

TECHNICAL BULLETIN

TRUE-SINE WAVE INVERTERS

**19207 – 12475034-1
(6130-01-563-8242)**

OR

**19207 – 12475034-2
(6130-01-563-8233)**

FOR

**CARRIER, STANDARDIZED INTEGRATED
COMMAND POST SYSTEM
(SICPS) M1068A3
(2350-01-369-6086)**

AVAILABILITY STATEMENT: This publication is not available through the AG publication centers. This publication is available through U.S. Army TACOM Life Cycle Management Command, Warren, MI 48397-5000.

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

TACOM LIFE CYCLE MANAGEMENT COMMAND, WARREN, MI

AUGUST 2008

WARNING SUMMARY

WARNING SUMMARY

This list summarizes critical WARNINGS in this bulletin. They are repeated here to let you know how important they are. Study these WARNINGS carefully; they can save your life and the lives of personnel you work with.

LIST OF WARNINGS IN WP PROCEDURES

This list includes all WARNINGS in the bulletin. These WARNINGS must be studied carefully and obeyed. They can save your life and the lives of soldiers with whom you work. Failure to obey a warning could cause death or injury as well as destruction of, or damage to, the vehicle and/or equipment.

WARNING



HIGH VOLTAGE is used in the operation of this equipment.

DEATH ON CONTACT may result if personnel do not observe safety precautions.

NEVER work on equipment unless at least one other person is nearby, familiar with the operation and hazards of the equipment and is familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

SHUT OFF POWER supply to equipment before beginning work. Make sure all external power is off/disconnected.

BE CAREFUL not to contact high-voltage connections when installing or operating this equipment.

FIRST AID

For first aid information, see FM 4-25.11.

INSERT LATEST UPDATED PAGES/WORK PACKAGES. DESTROY SUPERSEDED DATA.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

Note: The portion of text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands.

Dates of issue for original and changed pages/work packages are:

Original 29 August 2008

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 26 AND TOTAL NUMBER OF WORK PACKAGES IS 20 CONSISTING OF THE FOLLOWING:

Page/WP No.	*Change No.	Page/WP No.	*Change No.	Page/WP No.	*Change No.
Cover	0				
a/b blank	0				
A/B blank	0				
i – v/vi blank	0				
Chapter 1 Index	0				
WP 0001 00	0				
Chapter 2 Index	0				
WP 0002 00	0				
Chapter 3 Index	0				
WP 0003 00 – 0007 00	0				
Chapter 4 Index	0				
WP 0008 00 – 0011 00	0				
Chapter 5 Index	0				
WP 0012 00 – 0017 00	0				
Chapter 6 Index	0				
WP 0018 00 – 0020 00	0				
Index-1 – Index-2	0				
DA 2028 Sample/Reverse	0				
DA 2028/Reverse (3)	0				
Authentication	0				
Metric Chart	0				
Back Cover	0				

*Zero in the column indicates an original page or work package.

HEADQUARTERS
TACOM LIFE CYCLE MANAGEMENT COMMAND
WARREN MI, 29 AUGUST 2008

TECHNICAL BULLETIN

TRUE-SINE WAVE INVERTERS

**19207 – 12475034-1
(6130-01-563-8242)**

OR

**19207 – 12475034-2
(6130-01-563-8233)**

FOR

**CARRIER, STANDARDIZED INTEGRATED COMMAND POST
SYSTEM (SICPS) M1068A3
(2350-01-369-6086)**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any errors, or if you would like to recommend any improvements to the procedures in this publication, please let us know. The preferred method is to submit your DA Form 2028 (Recommended Changes to Publications and Blank Forms) through the Internet, on the Army Electronic Product Support (AEPS) website. The internet address is <https://aeprs.ria.army.mil>. The DA Form 2028 is located under the Public Applications section in the AEPS Public Home Page. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, email, or fax your comments or DA Form 2028 directly to: U. S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LC-LMPP/TECH PUBS, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is tacomlcmc.daform2028@us.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

AVAILABILITY STATEMENT: This publication is not available through the AG publication centers. This publication is available through U.S. Army TACOM Life Cycle Management Command, Warren, MI 48397-5000.

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

TABLE OF CONTENTS

WP Sequence No.
Page No.

WARNING SUMMARY

CHAPTER 1 – GENERAL INFORMATION

Introduction	0001 00
Figure 1. Outback Inverter Faceplate	0001-1
Figure 2. MDL New True-Sine Wave/Old Quasi-Sine Wave Inverter Faceplate	0001-1
Figure 3. Heart and Xantrex Old Model Inverter Faceplate	0001-2
Figure 4. Old Model Inverter	0001-2
Figure 5. New True-Sine Wave Inverter	0001-2
Figure 6. Inverter Grounding Surfaces.....	0001-3
Table 1. Old Model Inverters/Remote Harness	0001-3
Table 2. New Model Inverters/Remote Harness.....	0001-3
Figure 7. Cascade Remote Cable Faceplate Controls and Indicators	0001-4
Figure 8. Power Inverter Controls and Indicators	0001-5

CHAPTER 2 – OPERATION

MDL Inverter Operation.....	0002 00
-----------------------------	---------

CHAPTER 3 – TROUBLESHOOTING

Inverters Fail to Power Up or No Output AC Power on Power Control Enclosure Meter	0003 00
Overload Indicator Lit on Power Control Enclosure During Operations.....	0004 00
Inverters Stop Working and Low Battery Indicator is On	0005 00
Power Enclosure Panel Indicator Malfunctions	0006 00
No AC Power from Inverters.....	0007 00

CHAPTER 4 – MAINTENANCE INSTRUCTIONS

Repair Power Control Enclosure Faceplate and Bracket.....	0008 00
Figure 1. Faceplate Removal.....	0008-2
Figure 2. Faceplate Circuit Breaker CB1 Disassembly.....	0008-3
Figure 3. Faceplate Circuit Breaker CB2/Harness Disassembly	0008-4
Figure 4. Faceplate Circuit Breaker CB3/CB4 Disassembly	0008-5
Figure 5. Faceplate Toggle Switch S2 Disassembly	0008-6
Figure 6. Faceplate Circuit Breaker CB17/Toggle Switch S1 Disassembly.....	0008-7
Figure 7. Faceplate Circuit Breaker CB17/Toggle Switch S1 Assembly.....	0008-8
Figure 8. Faceplate Toggle Switch S2 Assembly	0008-9
Figure 9. Circuit Breaker CB3/CB4 Assembly	0008-10
Figure 10. Cascade Remote Harness and Circuit Breaker CB2 Assembly.....	0008-11
Figure 11. Faceplate Circuit Breaker CB1	0008-12
Figure 12. Faceplate Installation.....	0008-13

TABLE OF CONTENTS - Continued

	Page No.	WP Sequence No.
CHAPTER 4 – MAINTENANCE INSTRUCTIONS - Continued		
Replace Cascade Remote Harness		0009 00
Figure 1. Faceplate/RP1 Harness Removal	0009-2	
Figure 2. RP1 Harness Installation	0009-3	
Figure 3. Faceplate Installation	0009-4	
Convert Primary Power Inverter to Slave		0010 00
Figure 1. Inverter Access Cover Removal	0010-1	
Figure 2. Primary Inverter Reassignment	0010-2	
Replace/Repair Inverter and Inverter Housing Assembly A2		0011 00
Figure 1. Inverter Housing Access Cover/Terminal Block Removal	0011-2	
Figure 2. Inverter Cable and Lead Removal	0011-3	
Figure 3. Inverter Removal	0011-4	
Figure 4. Inverter Housing Removal	0011-5	
Figure 5. Inverter Housing Installation	0011-6	
Figure 6. Inverter Tray Installation	0011-7	
Figure 7. Inverter Installation	0011-8	
Table 1. W15 Harness Configuration	0011-10	
Figure 8. W15 Harness Connection	0011-10	
Figure 9. Inverter Cable and Lead Installation	0011-11	
Figure 10. Inverter Access Cover and Terminal Block Installation	0011-12	
CHAPTER 5 – REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)		
Repair Parts and Special Tools List (RPSTL) Introduction		0012 00
Power Control Enclosure, Faceplate Assembly		0013 00
Figure 1. Power Control Enclosure, Faceplate Assembly	0013-2	
Inverter Housing Assembly		0014 00
Figure 2. Inverter Housing Assembly	0014-2	
Electrical Power and Communication System Attaching Hardware		0015 00
Figure 3. Electrical Power and Communication System Attaching Hardware	0015-2	
National Stock Number Index		0016 00
Part Number Index		0017 00
CHAPTER 6 – SUPPORTING INFORMATION		
References		0018 00
Tool Identification List		0019 00
Table 1. Tool Identification List	0019-1	
Expendable and Durable Items List		0020 00
Table 1. Expendable and Durable Items List	0020-1	
INDEX		INDEX-1

HOW TO USE THIS MANUAL

HOW TO USE THIS MANUAL

The safest, easiest, and best way to use and maintain the true-sine wave inverter is to use this bulletin. Learning to use this bulletin is as easy as reading it. Knowing what is in this bulletin and how to use it will save you time. Becoming familiar with the work, procedures, and cautions will help you in your job and reduce your exposure to unnecessary hazards.

WHERE DO YOU START

This bulletin is divided into chapters and front and rear matter. The chapters are further divided into Work Packages (WPs) for ease of use. Go to the area within the manual that covers what you are to do and follow the instructions. Be sure to read and follow the WARNINGS, CAUTIONS, and NOTES.

HOW THIS BULLETIN IS ORGANIZED

The WARNING SUMMARY section provides safety and first aid information. This section includes a list of the most important warnings extracted from the WPs. All of these warnings cover hazards that could kill or injure personnel.

The TABLE OF CONTENTS lists the WPs in each Chapter.

CHAPTER 1 covers general information.

CHAPTER 2 covers operation.

CHAPTER 3 covers troubleshooting.

CHAPTER 4 covers maintenance instructions.

CHAPTER 5 contains repair parts and special tools list information.

CHAPTER 6 contains supporting information, such as lists of references, tools, expendable/durable items, etc.

The INDEX is an alphabetical listing of all the WPs in this manual. Each entry is cross-referenced to the WP number and page number.

The DA FORM 2028 is used to report errors and to recommend improvements for procedures in this bulletin. Three blank DA Form 2028s are in the back of this bulletin.

The back cover includes a METRIC CONVERSION CHART that can be used to convert U.S. customary measurements to their metric equivalents. Measurements in this manual are given in U.S. customary unit with metric units in parentheses.

HOW TO USE THE WORK PACKAGES

Pick a key word and look in the INDEX for this key word. Turn to the WP and page indicated.

How to Read the WP

WPs provide either descriptive/supporting information or detailed procedures for repair.

Pay attention to all WARNINGS, CAUTIONS, and NOTES. These can appear in all types of procedures. They help you avoid harm to yourself, other personnel, and equipment. They also tell you things you should know about the procedure.

HOW TO USE THIS MANUAL (cont)

Before you start a procedure, get all the tools, supplies, and personnel you need to do the procedure. These items will be listed in the INITIAL SETUP of the WP.

Start with Step 1 and do each step in the order given. Numbered primary steps tell you WHAT to do. Alpha substeps tell you HOW to do it.

Look at the illustrations. Locators show you where the parts are located. Close-up illustrations show the details you need to do the procedure.

The words END OF TASK will tell you when you have finished the procedure.

DEFINITION OF WP TERMS

WARNINGS, CAUTIONS, and NOTES

Pay attention to all WARNINGS and CAUTIONS within the WP. Ignoring a WARNING could cause death or injury to yourself or other personnel. Ignoring a CAUTION could cause damage to equipment. NOTES contain facts to make the procedure easier. WARNINGS, CAUTIONS, and NOTES always appear just above the step to which they apply.

WARNING

Highlights an essential operating or maintenance procedure, practice, condition, statement, etc., which, if not strictly observed, could result in injury to, long term health hazards for, or death of, personnel.

CAUTION

Highlights an essential operating or maintenance procedure, practice, condition, statement, etc., which, if not strictly observed, could result in damage to or destruction of equipment, or loss of mission effectiveness.

NOTE

Highlights an essential operating or maintenance procedure, condition, or statement.

Helper

Helpers are needed in procedures that require more than one person. A helper may be needed to help lift objects or act as an outside observer.

If a helper is needed to perform a procedure, the INITIAL SETUP will list "Helper (H)" under the PERSONNEL REQUIRED heading.

If a helper assists with a step, the step will include: "Have helper assist."

If a helper performs the action alone, the step will start with "(H):".

**CHAPTER 1
GENERAL INFORMATION**

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
INTRODUCTION	0001 00

PURPOSE

The information contained in this technical bulletin provides an interim document to support the new Magnetic Design Lab, Inc. (MDL) true-sine wave inverters for the M1068A3 carriers until the next TM 9-2350-277 change package is released. A separate technical bulletin 9-2350-277-23&P-2 will be released to support the new Outback inverter. New Outback remote cable assembly faceplate shown below.

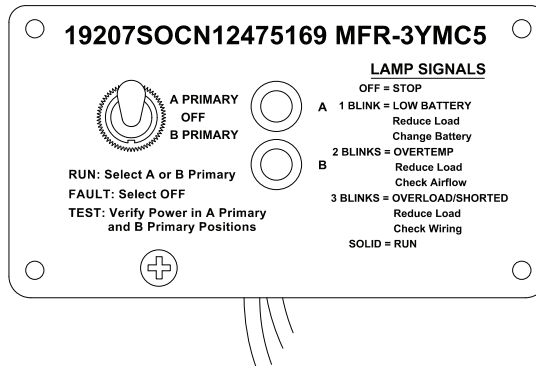


Figure 1. Outback Inverter Faceplate

GENERAL

1. The following explains ways to identify which inverter model you have:
 - a. To determine the model inverter your carrier is using, remove the inverter housing access cover (WP 0011 00). Remove the cascade remote harness connector from one inverter and check to see if it is 25-pin or 15-pin.
 - (1) 25-pin connector is the old model quasi sine wave inverter, see Table 1.
 - (2) 15-pin connector is the new model true-sine wave inverter, see Table 2.
 - b. This is the faceplate used on the new true-sine wave and old model quasi-sine wave inverters manufactured by MDL.

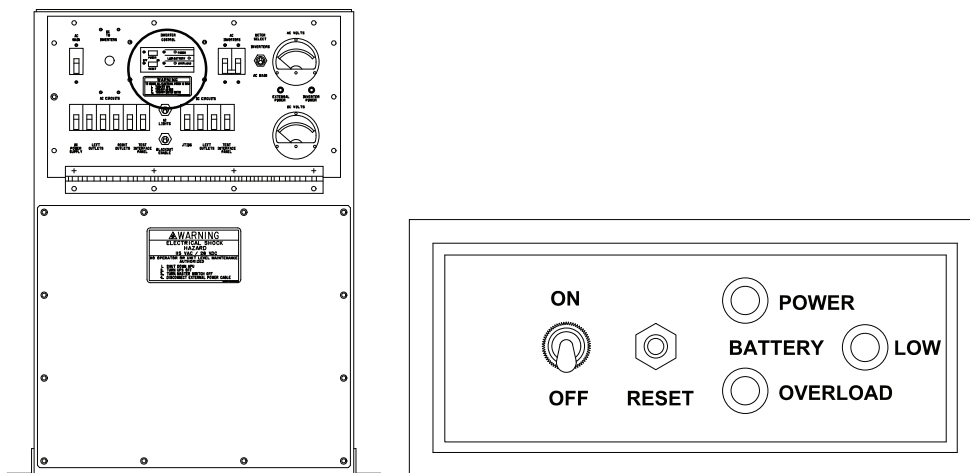


Figure 2. MDL New True-Sine Wave/Old Quasi-Sine Waverter Inverter Faceplate

- c. This is the old faceplate and can only be used on old model quasi-sine wave inverters manufactured by Heart Interface, Xantrex Corp., and MDL.

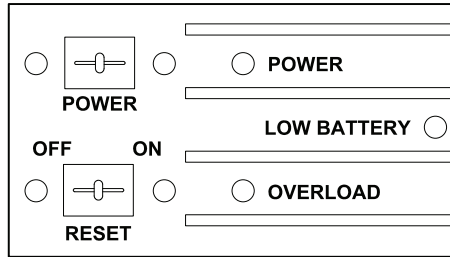


Figure 3. Heart and Xantrex Old Model Inverter Faceplate

CAUTION

The solo plug used on the older model inverters will not fit or work with the new true-sine wave inverters. Do not make or modify a solo plug to fit the new true-sine wave inverters, it may damage the inverters if power is applied.

- 2. The new inverters produce a true-sine wave AC power output and will help support laptop computers, digital devices, and newer technology systems requiring “clean” AC power. See below for the external differences in appearance between the older quasi-sine inverters and new true-sine wave inverters. The cascade remote harness RP1 (W15) has changed from a 25-pin to a 15-pin connector.

NOTE

Inverter models manufactured by Heart and Xantrex may have four electrical outlets on the front of the inverter. Inverters manufactured by MDL do not have electrical outlets.

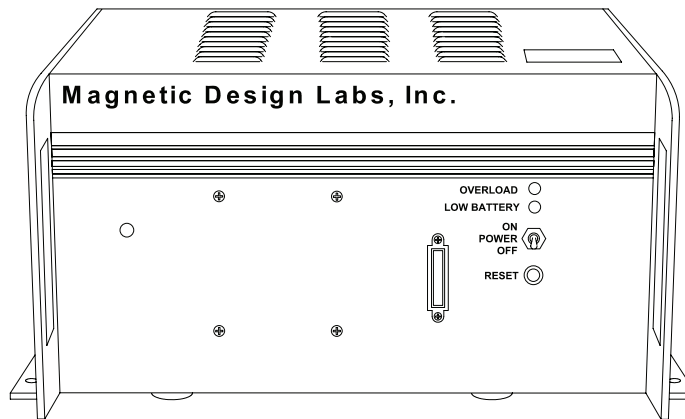


Figure 4. Old Model Inverter

NOTE

Not all true-sine wave inverters have the sine wave logo located on the front left side of the inverter. The new true-sine wave inverters do not have any visible vents like the old quasi-sine wave inverters do.

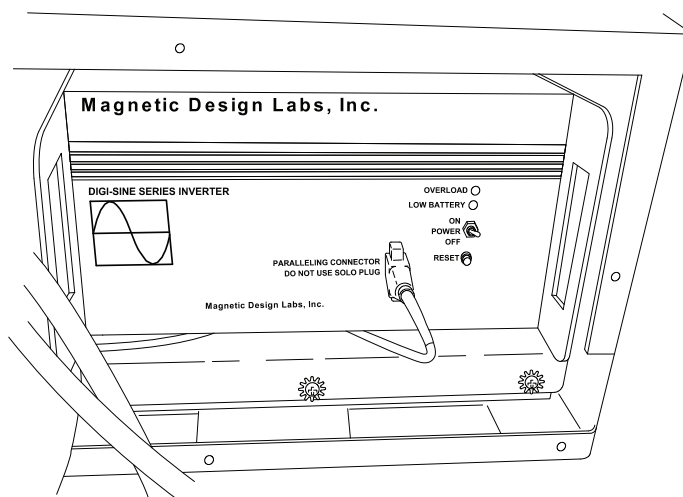


Figure 5. New True-Sine Wave Inverter

NOTE

Before replacing any inverter, check all grounding surfaces and clean as necessary to ensure bare metal to metal contact between washer and hull weld nut.

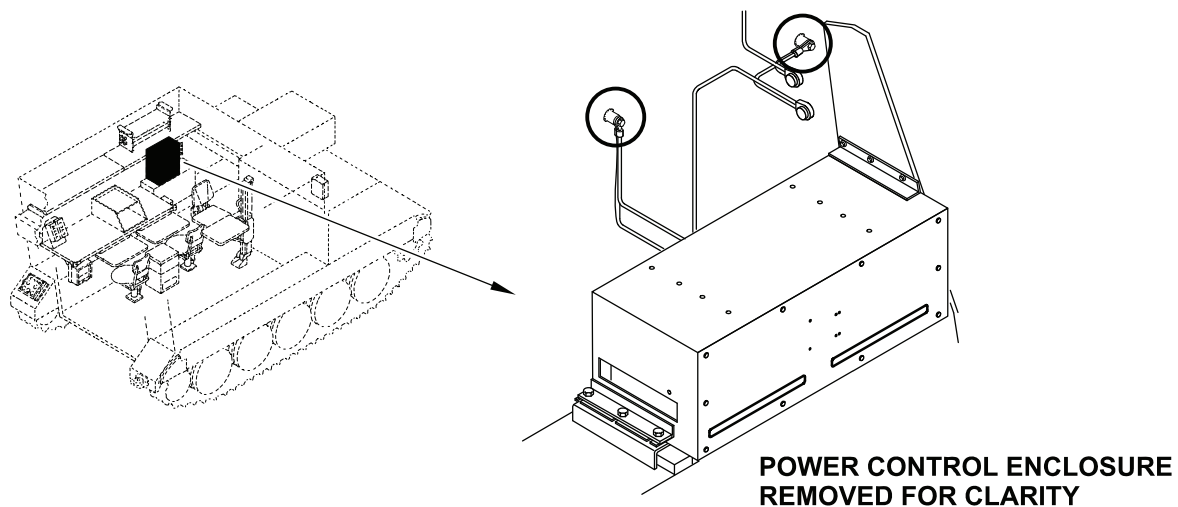


Figure 6. Inverter Grounding Surfaces

3. The inverters are powered by the power enclosure providing 24 VDC from the vehicle batteries or from the power supplies. One inverter produces 120 Vac at 60 Hz with a maximum continuous output rating of 2.5 kW/20 amps at 77° F (25° C). The two inverters combined can continuously convert 5.0 kW/40 amps total at 77° F (25° C).
4. The new inverters have a different part number for the left and right inverter. Internally they are the same, but the three leads that connect to the terminal block (TB2) on the inverter housing cover are numbered differently. If one inverter in a set fails it must be replaced with a similar model. If a similar model is not available you will need to replace both inverters as a set. If you replace 25-pin inverters with the new 15-pin model you must also replace the cascade remote harness (W15) that plugs into each inverter and to the power enclosure front main panel (see Tables 1 and 2 for inverter to remote harness cross reference). The wiring diagram is the same for the old and new model inverters (WP 0011 00).

Table 1. Old Model Inverters/Remote Harness

NSN	CAGEC	PART#	NOMENCLATURE
6130-01-379-7042	19207	12383902-1	Inverter, Power, Static, Quasi-Sine Wave (IN1) 25-pin
6130-01-386-4798	19207	12383902-2	Inverter, Power, Static, Quasi-Sine Wave (IN2) 25-pin
6150-01-373-5616	66200	84-4141-00	Remote Harness, RP1 (W15) 25-pin

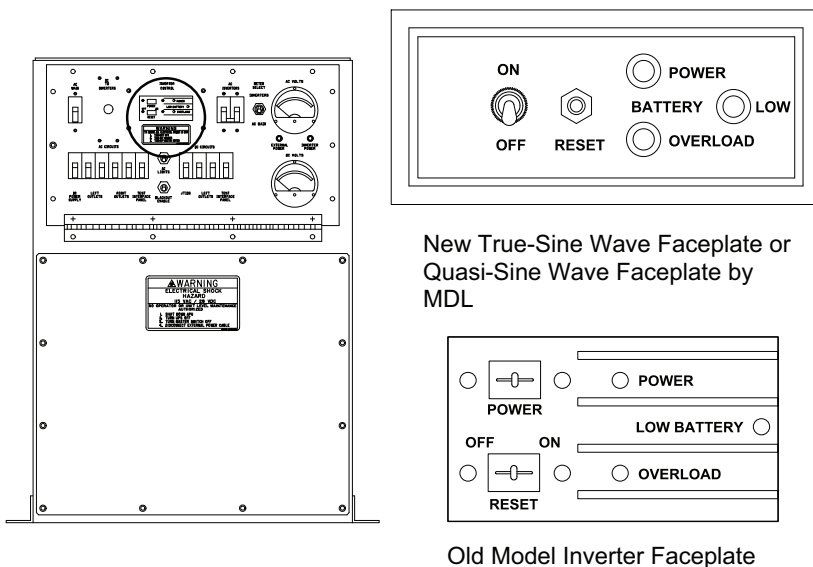
Table 2. New Model Inverters/Remote Harness

NSN	CAGEC	PART#	NOMENCLATURE
6130-01-563-8242	19207	12475034-1	Inverter, Power, Static, True-Sine Wave (IN1) 15-pin
6130-01-563-8233	19207	12475034-2	Inverter, Power, Static, True-Sine Wave (IN2) 15-pin
6150-01-563-8239	19207	12475036	Remote Harness, RP1 (W15) 15-pin

5. Operating procedures. Refer to WP 0002 00.
6. Troubleshooting procedures. Refer to WP 0003 00 – 0007 00.
7. Maintenance procedures. Refer to WP 0008 00 – 0011 00.
8. Repair Parts and Special Tools List data. Refer to WP 0012 00 – 0017 00.
9. Supporting Information. Refer to WP 0018 00 – 0020 00.

