

**TECHNICAL BULLETIN  
INSTALLATION INSTRUCTIONS**

**FOR SYSTEMS**

**SINGLE CHANNEL GROUND AND  
AIRBORNE RADIO SYSTEM (SINCGARS)  
AN/VRC-88F, AN/VRC-89F, AN/VRC-90F, AN/VRC-91F, AN/VRC-92F**

**PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR)  
AN/PSN-11**

**ENHANCED POSITION LOCATION REPORTING SYSTEM (EPLRS)  
AN/VSQ-2 (V)**

**VEHICULAR INTERCOMMUNICATION SET (VIS)  
AN/VIC-3 (V)20**

**TAC-SAT RADIO**

**HF 20 WATT RADIO**

**FOR VEHICLE**

**TRUCK, UTILITY: UP-ARMORED CARRIER, 4X4,  
M1114 (2320-01-413-3739) (EIC: B6C).**

Approved for public release; distribution is unlimited.

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**HEADQUARTERS, DEPARTMENT OF THE ARMY**

**OCTOBER 2006**



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# CHAPTER 1

## INTRODUCTION

### Section I. SCOPE

- 1-1.** This technical bulletin provides installation instructions for Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) equipment. The C4ISR equipment shall be installed in the following vehicles:
- Truck, Utility: Up-Armored Carrier, 4x4, M1114
- 1-2.** The information contained in this technical bulletin is the official authorization to perform the installation of the C4ISR equipment at the direct support maintenance level through contract maintenance teams.

### Section II. NOTES

- 2-1.** This technical bulletin is not an authorization for requisition or turn-in of vehicles.
- 2-2.** This technical bulletin does not establish quantity or types of vehicles assigned to using units.

### Section III. GENERAL INFORMATION

- 3-1.** Included in the C4ISR equipment are:
- a. Single Channel Ground and Airborne Radio System (SINCGARS), Radio Set AN/VRC-88F/89F/90F/91F/92F Series
  - b. Precision Lightweight GPS Receiver (PLGR), AN/PSN-11
  - c. Enhanced Position Location Reporting System (EPLRS), AN/VSQ-2 (V)
  - d. Vehicular Intercommunication Set (VIS), AN/VIC-3 (V)20
  - e. TAC-SAT Radio
  - f. HF 20 Watt Radio
  - g. Additional terminal boards
- 3-2.** The C4ISR equipment becomes operable when all the components are installed in the vehicle and correct power is supplied.

### Section IV. MAINTENANCE FORMS, RECORDS, AND REPORTS

Use the following to report any discrepancies:

- a. Reports of Maintenance and Unsatisfactory Equipment. See chapter 4, sections VI through VIII for information.
- b. Report of Packaging and Handling Deficiencies. See chapter 4, sections VI through VIII for information.
- c. Discrepancy in Transportation Deficiency Report (TDR) (SF361). See chapter 4, sections VI through VIII for information.

### Section V. CONSOLIDATED INDEX OF ARMY PUBLICATIONS

Refer to the latest issue of DA PAM 25-30 to determine whether there are new changes or additional publications pertaining to the C4ISR equipment.



## **CHAPTER 2**

### **PURPOSE OF INSTALLATION**

The purpose of installing the C4ISR equipment is to provide the primary means of integrating command and control capability.



## **CHAPTER 3**

### **COMPLETION TIME FOR INSTALLATION**

A total of 20 man hours are required for two personnel to install the C4ISR equipment. Typical vehicle downtime is 12 hours.



## CHAPTER 4 PREPARATION FOR INSTALLATION

### Section I. PREPARATION OF VEHICLE

To prepare the vehicle for installation, ensure that the site includes adequate lighting and a power source when drilling is required. Inspect the vehicle for damage that could affect installation. Have any such damage repaired before installing the C4ISR equipment.

### Section II. ITEMS TO BE REMOVED

- 2-1. Remove batteries. (Refer to TM 9-2320-387-24.)
- 2-2. Remove right-hand rear fixed door if desired. (Refer to TM 9-2320-387-24.)
- 2-3. Remove right-hand rear cab enclosure panel. (Refer to TM 9-2320-387-24.)
- 2-4. Remove right rear ammo storage tray.

### Section III. LIST OF ITEMS TO BE RETAINED

- 3-1. Batteries
- 3-2. Right-hand rear cab enclosure (if applicable).
- 3-3. Right-hand rear fixed door (if applicable).

### Section IV. PREPARATION OF C4ISR EQUIPMENT

To prepare C4ISR equipment, unpack, inspect, and check inventory.

### Section V. PRECAUTIONS DURING HANDLING

Observe the following precautions to prevent equipment damage.

- a. Keep dust covers in place on connectors.
- b. Do not disassemble or modify parts in the C4ISR equipment unless authorized to do so.
- c. Keep mounting hardware covered and protected until needed.

### Section VI. UNPACK AND INSPECT EQUIPMENT

- 6-1. Unpack and inspect packaging for evidence of damage.
- 6-2. Any shipping damage should be reported on SF364 Report of Discrepancy (ROD) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-64/MCO 4430.F.

### Section VII. INVENTORY C4ISR EQUIPMENT

If any item is missing, fill out and forward Transportation Deficiency Report (TDR) (SF361) as described in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 450015.

### Section VIII. EXAMINE EACH ITEM FOR DAMAGE

If any item is damaged, fill out and forward SF364 Report of Discrepancy (ROD) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-64/MCO 4430.F. All damages should be reported as prescribed by DA PAM 750-8, as contained in the Maintenance Management Update.

### **Section IX. C4ISR EQUIPMENT, DISTRIBUTION, AND CONSUMABLES**

- 9-1.** Use table 4-1 to identify and inventory C4ISR equipment installation parts supplied in kits.
- 9-2.** Use table 4-2 to identify and inventory C4ISR equipment installation parts not supplied in kits.

### **Section X. DISTRIBUTION AND ISSUE INSTRUCTIONS**

- 10-1.** U.S. Forces: Do not requisition C4ISR equipment. They will be shipped automatically.
- 10-2.** U.S. Army Depots: Requisition C4ISR equipment through supply channels.
- 10-3.** Multiservice: Instructions shall be included for multiservice modifications.
- 10-4.** MAP/MAS countries: Instructions shall be provided for MAP/MAS countries.

### **Section XI. PARTS LIST**

#### **KITS REQUIRED FOR THIS INSTALLATION:**

#### **NOTE**

- Not all material in kits is required for this installation. Material not used during installation will be returned to stock for disposition in accordance with AR 725-50.
- If maintenance is to be performed on a vehicle with an existing kit, do not order entire kit for necessary reinstallation.

#### **SINGARS:**

(A): MK-2801

#### **PLGR:**

(B): 57K4399

#### **EPLRS:**

(C): No kits available

#### **FBCB2:**

(D): No kits available

#### **VIS:**

(E): No kits available

#### **HF 20 WATT RADIO:**

(F): No kits available

#### **TAC-SAT RADIO:**

(G): No kits available



**MATERIAL REQUIRED FROM KITS:***Table 4-1. Kit Parts List for Installation of C4ISR Equipment.*

ITEM NO.	NOMENCLATURE	PART NUMBER	NSN	KIT	QTY.
1.	Bracket, Antenna	A3014546-1	5340-01-391-2742	(A)	1
2.	Bracket, Mounting	12480576	N/A	(B)	1
3.	Cable Assembly, Radio Frequency	A3014031-17	5995-01-225-1660	(A)	2
4.	Clamp	MS21333-67	5340-00-079-7837	(B)	2
5.	Clamp, Loop	MS21333-75	5340-00-050-2740	(A)	3
6.	Clamp, Loop	MS21333-77	5340-00-922-6300	(A)	2
7.	Clamp	MS21333-78	5340-00-958-8457	(B)	1
8.	Clamp	MS21333-96	5340-00-088-1255	(B)	1
9.	Gasket	A3013655-1	5330-01-205-2864	(A)	2
10.	Grommet	MS35489-31	5325-00-174-9336	(B)	1
11.	Grommet	12460299	5325-01-492-0008	(B)	1
12.	Mounting Base, Electrical Equipment	A3013367-1	5975-01-188-8873	(A)	1
13.	Nut	271169	5310-00-124-9265	(B)	1
14.	Nut	9419143	5310-01-148-0240	(B)	2
15.	Nut	9422771	5310-01-211-0691	(B)	4
16.	Screw	MS35206-263	5305-01-477-9548	(B)	4
17.	Screw	MS35207-265	5305-00-993-1848	(B)	1
18.	Screw	9416639	5305-01-197-2320	(B)	2
19.	Screw, Cap	B1821BH025C100N	5305-01-389-7984	(B)	2
20.	Screw, Cap	MS35307-365	5305-00-847-1159	(A)	8
21.	Terminal	7728777	5940-00-983-4067	(B)	1
22.	Terminal	7728780	5940-01-035-4212	(B)	1
23.	Washer	2436161	5310-01-102-3270	(B)	4
24.	Washer, Lock	MS35338-43	5310-00-045-3296	(B)	4
25.	Washer, Lock	MS45904-72	5310-00-889-2527	(A)	21

**MATERIAL REQUIRED BUT NOT INCLUDED IN KITS:***Table 4-2. Non-Kit Parts List for Installation of C4ISR Equipment.*

ITEM NO.	NOMENCLATURE	PART NUMBER	NSN	QTY.
1.	Adapter, Antenna	RF-1980-AT001	5985-01-519-6245	1
2.	Antenna AS-3900/VRC	A3017889-2	5985-01-308-8988	2
3.	Antenna, AS-3499/VSQ-1	A3005031	5820-01-183-9462	1
4.	Antenna, Element (lower)	A3018230-1	5985-01-201-1498	2
5.	Antenna, Element (upper)	A3017901-2	5985-01-306-4622	2
6.	Antenna, HF	4245		1
7.	Antenna, PLGR	AT575-030	5985-01-375-4660	1
8.	Bar, Support	10181-5213-002		1
9.	Bracket, Antenna, Base	RF292	5985-01-418-5247	1
10.	Bracket, Antenna, EPLRS	05A020ID		1
11.	Bracket, Support	12460300	5340-01-456-6554	1
12.	Bracket, PLGR	986-0645-001	5975-01-375-1302	1
13.	Bracket, User Readout (URO)	A3006206	5340-01-386-7841	1
14.	Cable Assembly	A3206018-2	5995-01-392-6196	2
15.	Cable Assembly	A3206018-15	5995-01-392-6200	2
16.	Cable Assembly, Antenna, HF	10181-9824-020	5995-01-460-5697	1
17.	Cable Assembly, Antenna, HF	10564-3355-A004		1
18.	Cable Assembly, Antenna, EPLRS	SM-C-911480	5995-01-167-1269	1
19.	Cable Assembly, Antenna, PLGR	426-0141-050	6150-01-375-8662	1
20.	Cable Assembly, Ground	12480567-1	N/A	1
21.	Cable Assembly, Power	A3206017-3	5995-01-452-4309	1
22.	Cable Assembly, Power	12480567-2	N/A	
23.	Cable Assembly, Power, EPLRS	A3004939	5995-01-198-0538	1
24.	Cable Assembly, Power, HF	10181-9826-020	5995-01-370-5985	1
25.	Cable Assembly, Power, PLGR	9728558-10	6150-01-375-8661	1
26.	Cable Assembly, Power, Speaker	10535-0708-A020	6150-01-519-6396	2
27.	Cable Assembly, Power, TAC-SAT	10570-0705-A021		1
28.	Cable Assembly, R/T	A3206019-3	5995-01-458-5334	1
29.	Cable Assembly, R/T	A3206127-3	N/A	1
30.	Cable Assembly, Speaker, R/T	10535-0707-A020	5995-01-514-6066	2
31.	Cable Assembly, TAC-SAT Antenna	10369-7211-020		1
32.	Cable Assembly, INC-EPUU	A3279383-3	5995-01-453-9171	1
33.	Clamp, Loop	MS21333-69	5340-00-764-7051	5
34.	Clamp, Loop	MS21333-77		1
35.	Clamp, Loop	MS21333-78	5340-00-958-8457	1
36.	Clamp, Loop	MS21333-112	5340-00-057-3043	11
37.	Cover, Antenna Bracket	1018-5212-02		1

**MATERIAL REQUIRED BUT NOT INCLUDED IN KITS (Contd):***Table 4-2. Non-Kit Parts List for Installation of C4ISR Equipment (Contd).*

ITEM NO.	NOMENCLATURE	PART NUMBER	NSN	QTY.
38.	Cover, Fuse	1209-9272	N/A	4
39.	Decal	12339060	7690-01-265-1135	1
40.	Fiber Rope Assembly	A3167672-1	4020-01-341-8795	2
41.	Gasket	A3013655-1	5330-01-205-2864	1
42.	Grommet, Nonmetallic	MS21266-1N	5325-00-960-2410	A/R
43.	Grommet, Nonmetallic	MS35489-19	5325-00-276-6091	1
44.	Grommet, Nonmetallic	MS35489-149	5325-01-309-7164	1
45.	Grommet, Nonmetallic	MS35489-150	5325-01-282-8245	1
46.	Grommet, Nonmetallic	12338098	5325-01-308-5424	1
47.	Grommet, Nonmetallic	2400	5325-01-289-7859	1
48.	Insert	12446871-1	5310-01-413-3276	6
49.	Insert	12446871-2	5310-01-411-3422	8
50.	Insert	12446871-8	5325-01-476-3041	4
51.	Interface Unit, FFCS	A3206624	5895-01-469-6120	2
52.	Locking Collar	Z52-0013-002		2
53.	Loudspeaker	10181-5180-01		2
54.	Master Control Station (MCS/L)	A3206623	5895-01-469-3352	1
55.	Mount, 20 Watt Radio	N/A	N/A	1
56.	Mount, Resilient	MT-6146/VSQ-1	5340-01-167-8297	1
57.	Mount, TAC-SAT Radio	RF-5800H-V005	5820-01-512-2462	1
58.	Mounting Bracket, TAC-SAT Antenna	N/A	N/A	1
59.	Nut	AN121502-2	N/A	4
60.	Nut	MS35650-302	5310-00-934-9751	11
61.	Nut	MS51967-5	5310-01-478-3126	4
62.	Nut	13218E0320-293	5310-00-913-8881	8
63.	Nut	9418931	5310-01-187-7610	4
64.	Nut	9418892	5310-01-157-9819	11
65.	Nut	9417954	5310-00-931-8167	2
66.	Nut	9419143	5310-01-148-0240	2
67.	Nut	MS35649-63	5310-00-804-3859	5
68.	Nut, Lock	MS51943-31		4
69.	Nut, Lock	271175	5310-01-333-5245	5
70.	Nut, Nylon	10075-1397		2
71.	Nut, Plain-Assembled	271169	5310-00-124-9265	5
72.	Panel, Enclosure	12447141	2510-01-413-5993	1
73.	Rivet, Blind	12339355-1	5320-01-271-6357	2
74.	Screw	MS24694S102	5305-00-045-3179	2

**MATERIAL REQUIRED BUT NOT INCLUDED IN KITS (Contd):***Table 4-2. Non-Kit Parts List for Installation of C4ISR Equipment (Contd).*

ITEM NO.	NOMENCLATURE	PART NUMBER	NSN	QTY.
75.	Screw	MS35206-265	5305-00-984-6212	1
76.	Screw, Cap	B1821BH025C075N	5305-00-068-0508	4
77.	Screw, Cap	B1821BH025C088N	5305-00-071-2505	5
78.	Screw, Cap	B1821BH025C100N	5305-01-389-7984	6
79.	Screw, Cap	B1821BH031C075N		4
80.	Screw, Cap	B1821BH031C100N	5306-00-226-4827	6
81.	Screw, Cap	B1821BH031C125N	5306-00-226-4829	1
82.	Screw, Cap	B1821BH031C150N		6
83.	Screw, Cap	B1821BH031F100N	5305-00-051-4076	5
84.	Screw, Cap	B1821BH031F125N	5305-00-051-4078	6
85.	Screw, Cap	B1821BH038C150N	5305-00-725-2317	4
86.	Screw, Cap	B1821BH038F175N	5305-00-269-3241	4
87.	Screw, Cap	B1821BH050C150N	5305-00-071-2069	4
88.	Screw	MS27039-4-32	5305-00-891-1786	2
89.	Screw, Machine	MS35206-230	5305-00-889-3000	5
90.	Screw, Machine	160046	5305-00-349-8534	1
91.	Screw, Cap	MS35207-265	5305-00-993-1848	3
92.	Screw, Cap	MS35207-269	5305-00-995-3441	6
93.	Screw, Cap	MS35207-270	5305-00-995-3440	4
94.	Screw, Self-Tapping	12342499-2	5305-01-264-5809	11
95.	Screw, Self-Tapping	9421073	5305-01-162-8512	9
96.	Spacer	10181-5214-01		5
97.	Spacer	92510A318	N/A	4
98.	Strap, Tiedown	MS3367-1-0	5975-00-984-6582	A/R
99.	Terminal Lug	7728777	5940-00-983-4067	1
100.	Terminal Lug	7728780	5940-01-035-4212	1
101.	Terminal Board	MS27212-3-8	5940-00-950-7782	1
102.	Terminal Board	12480570	N/A	1
103.	Terminal Board Cover	MS18029-3S-2	5940-01-280-9304	1
104.	Terminal Board Cover	12480569-2	N/A	1
105.	Terminal Board Cover	12480569-1	N/A	1
106.	Terminal Link	MS25226-6N-2	6150-01-167-9267	1
107.	Terminal Lug	MS20659-108	5940-00-115-2674	2
108.	Tubing, Convoluted	Z52-0013-001		1
109.	Tubing, Shrink	MS23053/4-302-0	5970-01-161-6796	A/R
110.	Washer	MS27183-8	5310-00-809-8546	6
111.	Washer	MS27183-10	5310-00-809-4058	9
112.	Washer	MS51412-23	5310-01-333-0060	2

**MATERIAL REQUIRED BUT NOT INCLUDED IN KITS (Contd):***Table 4-2. Non-Kit Parts List for Installation of C4ISR Equipment (Contd).*

ITEM NO.	NOMENCLATURE	PART NUMBER	NSN	QTY.
113.	Washer	12338095	5310-01-208-7576	3
114.	Washer	2436162	5310-01-119-1024	8
115.	Washer	2436164	5310-01-278-9555	2
116.	Washer, Lock	MS35338-41	5310-00-045-4007	5
117.	Washer, Lock	MS35338-43	5310-00-045-3296	25
118.	Washer, Lock	MS35338-44	5310-00-582-5965	4
119.	Washer, Lock	MS35338-45	5310-00-407-9566	2
120.	Washer, Lock	MS35338-48	5310-00-584-5272	3
121.	Washer, Lock	MS45904-71	5310-00-947-6980	8
122.	Washer, Lock	MS45904-72	5310-00-889-2527	25
123.	Washer, Lock	MS45904-76	5310-00-061-1258	20
124.	Washer	MS9320-10	5310-00-194-0637	2
125.	Washer	MS9320-12	5310-00-184-8974	4
126.	Washer, Lock	NAS1676-416	5310-00-143-6272	4
127.	Washer, Lock	NAS1676-516	5310-00-105-6661	8
128.	Washer, Lock	120217	5310-01-279-8319	1
129.	Wire Assembly, Fuse (12V)	12480568-2	N/A	1
130.	Wire Assembly, Fuse (24V)	12480568-1	N/A	3
131.	Wire, Lock	MS20995C32	9505-00-293-4208	A/R



## CHAPTER 5 INSTALLATION PROCEDURES

### Section I. SCOPE

This chapter provides instructions for installation of the following C4ISR equipment:

- Single Channel Ground and Airborne Radio System (SINCGARS)
- Precision Lightweight Global Positioning System Receiver (PLGR)
- Enhanced Position Location Reporting System (EPLRS)
- Vehicular Intercommunications Set (VIS)
- TAC-SAT Radio
- HF 20 Watt Radio
- Additional terminal boards in the vehicle

When installing C4ISR equipment, be sure to read and follow instructions and illustrations carefully.

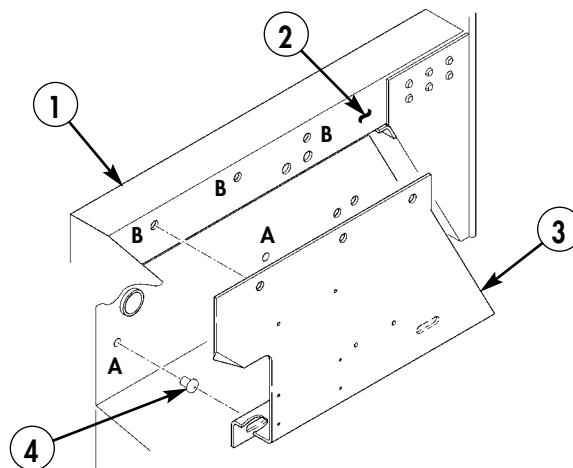
### Section II. INSTALLATION OF TERMINAL BOARDS

Use the following procedure to install additional terminal boards to provide adequate power connections. Vehicles must have dual-voltage alternators installed in order to have both 12V and 24V terminal boards installed.

### Section III. CAB ENCLOSURE PANEL, TERMINAL BOARD, AND COVER MODIFICATION

#### NOTE

- Late model M1114 vehicles come with cab enclosure panel and 24V terminal board. For early model M1114 vehicles, perform sections III through VI. For late model M1114 vehicles begin at section VII.
  - For vehicles without cab enclosure panel, begin with step 3-1.
  - For vehicles with cab enclosure panel, begin with step 3-3.
  - All dimensions are in inches.
- 3-1.** Place enclosure panel (3) in position. Locate, mark, and drill five 0.159-in. diameter holes marked A and B in B-beam (1) and battery box (2).
- 3-2.** Enlarge two lower mounting holes marked A to 0.390-in. diameter, and install two inserts (4) in battery box (2).



- 3. ENCLOSURE PANEL – 12447141 – QTY. 1**  
**4. INSERT – 12446871-2 – QTY. 2**

*Figure 5-1.*

**NOTE**

Do not install cab enclosure panel.

- 3-3. Locate, mark, and drill three 0.156-in. diameter holes marked A in cab enclosure panel (1).
- 3-4. Locate, mark, and drill two 0.196-in. diameter holes marked B in cab enclosure panel (1).
- 3-5. Locate, mark, and drill two 0.281-in. diameter holes marked C in cab enclosure panel (1).

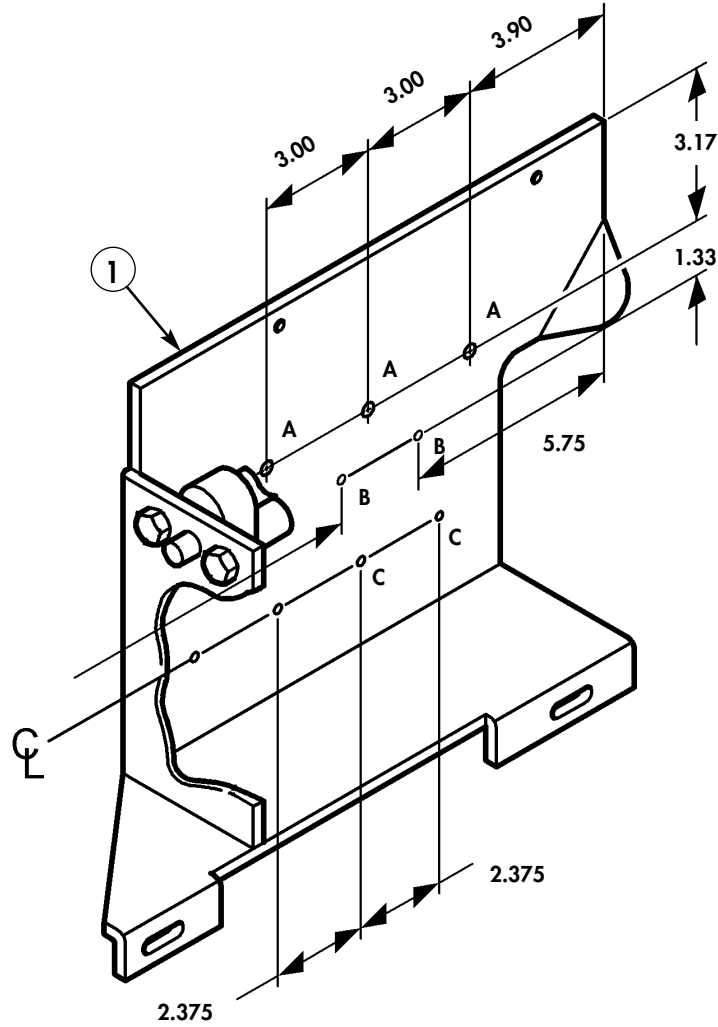


Figure 5-2.



**NOTE**

Perform steps 3-6 through 3-8 only if supplemental heater is installed.

- 3-6. Locate, mark, and cut corner of cab enclosure panel (1).
- 3-7. Locate, mark, and drill 0.154-in. diameter hole (5) in cab enclosure panel (1).

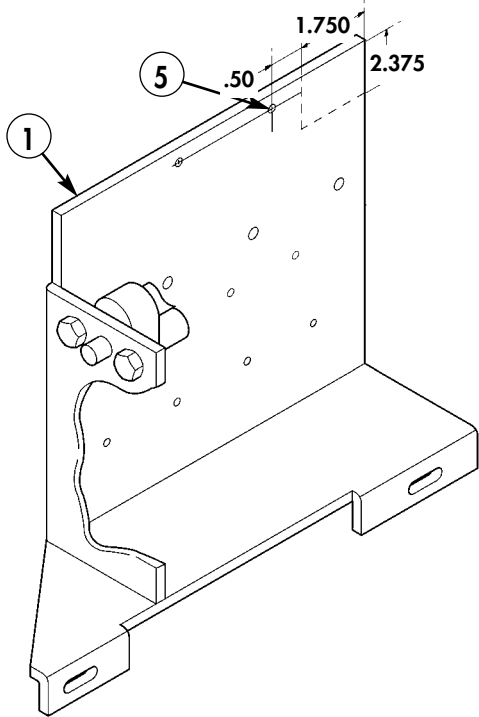
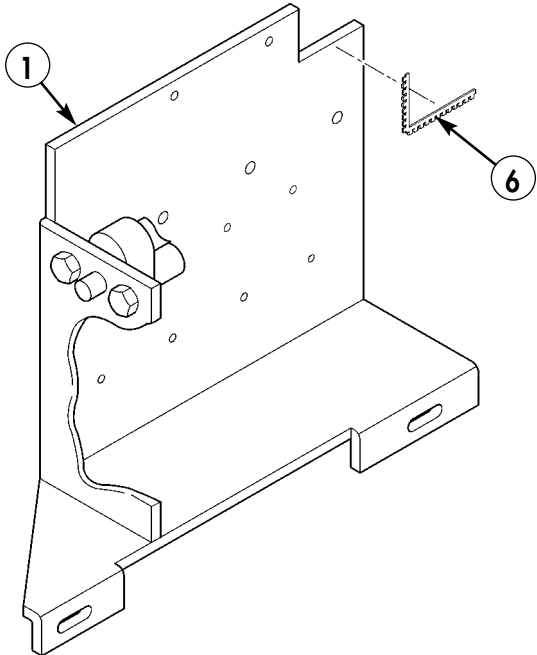


Figure 5-3.

- 3-8. Install grommet material (6) on cab enclosure panel (1) with RTV compound.



6. GROMMET MATERIAL – MS21266-1N – QTY. A/R

Figure 5-4.

**CAUTION**

Do not cut raised sections of terminal board. Terminal board is not usable if cut on raised section.

- 3-9. Measure and cut terminal board (6) in two places (7). Remove burrs and sharp edges.
- 3-10. Install five nut sleeves (10) in terminal board covers (8), (9), and (11), and secure with five snaprings (12).

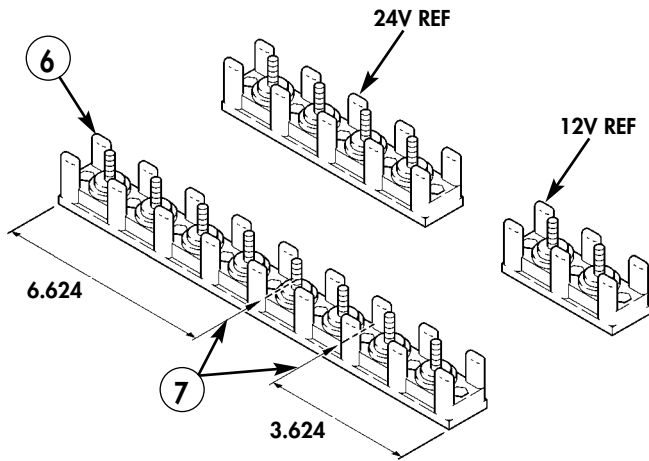


Figure 5-5.

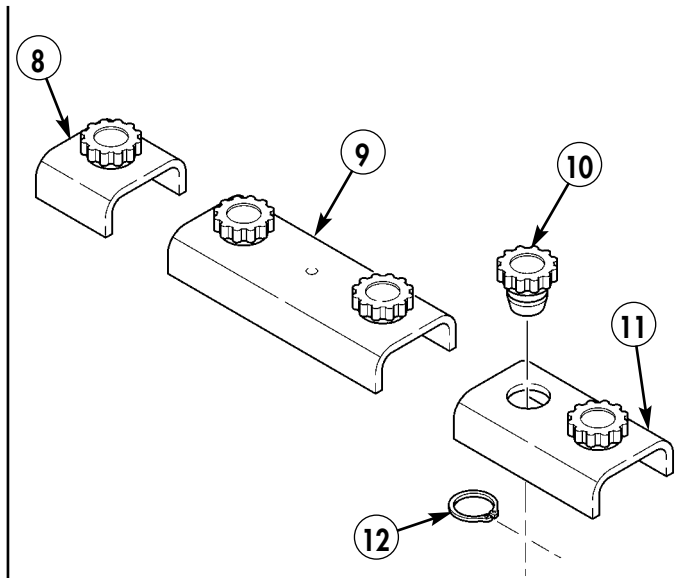
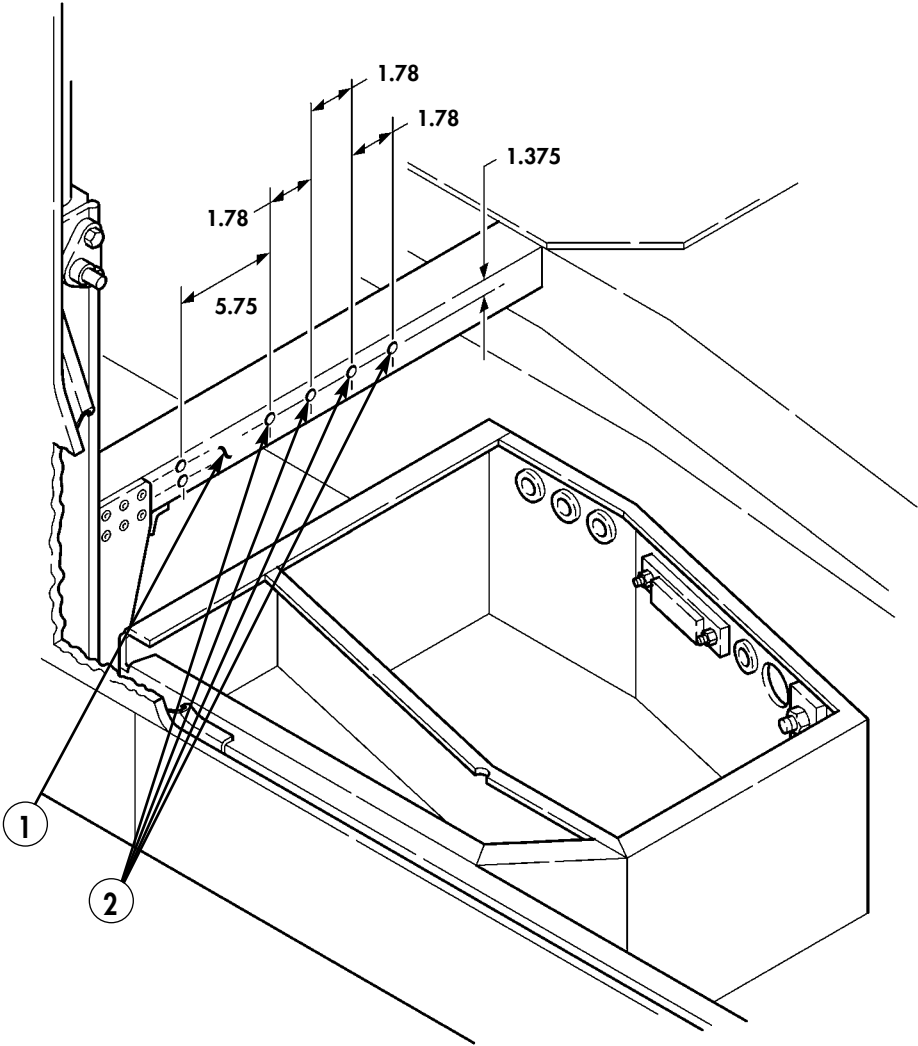


Figure 5-6.

- 6. TERMINAL BOARD – MS27212-3-8 – QTY. 1
- 8. TERMINAL BOARD COVER – 12480569-1 – QTY. 1
- 9. TERMINAL BOARD COVER – 12480569-2 – QTY. 1
- 11. TERMINAL BOARD COVER – MS18029-3S-2 – QTY. 1

### Section IV. B-BEAM PREPARATION

Locate, mark, and drill four 0.159-in. diameter holes (2) in B-beam (1).



- 1. FUSE COVER – 1209-9272 – QTY. 3 OR 4
- 2. SELF-TAPPING SCREW – 12342499-2 – QTY. 3 OR 4

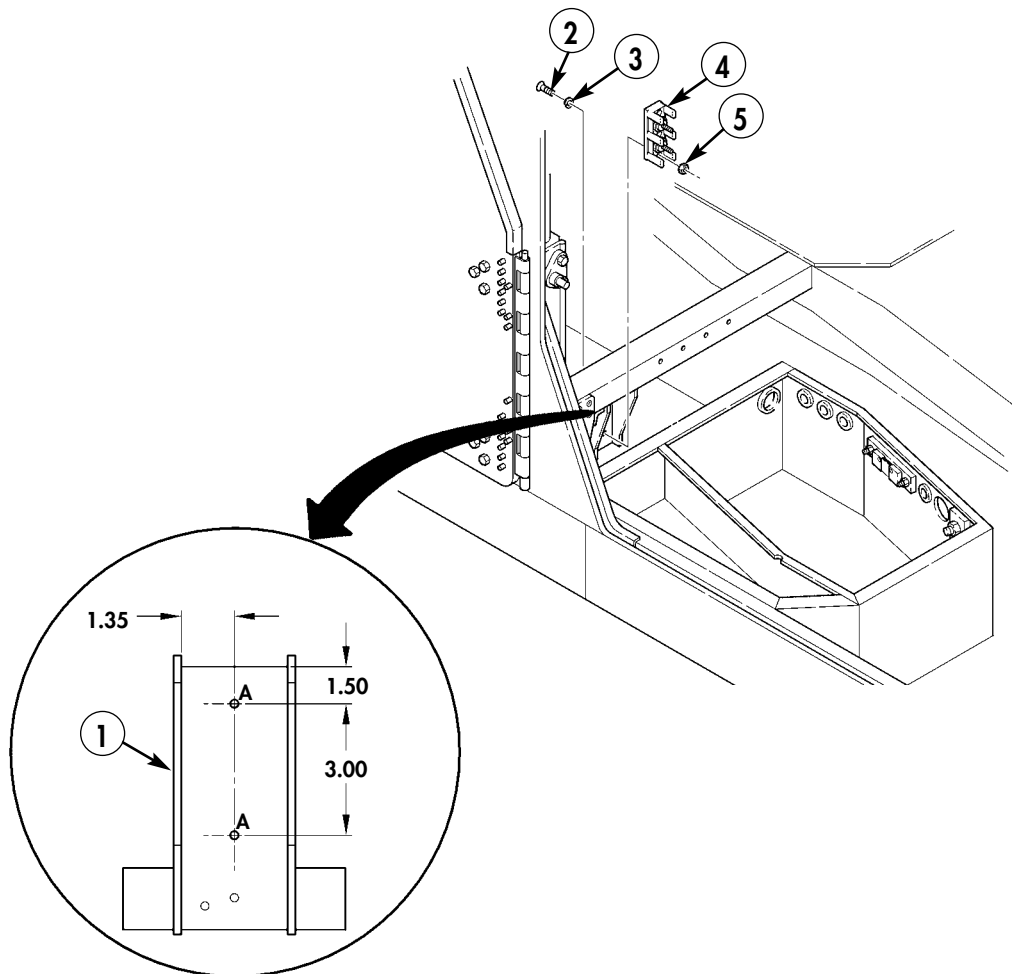
Figure 5-7.

### Section V. ASSEMBLY OF CAB ENCLOSURE PANEL

#### NOTE

- For 12V terminal board installation on models with rifle mount bracket shown in figure 5-8, perform steps 5-1 through 5-3.
- If not installing 12V terminal board, begin with step 5-4.

