

**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**

**FORCE XXI BATTLE COMMAND, BRIGADE-AND-BELOW (FBCB2)**

**AN/UYK-128(V)**

**DEFENSE ADVANCED GPS RECEIVER (DAGR)**

**AN/PSN-13**

**VEHICULAR INTERCOMMUNICATION SET (VIS)**

**AN/VIC-3(V)20**

**BLUE FORCE TRACKING (BFT)**

**ENHANCED POSITION LOCATION REPORTING SYSTEM (EPLRS)**

**AN/VQZ-2(V)**

**FOR VEHICLE**

**TRUCK, UTILITY: EXPANDED CAPACITY, ENHANCED, IAP/ARMOR READY, M1152A1**

**(2320-01-540-2007)**

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**HEADQUARTERS, DEPARTMENT OF THE ARMY**

**OCTOBER 2007**



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WASHINGTON, D.C., 31 OCTOBER 2007

## TECHNICAL BULLETIN INSTALLATION INSTRUCTIONS

### FOR SYSTEMS

#### SINGLE CHANNEL GROUND AND AIRBORNE RADIO SYSTEM (SINGARS)

AN/VRC-88F, AN/VRC-89F, AN/VRC-90F,  
AN/VRC-91F, AN/VRC-92F

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(2320-01-540-2007)

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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: Expanded Capacity, Enhanced, IAP/Armor Ready, M1152A1.
- 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), AN/VRC-88F/89F/90F/91F/92F Series
  - b. Force XXI Battle Command, Brigade-and-Below (FBCB2), AN/UYK-128(V)
  - c. Defense Advanced GPS Receiver (DAGR), AN/PSN-13
  - d. Vehicular Intercommunication Set (VIS), AN/VIC-3(V)20
  - e. Blue Force Tracking (BFT)
  - f. Enhanced Position Location Reporting System (EPLRS) AN/VSQ-2(V)
- 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

Remove batteries. (Refer to TM 9-2320-387-24.)

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

Batteries.

### 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

#### **DAGR:**

(B): 57K4886

#### **FBCB2:**

(D): No kits available

#### **VIS:**

(E): No kits available

#### **BFT:**

(F): No kits available

#### **EPLRS:**

(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.	Antenna, DAGR	013-1981-010	5985-01-502-6692	(B)	1
2.	Bracket, Antenna	A3014546-1	5340-01-391-2742	(A)	2
3.	Bracket, Mounting	12506679		(B)	1
4.	Cable Assembly, Antenna DAGR	987-5016-001	5995-01-521-4244	(B)	1
5.	Cable Assembly, Antenna DAGR	987-4640-001	5995-01-504-1762	(B)	1
6.	Cable Assembly, Radio Frequency	A3014031-8	5995-01-219-7035	(A)	1
7.	Cable Assembly, Radio Frequency	A3014031-17	5995-01-225-1660	(A)	1
8.	Cable, Power	987-5019-001	6150-01-521-6757	(B)	1
9.	Capscrew	MS35307-365	5305-00-847-1159	(A)	8
10.	Clamp, Loop	MS21333-75	5340-00-050-2740	(A)	4
11.	Clamp, Loop	MS21333-97	5340-00-080-9853	(B)	1
12.	DAGR AN/PSN-13	822-1873-001	5285-01-516-8038	(B)	1
13.	Gasket	A3013655-1	5330-01-205-2864	(A)	2
14.	Mount, Installation	987-5006-001	5975-01-521-3063	(B)	1
15.	Mounting Base, Electrical Equipment	A3013367-1	5975-01-188-8873	(A)	1
16.	Insert	12446871-3	5325-01-411-0066	(B)	2
17.	Nut, Lock	MS17829-3C	5310-00-689-3877	(B)	4
18.	Screw, Machine	MS35206-263	5305-00-984-6210	(B)	4
19.	Screw, Machine	MS35206-267	5305-00-984-6214	(B)	4
20.	Screw, Machine	MS35207-261	5305-00-990-6444	(B)	1
21.	Support	12506676		(B)	1
22.	Terminal Lug	7728777	5940-00-983-4067	(B)	1
23.	Terminal Lug	7728780	5940-01-035-4212	(B)	1
24.	Tubing, Shrink	MS23054/4-103-0		(B)	3 in.
25.	Washer, Lock	MS35338-43	5310-00-045-3296	(B)	5
26.	Washer, Lock	MS35338-44	5310-00-582-5965	(A)	14
27.	Washer, Lock	MS45904-72	5310-00-889-2527	(A)	6

**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.	Antenna Base	A3017899-2	5985-01-308-8988	2
2.	Antenna, AS-3499/VSQ-1	A3005031	5820-01-183-9462	1
3.	Antenna, Element (lower)	A3018230-1	5985-01-306-8110	2
4.	Antenna, Element (upper)	A3017901-2	5985-01-306-4622	2
5.	Anti-seize	12Z31001-1	8030-00-292-1102	A/R
6.	Assembly, Display Lock	872843-1	N/A	1
7.	Bar, Locking			1
8.	Bolt	MS35751-18	5306-00-108-9988	4
9.	Box, Stowage, Keyboard	889519-1	2540-01-499-0607	1
10.	Bracket, Antenna Base	A3050655-1	5340-01-412-4379	1
11.	Bracket, Locking			1
12.	Bracket, Mounting	889567-14		1
13.	Bracket, Transceiver	A1-38239D	—	1
14.	Bracket, User-Readout	A3006206	5340-01-386-7841	1
15.	Cable Assembly, Power	A3206017-3	5995-01-452-4309	1
16.	Cable Assembly	A3206018-2	5995-01-392-6196	1
17.	Cable Assembly, INC-EPUU	A3279383-3	5995-01-453-9171	1
18.	Cable Assembly, R/T	A3206019-3	5995-01-458-5334	1
19.	Cable Assembly, R/T	A3206127-3	5995-01-479-9739	1
20.	Cable, EPLRS Power	A3004939	5995-01-198-0538	1
21.	Cable, EPLRS Antenna	SM-C-911480	5995-01-167-1269	1
22.	Cable, Transceiver	A1-35997D	5995-01-531-2166	1
23.	Cable, URO	A3109227	5995-01-417-8085	1
24.	Cable, W3N	881336-1	5995-01-478-4913	1
25.	Cable, W3P	881335-1	5995-01-478-4891	1
26.	Clamp, Loop	MS21333-68	5340-00-843-7825	8
28.	Clamp, Loop	MS21333-98	5340-00-809-1490	2
29.	Clamp, Loop	MS21333-99	5340-00-993-6207	1
30.	Clamp, Loop	MS21333-100	5340-00-809-1492	4
31.	Clamp, Loop	MS21333-101	5340-00-088-6655	2
32.	Clamp, Loop	MS21333-105	5340-00-809-1494	6
33.	Clamp, Loop	MS21333-108	5340-00-057-3025	2
34.	Clamp, Loop	MS21333-110	5340-00-057-3034	2
35.	Clamp, Loop	MS21333-111	5340-00-057-3037	4
36.	Clamp, Loop	MS21333-112	5340-00-057-3043	2
37.	Clamp, Loop	MS21333-129	5340-00-151-9651	1
38.	CPU	881292-1	7021-01-474-3793	1
39.	Decal	861868-2	N/A	1
40.	Display	881293-1	7025-01-475-0229	1
41.	EPLRS AN/VSQ-2(V)	—	—	1
42.	Footrest Weldment	889567-21	N/A	1
43.	Full Function Control Station	A3206624	5895-01-469-6120	1
44.	Gasket	A3013655-1	5330-01-205-2864	1

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

ITEM NO.	NOMENCLATURE	PART NUMBER	NSN	QTY.
45.	Grommet, Nonmetallic	12338098	5325-01-208-5424	2
46.	Grommet, Nonmetallic	MS21266-6N	5325-00-783-4753	3 in.
47.	Grommet, Nonmetallic	MS21266-5N	5325-00-783-4754	3 in.
48.	Grommet, Nonmetallic	MS35489-27	5325-00-290-1960	1
49.	Guard, Amp	872842-1	5935-01-487-2172	1
50.	Insert	12446871-2	5310-01-411-3422	4
51.	Insert	12446871-3	5325-01-411-0066	2
52.	Insert	12446871-5	5325-01-483-7480	3
53.	Insert	12446871-7	5325-01-475-9697	4
54.	Insert	12446871-15	5325-01-535-5501	4
55.	Insert	12446871-16	N/A	7
56.	Integrated Rack	889509-1	—	1
57.	Isolation Kit, CPU	872826-2	5340-01-481-5741	1
58.	Isolation Kit, Display	872870-1	5340-01-481-5757	1
59.	Keyboard	501395-1	—	1
60.	Lanyard	8925T5-7X19	4010-01-497-2675	1
61.	Left Rail Weldment	889567-12	N/A	1
62.	Master Control Station	A3206623	5895-01-469-3352	1
63.	Mount, Antenna Overcab	A3265061	—	1
64.	Mount, Ramball	RAM-D-111-M1U	5975-01-485-3615	1
65.	Mount, Resilient	MT-6146/VSQ-1	5340-01-167-8297	1
66.	Nut	MS35649-2252	5310-00-997-1888	5
67.	Nut	MS51967-6	5310-00-931-8167	1
68.	Nut	120376	5310-00-930-4940	4
69.	Nut	13218E0320-293	5310-00-913-8881	12
70.	Nut	9418892	5310-01-157-9819	10
71.	Nut	9417954	5310-00-931-8167	2
72.	Nut	9419143	5310-01-148-0240	6
73.	Nut, Lock	M45913/4-4CG8Z	5310-01-548-1269	4
74.	Nut, Lock	M45913/4-5CG8Z	—	1
75.	Nut, Lock	271166	5310-00-696-5172	3
76.	Nut, Lock	271169	5310-00-124-9265	2
77.	Nut, Lock	271172	5310-01-152-0598	4
78.	Nut, Lock	271175	5310-01-333-5245	2
79.	Nut, Lock	271178	5310-01-407-7198	1
80.	Nut, Lock	9422279	5310-01-462-4393	1
81.	Overhead Rail, Left	A3265060-001	—	1
82.	Overhead Rail, Right	A3265060-002	—	1
83.	Padlock	—	—	1
84.	Plate, Interface	12506814	5310-00-422-1674	1
85.	Rack Support	889509-22	N/A	1
86.	Right Rail Weldment	889567-22	N/A	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.
87.	Rod	889567-16	N/A	1
88.	Screw, Cap	B1821BH025C075N	5305-00-068-0508	6
89.	Screw, Cap	B1821BH031F100N	5305-00-051-4076	2
90.	Screw, Cap	B1821BH031C100N	5306-00-226-4827	4
91.	Screw, Cap	B1821BH031F125N	5305-00-051-4078	8
92.	Screw, Cap	B1821BH038C325N	5305-00-808-0864	2
93.	Screw, Cap	B1821BH038C175N	5306-00-226-4832	2
94.	Screw, Cap	B1821BH025C150N	5305-00-071-2509	2
95.	Screw, Cap	B1821BH025C100N	5305-00-225-3843	29
96.	Screw, Cap	B1821BH025C088N	5305-00-071-2505	7
97.	Screw, Cap	B1821BH025C125N	5305-00-068-0509	3
98.	Screw, Cap	B1821BH025C200N	5305-00-071-2511	5
99.	Screw, Cap	B1821BH038C150N	5305-00-725-2317	4
100.	Screw, Cap	B1821BH038C200N	5305-00-782-9489	5
101.	Screw, Cap	B1821BH038C375N	5305-00-990-8632	2
102.	Screw, Cap	MS35206-266	5305-00-984-6213	4
103.	Screw	MS35206-267	5305-00-984-6214	1
104.	Screw	MS24667-35	5305-00-968-3514	1
105.	Screw	MS35308-336	5306-00-021-3915	4
106.	Screw, Machine	MS35190-287	5305-00-954-4295	2
107.	Screw, Machine	MS35190-291	5305-00-958-5247	2
108.	Screw, Machine	—	—	4
109.	Screw, Machine	MS35207-263	5305-00-989-7434	2
110.	Screw, Self-Tapping	9421073	5305-01-162-8512	7
111.	Serial Interface Adapter Device	881331-1	4920-01-478-3722	1
112.	Spacer	10705AL315C	5365-01-487-3145	4
113.	Spacer	51506-8070R	N/A	3
114.	Spacer	51506-8097R	—	3
115.	Spacer	6501138	—	2
116.	Spacer	6500859	—	1
117.	Spacer	6500872	—	1
118.	Spacer	—	—	1
119.	Strap, Tiedown	MS3367-1-0	5975-00-984-6582	A/R
120.	Spiral Wrap	11644992	9330-01-038-3486	20 in.
121.	Switch Box Assembly	A1-36044D	—	1
122.	Tape, Electrical	HH-I-595A-108-0	5970-00-926-7219	A/R
123.	Terminal Lug	MS20659-108	5940-00-115-2674	2
124.	Terminal Lug	MS20659-141	5940-00-113-9825	4
125.	Terminal Lug	7728777	5940-00-983-4067	1
126.	Terminal Lug	7728780	5940-01-035-4212	1
127.	Transceiver	MT2010E	—	1
128.	Tubing, Shrink	MS23053/4-103-0	N/A	3 in.

**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.
129.	Washer	2436161	5310-01-102-3270	10
130.	Washer	2436162	5310-01-119-1024	1
131.	Washer	MS27183-10	5310-00-809-4058	13
132.	Washer	MS27183-13	—	3
133.	Washer	MS51412-23	5310-01-333-0060	3
134.	Washer	9416128	5310-00-402-2778	4
135.	Washer	MS27183-47	5310-01-312-4959	2
136.	Washer	10910174-19	5310-00-964-3415	4
137.	Washer	9414920	—	7
138.	Washer	12338095	5310-01-208-7576	6
139.	Washer	2436162	5310-01-119-1024	1
140.	Washer		—	4
141.	Washer	120392	5310-00-809-4058	24
142.	Washer	120394	5310-00-582-5977	8
143.	Washer, Lock	MS35338-45	5310-00-407-9566	7
144.	Washer, Lock	MS35338-44	5310-00-582-5965	39
145.	Washer, Lock	MS45904-71	5310-00-947-6980	12
146.	Washer, Lock	MS45904-72	5310-00-889-2527	12
147.	Washer, Lock	MS35338-43	5306-00-959-0793	6
148.	Washer, Lock	MS45904-76	5310-00-061-1258	24
149.	Washer, Lock	—	—	4
150.	Washer, Lock	MS35338-46	5310-00-637-9541	8
151.	Wingnut	MS51553-420	5310-01-384-2546	4
152.	Wire, Braided	AA59569F30T0375	6145-00-191-8402	A/R
153.	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)
- Defense Advanced Global Positioning System Receiver (DAGR)
- Vehicular Intercommunications Set (VIS)
- Force XXI Battle Command, Brigade-and-Below (FBCB2)
- Blue Force Tracking (BFT)
- Enhanced Position Location Reporting System (EPLRS)

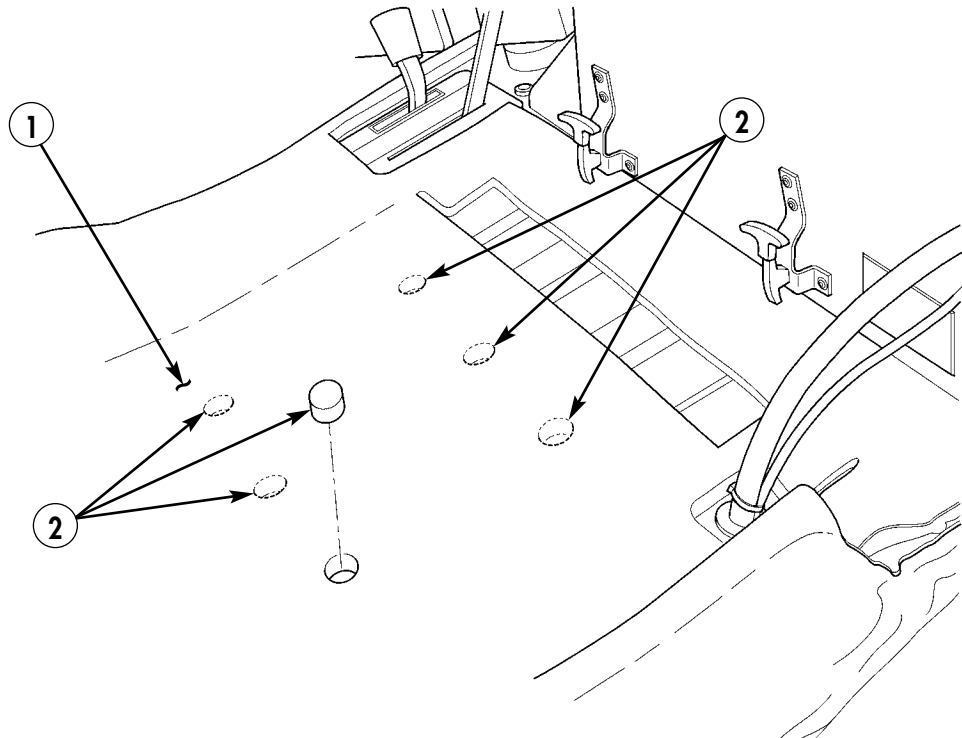
Perform the steps in this chapter when installing SINCGARS, DAGR, VIS, FBCB2, BFT, and EPLRS. When installing C4ISR equipment, be sure to read and follow instructions and illustrations carefully.

### Section II. INTEGRATED RACK INSTALLATION

#### NOTE

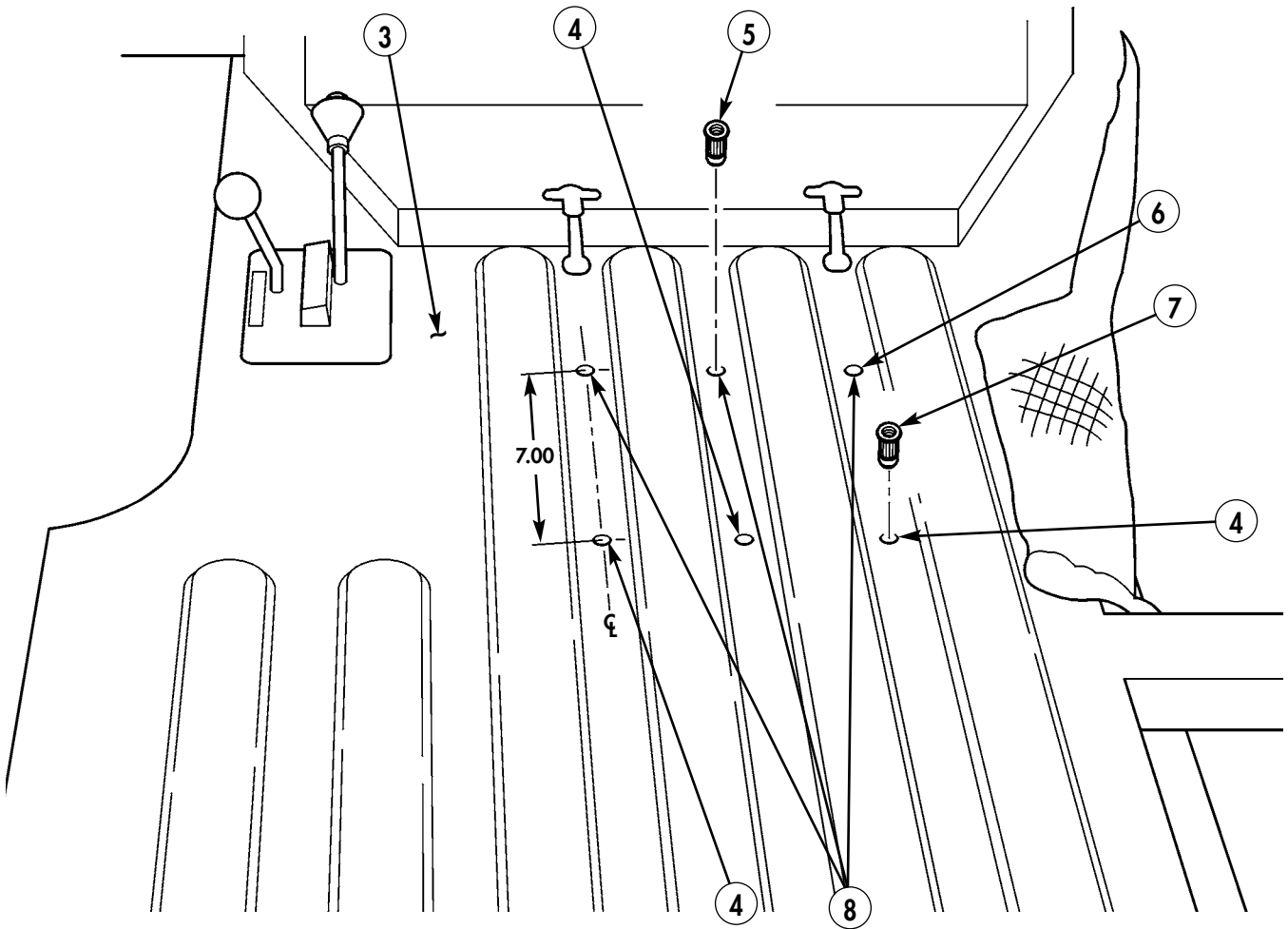
Early production vehicles require holes to be drilled. If cutouts are present, perform steps 2-1 and 2-2 then proceed to step 2-10. If cutouts are not present, skip to step 2-3.

- 2-1.** Remove standard radio rack. (Refer to TM 9-2320-387-24.)
- 2-2.** If cutouts are present, remove six cutouts (2) from tunnel insulation (1).
- 2-3.** If cutouts are not present, cut holes in tunnel insulation.



*Figure 5-1.*

- 2-4. Remove three existing rivets (6) from tunnel floor (3).
- 2-5. Locate and mark three holes (4) in tunnel floor (3).
- 2-6. Enlarge three holes (8) in tunnel floor (3) to 0.391-in.
- 2-7. Drill three 0.531-in. diameter holes (4) in tunnel floor (3).
- 2-8. Install three inserts (5) in tunnel floor (3).
- 2-9. Install three inserts (7) in tunnel floor (3).

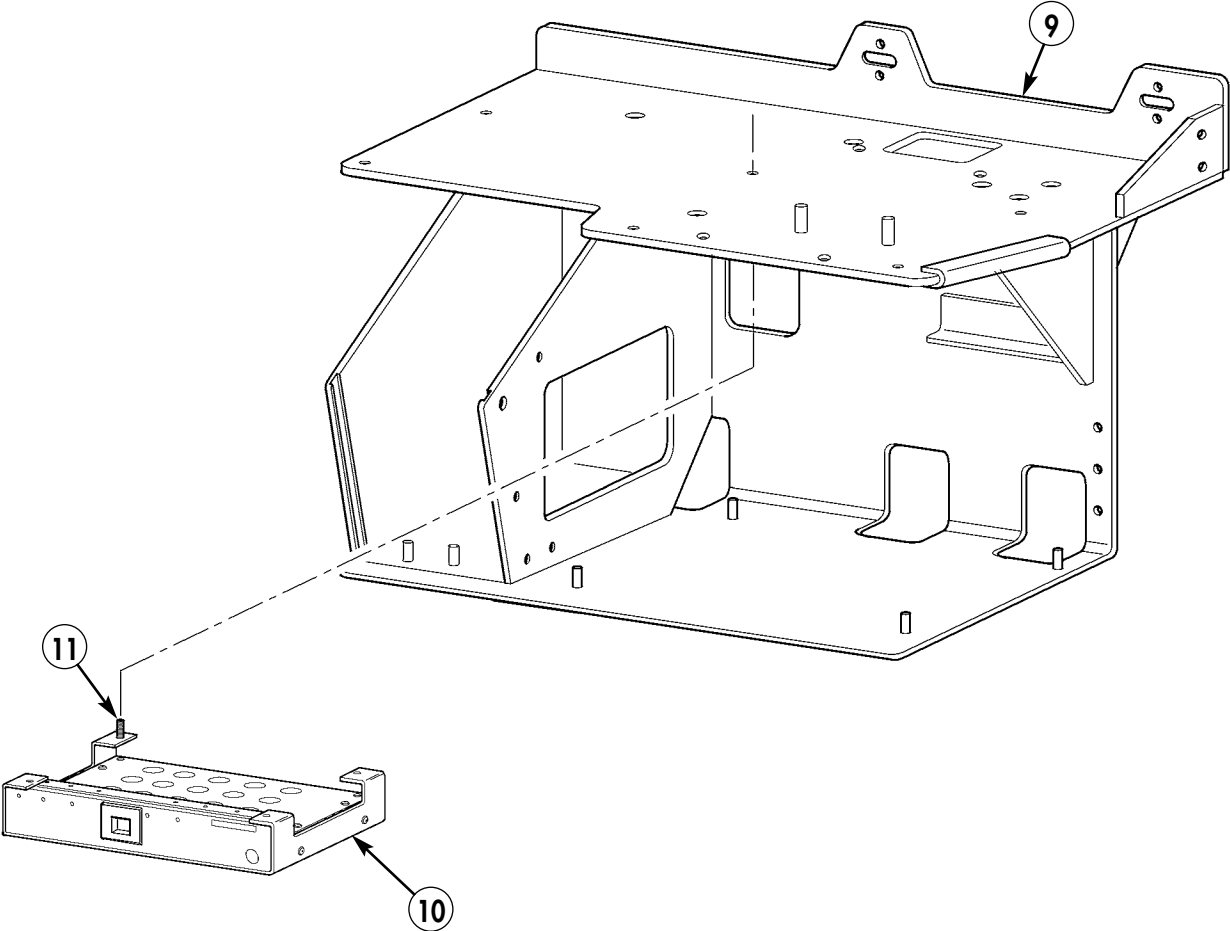


- 5. INSERT - 12446871-16 - QTY. 3
- 7. INSERT - 12446871-5 - QTY. 3

Figure 5-2.



2-10. Install keyboard stowage box (10) on integrated rack (9) using four existing captive screws (11).



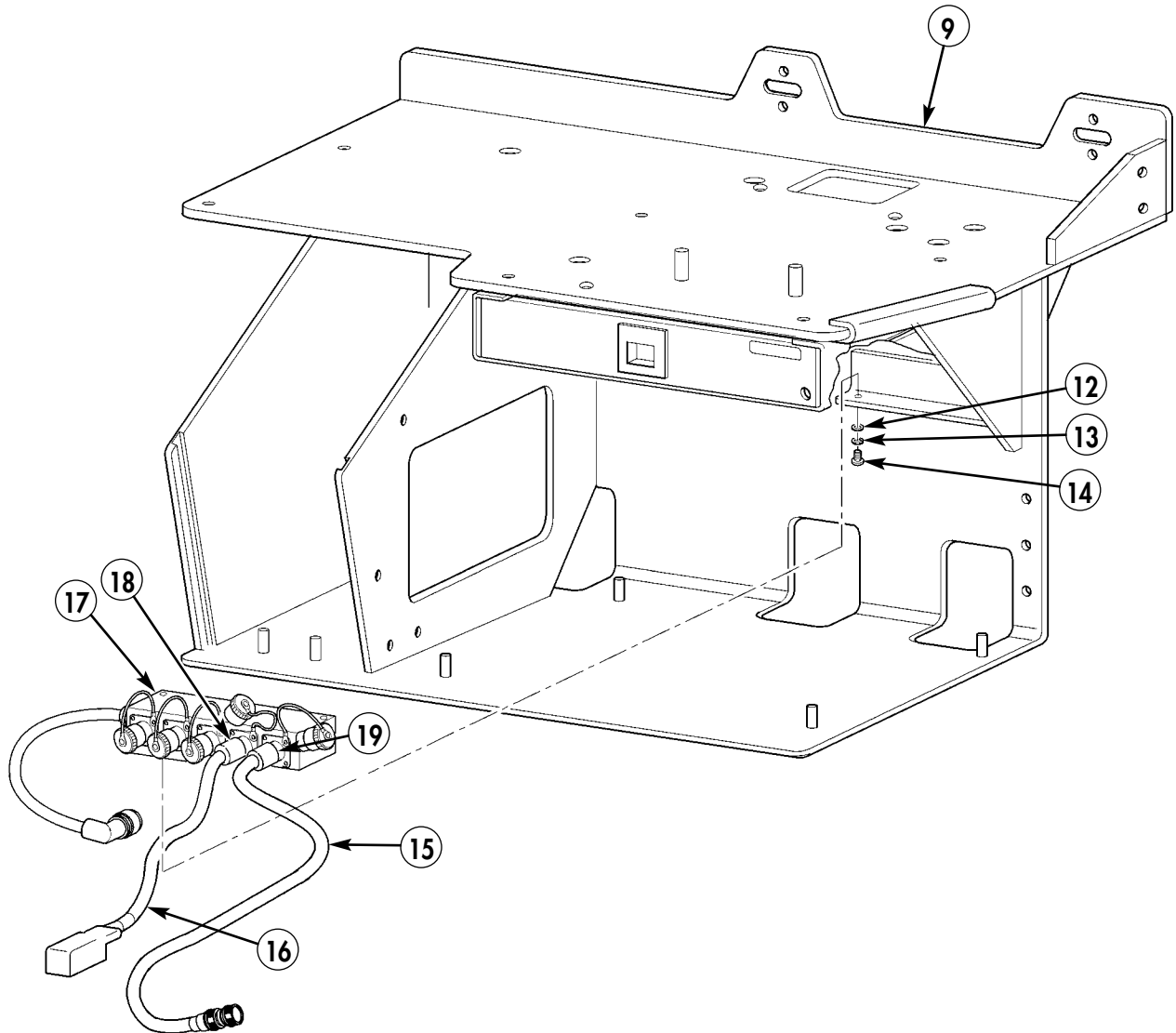
- 9. INTEGRATED RACK - 889509-1 - QTY. 1
- 10. KEYBOARD STOWAGE BOX - 889519-1 - QTY. 1

Figure 5-3.