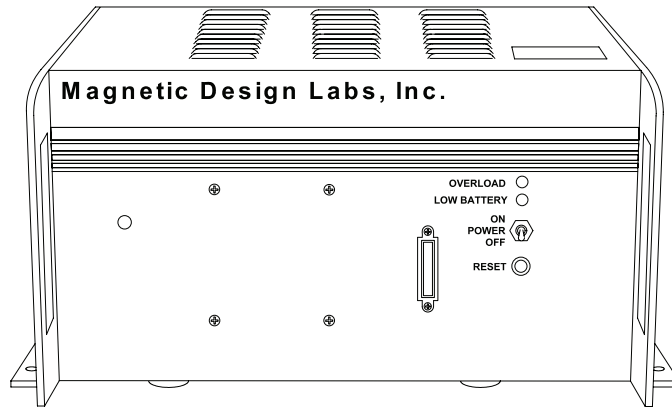
CONTROLS AND INDICATORS

The following explains controls and indicators located on the cascade remote harness faceplate and power inverters.

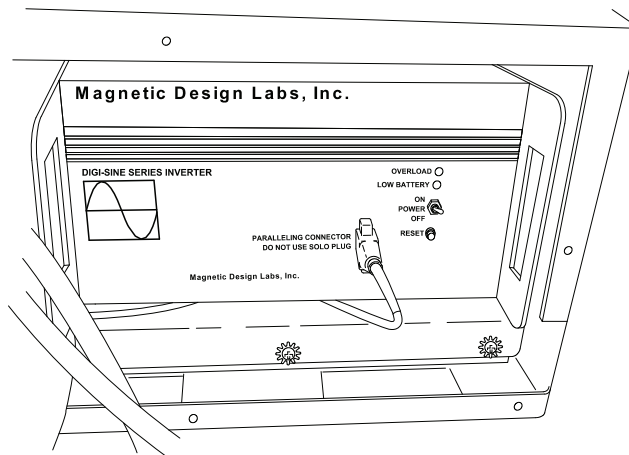


- | | |
|-----------------------|---|
| ON/OFF Switch | Turns power on to the inverters. |
| RESET Switch | Push (MDL) or slide (HEART/XANTREX) and release to activate the inverters. |
| POWER Indicator | Comes on when the inverters are activated/engaged. |
| BATTERY LOW Indicator | Indicates the power source has dropped below the minimum 18.5 DC volts required to operate the inverters. |
| OVERLOAD Indicator | Indicates an output overload or a high ambient temperature causing the inverter to overheat. |

Figure 7. Cascade Remote Cable Faceplate Controls and Indicators



Old Model Inverter



New True-Sine Wave Inverter

- | | |
|-----------------------|---|
| ON/OFF Switch | Turns power on to the inverters. Should be in the ON position only when the remote cable connectors are in place. Should be OFF if testing the opposite inverter. |
| RESET Switch | Push (MDL) or slide (HEART/XANTREX) and release to activate the inverters. |
| BATTERY LOW Indicator | Indicates the power source has dropped below the minimum 18.5 DC volts required to operate the inverters. When the cascade remote cable has an overload LED ON and the inverter has a battery low LED ON, it may be damaged internally. Have maintenance troubleshoot the inverter and replace if no AC output. |
| OVERLOAD Indicator | Indicates an output overload or a high ambient temperature causing the inverter to overheat. |

Figure 8. Power Inverter Controls and Indicators

CHAPTER 2 OPERATION

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
MDL Inverter Operation	0002 00

MDL INVERTER OPERATION**0002 00****THIS WORK PACKAGE COVERS:**

General (page 0002 00-1).
 Power-Up (page 0002 00-3).
 Power-Down (page 0002 00-4).

INITIAL SETUP:

Personnel Required
 SCIPS Operator

Equipment Conditions
 SCIPS external power sources
 disconnected (TM 11-7010-256-12&P)

GENERAL**WARNING**

HIGH VOLTAGE is used in the operation of this equipment.

DEATH ON CONTACT may result if personnel do not observe safety precautions.

NEVER work on equipment unless at least one other person is nearby, familiar with the operation and hazards of the equipment and is familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

SHUT OFF POWER supply to equipment before beginning work. Make sure all external power is off/disconnected.

BE CAREFUL not to contact high-voltage connections when installing or operating this equipment.

The inverters are powered by 24 VDC through the power control enclosure from the vehicle batteries or power supplies. All switches and circuit breakers on the power control enclosure should be OFF. The vehicle master switch has to be ON to engage the inverters. Power is applied on the power control enclosure through a 200A, DC TO INVERTERS circuit breaker. Push in the DC TO INVERTERS circuit breaker if popped out. Troubleshoot if it doesn't stay in. When the cascade remote cable INVERTER CONTROL switch is in the OFF position, the inverters are off (all LED's should be OFF). When the inverter control panel POWER ON/OFF switch is set from the OFF to ON position the power, overload, and battery low LED's should be on and stay on. The internal fans in the inverters will be on. This is normal operation and lets you know the lights are working and that the fans will help reduce the heat created during inverter operations, however there will be no 120 VAC output from the inverters yet. When you push in and release the RESET switch, both overload and battery low LED's should go out and the power LED remain on. With the inverter housing access cover lowered, only the primary (master) inverter (IN1) will have the same LED's on as the inverter control panel (see Figure 1, page 0002 00-2). The secondary (slave) inverter LED's do not light unless there is a problem/failure. Always use caution when the inverter housing access cover is removed and power is applied due to high AC/DC power levels going through the terminal blocks located on the access cover.

The dual inverter's output waveform is a low-distortion sine wave (less than 5% T.H.D.), the same as U.S. utility-grade wall outlet power (120 VAC, 60 Hz, sine wave) and all loads made for standard U.S. wall power will work as long as the loads are within the dual inverter's power range (5.0 kW continuous/40 amps maximum) with the inverter's AC outputs in parallel, or 2.5 kW/20 amps maximum per inverter if the inverter's AC outputs are not in parallel. However, the inverters are capable of handling AC output overloads of about 3 times the continuous rating (15,000 VA) for about 3 seconds for the dual inverter configuration in parallel. This allows them to start motors, compressors, and other similar high starting current loads for brief periods without shutting down. During output overloads, it is normal for the AC output voltage to drop somewhat below the normal output specifications. The inverters have internal protection circuitry to protect them from output overloads, short circuits, over-temperature, or low battery conditions. The overload LED can come on if the equipment attached is drawing more power than the inverters are rated for or if the ambient temperature is high and the inverters AC output is close to the maximum limit of 5.0 kW/40 amps.

CAUTION

During inverter operations, power-down inverters (page 0002 00-4) before starting vehicle engine, 5.0 kW APU or connecting outside DC power source through the NATO receptacle. Damage to inverters can occur due to high electrical spikes during initial start-up. Once the engine or APU is running smoothly, or the outside DC power source is connected, engage the inverters using power-up procedures (page 0002 00-3).

If the inverters internal component temperature exceeds a pre-set value, the inverters will shut down and the remote control panel overload LED will come on. If this happens the remote control box's POWER ON/OFF switch must be set to OFF to allow the inverters to cool down. The cool down period depends on the ambient temperature around the inverter and the amount of air flow over the inverter housing assembly. If the ambient temperature is under 85°, check the equipment attached to make sure the maximum output (5.0 kW/40 amps) is not being exceeded. If ambient temperature is above 85° cool down may take 30–60 minutes. After cool down follow power-up procedures (page 0002 00-3).

The inverters will automatically shut down if the DC input voltage drops below 18.5 VDC continuously. The inverters can be damaged by DC input voltage that is too high (greater than 35 VDC continuously).

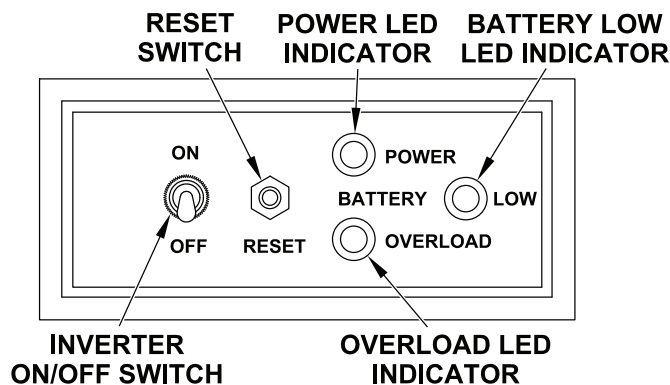


Figure 1. MDL Inverter Control Panel

POWER-DOWN

1. Turn OFF all AC and DC circuit breakers.
2. Switch AC INVERTERS circuit breaker to the OFF position to power-down 110 VAC power output from the inverters to the M1068 power system.
3. Switch INVERTER CONTROL switch to the OFF position.
4. Turn MASTER switch to OFF. See TM 9-2350-277-10.

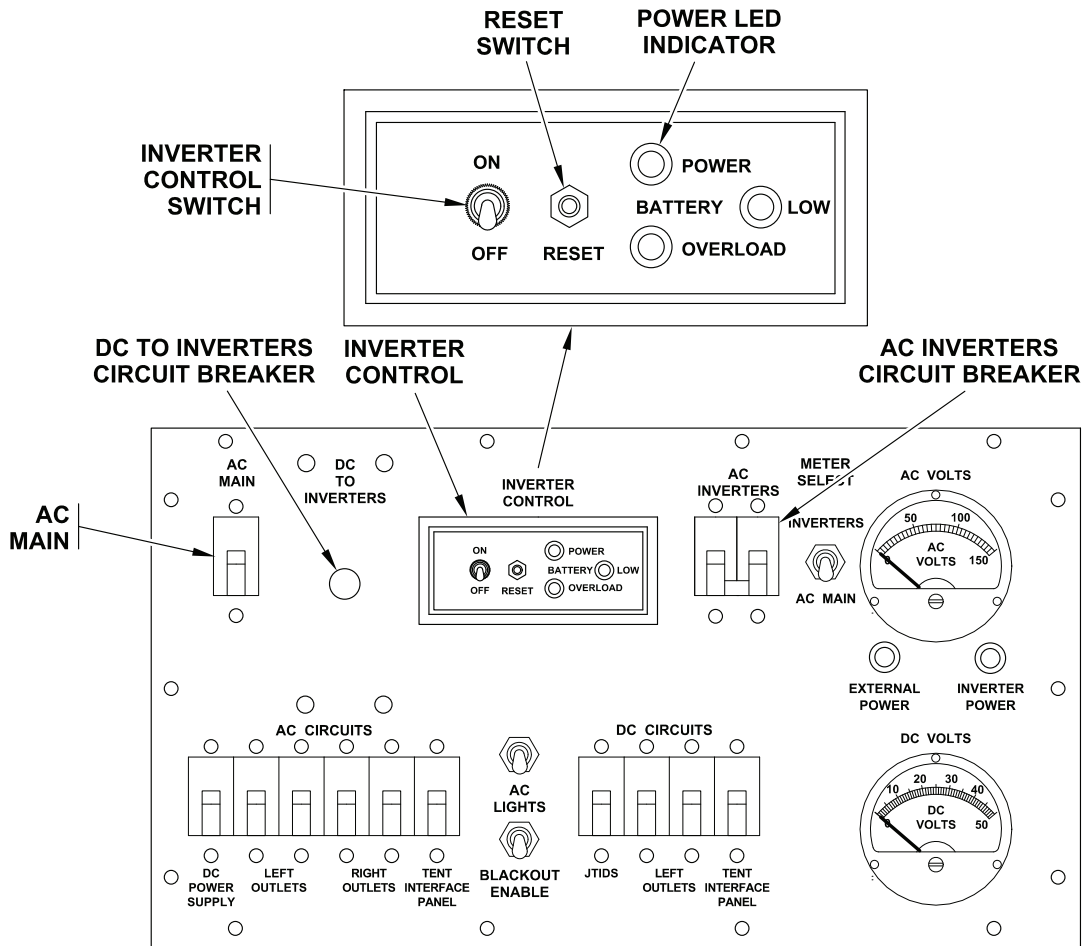


Figure 3. Power Control Enclosure Power-Down Indicators

END OF WORK PACKAGE

CHAPTER 3 TROUBLESHOOTING

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
INVERTERS FAIL TO POWER UP OR NO OUTPUT AC POWER ON POWER CONTROL ENCLOSURE	0003 00
OVERLOAD INDICATOR LIT ON POWER CONTROL ENCLOSURE DURING OPERATIONS.....	0004 00
INVERTERS STOP WORKING AND LOW BATTERY INDICATOR IS ON	0005 00
POWER ENCLOSURE PANEL INDICATOR MALFUNCTIONS	0006 00
NO AC POWER FROM INVERTERS	0007 00

**INVERTERS FAIL TO POWER-UP OR NO OUTPUT AC POWER ON
POWER CONTROL ENCLOSURE METER**

0003 00

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Soldier

Equipment Condition

Engine stopped (TM 9-2350-277-10)

Carrier blocked (TM 9-2350-277-10)

Inverter control switch in the OFF position.

WARNING



HIGH VOLTAGE is used in the operation of this equipment.

DEATH ON CONTACT may result if personnel do not observe safety precautions.

NEVER work on equipment unless at least one other person is nearby, familiar with the operation and hazards of the equipment and is familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

SHUT OFF POWER supply to equipment before beginning work. Make sure all external power is off/disconnected.

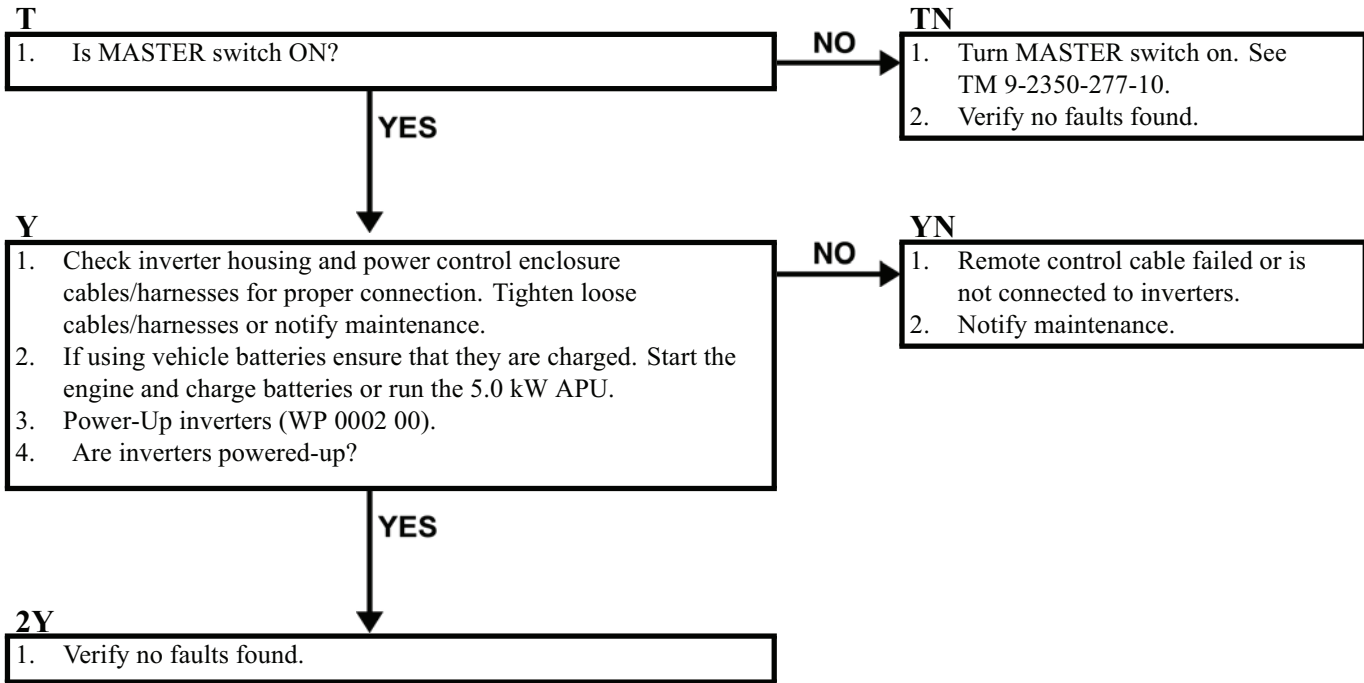
BE CAREFUL not to contact high-voltage connections when installing or operating this equipment.

NOTE

Follow power-down procedures (WP 0002 00) prior to checking for loose connectors.

INVERTERS FAIL TO POWER-UP OR NO OUTPUT AC POWER ON POWER CONTROL ENCLOSURE METER — Continued

0003 00



OVERLOAD LIGHT COMES ON SICPS POWER CONTROL ENCLOSURE DURING OPERATIONS

0004 00

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Soldier

References

Equipment Condition

Engine stopped (TM 9-2350-277-10)

Carrier blocked (TM 9-2350-277-10)

T

1. Turn inverters off (WP 0002 00).
2. Calculate the power draw of equipment connected to the AC power.

NOTE

Maximum load provided by both inverters is 5.0 kw/40 amps. If one inverter has failed the other inverter will only provide 2.5 kW/20 amps if it is the primary (master) unit.

3. Disconnect equipment until power draw is below inverter maximum load rating.

NOTE

Allow inverters to cool before attempting to restart in high ambient temperatures with a high load. This could take 30 to 60 minutes. A light overload, short duration, and low ambient temperatures may allow for it to be restarted quickly.

4. Power-up the inverters (WP 0002 00).
5. Is overload LED lit?

NO

TN

1. Verify no faults found.

YES

Y

1. Turn OFF all DC and AC circuit breakers.
2. Set MASTER switch to ON. Do not push the reset switch.

NOTE

If it is quiet enough, listen to hear if the internal fans in the inverters are operating. If these are working, they will aid in cool down. If these are not working the inverters may be overheating causing the overload condition.

3. Repeat Steps 1-2 above to cool inverters down a maximum of three times.
4. If inverters have cooled down and all equipment has been removed and inverter still shows overload LED on, notify maintenance to troubleshoot (WP 0007 00).
5. If overload LED is OFF, verify no faults found.

INVERTERS STOP WORKING AND LOW BATTERY LIGHT IS ON

0005 00

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Soldier

Equipment Condition

Engine stopped (TM 9-2350-277-10)

Carrier blocked (TM 9-2350-277-10)

T

- 1. Check vehicle batteries.
- 2. Is battery charge in the green zone?

YES

Y

- 1. Check for any loose cable connections from the inverter housing to the power control enclosure and all grounds to the hull. Tighten as required.
- 2. If inverter battery low LED is still ON, notify maintenance.

NO

TN

- 1. Charge batteries by running the 5.0 kW APU or starting the engine.
- 2. Power-Up inverters (WP 0002 00).
- 3. Verify no faults found.

POWER ENCLOSURE PANEL INDICATOR MALFUNCTIONS

0006 00

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Soldier

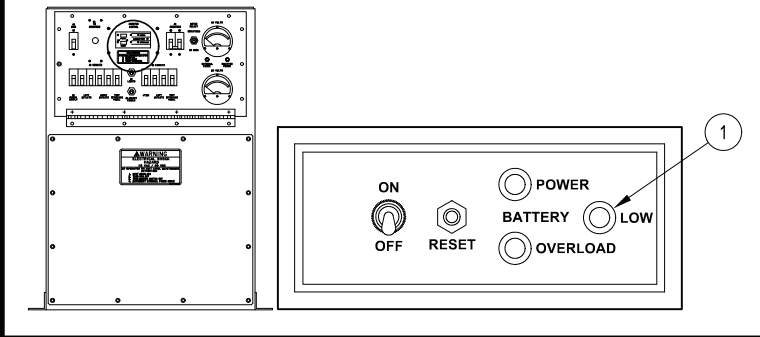
Equipment Condition

Engine stopped (TM 9-2350-277-10)

Carrier blocked (TM 9-2350-277-10)

T

1. Is power enclosure panel LOW BATTERY indicator (1) lit?



NO

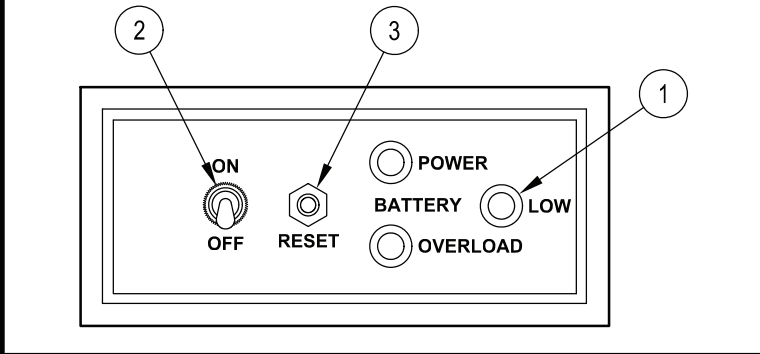
TN

GO TO AY (PAGE 0006 00-2)

YES

Y

1. Turn the inverter power switch (2) to OFF for a few seconds, then turn it back ON.
 2. Momentarily press and release the RESET switch (3).
 3. Is LOW BATTERY indicator (1) out?



NO

YN

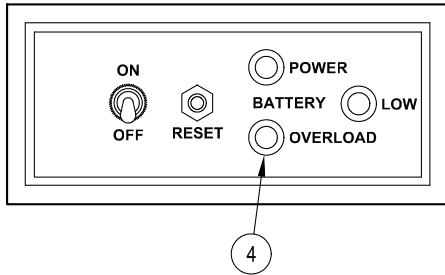
GO TO BY (PAGE 0006 00-3)

YES

2Y

1. Verify no faults found.

AY 1. Is power enclosure panel OVERLOAD indicator (4) lit? **AYN**
1. Verify no faults found.



YES

A2Y 1. Turn inverter power switch (2) to OFF. 2. Calculate the power draw of equipment connected to the AC power. **A2YN**
1. Verify no faults found.

NOTE

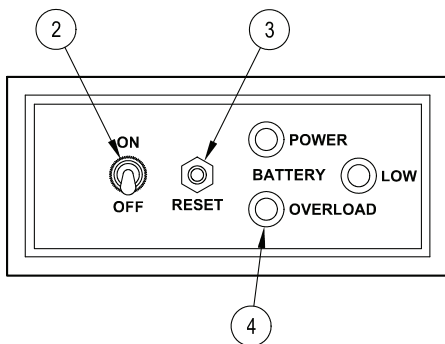
Maximum load provided by both inverters if 5.0 kW/40 amps.

3. Disconnect equipment until power draw is below inverter maximum load rating.

NOTE

Allow the inverters to cool down. In high ambient temperature (above 85°F (29°C)) with a high load this could take 30 to 60 minutes. A light overload, short duration, and low ambient temperatures may allow for the inverters to be restarted quickly.

4. Turn the inverter power switch (2) to ON.
5. Momentarily press and release the RESET switch (3).
6. Is OVERLOAD indicator (4) lit?



YES

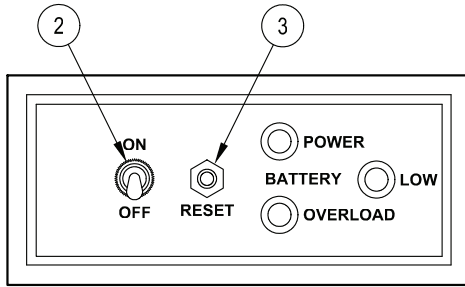
A3Y

1. Internal component temperature has exceeded maximum value of 203°F (95°C) at the power board or 338°F (170°C) at the transformer. Turn inverter power switch (2) to OFF and allow unit to cool down.

NOTE

The cool down period depends on the ambient temperature around the inverter and the amount of air flow over the chassis of the inverter. It may take 30-60 minutes.

2. Turn the inverter power switch (2) to ON.
3. Momentarily press and release the RESET switch (3).
4. Is OVERLOAD indicator lit?