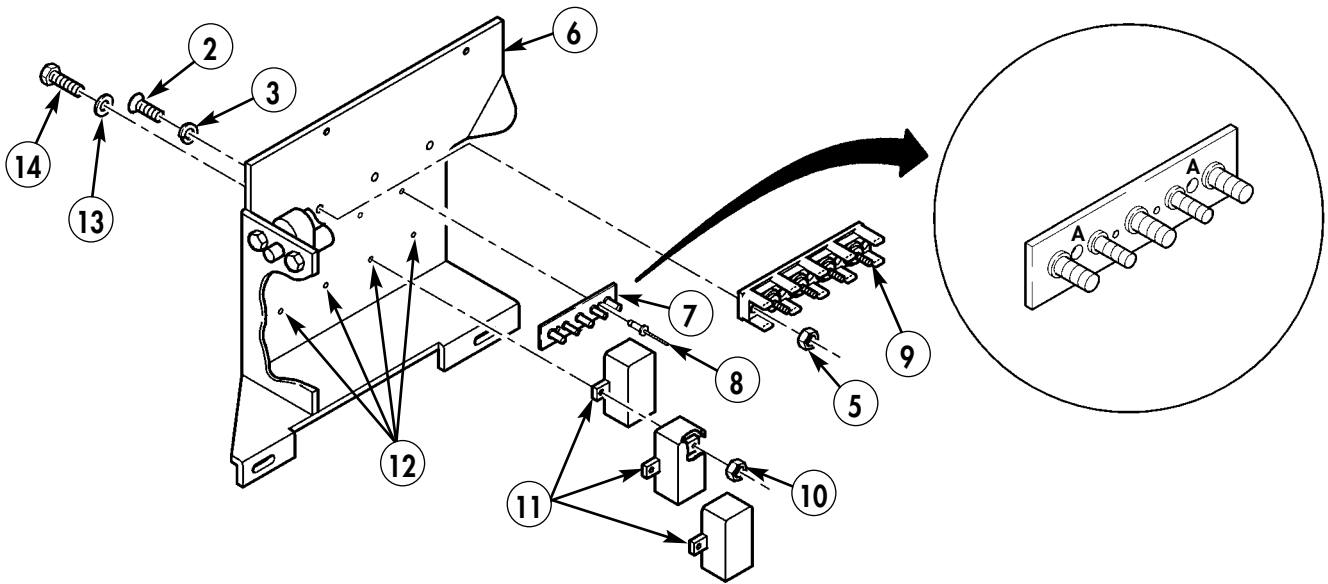
- 5-1. Remove lower rifle mount bracket (1) from B-beam. (Refer to TM 9-2320-387-24.)
- 5-2. Locate, mark, and drill two 0.159-in. diameter holes marked A in lower rifle mount bracket (1), and install 12V terminal board (4) with two screws (2), lockwashers (3), and nuts (5).
- 5-3. Install lower rifle mount bracket (1) on B-beam. (Refer to TM 9-2320-387-24.)



2. SCREW – MS35206-230 – QTY. 2
3. LOCKWASHER – MS35338-41 – QTY. 2
5. NUT– MS35649-63 – QTY. 2

Figure 5-8.

- 5-4. Install 24V terminal board (9) on enclosure panel (6) with three screws (2), lockwashers (3), and nuts (5).
- 5-5. Enlarge two holes marked A in terminal board (7) to 0.196 in., and secure terminal board (7) to panel (6) with two rivets (8).
- 5-6. Install three existing relays (11) in holes (12) on panel (6) with four existing screws (14), washers (13), and locknuts (10).



- 2. SCREW – MS35206-230 – QTY. 3
- 3. LOCKWASHER – MS35338-41 – QTY. 3
- 5. NUT – MS35649-63 – QTY. 3
- 7. TERMINAL BOARD – 12480570 – QTY. 1
- 8. BLIND RIVET – 12339355-1 – QTY. 2
- 10. LOCKNUT – MS51943-31 – QTY. 4

Figure 5-9.

**Section VI. FINAL ASSEMBLY, TERMINAL BOARD WIRING, AND TERMINAL LINK**

**NOTE**

- Refer to figure 5-10 for wiring overview.
- Perform steps 6-1 and 6-2 if hole and grommet do not exist in battery box.
- If installing 24V terminal board only, begin with step 6-6.

- 6-1.** Locate, mark, and drill 2.00-in. diameter hole (3) in upper right corner of rear wall of battery box.
- 6-2.** Install grommet (4) in hole (3).
- 6-3.** Secure terminal link (8) and fuse wire (7) to 12V terminal board (1) with two locknuts (6), and install cover (5).
- 6-4.** Route wire (2) through battery box hole (3).

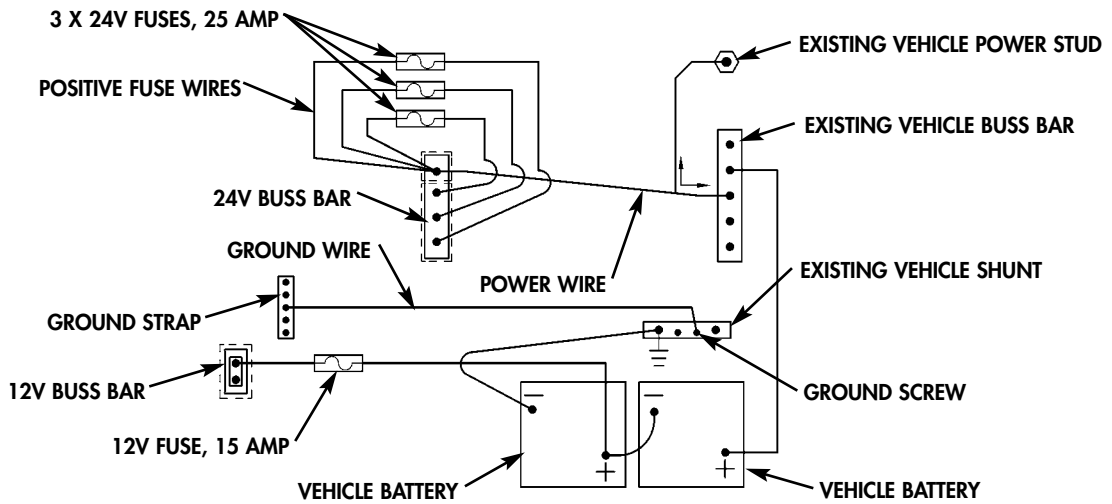


Figure 5-10.

4. GROMMET – 2400 – QTY. 1
6. LOCKNUT – 271175 – QTY. 2
7. FUSE WIRE ASSEMBLY (12V) – 12480568-2 – QTY. 1
8. TERMINAL LINK – MS25226-6N-2 – QTY. 1

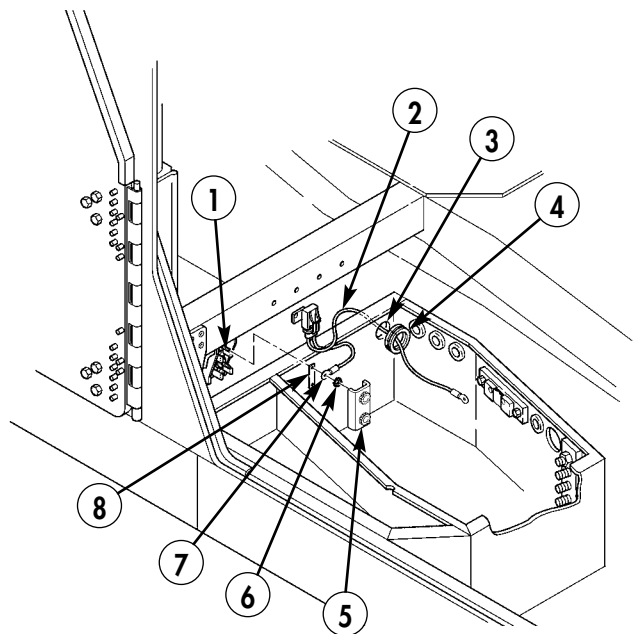


Figure 5-11.

- 6-5.** Connect wire (2) to existing positive 12V battery terminal end (10) with existing screw (9) and nut (11).

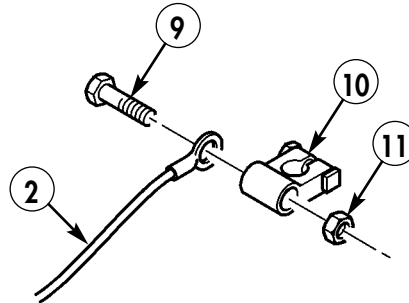
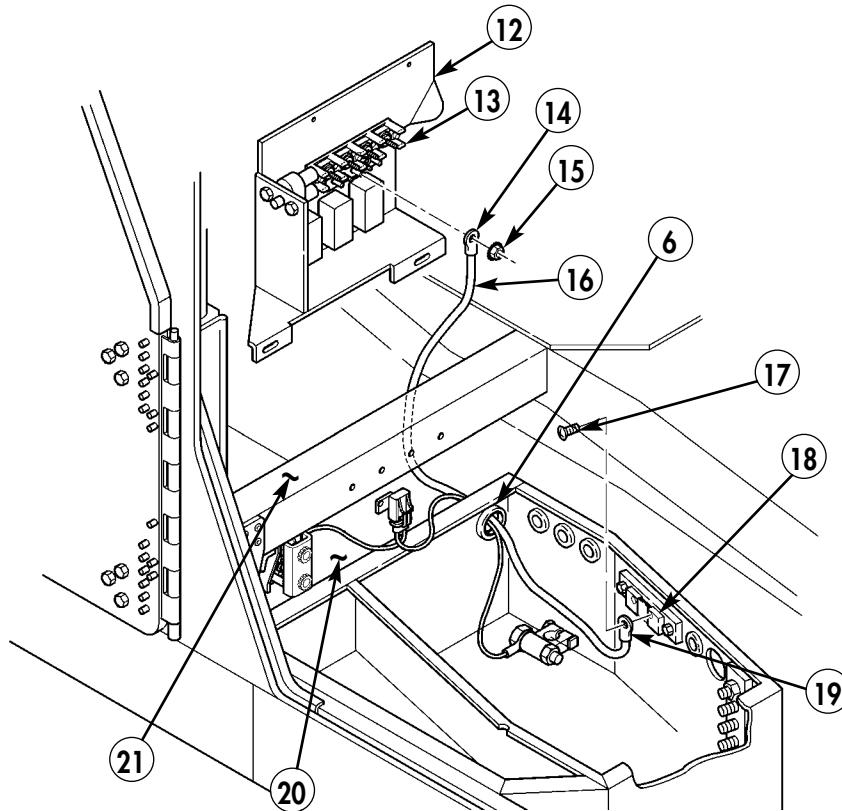


Figure 5-12.

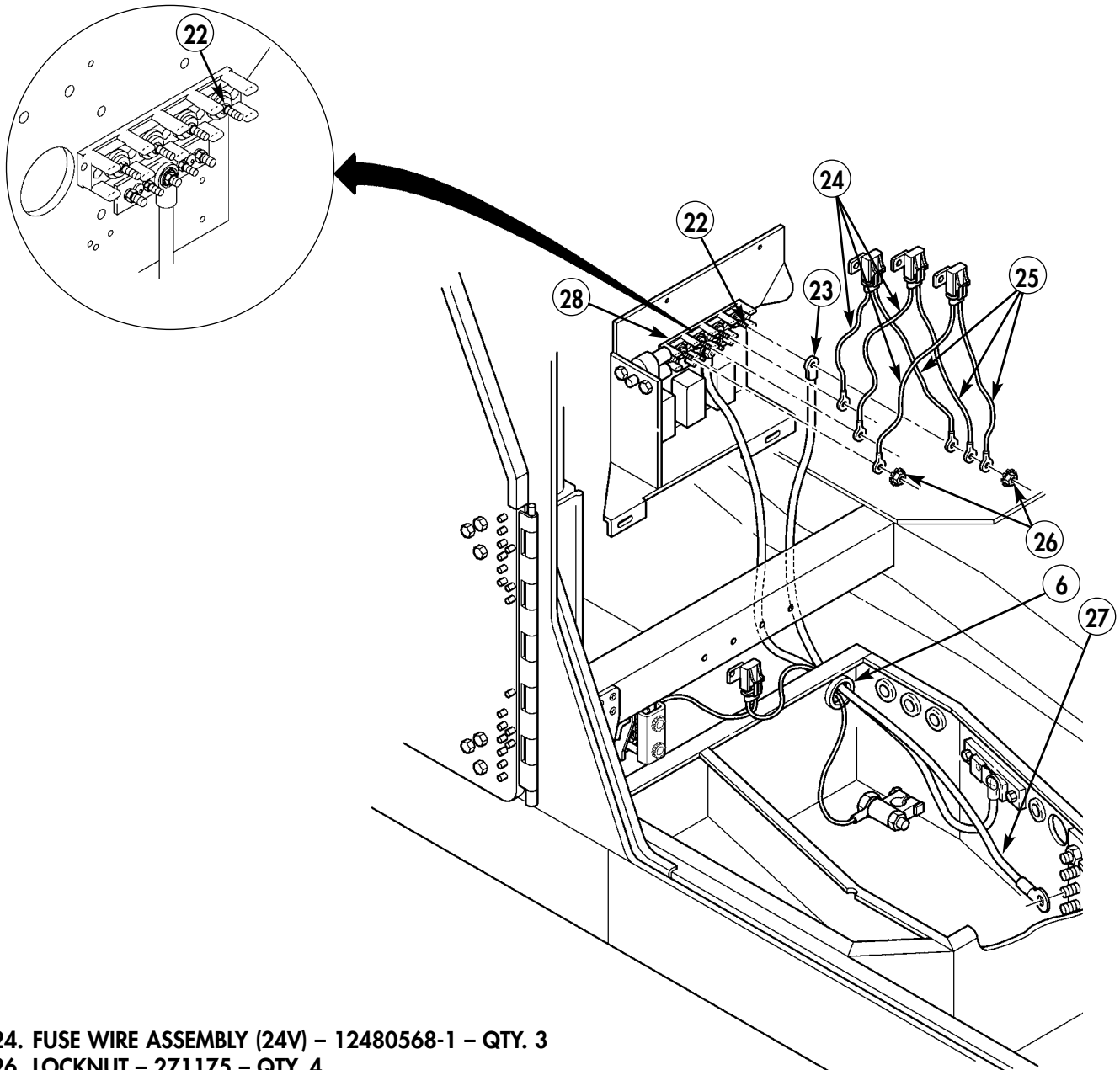
- 6-6.** Position cab enclosure panel (12) in rear floor pan (20) and rear of B-beam (21). Do not secure cab enclosure panel (12) at this time.
- 6-7.** Route ground cable (16) through battery box hole (6).
- 6-8.** Secure terminal lug (14) on center terminal of terminal board (13) with nut (15), and secure terminal lug (19) on shunt (18) with existing screw (17).
- 6-9.** Install four additional plain-assembled nuts (15) on terminal board (13).



- 15. PLAIN-ASSEMBLED NUT – 271169 – QTY. 5**  
**16. GROUND CABLE ASSEMBLY – 12480567-1 – QTY. 1**

Figure 5-13.

- 6-10. Route 24V power cable (27) through hole (6) and install 24V power cable terminal lug (23) on inboard stud (22) of terminal board (28). Do not secure 24V power cable terminal lug (23) at this time.
- 6-11. Secure three fuse wires (25) and 24V power cable terminal lug (23) to inboard terminal board stud (22) with locknut (26).
- 6-12. Secure three remaining fuse wires (24) to corresponding studs on 24V terminal board (28) with three locknuts (26).



- 24. FUSE WIRE ASSEMBLY (24V) - 12480568-1 - QTY. 3
- 26. LOCKNUT - 271175 - QTY. 4
- 27. POWER CABLE ASSEMBLY - 12480567-2 - QTY. 1

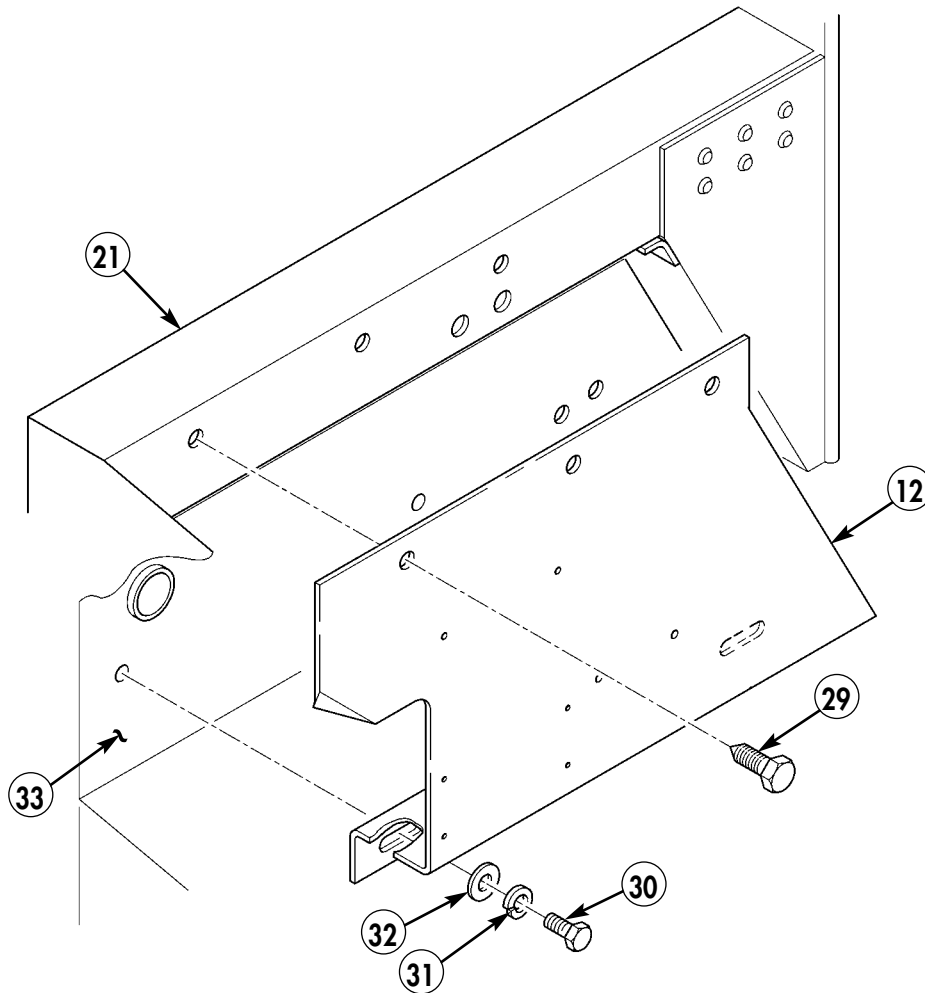
Figure 5-14.



**NOTE**

For vehicles with new enclosure panel, begin with step 6-14.

- 6-13. Install cab enclosure panel (12). (Refer to TM 9-2320-387-24.)
- 6-14. Secure cab enclosure panel (12) to B-beam (21) with three self-tapping screws (29).
- 6-15. Secure cab enclosure panel (12) to battery box (33) with two capscrews (30), lockwashers (31), and washers (32).



- 29. SELF-TAPPING SCREW – 12342499-2 – QTY. 3
- 30. CAPSCREW – B1821BH025C075N – QTY. 2
- 31. LOCKWASHER – MS35338-48 – QTY. 2
- 32. WASHER – MS51412-23 – QTY. 2

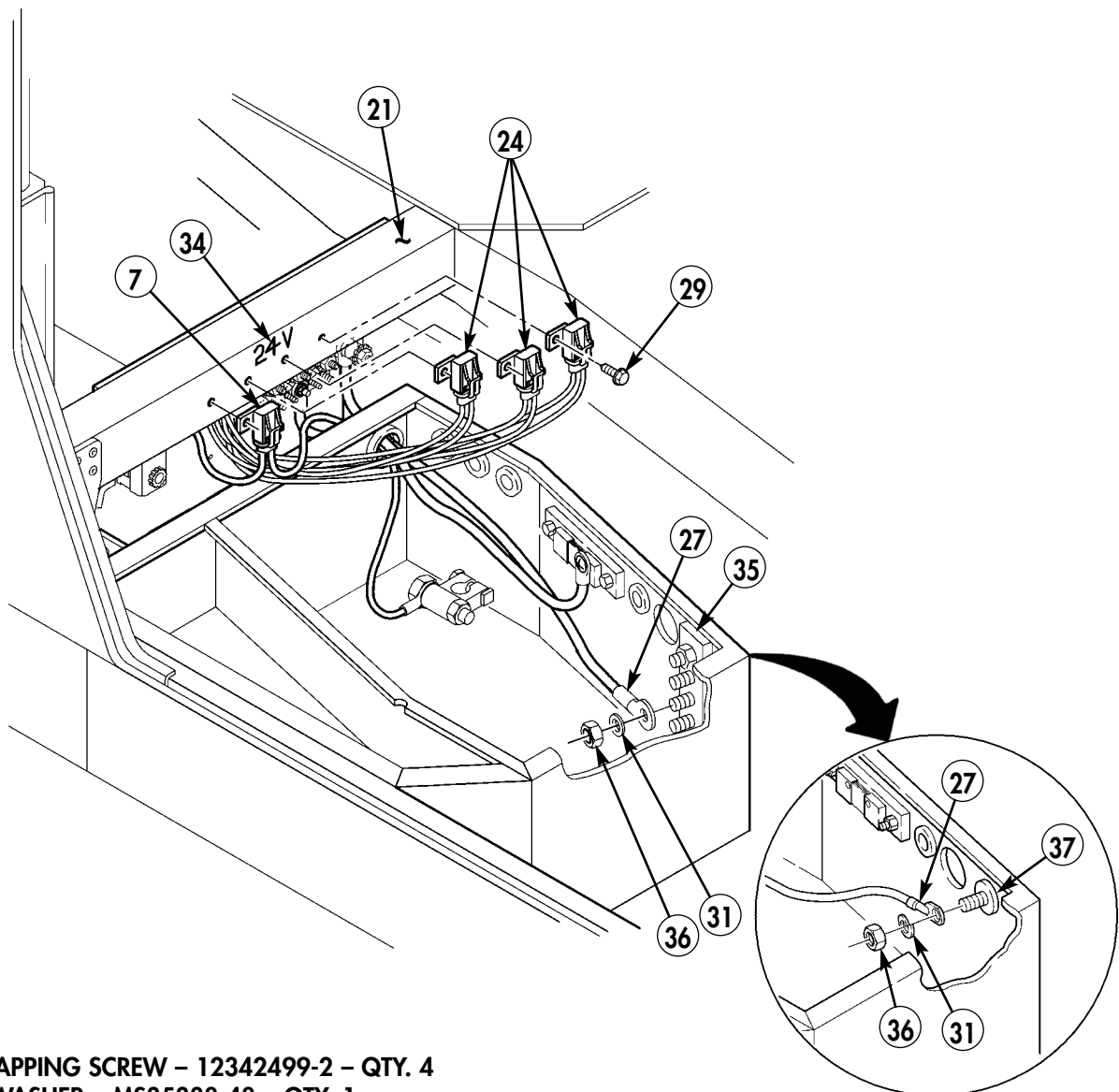
Figure 5-15.

- 6-16. Secure three 24V fusewire assemblies (24) and one 12V fusewire assembly (7) to B-beam (21) with four self-tapping screws (29).

**NOTE**

For models equipped with power stud, perform step 6-17.  
Otherwise, proceed to step 6-18.

- 6-17. Secure 24V terminal board power wire terminal lug (27) to power stud (37) with lockwasher (31) and existing nut (36).
- 6-18. Secure 24V terminal board power wire terminal lug (27) to terminal board (35) with lockwasher (31) and existing nut (36).
- 6-19. Install decal (34) on B-beam (21).
- 6-20. If previously removed, install right-hand rear fixed door. (Refer to TM 9-2320-387-24.)
- 6-21. Install batteries. (Refer to TM 9-2320-387-24.)



- 29. SELF-TAPPING SCREW – 12342499-2 – QTY. 4
- 31. LOCKWASHER – MS35338-48 – QTY. 1
- 34. DECAL – 12339060 – QTY. 1

Figure 5-16.

### Section VII. SINGARS MOUNTING TRAY AND POWER AMP INSTALLATION

- 7-1. Install standard radio rack if necessary. (Refer to TM 9-2320-387-24.)
- 7-2. Remove paint from five mounting holes (4) on standard rack (7) and five mounting holes (3) on bottom of mounting base (2).
- 7-3. Apply antiseize compound to five mounting holes (4) and five mounting holes (3).
- 7-4. Install mounting base (2) on standard rack (7) with five capscrews (1), ten lockwashers (6), and five nuts (5).

- 1. CAPSCREW - B1821BH031F100N - QTY. 5
- 2. MOUNTING BASE MT-6352/VRC - A3013367-1 - QTY. 1
- 5. NUT - 9418892 - QTY. 5
- 6. LOCKWASHER - MS45904-72 - QTY. 10

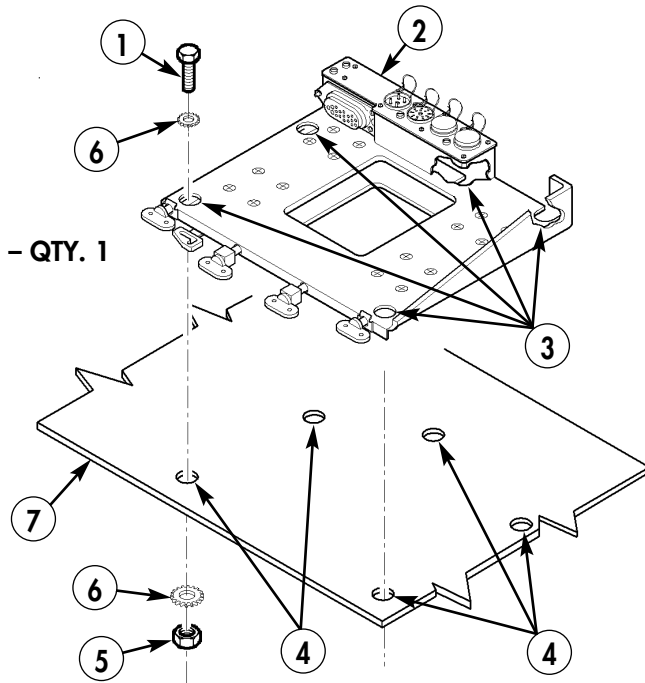


Figure 5-17.

**NOTE**

Perform step 7-5 for AN/VRC-92F only.

- 7-5. Install power amp (8) in SINGARS mount (2).

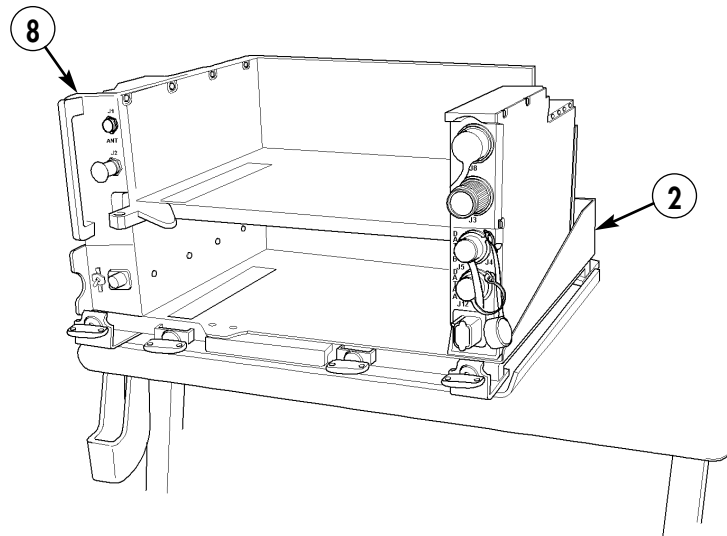


Figure 5-18.

**Section VIII. VIC-3 COMPONENTS INSTALLATION ON STANDARD RACK**

- 8-1. Remove existing capscrew (10) and washer (9) from radio rack (13).
- 8-2. Install MCS/L (5) to plate (7) with two capscrews (4), four lockwashers (1), two washers (3), and nuts (2).
- 8-3. Install FFCS/L (6) to plate (7) with two capscrews (4), four lockwashers (1), two washers (3) and nuts (2).
- 8-4. Install plate (7) to radio rack (13) with screw (8), lockwasher (11), and nut (12).
- 8-5. Secure plate (7) to radio rack (13) with screw (10), washer (9), lockwasher (11), and nut (12).

- 1. LOCKWASHER – NAS1676-516 – QTY. 8
- 2. NUT – MS51967-5 – QTY. 4
- 3. WASHER – MS9320-12 – QTY. 4
- 4. CAPSCREW – B1821BH031C150N – QTY. 4
- 5. MCS/L – A3206623 – QTY. 1
- 6. FFCS/L – A3206624 – QTY. 1

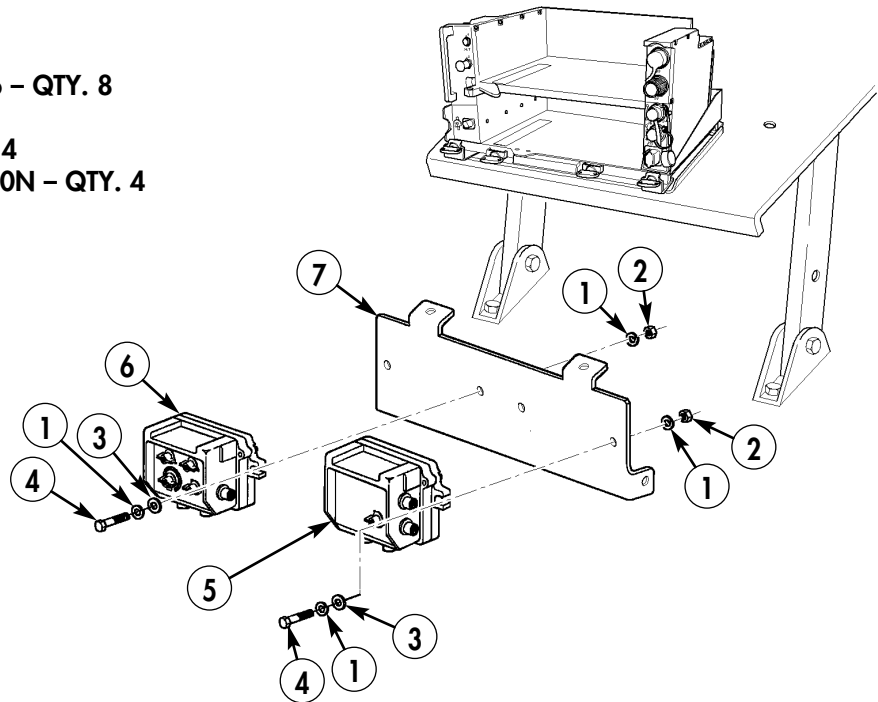


Figure 5-19.

- 8. SCREW – MS24694S102 – QTY. 2
- 9. WASHER – MS9320-10 – QTY. 2
- 10. SCREW – MS27039-4-32 – QTY. 2
- 11. LOCKWASHER – NAS1676-416 – QTY. 4
- 12. NUT – AN121502-2 – QTY. 4

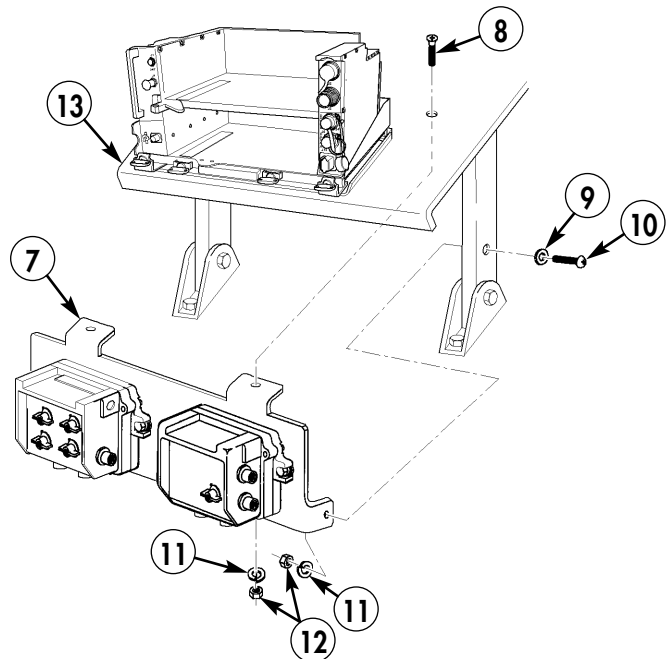
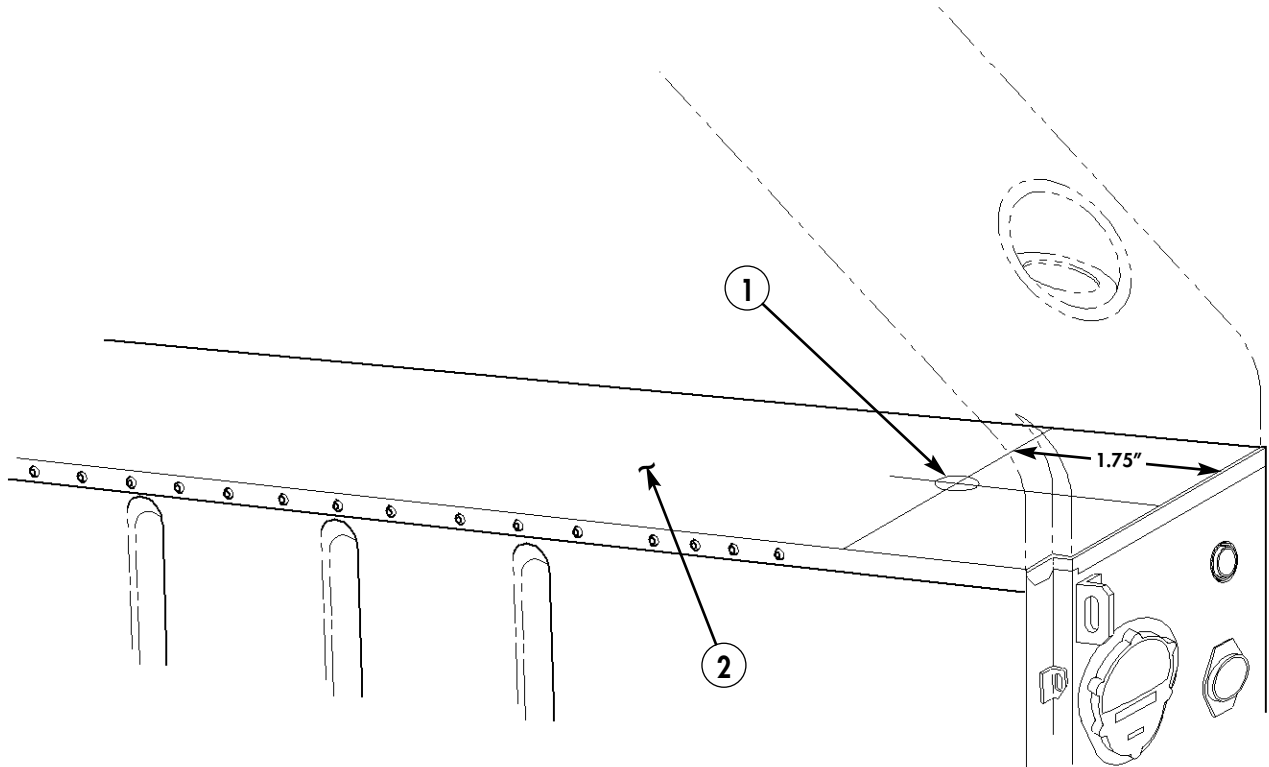


Figure 5-20.

**Section IX. HF 20 WATT RADIO ANTENNA BRACKET AND ANTENNA INSTALLATION****NOTE**

Position hole 1.75 in. from rear edge of wheelhouse and centered on coupler mounting plate.

- 9-1.** Locate, mark, and drill 1.625-in. diameter hole (1) in right rear wheelhouse (2).



*Figure 5-21.*

**NOTE**

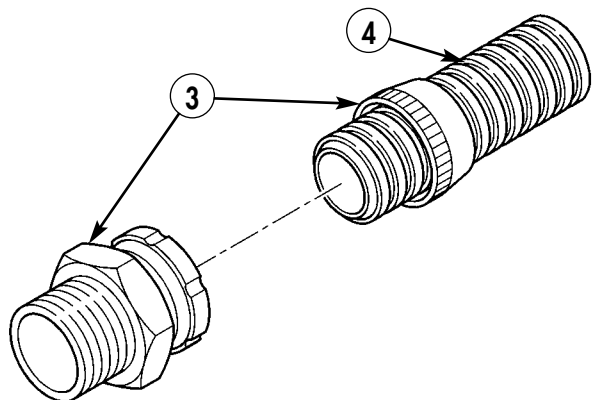
Ensure convoluted tubing is cut straight and even to allow proper fit of locking collar.

- 9-2. Install locking collar (3) on one end of convoluted tubing (4).
- 9-3. Place convoluted tubing and grommet assembly (4) in existing hole (5) of right wheelhouse (2), through wheelhouse (2), and through hole (6) in right wheelhouse (2). Mark convoluted tubing (4) at proper length.
- 9-4. Remove convoluted tubing (4) from wheelhouse (2) and cut to proper length.

**NOTE**

Ensure convoluted tubing is cut straight and even to allow proper fit of locking collar.

- 9-5. Install locking collar (3) on other end of convoluted tubing (4).
- 9-6. Place convoluted tubing and grommet assembly (4) in hole (6) on inside of right wheelhouse (2), through wheelhouse (2), and through hole (5) in rear wall (2). Secure convoluted tubing (4) to right rear wheelhouse (2) with nylon nuts (7).



- 3. LOCKING COLLAR - Z52-0013-002 - QTY. 2
- 4. CONVOLUTED TUBING - Z52-0013-001 - QTY. 1

Figure 5-22.