**NOTE**

Install W3N cable if using BFT only.

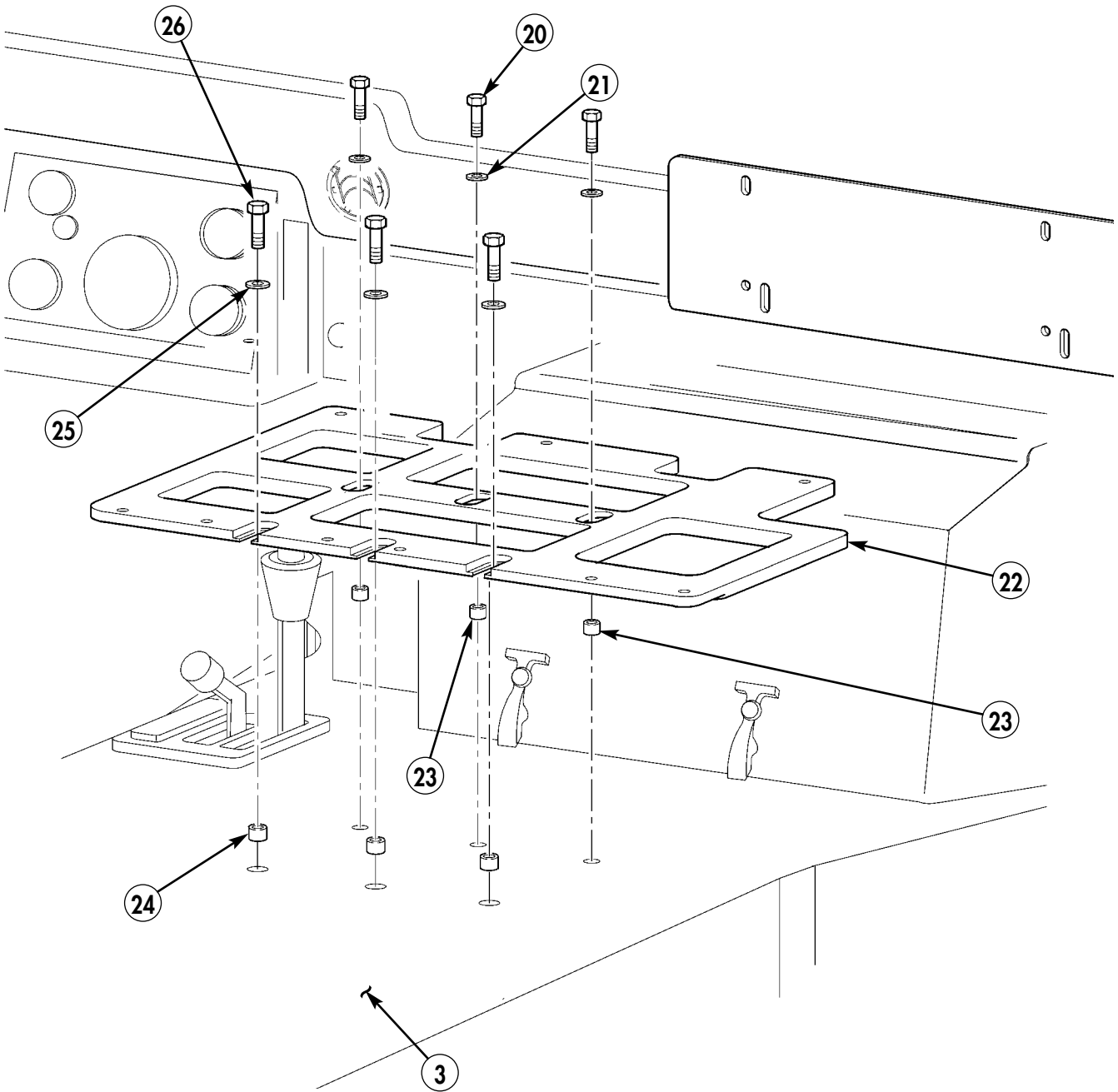
- 2-11. Install W3N cable (15) to J1 connector (19) on Serial Interface Adapter Device (SIAD) (17).
- 2-12. Install W3P cable (16) to J2 connector (18) on SIAD (17). Route W3P cable (16) to DAGR.
- 2-13. Install SIAD (17) on integrated rack (9) using two screws (14), lockwashers (13), and washers (12).



- 12. WASHER – MS27183-47 – QTY. 2
- 13. LOCKWASHER – MS35338-43 – QTY. 2
- 14. SCREW – MS35207-263 – QTY. 2
- 15. W3N CABLE – 881336-1 – QTY. 1
- 16. W3P CABLE – 881335-1 – QTY. 1
- 17. SIAD – 881331-1 – QTY. 1

Figure 5-4.

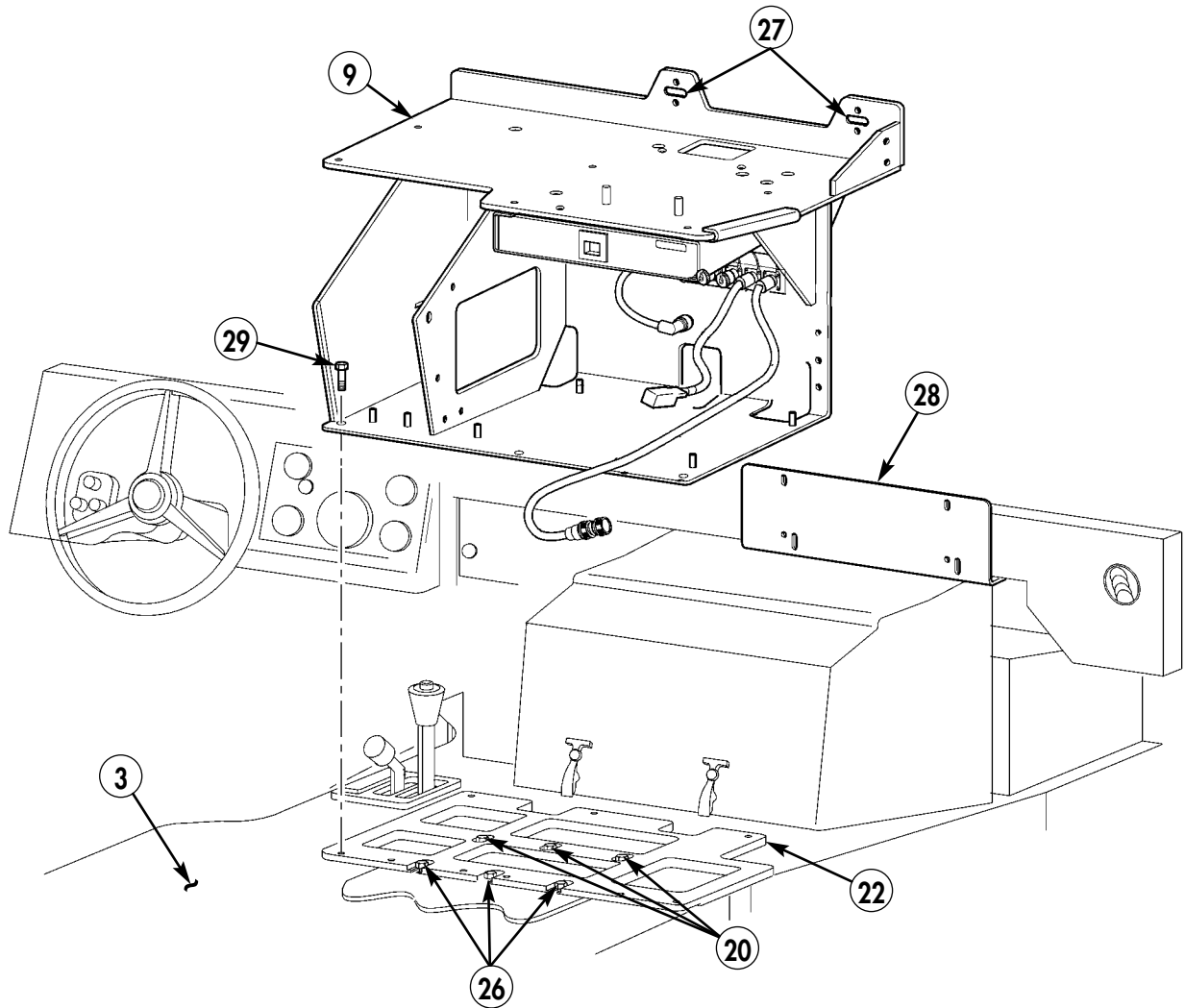
**2-14.** Install rack support (22) on tunnel floor (3) with three capscrews (20), washers (21), spacers (23), three capscrews (26), washers (25), and spacers (24). Do not tighten capscrews (20) and (26) at this time.



- 20. CAPSCREW - B1821BH025C200N - QTY. 3
- 21. WASHER - MS27183-10 - QTY. 3
- 22. RACK SUPPORT - 889509-22 - QTY. 1
- 23. SPACER - 51506-8070R - QTY. 3
- 24. SPACER - 51506-8097R - QTY. 3
- 25. WASHER - MS27183-13 - QTY. 3
- 26. CAPSCREW - B1821BH038C200N - QTY. 3

Figure 5-5.

- 2-15. Temporarily install integrated rack (9) on rack support (22) with two capscrews (29).
- 2-16. Position rack support (22) and top mounting holes (27) of integrated rack (9) to radio rack support plate (28).
- 2-17. Remove two capscrews (29) and integrated rack (9) from rack support (22).
- 2-18. Tighten rack support (22) to tunnel floor (3) with six capscrews (20) and (26).



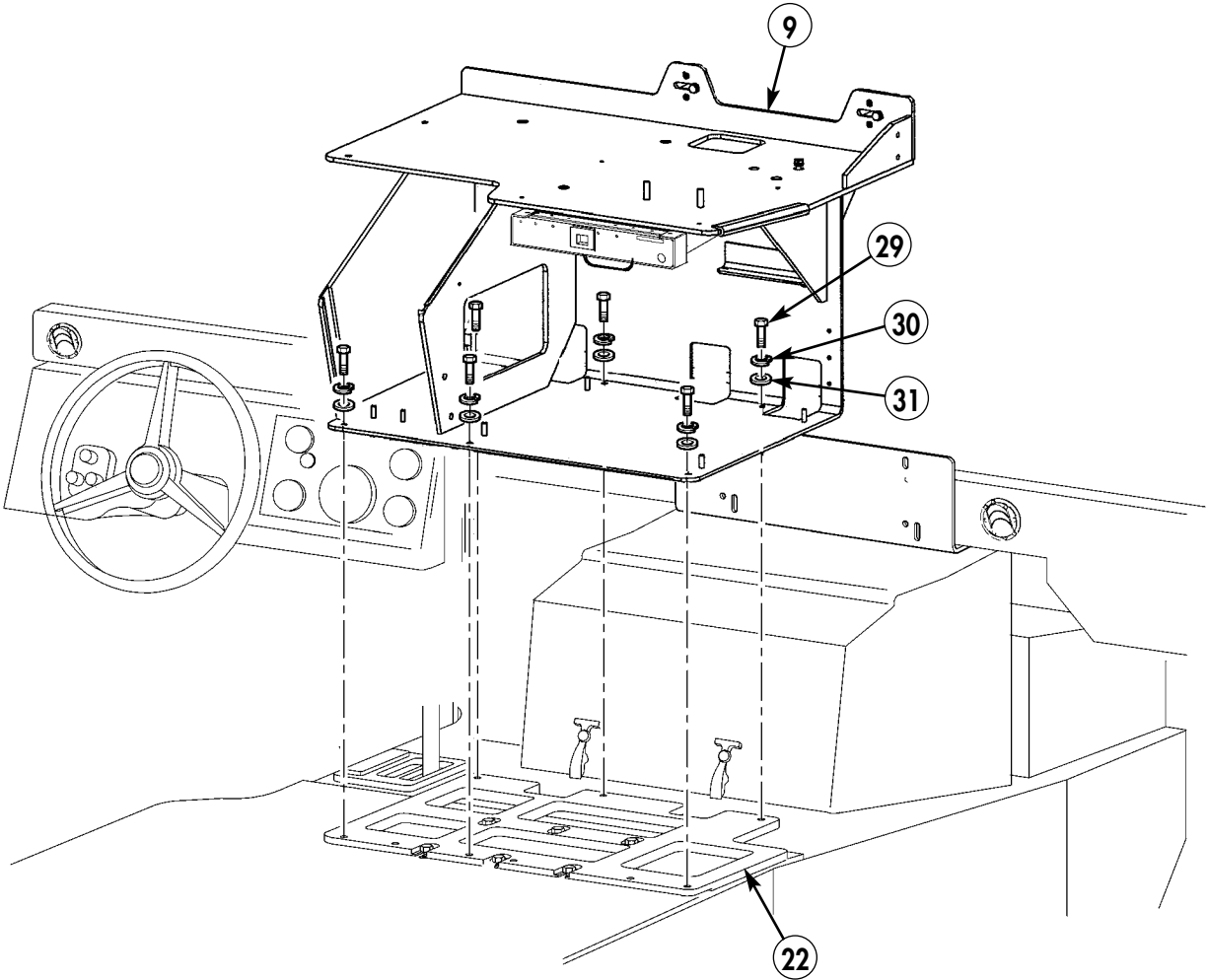
29. CAPSCREW – B1821BH025C088N – QTY. 6

Figure 5-6.

**NOTE**

SIAD and cables not shown for clarity.

**2-19.** Install integrated rack (9) on rack support (22) with six capscrews (29), lockwashers (30), and washers (31).



- 30. LOCKWASHER – MS35338-44 – QTY. 6
- 31. WASHER – MS27183-10 – QTY. 6

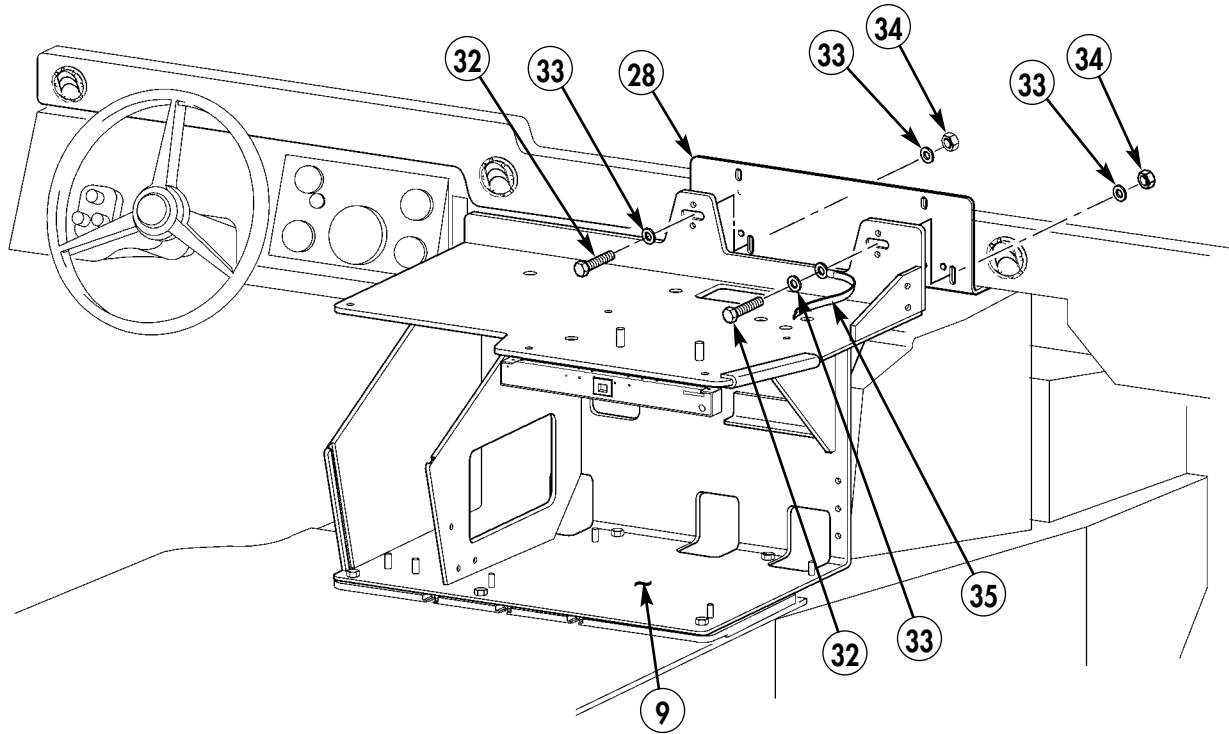
Figure 5-7.

2-20. Fabricate ground strap (35) from 8-in. length of braided wire and two terminal lugs.

**NOTE**

Remove paint from vicinity of integrated rack mounting holes before performing step 2-21. Apply antiseize compound as required.

2-21. Attach integrated rack (9) to radio rack support plate (28) with two capscrews (32), washers (33), ground strap (35), two washers (33), and nuts (34).



- 32. CAPSCREW – B1821BH025C150N – QTY. 2
- 33. WASHER – 2436161 – QTY. 4
- 34. LOCKNUT – M45913/4-4CG8Z – QTY. 2
- 35. GROUND STRAP
  - BRAIDED WIRE – AA59569F30T0375 – QTY. A/R
  - TERMINAL LUG – MS20659-141 – QTY. 2

Figure 5-8.

### Section III. SINGARS MOUNTING TRAY, AMP GUARD, AND FBCB2 COMPONENTS INSTALLATION

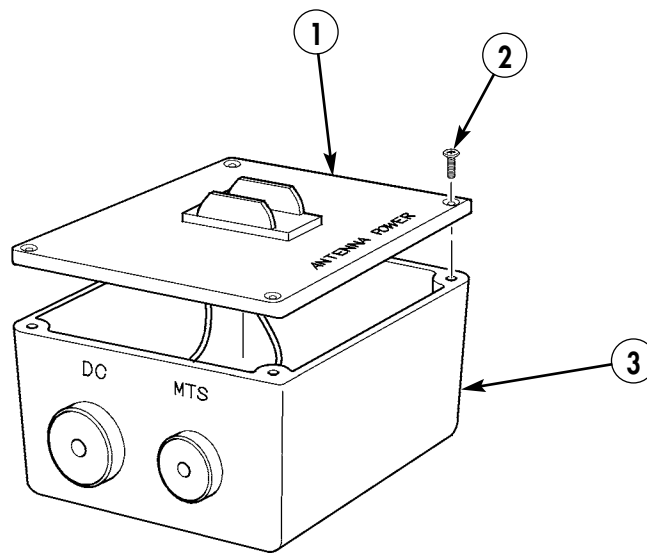
#### **CAUTION**

Take care when removing antenna power switch cover as antenna switch is still connected. Equipment damage may occur if antenna power switch cover is removed forcefully.

#### **NOTE**

Antenna switch box is for Blue Force Tracking (BFT). If not installing BFT, skip to step 3-7.

- 3-1. Remove four screws (2) and antenna power switch cover (1) from antenna power switch box (3). Retain all hardware.



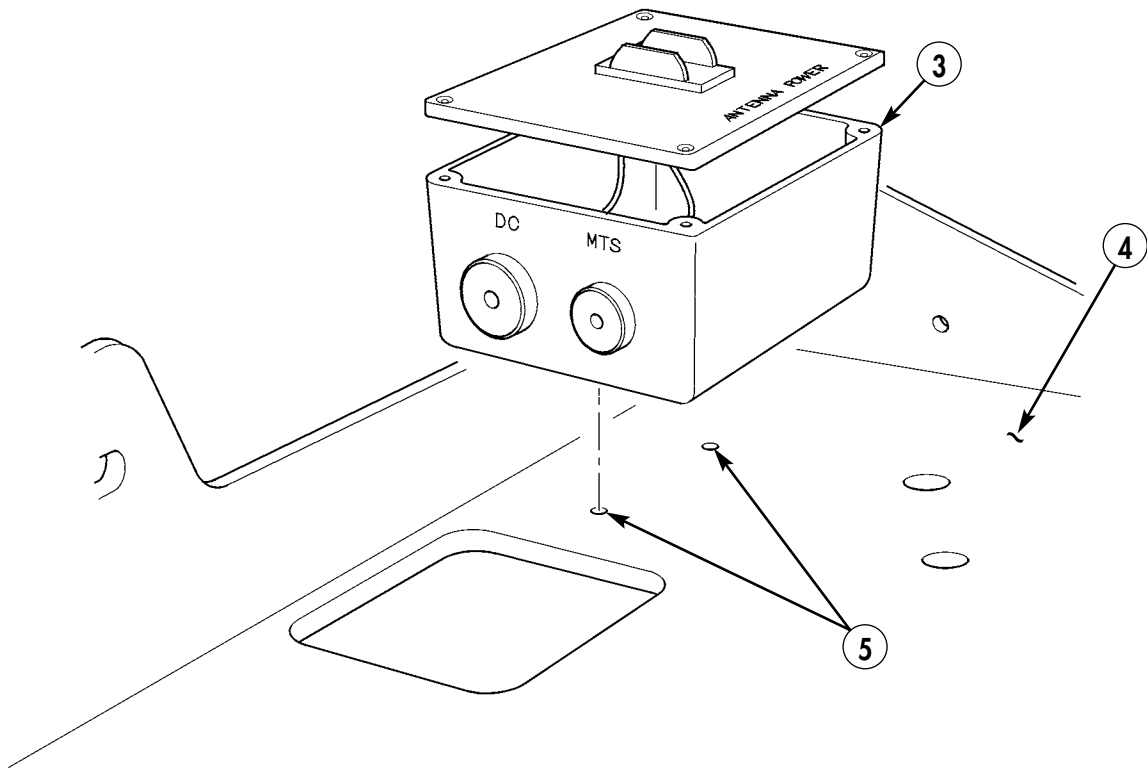
#### 3. SWITCH BOX ASSEMBLY – A1-36044D – QTY. 1

*Figure 5-9.*

**NOTE**

- Antenna power switch box mounting holes may already exist in integrated rack. If antenna power switch box mounting holes exist, do not perform step 3-2.
- Antenna power switch box should be flush with cutout in integrated rack and against the rear flange of integrated rack.

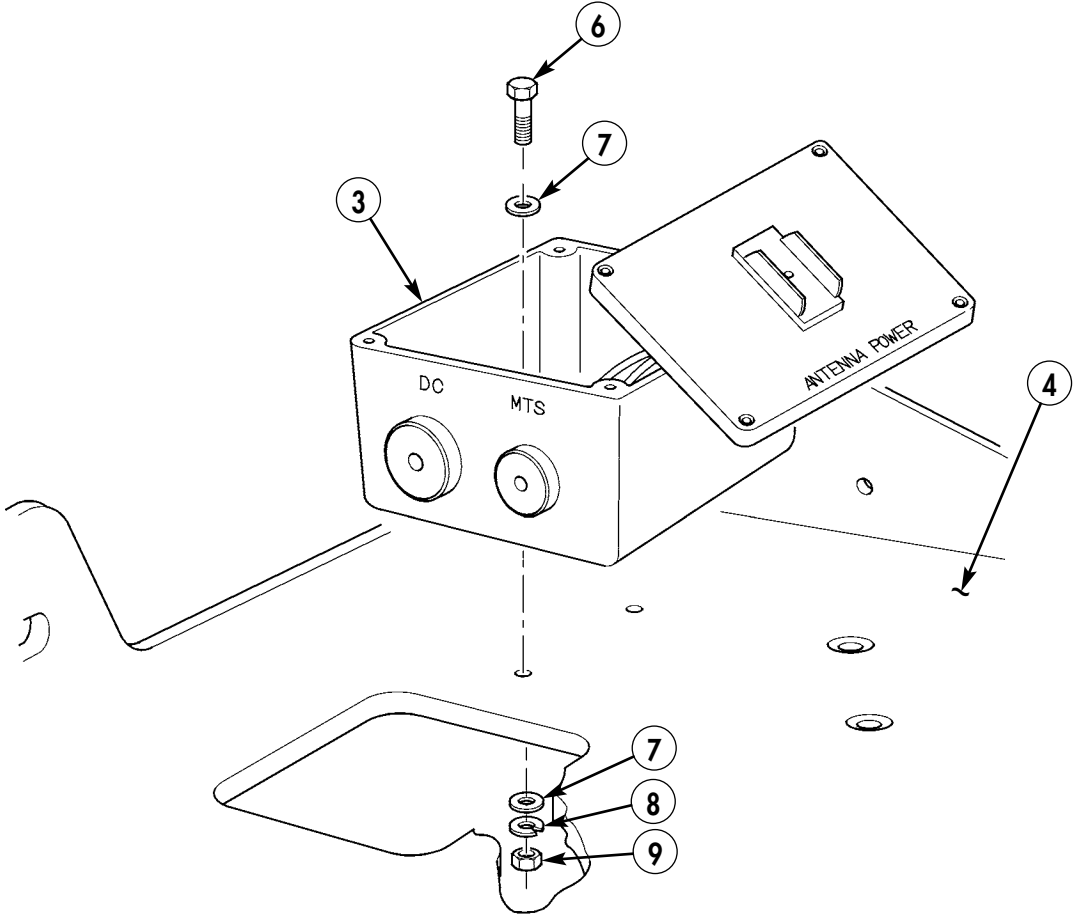
- 3-2.** Using antenna power switch box (3) as template, locate and mark two hole positions (5) in integrated rack (4).
- 3-3.** Remove antenna power switch box (3) from integrated rack (4).
- 3-4.** Drill two 0.281-in. diameter holes (5) in integrated rack (4).



*Figure 5-10.*



3-5. Install antenna power switch box (3) on integrated rack (4) with two capscrews (6), four washers (7), two lockwashers (8), and nuts (9).



- 6. CAPSCREW – B1821BH025C075N – QTY. 2
- 7. WASHER – 2436161 – QTY. 4
- 8. LOCKWASHER – MS35338-44 – QTY. 2
- 9. NUT – 9419143 – QTY. 2

Figure 5-11.

- 3-6. Install antenna power switch cover (1) on antenna power switch box (3) with four existing screws (2).