NO

A3YN

1. Verify no faults found.

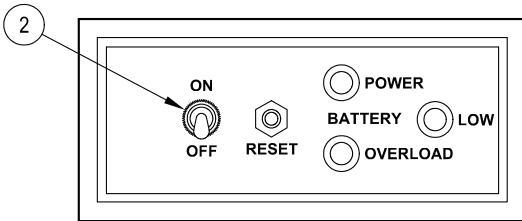
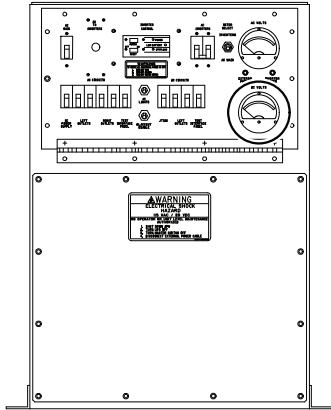
YES

A4Y

1. Failed inverter. Notify maintenance.

BY

1. Move POWER switch (2) to OFF.
2. Does DC volts meter on power control enclosure read above 21.5 volts?



YES

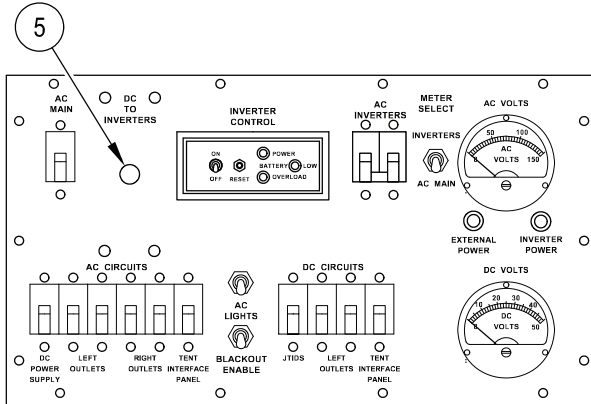
NO

BYN

1. Service carrier batteries. See TM 9-2350-277-10.
2. Power-up inverters (WP 0002 00).
3. Verify no faults found.

B2Y

1. Push in the DC TO INVERTERS circuit breaker (5). Cycle it by popping it out and firmly pushing it in. If it does not engage properly it may need to be replaced.
2. Check for loose power input connections between the inverter housing and the power control enclosure.
3. Power-up the inverters (WP 0002 00).
4. Are the inverters outputting AC power?y



NO

B2YN

1. Go to No AC Power From Inverters (WP 0007 00).

YES

B3Y

1. Verify no faults found.

NO AC POWER FROM INVERTERS**0007 00****INITIAL SETUP:**Maintenance Level

Field

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0019 00, Item 2)

Digital Multimeter (WP 0019 00, Item 1)

Equipment Condition

Engine stopped (TM 9-2350-277-10)

Carrier blocked (TM 9-2350-277-10)

All external power disconnected

(TM 11-7010-256-12&P)

Materials/Parts

Lockwasher (10)

WARNING

HIGH VOLTAGE is used in the operation of this equipment.

DEATH ON CONTACT may result if personnel do not observe safety precautions.

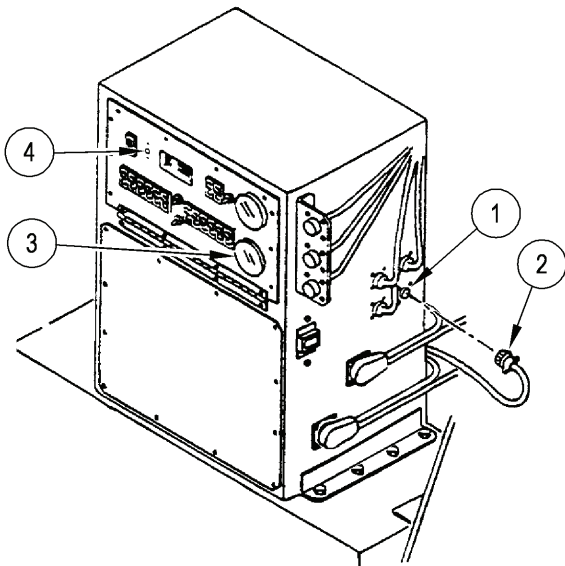
NEVER work on equipment unless at least one other person is nearby, familiar with the operation and hazards of the equipment and is familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

SHUT OFF POWER supply to equipment before beginning work. Make sure all external power is off/disconnected.

BE CAREFUL not to contact high-voltage connections when installing or operating this equipment.

T

1. Remove cable W5 plug P6 (2) from Power Control Enclosure jack J27 (1).
2. Set MASTER SWITCH to ON.
3. If popped out, press DC TO INVERTERS button (4) on Power Control Enclosure panel.
4. Does DC VOLTS meter (3) on Power Control Enclosure panel read 26 volts DC or more?

YES
↓

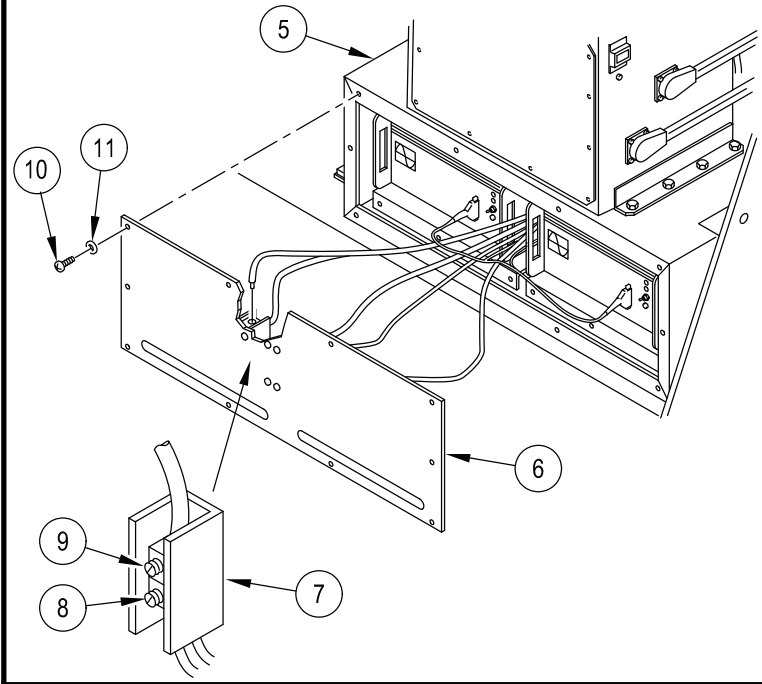
NO →

TN

1. Go to Power Control Enclosure A1 DC Input/Output Inoperative. See TM 9-2350-277-20-1.

Y

1. Remove ten screws (10), lockwashers (11), and access cover (6) from inverter housing (5). Discard lockwashers.
2. Measure voltage between terminal E2 (9) on terminal block TB1 (7) and ground.
3. Repeat measurement between terminal E4 (8) and ground.
4. Does multimeter read 22 volts DC or more for both measurements?



YES

NO

YN

1. Check for loose setscrews and tighten if necessary.
2. Check continuity in W6 cable.
3. If no continuity in W6 cable, replace. See TM 9-2350-277-20-6.
4. Verify no faults found.

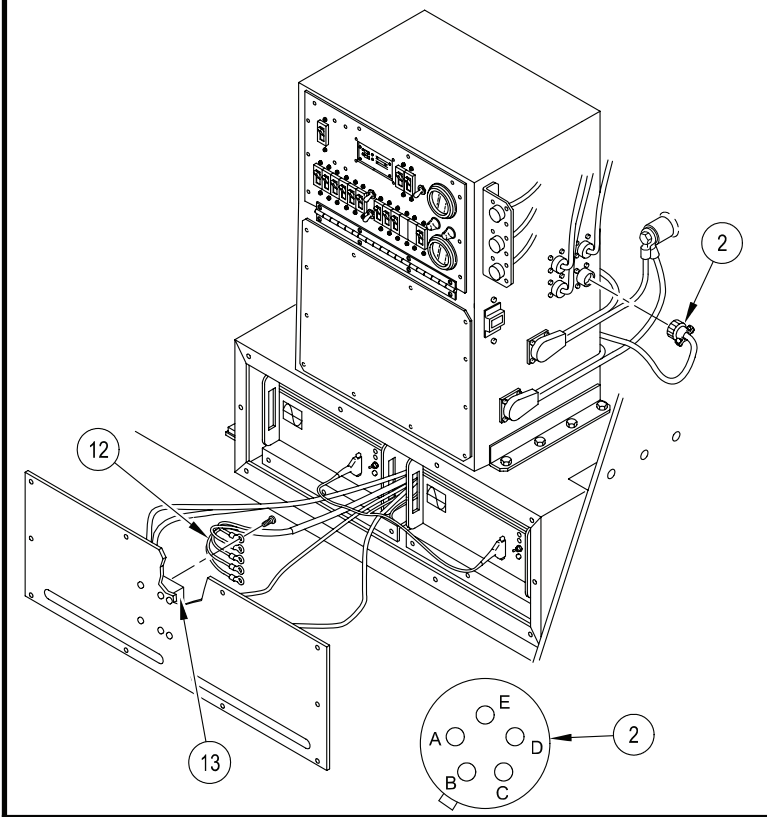
2Y

1. Set MASTER SWITCH to OFF.
2. Tag leads E1 thru E5 before removal. Remove cable W5 leads (12) from posts on terminal block TB2 (13).
3. Measure resistance between sockets of plug P6 (2) and W5 leads (12) as follows:
 - Socket A to lead E1
 - Socket B to lead E2
 - Socket C to lead E3
 - Socket D to lead E4
 - Socket E to lead E5
4. Does multimeter read 0 ohms for each measurement?

NO

2YN

1. Replace W5 cable. See TM 9-2350-277-20-6.
2. Verify no faults found.



YES

3Y

CAUTION

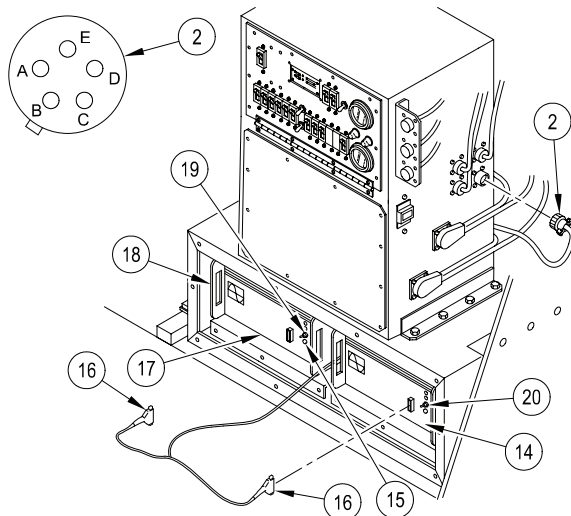
Never remove the remote cable connectors to the inverters (IN1 and IN2) until you move the POWER switch on the face of the inverter to OFF. Failure to comply will cause damage when the inverters are powered-up. When testing one inverter, turn both POWER switches OFF to prevent damaging both inverters.

If the remote cable connector is not connected properly or installed correctly on the inverter connector, it could damage the inverter(s) when powered-up. After testing always install the remote cable connector properly and secure it with the attached screws.

NOTE

When the POWER switch (19) is set to ON, all LED's on the inverter should come on. When the RESET switch (15) is pushed in and released, the battery low and overload LED's on the inverter should go out.

1. Install cable W5 leads on terminal block TB2 (WP 0011 00).
2. Remove cable W15 plugs (16) from inverters IN1 (18) and IN2 (14).
3. Turn both inverters POWER switches (19) and (20) to OFF.
4. Set MASTER SWITCH to ON.
5. On inverter front panel (17) for inverter IN1 (18), set POWER switch (19) to ON and momentarily push RESET switch (15).
6. Measure voltage between sockets A and B of cable W5 plug P6 (2).
7. Does multimeter read 110 volts AC or more and overload and battery low LED's are OFF on inverter IN1 (18)?



YES

NO

3YN

NOTE

Temporary power (2.5 kW/20 amp maximum) can be restored by reassigning inverter IN2 as primary (WP 0005 00).

1. Replace inverter IN1 (WP 0006 00).
2. Verify no faults found.

4Y

CAUTION

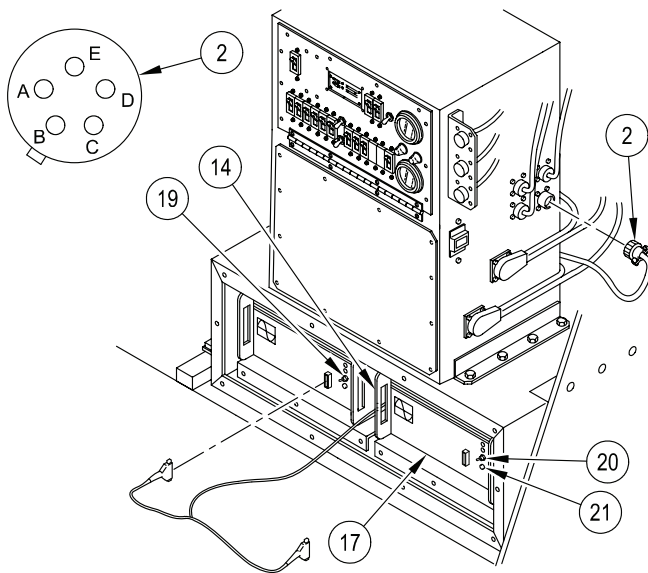
Never remove the remote cable connectors to the inverters (IN1 and IN2) until you move the **POWER** switch on the face of the inverter to **OFF**. Failure to comply will cause damage when the inverters are powered-up. When testing one inverter, turn both **POWER** switches **OFF** to prevent damaging both inverters.

If the remote cable connector is not connected properly or installed correctly on the inverter connector, it could damage the inverter(s) when powered-up. After testing always install the remote cable connector properly and secure it with the attached screws.

NOTE

When the **POWER** switch (19) is set to **ON**, all **LED**'s on the inverter should come on. When the **RESET** switch (21) is pushed in and released, the battery low and overload **LED**'s on the inverter should go out.

1. Turn **MASTER** switch to **OFF**. See TM 9-2350-277-10.
2. Turn inverters power switches (19) and (20) to **OFF**.
3. Set **MASTER** switch to **ON**. See TM 9-2350-277-10.
4. On inverter front panel (17) for inverter IN2 (14), set **POWER** switch (20) to **ON** and momentarily push **RESET** switch (21).
5. Measure voltage between sockets C and D of cable W5 plug P6 (2).
6. Does multimeter read 110 volts AC or more and overload and battery low **LED**'s are **OFF** on inverter IN1 (18)?

**YES****NO**

4YN

1. Replace inverter IN2 (WP 0006 00).
2. Verify no faults found.

5Y

1. Switch INVERTER CONTROL switch to OFF.
2. Turn MASTER switch to OFF. See TM 9-2350-277-10.
3. Install cable W5 plug P6 on Power Control Enclosure jack J27.
4. Replace cascade remote harness W15 (WP 0009 00).
5. Verify no faults found.

CHAPTER 4 MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET.....	0008 00
REPLACE CASCADE REMOTE HARNESS	0009 00
CONVERT PRIMARY POWER INVERTER TO SLAVE	0010 00
REPLACE/REPAIR INVERTER AND INVERTER HOUSING ASSEMBLY A2	0011 00

REPAIR POWER CONTROL ENCLOSURE FACEPLATE AND BRACKET

0008 00

THIS WORK PACKAGE COVERS:

Disassembly (page 0008 00-2).
 Assembly (page 0008 00-8).

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0019 00, Item 2)

References

TM 9-2350-277-20 (Volumes 1-6)

Materials/Parts

Primer (WP 0020 00, Item 1)
 Sealing Compound (WP 0020 00, Item 2)
 Locknut (4)
 Locknut (4)
 Lockwasher (4)
 Lockwasher (4)
 Lockwasher (10)
 Lockwasher (10)
 Strap (AR)

Equipment Condition

Engine stopped (TM 9-2350-277-10)
 Carrier blocked (TM 9-2350-277-10)
 All external power disconnected
 (TM 11-7010-256-12&P)
 Battery ground lead disconnected
 (TM 9-2350-277-20-3)

DISASSEMBLY

NOTE

Unless otherwise noted retain all hardware for use during reinstallation.

1. Remove two screws (5), lockwashers (4), and bracket (3) from enclosure (2). Discard lockwashers.
2. Remove ten screws (10), lockwashers (6), and faceplate assembly (9) from enclosure (2). Lower faceplate (9). Discard lockwashers.
3. Remove straps (1) from leads as required. Discard straps.
4. Remove four screws (7) and washers (6) from faceplate hinge (8). Discard locknuts.

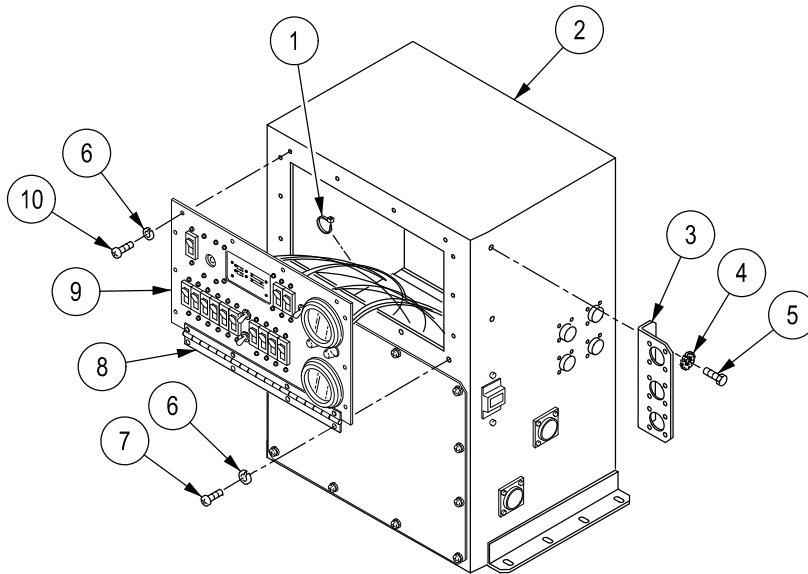


Figure 1. Faceplate Removal

NOTE

Tag all leads before removal.

There are 13 circuit breakers alike. All circuit breakers are removed in the same way. The artwork shows the removal of only one circuit breaker. Reference M1068A3 Wiring Diagram TM 9-2350-277-20-6.

NOTE

Unless otherwise noted retain all hardware for use during reinstallation.

5. Remove nut (16) and safety cover (17) from terminal 1 of circuit breaker CB1 (11). Unwrap velcro strap (18) from around local wiring.
6. Remove two nuts (15) and lockwashers (14) from circuit breaker CB1 (11).
7. Remove circuit 7A lead (13) from terminal 1 of circuit breaker CB1 (11).
8. Remove circuits 9A, 9E, and 9D leads (12) from terminal 2 of circuit breaker CB1 (11).
9. Remove two screws (19), lockwashers (20), and circuit breaker CB1 (11) from faceplate (9). Discard lockwashers.

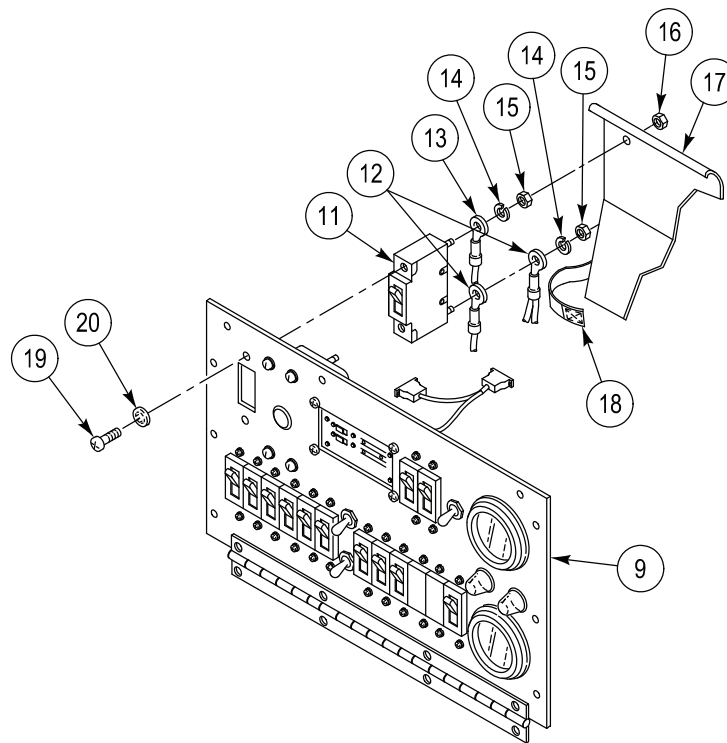


Figure 2. Faceplate Circuit Breaker CB1 Disassembly

NOTE

Unless otherwise noted retain all hardware for use during reinstallation.

10. Remove two nuts (24) and lockwashers (23) from circuit breaker CB2 (21).
11. Remove circuit 31B lead (22) from terminal 1 of circuit breaker CB2 (21).
12. Remove circuit 36C lead (25) from terminal 2 of circuit breaker CB2 (21).
13. Remove four screws (30), lockwashers (29), and circuit breaker CB2 (21) from faceplate (9). Discard lockwashers.
14. Remove four screws (28), locknuts (26), and cascade remote harness RP1 (27) from faceplate (9) and two inverters. Discard locknuts.

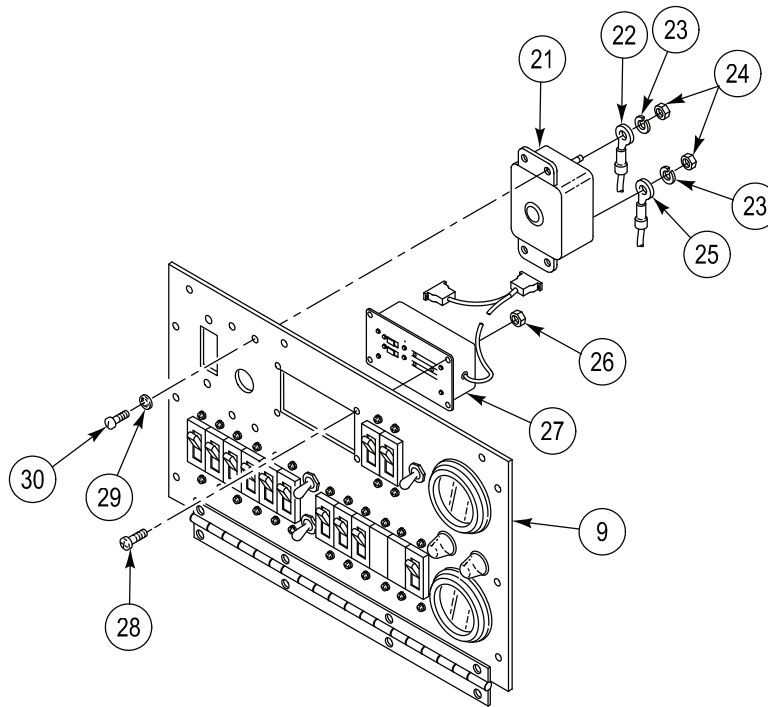


Figure 3. Faceplate Circuit Breaker CB2/Harness Disassembly

NOTE

All leads for CB3 and CB4 are secured with a washer and a nut. Art work shows the removal of only one washer and one nut.

NOTE

Unless otherwise noted retain all hardware for use during reinstallation.

15. Remove two nuts (35) and lockwashers (34) from circuit breaker CB3 (31).
16. Remove circuit 11A lead (33) from terminal 1 of circuit breaker CB3 (31).
17. Remove circuits 13A and 13B leads (36) from terminal 2 of circuit breaker CB3 (31).
18. Remove two nuts (35) and lockwashers (34) from circuit breaker CB4 (32).
19. Remove circuit 12A lead (38) from terminal 1 of circuit breaker CB4 (32).
20. Remove circuits 13B and 13C leads (37) from CB4 (32).
21. Remove four screws (19), lockwashers (20), and circuit breakers CB3 (31) and CB4 (32) from faceplate (9). Discard lockwashers.