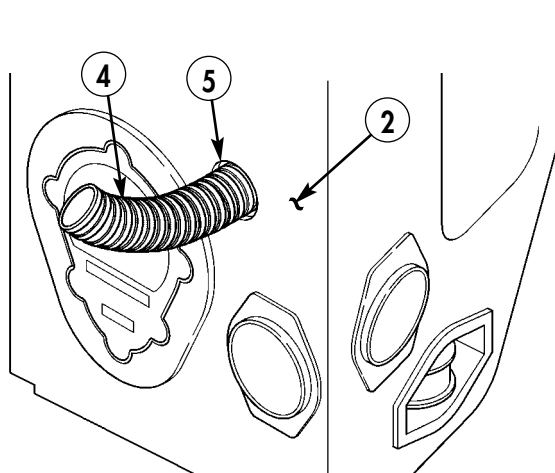
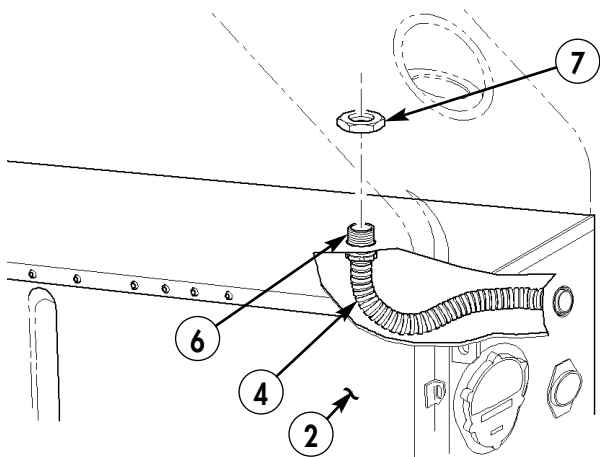
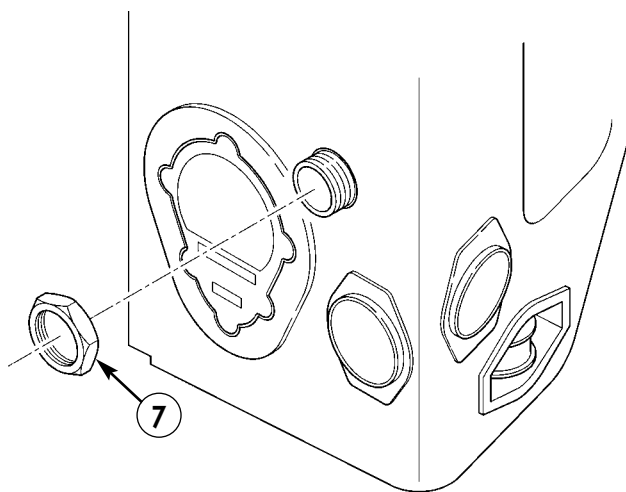


Figure 5-23.



- 7. NYLON NUT - 10075-1397 - QTY. 1

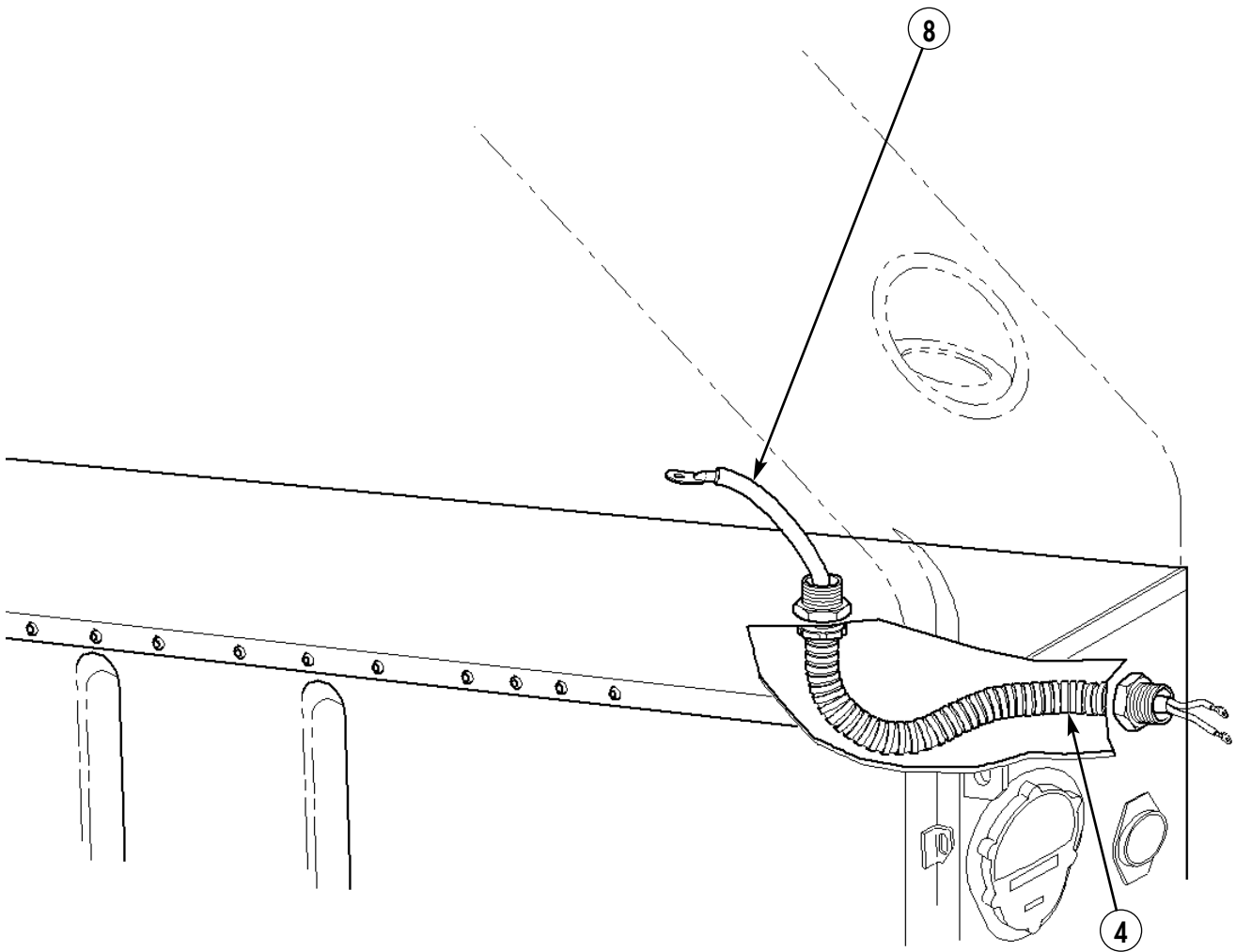
Figure 5-24.



- 7. NYLON NUT - 10075-1397 - QTY. 1

Figure 5-25.

9-7. Route antenna cable (8) through convoluted tubing (4).



8. HF ANTENNA CABLE - 10564-3355-A004 - QTY. 1

Figure 5-26.

**NOTE**

Do not tighten screws at this time.

- 9-8. Attach antenna mount (12) to rear wall of right rear wheelhouse (2) with three capscrews (13), six lockwashers (10), three aluminum spacers (11), and nuts (9).
- 9-9. Temporarily install support bar (14) on antenna mounting bracket (12).
- 9-10. Using support bar (14) as template, locate and mark two hole locations (15). Remove support bar (14).
- 9-11. Drill two 0.281-in. diameter holes (15) in right rear wheelhouse (2).

**NOTE**

Do not tighten bolts at this time.

- 9-12. Attach support bar (14) to antenna support bracket with two capscrews (20), lockwashers (17), and washers (18).

**NOTE**

Do not tighten capscrews at this time.

- 9-13. Attach support bar (14) to right rear wheelhouse (2) with two capscrews (19), washers (18), spacers (11), lockwashers (17), and nuts (16).
- 9-14. Tighten top two capscrews (13) securing antenna mounting bracket (12) to right rear wheelhouse (2).
- 9-15. Tighten two capscrews (20) securing support bar (14) to antenna mounting bracket (12).
- 9-16. Tighten two capscrews (19) securing support bar (14) to right rear wheelhouse (2).

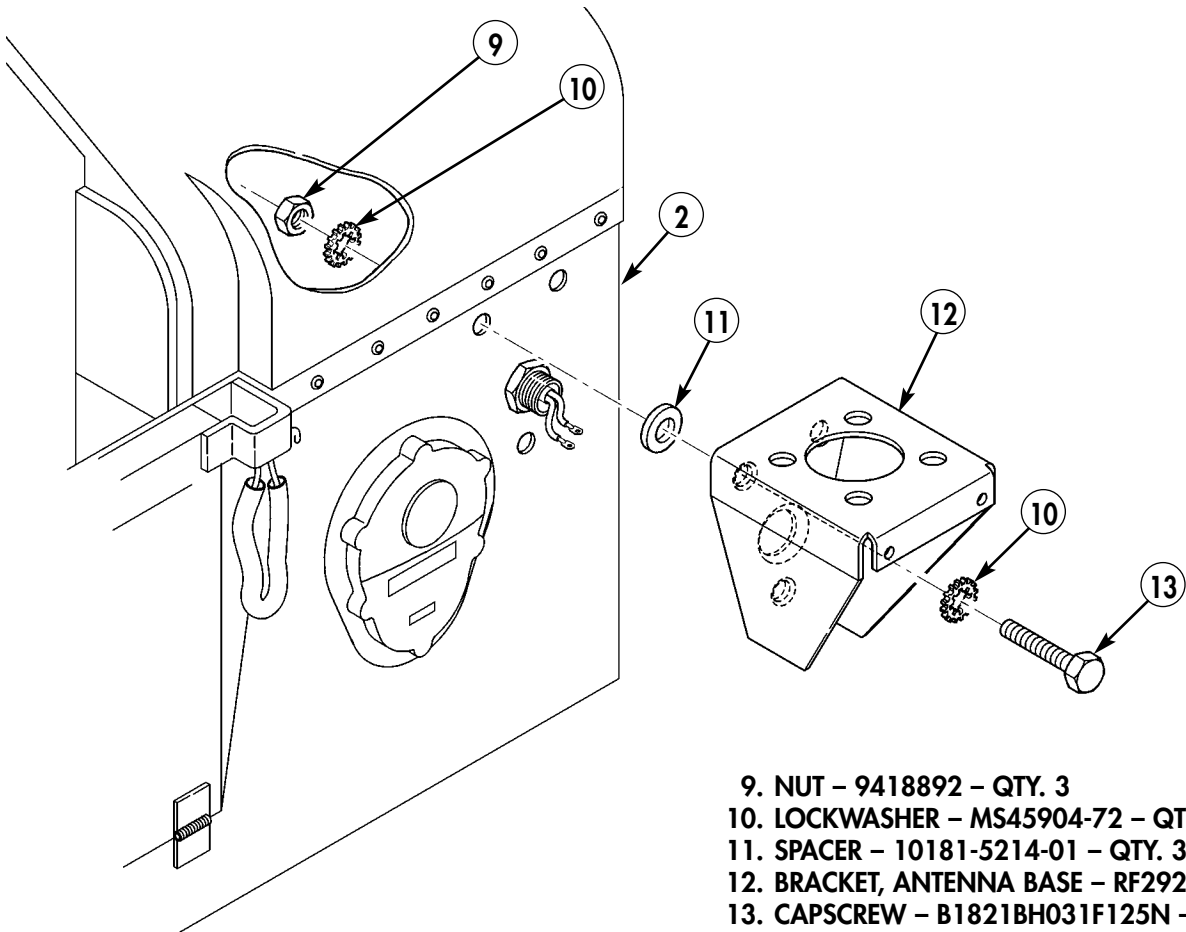


Figure 5-27.



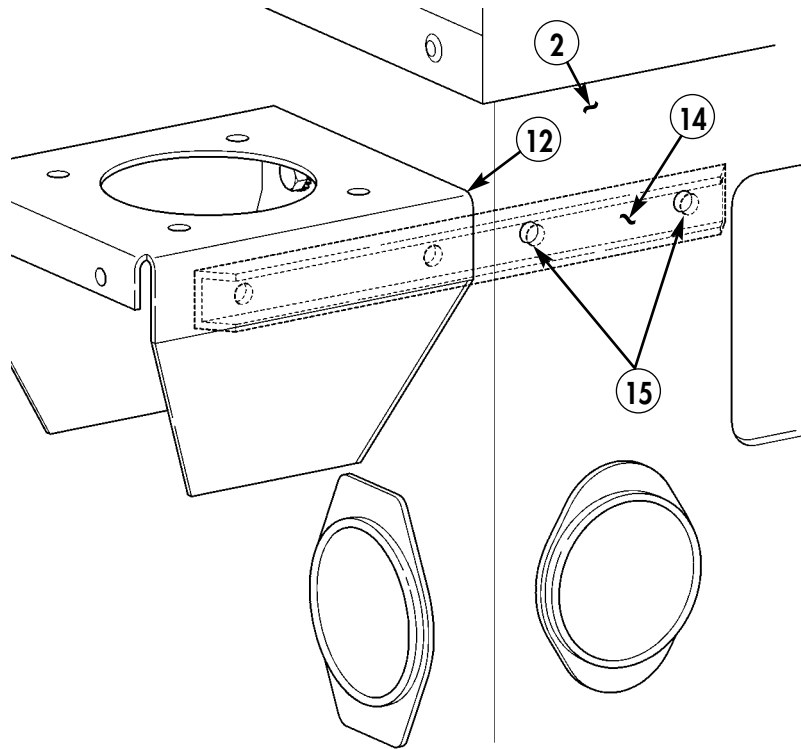
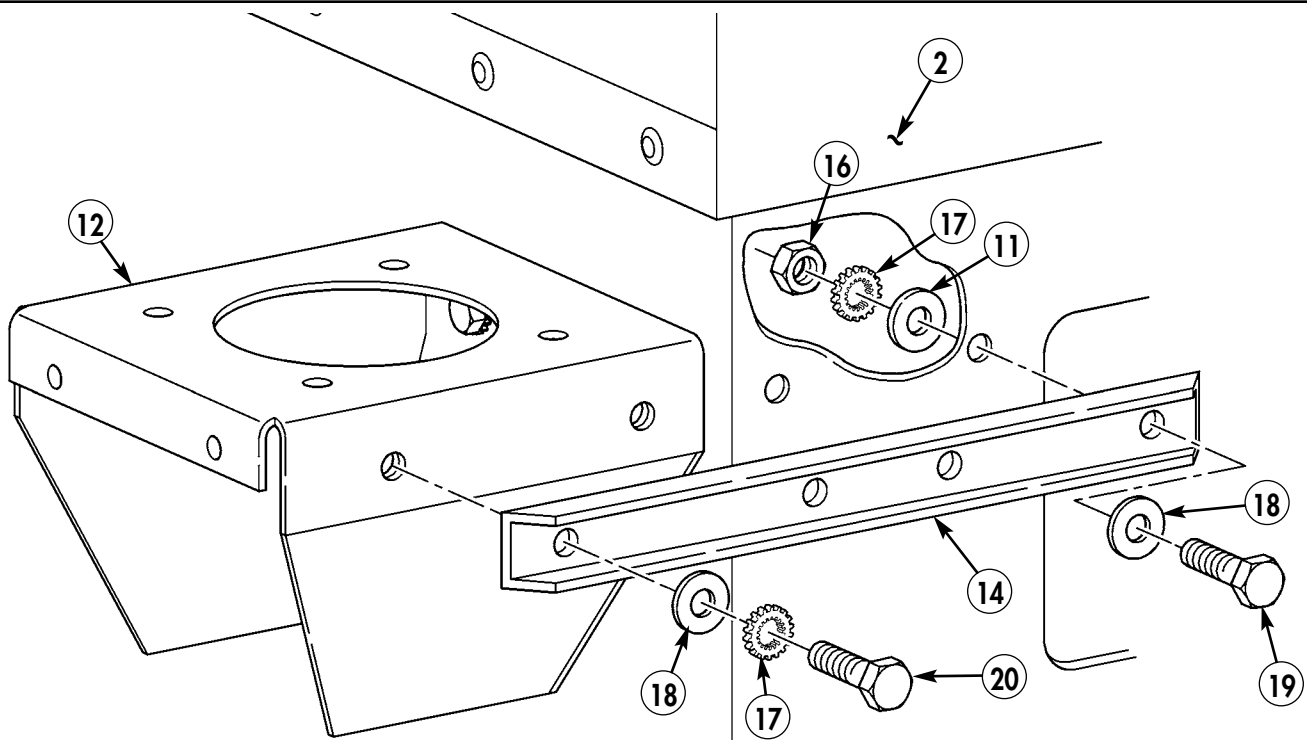


Figure 5-28.

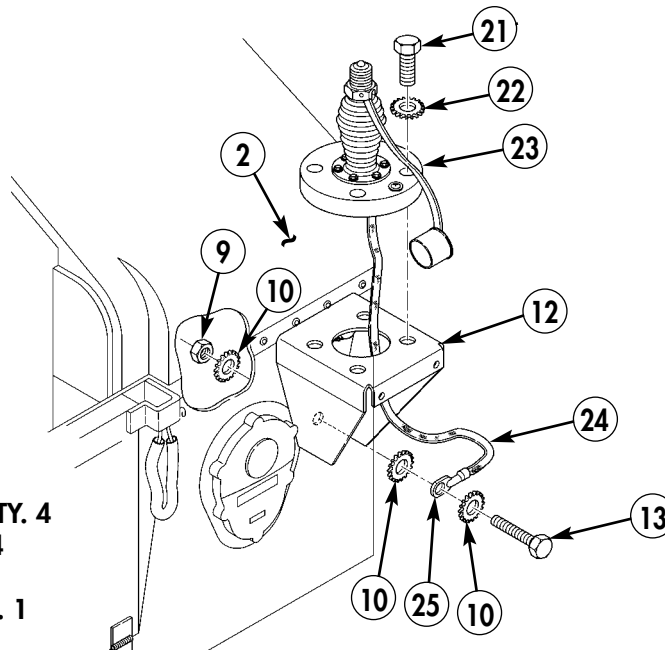


- 11. SPACER - 10181-5214-01 - QTY. 2
- 14. BAR, SUPPORT - 10181-5213-002 - QTY. 1
- 16. NUT - 9419143 - QTY. 2
- 17. LOCKWASHER - MS45904-72 - QTY. 4

- 18. WASHER - MS27183-10 - QTY. 6
- 19. CAPSCREW - B1821BH025C100N - QTY. 2
- 20. CAPSCREW - B1821BH025C088N - QTY. 2

Figure 5-29.

- 9-17. Attach ground strap (24) to antenna base (23) and position antenna base (23) on antenna mounting bracket (12).
- 9-18. Install terminal lug (25) on ground strap (24).
- 9-19. Remove bottom capscrew (13) and lockwashers (10) from antenna mounting bracket (12). Secure antenna ground strap (24) to right rear wheelhouse (2) and antenna mounting bracket (12) with existing capscrew (13), three lockwashers (10), and nut (9).
- 9-20. Secure antenna base (23) to antenna mounting bracket (12) with four capscrews (21) and lockwashers (22).



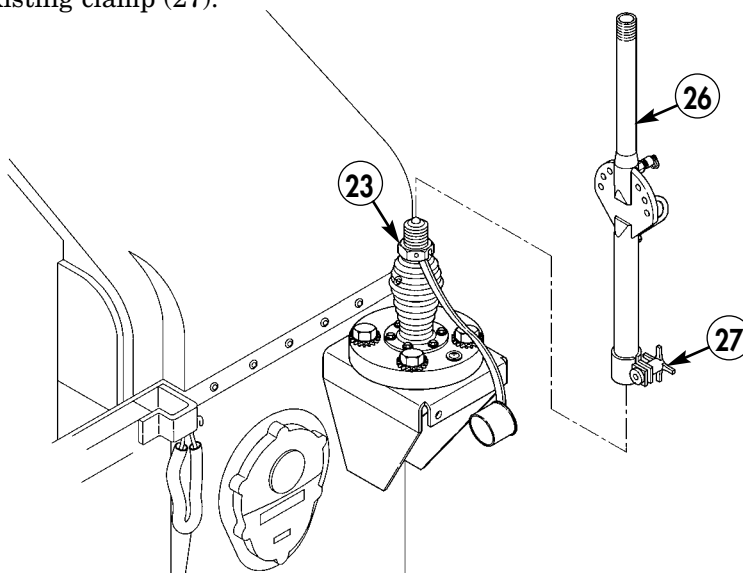
- 10. LOCKWASHER – MS45904-72 – QTY. 1
- 21. CAPSCREW – B1821BH038F175N – QTY. 4
- 22. LOCKWASHER – MS45904-76 – QTY. 4
- 23. HF ANTENNA – 4245 – QTY. 1
- 25. TERMINAL LUG – MS20659-108 – QTY. 1

Figure 5-30.

**NOTE**

Ensure antenna adapter tilts fore and aft of vehicle after tightening.

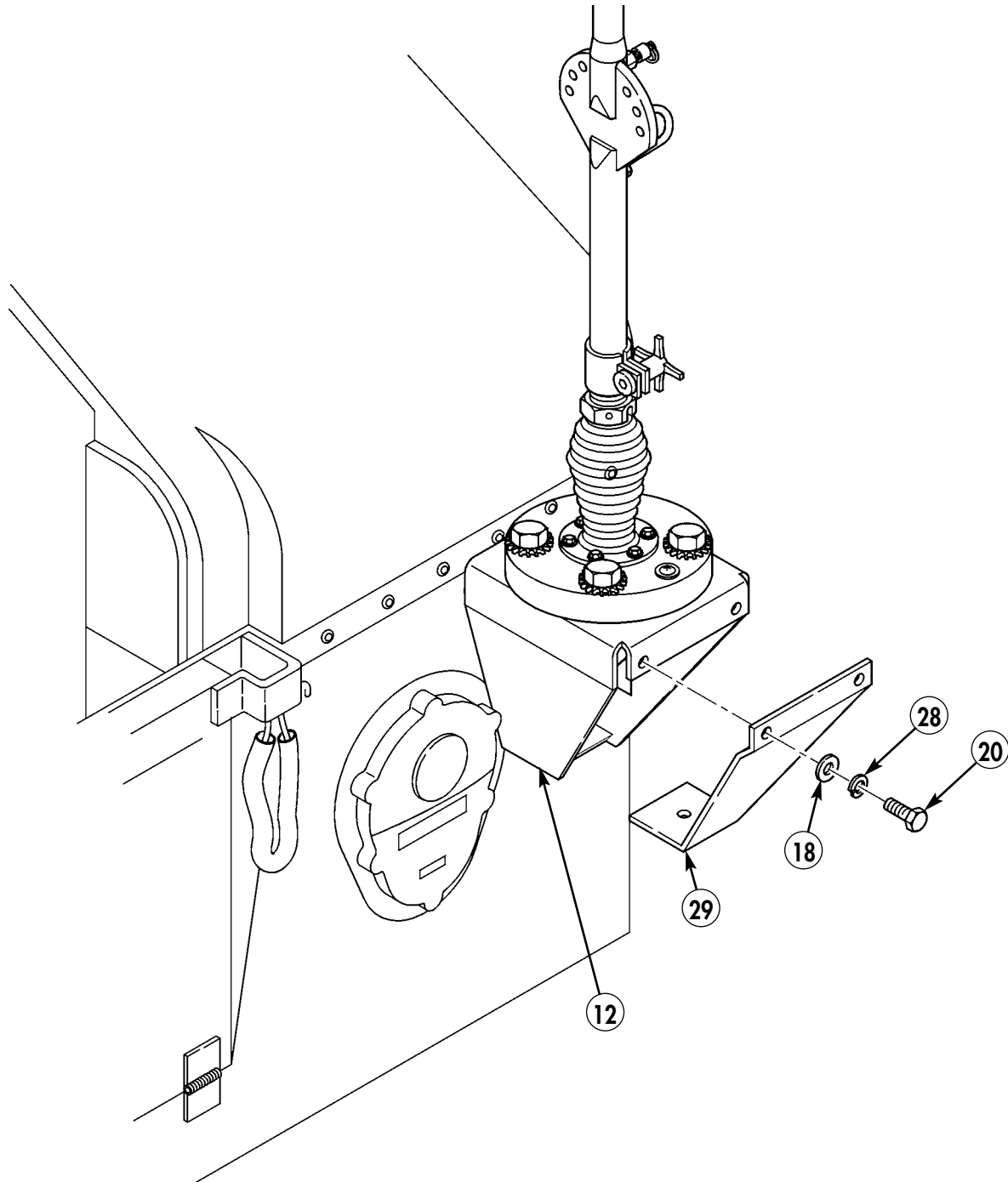
- 9-21. Install antenna adapter (26) on antenna base (23) by screwing on until tight.
- 9-22. Secure with existing clamp (27).



- 26. ANTENNA ADAPTER – RF-1980-AT001 – QTY. 1

Figure 5-31.

- 9-23.** Install cover plate (29) on antenna mounting bracket (12) with three screws (20), washers (18), and lockwashers (28).

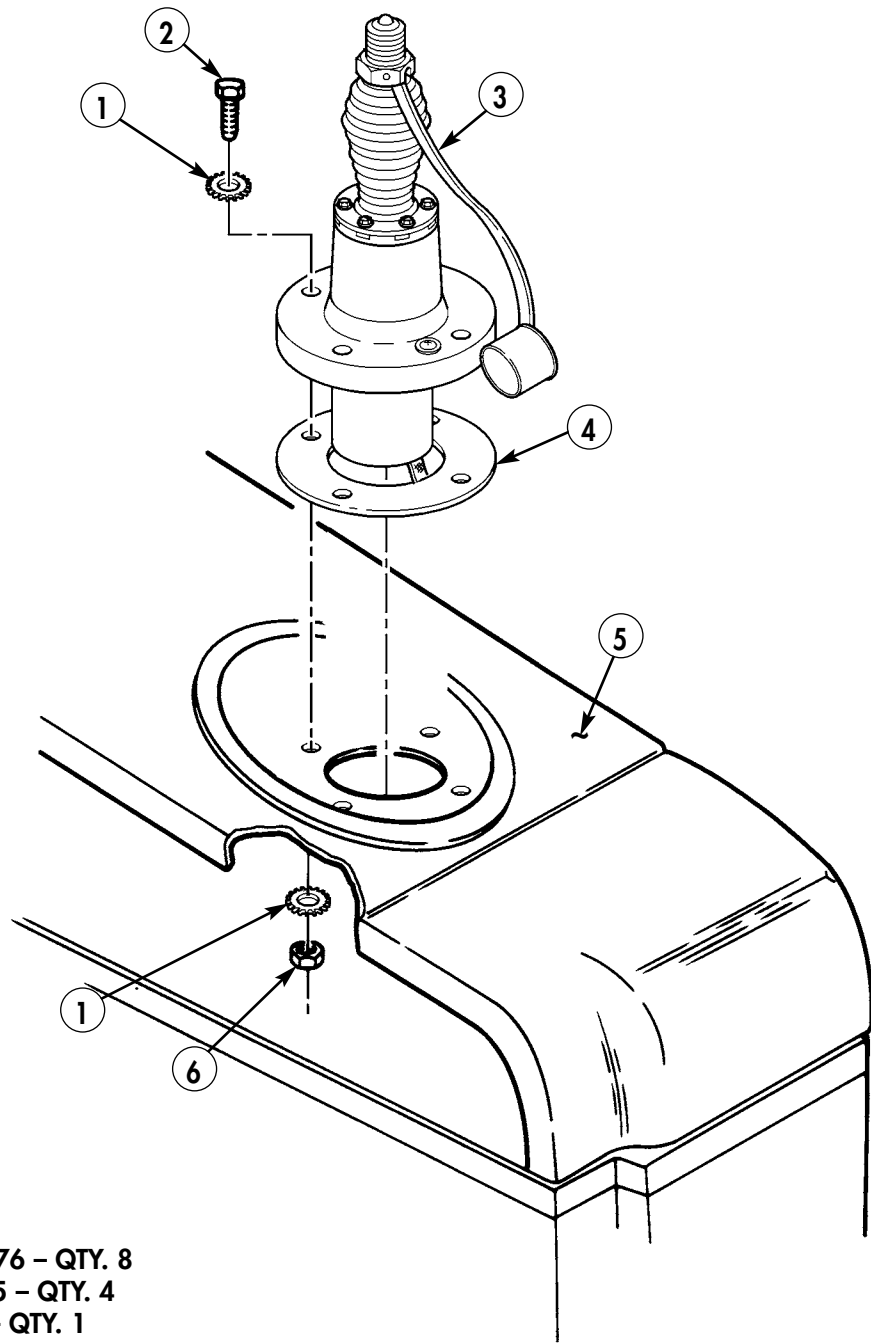


18. WASHER – MS27183-10 – QTY. 3  
 20. CAPSCREW – B1821BH025C088N – QTY. 3  
 28. LOCKWASHER – MS35338-44 – QTY. 3  
 29. COVER, ANTENNA BRACKET – 1018-5212-02 – QTY. 1

*Figure 5-32.*

### Section X. SINGARS ANTENNA INSTALLATION

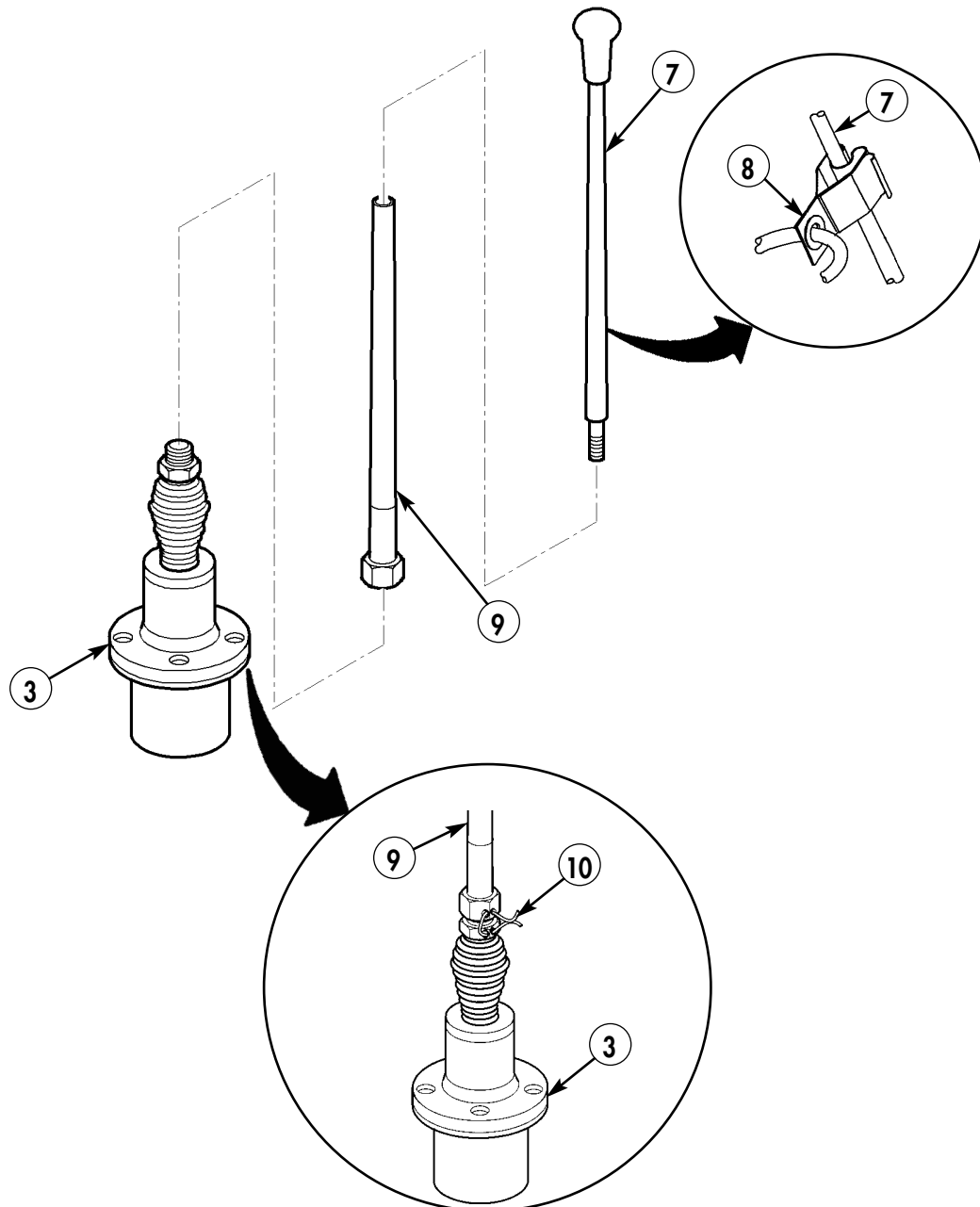
- 10-1. Install antenna (3) on right rear cargo shell (5) with gasket (4), four capscrews (2), eight lockwashers (1), and four nuts (6).



- 1. LOCKWASHER - MS45904-76 - QTY. 8
- 2. CAPSCREW - MS35307-365 - QTY. 4
- 3. ANTENNA - A3017889-2 - QTY. 1
- 4. GASKET - A3013655-1 - QTY. 1
- 6. NUT - 9418931 - QTY. 4

Figure 5-33.

- 10-2. Attach upper antenna element (7) to lower antenna element (9).
- 10-3. Attach antenna assembly to antenna base (3).
- 10-4. Attach fiber rope assembly (8) to upper antenna element (7).
- 10-5. Secure lower antenna element (9) to antenna base (3) with lock wire (10).



- 7. UPPER ANTENNA ELEMENT – A3017901-2 – QTY. 1
- 8. FIBER ROPE ASSEMBLY – A3167672-1 – QTY. 1
- 9. LOWER ANTENNA ELEMENT – A3018230-1 – QTY. 1
- 10. LOCK WIRE – MS20995C32 – QTY. A/R

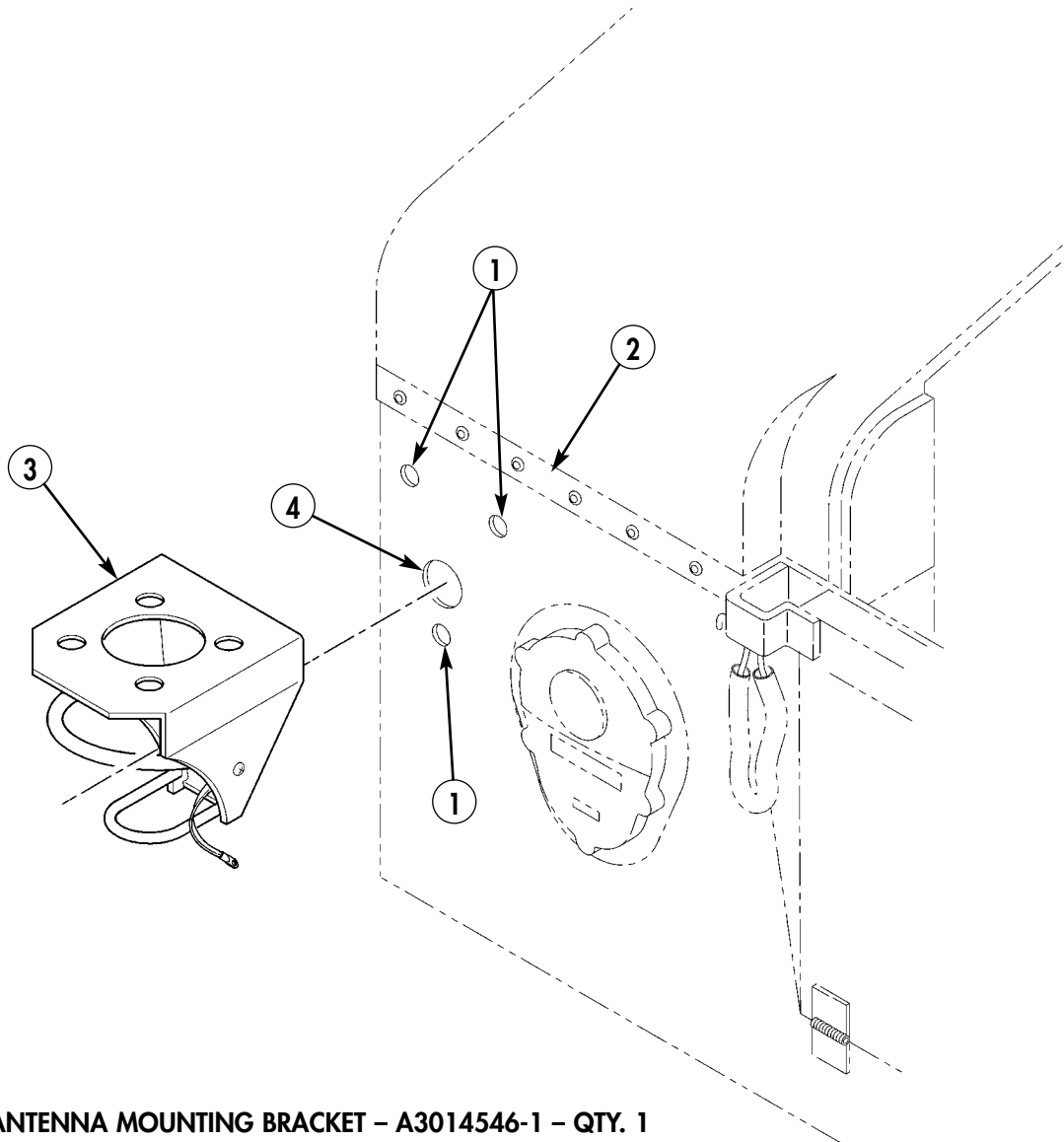
Figure 5-34.

