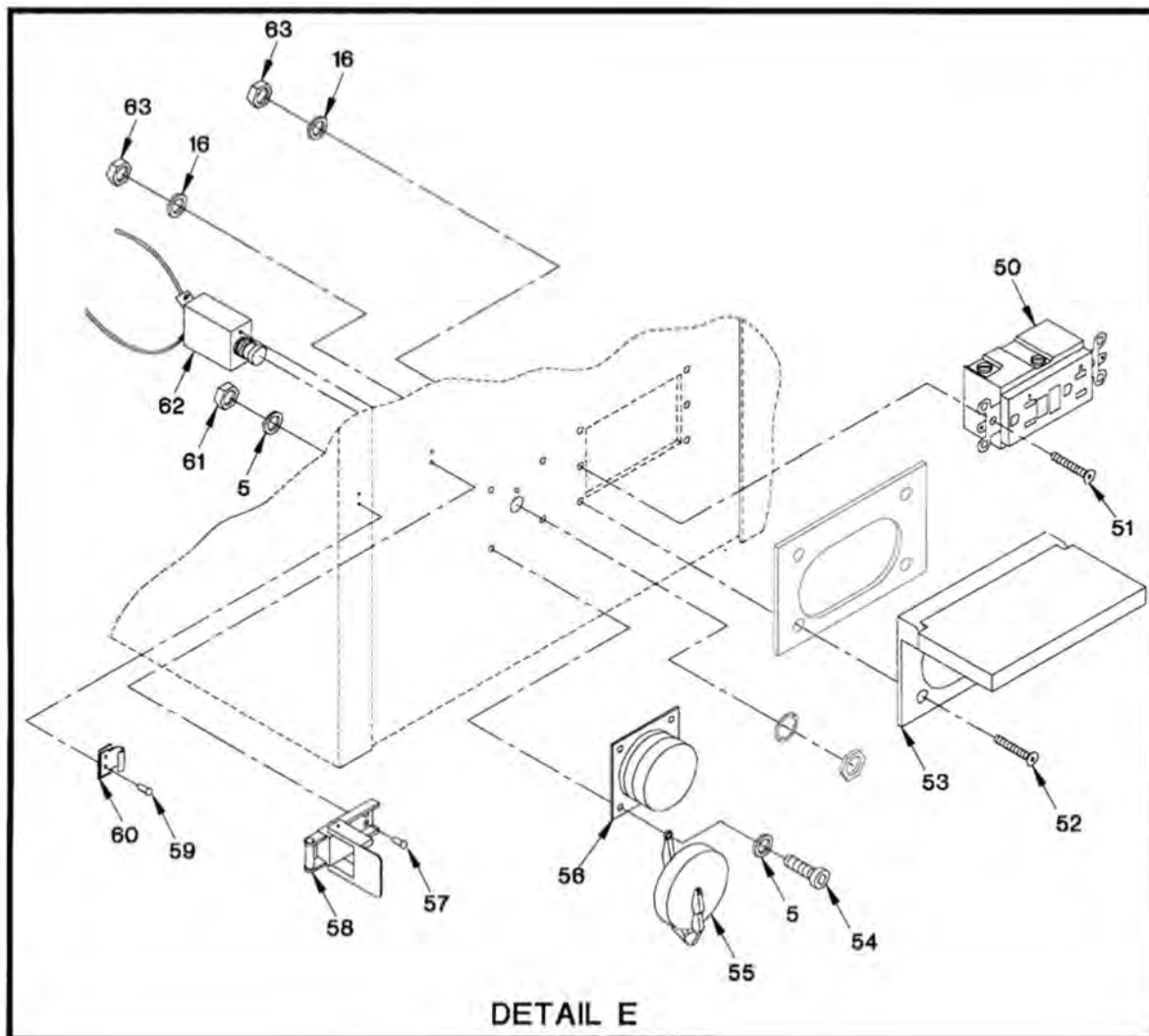


Figure 2. PP-8440/ASM Power Distribution Box Subassembly (Sheet 6 of 6).

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
<b>GROUP 01 PP-8440/ASM POWER DISTRIBUTION BOX SUBASSEMBLY</b> <b>FIGURE 2 PP-8440/ASM POWER DISTRIBUTION BOX SUBASSEMBLY</b>						
1	PAFZZ	5310-00-022-8847	80205	MS35333-1 10	. WASHER, LOCK UOC: LDD .....	15
2	PAFZZ	5310-00-022-8834	80205	MS35333-108	. WASHER, LOCK UOC: LDD .....	12
3	PAFZZ	5925-01-433-5321	1W134	CD3-A3-DU0080-0 2A	. CIRCUIT BREAKER, 80 AMP UOC: LDD .....	1
4	MFFZZ	5340-01-434-2230	80063	A3261173	. BOOT, DUST AND MOISTURE SEAL UOC: LDD, MAKE FROM CAGE 74193 P/N 006-10055 .....	2
5	PAFZZ	5310-00-722-5998	80205	MS 15795-805	. WASHER, FLAT UOC: LDD .....	28
6	PAFZZ	5310-00-929-6395	80205	MS35338-1 36	. WASHER, LOCK UOC: LDD .....	12
7	PAFZZ	5305-00-054-6655	96906	MS51957-31	. SCREW, EXTERNALLY RELIEVED UOC: LDD .....	12
8	PAFZZ	5305-00-059-3659	80205	MS51 958-63	. SCREW, MACHINE UOC: LDD .....	12
9	PAFZZ	5310-00-933-8120	80205	MS35338-138	. WASHER, LOCK UOC: LDD .....	38
10	PAFZZ	5310-00-619-1148	80205	MS15795-808	. WASHER, FLAT UOC: LDD .....	60
11	XBFZZ		80063	A3254568	. BEZEL, CIRCUIT BREAKER UOC: LDD .....	2
12	XBFZZ	5340-01-434-3586	14850	A3254567	. BOOT, DUST AND MOISTURE SEAL UOC: LDD .....	2
13	PAFZZ	5925-01-433-5320	74193	CD3-A3-DU-0100-0 2A	. CIRCUIT BREAKER, 100 AMP UOC: LDD .....	1
14	PAFZZ	5925-01-433-5323	74193	GJ3-A3-DU-0200-2 A	. CIRCUIT BREAKER, 200 AMP UOC: LDD .....	2
15	PAFZZ	5930-01-181-6628	00779	1-1825042-0	. SWITCH, PUSH UOC: LDD .....	4
16	PAFZZ	5310-00-880-5978	80205	MS 15795-807	. WASHER, FLAT UOC: LDD .....	14
17	PAFZZ	5310-00-933-8119	80205	MS35338-137	. WASHER, LOCK UOC: LDD .....	2
18	PAFZZ	5303-00-054-6669	96906	MS51 957-44	. SCREW, MACHINE UOC: LDD .....	2
19	PAFZZ	5930-01-433-8640	95146	MPG-206F	. SWITCH, PUSH UOC: LDD .....	1
20	PAFZZ	5310-00-208-9255	80205	MS21044C3	. NUT, SELF-LOCKING, HEXAGON UOC: LDD .....	16
21	XBFZZ		80063	A3254564-001	. GROUND STRAP UOC: LDD .....	2

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
22	PAFZZ	6625-01-433-6261	52797	2A-6C4	. INDICATOR, PHASE SEQUENCE UOC: LDD .....	1
23	PAFZZ	5930-00-800-5770	81349	M5423/07-01	. BOOT, DUST AND MOISTURE SEAL UOC: LDD .....	5
24	XBFZZ		14557	4484	. HANDLE, PULL UOC: LDD .....	1
25	PAFZZ	6210-00-481-3334	81349	LC33CN2	. LENS,LIGHT UOC: LDD .....	27
26	PAFZZ	6240-01-433-8639	61951	G9B	. LAMP, GLOW UOC: LDD .....	15
27	PAFZZ	6210-00-183-0576	81349	LH88/2	. LIGHT, INDICATOR UOC: LDD .....	15
28	PAFZZ	4010-01-352-9899	84256	50996-9T	. WIRE ROPE ASSEMBLY, SINGLE LEG UOC: LDD .....	2
29	PAFZZ	5305-00-059-3661	80205	MS51 958-65	. SCREW, MACHINE UOC: LDD .....	26
30	XBFZZ		80063	A3254566	. BAG, STORAGE UOC: LDD .....	1
31	PAFZZ	5340-01-204-2545	94222	16-10-51 1-16	. FASTENER, PAWL UOC: LDD .....	16
32	PAFZZ	5310-00-903-3994	96906	MS51 969-3	. NUT, PLAIN, HEXAGON UOC: LDD .....	2
33	PAFZZ	5940-00-978-7672	96906	MS39347-3	. TERMINAL, STUD UOC: LDD .....	1
34	PAFZZ	5305-00-717-5592	80205	MS24693-C275	. SCREW, MACHINE UOC: LDD .....	2
35	PAFZZ	5340-01-434-0900	14850	A3261 175-004	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: LDD .....	4
36	PAFZZ	5340-01-436-4929	14850	A3261 175-003	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: LDD .....	4
37	PAFZZ	5340-01-434-3587	14850	A3261 175-005	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: LDD .....	4
38	PAFZZ	5940-01-433-6259	96906	MS39347-4	. TERMINAL, STUD UOC: LDD .....	12
39	PAFZZ	5310-00-913-5474	96906	MS51969-5	. NUT, PLAIN, HEXAGON UOC: LDD .....	24
40	PAFZZ	5310-00-042-4229	80205	MS35333-1 13	. WASHER, LOCK UOC: LDD .....	36
41	PAFZZ	5310-00-691-0141	80205	MS 15795-418	. WASHER, FLAT UOC: LDD .....	12
42	PAFZZ	5305-00-059-3662	80205	MS51 958-66	. SCREW, MACHINE UOC: LDD .....	6
43	PAFZZ	5340-01-434-0901	14850	A3261 175-002	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: LDD .....	4
44	PAFZZ	5340-01-434-0902	14850	A3261 175-001	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: LDD .....	4
45	PAFZZ	5940-00-237-2704	96906	MS39347-6	. TERMINAL,STUD UOC: LDD .....	8
46	PAFZZ	5310-00-913-5476	96906	MS51969-8	. NUT, PLAIN, HEXAGON UOC: LDD .....	16

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
47	PAFZZ	5310-00-209-3987	96906	MS35333-1 16	. WASHER, LOCK UOC: LDD .....	24
48	PAFZZ	5310-00-859-0719	80205	MS 15795-422	. WASHER, FLAT UOC: LDD .....	8
49	PAFZZ	6240-00-723-3378	81349	M1 5098/11-002	. LAMP, GLOW UOC: LDD .....	12
50	PAFZZ	5925-01-271-6053	74545	GF5362A	. INTERRUPTER, GROUND FAULT UOC: LDD .....	2
51	PAFZZ	5305-00-088-9671	96906	MS24693-C52	. SCREW, MACHINE UOC: LDD .....	4
52	PAFZZ	5305-00-764-0064	96906	MS51959-32	. SCREW, MACHINE UOC: LDD .....	8
53	PAFZZ	5935-01-300-9040	80063	A3273029-2	. COVER, ELECTRICAL CONNECTOR UOC: LDD .....	2
54	PAFZZ	5305-00-054-6656	96906	MS51 957-32	. SCREW, MACHINE UOC: LDD .....	8
55	PAFZZ	5935-01-191-4127	96906	MS25043-28DA	. COVER, ELECTRICAL CONNECTOR UOC: LDD .....	2
56	PAFZZ	5935-00-763-6983	96906	MS3105-28	. DUMMY CONNECTOR, RECEPTACLE UOC: LDD .....	2
57	PAFZZ	5320-01-134-5844	80205	NAS9301BNS-4-05	. RIVET, BLIND UOC: LDD .....	4
58	PAFZZ	5340-00-178-7870	96906	MS 18015-2	. LATCH UOC: LDD .....	2
59	PAFZZ	5320-00-117-6951	80205	MS20426AD4-6	. RIVET, SOLID UOC: LDD .....	4
60	PAFZZ	5340-00-237-6254	96906	MS1 8015-3	. STRIKE, CATCH UOC: LDD .....	2
61	PAFZZ	5310-00-982-6813	80205	MS21044-C06	. NUT, SELF-LOCKING, HEXAGON UOC: LDD .....	8
62	PAFZZ	5925-00-682-4015	81343	MS25244-20	. CIRCUIT BREAKER UOC: LDD .....	2
63	PAFZZ	5310-00-982-6814	80205	MS21044-C08	. NUT, SELF-LOCKING, HEXAGON UOC: LDD .....	12
END OF FIGURE						





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**OPERATOR AND FIELD MAINTENANCE**  
**GROUP 01 PP-8440A/ASM POWER DISTRIBUTION BOX**

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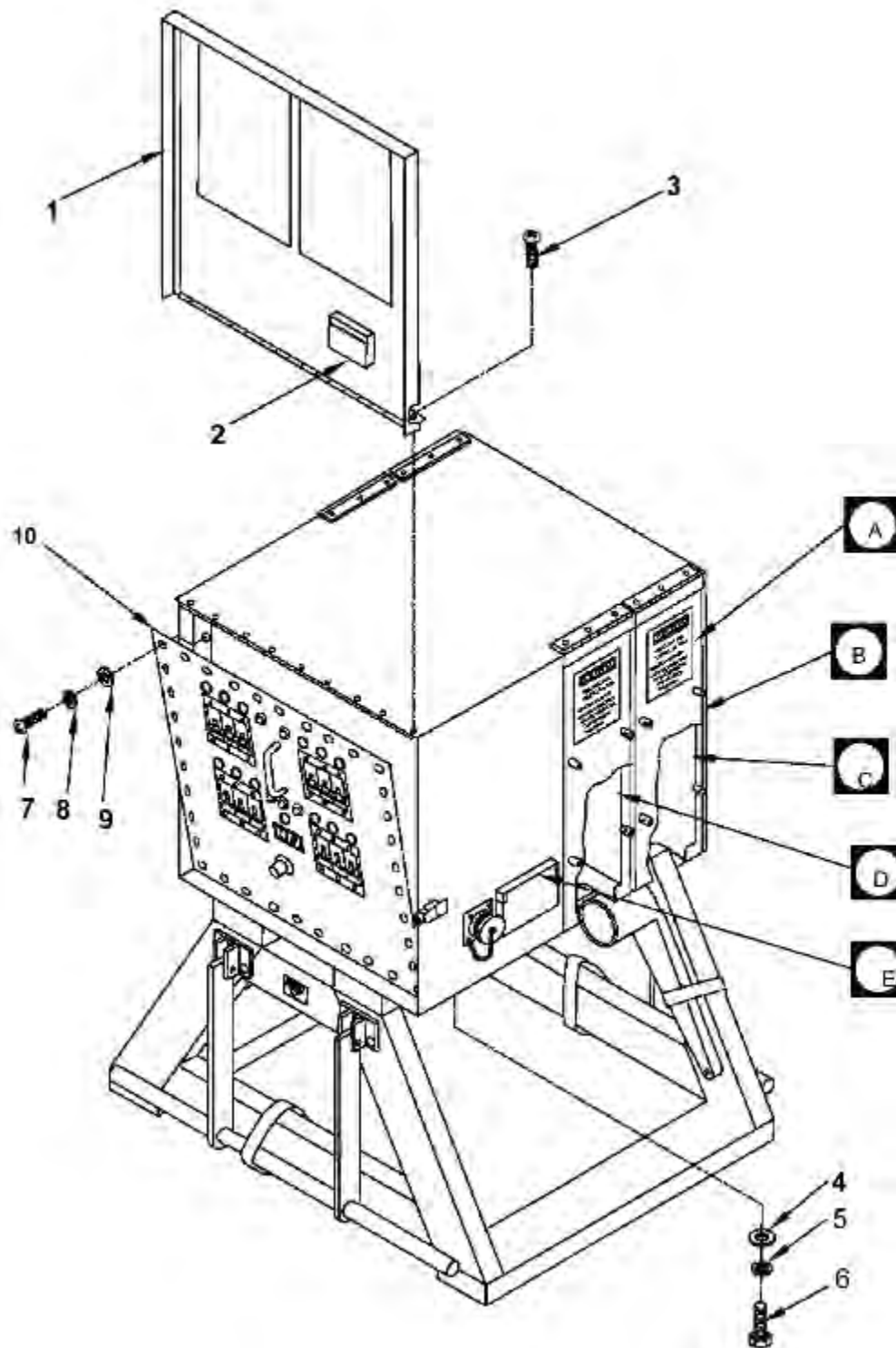


Figure 3. PP-8440A/ASM Power Distribution Box Subassembly (Sheet 1 of 6).

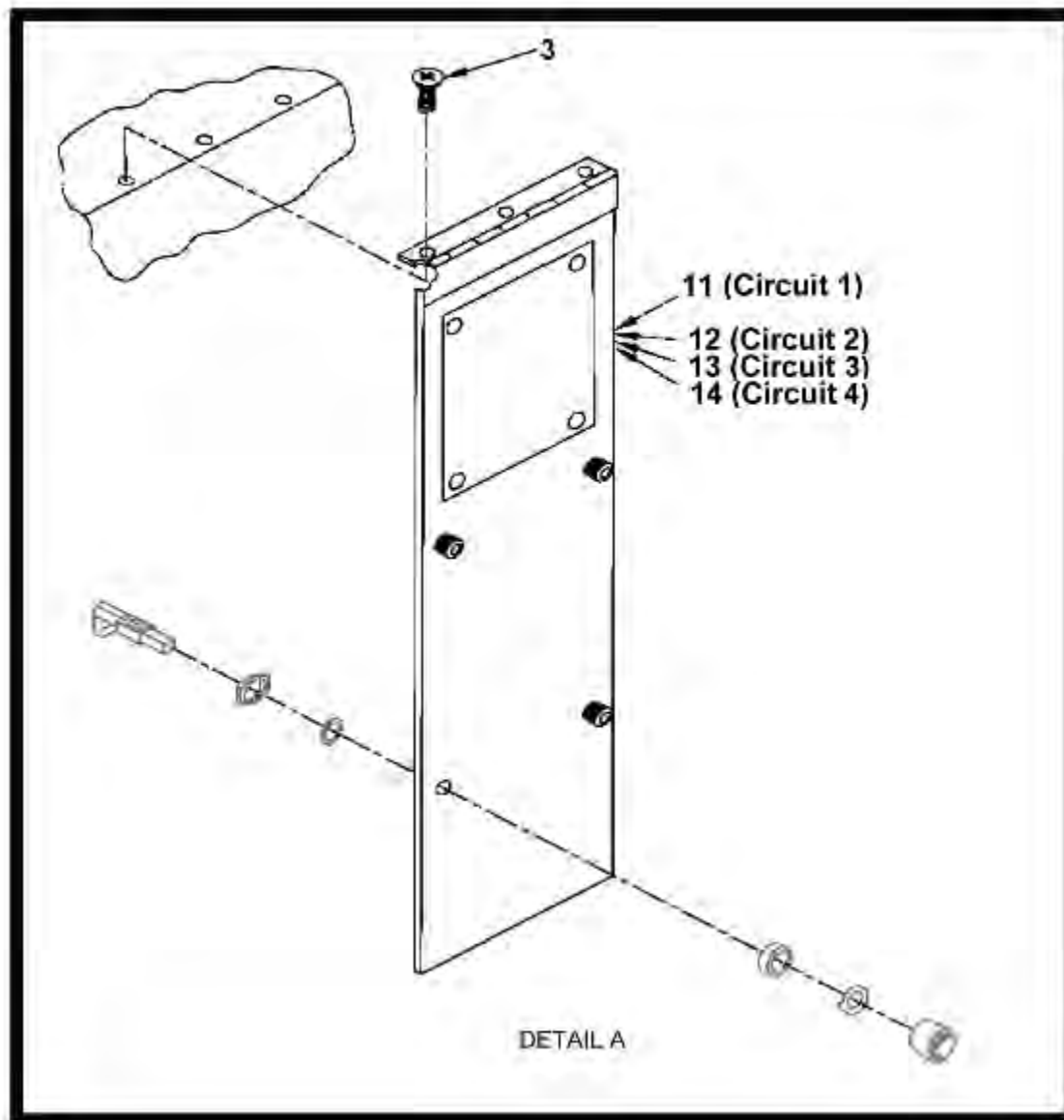


Figure 3. PP-8440A/ASM Power Distribution Box Subassembly (Sheet 2 of 6).