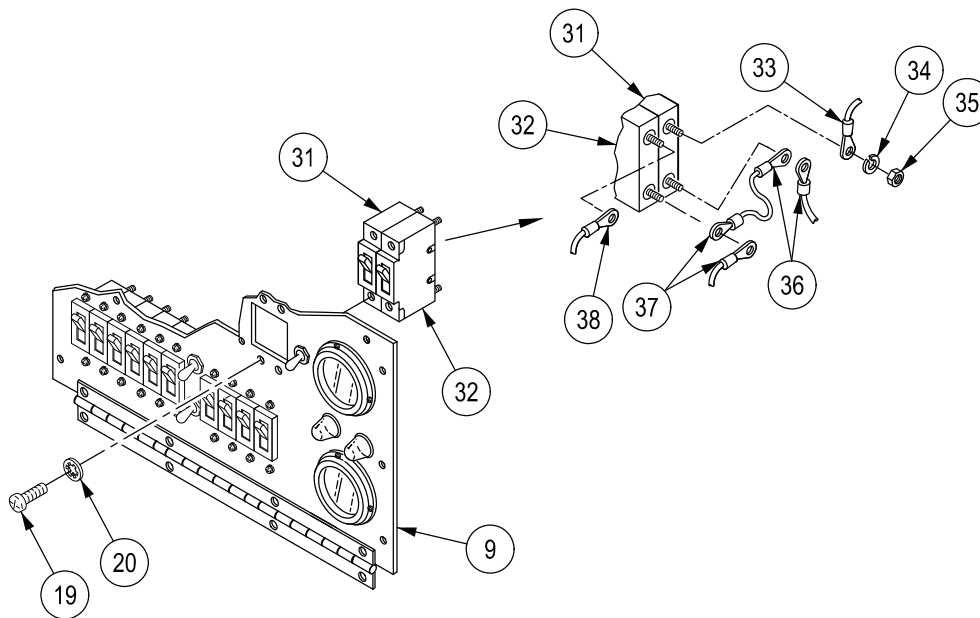


Figure 4. Faceplate Circuit Breaker CB3/CB4 Disassembly

NOTE

All leads are secured to S2 with a screw and a washer. The art work shows the removal of only one washer and one screw.

NOTE

Unless otherwise noted retain all hardware for use during reinstallation.

22. Remove screw (42), lockwasher (41), and circuit 9E lead (40) from terminal 1 of toggle switch S2 (39).
23. Remove screw (42), lockwasher (41), and circuit 30A lead (43) from terminal 2 of toggle switch S2 (39).
24. Remove screw (42), lockwasher (41), and circuit 13C lead (45) from terminal 3 of toggle switch S2 (39).
25. Remove screw (42), lockwasher (41), and circuit 8D and 8F leads (50) from terminal 4 of toggle switch S2 (39).
26. Remove screw (42), lockwasher (41), and circuit 29A lead (44) from terminal 5 of toggle switch S2 (39).
27. Remove screw (42), lockwasher (41), and circuit 28C and 28F leads (46) from terminal 6 of toggle switch S2 (39).
28. Remove nut (49), lockwasher (48), locking ring (47), and toggle switch S2 (39) from faceplate (9).

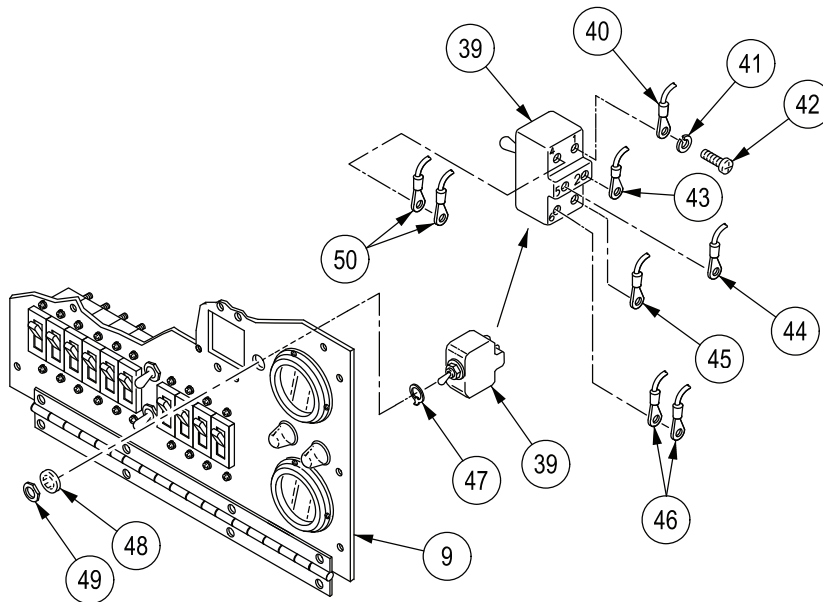


Figure 5. Faceplate Toggle Switch S2 Disassembly

NOTE

Unless otherwise noted retain all hardware for use during reinstallation.

29. Remove two nuts (55) and lockwashers (54) and circuit lead(s) (53) from terminal 1 (52) and terminal 2 (56) of circuit breaker (51).
30. Remove circuit breaker (51) by removing two screws (19) and lockwashers (20) from faceplate (9). Discard lockwashers.
31. Remove screw (61), lockwasher (60), and circuit 19A lead (59) from terminal 2 of circuit breaker CB17 (58).
32. Remove screw (61), lockwasher (60), and circuit 17C lead (62) from terminal 1 of circuit breaker CB17 (58).
33. Remove nut (71), lockwasher (72), locking ring (57), and circuit breaker CB17 (58) from faceplate (9).
34. Remove screw (66), lockwasher (65), and circuits 19A and 19B leads (64) from terminal 2 of toggle switch S1 (63).
35. Remove screw (66), lockwasher (65), and circuits 20A and 20B leads (67) from terminal 3 of toggle switch S1 (63).
36. Remove nut (70), lockwasher (69), locking ring (68), and toggle switch S1 (63) from faceplate (9).

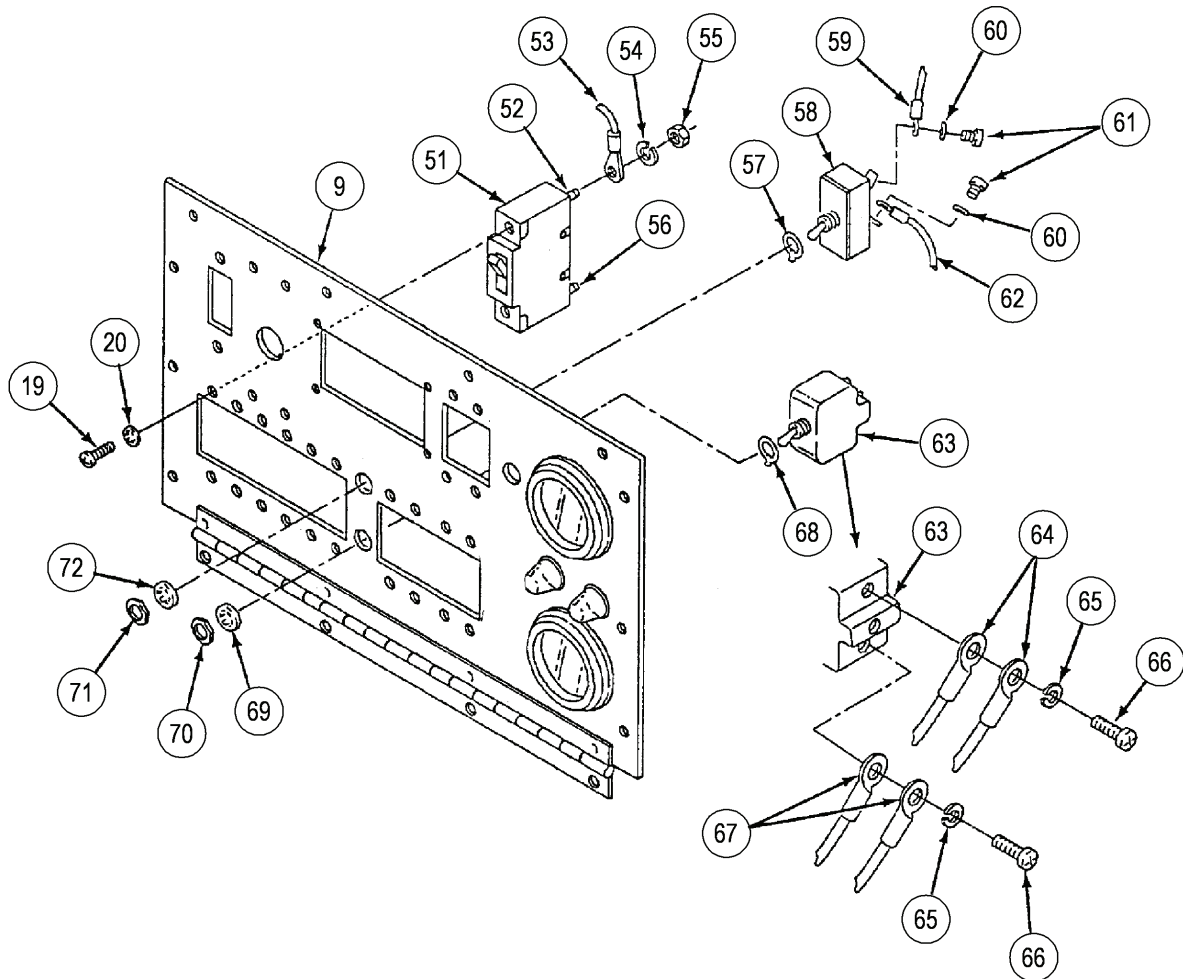


Figure 6. Faceplate Circuit Breaker CB17/Toggle Switch S1 Disassembly

ASSEMBLY

1. Install toggle switch S1 (63), locking ring (68), lockwasher (69), and nut (70) on faceplate (9).
2. Install circuits 20A and 20B leads (67), screw (66), and lockwasher (65) on terminal 3 of toggle switch S1 (63).
3. Install circuits 19A and 19B leads (64), screw (66), and lockwasher (65) on terminal 2 of toggle switch S1 (63).

NOTE

There are 12 circuit breakers alike. All circuit breakers are installed in the same way. Art work shows the installation of one circuit breaker. Reference M1068A3 Wiring Diagram TM 9-2350-277-20-6.

4. Install circuit breaker CB17 (58), locking ring (57), lockwasher (72), and nut (71) on faceplate (9).
5. Install circuit 19A lead (59), screw (61), and lockwasher (60) on terminal 2 of circuit breaker CB17 (58).
6. Install circuit 17C lead (62), screw (61), and lockwasher (60) on terminal 1 of circuit breaker CB17 (58).
7. Install circuit breaker (51) on faceplate (9). Secure with two new lockwashers (20) and screws (19).
8. Install circuit lead(s) (53) to terminal 1 (52) and terminal 2 (56) with two lockwashers (54) and nuts (55).

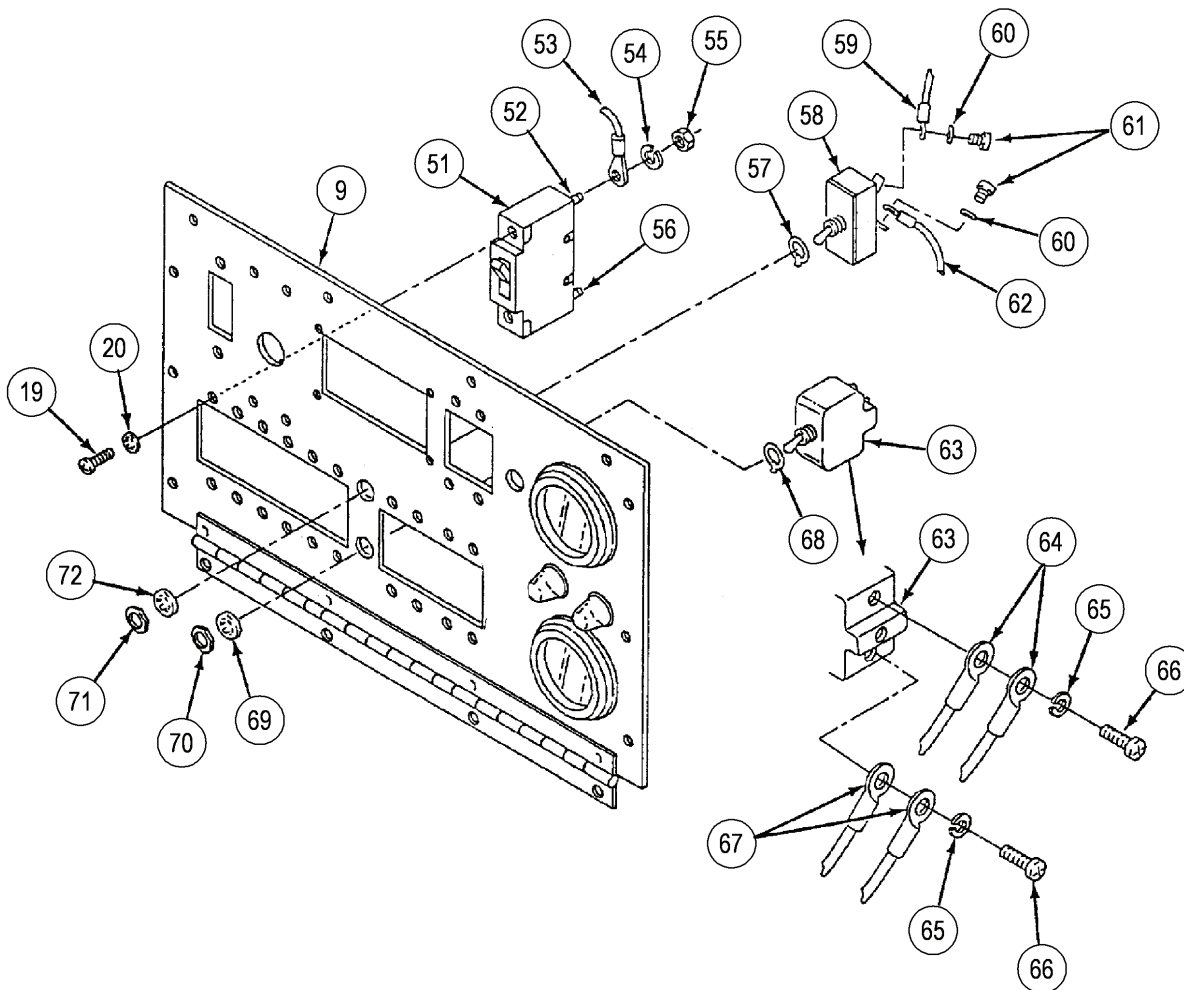


Figure 7. Faceplate Circuit Breaker CB17/Toggle Switch S1 Assembly

NOTE

All S2 leads are secured with a washer and a screw. The art work shows the installation of only one washer and one screw.

9. Install toggle switch S2 (39), locking ring (47), lockwasher (48), and nut (49) on faceplate (9).
10. Install circuits 28C and 28F leads (46), lockwasher (41), and screw (42) on terminal 6 of toggle switch S2 (39).
11. Install circuit 29A lead (44), lockwasher (41), and screw (42) on terminal 5 of toggle switch S2 (39).
12. Install circuits 8D and 8F leads (50), lockwasher (41), and screw (42) on terminal 4 of toggle switch S2 (39).
13. Install circuit 13C lead (45), lockwasher (41), and screw (42) on terminal 3 of toggle switch S2 (39).
14. Install circuit 30A lead (43), lockwasher (41), and screw (42) on terminal 2 of toggle switch S2 (39).
15. Install circuit 9E lead (40), lockwasher (41), and screw (42) on terminal 1 of toggle switch S2 (39).

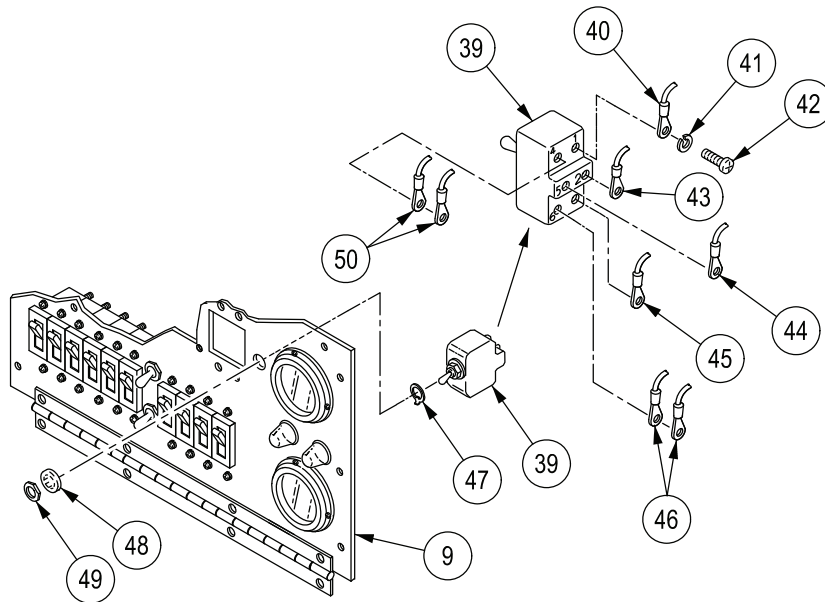


Figure 8. Faceplate Toggle Switch S2 Assembly

NOTE

All circuit leads for CB3 and CB4 are secured with a washer and a nut. The art work shows the installation of only one washer and one nut.

16. Install circuit breakers CB3 (31) and CB4 (32) on faceplate (9) and secure with four screws (19) and new lockwashers (20).
17. Install circuits 13B and 13C leads (37), lockwasher (34), and nut (35) on terminal 2 of circuit breaker CB4 (32).
18. Install circuit 12A lead (38), lockwasher (34), and nut (35) on terminal 1 of circuit breaker CB4 (32).
19. Install circuits 13B and 13A leads (36), lockwasher (34), and nut (35) on terminal 2 of circuit breaker CB3 (31).
20. Install circuit 11A lead (33), lockwasher (34), and nut (35) on terminal 1 of circuit breaker CB3 (31).

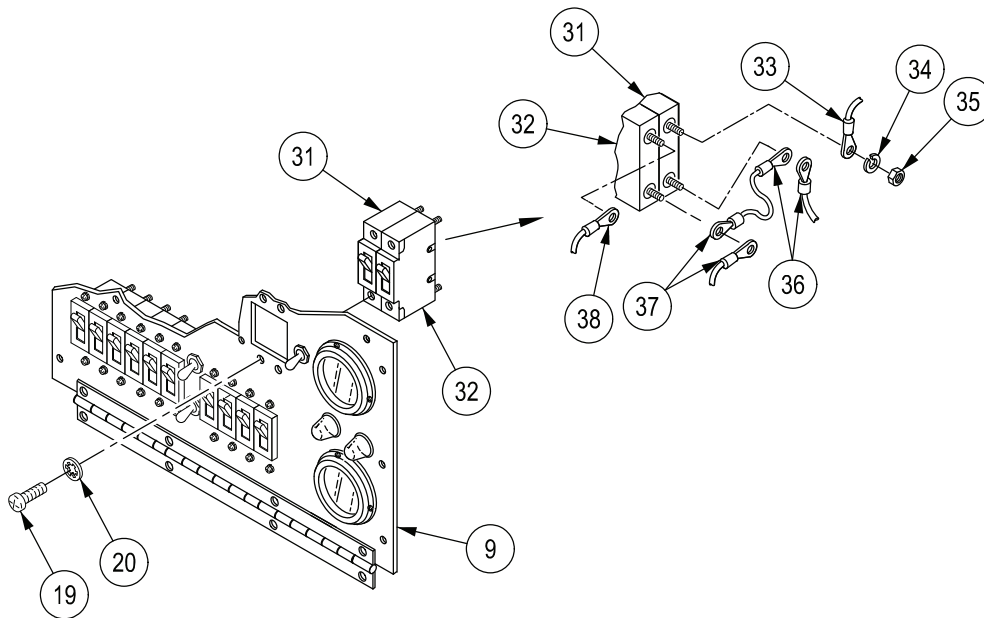


Figure 9. Circuit Breaker CB3/CB4 Assembly

NOTE

If replacing the cascade remote harness RP1 (W15), verify the type inverter you have (15-pin or 25-pin) and check WP 0014 00 to identify which harness to order.

21. Install cascade remote harness RP1 (27) on faceplate (9) and secure with four screws (28) and new locknuts (26).
22. Install circuit breaker CB2 (21), four screws (30), and new lockwashers (29) on faceplate (9).
23. Install circuit 36C lead (25), nut (24), lockwasher (23) on terminal 2 of circuit breaker CB2 (21).
24. Install circuit 31B lead (22), lockwasher (23), and nut (24) on terminal 1 of circuit breaker CB2 (21).

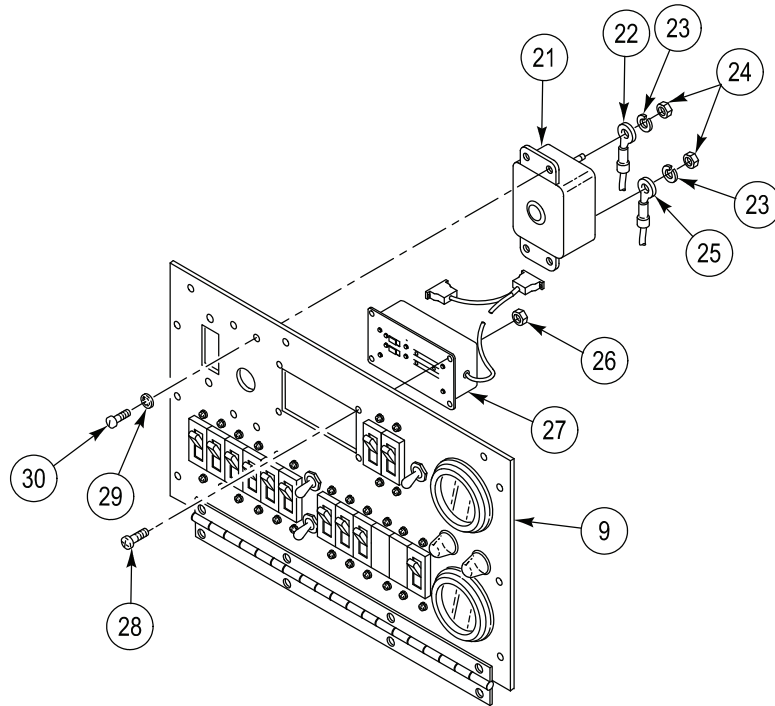


Figure 10. Cascade Remote Harness and Circuit Breaker CB2 Assembly

25. Install circuit breaker CB1 (11), two screws (19), and new lockwashers (20) on faceplate (9).
26. Install circuits 9A, 9E, and 9D leads (12), lockwasher (14), and nut (15) on terminal 2 of circuit breaker CB1 (11).
27. Install circuit 7A lead (13), lockwasher (14), and nut (15) on terminal 1 of circuit breaker CB1 (11).
28. Apply primer and sealing compound to threads of terminal 1 of circuit breaker CB1 (11).
29. Install safety cover (17) and nut (16) on terminal 1 of circuit breaker CB1 (11). Wrap velcro strap (18) around local wiring.

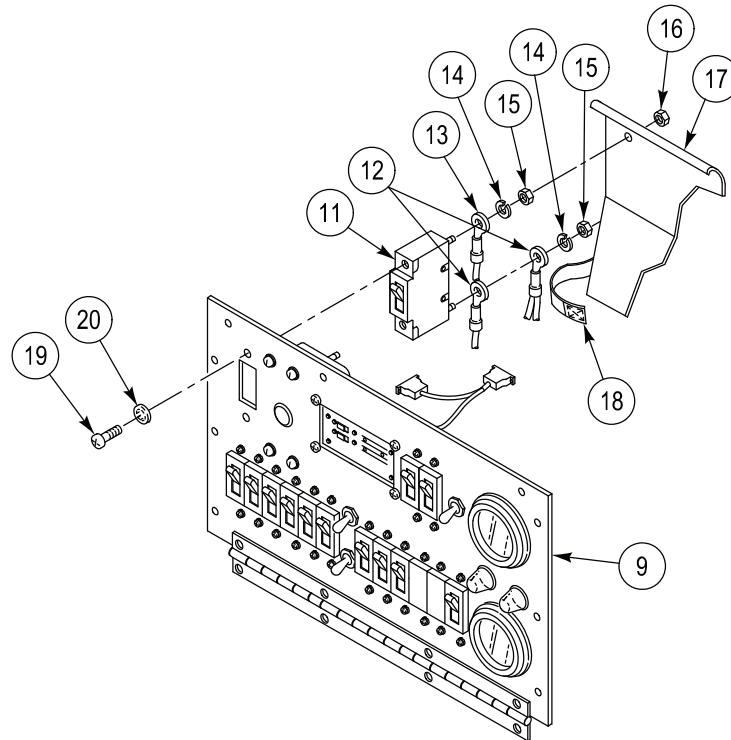


Figure 11. Faceplate Circuit Breaker CB1 Assembly

30. Install new straps (1) on leads as required.
31. Lift faceplate assembly (9) into place. Secure faceplate hinge (8) to enclosure (2) with four screws (7) and washers (6).
32. Close faceplate assembly (9). Secure to enclosure (2) with ten screws (10) and new lockwashers (6).
33. Install bracket (3) on enclosure (2). Secure with two screws (5) and new lockwashers (4).