## Section XI. REAR SINGARS ANTENNA INSTALLATION

### NOTE

This procedure applies to vehicles without existing antennas.  
For vehicles with existing antennas, remove all control cables.  
(Refer to TM 9-2320-387-24.)

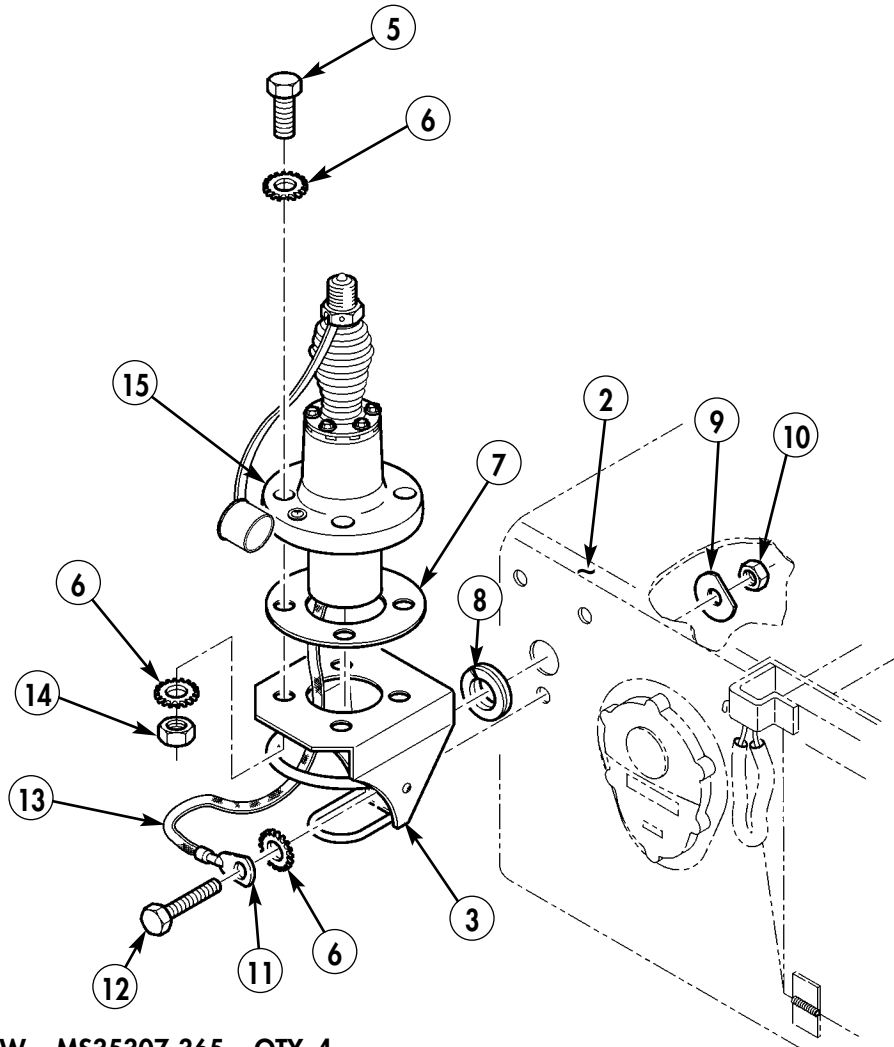
- 11-1. Using antenna mounting bracket (3) as template, locate, mark, and drill one 1.375-in. diameter hole (4) in left rear wall (2).
- 11-2. Locate, mark, and drill three 0.343-in. diameter holes (1) in rear wall (2).
- 11-3. Remove paint from vicinity of three holes (1) and three matching holes in antenna mounting bracket (3).
- 11-4. Apply anti-seize compound to vicinity of three holes (1) and rear of antenna mounting bracket (3).



3. ANTENNA MOUNTING BRACKET – A3014546-1 – QTY. 1

Figure 5-35.

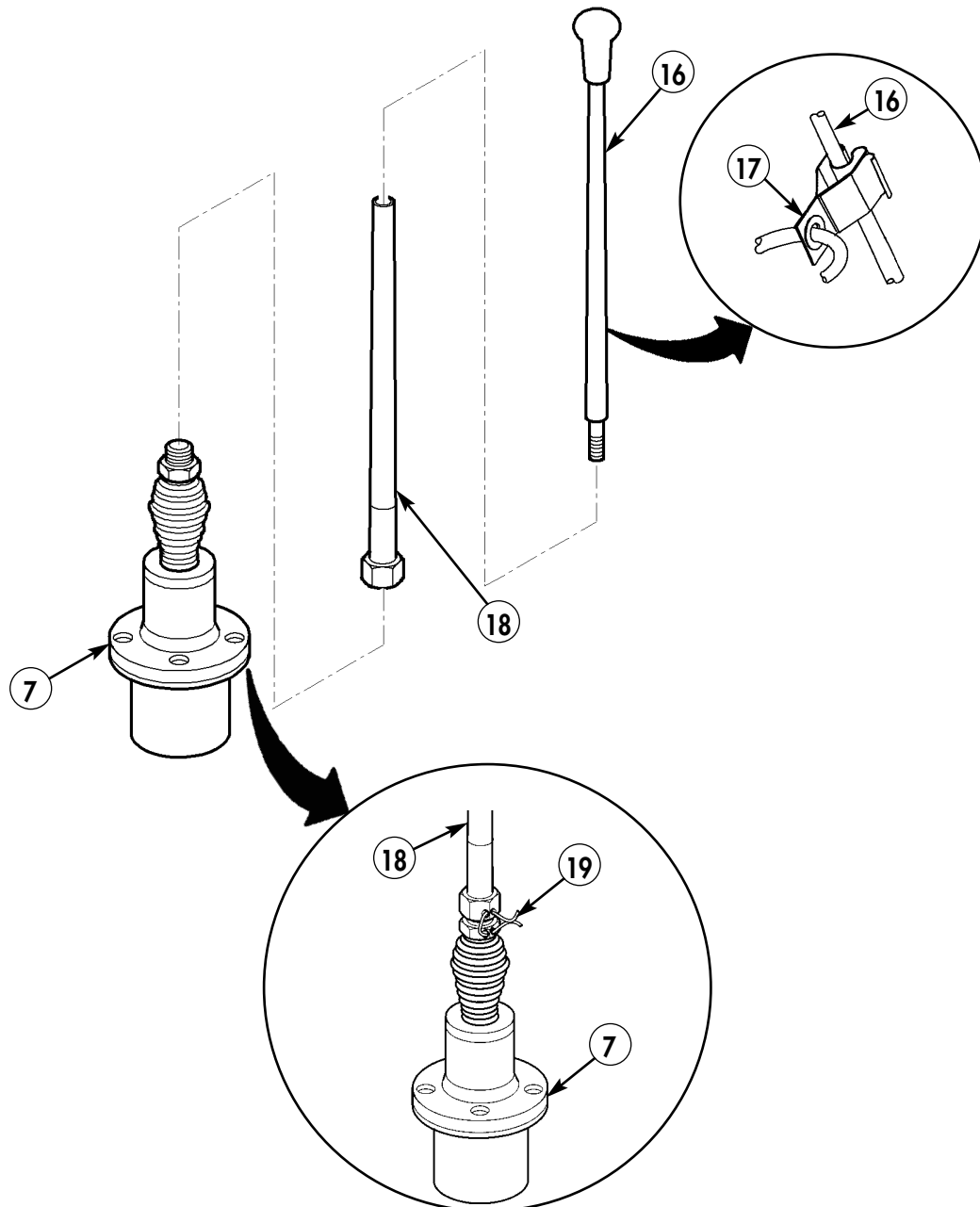
- 11-5. Install grommet (8) in hole of rear wall (2).
- 11-6. Position antenna (15) and gasket (7) on antenna mounting bracket (3) and route existing ground strap (13) through antenna mounting bracket (3).
- 11-7. Install antenna (15) on antenna mounting bracket (3) with four capscrews (5), eight lockwashers (6), and four nuts (14).
- 11-8. Install antenna mounting bracket (3) on rear wall (2) with two capscrews (12), lockwashers (6), washers (9), and nuts (10).
- 11-9. Remove old terminal lug, and install new terminal lug (11) on ground strap (13). Install ground strap (13) and antenna mounting bracket (3) on rear wall (2) with capscrew (12), lockwasher (6), washer (9), and nut (10).



5. CAPSCREW – MS35307-365 – QTY. 4  
 6. LOCKWASHER – MS45904-72 – QTY. 11  
 7. GASKET – A3013655-1 – QTY. 1  
 8. GROMMET – 12338098 – QTY. 1  
 9. WASHER – 12338095 – QTY. 3  
 10. NUT – 9418892 – QTY. 3  
 11. TERMINAL LUG – MS20659-108 – QTY. 1  
 12. CAPSCREW – B1821BH031F125N – QTY. 3  
 14. NUT – 13218E0320-293 – QTY. 4  
 15. ANTENNA – A3017889-2 – QTY. 1

Figure 5-36.

- 11-10. Attach upper antenna element (16) to lower antenna element (18).
- 11-11. Attach antenna assembly to antenna base (7).
- 11-12. Attach fiber rope assembly (17) to upper antenna element (16).
- 11-13. Secure lower antenna element (18) to antenna base (7) with lockwire (19).



- 16. UPPER ANTENNA ELEMENT – A3017901-2 – QTY. 1
- 17. FIBER ROPE ASSEMBLY – A3167672-1 – QTY. 1
- 18. LOWER ANTENNA ELEMENT – A3018230-1 – QTY. 1
- 19. LOCKWIRE – MS20995C32 – QTY. A/R

Figure 5-37.



## Section XII. EPLRS ANTENNA AND BRACKET INSTALLATION

- 12-1.** Remove six capscrews (6), washers (5), and lockwashers (4) from A/C louvers (2).
- 12-2.** Enlarge holes (3) to 0.375 in. diameter.
- 12-3.** Install EPLRS antenna bracket (1) on A/C louvers (2) with six capscrews (6), lockwashers (5), and washers (4).

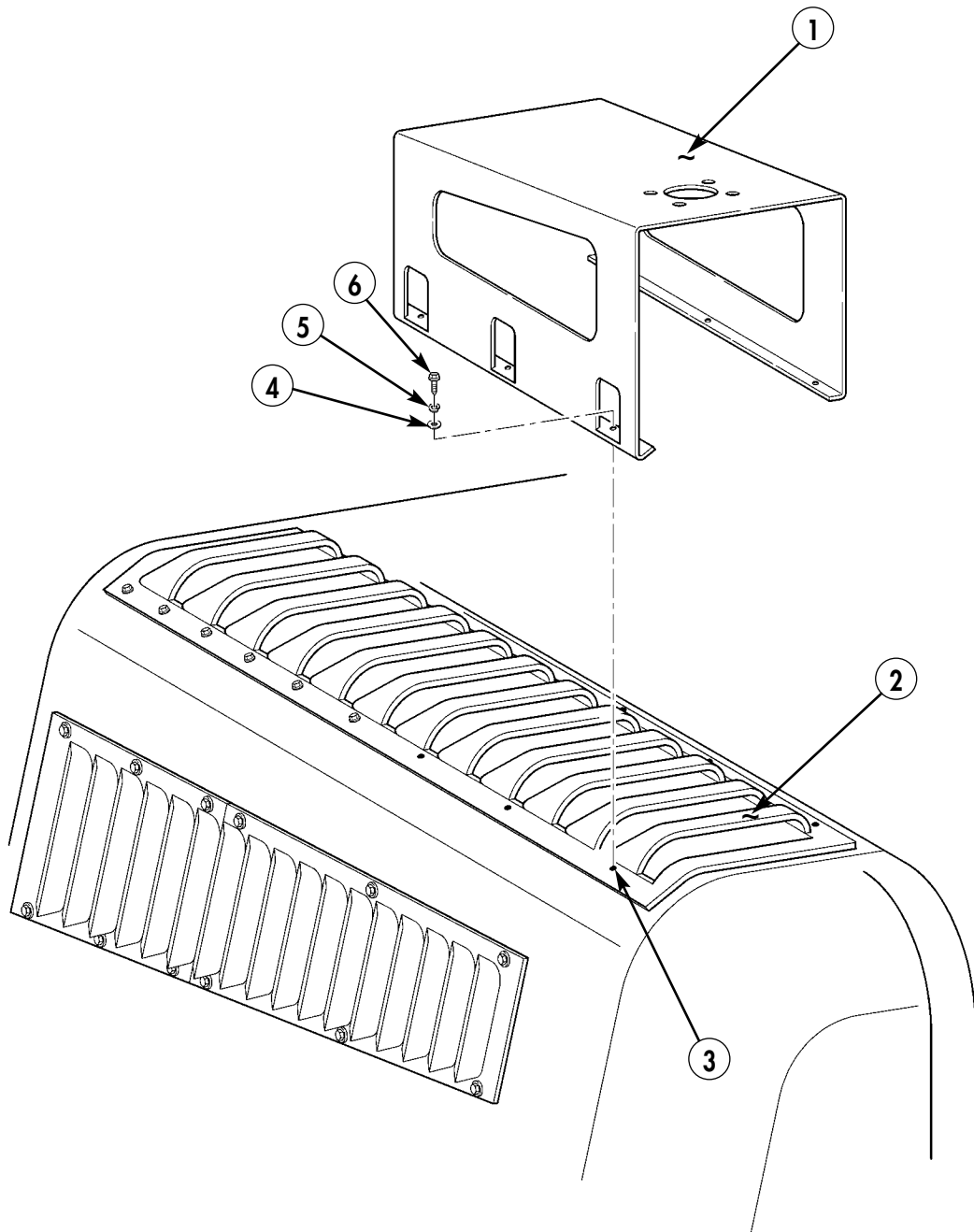


Figure 5-38.

1. EPLRS ANTENNA BRACKET – 05A020ID – QTY. 1  
 4. FLAT WASHER – MS27183-8 – QTY. 6  
 5. LOCKWASHER – MS35338-43 – QTY. 6  
 6. CAPSCREW – MS35207-269 – QTY. 6

12-4. Install EPLRS antenna (9) and gasket (10) on bracket (1) with four capscrews (7), eight lockwashers (8), and four nuts (11).

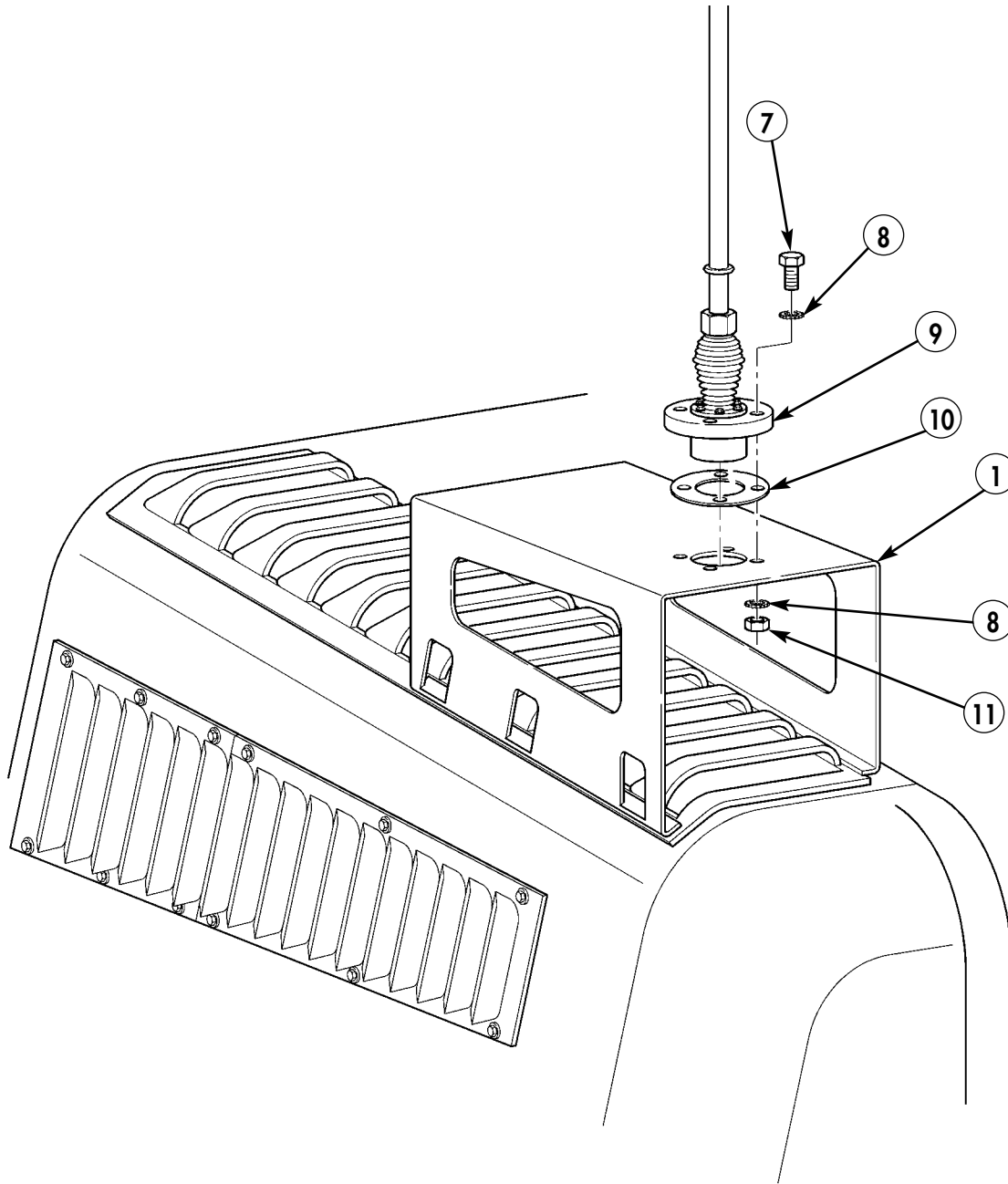


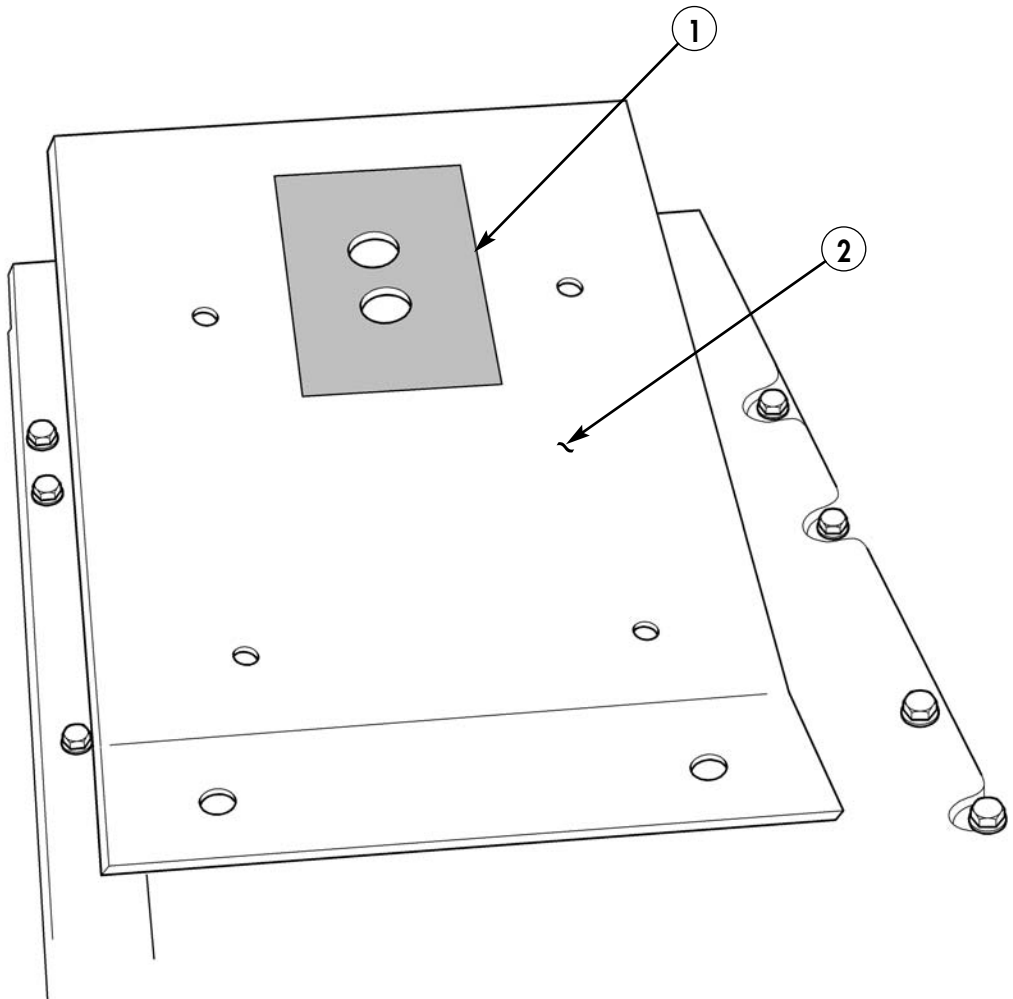
Figure 5-39.

- 7. CAPSCREW - B1821BH038C150N - QTY. 4
- 8. LOCKWASHER - MS45904-76 - QTY. 8
- 9. ANTENNA - A3005031 - QTY. 1
- 10. GASKET - A3013655-1 - QTY. 1
- 11. NUT - 13218E0320-293 - QTY. 4

**Section XIII. INSTALLATION OF TAC-SAT BRACKET AND ANTENNA****NOTE**

- Entire area under antenna base must be free of paint.
- Do not remove any excess paint. Spot paint as necessary.

**13-1.** Using TAC-SAT antenna base as template, sketch outline on mounting bracket (2). Remove all paint within this area (1) on mounting bracket (2).



*Figure 5-40.*

**2. TAC-SAT ANTENNA MOUNTING BRACKET – N/A – QTY. 1**

- 13-2. Position TAC-SAT antenna mount 1.00 in. from left edge of cargo door. Locate, mark, and drill 0.375-in. diameter hole (3) in cargo door (4).
- 13-3. Using TAC-SAT antenna bracket as template, locate, mark, and drill remaining three holes (5) in cargo door (4).

**NOTE**

Align hole in cargo door with rear hole in bracket.

- 13-4. Locate, mark, and drill one 0.75-in. diameter hole in cargo door (6).

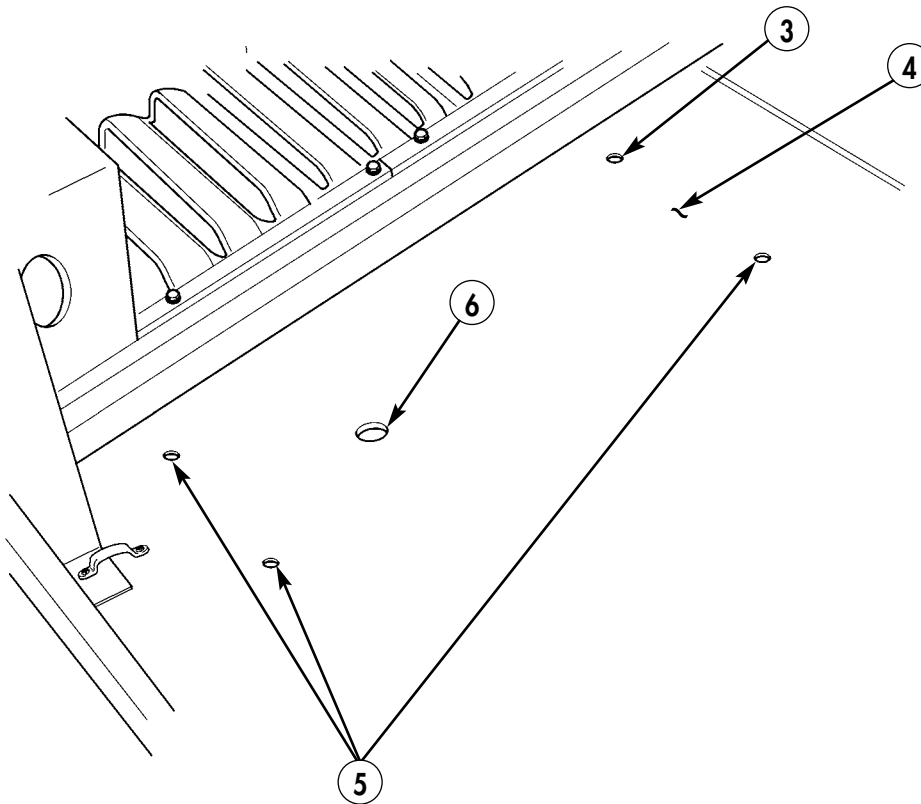
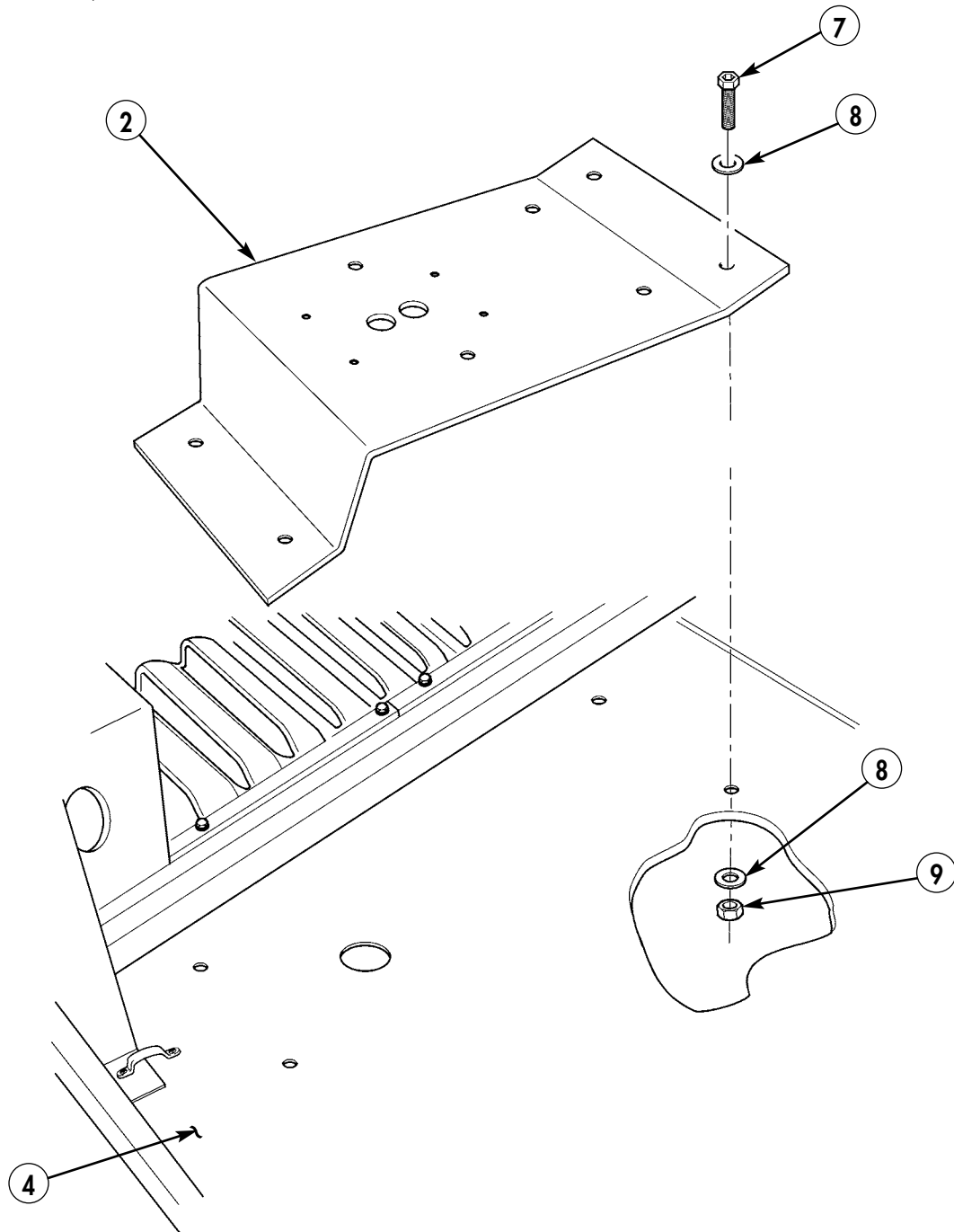


Figure 5-41.

**NOTE**

Remove any footman loop that interferes with installation of antenna bracket.

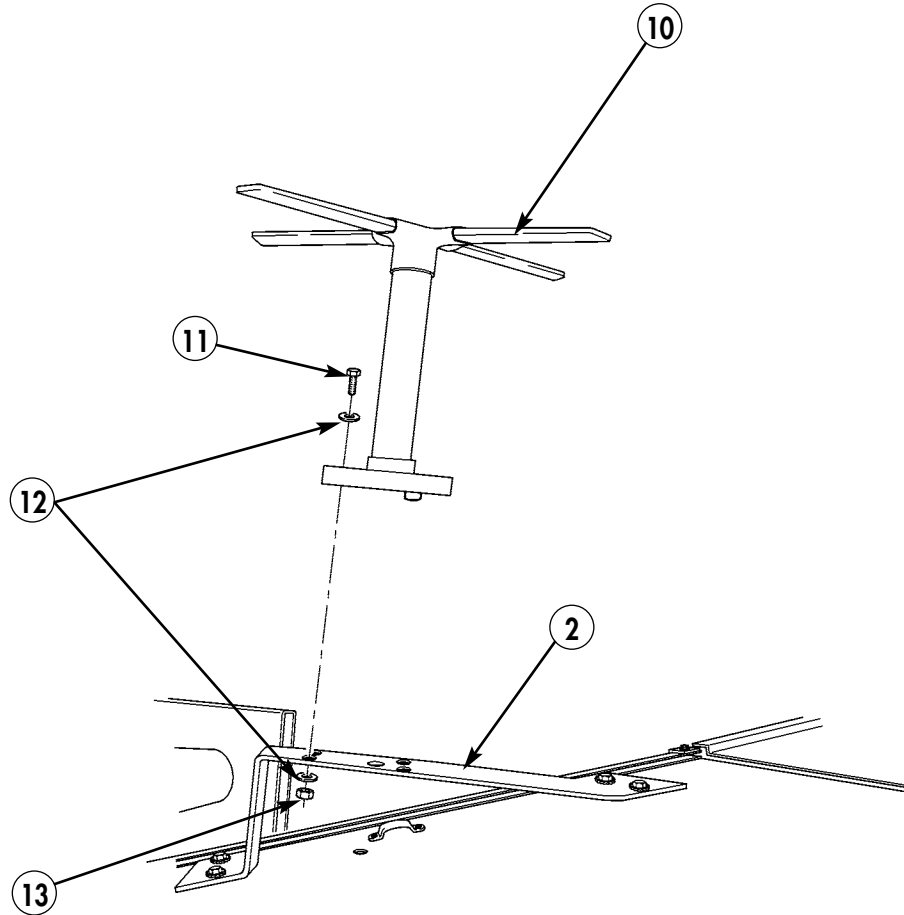
- 13-5.** Install TAC-SAT antenna mounting bracket (2) on cargo door (4) with four capscrews (7), eight lockwashers (8), and four locknuts (9).



*Figure 5-42.*

7. CAPSCREW – B1821BH050C150N – QTY. 4  
 8. LOCKWASHER – MS35338-43 – QTY. 8  
 9. NUT – MS35650-302 – QTY. 4

- 13-6.** Install antenna (10) on antenna bracket (2) with four capscrews (11), eight lockwashers (12), and four nuts (13).

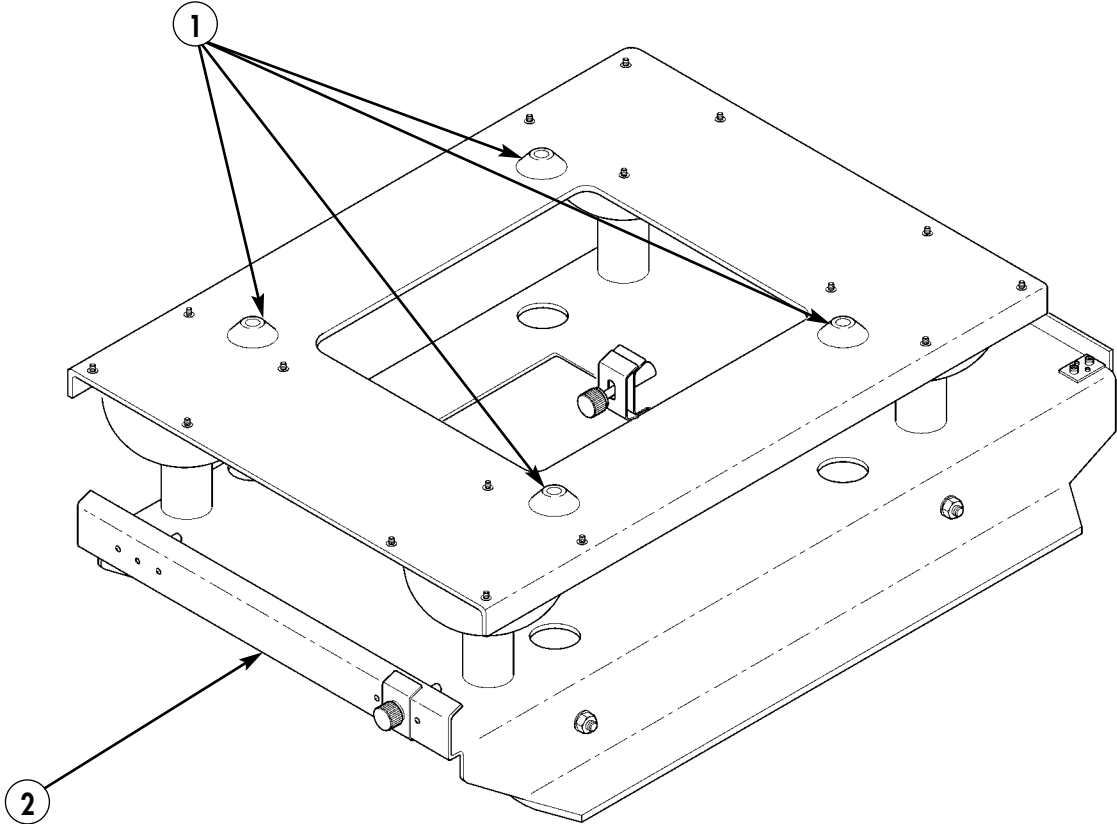


*Figure 5-43.*

11. CAPSCREW – MS35207-270 – QTY. 4  
12. LOCKWASHER – MS35338-43 – QTY. 8  
13. NUT – MS35650-302 – QTY. 4

**Section XIV. EPLRS MOUNTING INSTALLATION**

**14-1.** Remove paint from vicinity of four mounting holes (1) on bottom of MT-6146/VSQ-1 mount (2).



*Figure 5-44.*

**2. RESILIENT MOUNT – MT-6146/VSQ-1 – QTY. 1**

- 14-2. Using EPLRS mount (2) as template, locate, mark, and drill four 0.531-in. diameter holes (7) in right rear wheelhouse (6).
- 14-3. Install four inserts (5) in right rear wheelhouse (6).
- 14-4. Install EPLRS mount (2) on right rear wheelhouse (6) with four capscrews (3) and lockwashers (4).