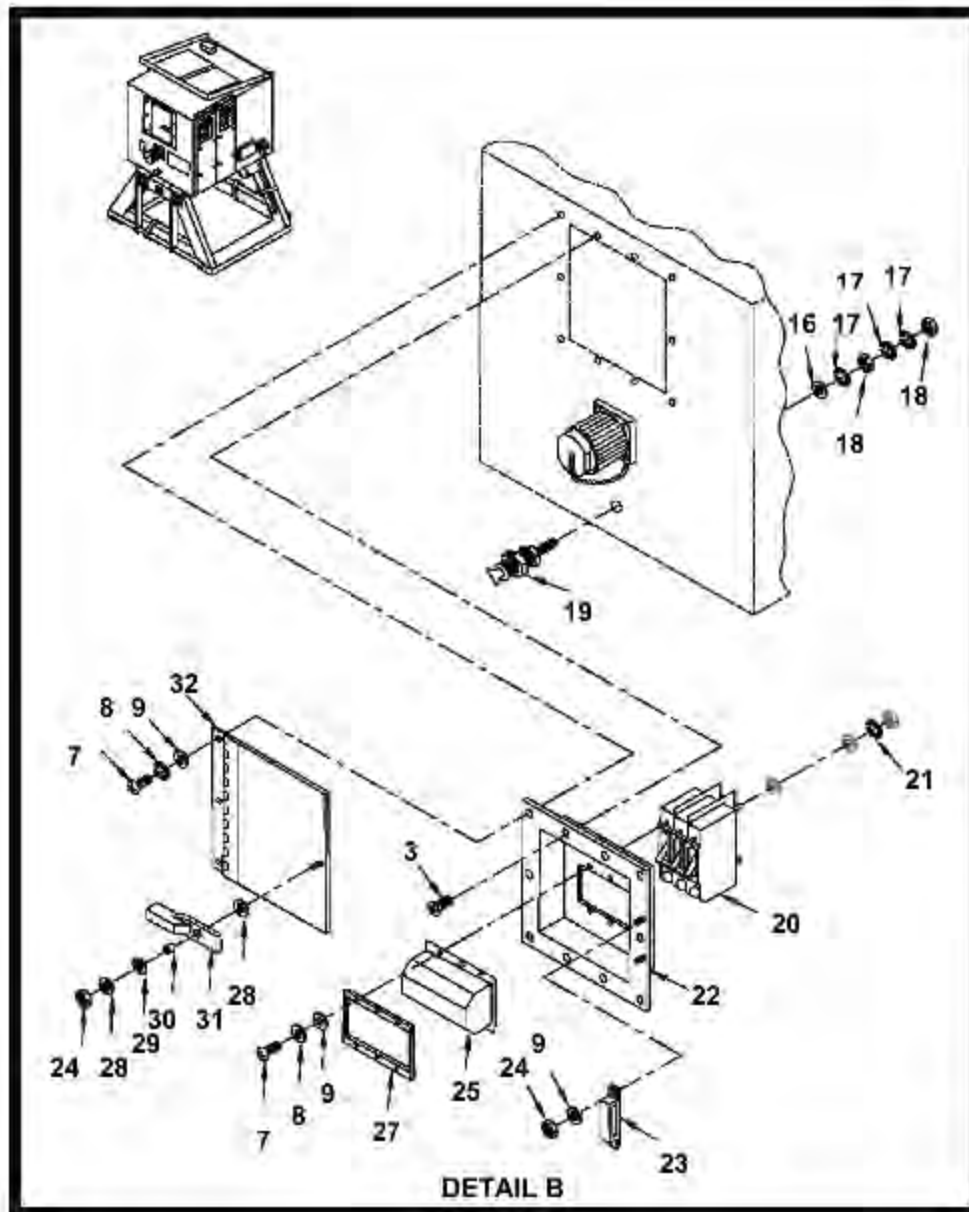


Figure 3. PP-8440A/ASM Power Distribution Box Subassembly (Sheet 3 of 6).

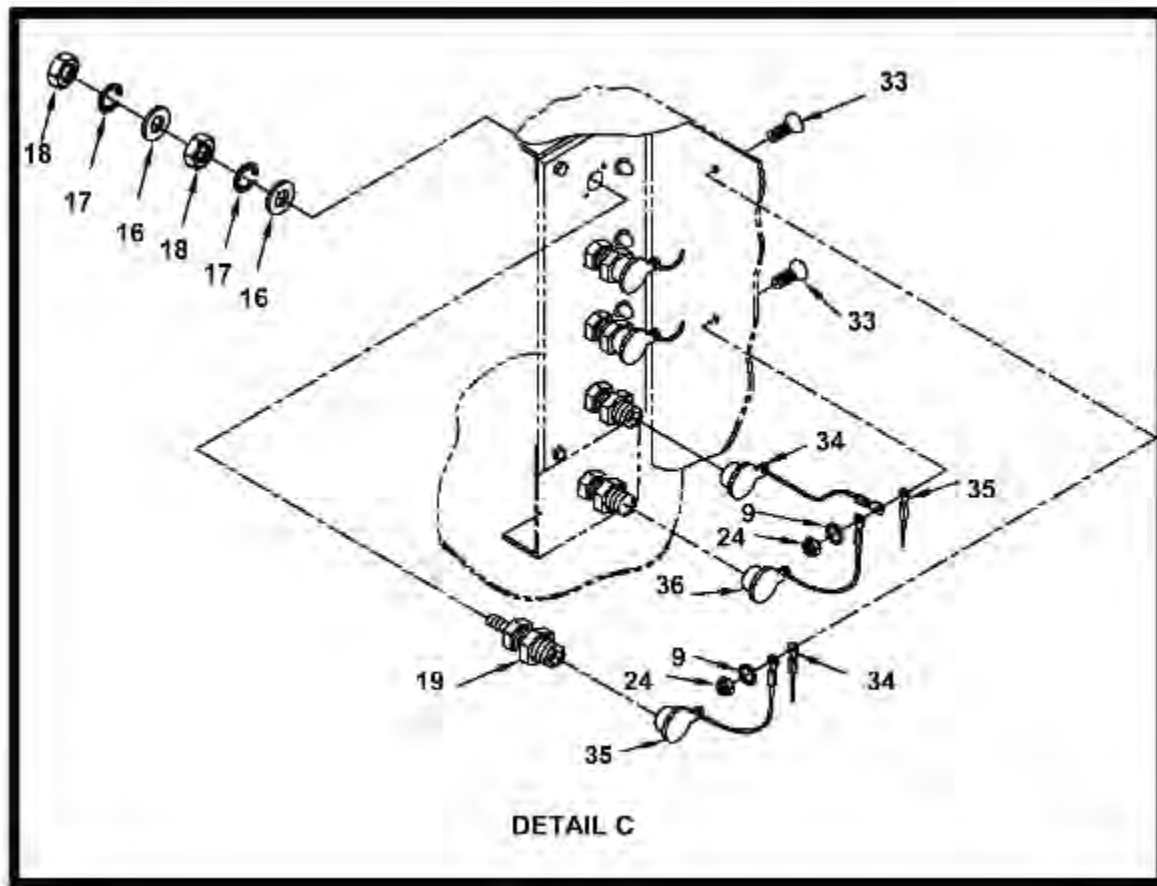


Figure 3. PP-8440A/ASM Power Distribution Box Subassembly (Sheet 4 of 6).

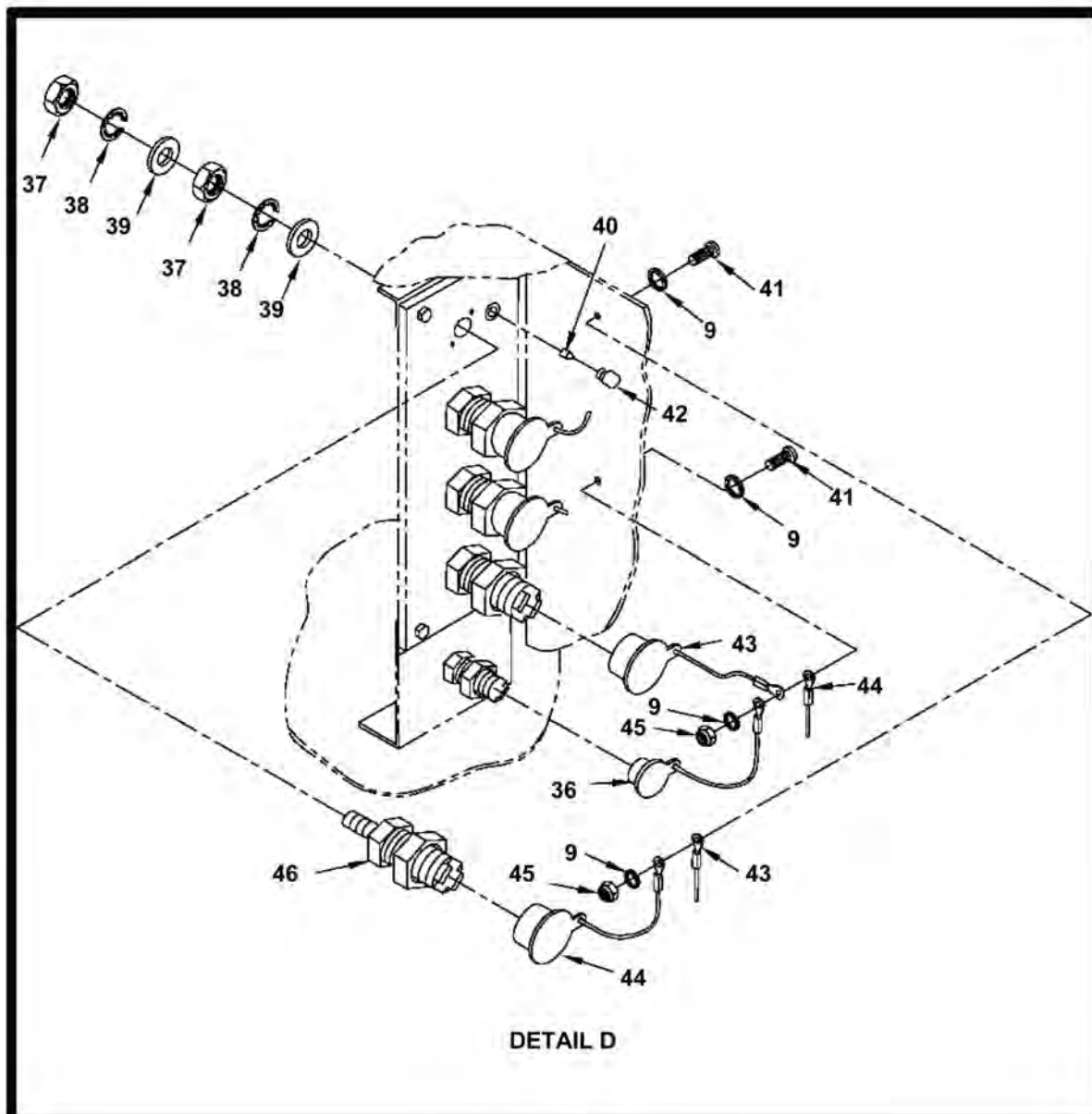


Figure 3. PP-8440A/ASM Power Distribution Box Subassembly (Sheet 5 of 6).

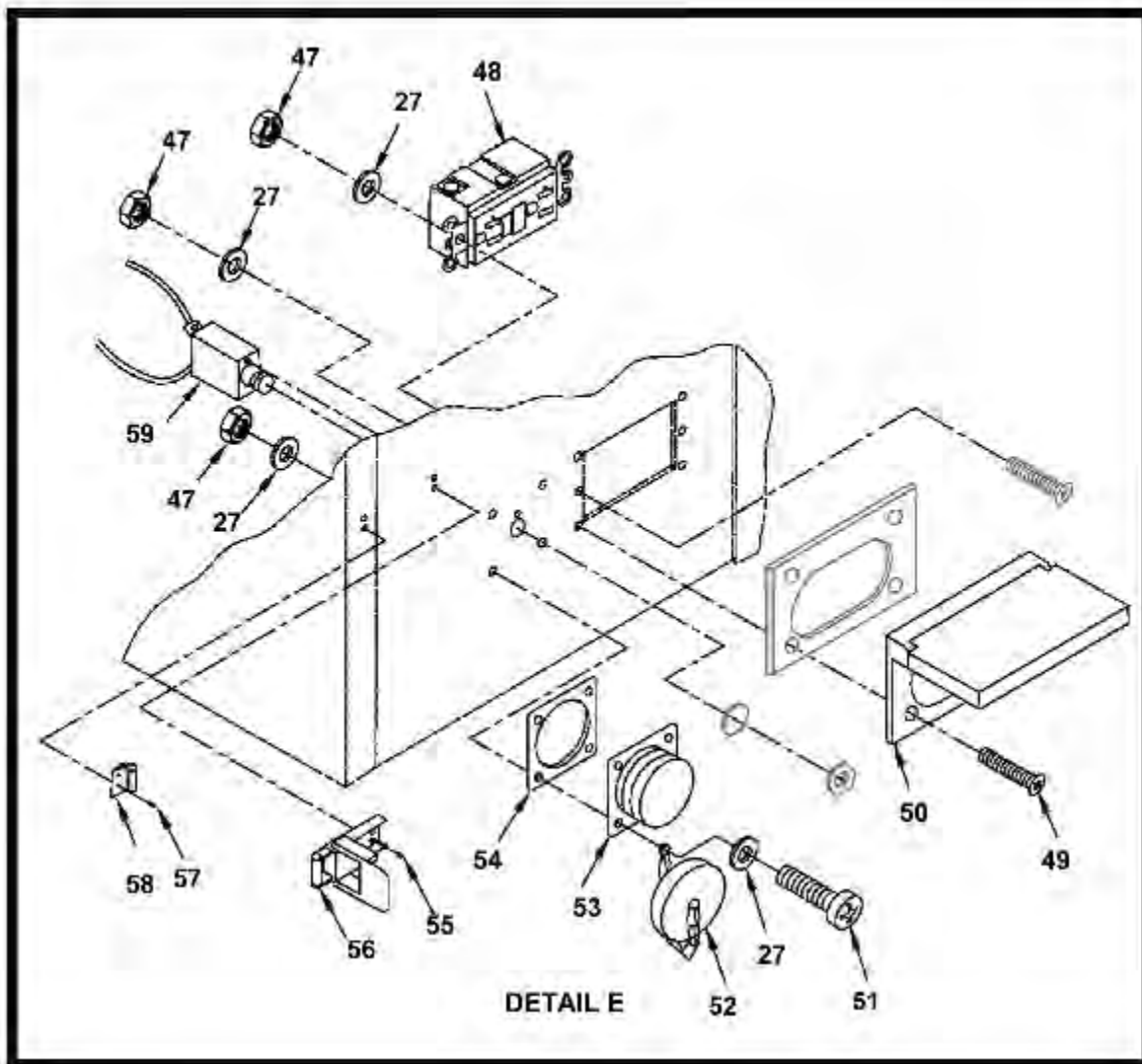


Figure 3. PP-8440A/ASM Power Distribution Box Subassembly (Sheet 6 of 6).