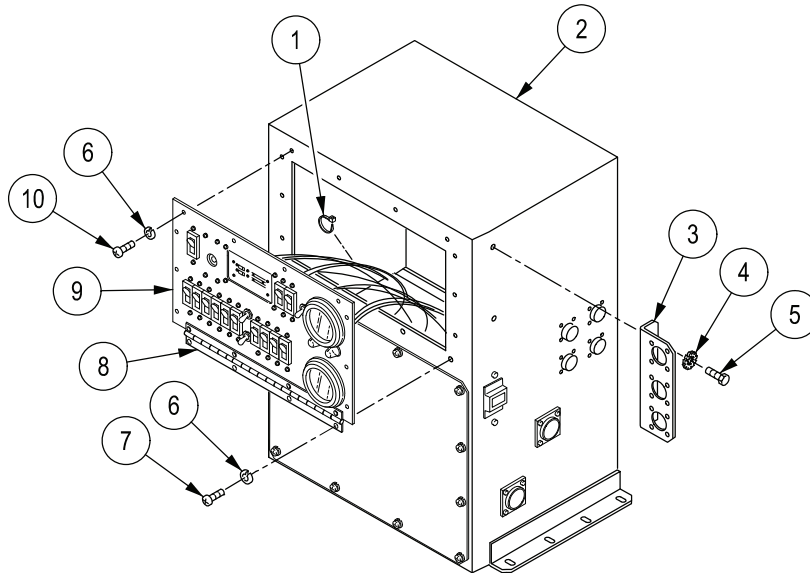


Figure 12. Faceplate Installation

FOLLOW-THROUGH STEPS

1. Connect battery ground lead. See TM 9-2350-277-20-3.

END OF TASK

REPLACE CASCADE REMOTE HARNESS

0009 00**THIS WORK PACKAGE COVERS:**

Removal (page 0009-1).
 Installation (page 0009-3).

INITIAL SETUP:Maintenance Level

Field

Personnel Required

Power-Generation Equipment Repairer 52D10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0019 00, Item 2)

Equipment Condition

Engine stopped (TM 9-2350-277-10)

Carrier blocked (TM 9-2350-277-10)

Materials/Parts

Primer (WP 0020 00, Item 1)

Sealing Compound (WP 0020 00, Item 2)

Lockwasher (10)

Lockwasher (10)

Locknut (4)

All external power disconnected
(TM 11-7010-256-12&P)Battery ground lead disconnected
(TM 9-2350-277-20-3)

REMOVAL**NOTE**

The cascade remote harness has a 25-pin connector for the older inverters and 15-pin on new true-sine wave inverters. If the old quasi-sine wave inverters are being replaced with new true-sine wave inverters, replace the old 25-pin cascade harness with a new 15-pin cascade harness.

1. Remove access cover (12) on inverter housing A2 (16) by removing 10 screws (13) and lockwashers (14). Discard lockwashers.
2. Remove 10 screws (1), and lockwashers (2), from faceplate (3). Lower faceplate (3) to gain access to RP1 harness (8). Discard lockwashers.
3. Remove nut (7) and safety cover (6) from terminal 2 on meter M1 (4). Unwrap velcro strap (5) from local wiring.
4. Loosen captive screws on connectors and disconnect RP1 harness connectors (11) from inverters (15).
5. Remove four locknuts (9), screws (10), and RP1 remote harness (8) from faceplate (3). Remove harness. Discard locknuts.

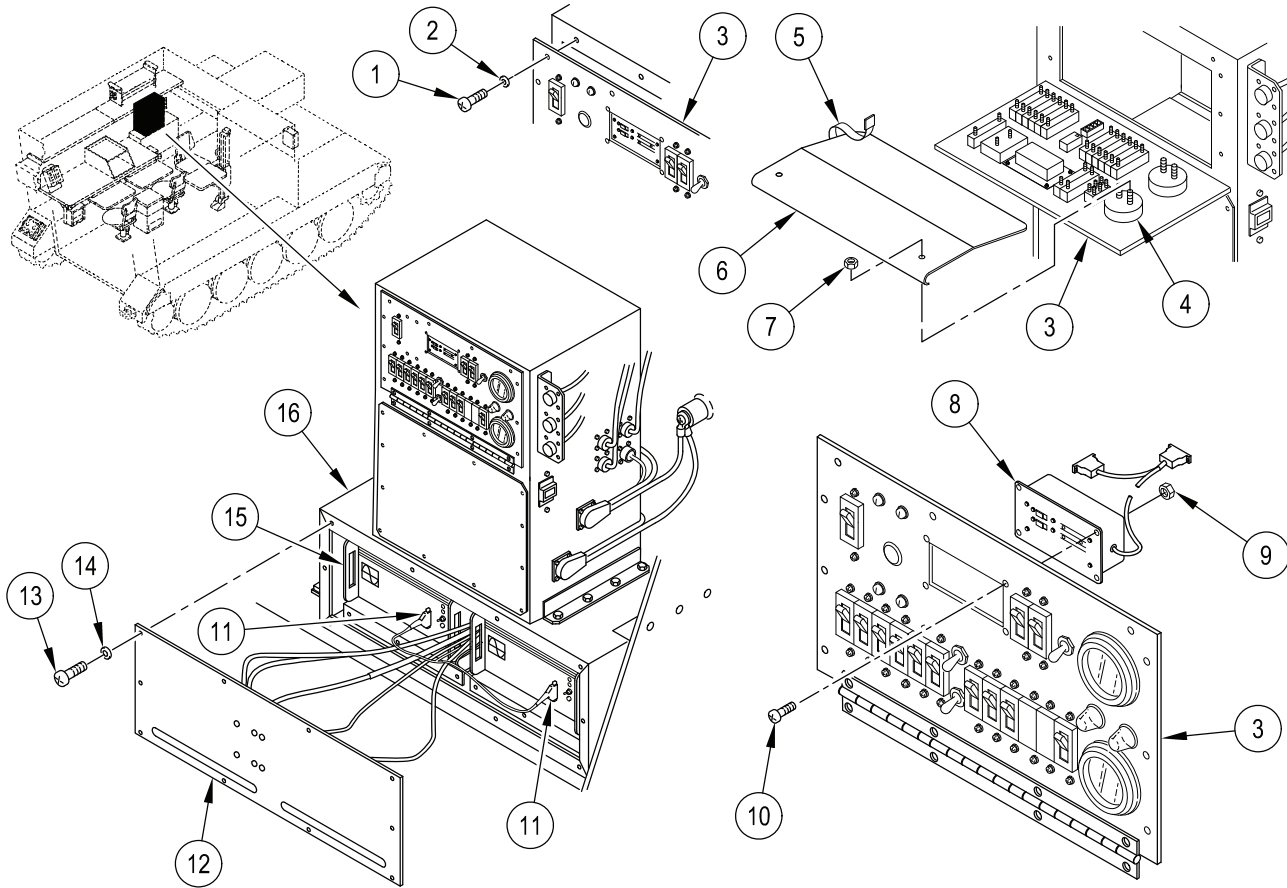


Figure 1. Faceplate/Remote Harness Removal

INSTALLATION

NOTE

When replacing the cascade remote harness RP1 (W15), verify the type inverter you have (15-pin or 25-pin) and check WP 0014 00 to identify which harness to order.

1. Install RP1 harness (8), four screws (10), and new locknuts (9) on faceplate (3). Route RP1 harness leads down through power enclosure and behind inverter housing A2 to front face of inverters. Avoid interfering with other components in power enclosure.

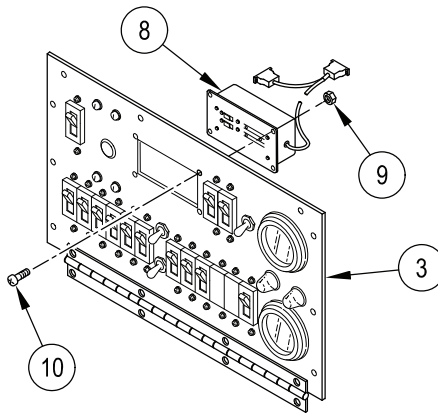
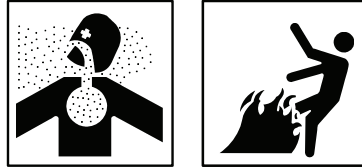


Figure 2. RP1 Harness Installation

WARNING

Adhesive, primer, sealant compounds, and isopropyl alcohol are toxic and flammable. These compounds are toxic to eyes, skin, and respiratory tract. Continued exposure can make you dizzy and irritate your eyes and throat.

Always use in well ventilated areas, away from heat, sparks, and flames. Do not breathe fumes. Do not allow into contact with skin and eyes. Use goggles or face shield and protective gloves.

2. Apply primer and sealing compound to threads of terminal 2 of meter M1 (4).
3. Install safety cover (6) and nut (7) on terminal 2 of meter M1 (4). Wrap velcro strap (5) around local wiring.
4. Lift faceplate (3) in place and install 10 new lockwashers (2) and screws (1).
5. Connect red W15 cable connector (11) to inverter IN1 (15) and black W15 cable connector (18) to inverter IN2 (19).
6. Install access cover (12) on front of inverter housing A2 (16) with 10 new lockwashers (14) and screws (13).

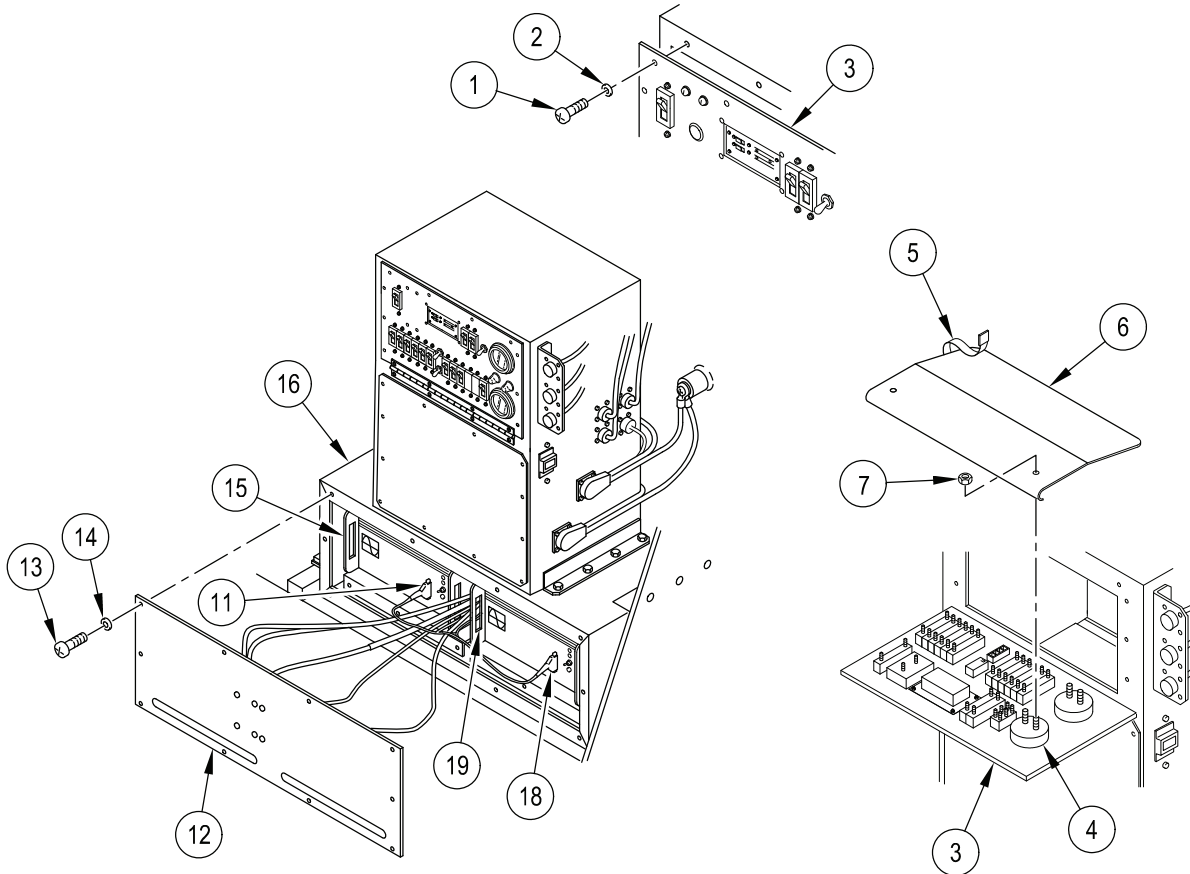


Figure 3. Faceplate Installation

FOLLOW-THROUGH STEPS

1. Connect battery ground lead. See TM 9-2350-277-20-3.

END OF TASK

CONVERT PRIMARY POWER INVERTER TO SLAVE**0010 00****THIS WORK PACKAGE COVERS:**

Convert Primary Power Inverter to Slave (page 0010-1).

INITIAL SETUP:Maintenance Level

Field

Equipment Condition

Engine stopped (TM 9-2350-277-10)

Carrier blocked (TM 9-2350-277-10)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0019 00, Item 2)

All external power disconnected

(TM 11-7010-256-12&P)

Personnel Required

Power-Generation Equipment Repairer 52D10

Battery ground lead disconnected

(TM 9-2350-277-20-3)

CONVERT PRIMARY POWER INVERTER TO SLAVE**NOTE**

By switching the W15 cable connectors, the faulty inverter becomes the slave and can stay dormant, while the reassigned new primary inverter will function and provide 50% power output (2.5 kW/20 amps maximum).

This procedure should only be used as a temporary repair until maintenance can replace the faulty power inverter.

1. Remove ten screws (1), lockwashers (2), and access cover (4) from inverter housing (3). Discard lockwashers.

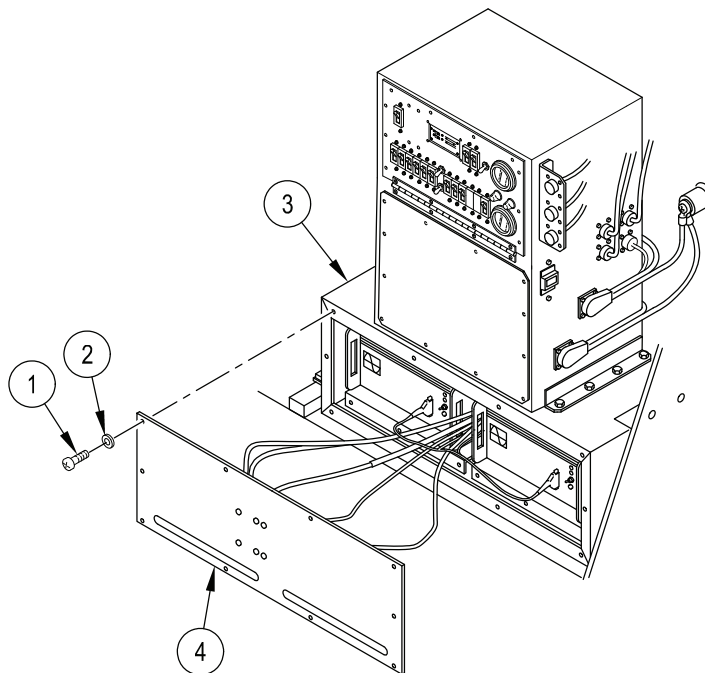


Figure 1. Inverter Access Cover Removal

CAUTION

Install each W15 cable connector carefully and properly secure and snug with the attached screws. Do not overtighten. Loose connector(s), missing screws, or an improperly connected W15 cable may cause the inverter to short circuit resulting in damage and failure to operate.

2. Remove W15 cable connectors from inverters IN1 and IN2. Reconnect red W15 cable connector to inverter IN2 (5) and black W15 cable connector to inverter IN1 (3).
3. Install access cover (6) on inverter housing (4) and secure with ten screws (1) and new lockwashers (2).

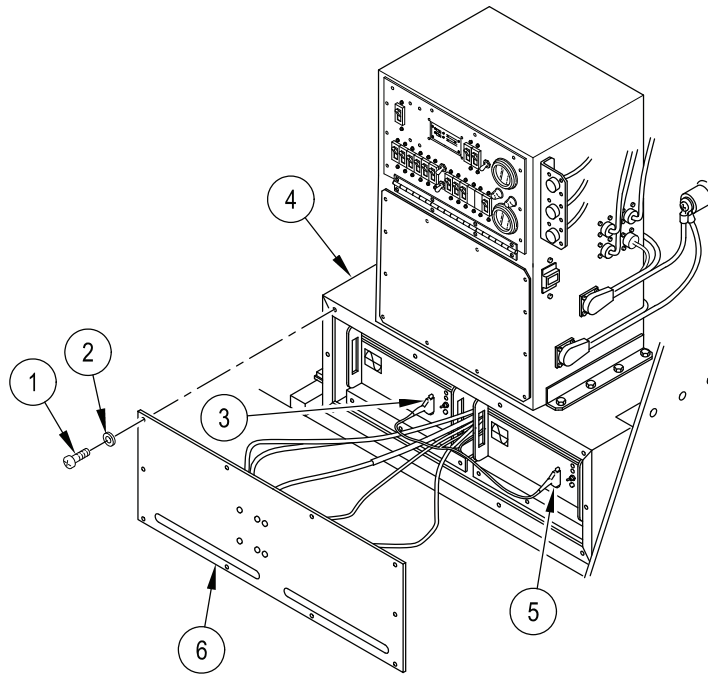


Figure 2. Primary Inverter Reassignment

END OF TASK

REPLACE/REPAIR INVERTER AND INVERTER HOUSING ASSEMBLY A2

0011 00

THIS WORK PACKAGE COVERS:

Removal (page 0011-1).
 Installation (page 0011-6).

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Power-Generation Equipment Repairer 52D10
 Helper (H)

Tools and Special Tools

General Mechanic's Tool Kit (WP 0019 00, Item 2)

Equipment Condition

Engine stopped (TM 9-2350-277-10)
 Carrier blocked (TM 9-2350-277-10)
 All external power disconnected
 (TM 11-7010-256-12&P)
 Battery ground lead disconnected
 (TM 9-2350-277-20-3)
 Power control enclosure removed
 (TM 9-2350-277-20-6)

Materials/Parts

Lockwasher (12)
 Lockwasher (6)
 Lockwasher (4)
 Self-locking nut (16)
 Self-locking nut (8)
 Self-locking nut (8)
 Self-locking nut (4)
 Self-locking nut (3)
 Self-locking nut (2)

REMOVAL

NOTE

Replacement of old quasi-sine wave inverters (25-pin) with new true-sine wave inverters (15-pin) requires the cascade remote harness be replaced at the same time. If one inverter in a set fails you need to replace it with a similiar model. If you cannot replace it with a similiar model you will need to replace both inverters as a set. It is not necessary to remove the housing to remove one or both inverters.

1. Remove ten screws (6), lockwashers (5), and access cover (4) from inverter housing (1). Discard lockwashers.
2. Remove four screws (2), locknuts (7), and terminal block TB2 (3) from access cover (4). Discard locknuts.
3. Remove two screws (10), locknuts (8), and terminal block TB1 (9) from access cover (4). Discard locknuts.

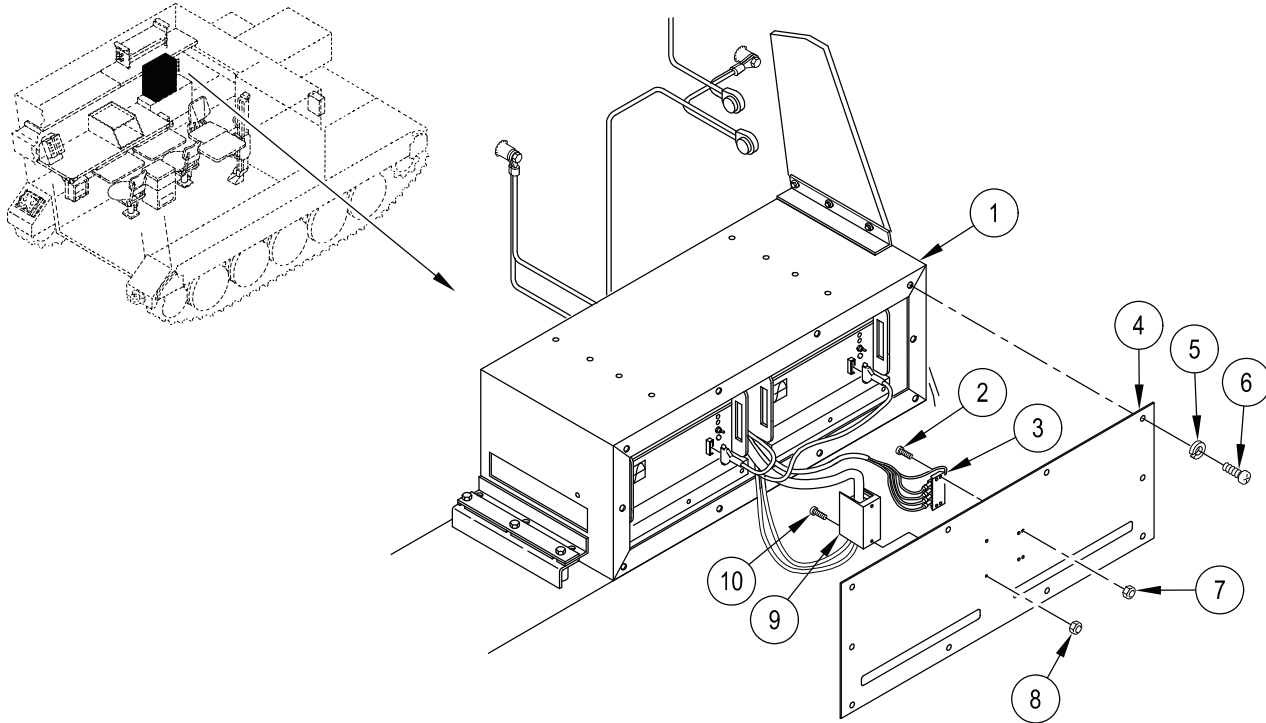


Figure 1. Inverter Housing Access Cover/Terminal Block Removal

NOTE

Tag leads/cables before removing/disconnecting.

4. Remove ten screws (2), cable W5 five leads (21), and six leads (20) from terminal block TB2 (3).
5. Remove two set screws (26), cable W6 (24), and two leads E4 (25) from terminal block TB1 (9).
6. Remove screw (13), ground lead W632 (17), ground lead W432 (16), and two lockwashers (11) from carrier wall. Discard lockwashers.
7. Remove screw (13), two ground leads E5 (12), and two lockwashers (11) from carrier wall. Discard lockwashers.
8. Remove three screws (19), locknuts (14), six washers (15), and blackout curtain (18) from inverter housing (1). Discard locknuts.

NOTE

The new true-sine wave inverter cable has a 15-pin arrangement versus a 25-pin for older inverters. The 25 and 15 pin cables are not interchangeable for the old and new style inverters.

9. Disconnect two cable W15 connectors (22) from inverters IN1 and inverter IN2 (23).

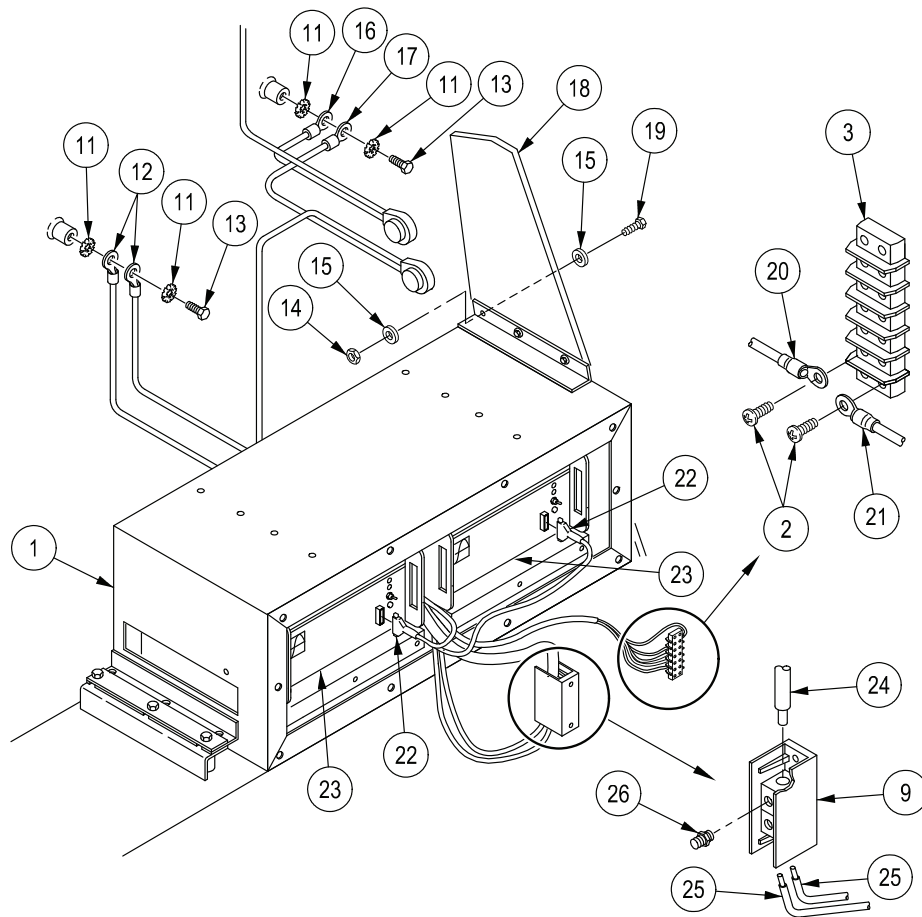


Figure 2. Inverter Cable and Lead Removal

NOTE

Both inverters are removed the same way. Inverter IN1 is removed for clarity.