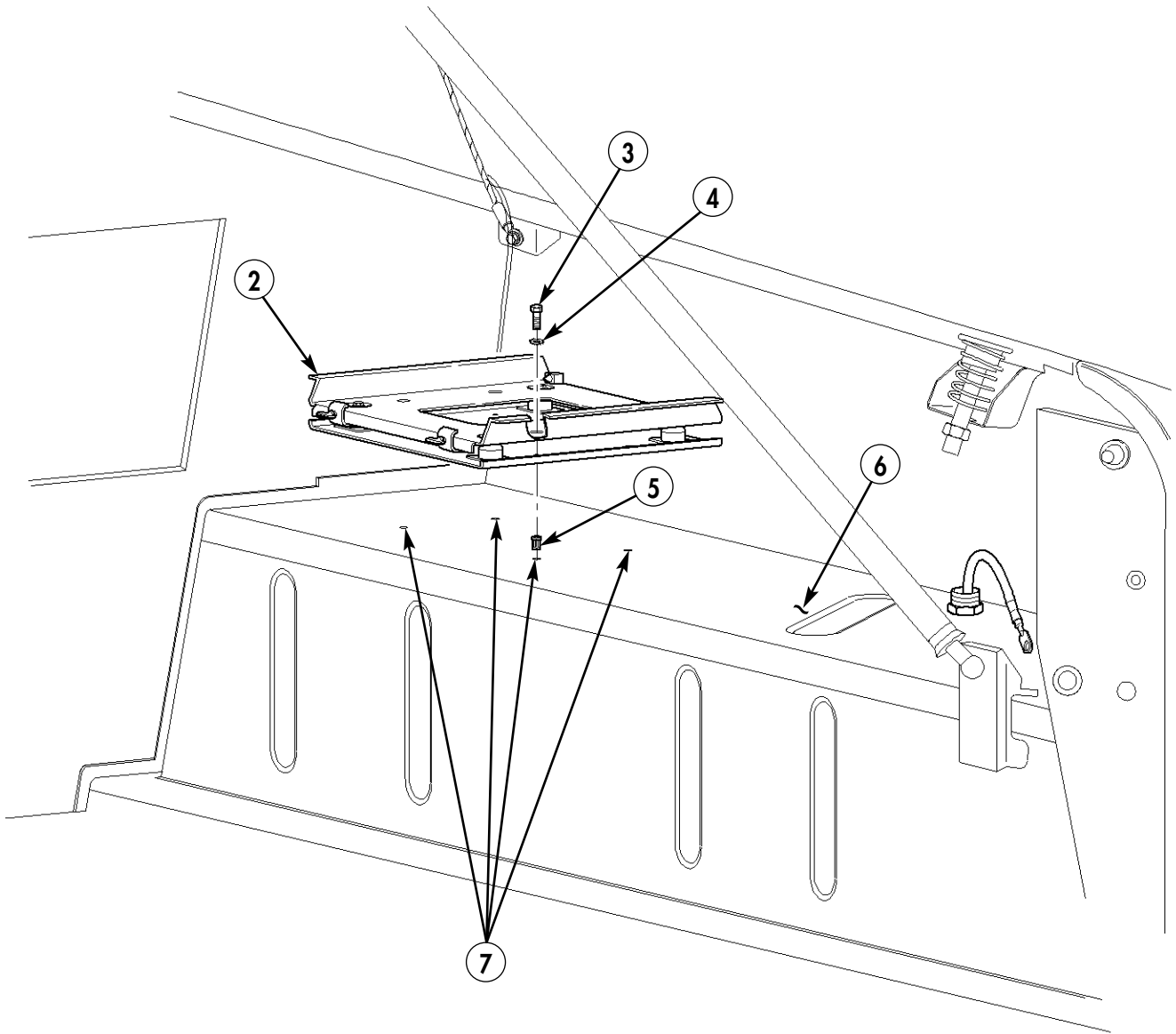


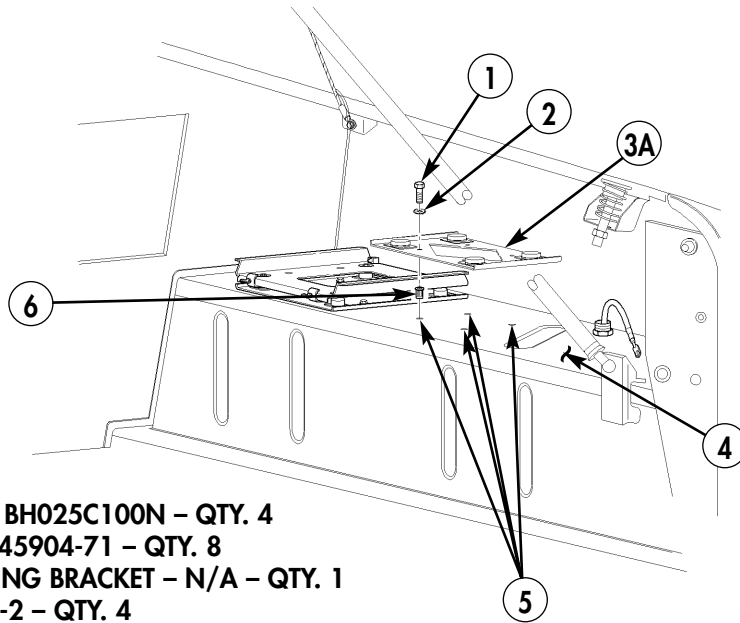
Figure 5-45.

- 3. CAPSCREW – B1821BH031C075N – QTY. 4
- 4. LOCKWASHER – MS45904-72 – QTY. 8
- 5. INSERT – 12446871-1 – QTY. 4



**Section XV. HF 20 WATT RADIO MOUNTING BRACKET INSTALLATION**

- 15-1. Using bottom portion of HF 20 watt radio mounting bracket (3A) as template, locate, mark, and drill four 0.391-in. diameter holes (5) in right rear wheelhouse (4).
- 15-2. Install four inserts (6) in right rear wheelhouse (4).
- 15-3. Install bottom portion of HF 20 watt radio mounting bracket (3A) on wheelhouse (4) with four capscrews (1) and lockwashers (2).
- 15-4. Install top portion of HF 20 watt radio mount (3B) to bottom portion of HF 20 watt radio mount (9) with four capscrews (7) and lockwashers (8).



- 1. CAPSCREW – B1821BH025C100N – QTY. 4
- 2. LOCKWASHER – MS45904-71 – QTY. 8
- 3. R/T RADIO MOUNTING BRACKET – N/A – QTY. 1
- 6. INSERT – 12446871-2 – QTY. 4

Figure 5-46.

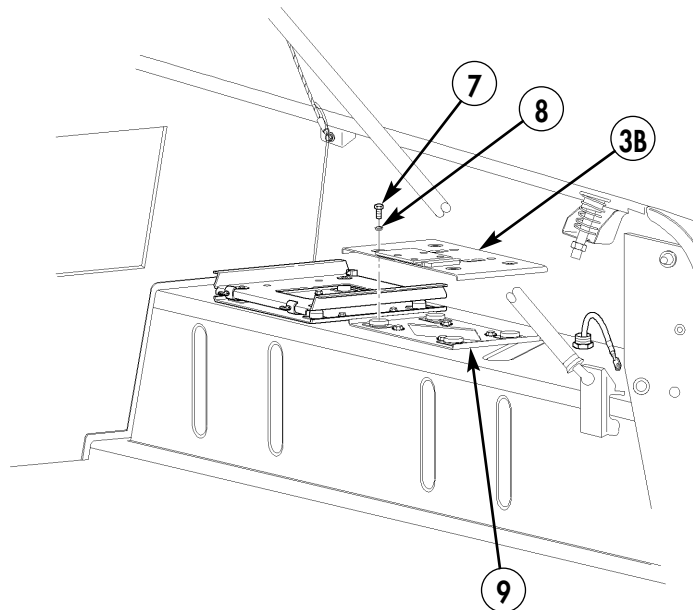


Figure 5-47.

### Section XVI. EPLRS USER READOUT (URO) INSTALLATION

**16-1.** Remove two existing screws (2) and connector bracket (3) from URO bracket (1).

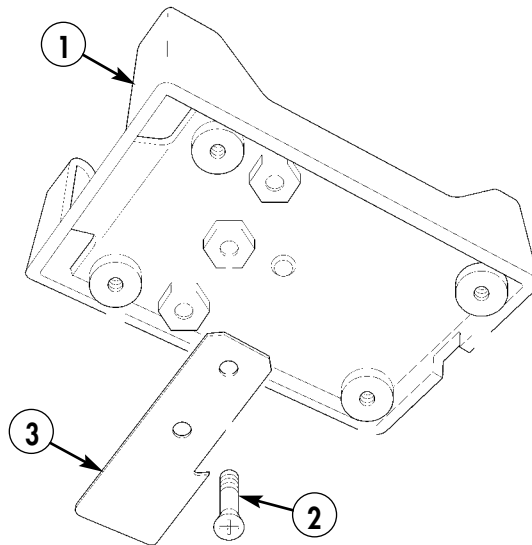


Figure 5-48.

**16-2.** Using URO bracket (1) as template, locate, mark and drill four 0.218-in. diameter holes (7) in right rear wheelhouse (4).

**16-3.** Install URO bracket (1) on right rear wheelhouse (4) with four capscrews (9), spacers (8), washers (6), and locknuts (5).

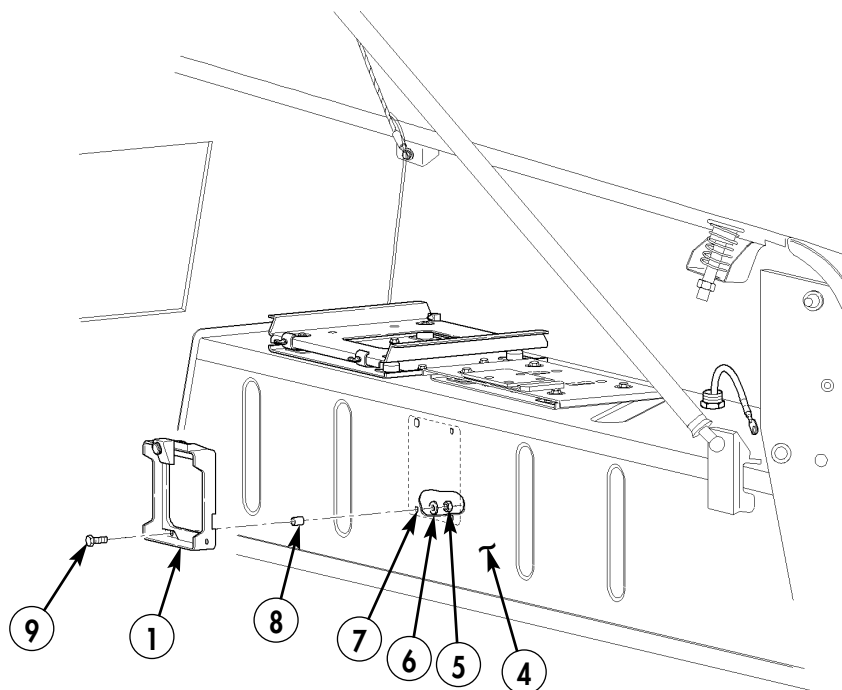


Figure 5-49.

- 1. USER READOUT BRACKET (URO) – A3006206 – QTY. 1
- 5. NUT – MS35650-302 – QTY. 3
- 6. LOCKWASHER – MS35338-43 – QTY. 3
- 8. SPACER – 92510A318 – QTY. 4
- 9. CAPSCREW – MS35207-265 – QTY. 4

## Section XVII. TAC-SAT RADIO MOUNT INSTALLATION

### NOTE

It is necessary to relocate ammo box tray to install TAC-SAT radio mount. Perform steps 17-1 through 17-7 to relocate ammo box tray.

- 17-1. Remove four capscrews (1) and (3), lockwashers (10) and (4), and ammo box tray (2) from cargo floor (7).
- 17-2. Modify tray (2) to match holes in armor plate (8).
- 17-3. Using ammo box tray (2) as template, locate, mark and drill two 0.531-in. diameter holes (6) in cargo floor (7).
- 17-4. Install two inserts (5) in cargo floor (7).
- 17-5. Install two inserts (9) in armor plate (8).
- 17-6. Install ammo box tray (2) on armor plate (8) with two capscrews (1) and lockwashers (10).
- 17-7. Secure ammo box tray (2) on cargo floor (7) with two capscrews (3) and lockwashers (4).

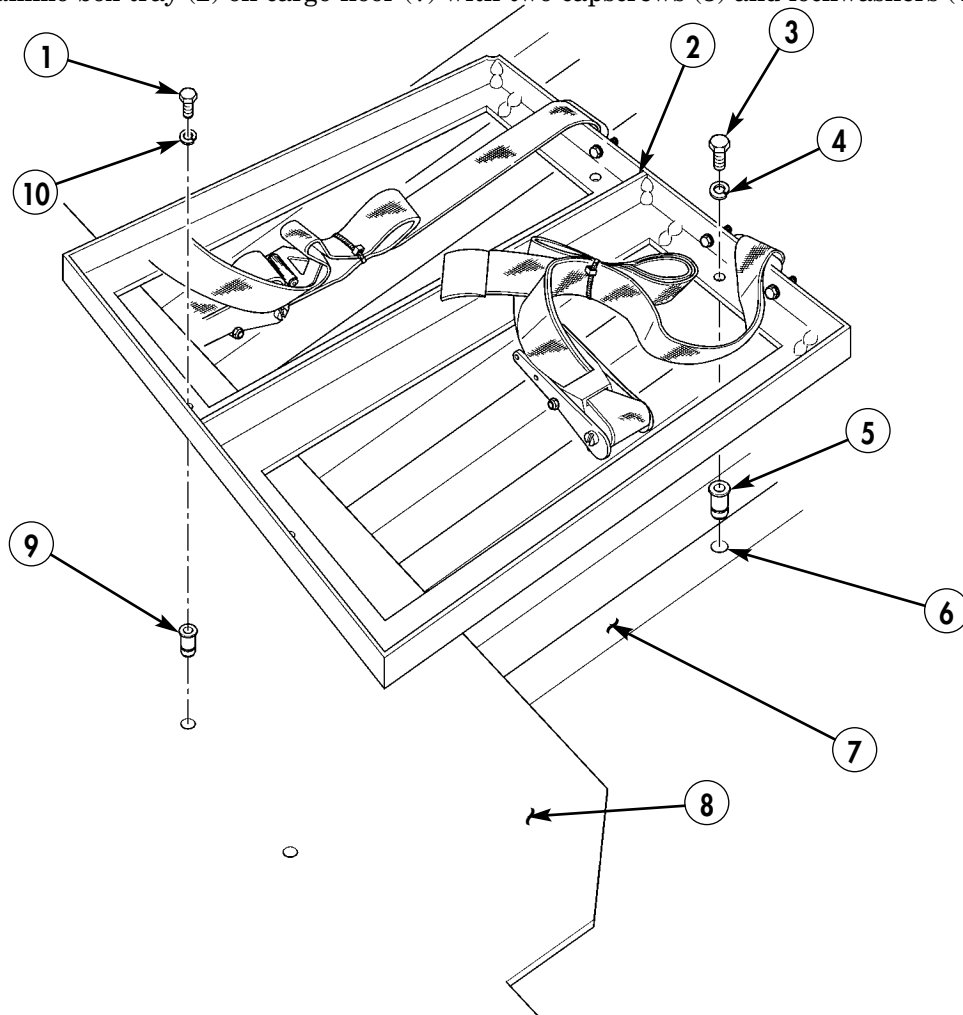


Figure 5-50.

1. CAPSCREW – B1821BH025C075N – QTY. 2
3. CAPSCREW – B1821BH031C100N – QTY. 2
4. LOCKWASHER – MS45904-72 – QTY. 2
5. INSERT – 12446871-1 – QTY. 2
9. INSERT – 12446871-2 – QTY. 2
10. LOCKWASHER – MS35338-44 – QTY. 2

- 17-8. Locate, mark, and drill one 0.531 in. diameter hole (15) in armor plate (16).
- 17-9. Using resilient mount (12) as template, locate, mark and drill three 0.531-in. diameter holes (13) in cargo floor (14).
- 17-10. Install four inserts (17) in cargo floor (14).
- 17-11. Enlarge holes (18) in resilient mount (12) to 0.50 in. diameter.
- 17-12. Install resilient mount (12) on cargo floor (14) and armor plate (16) with four capscrews (11) and lockwashers (19).
- 17-13. Install TAC-SAT mount (22) to resilient mount (12) with four capscrews (20) and lockwashers (21).

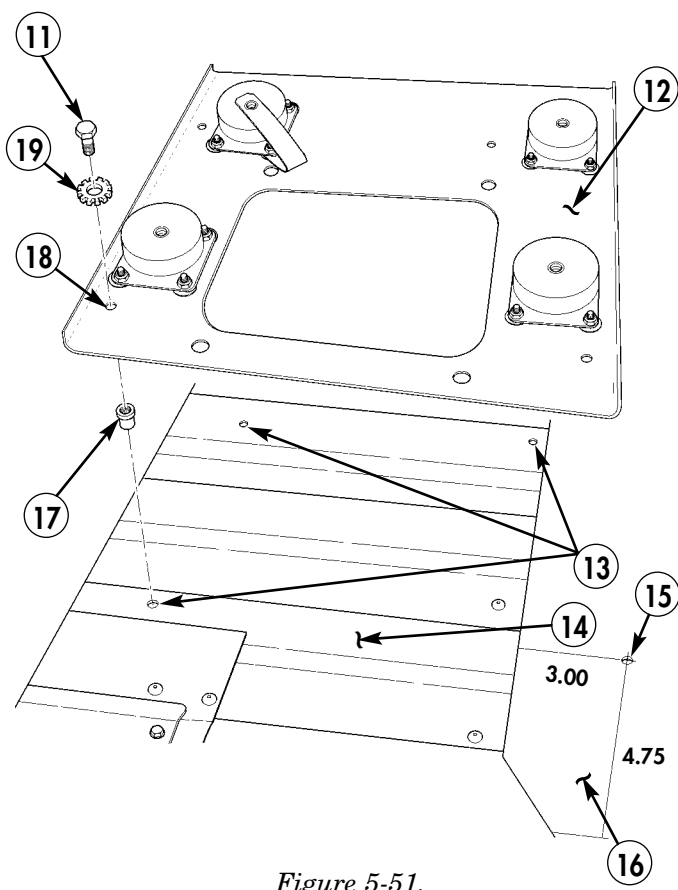


Figure 5-51.

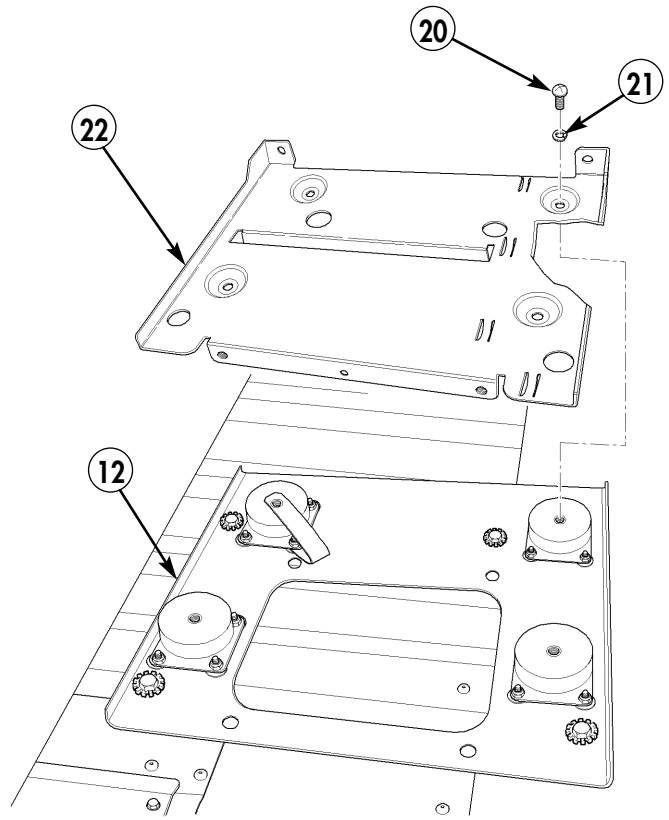


Figure 5-52.

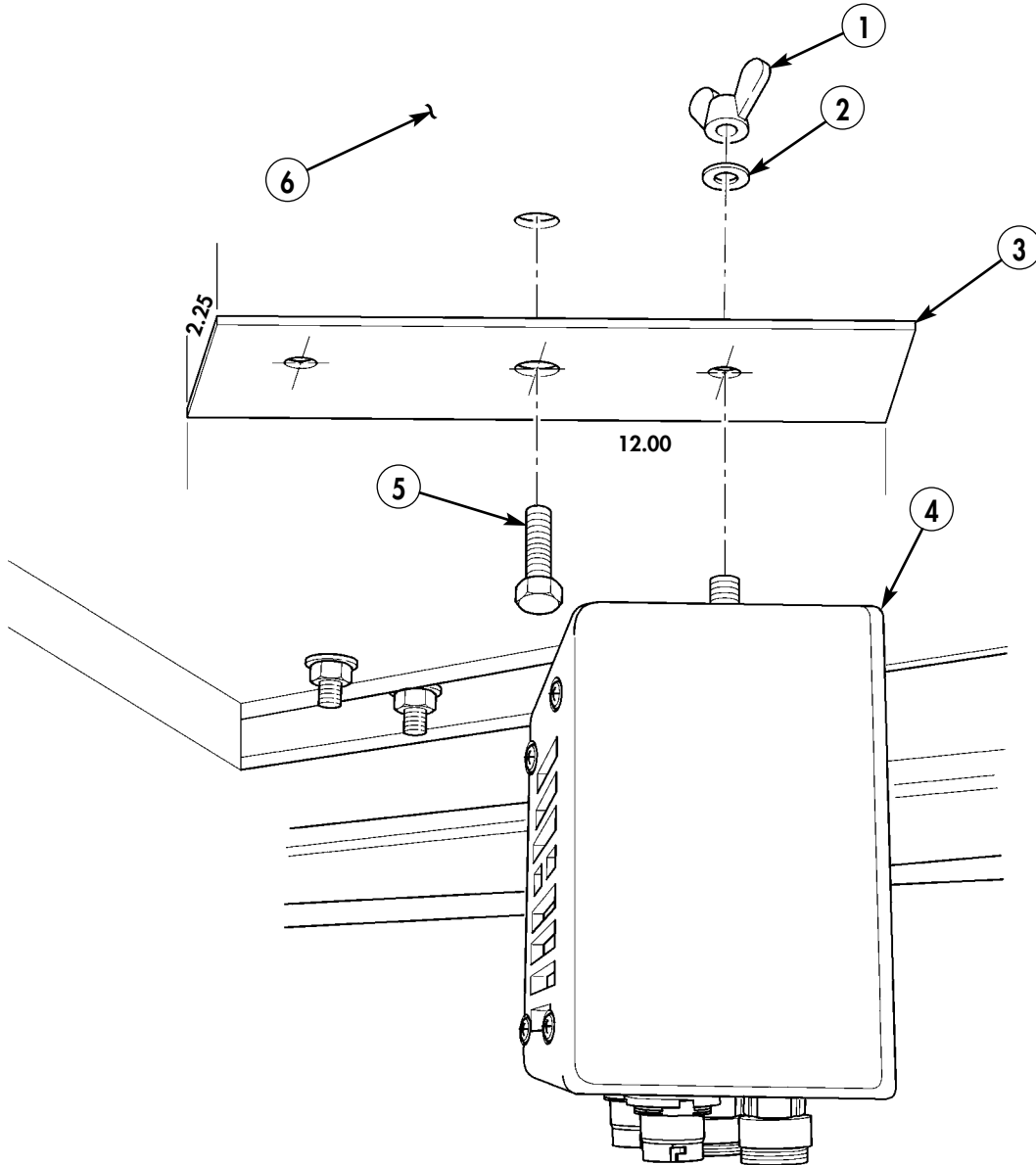
- 11. CAPSCREW – B1821BH031C100N – QTY. 4
- 12. TAC-SAT RADIO MOUNT – RF-5800H-V005 – QTY. 1
- 17. INSERT – 12446871-8 – QTY. 4
- 19. LOCKWASHER – MS45904-72 – QTY. 4
- 22. TAC-SAT RADIO MOUNT P/O – RF-5800H-V005 – QTY. 1

**Section XVIII. TAC-SAT RADIO AND HF RADIO LOUDSPEAKER INSTALLATION**

**NOTE**

- Fabricate bracket from 0.125-in barstock.
- The following procedure applies to TAC-SAT radio loudspeaker or HF radio loudspeaker.

- 18-1.** Install loudspeaker (4) on bracket (3) with existing washer (2) and wingnut (1).  
**18-2.** Install bracket (3) and loudspeaker (4) into turret support beam (6) with bolt (5).

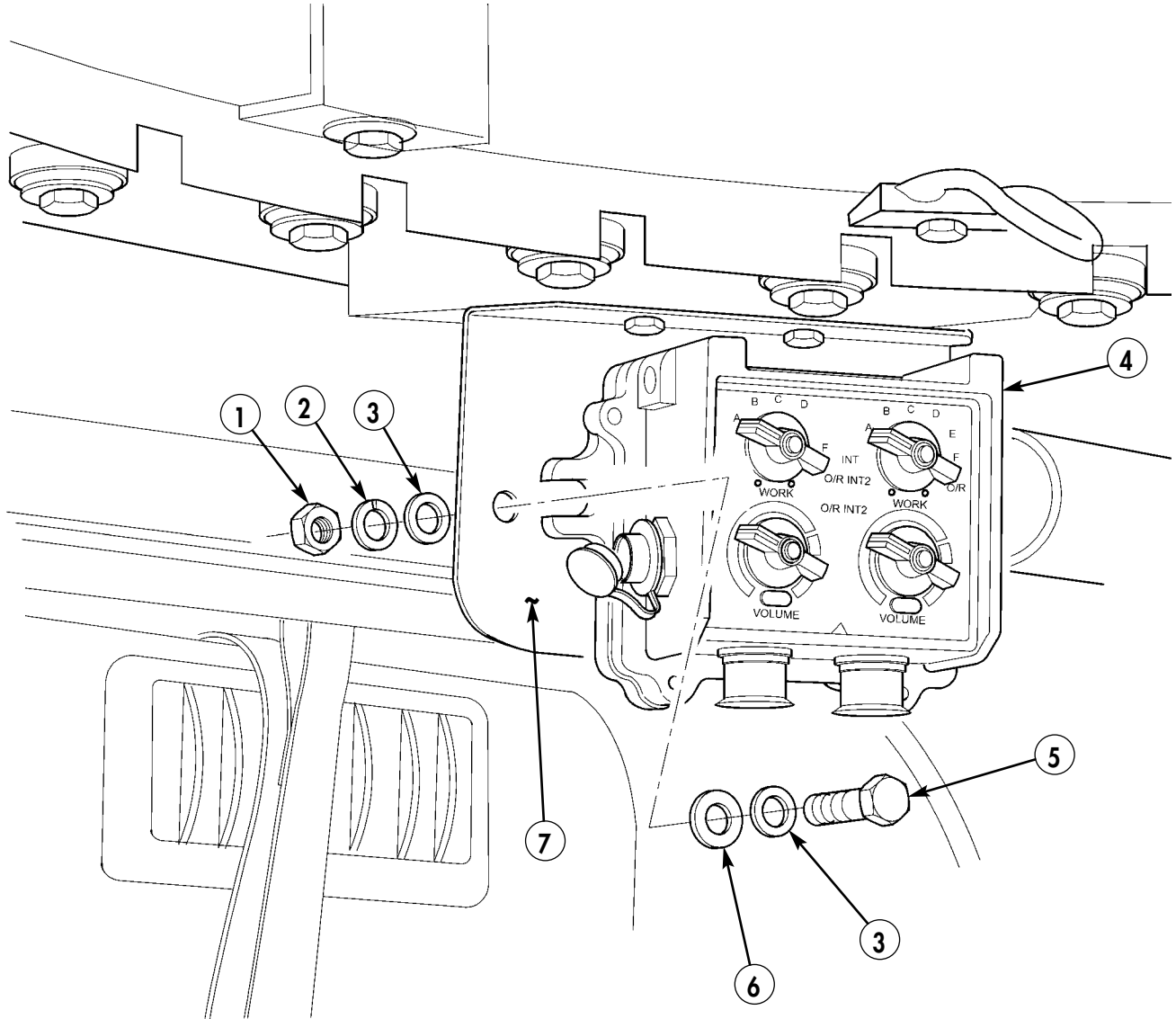


*Figure 5-53.*

- 4. LOUDSPEAKER – 10181-5180-01 – QTY. 2**  
**5. CAPSCREW – B1821BH031C125N – QTY. 2**

**Section XIX. REAR FFCS/L INSTALLATION AND VIC-3 CABLE ROUTING**

**19-1.** Install FFCS/L module (4) on existing bracket (7) with two capscrews (5), washers (3), washers (6), lockwashers (2), washers (3), and nuts (1).



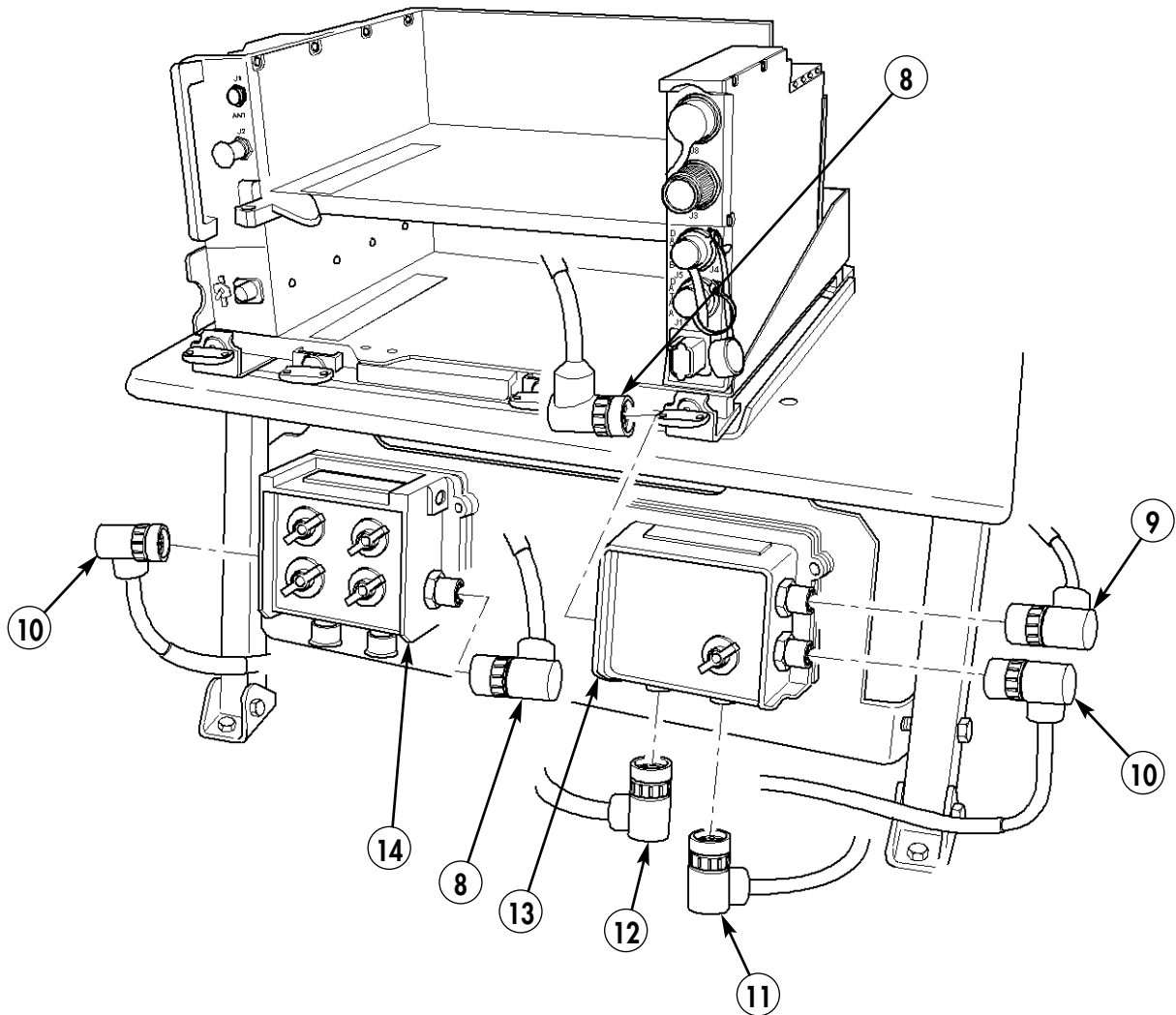
- 1. NUT - 9417954 - QTY. 2
- 2. LOCKWASHER - MS35338-45 - QTY. 2
- 3. WASHER - 2436162 - QTY. 4
- 4. FFCS/L MODULE - A3206624 - QTY. 1
- 5. CAPSCREW - B1821BH031C150N - QTY. 2
- 6. WASHER - 2436164 - QTY. 2

*Figure 5-54.*

**NOTE**

SINGGARS and loudspeaker cables removed for clarity.

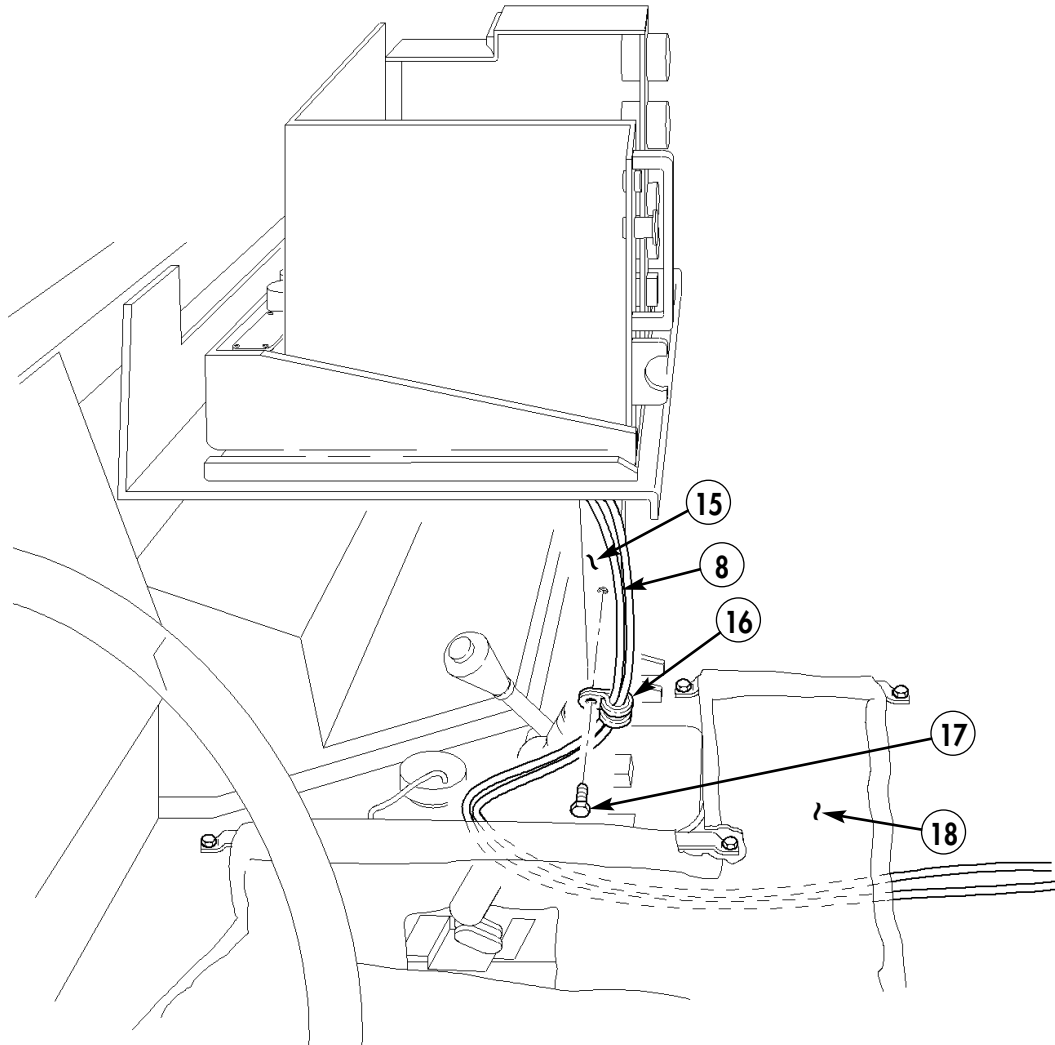
- 19-2. Install cable assembly (10) to front FFCS/L (14).
- 19-3. Install cable assembly (10) to MCS/L (13).
- 19-4. Install cable assembly (8) to front FFCS/L (14).
- 19-5. Install cable assembly (8) to MCS/L (13).
- 19-6. Install power cable assembly (9) to MCS/L (13).
- 19-7. Install R/T cable assembly (11) to MCS/L (13).
- 19-8. Install R/T cable assembly (12) to MCS/L (13).



- 8. CABLE ASSEMBLY – A3206018-15 – QTY. 2
- 9. POWER CABLE ASSEMBLY – A3206017-3 – QTY. 1
- 10. CABLE ASSEMBLY – A3206018-2 – QTY. 2
- 11. CABLE ASSEMBLY, R/T – A3206019-3 – QTY. 1
- 12. CABLE ASSEMBLY, R/T – A3206127-3 – QTY. 1

Figure 5-55.

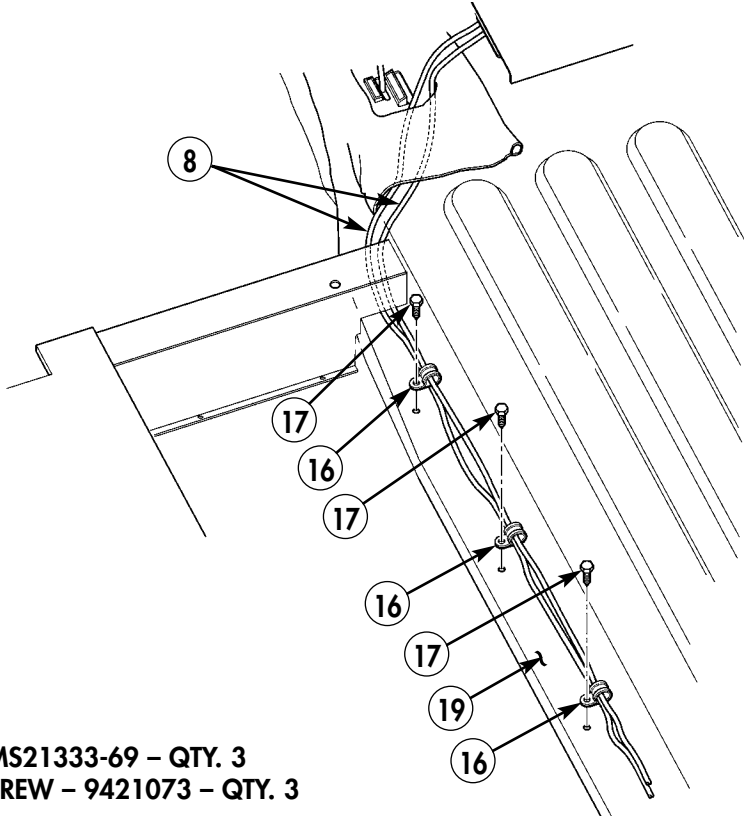
- 19-9.** Route two cable assemblies (8) down leg of radio rack (15). Secure cable assemblies (8) to radio rack (15) with loop clamp (16) and self-tapping screw (17).
- 19-10.** Route cable assemblies (8) under left side tunnel insulation (18).
- 19-11.** Route cable assemblies (8) along tunnel (19). Secure cable assemblies (8) to tunnel (19) with three loop clamps (16) and self-tapping screws (17).
- 19-12.** Route cable assemblies (8) behind left rear seat (21) and up rear wall (20) to rear FFCS/L. Secure cable assemblies (8) to rear wall with loop clamp (16) and self-tapping screw (17).
- 19-13.** Connect cable assemblies (8) to rear FFCS/L (4).



