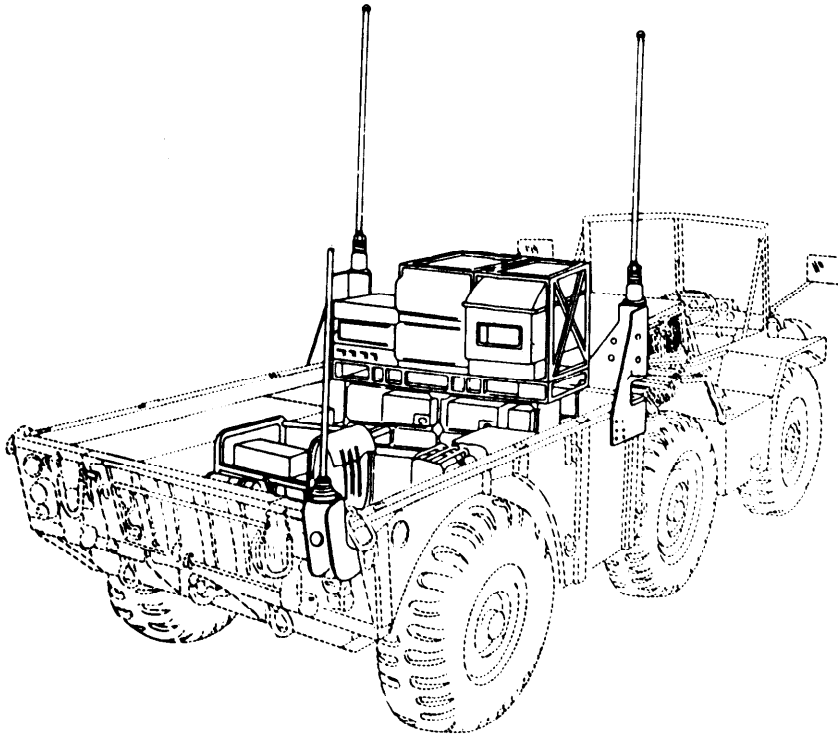


**TM 11-7440-284-14**

**TECHNICAL MANUAL**

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



**EQUIPMENT  
DESCRIPTION  
1-5**

**ASSEMBLY AND  
INSTALLATION  
4-4**

**REMOVAL OF  
EQUIPMENT  
4-105**

**INDEX  
Index 1**

**ELECTRONICS EQUIPMENT  
INSTALLATION KIT MK-1819/GSG-10(V)  
(NSN 1290-01-070-8907)  
AND  
POWER ACCESSORY KIT MK-1821/GSG-10(V)  
(NSN 1290-01-071-4343)  
IN  
CARGO TRUCK 1 1/4 TON M561**

**HEADQUARTERS, DEPARTMENT OF THE ARMY  
1 JUNE 1983**



**5**

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

**1**

DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

**2**

IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

**3**

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

**4**

SEND FOR HELP AS SOON AS POSSIBLE

**5**

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

**WARNING**

**HIGH VOLTAGE**

is used in the operation of this equipment.

**DEATH ON CONTACT**

may result if personnel fail to observe  
safety precautions.

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment. When the technician is aided by an operator he must warn the operator about dangerous areas.

The power supply must be shut off before beginning work on the equipment. Always ground every part before touching it. When possible, keep one hand away from equipment to reduce the hazard of electrical shock.

Be sure equipment is always properly grounded.

When performing work on a vehicle always engage parking brake.



TECHNICAL MANUAL  
No. 11-7440-284-14

HEADQUARTERS  
DEPARTMENT OF THE ARMY

Washington, DC, 1 June 1983

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

ELECTRONICS EQUIPMENT INSTALLATION KIT MK-1819/GSG-10(V)  
(NSN 1290-01-070-8907)

and

POWER ACCESSORY KIT MK-1821/GSG-10(V)  
(NSN 1290-01-071-4343)

in

CARGO TRUCK 1 1/4 TON M561

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Equipment Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. A reply will be furnished to you.

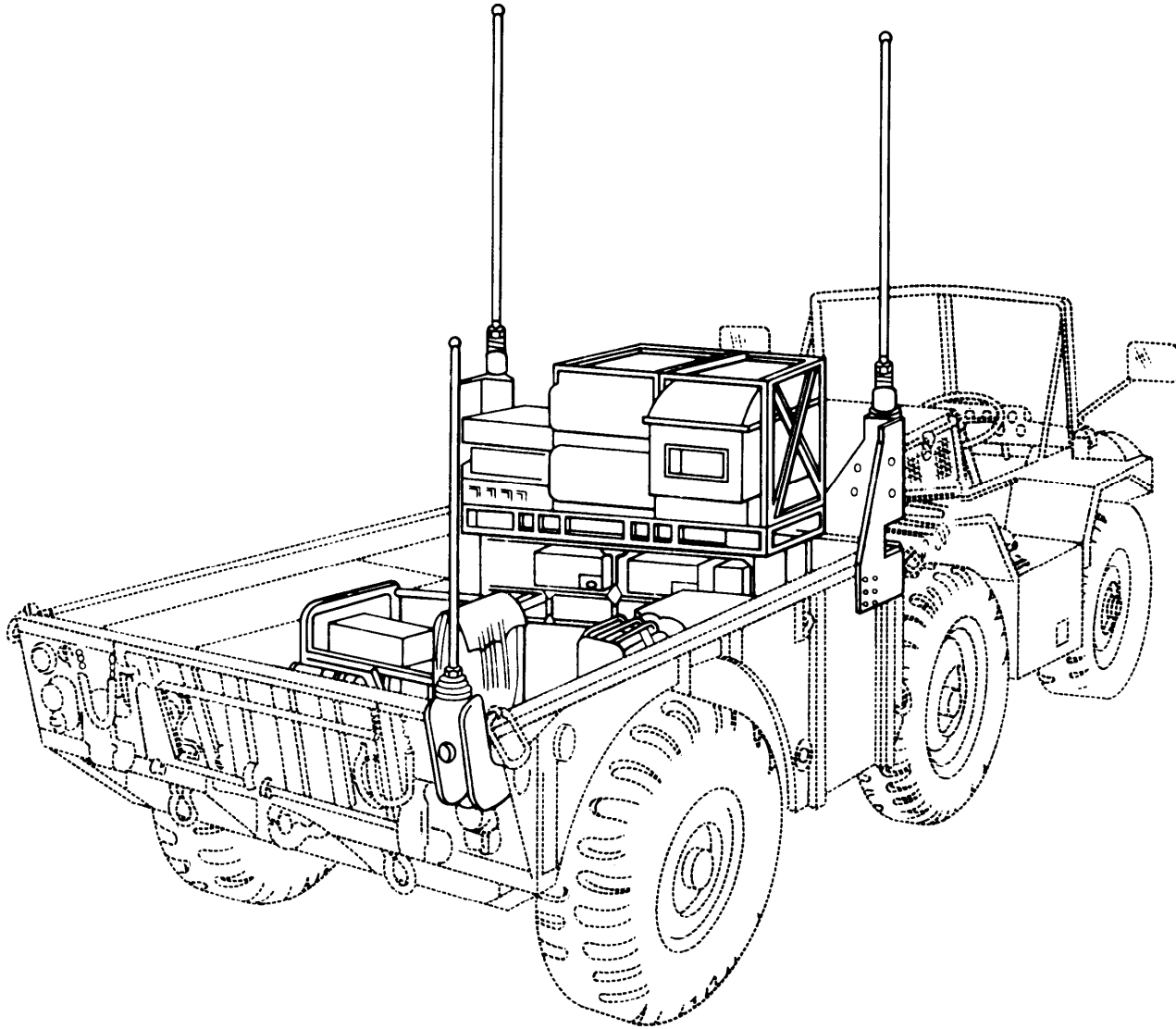
	Page
HOW TO USE THIS MANUAL. . . . .	ii
CHAPTER 1 INTRODUCTION. . . . .	1-1
Section I General Information. . . . .	1-1
II Equipment Description. . . . .	1-5
III Rules of Operation. . . . .	1-8
CHAPTER 2 OPERATING INSTRUCTIONS. . . . .	2-1
Section I Description and Use of Operator's Controls and Indicators. . . . .	2-1
II Operator Preventive Maintenance Checks and Services. . . . .	2-1
III Operation Under Usual Conditions. . . . .	2-1
IV Operation Under Unusual Conditions. . . . .	2-2
CHAPTER 3 OPERATOR MAINTENANCE. . . . .	3-1
Section I Lubrication Instructions. . . . .	3-1
II Troubleshooting Procedures. . . . .	3-1
III Maintenance Procedures. . . . .	3-1

	Page
CHAPTER 4	ORGANIZATIONAL MAINTENANCE . . . . . 4-1
Section I	Repair Parts, Special Tools, TM DE, and Support Equipment . . . . . 4-1
II	Service Upon Receipt. . . . . 4-1
III	Assembly and Installation of Electronics Equipment Kit and Power Accessory Kit . . . . . 4-4
IV	Preventive Maintenance Checks and Services. . . . . 4-104
V	Organizational Troubleshooting . . . . . 4-134
VI	Maintenance procedures . . . . . 4-104
VII	Removal of Electronics Equipment Kit and Power Accessory Kit . . . . . 4-105
VIII	Preparation for Storage and Shipment . . . . . 4-189
CHAPTER 5	DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE. . . . . 5-1
APPENDIX A	REFERENCES . . . . . A-1
B	MAINTENANCE ALLOCATION CHART. . . . . B-1
C	EXPENDABLE SUPPLIES AND MATERIALS LIST . . . . . C-1
GLOSSARY	. . . . . Glossary
INDEX	. . . . . Index 1

### HOW TO USE THIS MANUAL

In this manual paragraphs are numbered by chapter and order in each chapter. To find the paragraph you need, first locate your subject in the table of contents. Turn to the page shown and read the paragraph headings until you see what you're looking for. If you find a word or term you don't understand, refer to the glossary in the back of the book.





EL8KG001

Truck, Cargo 1 1/4 Ton M561, MK-1819/GSG-10(V), MK-1821/GSG- 10(V) Installed.



# CHAPTER 1

## INTRODUCTION

Subject	Section	Page
General Information . . . . .	I	1-1
Equipment Description . . . . .	II	1-4
Principles of Operation . . . . .	III	1-6

### OVERVIEW

This chapter contains general information, equipment description, and principles of operation for Electronics Equipment Installation Kit MK-1819/GSG-10(V) and Power Accessory Kit MK-1821/GSG-10(V) in truck, cargo 1 1/4 ton M561.

### Section 1 GENERAL INFORMATION

Subject	Para	Page
Scope . . . . .	1-1	1-1
Maintenance Forms, Records, and Reports . . . . .	1-2	1-1
Consolidated Index of Army Publications and Blank Forms . . . . .	1-3	1-2
Destruction of Army Electronic Materiel . . . . .	1-4	1-2
Administrative Storage . . . . .	1-5	1-2
Reporting Equipment Improvement Recommendations . . . . .	1-6	1-2
Nomenclature Cross-Reference . . . . .	1-7	1-2
List of Abbreviations . . . . .	1-8	1-4

#### 1-1. SCOPE

Type of Manual: Operator's, Organizational, Direct Support, and General Support Maintenance.

Equipment Name and Model Number Electronics Equipment installation Kit MK-1819/GSG-10(V) and Power Accessory Kit MK-1821/GSG-10(V) in Cargo Truck 1 1/4 Ton M561.

Purpose Of Equipment: Provides mounting racks, hardware and cables for the installation of Variable Format Message Entry Device AN/GSC-21 in Cargo Truck 1 1/4 Ton M561.

#### 1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS.

##### REPORTS OF MAINTENANCE AND UNSATISFACTORY EQUIPMENT

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System (TAMMS)

##### REPORT OF PACKAGING AND HANDLING DEFICIENCIES

Fill out and forward SF 364, Report Of Discrepancy (ROD) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73/AFR 400-54/MCO 4430.3E.

**1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS. (CONT)**

DISCREPANCY IN SHIPMENT REPORT

Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55A38/ NAVSUPINST 4610.33 B/AFR 75-18/MCO 4610.19C/DLAR 4500.15.

**1-3. CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS**

Refer to the latest issue of DA Pam 310-1 to determine whether there are new editions, changes or additional publications pertaining to the equipment.

**1-4. DESTRUCTION OF ARMY ELECTRONIC MATERIEL.**

Destruction of Army electronic materiel to prevent enemy use shall be in accordance with TM 750-214-2.

**1-5. ADMINISTRATIVE STORAGE.**

Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the PMCS charts before storing. When removing the equipment from administrative storage, the PMCS should be performed to assure operational readiness. Disassembly and repacking of equipment for shipment or limited storage are covered in section VIII of chapter 4.

**1-6. REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS (EIR).**

If your installation and accessory kits need improvement, let us know. Send us a EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mail it to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. A reply will be sent to you.

**1.7. NOMENCLATURE CROSS-REFERENCE.**

This list contains common names used throughout this manual in place of official nomenclature.

Common Name	Official Nomenclature
bracket	bracket assembly
electronic line printer rack	Electrical Equipment Rack MT-4392/GSG-10(V)
electronic equipment	message entry group, electronic line printer, key generator, power distribution box
electronic equipment racks	key generator rack, message entry group rack, electronic line printer rack
electronic equipment table	Electronics Equipment Table MT-4394/GSG-10(V)

**1-7. NOMENCLATURE CROSS-REFERENCE. (CONT)**

Common Name	Official Nomenclature
ground rod	ground rod, driver, sectional (9 ft)
ground strap	electrical lead
installation kit	Electronics Equipment Installation Kit MK-1819/GSG-10(V)
key generator rack	Electrical Equipment Rack MT-4393/GSG-10(V)
message entry group rack	Electrical Equipment Rack MT-4391/GSG-10(V)
mounting strip L.H.	mounting strip assembly (L. H.)
mounting strip R.H.	mounting strip assembly (R. H.)
power accessory kit	Power Accessory Kit MK-1821/GSG-10(V)
power distribution box	Power Distribution Box J-3030/GSG-10(V)
radio mount	Radio Mount MT-6188
tacfire components	electronic line printer, message entry group, key generator, power distribution box, radio receiver transmitters
tacfire racks	electronic line printer rack, message entry group rack, and key generator rack.

**1-8. LIST OF ABBREVIATIONS**

The list contains abbreviations used in this manual.

---

Abbreviations	Word or Term
elect.	electrical
ET	external tooth
ft	foot
hex	hexagon
hd	head
IET	internal/external tooth
in.	inch
IT	internal tooth
L.H.	left-hand
lg	long
MT	mount
R.H.	right-hand
slf-lkg	self-locking
Sp	special purpose

## Section II EQUIPMENT DESCRIPTION

Subject	Para	Page
Purpose of Installation Kit . . . . .	1-9	1-5
Equipment Capabilities and Features . . . . .	1-10	1-5
Location and Description of Major Components. . . . .	1-11	1-6
Safety, Care and Handling . . . . .	1-12	1-8

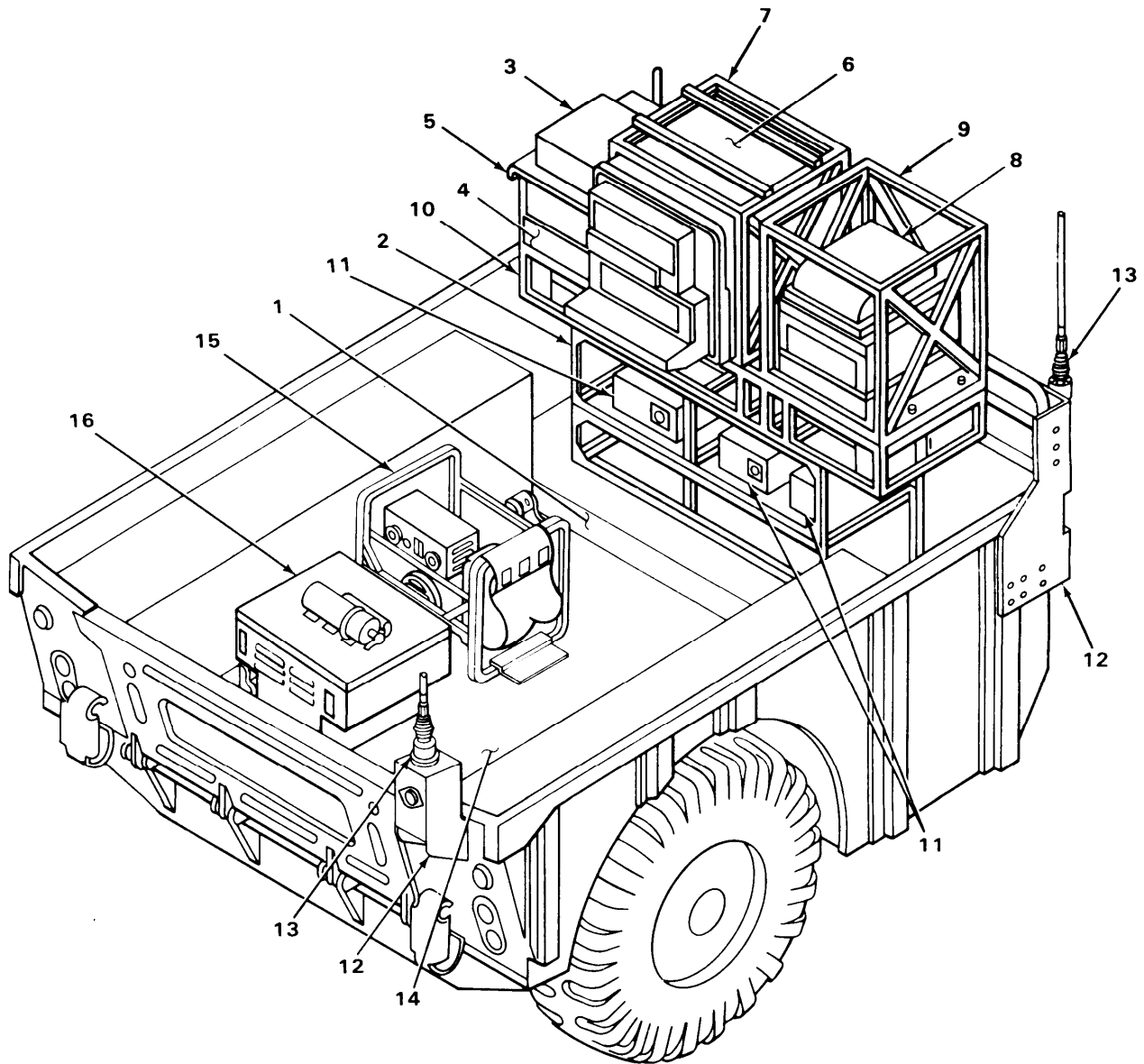
### 1-9. PURPOSE OF INSTALLATION KIT.

Provides mounting racks, antennas, and power connections for electronic equipment.

### 1.10. EQUIPMENT CAPABILITIES AND FEATURES.

Provides an all-weather land and water transportable mobile system for secure field voice and teletype communications.

1-11. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.



EL8KG002

**1-11. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS. (CONT)**

## FORWARD WALL OF CARRIER

- 1 SUBMOUNT. Provides a mounting base for tacfire rack.
- 2 RADIO MOUNT. Provides a base support for electronic equipment racks and serves as a housing for radio receiver transmitters.
- 3 KEY GENERATOR. Communication security equipment.
- 4 POWER DISTRIBUTION BOX. Distributes input power to electronic equipment.
- 5 KEY GENERATOR RACK. Provides a housing and support for key generator and power distribution box.
- 6 MESSAGE ENTRY GROUP. Groups incoming messages to produce words.
- 7 MESSAGE ENTRY GROUP RACK. Provides a housing and support for message entry group.
- 8 ELECTRONIC LINE PRINTER. Teletypewriter.
- 9 ELECTRONIC LINE PRINTER RACK. Provides a housing and support for electronic line printer.
- 10 ELECTRONIC EQUIPMENT TABLE. Provides a mount and support for electronic equipment racks.
- 11 RADIO RECEIVER/TRANSMITTERS. Receives and transmits radio signals.

## FORWARD AND REAR OUTER WALLS OF CARRIER

- 12 ANTENNA MOUNTING BRACKETS. Provides mounts for antenna assemblies,
- 13 ANTENNA ASSEMBLY. Used for receiving and transmitting radio signals.

## REAR SECTION OF CARRIER

- 14 FLOOR BASE. Provides a mounting platform for power accessory kit.
- 15 GENERATOR. Provides power to operate electronic equipment for field use.
- 16 BATTERY BOX. Provides a housing for batteries and mount for fire extinguisher during field use.

**1-12. SAFETY, CARE, AND HANDLING.**

Be sure to obey all WARNINGS and CAUTIONS given in this manual. Serious injury to personnel or damage to equipment may result if WARNINGS and CAUTIONS are not followed exactly.

**Section III PRINCIPLES OF OPERATION**

Refer to TM 11-7440-251-10 and TM 11-7440 -253-10-1 for principles of operation for the electronic equipment housed in the installation kit.



## CHAPTER 2

### OPERATING INSTRUCTIONS

Subject	Section	Page
Description and Use of Operator's Controls and Indicators . . . . .	I	2-1
Operator Preventive Maintenance Checks and Services . . . . .	II	2-1
Operation Under Usual Conditions.. . . .	III	2-1
Operation Under Unusual Conditions. . . . .	IV	2-1

#### OVERVIEW

This chapter contains description and use of operator's controls and indicators, preventive maintenance checks and services, and operation under usual and unusual conditions for the electronic equipment provided in the installation kit.

#### **Section I DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS**

For operating instructions of the tacfire electronic equipment refer to TM 11-7440-251-10 and TM 11-7440-253-10-1.

#### **Section II OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES**

There are no operator PMCS procedures for this equipment. Routine checks like equipment inventory, cleaning the vehicle, checking for frayed or broken cables, replacing items not in use, and checking for loose hardware, such as nuts, bolts, and screws, are not listed in the PMCS table. Do these tasks daily.

#### **Section III OPERATION UNDER USUAL CONDITIONS**

For operation under usual conditions refer to TM 11-7440-251-10 and TM 11-7440-253-10-1.

#### **Section IV OPERATION UNDER UNUSUAL CONDITIONS**

For operation under unusual conditions refer to TM 11-7440-251-10 and TM 11-7440-253-10-1.



**CHAPTER 3**  
**OPERATOR MAINTENANCE**

Subject	Section	Page
Lubrication Instructions . . . . .	I	3-1
Troubleshooting Procedures . . . . .	II	3-1
Maintenance Procedures . . . . .	III	3-1

**OVERVIEW**

This chapter contains lubrication, troubleshooting, and maintenance instructions for the electronic equipment in the installation kit.

**Section I LUBRICATION INSTRUCTIONS**

There are no lubrication instructions for the installation kit.

**Section II TROUBLESHOOTING PROCEDURES**

For troubleshooting procedures refer to TM 11-7440-251-10 and TM 11-7440-253-10-1.

**Section III MAINTENANCE PROCEDURES**

For maintenance procedures refer to TM 11-7440-251-10 and TM 11-7440-253-10-1.



## CHAPTER 4

### ORGANIZATIONAL MAINTENANCE

Subject	Section	Page
Repair Parts, Special Tools, TMDE and Support Equipment . . . . .	I	4-1
Service Upon Receipt . . . . .	II	4-1
Assembly and Installation of Electronic Equipment Installation Kit and Power Accessory Kit . . . . .	III	4-4
Preventive Maintenance Checks and Services . . . . .	IV	4-104
Organizational Troubleshooting . . . . .	V	4-104
Maintenance Procedures . . . . .	VI	4-104
Removal of Electronic Equipment Installation Kit and Power Accessory Kit . . . . .	VII	4-105
Preparation for Storage and Shipment . . . . .	VIII	4-189

#### OVERVIEW

This chapter contains instructions for the assembly, installation, and removal of the installation kit.

#### Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Subject	Para	Page
Common Tools and Equipment . . . . .	4-1	4-1
Special Tools, TMDE, and Support Equipment . . . . .	4-2	4-1

##### 4.1. COMMON TOOLS AND EQUIPMENT.

The common tools and equipment needed for the installation of the electronic equipment installation kit will be listed in the Maintenance Allocation Chart (MAC) found in appendix B, and at the beginning of each installation procedure.

##### 4.2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

For special tools refer to appendix B.

#### Section II SERVICE UPON RECEIPT

Subject	Para	Page
Unpacking . . . . .	4-3	4-2
Checking Unpacked Materiel . . . . .	4-4	4-4

**4-3. UNPACKING.**

This task covers:

Unpacking of installation kit and electronic equipment

INITIAL SETUP

Tools	Personnel Required
Pliers	Two mechanics
Claw hammer	Equipment Condition
Shears	Equipment crated.
Pocket knife	
Materials/Parts	
None	

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**WARNING**

Stand to the side of each packing band when cutting.

**NOTE**

Move crated equipment to site of installation. Save cartons, fillers, and blocking for future use as packing for storage.

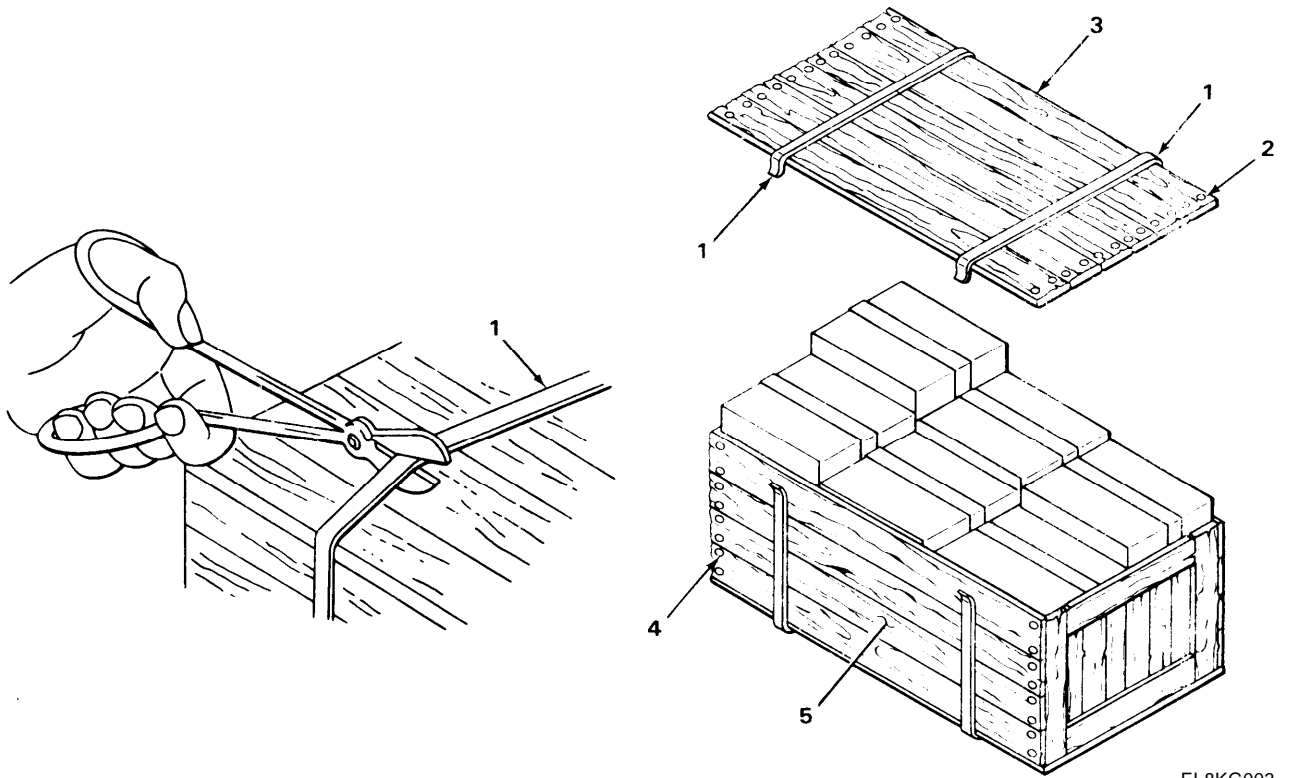
1. Wooden crate	Packing band (1)	Using shears, cut.
2. Top cover	Nails (2)	Using claw hammer, remove.
3. Wooden crate	Top cover (3)	Remove.
4. Side cover	Nails (4)	Using claw hammer, remove.
6. Wooden crate	Side cover (5)	Remove.

**If packed for overseas shipment, remove moisture proof cover.**

**NOTE**

Remove cartons from wooden crate and carefully remove components. Some parts are secured to sides of wooden crate. Using pliers, remove.

4-3. UNPACKING. (CONT)



EL8KG003

**4-4. CHECKING UNPACKED MATERIEL.**

When the installation kit is received, the unpacker must check equipment for damage resulting from shipment, proper amount of items or parts shipped, and if the right units were sent in the kit.

If damage to a unit or a part of the kit other than minor scratches or dents are found, see paragraph 1-2, Maintenance Forms, Records and Reports. Check the parts list with the parts received and if there is a difference in the amount received, report on forms shown in TM 38-750. If the part numbers are not the same, check the current Modification Work Order (MWO) DA PAM 310-1 for a change in parts listing.

**Section III ASSEMBLY AND INSTALLATION OF ELECTRONIC EQUIPMENT  
INSTALLATION KIT AND POWER ACCESSORY KIT**

Subject	Para	Page
Removing Canvas Tie-down Hooks . . . . .	4-5	4-6
Preparation For Drilling . . . . .	4-6	4-8
Modifying Front Antenna Mounting Brackets . . . . .	4-7	4-8
Front Antenna Bracket Mounting Holes. . . . .	4-8	4-10
Rear Antenna Bracket Mounting Holes . . . . .	4-9	4-12
Center Punching . . . . .	4-10	4-14
Pilot Drilling . . . . .	4-11	4-16
Final Drilling. . . . .	4-12	4-18
Installing Canvas Tie-down Hooks on Front Antenna Mounting Brackets . . . . .	4-13	4-20
Installing Front Antenna Mounting Brackets . . . . .	4-14	4-22
Installing Front Antenna Supports . . . . .	4-15	4-24
Installing Antenna Mounting Bases . . . . .	4-16	4-26
Installing Antenna Ground Straps . . . . .	4-17	4-28
Installing Antenna Masts . . . . .	4-18	4-30
25-inch Ground Strap to Forward Wall Mounting Hole . . . . .	4-19	4-33
Installing Rear Antenna Mounting Bracket . . . . .	4-20	4-34
Removing Cargo Tie-down Assemblies . . . . .	4-21	4-21
Installing Adapter Assemblies . . . . .	4-22	4-40
installing Submount Assembly . . . . .	4-23	4-42
Installing Radio Mount . . . . .	4-24	4-44
Preparation For Drilling Front Reinforcement Support Mounting Holes. . . . .	4-25	4-46
Center Punching and Drilling Front Reinforcement Support Mounting Holes . . . . .	4-26	4-48
Installing Electronic EquipmentTable . . . . .	4-27	4-54
Installing Front Reinforcement Support . . . . .	4-28	4-56
Installing Key Generator Rack . . . . .	4-29	4-60
installing Message Entry Group Rack . . . . .	4-30	4-62
Installing Electronic Line Printer Rack. . . . .	4-31	4-64
Installing Electronic Line Printer Sliding Tray . . . . .	4-32	4-66
installing 4-Inch Ground Straps . . . . .	4-33	4-68
Installing Radio Power Cables To Radios . . . . .	4-34	4-70
installing Radio Mounting Bases . . . . .	4-35	4-72
installing Tacfire Components . . . . .	4-36	4-74
Installing Radio and Power Distribution Box Power Cables to Vehicle Power . . . . .	4-37	4-76
Installing 25-inch Ground Strap to Front Wall . . . . .	4-38	4-78
installing 25-Inch Ground Strap to Power Distribution Box . . . . .	4-39	4-80
Installing Sledge Hammer and Mounting Brackets . . . . .	4-40	4-82



Subject	Para	Page
Installing Floor Base . . . . .	4-41	4-84
Installing Fuel Filler Nozzle and Bracket . . . . .	4-42	4-86
installing Fuel Can and Bracket . . . . .	4-43	4-88
Installing Generator. . . . .	4-44	4-90
installing Battery Box . . . . .	4-45	4-92
installing Batteries and Holddown. . . . .	4-46	4-94
installing Fire Extinguisher MountingBracket . . . . .	4-47	4-96
Installing Fire Extinguisher. . . . .	4-48	4-98
Installing Canvas Cable Bag . . . . .	4-49	4-99
Installing Antenna Cabling . . . . .	4-50	4-100
Installing External Ground Rod Kit. . . . .	4-57	4-102

**4-5. REMOVING CANVAS TIE-DOWN HOOKS.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench (2 required)

Materials/Parts

None

Personnel Required

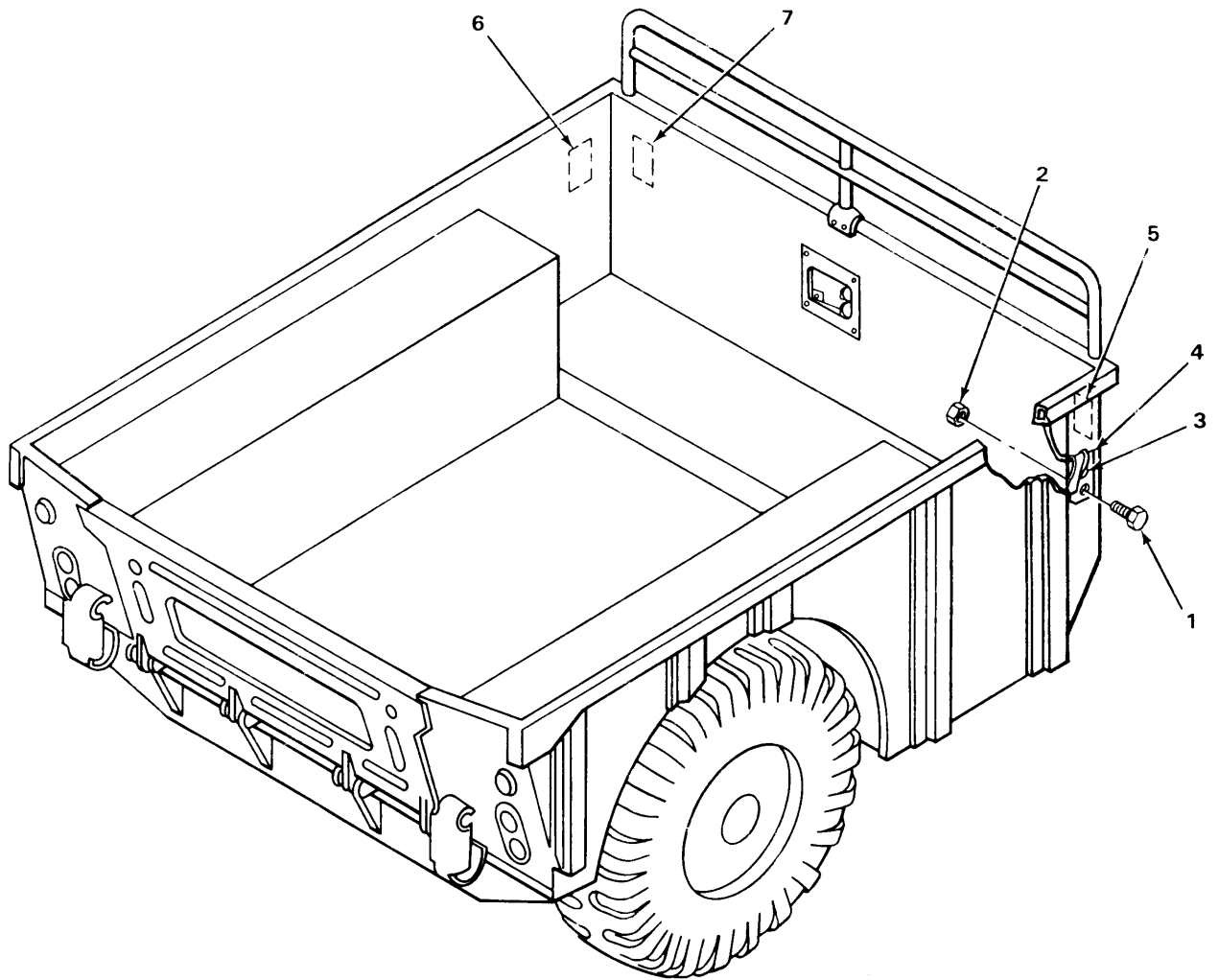
One mechanic

Equipment Condition

Truck set at installation site.

LOCATION	ITEM	ACTION REMARKS
1. Curbside front outer side wall	Screw (1) and locknut (2)	Using two 1/2-inch box wrenches, remove. <b>There are two screws. Step 1 is typical for both screws.</b>
2.	Screw (3)	Do step 2 again.
3.	Tie-down hook (4)	Remove and save. <b>There are four tie-down hooks. Steps 1 thru 3 are typical for all four tie-down hooks.</b>
4. Curbside forward outer wall	Tie-down hooks (5), (6) and (7)	Do steps 1, 2 and 3 again.

3-5. REMOVING CANVAS TIE-DOWN HOOKS. (CONT)



EL8KG004

**4-6. PREPARATION FOR DRILLING.**

Preparation for drilling instructions for:

- Modifying front antenna mounting brackets
- Front curbside and roadside antenna bracket mounting holes
- Rear antenna bracket mounting holes
- 25-inch ground strap mounting hole

**4-7. MODIFYING FRONT ANTENNA MOUNTING BRACKETS.**

This task covers:

Modification

**INITIAL SETUP**

<p>Tools</p> <ul style="list-style-type: none"> <li>Hammer</li> <li>Chisel</li> <li>Safety goggles</li> </ul> <p>Materials/Parts</p> <ul style="list-style-type: none"> <li>Front antenna mounting brackets (2 required)</li> </ul>	<p>Personnel Required</p> <ul style="list-style-type: none"> <li>One mechanic</li> </ul> <p>Equipment Condition</p> <ul style="list-style-type: none"> <li>Antenna brackets on bench.</li> </ul>
---	--

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**WARNING**

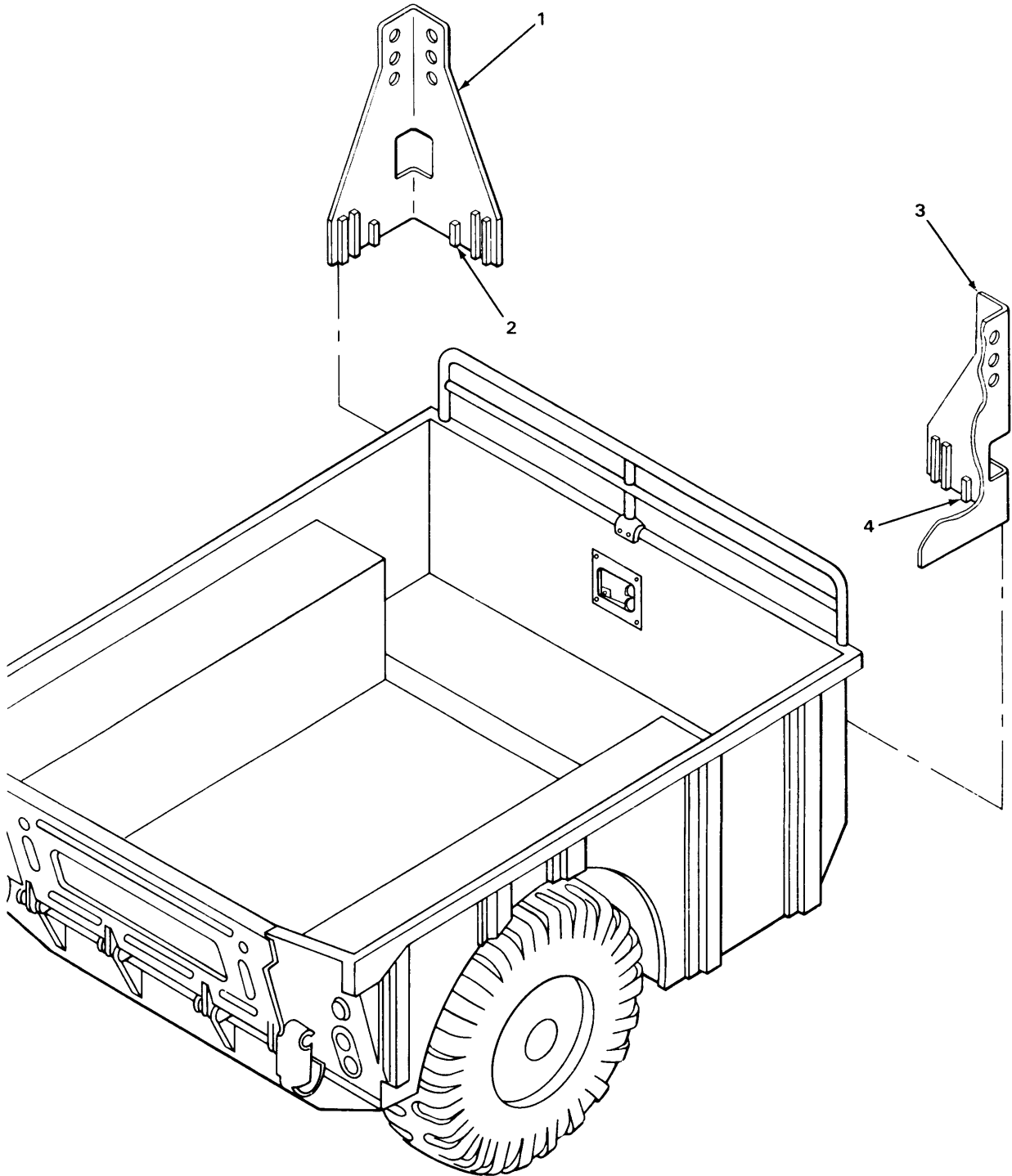
Safety goggles must be worn during this task.

**NOTE**

The particular spacer removed determines roadside or curbside positions for antenna brackets.

<p><b>1. Outside vehicle</b></p>	<p>Antenna bracket (1) and short spacer (2)</p>	<p>Using hammer and chisel, remove. <b>This becomes the roadside antenna bracket.</b></p>
<p><b>2.</b></p>	<p>Antenna bracket (3) and short spacer (4)</p>	<p>Using hammer and chisel, remove. <b>This becomes the curbside antenna bracket.</b></p>

4.7. MODIFYING FRONT ANTENNA MOUNTING BRACKETS. (CONT)



EL8KGO05

**4-8. FRONT ANTENNA BRACKET MOUNTING HOLES.**

**This task covers:**

Preparation for drilling

**INITIAL SETUP**

**Tools**

C-clamps (2 required)  
White marking pencil

**Materials/Parts**

Front antenna bracket

**Personnel Required**

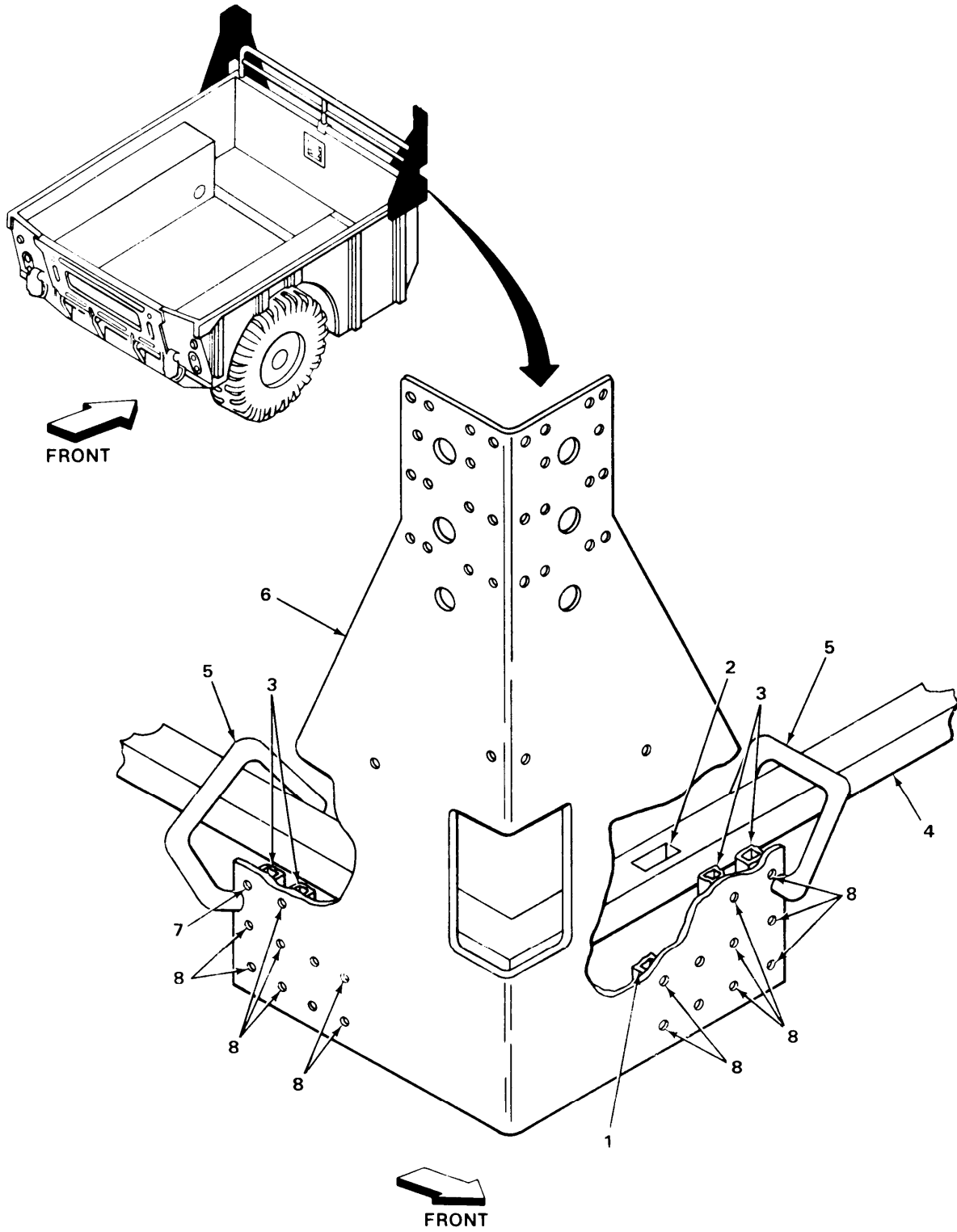
Two mechanics

**Equipment Condition**

Tie-down hooks removed and antenna brackets modified (para 4-7).

LOCATION	ITEM	ACTION REMARKS
1. Outside carrier, front corners	Inner spacer (1) and bow socket (2)	Aline.
2.	Outer spacers (3) and carrier wall lip (4)	Push bracket up so spacers are under wall lip.
3.	C-clamp (5) and bracket (6)	Using two C-clamps, clamp both sides of bracket to wall.
4.	Screw hole (7)	Using marking pencil, mark. <b>There are 16 screw holes. Step 4 is typical for all 16 holes.</b>
5.	Screw hole (8)	Do step 4 again.
6.	C-clamps (5) and bracket (6)	Remove.

4-8. FRONT ANTENNA BRACKET MOUNTING HOLES. (CONT)



EL8KGO06

**4-9. REAR ANTENNA BRACKET MOUNTING HOLES.**

This task covers:

Preparation for drilling

**INITIAL SETUP**

Tools

Felt-tip pen  
Tape measure  
Cross-tip screwdriver

Personnel Required

One mechanic

Equipment Condition

Materials/Parts

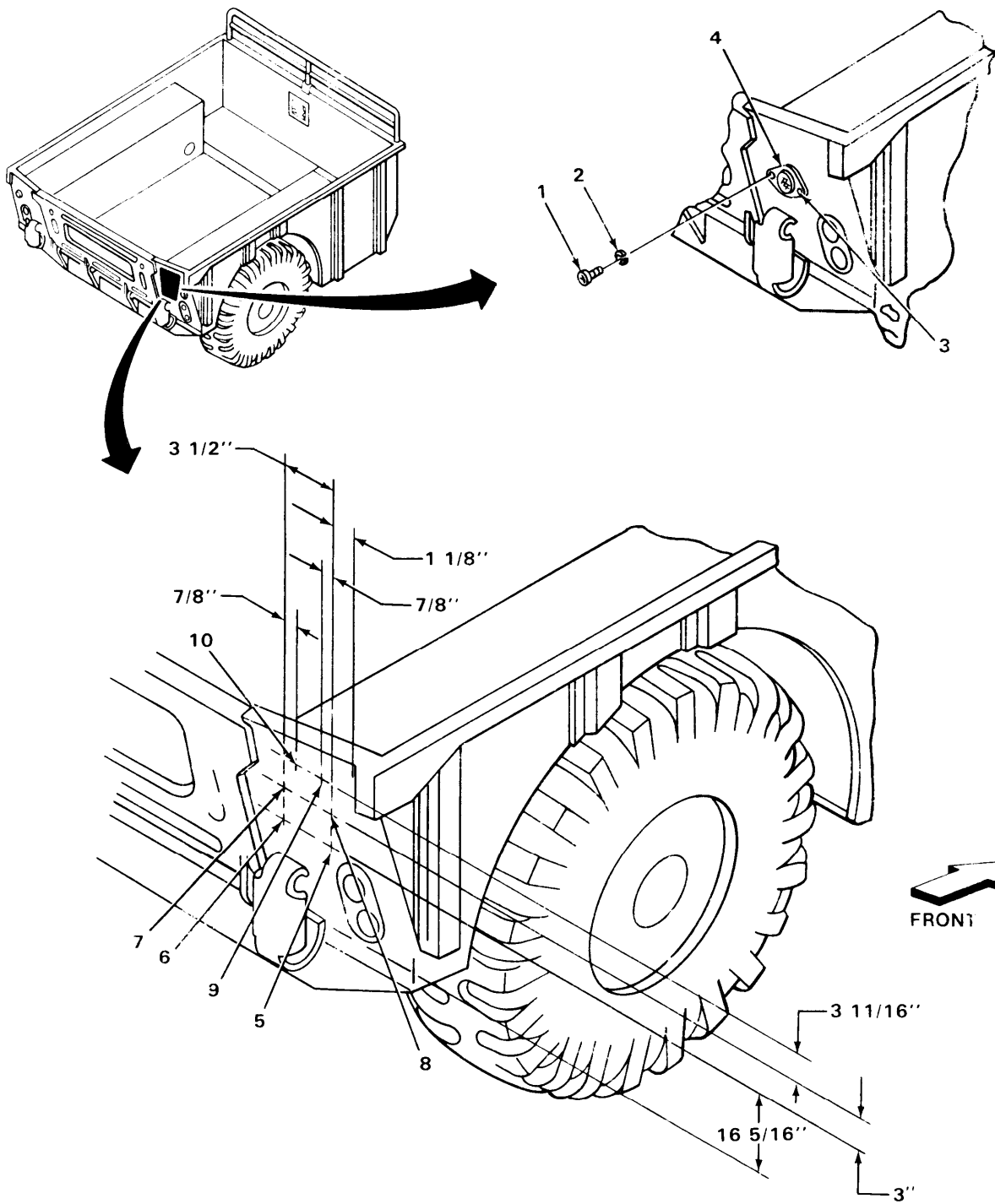
Truck set at installation site.

None

	LOCATION	ITEM	ACTION REMARKS
1.	Outside corner rear curbside wall	Screw (1) and lockwasher (2)	Using cross-tip screwdriver, remove. <b>There are two screws. Step 1 is typical for both screws.</b>
2.		Screw (3)	Do step 1 again.
3.		Reflector (4)	Remove. <b>Save.</b>
4.		Mark (5)	Measure 16 5/16 inches from lower edge of carrier body. Measure 1 1/8 inches in from outside edge of body. Using felt-tip pen, mark.
5.		Mark (6)	Measure 3 1/2 inches over from mark (5). Using felt-tip pen, mark.
6.		Mark (7)	Measure 3 inches up from mark (6). Using felt-tip pen, mark.
7.		Mark (8)	Measure 3 1/2 inches over from mark (7). Using felt-tip pen, mark.
8.		Mark (9)	Measure 3 11/16 inches up from mark (8). Using felt-tip pen, mark.
9.		Mark (10)	Measure 3 1/2 inches over from mark (9). Using felt-tip pen, mark.



4-9. REAR ANTENNA BRACKET MOUNTING HOLES. (CONT)



EL8KG007

**4-10. CENTER PUNCHING.**

This task covers:

Center punching

**INITIAL SETUP**

Tools

Hammer  
Center punch

Materials/Parts

None

Personnel Required

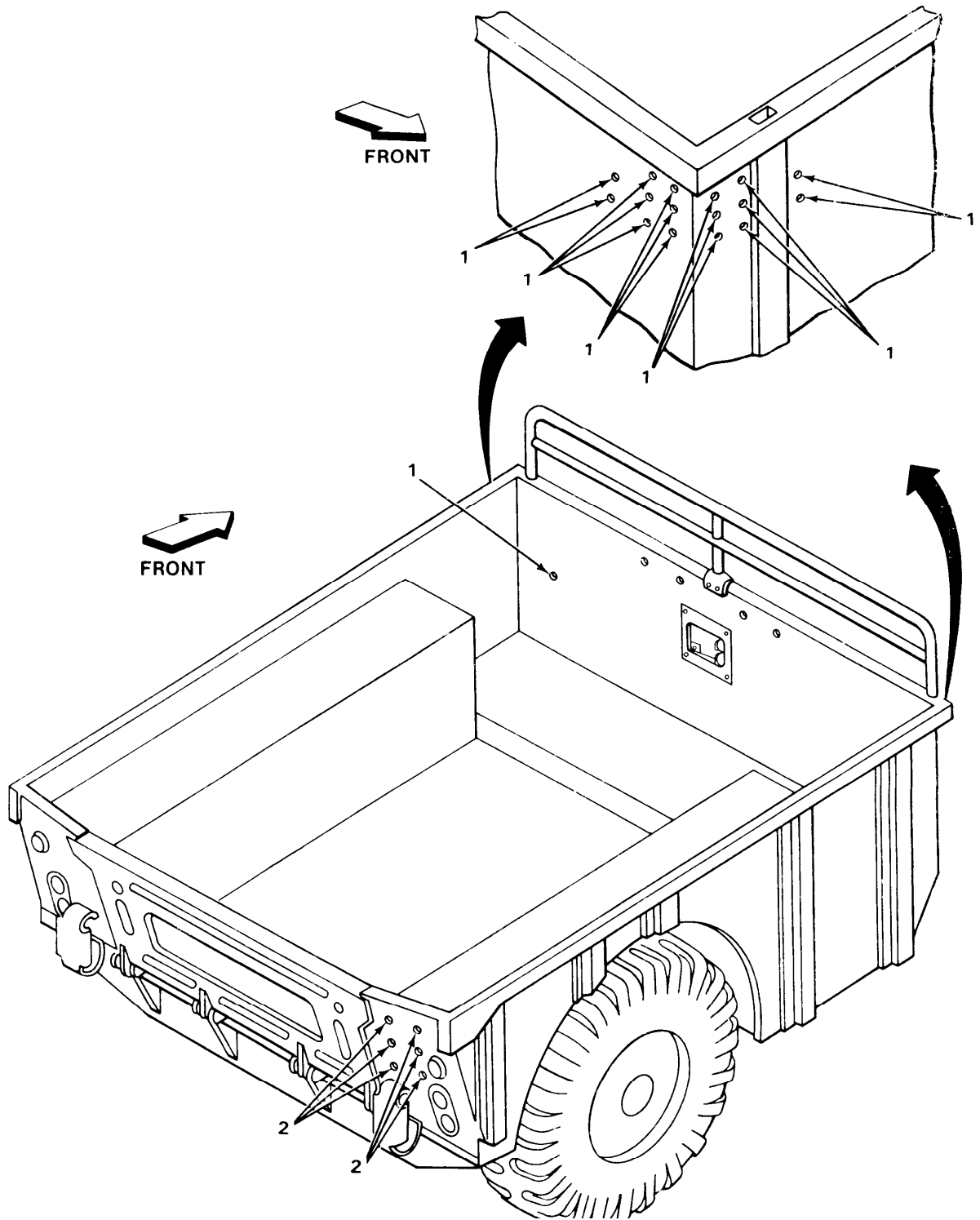
One mechanic

Equipment Condition

All areas to be center punched,  
marked.