10. Remove three screws (30) and lockwashers (11) from mount (27) and tray (32). Discard lockwashers.
11. Remove mount (27) and inverter (23) from housing (1). Have Helper assist.
12. Remove four screws (28), washers (29), locknuts (31), and mount (27) from inverter (23). Discard locknuts.

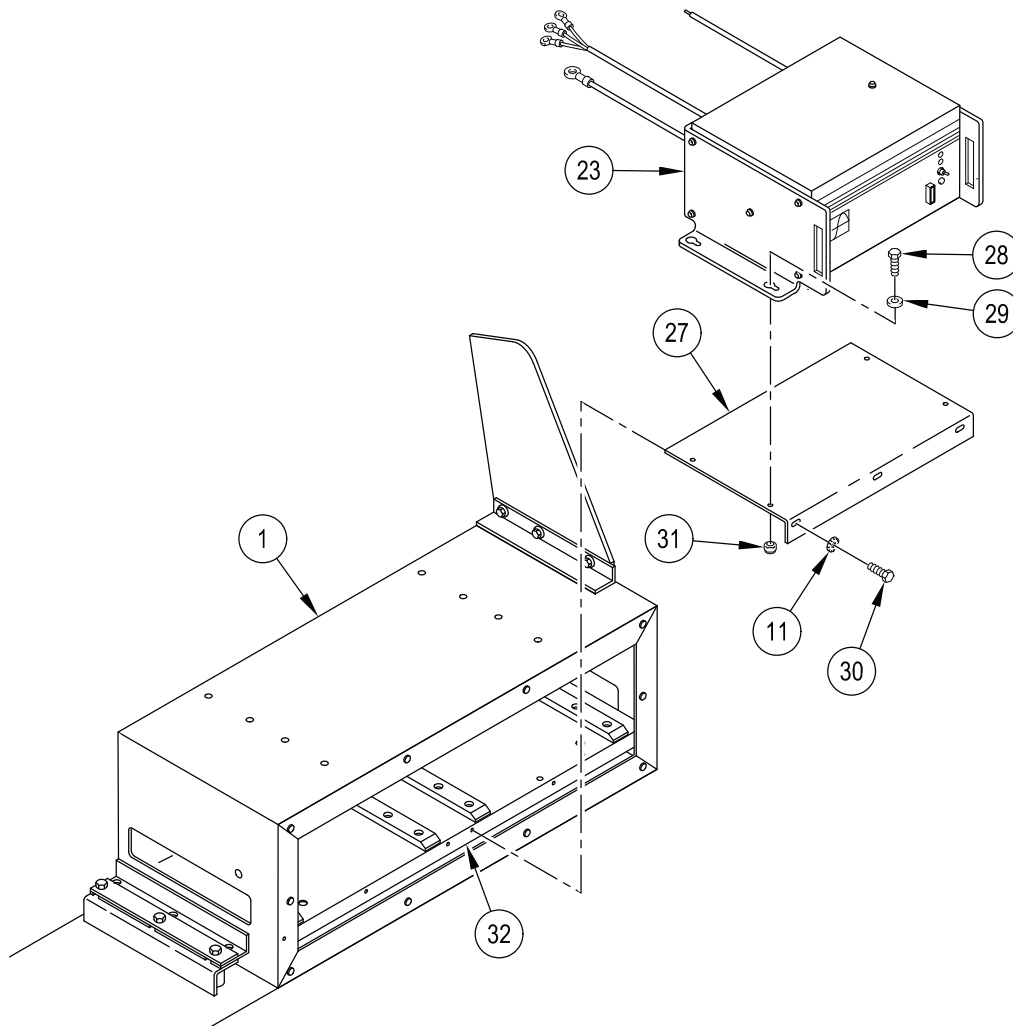


Figure 3. Inverter Removal

13. Remove four screws (33), lockwashers (34), and tray (32) from four resilient mounts (44). Discard lockwashers.
14. Remove sixteen screws (36), locknuts (8), thirty-two washers (37), and four straps (35) from tray (32). Discard locknuts.
15. Remove eight locknuts (38), washers (39), screws (40), and four resilient mounts (44) from housing (1). Discard locknuts.
16. Remove three screws (43), bezel (42), inverter housing (1), and mounting strip (41) from sponson weld nuts.

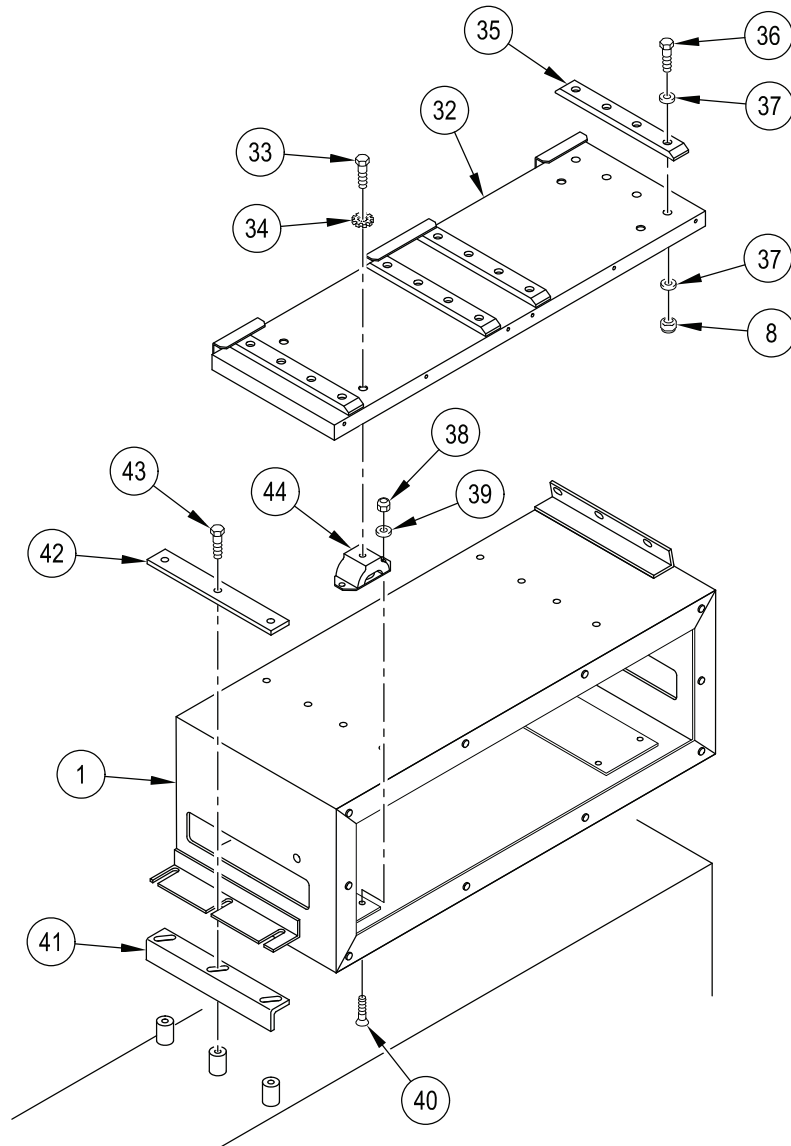


Figure 4. Inverter Housing Removal

INSTALLATION

NOTE

Both inverters are installed the same way except for wiring leads. Inverter IN2 is installed as shown. Inverter IN1 installs on the left side and is not shown for clarity. When replacing one inverter the replacement must be the same type/model. Older model inverters have a 25-pin connector, the new true-sine wave inverters have a 15-pin connector.

1. Install mounting strip (41), inverter housing (1), bezel (42), and three screws (43) on sponson.
2. Install four resilient mounts (44) on inverter housing (1) and secure with eight screws (40), washers (39), and new locknuts (38).

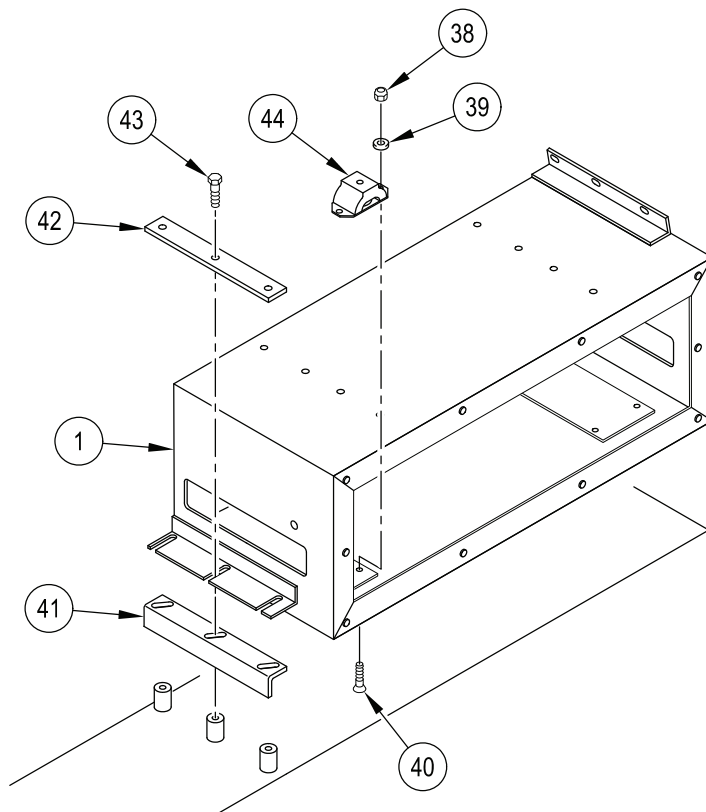


Figure 5. Inverter Housing Installation

3. Install four straps (35) on tray (32), secure with sixteen screws (36), thirty-two washers (37), and sixteen new locknuts (8).
4. Install tray (32) on four resilient mounts (44) and secure with four screws (33) and new lockwashers (34).

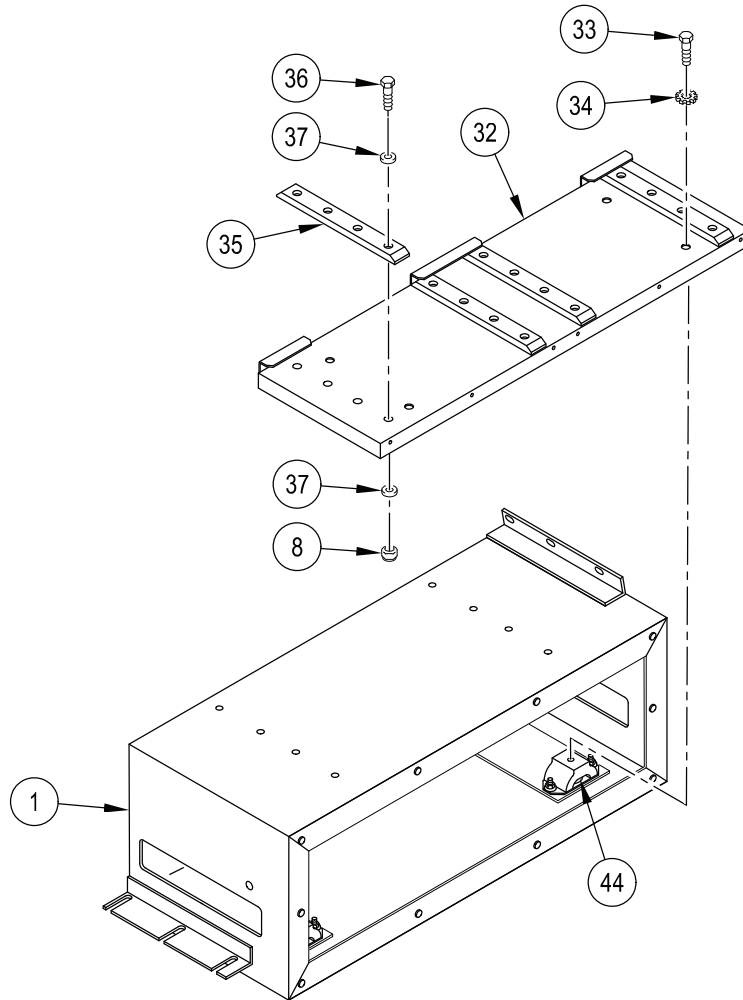


Figure 6. Inverter Tray Installation

5. Install mount (27) on inverter (23) and secure with four screws (28), washers (29), and new locknuts (31).
6. Install mount (27) and inverter (IN2) (23) in housing (1), secure on tray (32) with three screws (30) and new lockwashers (11). Have helper assist.
7. Repeat Steps 5 - 6 to install inverter (IN1) in housing (1). Have helper assist.

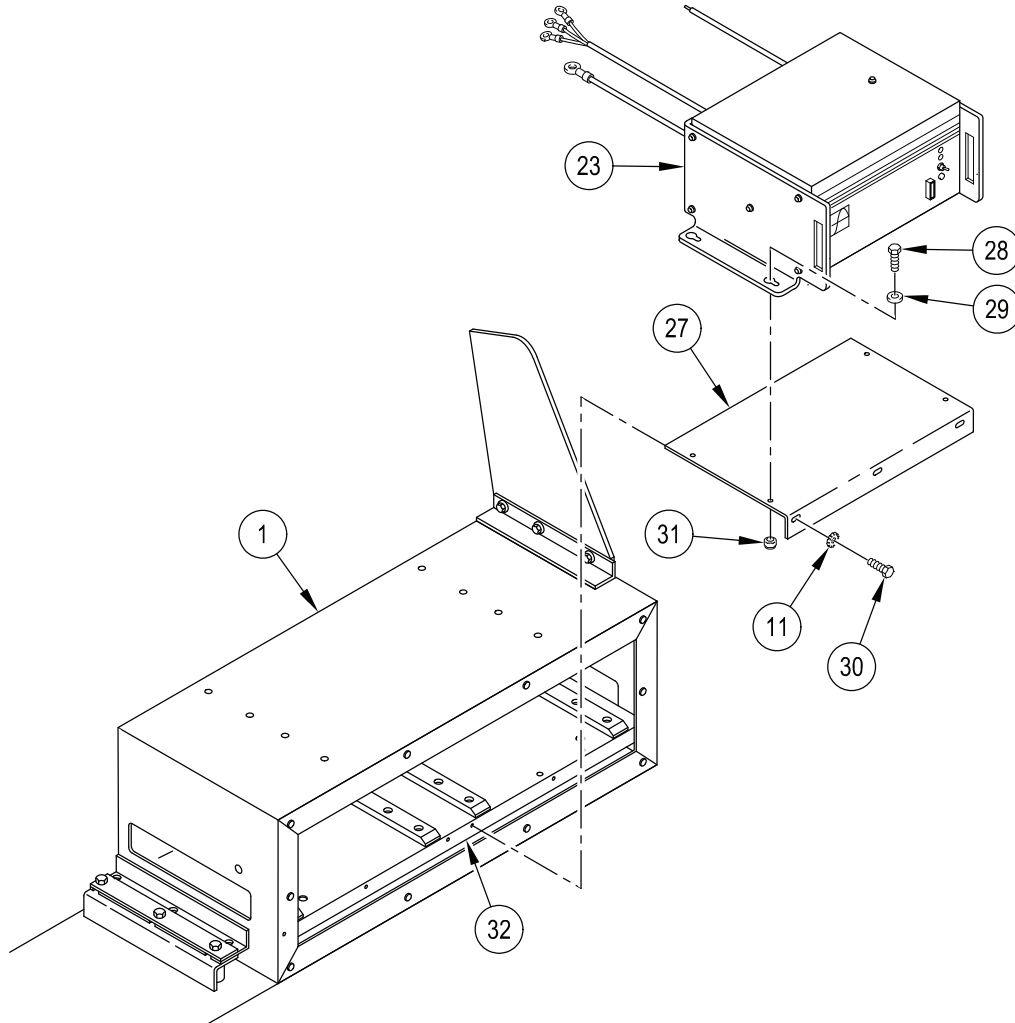


Figure 7. Inverter Installation

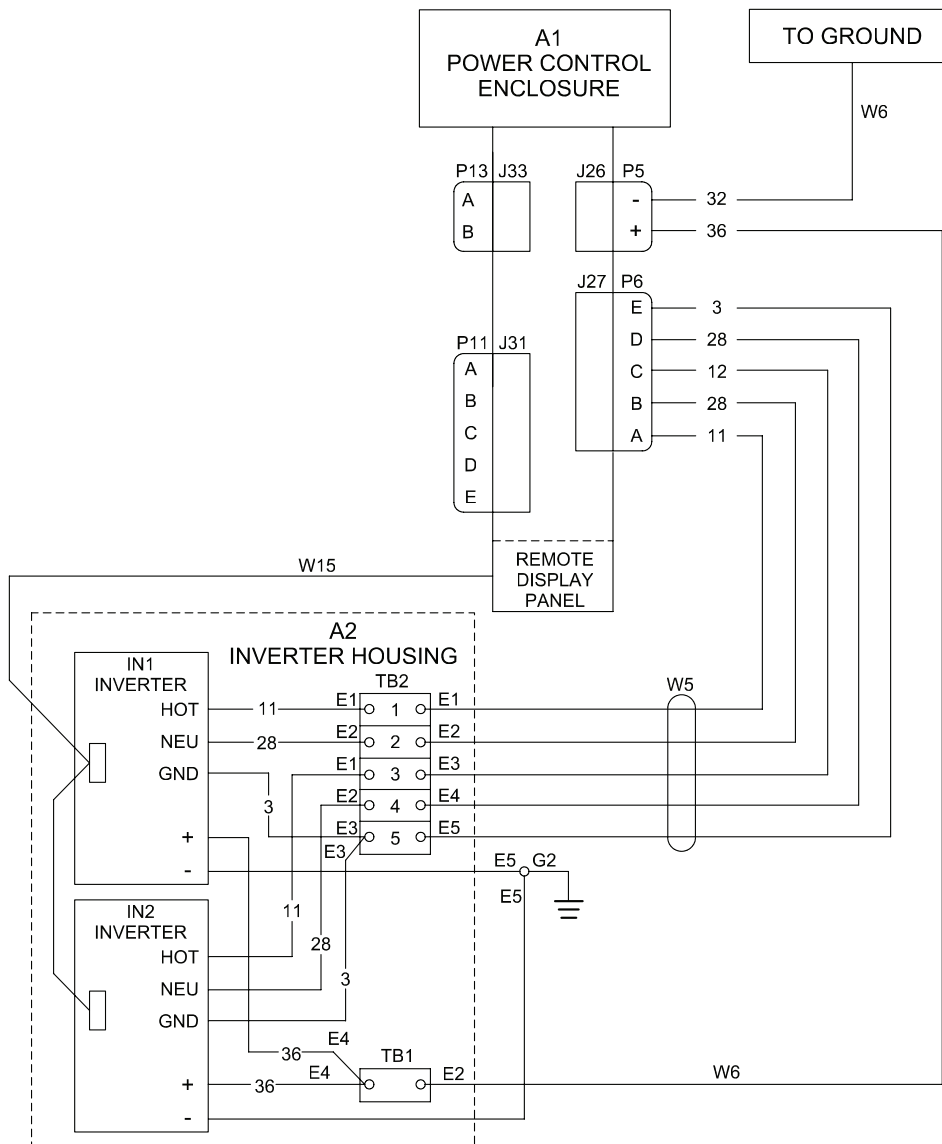
CAUTION

If retaining screws at W15 connector loosen or fall out, the W15 connector can cause a short and damage the inverter. Make sure retaining screws are tight.

NOTE

Wiring leads for inverters IN1 and IN2 are different, follow schematic below for proper wiring connections.

The W15 cable is different for old and new model inverters. Old quasi-sine wave inverters have a 25-pin connector configuration and new true-sine wave inverters have a 15-pin connector configuration. They are not interchangeable. See Table 1 for correct harness configuration.



8. Connect red W15 cable connector (22) to inverter IN1 (23) and black W15 cable (22) connector to inverter IN2 (23) (see Table 1 for correct W15 harness).

Table 1. W15 Harness Configuration

PART NUMBER/NSN	LEADS ON INVERTER	LEADS ON INVERTER	MODEL
*12383902-1 (IN1) 6130-01-379-7042	IN1 E1 (A2TB2-1)	IN1 E2 (A2TB2-2)	OLD MODEL INVERTER (25-PIN)
*12383902-1 (IN2) 6130-01-386-4798	IN2 E1 (A2TB2-3)	IN2 E2 (A2TB2-4)	
#12475034-1 (IN1)	IN1 E1 (A2TB2-1)	IN1 E1 (A2TB2-2)	NEW TRUE-SINE WAVE INVERTER (15-PIN)
#12475034-2 (IN2)	IN2 E1 (A2TB2-3)	IN2 E1 (A2TB2-4)	
*Mate with W15 harness (66200) P/N 84-4141-00 or (19207) P/N 12384133.			
#Mate with W15 harness (19207) P/N 12475036.			

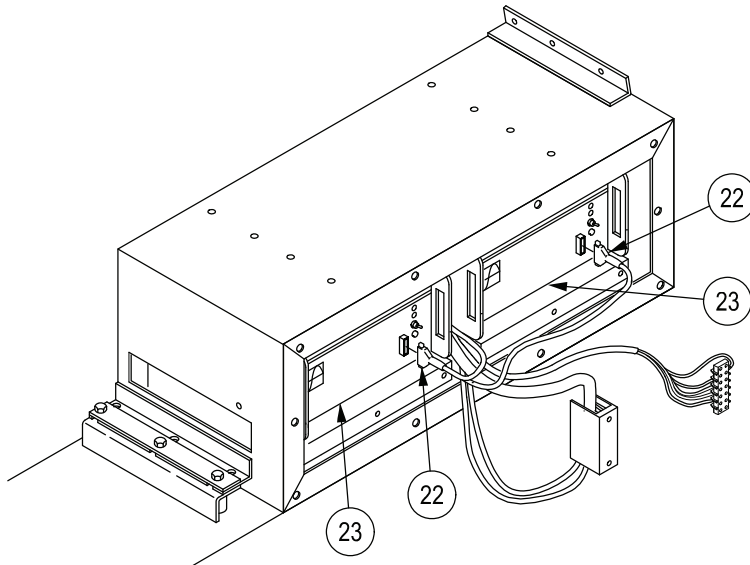


Figure 8. W15 Harness Connection

NOTE

Sand the surface of the weldnut to make sure there is a bare metal to metal surface for the ground.

9. Install blackout curtain (18) on inverter housing (1) and secure with six washers (15), three screws (19), and new locknuts (14).
10. Install two ground leads E5 (12) on carrier wall and secure with two new lockwashers (11) and screw (13).
11. Install ground lead W4E1 (16) and ground lead W6E1 (17) on carrier wall and secure with two new lockwashers (11) and screw (13).
12. Connect cable W6 (24) and two leads E4 (25) on terminal block TB1 (9) and secure with two set screws (26).
13. Connect cable W5 five leads (20) and six leads (21) on terminal block TB2 (3) and secure with ten screws (2).