- 16. LOOP CLAMP – MS21333-69 – QTY. 1**
- 17. SELF-TAPPING SCREW – 9421073 – QTY. 1**

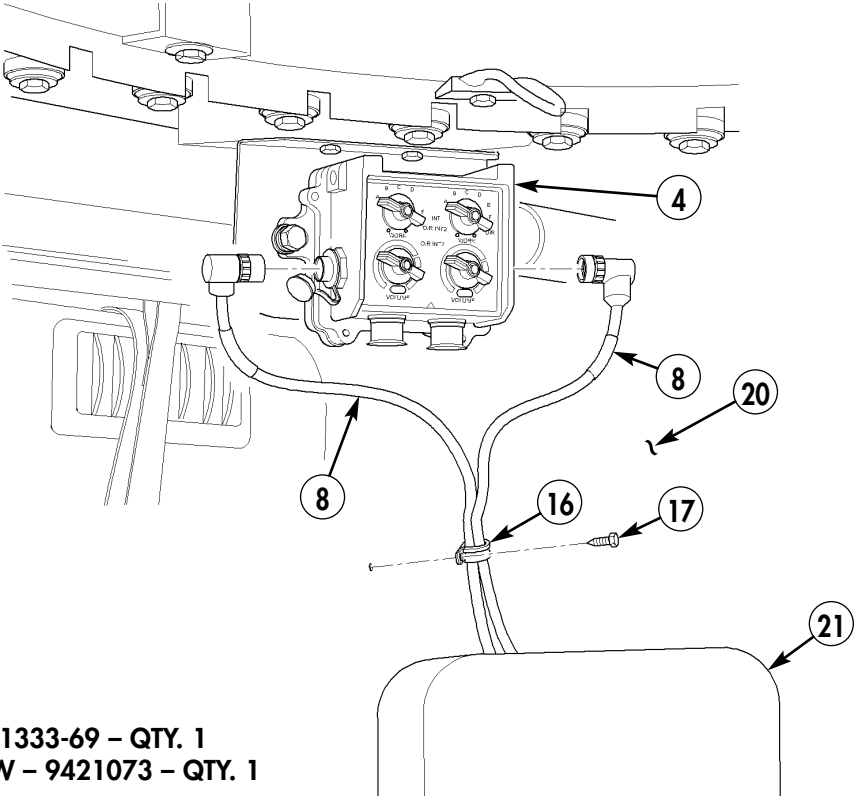
*Figure 5-56.*





- 16. LOOP CLAMP – MS21333-69 – QTY. 3
- 17. SELF-TAPPING SCREW – 9421073 – QTY. 3

Figure 5-57.



- 16. LOOP CLAMP – MS21333-69 – QTY. 1
- 17. SELF-TAPPING SCREW – 9421073 – QTY. 1

Figure 5-58.

- 19-14.** Connect radio R/T cable assembly (12) to A4J3 connector (24) on SINCGARS mounting tray (15).
- 19-15.** Connect radio R/T cable assembly (11) to A4J4 connector (23) on SINCGARS mounting tray (15).
- 19-16.** Connect power cable assembly (9) to A4J2 (22) connector on SINCGARS mounting tray (15).

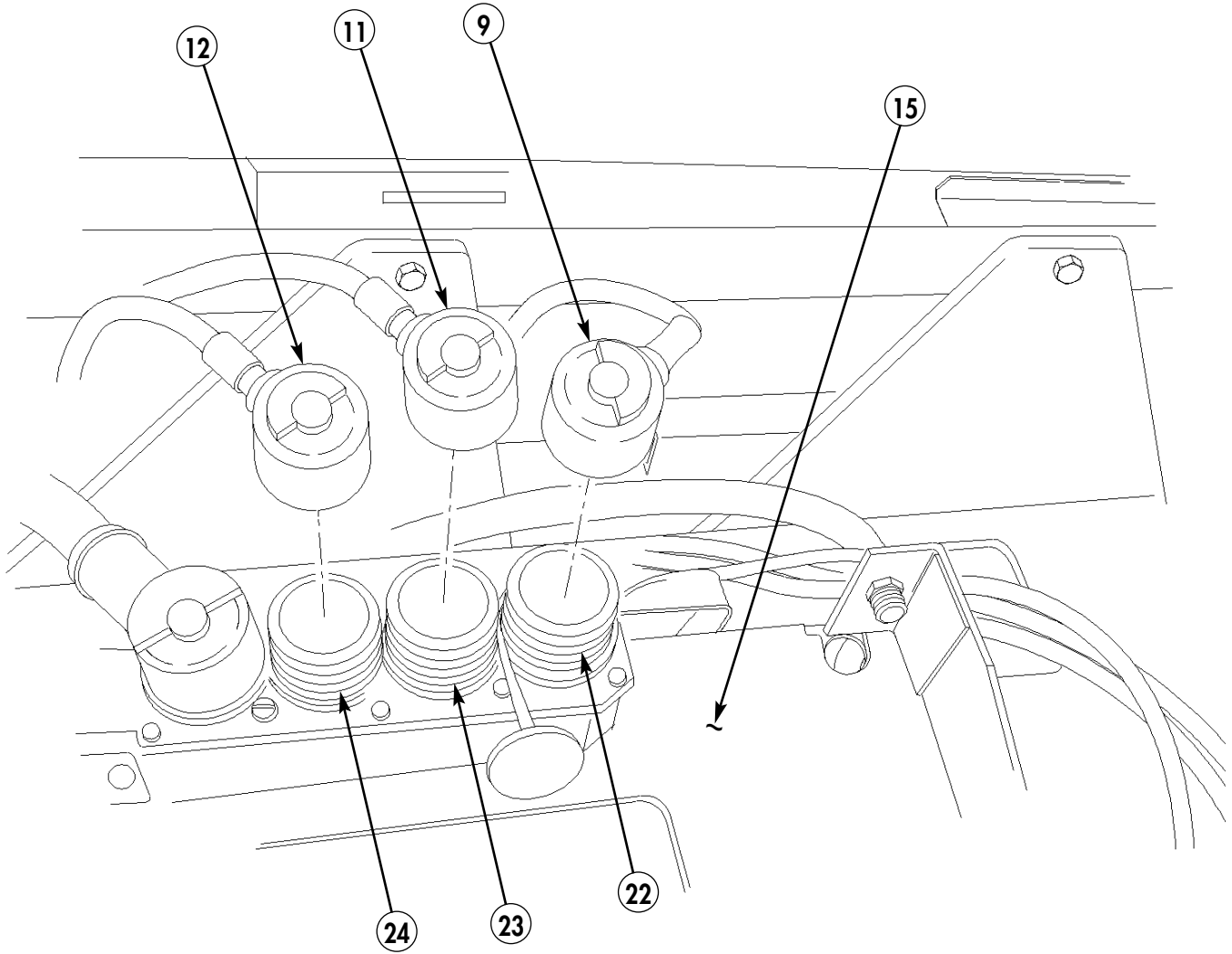
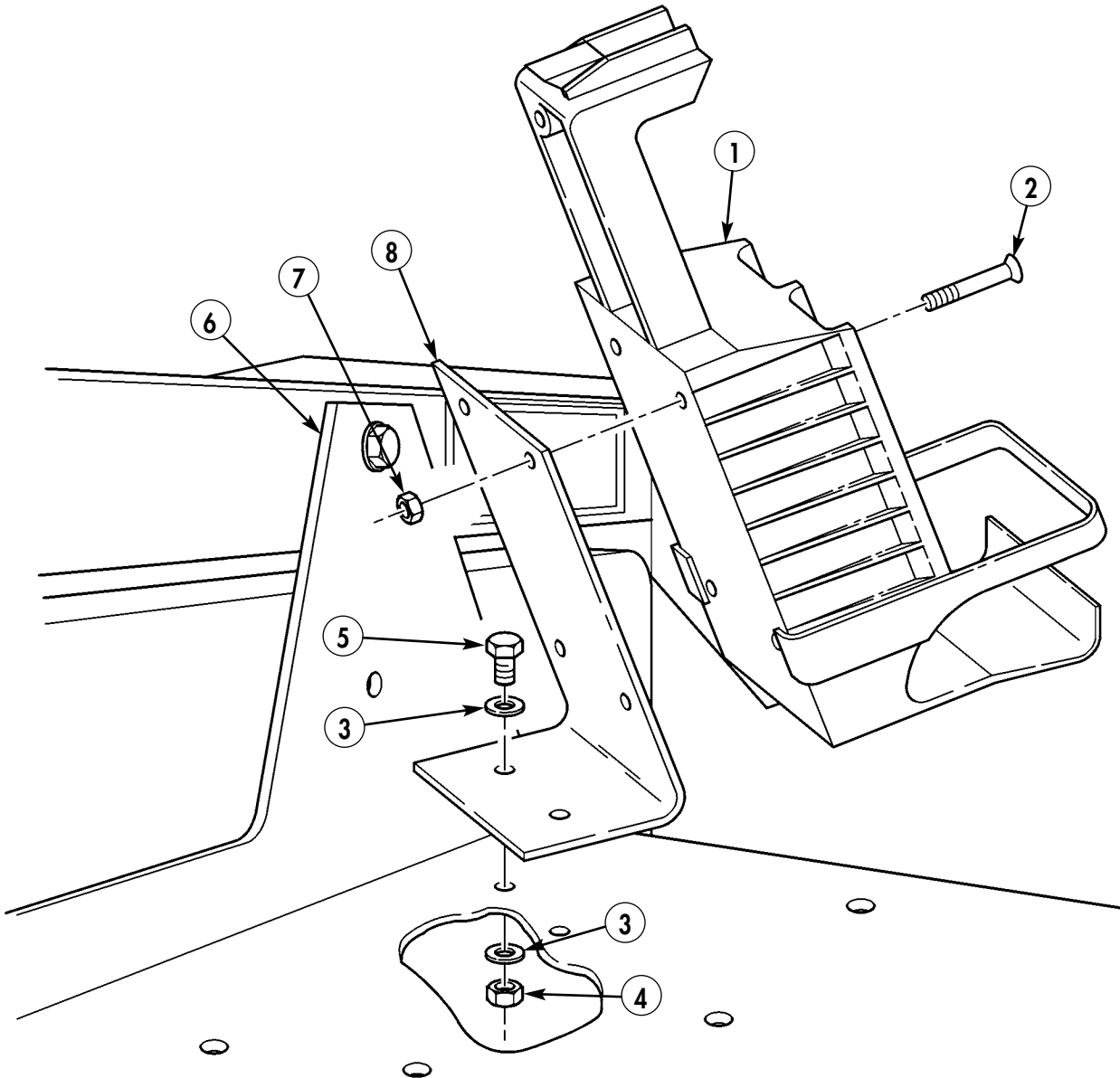


Figure 5-59.

## Section XX. PLGR BRACKET INSTALLATION

- 20-1.** Install PLGR mount (8) on standard rack (6) with two capscrews (5), four washers (3), and nuts (4).
- 20-2.** Install PLGR bracket (1) on PLGR mount (8) with four screws (2), and nuts (7).

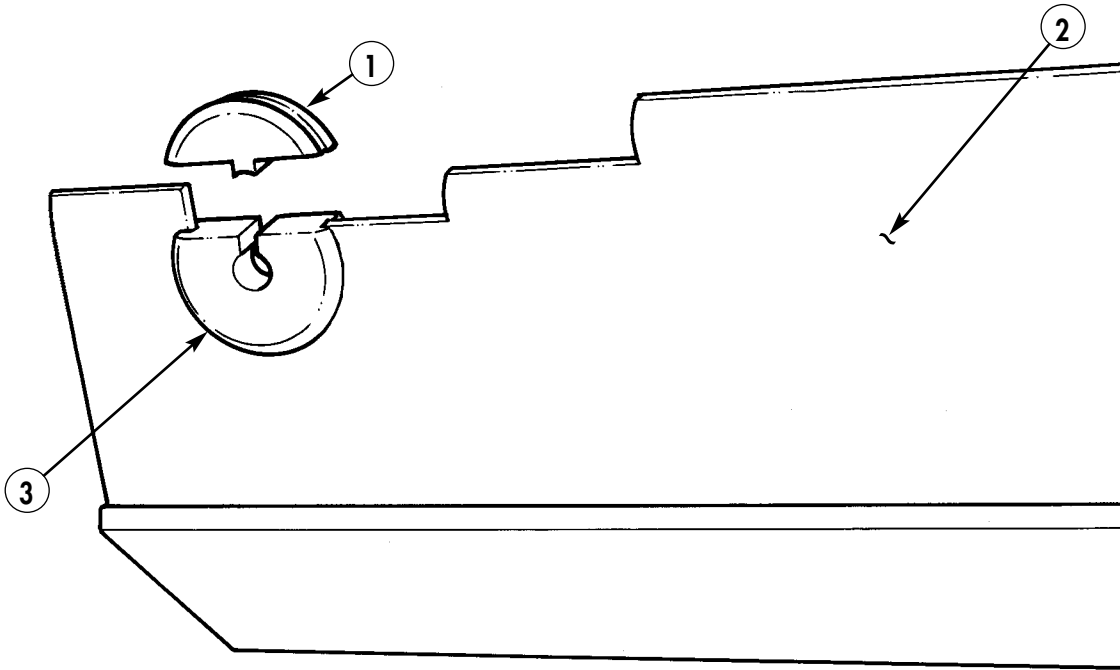


1. PLGR BRACKET – 986-0645-001 – QTY. 1
2. SCREW – MS35206-263 – QTY. 4
3. WASHER – 2436161 – QTY. 4
4. NUT – 9419143 – QTY. 2
5. CAPSCREW – B1821BH025C100N – QTY. 2
7. PLAIN-ASSEMBLED NUT – 9422771 – QTY. 4
8. PLGR MOUNT – 12480576 – QTY. 1

Figure 5-60.

### Section XXI. PLGR ANTENNA AND CABLES INSTALLATION

21-1. Cut grommet (1) to fit opening (3) and install in right windshield deflector (2).



1. GROMMET - 12460299 - QTY. 1

*Figure 5-61.*

21-2. Locate, mark, and drill 0.562-in. diameter hole (7) in A-frame pillar (6).

**NOTE**

Wrap a section of PLGR antenna cable with tape to prevent PLGR antenna cable from being pulled into vehicle.

21-3. Split grommet (5) and insert PLGR antenna cable (4) and grommet (5) in hole (7) in A-frame pillar (6).

21-4. Apply RTV sealant around grommet (5).

- 4. PLGR ANTENNA CABLE – 426-0141-050 – QTY. 1
- 5. GROMMET – MS35489-31 – QTY. 1

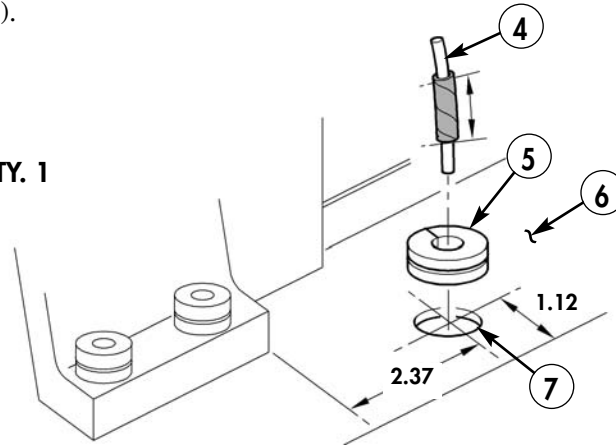


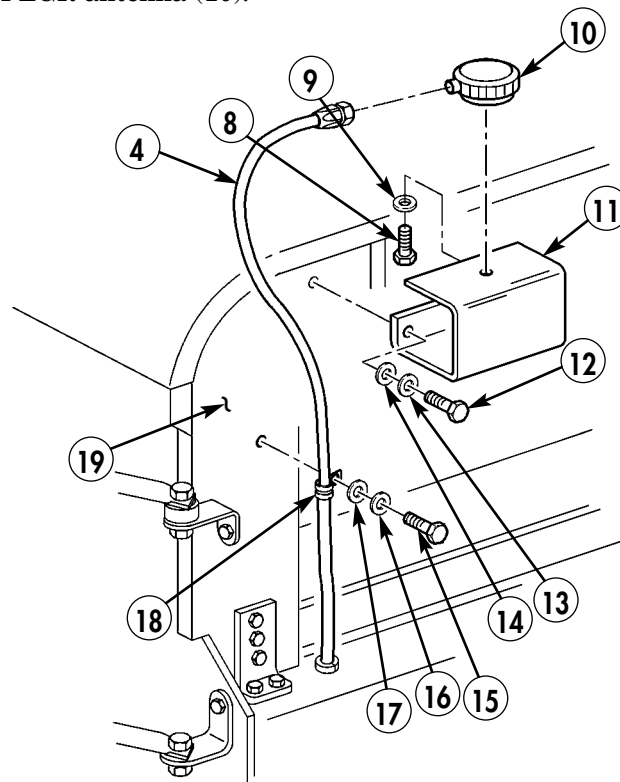
Figure 5-62.

21-5. Attach PLGR antenna (10) to support bracket (11) with screw (8) and lockwasher (9).

21-6. Attach support bracket (11) to right windshield armor plate (19) with two existing screws (12), lockwashers (13), and washers (14).

21-7. Route PLGR antenna cable (4) along right windshield armor plate (19) with loop clamp (18), existing screw (15), lockwasher (16), and washer (17).

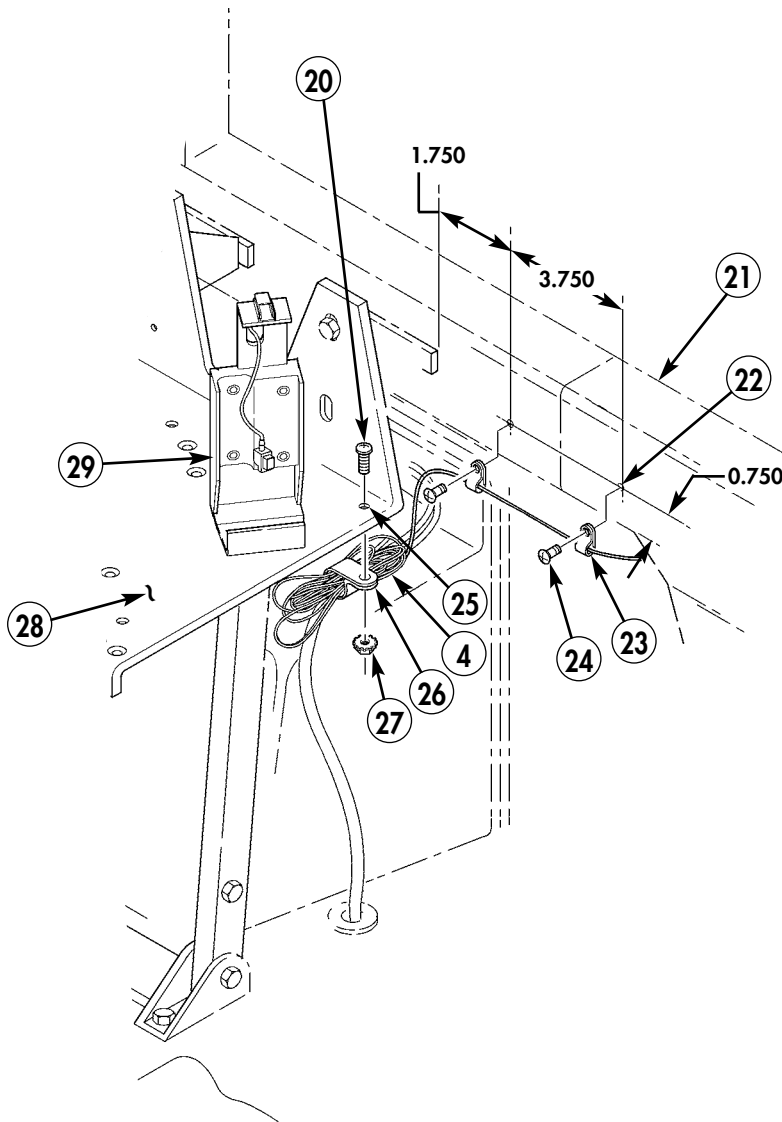
21-8. Connect PLGR antenna cable (4) to PLGR antenna (10).



- 8. SCREW – 160046 – QTY. 1
- 9. LOCKWASHER – 120217 – QTY. 1
- 10. PLGR ANTENNA – AT575-030 – QTY. 1
- 11. SUPPORT BRACKET – 12460300 – QTY. 1
- 18. LOOP CLAMP – MS21333-96 – QTY. 1

Figure 5-63.

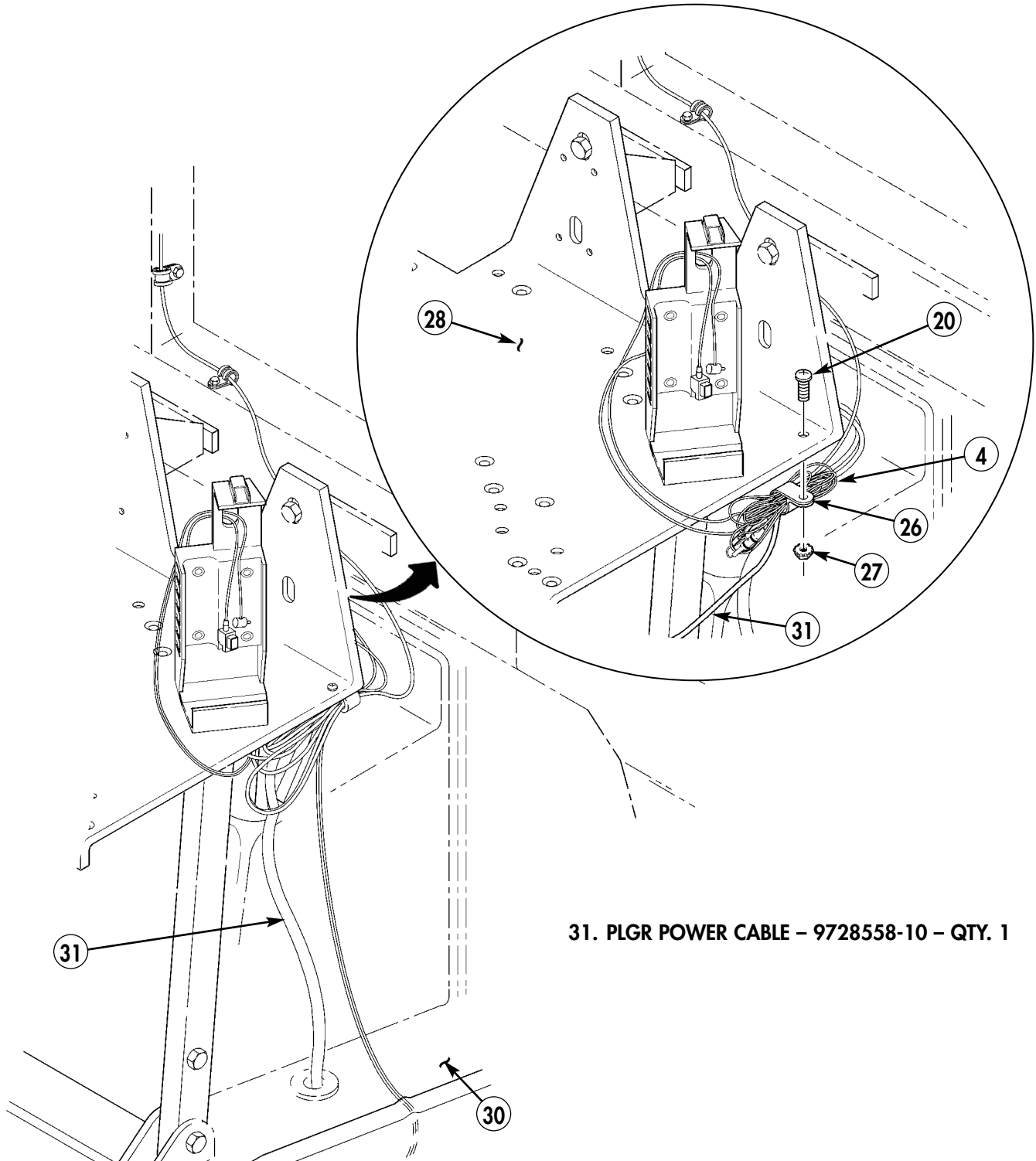
- 21-9. Locate, mark, and drill two 0.147-in. diameter holes (22) in plenum (21). Route antenna cable (4) behind plenum (21) to installation mount (29).
- 21-10. Secure antenna cable (4) to plenum (21) with two clamps (23) and screws (24).
- 21-11. Secure excess antenna cable (4) to existing hole (25) on radio rack (28) with clamp (26), screw (20) and nut (27). Do not tighten nut (27).



- 20. SCREW – MS35206-265 – QTY. 1
- 23. LOOP CLAMP – MS21333-67 – QTY. 2
- 24. SELF-TAPPING SCREW – 9416639 – QTY. 2
- 26. LOOP CLAMP – MS21333-78 – QTY. 1
- 27. NUT – 271169 – QTY. 1

Figure 5-64.

- 21-12. Route power cable (31) under right side tunnel insulation (30) to cab enclosure panel.
- 21-13. Remove nut (27), clamp (26) and antenna cable (4) from screw (20) on standard production radio rack (28).
- 21-14. Secure power cable (31) with existing clamp (26) and antenna cable (4) to standard production radio rack (28) with screw (20) and nut (27).



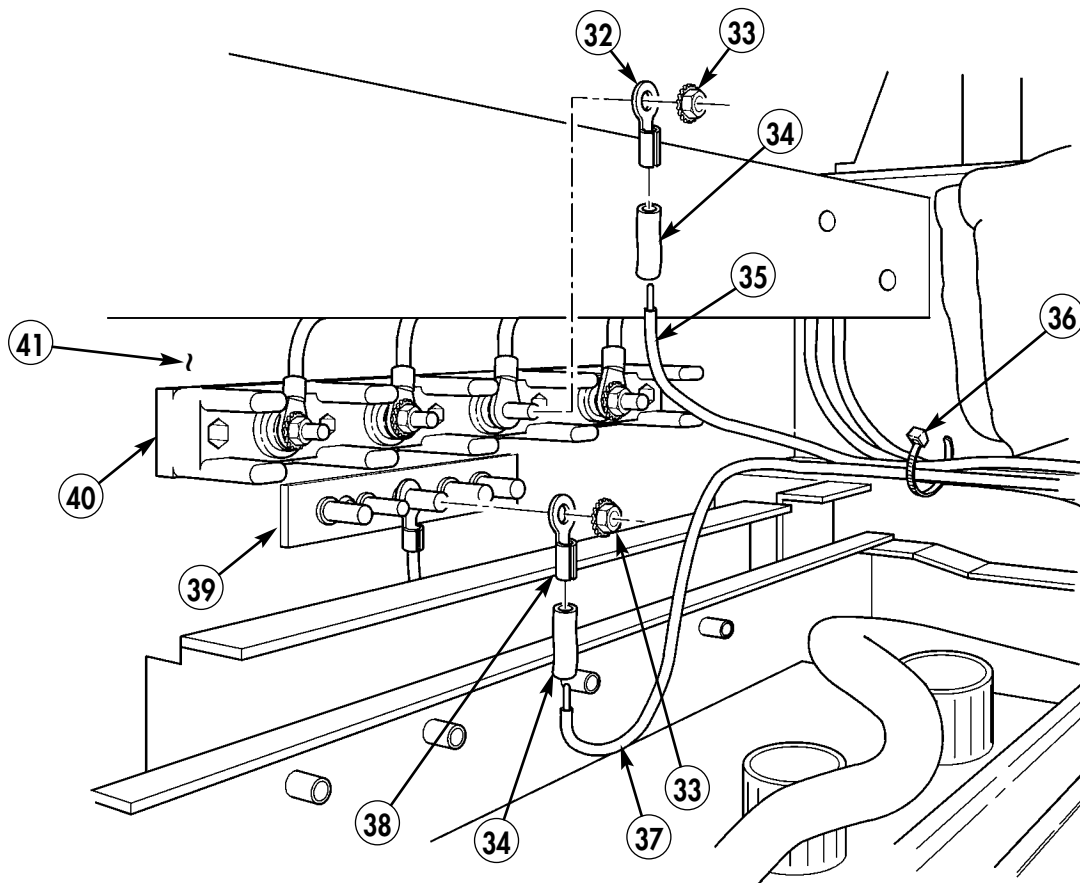
31. PLGR POWER CABLE - 9728558-10 - QTY. 1

Figure 5-65.

**NOTE**

PLGR power cable positive lead insulation is ribbed.

- 21-15. Attach shrink tubing (34) and terminal lugs (38) and (32) to PLGR power cable negative lead (37) and PLGR power cable positive lead (35). (Refer to TM 9-2320-387-24 for terminal connector repair.)
- 21-16. Attach PLGR power cable positive lead (35) to 24-volt terminal board (40), located on cab enclosure panel (41), with existing nut (33).
- 21-17. Attach PLGR power cable negative lead (37) to ground strap (39), located on cab enclosure panel (41), with existing nut (33).
- 21-18. Coil excess positive and negative power leads (35) and (37), place beneath ground strap (39), and secure with tiedown strap (36).



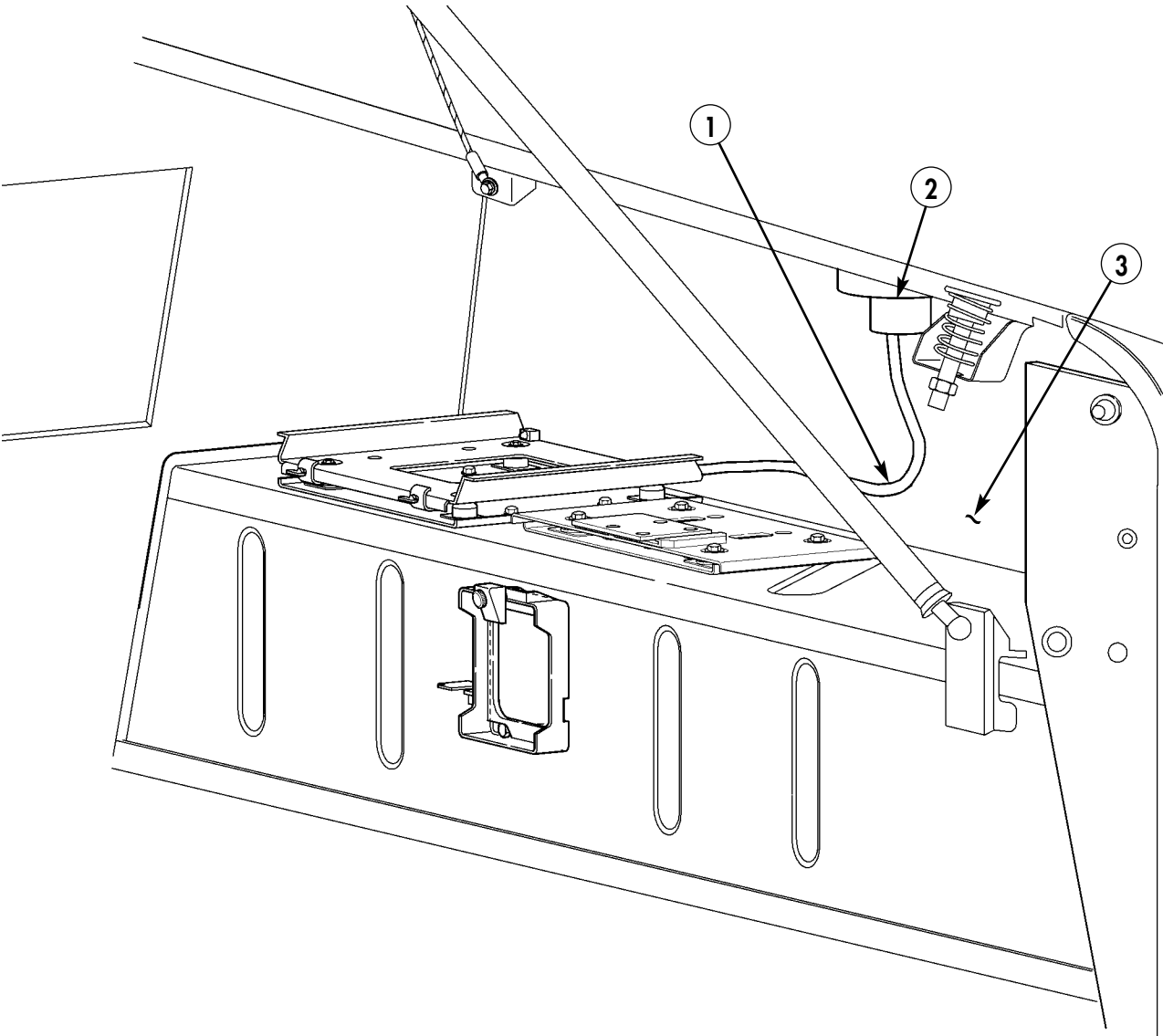
- 32. TERMINAL LUG – 7728780 – QTY. 1
- 34. SHRINK TUBING – MS23053/4-302-0 – QTY. A/R
- 36. TIEDOWN STRAP – MS3367-1-0 – QTY. A/R
- 38. TERMINAL LUG – 7728777 – QTY. 1

*Figure 5-66.*



**Section XXII. CABLES INSTALLATION**

- 22-1.** Connect SINGARS antenna cable (1) to antenna (2).
- 22-2.** Route SINGARS antenna cable (1) down to top of right rear wheelwell (3).



**1. SINGARS ANTENNA CABLE – A3014031-17 – QTY. 1**

*Figure 5-67.*

- 22-3.** Remove twelve screws (4), four screws (6), and cargo floor cover (5) from cargo floor (7). Retain all screws (4) and (6).

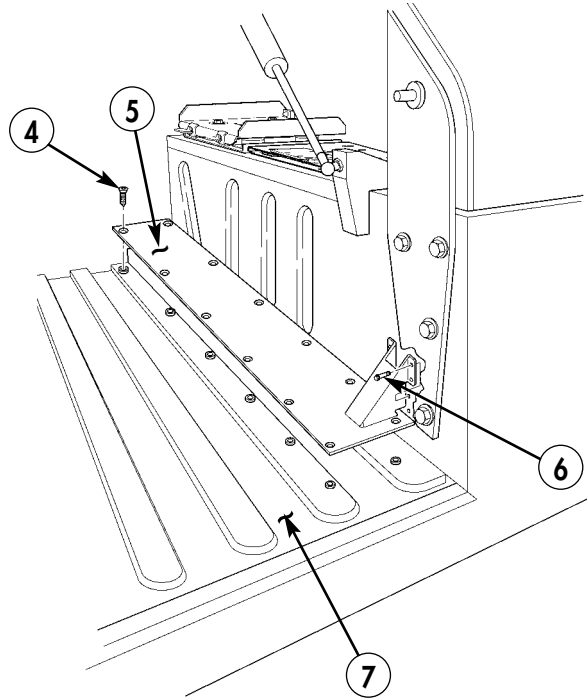
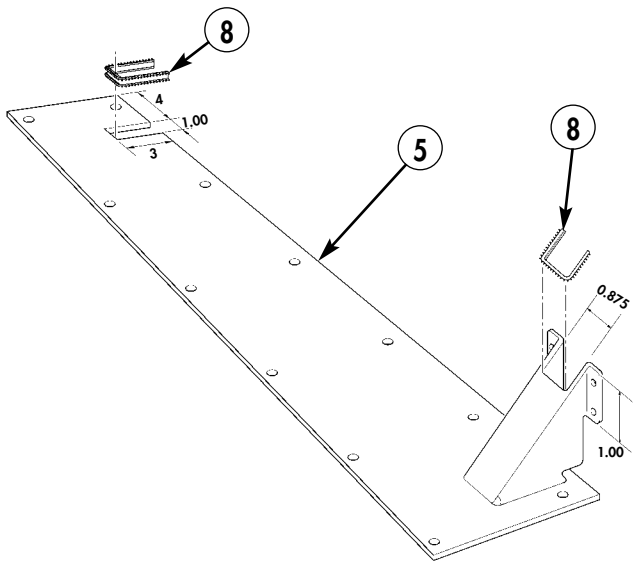


Figure 5-68.

- 22-4.** Cut notches in cargo floor cover (5) as shown.  
**22-5.** Cut and install grommet material (8) to fit. Secure with RTV compound.  
**22-6.** Remove three screws (10), washers (13), nuts (12), and rear partition access cover (11) from rear partition (9).



**8. GROMMET MATERIAL – MS21266-1N – QTY. A/R**

Figure 5-69.