	LOCATION	ITEM	ACTION REMARKS
7.	Front antenna mounting, roadside	Marks (1)	Using hammer and center punch, punch. <b>There are 16 marks to be punched.</b>
2.	Front antenna mounting, curbside	Marks (1)	Using hammer and center punch, punch. <b>There are 16 marks to be punched.</b>
3.	Ground strap mounting, front roadside	Mark (1)	Using hammer and center punch, punch.
4.	Rear antenna mounting	Marks (2)	Using hammer and center punch, punch. <b>There are six marks to be punched.</b>

4-10. CENTER PUNCHING. (CONT)



EL8KG010

4.11. PILOT DRILLING.

This task covers:

Pilot drilling

INITIAL SETUP

Tools

Electric drill  
1/8-inch drill bit

Materials/Parts

None

Personnel Required

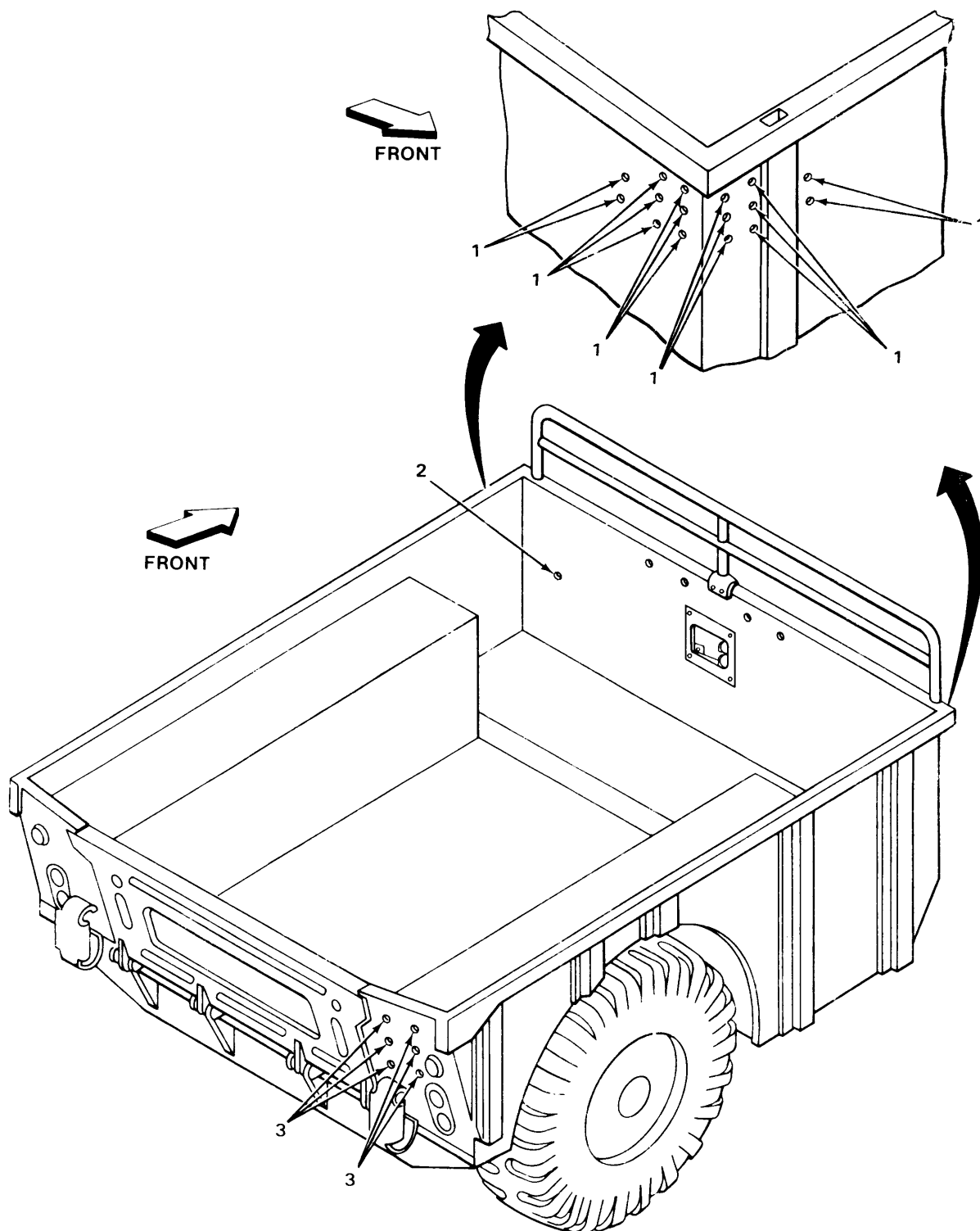
One mechanic

Equipment Condition

All areas to be drilled,  
center punched.

	LOCATION	ITEM	ACTION REMARKS
1.	Front antenna mounting, roadside	Marks (1)	Using electric drill and 1/8-inch drill bit. drill. <b>There are 16 holes to be drilled.</b>
2.	Front antenna mounting, curbside	Marks (1)	Using electric drill and 1/8-inch drill bit drill <b>There are 16 holes to be drilled.</b>
3.	Ground strap mounting, front roadside	Mark (2)	Using electric drill and 1/8-inch drill bit drill.
4.	Rear antenna mounting, curbside	Marks (3)	Using electric drill and 1/8-inch drill bit, drill. <b>There are six holes to be drilled.</b>

4-11. PILOT DRILLING. (CONT)



EL8KG011

**4-12. FINAL DRILLING.**

This task covers:

Final drilling

INITIAL SETUP

Tools

Electric drill  
 9/32-inch drill bit  
 13/32-inch drill bit  
 1-inch drill bit

Materials/Parts

None

Personnel Required

One mechanic

Equipment Condition

All pilot holes drilled.

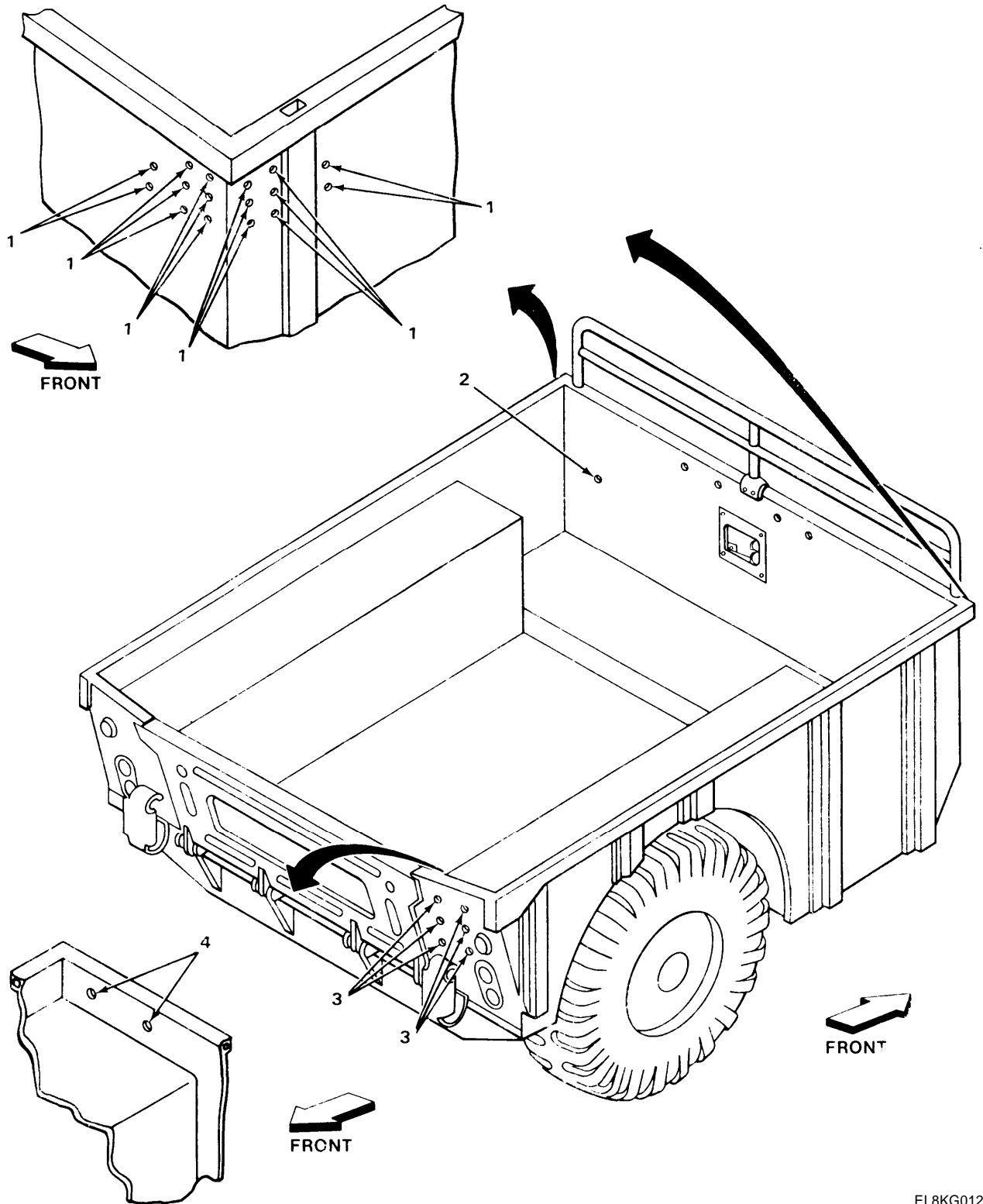
LOCATION	ITEM	ACTION REMARKS
1. Front antenna mounting, roadside	Holes (1)	Using electric drill and 9/32-inch drill bit, drill. <b>There are 16 holes to be drilled.</b>
2. Front antenna mounting, curbside	Holes (1)	Using electric drill and 9/32-inch drill bit, drill. <b>There are 16 holes to be drilled.</b>
3. Ground strap mounting, front roadside	Hole (2)	Using electric drill and 13/32-inch drill bit, drill.
4. Rear antenna mounting, curbside, outside of carrier	Holes (3)	Using electric drill and 13/32-inch drill bit, drill. <b>There are six holes to be drilled.</b>

**NOTE**

Drill top two holes through outer and inner walls of carrier.

5. Rear antenna mounting, curbside inside of carrier	Holes (4)	Using electric drill and 1-inch drill bit, drill. <b>Drill inner wall only.</b>
--	-----------	--

4-12. FINAL DRILLING. (CONT)



EL8KG012

**4-13. INSTALLING CANVAS TIE-DOWN HOOKS ON FRONT ANTENNA MOUNTING BRACKETS.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

1/2-inch box wrench  
(2 required)

**Materials/Parts**

Antenna brackets (2 required)  
Tie-down hooks (4 required)  
5/16-24 x 1 inch long hex head  
screws (8 required)  
5/16-24 lock-hex nut  
(8 required)

**Personnel Required**

One mechanic

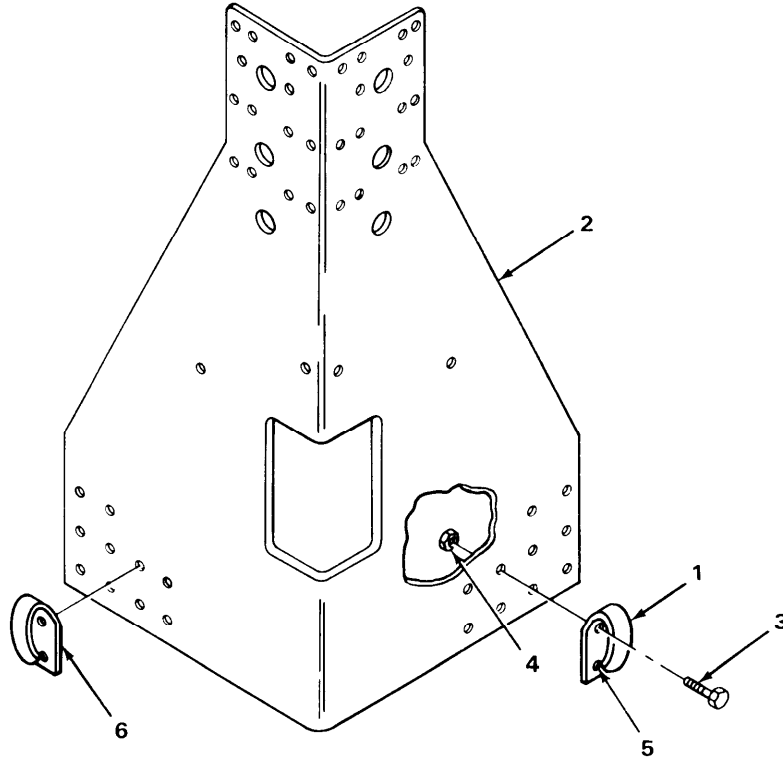
**Equipment Condition**

Tie-down hooks removed from  
carrier.

LOCATION	ITEM	ACTION REMARKS
1. Curbside antenna bracket	Tie-down hook (1) and bracket (2)	Place and aline holes.
2.	Screw (3) and locknut (4)	Using two 1/2-inch box wrenches, install. <b>There are two screws. Step 1 is typical for both screws.</b>
3.	Hole (5)	Do step 2 again. <b>There are two tie-down hooks. Steps 1, 2 and 3 are typical for both hooks.</b>
4.	Tie-down hook (1)	Do steps 1, 2 and 3 again. <b>There are two front antenna brackets. Steps 1 through 4 are typical for both brackets.</b>
s. Roadside antenna bracket	Tie-down hook (1) and tie-down hook (6)	Do steps 1 through 4 for second bracket.



4-13. INSTALLING CANVAS TIE-DOWN HOOKS ON FRONT ANTENNA MOUNTING BRACKETS. (CONT)



EL8KG013

**4-14. INSTALLING FRONT ANTENNA MOUNTING BRACKETS.**

This task covers:

Installation

INITIAL SETUP

Tools

7/16-inch box wrench  
(2 required)

Materials/Parts (Cont)

Antenna mounting brackets  
(2 required)

Materials/Parts

1/4-28 x 3 inch long hex head  
screws (32 required)  
1/4-inch flat washer  
(64 required)  
1/4-28 self-locking nut  
(32 required)

Personnel Required

Two mechanics

Equipment Condition

Mounting holes drilled and canvas  
tie-downs installed.

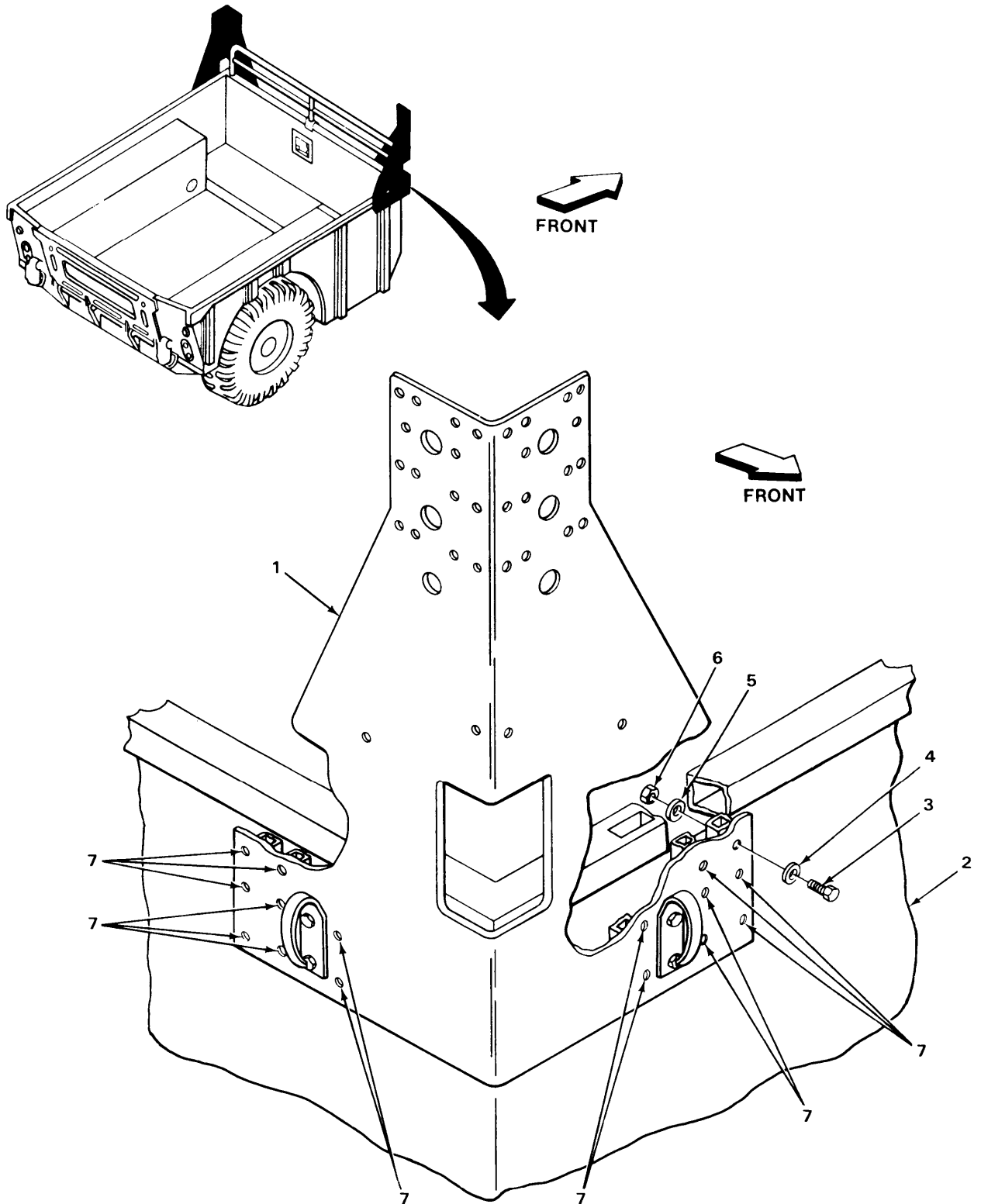
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed outside carrier.

1. Outside carrier, forward curbside wall	Bracket (1) and carrier wall (2)	Place and aline holes.
2.	Screw (3), flat washer (4), flat washer (5) and nut (6)	Install, handtighten. There are 16 screws. Step 2 is typical for all 16 screws.
3.	Holes (7)	Do step 2 again.
4.	Screws (3)	Using two 7/16 inch box wrenches, tighten. <b>There are two front antenna brackets. Steps 1 through 4 are typical for both brackets.</b>
5. Outside carrier, forward roadside wall	Bracket (1)	Do steps 1 through 4 again.

4-14. INSTALLING FRONT ANTENNA MOUNTING BRACKETS. (CONT)



EL8KGC14

**4-15. INSTALLING FRONT ANTENNA SUPPORTS.**

This task covers:

Installation

INITIAL SETUP

Tools

7/16-inch box end wrench  
(2 required)

Materials/Parts

1/4-20 x 3/4 inch long hex head  
screw (12 required)  
1/4-20 plain hex nut  
(12 required)  
14-inch IET lockwasher  
(12 required)  
Support assembly (2 required)

Personnel Required

One mechanic

Equipment Condition

Front antenna brackets installed.

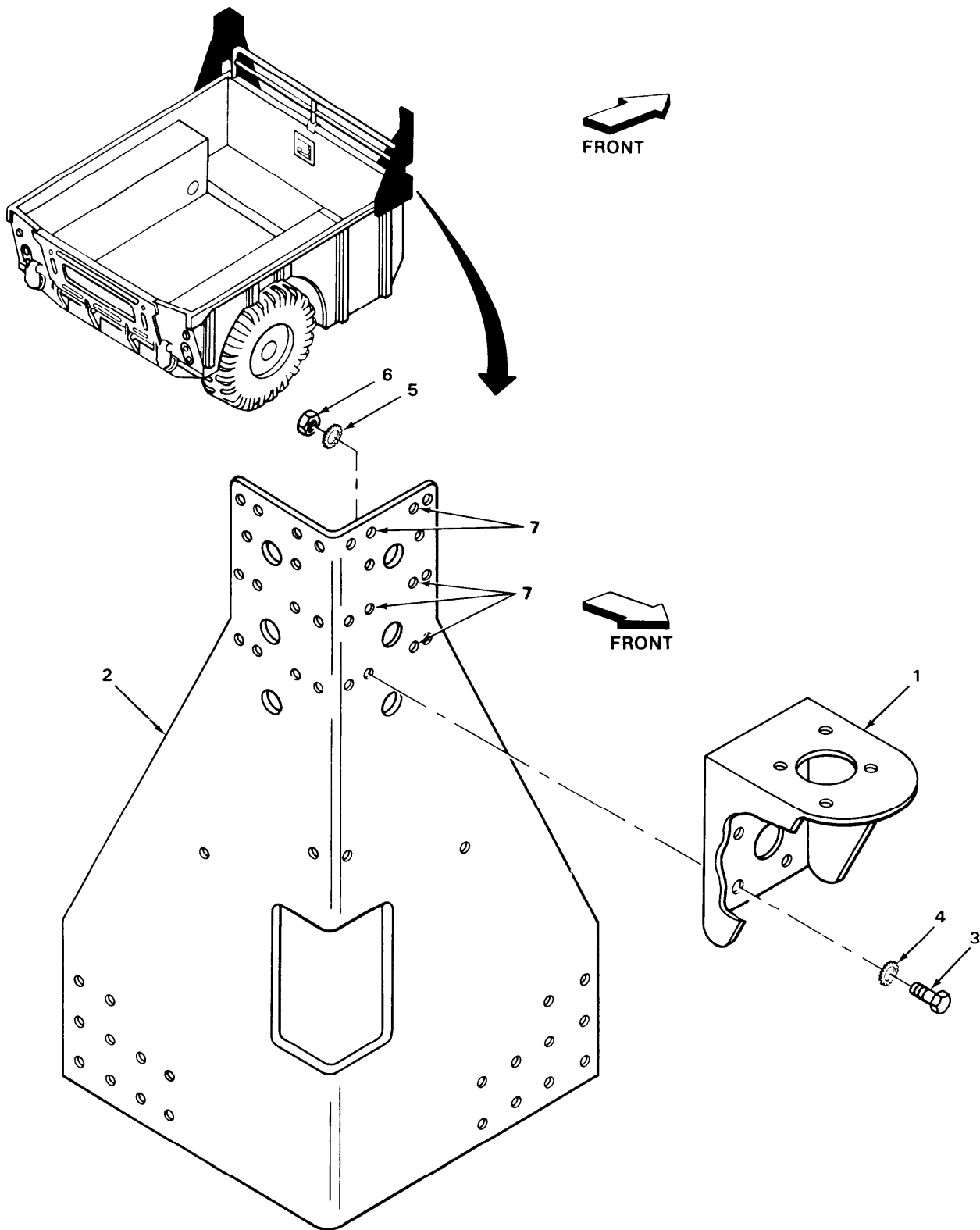
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

Support assemblies face front of vehicle.

1. Curbside antenna bracket	Support (1) and bracket (2)	Place and aline holes.
2.	Screw (3), IET lockwasher (4), lockwasher (5) and nut (6)	Install, handtighten. <b>There are six screws. Step 2 is typical for all six screws.</b>
3.	Holes (7)	Do step 2 again.
4.	Screws (3)	Using two 7/16-inch box wrenches, tighten. <b>Do steps 1 through 4 for roadside antenna bracket.</b>

4-15. INSTALLING FRONT ANTENNA SUPPORTS. (CONT)



EL8KG015

**4-16. INSTALLING ANTENNA MOUNTING BASES.**

This task covers:

Installation

INITIAL SETUP

Tools

9/16-inch box wrench (2 required)

Materials/Parts

Antenna Mounting Base AS-1729/ VRC  
(2 required)  
Antenna Mounting Base AB-558 GR  
3/8-16 x 1 3/4 inch long screw  
(12 required)  
3/8-inch flat washer (12 required)

Materials/Parts (Cont)

3/8-inch lockwasher (12 required)  
3/8-16 nut (12 required)

Personnel Required

One mechanic

Equipment Condition

Antenna support assemblies installed.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**CAUTION**

Do not over tighten hardware. Over tightening can cause damage to antenna mounting bases.

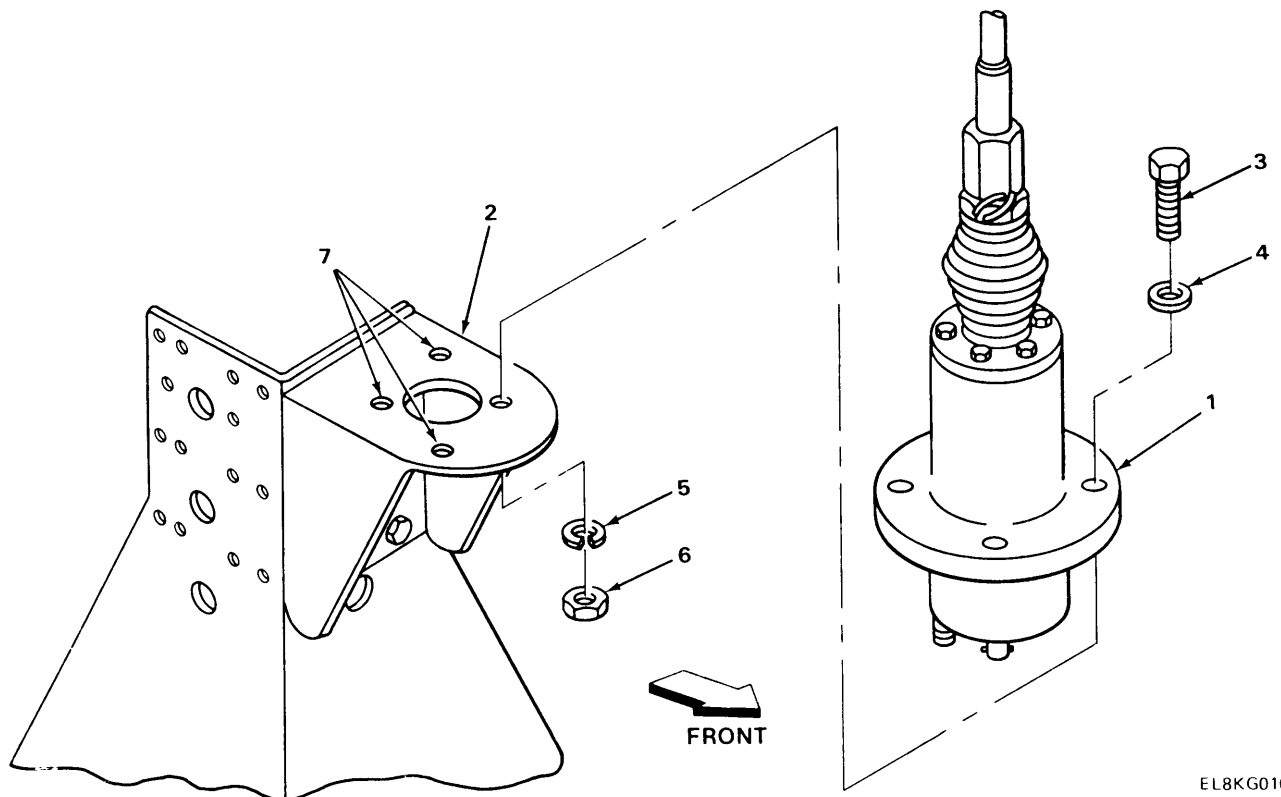
**NOTE**

There are two VRC antenna mounting bases and one GR antenna mounting base. The steps given are typical for both types.

- |   |  |   |
|---|--|---|
| 1. Front roadside position of outer panel of carrier wall | VRC antenna mounting base (1) and antenna support assembly (2) | Place and aline holes.  |
| 2.  | Screw (3), flat washer (4), lockwasher (5) and nut (6)         | Install, handtighten.<br><b>There are four screws. Step 1 is typical for all four screws.</b> |

4-16. INSTALLING ANTENNA MOUNTING BASES. (CONT)

LOCATION	ITEM	ACTION REMARKS
3. Front roadside position of outer panel of carrier wall	Screw holes (7)	Do step 2 again.
4.	Screws (3) and nuts (6)	Using two 9/16-inch box wrenches, tighten.
5. Front curbside position of outer panel of carrier wall	VRC antenna mounting base (1)	Do steps 1 through 4 again.
6. Curbside position of carrier rear wall	GR antenna mounting base (1)	Do steps 1 through 4 again.



EL8KG016

**4-17. INSTALLING ANTENNA GROUND STRAPS.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

- 1/2-inch box wrench (2 required)
- Flat-tip screwdriver

**Materials/Parts**

- 5/16-24 x 3/4 inch long screw (3 required)
- 5/16-24, plain hex nut (3 required)
- 5/16-inch IET lockwasher (6 required)
- 6-inch ground strap (3 required)

**Personnel Required**

One mechanic

**Equipment Condition**

Antenna mounting bases in place.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

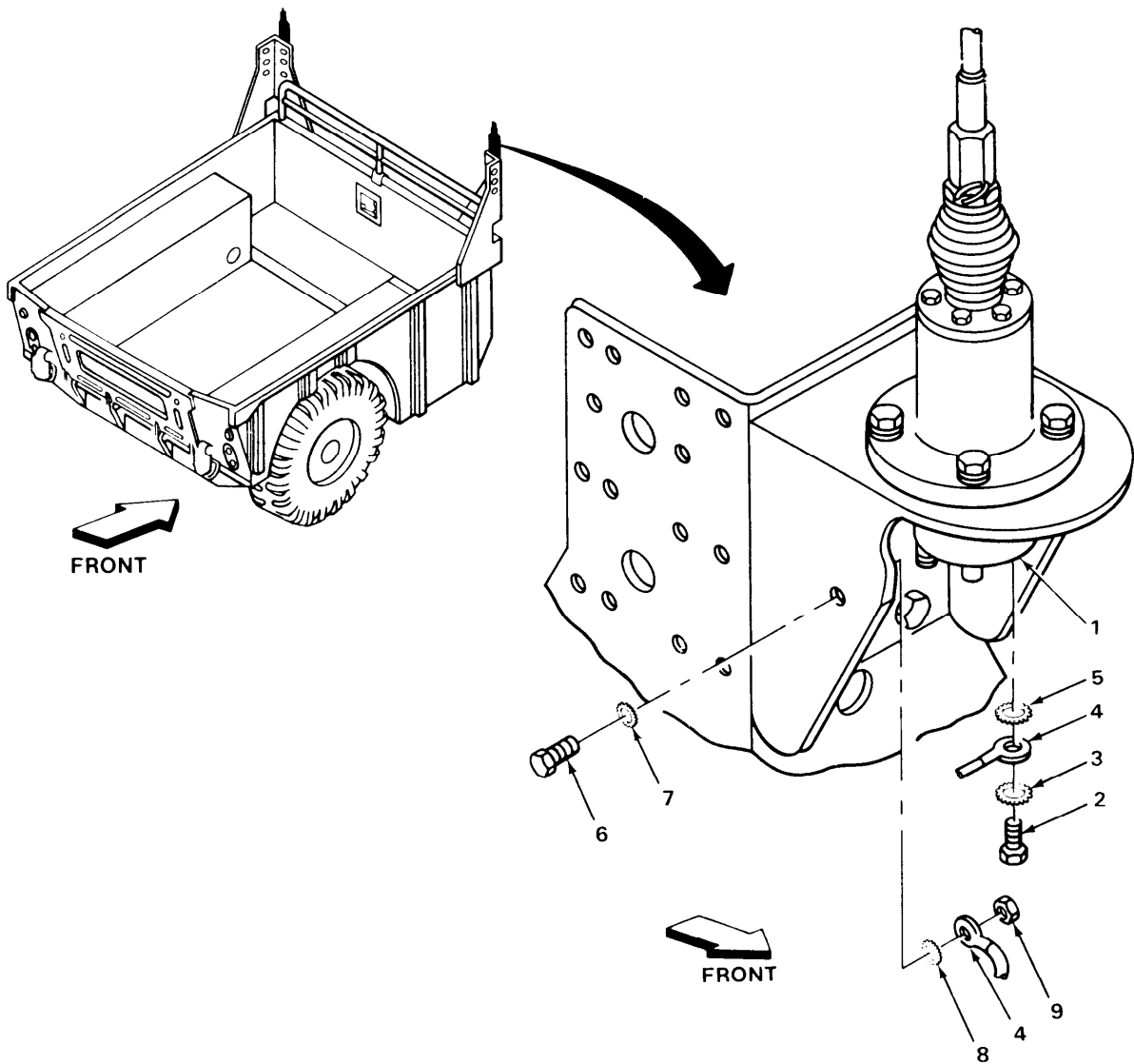
There are two different kinds of antennas used. The steps given are typical for both.

1. Front roadside antenna	Antenna mounting base (1), screw (2), IET lockwasher (3), ground strap (4) and IET lockwasher (5)	Using flat-tip screwdriver, install.
2.	Screw (6), ET lockwasher (7), ground strap (4), ET lockwasher (8) and nut (9)	Using 1/2-inch box wrench, install. <b>There are three vehicle antennas. Steps 1 and 2 are typical for all three vehicle antennas.</b>
3. Front curbside antenna	Ground strap (4)	Do step 1 and 2 again.



4.17. INSTALLING ANTENNA GROUND STRAPS. (CONT)

LOCATION	ITEM	ACTION REMARKS
4. Rear curbside antenna	Ground strap (4)	Do steps 1 and 2 again.



EL8KG017

**4-18. INSTALLING ANTENNA MASTS.**

This task covers:

Installation

INITIAL SETUP

Tools

- 1/8-inch hex wrench
- Adjustable crescent wrench
- Cutting pliers

Personnel Required

One mechanic

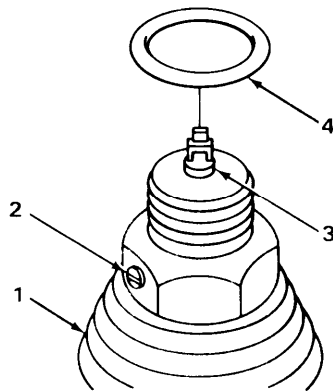
Equipment Condition

Antenna mounting base installed.

Materials/Parts

- Antenna mast (3 required)
- Safety wire
- Electrical tape

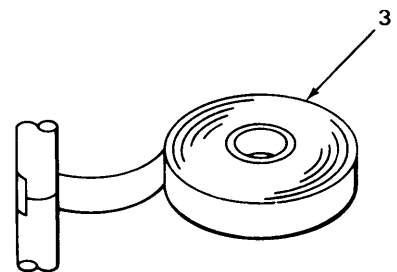
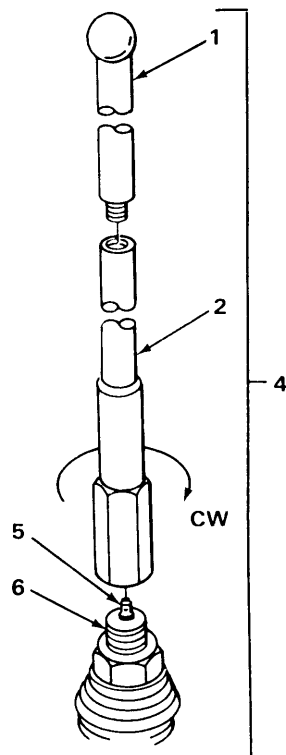
LOCATION	ITEM	ACTION REMARKS
1. All antennas	Antenna mounting base (1), set-screw (2) and electrical contact (3)	Pull electrical contact up to maximum travel, out of antenna mounting base. Using 1/8-inch hex wrench, tighten setscrew until resistance is felt.
2.	Antenna mounting base (1) and O-ring (4)	Install.



E18KG018

4-18. INSTALLING ANTENNA MASTS. (CONT)

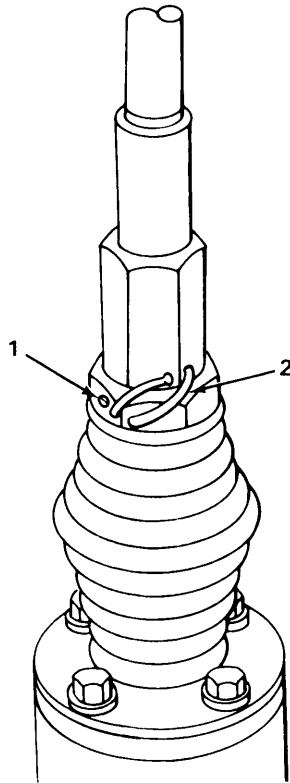
LOCATION	ITEM	ACTION REMARKS
3. All antennas	Upper antenna mast (1), lower antenna mast (2) and electrical tape (3)	Screw upper antenna mast clockwise into antenna mast. <b>Wrap two turns of electrical tape where upper and lower antenna masts meet.</b>
4.	Antenna mast (4), electrical contact (5) and mounting base (6)	Using adjustable wrench, install. <b>Antenna mast will seat against antenna mounting base. Slight resistance will be felt as electrical contact seats against antenna mast.</b>



EL8KG019

4-18. INSTALLING ANTENNA MASTS. (CONT)

LOCATION	ITEM	ACTION REMARKS
5. All antennas	Setscrew (1)	Using 1/8-inch hex wrench, tighten.
6.	Safety wire (2)	Install. Using cutting pliers, clip off wire ends.



EL8KG020

**4-19. 25-INCH GROUND STRAP TO FORWARD WALL MOUNTING HOLE.**

This task covers:

Preparation for drilling

**INITIAL SETUP**

**Tools**

- Felt-tip pen
- Hammer
- Center punch
- Tape measure

**Materials/Parts**

None

**Personnel Required**

One mechanic

**Equipment Condition**

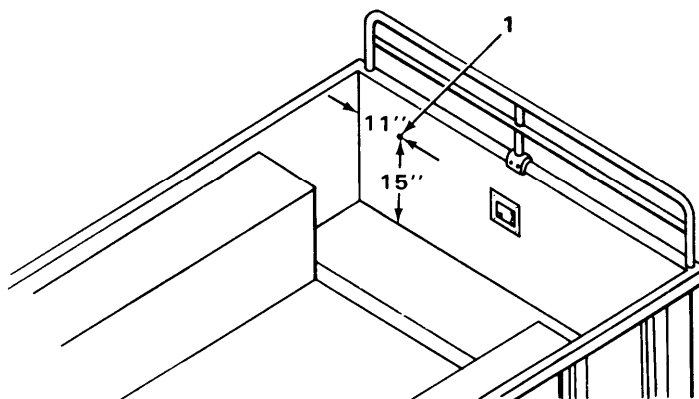
Truck set at installation site and roadside drop seat lowered.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

Measure a point 15 inches up from floor and 11 inches from roadside wall.

- |                          |          |                           |
|--------------------------|----------|---------------------------|
| 1. Roadside forward wall | Mark (1) | Using felt-tip pen, mark. |
|--------------------------|----------|---------------------------|



EL8KG008

**4-20. INSTALLING REAR ANTENNA MOUNTING BRACKET.**

This task covers:

Installation

INITIAL SETUP

Tools

- 3/8-inch drive, 6 inch long extension bar
- 3/8-inch drive socket wrench
- 9/16-inch socket
- 9/16-inch box wrench (2 required)
- Cross-tip screwdriver

Materials/Parts

- 3/8-24 x 1 inch long hex head screw (6 required)
- 3/8-inch flat washer (12 required)
- 3/8-24 self-locking nut (6 required)

Materials/Parts (Cont)

- Rear antenna bracket
- Rear reflector
- 1/4-20 x 5/8 inch long panhead screw (2 required)
- 14-inch split lockwasher (2 required)

Personnel Required

Two mechanics

Equipment Condition

Antenna bracket mounting holes drilled and rear reflector removed.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

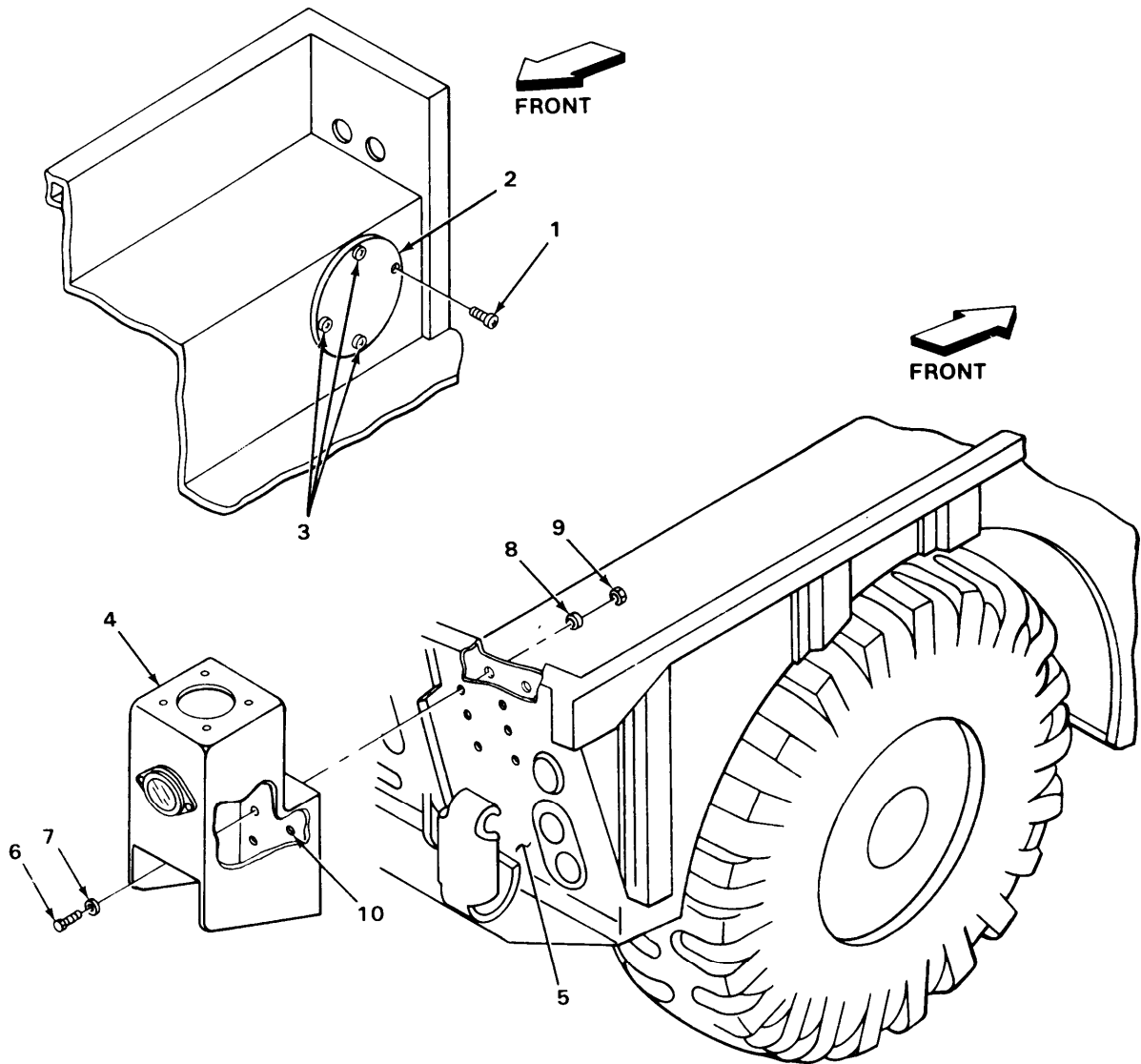
**NOTE**

A helper will be needed outside carrier.

1. Inside corner above rear curbside seat	Screw (1) and plate (2)	Using cross-tip screwdriver, remove. <b>There are four screws. Step 1 is typical for all four screws.</b>
2.	Screws (3)	Do step 1 again.
3.	Plate (2)	Remove.
4. Outside carrier, rear curbside wall	Bracket (4) and carrier wall (5)	Place and aline holes.

4-20. INSTALLING REAR ANTENNA MOUNTING BRACKET. (CONT)

LOCATION	ITEM	ACTION REMARKS
5. Inside carrier, rear curbside wall	Screw (6), flat washer (7), flat washer (8) and nut (9)	Install, handtighten. <b>There are two screws. Step 5 is typical for both screws.</b>
6.	Hole (10)	Do step 5 again.
7.	Screws (6)	Using ratchet wrench, extension, 9/16-inch socket and 9/16-inch box wrench, tighten. <b>Use socket wrench to reach top two nuts.</b>



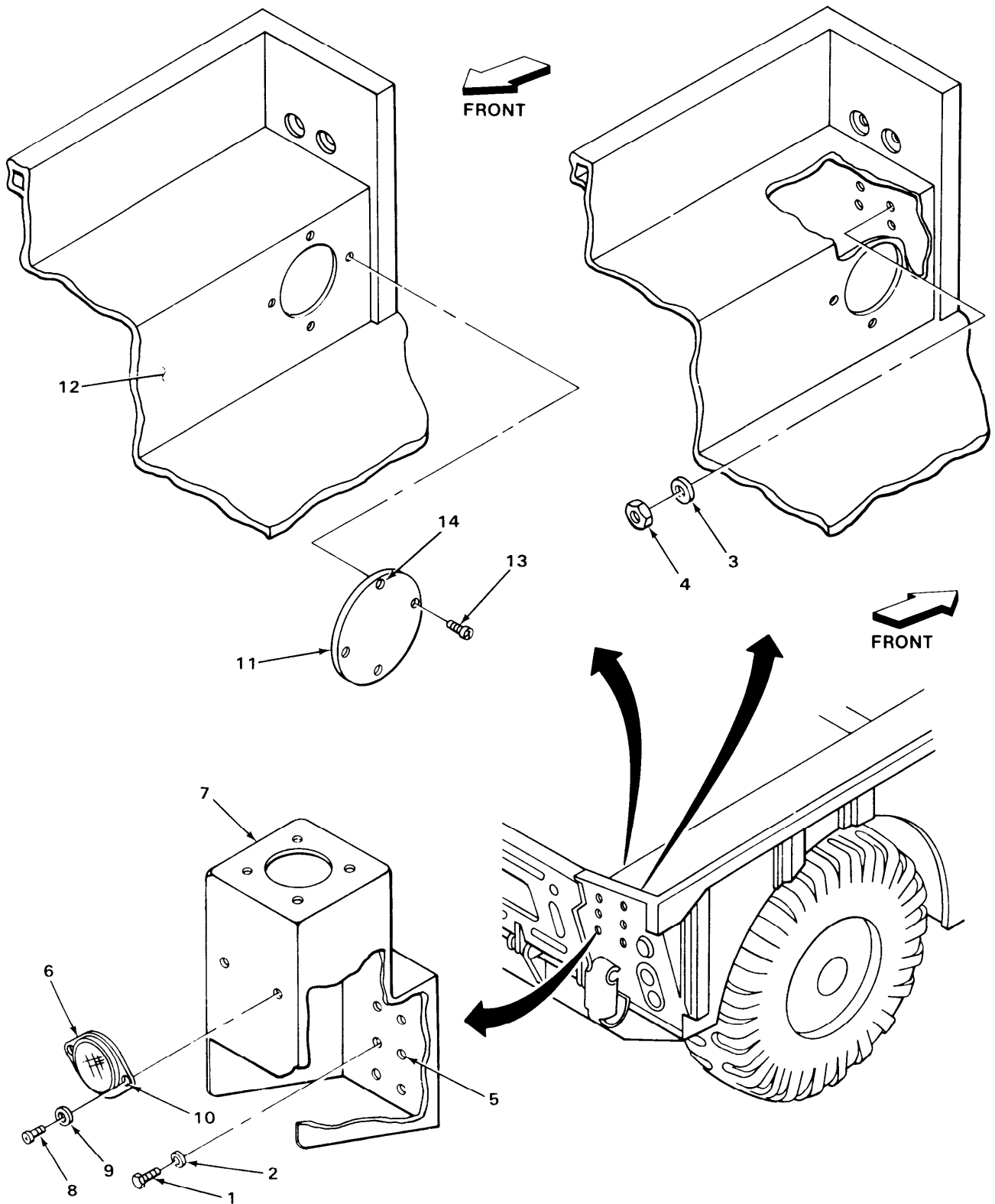
EL8KG021

4-20. INSTALLING REAR ANTENNA MOUNTING BRACKET. (CONT)

LOCATION	ITEM	ACTION REMARKS
8. Outside carrier, rear antenna bracket	Screw (1), flat washer (2), flat washer (3) and nut (4)	Install, handtighten. <b>There are four screws. Step 8 is typical for all four screws.</b>
9.	Holes (5)	Do step 8 again.
10.	Screws (1)	Using two 9/16-inch box wrenches, tighten.
11.	Reflector (6) and bracket (7)	Place and line holes.
12.	Screw (8) and lockwasher (9)	Using cross-tip screwdriver, install. There are two screws. Step 12 is typical for both screws.
13.	Hole (10)	Do step 12 again.
14. Inside carrier, rear curbside seat	Plate (11) and seat (12)	Place and aline holes.
15.	Screw (13)	Using cross-tip screwdriver, install. <b>There are four screws. Step 14 is typical for all four screws.</b>
16.	Holes (14)	Do step 15 again.



4-20. INSTALLING REAR ANTENNA MOUNTING BRACKET. (CONT)



EL8KG022

**4-21. REMOVING CARGO TIE-DOWN ASSEMBLIES.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench  
(2 required)  
Stiff wire brush

Personnel Required

Two mechanics

Equipment Condition

Truck set at installation site.

Materials/Parts

None

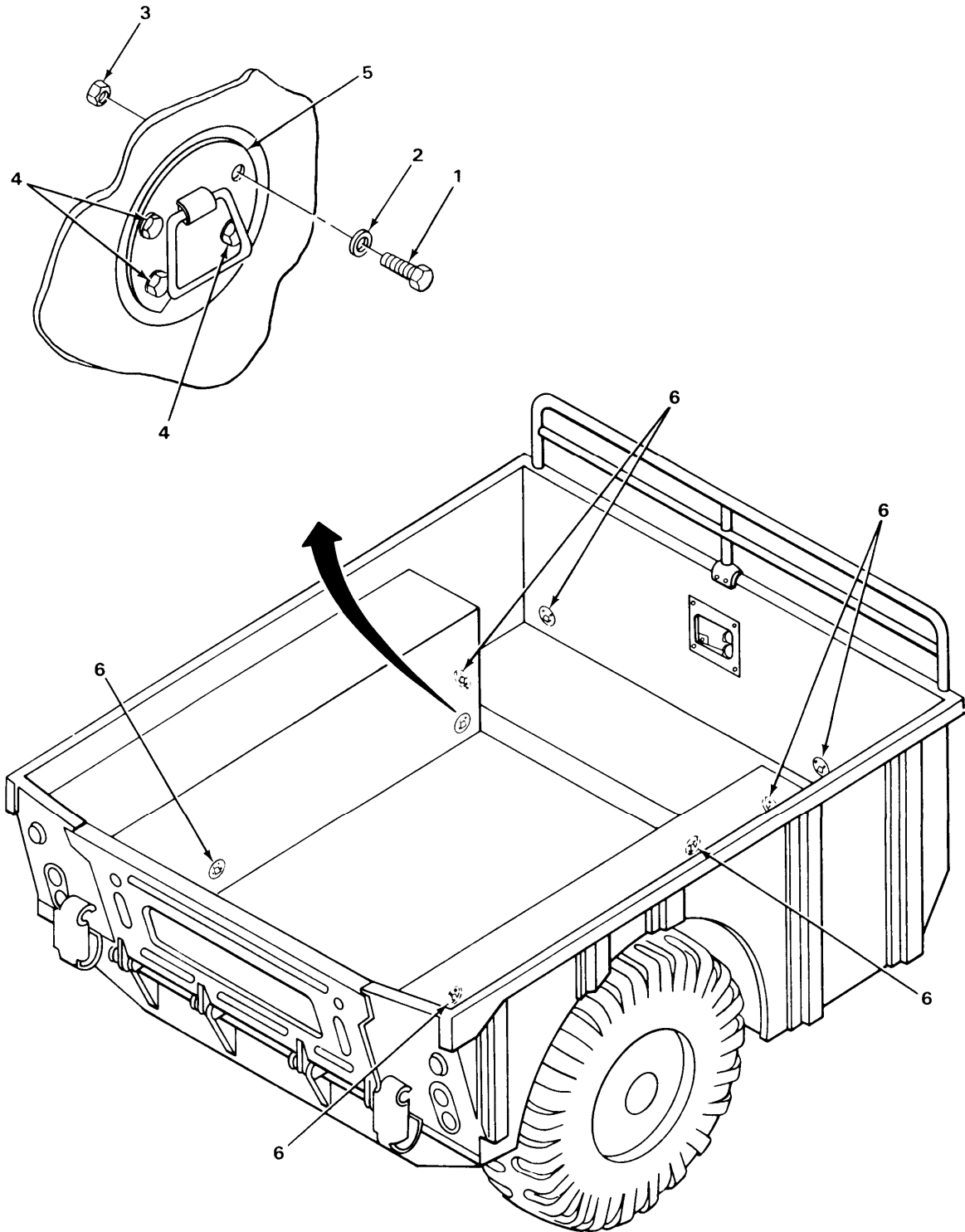
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed outside carrier. Clean back of cargo tie-down assemblies.

1. Carrier inner walls	Screw (1), flat washer (2) and nut (3)	Using two 1/2-inch box wrenches, remove. <b>There are four screws. Step 1 is typical for all four screws.</b>
2.	Screws (4)	Do step 1 again.
3.	Cargo tie-down assembly (5)	Remove, <b>There are eight cargo tie-down assemblies. Steps 1, 2 and 3 are typical for all eight cargo tie-down assemblies.</b>
4.	Cargo tie-down assemblies (6)	Do steps 1, 2 and 3 again. <b>Store cargo tie-down assemblies and hardware for future use.</b>

4-21. REMOVING CARGO TIE-DOWN ASSEMBLIES. (CONT)



EL8KG023

**4-22. INSTALLING ADAPTER ASSEMBLIES.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

1/2-inch box wrench  
(2 required)

**Materials/Parts**

5/16-18 x 1 1/2 inch long hex  
head screw (16 required)  
5/16-inch flat washer  
(32 required)  
5/16-18 self-locking nut  
(16 required)

**Materials/Parts (Cont)**

Adapter assemblies (8 required)  
Sealant compound

**Personnel Required**

Two mechanics

**Equipment Condition**

Cargo tie-down assemblies  
removed.

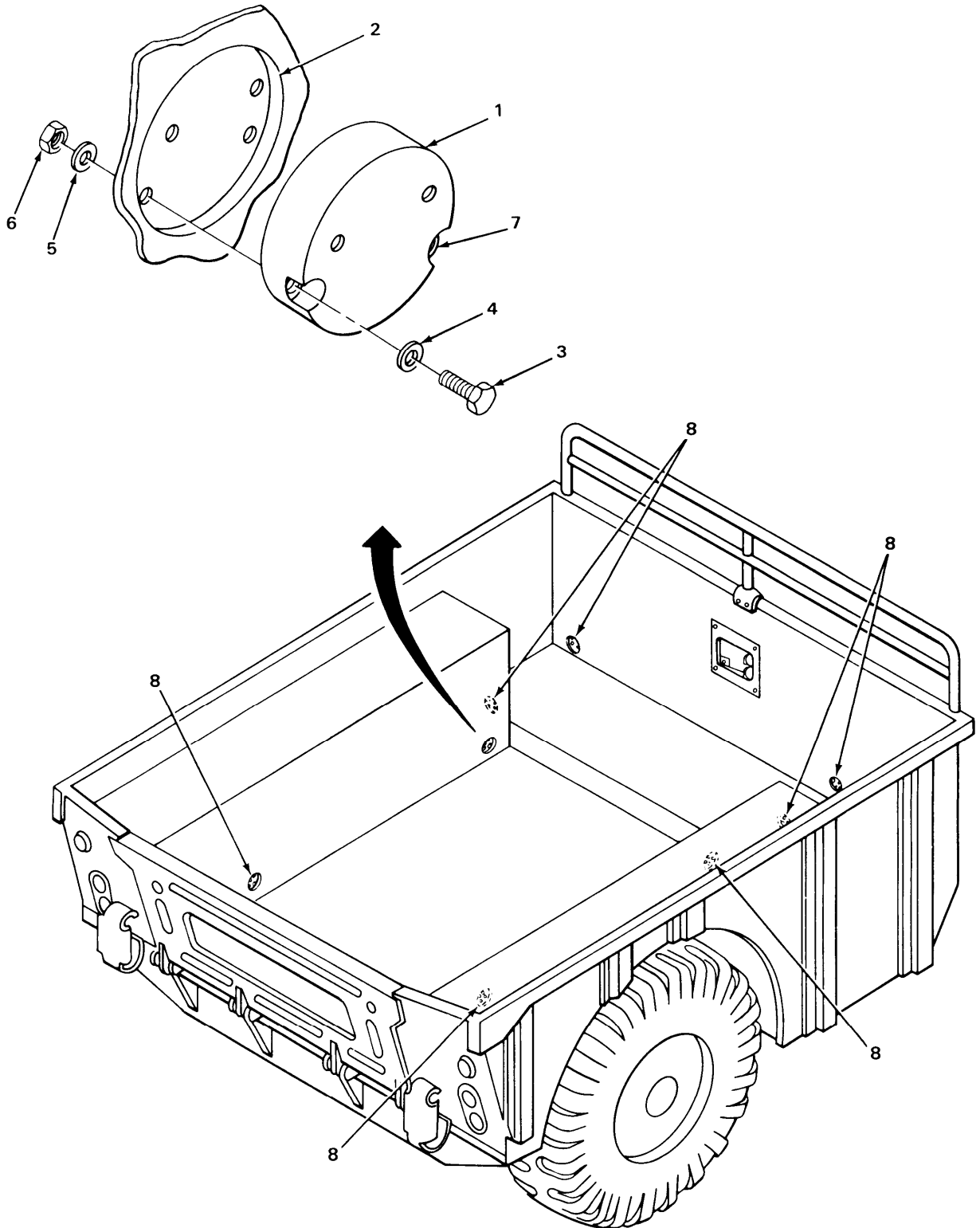
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed outside carrier. Grind or chisel any weld slag from tie-down sockets. Put sealant on back of adapters and mounting hardware before installing.

- |                        |   |   |
|------------------------|---|---|
| 1. Carrier inner walls | Adapter (1) and tie-down socket (2)                     | Place and align holes.<br><b>Arrows on adapter must be facing up. Put sealant on adapters.</b>              |
| 2.                     | Screw (3), flat washer (4), flat washer (5) and nut (6) | Using two 1/2-inch box wrenches, install.<br><b>There are two screws. Step 1 is typical for each screw.</b> |
| 3.                     | Hole (7)  | Do step 2 again.<br><b>There are eight adapters. Steps 1, 2 and 3 are typical for all eight adapters.</b>   |
| 4.                     | Remaining seven adapters (8)                            | Do steps 1, 2 and 3 again, for remaining seven chapters.  |

4-22. INSTALLING ADAPTER ASSEMBLIES. (CONT)



EL8KG024

**4-23. INSTALLING SUBMOUNT ASSEMBLY.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

- 1/2-inch box wrench  
(2 required)
- 9/16-inch box wrench  
(2 required)

**Materials/Parts**

- Submount
- 5/16-18 x 2 1/4 inch long hex  
head screw (8 required)
- 5/16-18 elastic stop nut  
(8 required)
- 5/16-inch flat washer  
(16 required)
- 1/16-inch shim (as required)
- 1/8-inch shim (as required)

**Personnel Required**

Two mechanics

**Equipment Condition**

Both seats lowered and  
adapter assemblies installed.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**WARNING**

A helper will be needed to lift and position submount on carrier floor.

**NOTE**

Loosen all hardware on angle brackets before placing submount into carrier.