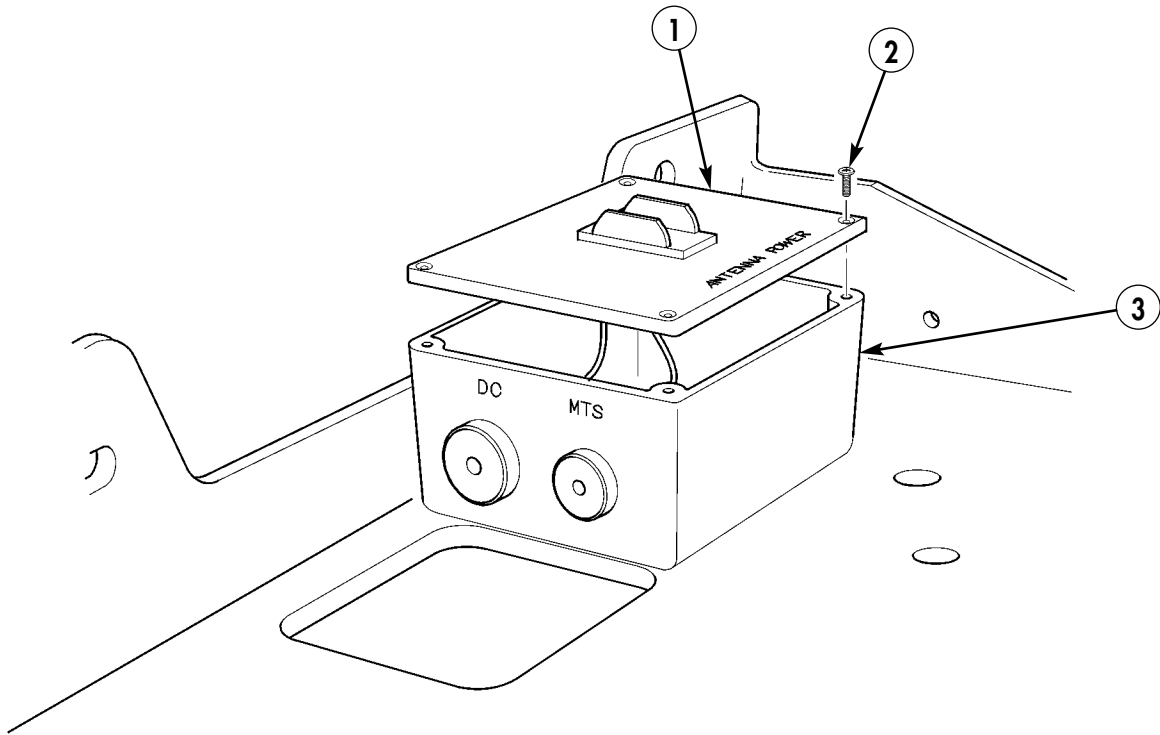
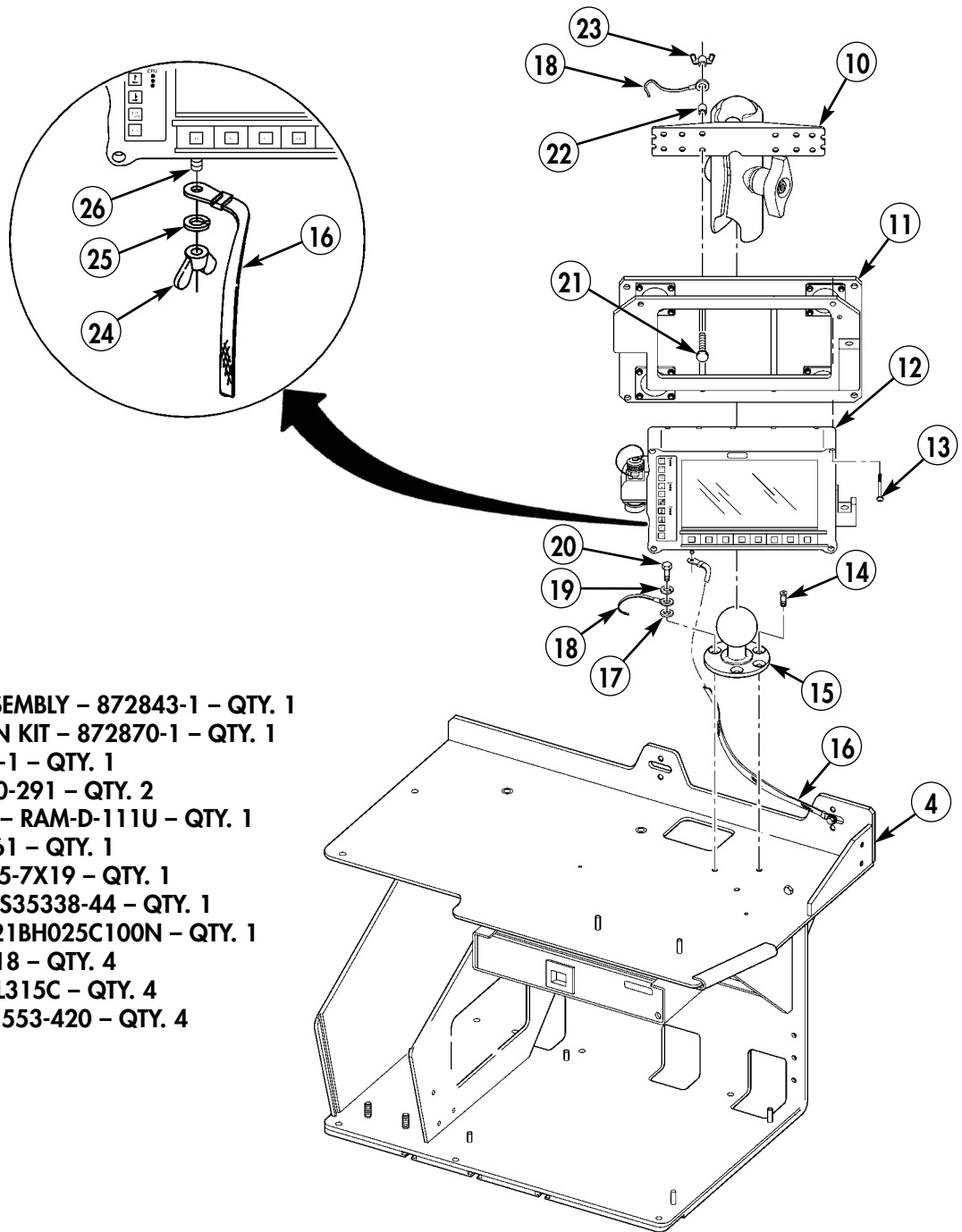


Figure 5-12.

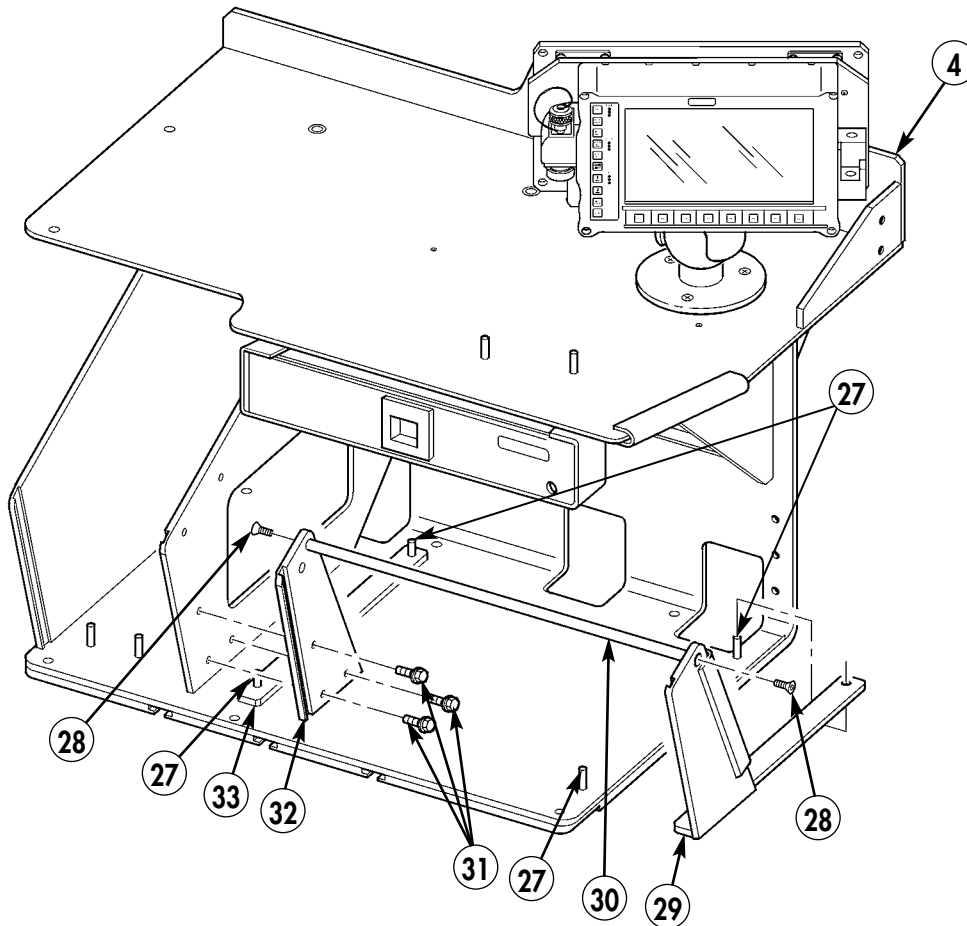
- 3-7. Install ramball mount (15) on integrated rack (4) with two screws (14), lockwasher (19), lanyard (18), and washer (17).
- 3-8. Install display isolation kit (11) on display lock assembly (10) with four bolts (21), spacers (22), lanyard (18), and four wingnuts (23).
- 3-9. Install display unit (12) on display isolation kit (11) with four existing screws (13).
- 3-10. Install display lock assembly (10) on ramball mount (15).
- 3-11. Install ground strap (16) on display ground stud (26) with existing lockwasher (25) and wingnut (24).



- 10. DISPLAY LOCK ASSEMBLY - 872843-1 - QTY. 1
- 11. DISPLAY ISOLATION KIT - 872870-1 - QTY. 1
- 12. DISPLAY - 881293-1 - QTY. 1
- 14. SCREW - MS35190-291 - QTY. 2
- 15. RAMBALL MOUNT - RAM-D-111U - QTY. 1
- 17. WASHER - 2436161 - QTY. 1
- 18. LANYARD - 8925T5-7X19 - QTY. 1
- 19. LOCKWASHER - MS35338-44 - QTY. 1
- 20. CAPSCREW - B1821BH025C100N - QTY. 1
- 21. BOLT - MS35751-18 - QTY. 4
- 22. SPACER - 10705AL315C - QTY. 4
- 23. WINGNUT - MS51553-420 - QTY. 4

Figure 5-13.

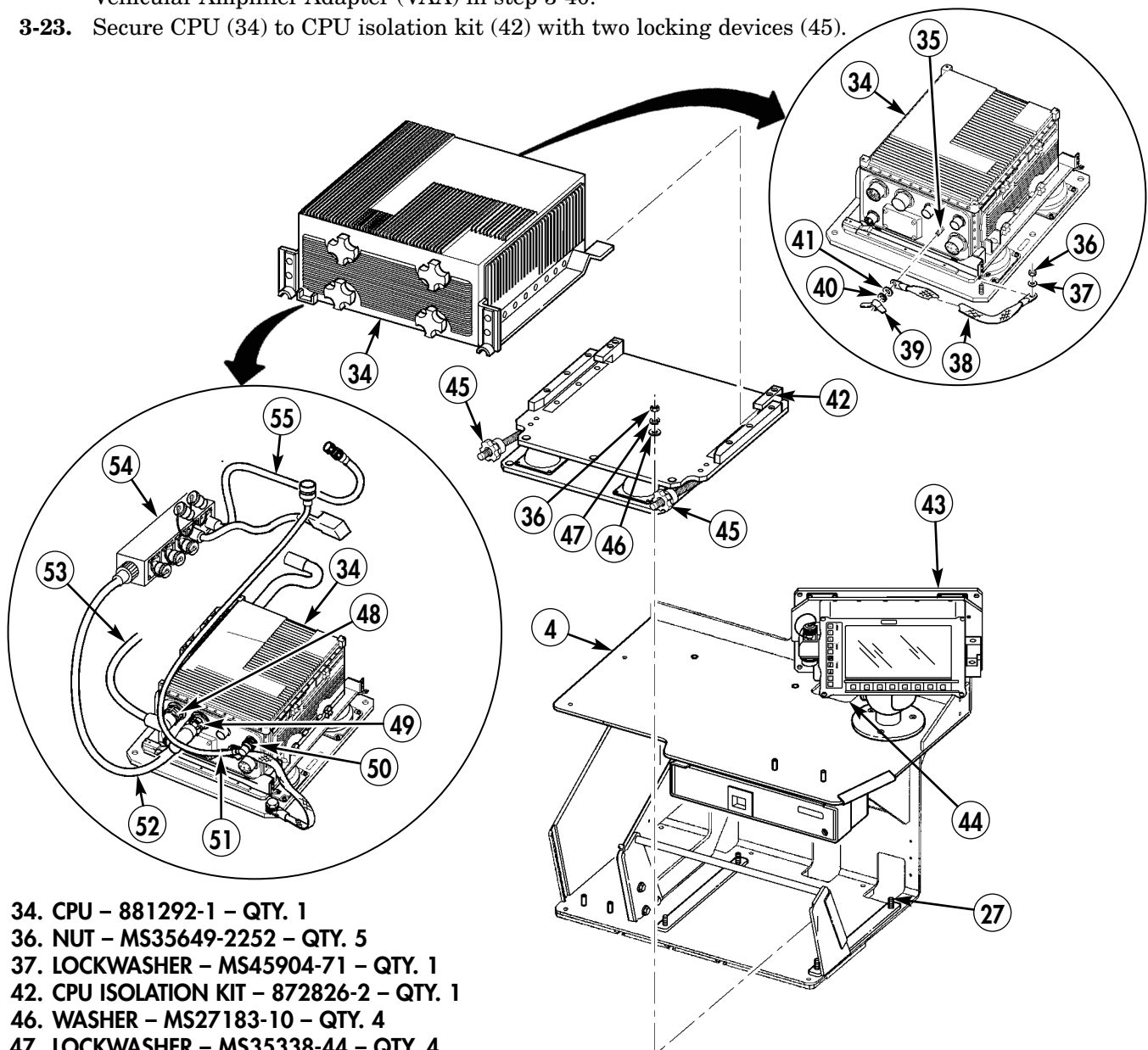
- 3-12. Place mounting bracket (33) on two existing left-hand studs (27).
- 3-13. Attach rod (30) to left rail weldment (32) and right rail weldment (29) with two screws (28).
- 3-14. Place rail assembly on two existing right-hand studs (27) on integrated rack (4) and attach left rail weldment (32) to integrated rack (4) with three capscrews (31).



- 28. SCREW – MS35190-287 – QTY. 2
- 29. RIGHT RAIL WELDMENT – 889567-22 – QTY. 1
- 30. ROD – 889567-16 – QTY. 1
- 31. CAPSCREW – B1821BH025C075N – QTY. 3
- 32. LEFT RAIL WELDMENT – 889567-12 – QTY. 1
- 33. MOUNTING BRACKET – 889567-14 – QTY. 1

Figure 5-14.

- 3-15.** Install CPU isolation kit (42) on integrated rack (4) and four existing studs (27), with three washers (46), lockwashers (47), and nuts (36).
- 3-16.** Position CPU (34) on CPU isolation kit (42).
- 3-17.** Install ground strap (38) on stud (35) of CPU (34) with existing wingnut (39), lockwasher (40), and washer (41).
- 3-18.** Secure ground strap (38) to stud of integrated rack (4) with lockwasher (37) and nut (36).
- 3-19.** Connect P1 connector (52) from Serial Interface Adapter Device (SIAD) (54) to J3 connector (49) on CPU (34).
- 3-20.** Connect W1P2 connector of W1 cable (51) to J1 connector (50) on CPU (34). Route W1 cable (51) through access cut out (44) of integrated rack (4) to top of integrated rack (4).
- 3-21.** Connect W2P1 connector of W2 cable (53) to J4 connector (48) on CPU (34). Route W2 cable through access cut out (44) of integrated rack (4) towards FBCB2 display unit (43). Connect in step 3-33.
- 3-22.** Route W3N cable (55) from SIAD (54) through access cut out (44) of integrated rack (4). Connect to Vehicular Amplifier Adapter (VAA) in step 3-40.
- 3-23.** Secure CPU (34) to CPU isolation kit (42) with two locking devices (45).



- 34.** CPU - 881292-1 - QTY. 1  
**36.** NUT - MS35649-2252 - QTY. 5  
**37.** LOCKWASHER - MS45904-71 - QTY. 1  
**42.** CPU ISOLATION KIT - 872826-2 - QTY. 1  
**46.** WASHER - MS27183-10 - QTY. 4  
**47.** LOCKWASHER - MS35338-44 - QTY. 4

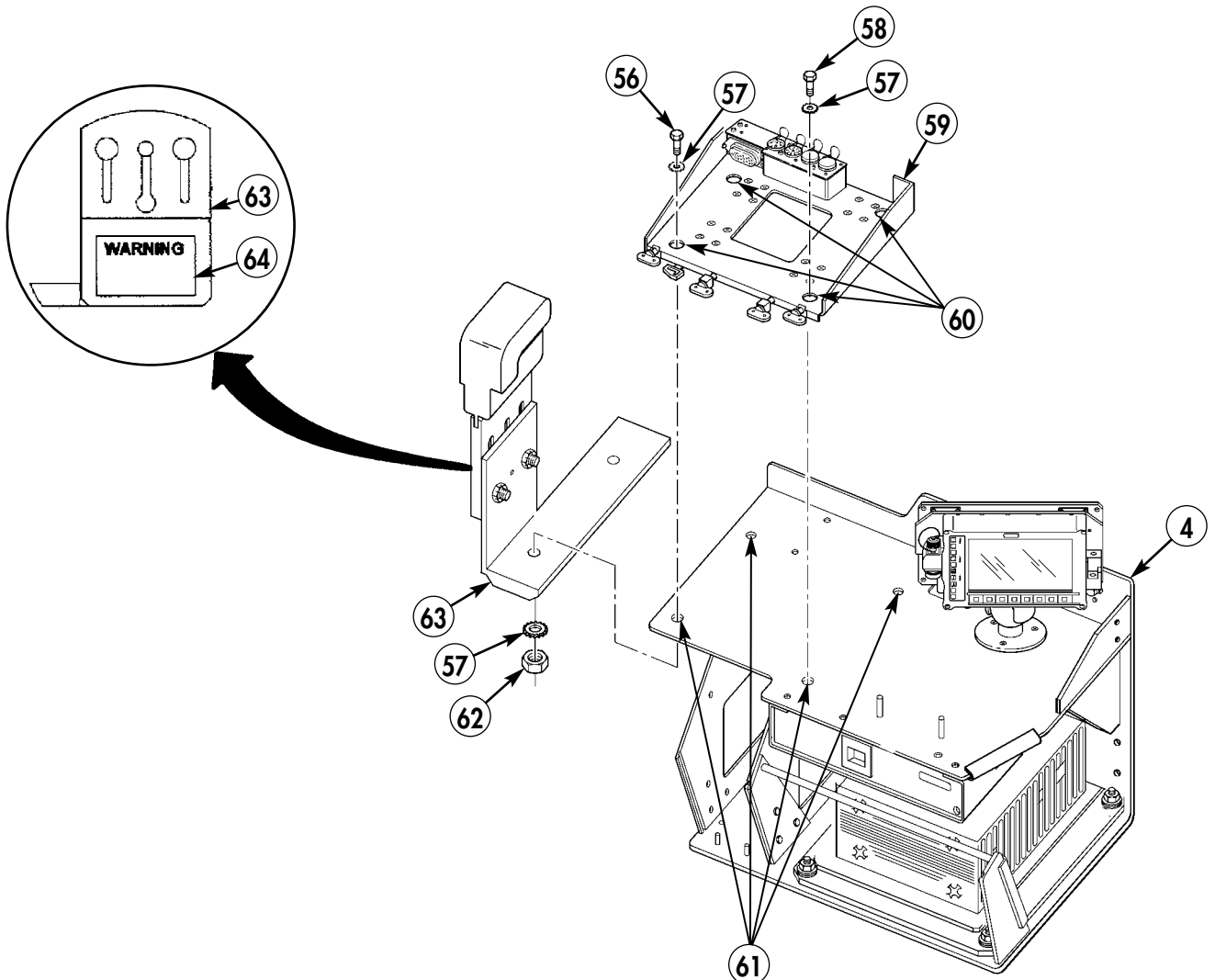
Figure 5-15.

- 3-24. Remove paint from four mounting holes (61) on integrated rack (4). Apply antiseize compound as required.
- 3-25. Remove paint from four mounting holes (60) on MT-6352/VRC mounting base (59). Apply antiseize compound as required.

**NOTE**

Two lockwashers and nuts are used on driver's side screws only.

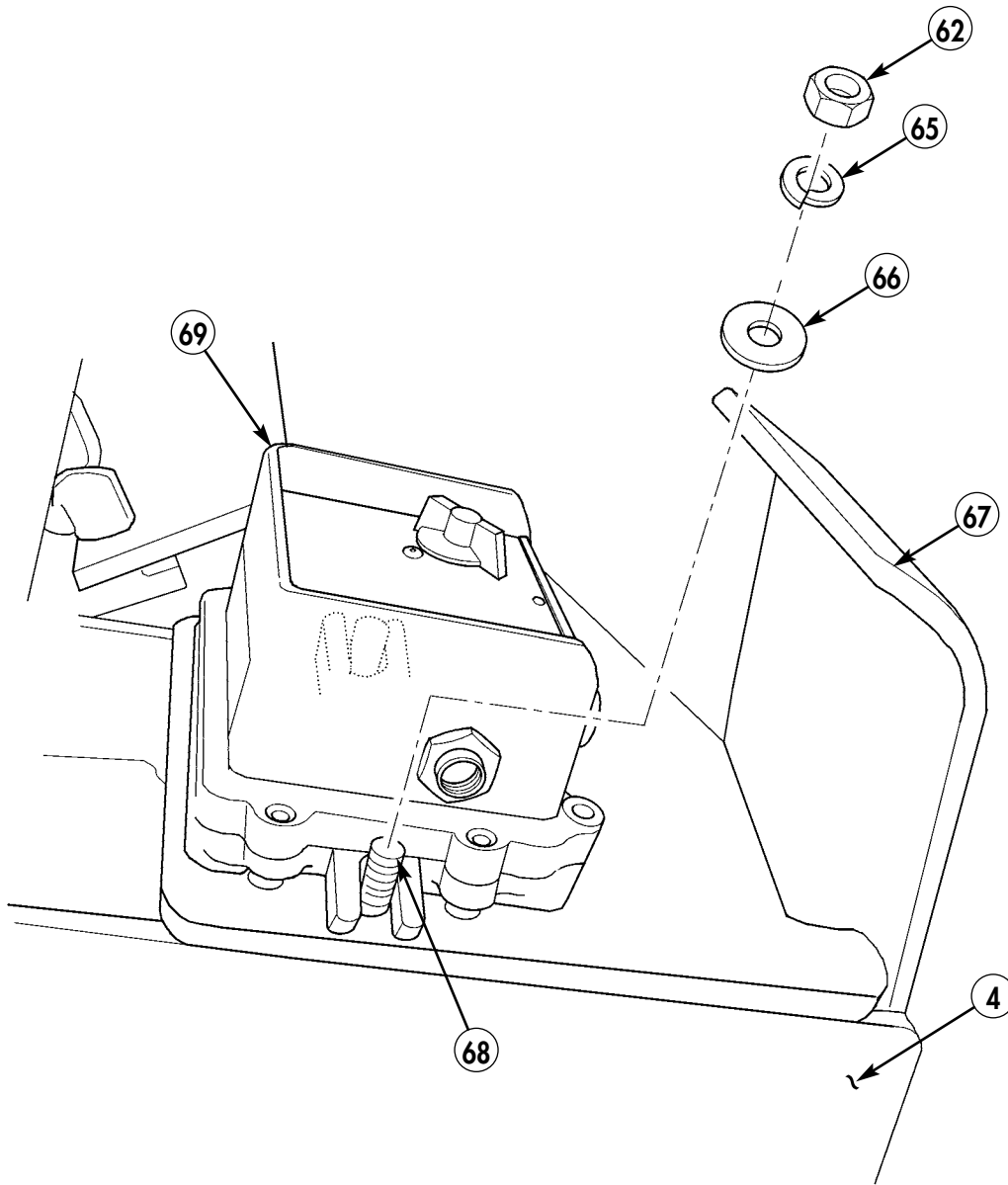
- 3-26. Mount MT-6352/VRC mounting base (59) and amp guard (63) on integrated rack (4) with two screws (56), four lockwashers (57), and two nuts (62). Secure mount MT-6352/VRC mounting base (59) to integrated rack (4) with two capscrews (58) and lockwashers (57).
- 3-27. Place warning decal (64) on amp guard (63).



- 56. CAPSCREW – B1821BH031F125N – QTY. 2
- 57. LOCKWASHER – MS45904-72 – QTY. 6
- 58. CAPSCREW – B1821BH031F100N – QTY. 2
- 59. MOUNTING BASE, MT-6352/VRC – A3013367-1 – QTY. 1
- 62. NUT – 9418892 – QTY. 2
- 63. AMP GUARD – 872842-1 – QTY. 1
- 64. DECAL – 861868-2 – QTY. 1

Figure 5-16.

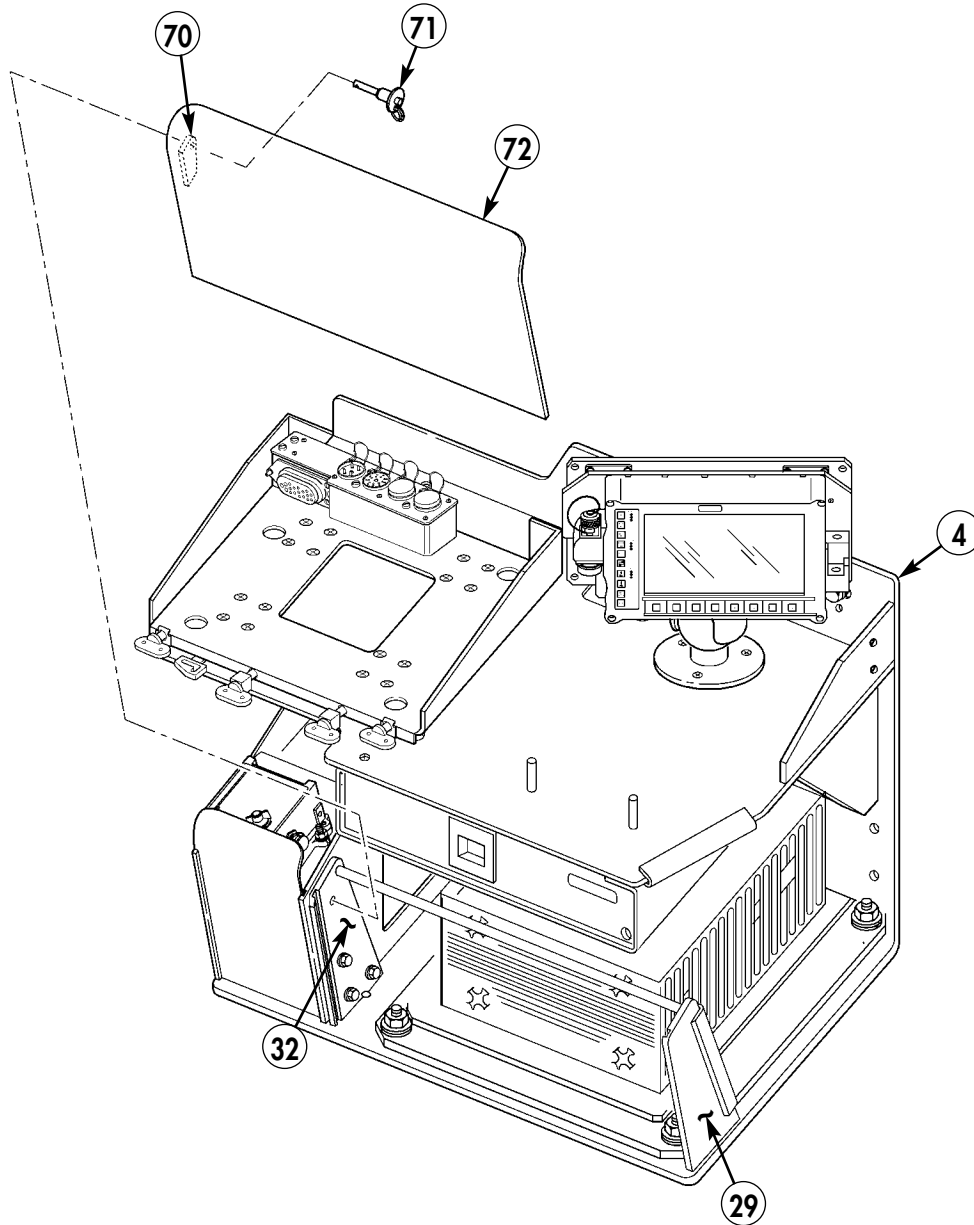
- 3-28. Insert kickplate (67) into grooves of integrated rack (4).
- 3-29. Install Master Control Station (MCS) (69) on mounting surface of kickplate (67) using two existing studs (68), washers (66), lockwashers (65), and nuts (62).



- 62. NUT - 120376 - QTY. 2
- 65. LOCKWASHER - MS35338-45 - QTY. 2
- 66. WASHER - 10910174-19 - QTY. 2
- 69. MCS - A3206623 - QTY. 1

Figure 5-17.

- 3-30. Insert kickplate (72) into grooves of right rail weldment (29) and left rail weldment (32).
- 3-31. Insert quick-release pin (71) through hole (70) in kickplate (72), left rail weldment (32), and integrated rack (4).