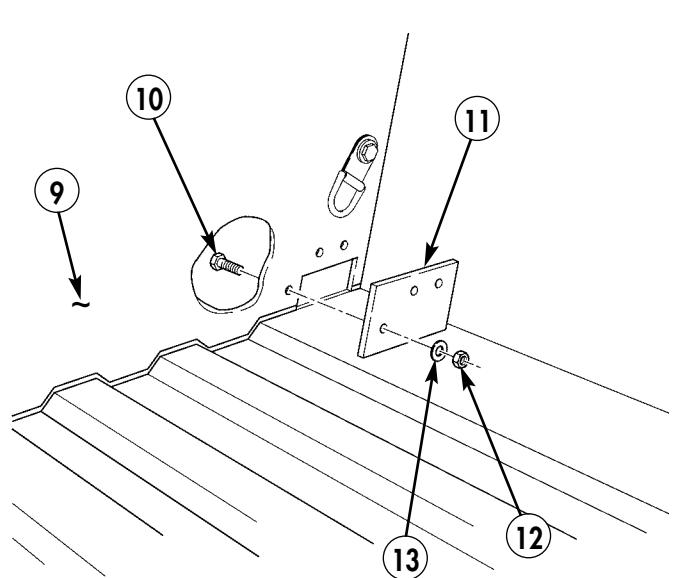
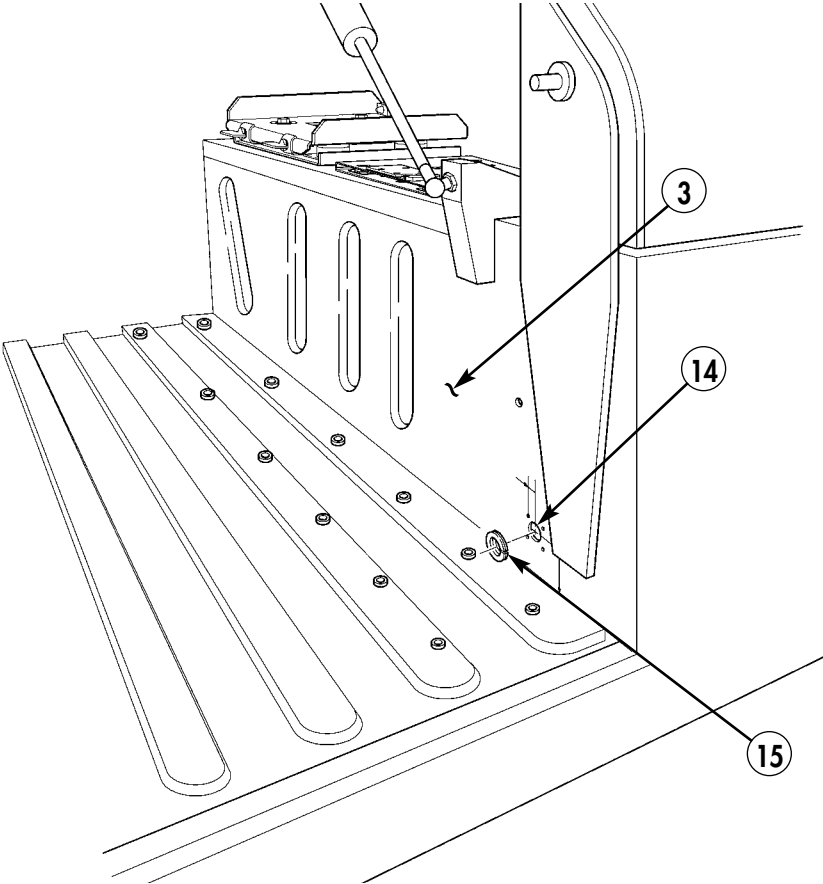


Figure 5-70.

- 22-7. Locate, mark, and drill a 0.750-in. hole (14) in right rear wheelhouse (3).
- 22-8. Insert grommet (15) into hole (14) in right rear wheelhouse (3).



15. GROMMET – MS35489-149 – QTY. 1

Figure 5-71.

- 22-9. Remove three screws (16) and cargo floor cover (5) from cargo floor (7) behind right rear seat (17).

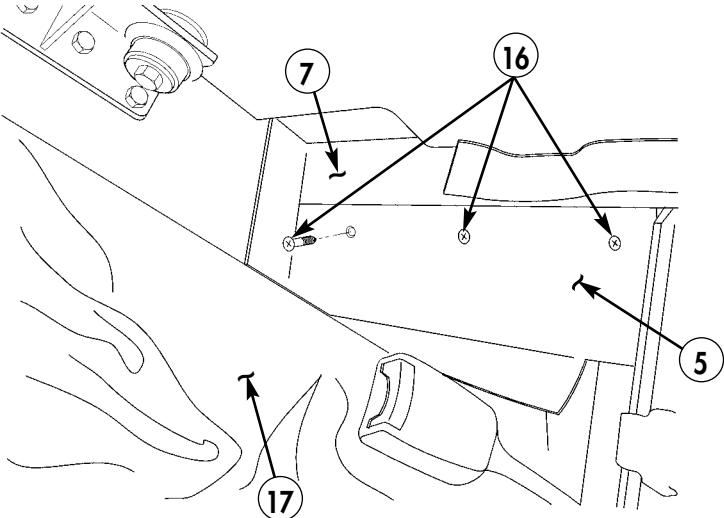
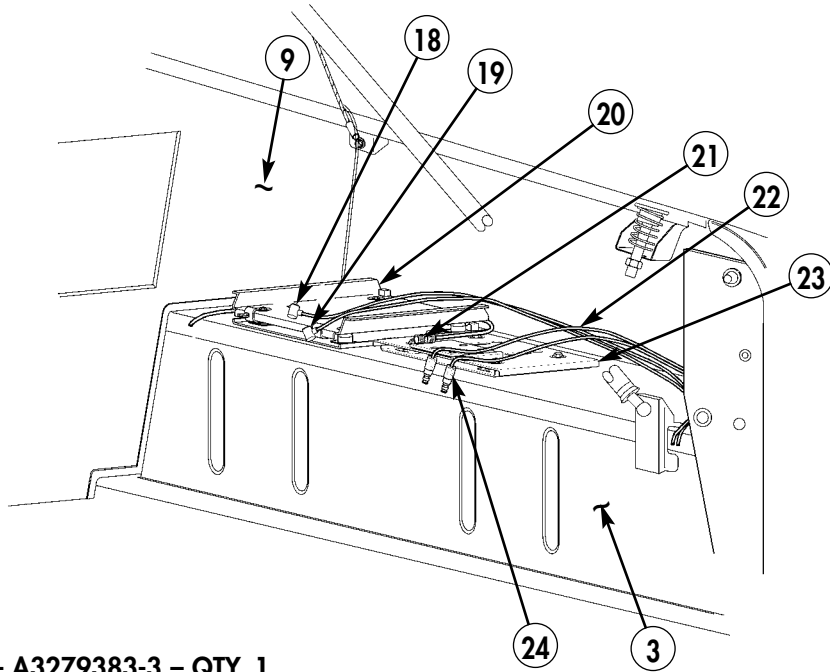


Figure 5-72.

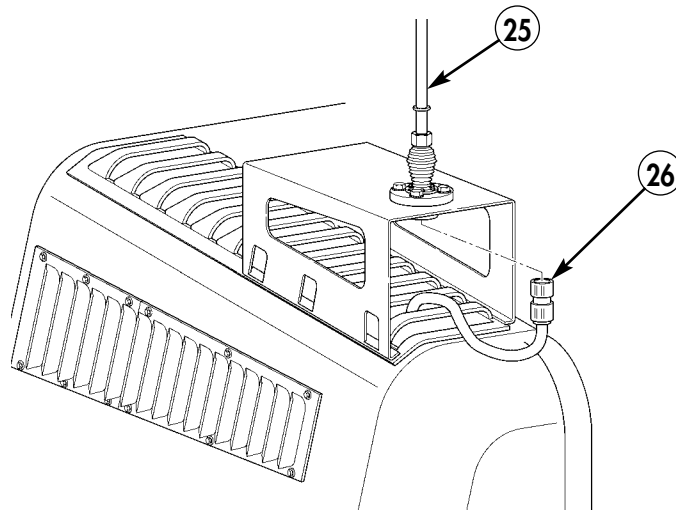
- 22-10. Lay EPLRS power cable (19) and INC-EPUU cable (18) connectors in vicinity of EPLRS mount (20). Ensure enough slack in cables to connect to equipment when installed.
- 22-11. Route HF power cable (21) behind mounts (20) and (23) along wheelhouse (3) to rear partition (9).
- 22-12. Position HF antenna cable (22), and HF speaker cable (24) in vicinity of HF 20 watt radio mount (23).



- 18. INC-EPUU CABLE – A3279383-3 – QTY. 1
- 19. EPLRS POWER CABLE – A3004939 – QTY. 1
- 21. HF POWER CABLE – 10181-9826-020 – QTY. 1
- 22. HF ANTENNA CABLE – 10181-9824-020 – QTY. 1
- 24. HF RADIO SPEAKER CABLE – 10535-0707-A020 – QTY. 1

Figure 5-73.

- 22-13. Connect EPLRS antenna cable (26) to EPLRS antenna (25).

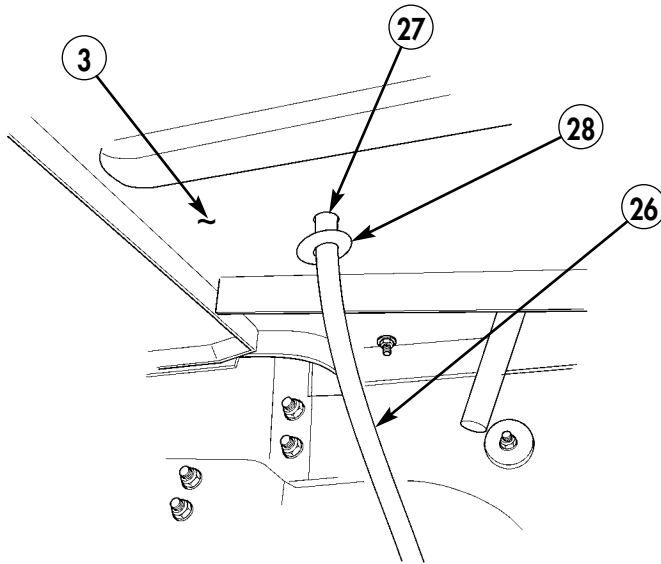


- 26. EPLRS ANTENNA CABLE – SM-C-911480 – QTY. 1

Figure 5-74.

**22-14.** Drill 1.00-in. hole (27) in wheelhouse (3).

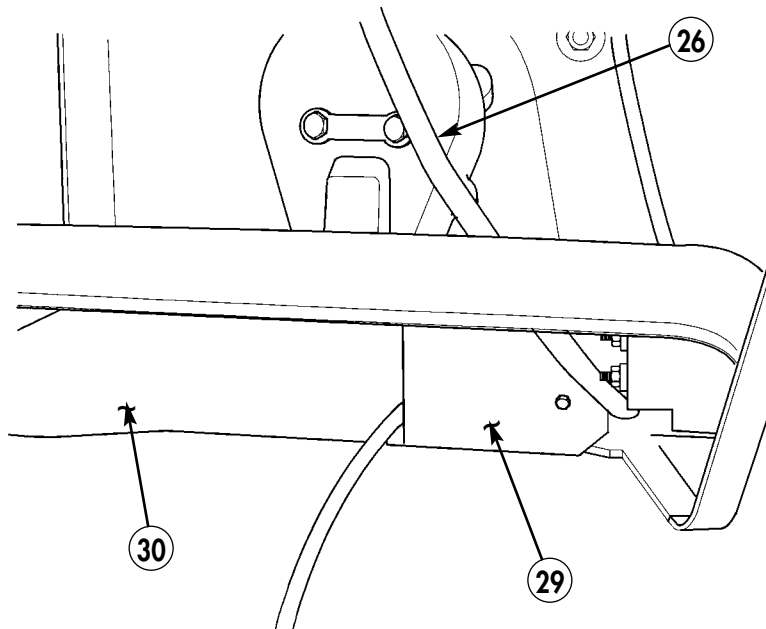
**22-15.** Route EPLRS antenna cable (26) through grommet (28) in wheelhouse (3).



**28. GROMMET – MS35489-19 – QTY. 1**

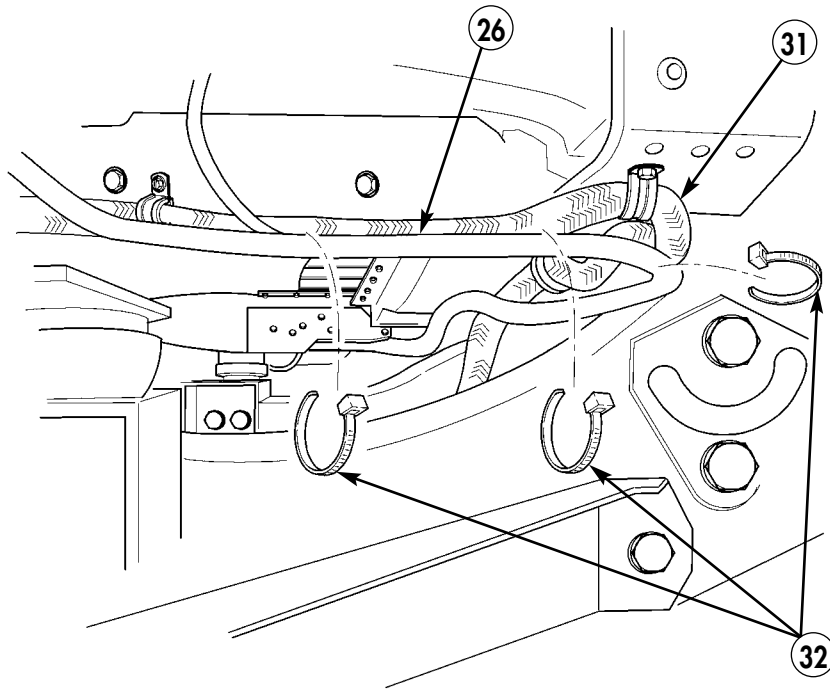
*Figure 5-75.*

**22-16.** Route EPLRS antenna cable (26) through bracket (29) and along frame (30).



*Figure 5-76.*

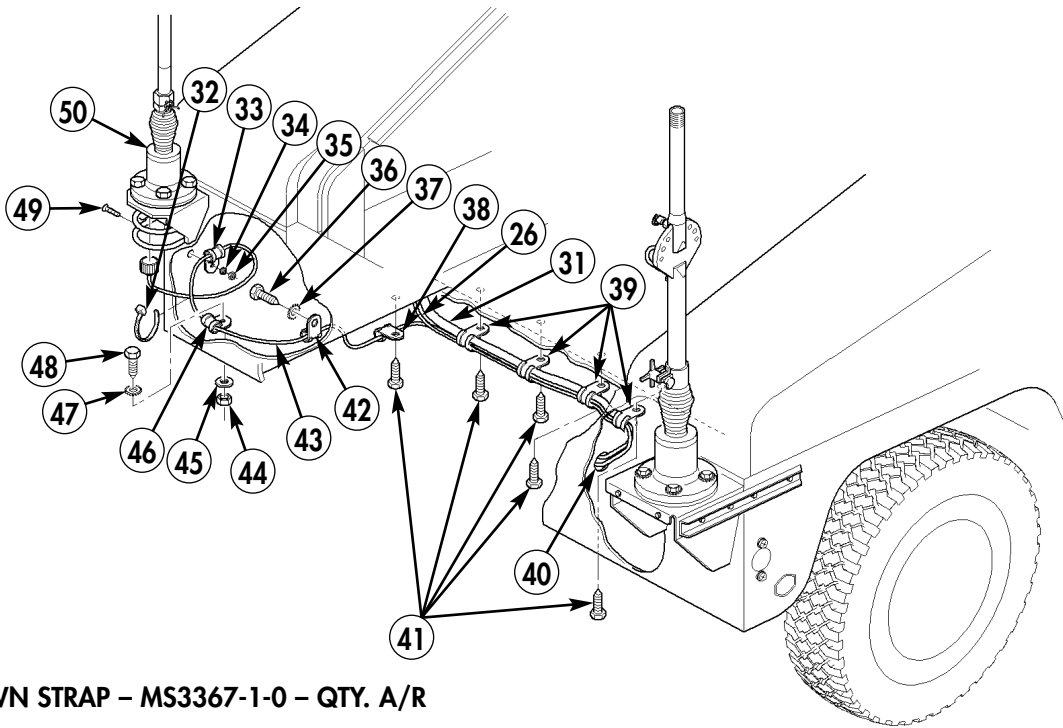
**22-17.** Secure EPLRS antenna cable (26) to taillight wiring harness (31) with tie-down straps (32).



**32. TIE-DOWN STRAP – MS3367-1-0 – QTY. A/R**

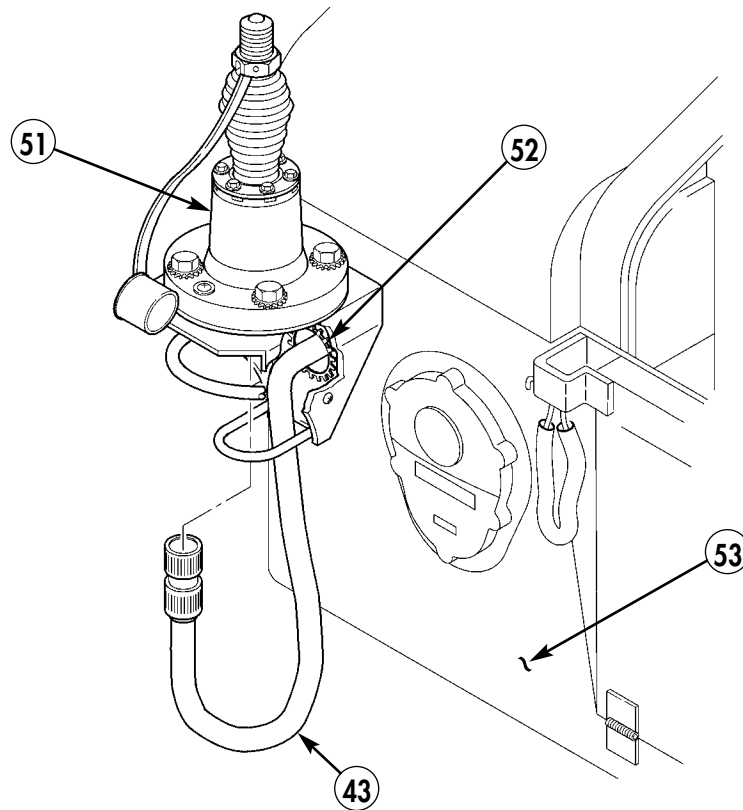
*Figure 5-77*

- 22-18.** Route SINCGARS antenna cable (43) from hole (40) along existing taillight wiring harness (31) and EPLRS antenna cable (26) and secure with four existing loop clamps (39) and existing self-tapping screws (41).
- 22-19.** Route SINCGARS antenna cable (43) along existing taillight wiring harness on left-side frame rail with existing loop clamp (38), and existing self-tapping screw (41).
- 22-20.** Route SINCGARS antenna cable (43) along existing taillight wiring harness and secure with existing loop clamp (38) and self-tapping screw (41).
- 22-21.** Route SINCGARS antenna cable (43) along existing taillight wiring harness and secure with existing loop clamp (42), self-tapping screw (36) and lockwasher (37).
- 22-22.** Route SINCGARS antenna cable (43) along existing taillight wiring harness and secure with existing loop clamp (46), screw (48), lockwasher (47), washer (45), and nut (44).
- 22-23.** Route SINCGARS antenna cable (43) to antenna base (50) with existing loop clamp (33), screw (49), lockwasher (34), and nut (35).
- 22-24.** Attach SINCGARS antenna cable (43) to antenna base (51).
- 22-25.** Route SINCGARS antenna cable (43) through hole (52) in rear wall (53).
- 22-26.** Coil excess antenna cable (43) and secure to inside of taillight closeout cover with tiedown strap (32).



32. TIEDOWN STRAP – MS3367-1-0 – QTY. A/R

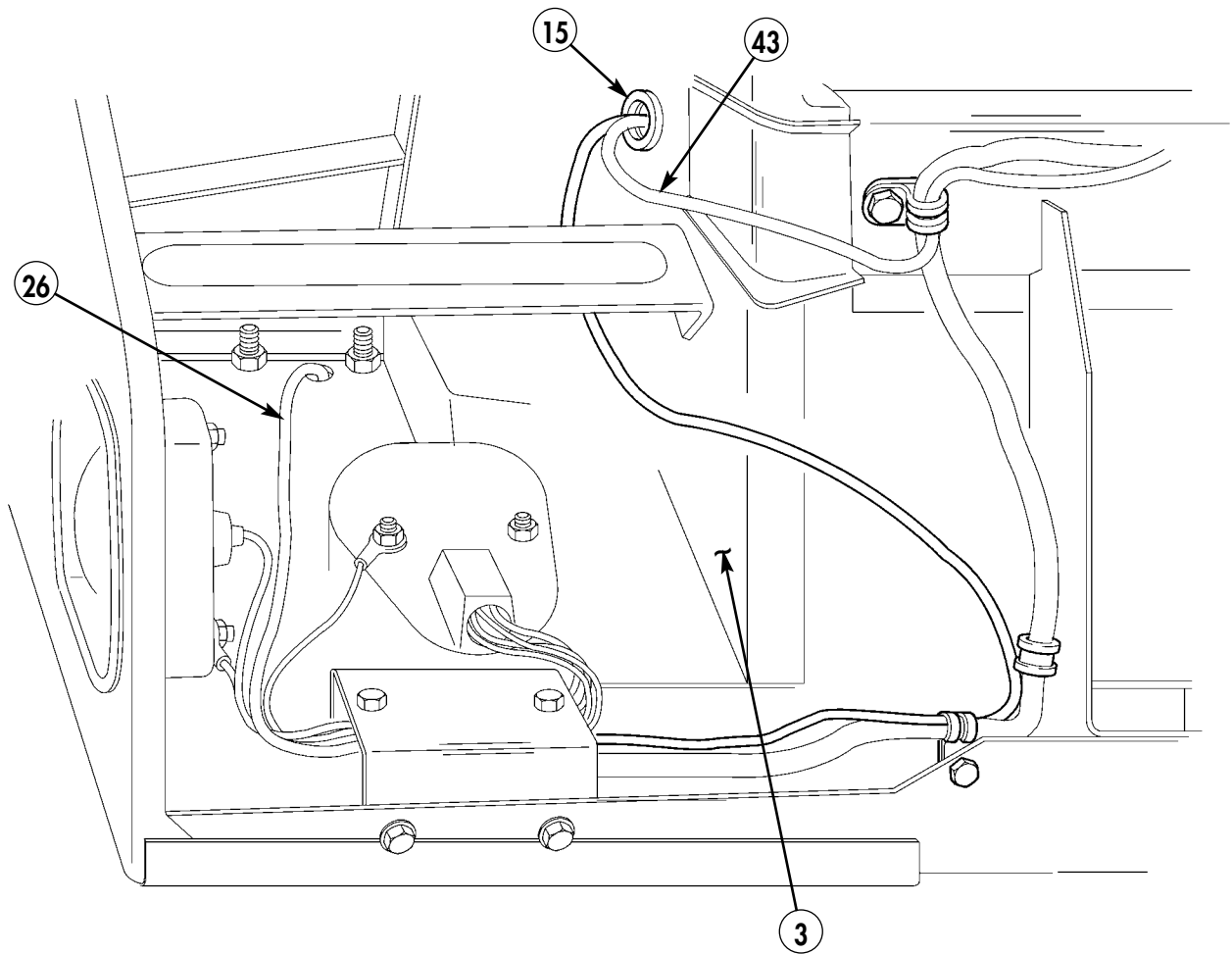
Figure 5-78.



44. SINGARS ANTENNA CABLE – A3014031-17 – QTY. 1

Figure 5-79.

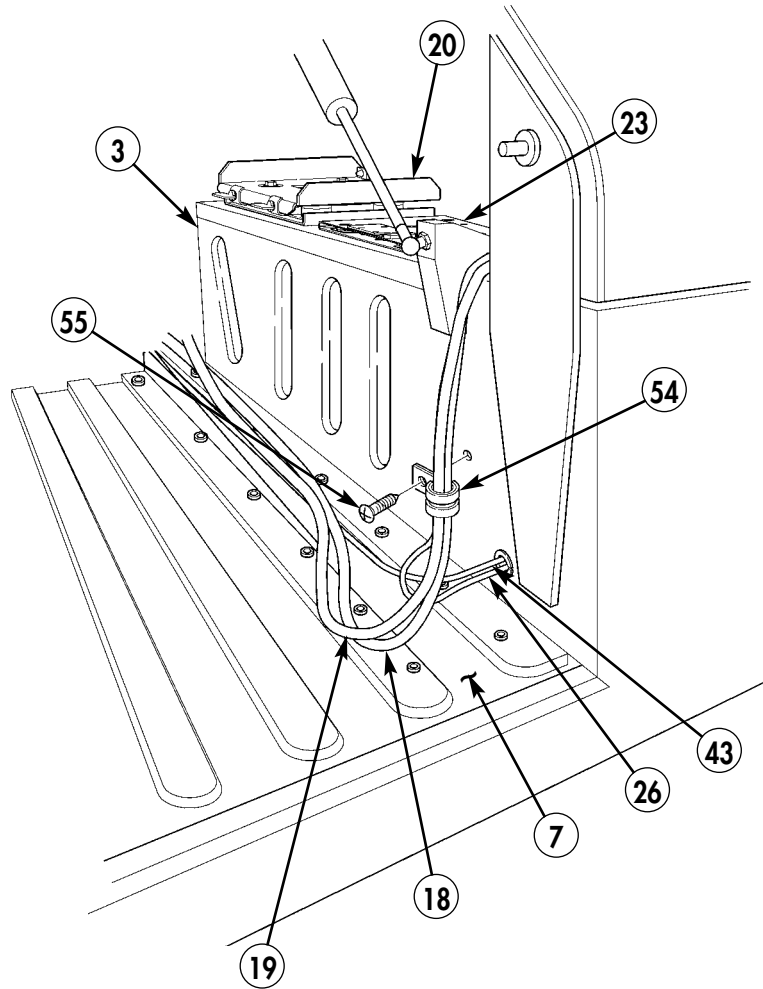
**22-27.** Feed SINCGARS antenna cable (43) and EPLRS antenna cable (26) through hole and grommet (15) in right-rear wheelwell (3).



*Figure 5-80.*



- 22-28.** Route EPLRS power cable (19), INC-EPUU cable (18), and SINCGARS antenna cable (43) along channel of cargo floor (7) towards front of vehicle.
- 22-29.** Route EPLRS antenna cable (26) up wheelhouse (3) to vicinity of EPLRS mount (20) behind HF 20 watt radio mount (23).
- 22-30.** Secure cables to wheelhouse (3) with loop clamp (54) and self-tapping screw (55).

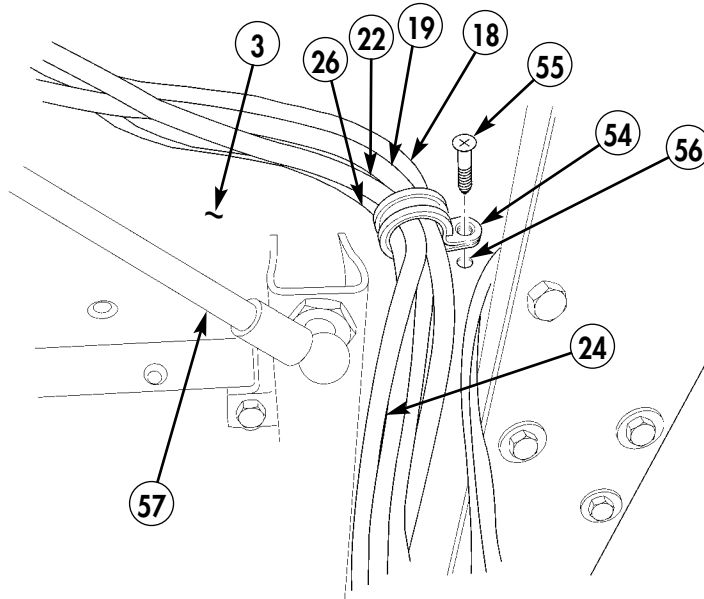


- 54. LOOP CLAMP – MS21333-77 – QTY. 1**
- 55. SELF-TAPPING SCREW – 9421073 – QTY. 1**

*Figure 5-81.*

**22-31.** Drill one 0.147-in. diameter hole (56) in right rear wheelhouse (3) near right gas spring (57).

**22-32.** Secure EPLRS power cable (19) and INC-EPUU cable (18), EPLRS antenna cable (26), HF speaker cable (24), and HF 20 watt radio antenna cable (22) to right rear wheelhouse (3) with loop clamp (54) and self-tapping screw (55).

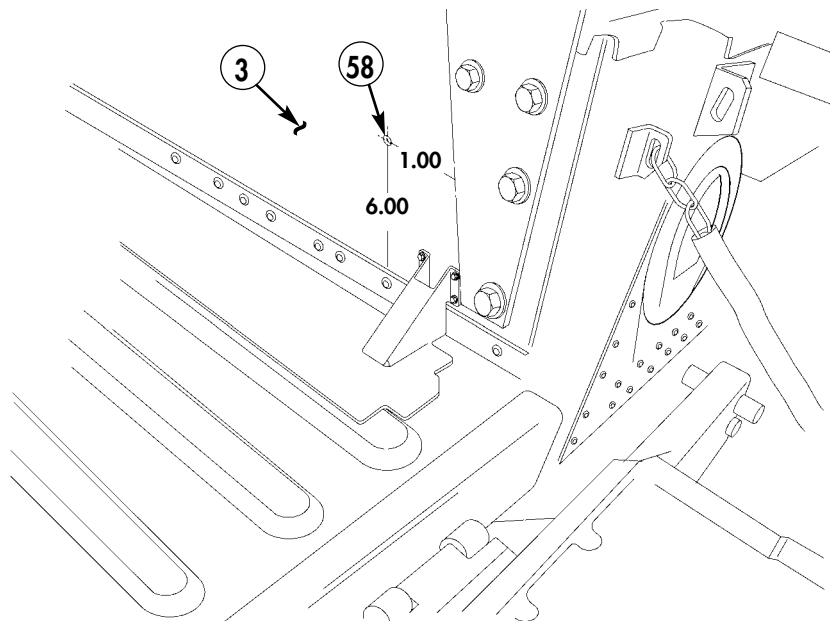


**54. LOOP CLAMP – MS21333-77 – QTY. 1**

**55. SELF-TAPPING SCREW – 9421073 – QTY. 1**

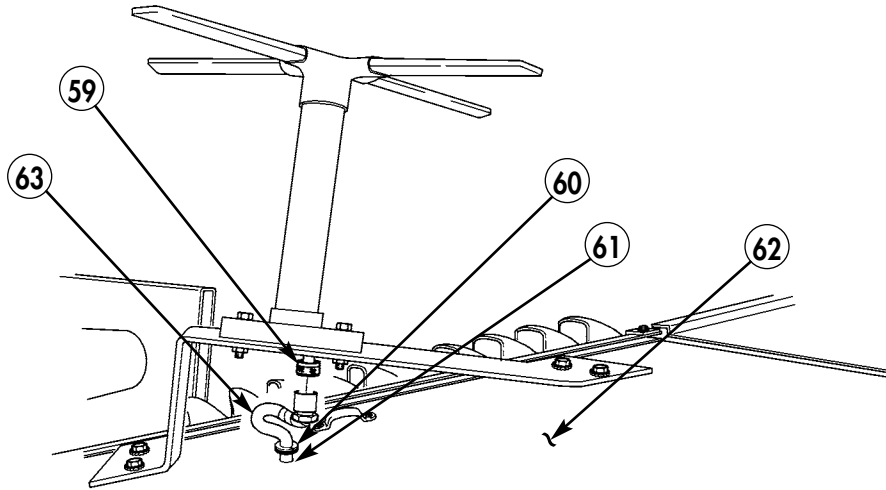
*Figure 5-82.*

**22-33.** Drill one 0.147-in. diameter hole (58) in right rear wheelhouse (3).



*Figure 5-83.*

- 22-34. Route TAC-SAT antenna cable (63) through hole (61) in cargo door (62).
- 22-35. Install grommet (60) on cable (63).
- 22-36. Connect TAC-SAT antenna cable (63) to TAC-SAT antenna (59).
- 22-37. Install grommet (60) in hole (61).



- 60. GROMMET – MS35489-150 – QTY. 1
- 63. CABLE – 10369-7211-20 – QTY. 1

*Figure 5-84.*

- 22-38. Secure antenna cable (63) to underside of cargo door (62) on existing stud (64) with loop clamp (65), ground strap (67), and nut (66).
- 22-39. Install ground strap (67) to body of vehicle (71) with existing stud (70), washer (68), and nut (69).
- 22-40. Secure antenna cable (63) to rear partition (9) with five loop clamps (65) and existing capscrews (72).
- 22-41. Route antenna cable (63) to right rear wheelhouse.

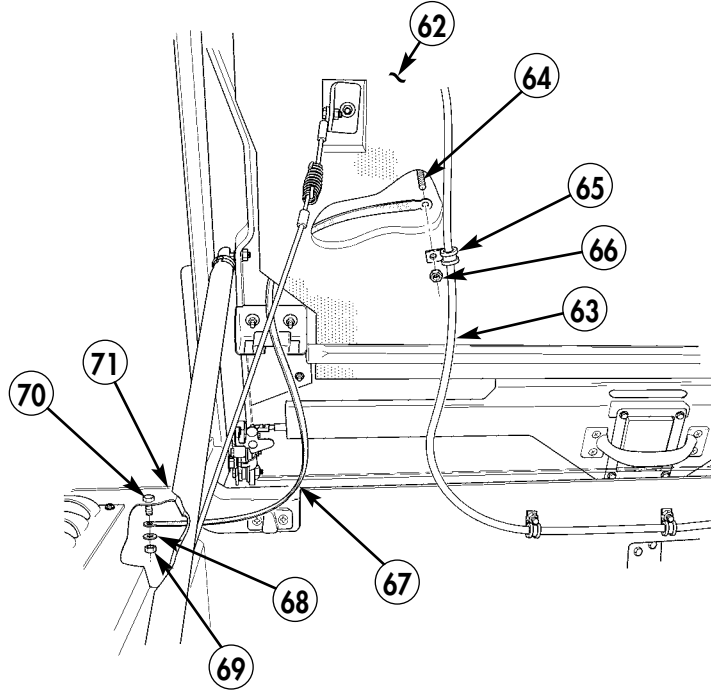
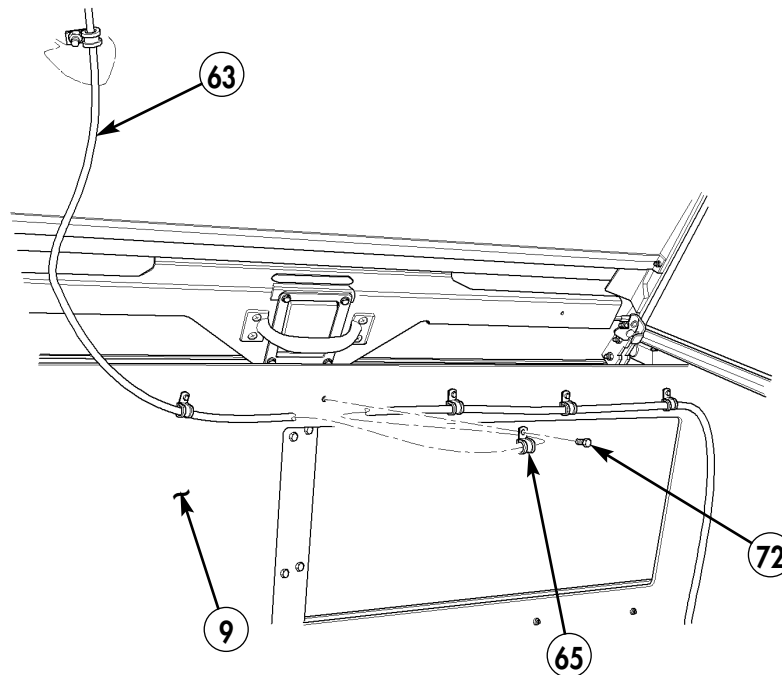


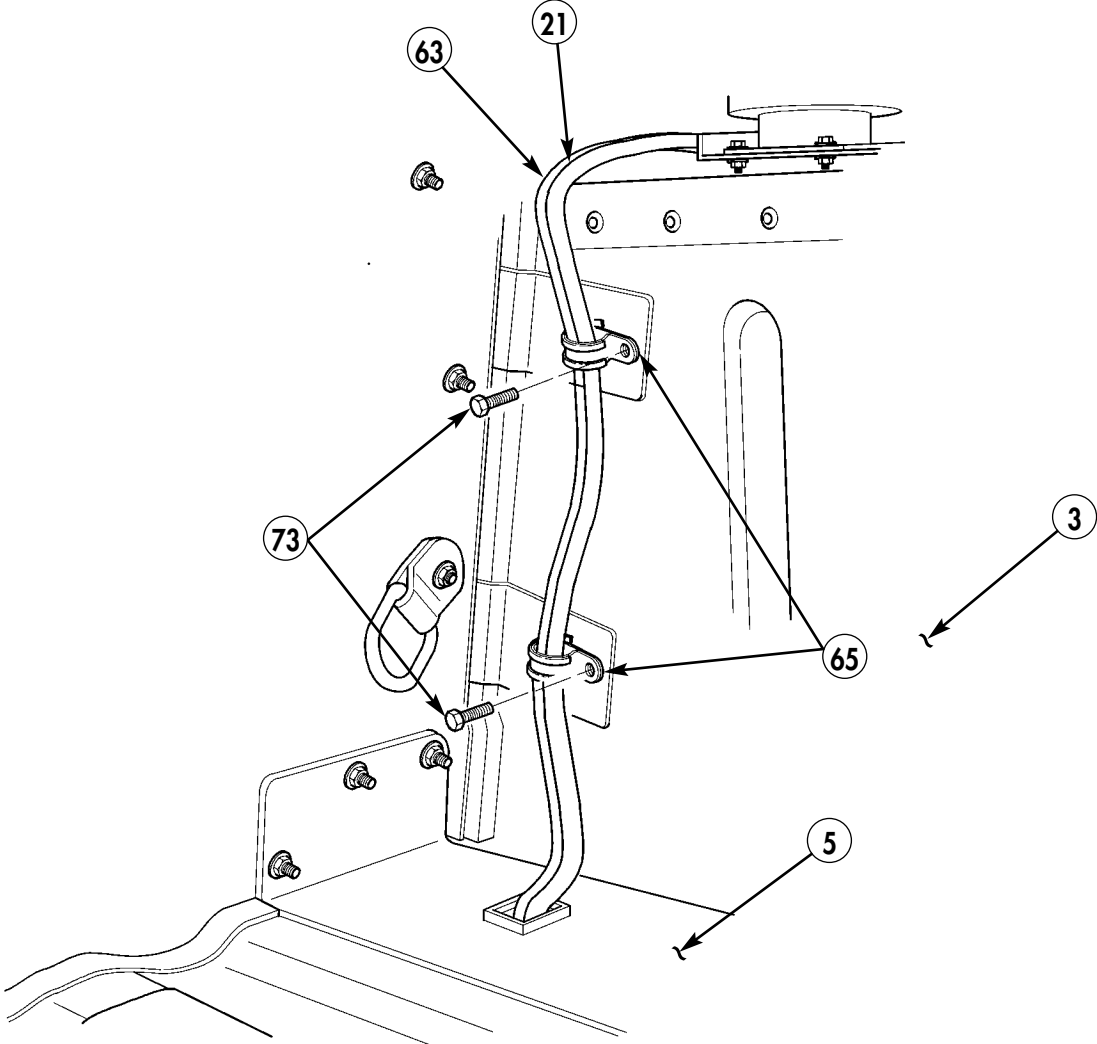
Figure 5-85.