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
<b>GROUP 01 PP-8440A/ASM POWER DISTRIBUTION BOX SUBASSEMBLY FIGURE 3 PP-8440A/ASM POWER DIS- TRIBUTION BOX SUBASSEMBLY</b>						
1	XBFZZ		80063	A3317512	. COVER ASSY, CIRCUIT BREAKER UOC: 6AX .....	1
2	XBFFF		80063	A3273291	. BAG, STORAGE UOC: 6AX .....	1
3	PAFZZ	5305-00-959-4158	80205	MS24693-C273	. SCREW, MACHINE UOC: 6AX .....	28
4	PAFZZ	5310-01-389-6965	96906	MS 15795-812	. WASHER, FLAT UOC: 6AX .....	6
5	PAFZZ	5310-00-974-6623	96906	MS35338-140	. WASHER, LOCK UOC: 6AX .....	6
6	PAFZZ	5306-00-543-4405	96906	MS35307-334	. SCREW, MACHINE UOC: 6AX .....	6
7	PAFZZ	5305-00-059-3661	80205	MS51 958-65	. SCREW, MACHINE UOC: 6AX .....	35
8	PAFZZ	5310-01-526-1963	80205	MS35338-138	. WASHER, LOCK UOC: 6AX .....	35
9	PAFZZ	5310-00-619-1148	80205	MS15795-808	. WAHER, FLAT UOC: 6AX .....	51
10	XBFDD		80063	A3317510	. CIRCUIT BREAKER PANEL (SEE FIG- URE 4 FOR BREAKDOWN) UOC: 6AX ...	1
11	XBFZZ		80063	A3317516-001	. COVER ASSY, CIRCUIT 1 UOC: 6AX ...	1
12	XBFZZ		80063	A3317516-002	. COVER ASSY, CIRCUIT 2 UOC: 6AX ...	1
13	XBFZZ		80063	A3317516-003	. COVER ASSY, CIRCUIT 3 UOC: 6AX ...	1
14	XBFZZ		80063	A3317516-004	. COVER ASSY, CIRCUIT 4 UOC: 6AX ...	1
15	PAFZZ	5340-01-204-2445	94222	16-10-51 1-16	. FASTENER, PAWL UOC: 6AX .....	16
16	PAFZZ	5310-00-691-0141	96906	MS 15795-418	. WASHER, FLAT UOC: 6AX .....	25
17	PAFZZ	5310-00-042-4229	96906	MS35333-1 13	. WASHER, LOCK UOC: 6AX .....	27
18	PAFZZ	5310-00-913-5474	96906	MS51 969-5	. NUT, PLAIN UOC: 6AX .....	26
19	PAFZZ	5940-01-433-6259	96906	MS39347-4	. TERMINAL POST UOC: 6AX .....	13
20	PAFZZ	5925-01-472-9844	74193	GJ3-A3-DU0250-0 1A	. CIRCUIT BREAKER, 250 AMP UOC: 6AX .....	1
21	PAFZZ	5310-00-022-8847	80205	MS35333-1 10	. WASHER, LOCK UOC: 6AX .....	6
22	PAFZZ		80063	A3273300	. ENTRANCE PANEL ASSY UOC: 6AX ...	1
23	PAFZZ	5340-00-134-3482	80063	SC-B-539597	. STRIKE CATCH UOC: 6AX .....	1
24	PAFZZ	5310-00-208-9255	80205	MS21044C3	. NUT, SELF-LOCKING, HEXAGON UOC: 6AX .....	5

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
25	XBFZZ		80063	A3273292	. BOOT, CIRCUIT BREAKER UOC: 6AX .	1
26	XBFZZ		80063	A3273293	. BEZEL, CIRCUIT BREAKER UOC: 6AX .	1
27	PAFZZ	5310-00-722-5998	80205	MS1 5795-805	. WASHER, FLAT UOC: 6AX .....	36
28	PAFZZ	5310-00-883-9384	96906	MS1 5795-842	. WASHER, FLAT UOC: 6AX .....	2
29	PAFZZ	5310-00-202-0331	80063	SC-B-539596	. WASHER, SPRING UOC: 6AX .....	1
30	PAFZZ	3120-00-177-3935	80063	SC-B-539595	. BUSHING UOC: 6AX .....	1
31	PAFZZ	5340-00-134-3470	80063	SC-B-539594	. LATCH UOC: 6AX .....	1
32	XBFZZ		80063	A3273302	. COVER, REAR UOC: 6AX .....	1
33	PAFZZ	5305-00-717-5592	96906	MS24693-C275	. SCREW, MACHINE UOC: 6AX .....	2
34	PAFZZ	5340-01-436-4929	14850	A3261 175-003	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: 6AX .....	4
35	PAFZZ	5340-01-434-0900	14850	A3261 175-004	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: 6AX .....	4
36	PAFZZ	5340-01-434-3587	14850	A3261 175-005	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: 6AX .....	4
37	PAFZZ	5310-00-926-5810	96906	MS35691 -60	. NUT, PLAIN, HEXAGON UOC: 6AX .....	16
38	PAFZZ	5310-00-209-3987	96906	MS35333-1 16	. WASHER, LOCK UOC: 6AX .....	16
39	PAFZZ	5310-00-859-0719	80205	MS15795-422	. WASHER, FLAT UOC: 6AX .....	16
40	PAFZZ	6240-00-723-3378	81349	M1 5098/11-002	. LAMP UOC: 6AX .....	12
41	PAFZZ	5305-00-059-3662	96906	MS51 958-66	. SCREW, MACHINE UOC: 6AX .....	6
42	PAFZZ	6210-00-481-3334	81349	LC33CN2	. LENS, LIGHT UOC: 6AX .....	12
43	PAFZZ	5340-01-434-0902	14850	A3261 175-001	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: 6AX .....	4
44	PAFZZ	5340-01-434-0901	14850	A3261 175-002	. CAP, PROTECTIVE, DUST AND MOIS- TURE SEAL UOC: 6AX .....	4
45	PAFZZ	5310-01-489-5515	80205	MS1 7830-01 0F	. NUT, SELF-LOCKING UOC: 6AX .....	6
46	PAFZZ	5940-00-237-2704	96906	MS39347-6	. TERMINAL STUD UOC: 6AX .....	8
47	PAFZZ	5310-00-982-6813	80205	MS21044C06	. NUT, SELF-LOCKING, HEXAGON UOC: 6AX .....	20
48	PAFZZ	5925-01-271-6053	74545	GF5362A	. INTERRUPTER, GROUND FAULT UOC: 6AX .....	2
49	PAFZZ	5305-00-764-0064	96906	MS51959-32	. SCREW, MACHINE UOC: 6AX .....	8



(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
50	PAFZZ	5935-01-300-9040	80063	A3273029-2	. COVER, ELECTRICAL CONNECTOR UOC: 6AX .....	2
51	PAFZZ	5305-00-054-6656	96906	MS51 957-32	. SCREW, MACHINE UOC: 6AX .....	8
52	PAFZZ	5935-01-191-4127	96906	MS25043-28DA	. COVER, ELECTRICAL CONNECTOR UOC: 6AX .....	2
53	PAFZZ	5935-00-763-6983	96906	MS3105-28	. DUMMY, CONNECTOR RECEPTACLE UOC: 6AX .....	2
54	PAFZZ	5330-00-376-2241	49956	2871 030P1 1	. GASKET UOC: 6AX .....	2
55	PAFZZ	5320-01-134-5844	80205	NAS9301BNS-4-05	. RIVET, BLIND UOC: 6AX .....	4
56	PAFZZ	5340-00-178-7870	96906	MS 18015-2	. LATCH UOC: 6AX .....	2
57	PAFZZ	5320-00-117-6951	80205	MS20426AD4-6	. RIVET, SOLID UOC: 6AX .....	4
58	PAFZZ	5340-00-237-6254	96906	MS1 8015-3	. STRIKE, CATCH UOC: 6AX .....	2
59	PAFZZ	5925-00-682-4015	81343	MS25244-20	. CIRCUIT BREAKER UOC: 6AX .....	2
END OF FIGURE						



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**OPERATOR AND FIELD MAINTENANCE**  
**GROUP 0101 CIRCUIT BREAKER PANEL PP-8440A/ASM**

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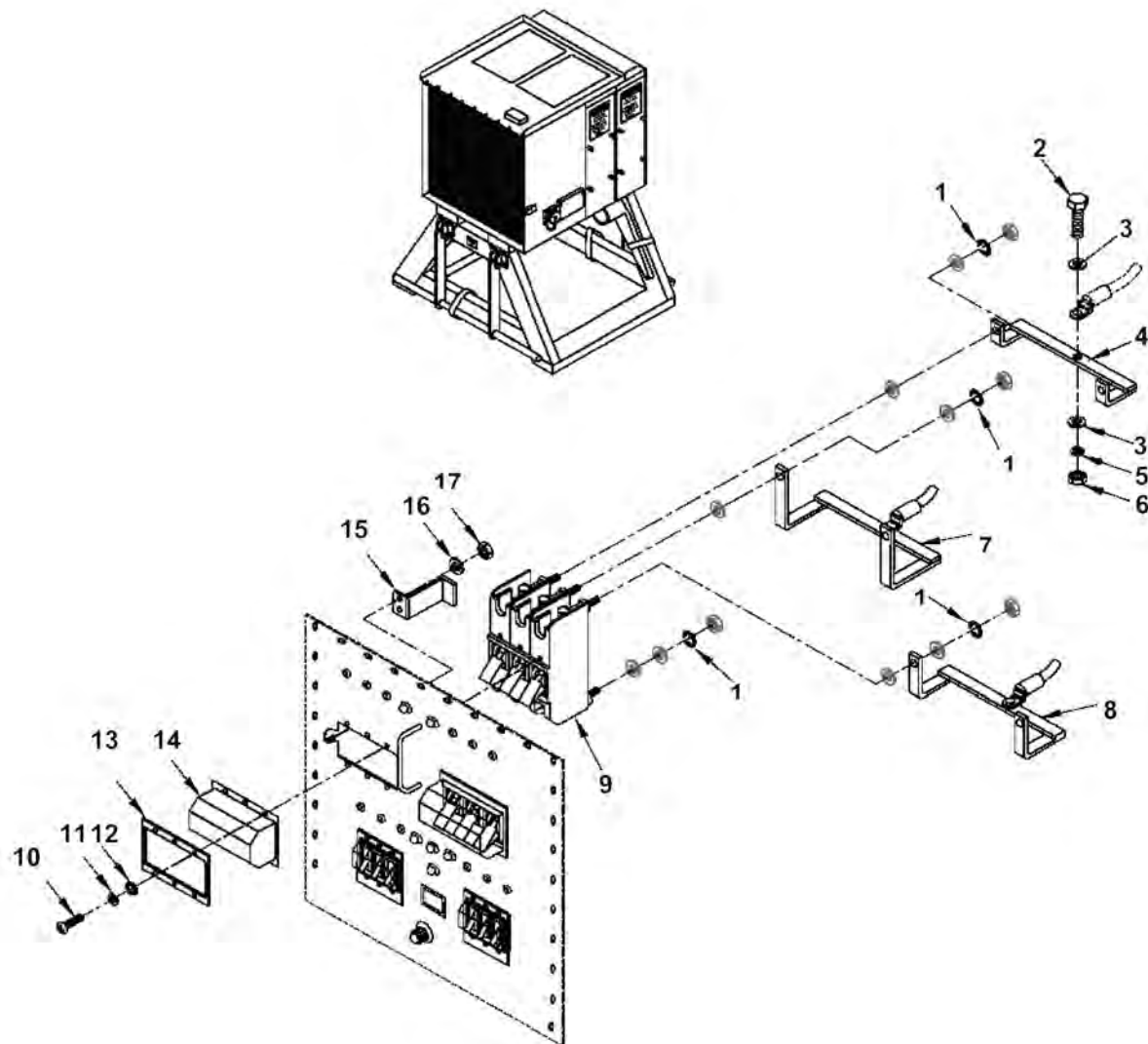


Figure 4. Circuit Breaker Panel PP-8440A/ASM Only (Sheet 1 of 3).

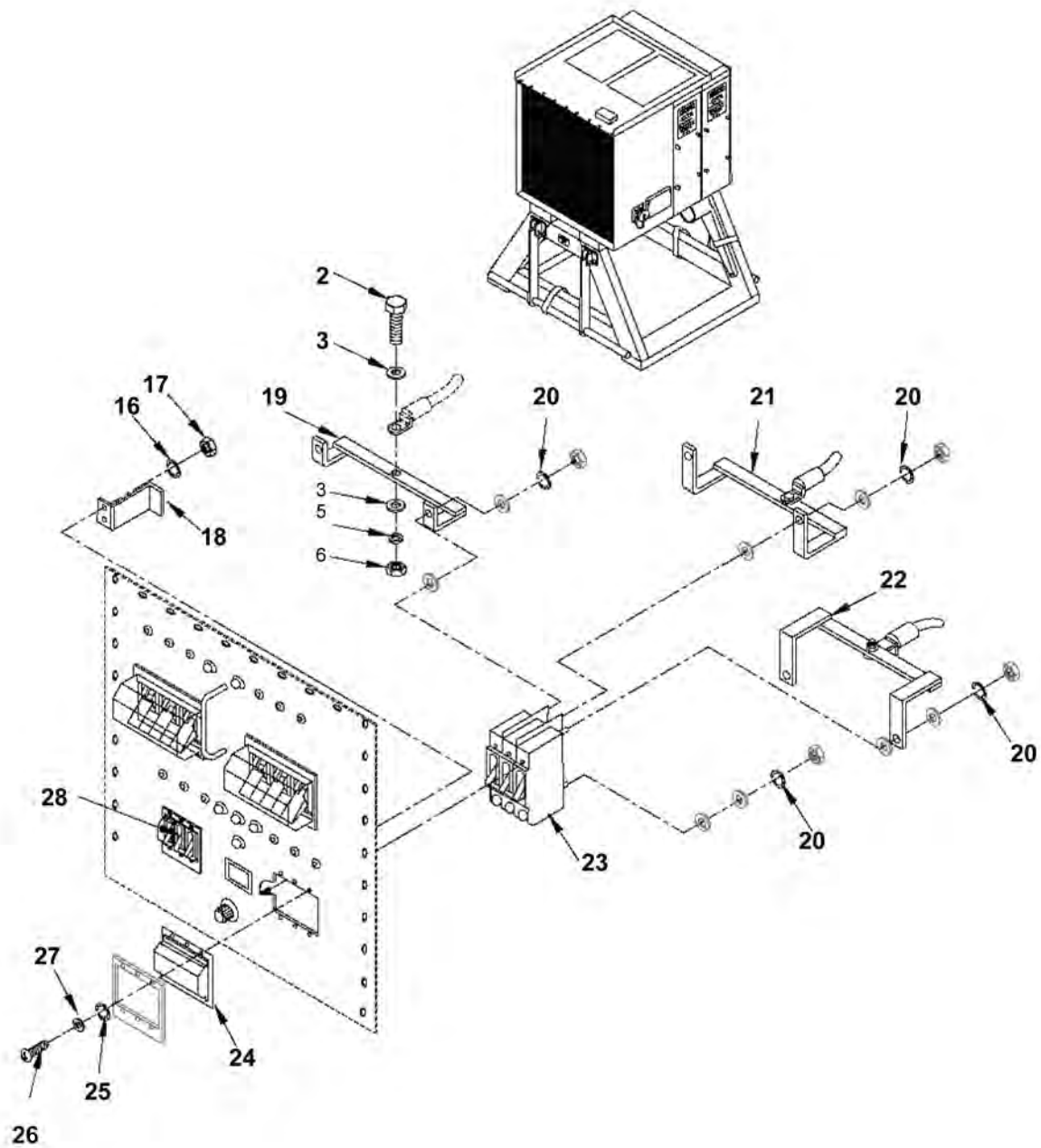


Figure 4. Circuit Breaker Panel PP-8440A/ASM Only (Sheet 2 of 3).

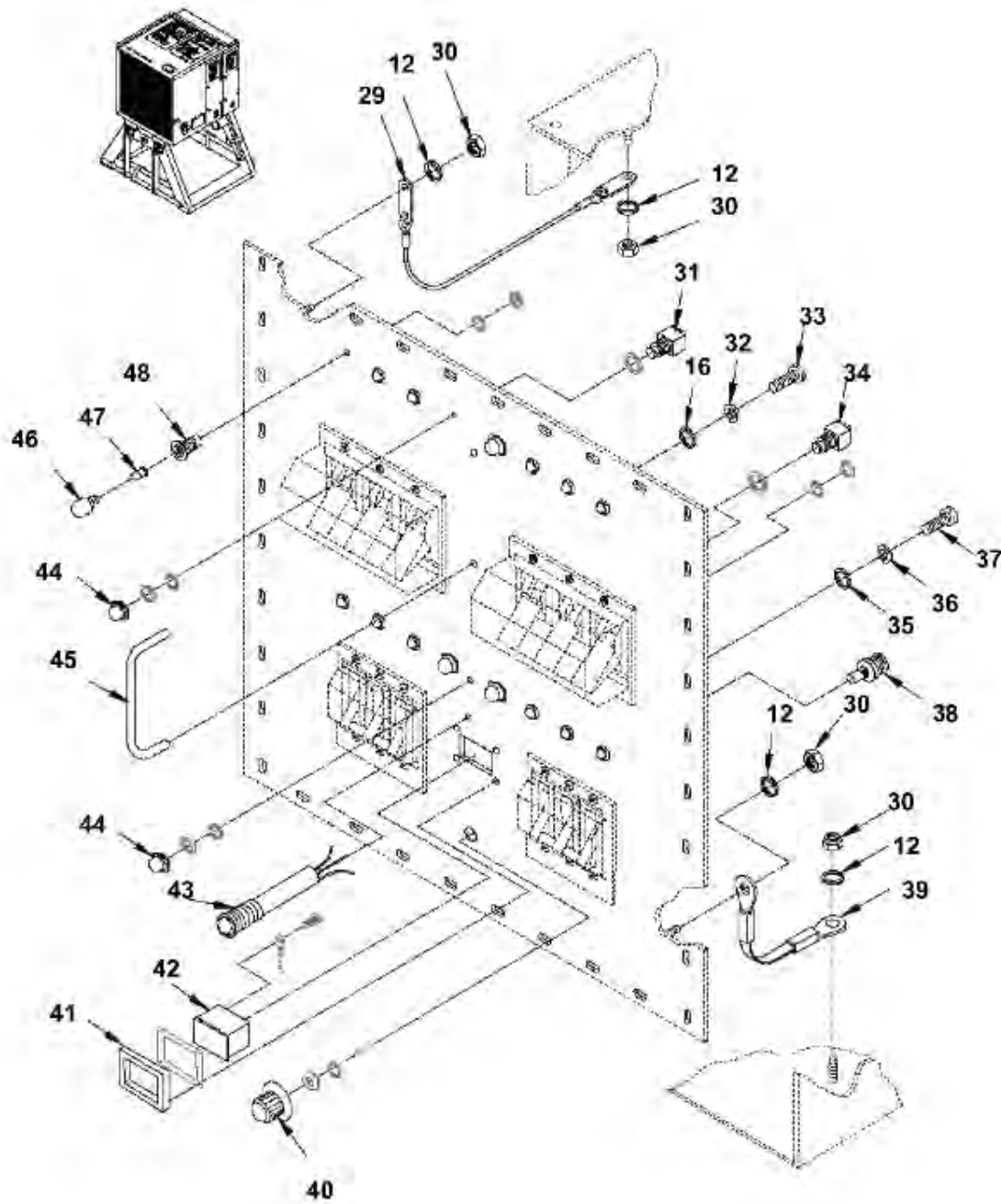


Figure 4. Circuit Breaker Panel PP-8440A/ASM Only (Sheet 3 of 3).