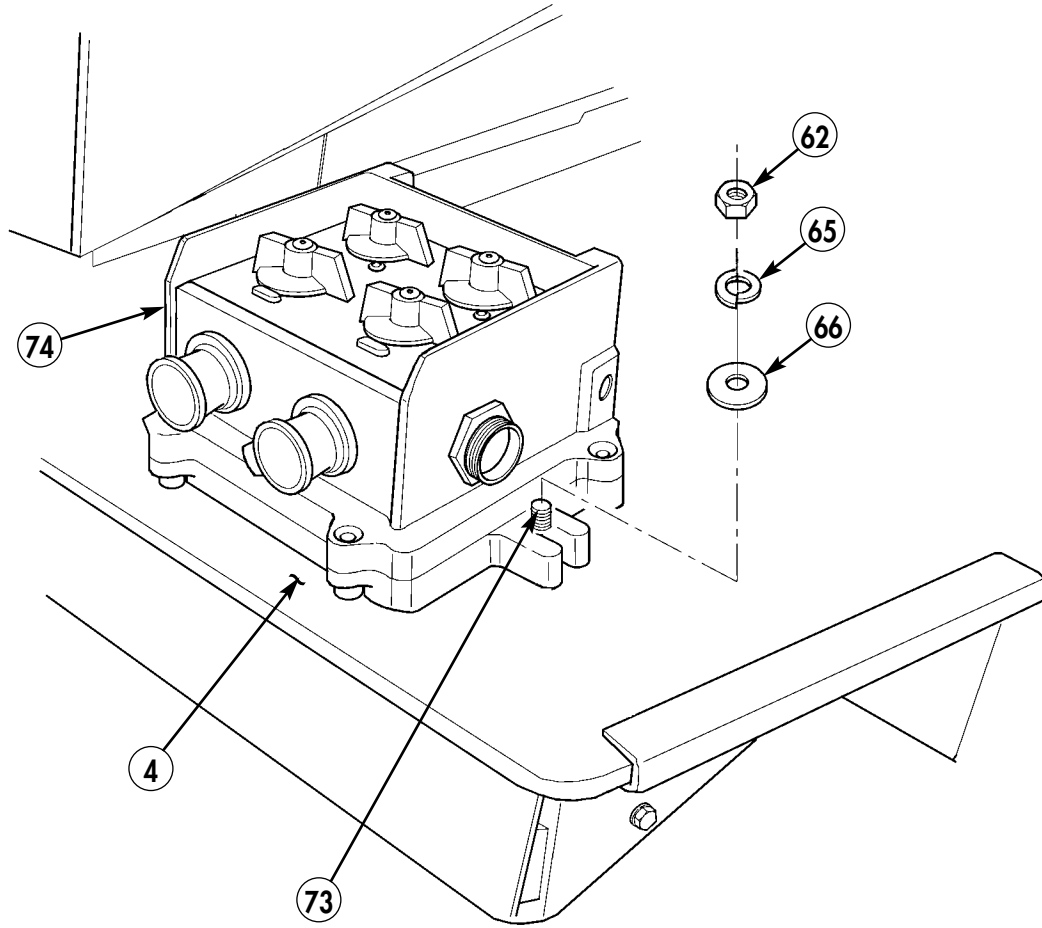


72. FOOTREST WELDMENT – 889567-21 – QTY. 1

Figure 5-18.



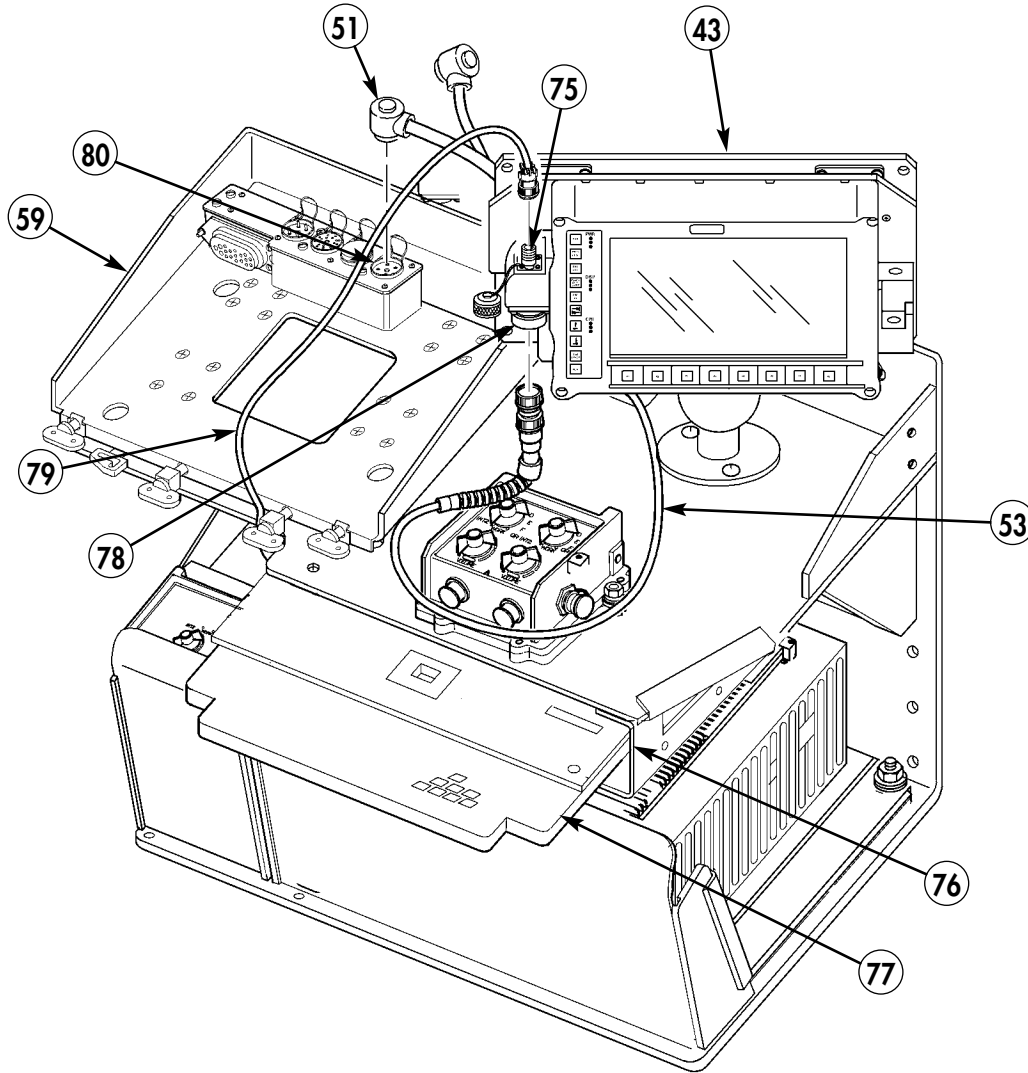
- 3-32.** Install Full Function Control Station (FFCS) (74) on integrated rack (4) using two existing studs (73), washers (66), lockwashers (65), and nuts (62).



62. NUT - 120376 - QTY. 2  
 65. LOCKWASHER - MS35338-45 - QTY. 2  
 66. WASHER - 10910174-19 - QTY. 2  
 74. FULL FUNCTION CONTROL STATION - A3206624 - QTY. 1

*Figure 5-19.*

- 3-33. Connect W2P2 connector of W2 cable (53) to J1 connector (78) on FBCB2 display unit (43).
- 3-34. Connect W1P1 connector of W1 cable (51) to A4J2 connector (80) on MT-6352/VRC mounting base (59).
- 3-35. Install keyboard (77) in keyboard stowage box (76).
- 3-36. Connect keyboard cable (79) from keyboard (77) to J2 connector (75) on FBCB2 display unit (43).



77. KEYBOARD - 501395-1 - QTY. 1

Figure 5-20.

- 3-37. Install Vehicular Amplifier Adapter (VAA) AM-7239 (81) into SINCGARS mount (59).
- 3-38. Lock VAA (81) into position with locking bar (83).
- 3-39. Secure VAA (81) to SINCGARS mount (59) with two outer locking devices (82).

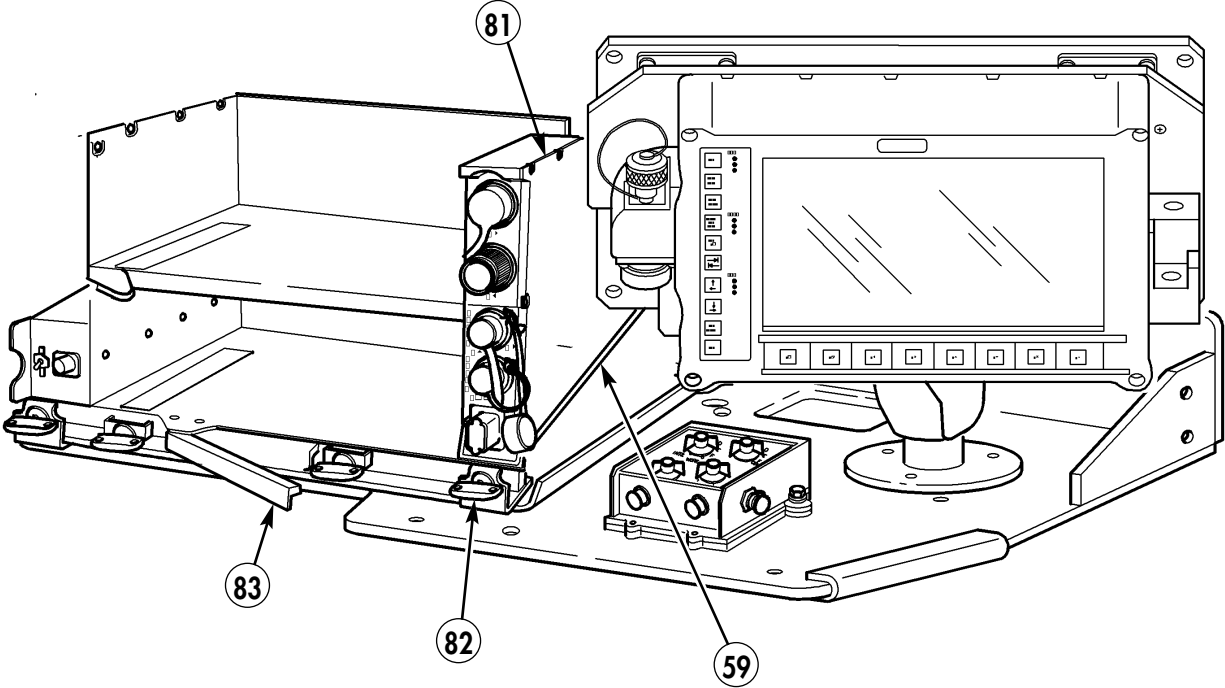


Figure 5-21.

3-40. Connect W3N cable (55) to J3 connector (84) on VAA (81).

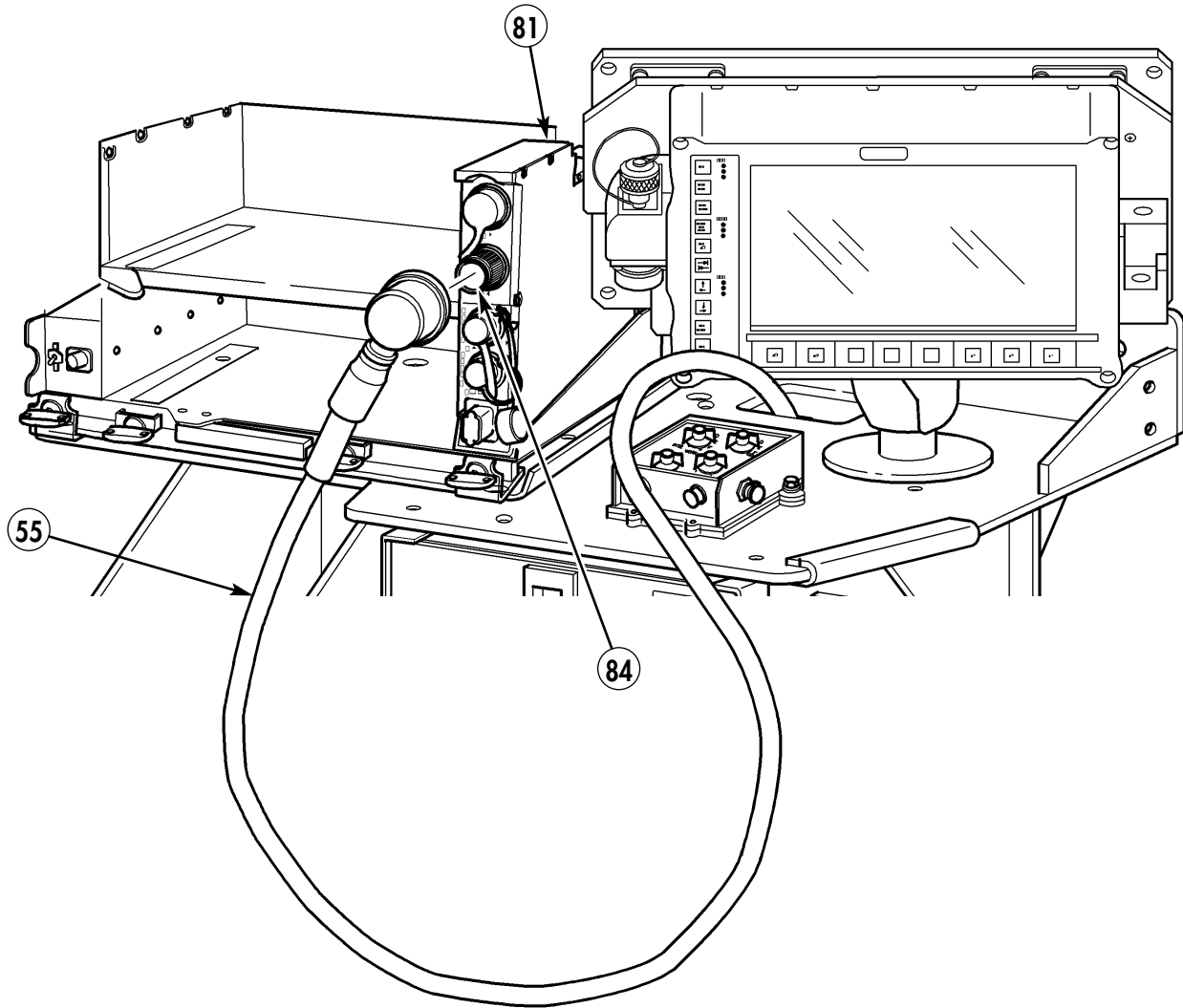


Figure 5-22.

### Section IV. DAGR INSTALLATION

- 4-1. Remove weather cap. (Refer to TM 9-2320-387-24.)
- 4-2. Remove locknut (5), two washers (6), and capscrew (11) from air intake stack support bracket (1) and mounting bracket (7). Discard locknut (5).
- 4-3. Loosen clamp (13) and remove air intake stack (12) from rubber boot (14) and mounting bracket (7).
- 4-4. Remove two capscrews (2) and (8), lockwashers (3) and (9), and washers (4) and (10) from mounting bracket (7). Remove mounting bracket (7) from vehicle (15). Discard lockwashers (3) and (9).

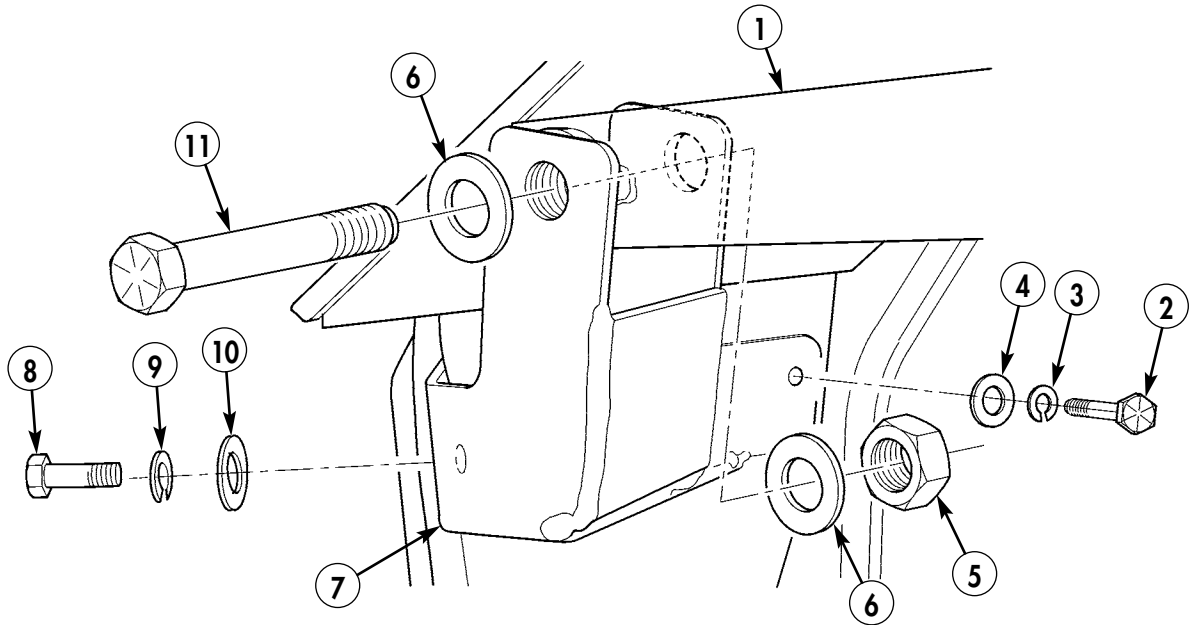


Figure 5-23.

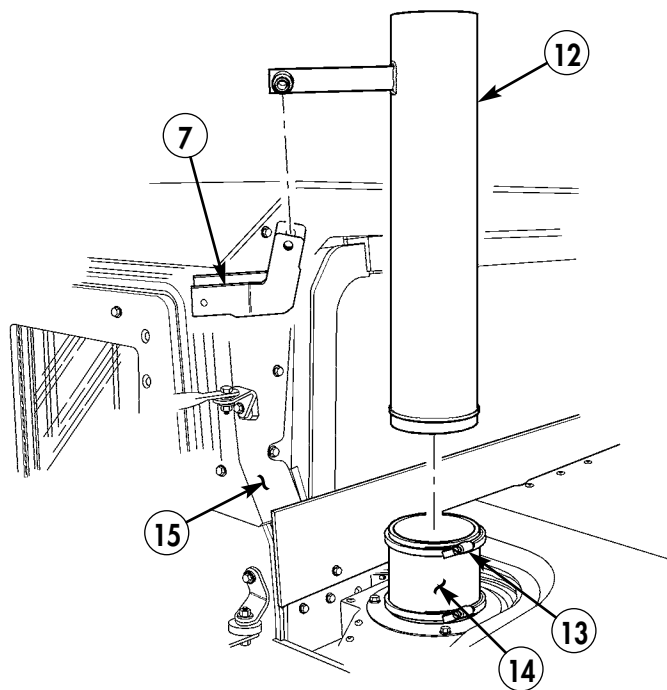


Figure 5-24.

- 4-5. Remove right side windshield wiper. (Refer to TM 9-2320-387-24.)
- 4-6. Remove four screws (19), lockwashers (18), washers (17), and right side front roof armor (16) from vehicle (15). Discard lockwashers (18).

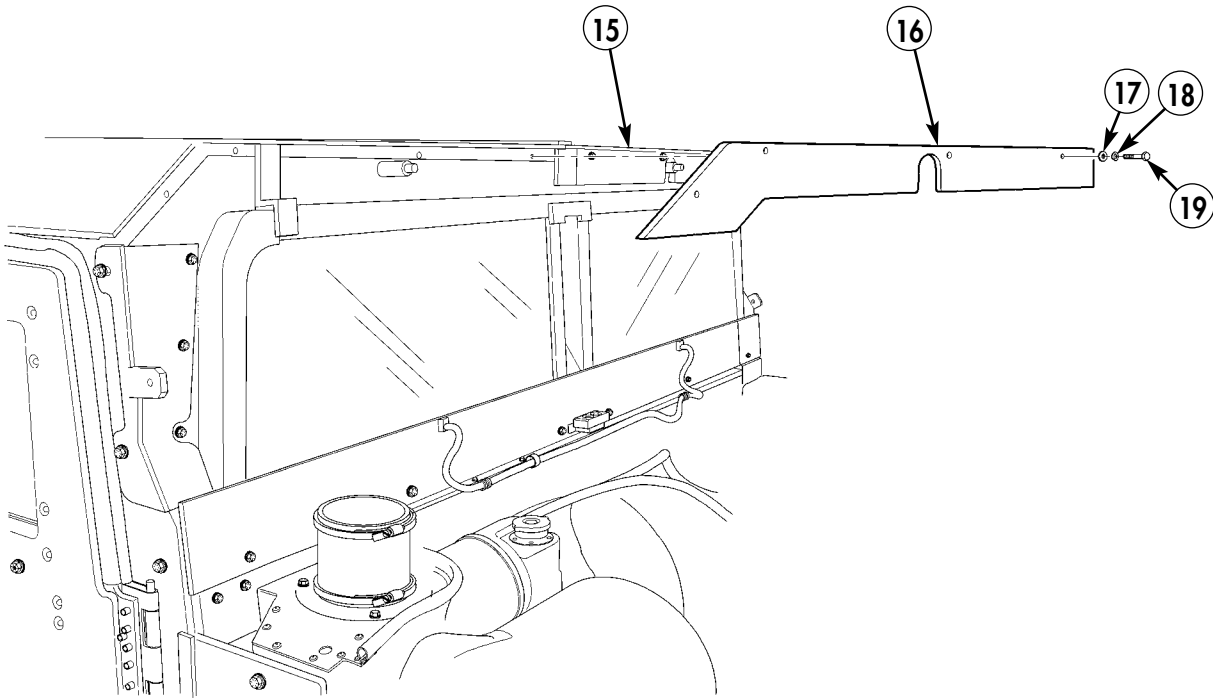


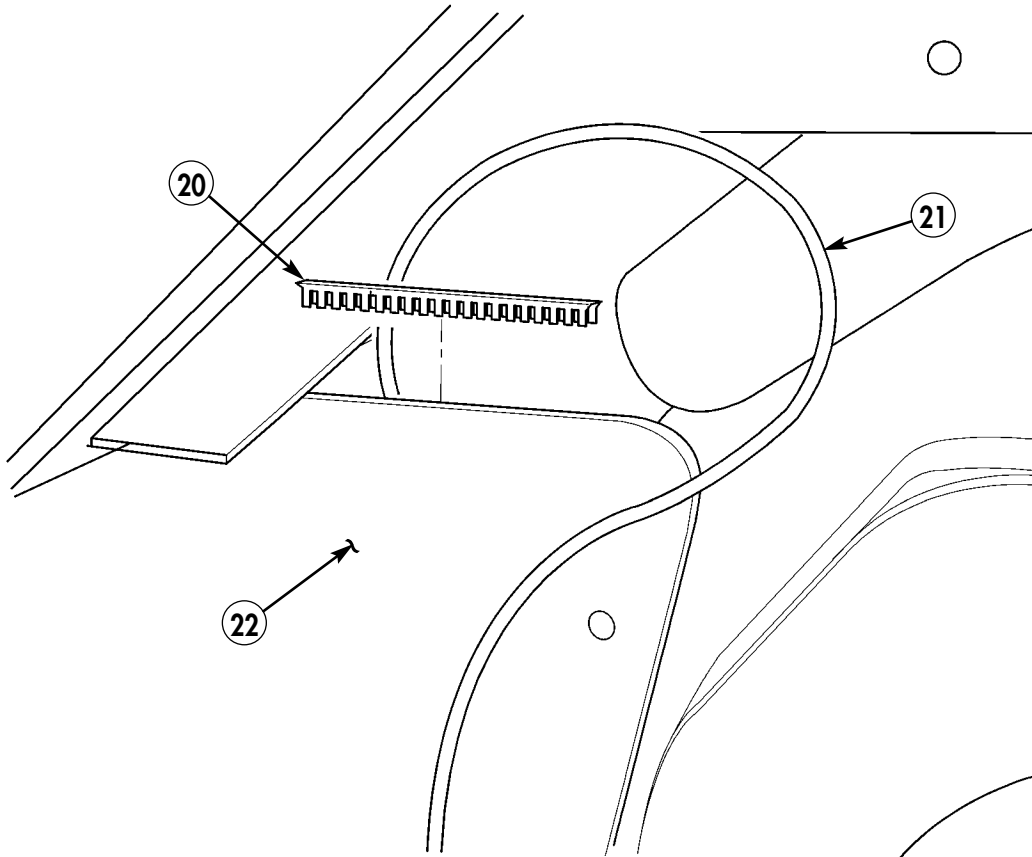
Figure 5-25.

4-7. Install grommet material (20) on armor plate (22).

**NOTE**

- Leave enough slack to connect cable to DAGR antenna.
- If installing BFT, install BFT cable with DAGR antenna cable at this time. See figure 5-39.

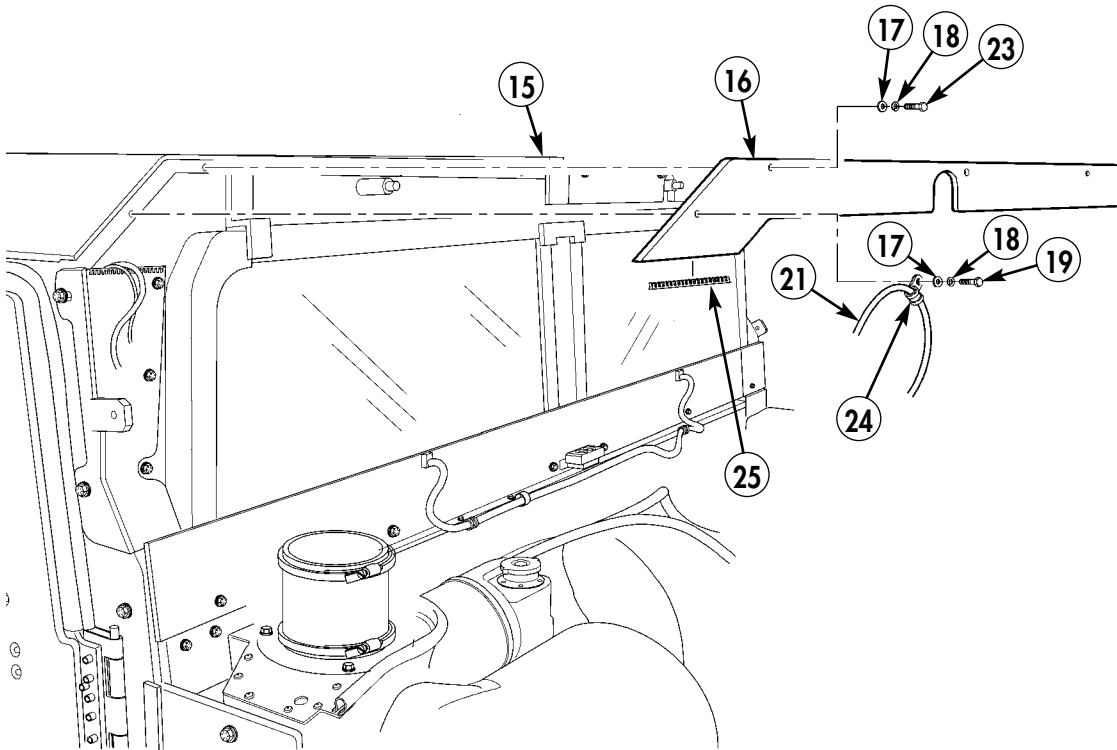
4-8. Route DAGR antenna cable (21) through gap in armor plate (22) to inside of vehicle.



- 20. GROMMET MATERIAL – MS21266-6N – QTY. 3 IN.
- 21A. DAGR ANTENNA CABLE – 987-5016-001 – QTY. 1
- 21B. DAGR ANTENNA CABLE – 987-4640-001 – QTY. 1

*Figure 5-26.*

- 4-9. Install grommet material (25) on right side roof armor (16).
- 4-10. Install right side front roof armor (16) on vehicle (15) with three existing screws (23), lockwashers (18), and existing washers (17).
- 4-11. Secure right side front roof armor (16) to vehicle with existing screw (19), loop clamp (24), DAGR antenna cable (21), lockwasher (18), and existing washer (17).

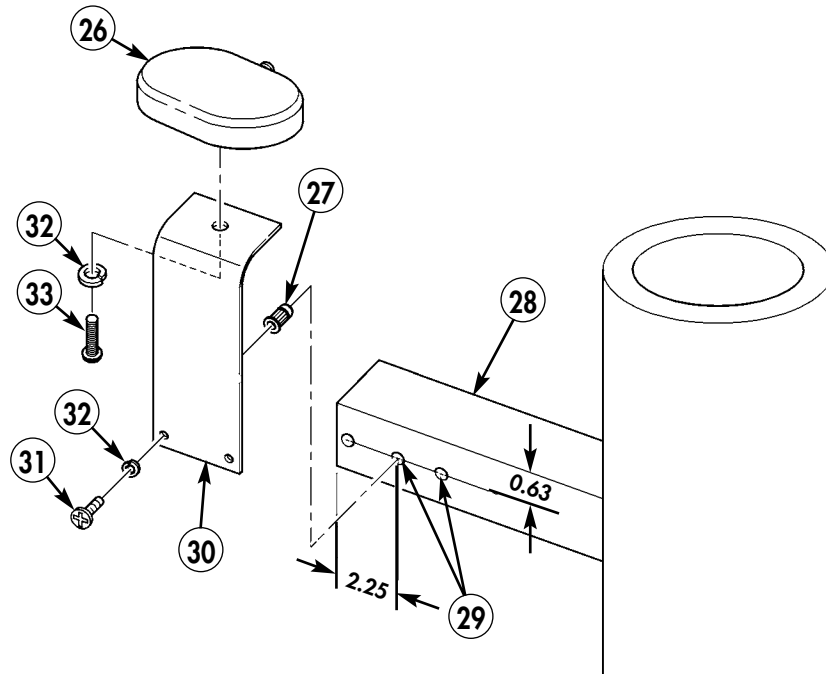


- 18. LOCKWASHER – MS35338-44 – QTY. 4
- 24. CLAMP, LOOP – MS21333-97 – QTY. 1
- 25. GROMMET MATERIAL – MS21266-5N – QTY. 3 IN.

Figure 5-27.