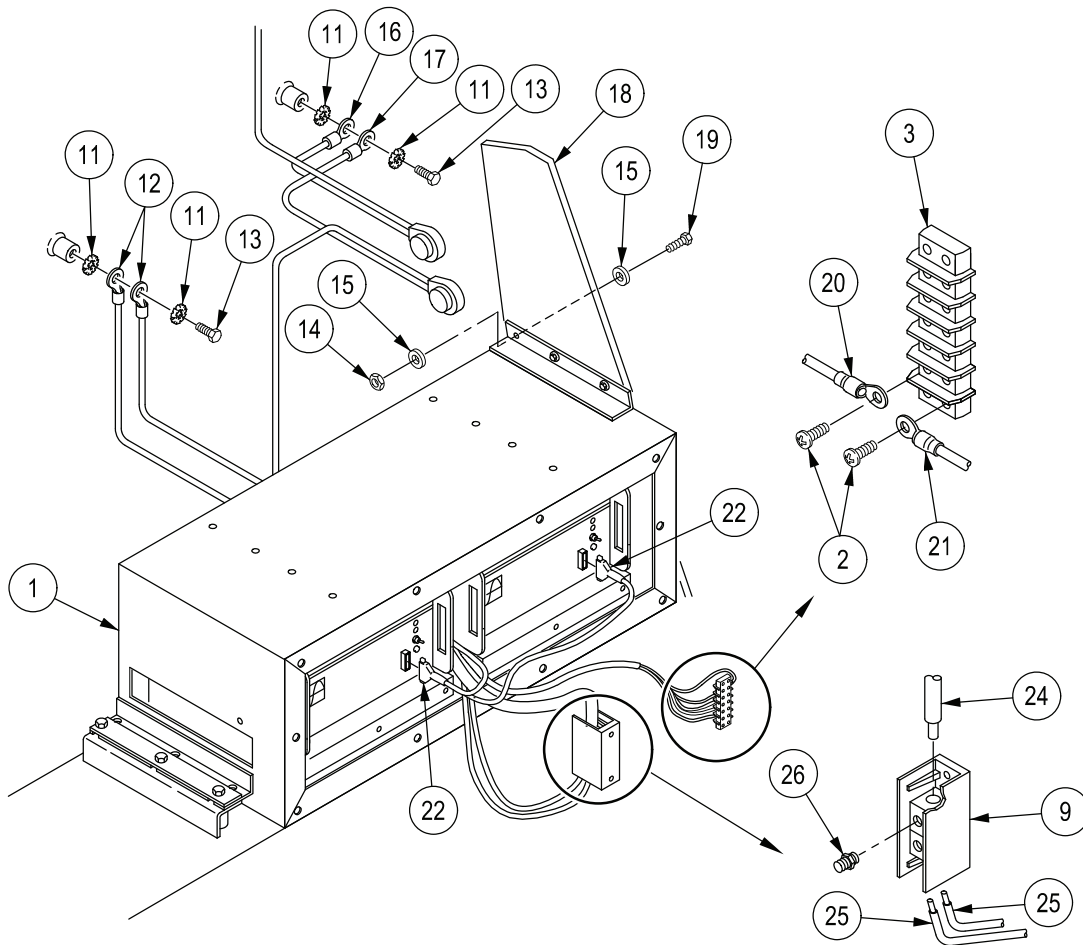


Figure 9. Inverter Cable and Lead Installation

14. Install terminal block TB1 (9) on access cover (4) and secure with two screws (10) and new locknuts (8).
15. Install terminal block TB2 (3) on access cover (4) and secure with four screws (2) and new locknuts (7).
16. Move POWER switch (45) on both inverters IN1 and IN2 (23) to ON.
17. Install access cover (4) on inverter housing (1) and secure with ten screws (6) and new lockwashers (5).

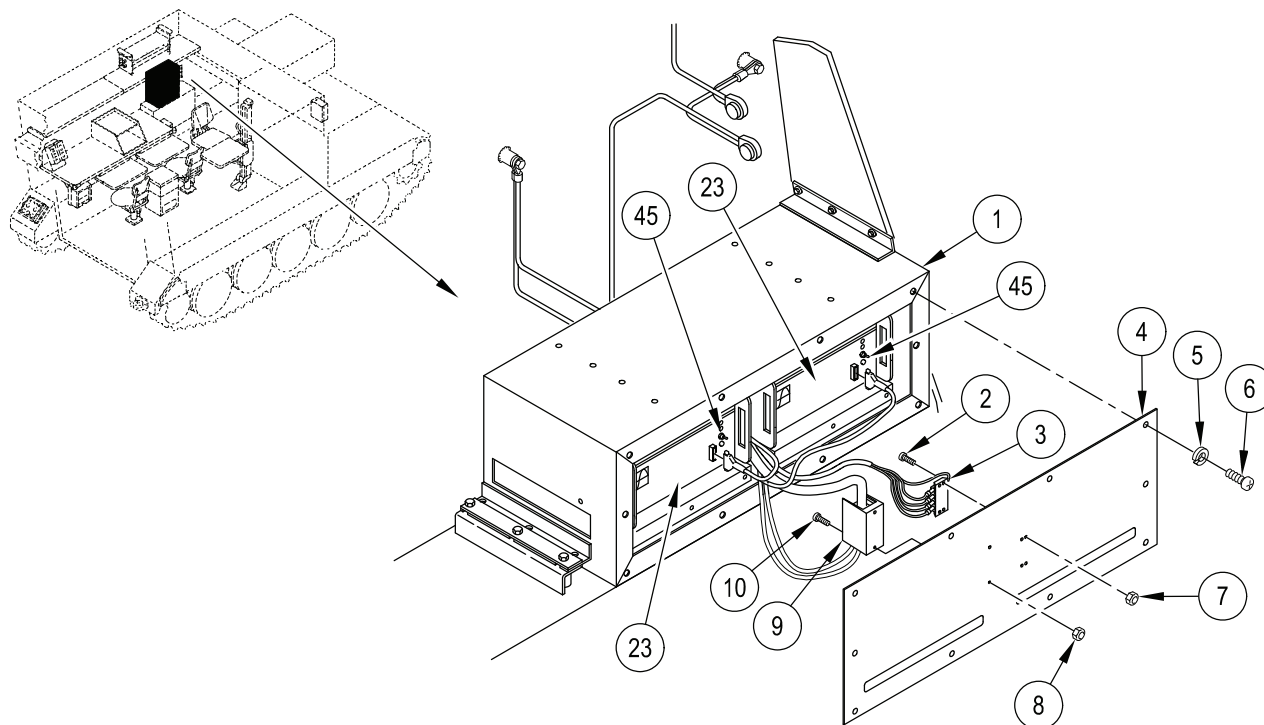


Figure 10. Inverter Access Cover and Terminal Block Installation

FOLLOW-THROUGH STEPS

1. Install power control enclosure (TM 9-2350-277-20-6).
2. Connect battery ground lead (TM 9-2350-277-20-3).

END OF TASK

CHAPTER 5
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION.....	0012 00
POWER CONTROL ENCLOSURE, FACEPLATE ASSEMBLY (M1068A3 ONLY)	0013 00
INVERTER HOUSING ASSEMBLY (M1068A3 ONLY)	0014 00
ELECTRICAL POWER AND COMMUNICATION SYSTEM ATTACHING HARDWARE	0015 00
NATIONAL STOCK NUMBER INDEX.....	0016 00
PART NUMBER INDEX	0017 00

REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION 0012 00

SCOPE

This Repair Parts and Special Tools List (RPSTL) lists and authorizes spares and repair parts for performance of field maintenance on the power control enclosure, faceplate assembly and the inverter housing assembly for the M1068A3. It authorizes the requisitioning, issue, and disposition of spares and repair parts 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 Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:

TABLE 1. SMR Code Explanation

Source Code XXxxx	Maintenance Code xxXXx	Recoverability Code xxxxX
1 st two positions: How to get an item.	3 rd position: Who can install, replace, or use the item.	5 th position: 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.

REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION -
Continued

0012 00

- a. Source Code. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

Source Code	Application/Explanation
PA PB PC PD PE PF PG PH PR PZ	<p>Stocked items: Use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3rd position of the SMR code.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">Items coded PC are subject to deterioration.</p>
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.
MF - Made at field MH - Made at below depot/sustainment level ML - Made at SRA MD - Made at Depot	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk material group of the repair parts list in the RPSTL. If the item is authorized to you by the 3rd position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.
AF - Assembled by field AH - Assembled by below depot sustainment level AL - Assembled by SRA AD - Assembled by Depot	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3rd position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.
XA	Do not requisition an XA-coded item. Order its next higher assembly. (Also, refer to the note below.)
XB	If an XB-coded item is not available from salvage, order it using the CAGEC and part number given.
XC	Installation drawing, diagram, instruction sheet, field service drawing that is identified by manufacturer's part number.
XD	<p>Item is not stocked. Order an XD-coded item through normal supply channels using the CAGEC and part number given if no NSN is available.</p> <p style="text-align: center;">NOTE</p> <p>Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source-coded "XA" or those aircraft support items restricted by requirements of AR 750-1.</p>

**REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION -
Continued**

0012 00

- b. Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to use the repair support items. The maintenance codes are entered in the 3rd and 4th 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 one of the following levels of maintenance:

Maintenance Code	Application/Explanation
F	Field maintenance can remove, replace, and use the item.
H	Below Depot Sustainment maintenance 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, replaced, or used as any maintenance level
D	Depot level can remove, replace, and use the item.

*NOTE – Army may use C in the third position. However, for joint service publications Army will 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.)

Maintenance Code	Application/Explanation
F	Field is the lowest level that can do complete repair of the item.
H	Below Depot Sustainment is the lowest level that can do complete repair of the item.
L	Specialized repair activity is the lowest level that can do complete repair of the item.
D	Depot is the lowest level that can do complete repair of the item.
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 the maintenance of a B-coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

**REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION -
Continued**

0012 00

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

Recoverability Code	Application/Explanation
Z	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3rd position of 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 not authorized below depot level.
L	Reparable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.
K	Reparable item. Condemnation and disposal to be performed at contractor facility.

National Stock Number (Column (3)). The NSN for the item is listed in this column.

CAGE Code (Column (4)). The Commercial and Government Entity Code (CAGEC) is a 5-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.
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.

REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION -
Continued

0012 00

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, sub-functional group, or an assembly. A "V" appearing in this column in place of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers).

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

1. National Stock Number (NSN) Index Work Package. NSNs 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.

FIGURE NUMBER 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 work packages.

ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIGURE 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.

FIGURE Column. This column lists the number of the figure where the item is identified/located in the repair parts 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.

POWER CONTROL ENCLOSURE, FACEPLATE ASSEMBLY

0013 00

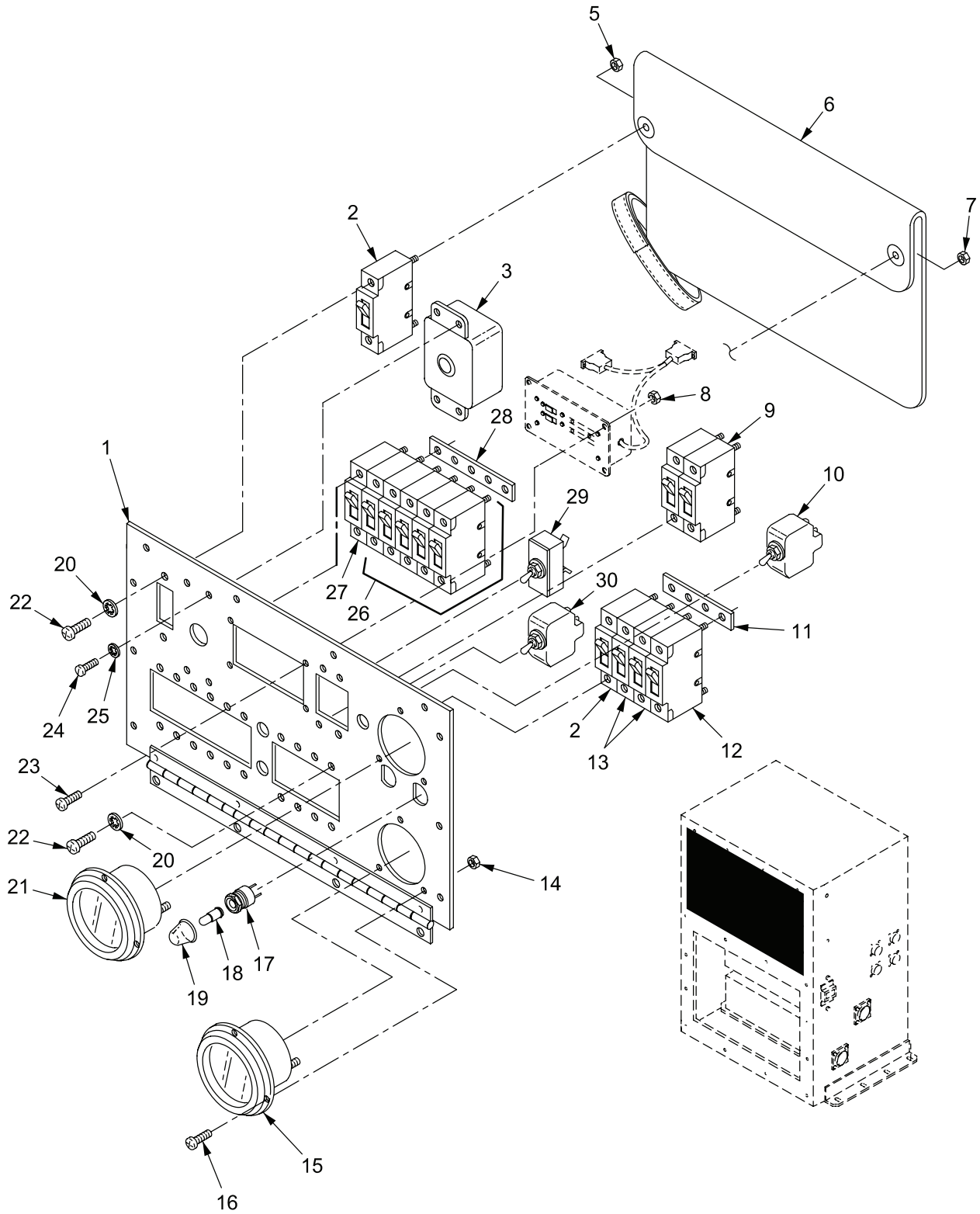


Figure 1. Power Control Enclosure, Faceplate Assembly

POWER CONTROL ENCLOSURE, FACEPLATE ASSEMBLY - Continued

0013 00

(1) ITEM NO	(2) SMR	(3) NSN	(4) CAGE	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 4202 ELECTRICAL CONTROLS (MAIN AND AUXILIARY) CONTINUED FIG. 1 POWER CONTROL ENCLOSURE, FACEPLATE ASSEMBLY						
1	XAFZZ		19207	12408451	FACEPLATE.....	1
2	PAOZZ	5925-01-371-0179	19207	12370179	UOC:AP3, CIRCUIT BREAKER.....	2
3	PAOZZ	5925-01-430-9485	81349	M13516/3BI-200	UOC:AP3, CIRCUIT,BREAKER.....	1
4				DELETED	DELETED (MOVED TO FIG 2).....	
5	PAOZZ	5310-00-934-9766	96906	MS35650-305	NUT,PLAIN HEXAGON.....	1
6	PAOZZ	5340-01-450-8713	19207	12408394	UOC:AP3, SAFETY, COVER.....	1
7	PAOZZ	5310-00-869-1018	80205	MS35650-3255B	UOC:AP3, NUT,PLAIN HEXAGON.....	1
8	PAOZZ	5310-00-081-8087	80205	MS21044N06	UOC:AP3, NUT,SELF-LOCKING,HE.....	8
9	PAOZZ	5925-00-487-5890	81349	M55629/3-094	UOC:AP3, CIRCUIT BREAKER.....	1
10	PAOZA	5930-00-655-4248	96906	MS24524-21	UOC:AP3, SWITCH,TOGGLE.....	1
11	PAOZZ	6150-01-451-2146	19207	12383818-3	UOC:AP3, BUS,CONDUCTOR.....	1
12	PAOZZ	5925-01-097-6892	81349	M55629/1-240	UOC:AP3, CIRCUIT BREAKER.....	1
13	PAOZZ	5925-01-066-6227	81349	M55629/1-127	UOC:AP3, CIRCUIT BREAKER.....	2
14	PAOZZ	5310-00-088-0551	80205	MS21044N04	UOC:AP3, NUT,SELF-LOCKING,HE.....	6
15	PAOZZ	6625-00-643-1800	81349	MR26W050DCVVR	UOC:AP3, VOLTMETER.....	1
16	PAOZZ	5305-00-984-4978	80205	MS35206-221	UOC:AP3, SCREW,MACHINE.....	6
17	PAOZZ	6210-00-836-2564	71744	4228-001	UOC:AP3, LIGHT,INDICATOR.....	2
18	PAOZZ	6240-01-303-1003	81349	M15098/10-001R	UOC:AP3, LAMP,GLOW.....	2
19	PAOZZ	6210-00-159-2299	81349	LC14CN3	UOC:AP3, LENS,LIGHT.....	2
20	PAOZZ	5310-00-579-0079	80205	MS35333-37	UOC:AP3, WASHER,LOCK.....	30
21	PAOZZ	6625-00-542-1558	81349	MR26W150ACVVR	UOC:AP3, VOLTMETER.....	1
22	PAOZZ	5305-00-984-4988	80205	MS35206-228	UOC:AP3, SCREW,MACHINE.....	26
23	PAOZZ	5305-00-889-3000	80205	MS35206-230	UOC:AP3, SCREW,MACHINE.....	4
24	PAOZZ	5305-00-989-7435	80205	MS35207-264	UOC:AP3, SCREW,MACHINE.....	4
25	PAOZZ	5310-00-576-5752	96906	MS35333-39	UOC:AP3, WASHER,LOCK.....	4
26	PAOZZ	5925-00-161-9167	81349	M55629/1-094	UOC:AP3, CIRCUIT BREAKER.....	5
27	PAOZZ	5925-01-208-7217	81349	M55629/1-243	UOC:AP3, CIRCUIT BREAKER.....	1
28	PAOZZ	6150-01-373-8624	19207	12383818-1	UOC:AP3, BUS,CONDUCTOR.....	1

POWER CONTROL ENCLOSURE, FACEPLATE ASSEMBLY - Continued

0013 00

(1) ITEM NO	(2) SMR	(3) NSN	(4) CAGE	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
29	PAOZZ	5930-00-683-1628	96906	MS24523-22	SWITCH, TOGGLE..... UOC:AP3,	1
30	PAOZZ	5925-00-837-8964	96906	MS24509-A-10	CIRCUIT BREAKER..... UOC:AP3,	1

END OF FIGURE

INVERTER HOUSING ASSEMBLY

0014 00

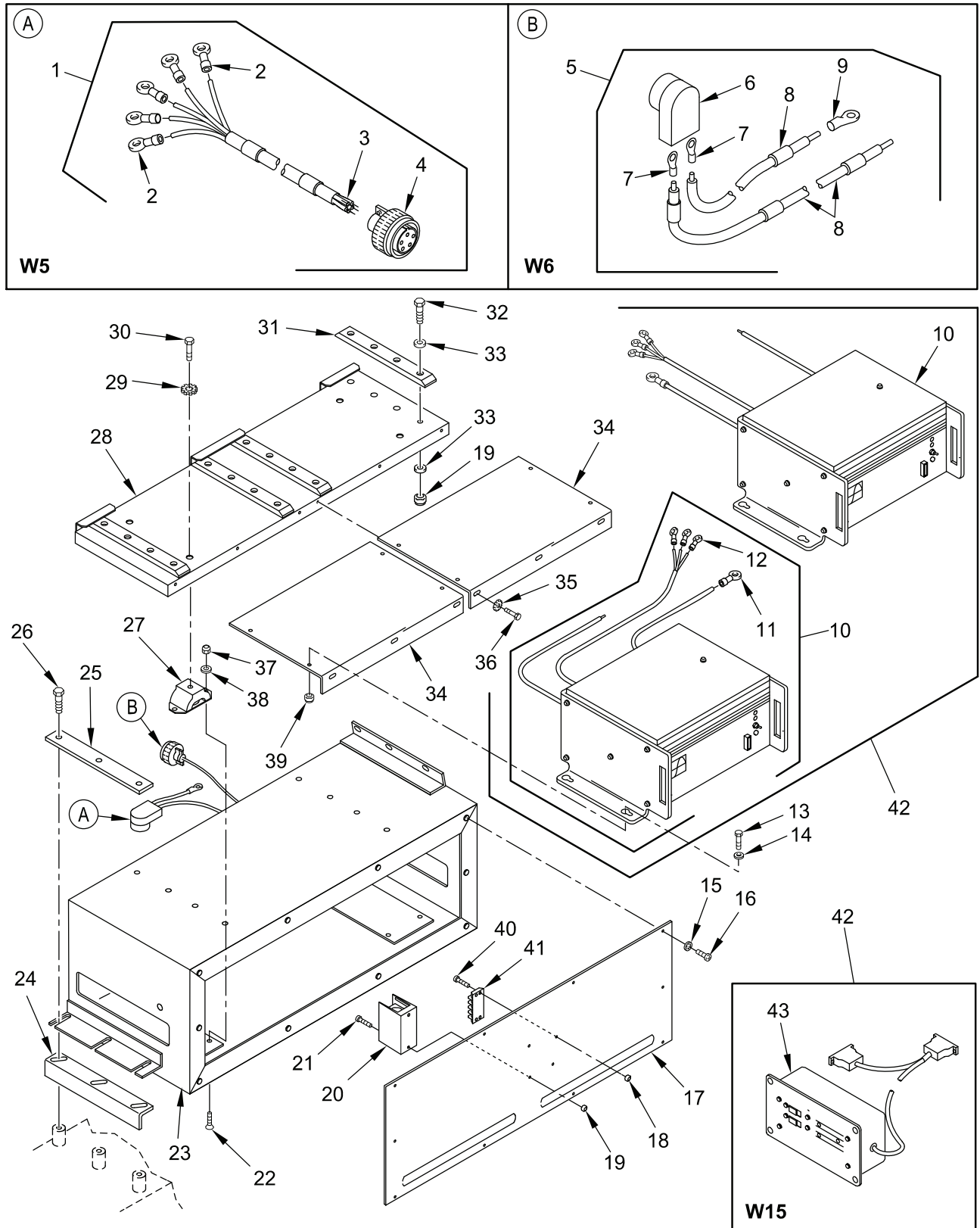


Figure 2. Inverter Housing Assembly

INVERTER HOUSING ASSEMBLY - Continued

0014 00

(1) ITEM NO	(2) SMR	(3) NSN	(4) CAGE	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 4202 ELECTRICAL CONTROLS (MAIN AND AUXILIARY) CONTINUED FIG. 2 INVERTER HOUSING ASSEMBLY						
1	PAOZZ	6150-01-376-5795	19207	12383900	CABLE ASSEMBLY, SPEC W5..... UOC:AP3,	1
2	PAOZZ	5940-00-113-0954	96906	MS25036-165	.TERMINAL, LUG..... UOC:AP3,	5
3	MFFZZ	6145-00-480-2291	81349	M81044/9-12-9	.WIRE, ELECTRICAL MAKE FROM WIRE, 81349, M81044/9-12-9..... UOC:AP3,	V
4	PAFZZ	5935-01-498-1527	96906	MS3106F18-11SX	.CONNECTOR, PLUG, ELECTRICAL..... UOC:AP3,	1
5	PAOOZ	6150-01-451-2104	19207	12382524	CABLE ASSEMBLY, SPEC W6..... UOC:AP3,	1
6	PAOZZ	5935-00-567-0128	19207	11682338	.CONNECTOR, PLUG, ELEC..... UOC:AP3,	1
7	PAOZZ	5940-00-115-5004	81343	MS20659-120	.TERMINAL, LUG..... UOC:AP3,	2
8	MFOZZ	6145-01-102-4659	06090	10603-00	.WIRE, ELECTRICAL MAKE FROM WIRE, 06090, 10603-00..... UOC:AP3,	V
9	PAOZZ	5940-00-115-5002	81343	MS20659-153	.TERMINAL, LUG..... UOC:AP3,	1
10	PAOZZ	6130-01-379-7042	19207	12383902-1	INVERTER, POWER, STAT USE WITH 4J497 84-4141-00 (25-PIN) HARNESS..... UOC:AP3,	1
10	PAOZZ	6130-01-386-4798	19207	12383902-2	INVERTER, POWER, STAT USE WITH 4J497 84-4141-00 (25-PIN) HARNESS..... UOC:AP3,	1
10	PAOZZ	6130-01-563-8242	19207	12475034-1	INVERTER, POWER, STAT USE WITH 19207, 12475036 (15-PIN) HARNESS..... UOC:AP3,	1
10	PAOZZ	6130-01-563-8233	19207	12475034-2	INVERTER, POWER, STAT USE WITH 19207, 12475036 (15-PIN) HARNESS..... UOC:AP3,	1
11	PAOZZ	5940-00-115-5000	96906	MS20659-117	.TERMINAL, LUG..... UOC:AP3,	1
12	PAOZZ	5940-00-113-0954	96906	MS25036-165	.TERMINAL, LUG..... UOC:AP3,	3
13	PAOZZ	5305-00-068-0508	80204	B1821BH025C075N	SCREW, CAP, HEXAGON H..... UOC:AP3,	8
14	PAOZZ	5310-00-809-4058	96906	MS27183-10	WASHER, FLAT..... UOC:AP3,	8
15	PAOZZ	5310-00-576-5752	80205	MS35333-39	WASHER, LOCK..... UOC:AP3,	10
16	PAOZZ	5305-00-984-6211	80205	MS35206-264	SCREW, MACHINE..... UOC:AP3,	10
17	PAOZZ	5340-01-369-6748	19207	12383975	COVER, ACCESS..... UOC:AP3,	1
18	PAOZZ	5310-00-081-8087	80205	MS21044N06	NUT, SELF-LOCKING, HE..... UOC:AP3,	4
19	PAOZZ	5310-00-877-5797	80205	MS21044N3	NUT, SELF-LOCKING, HE..... UOC:AP3,	2
20	PAOZZ	2920-01-371-1392	7Z016	16306-1	TERMINAL BLOCK, ELEC..... UOC:AP3,	1
21	PAOZZ	5305-00-993-1848	80205	MS35207-265	SCREW, MACHINE..... UOC:AP3,	2
22	PAOZZ	5305-00-958-5469	80205	MS35190-305	SCREW, MACHINE..... UOC:AP3,	8
23	XAFZZ		19207	12383974	INVERTER HOUSING..... UOC:AP3,	1
24	PAOZZ	2510-00-005-7695	19207	10917950	STRIP, MOUNTING FUEL..... UOC:AP3,	1