1. Inside carrier, forward section	Submount (1)	Place inside carrier and aline with adapters.
2.	Bracket (2), shim (3) and adapter (4)	Aline holes. <b>Add shims as required.</b>

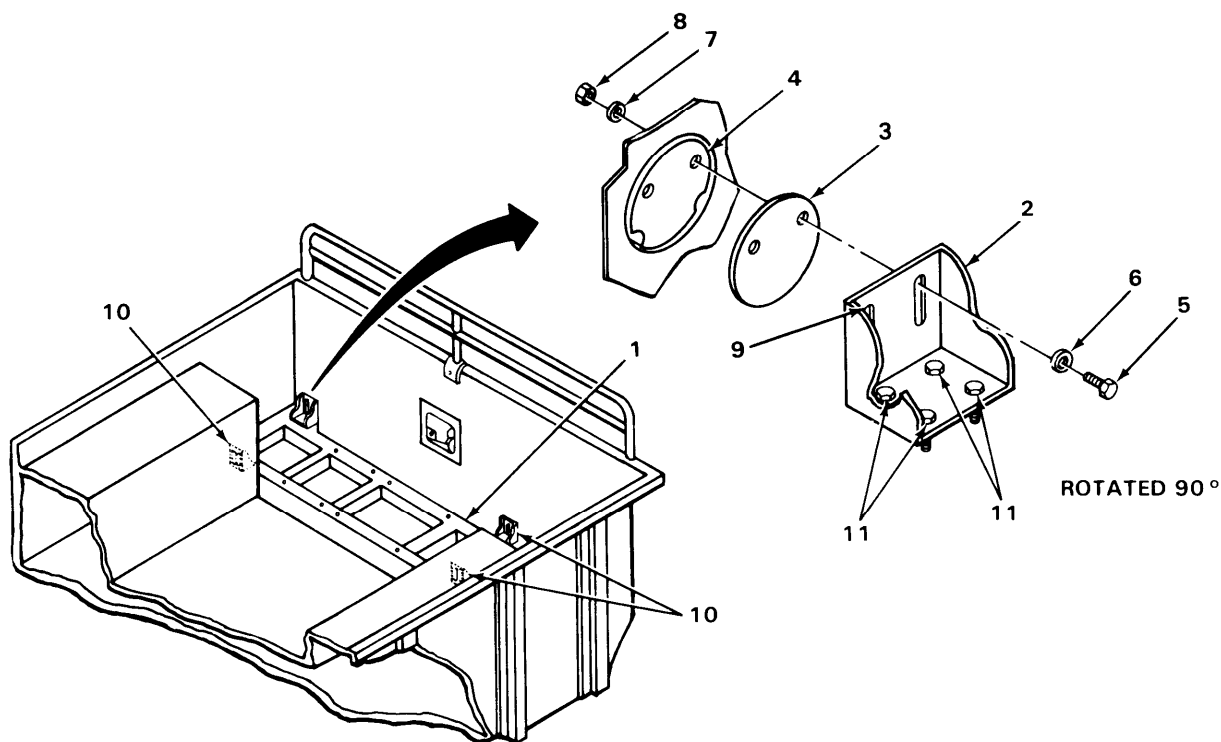
4-23. INSTALLING SUBMOUNT ASSEMBLY. (CONT)

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed outside carrier.

- |    |  |  |
|----|--|--|
| 3. | Screw (5),<br>flat washer (6),<br>flat washer (7)<br>and nut (8) | Install, handtighten.<br><b>There are two screws. Step 3 is<br/>typical for both screws.</b> |
| 4. | Hole (9)   | Do step 3 again.   |
| 5. | Brackets (10)  | Do steps 2, 3 and 4 again.<br><b>There are four brackets.</b>                                |
| 6. | Screws (5)   | Using two 1/2 inch box wrenches, tighten.  |
| 7. | Screws (11)  | Using two 9/16 inch box wrenches,<br>tighten.  |



EL8KG025

**4-24. INSTALLING RADIO MOUNT.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

1/2-inch box wrench

**Personnel Required**

Two mechanics

**Materials/Parts**

5/16-18 x 1 3/4 inch long hex head screw (8 required)  
 5/16-inch flat washer (8 required)  
 5/16-inch split lockwasher (8 required)  
 Radio mount

**Equipment Condition**

Submount installed.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

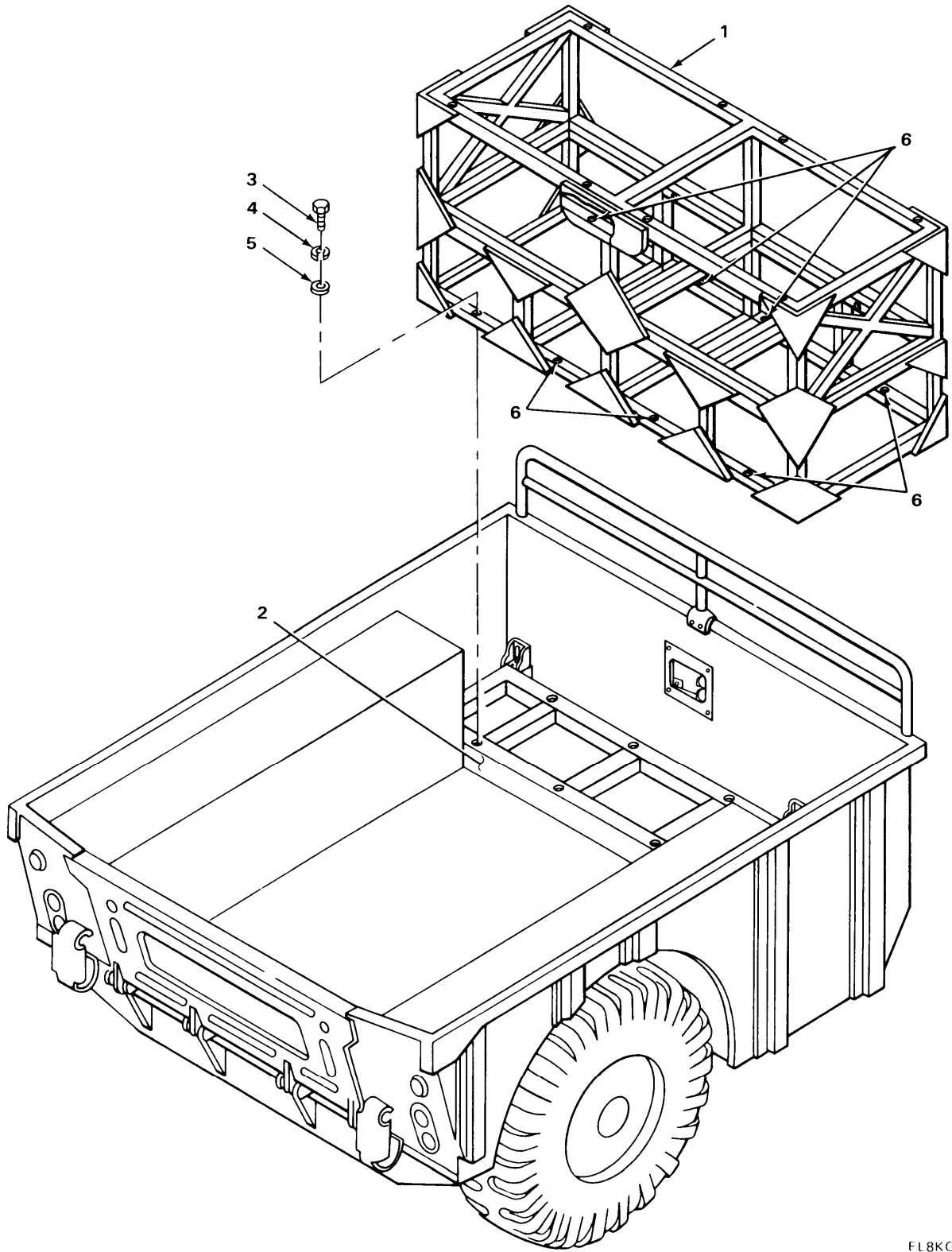
**WARNING**

A helper will be needed to lift radio mount.

1. Inside carrier, forward section	Radio mount (1) and submount (2)	Place and aline holes.
2.	Screw (3), lock-washer (4) and flat washer (5)	Install, handtighten. <b>There are eight screws. Step 2 is typical for all eight screws.</b>
3.	Holes (6)	Do step 2 again.
4.	Screws (3)	Using 1/2-inch box wrench, tighten.



4-24. INSTALLING RADIO MOUNT. (CONT)



FL8KG026

**4-25. PREPARATION FOR DRILLING FRONT REINFORCEMENT SUPPORT MOUNTING HOLES.**

This task covers:

Preparation

**INITIAL SETUP**

**Tools**

- White marking pencil
- 1/2-inch box wrench  
(2 required)
- 7/16-inch box wrench  
(2 required)

**Materials/Parts**

- Front reinforcement support  
Electronic equipment table
- 5/16-24 x 2 1/4 inch long hex  
head screw (4 required)
- 5/16-inch flat washer  
(8 required)
- 5/16-24 elastic stop nut  
(4 required)

**Materials/Parts (Cont)**

- 1/4-20 x 3 inch long hex head  
screw (2 required)
- 1/4-inch flat washer  
(4 required)
- 1/4-20 elastic stop nut  
(2 required)

**Personnel Required**

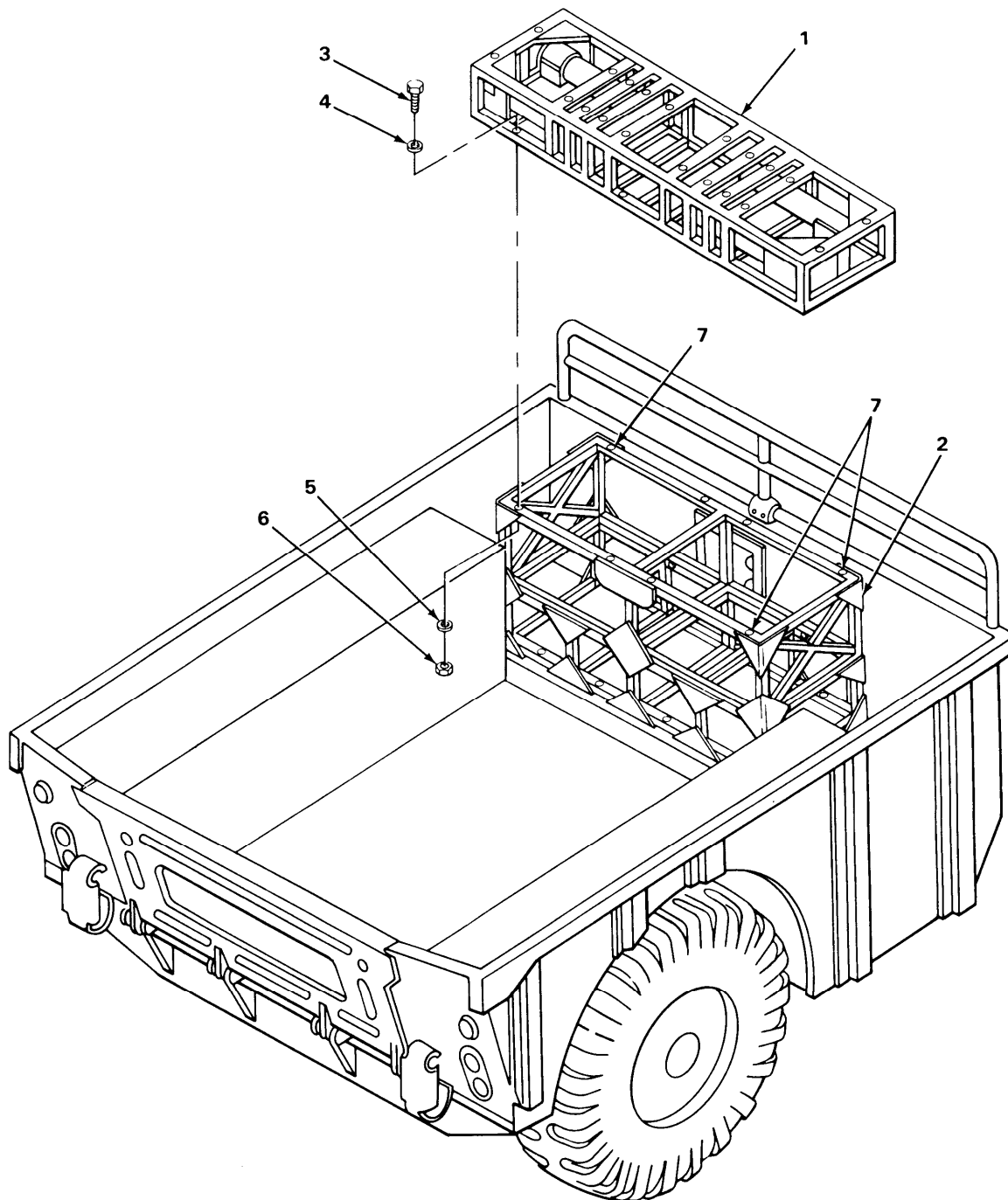
Two mechanics

**Equipment Condition**

Radio mount installed.

LOCATION	ITEM	ACTION REMARKS
1. Top of radio mount	Table (1) and radio mount (2)	Place table on top of radio mount and aline holes.
2.	Screw (3), flat washer (4), flat washer (5) and nut (6)	Install, handtighten. <b>There are four screws used at this time. Step 2 is typical for all four screws.</b>
3.	Screw holes (7)	Do step 2 again.
4.	Screws (3)	Using two 1/2-inch box wrenches, tighten.

4-25. PREPARATION FOR DRILLING FRONT REINFORCEMENT SUPPORT MOUNTING HOLES. (CONT)

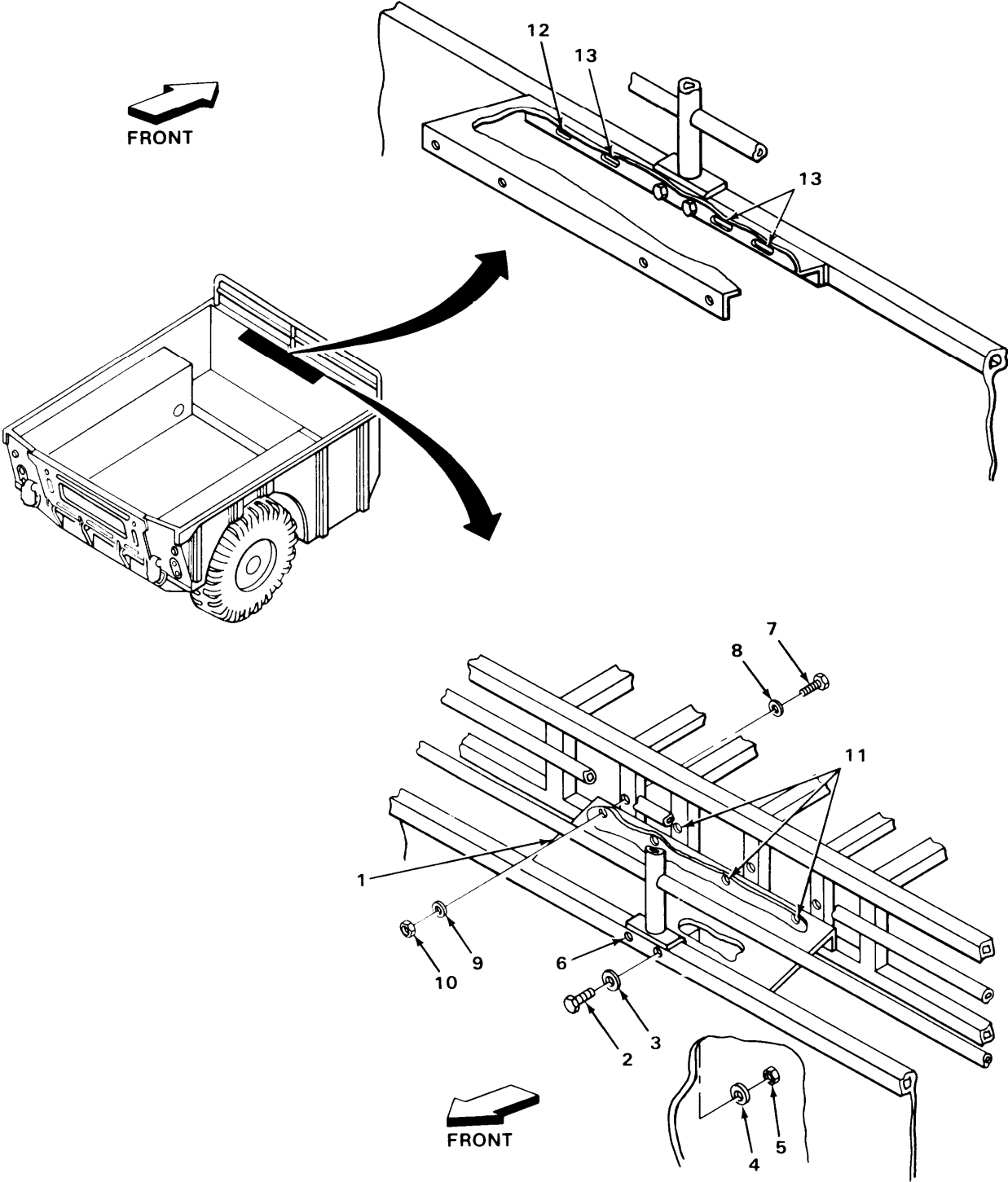


EL8KG027

## 4-25. PREPARATION FOR DRILLING FRONT REINFORCEMENT SUPPORT MOUNTING HOLES. (CONT)

	LOCATION	ITEM	ACTION REMARKS
5.	Forward carrier wall	Reinforcement support (1)	Place support between forward wall and table and aline holes.
6.		Screws (2), flat washer (3), flat washer (4) and nut (5)	Install, handtighten. <b>There are two screws. Step 6 is typical for both screws.</b>
7.		Screw hole (6)	Do step 6 again.
8.		Screw (7), flat washer (8), flat washer (9) and nut (10)	Install, handtighten. <b>There are four screws. Step 8 is typical for all four screws.</b>
9.		Screw holes (11)	Do step 8 again.
10.		Screws (2)	Using two 7/16-inch box wrenches, tighten.
11.		Screws (7)	Using two 1/2-inch box wrenches, tighten.
12.	Under reinforcement support	Mark (12)	Using pencil, mark. <b>Mark in center of slotted holes There are four holes. Step 12 is typical for all four holes.</b>
13.		Mark (13)	Do step 12 again.

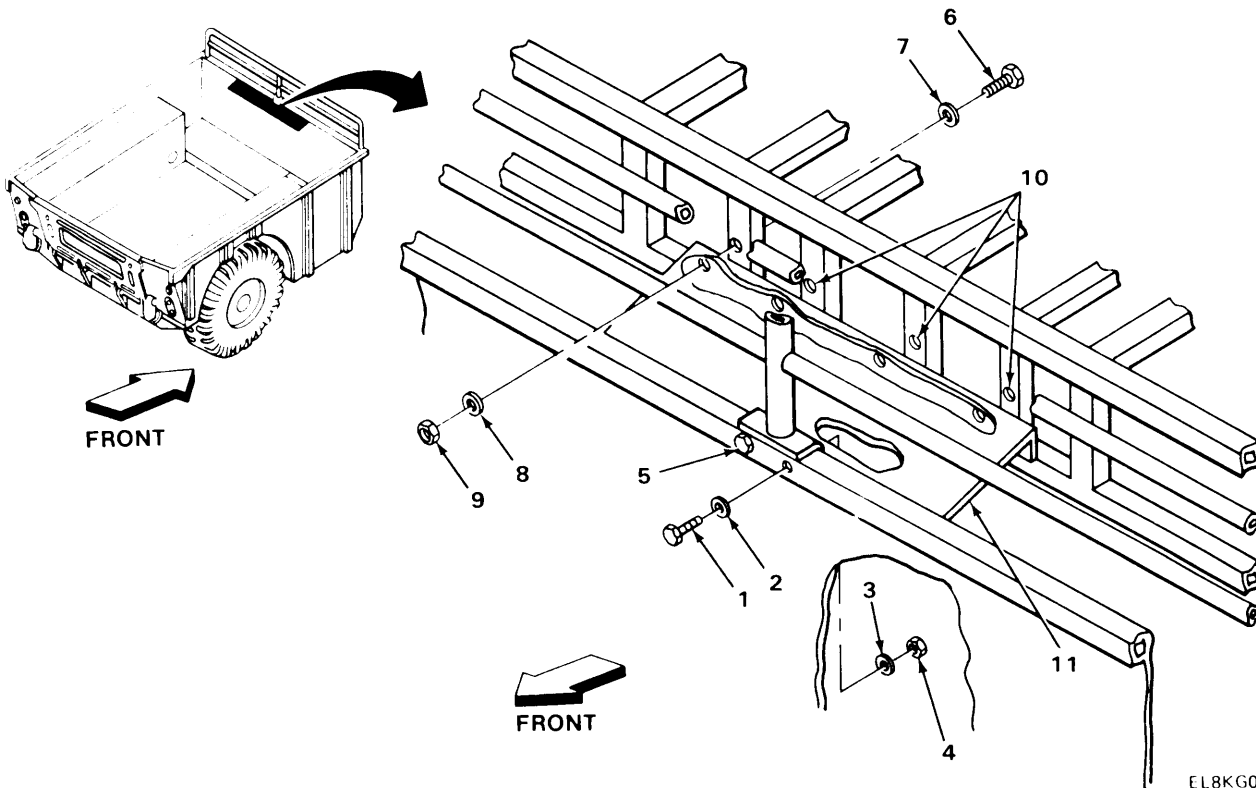
4-25. PREPARATION FOR DRILLING FRONT REINFORCEMENT SUPPORT MOUNTING HOLES. (CONT)



EL8KG028

4.25. PREPARATION FOR DRILLING FRONT REINFORCEMENT SUPPORT MOUNTING HOLES. (CONT)

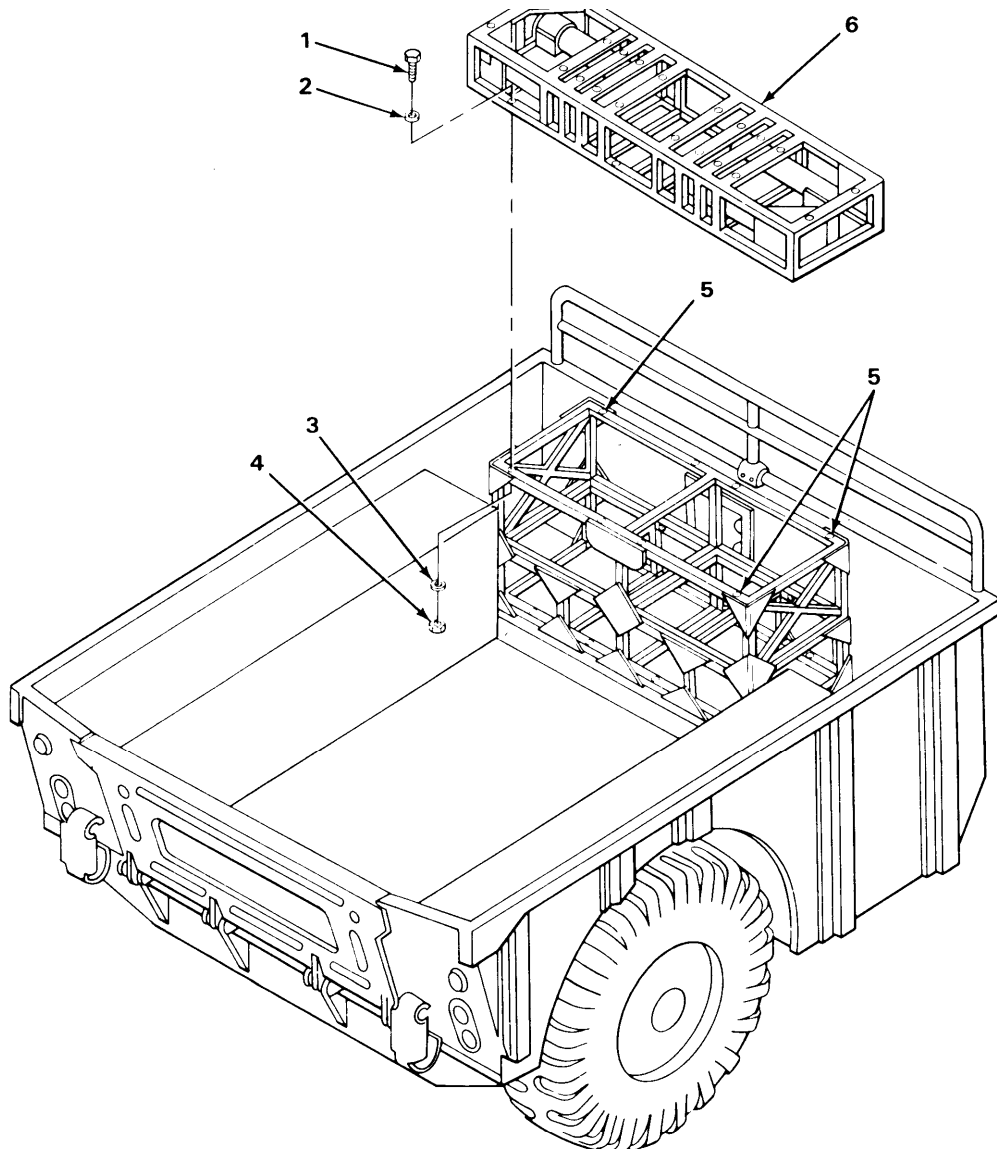
LOCATION	ITEM	ACTION REMARKS
14. Front reinforcement support	Screw (1), flat washer (2), flat washer (3) and nut (4)	Using two 7/16-inch box wrenches, remove. <b>There are two screws. Step 14 is typical for both screws.</b>
15.	Screws (5)	Do step 14 again.
16.	Screw (6), flat washer (7), flat washer (8) and nut (9)	Using two 1/2-inch box wrenches, remove. <b>There are four screws. Step 16 is typical for all four screws.</b>
17.	Screws (10)	Do step 16 again.
18. Forward carrier wall	Reinforcement support (11)	Remove.



EL8KG029

4-25. PREPARATION FOR DRILLING FRONT REINFORCEMENT SUPPORT MOUNTING HOLES. (CONT)

LOCATION	ITEM	ACTION REMARKS
19. Electronic equipment table	Screw (1), flat washer (2), flat washer (3) and nut (4)	Using two 1/2-inch box wrenches, remove. <b>There are four screws. Step 19 is typical for all four screws.</b>
20.	Screws (5)	Do step 19 again.
21.	Electronic equipment table (6)	Remove.



**4-26. CENTER PUNCHING AND DRILLING FRONT REINFORCEMENT SUPPORT MOUNTING HOLES.**

---

This task covers:

1. Center punching
  2. Pilot drilling
  3. Final drilling
- 

**INITIAL SETUP**

**Tools**

Electric drill  
 1/8-inch drill bit  
 9/32-inch drill bit  
 Center punch  
 Hammer

**Personnel Required**

One mechanic

**Equipment Condition**

Areas located and marked.

**Materials/Parts**

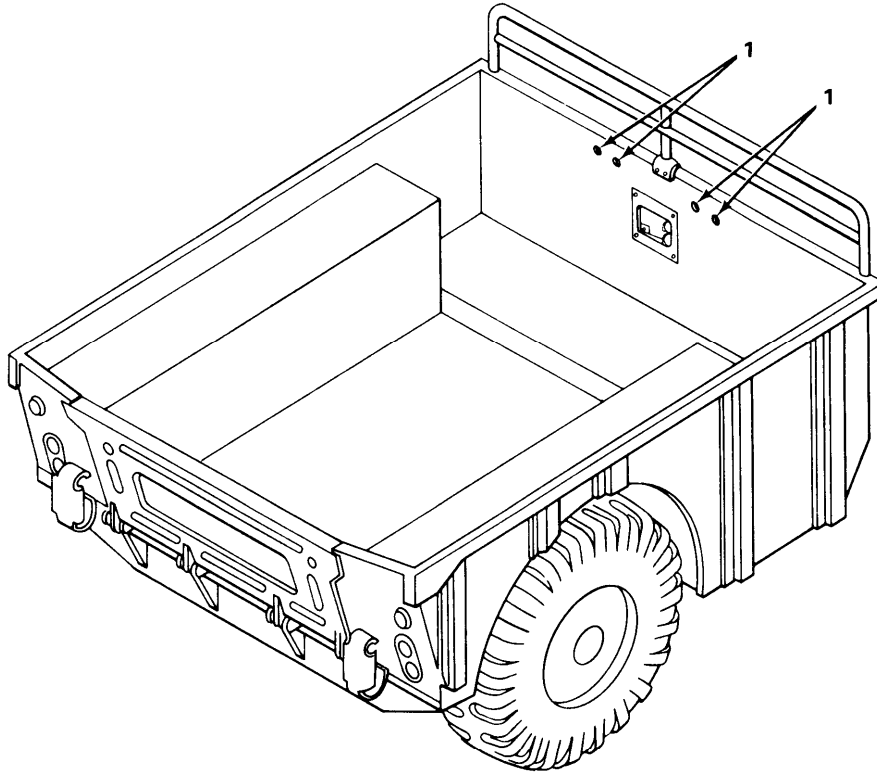
None

---

LOCATION	ITEM	ACTION REMARKS
<b>CENTER PUNCHING</b>		
Forward carrier wall	Marks (1)	Using hammer and center punch, punch.
<b>PILOT DRILLING</b>		
Forard carrier wall	Marks (1)	Using electric drill and 1/8-inch drill bit, drill.
<b>FINAL DRILLING</b>		
Forward carrier wal l	Marks (1)	Using electric drill and 9/32-inch drill bit, drill.



4-26. CENTER PUNCHING AND DRILLING FRONT REINFORCEMENT SUPPORT MOUNTING HOLES. (CONT)



EL8KG031

**4-27. INSTALLING ELECTRONIC EQUIPMENT TABLE.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

1/2-inch box end wrench  
(2 required)

**Materials/Parts**

Electronic equipment table  
5/16-24 x 2 1/4 inch long hex  
head screw (8 required)  
5/16-inch flat washer  
(16 required)  
5/16-24 elastic stop nut  
(8 required)

**Personnel Required**

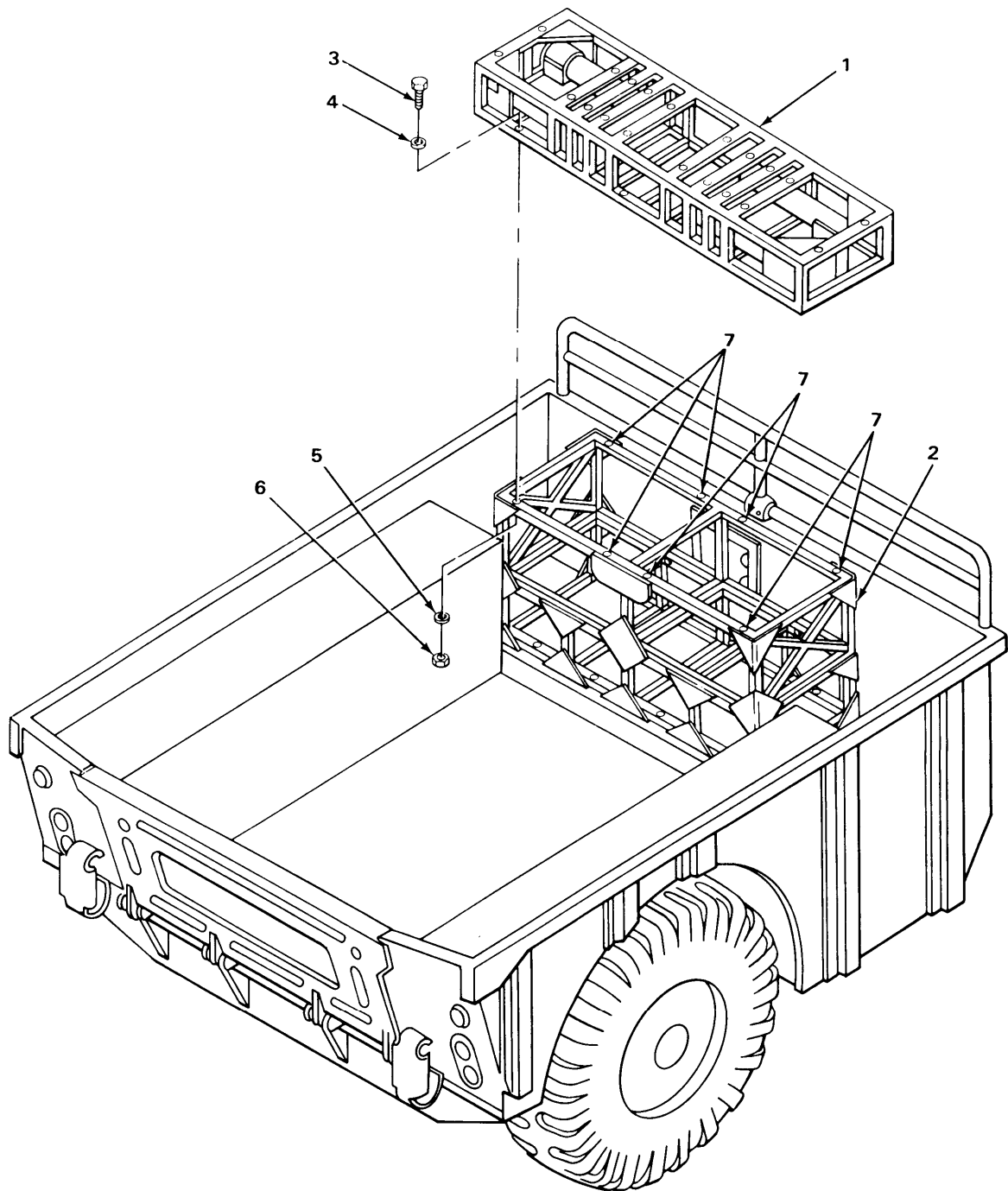
Two mechanics

**Equipment Condition**

Holes drilled for front  
reinforcement support.

LOCATION	ITEM	ACTION REMARKS
1. Top of radio mount	Table (1) and radio mount (2)	Place table on top of radio mount and aline holes.
2.	Screw (3), flat washer (4), flat washer (5) and nut (6)	Install, handtighten. <b>There are eight screws. Step 2 is typical for all eight screws.</b>
3.	Screw holes (7)	Do step 2 again.
4.	Screws (3)	Using two 1/2-inch box wrenches, tighten.

4-27. INSTALLING ELECTRONIC EQUIPMENT TABLE. (CONT)



**4-28. INSTALLING FRONT REINFORCEMENT SUPPORT.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

- 7/16-inch box wrench  
(2 required)
- 1/2-inch box wrench  
(2 required)

**Materials/Parts**

- Front reinforcement support
- 1/4-20 x 3 inch long hex head  
screw (6 required)
- 1/4-20 elastic stop nut  
(6 required)
- 1/4-inch flat washer  
(12 required)
- 1/4-inch split lockwasher

**Materials/Parts (Cont)**

- 5/16-18 x 1 1/2 inch long hex  
head screw (4 required)
- 5/16-18 elastic stop nut  
(4 required)
- 5/16-inch flat washer  
(8 required)

**Personnel Required**

**One mechanic**

**Equipment Condition**

Holes predrilled and electronic  
equipment table installed.

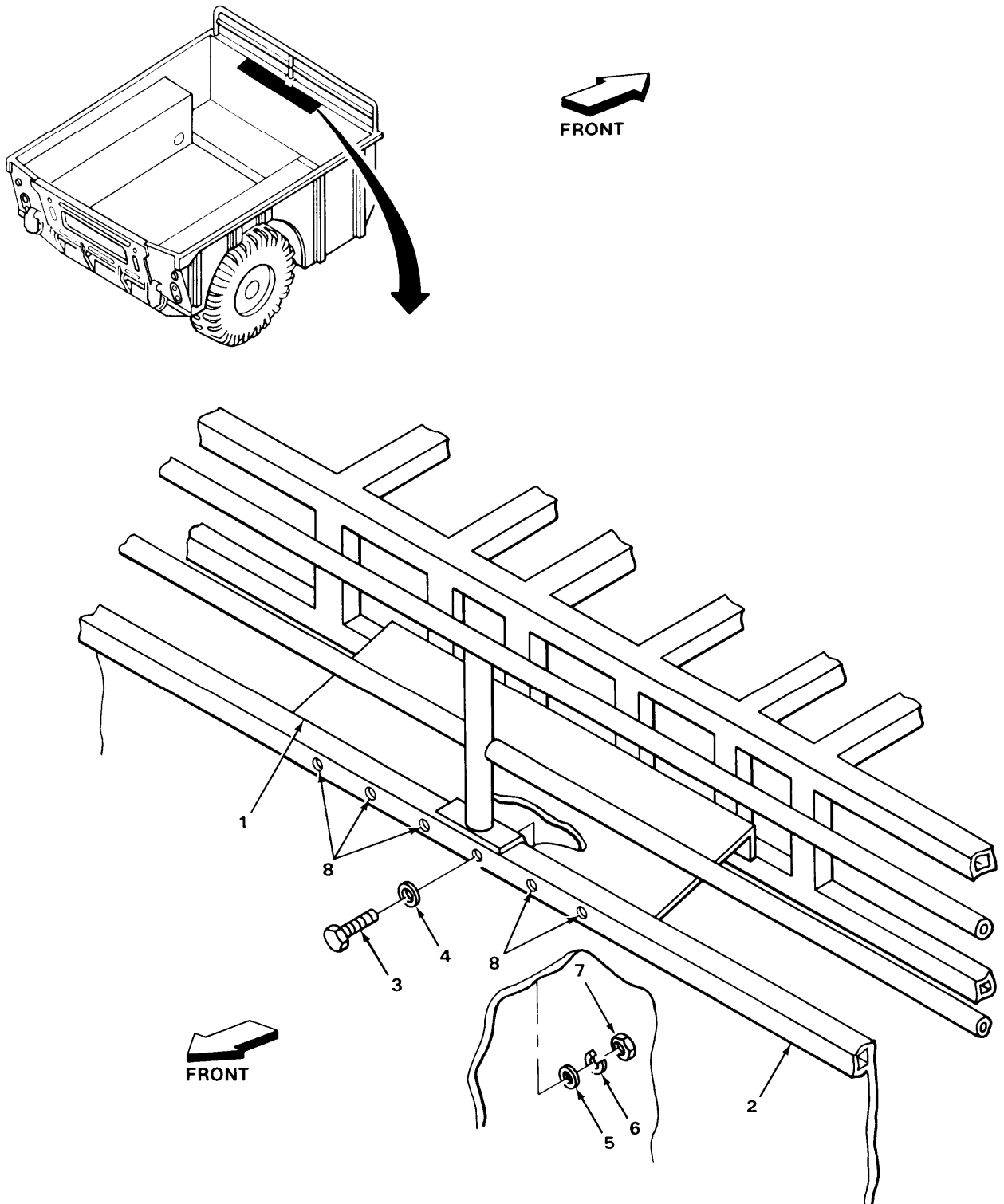
LOCATION	ITEM	ACTION REMARKS
1. Between electronic equipment table and forward wall	Support (1) and forward wall (2)	Install and aline holes.

**NOTE**

**All screws must face center of support**

2.	Screw (3), flat washer (4), flat washer (5), lockwasher (6) and nut (7)	Install, handtighten. <b>There are six screws. Step 2 is typical for all six screws.</b>
3.	Screw hole (8)	Do step 2 again.
4.	Screws (3)	Using two 7/16-inch box wrenches, tighten.

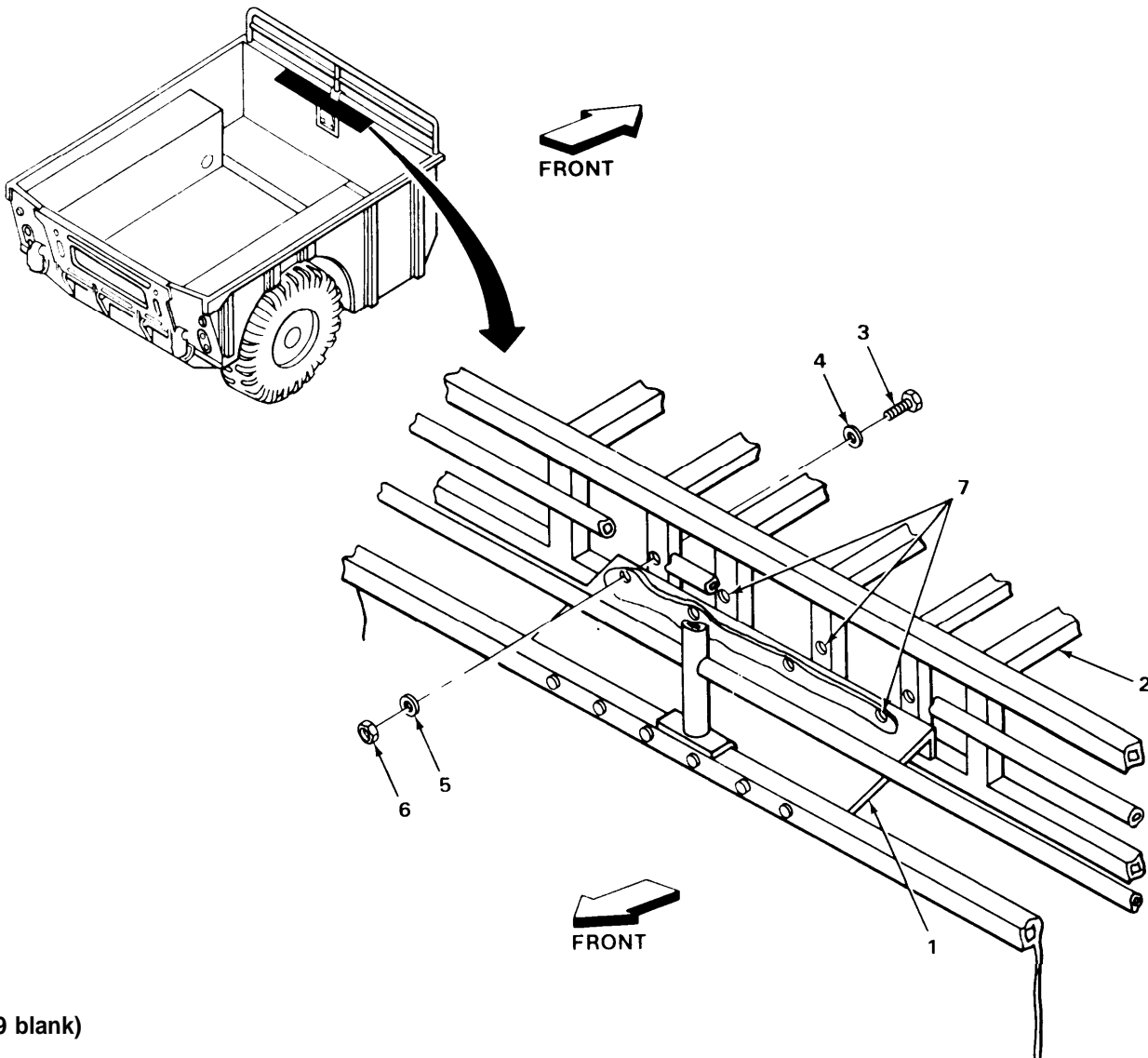
4-28. INTALLING FRONT REINFORCEMENT SUPPORT. (CONT)



EL8KG033

4-28. INSTALLING FRONT REINFORCEMENT SUPPORT. (CONT)

LOCATION	ITEM	ACTION REMARKS
5. Between electronic equipment table and forward wall	Support (1) and table (2)	Aline holes
6.	Screw (3), flat washer (4), flat washer (5) and nut (6)	Install, handtighten. <b>There are four screws. Step 5 is typical for all four screws.</b>
7.	Screw holes (7)	Do step 5 again.
8.	Screws (3)	Using two 1/2-inch box wrenches, tighten.





**4-29. INSTALLING KEY GENERATOR RACK.**

This task covers:

Installation

INITIAL SETUP

Tools

1/2-inch box wrench  
(2 required)

Materials/Parts

Key generator rack  
5/16-24 x 2 1/4 inch long  
screw (4 required)  
5/16-inch flat washer  
(8 required)  
5/16-24 elastic stop nut  
(4 required)

Personnel Required

One mechanic

Equipment Condition

Electronic equipment table  
in place.

ACTION  
REMARKS

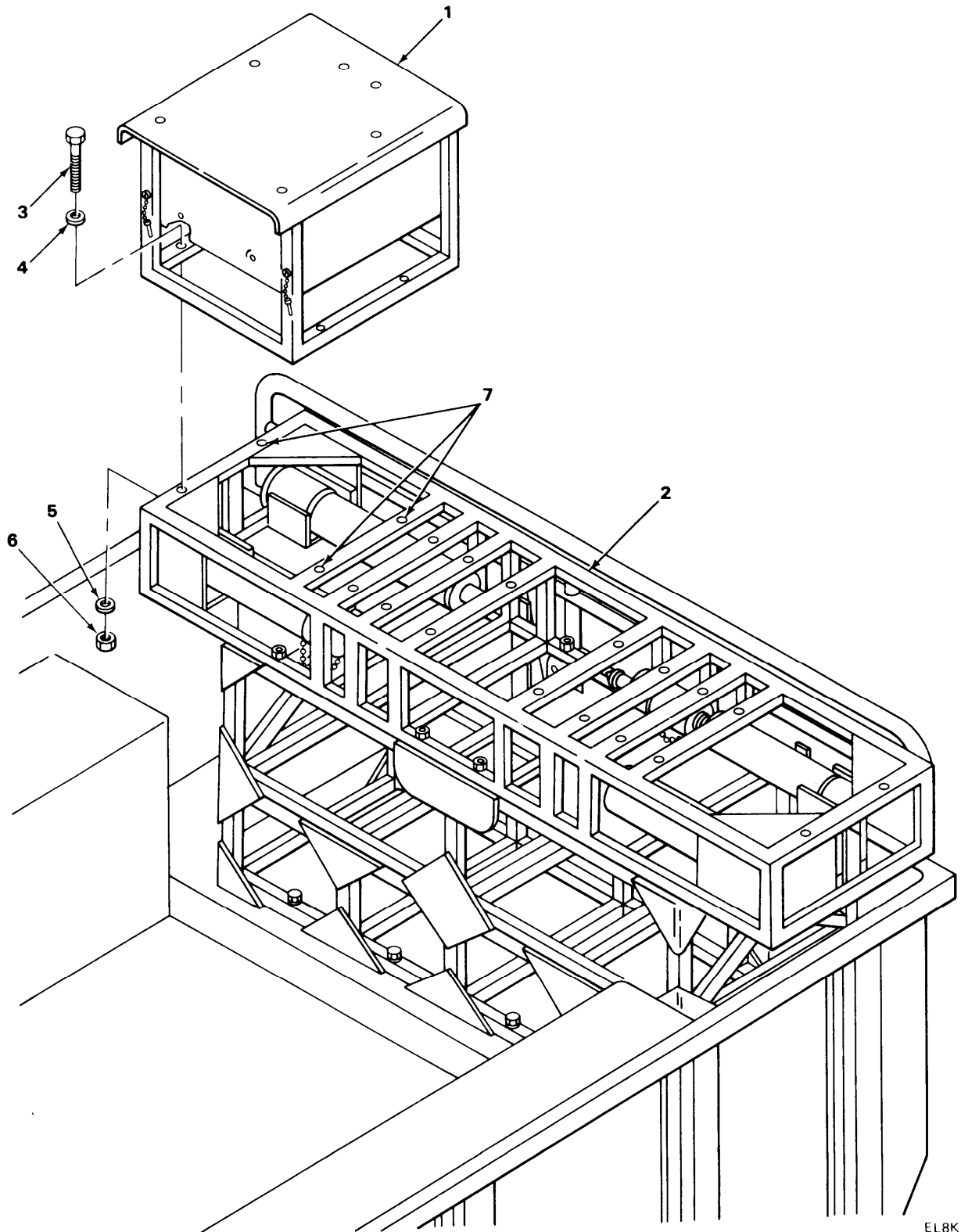
LOCATION

ITEM

- | LOCATION  | ITEM   | ACTION<br>REMARKS  |
|---|--|--|
| 1. Top of electronic equipment table in roadside position | Key generator rack (1) and electronic equipment table (2)            | Place key generator rack on top of electronic equipment table and align mounting holes.      |
| 2.  | Screw (3), flat washer (4), flat washer (5) and elastic stop nut (6) | Install, handtighten.<br><b>There are four screws. Step 2 is typical of all four screws.</b> |
| 3.  | Holes (7)  | Do step 2 again.   |
| 4.  | Screws (3) and elastic stop nuts (6)                                 | Using two 1/2-inch box wrenches, tighten.  |



4-29. INSTALLING KEY GENERATOR RACK. (CONT)



EL8KG035

**4-30. INSTALLING MESSAGE ENTRY GROUP RACK.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

1/2-inch box wrench  
(2 required)

**Materials/Parts**

Message entry group rack  
5/16-24 x 2 1/2 inch long  
screw (4 required)  
5/16-inch flat washer  
(3 required)  
5/16-inch elastic stop nut  
(4 required)

**Personnel Required**

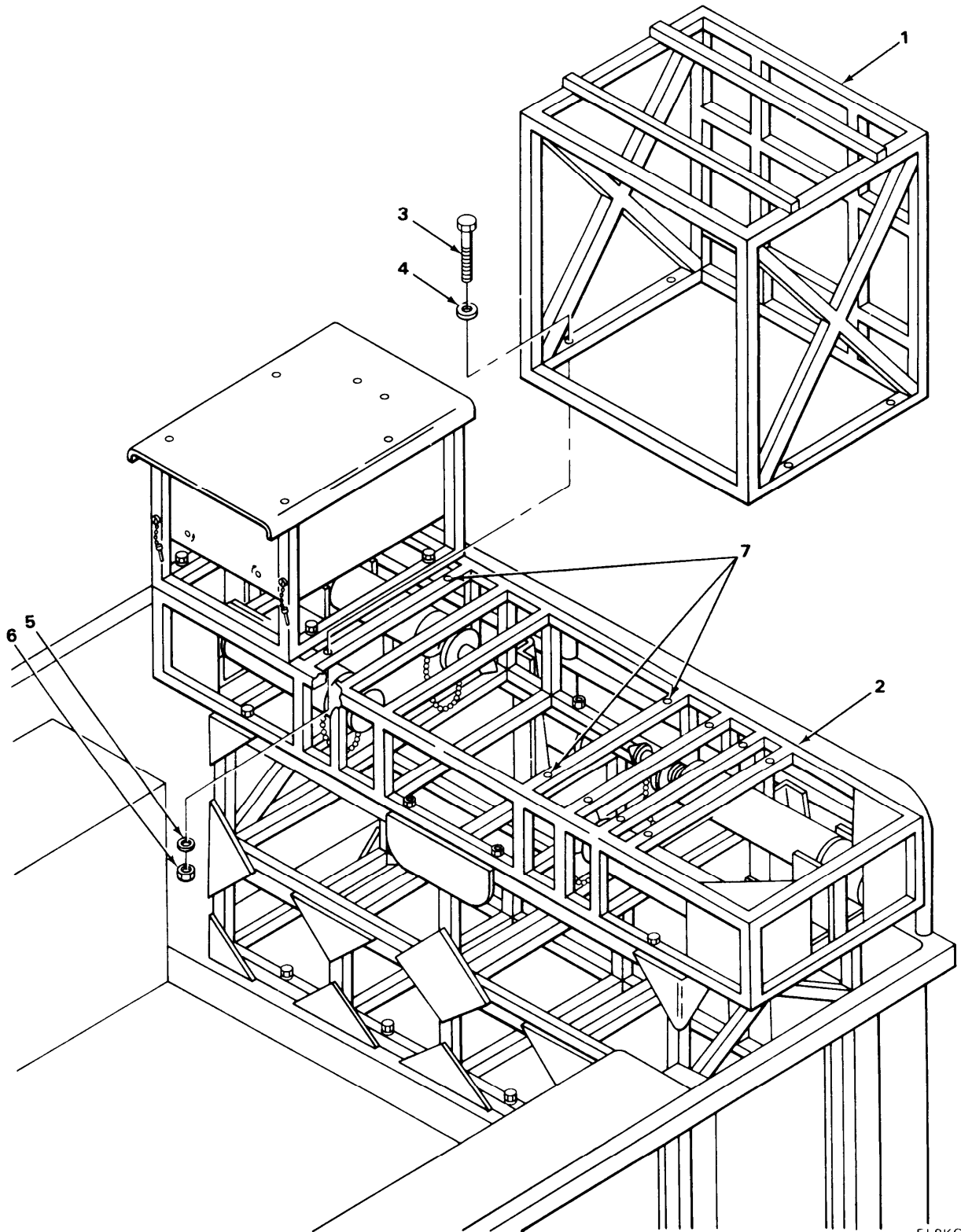
One mechanic

**Equipment Condition**

Electronic equipment table  
in place.

LOCATION	ITEM	ACTION REMARKS
1. Top of electronic equipment table in center position	Message entry group rack (1) and electronic equipment table (2)	Place message entry group rack on top of electronic equipment table and aline mounting holes.
2.	Screw (3), flat washer (4), flat washer (5) and elastic stop nut (6)	Install, handtighten. <b>There are four screws. Step 2 is typical for all four screws.</b>
3.	Holes (7)	Do step 2 again.
4.	Screws (3) and elastic stop nuts (6)	Using two 1/2-inch box wrenches, tighten.

4-30. INSTALLING MESSAGE ENTRY GROUP RACK. (CONT)



EL 8KG036

**4-31. INSTALLING ELECTRONIC LINE PRINTER RACK.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

1/2-inch box wrench  
(2 required)

**Materials/Parts**

Electronic line printer rack  
5/16-24 x 2 1/4 inch long  
screw (4 required)  
5/16-inch flat washer  
(8 required)  
5/16-inch elastic stop nut  
(4 required)

**Personnel Required**

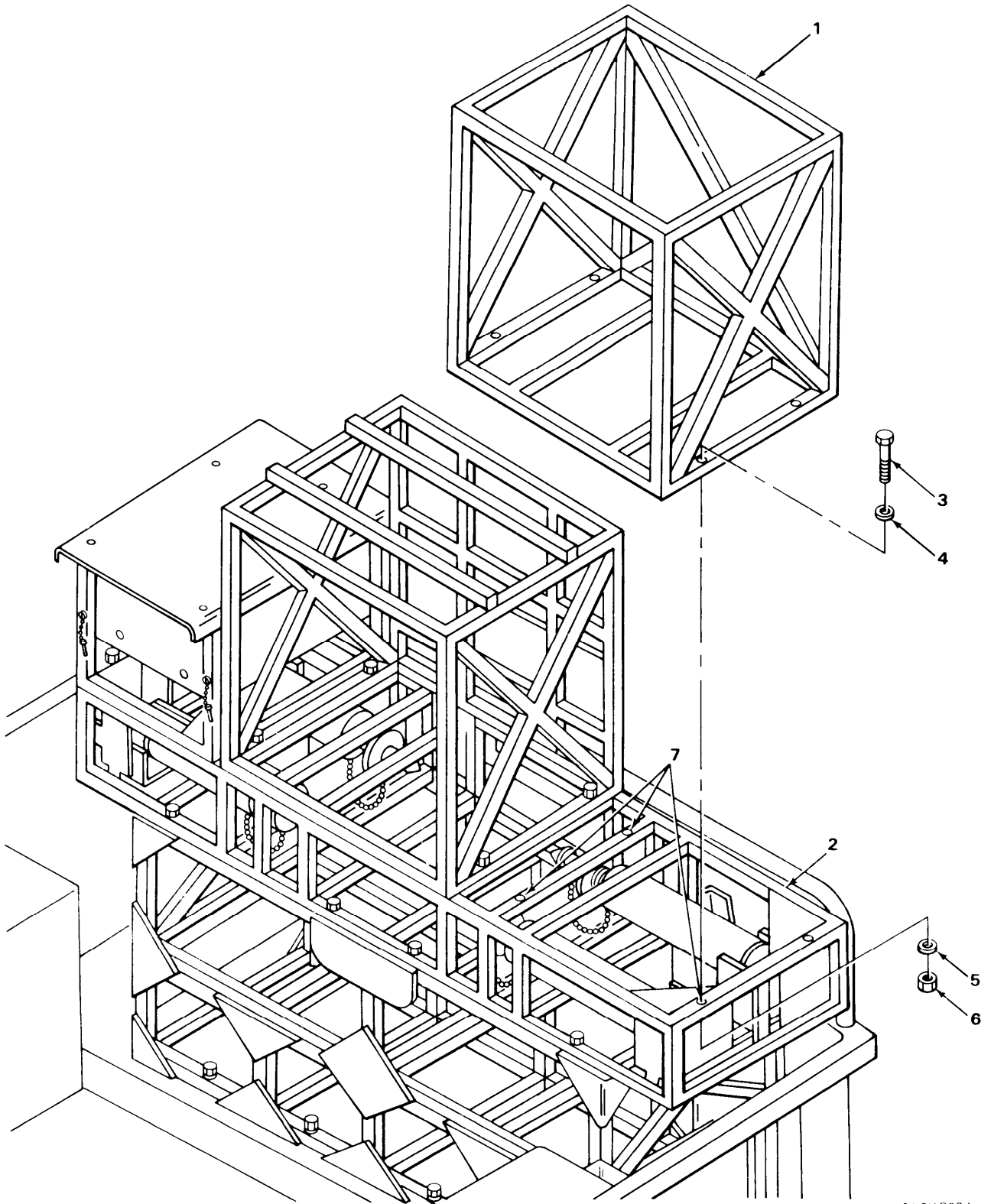
One mechanic

**Equipment Condition**

Electronic equipment table  
in place.

	LOCATION	ITEM	ACTION REMARKS
1.	Top of electronic equipment table (2) in curbside position	Electronic line printer rack (1) and electronic equipment table (2)	Place electronic line printer rack on top of electronic equipment table and align mounting holes.
2.		Screw (3), flat washer (4), flat washer (5) and elastic stop nut (6)	Install, handtighten. <b>There are four screws. Step 2 is typical for all four screws.</b>
3.		Holes (7)	Do step 2 again.
4.		Screws (3) and elastic stop nuts (6)	Using two 1/2-inch box wrenches, tighten.