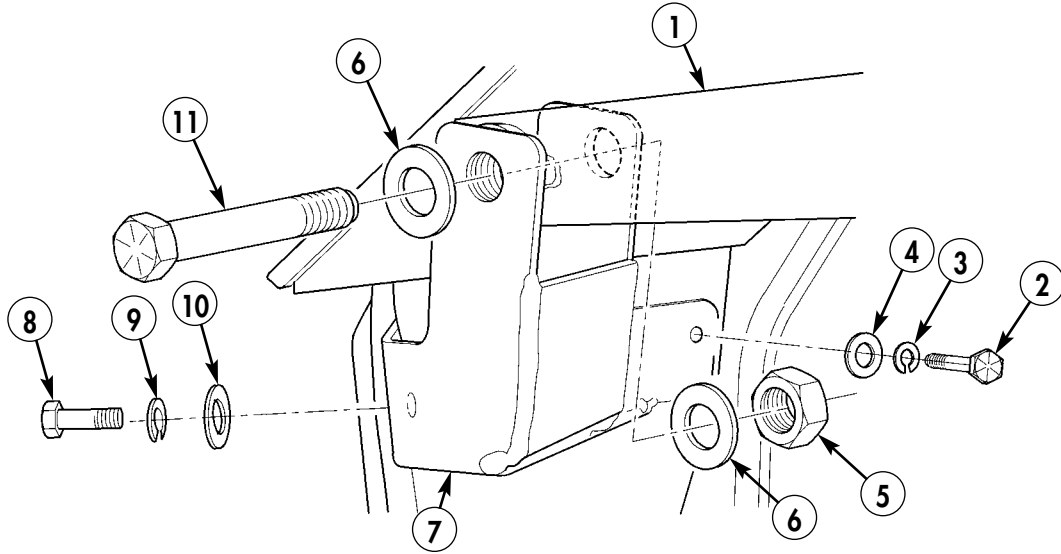
- 4-12. Locate, mark, and drill one 0.125-in. diameter pilot hole (29) in air intake stack support bracket (28).
- 4-13. Using support bracket (30) as template, drill 0.125-in. diameter pilot hole (29) in air intake stack support bracket (28).
- 4-14. Enlarge drilled holes (29) in air intake stack support bracket (28) to 0.297-in. diameter.
- 4-15. Install two inserts (27) in air intake stack support bracket (28).
- 4-16. Install antenna (26) on support bracket (30) with lockwasher (32) and screw (33).
- 4-17. Install support bracket (30) and antenna (26) on air intake stack support bracket (28) with two screws (31) and lockwashers (32).



- 26. ANTENNA - 013-1981-010 - QTY. 1
- 27. INSERT - 12446871-3 - QTY. 2
- 30. SUPPORT - 12506676 - QTY. 1
- 31. SCREW - MS35206-267 - QTY. 2
- 32. LOCKWASHER - MS35338-43 - QTY. 3
- 33. SCREW - MS35207-261 - QTY. 1

Figure 5-28.

- 4-18. Install mounting bracket (7) on vehicle (15) with capscrew (2), lockwasher (3), and washer (4).
- 4-19. Secure mounting bracket (7) to vehicle (15) with capscrew (8), lockwasher (9), and washer (10).
- 4-20. Install air intake stack (12) on rubber boot (14).
- 4-21. Secure air intake stack support bracket (1) to mounting bracket (7) with capscrew (11), two washers (6), and locknut (5).
- 4-22. Tighten clamp (13).
- 4-23. Install right side windshield wiper. (Refer to TM 9-2320-387-24.)



- 3. LOCKWASHER - MS35338-44 - QTY. 1
- 5. LOCKNUT - 9422279 - QTY. 1
- 9. LOCKWASHER - MS35338-45 - QTY. 1

Figure 5-29.

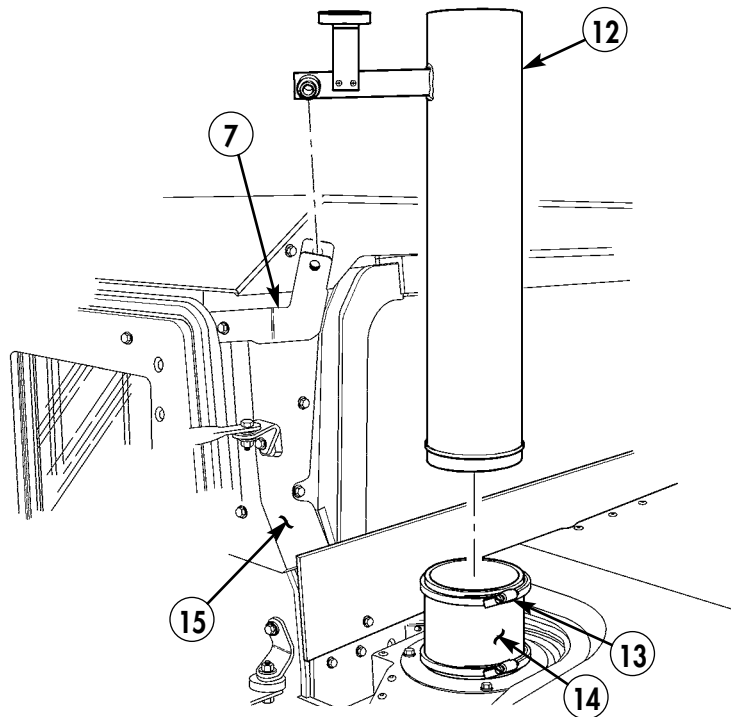


Figure 5-30.

- 4-24. Install weather cap. (Refer to TM 9-2320-387-24.)
- 4-25. Connect connector (34) of DAGR antenna cable (21) to DAGR antenna (26).

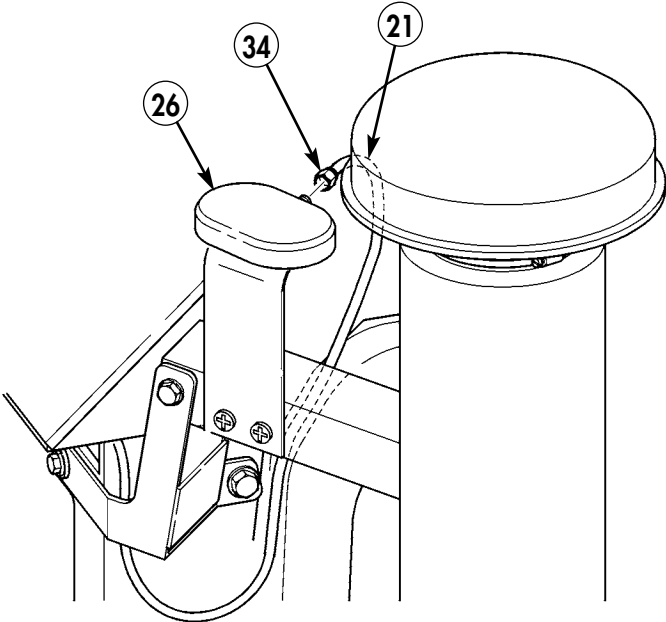
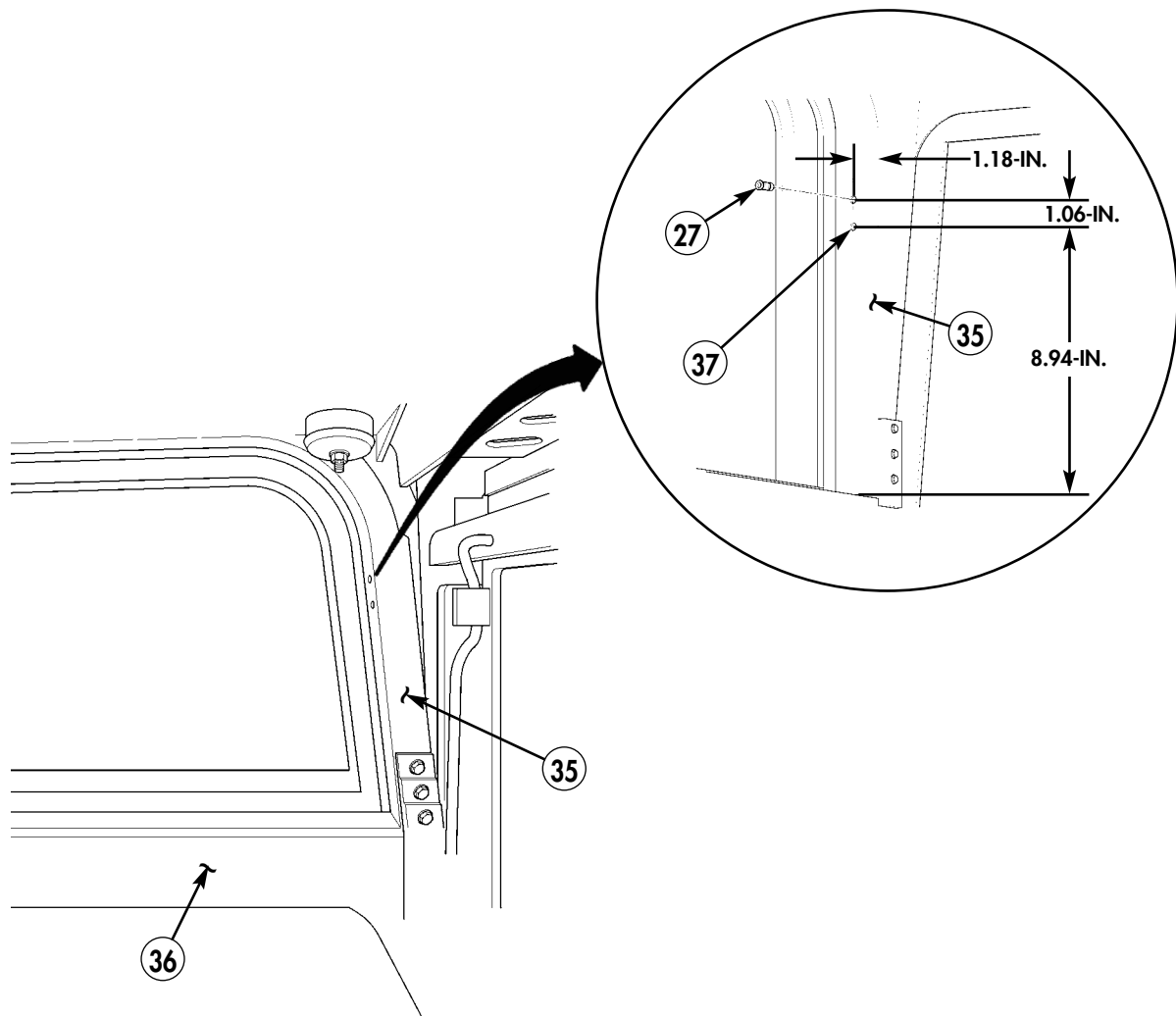


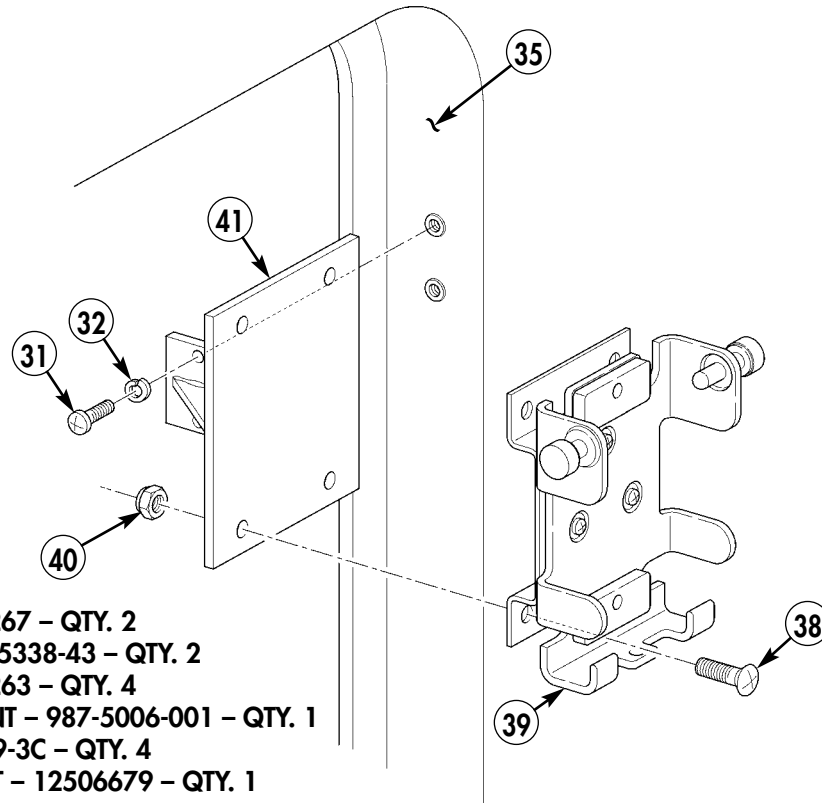
Figure 5-31.

- 4-26. Locate, mark, and drill two 0.297-in. diameter holes (37) in right-side windshield frame (35).
- 4-27. Install two inserts (27) in right-side windshield frame (35).
- 4-28. Install installation mount (39) on mounting bracket (41) with four screws (38) and locknuts (40).
- 4-29. Install mounting bracket (41) and installation mount (39) on right-side windshield frame (35) with two screws (31) and lockwashers (32).
- 4-30. Connect DAGR data cable (42) to DAGR (43).
- 4-31. Pull two spring loaded mounting pins (44) on installation mount (39) and align mount points (45) on DAGR (43) to installation mount (39) and seat properly.



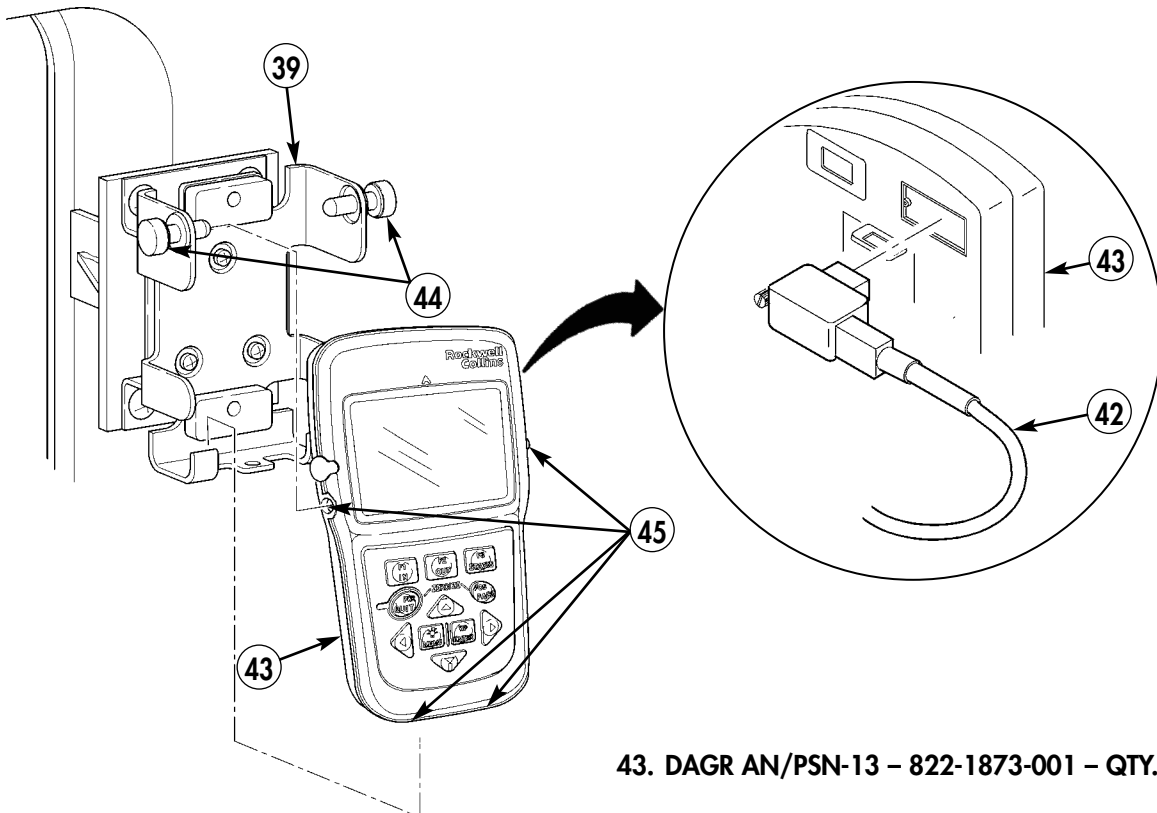
27. INSERT - 12446871-3 - QTY. 2

Figure 5-32.



- 31. SCREW – MS35206-267 – QTY. 2
- 32. LOCKWASHER – MS35338-43 – QTY. 2
- 38. SCREW – MS35206-263 – QTY. 4
- 39. INSTALLATION MOUNT – 987-5006-001 – QTY. 1
- 40. LOCKNUT – MS17829-3C – QTY. 4
- 41. MOUNTING BRACKET – 12506679 – QTY. 1

Figure 5-33.



- 43. DAGR AN/PSN-13 – 822-1873-001 – QTY. 1

Figure 5-34.

4-32. Route DAGR antenna cable (21) behind insulation (46), along A-pillar (47).

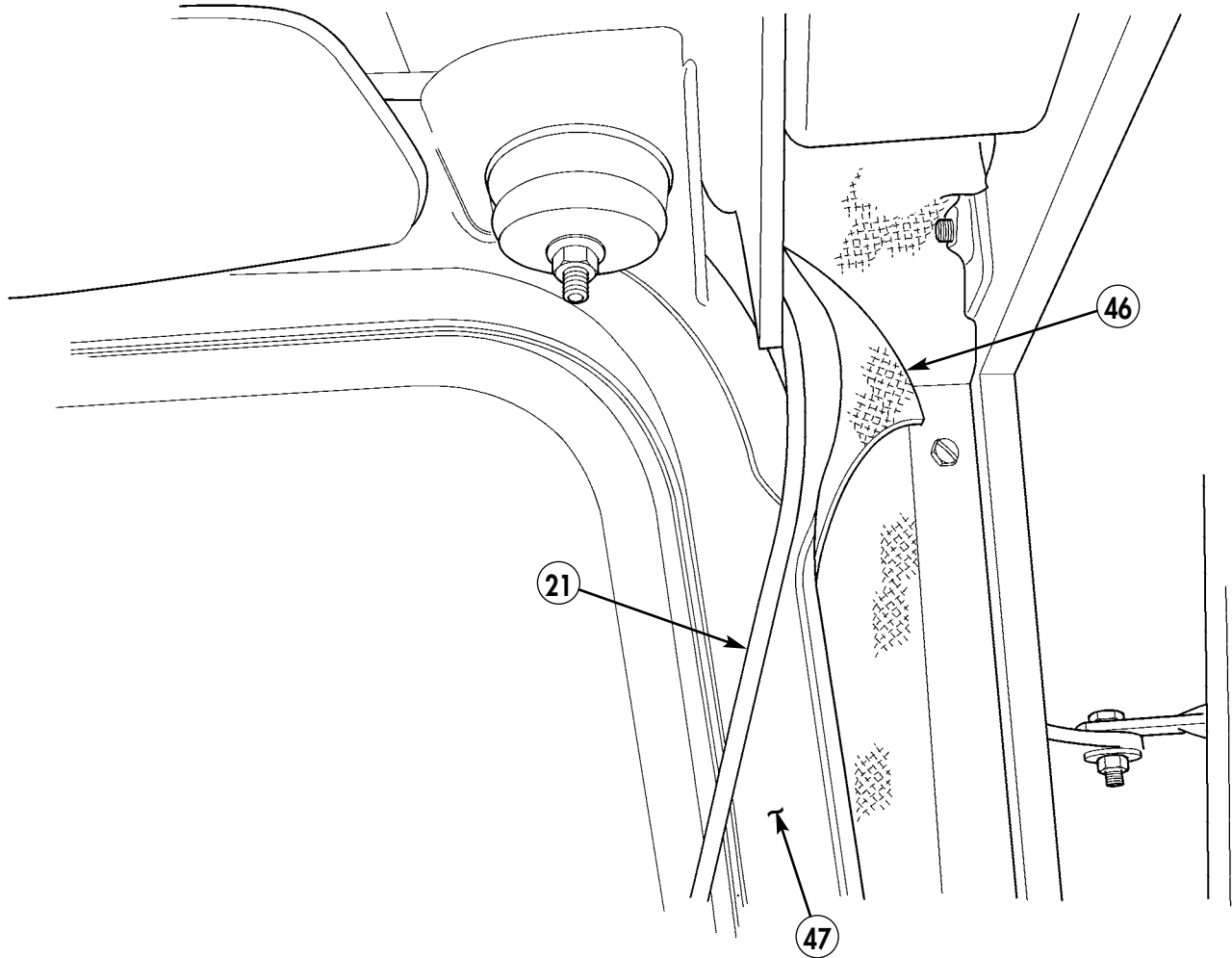


Figure 5-35.

4-33. Route DAGR antenna cable (21) along A-pillar (47) towards dashboard (55).

**NOTE**

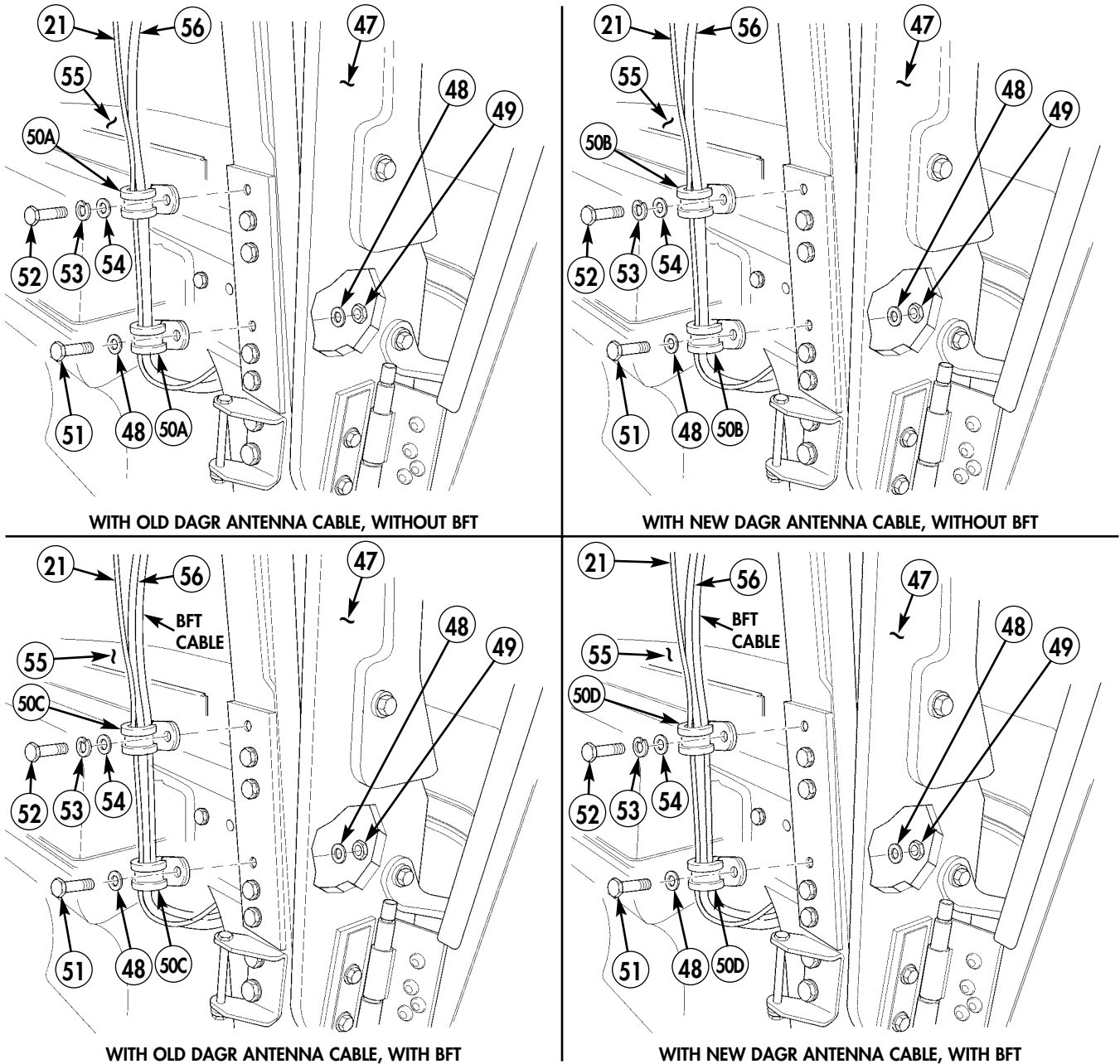
Route BFT cable if necessary.

4-34. Secure DAGR antenna cable (21) and DAGR power cable (56) to A-pillar (47) with clamp (50), existing screw (52), lockwasher (53), and washer (54).

**NOTE**

Leave DAGR power cable in position until connection is made in Section XIV

4-35. Secure DAGR antenna cable (21) and DAGR power cable (56) to A-pillar (47) with clamp (50), existing screw (51), two washers (48), and locknut (49).

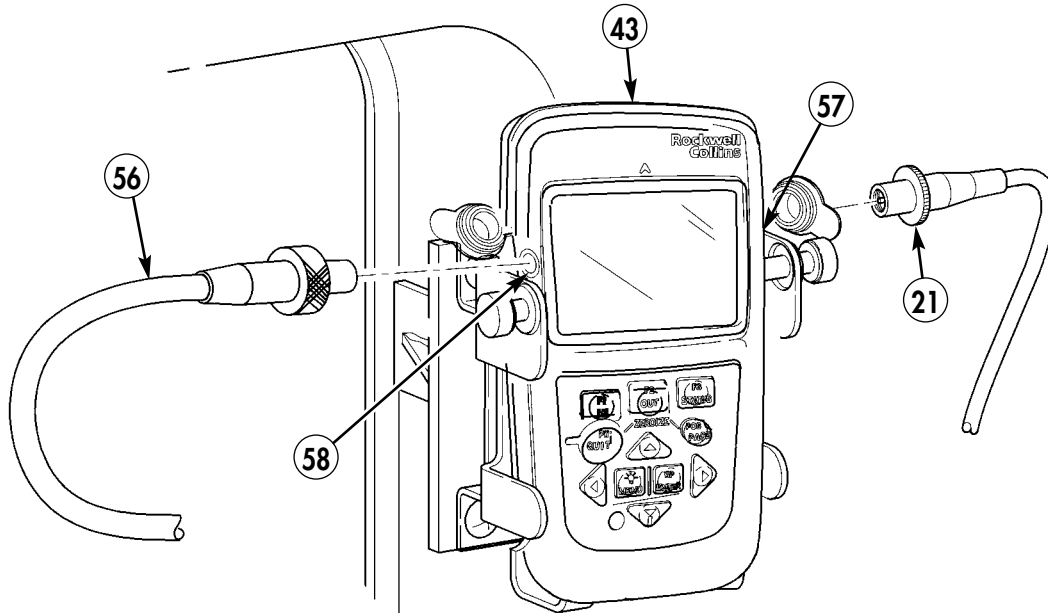


- 49. LOCKNUT - 45913/4-5CG8Z - QTY. 1
- 50A. CLAMP - MS21333-108 - QTY. 2
- 50B. CLAMP - MS21333-110 - QTY. 2

- 50C. CLAMP - MS21333-111 - QTY. 2
- 50D. CLAMP - MS21333-112 - QTY. 2
- 53. LOCKWASHER - MS35338-45 - QTY. 1

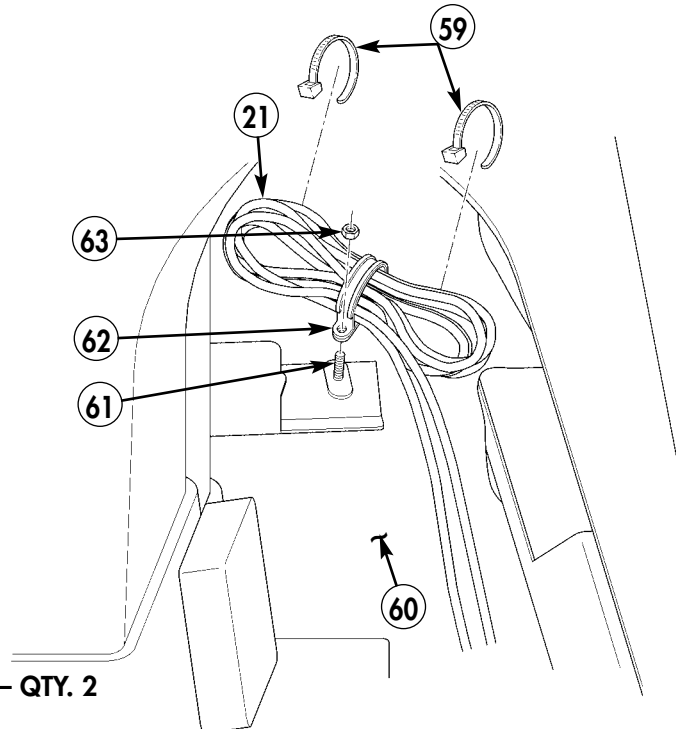
Figure 5-36.