INVERTER HOUSING ASSEMBLY - Continued

0014 00

(1) ITEM NO	(2) SMR	(3) NSN	(4) CAGE	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
25	PAOZZ	2590-00-783-7483	19207	10917952	BEZEL, AUTOMOTIVE TR..... UOC:AP3,	1
26	PAOZZ	5305-00-543-2419	80204	B1821BH038C113N	SCREW, CAP, HEXAGON H..... UOC:AP3,	3
27	PAOZZ	5342-00-988-8300	19207	12384120	MOUNT, RESILIENT..... UOC:AP3,	4
28	PAOZZ	5340-01-369-6901	19207	12383976	PLATE, MOUNTING..... UOC:AP3,	1
29	PAOZZ	5310-00-935-8984	96906	MS45904-84	WASHER, LOCK..... UOC:AP3,	4
30	PAOZZ	5305-00-732-0512	80204	B1821BH050C075N	SCREW, CAP, HEXAGON H..... UOC:AP3,	4
31	PAOZZ		19207	12383976-5	STRAP UOC:AP3,	4
32	PAOZZ	5305-00-995-3444	96906	MS35207-266	SCREW, MACHINE..... UOC:AP3,	16
33	PAOZZ	5310-00-809-8546	96906	MS27183-8	WASHER, FLAT..... UOC:AP3,	32
34	PAOZZ	5340-01-369-4833	19207	12383905	BRACKET, ANGLE..... UOC:AP3,	2
35	PAOZZ	5310-00-067-6357	96906	MS45904-69	WASHER, LOCK..... UOC:AP3,	6
36	PAOZZ	5305-00-225-3843	80204	B1821BH025C100N	SCREW, CAP, HEXAGON H..... UOC:AP3,	6
37	PAOZZ	5310-00-814-0673	81349	M45913/3-5CG8C	NUT, SELF-LOCKING, HE..... UOC:AP3,	8
38	PAOZZ	5310-01-280-5795	96906	MS27183-56	WASHER, FLAT..... UOC:AP3,	8
39	PAOZZ	5310-00-061-4650	81349	M45913/3-4CG8C	NUT, SELF-LOCKING, HE..... UOC:AP3,	8
40	PAOZZ	5305-00-984-4992	80205	MS35206-232	SCREW, MACHINE..... UOC:AP3,	4
41	PAOZZ	5940-00-983-6083	81349	38TB5F	TERMINAL BOARD..... UOC:AP3,	1
42	XBOZZ		19207	57K4329	INVERTER SET W/HARNESS SEE ITEM 10 FOR INDIVIDUAL INVERTER 15-PIN..... UOC:AP3	1
43	PAOZZ	6150-01-563-8239	19207	12475036	.CABLE ASSEMBLY-SWITCH, ELECTRICAL REM W15 USE WITH 15-PIN INVERTER 12475034-1 & 12475034-2 ONLY UOC:AP3,	1
43	PAOZZ	6150-01-373-5616	66200	84-4141-00	.HARNESS, CASCADE REM W15 USE WITH 25-PIN INVERTER (12383902-1 & 12383902-2 ONLY..... UOC:AP3,	1

END OF FIGURE

**ELECTRICAL POWER AND COMMUNICATION SYSTEM ATTACHING
HARDWARE**

0015 00

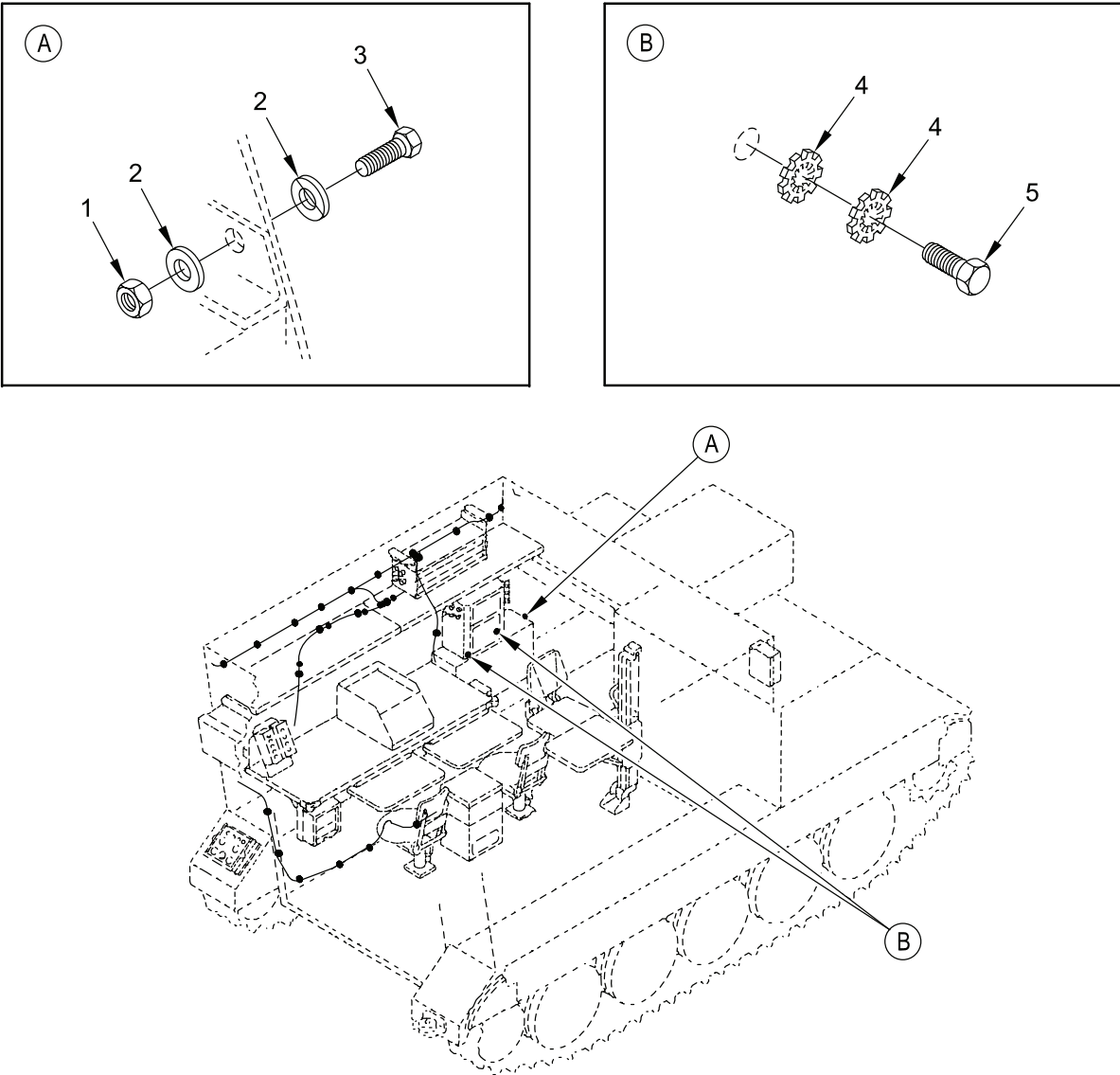


Figure 3. Electrical Power and Communication System Attaching Hardware

**ELECTRICAL POWER AND COMMUNICATION SYSTEM ATTACHING
HARDWARE - Continued**

0015 00

(1) ITEM NO	(2) SMR	(3) NSN	(4) CAGE	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 4202 ELECTRICAL CONTROLS (MAIN AND AUXILIARY) CONTINUED FIG. 3 ELECTRICAL POWER AND COMMUNICATION SYSTEM ATTACHING HARDWARE	
1	PAOZZ	5310-00-935-9021	96906	MS51943-35	NUT, SELF-LOCKING, HE..... UOC:AP3,	3
2	PAOZZ	5310-00-080-6004	96906	MS27183-14	WASHER, FLAT..... UOC:AP3,	6
3	PAOZZ	5305-00-068-0510	80204	B1821BH038C100N	SCREW, CAP, HEXAGON H..... UOC:AP3,	3
4	PAFZZ	5310-00-067-6357	96906	MS45904-69	WASHER, LOCK..... UOC:AP3,	4
5	PAOOZ	5305-00-068-0508	80204	B1821BH025C075N	SCREW, CAP, HEXAGON H..... UOC:AP3,	2

END OF FIGURE

NATIONAL STOCK NUMBER INDEX**0016 00**

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIGURE NO	ITEM NO	STOCK NUMBER	FIGURE NO	ITEM NO
2510-00-005-7695	2	24	5305-00-989-7435	1	24
5310-00-061-4650	2	39	5305-00-993-1848	2	21
5310-00-067-6357	2	35	5305-00-995-3444	2	32
	3	4	5925-01-066-6227	1	13
5305-00-068-0508	2	13	5925-01-097-6892	1	12
	3	5	6145-01-102-4659	2	8
5305-00-068-0510	3	3	5925-01-208-7217	1	27
5305-00-080-6004	3	2	5310-01-280-5795	2	38
5310-00-081-8087	1	8	6240-01-303-1003	1	18
	2	18	5340-01-369-4833	2	34
5310-00-088-0551	1	14	5340-01-369-6748	2	17
5940-00-113-0954	2	2	5340-01-369-6901	2	28
	2	12	2920-01-371-1392	2	20
5940-00-115-5000	2	11	6150-01-373-5616	2	43
5940-00-115-5002	2	9	6150-01-373-8624	1	28
5940-00-115-5004	2	7	6150-01-376-5795	2	1
6210-00-159-2299	1	19	6130-01-379-7042	2	10
5925-00-161-9167	1	26	6130-01-386-4798	2	10
5305-00-225-3843	2	36	5340-01-450-8713	1	6
6145-00-480-2291	2	3	6150-01-451-2146	1	11
5925-00-487-5890	1	9	5935-01-498-1527	2	4
6625-00-542-1558	1	21	6130-01-563-8233	2	10
5305-00-543-2419	2	26	6150-01-563-8239	2	43
5935-00-567-0128	2	6	6150-01-563-8242	2	10
5310-00-576-5752	1	25			
	2	15			
5310-00-579-0079	1	20			
6625-00-643-1800	1	15			
5930-00-655-4248	1	10			
5930-00-683-1628	1	29			
5305-00-732-0512	2	30			
2590-00-783-7483	2	25			
5310-00-809-4058	2	14			
5310-00-809-8546	2	33			
5310-00-814-0673	2	37			
6210-00-836-2564	1	17			
5925-00-837-8964	1	30			
5310-00-869-1018	1	7			
5310-00-877-5797	2	19			
5305-00-889-3000	1	23			
5310-00-934-9766	1	5			
5310-00-935-8984	2	29			
5310-00-935-9021	3	1			
5925-00-937-4574	1	3			
5305-00-958-5469	2	22			
5940-00-983-6083	2	41			
5305-00-984-4978	1	16			
5305-00-984-4988	1	22			
5305-00-984-4992	2	40			
5305-00-984-6211	2	16			

PART NUMBER INDEX**0017 00**

PART NUMBER INDEX

PART NUMBER	FIGURE NO	ITEM NO	PART NUMBER	FIGURE NO	ITEM NO
10603-00	2	8	MS24523-22	1	29
10917950	2	24	MS24524-21	1	10
10917952	2	25	MS25036-165	2	2
11682338	2	6		2	12
12382524	2	5	MS27183-8	2	33
12383900	2	1	MS27183-10	2	14
12383902-1	2	10	MS27183-14	3	2
12383902-2	2	10	MS27183-56	2	38
12383905	2	34	MS3106F18-11SX	2	4
12383974	2	23	MS35190-305	2	22
12383975	2	17	MS35206-221	1	16
12383976	2	28	MS35206-228	1	22
12383976-5	2	31	MS35206-230	1	23
12384120	2	27	MS35206-232	2	40
1238818-1	1	28	MS35206-264	2	16
12383818-3	1	11	MS35207-264	1	24
12408394	1	6	MS35207-265	2	21
12408451	1	1	MS35207-266	2	32
12475034-1	2	10	MS35333-37	1	20
12475034-2	2	10	MS35333-39	1	25
12475036	2	43		2	15
38TB5F	2	41	MS35650-305	1	5
57K4329	2	42	MS35650-3255	1	7
84-4141-00	2	37	MS45904-69	2	35
AM1-D3-A-60-02	1	2		3	4
B1821BH025C075N	2	13	MS45904-84	2	29
	3	5	MS51943-31	2	39
B1821BH025C100N	2	36	MS51943-33	2	37
B1821BH038C100N	3	3	MS51943-35	3	1
B1821BH038C113N	2	26	MS55629/1-094	1	26
B1821BH050C075N	2	30			
GG1	2	20			
LC14CN3	1	19			
LH76/3	1	17			
M13516/3BI-200	1	3			
M15098/10-001R	1	18			
M55629/1-127	1	13			
M55629/1-240	1	12			
M55629/1-243	1	27			
M55629/3-094	1	9			
M81044/9-12-9	2	3			
MR26W050DCVVR	1	15			
MR26W150ACVVR	1	21			
MS20659-117	2	11			
MS20659-120	2	7			
MS20659-153	2	9			
MS21044N04	1	14			
MS21044N06	1	8			
	2	18			
MS21044N3	2	19			
MS24509-A-10	1	30			

CHAPTER 6
SUPPORTING INFORMATION

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
REFERENCES	0018 00
TOOL IDENTIFICATION LIST	0019 00
EXPENDABLE AND DURABLE ITEMS LIST	0020 00

REFERENCES**0018 00****SCOPE**

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

FIELD MANUALS

First Aid For Soldiers FM 4-25.11

FORMS

Recommended Changes to Publications and Blank Forms DA Form 2028

MISCELLANEOUS PUBLICATIONS

Army Material Maintenance Policy AR 750-1

Army Medical Department Expendable/Durable Items CTA 8-100

Expendable/Durable Items (except Medical, Class V Repair Parts, and Heraldic Items) CTA 50-970

Field and Garrison Furnishings and Equipment CTA 50-909

TECHNICAL MANUALS

Direct Support and General Support Maintenance Manual for Carrier, Personnel, Full-Tracked, Armored, M113A3; Carrier, Command Post, Light Tracked, M577A3; Carrier, Smoke Generator, Full Tracked, M1059A3; Carrier, Mortar, 120-MM M121, Self Propelled, M1064A3; Carrier, Standardized Integrated Command Post System (SICPS) M1068A3; Carrier, Mechanized Smoke Obscurant, M58 TM 9-2350-277-34

Operator's and Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for M1068 Standardized Integrated Command Post System TM 11-7010-256-12&P

Operator's Manual for Carrier, Personnel, Full-Tracked, Armored, M113A3; Carrier, Command Post, Light Tracked, M577A3; Carrier, Smoke Generator, Full Tracked, M1059A3; Carrier, Mortar, 120-MM M121, Self Propelled, M1064A3; Carrier, Standardized Integrated Command Post System (SICPS) M1068A3; Carrier, Mechanized Smoke Obscurant, M58 TM 9-2350-277-10

Unit Maintenance, Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools List) for Carriers: M113A3, M577A3, M1059A3, M1064A3, M1068A3, and M58 TM 9-2350-277-24P

Unit Maintenance Manual for Carrier, Personnel, Full Tracked, Armored M113A3; Carrier, Command Post, Light Tracked M577A3; Carrier, Smoke Generator, Full Tracked M1059A3; Carrier, Mortar, 120-MM M121, Self- Propelled M1064A3; Carrier, Standardized Integrated Command Post System (SICPS) M1068A3; Carrier, Mechanized Smoke Obscurant M58 TM 9-2350-277-20

END OF WORK PACKAGE

COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES LIST

0019 00

INTRODUCTION

Scope

This work package lists all common tools, supplements, and special tools/fixtures needed.

Explanation of Columns

Column (1) – Item Number. This number is assigned to the entry in the list and is referenced in the Initial Setup section of the work package under Tools to identify the item (e.g., “General Mechanic’s Tool Kit (WP 0019 00, Item 2)”).

Column (2) – Item Name. This column lists the item by noun nomenclature and other descriptive features (e.g. “Tool Kit, General Mechanic’s”).

Column (3) – National Stock Number. This is the National Stock Number (NSN) assigned to the item; use it to requisition the item.

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

Column (5) – Reference. This column identifies the authorizing Supply Catalog (SC) or Repair Parts and Special Tools List (RPSTL) for items listed in this work package.

Table 1. Tool Identification List

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
1	Multimeter, Digital (AN/PSM-45)	6625-01-265-6000	27W/ACCE	SC 4940-95-CL-B03 or SC 4910-95-A81
2	Tool Kit, General Mechanic’s	5180-00-177-7033 or 5180-01-481-8389	SC 180-90-CL-N26 or DFP389J	SC 5180-90-CL-N26 or SC 5180-95-B47

EXPENDABLE/DURABLE ITEMS LIST**0020 00****SCOPE**

This work package lists expendable and durable items that you will need to operate and maintain the MDL true-sine wave inverters. 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 Number. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., "use sealing compound (WP 0020 00, Item 2)").

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

- F – Maintainer or ASB
- H – Below Depot or TASMG
- D - Depot

Column (3) National Stock Number (NSN). This is the National Stock Number (NSN) assigned to the item, which you can use to requisition the item.

Column (4) Item Name, Description, Commercial, and Government Entity Code (CAGEC), and Part Number (P/N). This column provides the other information you need to identify the item.

Column (5) Unit of Measure (U/M). This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable/Durable Items List

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) U/M
1	F	8010-00-292-1127	PRIMER COATING (81348) TT-P-664	GL
2	F	8030-00-081-2339	SEALING COMPOUND (05972) 088-21 MIL-S-22473 GRA	CC

END OF WORK PACKAGE

INDEX

A – B

C

Cascade Remote Harness
Installation0009 00-3
Removal0009 00-1
Convert Primary Power Inverter to Slave.....0010 00-1

D

E

Expendable/Durable Items List0020 00-1

F - H

I

Introduction.....0001 00-1
Inverter and Inverter Housing Assembly A2
Installation0011 00-6
Removal0011 00-1

J – O

P

Power Control Enclosure Faceplate and Bracket
Assembly.....0008 00-8
Disassembly.....0008 00-1

Q

INDEX - Continued

R

References0018 00-1

Repair Parts and Special Tools List (RPSTL)

- Electrical Power and Communication System Attaching Hardware0015 00-1
- Introduction0012 00-1
- Inverter Housing Assembly0014 00-1
- National Stock Number Index0016 00-1
- Part Number Index0017 00-1
- Power Control Enclosure, Faceplate Assembly.....0013 00-1

S

T

Tools List0019 00-1

Troubleshooting

- No AC Power from Inverters0007 00-1
- Power Enclosure Panel Indicator Malfunctions0006 00-1

U – Z

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE Date you filled out this form.
TO: (Forward to proponent of publication or form) (Include ZIP Code) AMSTA-LC-LMPP / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630						FROM: (Activity and location) (Include ZIP Code) Your mailing address	
PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TB 9-2350-277-23&P-1						DATE 29 Aug 08	Title True-Sine Wave Inverters for Carrier, Standardized Integrated Command Post System
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Provide exact wording of recommended changes, if possible).	
						SAMPLE	
<i>*Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE Your Name				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		Signature Your Signature	

TO: (Forward direct to addressee listed in publication) AMSTA-LC-LMPP / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630	FROM: (Activity and location) (Include ZIP Code) Your address	DATE Date you filled out this form
--	---	--

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TB 9-2350-277-23&P-1	DATE 29 Aug 08	TITLE True-Sine Wave Inverters for Carrier, Standarized Integrated Command Post System
---	--------------------------	--

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
SAMPLE								

PART III – REMARKS (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.)

TYPED NAME, GRADE OR TITLE Your Name	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE Your Signature
--	---	------------------------------------

TO: (Forward direct to addressee listed in publication) AMSTA-LC-LMPP / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630	FROM: (Activity and location) (Include ZIP Code)	DATE
--	---	-------------

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TB 9-2350-277-23&P-1					DATE 29 Aug 08		TITLE True-Sine Wave Inverters Carrier, Standard- ized Integrated Command Post System	
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS (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.)

--

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
----------------------------	--	-----------

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
For use of this form, see AR 25-30; the proponent agency is ODISC4.							
TO: (Forward to proponent of publication or form) (Include ZIP Code) AMSTA-LC-LMPP / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630						FROM: (Activity and location) (Include ZIP Code)	
PUBLICATION/FORM NUMBER TB 9-2350-277-23&P-1						DATE 29 Aug 08	TITLE True-Sine Wave Inverters for Carrier, Standardized Integrated Command Post System
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Provide exact wording of recommended changes, if possible).	
<i>*Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE					TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE

TO: (Forward direct to addressee listed in publication) AMSTA-LC-LMPP / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630	FROM: (Activity and location) (Include ZIP Code)	DATE
--	---	-------------

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TB 9-2350-277-23&P-1				DATE 29 Aug 08			TITLE True-Sine Wave Inverters for Carrier, Standardized Integrated Command Post System	
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS *(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.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
----------------------------	--	-----------

By Order of the Secretary of the Army:

Official:



JOYCE E. MORROW
*Administrative Assistant to the
Secretary of the Army*
0821102

GEORGE W. CASEY, JR.
*General, United States Army
Chief of Staff*

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 344928 requirements for TB 9-2350-277-23&P-1.

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 Lb.
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
 1 Sq. Kilometer = 1,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

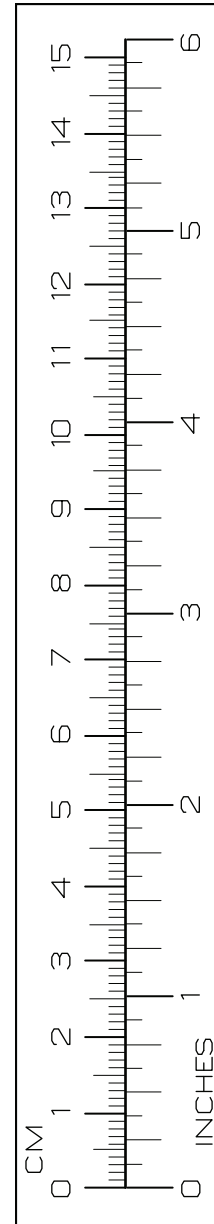
1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

TEMPERATURE

$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 $212^{\circ}\text{ Fahrenheit is equivalent to } 100^{\circ}\text{ Celsius}$
 $90^{\circ}\text{ Fahrenheit is equivalent to } 32.2^{\circ}\text{ Celsius}$
 $32^{\circ}\text{ Fahrenheit is equivalent to } 0^{\circ}\text{ Celsius}$
 $(9/5 \times ^{\circ}\text{C}) + 32 = ^{\circ}\text{F}$

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



PIN: 085042-000