4-31. INSTALLING ELECTRONIC LINE PRINTER RACK. (CONT)



EL8KG037

**4-32. INSTALLING ELECTRONIC LINE PRINTER SLIDING TRAY.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

9/16-inch box wrench

**Personnel Required**

One mechanic

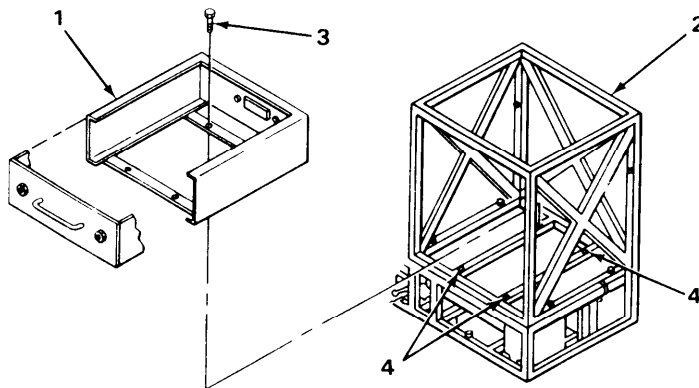
**Materials/Parts**

ELP sliding tray  
 3/8-24 x 7/8 inch long hex head  
 screw (4 required)

**Equipment Condition**

ELP rack installed.

LOCATION	ITEM	ACTION REMARKS
1. Inside ELP rack	ELP tray (1) and ELP rack (2)	Place tray inside rack and align holes.
2.	Screw (3)	Install, handtighten. <b>There are four screws. Step 2 is typical for all four screws.</b>
3.	Screws (4)	Do step 2 again.
	Screws (3)	Using 9/16-inch box wrench, tighten.



EL8KG038



**4-3. INSTALLING 4-INCH GROUND STRAPS.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

Adjustable pliers

**Personnel Required**

One mechanic

**Materials/Parts**

4-inch ground strap  
(7 required)  
IT #10 lockwasher (28 required)  
Brass wingnut (14 required)

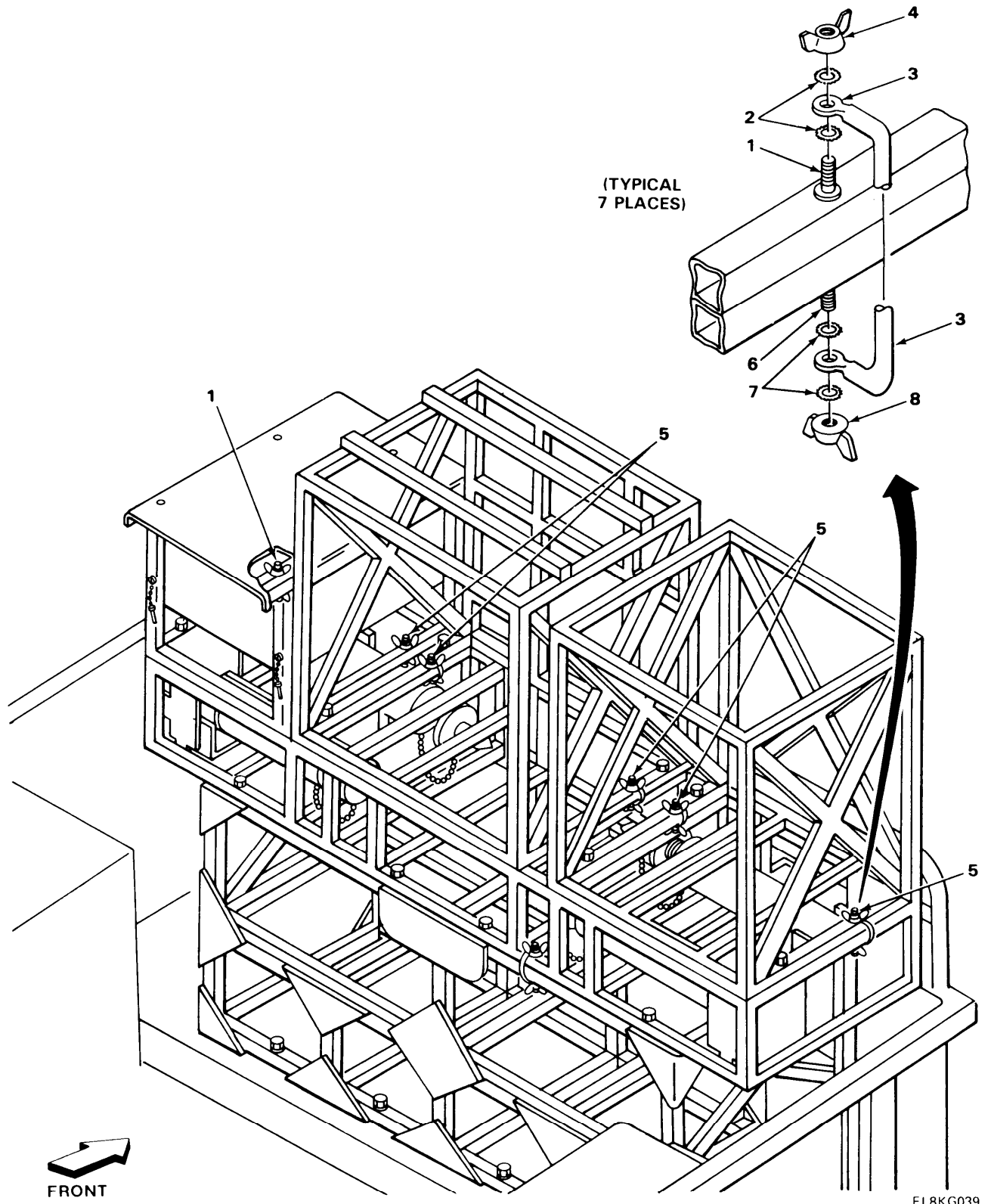
**Equipment Condition**

Tacfire racks installed.

LOCATION	ITEM	ACTION REMARKS
1. Upper studs, electronic equipment rack and electronic equipment table	Ground strap stud (1), lockwasher (2), ground strap (3) and wingnut (4)	Using pliers, install. <b>There are seven ground strap studs. Step 1 is typical for all seven studs.</b>
2.	Ground strap studs (5)	Do step 1 again.
3. Lower studs, electronic equipment rack and electronic equipment table	Ground strap studs (6), lockwashers (7), ground strap (3) and wingnut (8)	Do steps 1 and 2 again.



4-33. INSTALLING 4-INCH GROUND STRAPS. (CONT)



**4-34. INSTALLING RADIO POWER CABLES TO RADIOS.**

This task covers:

Installation

**INITIAL SETUP**

Tools

None

Personnel Required

One mechanic

Materials/Parts

Cable Assembly, SP, CX-13050  
 Cable Assembly, SP, CX-13052  
 (2 required)  
 Cable Assembly, SP, CX-4721  
 Radio Mounting Base, MT-1029  
 (2 required)  
 Radio Mounting Base, MT-1898

Equipment Condition

Terminal plugs removed from  
 radio mounting bases.

LOCATION	ITEM	ACTION REMARKS
1. Underside rear of roadside MT-1029 radio mounting base	Cable CX-13052 (1) and J21 (2)	Connect. <b>To complete installation, see paragraph 4-37.</b>
2.	Cable CX-4721 (3) and J22 (4)	Connect. <b>For comsec use only.</b>
3.	Cable CX-13050 (5) and J23 (6)	Connect.
4. Underside rear of curbside MT-1029 radio mounting base	Cable CX-13050 (5) and J21 (7)	Route and connect.
5.	Cable CX-4721 (8) and J22 (9)	Connect. <b>For comsec use only.</b>
6.	Cable CX-13052 (10) and J23 (11)	Connect.

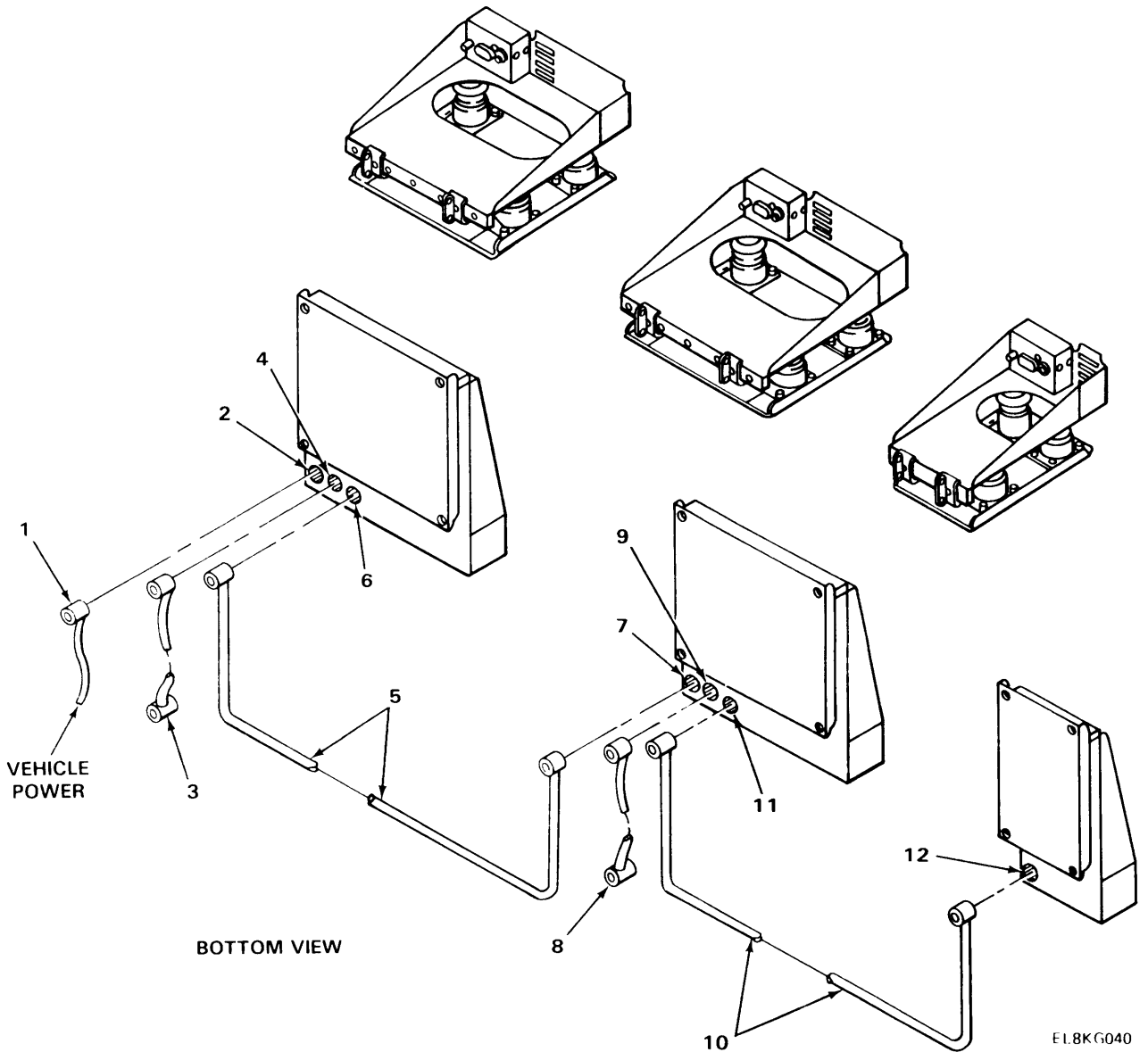
4-34. INSTALLING RADIO POWER CABLES TO RADIOS. (CONT)

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

7. Underside rear of curbside MT-1898 radio mounting base

Cable CX-13052 (10) and J21 (12)

Connect.



E1.8KG040

**4-35. INSTALLING RADIO MOUNTING BASES.**

This task covers:

Installation

INITIAL SETUP

Tools

1/2-inch box wrench

Personnel Required

One mechanic

Materials/Parts

5/16-18 hex nuts (14 required)  
5/16-inch ET lockwashers  
(14 required)

Equipment Condition

Power cables installed on  
mounting bases.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

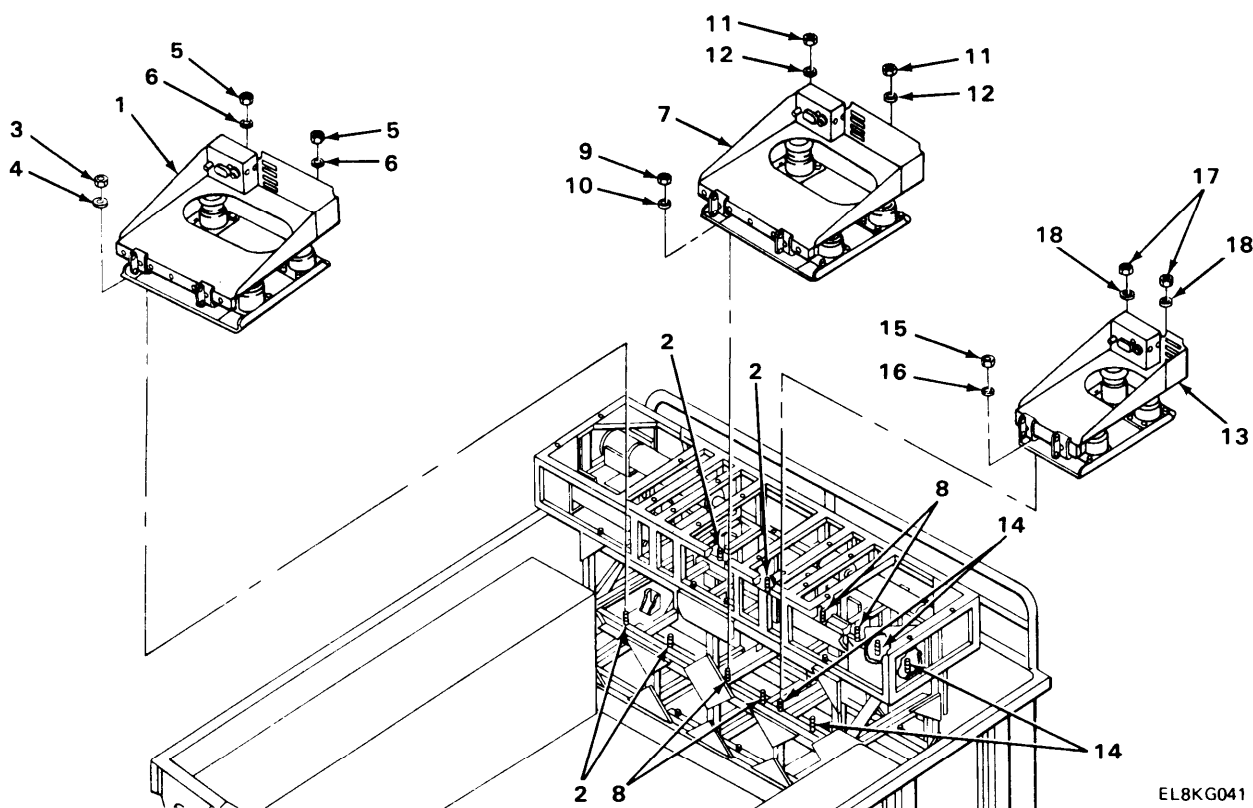
**NOTE**

Install radio mounting bases with latches facing out.

1. Roadside position of radio mount	Radio mounting base (1) and studs (2)	Place on studs.
2.	Nut (3) and ET lockwasher (4)	Using 1/2-inch box wrench, install. <b>There are five nuts. Step 2 is typical for all five nuts.</b>
3.	Nuts (5) and ET lockwashers (6)	Do step 2 again.
4. Curbside position of radio mount	Radio mounting base (7) and studs (8)	Place on to studs.
5.	Nut (9) and ET lockwasher (10)	Using 1/2-inch box wrench, install. <b>There are five nuts. Step 5 is typical for all five nuts.</b>

4-35. INSTALLING RADIO MOUNTING BASES. (CONT)

LOCATION	ITEM	ACTION REMARKS
6. Curbside position of radio mount	Nuts (11) and ET lockwashers (12)	Do step 5 again.
7. Curbside corner position of radio mount	Radio mounting base (13) and studs (14)	Place on to studs.
8.	Nut (15) and ET lockwasher (16)	Using 1/2-inch box wrench, install. <b>There are four nuts. Step 8 is typical for all four nuts.</b>
9.	Nuts (17) and ET lockwasher (18)	Do step 8 again.



EL8KG041

**4-36. INSTALLING TACFIRE COMPONENTS.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

Flat-tip screwdriver  
 Cross-tip screwdriver

**Materials/Parts**

Message entry group  
 Electronic line printer  
 Key generator  
 5/16-24 x 1/2 inch long flat  
 head screw (4 required)

**Personnel Required**

Two mechanics

**Equipment Condition**

Tacfire racks installed.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

Carefully slide tacfire components into place engaging shear pins on rear of racks. This is typical for steps 1 and 2.

1. Electronic line printer rack	Electronic line printer (1)	Install.
---------------------------------	-----------------------------	----------

**NOTE**

ELP is mounted to a sliding tray. See paragraph 4-32 for installation of tray.

2. Message entry group rack	Message entry group (2)	Install.
3. Key generator rack	Key generator (3) and KG tray (4)	Place key generator on tray and aline holes.
4.	Screw (5)	Install, handtighten. <b>There are four screws. Step 4 is typical for all four screws.</b>

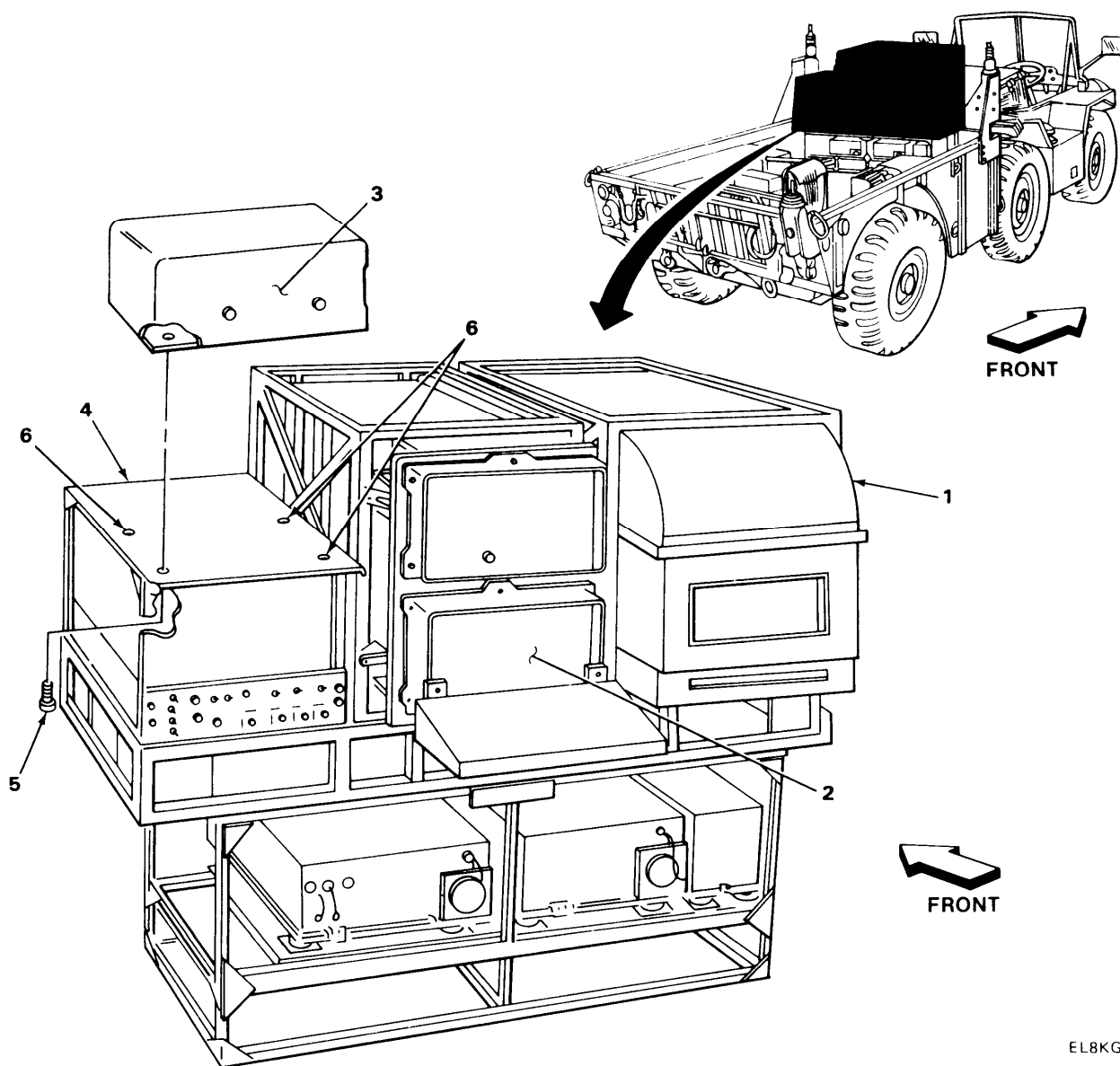
4-36. INSTALLING TACFIRE COMPONENTS. (CONT)

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

5.	Screw holes (6)	Do step 4 again.
----	-----------------	------------------

**NOTE**

For completion of tacfire component installation, refer to TM 11-7440-251-10 and TM 11-7440-253-10-1.



EL8KG042

**4-37. INSTALLING RADIO AND POWER DISTRIBUTION BOX POWER CABLES TO VEHICLE POWER.**

This task covers:

Installation

INITIAL SETUP

Tools

None

Materials/Parts

Cable Assembly, Pwr, Elect,  
10 ft

Personnel Required

One mechanic

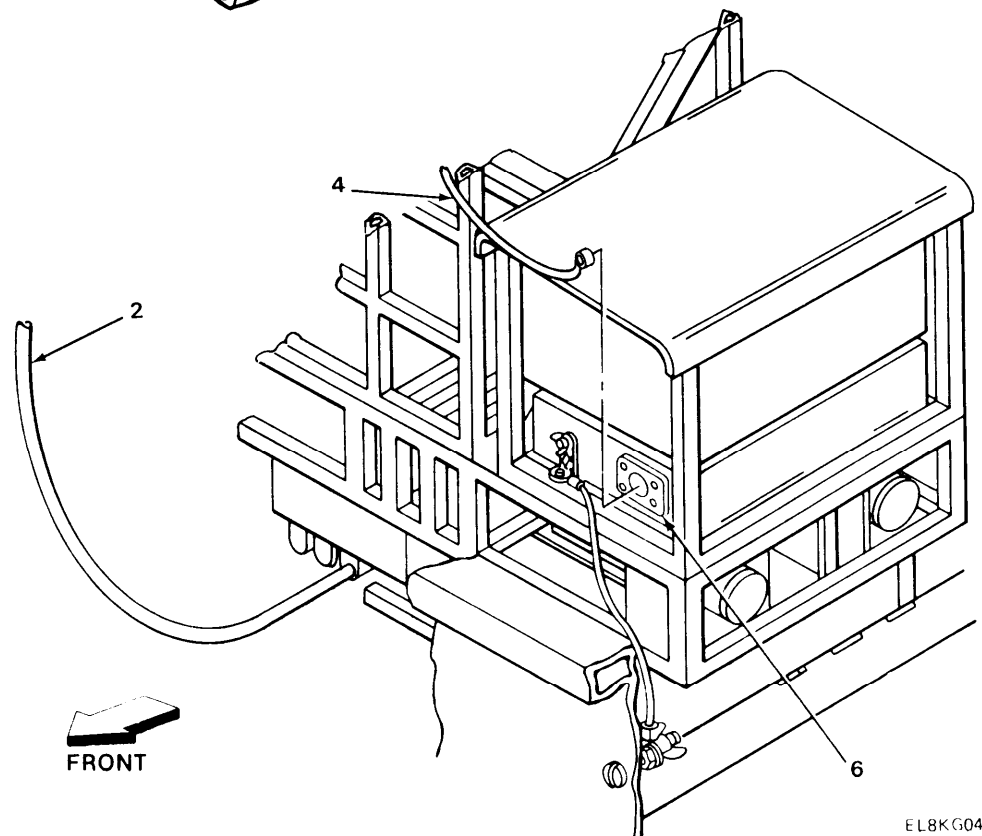
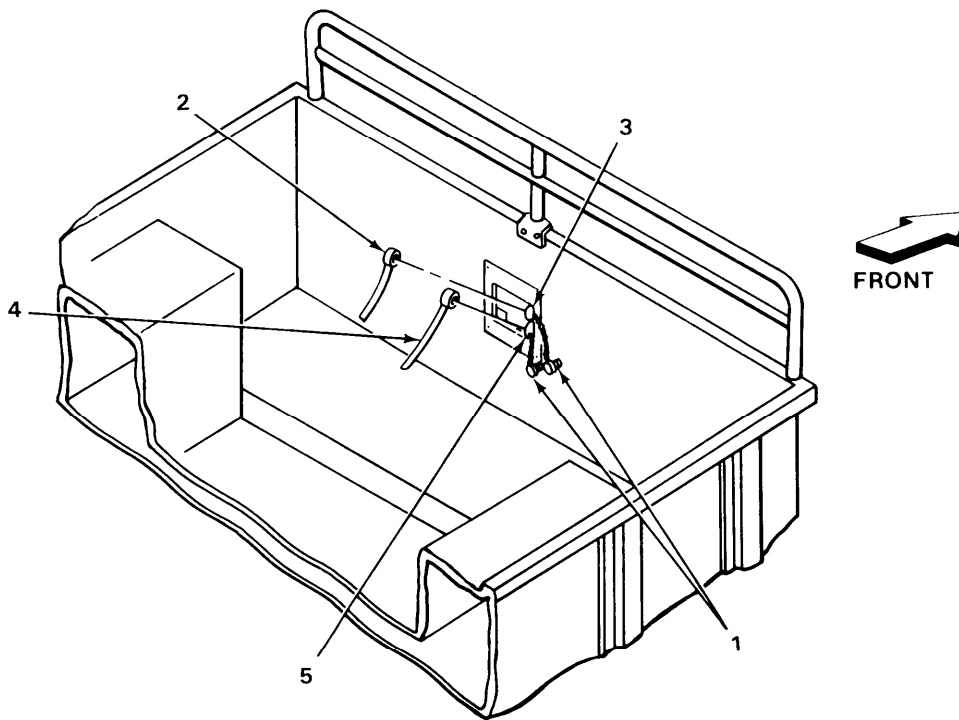
Equipment Condition

Cable Assembly, CX-13052 con-  
nected to roadside radio.

LOCATION	ITEM	ACTION REMARKS
<b><u>WARNING</u></b>		
Make sure all power is off.		
1. Carrier forward wall power receptacle	Protective caps (1)	Remove. <b>There are two caps.</b>
2.	Cable, CX-13052 (2) upper plug (3)	Route and connect. <b>For connection of opposite end of cable see paragraph 4-34.</b>
3.	Cable, (4) and lower plug (5)	Connect.
4. Rear of power distribution box	Cable, (4) and receptacle (6)	Route and connect.



4-37. INSTALLING RADIO AND POWER DISTRIBUTION BOX POWER CABLES TO VEHICLE POWER. (CONT)



EL8KG043

**4-38. INSTALLING 25-INCH GROUND STRAP TO FRONT WALL.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

9/16-inch box wrench  
 Flat-tip screwdriver  
 Adjustable pliers

**Materials/Parts (Cont)**

3/8-16 brass nut  
 Sandpaper  
 Degreaser

**Materials/Parts**

25-inch ground strap  
 3/8-inch brass wingnut  
 3/8-16 by 1 1/4 inch  
 long brass screw  
 3/8-inch IT lockwasher  
 (4 required)

**Personnel Required**

One mechanic

**Equipment Condition**

Hole predrilled.

LOCATION

ITEM

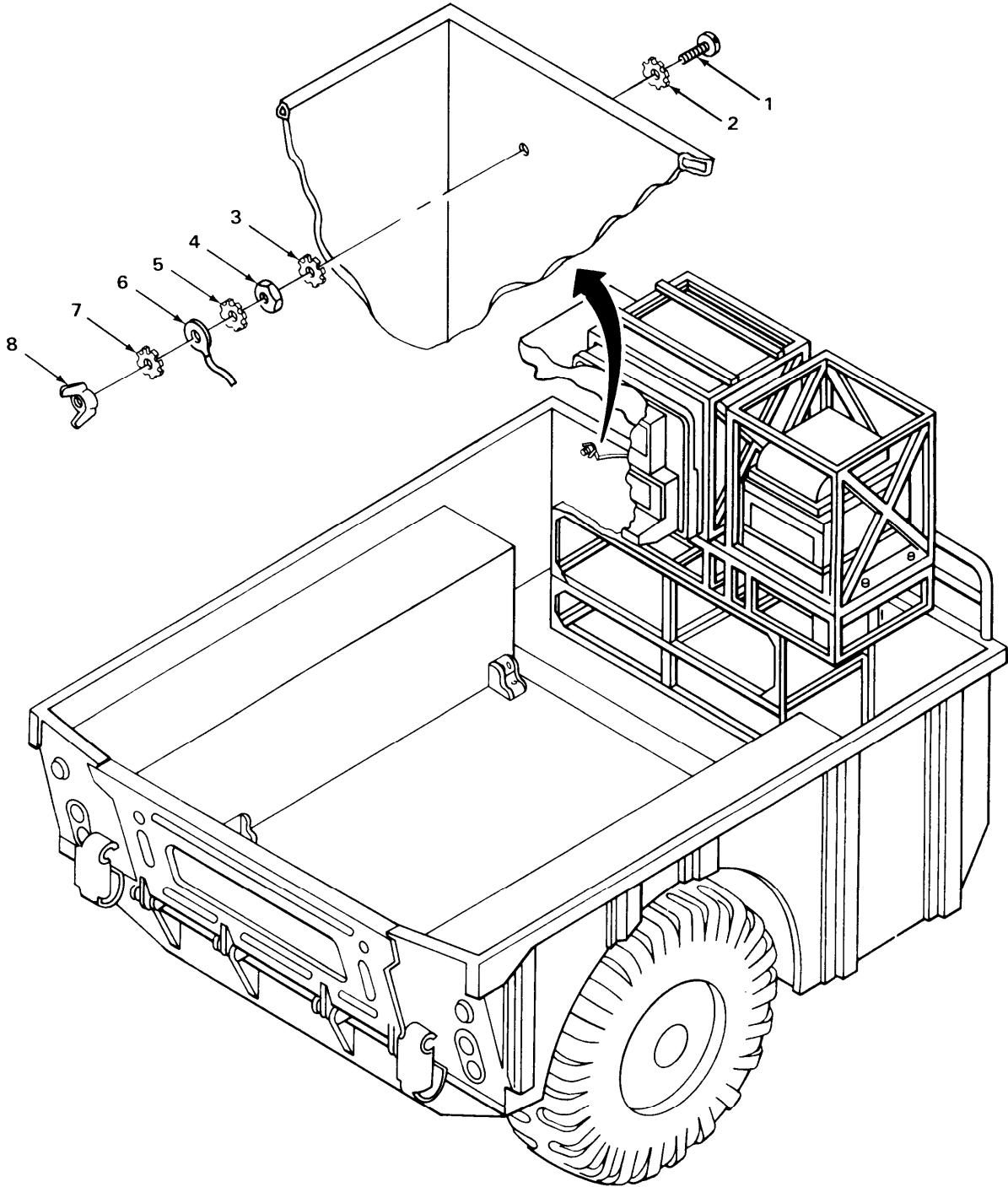
ACTION  
 REMARKS

**NOTE**

Use sandpaper and degreaser to remove paint and grease from area of predrilled hole in carrier wall.

- |  |   |   |
|--|---|---|
| 1. Forward roadside corner of carrier wall | Brass screw (1), IT lockwasher (2), IT lockwasher (3) and brass nut (4) | Using 9/16-inch box wrench and flat-tip screwdriver, install. |
| 2.   | IT lockwasher (5), ground strap (6), IT lockwasher (7) and wingnut (8)  | Using pliers, install.  |

4-38. INSTALLING 25-INCH GROUND STRAP TO FRONT WALL. (CONT)



EL8KG044

**4-39. INSTALLING 25-INCH GROUND STRAP TO POWER DISTRIBUTION BOX.**

This task covers:

Installation

INITIAL SETUP

Tools

- 9/16-inch box wrench  
(2 required)
- Adjustable pliers

Personnel Required

One mechanic

Equipment Condition

Materials/Parts

- 3/8-24 x 2 inch long brass screw
- 3/8-inch IET lockwasher  
(4 required)
- 3/8-24 nut
- 3/8-24 wingnut
- 6-inch braided ground strap
- 25-inch ground strap

25-inch ground strap attached to forward carrier wall. See paragraph 4-36 for installation of power distribution box.

LOCATION

ITEM

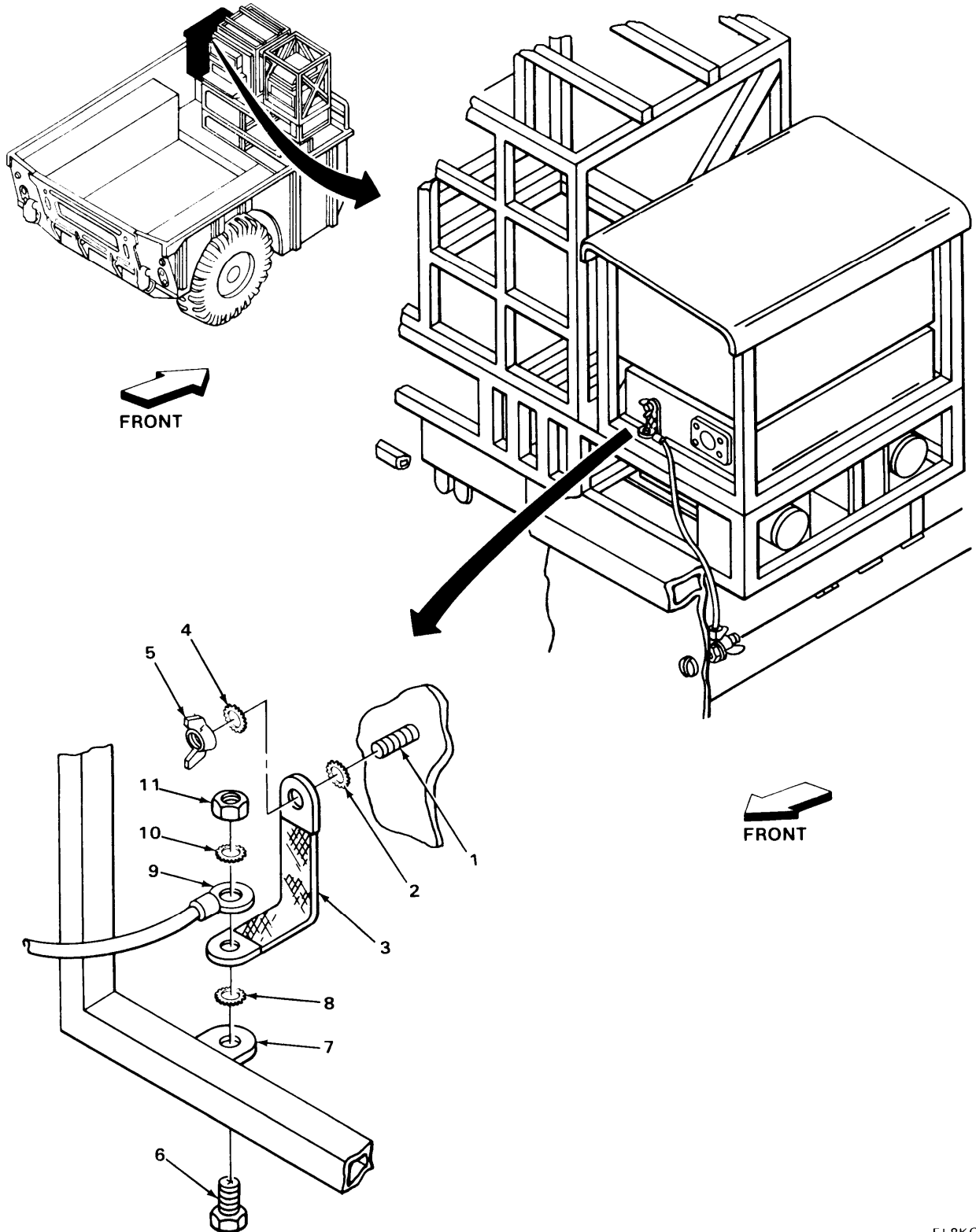
ACTION  
REMARKS

**WARNING**

Make sure all power is off.

- |                                   |  |   |
|-----------------------------------|--|---|
| 1. Rear of power distribution box | Stud (1), IET lockwasher (2), 6-in. ground strap (3), IET lockwasher (4) and wingnut (5)                                   | Install. Using pliers, tighten.                     |
| 2. Rear of key generator rack     | 6-inch ground (3)  | Aline with hole in tab on rear of rack.             |
| 3.                                | Screw (6), tab (7) IET lockwasher (8), 6-inch ground strap (3), 25-inch ground strap (9), IET lockwasher (10) and nut (11) | Install. Using two 9/16-inch box wrenches, tighten. |

4-39. INSTALLING 25-INCH GROUND STRAP TO POWER ISTRIBUTION BOX. (CONT)



EL8KG045

**4-40. INSTALLING SLEDGE HAMMER AND MOUNTING BRACKETS.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

7/16-inch box end wrench

**Materials/Parts**

1/4-20 x 1 3/4 inch long hex head screw (3 required)  
 1/4-inch flat washer  
 14-inch split lockwasher  
 Spacer, SC-B-866250  
 Spacer, SC-B-866251  
 Sledge hammer bracket

**Materials/Parts (Cont)**

Spring clip  
 Sledge hammer

**Personnel Required**

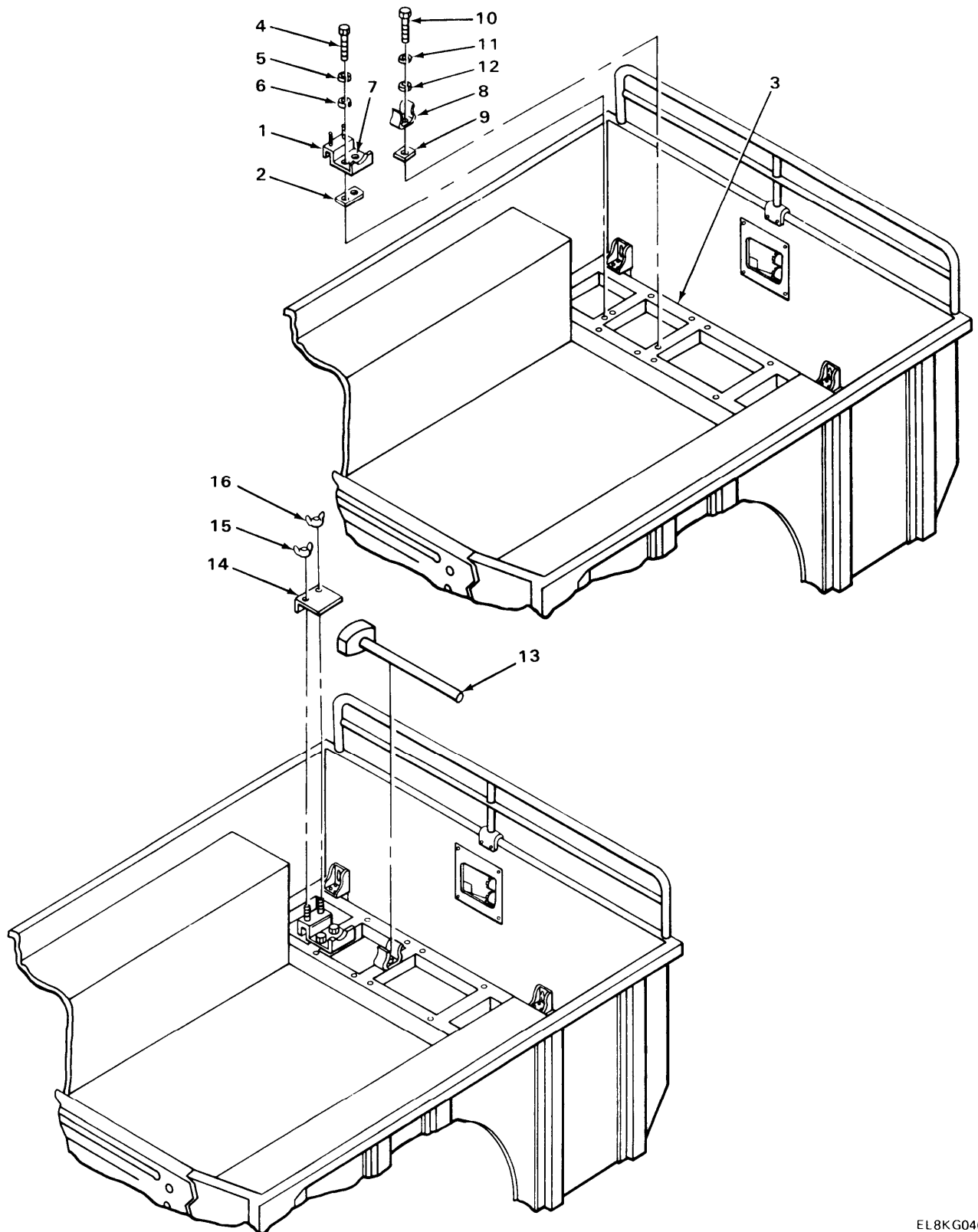
One mechanic

**Equipment Condition**

Submount installed.

LOCATION	ITEM	ACTION REMARKS
1. Submount, roadside	Bracket (1), spacer (2) and submount (3)	Place and aline holes.
2.	Screw (4), lock-washer (5) and flat washer (6)	Using 7/16-inch box wrench, install. <b>There are two screws. Step 2 is typical for both screws.</b>
3.	Screw hole (7)	Do step 2 again.
4.	Spring clip (8), spacer (9) and submount (3)	Place and aline holes.
5.	Screw (10), lock-washer (11) and flat washer (12)	Using 7/16-inch box wrench, install.
6. Submount, roadside	Sledge hammer (13)	Install.
7.	Sledge hammer bracket cover (14) and wingnut (15)	Install.
8.	Wingnut (16)	Install.

4-40. INSTALLING SLEDGE HAMMER AND MOUNTING BRACKETS. (CONT)



EL8KG046

**4-41. INSTALLING FLOOR BASE.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

- 1/2-inch box wrench  
(2 required)
- 9/16-inch box wrench  
(2 required)

**Materials/Parts**

- 5/16-18 x 2 1/4 inch long  
screws (8 required)
- 5/16-18 elastic stop nuts  
(8 required)
- 5/16-inch flat washers  
(16 required)

**Personnel Required**

Two mechanics

**Equipment Condition**

Angle brackets installed on floor base, all hardware loosened and adapter assemblies installed (para 4-22).

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed to place and aline floor base in carrier floor.

- |    |                |  |   |
|----|----------------|--|---|
| 1. | Inside carrier | Floor base (1)                         | Install in carrier.                           |
| 2. |                | Brackets (2), shim (3) and adapter (4) | Aline holes.<br><b>Add shims as required.</b> |

**NOTE**

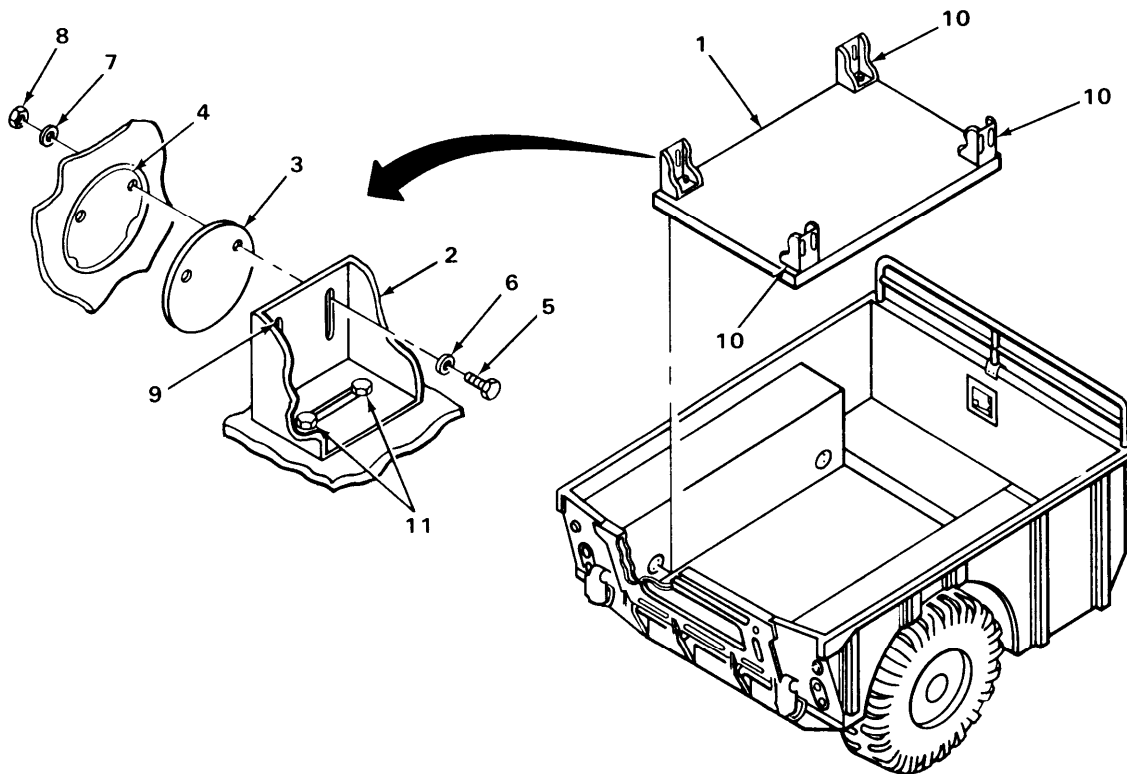
A helper will be needed outside carrier.

- |    |  |   |  |
|----|--|---|--|
| 3. |  | Screw (5), flat washer (6), flat washer (7) and nut (8) | Install, handtighten.<br><b>There are two screws. Step 3 is typical for both screws.</b> |
|----|--|---|--|



4-41. INSTALLING FLOOR BASE. (CONT)

	LOCATION	ITEM	ACTION REMARKS
4.		Screw holes (9)	Do step 3 again. <b>There are four brackets. Step 4 is typical for all four brackets.</b>
5.		Brackets (10)	Do steps 2, 3 and 4 again.
6.		Screws (5)	Using two 1/2-inch box wrenches, tighten.
7.		Screws (11)	Using two 9/16-inch box wrenches, tighten.



EL8KG047

**4-42. INSTALLING FUEL FILLER NOZZLE AND BRACKET.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

1/2-inch box wrench

**Personnel Required**

One mechanic

**Materials/Parts**

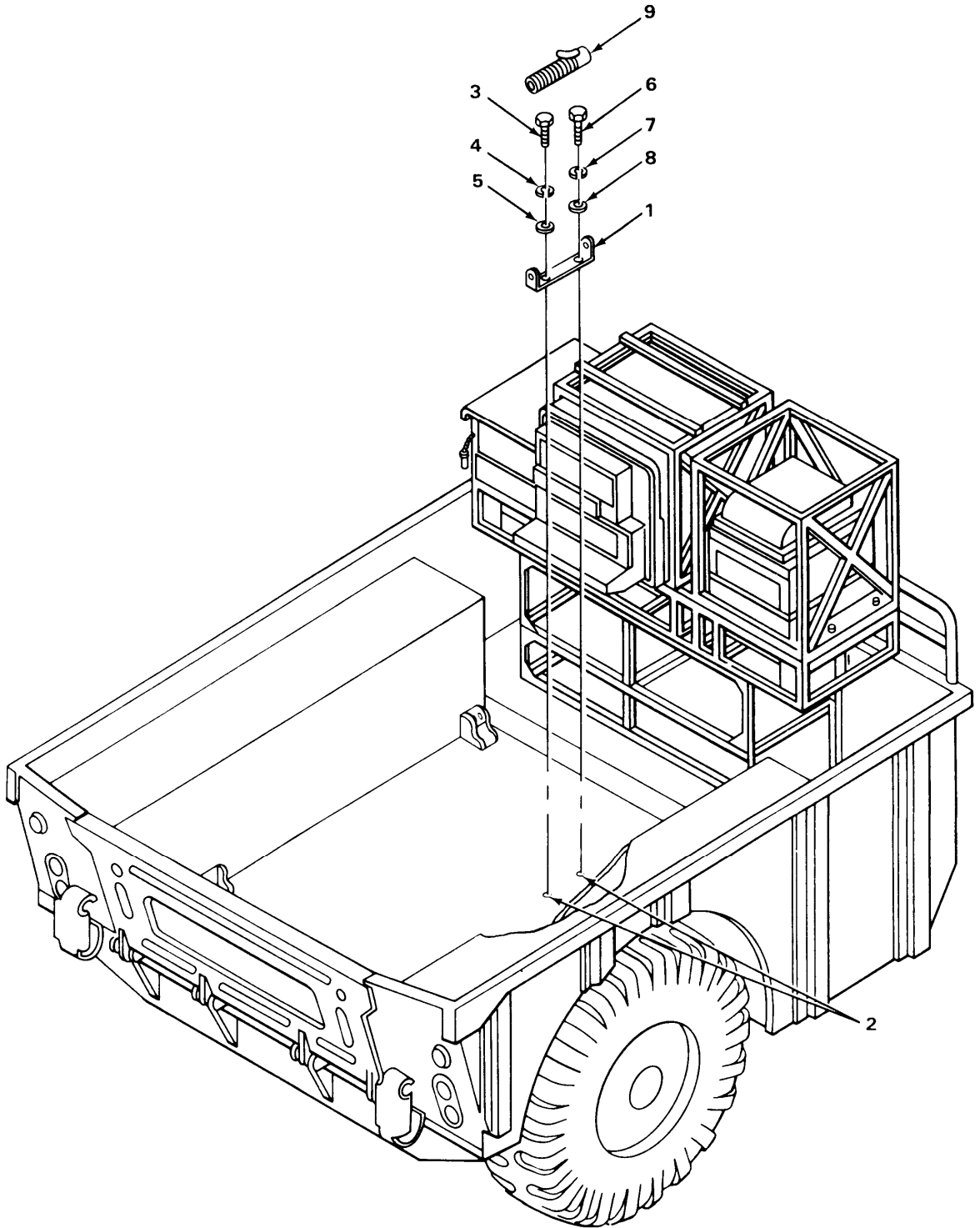
Fuel filler nozzle  
 Fuel filler nozzle bracket  
 5/16-18 x 1 inch long screw  
 (2 required)  
 5/16-inch flat washer  
 (2 required)  
 5/16-inch lockwasher  
 (2 required)

**Equipment Condition**

Floor base installed.

LOCATION	ITEM	ACTION REMARKS
1. Front curbside position of floor base	Fuel filler nozzle bracket (1) and floor base holes (2)	Align.
2.	Screw (3), lock-washer (4) and flat washer (5)	Install, handtighten.
3.	Screw (6), lock-washer (7) and flat washer (8)	Install, handtighten.
4.	Screw (3) and screw (6)	Using 1/2-inch box wrench, tighten.
5. Fuel filler nozzle bracket	Fuel filler nozzle (9)	Install.

4-42. INSTALLING FUEL FILLER NOZZLE AND BRACKET. (CONT)



ELBKG048

**4-43. INSTALLING FUEL CAN AND BRACKET.**

This task covers:

Installation

INITIAL SETUP

Tools

1/2-inch box wrench

Personnel Required

One mechanic

Materials/Parts

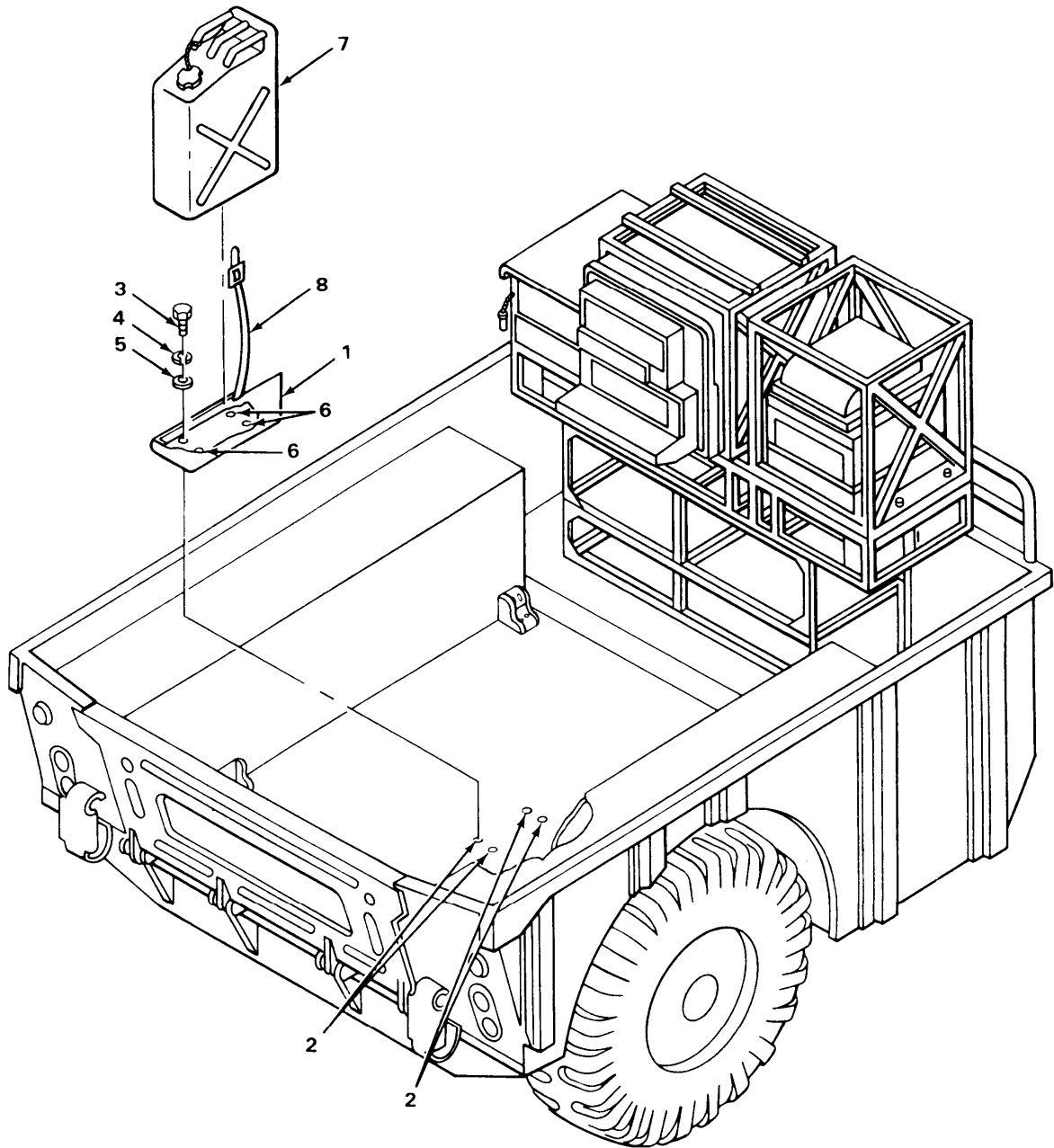
Fuel can bracket  
 5/16-18 x 1 inch long screw  
 (4 required)  
 5/16-inch flat washer  
 (4 required)  
 5/16-inch lockwasher  
 (4 required)

Equipment Condition

Floor base installed.

LOCATION	ITEM	ACTION REMARKS
1. Rear curbside position of floor base	Fuel can bracket (1) and floor base holes (2)	Aline. <b>Position high side of bracket to curbside.</b>
2.	Screw (3), lockwasher (4) and flat washer (5)	Install, handtighten. <b>There are four screws. Step 1 is typical for all four screws.</b>
3.	Screw holes (6)	Do step 2 again.
4.	Screws (3)	Using 1/2-inch box wrench, tighten.
5. Fuel can bracket	Fuel can (7) and strap (8)	Place fuel can in bracket and secure with strap.

4-43. INSTALLING FUEL CAN AND BRACKET. (CONT)



EL8KG049

**4-44. INSTALLING GENERATOR.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

Adjustable pliers

**Personnel Required**

Two mechanics

**Materials/Parts**

Generator  
Generator mounting strip  
(2 required)

**Equipment Condition**

Nut plates installed in floor base  
at depot and floor base  
installed.