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
<b>GROUP 0101 CIRCUIT BREAKER PANEL PP-8440A/ASM ONLY</b> <b>FIGURE 4 CIRCUIT BREAKER PANEL PP-8440A/ASM ONLY</b>						
1	PAFZZ	5310-00-022-8847	80205	MS35333-110	. WASHER, LOCK UOC: 6AX .....	12
2	PAFZZ	5305-00-576-5417	96906	MS35307-360	. SCREW, MACHINE UOC: 6AX .....	6
3	PAFZZ	5310-00-655-9477	80205	MS 15795-413	. WASHER, FLAT UOC: 6AX .....	12
4	XBFZZ		80063	A3254557-004	. BUSS BAR, WELDED ASSY UOC: 6AX .....	1
5	PAFZZ	5310-00-180-0277	96906	MS35333-76	. WASHER, LOCK UOC: 6AX .....	6
6	PAFZZ	5310-00-477-6768	96906	MS35649-2384	. NUT, PLAIN UOC: 6AX .....	6
7	XBFZZ		80063	A3254557-006	. BUSS BAR, WELDED ASSY UOC: 6AX .....	1
8	XBFZZ		80063	A3254557-005	. BUSS BAR, WELDED ASSY UOC: 6AX .....	1
9	PAFZZ	5925-01-433-5323	74193	GJ3-A3-DU-0200-2A	. CIRCUIT BREAKER, 200 AMP UOC: 6AX .....	2
10	PAFZZ	5305-00-059-3661	80205	MS51 958-65	. SCREW, MACHINE UOC: 6AX .....	12
11	PAFZZ	5310-00-933-8120	80205	MS35338-1 38B	. WASHER, LOCK UOC: 6AX .....	12
12	PAFZZ	5310-00-619-1148	80205	MS15795-808	. WASHER, FLAT UOC: 6AX .....	20
13	XBFZZ		80063	A3273293	. BEZEL, CIRCUIT BREAKER UOC: 6AX .....	2
14	XBFZZ		80063	A3273292	. BOOT, CIRCUIT BREAKER UOC: 6AX .	2
15	XBFZZ		80063	A3317519	. BRACKET ASSY, CIRCUIT BREAKER UOC: 6AX .....	4
16	PAFZZ	5310-00-880-5978	96906	MS 15795-807	. WASHER, LOCK UOC: 6AX .....	18
17	PAFZZ	5310-00-176-6333	96906	MS17830-08C	. NUT, SELF-LOCKING UOC: 6AX .....	16
18	XBFZZ		80063	A3273303	. BRACKET ASSY, CIRCUIT BREAKER UOC: 6AX .....	4
19	XBFZZ		80063	A3317520-001	. BUSS BAR, WELDED ASSY UOC: 6AX .....	1
20	PAFZZ	5310-00-022-8834	96906	MS35333-1 08	. WASHER, LOCK UOC: 6AX .....	12
21	XBFZZ		80063	A3317520-003	. BUSS BAR, WELDED ASSY UOC: 6AX .....	1

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
22	XBFZZ		80063	A3317520-002	. BUSS BAR, WELDED ASSY UOC: 6AX .....	1
23	PAFZZ	5925-01-187-6120	74193	CD3-A3-DU0060-0 2A	. CIRCUIT BREAKER, 60 AMP UOC: 6AX .....	1
24	PAFZZ	5340-01-434-2230	80063	A3261 173	. BOOT/BEZEL, CIRCUIT BREAKER UOC: 6AX .....	2
25	PAFZZ	5310-00-722-5998	80205	MS1 5795-805	. WASHER, FLAT UOC: 6AX .....	12
26	PAFZZ	5305-01-258-0031	80063	A3049948-1	. SCREW, EXTERNALLY RELIEVED BODY UOC: 6AX .....	12
27	PAFZZ	5310-00-929-6395	80205	MS35338-1 36	. WASHER, LOCK UOC: 6AX .....	12
28	PAFZZ	5925-01-433-5320	74193	CD3-A3-DU01 00-- 02A	. CIRCUIT BREAKER, 100 AMP UOC: 6AX .....	1
29	PAFZZ	4010-01-352-9899	84256	50996-9T	. WIRE ROPE ASSY, SINGLE LEG UOC: 6AX .....	2
30	PAFZZ	5310-00-208-9255	80205	MS21044C3	. NUT, SELF-LOCKING, HEXAGON UOC: 6AX .....	8
31	PAFZZ	5930-01-181-6628	00779	1-1 825042	. SWITCH UOC: 6AX .....	4
32	PAFZZ	5310-00-933-8119	80205	MS35338-137	. WASHER, LOCK UOC: 6AX .....	2
33	PAFZZ	5305-00-054-6669	96906	MS51 957-44	. SCREW, MACHINE UOC: 6AX .....	2
34	PAFZZ	5930-00-145-9391	00779	MPG206R	. SWITCH UOC: 6AX .....	1
35	PAFZZ	5310-00-595-6761	80205	MS1 5795-802	. WASHER, FLAT UOC: 6AX .....	4
36	PAFZZ	5310-00-928-2690	80205	MS35338-1 34	. WASHER, LOCK UOC: 6AX .....	4
37	PAFZZ	5305-00-054-5638	96906	MS51 957-4	. SCREW UOC: 6AX .....	4
38	PAFZZ	5930-01-255-5055	0B9Z1	57F3757	. SWITCH UOC: 6AX .....	1
39	XBFZZ		80063	A3273289-001	. GROUND STRAP UOC: 6AX .....	2
40	XBFZZ		0B9Z1	EH71-1F2S	. DIAL UOC: 6AX .....	1
41	PAFZZ	6695-01-522-8097	50721	DMS-BZL4	. BEZEL,INSTRUMENT PANEL UOC: 6AX .....	1
42	XBFZZ		50721	DMS-20PC-1-LM	. METER, DIGITAL,50/60 HZ UOC: 6AX ..	1
43	PAFZZ	6625-01-433-6261	52797	2A-6C4	. INDICATOR, PHASE SEQUENCE UOC: 6AX .....	1
44	PAFZZ	5930-01-397-6447	81349	M5423/7-01	. BOOT, DUST AND MOISTURE SEAL UOC: 6AX .....	5
45	XBFZZ		2V507	18645A23	. HANDLE, PULL UOC: 6AX .....	1



(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
46	PAFZZ	6210-00-481-3334	81349	LC33CN2	. LENS, LIGHT UOC: 6AX .....	12
47	PAFZZ	6240-01-433-8639	71744	G9B	. LAMP, GLOW, NEON GREEN UOC: 6AX .....	12
48	PAFZZ	6210-00-183-0576	81349	LH88/2	. LIGHT, INDICATOR UOC: 6AX .....	12
END OF FIGURE						



## OPERATOR AND FIELD MAINTENANCE

## GROUP 99 BULK MATERIALS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
GROUP 99 BULK MATERIALS FIG. BULK						
1	PAFZZ	5930-00-906-6627	74193	006-10055	BOOT, DUST AND MOISTURE SEAL .....	1
END OF FIGURE						



## OPERATOR AND FIELD MAINTENANCE

## NSN INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5310-00-022-8834	2	2	5365-00-584-0618	1	14
	4	20	5310-00-595-6761	4	35
5310-00-022-8847	2	1	5310-00-619-1148	2	10
	3	21		3	9
	4	1		4	12
5310-00-042-4229	2	40	5310-00-655-9477	4	3
	3	17	5925-00-682-4015	2	62
5305-00-054-5638	4	37		3	59
5305-00-054-6655	2	7	5310-00-691-0141	2	41
5305-00-054-6656	2	54		3	16
	3	51	5305-00-717-5592	2	34
5303-00-054-6669	2	18		3	33
5305-00-054-6669	4	33	5310-00-722-5998	2	5
5305-00-059-3659	2	8		3	27
5305-00-059-3661	2	29		4	25
	3	7	6240-00-723-3378	2	49
	4	10		3	40
5305-00-059-3662	2	42	5935-00-763-6983	2	56
	3	41		3	53
5305-00-088-9671	2	51	5305-00-764-0064	2	52
8315-00-106-5973	1	12		3	49
8315-00-106-5974	1	13	5930-00-800-5770	2	23
5320-00-117-6951	2	59	5310-00-859-0719	2	48
	3	57		3	39
5340-00-134-3470	3	31	5975-00-878-3791	1	5
5340-00-134-3482	3	23	5310-00-880-5978	2	16
5930-00-145-9391	4	34		4	16
5310-00-176-6333	4	17	5310-00-883-9384	1	11
3120-00-177-3935	3	30		3	28
5340-00-178-7870	2	58	5310-00-903-3994	2	32
	3	56	5930-00-906-6627	BULK	1
5310-00-180-0277	4	5	5310-00-913-5474	2	39
6210-00-183-0576	2	27		3	18
	4	48	5310-00-913-5476	2	46
5310-00-202-0331	3	29	5310-00-926-5810	3	37
5310-00-208-9255	2	20	5310-00-928-2690	4	36
	3	24	5310-00-929-6395	2	6
	4	30		4	27
5310-00-209-3987	2	47	5310-00-933-8119	2	17
	3	38		4	32
5940-00-237-2704	2	45	5310-00-933-8120	2	9
	3	46		4	11
5340-00-237-6254	2	60	5306-00-958-1148	1	9
	3	58	5305-00-959-4158	3	3
5330-00-376-2241	3	54	5310-00-974-6623	1	8
5305-00-455-9960	1	18		3	5
5310-00-477-6768	4	6	5940-00-978-7672	2	33
6210-00-481-3334	2	25	5310-00-982-6813	2	61
	3	42		3	47
	4	46	5310-00-982-6814	2	63
5306-00-543-4405	3	6	5120-01-019-9564	1	19
5305-00-576-5417	4	2	5120-01-046-4948	1	10

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5320-01-134-5844	2	57			
	3	55			
5930-01-181-6628	2	15			
	4	31			
5925-01-187-6120	4	23			
5935-01-191-4127	2	55			
	3	52			
5340-01-204-2445	3	15			
5340-01-204-2545	2	31			
5930-01-255-5055	4	38			
5305-01-258-0031	4	26			
5925-01-271-6053	2	50			
	3	48			
5935-01-300-9040	2	53			
	3	50			
4010-01-352-9899	2	28			
	4	29			
5310-01-389-6965	1	7			
	3	4			
5930-01-397-6447	4	44			
6110-01-423-8822	1	1			
5925-01-433-5320	2	13			
	4	28			
5925-01-433-5321	2	3			
5995-01-433-5322	1	4			
5925-01-433-5323	2	14			
	4	9			
5940-01-433-6259	2	38			
	3	19			
6625-01-433-6261	2	22			
	4	43			
5990-01-433-8637	1	3			
6240-01-433-8639	2	26			
	4	47			
5930-01-433-8640	2	19			
5340-01-434-0900	2	35			
	3	35			
5340-01-434-0901	2	43			
	3	44			
5340-01-434-0902	2	44			
	3	43			
5340-01-434-2230	2	4			
	4	24			
5340-01-434-3586	2	12			
5340-01-434-3587	2	37			
	3	36			
5340-01-436-4929	2	36			
	3	34			
5925-01-472-9844	3	20			
5310-01-489-5515	3	45			
6695-01-522-8097	4	41			
5310-01-526-1963	3	8			
6110-01-550-9613	1	1			

END OF WORK PACKAGE

## OPERATOR AND FIELD MAINTENANCE

## P/N INDEX

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
00364-0354	1	10	A3273289-001	4	39
006-10055	BULK	1	A3273291	3	2
1-1 825042	4	31	A3273292	3	25
1-1825042-0	2	15		4	14
16-10-51 1-16	2	31	A3273293	3	26
	3	15		4	13
18645A23	4	45	A3273300	3	22
2871 030P1 1	3	54	A3273302	3	32
2A-6C4	2	22	A3273303	4	18
	4	43	A3317506	1	1
4484	2	24	A3317508	1	2
5-4-1695-4	1	13	A3317510	3	10
50996-9T	2	28	A3317512	3	1
	4	29	A3317516-001	3	11
57F3757	4	38	A3317516-002	3	12
6-1-5876	1	12	A3317516-003	3	13
72-2029-1	1	19	A3317516-004	3	14
A3049948-1	4	26	A3317519	4	15
A3254545	1	1	A3317520-001	4	19
A3254548	1	2	A3317520-002	4	22
A3254554	1	4	A3317520-003	4	21
A3254557-004	4	4	AA55804-3B 9FT	1	5
A3254557-005	4	8	CD3-A3-DU-0100-02A	2	13
A3254557-006	4	7	CD3-A3-DU0060-02A	4	23
A3254560	1	3	CD3-A3-DU0080-02A	2	3
A3254561	1	17	CD3-A3-DU01 00--02A	4	28
A3254562	1	16	DMS-20PC-1-LM	4	42
A3254563	1	15	DMS-BZL4	4	41
A3254564-001	2	21	EH71-1F2S	4	40
A3254565-1	1	20	G9B	2	26
A3254565-2	1	6		4	47
A3254566	2	30	GF5362A	2	50
A3254567	2	12		3	48
A3254568	2	11	GJ3-A3-DU-0200- 2A	4	9
A3261 173	4	24	GJ3-A3-DU-0200-2A	2	14
A3261 175-001	2	44	GJ3-A3-DU0250-01A	3	20
	3	43	LC33CN2	2	25
A3261 175-002	2	43		3	42
	3	44		4	46
A3261 175-003	2	36	LH88/2	2	27
	3	34		4	48
A3261 175-004	2	35	M1 5098/11-002	2	49
	3	35		3	40
A3261 175-005	2	37	M5423/07-01	2	23
	3	36	M5423/7-01	4	44
A3261173	2	4	MPG-206F	2	19
A3273029-2	2	53	MPG206R	4	34
	3	50	MS 15795-413	4	3
A3273285	1	3	MS 15795-418	2	41
A3273286	1	17		3	16
A3273287	1	16	MS 15795-422	2	48
A3273288	1	15	MS 15795-805	2	5

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
MS 15795-807	2	16	MS35338-138	2	9
	4	16		3	8
MS 15795-812	3	4	MS35338-140	1	8
MS 18015-2	2	58		3	5
	3	56	MS35649-2384	4	6
MS1 5795-802	4	35	MS35691 -60	3	37
MS1 5795-805	3	27	MS39347-3	2	33
	4	25	MS39347-4	2	38
MS1 5795-842	3	28		3	19
MS1 7830-01 0F	3	45	MS39347-6	2	45
MS1 8015-3	2	60		3	46
	3	58	MS51 957-32	2	54
MS15795-422	3	39		3	51
MS15795-808	2	10	MS51 957-4	4	37
	3	9	MS51 957-44	2	18
	4	12		4	33
MS15795-812	1	7	MS51 958-63	2	8
MS15795-842	1	11	MS51 958-65	2	29
MS17830-08C	4	17		3	7
MS20426AD4-6	2	59		4	10
	3	57	MS51 958-66	2	42
MS21044-C06	2	61		3	41
MS21044-C08	2	63	MS51 969-3	2	32
MS21044C06	3	47	MS51 969-5	3	18
MS21044C3	2	20	MS51957-31	2	7
	3	24	MS51959-32	2	52
	4	30		3	49
MS24693-C1 20	1	18	MS51969-5	2	39
MS24693-C273	3	3	MS51969-8	2	46
MS24693-C275	2	34	MS90707-4037	1	14
	3	33	NAS9301BNS-4-05	2	57
MS24693-C52	2	51		3	55
MS25043-28DA	2	55	SC-B-539594	3	31
	3	52	SC-B-539595	3	30
MS25244-20	2	62	SC-B-539596	3	29
	3	59	SC-B-539597	3	23
MS3105-28	2	56			
	3	53			
MS35307-334	3	6			
MS35307-348	1	9			
MS35307-360	4	2			
MS35333-1 08	4	20			
MS35333-1 10	2	1			
	3	21			
MS35333-1 13	2	40			
	3	17			
MS35333-1 16	2	47			
	3	38			
MS35333-108	2	2			
MS35333-110	4	1			
MS35333-76	4	5			
MS35338-1 34	4	36			
MS35338-1 36	2	6			
	4	27			
MS35338-1 38B	4	11			
MS35338-137	2	17			
	4	32			

END OF WORK PACKAGE



## **CHAPTER 8**

### **OPERATOR AND FIELD SUPPORTING INFORMATION**



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## REFERENCES

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**SCOPE**

Following is a list of all forms, Army Regulations, Technical Bulletins, Field and Technical Manuals, and Department of the Army (DA) Pamphlets required by operator and maintenance personnel.

**FORMS**

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2407	Maintenance Request
SF Form 361	Transportation Discrepancy Report
SF Form 364	Report of Discrepancy
SF Form 368	Quality Deficiency Report

**ARMY REGULATIONS (AR)**

AR 55-38	Reporting of Transportation Discrepancies in Shipment
AR 735-11-2	Reporting of Item and Packaging Discrepancies (replaces AR 700-58)

**FIELD MANUALS**

FM 20-31	Electrical Power Generation in the Field
FM 3-4	Nuclear, Biological, and Chemical Protection Operations
FM 3-5	Nuclear, Biological, and Chemical Decontamination
FM 4-25.11	First Aid

**TECHNICAL MANUALS**

TM 11-5895-1449-12	Operator's and Aviation Unit Maintenance Manual for Communications Central AN/ASC-15B
TM 11-5895-1449-12	Operator's and Aviation Unit Maintenance for C-E Equipment
TM 11-6110-252-13&P	Operator and Field Maintenance Manual Including Repair Parts and Special Tools List for Power Distribution Box PP-8479(V1)/ASM, PP-8479(V2)/ASM, PP-8479(V3)/ASM, PP-8479(V4)/ASM
TM 38-230-1	Packaging of Materiel: Preservation (VOL 1)
TM 43-0139	Painting Instructions for Army Materiel
TM 5-6115-545-12	Operator and Organization Maintenance, Generator Set, 60kw, 120/208v or 240/416v, 3-phase, 4-wire
TM 55-1500-323-24	Installation Practices for Aircraft Electric and Electronic Wiring
TM 750-244-3	Procedures for Destruction of Equipment to Prevent Enemy Use
TM 9-4120-404-24P	Unit, Direct Support and General Support Maintenance Repair Part Special Tools List For Air Conditioner, Compact, Horizontal, Multi Power Input, 36,000 BTU/UR 208 Volt, 3 Phase, 50/60/400 Hertz Model MH-40-MP (NSN 4120-01-330-6543)

**TECHNICAL BULLETINS**

TB SIG 291	Safety Measures to be Observed When Installing and Using Whip Antennas, Field-Type Masts, Towers and Antennas and Metal Poles That Are Used with Communications, Radar and Direction Finder Equipment
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**SUPPLY BULLETINS**

SB 740-91-001	Storage Serviceability Standard for CECOM Materiel
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**DA PAMPHLETS (DA PAM)**

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
DA PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual

**MILITARY HANDBOOKS**

MIL-HDBK-454B	General Guidelines For Electronic Equipment GUIDELINES FOR ELECTRONIC EQUIPMENT
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**END OF WORK PACKAGE**

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## INTRODUCTION FOR STANDARD TWO-LEVEL MAC

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### MAINTENANCE ALLOCATION CHART (MAC)

#### INTRODUCTION

##### The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept.

This MAC (immediately following the introduction) 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 shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Field - includes two subcolumns, Crew (C) and Maintainer (F).

Sustainment - includes two subcolumns, Below Depot (H) and Depot (D).

The maintenance to be performed at field and sustainment levels is described as follows:

1. Crew maintenance. The responsibility of a using organization to perform maintenance on its assigned equipment. It normally consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies. The replace function for this level of maintenance is indicated by the letter "C" in the third position of the SMR code. A "C" appearing in the fourth position of the SMR code indicates complete repair is possible at the crew maintenance level.
2. Maintainer maintenance. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "F" appearing in the third position of the SMR code. An "F" appearing in the fourth position of the SMR code indicates complete repair is possible at the field maintenance level. Items are returned to the user after maintenance is performed at this level.
3. Below depot sustainment. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "H" appearing in the third position of the SMR code. An "H" appearing in the fourth position of the SMR code indicates complete repair is possible at the below depot sustainment maintenance level. Items are returned to the supply system after maintenance is performed at this level.
4. Depot sustainment. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "D" or "K" appearing in the third position of the SMR code. Depot sustainment maintenance can be performed by either depot personnel or contractor personnel. A "D" or "K" appearing in the fourth position of the SMR code indicates complete repair is possible at the depot sustainment maintenance level. Items are returned to the supply systems after maintenance is performed at this level.

The tools and test equipment requirements table (immediately following the MAC) lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks table (immediately following the tools and test equipment requirements) contains supplemental instructions and explanatory notes for a particular maintenance function.