- 4-36. Connect DAGR power cable (56) to J4 terminal (58) of DAGR (43).
- 4-37. Route DAGR antenna cable (21) to DAGR (43).
- 4-38. Connect DAGR antenna cable (21) to J3 terminal (57) on DAGR (43).
- 4-39. Secure excess DAGR antenna cable (21) to upper evaporator mounting bracket screw (61) on right floorboard (60) with clamp (62), nut (63) and two tie-down straps (59).



56. DAGR POWER CABLE – 987-5019-001 – QTY. 1

Figure 5-37.



- 59. STRAP, TIEDOWN – MS3367-1-0 – QTY. 2
- 62. CLAMP – MS21333-129 – QTY. 1
- 63. NUT – MS51967-6 – QTY. 1

Figure 5-38.

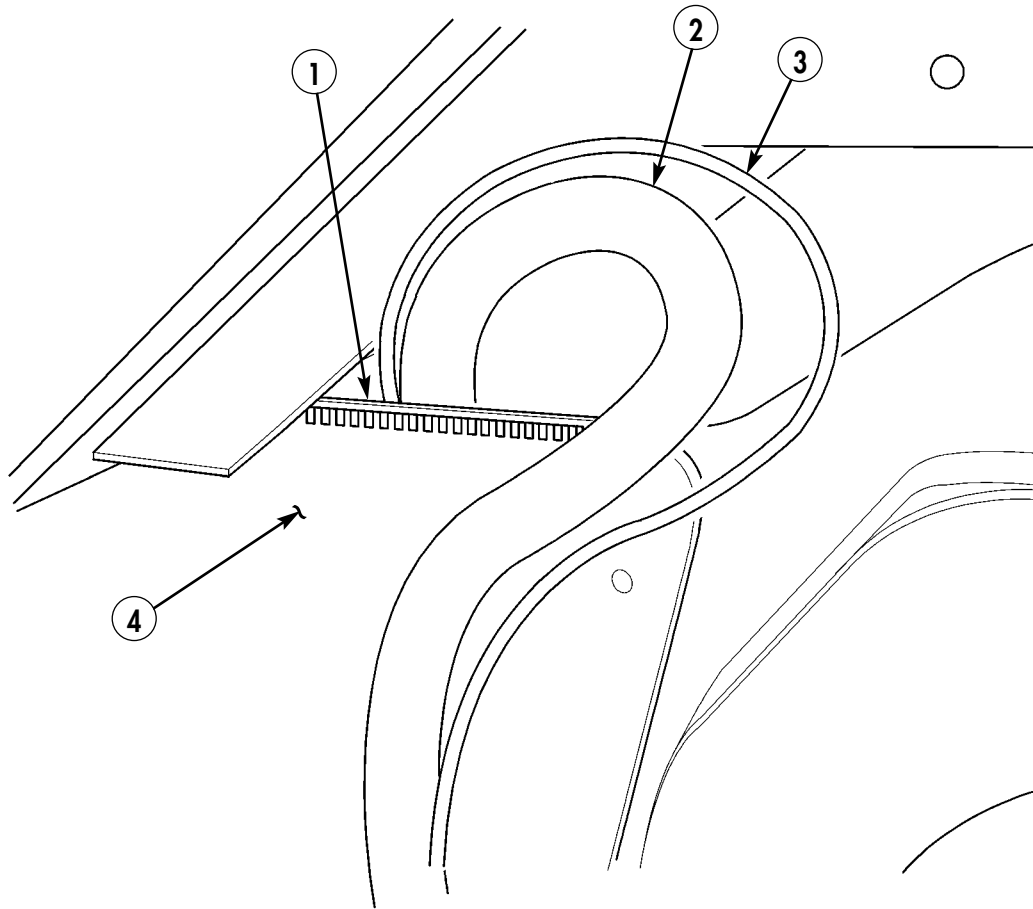


**Section V. BFT INSTALLATION**

**NOTE**

- Perform either BFT installation or EPLRS installation. For EPLRS installation, see sections VI through X.
- Leave enough slack to connect cables to transceiver DAGR antenna.

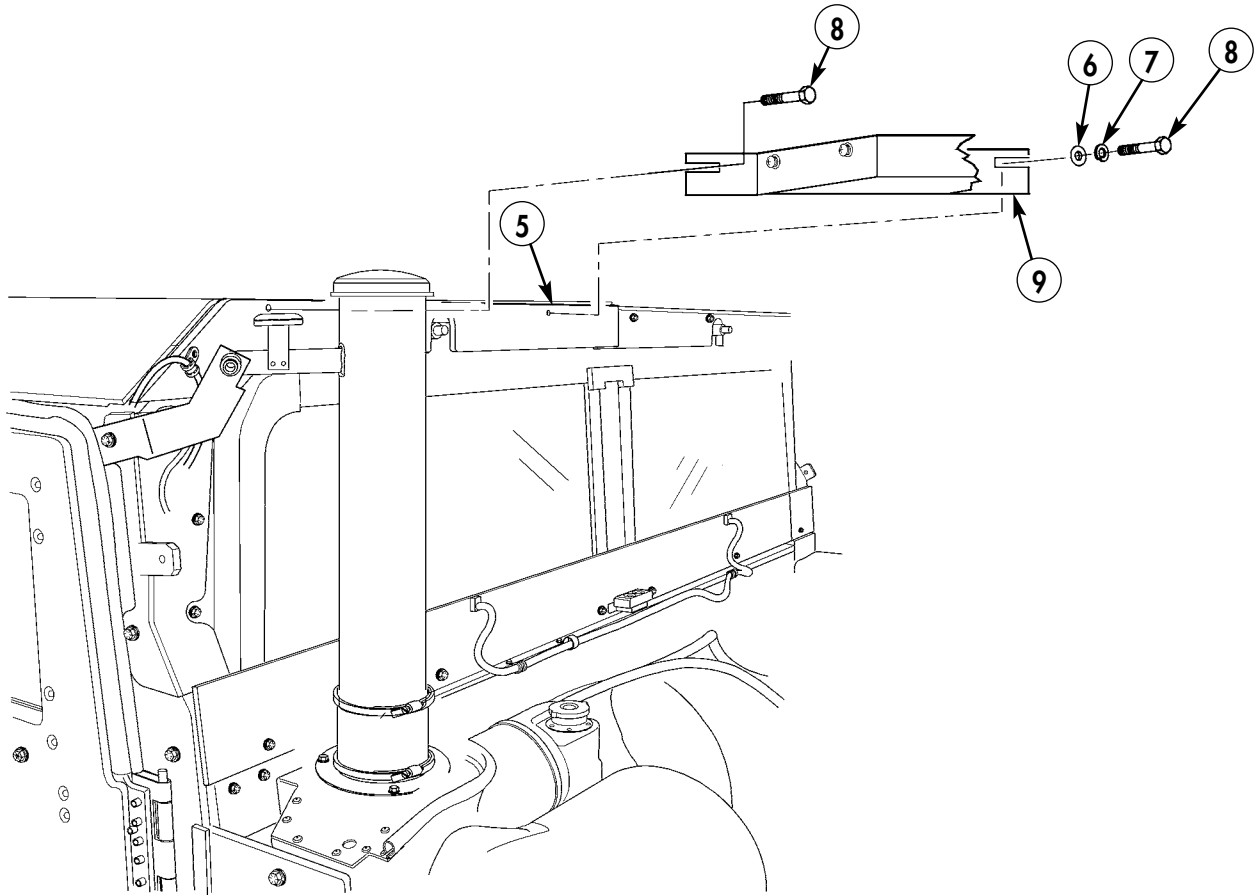
**5-1.** Route transceiver cable (2) with DAGR cable (3) through gap in armor plate (4) over grommet (1) to inside of vehicle.



**2. TRANSCEIVER CABLE – A1-35997D – QTY. 1**

*Figure 5-39.*

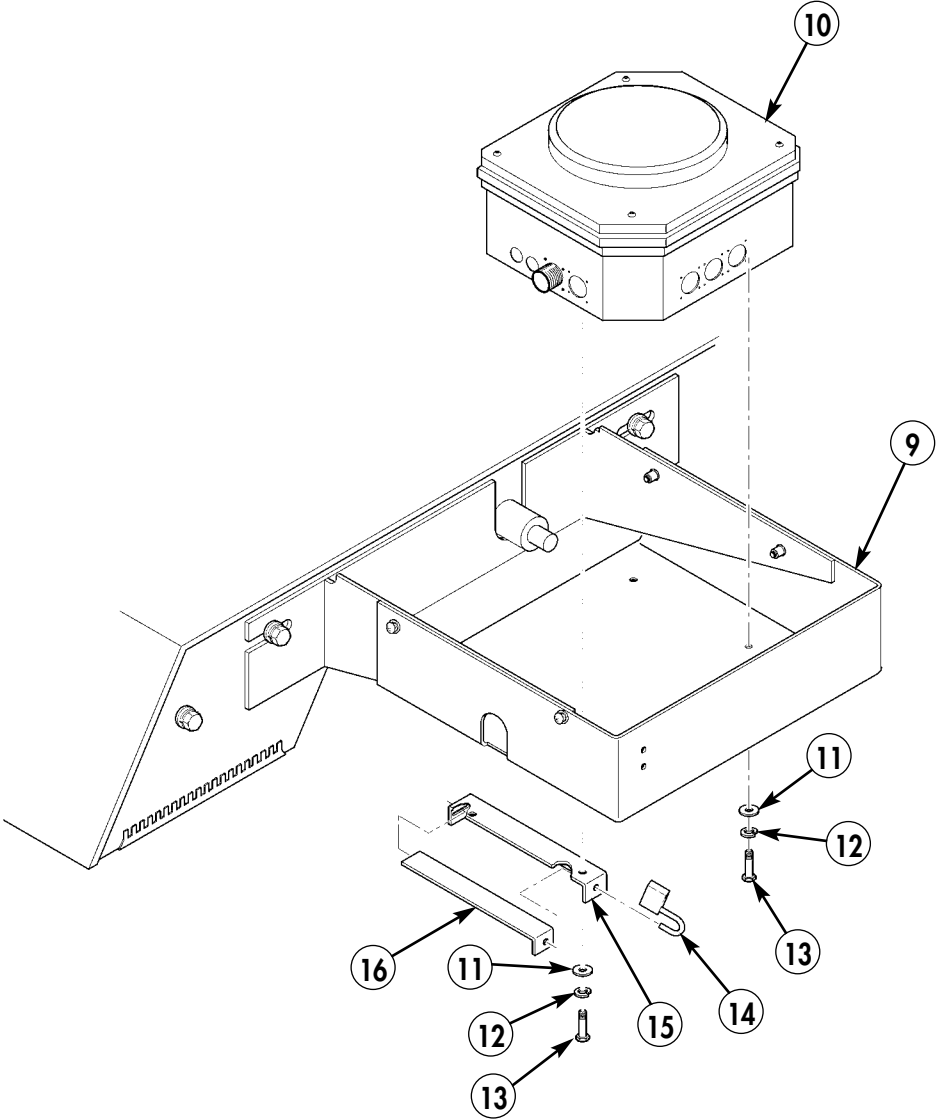
- 5-2. Remove two capscrews (8), lockwashers (7), and washers (6) from vehicle (5). Discard two capscrews (8) and lockwashers (7).
- 5-3. Install transceiver bracket (9) on vehicle (5) with capscrew (8), lockwasher (7), washer (6), and capscrew (8).



- 7. LOCKWASHER – MS35338-44 – QTY. 1
- 8. CAPSCREW – B1821BH025C125N – QTY. 2
- 9. TRANSCEIVER BRACKET – A1-38239D – QTY. 1

Figure 5-40.

- 5-4. Install transceiver (10) on transceiver bracket (9) with two screws (13), lockwashers (12), washers (11), screws (13), lockwashers (12), washers (11), and locking bracket (15).
- 5-5. Install locking bar (16) on locking bracket (15) and secure with padlock (14).



- 10. TRANSCEIVER – MT2010E – QTY. 1
- 11. WASHER – TBD – QTY. 4
- 12. LOCKWASHER – TBD – QTY. 4
- 13. SCREW – TBD – QTY. 4
- 14. PADLOCK – TBD – QTY. 1
- 15. LOCKING BRACKET – TBD – QTY. 1
- 16. LOCKING BAR – TBD – QTY. 1

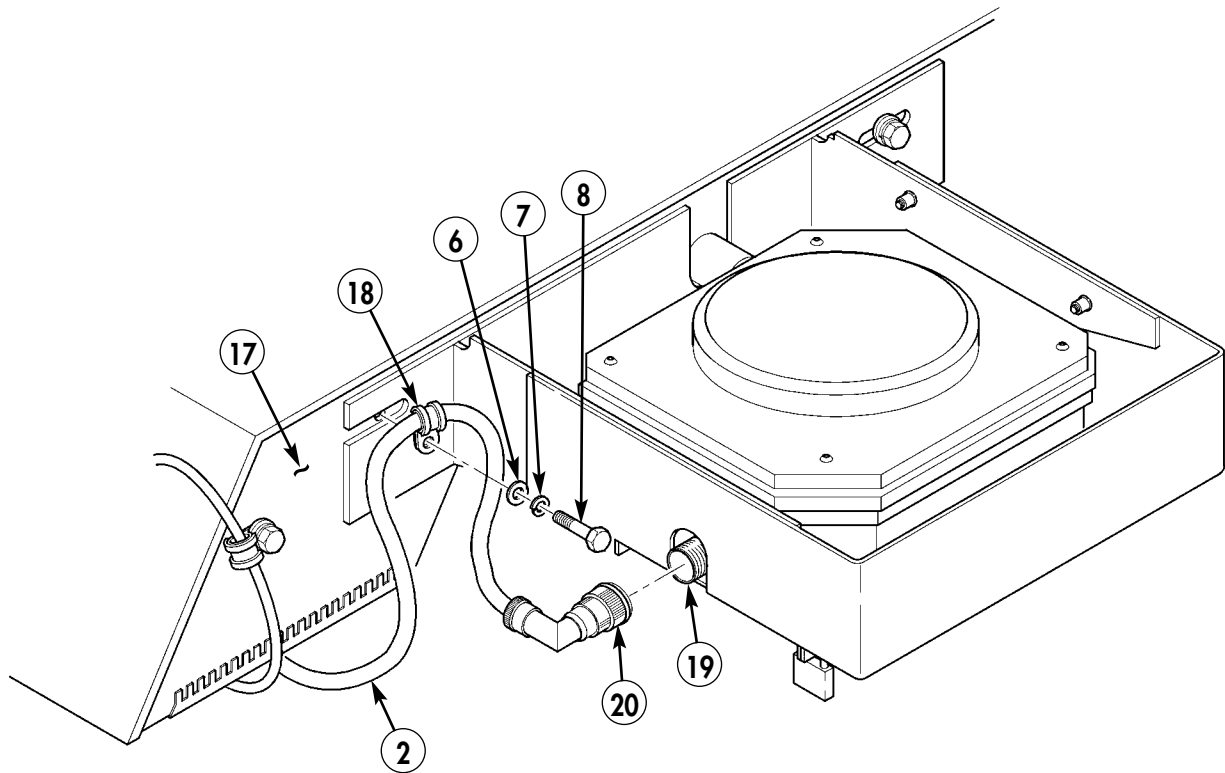
Figure 5-41.

- 5-6. Remove capscrew (8) from right side front roof armor (17).
- 5-7. Connect connector (20) of transceiver cable (2) to transceiver connector (19).

**NOTE**

Ensure all slack in cable is inside vehicle.

- 5-8. Route transceiver cable (2) along right side roof armor (17) with clamp (18), existing capscrew (8), lockwasher (7), and existing washer (6).



- 7. LOCKWASHER – MS35338-44 – QTY. 1
- 18. CLAMP, LOOP – MS21333-101 – QTY. 1

*Figure 5-42.*

- 5-9. Remove screw (24) and air conditioning close out panel (23) from air conditioning duct (22).
- 5-10. Route transceiver cable (2) behind air conditioning duct (22) to radio rack (21).
- 5-11. Install air conditioning close out panel (23) on air conditioning duct (22) with screw (24).

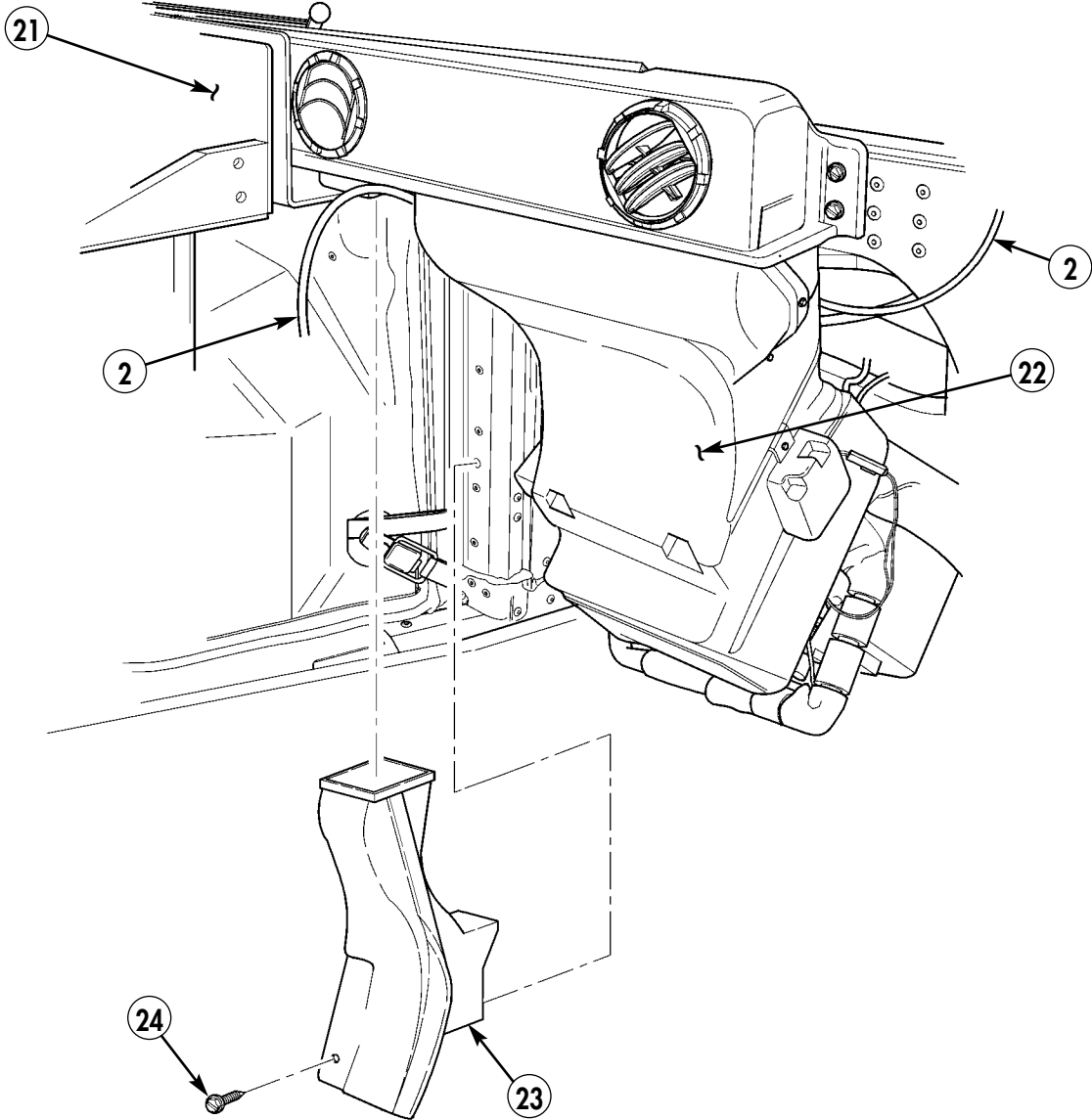


Figure 5-43.

**NOTE**

Equipment not shown for clarity.

- 5-12. Remove screws (26) from lid (25) of antenna switch box (27).
- 5-13. Route Data/Power with terminal ends (29) of transceiver cable (2) between radio rack (21) and engine cover (32) through radio rack access hole (28).
- 5-14. Insert Data/Power with terminal ends (29) of transceiver cable (2) into antenna switch box (27).
- 5-15. Route Data leg with connector end (35) of transceiver cable (2) between radio rack (21) and engine cover (32) through rear radio rack access hole (28).
- 5-16. Connect Data leg connector (35) of transceiver cable (2) to J3 connector (34) of SIAD (33).
- 5-17. Insert power cable with terminal ends (31) into antenna switch box (27).
- 5-18. Route power cable (31) through radio rack access hole (28) and to tunnel insulation (30).
- 5-19. Remove nut (37) and washer (38) from stud (41) in antenna switch box (27).
- 5-20. Connect negative lead (39) of Data/Power with terminal ends (29) of transceiver cable (2) to stud (41) in antenna switch box (27).
- 5-21. Secure negative leads (39) and (40) to stud (41) with existing washer (38) and nut (37).
- 5-22. Connect negative lead (40) of power cable (31) to stud (41) in antenna switch box (27).
- 5-23. Install positive lead (44) of Data/Power with terminal ends (29) of transceiver cable (2) to antenna switch (36) with existing screw (45).
- 5-24. Install positive lead (43) of power cable (31) to antenna switch (36) with existing screw (42).
- 5-25. Install lid (25) on antenna switch box (27) with screws (26).

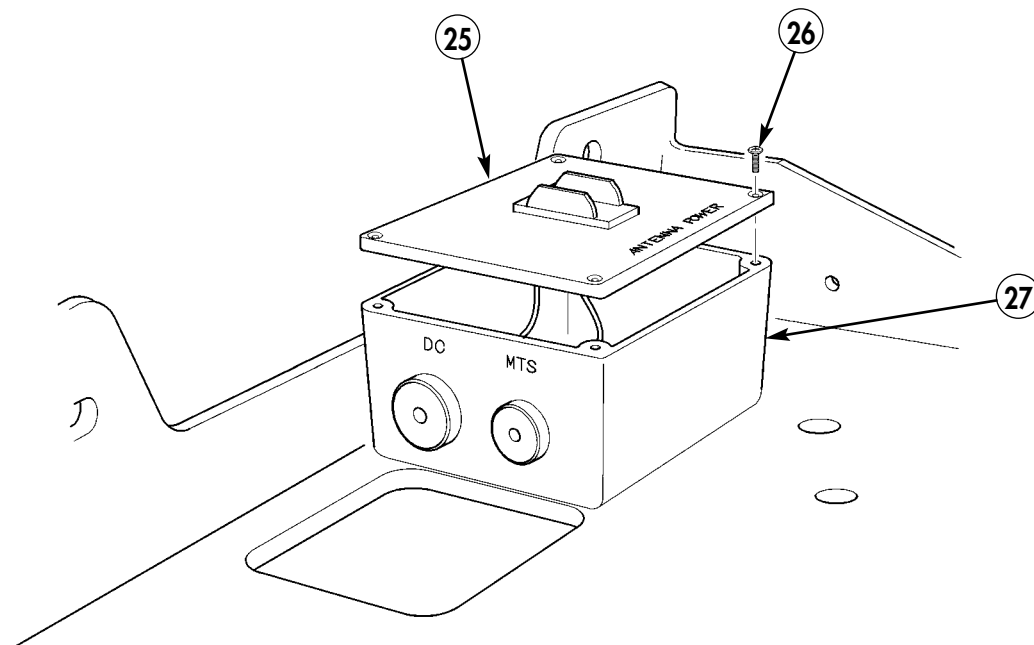
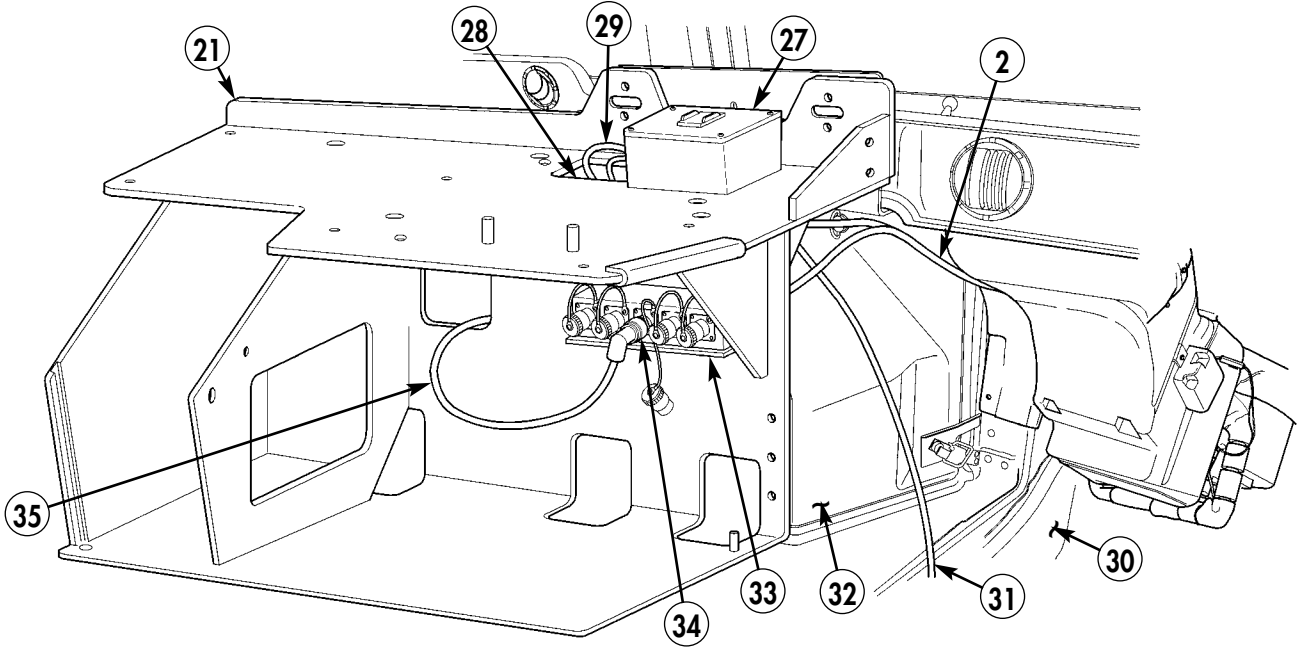


Figure 5-44.



- 29. MTS/V4/POWER CABLE - A1-35997D - QTY. 1
- 31. DC POWER CABLE - A1-35997D - 36004D-003 - QTY. 1

Figure 5-45.

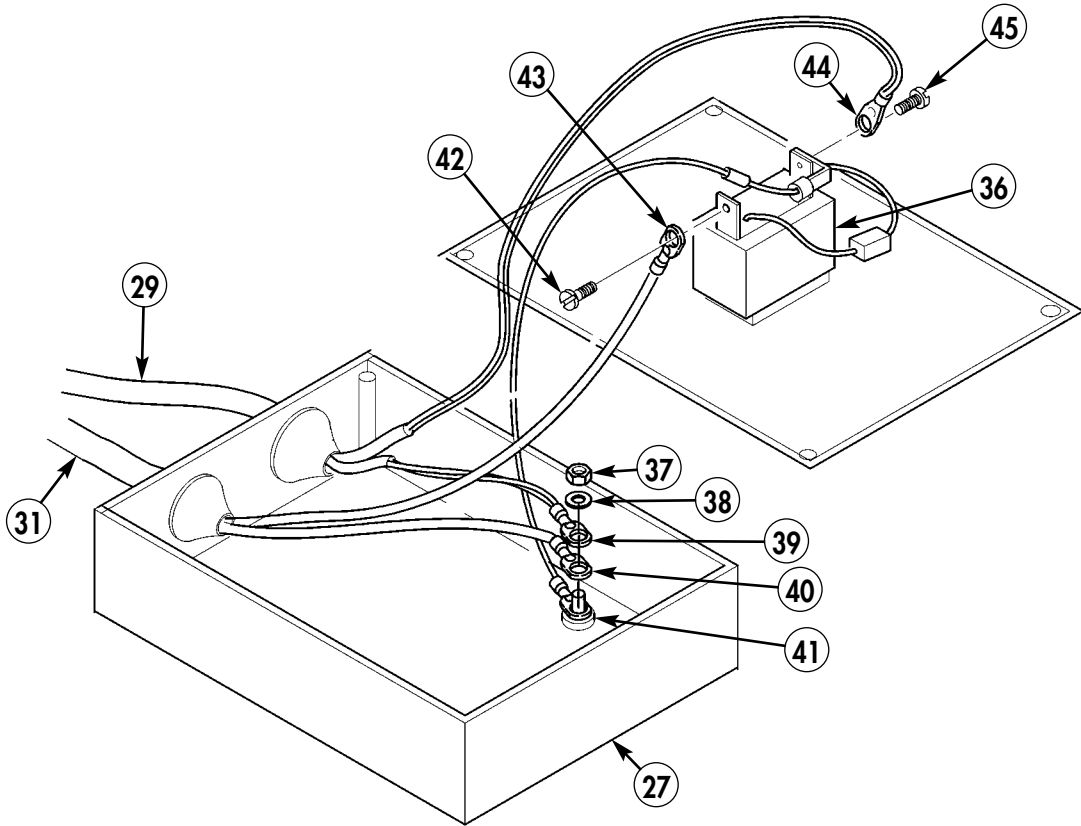


Figure 5-46.