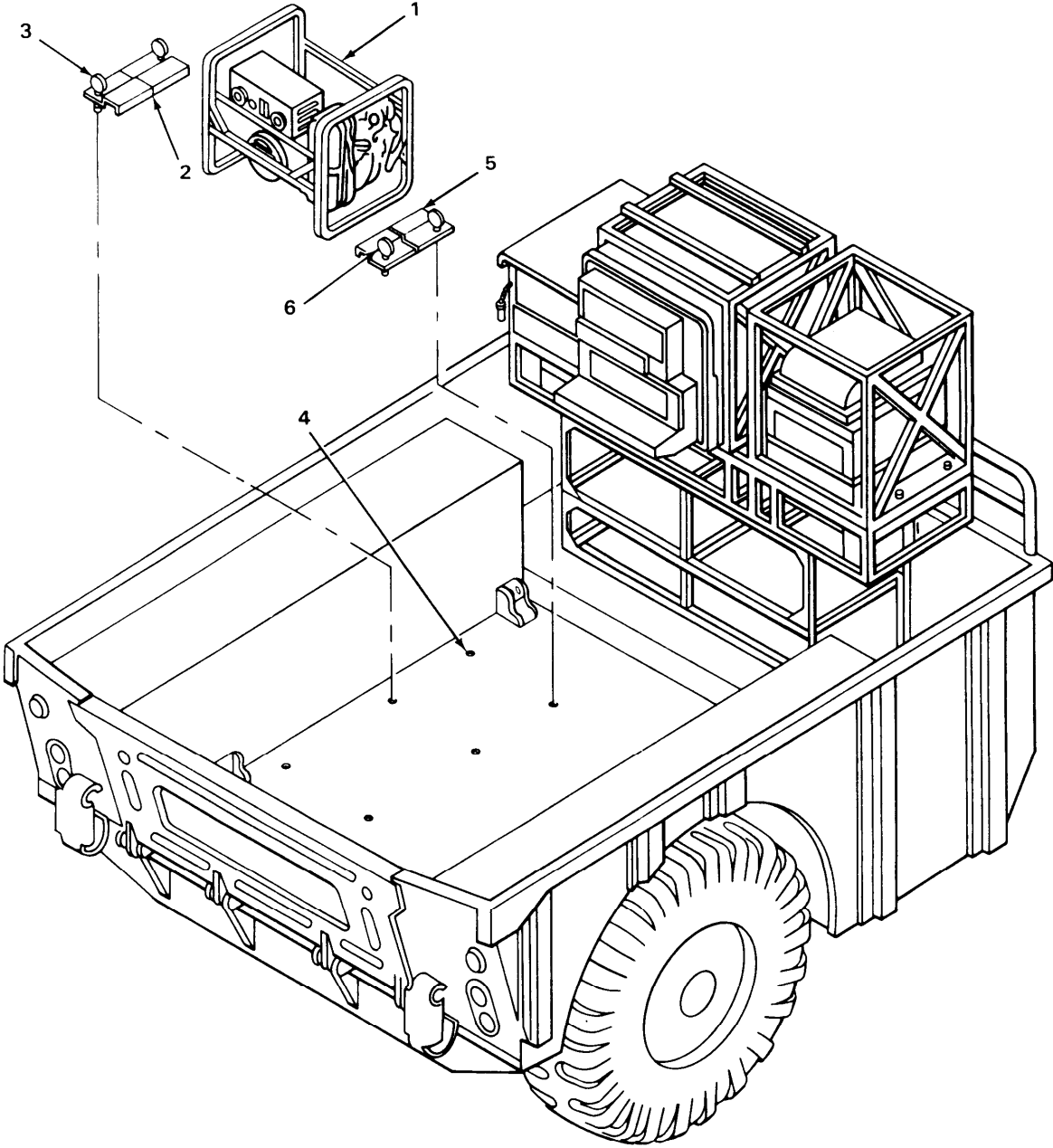
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed to lift and position battery box on carrier bed floor.

1. Roadside of carrier bed floor	Generator (1)	Place generator on floor base between nut plate holes.
2. Generator roadside rail	Roadside mounting strip (2) and wingnut (3)	Install, handtighten.
3.	Wingnut hole (4)	Do step 2 again.
4. Generator curbside rail	Curbside mounting strip (5)	Do steps 2 and 3 again.
5.	Wingnuts (3) and wingnut (6)	Using pliers, tighten.

4-44. INSTALLING GENERATOR. (CONT)



EL8K G050

**4-45. INSTALLING BATTERY BOX.**

This task covers:

Installation

**INITIAL SETUP**

Tools

Adjustable pliers

Materials/Parts

Battery box

Personnel Required

Two mechanics

Equipment Condition

Generator installed.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed to lift and position generator on carrier bed floor.

1. Rear roadside position of carrier bed behind generator	Battery box (1) and generator frame (2)	Place battery box behind generator frame.
2.	Generator frame rear cross member (3) and battery box C-bracket (4)	Install.
3.	Quick release pin (5)	Install.
4.	Mounting tab (6) and wingnut (7)	Aline and install, handtighten.
5. Curbside of battery box	Mounting tab (6) and wingnut (7)	Do step 4 for remaining mounting tab and wingnut.

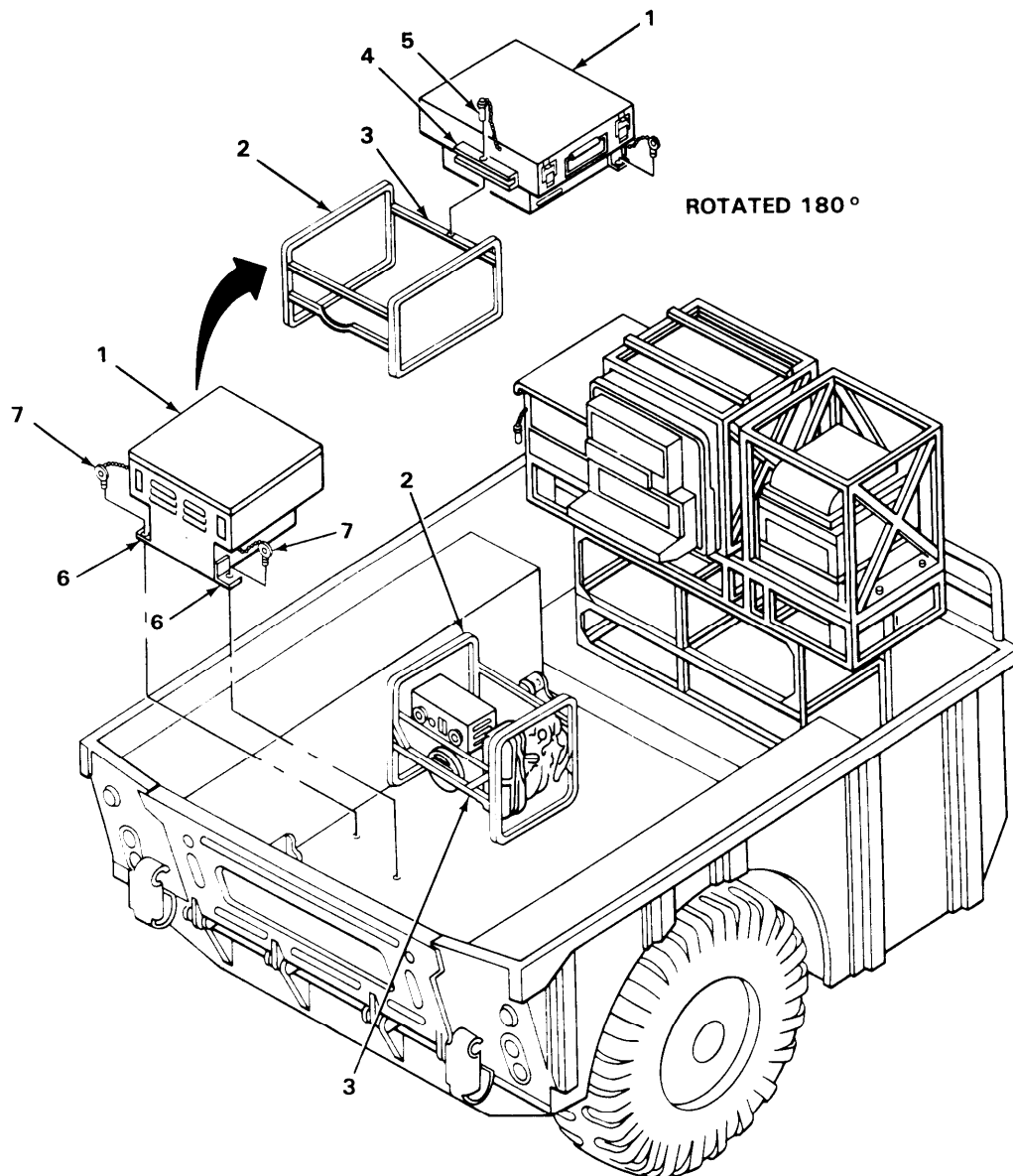


4-45. INSTALLING BATTERY BOX. (CONT)

LOCATION	ITEM	ACTION REMARKS
6.	Wingnuts (7)	Using pliers, tighten.

**NOTE**

Use nylon straps to secure battery box cables to generator cross bar when cables are not in use.



EL8KG051

**4-46. INSTALLING BATTERIES AND HOLDDOWN.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

Adjustable pliers

**Personnel Required**

One mechanic

**Materials/Parts**

45 amp H.R. lead-acid battery  
(2 required)  
Threaded J-bolt (4 required)  
Battery holddown  
Nut (4 required)  
Flat washer (4 required)

**Equipment Condition**

Battery box installed.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**WARNING**

When using battery acid, be sure to work in a well ventilated area, use proper eye protection, and wear rubber gloves. Should you come in contact with battery acid, be sure to wash the affected area with cool water, then seek immediate medical aid.

**CAUTION**

Upon receipt of lead-acid batteries, batteries must be filled with sulfuric acid and charged before they can be installed. See decal on inside of battery box for correct polarity for positioning of batteries.

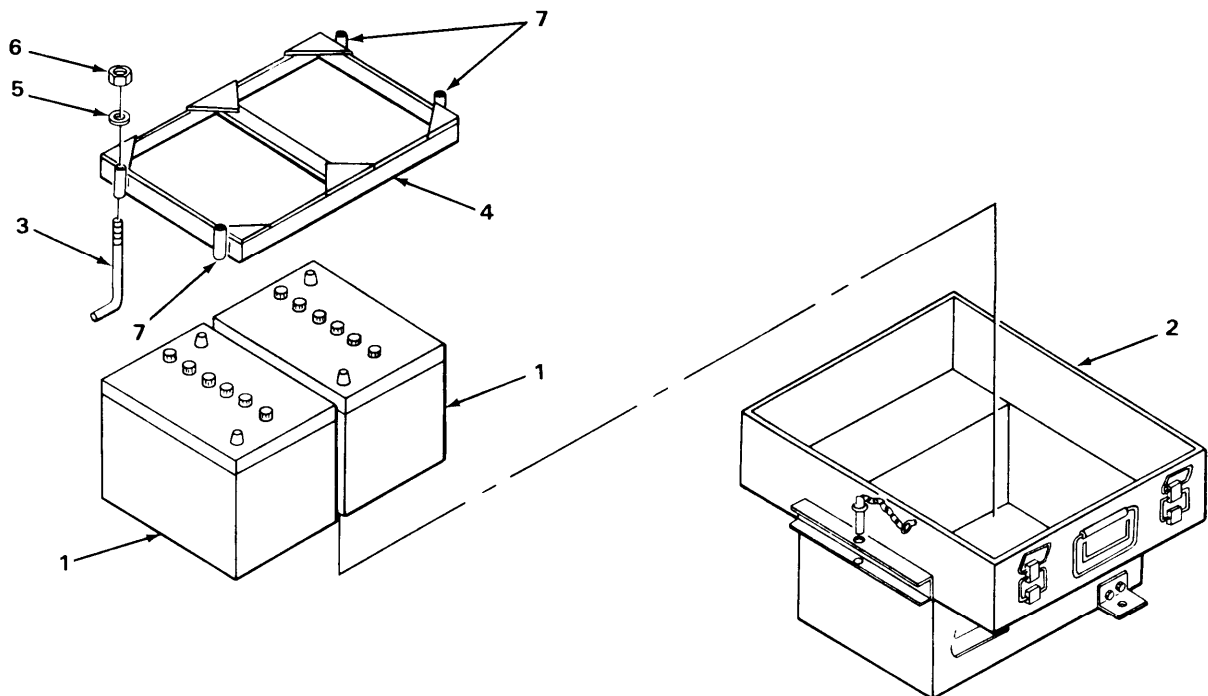
1. Inside battery box	Batteries (1) and battery box (2)	Place batteries in battery box.
-----------------------	-----------------------------------	---------------------------------

4-46. INSTALLING BATTERIES AND HOLDDOWN. (CONT)

LOCATION	ITEM	ACTION REMARKS
2. Inside battery box	J-bolt (3) battery hold-down bracket (4), flat washer (5) and nut (6)	Using pliers, install. <b>Hook J-bolt-thru loop in battery box and slide on battery holddown bracket.</b> <b>There are four J-bolts. Step 2 is typical for all four J-bolts.</b>
3.	Holes (7)	Do step 2 again.

**WARNING**

Before connecting battery terminal ends, be sure all circuit breakers are in the OFF position.



E L8KG052

**4-47. INSTALLING FIRE EXTINGUISHER MOUNTING BRACKET.**

This task covers:

Installation

INITIAL SETUP

Tools

7/16-inch box wrench  
(2 required)

Materials/Parts

1/4-20 x 1/2 inch long screw  
(4 required)  
1/4-20 nut (4 required)  
1/4-inch flat washer (4 required)  
1/4-inch lockwasher (4 required)  
Fire extinguisher mounting bracket

Personnel Required

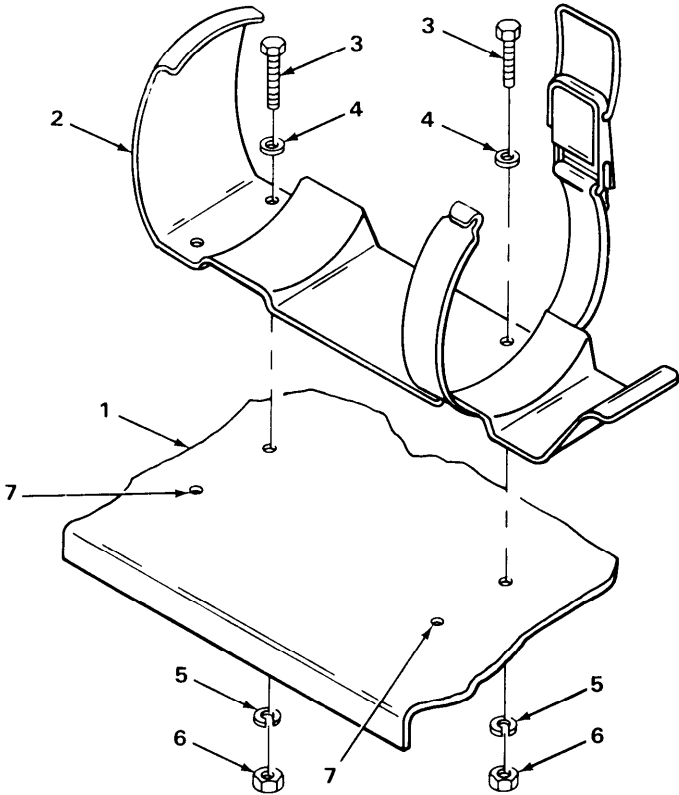
One mechanic

Equipment Condition

Battery box installed.

LOCATION	ITEM	ACTION REMARKS
1. Battery box cover	Battery box cover (1) and fire extinguisher bracket (2)	Place and align holes. <b>Strap on bracket must face curbside of vehicle.</b>
2.	Screw (3), flat washer (4), lockwasher (5) and nut (6)	Install, handtighten. <b>There are four screws. Step 2 is typical for all four screws.</b>
3.	Holes (7)	Do step 2 again.
4.	Screws (3) and nuts (6)	Using two 7/16-inch box wrenches, tighten.

4-47. INSTALLING FIRE EXTINGUISHER MOUNTING BRACKET. (CONT)



EL8KG053

**4-48. INSTALLING FIRE EXTINGUISHER.**

This task covers:

Installation

**INITIAL SETUP**

Tools

None

Materials/Parts

Fire extinguisher

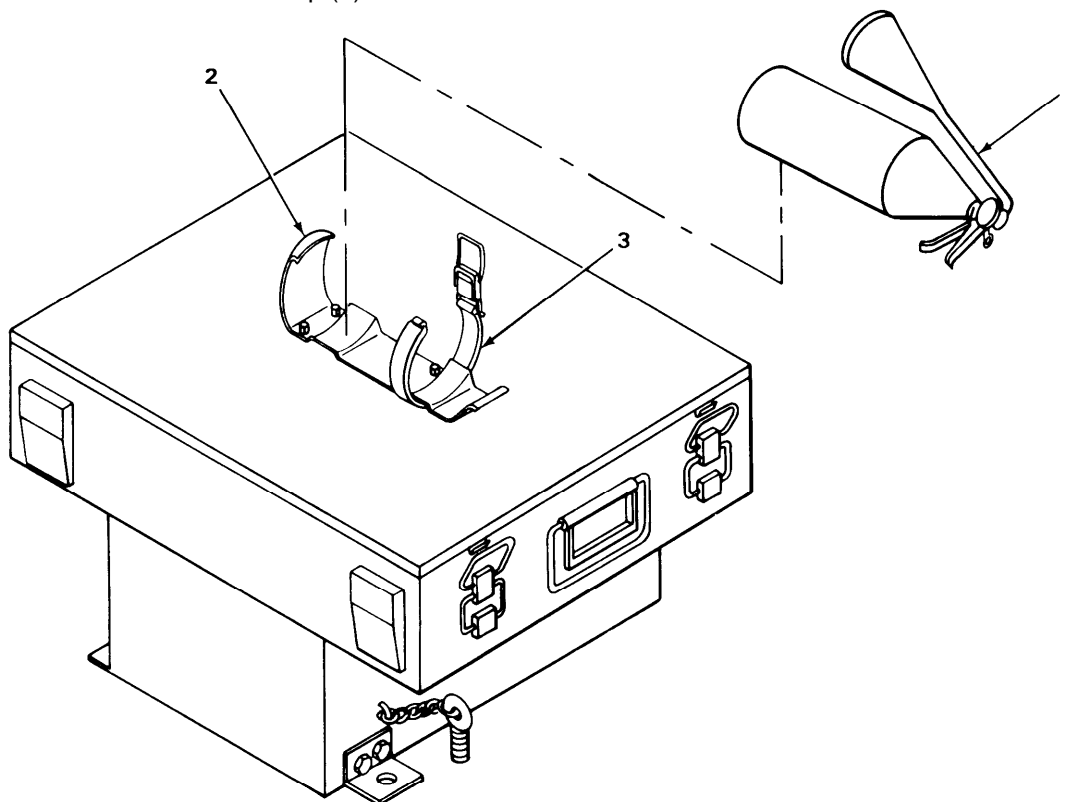
Personnel Required

One mechanic

Equipment condition

Fire extinguisher bracket installed.

LOCATION	ITEM	ACTION REMARKS
1. Top of battery box	Fire extinguisher (1) and fire extinguisher bracket (2)	Place fire extinguisher in fire extinguisher bracket. <b>Handle faces toward curbside vehicle wall.</b>
2.	Strap (3)	Secure.



E L8KG054

**4-49. INSTALLING CANVAS CABLE BAG.**

This task covers:

Installation

**INITIAL SETUP**

Tools

None

Materials/Parts

Canvas cable bag

Personnel Required

One mechanic

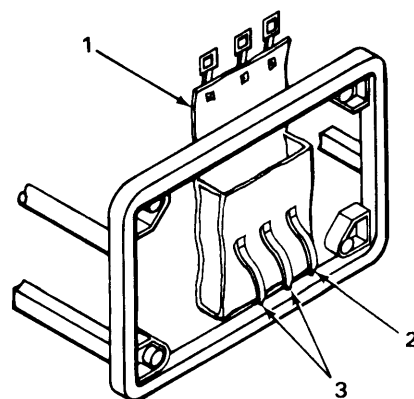
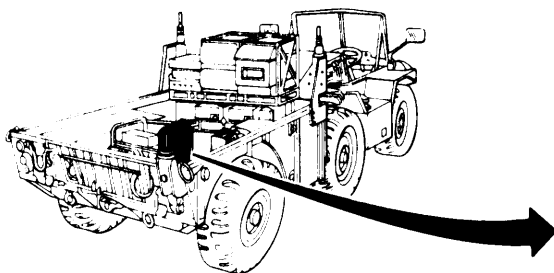
Equipment Condition

Generator installed.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**INSTALLATION**

- |                            |                      |   |
|----------------------------|----------------------|---|
| 1. Curbside generator rail | Canvas cable bag (1) | Place canvas cable bag on curbside generator rail.  |
| 2.                         | Canvas strap (2)     | Secure.<br><b>There are three canvas straps. Step 2 is typical for all three canvas straps.</b> |
| 3.                         | Canvas straps (3)    | Do step 2 again.  |



EL8KG055

**4-50. INSTALLING ANTENNA CABLING.**

This task covers:

Installation

INITIAL SETUP

Tools

- Electric drill
- 3/32-inch drill bit
- Cutting pliers
- Flat-tip screwdriver

Personnel Required

One mechanic

Equipment Condition

Antenna mounting bases installed.

Materials/Parts

- Control cable (3 required)
- RF cable (3 required)
- Cable clamp kit

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

Cable clamps must be cut into desired lengths, using cutting pliers before installing.

- |                                 |  |  |
|---------------------------------|--|--|
| 1. Front roadside mounting base | RF cable (1) and control cable (2)                             | Route.<br><b>Routing must be done close to the underside of carrier bed side wall top rail.</b>                |
| 2.                              | Carrier walls (3)  | Using electric drill and 3/32-inch drill bit, drill.<br><b>Drill every two to three feet following cables.</b> |
| 3.                              | RF cable (1), control cable (2), cable clamp (4) and screw (5) | Using flat-tip screwdriver, install.   |

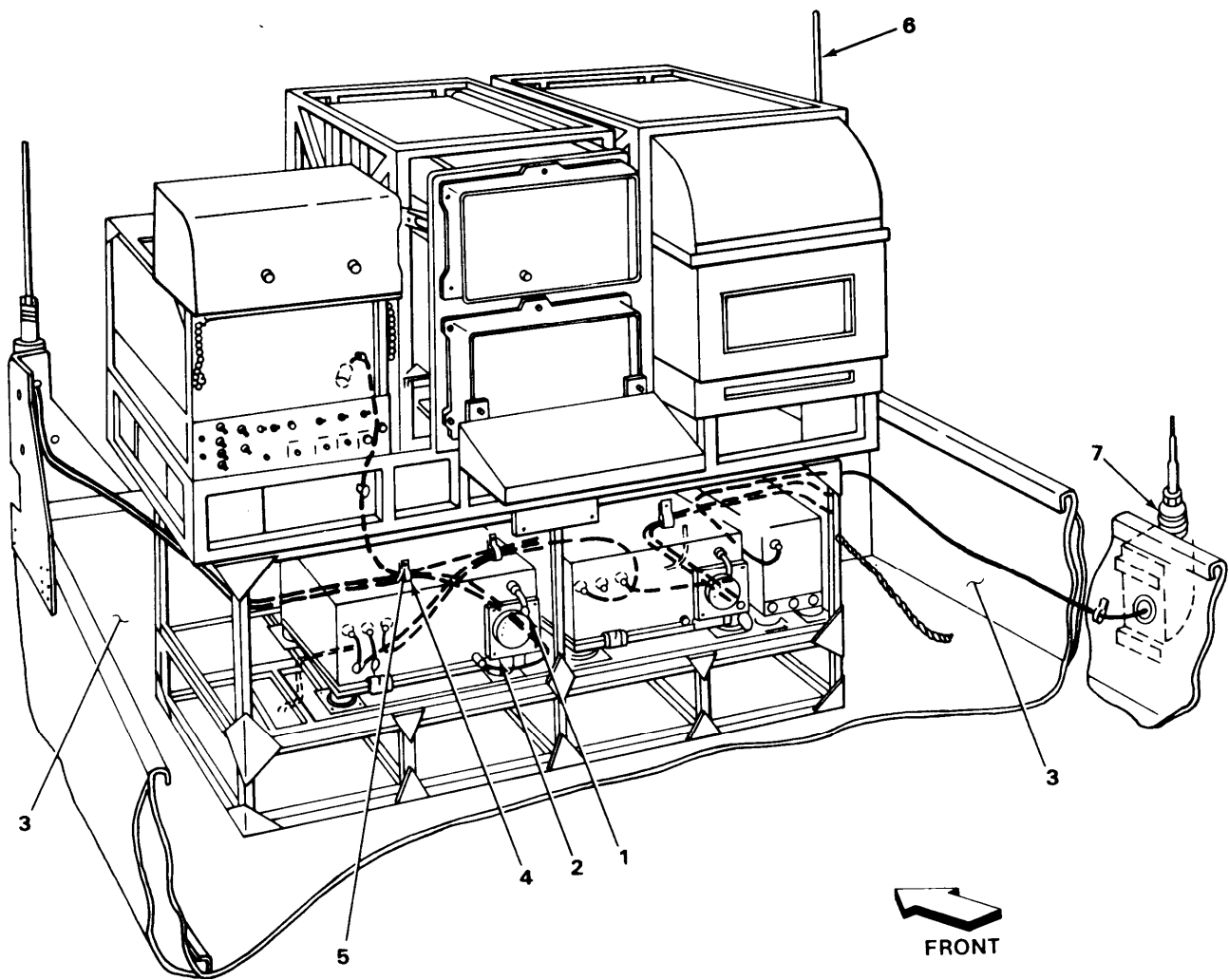
**NOTE**

See SB 11-131 for antenna cabling hook-ups.



4-50. INSTALLING ANTENNA CABLING. (CONT)

LOCATION	ITEM	ACTION REMARKS
4. Front curbside antenna mounting base	Antenna (6)	Do steps 1, 2 and 3 again.
5. Rear curbside antenna mounting base	Antenna (7)	Do steps 1, 2 and 3 again.



EL8KG056

**4-51. INSTALLING EXTERNAL GROUND ROD KIT.**

This task covers:

Installation

**INITIAL SETUP**

**Tools**

8-lb sledge hammer  
 Flat-tip screwdriver  
 Adjustable pliers

**Personnel Required**

One mechanic

**Equipment Condition**

**Materials/Parts**

Ground rod clamp kit  
 Ground rod assembly (10 feet)  
 Ground rod, sectional (9 feet)

Vehicle at field operation site.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

The external ground rod is used only when vehicle is not moving. It is stored between the roadside carrier bed side wall and generator.

- |  |   |                        |
|--|---|------------------------|
| 1. Forward roadside corner of carrier inner wall | Wingnut (1) and IT lockwasher (2)                           | Using pliers, remove.  |
| 2.   | Wingnut (1), IT lockwasher (2) and 10 foot ground strap (3) | Using pliers, install. |

**NOTE**

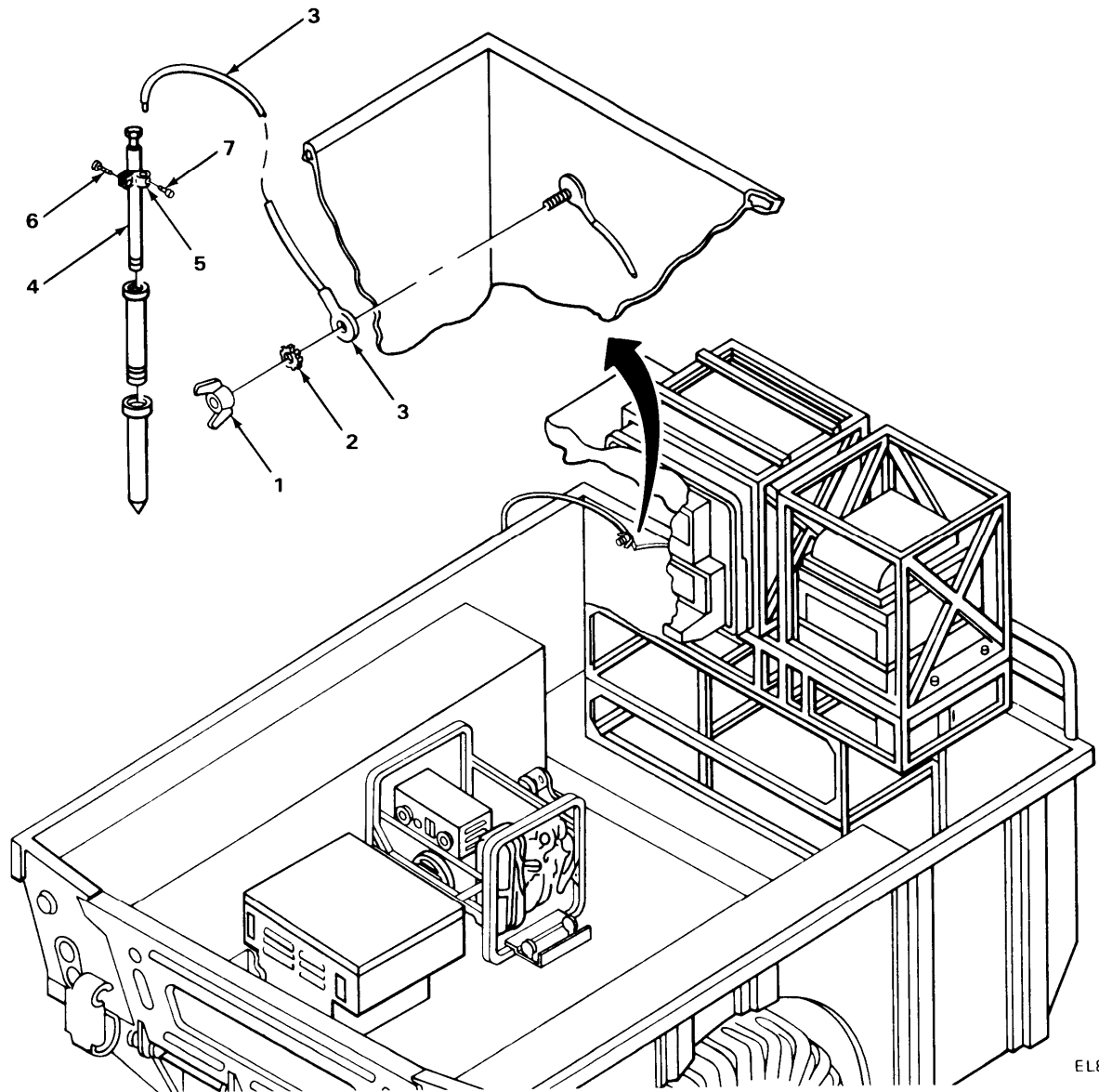
The ground rod comes in three sections. Using driving stud and sledge hammer, drive one section into ground. After a section is driven into ground, connect next section to it.

- |                    |  |                                      |
|--------------------|--|--------------------------------------|
| 3. Outside vehicle | Ground rod (4), ground rod clamp (5) and clamp screw (6) | Using flat-tip screwdriver, install. |
|--------------------|--|--------------------------------------|

4-51. INSTALLING EXTERNAL GROUND ROD KIT. (CONT)

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

4. Outside vehicle	10 foot ground strap (3) and clamp screw (7)	Using flat-tip screwdriver, install.
--------------------	--	--------------------------------------



EL8KG057

## **Section IV PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)**

There are no special organizational preventive maintenance checks and services for this equipment. Routine checks like equipment inventory, broken cables, replacing damaged items, tightening loose hardware, equipment painting are not listed in PMCS table. You should do these checks and services daily or at any time you see they need to be done.

## **Section V ORGANIZATIONAL MAINTENANCE**

No troubleshooting procedures for the Electronics Equipment Installation Kit MK-1819/GSG-10(V) and Power Accessory Kit MK-1821/GSG-10(V) are given in this manual. For organizational troubleshooting procedures for the electronic equipment, refer to manuals TM 11-7440-253-10-1 and TM 11-7440-251-10.

## **Section VI MAINTENANCE PROCEDURES**

For maintenance procedures for electronic equipment used with these installation kits, refer to manuals TM 11-7440-251-10 and TM 11-7440-253-10-1.

## Section VII REMOVAL OF ELECTRONICS EQUIPMENT INSTALLATION KIT, MK-1819/GSG-10(V) AND POWER ACCESSORY KIT, MK-1821/GSG-10(V)

Subject	Para	Page
Removing 25-Inch Ground Strap from Front Wall . . . . .	4-55	4-106
Removing 25-Inch Ground Strap from Power Distribution Box. . . . .	4-56	4-108
Removing Radio Power Cables from Radios . . . . .	4-57	4-110
Removing Radio and Power Distribution Box Power Cables from Vehicle Power . . . . .	4-58	4-112
Removing Radio Mounting Bases. . . . .	4-59	4-114
Removing Tacfire Components. . . . .	4-60	4-116
Removing 4-Inch Ground Straps . . . . .	4-61	4-118
Removing Electronic Line Printer Sliding Tray . . . . .	4-62	4-120
Removing Electronic Line Printer Rack . . . . .	4-63	4-122
Removing Message Entry Group Rack . . . . .	4-64	4-124
Removing Key Generator Rack . . . . .	4-65	4-126
Removing Front Reinforcement Support . . . . .	4-66	4-128
Removing Electronic Equipment Table . . . . .	4-67	4-130
Removing Radio Mount . . . . .	4-68	4-132
Removing Submount Assembly . . . . .	4-69	4-134
Removing Adapter Assemblies . . . . .	4-70	4-136
Removing Canvas Tie-Down Hooks from Front antenna Mounting Brackets. . . . .	4-71	4-138
Removing/Installing Antenna Cables. . . . .	4-72	4-140
Removing Antenna Ground Straps . . . . .	4-73	4-142
Removing Antenna Masts . . . . .	4-74	4-144
Removing Antenna Mounting Bases . . . . .	4-75	4-146
Removing Front Antenna Supports . . . . .	4-76	4-148
Removing Front Antenna Mounting Brackets . . . . .	4-77	4-150
Removing Rear Antenna Mounting Bracket . . . . .	4-78	4-152
Removing Canvas Cable Bag . . . . .	4-79	4-156
Removing Generator . . . . .	4-80	4-158
Removing Fire Extinguisher . . . . .	4-81	4-160
Removing Fire Extinguisher Mounting Bracket. . . . .	4-82	4-161
Removing/Installing Battery Holddown . . . . .	4-83	4-162
Removing Batteries . . . . .	4-84	4-164
Removing Battery Box . . . . .	4-85	4-166
Removing Sledge Hammer and Mounting Brackets . . . . .	4-86	4-168
Removing Fuel Can and Bracket . . . . .	4-87	4-170
Removing Fuel Filler Nozzle and Bracket . . . . .	4-88	4-172
Removing Floor Base. . . . .	4-89	4-174
Removing External Ground Rod Kit . . . . .	4-90	4-176
Out of Vehicle Configuration . . . . .	4-91	4-178

**4-55. REMOVING 25-INCH GROUND STRAP FROM FRONT WALL.**

This task covers:

Removal

INITIAL SETUP

Tools

9/16-inch box wrench  
 Flat-tip screwdriver  
 Adjustable pliers

Personnel Required

One mechanic

Equipment Condition

All power off.

Materials/Parts

None

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**WARNING**

Make sure all power is off.

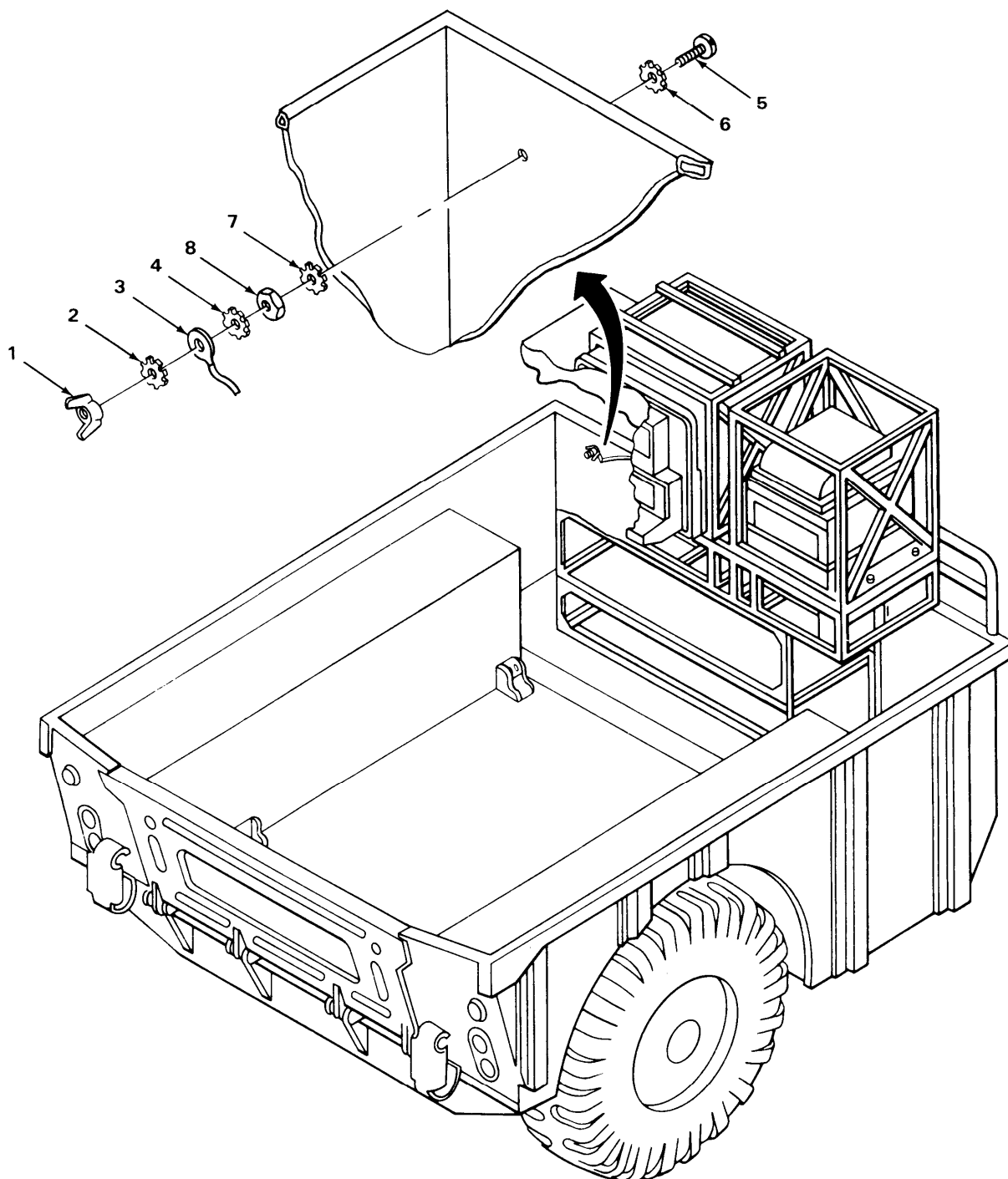
1. Forward roadside corner of corner wall	Wingnut (1), IET lockwasher (2), ground strap (3), and IET lockwasher (4)	Using pliers, remove.
---	---	-----------------------

**NOTE**

If brass screw needs replacement, see step 2.

2.	Screws (5), IET lockwasher (6), IET lockwasher (7) and nut (8)	Using flat-tip screwdriver and 9/16-inch box wrench, remove.
3.	Ground strap (3)	See paragraph 4-38 for installation.

4-55. REMOVING 25-INCH GROUND STRAP FROM FRONT WALL. (CONT)



EL8KG058

**4-56. REMOVING 25-INCH GROUND STRAP FROM POWER DISTRIBUTION BOX.**

This task covers:

Removal

**INITIAL SETUP**

Tools

9/16-inch box wrench (2 required)  
Adjustable pliers

Materials/Parts

None

Personnel Required

One mechanic

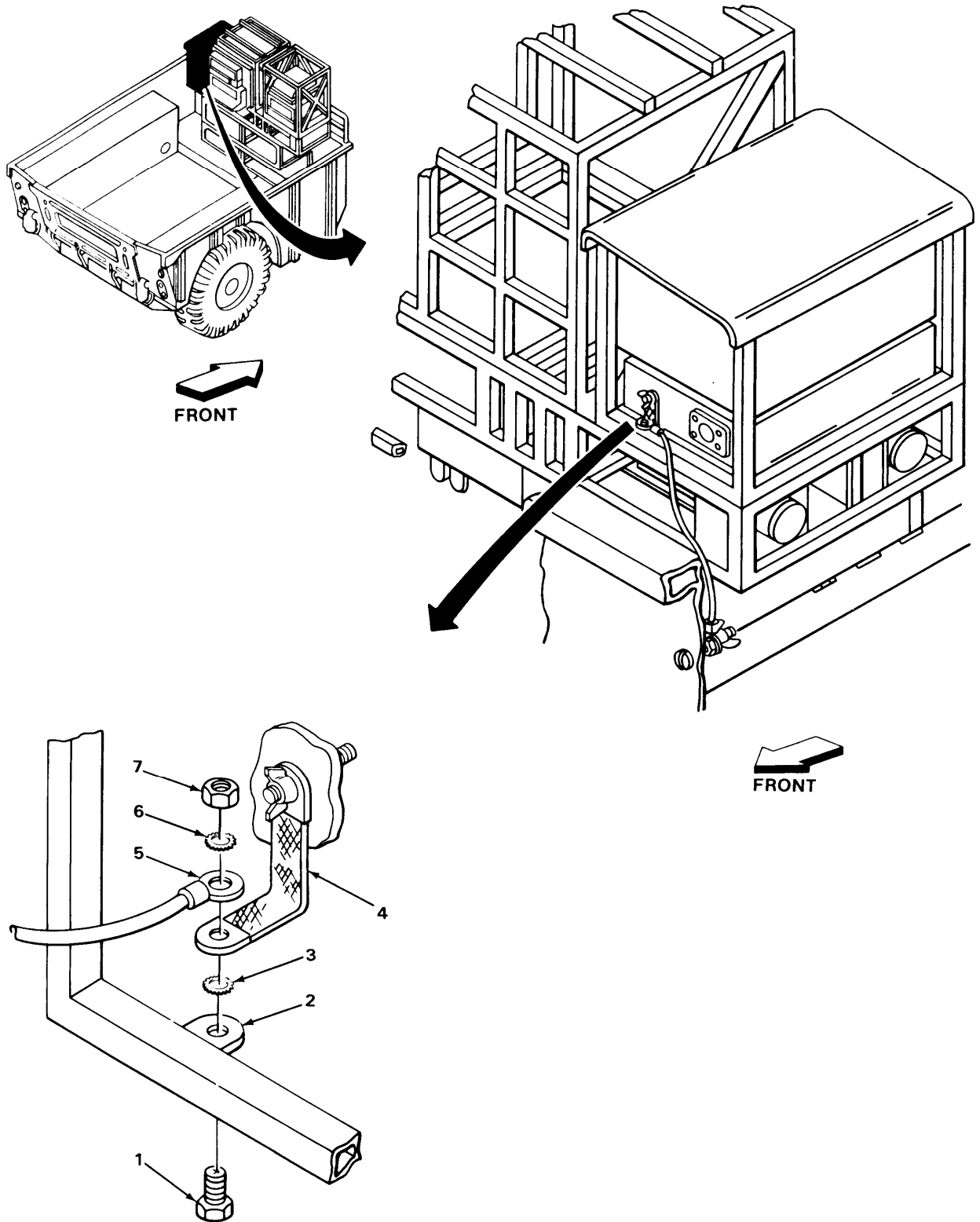
Equipment Condition

All power off.

LOCATION	ITEM	ACTION REMARKS
<b><u>WARNING</u></b>		
Make sure all power is off.		
1. Rear of Key generator rack	Screw (1), tab (2), IET lockwasher (3), 6-inch ground strap (4), 25-inch ground strap (5), IET lockwasher (6) and nut (7)	Using two 9/16-inch box wrenches, remove.
2.	25-inch ground strap (5)	Remove. <b>See paragraph 4-37 for installation.</b>



4-56. REMOVING 25-INCH GROUND STRAP FROM POWER DISTRIBUTION BOX. (CONT)



EL8KG059

**4-57. REMOVING RADIO POWER CABLES FROM RADIOS.**

This task covers:

Removal

INITIAL SETUP

Tools	Personnel Required
None	One mechanic
Materials/Parts	Equipment Condition
None	All power off.

LOCATION	ITEM	ACTION REMARKS
<b><u>WARNING</u></b>		
Make sure all power is off.		
1. Underside rear of roadside MT-1029 radio mounting base	Cable, CX-13052 (1) and J21 (2)	Disconnect. <b>To complete removal, see paragraph 4-58.</b>
2.	Cable, CX-4721 (3) and J22 (4)	Disconnect. <b>For comsec use only.</b>
3.	Cable, CX-13050 (5) and J23 (6)	Disconnect.
4. Underside rear of curbside MT-1029 radio mounting base	Cable, CX-13050 (5) and J21 (7)	Disconnect.
5.	Cable, CX-4721 (8) and J22 (9)	Disconnect. <b>For comsec use only.</b>
6.	Cable, CX-13052 (10) and J23(11)	Disconnect.
7. Underside rear of curbside MT-1898 radio mounting base	Cable, CX-13052 (10) and J21 (12)	Disconnect.

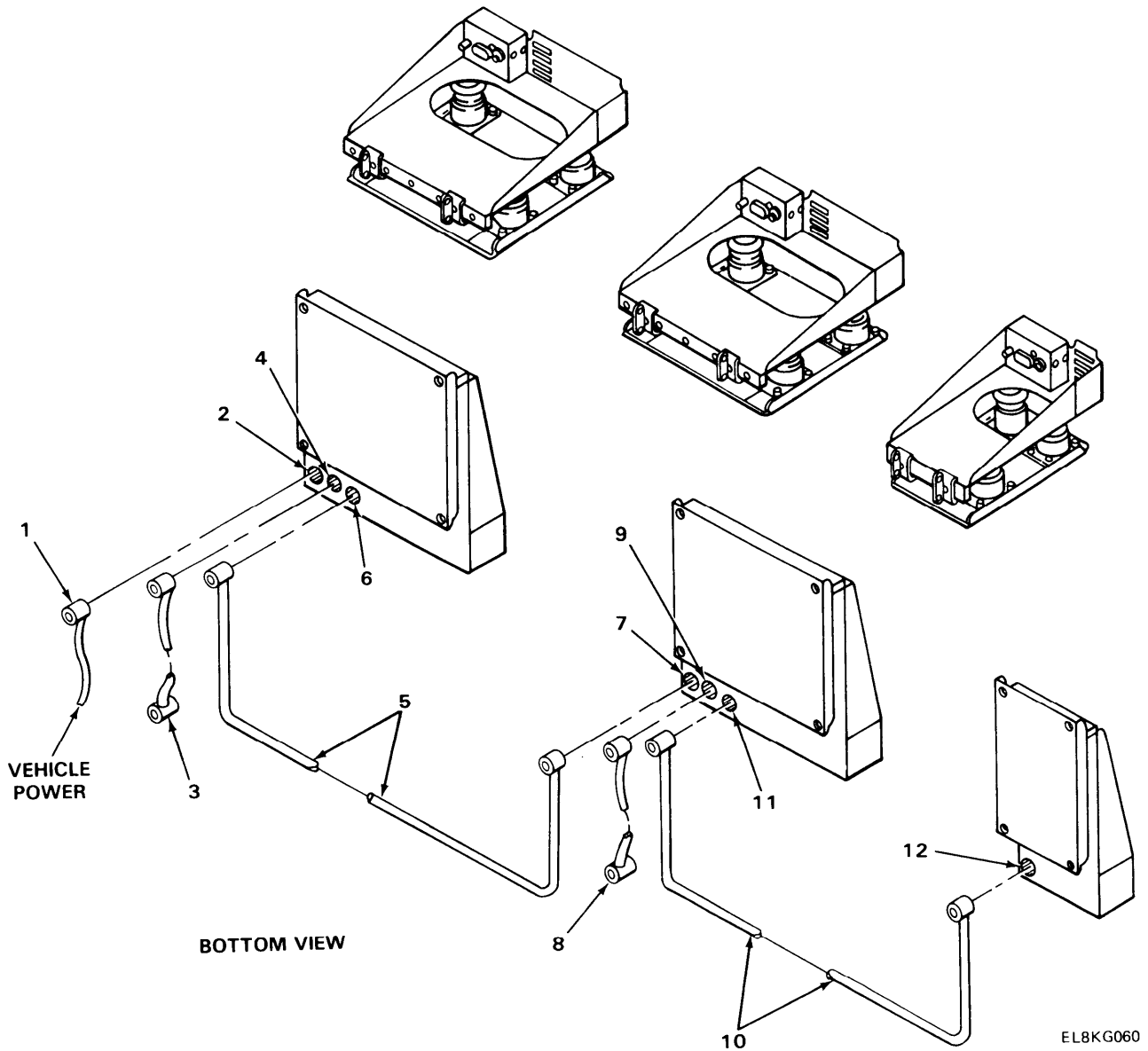
4-57. REMOVING RADIO POWER CABLES FROM RADIOS. (CONT)

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

8. Underside rear of both MT-1029 and MT-1898 radio mounting bases

Cables, (1), (3), (5), (8) and (10)

See paragraph 4-34 for installation.



**4-58. REMOVING RADIO AND POWER DISTRIBUTION BOX POWER CABLES FROM VEHICLE POWER.**

This task covers:

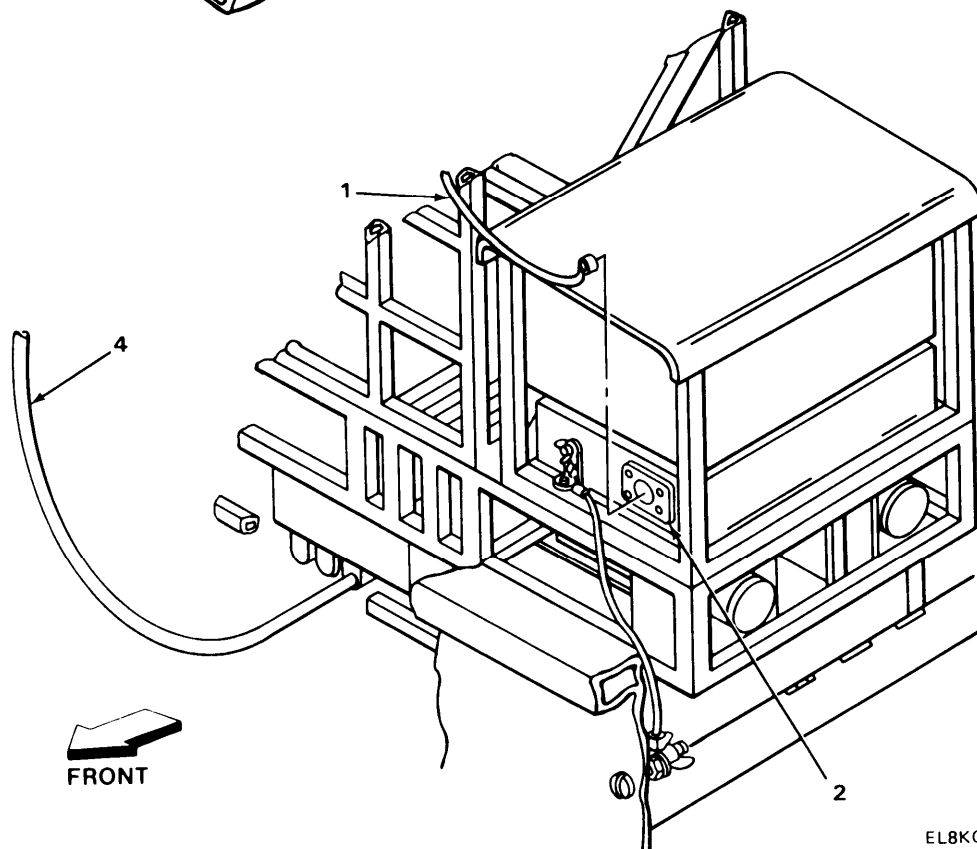
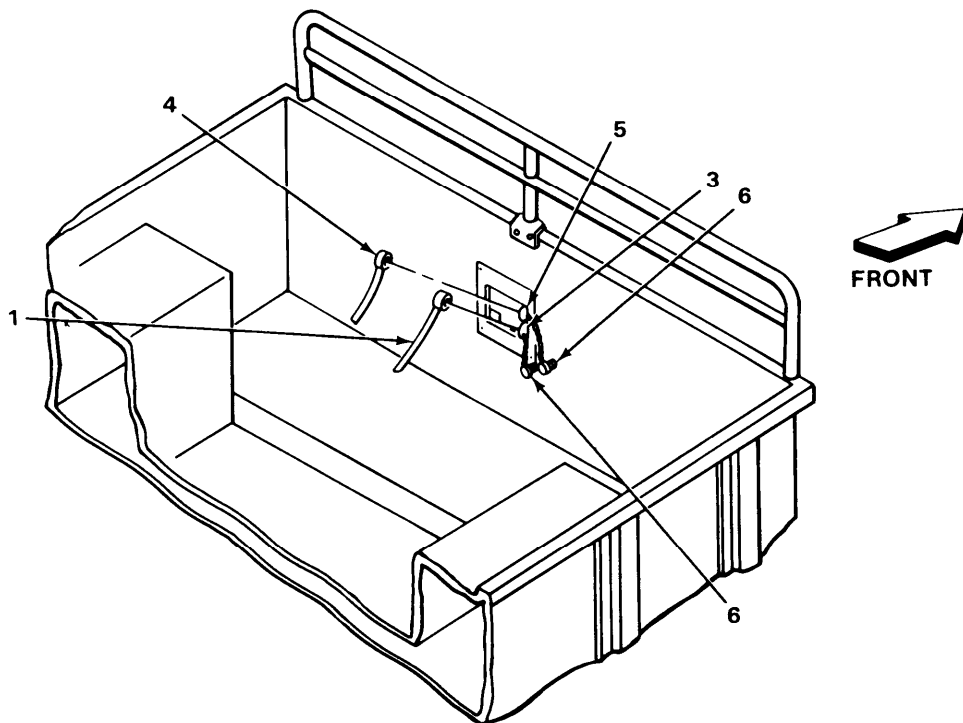
Removal

INITIAL SETUP

Tools	Personnel Required
None	One mechanic
Materials/Parts	Equipment Condition
None	All power off.

LOCATION	ITEM	ACTION REMARKS
<b><u>WARNING</u></b>		
Make sure all power is off.		
1. Rear of power distribution box	Cable, SC-D-690641 (1) and receptacle (2)	Disconnect.
2. Carrier forward wall power receptacle	Cable, SC-D-690641 (1) and lower plug (3)	Disconnect.
3.	Cable, CX-13052 (4) and upper plug (5)	Disconnect. <b>To disconnect opposite end of cable, see paragraph 4-57 for removal.</b>
4.	Protective caps (6)	Install.
5.	Cable, SC-D-690641 (1) and cable, CX-13052 (4)	See paragraph 4-37 for installation.

4-58. REMOVING RADIO AND POWER DISTRIBUTION BOX POWER CABLES FROM VEHICLE POWER. (CONT)



EL8KG061

**4-59. REMOVING RADIO MOUNTING BASES.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench

Personnel Required

One mechanic

Materials/Parts

None

Equipment Condition

Radio power cables removed, see paragraph 4-57.

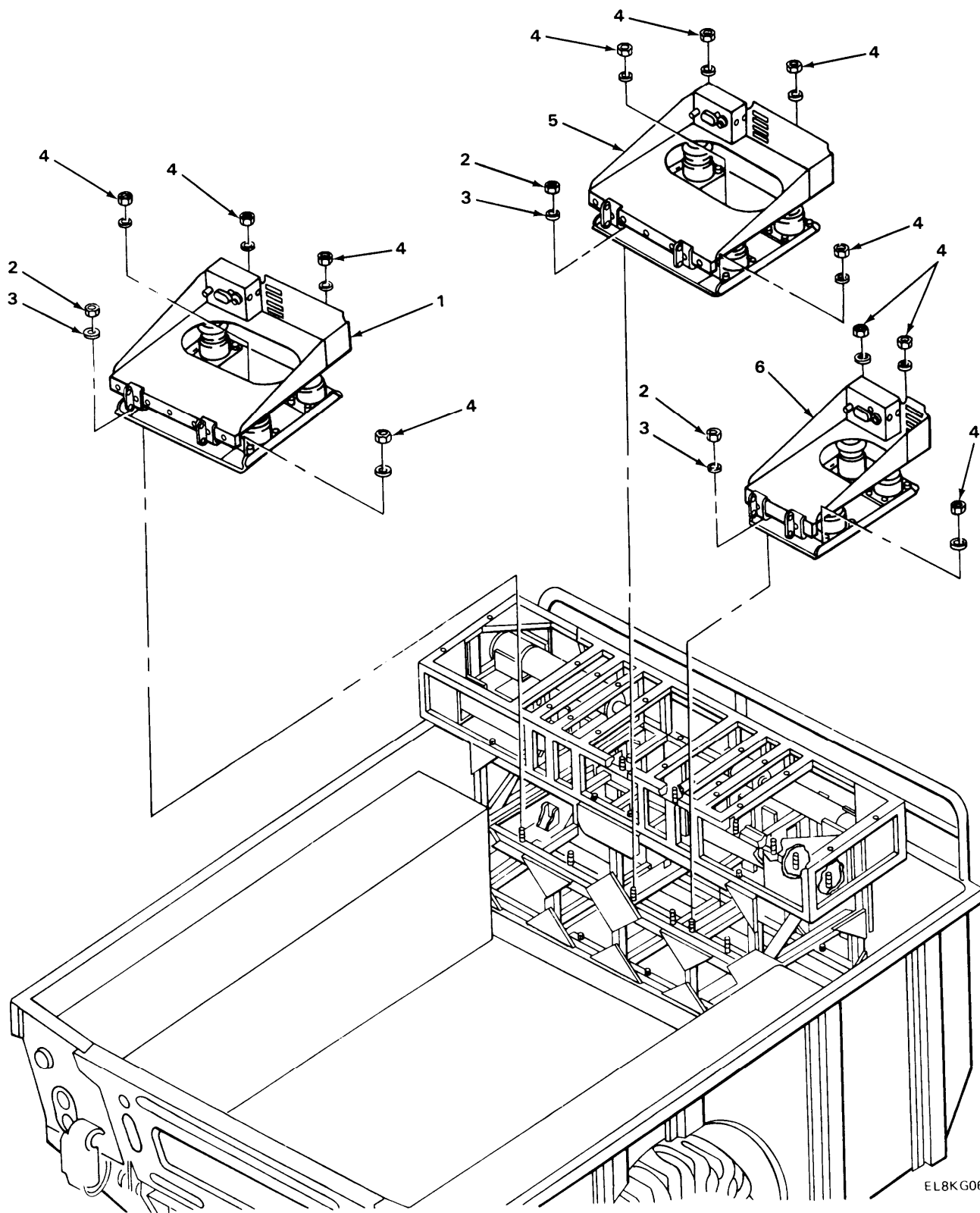
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

There are three radio mounting bases. Steps given are typical of all three mounting bases.