#### Maintenance Functions

Maintenance functions are limited to and defined as follows:

**MAINTENANCE ALLOCATION CHART (MAC) – CONTINUED**

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). This includes scheduled inspection and gaugings and evaluation of cannon tubes.
2. **Test.** To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, i.e., load testing of lift devices and hydrostatic testing of pressure hoses.
3. **Service.** Operations required periodically to keep an item in proper operating condition; e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms. The following are examples of service functions:
  - a. **Unpack.** To remove from packing box for service or when required for the performance of maintenance operations.
  - b. **Repack.** To return item to packing box after service and other maintenance operations.
  - c. **Clean.** To rid the item of contamination.
  - d. **Touch up.** To spot paint scratched or blistered surfaces.
  - e. **Mark.** To restore obliterated identification.
4. **Adjust.** To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.
5. **Align.** To adjust specified variable elements of an item to bring about optimum or desired performance.
6. **Calibrate.** To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment 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.
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.
8. **Paint (ammunition only).** To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper ammunition identification.
9. **Replace.** To remove an unserviceable item and install a serviceable counterpart in its place "Replace" is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance and Recoverability (SMR) code.
10. **Repair.** The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

**NOTE**

The following definitions are applicable to the "repair" maintenance function:

Services. Inspect, test, service, adjust, align, calibrate, and/or replace.

**MAINTENANCE ALLOCATION CHART (MAC) – CONTINUED**

Fault location/troubleshooting. 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).

Disassembly/assembly. The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

11. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.
12. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

**Explanation of Columns in the MAC**

Column (1) Group Number. Column (1) lists Functional Group Code (FGC) numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

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

Column (3) Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to "Maintenance Functions" outlined above).

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work time 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 varies at different maintenance levels, appropriate work time figures are to 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 location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

Field:

C Crew maintenance

F Maintainer maintenance

Sustainment:

L Specialized Repair Activity (SRA)

H Below depot maintenance

D Depot maintenance

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**MAINTENANCE ALLOCATION CHART (MAC) – CONTINUED****NOTE**

The "L" maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by work time figure in the "H" column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks and the SRA complete repair application is explained there.

Column (5) Tools and Equipment Reference Code. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) Remarks Code. When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks table entries.

**Explanation of Columns in the Tools and Test Equipment Requirements**

Column (1) - Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) - Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) - Nomenclature. Name or identification of the tool or test equipment.

Column (4) - National Stock Number (NSN). The NSN of the tool or test equipment.

Column (5) - Tool Number. The manufacturer's part number.

**Explanation of Columns in the Remarks**

Column (1) - Remarks Code. The code recorded in column (6) of the MAC.

Column (2) - Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

**END OF WORK PACKAGE**



## STANDARD TWO-LEVEL MAC

Table 1. MAC for Power Distribution Box.

(1)  GROUP NUMBER	(2)  COMPONENT/ ASSEMBLY	(3)  MAINTENANCE FUNCTION	(4)  MAINTENANCE LEVEL				(5)  TOOLS AND EQUIPMENT REFERENCE CODE	(6)  REMARKS CODE	
			FIELD		SUSTAINMENT				
			CREW (C)	MAINTAINER (F)	BELOW DEPOT (H)	DEPOT (D)			
00	PP-8440/ASM or PP-8440A/ ASM POWER DISTRIBUTION BOX	Inspect	0.5	0.3			4	A	
		Inspect							B
		Inspect		0.5					B
		Repair		0.3					D
		Repair		0.4				2, 3, 4, 7	H
		Repair		2.3				1, 2, 3, 4, 5, 6	
01	PP-8440/ASM or PP-8440A/ ASM Power Distribution Box Subassembly	Inspect	0.3					B	
		Inspect		0.3				B	
		Test		0.15		4	C		
		Repair		2.0		1, 2, 3, 5, 6	F		
0101	PP-8440/ASM or PP-8440A/ ASM Circuit Breaker Panel PP-8440A/ASM Only	Inspect	0.3					B	
		Inspect		0.3				B	
		Test		0.5		4	C		
		Repair		1.1		1, 2, 3, 5, 6	G		
02	Base Welded Assembly	Inspect	0.1					B	
		Inspect		0.2				B	
		Replace		0.3		1, 3	E		

Table 2. Tools and Test Equipment Requirements for Power Distribution Box.

TOOLS OR TEST EQUIPMENT	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	F	Tool Kit, Electronic	5180-00-605-0079	TK-100/G
2	F	Tool Kit, Electronic	5180-00-064-5178	TK-101/G
3	F	Tool Kit, Electronic	5180-00-610-8177	TK-105/G
4	F	Multimeter	6625-01-139-2512	AN/PSM-45

Table 2. Tools and Test Equipment Requirements for Power Distribution Box. – Continued

TOOLS OR TEST EQUIPMENT	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
5	F	Wrench, Box	5120-01-019-9564	72-2029-1
6	F	Wrench, Box	5120-01-046-4948	71-4960
7	F	Cutter, Cable, Hand Operated	5110-01-226-2887	63060

Table 3. Remarks for Power Distribution Box.

REMARK CODE	REMARKS
A	Operational Test.
B	Preventive Maintenance Checks.
C	Continuity Testing.
D	Replace Power-In Cable due to physical damage. Replacement of Ground Rod and Wire.
E	Replacement of pedestal handles, U - bracket, pins and retaining ring. Replacement of wrench standoff and fastener tape.
F	Replacement of circuit breaker, circuit breaker protective boots, access cover pawl fasteners, latches, keepers, terminal post safety covers, terminal posts, Ground Fault Circuit Interrupt (GFCI) receptacles and weather covers, side access covers, lanyards, and ground straps.
G	Replacement of pushbutton switches, selector switch, circuit breakers, protective boots, buss bars, buss bar interconnects, voltage meter, front panel lampholders, CB panel, circuit breaker panel handle, indicator lamps and lens covers.
H	Repair limited to cutting, stripping and tinning of source end (Pig Tail) of power cable. See TM 55-1500-323-24.

END OF WORK PACKAGE

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## COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

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### INTRODUCTION

#### Scope

This work package lists COEI and BII for the PP-8479(V1)/ASM PDB to help you inventory items for safe and efficient operation of the equipment.

#### General

The COEI and BII information is divided into the following lists:

**Components of End Item (COEI).** This list is for information purposes only and is not authority to requisition replacements. These items are part of the PP-8479(V1)/ASM PDB. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

**Basic Issue Items (BII).** These essential items are required to place the PP-8479(V1)/ASM PDB in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the PP-8479(V1)/ASM PDB 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.

#### Explanation of Columns in the COEI List and BII List

Column (1) Illus Number. Gives you the number of the item illustrated.

Column (2) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (3) Description, Part Number/(CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (4) Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment. These codes are identified below:

<b>CODE</b>	<b>USED ON</b>
LDD	PP-8440/ASM
6AX	PP-8440A/ASM

Column (5) U/I. Unit of Issue (U/I) indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (2).

Column (6) Qty Rqr. Indicates the quantity required.

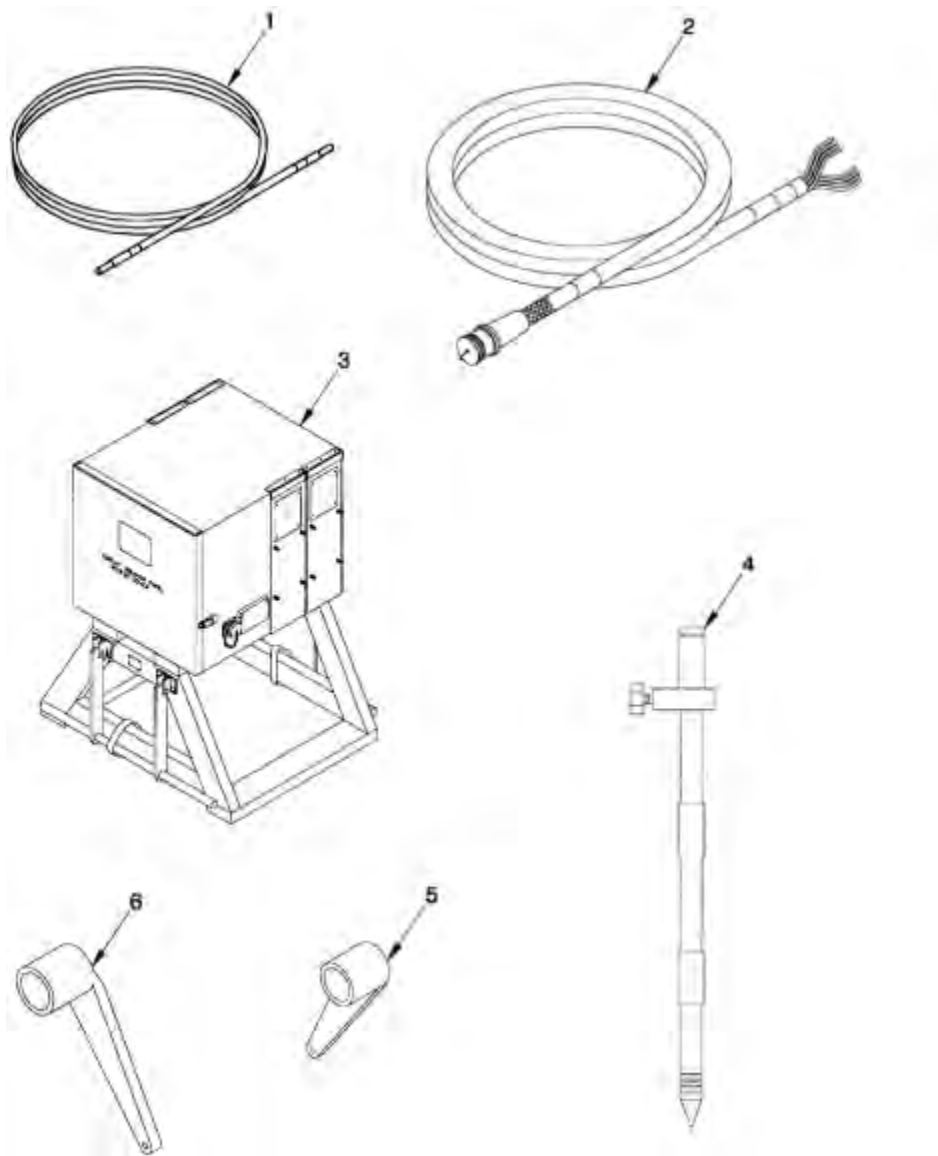


Figure 1. Components of End Items (COEI).

Table 1. Component of End Items (COEI) List.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER (NSN)	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
1	5999-01-433-8637	STRIP, ELECTRICAL GROUNDING (20 FOOT) 20 ft (Stowage Varies) A3254560-001 (80063)	LDD	EA	1
1	5999-01-433-8637	STRIP, ELECTRICAL GROUNDING 20 ft (Stowage Varies)	6AX	EA	1

Table 1. Component of End Items (COEI) List. – Continued

(1)	(2)	(3)	(4)	(5)	(6)
ILLUS NUMBER	NATIONAL STOCK NUMBER (NSN)	DESCRIPTION, PART NUMBER/(CAGEC)	USABLE ON CODE	U/I	QTY RQR
2	5995-01-433-5322	A3273285 (80063) CABLE ASSEMBLY, POWER ELECTRICAL 200 Amp, 8 pin (Stowage Varies)		EA	1
3	6110-01-423-8822	A3254554 (14850) DISTRIBUTION BOX, POWER PP-8440/ASM (Stowage Varies)	LDD	EA	1
3	6110-01-550-9613	AA3254545 (80063) DISTRIBUTION BOX, POWER PP-8440A/ ASM (Stowage Varies)	6AX	EA	1
4	5975-00-878-3791	A3317506 (14850) ROD, GROUND 3-Piece w/Strap (Stowage Varies)	LDD, 6AX	EA	1
5	5120-01-019-9564	A-A-55804-I I-B (58536) WRENCH, BOX Small (Stowage Varies)	LDD, 6AX	EA	1
6	5120-01-046-4948	72-2029-1 (30554) WRENCH, BOX Large (Stowage Varies)	LDD, 6AX	EA	1
		00365-0354 (79343)			



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**ADDITIONAL AUTHORIZATION LIST (AAL)**


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**INTRODUCTION****Scope**

This work package lists additional items you are authorized for the support of the PDB.

**General**

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

**Explanation of Entries in the AAL**

Column (1) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (2) Description, Part Number/(CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (3) Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment. These codes are identified below:

CODE	USED ON
------	---------

LDD	PP-8440/ASM
6AX	PP-8440A/ASM

Column (4) U/I. Unit of Issue (U/I) indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (1).

Column (5) Qty Recm. Indicates the quantity recommended.

**Table 1. Additional Authorization List.**

(1) NATIONAL STOCK NUMBER (NSN)	(2) DESCRIPTION, PART NUMBER/(CAGEC)	(3) USABLE ON CODE	(4) U/I	(5) QTY RECM
6150-01-256-6300	100 A, PIGTAIL/CONNECTOR POWER STUB, 4 FT, 3-PHASE, 8-PIN 13226E7020 (97403)	6AX	EA	1
6150-01-247-4768	200 A, PIGTAIL/CONNECTOR POWER STUB, 4 FT, 3-PHASE, 8-PIN 13226E7021 (97403)	6AX	EA	1
6150-01-256-6301	60 A, PIGTAIL/CONNECTOR POWER STUB, 4 FT, 3-PHASE, 5-PIN 13226E7019 (97403)	6AX	EA	1
5975-00-224-5260	ROD, GROUND 3 FT SCD14158 (80065)	LDD, 6AX	EA	1
5820-01-263-1760	ROD, GROUNDING KIT MK-2551A/U (80058)	LDD, 6AX	EA	1

**END OF WORK PACKAGE**





## EXPENDABLE AND DURABLE ITEMS LIST

## INTRODUCTION

## Scope

This work package lists expendable and durable items that you will need to operate and maintain the PDB. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment or CTA 8-100, Army Medical Department Expendable/Durable Items.

## Explanation of Columns in the Expendable/Durable Items List

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use brake fluid (WP 0098, item 5).

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

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) Item Name, Description, Part Number/Commercial and Government entity Code (CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (5) Unit of Issues (U/I). Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable and Durable Items List.

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER/(CAGEC)	(5) U/I
1	C	5995-01-433-5322	Cable Assembly, Power, Electrical A3273279-001 (14850)	EA
2	C	6810-00-205-6786	Denatured Alcohol (0A9L8)	GL
3	C	7501-00-266-6711	Masking Tape (52152)	ROLL
4	C	5995-01-327-9781	Power Cable SC-D-883964GRP5-3	EA
5	C	6150-01-512-9087	Power Cable A3284127-001	EA
6	C	6150-01-440-1907	Power Cable Assembly SC-D-883964GRP9-3	EA
7	C	5995-01-435-8697	Power Cable Assembly, 50 ft SC-D-883964GRP17-4	EA

Table 1. Expendable and Durable Items List. – Continued

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER/(CAGEC)	(5) U/I
8	C	7920-00-205-1711	Rag, Wiping (64067)	BX
9	C	3930-01-503-7122	Velcro Tape Strip 6623532 (1YHH8)	ROLL
10	C	6850-00-854-6664	Water-white rosin 1978078 (96613)	EA

END OF WORK PACKAGE

<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b> For use of this form, see AR 25-30; the proponent agency is OAASA					Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).		DATE 21 Nov 2011
<b>TO:</b> (Forward to proponent of publication or form) (Include ZIP Code) Commander, U.S. Army Communications-Electronics Command, 6001 Combat Drive, ATTN: AMSEL-LCL-ECM, Aberdeen Proving Ground, MD 21005-1846					<b>FROM:</b> (Activity and location) (Include ZIP Code) Jane Q. Doe, SFC 1234 Any Street Anytown, AL 34565		
<b>PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS</b>							
PUBLICATION/FORM NUMBER TM 11-1234-567-14				DATE 15 Jan 2011		TITLE Operator, Field and Sustainment Support Maintenance Manual for Radio, AN/ABC-123	
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
1	WP0005 PG 3		2			Test or Corrective Action... should identify a different WP number.	
TYPED NAME, GRADE OR TITLE Jane Q. Doe, SFC				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION 123-4567		SIGNATURE	

<b>TO:</b> (Forward to proponent of publication or form) (Include ZIP Code)				<b>FROM:</b> (Activity and location) (Include ZIP Code)			<b>DATE</b>	
<b>PART II- REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS</b>								
PUBLICATION/FORM NUMBER				DATE			TITLE	
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
<div style="position: relative; height: 100px;"> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%) rotate(-45deg); font-size: 100px; opacity: 0.5;">EXAMPLE</div> </div>								
<b>PART III - REMARKS</b> (Leave open for remarks or recommendations, or suggestions for improvement of publications and blank space. Additional blank sheets may be used if more space is needed.)								
TYPED NAME, GRADE OR TITLE			TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION			SIGNATURE		

<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b> For use of this form, see AR 25-30; the proponent agency is OAASA						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
<b>TO:</b> (Forward to proponent of publication or form) (Include ZIP Code)						<b>FROM:</b> (Activity and location) (Include ZIP Code)	
<b>PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS</b>							
PUBLICATION/FORM NUMBER				DATE		TITLE	
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE	

<b>TO:</b> <i>(Forward to proponent of publication or form) (Include ZIP Code)</i>				<b>FROM:</b> <i>(Activity and location) (Include ZIP Code)</i>			<b>DATE</b>	
<b>PART II- REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS</b>								
PUBLICATION/FORM NUMBER			DATE		TITLE			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
<b>PART III - REMARKS</b> <i>(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)</i>								
TYPED NAME, GRADE OR TITLE			TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION			SIGNATURE		

<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b> For use of this form, see AR 25-30; the proponent agency is OAASA						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
<b>TO:</b> (Forward to proponent of publication or form) (Include ZIP Code)						<b>FROM:</b> (Activity and location) (Include ZIP Code)	
<b>PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS</b>							
PUBLICATION/FORM NUMBER				DATE		TITLE	
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE	

<b>TO:</b> <i>(Forward to proponent of publication or form) (Include ZIP Code)</i>				<b>FROM:</b> <i>(Activity and location) (Include ZIP Code)</i>			<b>DATE</b>	
<b>PART II- REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS</b>								
PUBLICATION/FORM NUMBER			DATE		TITLE			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
<b>PART III - REMARKS</b> <i>(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)</i>								
TYPED NAME, GRADE OR TITLE			TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION			SIGNATURE		



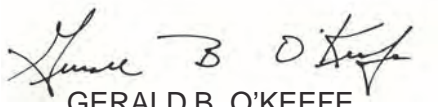
<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b> For use of this form, see AR 25-30; the proponent agency is OAASA						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
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PUBLICATION/FORM NUMBER				DATE		TITLE	
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE	

<b>TO:</b> <i>(Forward to proponent of publication or form) (Include ZIP Code)</i>				<b>FROM:</b> <i>(Activity and location) (Include ZIP Code)</i>			<b>DATE</b>	
<b>PART II- REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS</b>								
PUBLICATION/FORM NUMBER			DATE		TITLE			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
<b>PART III - REMARKS</b> <i>(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)</i>								
TYPED NAME, GRADE OR TITLE			TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION			SIGNATURE		