## Section VI. INTERFACE PLATE INSTALLATION

### NOTE

- Perform either BFT installation or EPLRS installation. For BFT installation, see section V.
- Vehicles with serial numbers 235719 and below do not have interface plates. Vehicles with serial numbers 235720 and above will have holes drilled and inserts installed.

- 6-1. Remove two capscrews (1), lockwashers (2), and washers (3) from left side wheelhouse (4).
- 6-2. Place interface plate (5) on left side wheelhouse (4).
- 6-3. Install two existing capscrews (1), lockwashers (2), and washers (3) in bracket assembly (10). Do not tighten capscrews (1) at this time.
- 6-4. Align inboard curved edge of interface plate (5) with inner edge of wheelhouse (4) and ensure interface plate (5) is positioned correctly.
- 6-5. Tighten two capscrews (1) to 6 lb-ft. (8 N•m).
- 6-6. Using interface plate (5) as template, locate, and mark eight hole positions (7) in wheelhouse (4).
- 6-7. Remove two capscrews (1), lockwashers (2), and washers (3) from wheelhouse (4) and bracket assembly (10). Discard lockwashers (2).
- 6-8. Remove interface plate (5) from wheelhouse (4).

### CAUTION

Use drill stop to prevent damage to A/C condenser.

- 6-9. Drill eight 0.391-in. diameter holes (7) in wheelhouse (4).
- 6-10. Install four inserts (6) in holes marked A and four inserts (8) in holes marked B in left side wheelhouse (4).
- 6-11. Install interface plate (5) on left side wheelhouse (4) with two existing capscrews (1), lockwashers (2), and washers (3). Do not tighten capscrews (1) at this time.
- 6-12. Secure interface plate (5) to left side wheelhouse (4) with eight screws (9).
- 6-13. Tighten capscrews (1) and screws (9) to 6 lb-ft. (8 N•m).

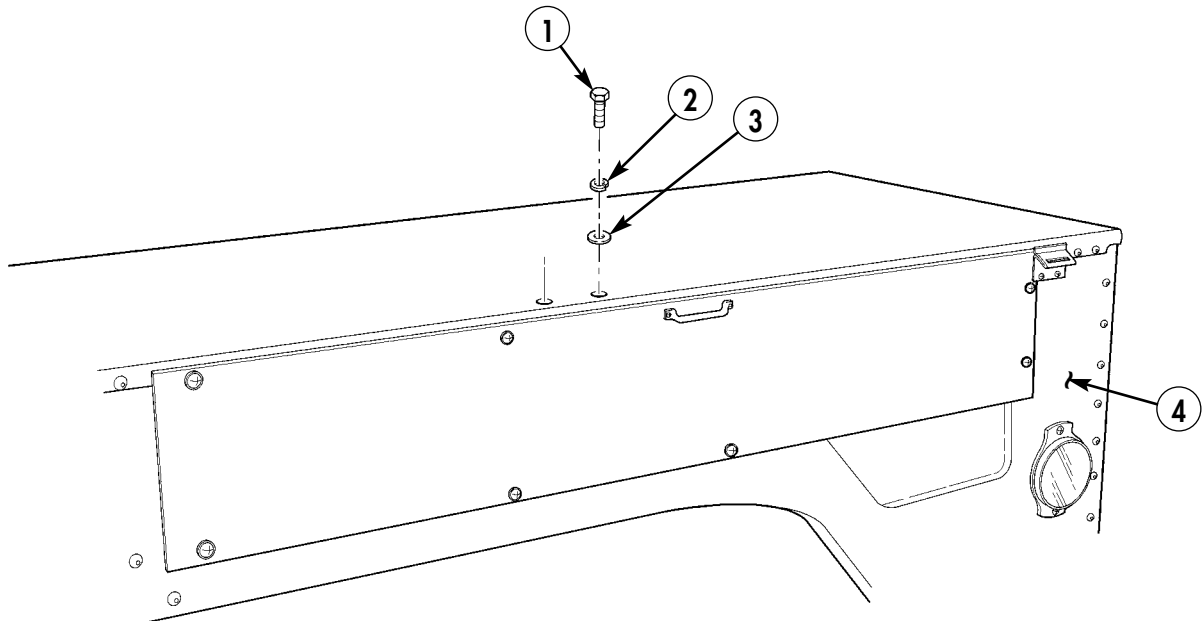
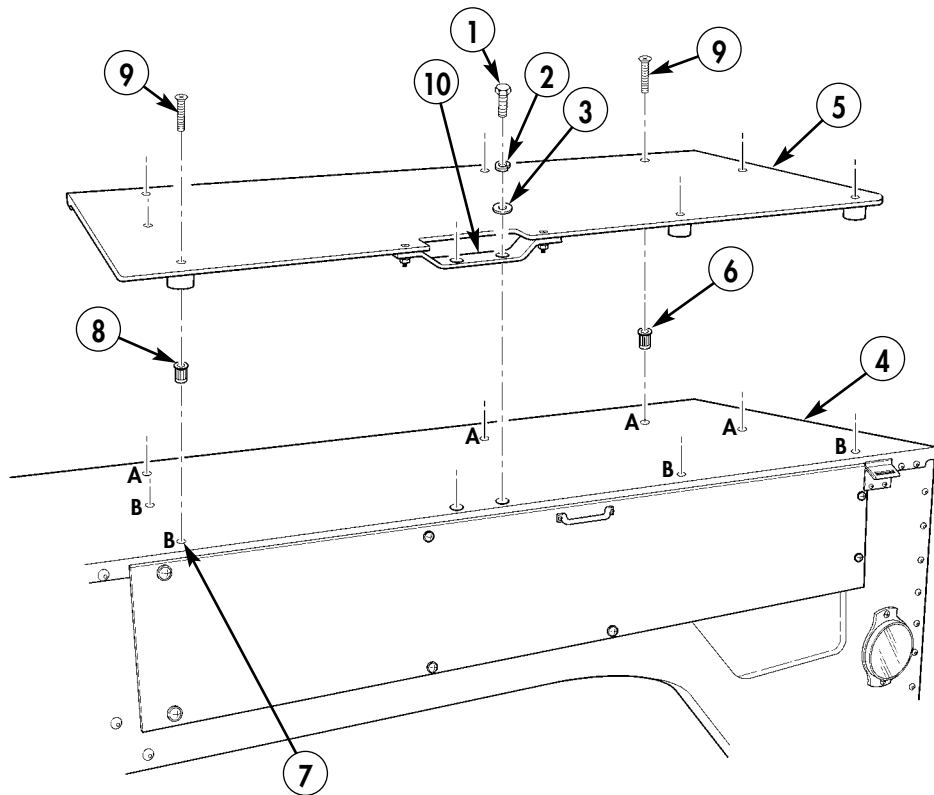


Figure 5-47.





- 2. LOCKWASHER - MS35338-44 - QTY. 2
- 4. INTERFACE PLATE - 12506814 - QTY. 1
- 6. INSERT - 12446871-16 - QTY. 4

- 8. INSERT - 12446871-2 - QTY. 4
- 9. SCREW - MS24667-35 - QTY. 8

Figure 5-48.

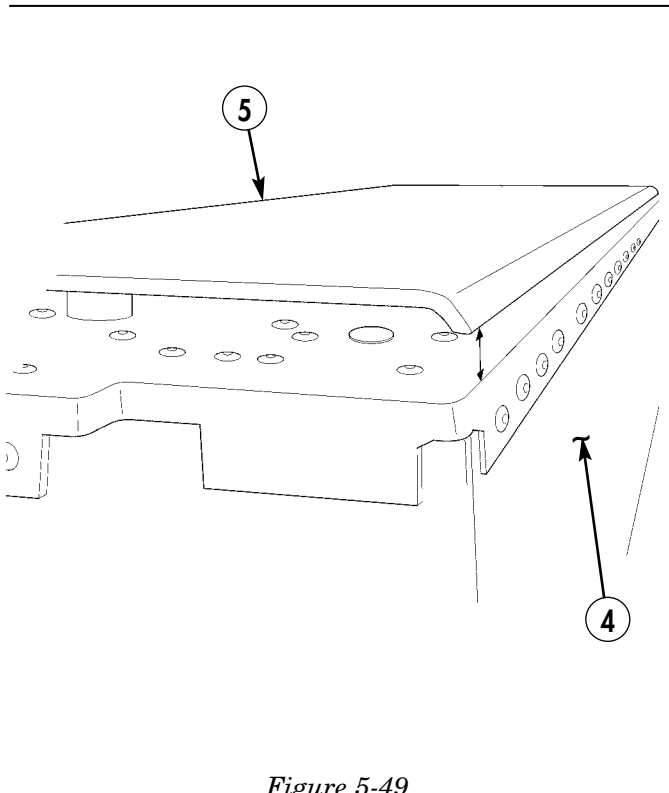


Figure 5-49.

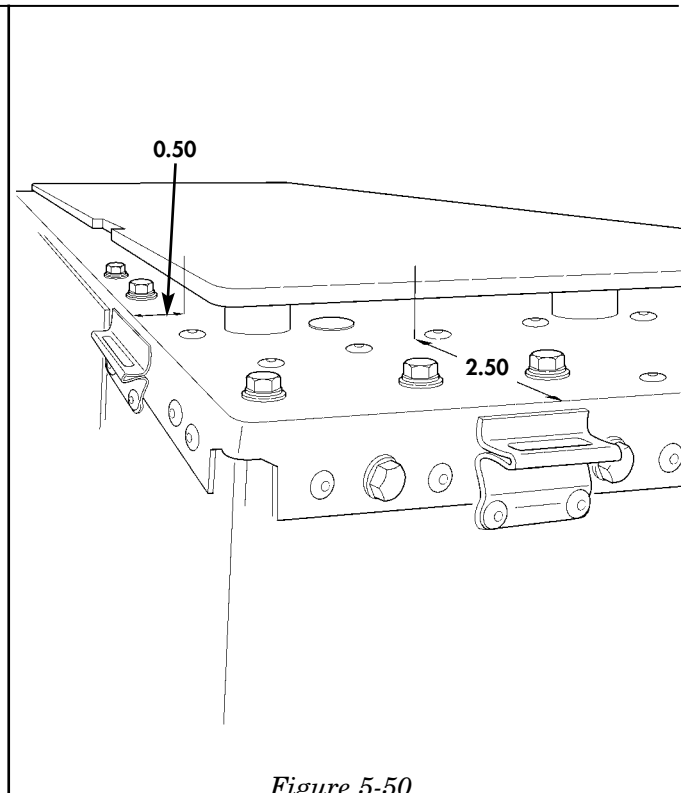


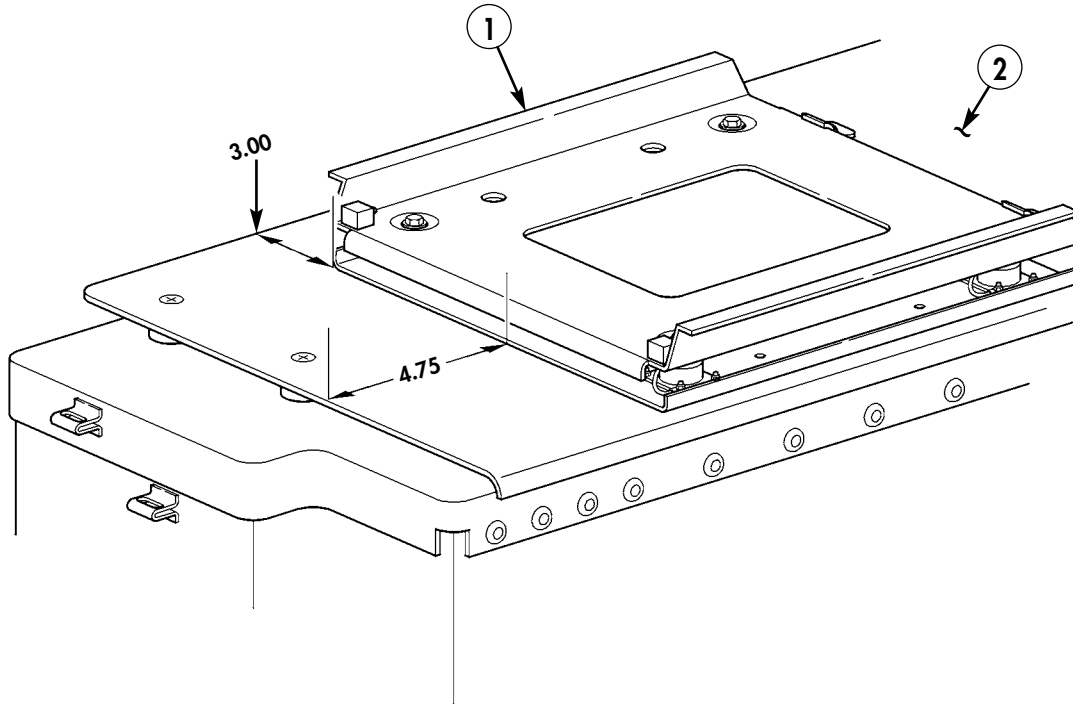
Figure 5-50.

## Section VII. EPLRS RESILIENT MOUNT INSTALLATION

### NOTE

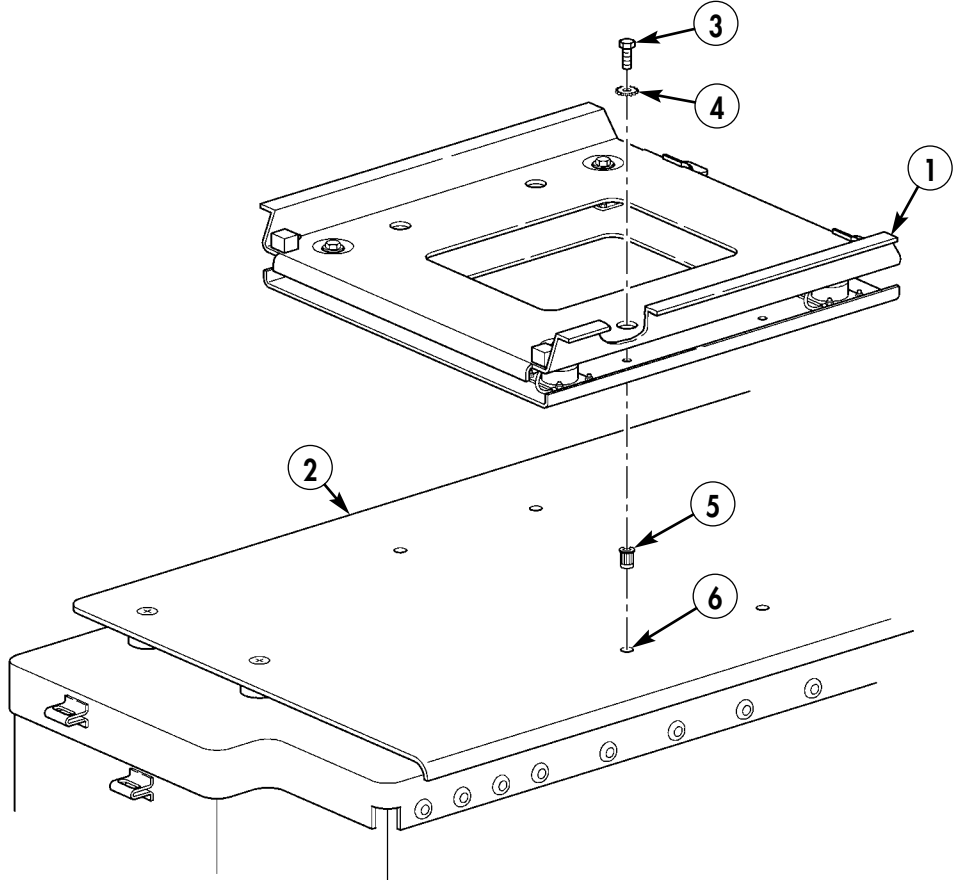
Perform either BFT installation or EPLRS installation. For BFT installation, see section V.

- 7-1. Position EPLRS resilient mount (1) on left side interface plate (2).
- 7-2. Using EPLRS resilient mount (1) as template, locate, and mark four hole positions (6) in left side interface plate (2).
- 7-3. Remove EPLRS resilient mount (1) from left side interface plate (2).
- 7-4. Drill four 0.531-in. diameter holes (6) in left side interface plate (2).
- 7-5. Install four inserts (5) in holes (6) in left side interface plate (2).
- 7-6. Install EPLRS resilient mount (1) on left side interface plate (2) with four capscrews (3) and lockwashers (4).
- 7-7. Install EPLRS unit (7) in EPLRS mount (1).
- 7-8. Connect ground leads (8) to EPLRS unit (7).



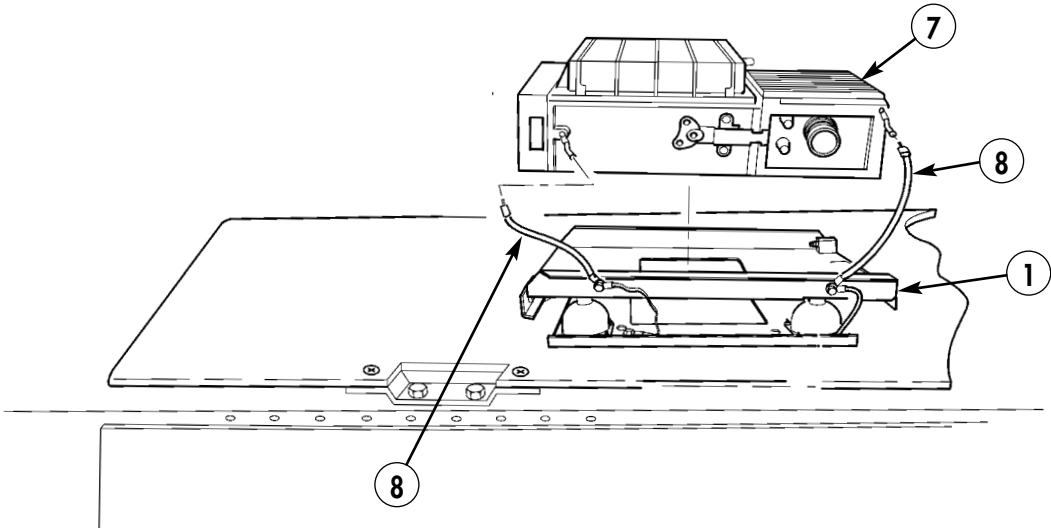
1. RESILIENT MOUNT - MT-6146/VSQ-1 - QTY. 1

Figure 5-51.



- 3. CAPSCREW - B1821BH031C100N - QTY. 4
- 4. LOCKWASHER - MS45904-72 - QTY. 4
- 5. INSERT - 12446871-15 - QTY. 4

Figure 5-52.



- 7. EPLRS-AN/VSQ-2(V) - QTY. 1

Figure 5-53.

### Section VIII. EPLRS ANTENNA INSTALLATION

#### NOTE

Perform either BFT installation or EPLRS installation. For BFT installation, see section V.

- 8-1. Enlarge four holes (2) to 0.343-in. diameter, and remove paint from vicinity of four mounting holes (2) on antenna base bracket (1).

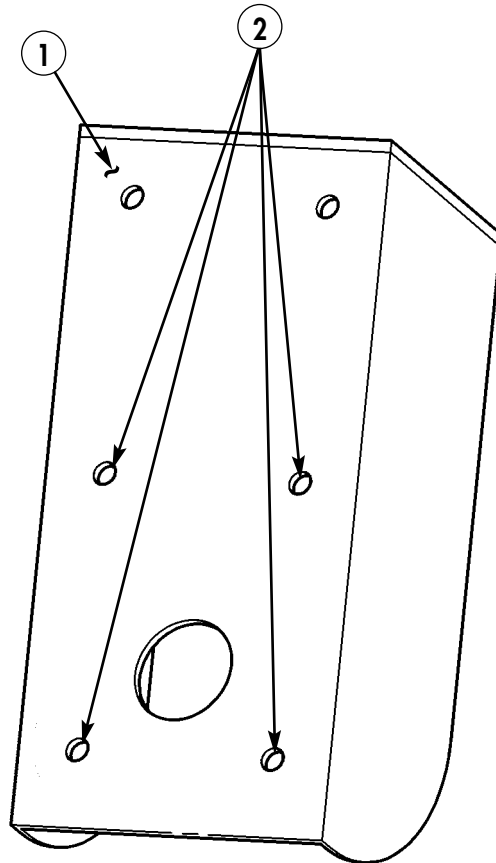
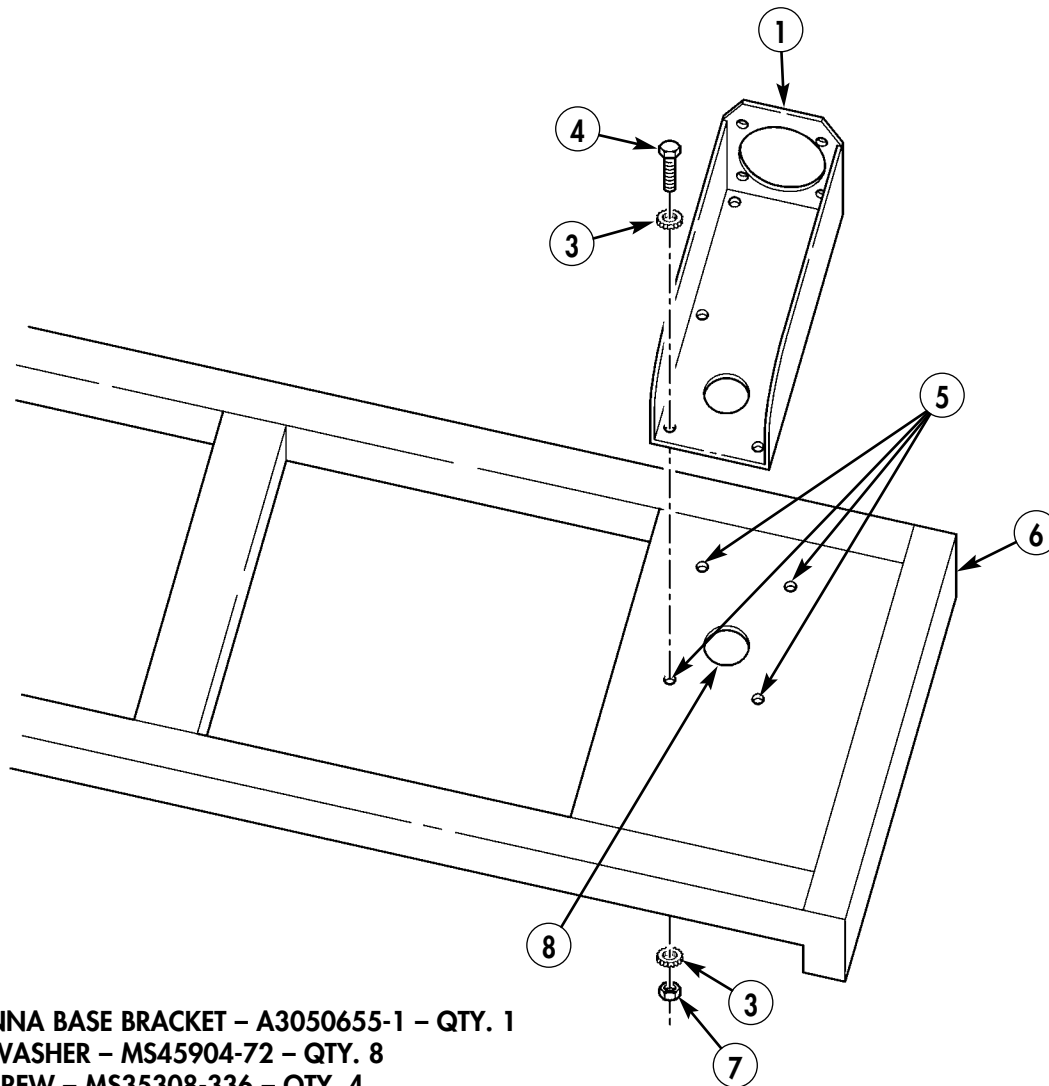


Figure 5-54.

**NOTE**

Secure antenna base bracket to antenna overcab mount with clamping device.

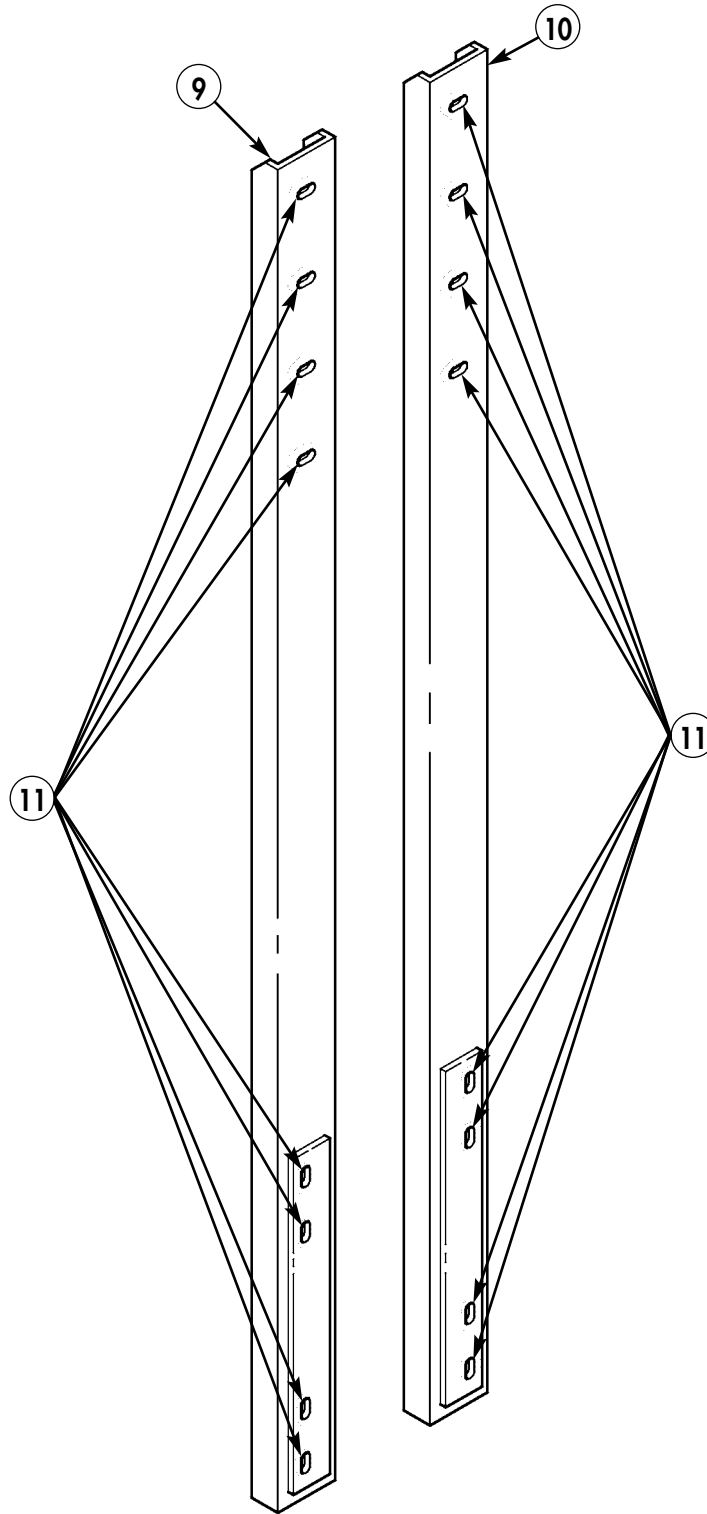
- 8-2. Position antenna base bracket (1) over cable access cut out (8).
- 8-3. Using antenna base bracket (1) as template, locate, mark, and drill four 0.343-in. diameter holes (5) in antenna overcab mount (6). Remove clamping device from antenna base bracket (1) and antenna overcab mount (6).
- 8-4. Remove paint from vicinity of four mounting holes (5) on antenna overcab mount (6). Apply antiseize compound as required.
- 8-5. Install antenna base bracket (1) on left front side of antenna overcab mount (6) with four capscrews (4), eight lockwashers (3), and four nuts (7).



1. ANTENNA BASE BRACKET - A3050655-1 - QTY. 1
3. LOCKWASHER - MS45904-72 - QTY. 8
4. CAPSCREW - MS35308-336 - QTY. 4
6. ANTENNA OVERCAB MOUNT - A3265061 - QTY. 1
7. NUT - 9418892 - QTY. 4

Figure 5-55.