1.	Roadside position of radio mount	Radio mounting box (1), nut (2) and ET lock-washer (3)	Using 1/2-inch box wrench, remove. <b>There are five nuts. Step 1 is typical for all five nuts.</b>
2.		Nuts (4)	Do step 1 again.
3.		Radio mounting base (1)	Remove.
4.	Curbside position of radio mount	Radio mounting base (5)	Do steps 1, 2 and 3 again.
5.	Curbside corner position of radio mount	Radio mounting base (6)	Do steps 1, 2 and 3 again. <b>There are only four nuts used with this radio mount.</b>
6.		Radio mounting bases (1), (5) and (6)	See paragraph 4-35 for installation

4-59. REMOVING RADIO MOUNTING BASES. (CONT)



EL8KG062

4-60. REMOVING TACFIRE COMPONENTS.

This task covers:

Removal

INITIAL SETUP

Tools

Flat-tip screwdriver  
Cross-tip screwdriver

Personnel Required

Two mechanics

Equipment Condition

All power off.

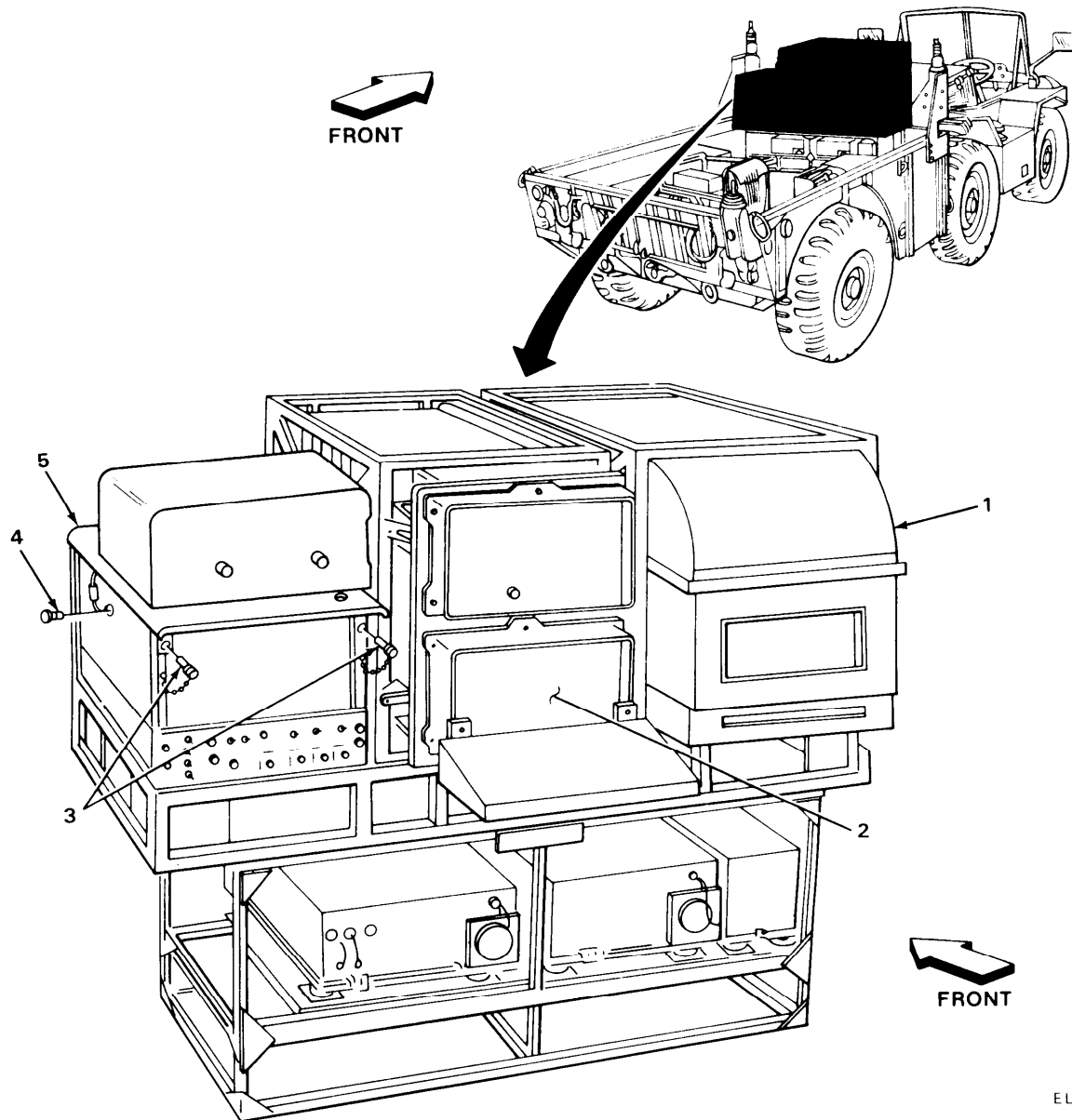
Materials/Parts

None

LOCATION	ITEM	ACTION REMARKS
1. Electronic line printer rack	Electronic line printer (1)	Remove.
2. Message entry group rack	Message entry group (2)	Remove.
3. Key generator rack	Screws (3)	Using flat-tip screwdriver, remove. <b>These are captive screws. Leave hanging on chains.</b>
4.	Screw (4)	Using cross-tip screwdriver, remove. <b>Put screw back in storage box for storage.</b>
5.	Key generator tray (5)	Lift front of tray up and pull tray out.
<b>NOTE</b>		
For emergency removal do steps 3 and 5 only.		
For completion of electronic equipment removal, refer to TM 11-7440-251-10 and TM 11-7440-253-10-1.		
6. Tacfire racks	Tacfire components (1), (2), (5)	See paragraph 4-36 for installation.



4-60. REMOVING TACFIRE COMPONENTS. (CONT)



EL8KG063

**4-61. REMOVING 4-INCH GROUND STRAPS.**

This task covers:

Removal

INITIAL SETUP

Tools

Adjustable pliers

Materials/Parts

None

Personnel Required

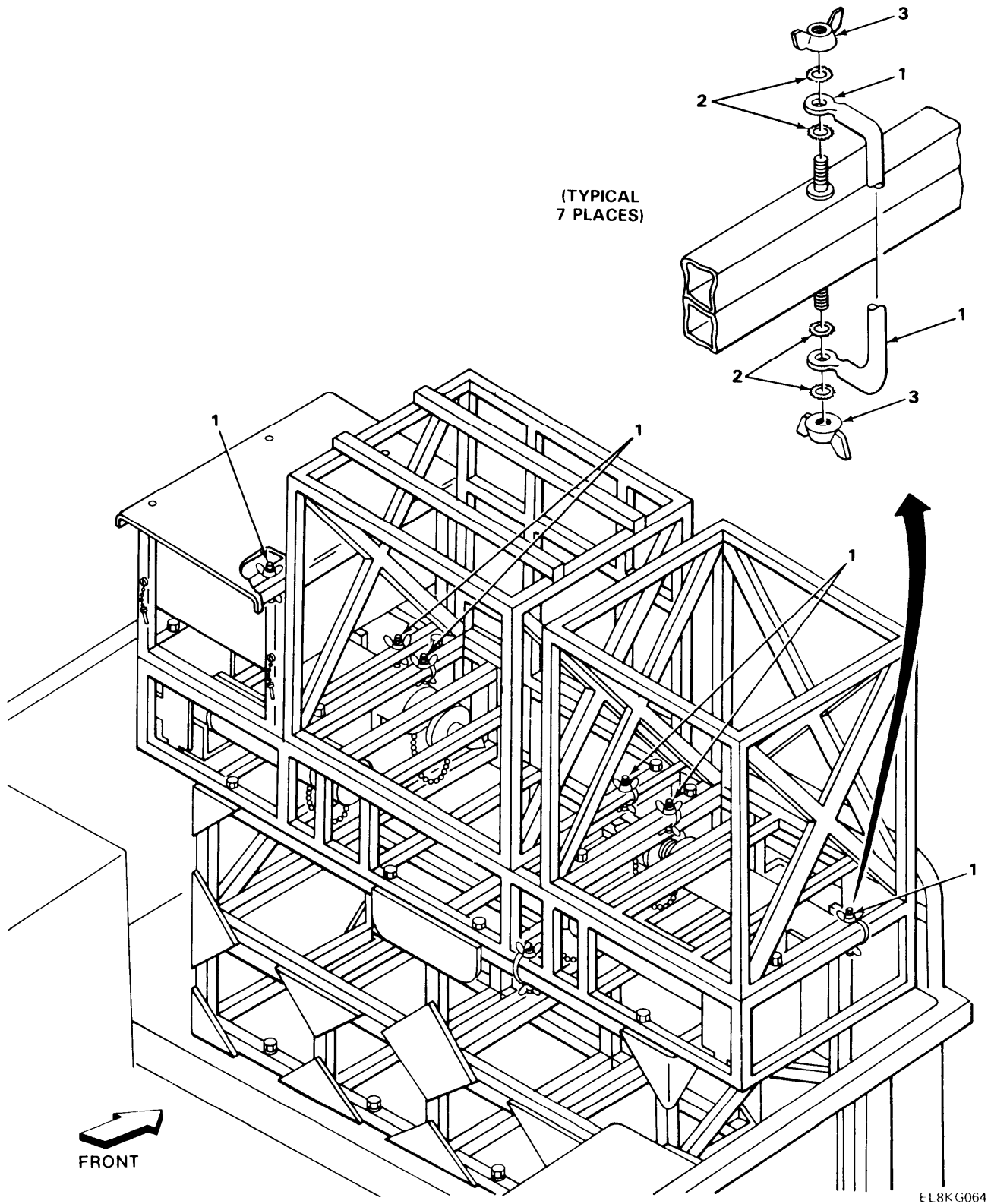
One mechanic

Equipment Condition

Tacfire racks installed and ground straps in place.

LOCATION	ITEM	ACTION REMARKS
1. Upper studs, electronic rack and electronic equipment table	Ground straps (1), IET lockwasher (2) and wingnut (3)	Using pliers, remove. <b>There are seven ground straps. Step 1 is typical for all seven ground straps.</b>
2.	Ground strap (1)	Do step 1 again.
3. Lower studs, electronic equipment rack and electronic equipment table	Ground strap (1)	Do steps 1 and 2 again.
4.	Ground strap (1)	See paragraph 4-33 for installation.

4-61. REMOVING 4-INCH GROUND STRAPS. (CONT)



**4-62. REMOVING ELECTRONIC LINE PRINTER SLIDING TRAY.**

This task covers:

Removal

**INITIAL SETUP**

**Tools**

9/16-inch box wrench

**Personnel Required**

One mechanic

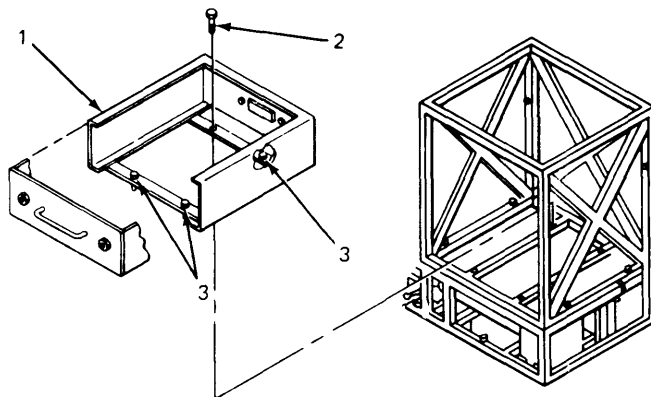
**Materials/Parts**

None

**Equipment Condition**

Tacfire components removed, see paragraph 4-60.

LOCATION	ITEM	ACTION REMARKS
1. Inside ELP rack	ELP tray (1) and screw (2)	Slide tray out. Using 9/16-inch box wrench remove. <b>There are four screws. Step 1 is typical for all four screws.</b>
2.	Screws (3)	Do step 1 again.
3.	ELP tray (1)	Remove.
4.	ELP tray (1)	See paragraph 4-32 for installation.



EL8KG065



**4-63. REMOVING ELECTRONIC LINE PRINTER RACK.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench (2 required)

Personnel Required

One mechanic

Materials/Parts

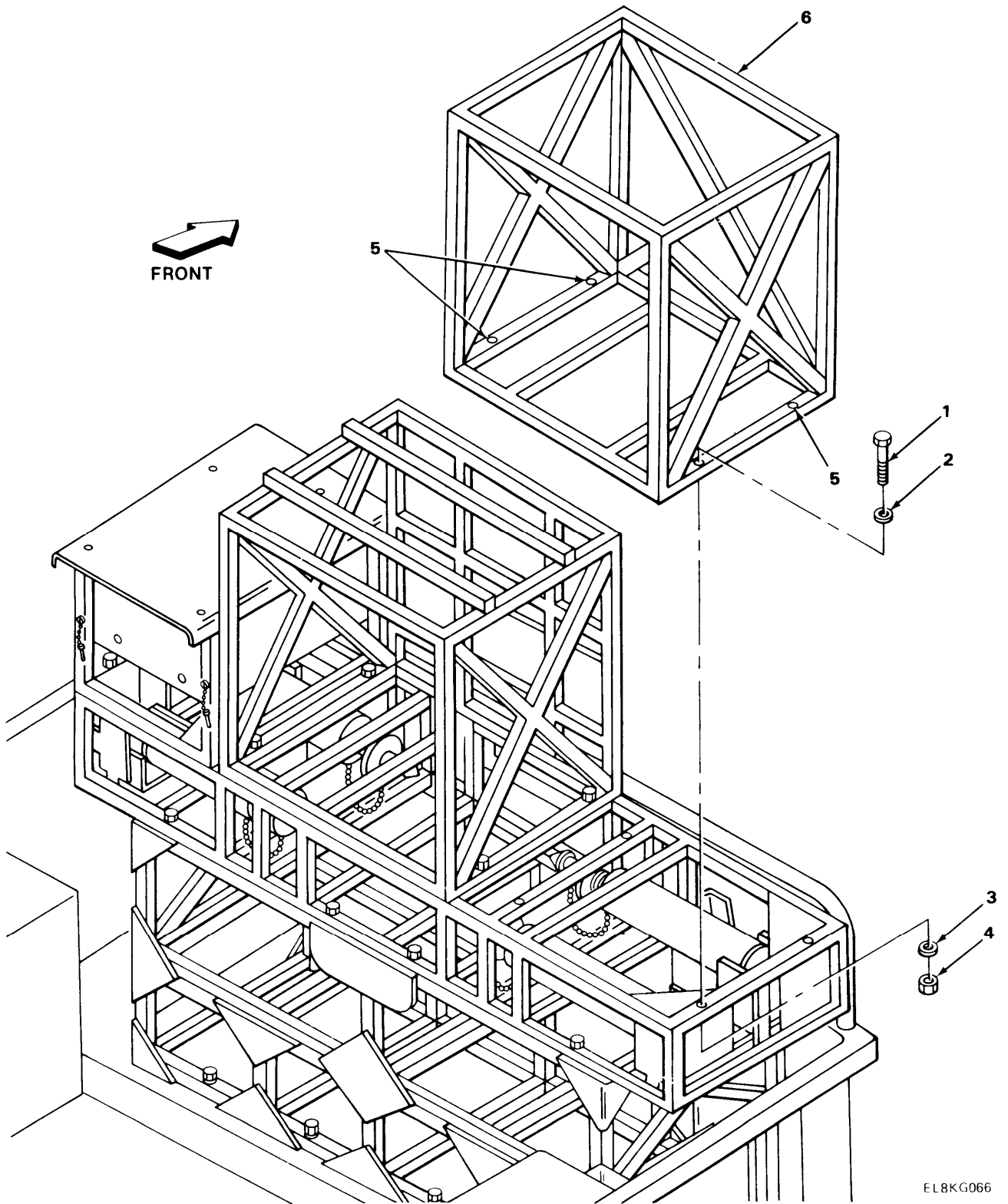
None

Equipment Condition

Electronic line printer sliding tray removed, see paragraph 4-62.

LOCATION	ITEM	ACTION REMARKS
1. Curbside top of electronic equipment table	Screw (1), flat washer (2), flat washer (3) and nut (4)	Using two 1/2-inch box wrenches, remove. <b>There are four screws. Step 1 is typical for all four screws.</b>
2.	Screws (5)	Do step 1 again.
3.	ELP rack (6)	Remove. <b>See paragraph 4-31 for installation.</b>

4-63. REMOVING ELECTRONIC LINE PRINTER RACK. (CONT)



EL8KG066

**4-64. REMOVING MESSAGE ENTRY GROUP RACK.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench (2 required)

Personnel Required

One mechanic

Materials/Parts

None

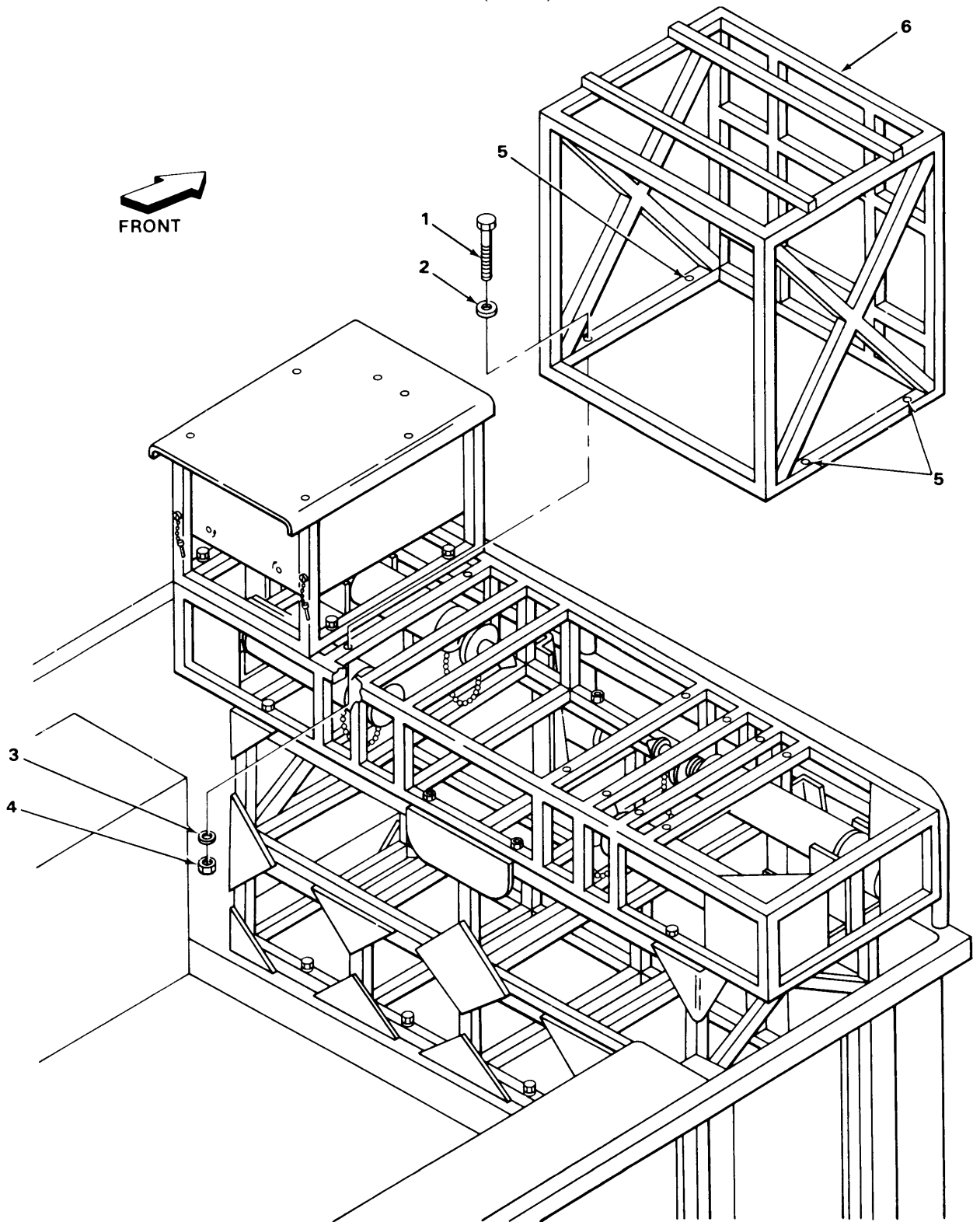
Equipment Condition

Tacfire components removed, see paragraph 4-60.

	LOCATION	ITEM	ACTION REMARKS
1.	Center position top of electronic equipment table	Screw (1), flat washer (2), flat washer (3) and nut (4)	Using two 1/2-inch box wrenches, remove. There are four screws. Step 1 is typical for all four screws.
2.		Screws (5)	Do step 1 again.
3.		MEG rack (6)	Remove. <b>See paragraph 4-30 for installation.</b>



4-64. REMOVING MESSAGE ENTRY GROUP RACK. (CONT)



E.L8KG067

**4-65. REMOVING KEY GENERATOR RACK.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench (2 required)

Personnel Required

One mechanic

Materials/Parts

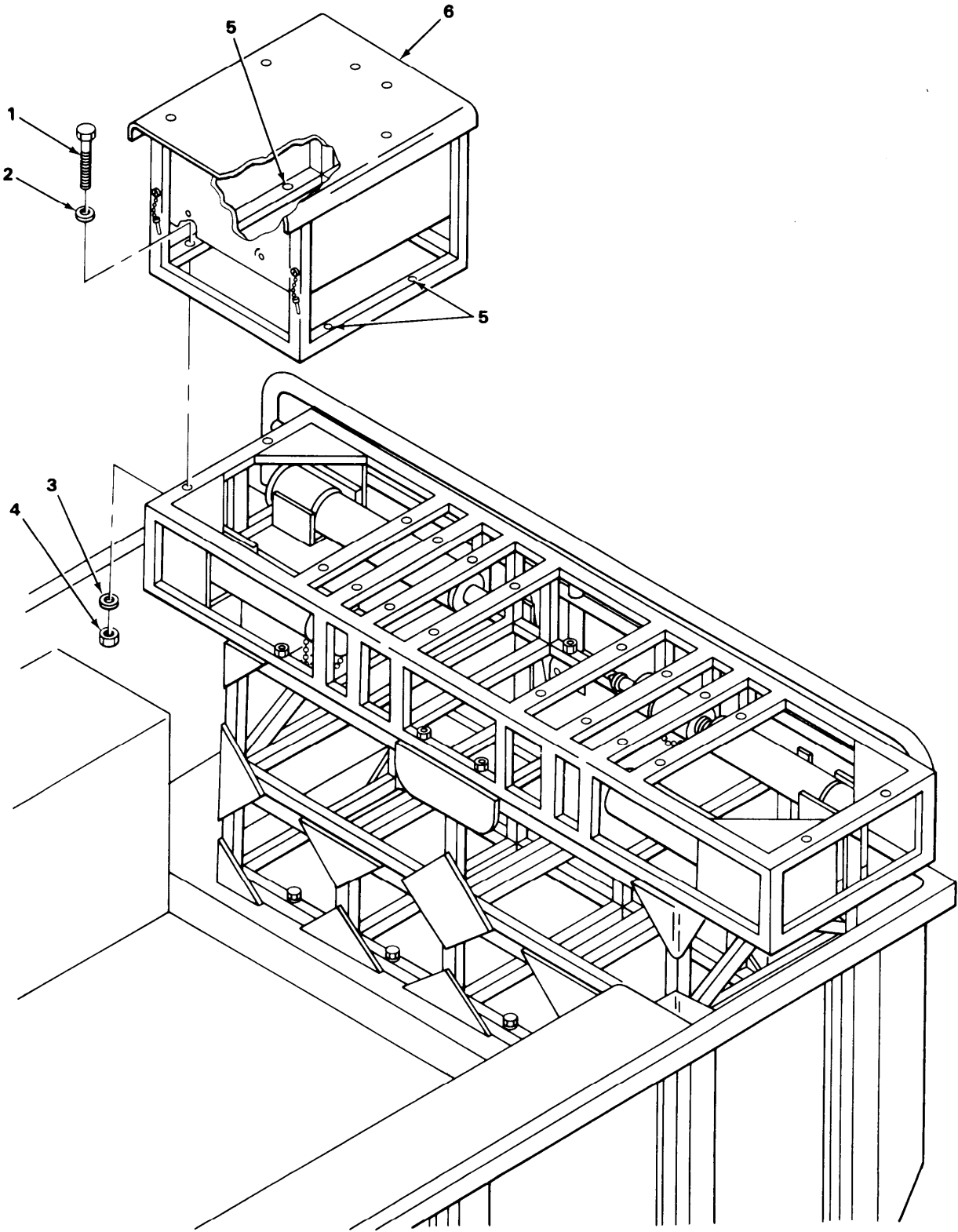
None

Equipment Condition

Tacfire components removed, see paragraph 4-60.

LOCATION	ITEM	ACTION REMARKS
1. Roadside top of electronic equipment table	Screw (1), flat washer (2), flat washer (3) and nut (4)	Using two 1/2-inch box wrenches, remove. <b>There are four screws. Step 1 is typical for all four screws.</b>
2.	Screws (5)	Do step 1 again.
3.	KG rack (6)	Remove. <b>See paragraph 4-30 for installation.</b>

4-65. REMOVING KEY GENERATOR RACK. (CONT)



EL8KG068

**4-66. REMOVING FRONT REINFORCEMENT SUPPORT.**

This task covers:

Removal

INITIAL SETUP

Tools

7/16-inch box wrench (2 required)  
 1/2-inch box wrench (2 required)

Materials/Parts

None

Personnel Required

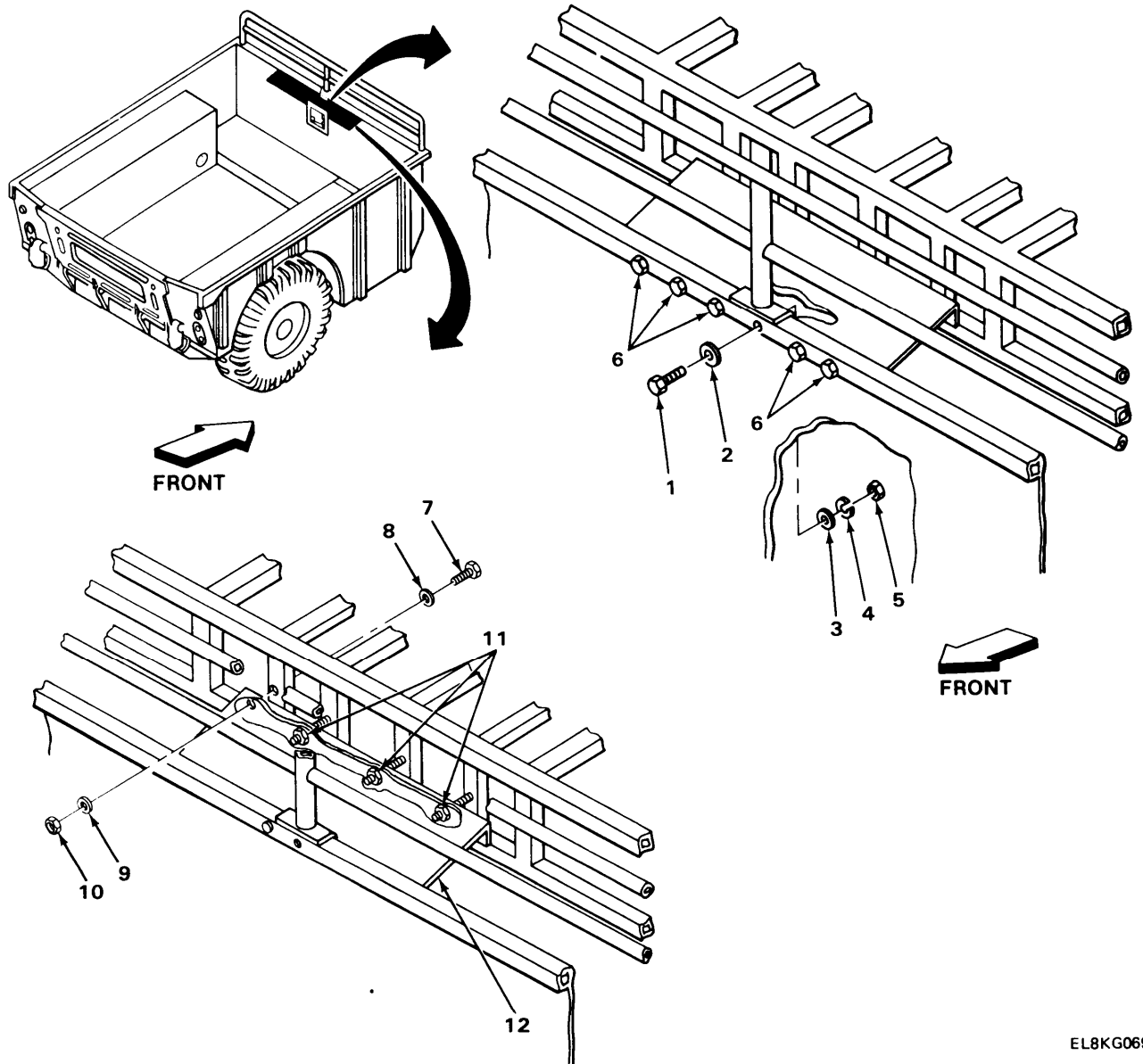
One mechanic

Equipment Condition

Tacfire racks removed. (See para 4-63, 4-64 and 4-65. )

LOCATION	ITEM	ACTION REMARKS
1. Front carrier wall	Screw (1), flat washer (2), flat washer (3), lock-washer (4) and nut (5)	Using two 7/16-inch box wrenches, remove. <b>There are six screws. Step 1 is typical for all six screws.</b>
2.	Screws (6)	Do step 1 again.
3. Front of electronic equipment table	Screw (7), flat washer (8), flat washer (9) and nut (10)	Using two 1/2-inch box wrenches, remove. <b>There are four screws. Step 3 is typical for all four screws.</b>
4.	Screws (11)	Do step 3 again.
5.	Front reinforcement support (12)	Remove. <b>See paragraph 4-28 for installation.</b>

4-66. REMOVING FRONT REINFORCEMENT SUPPORT. (CONT)



EL8KG069

**4-67. REMOVING ELECTRONIC EQUIPMENT TABLE.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench (2 required)

Materials/Parts

None

Personnel Required

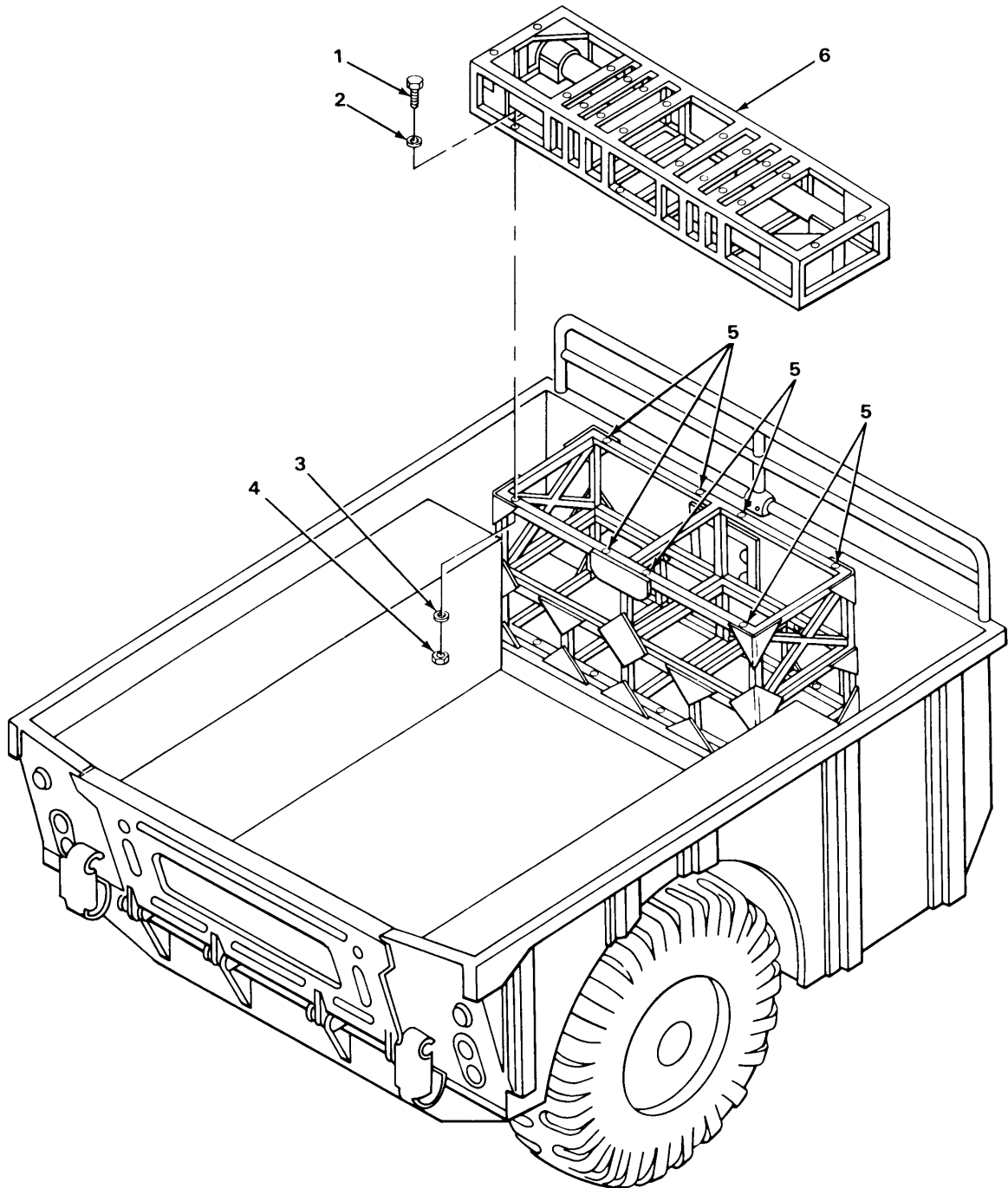
Two mechanics

Equipment Condition

Tacfire components removed, see paragraph 4-60.  
 ELP rack removed, see paragraph 4-63.  
 MEG rack removed, see paragraph 4-64.  
 KG rack removed, see paragraph 4-65.  
 Front reinforcement support removed, see paragraph 4-66.

LOCATION	ITEM	ACTION REMARKS
1. Top of radio mount	Screw (1), flat washer (2), flat washer (3) and nut (4)	Using two 1/2-inch box wrenches, remove. <b>There are eight screws. Step 1 is typical for all eight screws.</b>
2.	Screws (5)	Do step 1 again.
<b><u>WARNING</u></b>		
A helper will be needed to lift and remove electronic equipment table.		
3.	Electronic equipment table (6)	Remove. <b>See paragraph 4-27 for installation.</b>

4-67. REMOVING ELECTRONIC EQUIPMENT TABLE. (CONT)



EL8KG070

**4-68. REMOVING RADIO MOUNT.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box end wrench

Personnel Required

Two mechanics

Materials/Parts

None

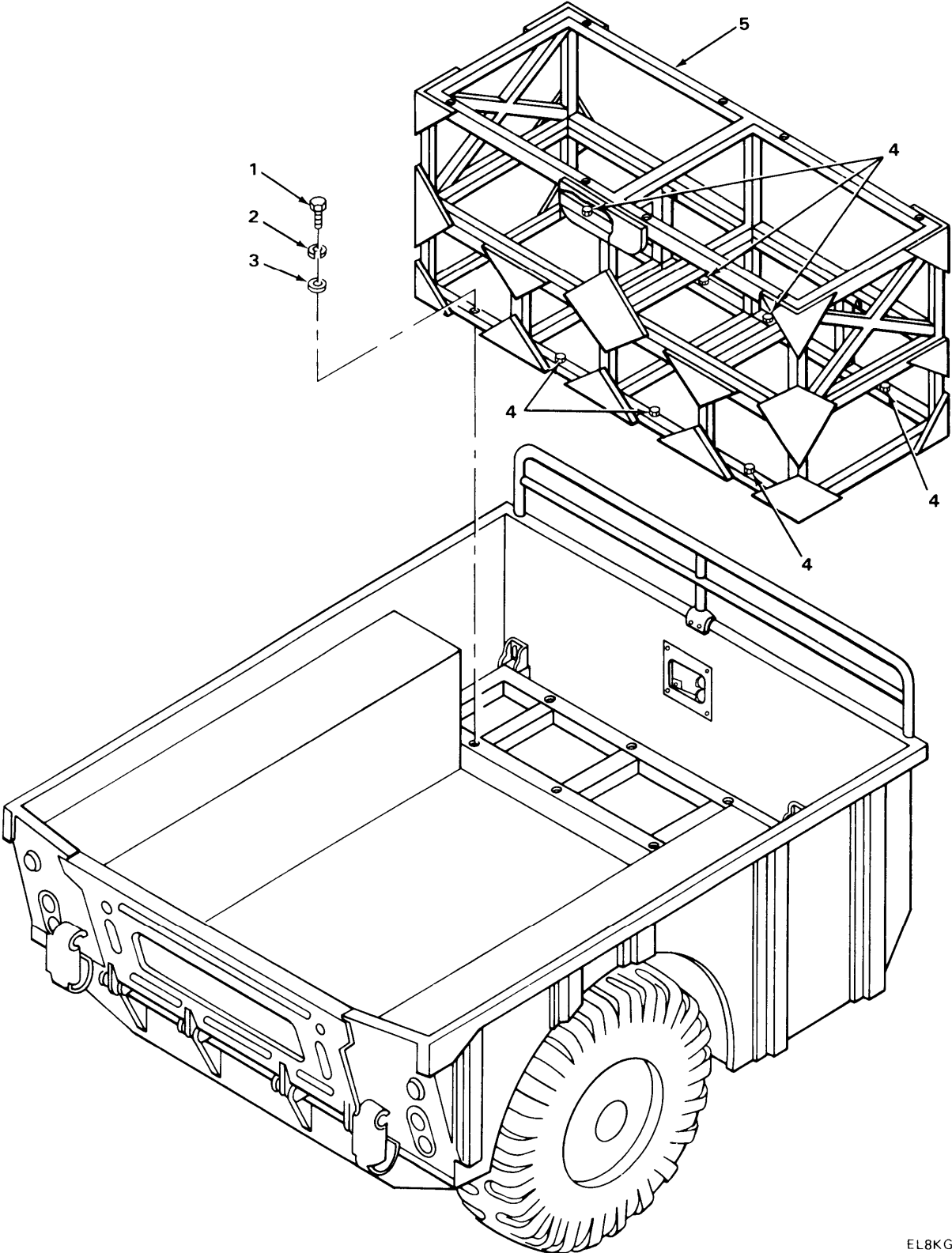
Equipment Condition

Electronic equipment table removed, see paragraph 4-67.

LOCATION	ITEM	ACTION REMARKS
1. Top of Submount	Screw (1), lock-washer (2) and flatwasher (3)	Using 1/2-inch box wrench, remove. <b>There are eight screws. Step 1 is typical for all eight screws.</b>
2.	Screws (4)	Do step 1 again.
<b><u>WARNING</u></b>		
A helper will be needed to lift and remove radio mount.		
3.	Radio mount (5)	Remove. <b>See paragraph 4-24 for installation.</b>



4-68. REMOVING RADIO MOUNT. (CONT)



EL8KG071

**4-69. REMOVING SUBMOUNT ASSEMBLY.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench (2 required)

Personnel Required

Two mechanics

Materials/Parts

None

Equipment Condition

Radio mount removed, see paragraph 4-68.

LOCATION

ITEM

ACTION  
REMARKS

**NOTE**

A helper will be needed outside carrier.

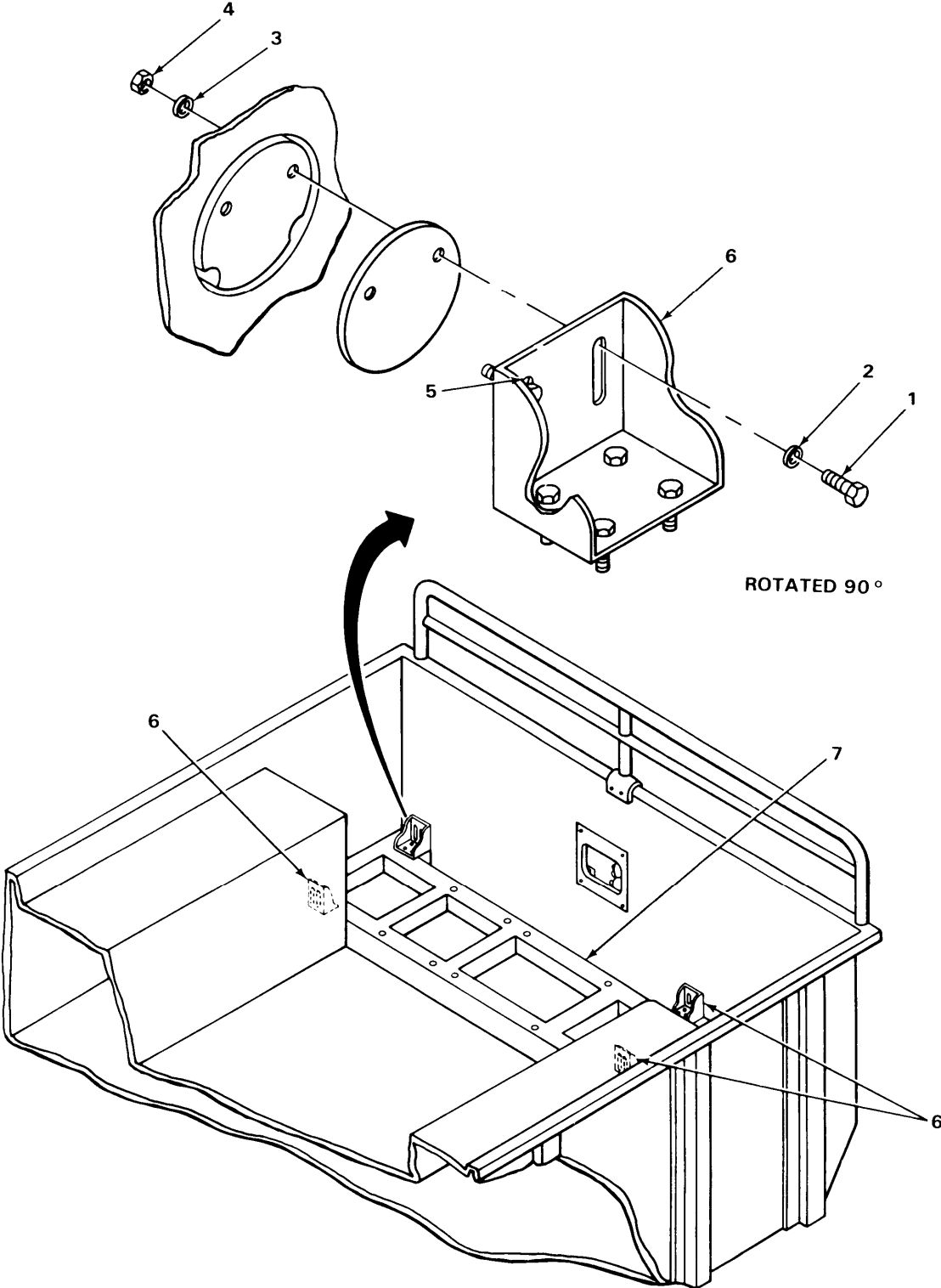
- |                                    |   |   |
|------------------------------------|---|---|
| 1. Inside carrier, forward section | Screw (1), flat washer (2), flat washer (3) and nut (4) | Using two 1/2-inch box wrenches, remove.<br><b>There are two screws. Step 1 is typical for both screws.</b> |
| 2.                                 | Screws (5)  | Do step 1 again.  |
| 3.                                 | Brackets (6)  | Do steps 1 and 2 again.<br>There are four brackets.   |

**WARNING**

A helper will be needed to lift and remove submount.

- |    |              |  |
|----|--------------|--|
| 4. | Submount (7) | Remove.<br><b>See paragraph 4-23 for installation.</b> |
|----|--------------|--|

4-69. REMOVING SUBMOUNT ASSEMBLY. (CONT)



E18KG072

**4-70. REMOVING ADAPTER ASSEMBLIES.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench  
(2 required)

Materials/Parts

None

Personnel Required

Two mechanics

Equipment Condition

Submount assembly removed,  
see paragraph 4-69.

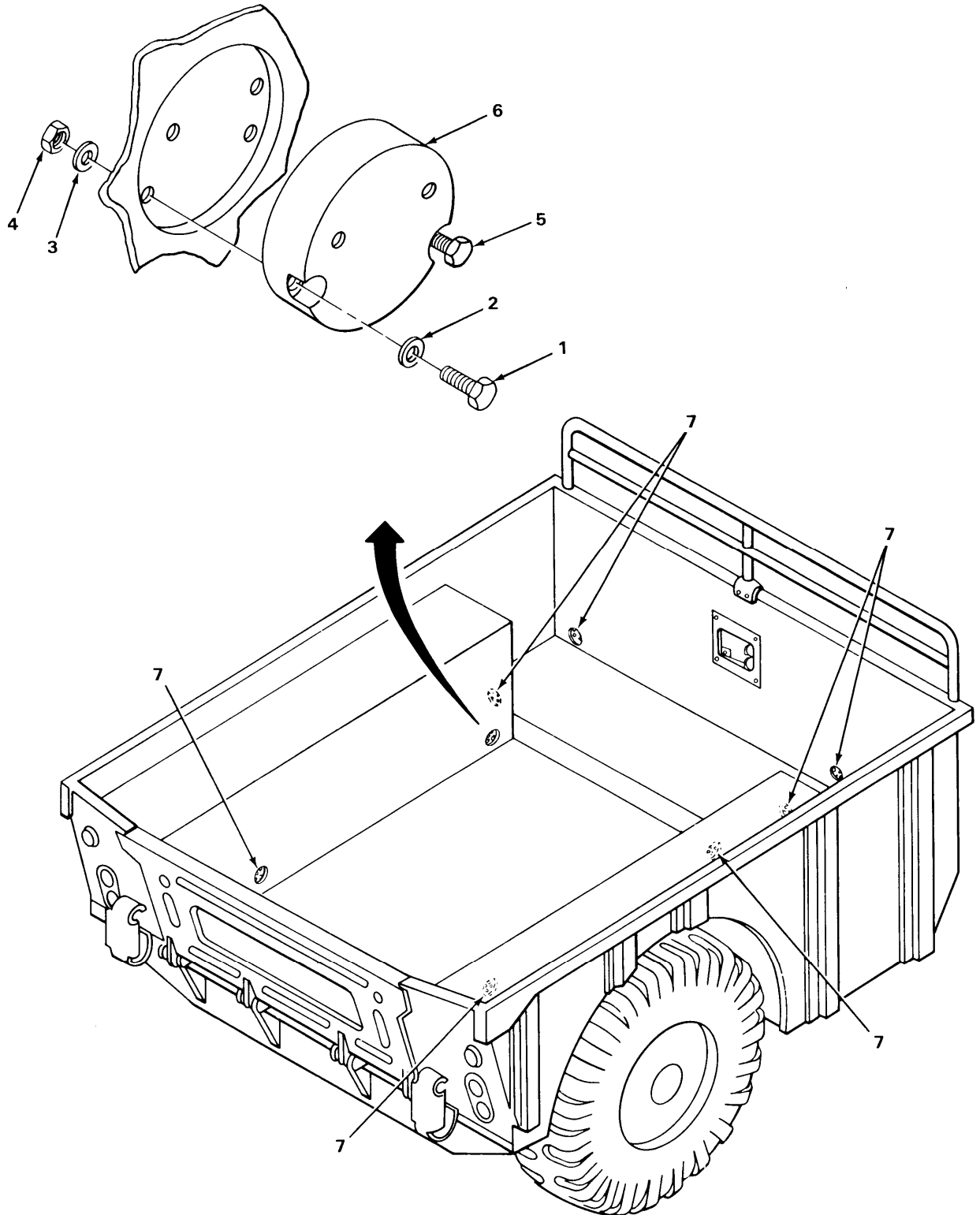
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed outside carrier.

- |                  |  |   |
|------------------|--|---|
| 1. Carrier walls | Screw (1) flat washer (2), flat washer (3) and nut (4) | Using two 1/2-inch box wrenches, remove. There are two screws. Step 1 is typical for both screws. |
| 2.               | Screw (5)  | Do step 1 again.  |
| 3.               | Adapter (6)  | Remove.<br><b>There are eight adapters. Step 3 is typical for all eight adapters.</b>             |
| 4.               | Adapter (7)  | Do steps 1, 2 and 3 again.<br><b>See paragraph 4-22 for installation.</b>                         |

4-70. REMOVING ADAPTER ASSEMBLIES. (CONT)



EL8KG073

**4-71. REMOVING CANVAS TIE-DOWN HOOKS FROM FRONT ANTENNA MOUNTING BRACKETS.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench  
(2 required)

Materials/Parts

None

Personnel Required

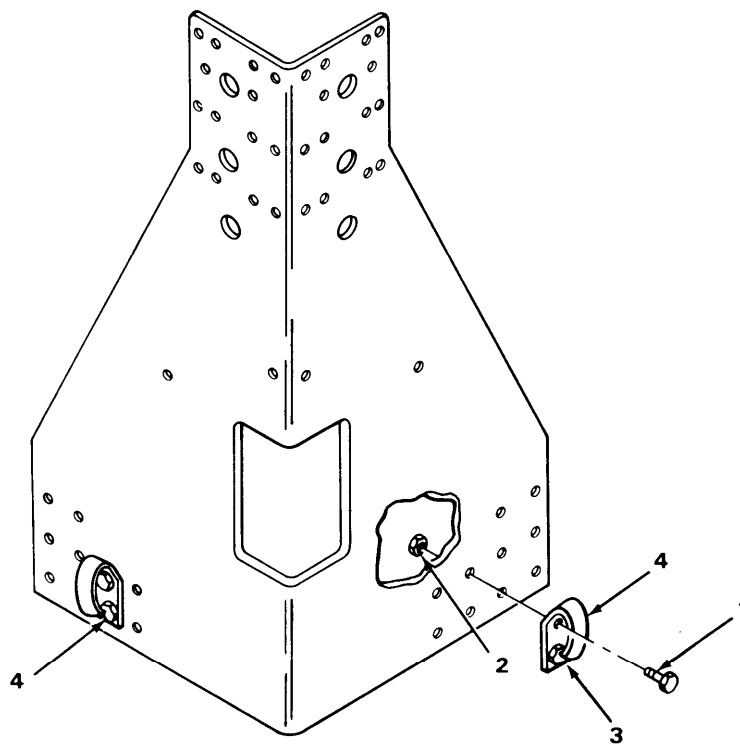
One mechanic

Equipment Condition

Tie-down hooks in place.

	LOCATION	ITEM	ACTION REMARKS
1.	Curbside antenna mounting bracket	Screw (1) and nut (2)	Using two 1/2-inch box wrenches, remove. <b>There are two screws. Step 1 is typical for both screws.</b>
2.		Screw (3)	Do step 1 again.
3.		Tie-down hook (4)	Remove. <b>There are two tie-down hooks on each antenna mounting bracket. Steps 1, 2 and 3 are typical for both tie-down hooks.</b>
4.	Roadside antenna mounting bracket	Tie-down hook (4)	Do steps 1, 2 and 3 again. See paragraph 4-14 for installation.

4-71. REMOVING CANVAS TIE-DOWN HOOKS FROM FRONT ANTENNA MOUNTING BRACKETS. (CONT)



EL8KG074

**4-72. REMOVING/INSTALLING ANTENNA CABLING.**

This task covers:

1. Removal
2. Installation

INITIAL SETUP

Tools

Flat-tip screwdriver

Materials/Parts

Canvas bag (3 required)

Personnel Required

One mechanic

Equipment Condition

Antenna cabling disconnected from radios, see SB 11-131 for removal.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

REMOVAL

1. Front roadside antenna mounting base	Screw (1) and cable clamp (2)	Using flat-tip screwdriver, remove. <b>Remove all clamps and screws.</b>
2.	RF cable (3) and control cable (4)	Remove. <b>Store in canvas bag.</b>
3. Front curbside antenna mounting base	Antenna (5)	Do steps 1 and 2 again.
4. Rear curbside antenna mounting base	Antenna (6)	Do steps 1 and 2 again.

INSTALLATION

1. Front roadside antenna mounting base	RF cable (3) and control cable (4)	Route.
2.	Screw (1), cable clamp (2), RF cable (3) and control cable (4)	Using flat-tip screwdriver, install. <b>Use existing holes for cable clamps.</b>
3. Front curbside antenna mounting base	Antenna (5)	Do steps 1 and 2 again.

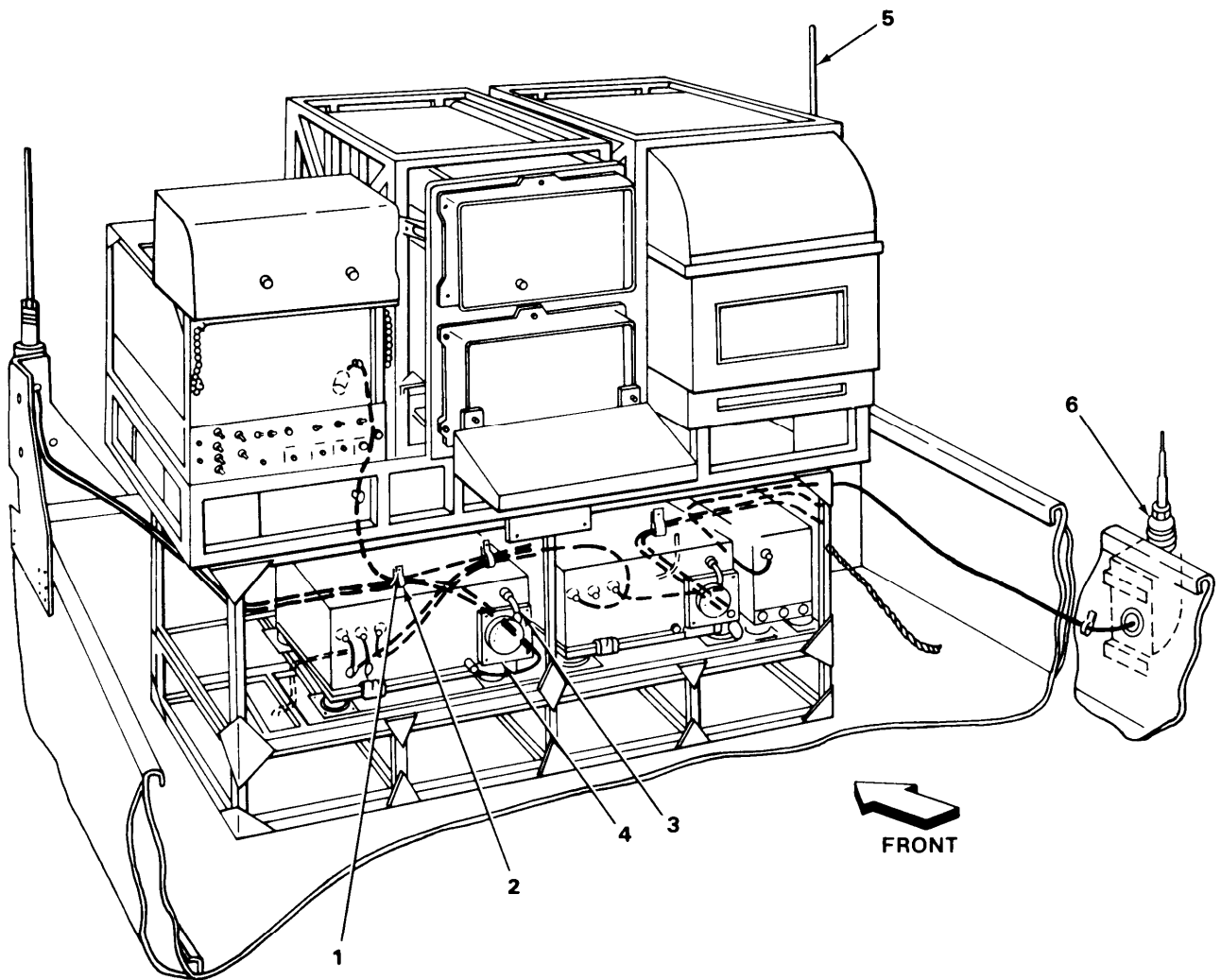


4-72. REMOVING/INSTALLING ANTENNA CABLING. (CONT)

LOCATION	ITEM	ACTION REMARKS
4. Rear curbside antenna mounting base	Antenna (6)	Do steps 1 and 2 again.

**NOTE**

See SB 11-131 for cable to radio hook-up.