**TM 9-6110-251-13&P**

By Order of the Secretary of the Army:

Official:



GERALD B. O'KEEFE

*Administrative Assistant to the  
Secretary of the Army*

1416704

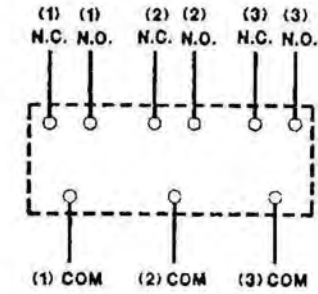
RAYMOND T. ODIERNO  
*General, United States Army  
Chief of Staff*

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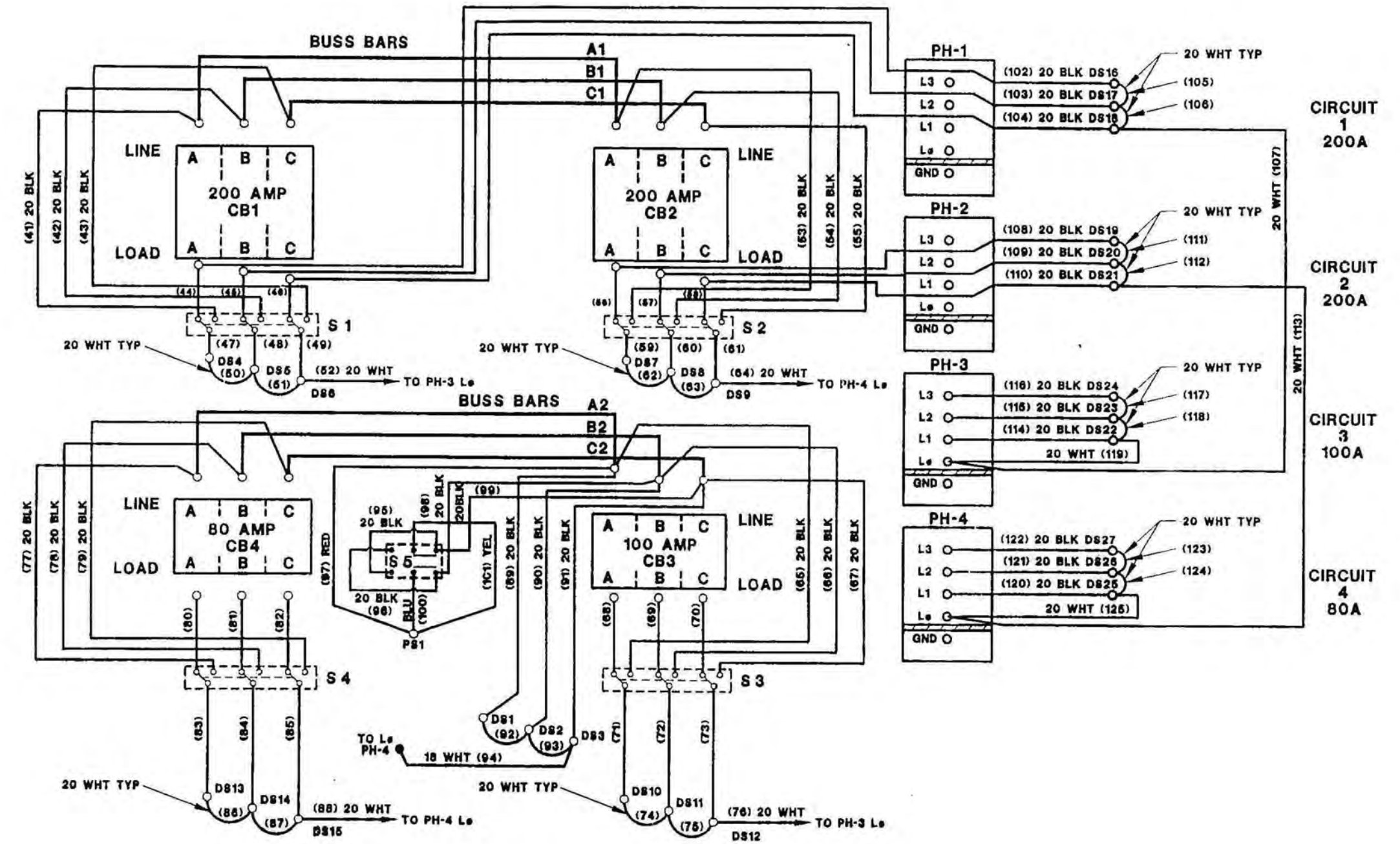
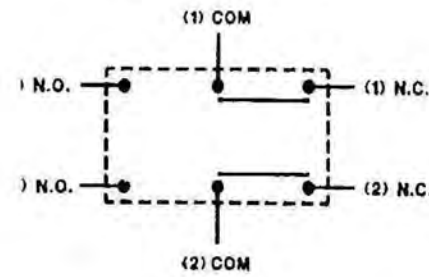


**S1 THRU S4 CONNECTIONS**



N.C. = NORMALLY CLOSED  
N.O. = NORMALLY OPEN  
C = COMMON

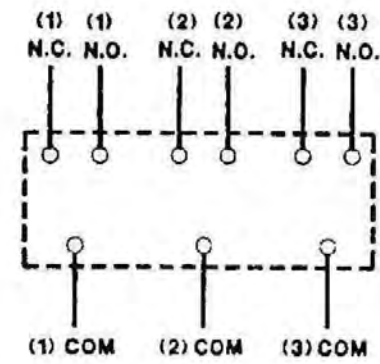
**S5 CONNECTION**



**TEST LIGHTS WIRING DIAGRAM**

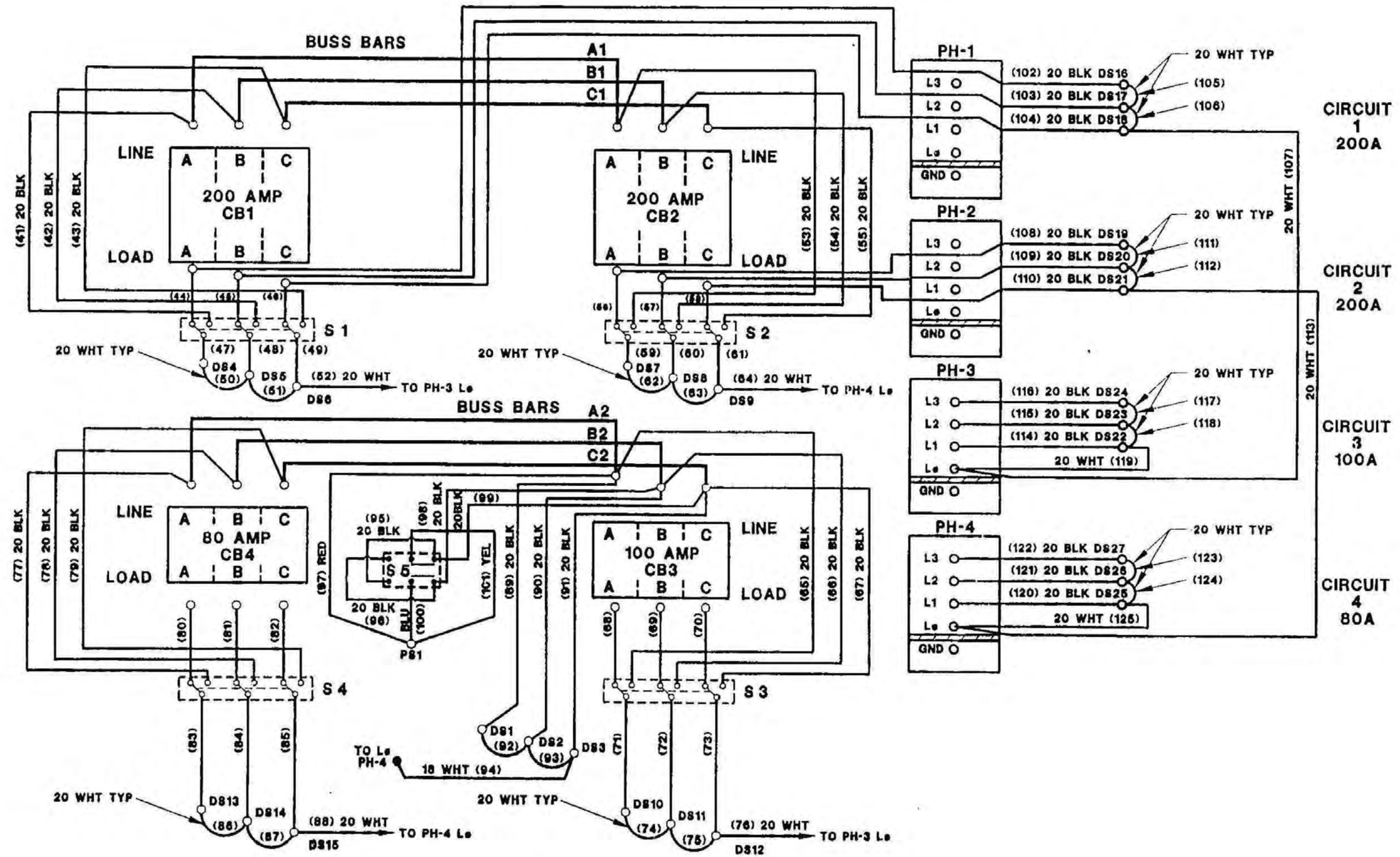
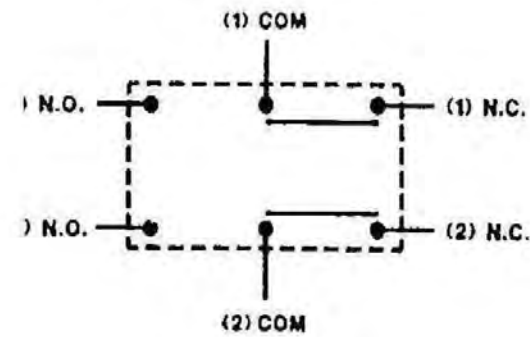


**S1 THRU S4 CONNECTIONS**



N.C. = NORMALLY CLOSED  
N.O. = NORMALLY OPEN  
C = COMMON

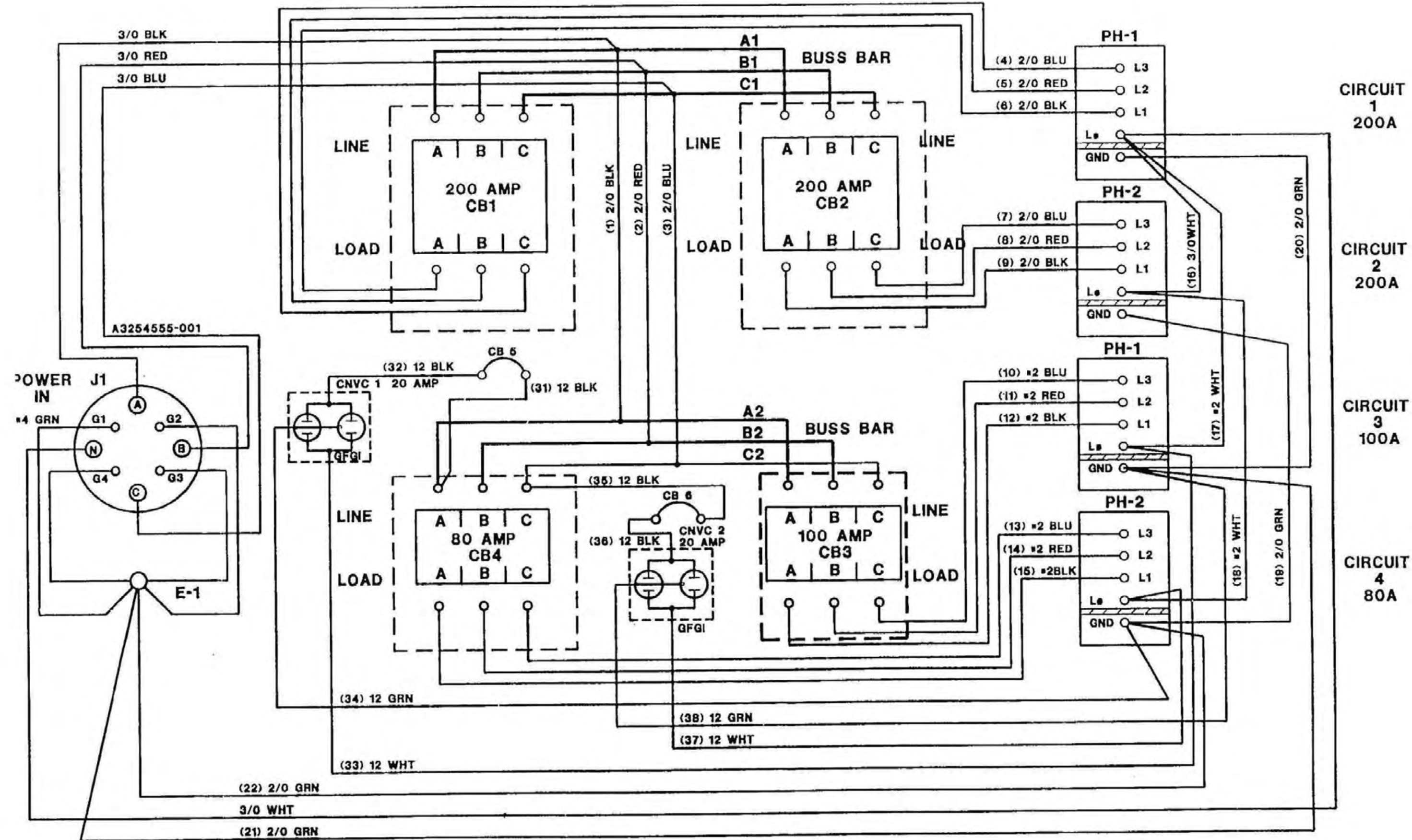
**S5 CONNECTION**



**TEST LIGHTS WIRING DIAGRAM**







POWER WIRING DIAGRAM



WIRE DATA CHART							
WIRE NUMBER	AWG. COLOR	DRAWING NUMBER	FROM	TERMINATION	TO	TERMINATION	LENGTH
(1)	2/0, BLK	A3254556-001	BUSS BAR A1	TERMINAL LUG	BUSS BAR A2	TERMINAL LUG	9.75
(2)	2/0, RED	A3254556-002	BUSS BAR B1	TERMINAL LUG	BUSS BAR B2	TERMINAL LUG	9.50
(3)	2/0, BLU	A3254556-003	BUSS BAR C1	TERMINAL LUG	BUSS BAR C2	TERMINAL LUG	9.50
(4)	2/0, BLU	A3254556-004	CB1 LOAD C	TERMINAL LUG	PH-1 L3	TERMINAL LUG	28.00
(5)	2/0, RED	A3254556-005	CB1 LOAD B	TERMINAL LUG	PH-1 L2	TERMINAL LUG	31.50
(6)	2/0, BLK	A3254556-006	CB1 LOAD A	TERMINAL LUG	PH-1 L1	TERMINAL LUG	35.00
(7)	2/0, BLU	A3254556-007	CB2 LOAD C	TERMINAL LUG	PH-2 L3	TERMINAL LUG	28.00
(8)	2/0, RED	A3254556-008	CB2 LOAD B	TERMINAL LUG	PH-2 L2	TERMINAL LUG	31.50
(9)	2/0, BLK	A3254556-009	CB2 LOAD A	TERMINAL LUG	PH-2 L1	TERMINAL LUG	35.00
(10)	#2, BLU	A3254556-010	CB3 LOAD C	TERMINAL LUG	PH-3 L3	TERMINAL LUG	27.00
(11)	#2, RED	A3254556-011	CB3 LOAD B	TERMINAL LUG	PH-3 L2	TERMINAL LUG	30.50
(12)	#2, BLK	A3254556-012	CB3 LOAD A	TERMINAL LUG	PH-3 L1	TERMINAL LUG	34.00
(13)	#2, BLU	A3254556-013	CB4 LOAD C	TERMINAL LUG	PH-4 L3	TERMINAL LUG	27.00
(14)	#2, RED	A3254556-014	CB4 LOAD B	TERMINAL LUG	PH-4 L2	TERMINAL LUG	30.50
(15)	#2, BLK	A3254556-015	CB4 LOAD A	TERMINAL LUG	PH-4 L1	TERMINAL LUG	34.00
(16)	3/0, WHT	A3254556-016	PH-1 LØ	TERMINAL LUG	PH-2 LØ	TERMINAL LUG	17.00
(17)	2/0, WHT	A3254556-017	PH-1 LØ	TERMINAL LUG	PH-3 LØ	TERMINAL LUG	12.00
(18)	2/0, WHT	A3254556-018	PH-2 LØ	TERMINAL LUG	PH-4 LØ	TERMINAL LUG	12.00
(19)	2/0, GRN	A3254556-019	PH-4 GND	TERMINAL LUG	PH-2 GND	TERMINAL LUG	12.00
(20)	2/0, GRN	A3254556-020	PH-1 GND	TERMINAL LUG	PH-3 GND	TERMINAL LUG	12.00
(21)	2/0, GRN	A3254556-021	E-1	TERMINAL LUG	PH-3 GND	TERMINAL LUG	11.00
(22)	2/0, GRN	A3254556-022	E-1	TERMINAL LUG	PH-4 GND	TERMINAL LUG	11.00

WIRE DATA CHART								
WIRE NUMBER	WIRE GAUGE, COLOR AND FIND NO.			FROM	TERMINATION	TO	TERMINATION	LENGTH
(31)	12 AWG	BLK	106	CB4 LINE A	TERM LUG, F/N 110	CB5 LINE	TERM LUG, F/N 109	26.00
(32)	12 AWG	BLK	106	CB5 LOAD	TERM LUG, F/N 109	CNVC 1 HOT	TERM LUG, F/N 109	8.00
(33)	12 AWG	WHT	107	CNVC 1 NEUT	TERM LUG, F/N 109	PH-3 LØ	TERM LUG, F/N III	24.00
(34)	12 AWG	GRN	108	CNVC 1 GND	TERM LUG, F/N 109	PH-3 GND	TERM LUG, F/N III	22.00
(35)	12 AWG	BLK	106	CB4 LINE C	TERM LUG, F/N 110	CB6 LINE	TERM LUG, F/N 109	12.00
(36)	12 AWG	BLK	106	CB6 LOAD	TERM LUG, F/N 109	CNVC 2 HOT	TERM LUG, F/N 109	8.00
(37)	12 AWG	WHT	107	CNVC 2 NEUT	TERM LUG, F/N 109	PH-4 LØ	TERM LUG, F/N III	24.00
(38)	12 AWG	GRN	108	CNVC 2 GND	TERM LUG, F/N 109	PH-4 GND	TERM LUG, F/N III	22.00