65. LOOP CLAMP – MS21333-112 – QTY. 6

Figure 5-86.

- 22-42. Route TAC-SAT antenna cable (63) and HF 20 watt power cable (21) down side of wheelhouse (3) and through cutout in cargo floor cover (5).
- 22-43. Secure cable to wheelhouse (3) with two loop clamps (65) and existing screws (73).

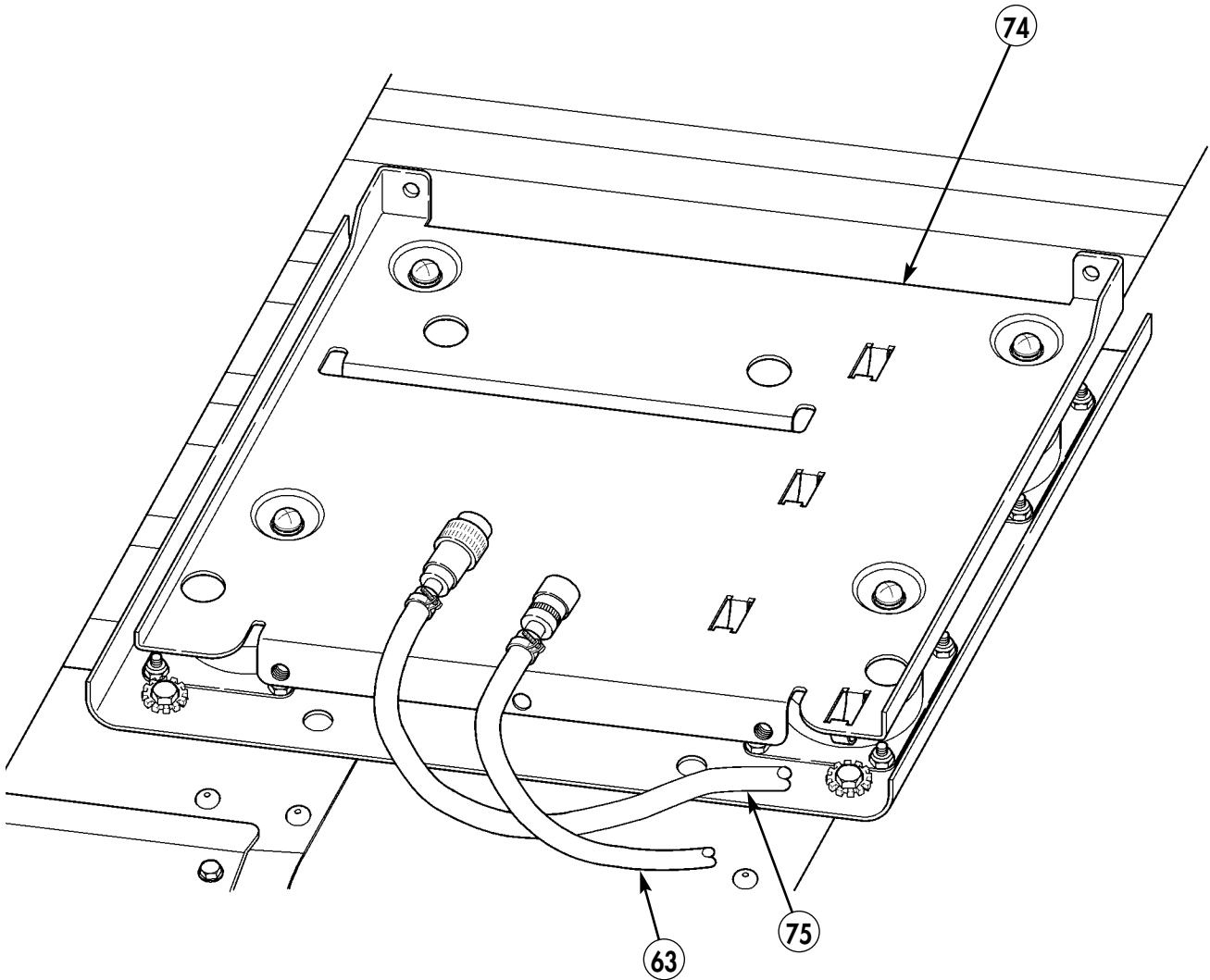


65. LOOP CLAMP – MS21333-112 – QTY. 2

Figure 5-87.

22-44. Route TAC-SAT antenna cable (63) to TAC-SAT radio mount (74).

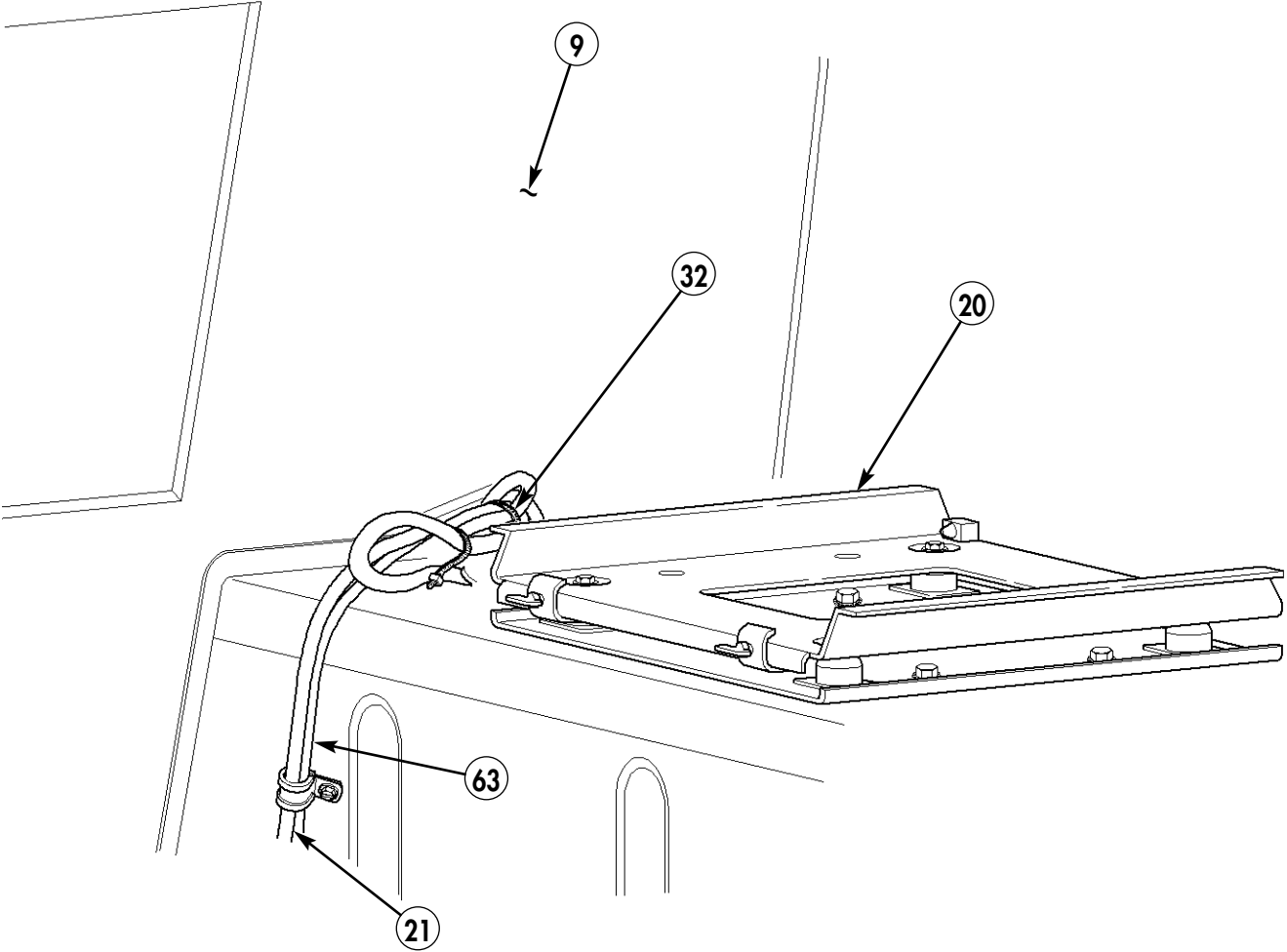
22-45. Route TAC-SAT power cable (75) from TAC-SAT radio mount (74) to tunnel.



75. TAC-SAT POWER CABLE – 10570-0705-A021 – QTY. 1

Figure 5-88.

**22-46.** Bundle TAC-SAT antenna cable (63) and HF 20 watt radio power cable (21) with tie-down straps (32) and position between EPLRS mount (20) and rear partition (9).



**32. TIE-DOWN STRAP – MS33367-1-0 – QTY. A/R**

*Figure 5-89.*

22-47. Bundle all cables (77) and install in side channel (76) of cargo floor cover (5).

**NOTE**

Ensure all cables fit neatly within cargo floor channel before installing cargo floor cover.

22-48. Install cargo floor cover (5) on cargo floor (7) with twelve existing screws (4) and four screws (6) retained in step 22-3.

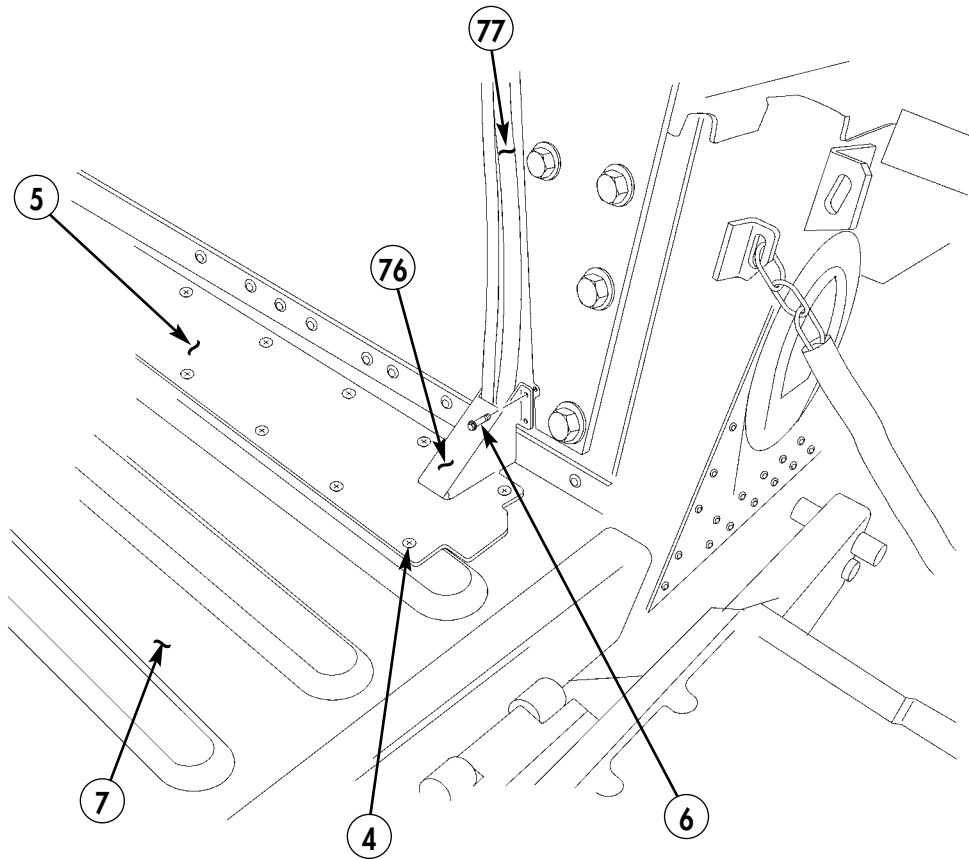


Figure 5-90.



**22-49.** Route all cables (77) forward from step 22-28 through cargo access hole (79) and in between tunnel (80) and right rear seat (78).

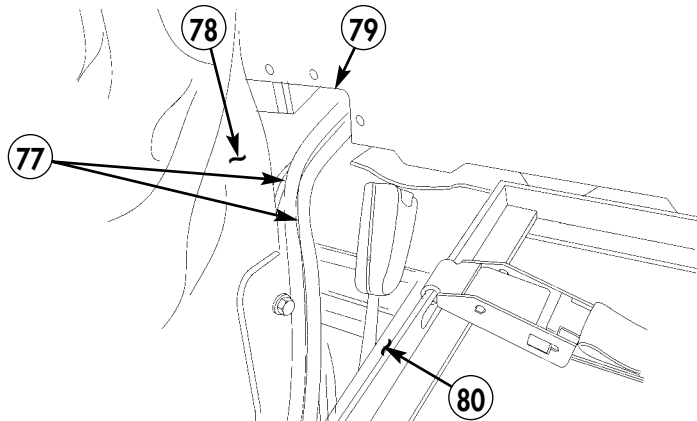


Figure 5-91.

**NOTE**

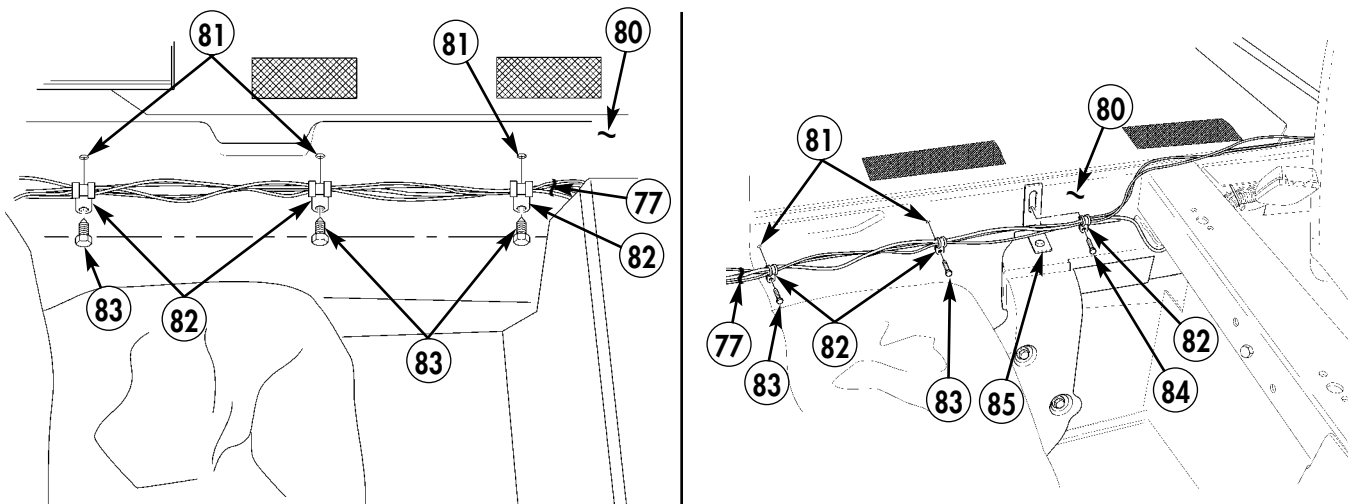
- Perform steps 22-50 and 22-51 if supplemental heater is not installed. Perform 22-52 and 22-53 if supplemental heater is installed.
- Do not route TAC-SAT or HF radio speaker cables through tunnel.

**22-50.** Locate, mark, and drill three 0.147-in. diameter holes (81) in side of tunnel (80), evenly spaced apart.

**22-51.** Secure cables (77) to side of tunnel (80) with three clamps (82) and self-tapping screws (83).

**22-52.** Locate, mark, and drill two 0.147-in. diameter holes (81) in side of tunnel (80), evenly spaced apart.

**22-53.** Secure all cables (77) to side of tunnel (80) with two loop clamps (82) and self-tapping screws (83), and clamp (82), existing bracket (85), and screw (84).



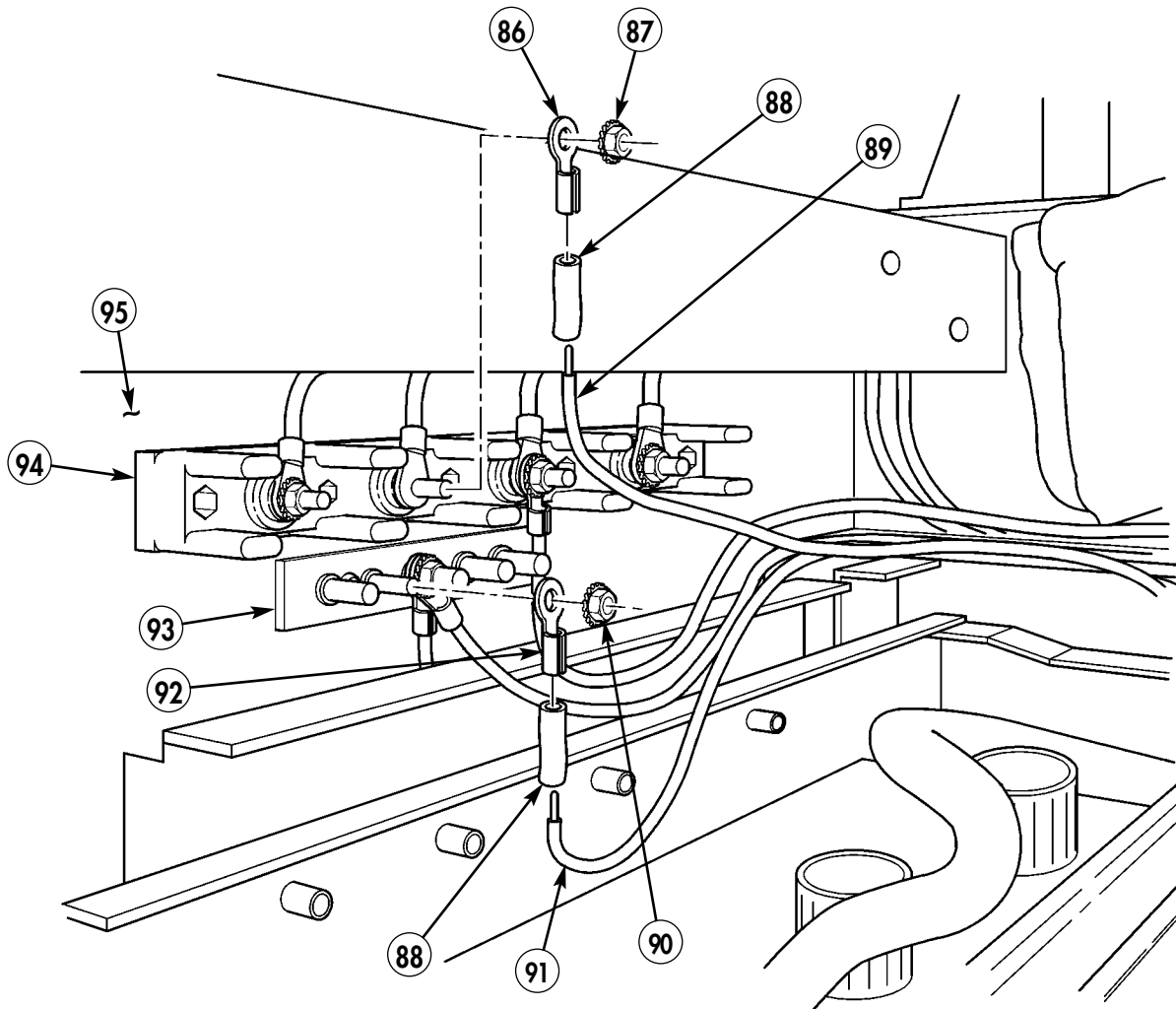
- 82. LOOP CLAMP – MS21333-75 – QTY. 3**
- 83. SELF-TAPPING SCREW – 9421073 – QTY. 2**

Figure 5-92.

**NOTE**

Remove terminal board cover before connecting leads, and reinstall cover after leads are connected.

- 22-54. Attach heat shrink tubing (88) and two terminal lugs (86) and (92) to EPLRS power cable negative lead (91) and EPLRS power cable positive lead (89). (Refer to TM 9-2320-387-24 for terminal connector repair.)
- 22-55. Connect EPLRS power cable positive lead (89) to 24-volt terminal board (94), located on cab enclosure panel (95), with existing nut (87).
- 22-56. Connect EPLRS power cable negative lead (91) to ground strap (93), located on cab enclosure panel (95), with existing nut (90).



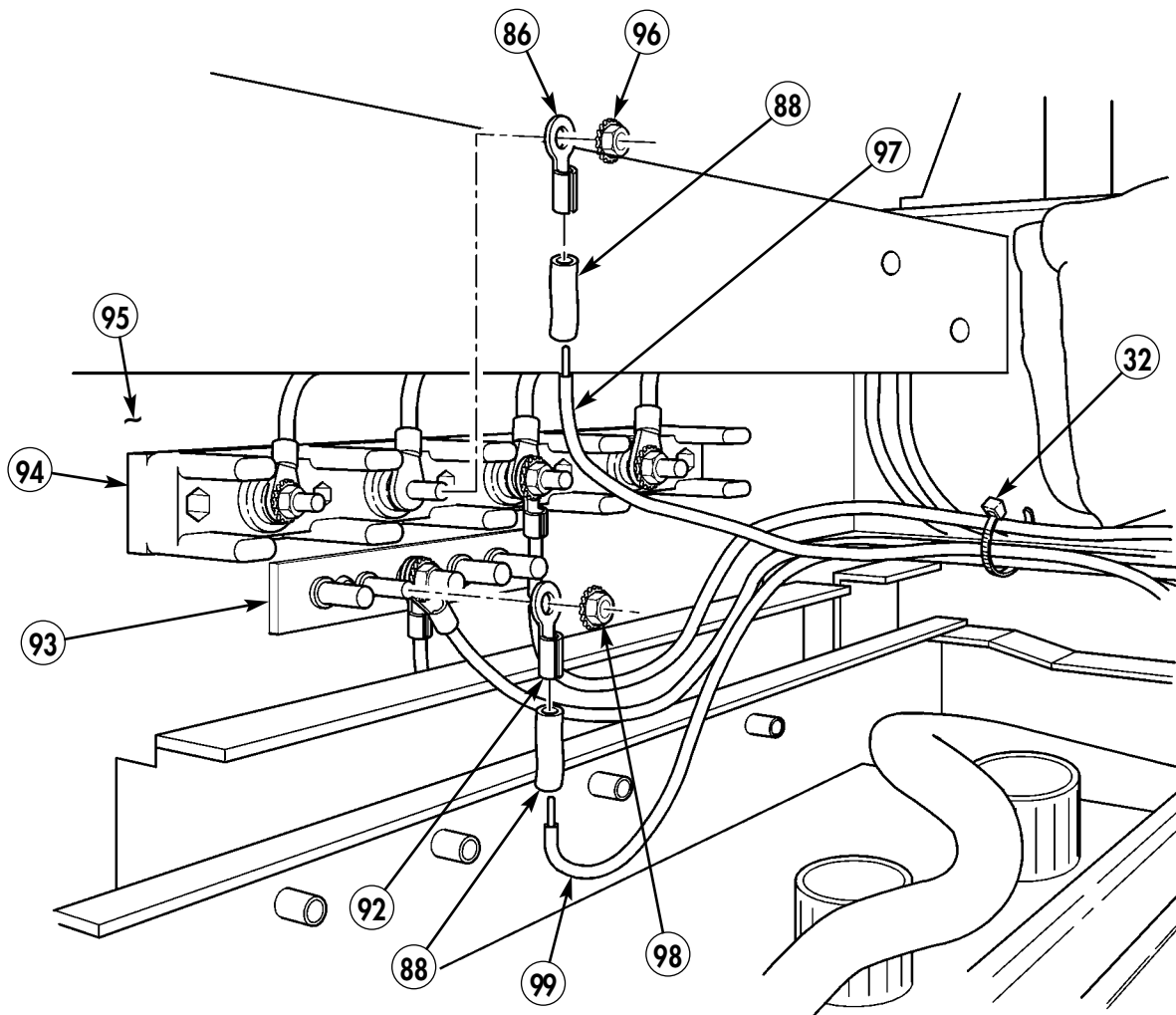
- 86. TERMINAL LUG - 7728780 - QTY. 1
- 88. SHRINK TUBING - MS23053/4-302-0 - QTY. A/R
- 92. TERMINAL LUG - 7728777 - QTY. 1

Figure 5-93.

**NOTE**

Remove terminal board cover before connecting leads, and reinstall cover after leads are connected.

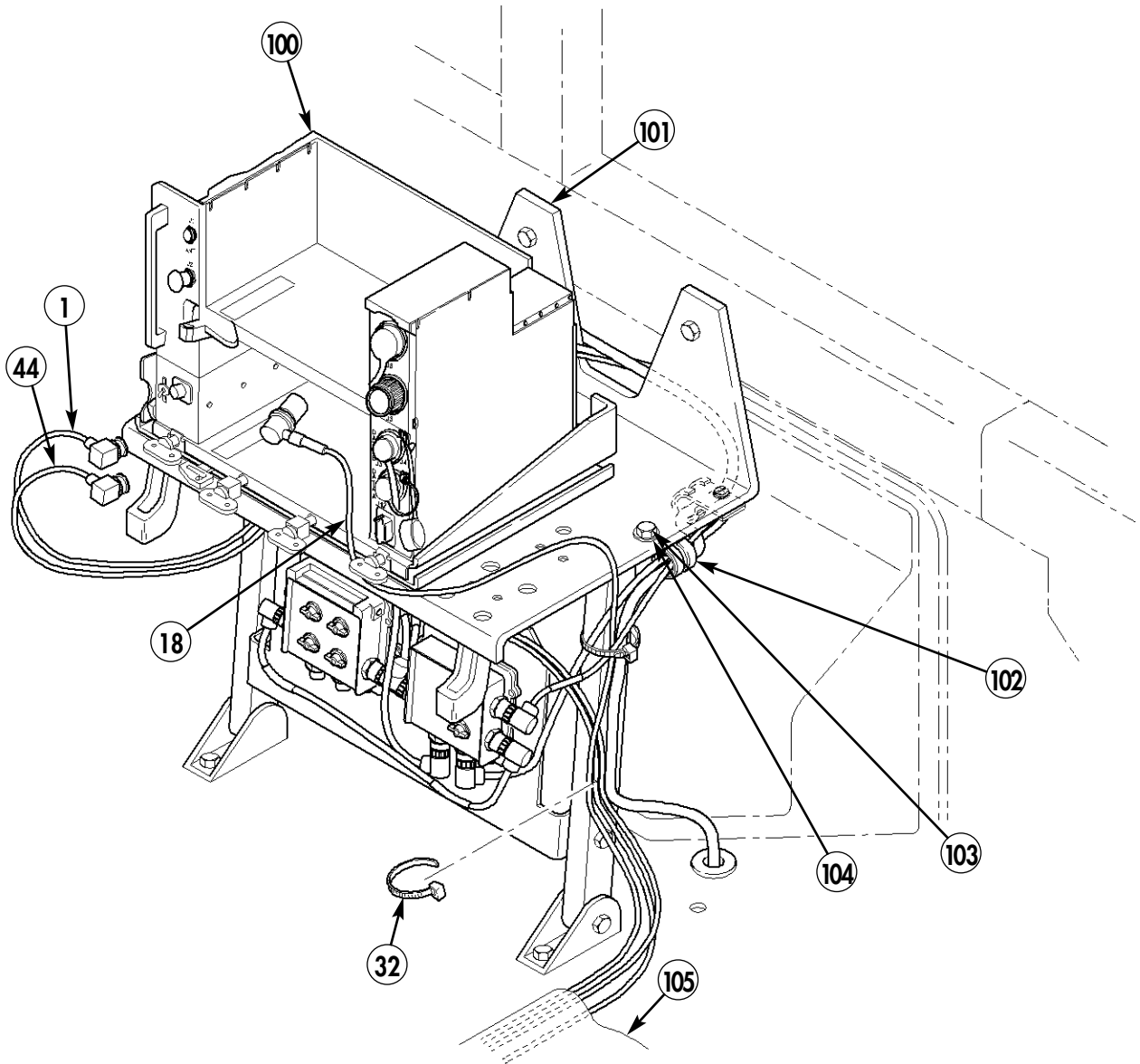
- 22-57.** Attach heat shrink tubing (89) and two terminal lugs (86) and (92) to HF 20 watt radio power cable negative lead (99) and HF 20 watt radio power cable positive lead (97). (Refer to TM 9-2320-387-24 for terminal connector repair.)
- 22-58.** Connect HF 20 watt radio power cable positive lead (97) to 24-volt terminal board (94), located on cab enclosure panel (95), with existing nut (96).
- 22-59.** Connect HF 20 watt radio power cable negative lead (99) to ground strap (93), located on cab enclosure panel (95), with existing nut (98). Secure all leads together with tiedown strap (32).



- 32.** TIEDOWN STRAP – MS3367-1-0 – QTY. A/R  
**86.** TERMINAL LUG – 7728780 – QTY. 1  
**88.** SHRINK TUBING – MS23053/4-302-0 – QTY. A/R  
**92.** TERMINAL LUG – 7728777 – QTY. 1

*Figure 5-94.*

- 22-60. Route SINCGARS antenna cables (1) and (44) under tunnel insulation (105) and up leg of radio rack (101). Secure with existing loop clamp (102), screw (103), and washer (104).
- 22-61. Route SINCGARS antenna cables (1) and (44) to vicinity of SINCGARS mount (100).
- 22-62. Route INC-EPUU cable (18) to vicinity of SINCGARS mount (100).
- 22-63. Secure SINCGARS antenna cables (1) and (44) and INC-EPUU cable (18) to radio rack (101) with tie-down straps (32).



32. TIE-DOWN STRAP – MS3367-1-0 – QTY. A/R

Figure 5-95.

- 22-64. Route URO extension cable (108) from EPLRS bracket (20) to URO bracket (106).
- 22-65. Connect URO extension cable (108) to URO bracket (106) with four screws (107), lockwashers (109), and nuts (110).

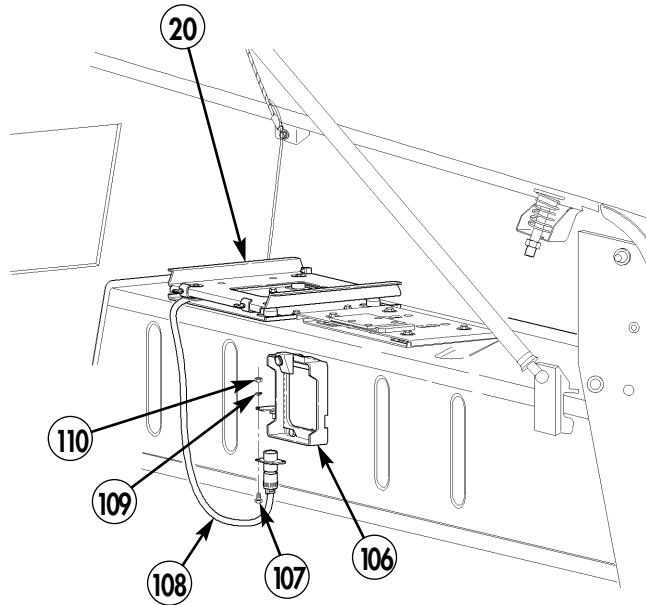
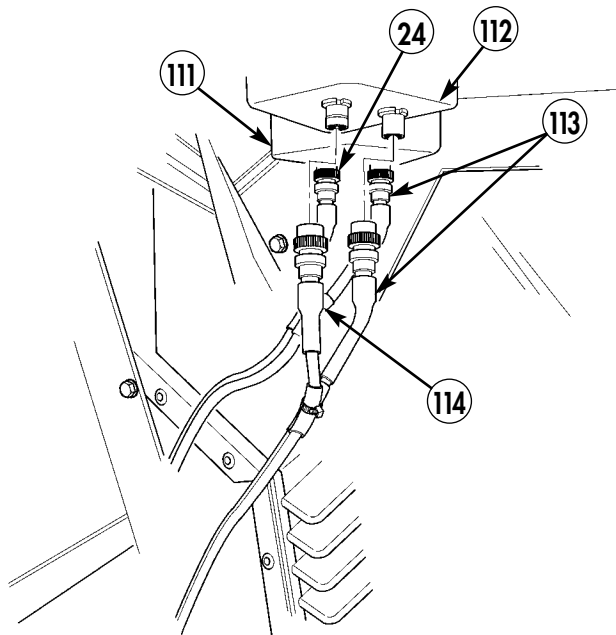


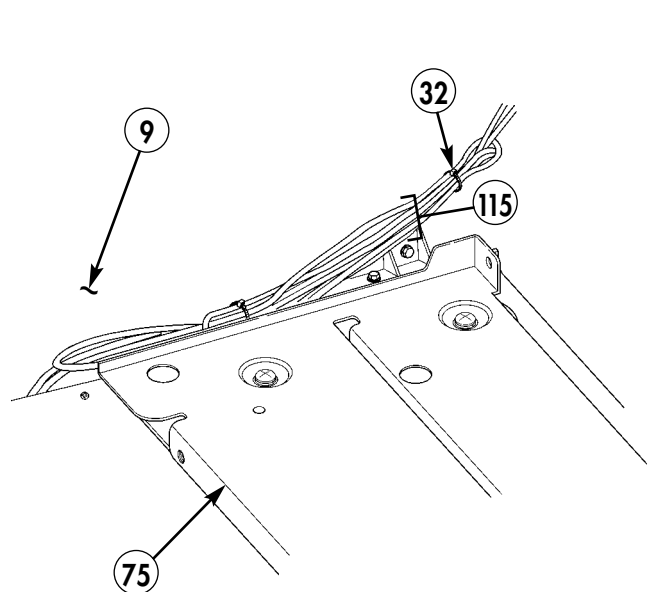
Figure 5-96.

- 22-66. Connect two TAC-SAT speaker cables (113) and (114) to TAC-SAT radio speaker (112).
- 22-67. Connect two HF 20 watt radio speaker cables (24) and (113) to HF 20 watt radio speaker (111).
- 22-68. Route speaker cables (115) down rear partition (9) behind TAC-SAT radio mount (75).
- 22-69. Bundle speaker cables (115) with tie-down straps (32) as necessary.



- 113. SPEAKER POWER CABLE –  
10535-0708-A020 – QTY. 2
- 114. TAC-SAT SPEAKER R/T CABLE –  
10535-0707-A020 – QTY. 1

Figure 5-97.



- 32. TIE-DOWN STRAP – MS3367-1-0 – QTY. A/R

Figure 5-98.



By Order of the Secretary of the Army:

PETER J. SCHOOMAKER  
*General, United States Army*  
*Chief of Staff*

Official:

A handwritten signature in black ink that reads "Joyce E. Morrow". The signature is written in a cursive style with a large, stylized initial "J".

JOYCE E. MORROW  
*Administrative Assistant to the*  
*Secretary of the Army*  
0620109

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ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO.*	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON <i>(Provide exact wording of recommended changes, if possible)</i>
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	<b>5-38</b>	<b>17</b>	<b>17-10</b>	<b>5-51</b>		<b>Insert should be part number 12446871-8.</b>
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PART II - REPAIR PARTS AND SPECIAL TOOLS LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION/FORM NUMBER TB 9-2320-387-35-5	DATE 1 OCT 2006	TITLE TECHNICAL BULLETIN INSTALLATION INSTRUCTIONS
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
<h1>SAMPLE</h1>								

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE, OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b> For use of this form, see AR 25-30; the proponent agency is ODISC4.				Use Part II (reverse) for Repair Parts and Special Tools Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).		DATE:
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