EL8KG075

**4-73. REMOVING ANTENNA GROUND STRAPS.**

This task covers:

Removal

**INITIAL SETUP**

**Tools**

7/16-inch box wrench (2 required)  
Flat-tip screwdriver

**Materials/Parts**

None

**Personnel Required**

One mechanic

**Equipment Condition**

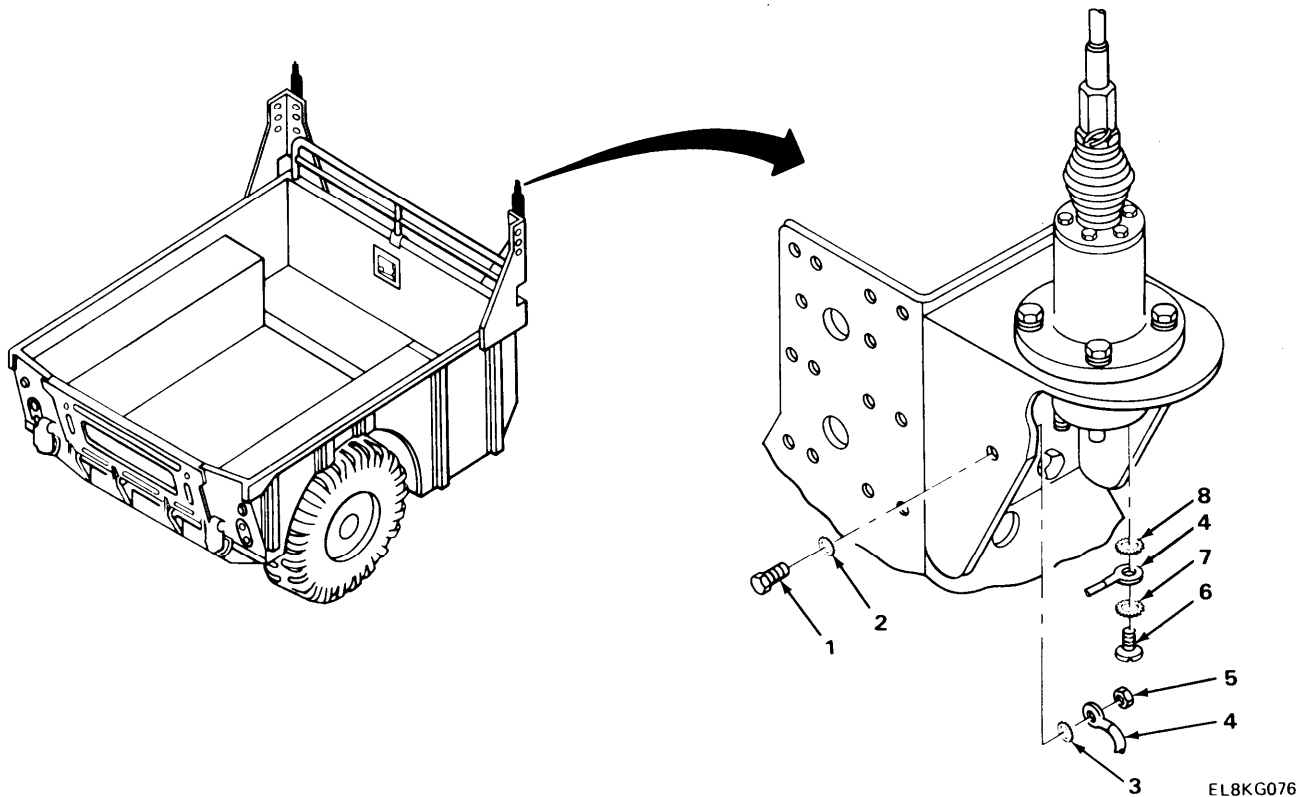
Antenna cabling removed, see paragraph 4-72.

LOCATION	ITEM	ACTION REMARKS
1. Antenna supports	Screw (1), IET lockwasher (2), IET lockwasher (3), ground strap (4) and nut (5)	Using two 7/16-inch box wrenches, remove.
2.	Screw (6), IET lockwasher (7), ground strap (4) and IET lockwasher (8)	Using flat-tip screwdriver, remove.
3.	Ground strap (4)	See paragraph 4-18 for installation.

**NOTE**

There are three vehicle antennas. Steps 1, 2 and 3 are typical for all three antennas.

4-73. REMOVING ANTENNA GROUND STRAPS. (CONT)



**4-74. REMOVING ANTENNA MASTS.**

This task covers:

Removal

**INITIAL SETUP**

**Tools**

1/8-inch hex wrench  
Adjustable crescent wrench

**Materials/Parts**

None

**Personnel Required**

One mechanic

**Equipment Condition**

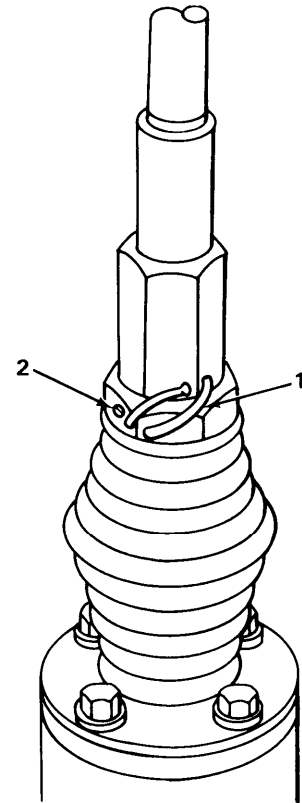
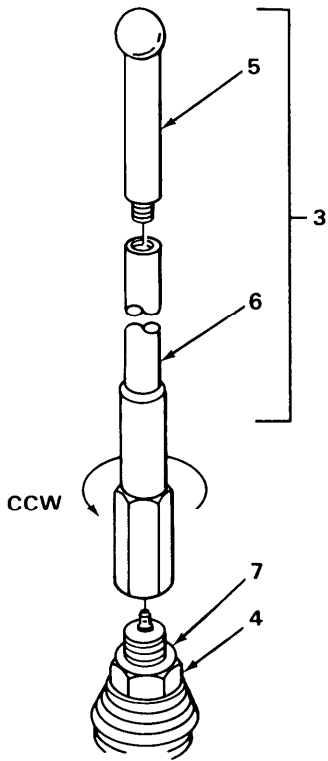
Antenna ground straps removed, see paragraph 4-73.

LOCATION	ITEM	ACTION REMARKS
1. Antenna supports	Safety wire (1)	Remove.
2.	Setscrew (2)	Using 1/8-inch hex wrench, loosen.
3.	Antenna mast (3) and mounting base (4)	Using adjustable wrench, remove.
4.	Upper antenna mast (5) and lower antenna mast (6)	Peel off electrical tape. Turning counter-clockwise, remove.
5.	O-ring (7)	Remove.
6.	Antenna mast (3)	See paragraph 4-19 for installation.

**NOTE**

There are three vehicle antennas. Steps 1 through 6 are typical for all three antennas.

4-74. REMOVING ANTENNA MASTS. (CONT)



EL8KG077

**4-75. REMOVING ANTENNA MOUNTING BASES.**

This task covers:

Removal

INITIAL SETUP

Tools	Personnel Required
9/16-inch box wrench (2 required)	One mechanic
Materials/Parts	Equipment Condition
None	Antenna masts removed, see paragraph 4-74.

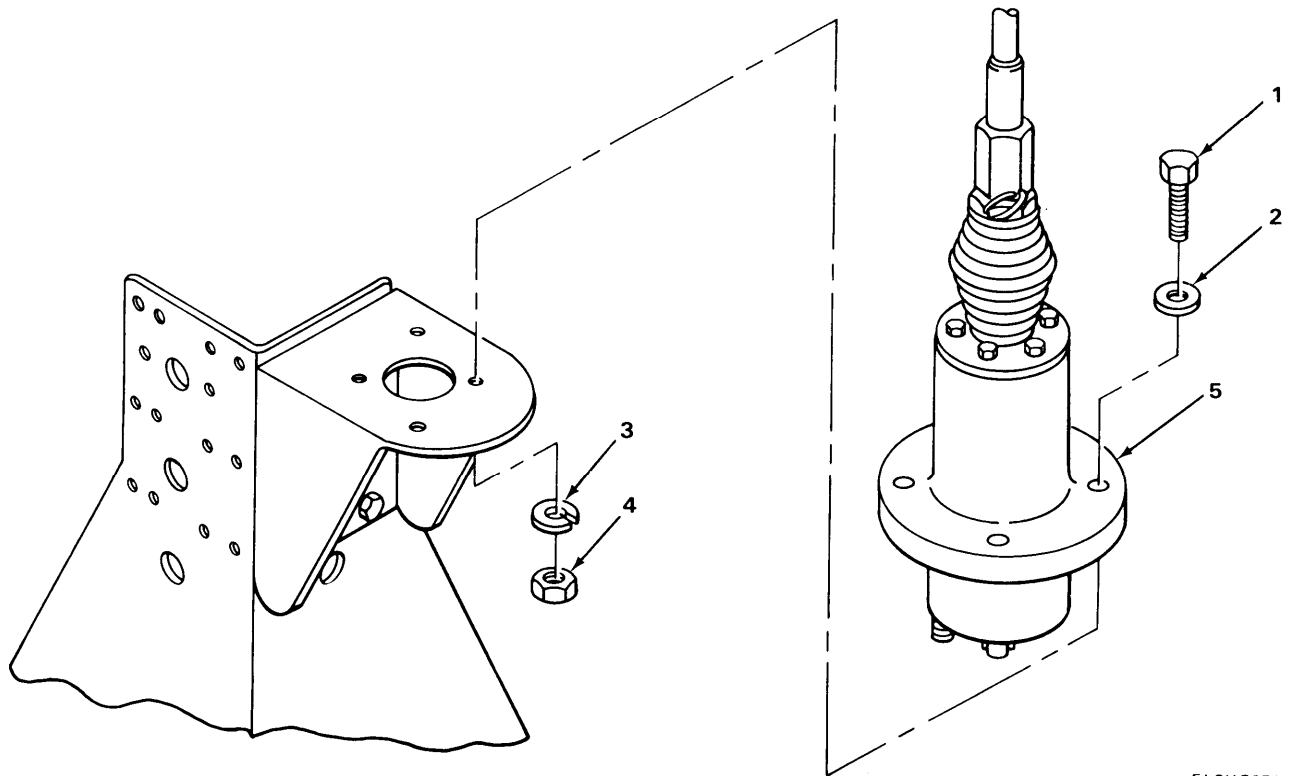
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

There are two VRC antenna mounting bases, and one GR antenna mounting base. The steps given are typical for both types.

1. Antenna supports	Screw (1), flat washer (2), lock-washer (3) and nut (4)	Using two 9/16-inch box wrenches, remove. <b>There are four screws. Step 1 is typical for all four screws.</b>
2.	Screws (1)	Do step 1 again.
3.	Antenna mounting base (5)	Remove.
4.	Antenna mounting base (5)	See paragraph 4-17 for installation.

4-75. REMOVING ANTENNA MOUNTING BASES.



EL8KG078

**4-76. REMOVING FRONT ANTENNA SUPPORTS.**

This task covers:

Removal

INITIAL SETUP

Tools

7/16-inch box wrench (2 required)

Personnel Required

One mechanic

Materials/Parts

None

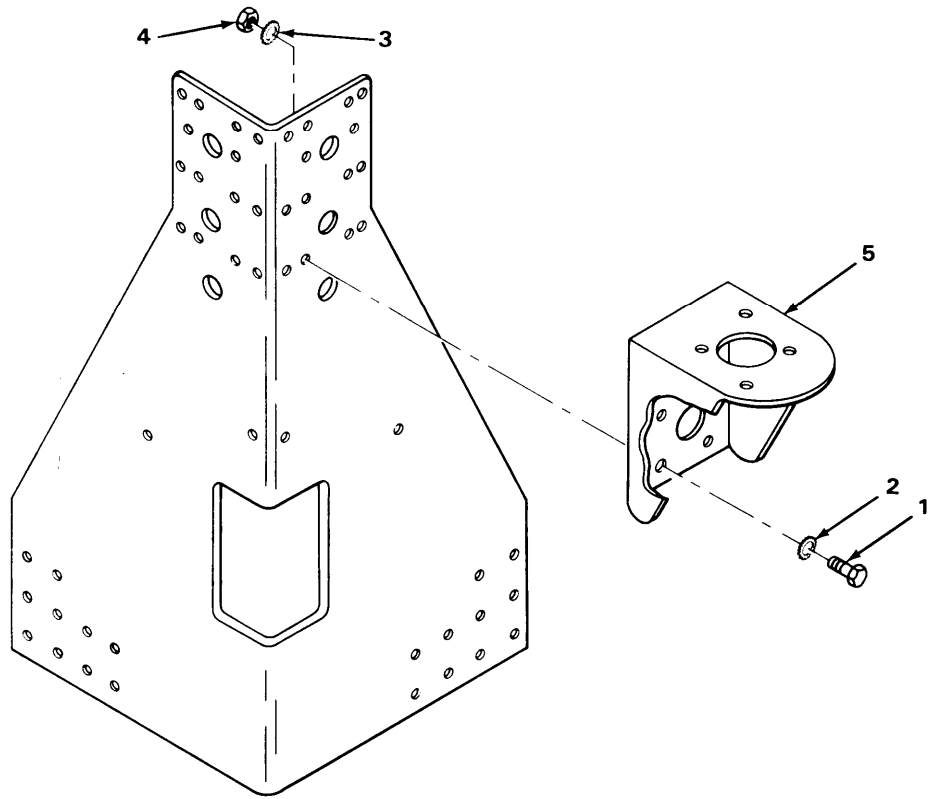
Equipment Condition

Antenna mounting bases removed, see paragraph 4-75.

LOCATION	ITEM	ACTION REMARKS
1. Front curbside antenna mounting bracket	Screw (1), IET lockwasher (2), IET lockwasher (3) and nut (4)	Using two 7/16-inch box wrenches, remove. <b>There are six screws. Step 1 is typical for all six screws.</b>
2.	Screws (1)	Do step 1 again.
3.	Roadside antenna support (5)	Remove. <b>Do steps 1, 2 and 3 for curbside support assembly.</b>
4. Front roadside antenna mounting bracket	Curbside antenna support (5)	Do steps 1, 2 and 3 again.
5. Front curbside and roadside antenna mounting brackets	Antenna Supports (5)	See paragraph 4-16 for installation.



4-76. REMOVING FRONT ANTENNA SUPPORTS. (CONT)



**4-77. REMOVING FRONT ANTENNA MOUNTING BRACKETS.**

This task covers:

Removal

**INITIAL SETUP**

Tools

7/16-inch box wrench (2 required)

Materials/Parts

None

Personnel Required

Two mechanics

Equipment Condition

Antenna support assemblies removed, see paragraph 4-76.

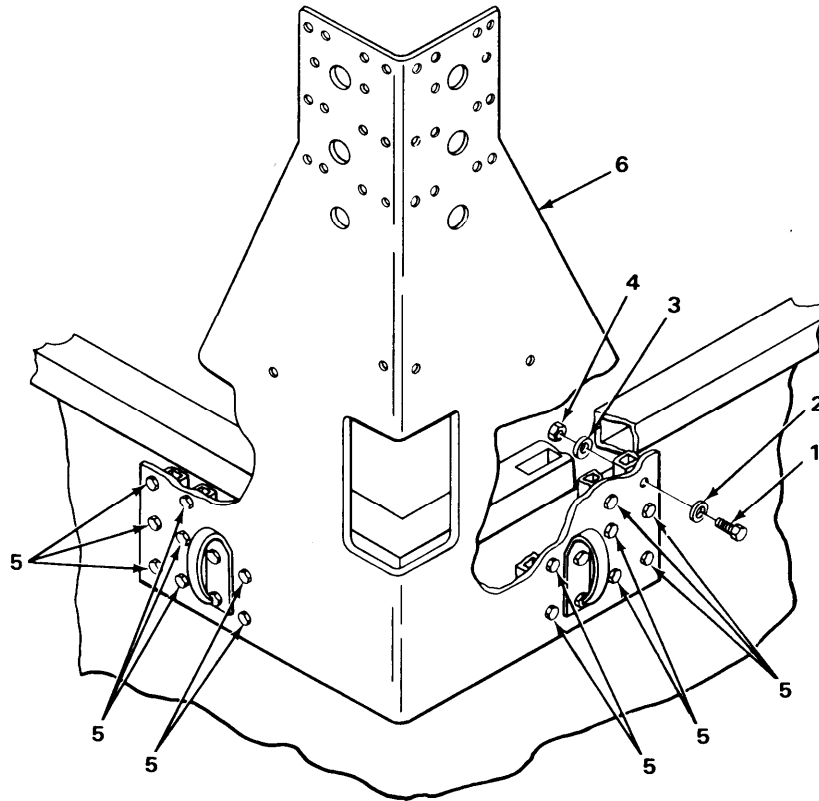
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed outside carrier.

1. Outside carrier forward curbside wall	Screw (1), flat washer (2), flat washer (3) and nut (4)	Using two 7/16-inch box wrenches, remove. <b>There are 16 screws. Step 1 is typical for all 16 screws.</b>
2.	Screws (5)	Do step 1 again.
3.	Antenna bracket (6)	Remove.
4. Outside carrier forward roadside wall	Antenna bracket (6)	Do steps 1, 2 and 3 again.
5. Outside carrier forward curbside and roadside wall	Antenna brackets (6)	See paragraph 4-15 for installation.

4-77. REMOVING FRONT ANTENNA MOUNTING BRACKETS. (CONT)



EL8KG080

**4-78. REMOVING REAR ANTENNA MOUNTING BRACKET.**

This task covers:

Removal

INITIAL SETUP

Tools

- 3/8-inch drive, 6 inch long extension bar
- 3/8-inch drive socket wrench
- 9/16-inch socket
- 9/16-inch box wrench
- Cross-tip screwdriver

Personnel Required

Two mechanics

Equipment Condition

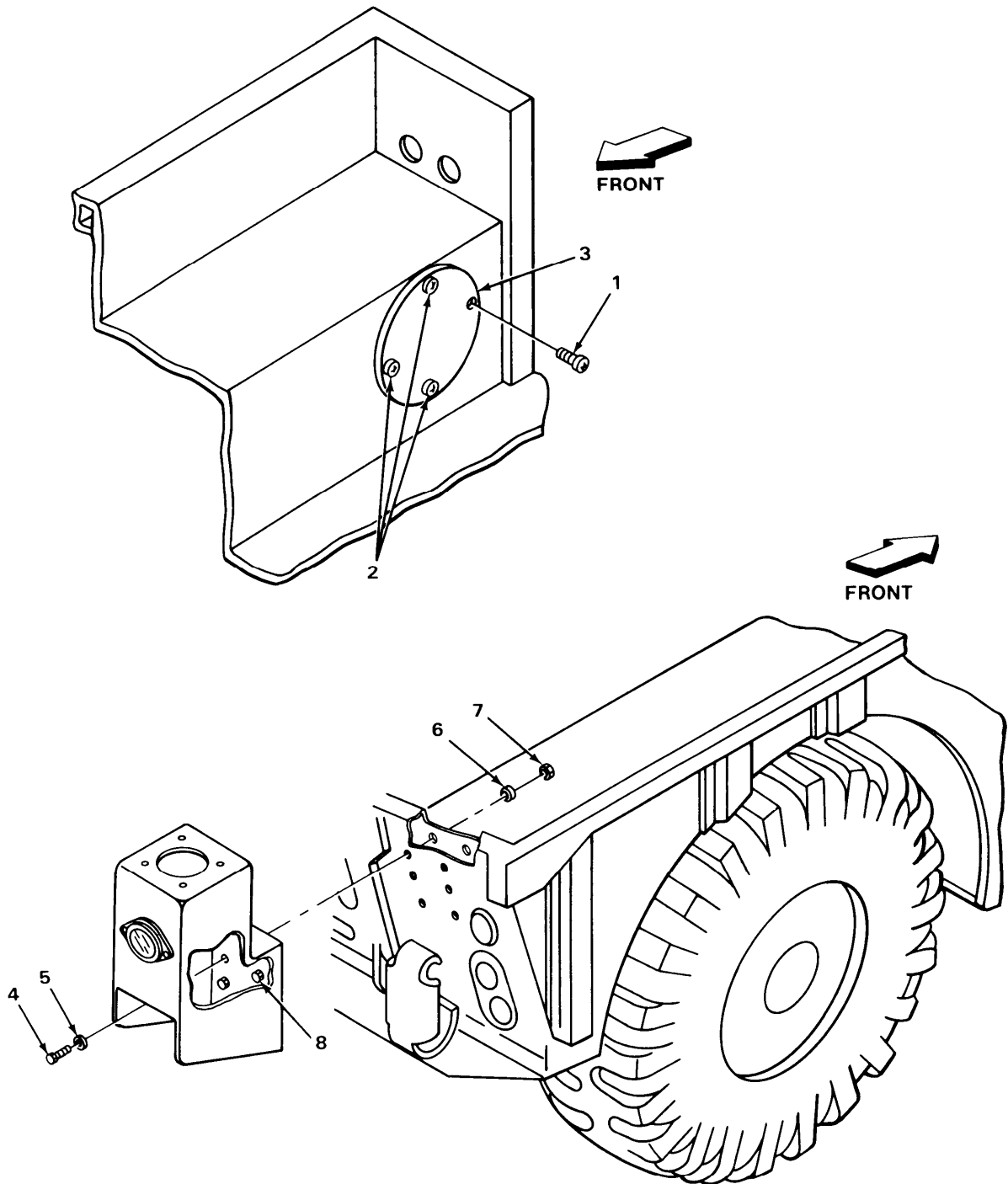
Antenna mounting base removed, see paragraph 4-77.

Materials/Parts

None

LOCATION	ITEM	ACTION REMARKS
1. Below rear curbside carrier seat	Screw (1)	Using cross-tip screwdriver, remove. <b>There are four screws. Step 1 is typical for all four screws.</b>
2.	Screws (2)	Do step 1 again.
3.	Plate (3)	Remove. <b>Save.</b>
4. Above rear curbside carrier seat	Screw (4), flat washer (5), flat washer (6) and nut (7)	Using ratchet wrench, extension, 9/16-inch socket and 9/16-inch box wrench, remove. <b>There are two screws. Step 4 is typical for both screws.</b>
5.	Screw (8)	Do step 4 again.

4-78. REMOVING REAR ANTENNA MOUNTING BRACKET. (CONT)

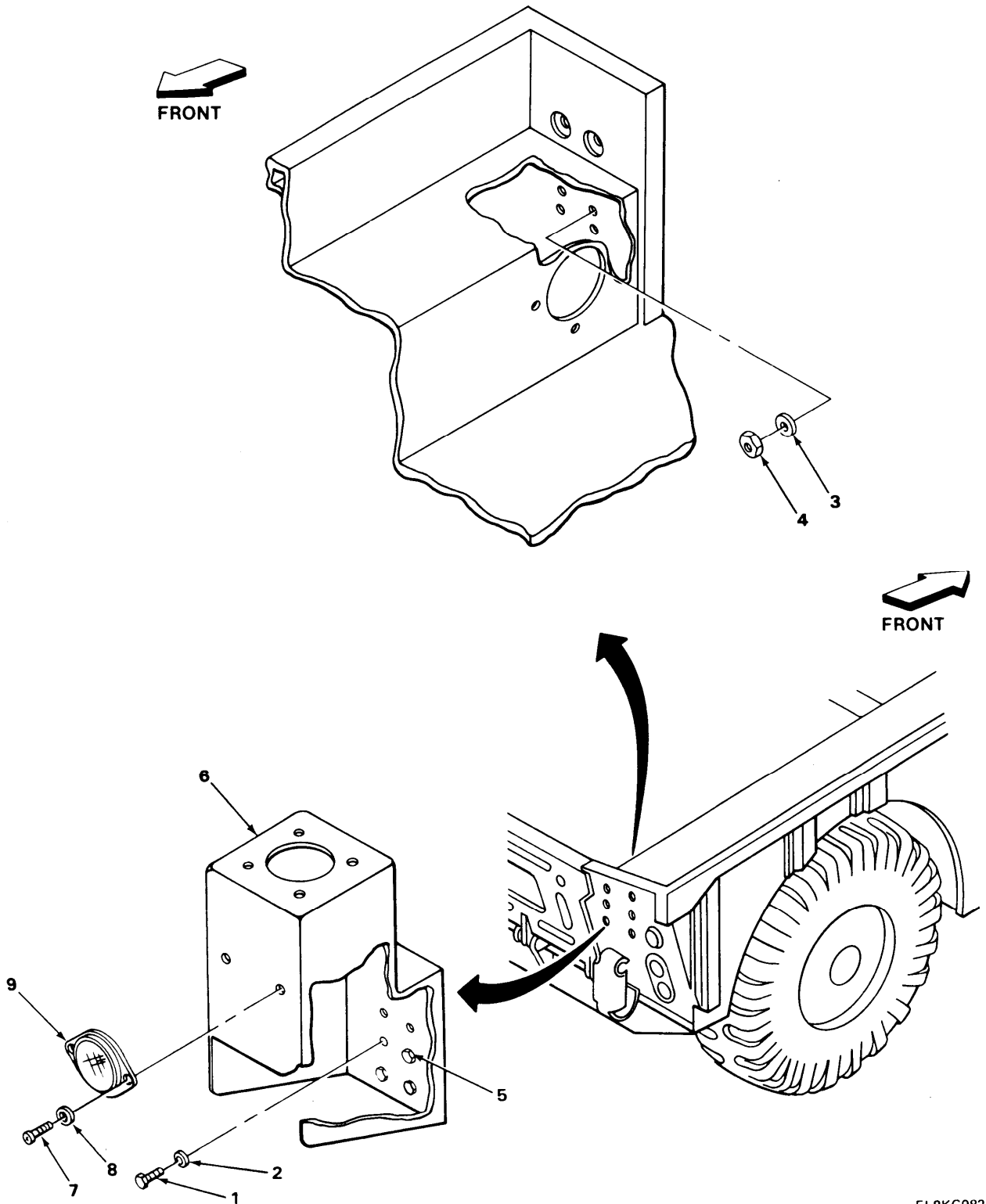


EL8KG081

4-78. REMOVING REAR ANTENNA MOUNTING BRACKET. (CONT)

LOCATION	ITEM	ACTION REMARKS
REMOVAL (CONT)		
6. Rear curbside of carrier	Screw (1), flat washer (2), fiat washer (3) and nut (4)	Using two 9/16-inch box wrenches, remove. <b>There are four screws. Step 6 is typical for all four screws.</b>
7.	Screws (5)	Do step 6 again.
8.	Antenna bracket (6)	Remove.
9. On rear antenna bracket	Screw (7) and flat washer (8)	Using cross-tip screwdriver, remove. <b>There are two screws. Step 9 is typical for both screws.</b>
10.	Screw (7)	Do step 9 again.
11.	Reflector (9)	Remove. <b>Save.</b>
12. Rear curbside of carrier	Antenna bracket (6)	See paragraph 4-20 for installation.

4-78. REMOVING REAR ANTENNA MOUNTING BRACKET. (CONT)



EL8KG082

**4-79. REMOVING CANVAS CABLE BAG.**

This task covers:

Removal

INITIAL SETUP

Tools

None

Materials/Parts

None

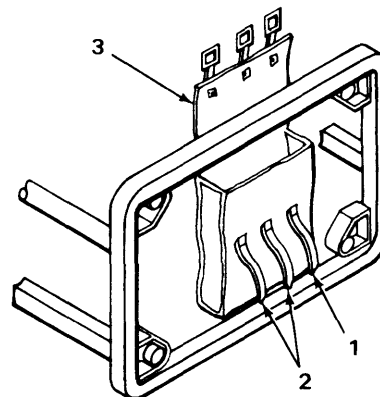
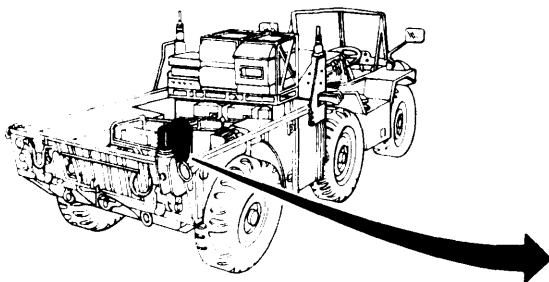
Personnel

One mechanic

Equipment Condition

Canvas cable bag in place.

	LOCATION	ITEM	ACTION REMARKS
1.	Curbside generator rail	Canvas strap (1)	Loosen. <b>There are three straps. Step 1 is typical for all three straps.</b>
2.		Canvas straps (2)	Do step 1 again.
3.		Canvas cable bag (3)	Remove.
4.		Canvas cable bag (3)	See paragraph 4-49 for installation.



EL8KG083





**4-80. REMOVING GENERATOR.**

This task covers:

Removal

INITIAL SETUP

Tools

Adjustable pliers

Materials/Parts

None

Personnel Required

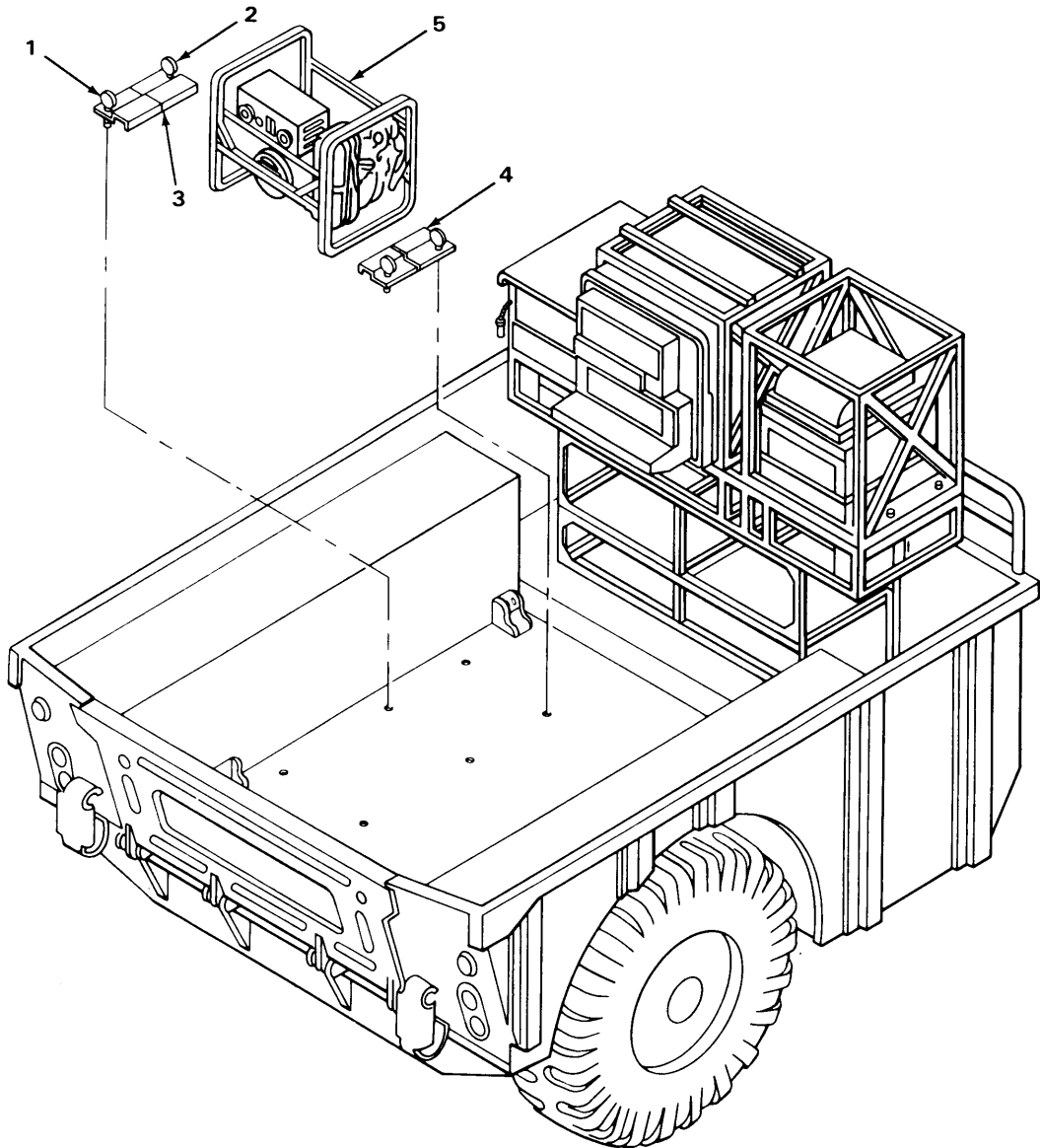
Two mechanics

Equipment Condition

Canvas cable bag removed, see paragraph 4-79.

LOCATION	ITEM	ACTION REMARKS
1. Generator roadside rail	Wingnut (1)	Using pliers, remove. <b>There are two wingnuts per mounting plate. Step 1 is typical for both wingnuts.</b>
2.	Wingnut (2)	Do step 1 again.
3.	Mounting strip (3)	Remove. <b>There are two mounting strips. Steps 1, 2 and 3 are typical for both mounting strips.</b>
4. Generator curbside rail	Mounting strip (4)	Do steps 1, 2 and 3 again.
5. Carrier floor	Generator (5)	Remove. <b>NOTE</b> A helper will be needed to lift and remove generator;
6.	Generator (5)	See paragraph 4-44 for installation.

4-80. REMOVING GENERATOR. (CONT)



EL8KG084

**4-81. REMOVING FIRE EXTINGUISHER.**

This task covers:

Removal

INITIAL SETUP

Tools

None

Materials/Parts

None

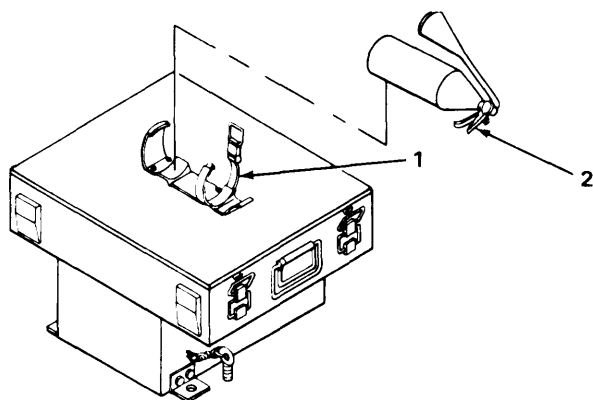
Personnel Required

One mechanic

Equipment Condition

Fire extinguisher in place.

	LOCATION	ITEM	ACTION REMARKS
1.	Top of battery box	Strap (1)	Loosen.
2.		Fire extinguisher (2)	Remove.
3.		Fire extinguisher (2)	See paragraph 4-48 for installation. <b>Place fire extinguisher in original carton for storage.</b>



EL8KG085

**4-82. REMOVING FIRE EXTINGUISHER MOUNTING BRACKET.**

This task covers:

Removal

INITIAL SETUP

Tools

7/16-inch box wrench  
(2 required)

Materials/Parts

Packing carton

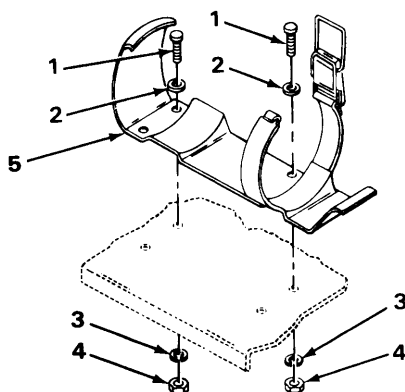
Personnel Required

One mechanic

Equipment Condition

Fire extinguisher removed, see paragraph 4-81.

LOCATION	ITEM	ACTION REMARKS
1. Battery box cover	Screw (1), flat washer (2), lock-washer (3) and nut (4)	Using two 7/16-inch box wrenches, remove. <b>There are four screws.</b>
2.	Screws (1)	Do step 1 again.
3.	Fire extinguisher bracket (5)	Remove.
4.	Fire extinguisher bracket (5)	See paragraph 4-47 for installation. <b>Place bracket and hardware in original carton for storage.</b>



EL8KG086

4-83. REMOVING/INSTALLING BATTERY HOLDDOWN.

This task covers:

1. Removal
2. Installation

INITIAL SETUP

Tools	Personnel Required
Adjustable pliers	One mechanic
Materials/Parts	Equipment Condition
None	Battery cables disconnected.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

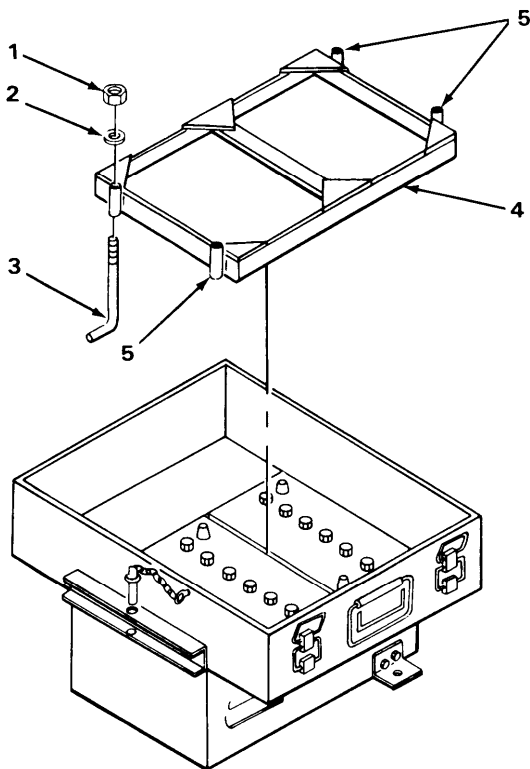
REMOVAL

1. Top of battery box	Nut (1), flat washer (2), and J-bolt (3)	Using pliers, remove. <b>There are four J-bolts. Step 1 is typical for all four J-bolts.</b>
2.	J-bolts (3)	Do step 1 again.
3.	Battery hold-down (4)	Remove <b>Place hardware in battery box for storage.</b>

INSTALLATION

1. Top of battery box	J-bolt (3), battery holddown (4), flat washer (2) and nut (1)	Using pliers, install. <b>Hook J-bolt through loop in battery box and slide on battery holddown. There are four J-bolts. Step 1 is typical for all four J-bolts.</b>
2.	J-bolt holes (5)	Do step 1 again.

4-83. REMOVING/INSTALLING BATTERY HOLDDOWN. (CONT)



EL8KG087

**4-84. REMOVING BATTERIES.**

This task covers:

Removal

INITIAL SETUP

Tools

Adjustable pliers

Materials/Parts

None

Personnel Required

One mechanic

Equipment Condition

Batteries and holddown in place.

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**WARNING**

Before disconnecting battery cables, be sure all circuit breakers are in the OFF position.

When removing batteries, work in a well ventilated area, use proper eye protection and wear rubber gloves. Should you come in contact with battery acid, be sure to wash affected area with cool water, then seek immediate medical aid.

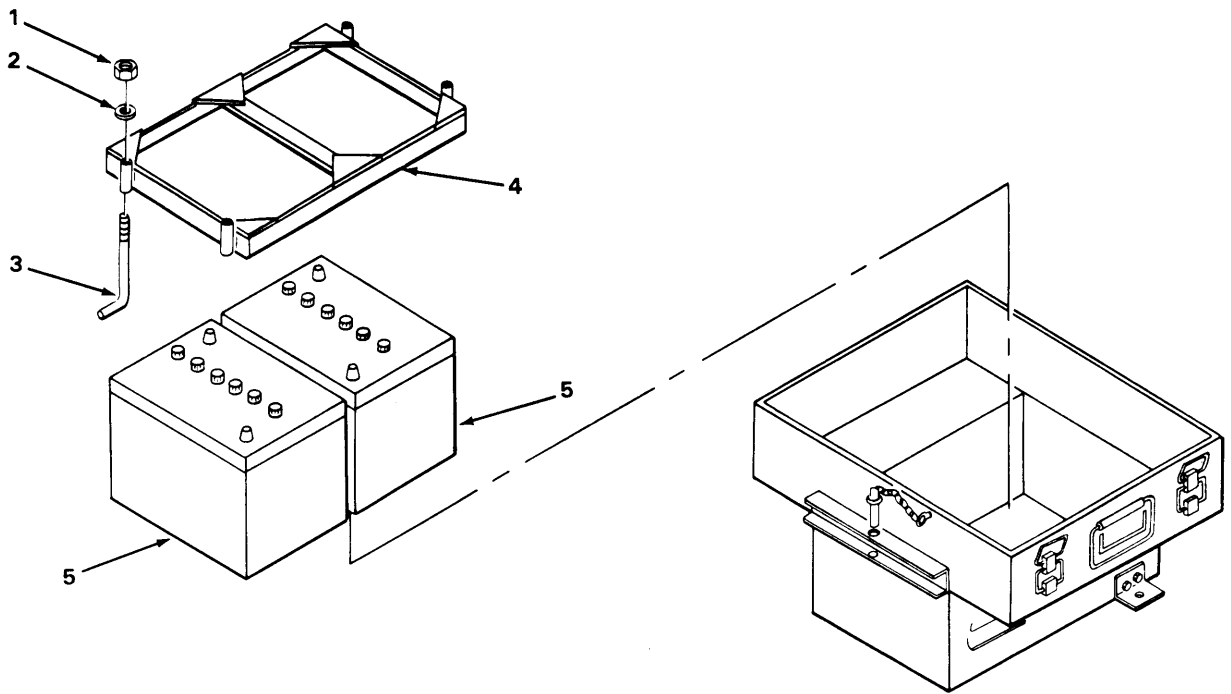
**NOTE**

Remove battery box cover by unfastening four retaining clips.

- |                |   |   |
|----------------|---|---|
| 1. Battery box | Nut (1), flat washer (2) and J-bolt (3) | Using pliers, remove.<br><b>There are four J-bolts. Step 1 is typical for all four J-bolts.</b> |
| 2.             | J-bolts (3)                             | Do step 1 again.  |
| 3.             | Battery hold-down (4)                   | Remove.   |
| 4.             | Batteries (5)                           | Remove.   |
| 5.             | Batteries (5)                           | See paragraph 4-46 for installation.  |



4-84. REMOVING BATTERIES. (CONT)



EL8KG088

**4-85. REMOVING BATTERY BOX.**

This task covers:

Removal

**INITIAL SETUP**

Tools

Adjustable pliers

Materials/Parts

None

Personnel Required

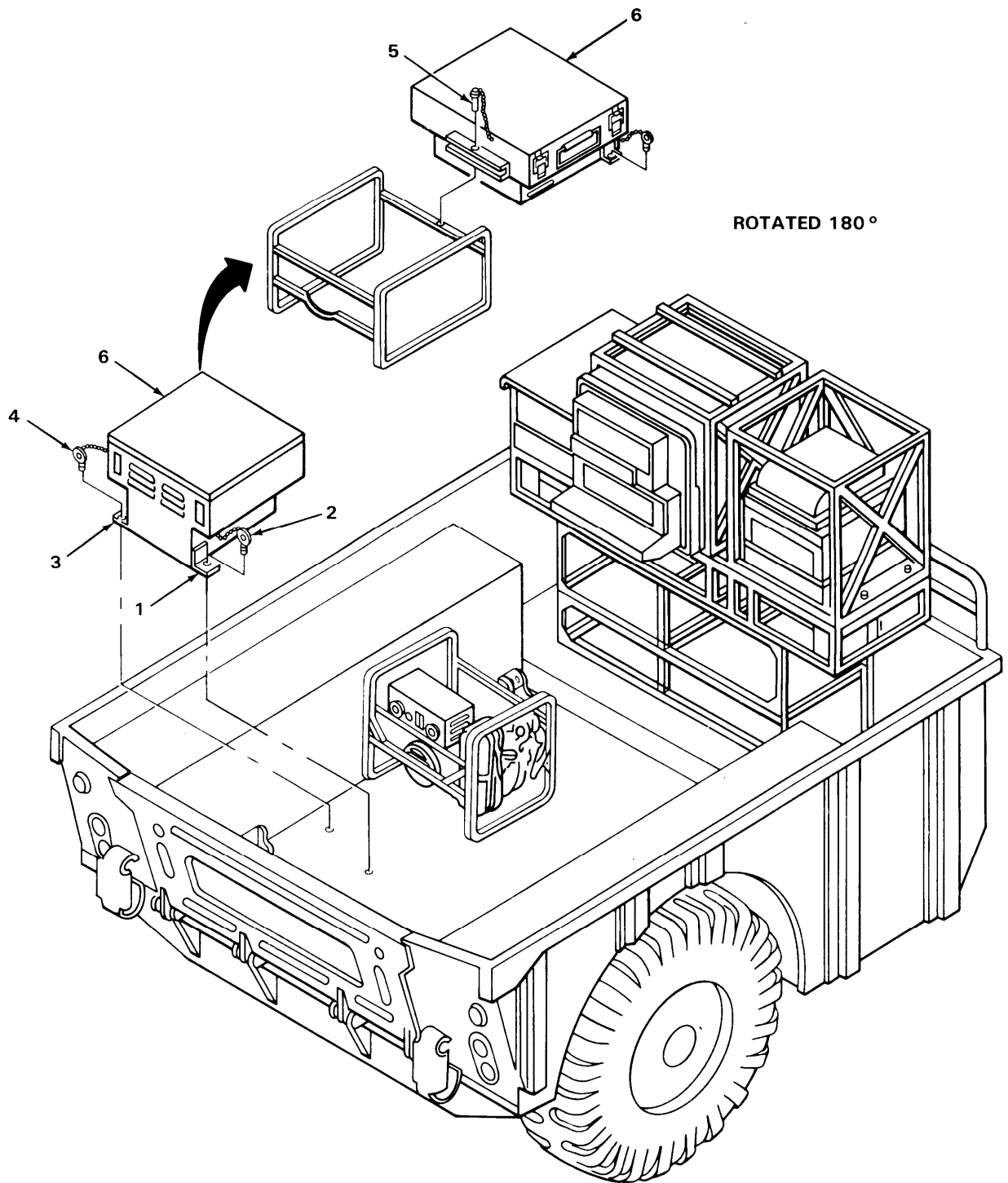
One mechanic

Equipment Condition

Batteries removed, see paragraph 4-84.

LOCATION	ITEM	ACTION REMARKS
1. Rear roadside of carrier floor base	Mounting tab (1) and wingnut (2)	Using pliers, remove.
2.	Mounting tab (3) and wingnut (4)	Using pliers, remove.
3.	Quick release pin (5)	Remove.
4.	Battery box (6)	Remove.
5.	Battery box (6)	See paragraph 4-45 for installation.

4-85. REMOVING BATTERY BOX. (CONT)



EL8KG089

**4-86. REMOVING SLEDGE HAMMER AND MOUNTING BRACKETS.**

This task covers:

Removal

INITIAL SETUP

Tools

7/16-inch box wrench

Personnel Required

One mechanic

Materials/Parts

None

Equipment Condition

Sledge hammer and mounting brackets in place.

LOCATION	ITEM	ACTION REMARKS
1. Top of floor base	Wingnuts (1)	Remove.
2.	Sledge hammer bracket cover (2)	Remove.
3.	Sledge hammer (3)	Remove.
4.	Screw (4), lock-washer (5) and flat washer (6)	Using 7/16-inch box wrench, remove.
5.	Spring clip (7) and spacer (8)	Remove.
6.	Screw (9), lock-washer (10) and flat washer (11)	Using 7/16-inch box wrench, remove. <b>There are two screws. Step 6 is typical for both screws.</b>
7.	Screw (12)	Do step 6 again.
8.	Bracket (13) and spacer (14)	Remove.
9.	Sledge hammer and mounting bracket	See paragraph 4-40 for installation.



**4-87. REMOVING FUEL CAN AND BRACKET.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench

Personnel Required

One mechanic

Materials/Parts

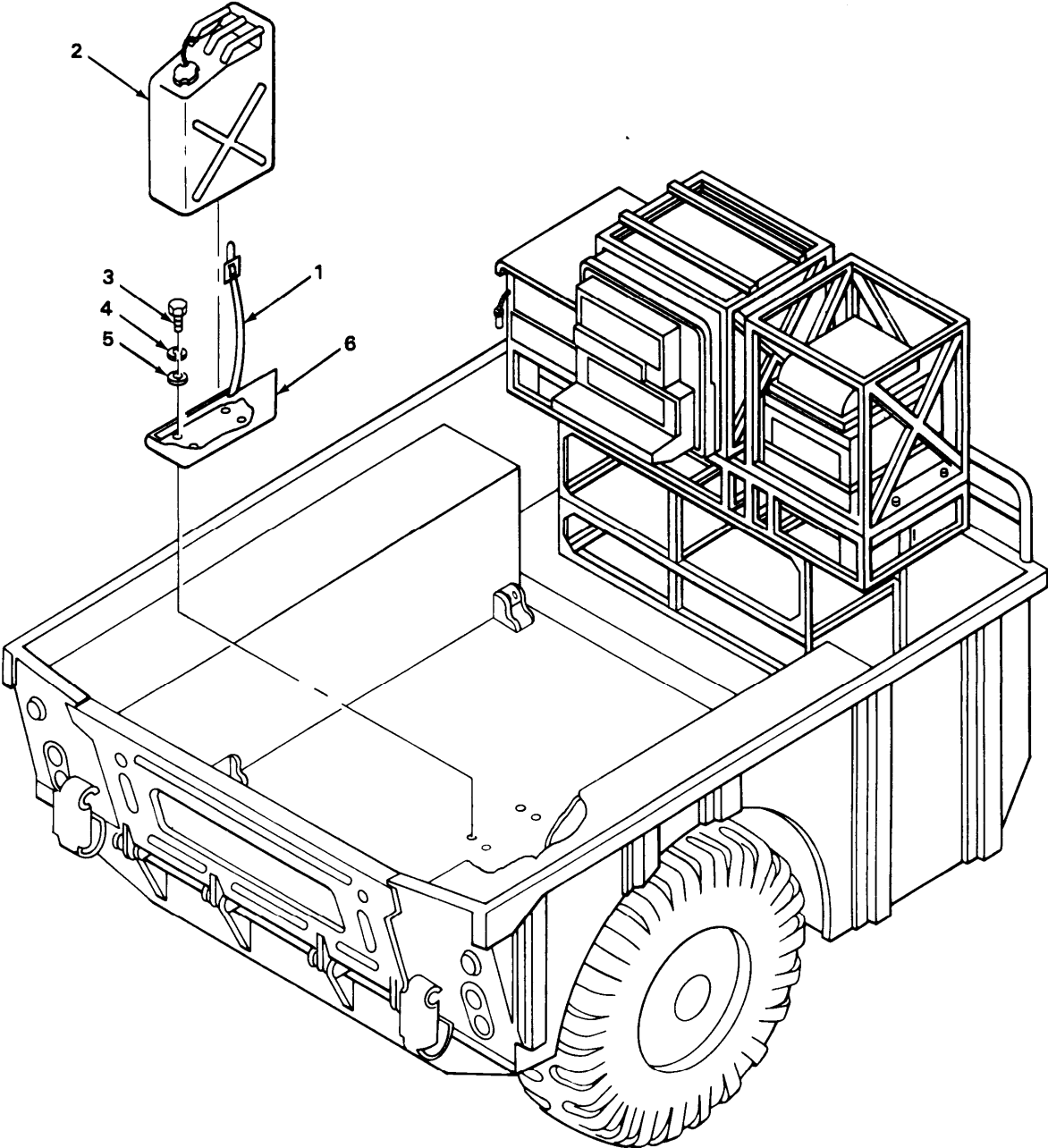
None

Equipment Condition

Fuel can and bracket in place.

	LOCATION	ITEM	ACTION REMARKS
1.	Curbside rear of floor base	Strap (1)	Loosen.
2.		Fuel can (2)	Remove.
3.		Screw (3), lock-washer (4) and flat washer (5)	Using 1/2-inch box wrench, remove. <b>There are four screws. Step 3 is typical for all four screws.</b>
4.		Screws (3)	Do step 3 again.
5.		Bracket (6)	Remove.
6.		Fuel can (2) and bracket (6)	See paragraph 4-43 for installation.

4-87. REMOVING FUEL CAN AND BRACKET. (CONT)



EL8KG091

**4-88. REMOVING FUEL FILLER NOZZLE AND BRACKET.**

This task covers:

Removal

INITIAL SETUP

Tools

1/2-inch box wrench

Personnel Required

One mechanic

Materials/Parts

None

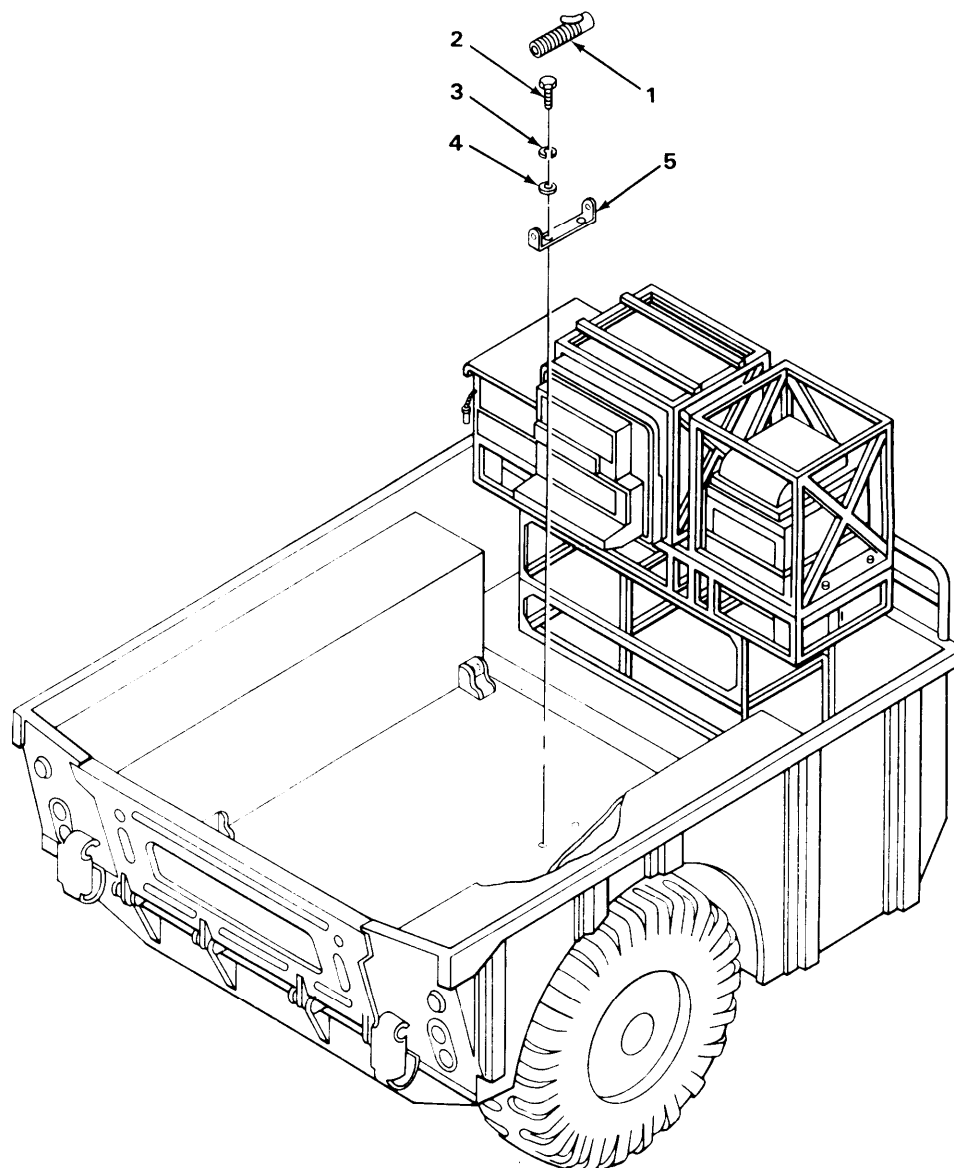
Equipment Condition

Fuel filler nozzle and bracket in place.

	LOCATION	ITEM	ACTION REMARKS
1.	Curbside front of floor base	Filler nozzle (1)	Remove.
2.		Screw (2), lock-washer (3) and flat washer (4)	Using 1/2-inch box wrench, remove. <b>There are two screws. Step 2 is typical of both screws.</b>
3.		Screw (2)	Do step 2 again.
4.		Bracket (5)	Remove.
5.		Filler nozzle (1) and bracket (5)	See paragraph 4-42 for installation.



4-88. REMOVING FUEL FILLER NOZZLE AND BRACKET. (CONT)



EL8KG092

**4-89. REMOVING FLOOR BASE.**

This task covers:

Removal

INITIAL SETUP

Tools	Equipment Condition
1/2-inch box wrench (2 required)	Battery box removed, see paragraph 4-85. Generator removed, see paragraph 4-80. Fuel can and bracket removed, see paragraph 4-87.
Materials/Parts	Fuel filler nozzle and bracket removed, see paragraph 4-88.
None	Sledge hammer and mounting brackets removed, see paragraph 4-86.
Personnel Required	
Two mechanics	

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

**NOTE**

A helper will be needed outside vehicle.

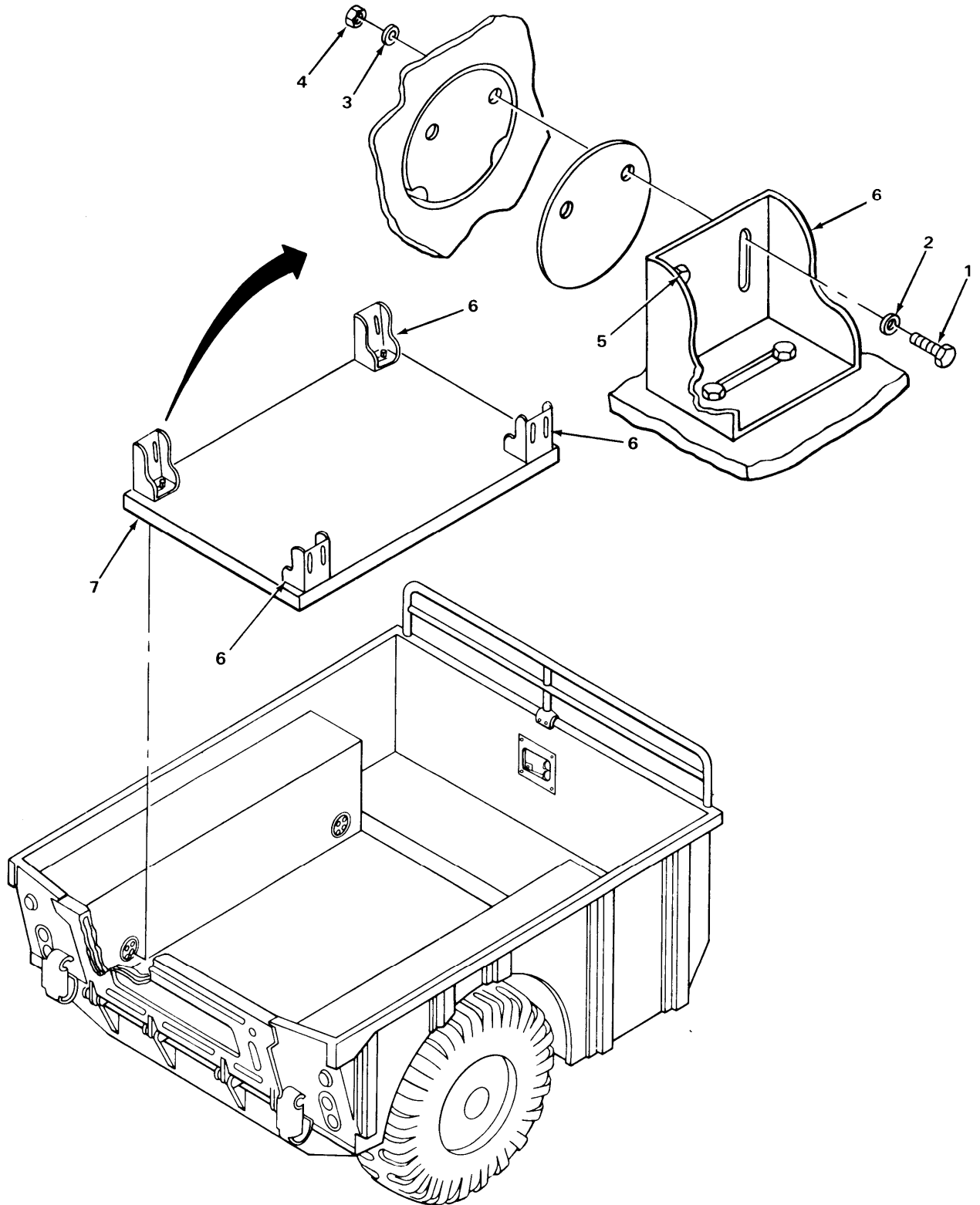
1. Inside carrier	Screw (1), flat washer (2), flat washer (3) and nut (4)	Using two 12-inch box wrenches, remove. <b>There are two screws. Step 1 is typical for both screws.</b>
2.	Screw (5)	Do step 1 again.
3.	Brackets (6)	There are four brackets. Steps 1 and 2 are typical for all four brackets.
4.	Floor base (7)	Remove.