WIRE NUMBER	WIRE GAUGE COLOR AND FIND NO.			FROM	TERMINATION	TO	TERMINATION	LENGTH
141)	20 AWG	BLK	112	CB1-A (LINE)	TERM LUG, F/N 115	S1-1 N.O.	SOLDER, F/N 117	10.50
142)	20 AWG	BLK	112	CB1-B (LINE)	TERM LUG, F/N 115	S1-2 N.O.	SOLDER	9.50
143)	20 AWG	BLK	112	CB1-C (LINE)	TERM LUG, F/N 115	S1-3 N.O.	SOLDER	7.50
144)	20 AWG	BLK	112	CB1-A (LOAD)	TERM LUG, F/N 115	S1-1 N.C.	SOLDER	18.00
145)	20 AWG	BLK	112	CB1-B (LOAD)	TERM LUG, F/N 115	S1-2 N.C.	SOLDER	16.50
146)	20 AWG	BLK	112	CB1-C (LOAD)	TERM LUG, F/N 115	S1-3 N.C.	SOLDER	15.00
147)	20 AWG	BLK	112	S1-1 COM	SOLDER	DS4 (HOT)	SOLDER	8.50
148)	20 AWG	BLK	112	S1-2 COM	SOLDER	DS5 (HOT)	SOLDER	7.00
149)	20 AWG	BLK	112	S1-3 COM	SOLDER	DS6 (HOT)	SOLDER	6.00
150)	20 AWG	WHT	113	DS4 (NEUT)	SOLDER	DS5 (NEUT)	SOLDER	5.00
151)	20 AWG	WHT	113	DS5 (NEUT)	SOLDER	DS6 (NEUT)	SOLDER	5.00
152)	20 AWG	WHT	113	DS6 (NEUT)	SOLDER	PH-3 LØ	TERM LUG, F/N 116	46.00
153)	20 AWG	BLK	112	CB2-A (LINE)	TERM LUG, F/N 115	S2-1 N.O.	SOLDER	7.50
154)	20 AWG	BLK	112	CB2-B (LINE)	TERM LUG, F/N 115	S2-2 N.O.	SOLDER	8.00
155)	20 AWG	BLK	112	CB2-C (LINE)	TERM LUG, F/N 115	S2-3 N.O.	SOLDER	10.00
156)	20 AWG	BLK	112	CB2-A (LOAD)	TERM LUG, F/N 115	S2-1 N.C.	SOLDER	13.00
157)	20 AWG	BLK	112	CB2-B (LOAD)	TERM LUG, F/N 115	S2-2 N.C.	SOLDER	14.50
158)	20 AWG	BLK	112	CB2-C (LOAD)	TERM LUG, F/N 115	S2-3 N.C.	SOLDER	16.00
159)	20 AWG	BLK	112	S2-1 COM	SOLDER	DS7 (HOT)	SOLDER	5.00
160)	20 AWG	BLK	112	S2-2 COM	SOLDER	DS8 (HOT)	SOLDER	7.00
161)	20 AWG	BLK	112	S2-3 COM	SOLDER	DS9 (HOT)	SOLDER	9.00
162)	20 AWG	WHT	113	DS7 (NEUT)	SOLDER	DS8 (NEUT)	SOLDER	5.00
163)	20 AWG	WHT	113	DS8 (NEUT)	SOLDER	DS9 (NEUT)	SOLDER	5.00
164)	20 AWG	WHT	113	DS9 (NEUT)	SOLDER	PH-4 LØ	TERM LUG, F/N 138	46.00
165)	20 AWG	BLK	112	CB3-A (LINE)	TERM LUG, F/N 114	S3-1 N.O.	SOLDER	9.50
166)	20 AWG	BLK	112	CB3-B (LINE)	TERM LUG, F/N 114	S3-2 N.O.	SOLDER	8.50
167)	20 AWG	BLK	112	CB3-C (LINE)	TERM LUG, F/N 114	S3-3 N.O.	SOLDER	7.50
168)	20 AWG	BLK	112	CB3-A (LOAD)	TERM LUG, F/N 114	S3-1 N.C.	SOLDER	12.00
169)	20 AWG	BLK	112	CB3-B (LOAD)	TERM LUG, F/N 114	S3-2 N.C.	SOLDER	11.00
170)	20 AWG	BLK	112	CB3-C (LOAD)	TERM LUG, F/N 114	S3-3 N.C.	SOLDER	10.00
171)	20 AWG	BLK	112	S3-1 COM	SOLDER	DS10 (HOT)	SOLDER	7.50
172)	20 AWG	BLK	112	S3-2 COM	SOLDER	DS11 (HOT)	SOLDER	6.50
173)	20 AWG	BLK	112	S3-3 COM	SOLDER	DS12 (HOT)	SOLDER	5.50
174)	20 AWG	WHT	113	DS10 (NEUT)	SOLDER	DS11 (NEUT)	SOLDER	5.00
175)	20 AWG	WHT	113	DS11 (NEUT)	SOLDER	DS12 (NEUT)	SOLDER	5.00
176)	20 AWG	WHT	113	DS12 (NEUT)	SOLDER	PH-3 LØ	TERM LUG, F/N 116	40.00
177)	20 AWG	BLK	112	CB4-A (LINE)	TERM LUG, F/N 114	S4-1 N.O.	SOLDER	9.50
178)	20 AWG	BLK	112	CB4-B (LINE)	TERM LUG, F/N 114	S4-2 N.O.	SOLDER	8.50
179)	20 AWG	BLK	112	CB4-C (LINE)	TERM LUG, F/N 114	S4-3 N.O.	SOLDER	7.50
180)	20 AWG	BLK	112	CB4-A (LOAD)	TERM LUG, F/N 114	S4-1 N.C.	SOLDER	11.50
181)	20 AWG	BLK	112	CB4-B (LOAD)	TERM LUG, F/N 114	S4-2 N.C.	SOLDER	13.00
182)	20 AWG	BLK	112	CB4-C (LOAD)	TERM LUG, F/N 114	S4-3 N.C.	SOLDER	14.00

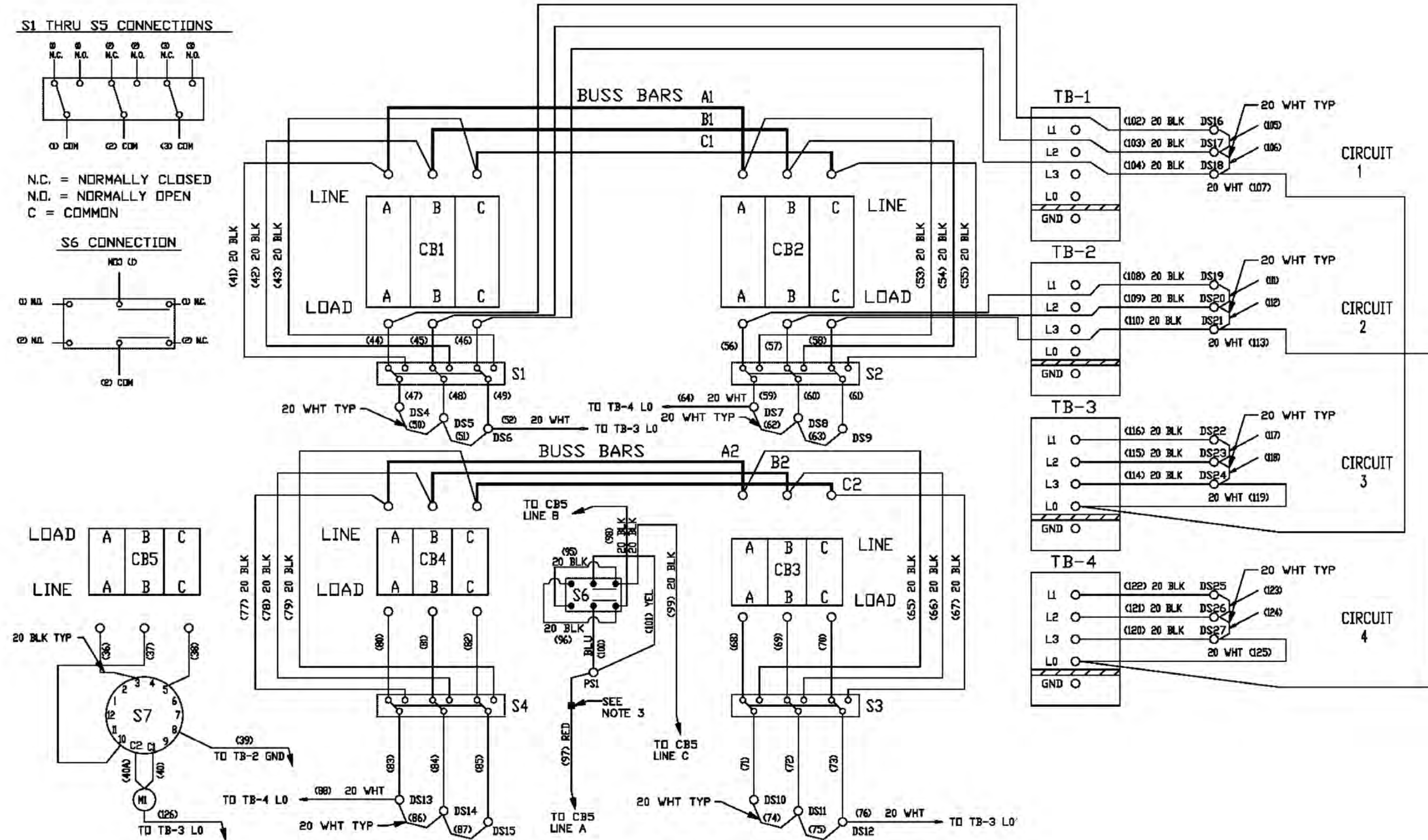




WIRE DATA CHART								
WIRE NUMBER	WIRE GAUGE COLOR AND FIND NO.			FROM	TERMINATION	TO	TERMINATION	LENGTH
(83)	20 AWG	BLK	112	S4-1 COM	SOLDER	DS13 (HOT)	SOLDER	5.00
(84)	20 AWG	BLK	112	S4-2 COM	SOLDER	DS14 (HOT)	SOLDER	7.00
(85)	20 AWG	BLK	112	S4-3 COM	SOLDER	DS15 (HOT)	SOLDER	9.00
(86)	20 AWG	WHT	113	DS13 (NEUT)	SOLDER	DS14 (NEUT)	SOLDER	5.00
(87)	20 AWG	WHT	113	DS14 (NEUT)	SOLDER	DS15 (NEUT)	SOLDER	5.00
(88)	20 AWG	WHT	113	DS15 (NEUT)	SOLDER	PH-4 LØ	TERM LUG, F/N 138	45.00
(89)	20 AWG	BLK	112	CB3-A (LINE)	TERM LUG, F/N 114	DS1 (HOT)	SOLDER	13.00
(90)	20 AWG	BLK	112	CB3-B (LINE)	TERM LUG, F/N 114	DS2 (HOT)	SOLDER	13.00
(91)	20 AWG	BLK	112	CB3-C (LINE)	TERM LUG, F/N 114	DS3 (HOT)	SOLDER	14.00
(92)	20 AWG	WHT	113	DS1 (NEUT)	SOLDER	DS2 (NEUT)	SOLDER	5.00
(93)	20 AWG	WHT	113	DS2 (NEUT)	SOLDER	DS3 (NEUT)	SOLDER	5.00
(94)	20 AWG	WHT	113	DS3 (NEUT)	SOLDER	PH-4 LØ	TERM LUG, F/N 138	33.00
(95)	20 AWG	BLK	112	S5-1 N.C.	SOLDER	S5-2 N.O.	SOLDER	5.00
(96)	20 AWG	BLK	112	S5-1 N.O.	SOLDER	S5-2 N.C.	SOLDER	5.00
(97)	RED	P/O F/N 74	SHEET 2	CB3-A (LINE)	TERM LUG, F/N 114	PS1	P/O PS1	10.00
(98)	20 AWG	BLK	112	CB3-B (LINE)	TERM LUG, F/N 114	S5-2 N.C.	SOLDER	10.00
(99)	20 AWG	BLK	112	CB3-C (LINE)	TERM LUG, F/N 114	S5-1 N.C.	SOLDER	10.00
(100)	BLU	P/O F/N 74	SHEET 2	S5-2 (COM)	SOLDER	PS1	P/O PS1	7.00
(101)	YEL	P/O F/N 74	SHEET 2	S5-1 (COM)	SOLDER	PS1	P/O PS1	7.00
(102)	20 AWG	BLK	112	CB1-A (LOAD)	TERM LUG, F/N 115	DS16 (HOT)	SOLDER	36.00
(103)	20 AWG	BLK	112	CB1-B (LOAD)	TERM LUG, F/N 115	DS17 (HOT)	SOLDER	38.00
(104)	20 AWG	BLK	112	CB1-C (LOAD)	TERM LUG, F/N 115	DS18 (HOT)	SOLDER	40.00
(105)	20 AWG	WHT	113	DS16 (NEUT)	SOLDER	DS17 (NEUT)	SOLDER	5.00
(106)	20 AWG	WHT	113	DS17 (NEUT)	SOLDER	DS18 (NEUT)	SOLDER	5.00
(107)	20 AWG	WHT	113	DS18 (NEUT)	SOLDER	PH-3 LØ	TERM LUG, F/N 116	15.00
(108)	20 AWG	BLK	112	CB2-A (LOAD)	TERM LUG, F/N 115	DS19 (HOT)	SOLDER	41.00
(109)	20 AWG	BLK	112	CB2-B (LOAD)	TERM LUG, F/N 115	DS20 (HOT)	SOLDER	42.00
(110)	20 AWG	BLK	112	CB2-C (LOAD)	TERM LUG, F/N 115	DS21 (HOT)	SOLDER	43.00
(111)	20 AWG	WHT	113	DS19 (NEUT)	SOLDER	DS20 (NEUT)	SOLDER	5.00
(112)	20 AWG	WHT	113	DS20 (NEUT)	SOLDER	DS21 (NEUT)	SOLDER	5.00
(113)	20 AWG	WHT	113	DS21 (NEUT)	SOLDER	PH-4 LØ	TERM LUG, F/N 116	15.00
(114)	20 AWG	BLK	112	PH-3 L3	TERM LUG, F/N 116	DS22 (HOT)	SOLDER	5.00
(115)	20 AWG	BLK	112	PH-3 L2	TERM LUG, F/N 116	DS23 (HOT)	SOLDER	5.00
(116)	20 AWG	BLK	112	PH-3 L1	TERM LUG, F/N 116	DS24 (HOT)	SOLDER	5.00
(117)	20 AWG	WHT	113	DS22	SOLDER	DS23 (NEUT)	SOLDER	5.00
(118)	20 AWG	WHT	113	DS23	SOLDER	DS24 (NEUT)	SOLDER	5.00
(119)	20 AWG	WHT	113	DS24	SOLDER	PH-3 LØ	TERM LUG, F/N 116	7.00
(120)	20 AWG	BLK	112	PH-4 L3	TERM LUG, F/N 116	DS25 (HOT)	SOLDER	5.00
(121)	20 AWG	BLK	112	PH-4 L2	TERM LUG, F/N 116	DS26 (HOT)	SOLDER	5.00
(122)	20 AWG	BLK	112	PH-4 L1	TERM LUG, F/N 116	DS27 (HOT)	SOLDER	5.00
(123)	20 AWG	WHT	113	DS25	SOLDER	DS26 (NEUT)	SOLDER	5.00
(124)	20 AWG	WHT	113	DS26	SOLDER	DS27 (NEUT)	SOLDER	5.00
(125)	20 AWG	WHT	113	DS27	SOLDER	PH-4 LØ	TERM LUG, F/N 116	7.00

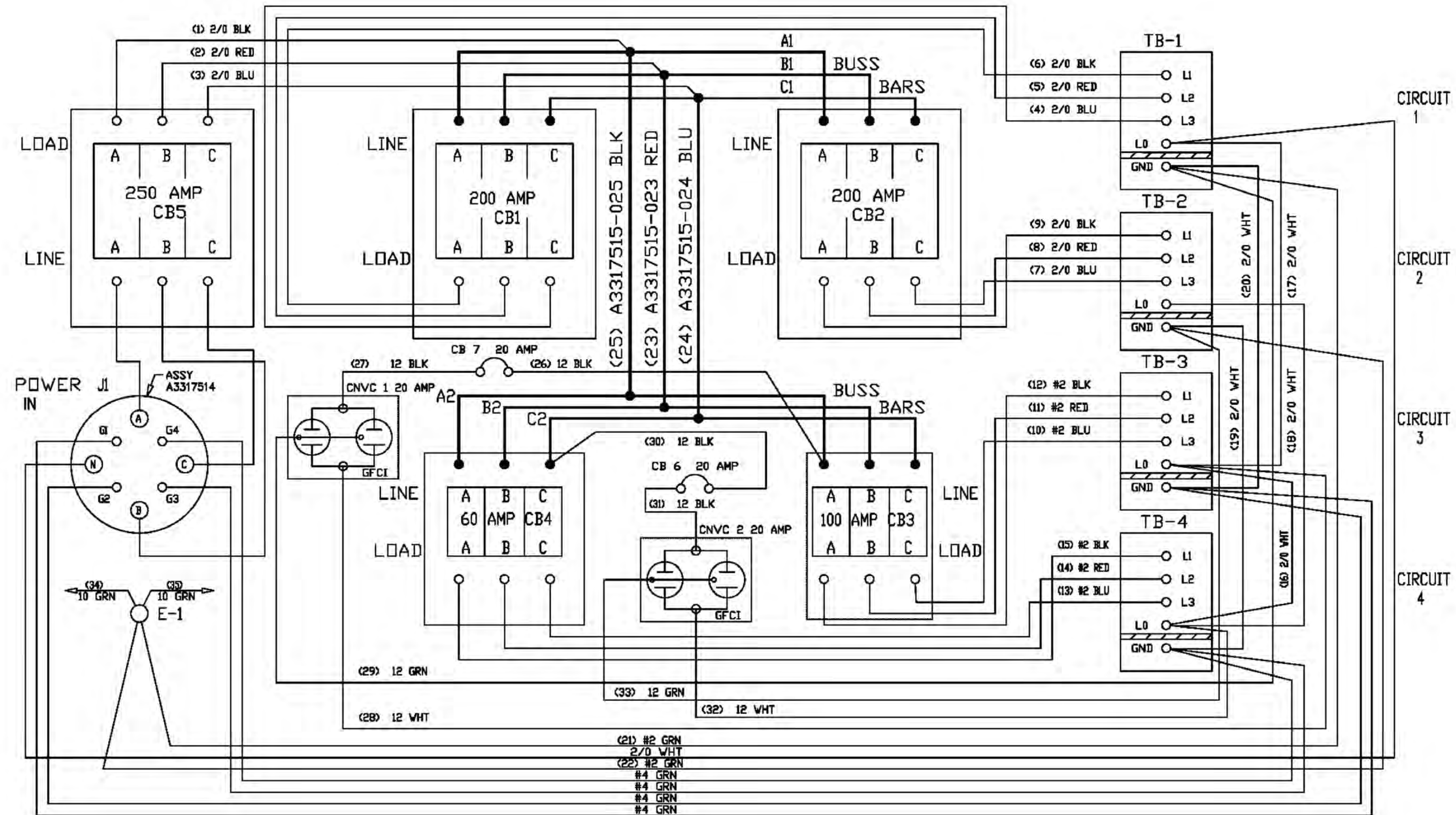






FO-4. PP-8440A/ASM Test Light Schematic.  
FP-11/12 blank





FO-5. PP-8440A/ASM Power Wiring Schematic.