**NOTE**

A helper will be needed to lift and remove floor base.

5.	Floor base (7)	See paragraph 4-41 for installation.
----	----------------	--------------------------------------

4-89. REMOVING FLOOR BASE. (CONT)



EL8KG093

**4-90. REMOVING EXTERNAL GROUND ROD KIT.**

This task covers:

Removal

INITIAL SETUP

Tools

8-lb sledge hammer  
Flat-tip screwdriver  
Adjustable pliers

Personnel Required

One mechanic

Equipment Condition

Materials/Parts

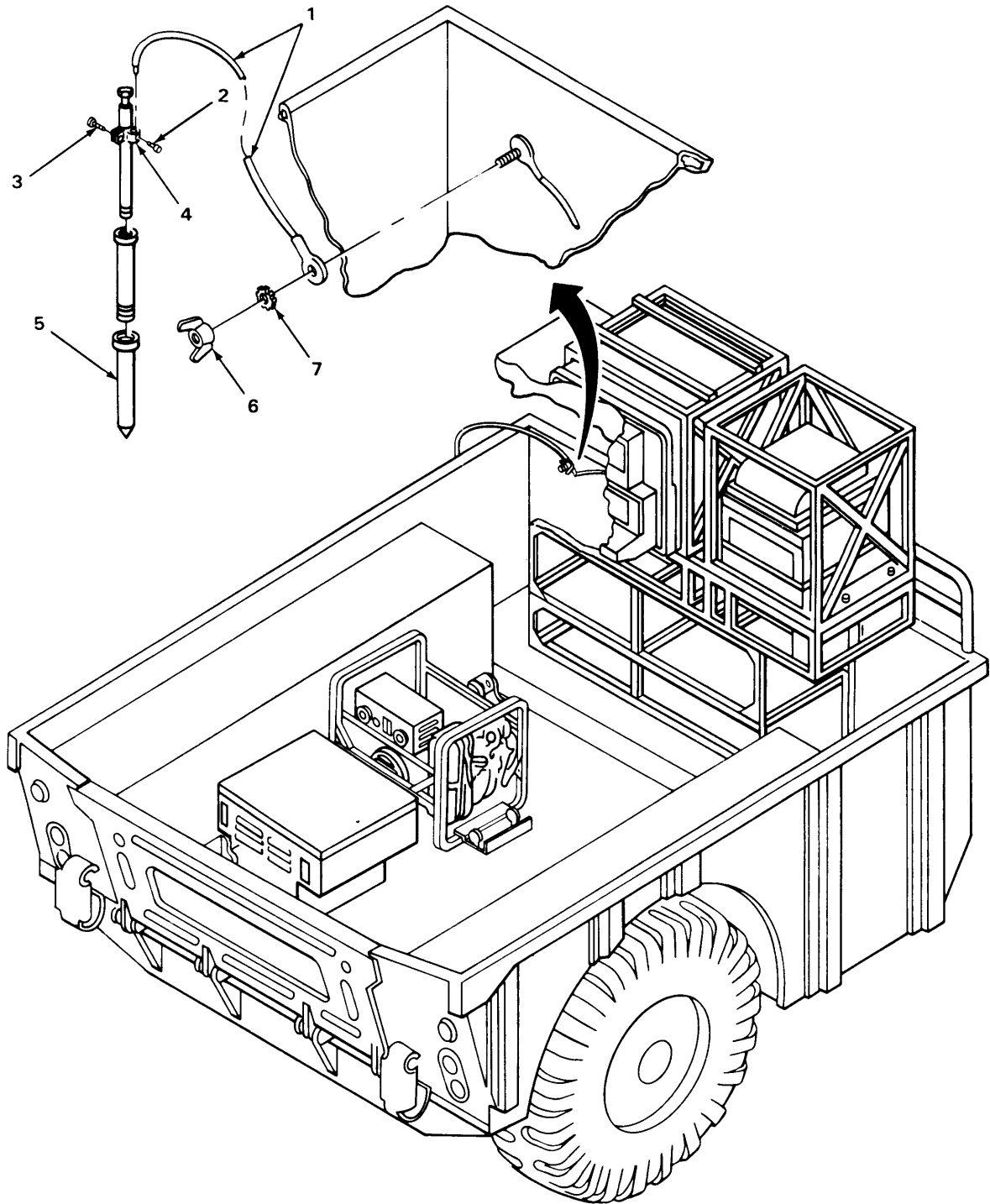
External ground rod in place.

Canvas bag

LOCATION	ITEM	ACTION REMARKS
1. Outside vehicle	10-foot ground strap (1) and clamp screw (2)	Using flat-tip screwdriver, remove.
2.	Clamp screw (3) and ground rod clamp (4)	Using flat-tip screwdriver, remove.
<b>NOTE</b>		
The dirt the ground rod sits in must be soaked with water to make removal of ground rod easier. Ground rod comes in three sections. Disconnect top two sections before removing third section.		
3.	Ground rod (5)	Using sledge hammer, remove.
4. Forward roadside corner of carrier forward wall	Wingnut (6), IT lockwasher (7) and 10-foot ground strap (1)	Using pliers, remove.
5.	Wingnut (6), IT lockwasher (7)	Using pliers, install.
6.	Ground rod (5)	Place hardware, ground strap, and ground rod sections in canvas bag and store under radio mount.

**See paragraph 4-51 for installation.**

4-90. REMOVING EXTERNAL GROUND ROD KIT. (CONT)



EL8KG094

**4-91. OUT OF VEHICLE CONFIGURATION.**

This task covers:

1. Component setup for field operation
2. Reinstallation for mobile operation

INITIAL SETUP

Tools

- Adjustable pliers
- Flat-tip screwdriver
- 8-lb sledge hammer

Personnel Required

Three mechanics

Equipment Condition

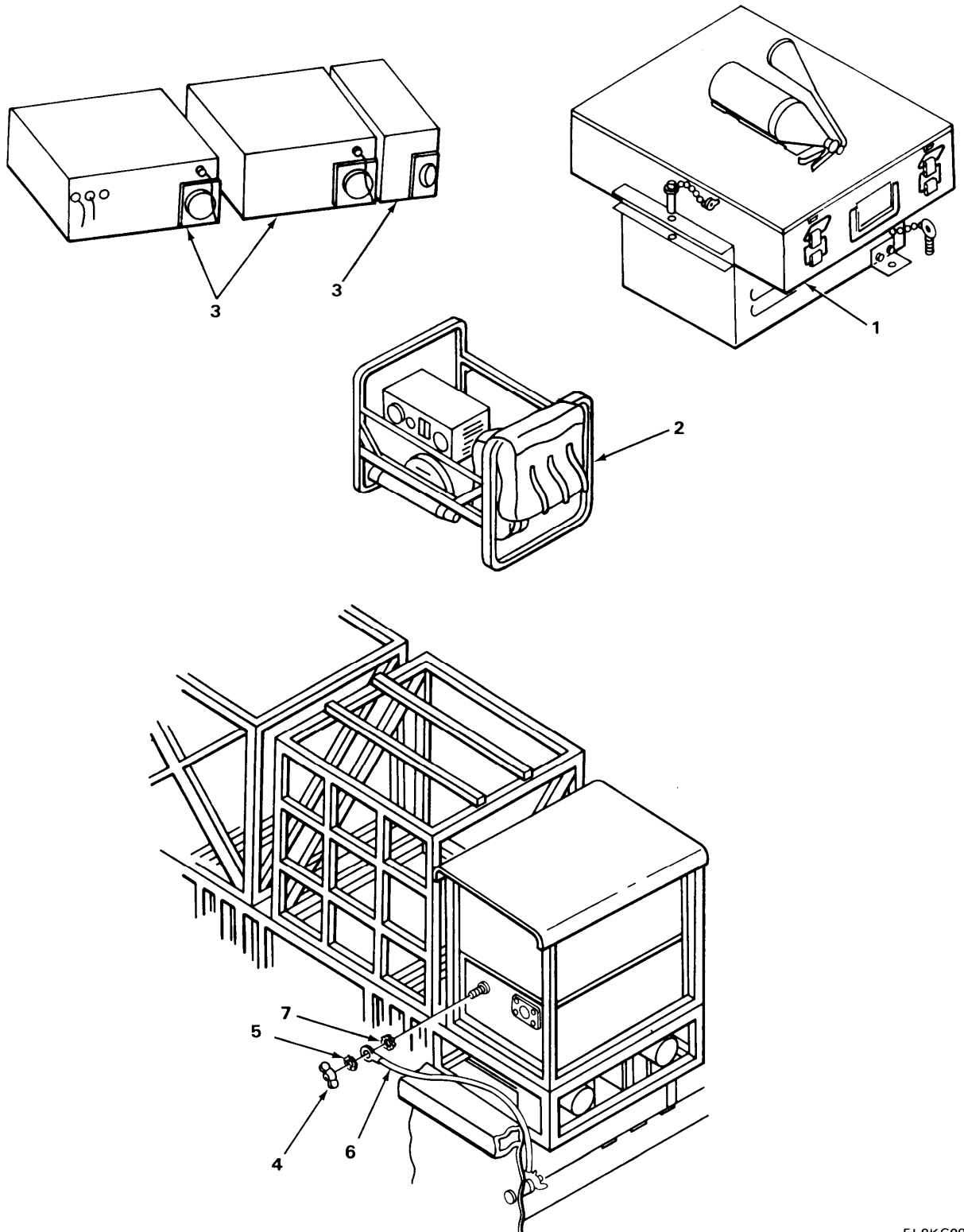
Materials/Parts

- Ground rod clamp kit
- Ground rod assembly (10 feet)
- Ground rod, sectional (9 feet)

Vehicle at field operation site and all power in OFF position.

LOCATION	ITEM	ACTION REMARKS
<b>COMPONENT SETUP FOR FIELD OPERATION</b>		
1. Vehicle bed	Battery box (1)	Remove, see paragraph 4-85. <b>Leave batteries in battery box, and fire extinguisher installed.</b>
2. Field operation site	Battery box (1)	Place in position.
3. Vehicle bed	Generator (2)	Remove, see paragraph 4-80. <b>Leave canvas cable bag on.</b>
4. Field operation site	Generator (2)	Place in position.
5. Vehicle bed	Radios (3)	Remove, see SB 11-131. <b>There are three radios to be removed.</b>
6. Field operation site	Radios (3)	Place in position.
7. Vehicle bed, behind power distribution box	Brass wingnut (4), lockwasher (5), ground strap (6) and lock-washer (7)	Using pliers, remove. <b>Hardware will be used later in this task.</b>

4-91. OUT OF VEHICLE CONFIGURATION. (CONT)



EL8KG095

4-91. OUT OF VEHICLE CONFIGURATION. (CONT)

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

COMPONENT SETUP FOR FIELD OPERATION (CONT)

**NOTE**

Before removing electronic equipment table, remove tacfire components and power cabling. See TM 11-7440-251-10, TM 11-7440-253-10-1 for removal. Leave key generator rack, message entry group rack, and electronic line printer rack attached to electronic equipment table.

8. Vehicle bed	Electronic equipment table (1)	Remove, see paragraph 4-67. Transfer from vehicle bed to operation site.
----------------	--------------------------------	---

**WARNING**

Due to weight of table legs, care must be taken when lowering into position.

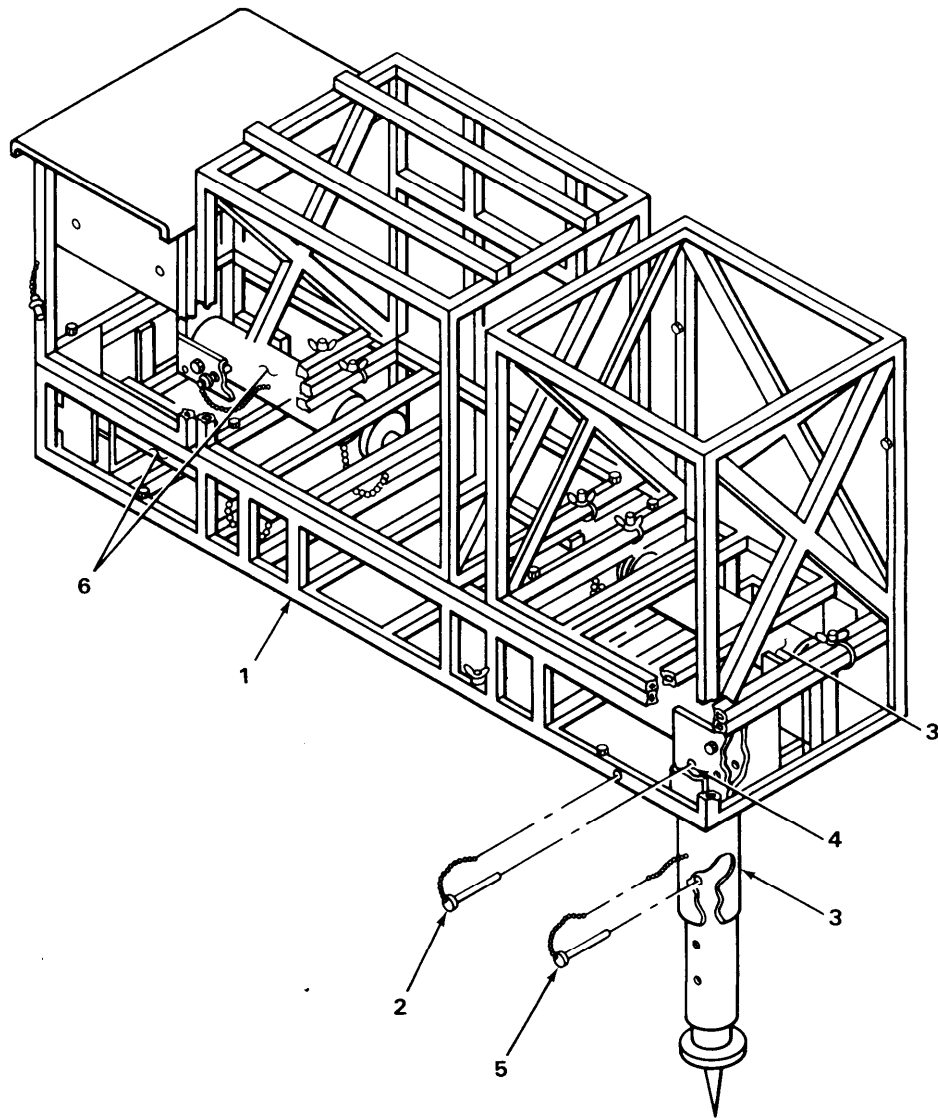
**NOTE**

To lower electronic equipment table legs, see steps 9 through 12.

9. Field operation site	Quick release pin (2)	Remove.
10.	Table leg (3)	Lower. <b>When lowered, table leg hole and hole in support bracket must be aligned.</b>
11.	Quick release pin (2) and table leg hole (4)	Install.
12.	Quick release pin (5) and table leg (3)	Using quick release pin, adjust leg to desired height. <b>There are four table legs. Steps 9 through 12 are typical for all four table legs.</b>
13.	Table legs (6)	Do steps 9 through 12 again. <b>Adjust all legs to same height.</b>



4-91. OUT OF VEHICLE CONFIGURATION. (CONT)



EL8KG096

4-91. OUT OF VEHICLE CONFIGURATION. (CONT)

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

COMPONENT SETUP FOR FIELD OPERATION (CONT)

14. Field operation site	Electronic equipment table (1)	Place in position.
--------------------------	--------------------------------	--------------------

**NOTE**

The external ground rod is stored under radio mount. The ground rod comes in three sections. Using driving stud and sledge hammer, drive one section into ground. After a section is driven into ground, connect next section to it.

15. Field operation site	Ground rod (2), ground rod clamp (3) and clamp screw (4)	Using flat-tip screwdriver, install.
--------------------------	--	--------------------------------------

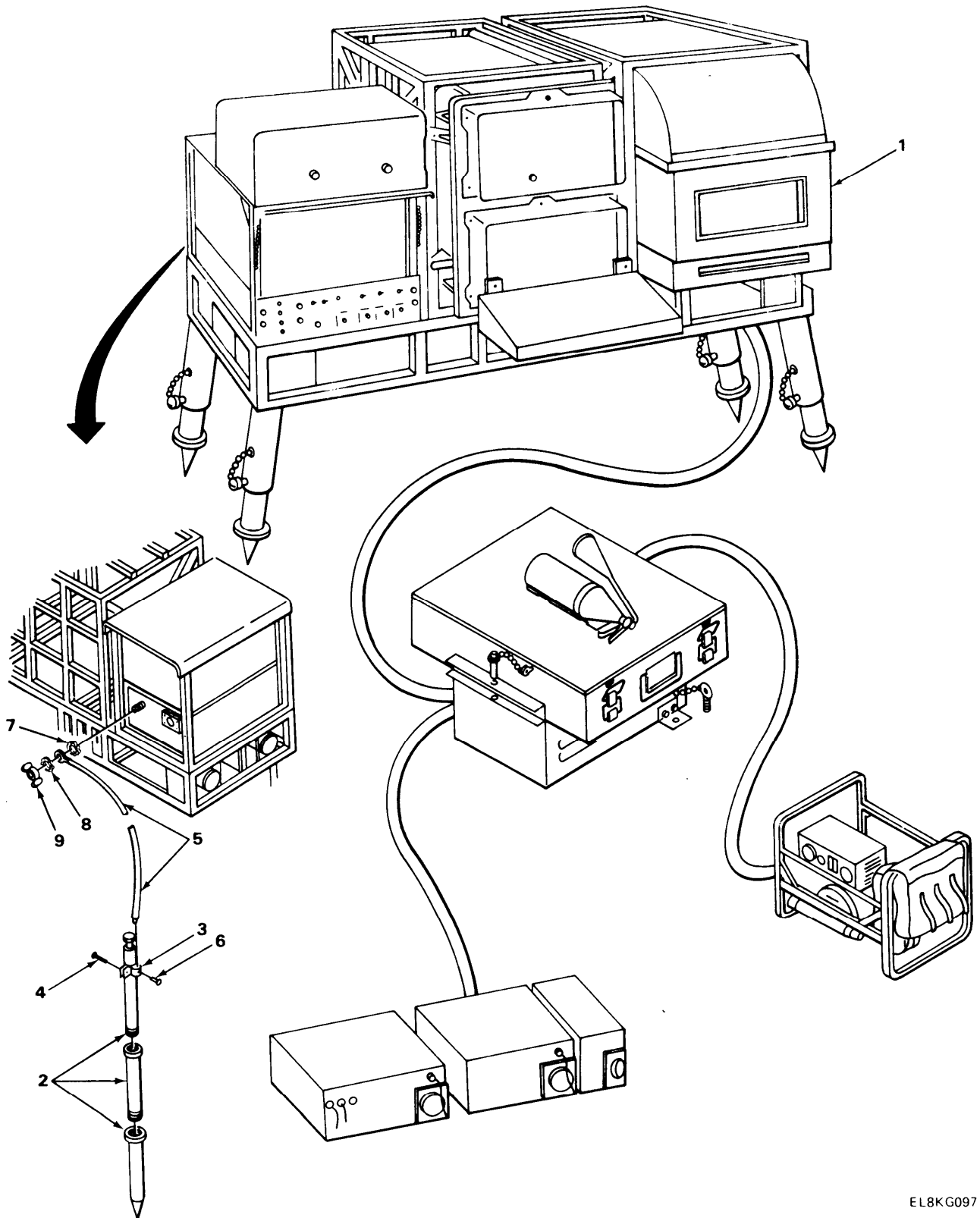
16.	10-foot ground strap (5) and clamp screw (6)	Using flat-tip screwdriver, install.
-----	--	--------------------------------------

17. Stud behind power distribution box	Lockwasher (7), 10-foot ground strap (5), lockwasher (8) and brass wingnut (9)	Using pliers, install.
--	--	------------------------

**NOTE**

For antenna and power cabling hook-ups, see SB 11-131. For tacfire component installations, see TM 11-7440-251-10 and TM 11-7440-253-10-1.

4-91. OUT OF VEHICLE CONFIGURATION. (CONT)



EL8KG097

4-91. OUT OF VEHICLE CONFIGURATION. (CONT)

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

REINSTALLATION FOR MOBILE OPERATION

**NOTE**

For antenna and power cabling disconnections, see SB 11-131. For tacfire component removals, see TM 11-7440-251-10 and TM 11-7440-253-10-1.

1. Stud behind power distribution box	Wingnut (1), lockwasher (2), 10-foot ground strap (3) and lock-washer (4)	Using pliers, remove. <b>Hardware will be used later in this task.</b>
2. Field operation site.	Clamp screw (5) and 10-foot ground strap (3)	Using flat-tip screwdriver, remove.
3.	Clamp screw (6) and ground rod clamp (7)	Using flat-tip screwdriver, remove.

**NOTE**

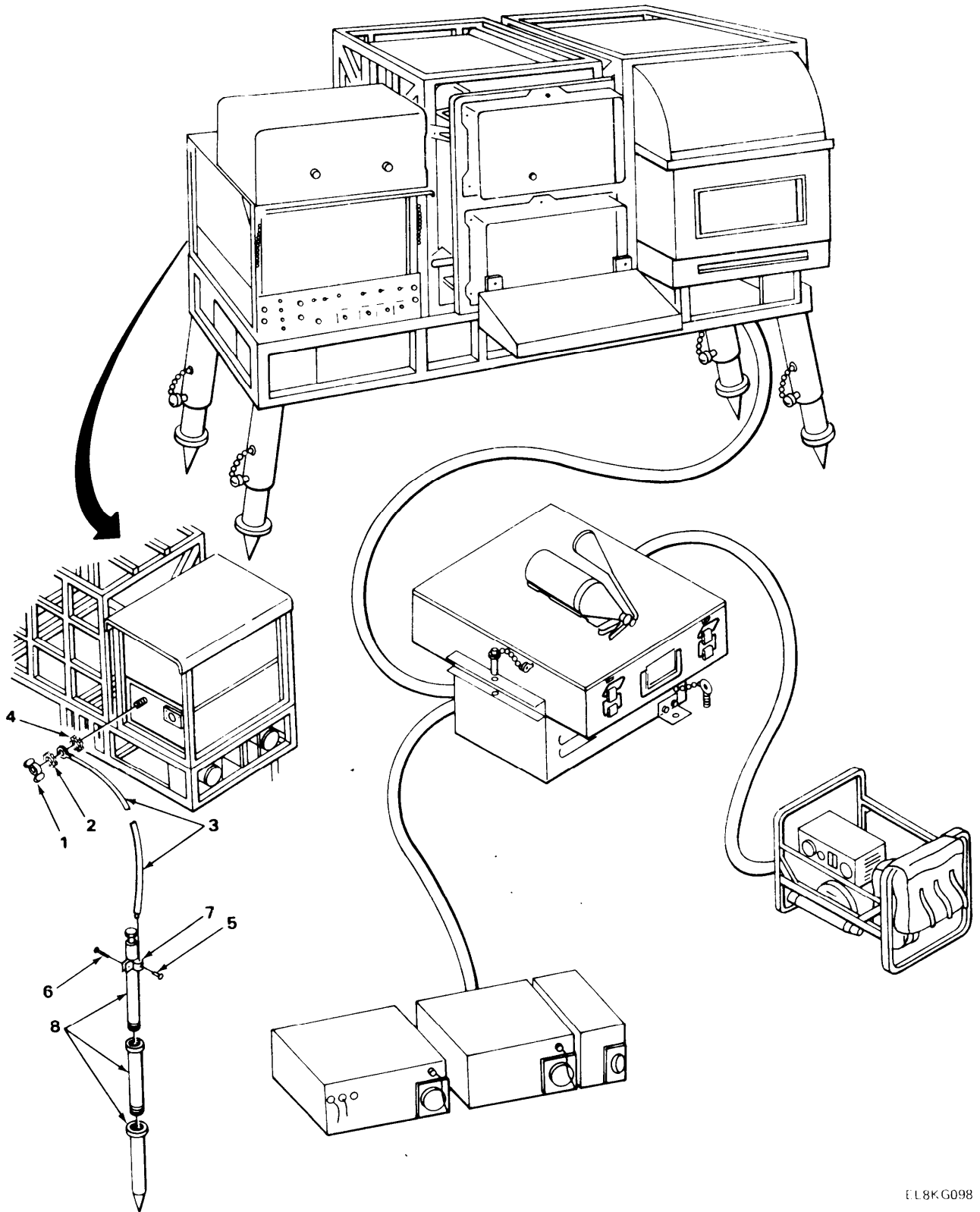
The dirt that ground rod sits in must be soaked with water to make removal of ground rod possible. Ground rod comes in three sections. Disconnect top two sections before removing third section.

4.	Ground rod (8)	Using 8-lb sledge hammer, remove.
----	----------------	-----------------------------------

**NOTE**

Place ground rod clamp, clamp screws, 10-foot ground strap and ground rod sections in canvas bag. Store under radio mount.

4-91. OUT OF VEHICLE CONFIGURATION. (CONT)



E L 8 K G 0 9 8

4-91. OUT OF VEHICLE CONFIGURATION. (CONT)

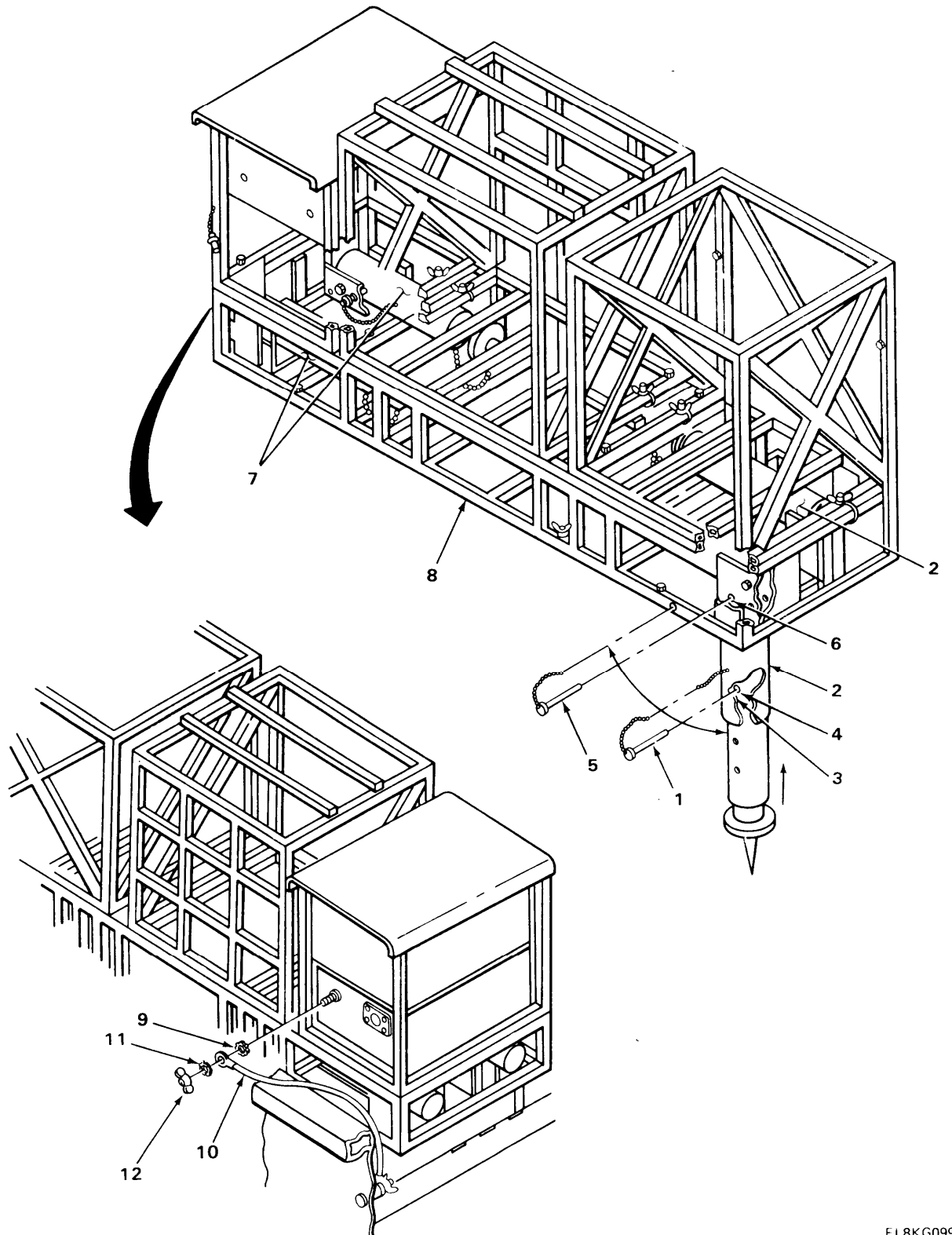
LOCATION	ITEM	ACTION REMARKS
REINSTALLATION FOR MOBILE OPERATION (CONT)		
5. Field operation site	Quick release pin (1)	Remove.
6.	Table leg (2), pin hole (3) and pin hole (4)	Push table leg up until pin hole (3) and pin hole (4) are alined.
7.	Quick release pin (1)	Install.
8.	Quick release pin (5)	Remove.
9.	Table leg (2)	Raise. When raised, table leg hole and hole in support bracket must be alined.
10.	Quick release pin (5) and table leg hole (6)	Install. There are four table legs. Steps 5 thru 10 are typical for all four table legs.
11.	Table legs (7)	Do steps 5 through 10 again.
12. Vehicle bed, top of radio mount	Electronic equipment table (8)	Install, see paragraph 4-27.

NOTE

To install tacfire components and power cabling, see TM 11-7440-251-10 and TM 11-7440-253-10-1.

13. Behind power distribution box	Lockwasher (9), ground strap (10), lockwasher (11) and brass wing-nut (12)	Using pliers, install.
-----------------------------------	--	------------------------

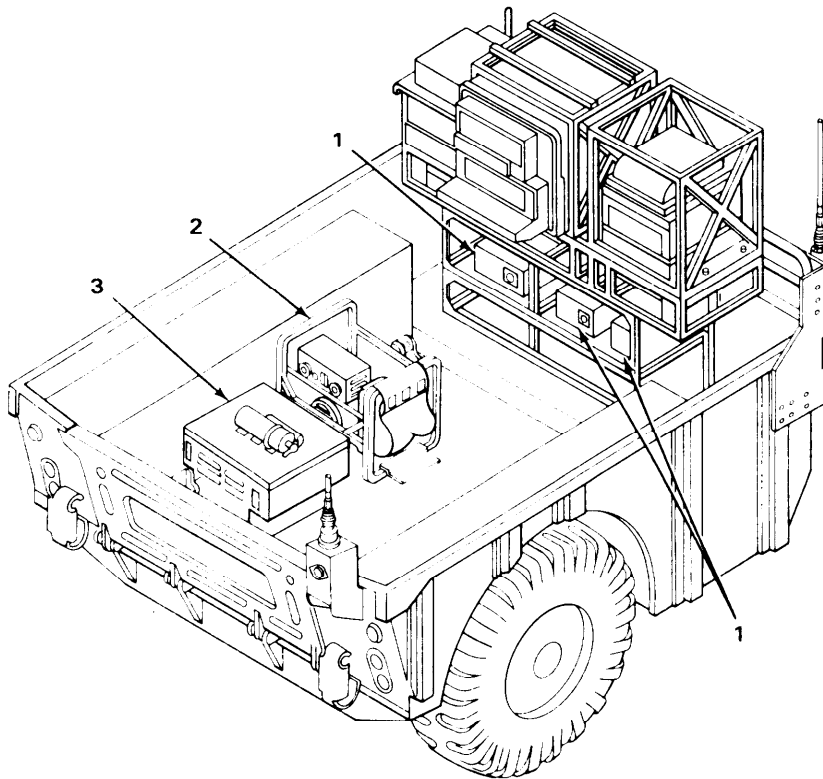
4-91. OUT OF VEHICLE CONFIGURATION. (CONT)



EL8KG099

4-91. OUT OF VEHICLE CONFIGURATION. (CONT)

LOCATION	ITEM	ACTION REMARKS
REINSTALLATION FOR MOBILE OPERATION (CONT)		
14. Vehicle bed	Radios (1)	Install, see SB 11-131. <b>There are three radios to be installed.</b>
15.	Generator (2)	Install, see paragraph 4-44.
16.	Battery box (3)	Install, see paragraph 4-45. <b>Battery box is installed with batteries inside.</b>



EL8KG100



## **Section VIII PREPARATION FOR STORAGE AND SHIPMENT**

Refer to SB 38-100 for preservation, packaging, packing and marking materials, supplies, and equipment used by the army.



## CHAPTER 5

### DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE

Direct support and general support maintenance is limited to straightening bends and welding minor cracks and breaks in tables, racks, and mounts. Refer to TM 9-237 for welding theory and application.



## APPENDIX A

### REFERENCES

**A-1. SCOPE.**

The following publications contain information applicable to the installation of Electronic Equipment Installation Kit MK-1819/GSG-10(V) and Power Accessory Kit MK-1821/GSG-10(V) in Cargo Truck 1 1/4 ton M561.

**A-2. PAMPHLETS.**

Consolidated Index of Army Publications and Blank Forms .....	DA Pam 310-1
Report of Packaging and Handling Deficiencies .....	AR 700-58

**A-3. SUPPLY BULLETINS.**

Vehicular Radio Sets and Authorized Installations .....	SB 11-131
Printing and Preservation Supplies Available for Field Use for Electronics Command Equipment .....	SB 11-573
Preservation, Packaging, Packing and Marking Materials, Supplies and Equipment Used by the Army .....	SB 38-100

**A-4. TECHNICAL BULLETINS.**

Field Instructions for Painting and Preserving Electronics Command Equipment, Including Camouflage Pattern Painting of Electrical Equipment Shelters .....	TB 43-0118
Safety Measures to be Observed When Installing and Using Whip Antennas, Field Type Masts, Towers, Antennas, and Metal Poles that are Used with Communication, Radar and Direction Finder Equipment .....	TB SIG 291

**A-5. TECHNICAL MANUALS.**

Welding Theory and Application. . . . .	TM 9-237
Operator's Manual: Data Display Artillery, Battery AN/GSO-122(BDU) . . . . .	TM 11-7440-251-10
Operator's Manual: Message Entry Device, Variable Format AN/GSC-21 (VFMED) . . . . .	TM 117440-253-10
The Army Maintenance Management System (TAMMS) . . . . .	TM 38-750
Administrative Storage of Equipment . . . . .	TM 740-90-1
Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command) . . . . .	TM 750-244-2

## APPENDIX B

### MAINTENANCE ALLOCATION CHART

#### Section I INTRODUCTION

##### **B-1. SCOPE.**

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

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

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

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

##### **B-2. MAINTENANCE FUNCTIONS.**

Maintenance functions will be limited to and defined as follows:

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

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

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

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

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

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

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

h. Replace. To remove an unserviceable item and install a serviceable counter-part in its place. 'Replace' is authorized by the MAC and is shown as the 3rd position code of the SMR code

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

a. Column 1, Reference Code. The code recorded in column 6, Section II.

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

**Section II MAINTENANCE ALLOCATION CHART FOR INSTALLATION KIT MK-1819/GSG-10(V) AND POWER ACCESSORY KIT MK-1821/GSG-10(V)**

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4)					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
00	Installation Kit MK-1819/ GSG-10 (V) and Power Accessory Kit MK-1821/ GSG-10 (V)	Install		10.5				1,2	
01	Tacfire Rack	Inspect Service Replace Repair	0.3 0.3	1.0	1.5			1,2 1,3,4	
0101	Radio Mount	Inspect Service Replace Repair	0.1 0.2	2.0	2.7			1,2 1,3,4	

**Section II MAINTENANCE ALLOCATION CHART FOR INSTALLATION KIT  
MK-1819/GSG-10(V) AND POWER ACCESSORY KIT MK-1821/GSG-10(V) (CONT)**

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
0102	Electronics Equipment Table	Inspect Service Replace Repair	0.1 0.2	1.5	2.0			1,2 1,3,4	
0103	Key Generator Rack	Inspect Service Replace Repair	0.1 0.2	0.5	0.7			1,2 1,3,4	
0104	Message Entry Group Rack	Inspect Service Replace Repair	0.1 0.2	0.5	0.7			1,2 1,3,4	
0105	Elect ronic Line Printer Rack	Inspect Service Replace Repair	0.1 0.2	0.5	0.7			1,2 1,3,4	
0106	Front Rein- forcement Support	Inspect Service Replace Repair	0.1 0.2	0.4	0.5			1,2 1,3,4	
02	Tac fire Components								C,D
0201	Electronic Line Printer								C,D

**Section II MAINTENANCE ALLOCATION CHART FOR INSTALLATION KIT  
MK-1819/GSG-10(V) AND POWER ACCESSORY KIT MK-4821/GSG-10(V) (cont)**

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
0202	Message Entry Group								C,D
0203	Key Generator								A
0204	Radio Receiver/ Transmitters								B
0205	Power Distri- bution Box								C,D
03	Antenna Assemblies	Inspect Service Replace Repair	0.2 0.2	1.0	1.5			1,2 1,3,4	
04	Generator	Inspect Service Replace Repair	0.1 0.3	0.5	3.0			1,2	
05	Batteries	Inspect Service Replace	0.2 0.2	0.3				1	
06	Fire Extinguisher		0.1	0.1					

**Section III TOOL AND TEST EQUIPMENT REQUIREMENTS FOR INSTALLATION KIT  
MK-1819/GSG-10(V) AND POWER ACCESSORY KIT MK-1821/GSG-10(V)**

<b>TOOLS OR TEST EQUIPMENT REF CODE</b>	<b>MAINTENANCE CATEGORY</b>	<b>NOMENCLATURE</b>	<b>NATIONAL/NATO STOCK NUMBER</b>	<b>TOOL NUMBER</b>
1	O,F	Tool Kit Mechanic	5180-00-754-0641	
2	O	No. 2 Common Organizational Maintenance Tool Kit	5910-00-754-0654	
3	F,H	Tool Kit, Welder's	5180-00-754-0661	
4	F,H	Shop Equipment, Welding Field Maintenance	3470-00-357-7268	

**Section IV REMARKS**

<b>REFERENCE CODE</b>	<b>REMARKS</b>
A	See KAM-240 B/TSEC VOL. 1
B	See TM 11-5820-401-12
C	See TM 11-7440-251-10
D	See TM 11-7440-253 -10-1

)

)

)

)

## APPENDIX C

### EXPENDABLE SUPPLIES AND MATERIALS LIST

#### Section I INTRODUCTION

##### C-1. SCOPE.

This appendix lists expendable supplies and materials you will need to operate and maintain the MK-1819/GSG-10(V) electronic equipment installation kit and MK-1821/GSG-10(V) power accessory kit.

##### C-2. EXPLANATION OF COLUMNS.

a. Column 1, Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., use cleaning compound, item 1, appendix C).

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

C - Operator/Crew

c. Column 3, National Stock Number. This is the National Stock Number assigned to the item; use it to request to requisition the item.

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

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

#### Section II EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, FSCM	(5) U/M
1	c	6850-00-105-3084	Trichlorotrifluoroethane Cleaning Compound, Freon PCA	PT
2	c	8305-00-222-2423	Cloth, Cotton (Cheesecloth) CCC-C-440E (81348)	YD
3	c	6810-00-264-8983	Methylethylketone	PT

C-1/(C-2 blank)





## GLOSSARY

A collection of words or terms and their definitions are given in this section.

---

Word or Term	Definition
Aline	Arrange or bring into line.
Burrs	Sharp edges.
Chock	Item used to keep vehicle from rolling.
Clockwise	Moving to the right, as in the direction of the hands of a clock.
Counterclockwise	Moving to the left, as in the opposite direction of the hands of a clock.
Engage	To apply, make connection with.
Exterior	Outside.
External	Outside.
Flammable	Can start on fire.
Flush	Up against.
Hardware	Manufactured articles like lockwashers, flat washers, nuts, and screws.
Install	To put in place or position.
Interior	Inside.
Pilot drill	To make ready for final drilling.
Preparation	To make ready.
Stud	A headless screw.
Uncrating	To unpack.
Ventilate	To expose to air.
Volts Direct Current (vdc)	An electric current flowing in one direction only and substantially constant in value.



INDEX

A

Subject	Page
Abbreviations, list of . . . . .	1-4
Adapter assemblies,	
installation . . . . .	4-40
removal . . . . .	4-136
Administrative storage . . . . .	1-2
Antenna bracket mounting holes,front . . . . .	4-10
Antenna bracket mounting holes, rear. . . . .	4-12
Antenna cabling,	
installation . . . . .	4-140
removal . . . . .	4-140
Antenna ground straps,	
installation . . . . .	4-28
removal . . . . .	4-142
Antenna masts,	
installation . . . . .	4-30
removal . . . . .	4-144
Antenna mounting bases,	
installation . . . . .	4-26
removal . . . . .	4-146
Antenna mounting brackets, front,	
installation . . . . .	4-22
removal . . . . .	4-150
Antenna mounting brackets, front modifying, . . . . .	4-8
Antenna mounting bracket, rear,	
installation . . . . .	4-34
removal . . . . .	4-152
Antenna supports, front,	
installation . . . . .	4-24
removal . . . . .	4-148
Assemblies, adapter	
installation . . . . .	4-40
removal . . . . .	4-136
Assembly and installation of electronic equipment	
installation kit and power accessory kit . . . . .	4-4
Assembly, surmount,	
installation . . . . .	4-42
removal . . . . .	4-134

INDEX (CONT)

B

Subject	Page
Bag, canvas cable,	
installation . . . . .	4-99
removal . . . . .	4-156
Base, floor,	
installation . . . . .	4-84
removal . . . . .	4-174
Bases, antenna mounting,	
installation . . . . .	4-26
removal . . . . .	4-146
Batteries,	
removal . . . . .	4-164
Batteries and holddown,	
installation . . . . .	4-94
Battery box,	
installation . . . . .	4-92
removal . . . . .	4-166
Battery holddown,	
removal/installation . . . . .	4-162
Bracket, fire extinguisher mounting,	
installation . . . . .	4-96
removal . . . . .	4-161
Bracket, front antenna mounting holes, . . . . .	4-10
Bracket and fuel filler nozzle,	
installation . . . . .	4-86
removal . . . . .	4-172
Bracket and fuel can,	
installation . . . . .	4-88
removal . . . . .	4-170
Bracket, rear antenna mounting,	
installation . . . . .	4-34
removal . . . . .	4-152
Bracket, rear antenna mounting holes . . . . .	4-12
Brackets, front antenna mounting,	
installation . . . . .	4-22
removal . . . . .	4-150
Brackets, modifying, front antenna mounting, . . . . .	4-8
Brackets, mounting and sledgehammer,	
installation . . . . .	4-82
removal . . . . .	4-168

INDEX (CONT)

C

Subject	Page
Cabling, antenna, installation .....	4-140
removal .....	4-140
Cables, power to radios, installation .....	4-70
removal .....	4-110
Cables, power, radio and power distribution box to vehicle power, installation .....	4-76
removal .....	4-112
Canvas cable bag, installation .....	4-99
removal .....	4-156
Canvas tie-down hooks , installation .....	4-6
Canvas tie-down hooks from front antenna mounting brackets, installation .....	4-20
removal .....	4-138
Cargo tie-down assemblies, removal .....	4-38
Center punching .....	4-14
Center punching and drilling front reinforcement support mounting holes .....	4-52
Checking unpacked material .....	4-4
Common tools and equipment .....	4-1
Components, tacfire, installation .....	4-74
removal .....	4-116

D

Description and use of operator's controls and indicators .....	2-1
Destruction of Army electronics materiel .....	1-2
Direct support and general support maintenance .....	5-1
Drilling and center punching front reinforcement support mounting holes .....	4-52
Drilling, final .....	4-18
pilot .....	4-16
preparation for .....	4-8
preparation for, front reinforcement support mounting holes .....	4-46

INDEX (CONT)

E

Subject	Page
Electronic equipment table, installation . . . . .	4-54
removal . . . . .	4-130
Electronic line printer rack, installation . . . . .	4-64
removal . . . . .	4-122
Electronic line printer sliding tray, installation . . . . .	4-66
removal . . . . .	4-120
Equipment capabilities and features . . . . .	1-5
Expendable supplies and materials list. . . . .	C-1
External ground rod kit, installation . . . . .	4-102
removal . . . . .	4-176

F

Final drilling . . . . .	4-18
Fire extinguisher, installation . . . . .	4-98
removal . . . . .	4-160
Fire extinguisher mounting bracket, installation . . . . .	4-96
removal . . . . .	4-161
Floor base, installation . . . . .	4-84
removal . . . . .	4-174
Front antenna bracket mounting holes . . . . .	4-10
Front antenna mounting brackets, installation . . . . .	4-22
removal . . . . .	4-150
Front antenna supports, installation . . . . .	4-24
removal . . . . .	4-148
Front antenna mounting brackets, modifying	4-8
Front reinforcement support, installation . . . . .	4-56
removal . . . . .	4-128
Front reinforcement support mounting holes, center punchibg and drilling . . . . .	4-52
Front reinforcement support mounting holes, preparation for drilling. . . . .	4-46
Fuel can and bracket, installation . . . . .	4-88
removal . . . . .	4-170
Fuel filler nozzle and bracket, installation . . . . .	4-86
removal . . . . .	4-172

INDEX (CONT)

G

Subject	Page
Generator,	
installation . . . . .	4-90
removal . . . . .	4-158
Ground rod kit, external,	
installation . . . . .	4-102
removal . . . . .	4-176
Ground straps, antenna,	
installation . . . . .	4-28
removal . . . . .	4-142
Ground straps, 4-inch,	
installation . . . . .	4-68
removal . . . . .	4-118
Ground strap, 25-inch, to front wall,	
installation . . . . .	4-78
removal . . . . .	4-106
Ground strap, 25-inch, to front wall mounting hole,	
center punching . . . . .	4-14
pilot drilling . . . . .	4-16
final drilling . . . . .	4-18
Ground strap, 25-inch, to power distribution box,	
installation . . . . .	4-80
removal . . . . .	4-108

H

Holddown, battery,	
removal/installation . . . . .	4-162
How to use this manual. . . . .	ii

I

Index of Army publications and blank forms, consolidated . . . . .	1-2
Installation,	
adapter assemblies . . . . .	4-40
antenna cabling . . . . .	4-100
antenna ground straps . . . . .	4-28
antenna masts . . . . .	4-30
antenna mounting bases. . . . .	4-26
batteries and holddown . . . . .	4-94
battery box . . . . .	4-92
canvas cable bag . . . . .	4-99
canvas tie-down hooks on front antenna mounting brackets. . . . .	4-20
electronic line printer rack . . . . .	4-64
electronic line printer sliding tray. . . . .	4-66
electronic equipment table . . . . .	4-54
external ground rod kit . . . . .	4-102
fire extinguisher . . . . .	4-98
fire extinguisher mounting bracket . . . . .	4-96

INDEX (CONT)

I (CONT)

Subject	Page
floor base . . . . .	4-84
front antenna mounting brackets . . . . .	4-22
front antenna supports . . . . .	4-24
front reinforcement support . . . . .	4-56
fuel can and bracket . . . . .	4-88
fuel filler nozzle and bracket . . . . .	4-86
generator . . . . .	4-90
key generator rack . . . . .	4-60
message entry group rack . . . . .	4-62
radio mount . . . . .	4-44
radio mounting bases . . . . .	4-72
radio power cables to radios . . . . .	4-70
radio and power distribution box power cables to vehicle power. . . . .	4-76
rear antenna mounting bracket. . . . .	4-34
sledge hammer and mounting brackets. . . . .	4-82
submount assembly . . . . .	4-42
tacfire components . . . . .	4-74
4-inch ground straps . . . . .	4-68
25-inch ground strap to front wall . . . . .	4-78
25-inch ground strap to power distribution box . . . . .	4-80

J

K

Key generator rack, installation . . . . .	4-60
removal . . . . .	4-126

L

Line printer, electronic, rack, installation . . . . .	4-64
removal . . . . .	4-122
Line printer, electronic, sliding tray, installation . . . . .	4-66
removal . . . . .	4-120
List of abbreviations . . . . .	1-4
Location and description of major components . . . . .	1-6
Lubrication instructions . . . . .	3-1



INDEX (CONT)

M

Subject	Page
Maintenance allocation chart . . . . .	B-4
Maintenance, forms, records and reports . . . . .	1-1
Maintenance procedures. . . . .	3-1
Masts, antenna,	
installation . . . . .	4-30
removal . . . . .	4-144
Message entry group rack,	
installation . . . . .	4-62
removal . . . . .	4-124
Modifying front antenna mounting brackets, . . . . .	4-8
Mounting bases, antenna,	
installation . . . . .	4-26
removal . . . . .	4-146
Mounting bases, radio,	
installation . . . . .	4-72
removal . . . . .	4-114
Mount radio,	
installation . . . . .	4-44
removal . . . . .	4-132

N

Nomenclature cross-reference list . . . . .	1-2
---	-----

O

Operator preventive maintenance checks and services.. . . .	2-1
Operation under unusual conditions . . . . .	2-1
Operation under usual conditions . . . . .	2-1
Out of vehicle configuration . . . . .	4-178

P

Pilot drilling . . . . .	4-16
Power cables to radios,	
installation . . . . .	4-70
removal . . . . .	4-110
Preparation,	
drilling . . . . .	4-8
drilling front reinforcement support mounting holes . . . . .	4-46
storage and shipment . . . . .	4-189
Preventive maintenance checks and services . . . . .	4-104
Purpose of installation kit. . . . .	1-5

Q

INDEX (CONT)

R

Subject	Page
Racks,	
electronic line printer,	
installation . . . . .	4-64
removal . . . . .	4-122
key generator,	
installation . . . . .	4-60
removal . . . . .	4-126
message entry group,	
installation . . . . .	4-62
removal . . . . .	4-124
Radio mounting bases,	
installation . . . . .	4-72
removal . . . . .	4-114
Radio power cables to radios,	
installation . . . . .	4-70
removal . . . . .	4-110
Radio and power distribution box power cables to vehicle power,	
installation . . . . .	4-76
removal . . . . .	4-112
Radio mount,	
installation . . . . .	4-44
removal . . . . .	4-132
Rear antenna bracket mounting holes . . . . .	4-12
Rear antenna mounting bracket,	
installation . . . . .	4-34
removal . . . . .	4-152
Removal,	
adapter assemblies . . . . .	4-136
antenna ground straps . . . . .	4-142
antenna masts . . . . .	4-144
antenna mounting bases . . . . .	4-146
batteries . . . . .	4-164
battery box . . . . .	4-166
canvas cable bag . . . . .	4-156
canvas tie-down hooks . . . . .	4-6
canvas tie-down hooks from front antenna mounting brackets . . . . .	4-138
cargo tie-down assemblies . . . . .	4-38
electronic equipment installation kit and power accessory kit . . . . .	4-105
electronic line printer rack . . . . .	4-122
electronic line printer sliding tray . . . . .	4-120
electronic equipment table . . . . .	4-130
external ground rod kit . . . . .	4-176
fire extinguisher, . . . . .	4-160
fire extinguisher mounting bracket . . . . .	4-161
floor base . . . . .	4-174
front antenna mounting brackets . . . . .	4-150
front antenna support assemblies . . . . .	4-148
front reinforcement support . . . . .	4-128

**INDEX (CONT)**

**R (CONT)**

Subject	Page
fuel can and bracket . . . . .	4-170
fuel filler nozzle and bracket . . . . .	4-172
generator . . . . .	4-158
key generator rack . . . . .	4-126
message entry group rack . . . . .	4-124
radio power cables from radios . . . . .	4-110
radio and power distribution box power cables from vehicle power . . . . .	4-112
radio mount . . . . .	4-132
radio mounting bases . . . . .	4-114
rear antenna mounting bracket. . . . .	4-152
sledge hammer and mounting brackets. . . . .	4-168
submount assembly . . . . .	4-134
tacfire components . . . . .	4-116
4-inch ground straps . . . . .	4-118
25-inch ground strap from front wall. . . . .	4-106
25-inch ground strap from power distribution box. . . . .	4-108
Repair parts, special tools, TMDE and support equipment . . . . .	4-1
Reporting errors and recommending improvements . . . . .	1-2

**S**

Safety, care and handling . . . . .	1-8
Service upon receipt . . . . .	4-1
Sledgehammer and mounting brackets, installation . . . . .	4-82
removal . . . . .	4-168
Submount assembly, installation . . . . .	4-42
removal . . . . .	4-134
Supports, front antenna, installation . . . . .	4-24
removal . . . . .	4-148
Support, front reinforcement, installation . . . . .	4-56
removal . . . . .	4-128

**INDEX (CONT)**

**T**

Subject	Page
Table, electronic equipment, installation .....	4-54
removal .....	4-130
Tacfire components, installation .....	4-74
removal .....	4-116
Tie-down hooks, canvas, removal .....	4-6
Tie-down hooks, canvas, from front antenna mounting brackets, installation .....	4-20
removal .....	4-138
Troubleshooting procedures .....	3-1

**U**

Unpacking .....	4-2
-----------------	-----

**V,W,X,Y,Z**



THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

Commander  
Stateside Army Depot  
ATTN: AMSTA-US  
Stateside, N.J. 07703

DATE SENT

10 July 1975

PUBLICATION NUMBER

TM 11-5840-340-12

PUBLICATION DATE

23 Jan 74

PUBLICATION TITLE

Radar Set AN/PRC-76

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
2-25	2-28		
3-10	3-3		3-1
5-6	5-8		
		F03	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°.

REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.

Item 5, Function column. Change "2 db" to "3db."

REASON: The adjustment procedure for the TRANS POWER FAULT indicator calls for a 3 db (500 watts) adjustment to light the TRANS POWER FAULT indicator.

Add new step f.1 to read, "Replace cover plate removed in step e.1, above."

REASON: To replace the cover plate.

Zone C 3. On J1-2, change "+24 VDC to "+5 VDC."

REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.

TEAR ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SSG I. M. DeSpirito 999-1776

SIGN HERE

FILL IN YOUR  
UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

\_\_\_\_\_  
\_\_\_\_\_

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY  
DOD 314



TEAR ALONG PERFORATED LINE

Commander  
US Army Communications-Electronics Command  
and Fort Monmouth  
ATTN: DRSEL-ME-MP  
Fort Monmouth, New Jersey 07703

**SAMPLE**

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER  
TM 11-7440-284-14

PUBLICATION DATE

PUBLICATION TITLE Installation Kit  
MK-1819/GSG-10(V) and Power  
Accessory Kit MK-1821/GSG-10(V)

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

TEAR ALONG PERFORATED LINE

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

FILL IN YOUR  
UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

\_\_\_\_\_  
\_\_\_\_\_

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY  
DOD 314



TEAR ALONG PERFORATED LINE

Commander  
US Army Communications-Electronics Command  
and Fort Monmouth  
ATTN: DRSEL-ME-MP  
Fort Monmouth, New Jersey 07703



RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER  
TM 11-7440-284-14

PUBLICATION DATE

PUBLICATION TITLE Installation Kit  
MK-1819/GSG-10(V) and Power  
Accessory Kit MK-1821/GSG-10(V)

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

TEAR ALONG PERFORATED LINE

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

DA FORM 2028-2  
1 JUL 79

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

FILL IN YOUR  
UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

\_\_\_\_\_  
\_\_\_\_\_

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY  
DOD 314



TEAR ALONG PERFORATED LINE

Commander  
US Army Communications-Electronics Command  
and Fort Monmouth  
ATTN: DRSEL-ME-MP  
Fort Monmouth, New Jersey 07703



FILL IN YOUR  
UNIT'S ADDRESS



FOLD BACK

DEPARTMENT OF THE ARMY

\_\_\_\_\_  
\_\_\_\_\_

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY  
DOD 314



TEAR ALONG PERFORATED LINE

Commander  
US Army Communications-Electronics Command  
and Fort Monmouth  
ATTN: DRSEL-ME-MP  
Fort Monmouth, New Jersey 07703

**By Order of the Secretary of the Army:**

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

Official:

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

DISTRIBUTION:

To be distributed in accordance with Special List.