WIRE DATA CHART								
WIRE NUMBER	AWG, COLOR	FIND NO.	DRAWING NUMBER	FROM	TERMINATION	TO	TERMINATION	LENGTH
①	2/0, BLK	75	A3317515-001	CB5 LOAD A	TERMINAL LUG	BUSS BAR A1	TERMINAL LUG	36.00
②	2/0, RED	76	A3317515-002	CB5 LOAD B	TERMINAL LUG	BUSS BAR B1	TERMINAL LUG	36.00
③	2/0, BLU	77	A3317515-003	CB5 LOAD C	TERMINAL LUG	BUSS BAR C1	TERMINAL LUG	36.00
④	2/0, BLU	78	A3317515-004	CB1 LOAD C	TERMINAL LUG	TB-1 L3	TERMINAL LUG	28.00
⑤	2/0, RED	79	A3317515-005	CB1 LOAD B	TERMINAL LUG	TB-1 L2	TERMINAL LUG	31.00
⑥	2/0, BLK	80	A3317515-006	CB1 LOAD A	TERMINAL LUG	TB-1 L1	TERMINAL LUG	35.00
⑦	2/0, BLU	81	A3317515-007	CB2 LOAD C	TERMINAL LUG	TB-2 L3	TERMINAL LUG	28.00
⑧	2/0, RED	82	A3317515-008	CB2 LOAD B	TERMINAL LUG	TB-2 L2	TERMINAL LUG	31.00
⑨	2/0, BLK	83	A3317515-009	CB2 LOAD A	TERMINAL LUG	TB-2 L1	TERMINAL LUG	35.00
⑩	#2, BLU	84	A3317515-010	CB3 LOAD C	TERMINAL LUG	TB-3 L3	TERMINAL LUG	28.00
⑪	#2, RED	85	A3317515-011	CB3 LOAD B	TERMINAL LUG	TB-3 L2	TERMINAL LUG	31.00
⑫	#2, BLK	86	A3317515-012	CB3 LOAD A	TERMINAL LUG	TB-3 L1	TERMINAL LUG	35.00
⑬	#2, BLU	87	A3317515-013	CB4 LOAD C	TERMINAL LUG	TB-4 L3	TERMINAL LUG	28.00
⑭	#2, RED	88	A3317515-014	CB4 LOAD B	TERMINAL LUG	TB-4 L2	TERMINAL LUG	31.00
⑮	#2, BLK	89	A3317515-015	CB4 LOAD A	TERMINAL LUG	TB-4 L1	TERMINAL LUG	35.00
⑯	2/0, WHT	90	A3317515-016	TB-3 L①	TERMINAL LUG	TB-4 L①	TERMINAL LUG	27.00
⑰	2/0, WHT	91	A3317515-017	TB-1 L①	TERMINAL LUG	TB-3 L①	TERMINAL LUG	12.00
⑱	2/0, WHT	92	A3317515-018	TB-2 L①	TERMINAL LUG	TB-4 L①	TERMINAL LUG	12.00
⑲	2/0, GRN	93	A3317515-019	TB-4 GND	TERMINAL LUG	TB-2 GND	TERMINAL LUG	12.00
⑳	2/0, GRN	94	A3317515-020	TB-1 GND	TERMINAL LUG	TB-3 GND	TERMINAL LUG	12.00
㉑	2/0, GRN	95	A3317515-021	E-1	TERMINAL LUG	TB-3 GND	TERMINAL LUG	12.00
㉒	2/0, GRN	96	A3317515-022	E-1	TERMINAL LUG	TB-4 GND	TERMINAL LUG	12.00
㉓	2/0, RED	97	A3317515-023	BUSS BAR B1	TERMINAL LUG	BUSS BAR B2	TERMINAL LUG	8.75
㉔	2/0, BLU	98	A3317515-024	BUSS BAR C1	TERMINAL LUG	BUSS BAR C2	TERMINAL LUG	7.00
㉕	2/0, BLK	99	A3317515-025	BUSS BAR A1	TERMINAL LUG	BUSS BAR A2	TERMINAL LUG	9.50
WIRE DATA CHART								
WIRE NUMBER	WIRE GAUGE, COLOR AND FIND NO.			FROM	TERMINATION	TO	TERMINATION	LENGTH
②6	12 AWG	BLK	108	CB3 LINE A	TERM LUG, F/N 112	CB7 LINE	TERM LUG, F/N 121	23.00
②7	12 AWG	BLK	108	CB7 LOAD	TERM LUG, F/N 111	CNVC 1 HOT	TERM LUG, F/N 121	9.00
②8	12 AWG	WHT	109	CNVC 1 NEUT	TERM LUG, F/N 111	TB-3 L①	TERM LUG, F/N 113	24.00
②9	12 AWG	GRN	110	CNVC 1 GND	TERM LUG, F/N 111	TB-1 GND	TERM LUG, F/N 113	22.00
③0	12 AWG	BLK	108	CB4 LINE C	TERM LUG, F/N 112	CB6 LINE	TERM LUG, F/N 121	23.00
③1	12 AWG	BLK	108	CB6 LOAD	TERM LUG, F/N 111	CNVC 2 HOT	TERM LUG, F/N 121	9.00
③2	12 AWG	WHT	109	CNVC 2 NEUT	TERM LUG, F/N 111	TB-4 L①	TERM LUG, F/N 113	24.00
③3	12 AWG	GRN	110	CNVC 2 GND	TERM LUG, F/N 111	TB-2 GND	TERM LUG, F/N 113	22.00
③4	10 AWG	GRN	126	MAIN BOX STUD	TERM LUG, F/N 125	E-1	TERM LUG, F/N 113	18.00
③5	10 AWG	GRN	126	MAIN BOX STUD	TERM LUG, F/N 125	E-1	TERM LUG, F/N 113	18.00
③6	20 AWG	BLK	114	S7-3	SOLDER	CB5 LINE A	TERM LUG, F/N 117	60.00
③7	20 AWG	BLK	114	S7-10	SOLDER	CB5 LINE B	TERM LUG, F/N 117	42.00
③8	20 AWG	BLK	114	S7-5	SOLDER	CB5 LINE C	TERM LUG, F/N 117	54.00
③9	20 AWG	BLK	114	S7-B	SOLDER	TB-2 GND	TERM LUG, F/N 113	36.00
④0	20 AWG	BLK	114	S7-C	SOLDER	M1 HOT	TERM LUG, F/N 122	6.00
④0A	20 AWG	BLK	114	S7-C	SOLDER	M1 HOT	TERM LUG, F/N 122	6.00





WIRE DATA CHART								
WIRE NUMBER	AWG, COLOR	FIND NO.	DRAWING NUMBER	FROM	TERMINATION	TO	TERMINATION	LENGTH
①	2/0, BLK	75	A3317515-001	CB5 LOAD A	TERMINAL LUG	BUSS BAR A1	TERMINAL LUG	36.00
②	2/0, RED	76	A3317515-002	CB5 LOAD B	TERMINAL LUG	BUSS BAR B1	TERMINAL LUG	36.00
③	2/0, BLU	77	A3317515-003	CB5 LOAD C	TERMINAL LUG	BUSS BAR C1	TERMINAL LUG	36.00
④	2/0, BLU	78	A3317515-004	CB1 LOAD C	TERMINAL LUG	TB-1 L3	TERMINAL LUG	28.00
⑤	2/0, RED	79	A3317515-005	CB1 LOAD B	TERMINAL LUG	TB-1 L2	TERMINAL LUG	31.00
⑥	2/0, BLK	80	A3317515-006	CB1 LOAD A	TERMINAL LUG	TB-1 L1	TERMINAL LUG	35.00
⑦	2/0, BLU	81	A3317515-007	CB2 LOAD C	TERMINAL LUG	TB-2 L3	TERMINAL LUG	28.00
⑧	2/0, RED	82	A3317515-008	CB2 LOAD B	TERMINAL LUG	TB-2 L2	TERMINAL LUG	31.00
⑨	2/0, BLK	83	A3317515-009	CB2 LOAD A	TERMINAL LUG	TB-2 L1	TERMINAL LUG	35.00
⑩	#2, BLU	84	A3317515-010	CB3 LOAD C	TERMINAL LUG	TB-3 L3	TERMINAL LUG	28.00
⑪	#2, RED	85	A3317515-011	CB3 LOAD B	TERMINAL LUG	TB-3 L2	TERMINAL LUG	31.00
⑫	#2, BLK	86	A3317515-012	CB3 LOAD A	TERMINAL LUG	TB-3 L1	TERMINAL LUG	35.00
⑬	#2, BLU	87	A3317515-013	CB4 LOAD C	TERMINAL LUG	TB-4 L3	TERMINAL LUG	28.00
⑭	#2, RED	88	A3317515-014	CB4 LOAD B	TERMINAL LUG	TB-4 L2	TERMINAL LUG	31.00
⑮	#2, BLK	89	A3317515-015	CB4 LOAD A	TERMINAL LUG	TB-4 L1	TERMINAL LUG	35.00
⑯	2/0, WHT	90	A3317515-016	TB-3 L②	TERMINAL LUG	TB-4 L②	TERMINAL LUG	27.00
⑰	2/0, WHT	91	A3317515-017	TB-1 L②	TERMINAL LUG	TB-3 L②	TERMINAL LUG	12.00
⑱	2/0, WHT	92	A3317515-018	TB-2 L②	TERMINAL LUG	TB-4 L②	TERMINAL LUG	12.00
⑲	2/0, GRN	93	A3317515-019	TB-4 GND	TERMINAL LUG	TB-2 GND	TERMINAL LUG	12.00
⑳	2/0, GRN	94	A3317515-020	TB-1 GND	TERMINAL LUG	TB-3 GND	TERMINAL LUG	12.00
㉑	2/0, GRN	95	A3317515-021	E-1	TERMINAL LUG	TB-3 GND	TERMINAL LUG	12.00
㉒	2/0, GRN	96	A3317515-022	E-1	TERMINAL LUG	TB-4 GND	TERMINAL LUG	12.00
㉓	2/0, RED	97	A3317515-023	BUSS BAR B1	TERMINAL LUG	BUSS BAR B2	TERMINAL LUG	8.75
㉔	2/0, BLU	98	A3317515-024	BUSS BAR C1	TERMINAL LUG	BUSS BAR C2	TERMINAL LUG	7.00
㉕	2/0, BLK	99	A3317515-025	BUSS BAR A1	TERMINAL LUG	BUSS BAR A2	TERMINAL LUG	9.50
WIRE DATA CHART								
WIRE NUMBER	WIRE GAUGE, COLOR AND FIND NO.			FROM	TERMINATION	TO	TERMINATION	LENGTH
②6	12 AWG	BLK	108	CB3 LINE A	TERM LUG, F/N 112	CB7 LINE	TERM LUG, F/N 121	23.00
②7	12 AWG	BLK	108	CB7 LOAD	TERM LUG, F/N 111	CNVC 1 HDT	TERM LUG, F/N 121	9.00
②8	12 AWG	WHT	109	CNVC 1 NEUT	TERM LUG, F/N 111	TB-3 L②	TERM LUG, F/N 113	24.00
②9	12 AWG	GRN	110	CNVC 1 GND	TERM LUG, F/N 111	TB-1 GND	TERM LUG, F/N 113	22.00
③0	12 AWG	BLK	108	CB4 LINE C	TERM LUG, F/N 112	CB6 LINE	TERM LUG, F/N 121	23.00
③1	12 AWG	BLK	108	CB6 LOAD	TERM LUG, F/N 111	CNVC 2 HDT	TERM LUG, F/N 121	9.00
③2	12 AWG	WHT	109	CNVC 2 NEUT	TERM LUG, F/N 111	TB-4 L②	TERM LUG, F/N 113	24.00
③3	12 AWG	GRN	110	CNVC 2 GND	TERM LUG, F/N 111	TB-2 GND	TERM LUG, F/N 113	22.00
③4	10 AWG	GRN	126	MAIN BDX STUD	TERM LUG, F/N 125	E-1	TERM LUG, F/N 113	18.00
③5	10 AWG	GRN	126	MAIN BDX STUD	TERM LUG, F/N 125	E-1	TERM LUG, F/N 113	18.00
③6	20 AWG	BLK	114	S7-3	SOLDER	CB5 LINE A	TERM LUG, F/N 117	60.00
③7	20 AWG	BLK	114	S7-10	SOLDER	CB5 LINE B	TERM LUG, F/N 117	42.00
③8	20 AWG	BLK	114	S7-5	SOLDER	CB5 LINE C	TERM LUG, F/N 117	54.00
③9	20 AWG	BLK	114	S7-8	SOLDER	TB-2 GND	TERM LUG, F/N 113	36.00
④0	20 AWG	BLK	114	S7-C	SOLDER	M1 HDT	TERM LUG, F/N 122	6.00
④0A	20 AWG	BLK	114	S7-C	SOLDER	M1 HDT	TERM LUG, F/N 122	6.00





WIRE DATA CHART								
WIRE NUMBER	WIRE GAUGE COLOR AND FIND NO.			FROM	TERMINATION	TO	TERMINATION	LENGTH
(41)	20 AWG	BLK	114	CB1-A (LINE)	TERM LUG, F/N 117	S1-1 N.O.	SOLDER	12.00
(42)	20 AWG	BLK	114	CB1-B (LINE)	TERM LUG, F/N 117	S1-2 N.O.	SOLDER	11.00
(43)	20 AWG	BLK	114	CB1-C (LINE)	TERM LUG, F/N 117	S1-3 N.O.	SOLDER	10.00
(44)	20 AWG	BLK	114	CB1-A (LOAD)	TERM LUG, F/N 117	S1-1 N.C.	SOLDER	17.00
(45)	20 AWG	BLK	114	CB1-B (LOAD)	TERM LUG, F/N 117	S1-2 N.C.	SOLDER	16.00
(46)	20 AWG	BLK	114	CB1-C (LOAD)	TERM LUG, F/N 117	S1-3 N.C.	SOLDER	15.00
(47)	20 AWG	BLK	114	S1-1 COM	SOLDER	DS4 (HOT)	SOLDER	8.00
(48)	20 AWG	BLK	114	S1-2 COM	SOLDER	DS5 (HOT)	SOLDER	7.00
(49)	20 AWG	BLK	114	S1-3 COM	SOLDER	DS6 (HOT)	SOLDER	5.00
(50)	20 AWG	WHT	115	DS4 (NEUT)	SOLDER	DS5 (NEUT)	SOLDER	5.00
(51)	20 AWG	WHT	115	DS5 (NEUT)	SOLDER	DS6 (NEUT)	SOLDER	5.00
(52)	20 AWG	WHT	115	DS6 (NEUT)	SOLDER	TB-3 LØ	TERM LUG, F/N 123	50.00
(53)	20 AWG	BLK	114	CB2-A (LINE)	TERM LUG, F/N 117	S2-1 N.O.	SOLDER	10.00
(54)	20 AWG	BLK	114	CB2-B (LINE)	TERM LUG, F/N 117	S2-2 N.O.	SOLDER	11.00
(55)	20 AWG	BLK	114	CB2-C (LINE)	TERM LUG, F/N 117	S2-3 N.O.	SOLDER	12.00
(56)	20 AWG	BLK	114	CB2-A (LOAD)	TERM LUG, F/N 117	S2-1 N.C.	SOLDER	15.00
(57)	20 AWG	BLK	114	CB2-B (LOAD)	TERM LUG, F/N 117	S2-2 N.C.	SOLDER	16.00
(58)	20 AWG	BLK	114	CB2-C (LOAD)	TERM LUG, F/N 117	S2-3 N.C.	SOLDER	17.00
(59)	20 AWG	BLK	114	S2-1 COM	SOLDER	DS7 (HOT)	SOLDER	5.00
(60)	20 AWG	BLK	114	S2-2 COM	SOLDER	DS8 (HOT)	SOLDER	7.00
(61)	20 AWG	BLK	114	S2-3 COM	SOLDER	DS9 (HOT)	SOLDER	8.00
(62)	20 AWG	WHT	115	DS7 (NEUT)	SOLDER	DS8 (NEUT)	SOLDER	5.00
(63)	20 AWG	WHT	115	DS8 (NEUT)	SOLDER	DS9 (NEUT)	SOLDER	5.00
(64)	20 AWG	WHT	115	DS9 (NEUT)	SOLDER	TB-4 LØ	TERM LUG, F/N 123	50.00
(65)	20 AWG	BLK	114	CB3-A (LINE)	TERM LUG, F/N 116	S3-1 N.O.	SOLDER	12.00
(66)	20 AWG	BLK	114	CB3-B (LINE)	TERM LUG, F/N 116	S3-2 N.O.	SOLDER	11.00
(67)	20 AWG	BLK	114	CB3-C (LINE)	TERM LUG, F/N 116	S3-3 N.O.	SOLDER	10.00
(68)	20 AWG	BLK	114	CB3-A (LOAD)	TERM LUG, F/N 116	S3-1 N.C.	SOLDER	17.00
(69)	20 AWG	BLK	114	CB3-B (LOAD)	TERM LUG, F/N 116	S3-2 N.C.	SOLDER	16.00
(70)	20 AWG	BLK	114	CB3-C (LOAD)	TERM LUG, F/N 116	S3-3 N.C.	SOLDER	15.00
(71)	20 AWG	BLK	114	S3-1 COM	SOLDER	DS10 (HOT)	SOLDER	8.00
(72)	20 AWG	BLK	114	S3-2 COM	SOLDER	DS11 (HOT)	SOLDER	7.00
(73)	20 AWG	BLK	114	S3-3 COM	SOLDER	DS12 (HOT)	SOLDER	5.00
(74)	20 AWG	WHT	115	DS10 (NEUT)	SOLDER	DS11 (NEUT)	SOLDER	5.00
(75)	20 AWG	WHT	115	DS11 (NEUT)	SOLDER	DS12 (NEUT)	SOLDER	5.00
(76)	20 AWG	WHT	115	DS12 (NEUT)	SOLDER	TB-3 LØ	TERM LUG, F/N 123	40.00
(77)	20 AWG	BLK	114	CB4-A (LINE)	TERM LUG, F/N 116	S4-1 N.O.	SOLDER	10.00
(78)	20 AWG	BLK	114	CB4-B (LINE)	TERM LUG, F/N 116	S4-2 N.O.	SOLDER	11.00
(79)	20 AWG	BLK	114	CB4-C (LINE)	TERM LUG, F/N 116	S4-3 N.O.	SOLDER	12.00
(80)	20 AWG	BLK	114	CB4-A (LOAD)	TERM LUG, F/N 116	S4-1 N.C.	SOLDER	15.00
(81)	20 AWG	BLK	114	CB4-B (LOAD)	TERM LUG, F/N 116	S4-2 N.C.	SOLDER	16.00
(82)	20 AWG	BLK	114	CB4-C (LOAD)	TERM LUG, F/N 116	S4-3 N.C.	SOLDER	17.00