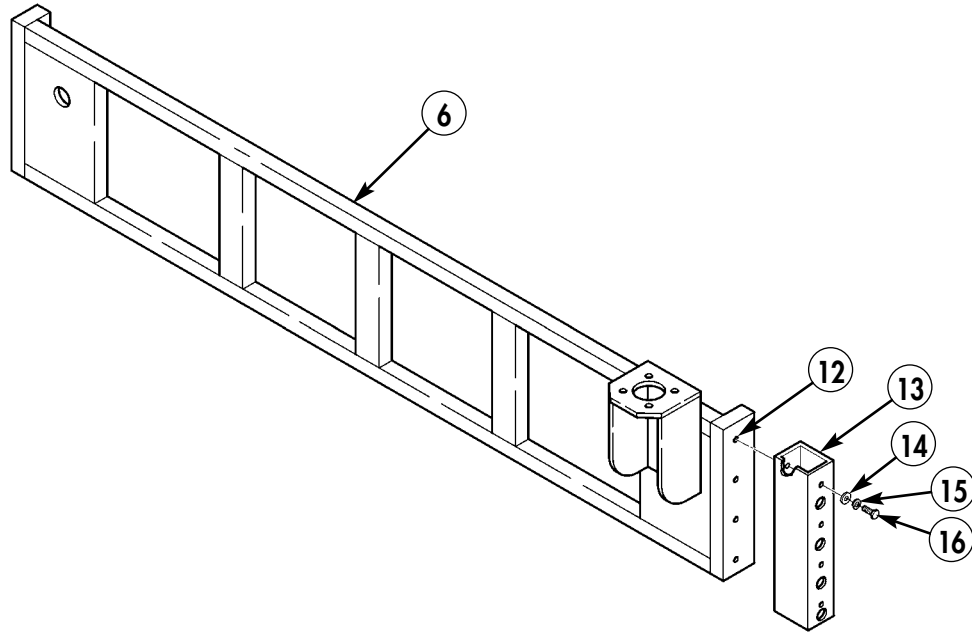
- 8-6. Remove paint from vicinity of sixteen mounting holes (11) on left overhead rail (9) and right overhead rail (10). Apply antiseize compound as required.



9. LEFT OVERHEAD RAIL - A3265060-001 - QTY. 1  
10. RIGHT OVERHEAD RAIL - A3265060-002 - QTY. 1

Figure 5-56.

- 8-7. Remove paint from vicinity of four mounting holes (12) on antenna overcab mount (6). Apply antiseize compound as required. Repeat for opposite side.
- 8-8. Install spacer (13) on antenna overcab mount (6) with four capscrews (16), lockwashers (15), and washers (14). Repeat for opposite side.



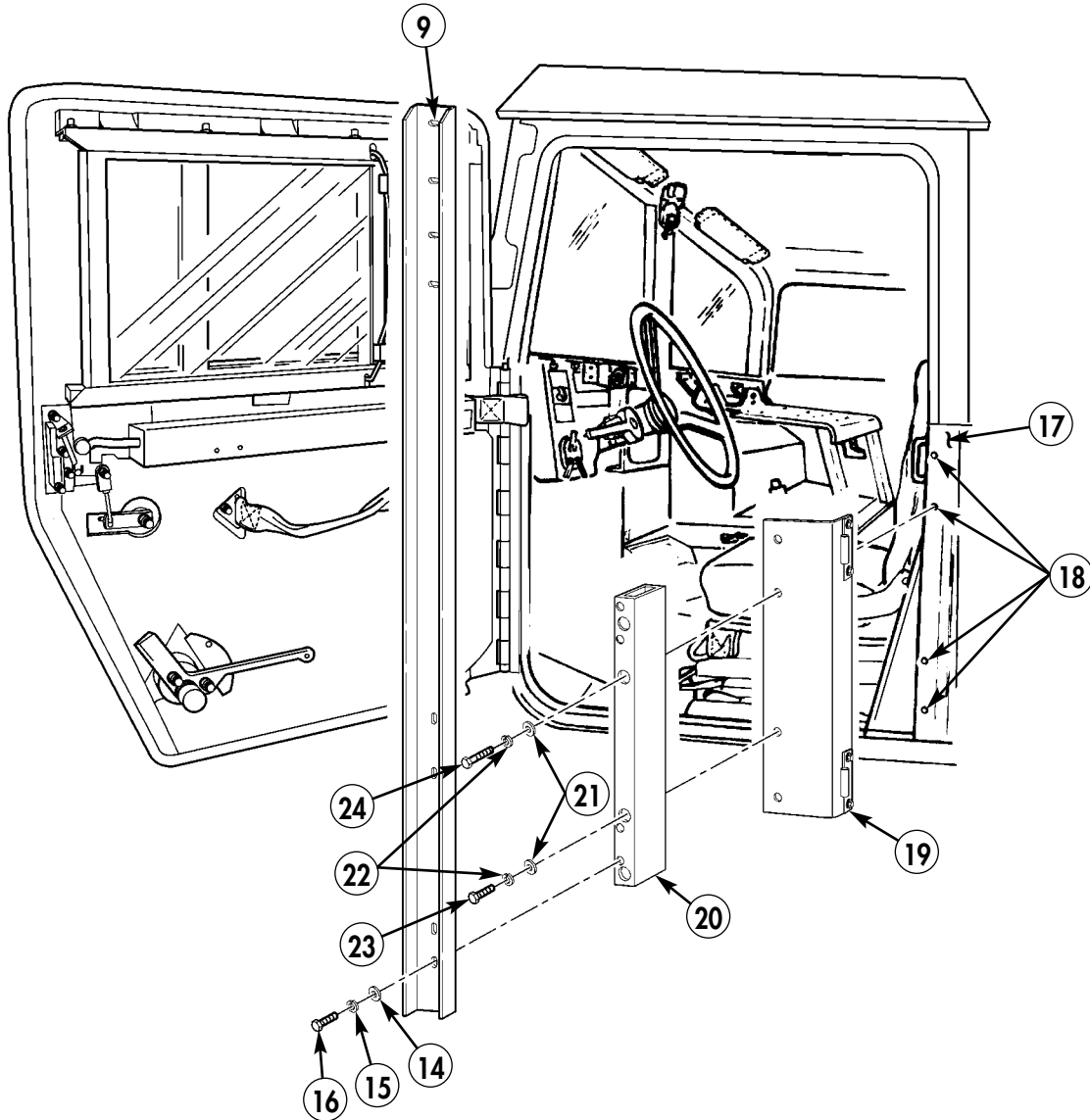
- 13. SPACER – 6501138 – QTY. 2
- 14. WASHER – 120392 – QTY. 8
- 15. LOCKWASHER – MS35338-44 – QTY. 8
- 16. CAPSCREW – B1821BH025C100N – QTY. 8

Figure 5-57.

**NOTE**

Remove two half doors, eight capscrews, lockwashers, washers, and two hinge plates from left and right B-pillars before performing steps 8-9 through 8-14.

- 8-9. Remove paint from vicinity of four holes (18) on left side of vehicle B-pillar (17). Apply antiseize compound as required.
- 8-10. Install left hinge plate (19) and left spacer (20) to left B-pillar mounting (17) with two capscrews (23), capscrews (24), four lockwashers (22), and washers (21).
- 8-11. Install left overhead rail (9) on left spacer (20) with four capscrews (16), lockwashers (15), and washers (14). Do not tighten capscrews (16) at this time.



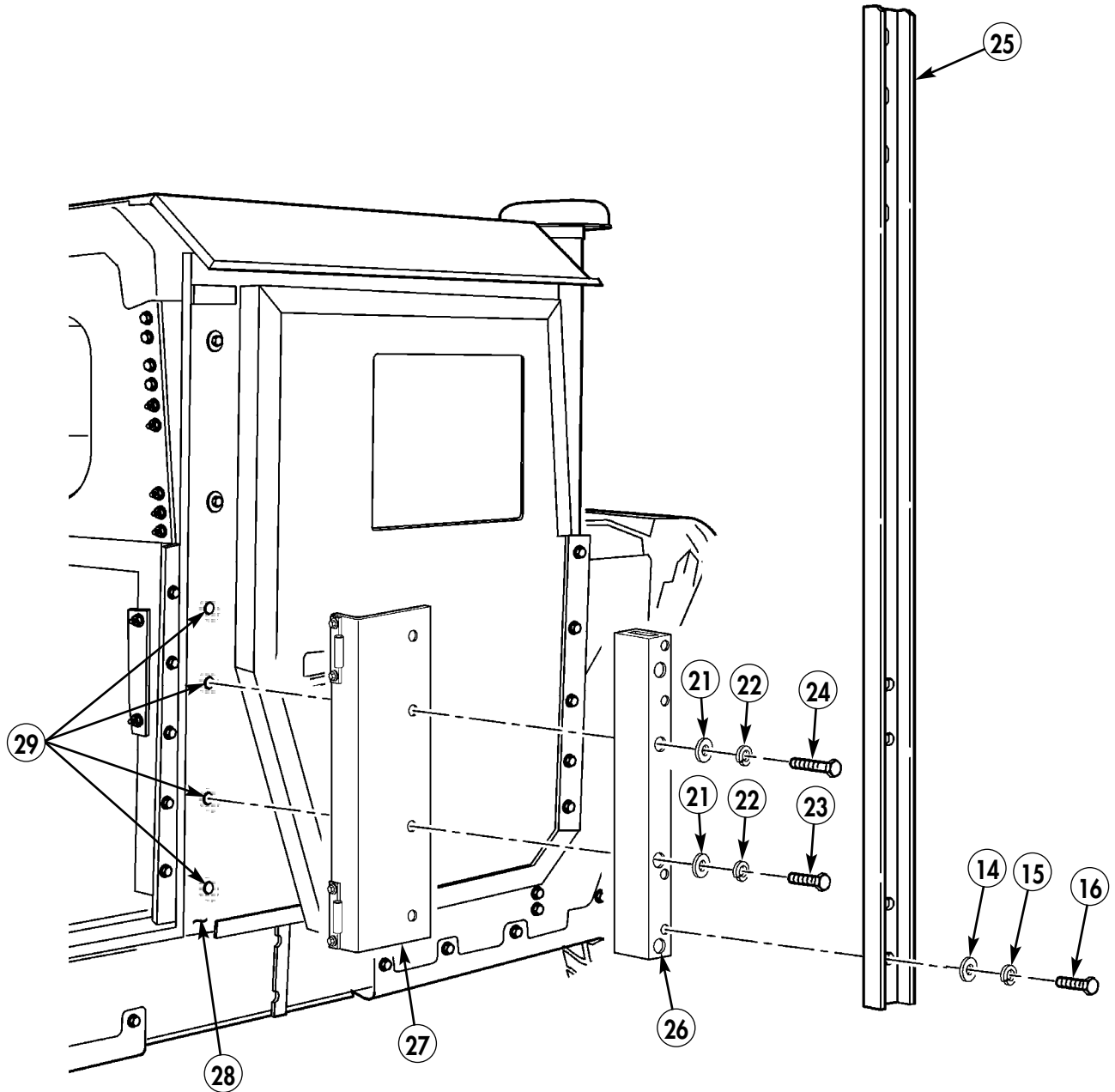
- 14. WASHER - 120392 - QTY. 4
- 15. LOCKWASHER - MS35338-44 - QTY. 4
- 16. CAPSCREW - B1821BH025C100N- QTY. 4
- 20. SPACER - 6500859 - QTY. 1

- 21. WASHER - 120394 - QTY. 4
- 22. LOCKWASHER - MS35338-46 - QTY. 4
- 23. CAPSCREW - B1821BH038C200N - QTY. 2
- 24. CAPSCREW - B1821BH038C375N - QTY. 2

Figure 5-58.



- 8-12. Remove paint from vicinity of four holes (29) on right side of vehicle B-pillar (28). Apply antiseize compound as required.
- 8-13. Install right hinge plate (27) and right spacer (26) to right B-pillar mounting (28) with two capscrews (23), capscrews (24), four lockwashers (22), and washers (21).
- 8-14. Install right overhead rail (25) on right spacer (26) with four capscrews (16), lockwashers (15), and washers (14). Do not tighten capscrews (16) at this time.



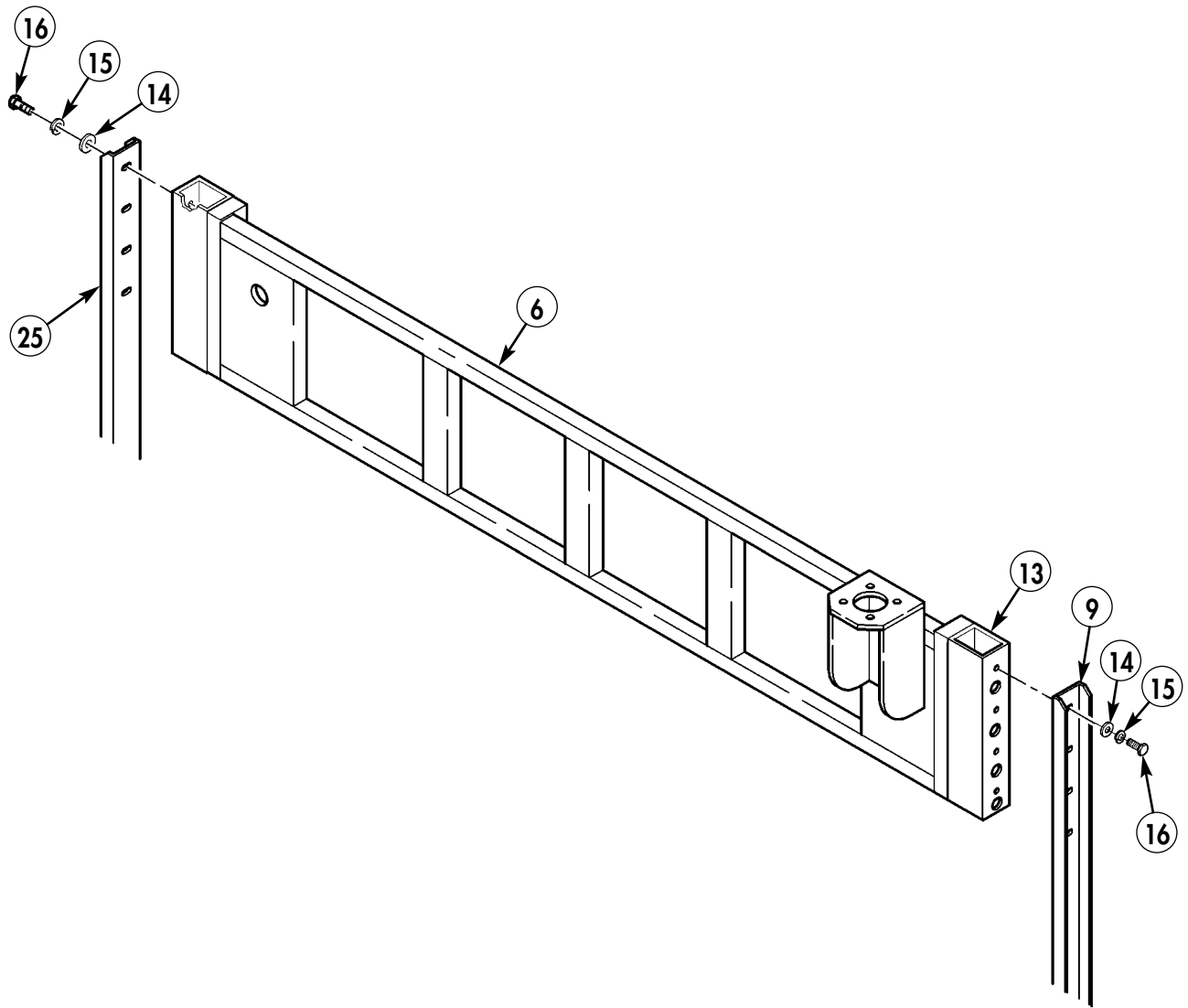
- 14. WASHER - 120392 - QTY. 4
- 15. LOCKWASHER - MS35338-44 - QTY. 4
- 16. CAPSCREW - B1821BH025C100N - QTY. 4
- 21. WASHER - 120394 - QTY. 4

- 22. LOCKWASHER - MS35338-46 - QTY. 4
- 23. CAPSCREW - B1821BH038C175N - QTY. 2
- 24. CAPSCREW - B1821BH038C325N - QTY. 2
- 26. SPACER - 6500872 - QTY. 1

Figure 5-59.

**8-15.** Install antenna overcab mount (6) with spacers (13) on left overhead rail (9) and right overhead rail (25) with seven capscrews (16) lockwashers (15), and washers (14), omitting left side screw, lockwasher, and washer (third from top). Tighten lower left rail and right rail capscrews (16) (Refer to figures 5-56 and 5-57).

**8-16.** Locate, mark, and drill 0.281-in. diameter hole (30) in overhead antenna mount (6).



- 14. WASHER - 120392 - QTY. 7
- 15. LOCKWASHER - MS35338-44 - QTY. 7
- 16. CAPSCREW - B1821BH025C100N - QTY. 7

Figure 5-60.

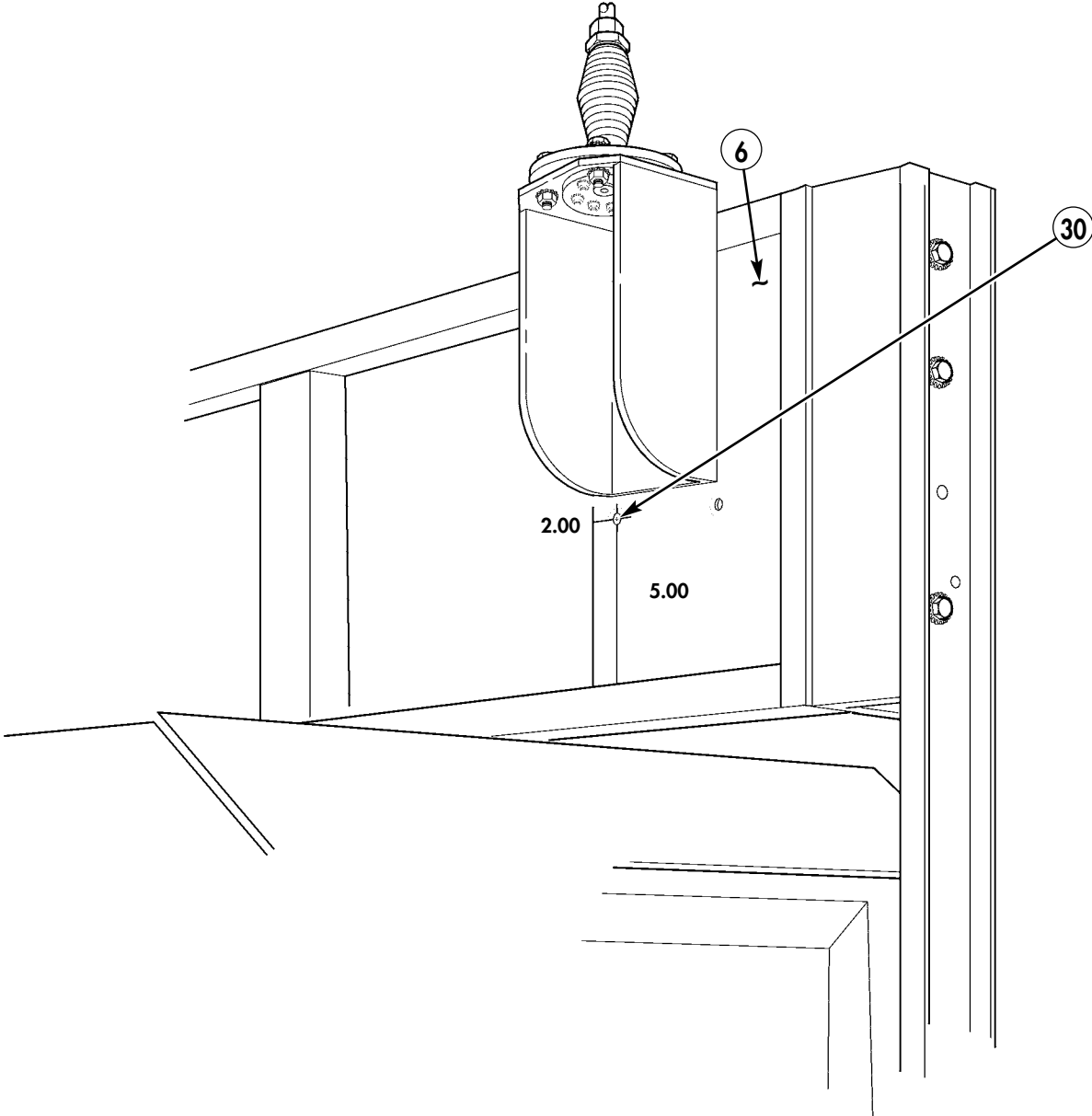
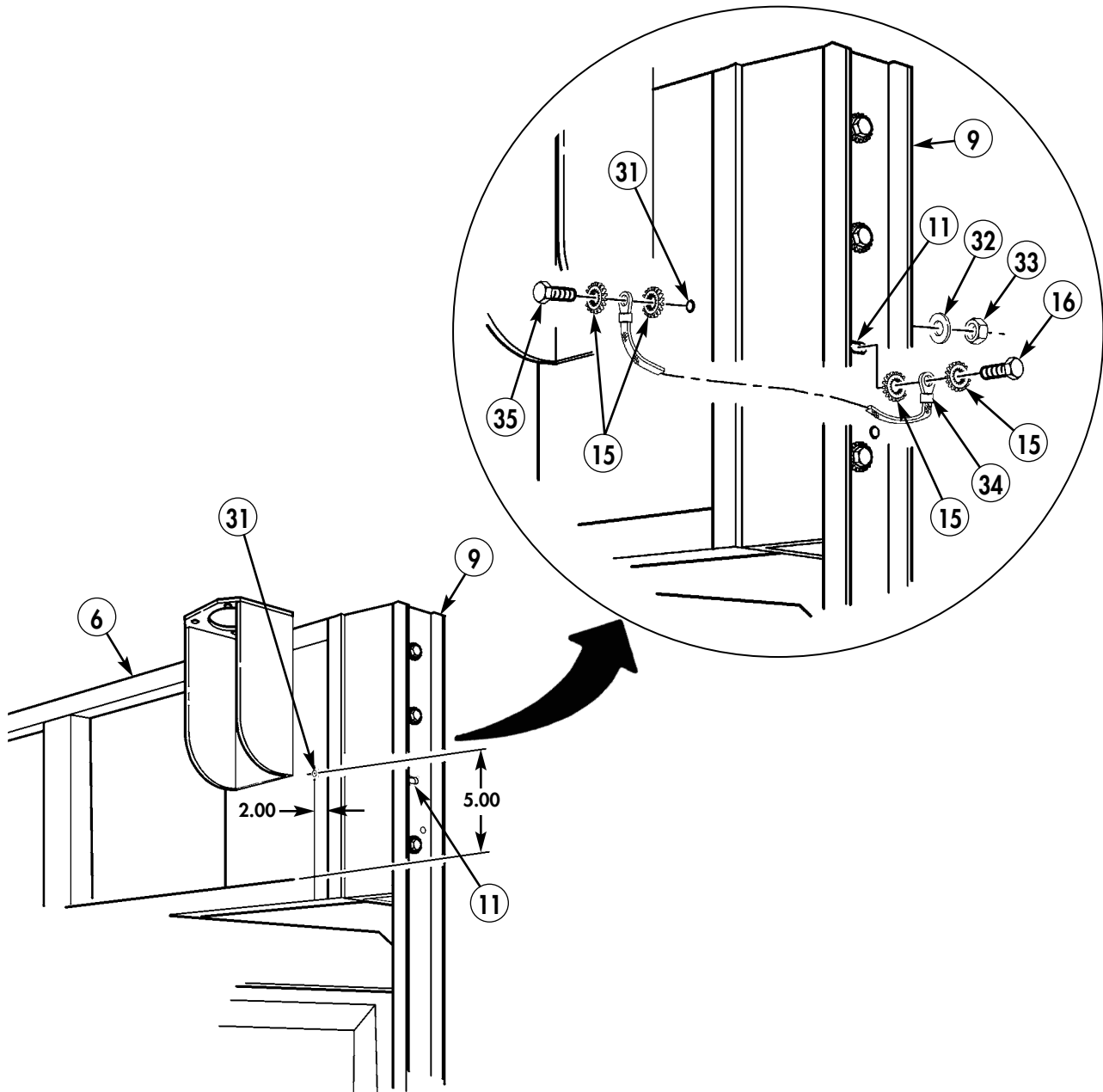


Figure 5-61.

- 8-17. Remove paint from vicinity of left overhead rail hole (11). Apply antiseize compound as required.
- 8-18. Fabricate ground strap (34) from 6-in. length of braided wire and two terminal lugs.
- 8-19. Install ground strap (34) on left overhead rail (9) with capscrew (16) and two lockwashers (15).
- 8-20. Locate, mark, and drill 0.281-in. diameter hole (31) in antenna overcab mount (6).
- 8-21. Remove paint from vicinity of antenna overcab mount hole (31). Apply antiseize compound as required.
- 8-22. Install ground strap (34) on antenna overcab mount (6) with capscrew (35), two lockwashers (15), washer (32), and nut (33).

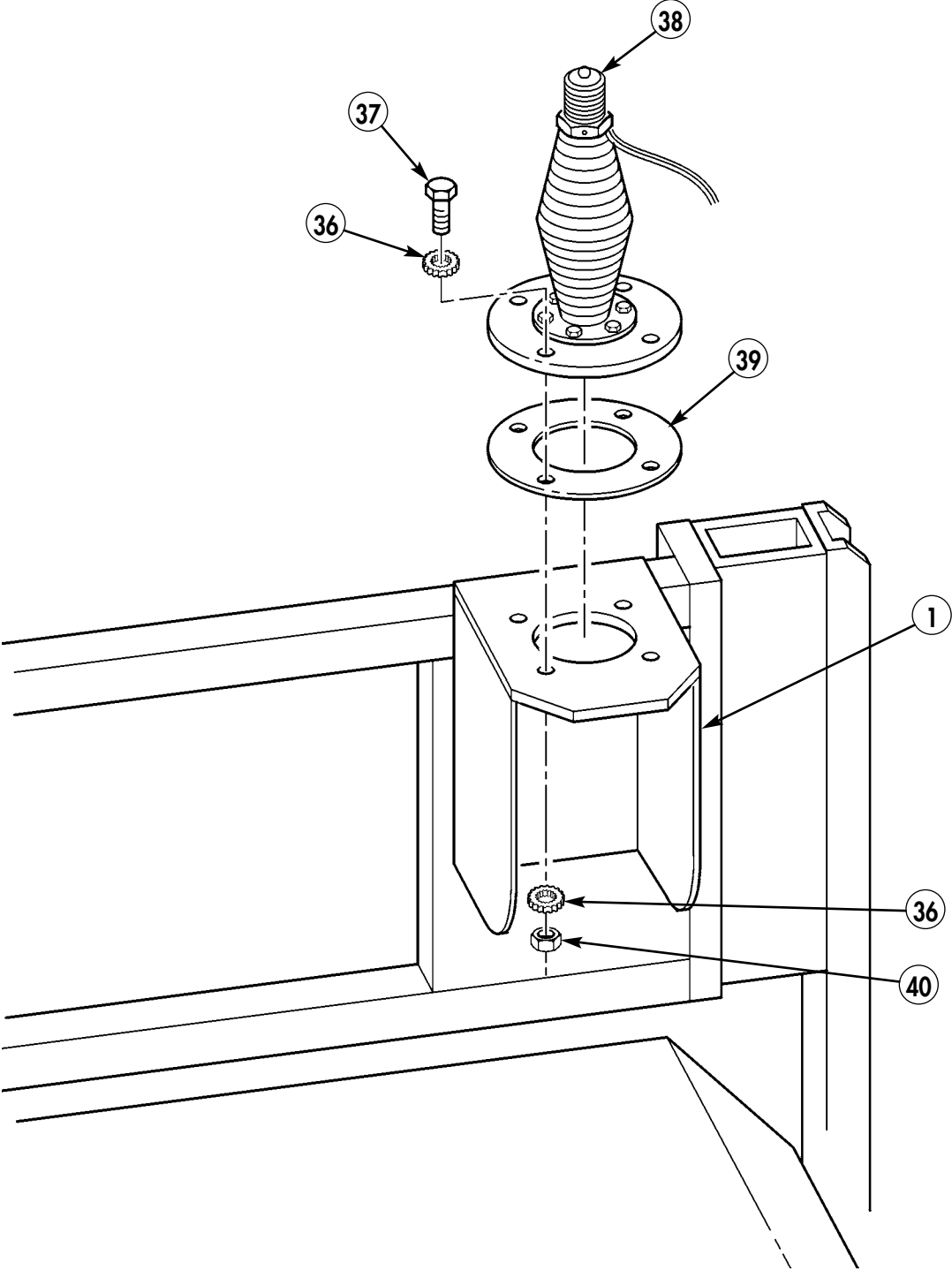


- 15. LOCKWASHER – MS45904-71 – QTY. 4
- 16. CAPSCREW – B1821BH025C100N – QTY. 1
- 32. WASHER – 2436161 – QTY. 1
- 33. NUT – 9419143 – QTY. 1

- 34. GROUND STRAP
  - BRAIDED WIRE – AA59569F30T0375 – QTY. A/R
  - TERMINAL LUG – MS20659-141 – QTY. 2
- 35. CAPSCREW – B1821BH025C075N – QTY. 1

Figure 5-62.

8-23. Install antenna base (38) on antenna base bracket (1) with four capscrews (37), eight lockwashers (36), gasket (39), and four nuts (40).



- 36. LOCKWASHER - MS45904-76 - QTY. 8
- 37. CAPSCREW - B1821BH038C150N - QTY. 4
- 38. ANTENNA - A3005031 - QTY. 1
- 39. GASKET - A3013655-1 - QTY. 1
- 40. NUT - 13218E0320-293 - QTY. 4

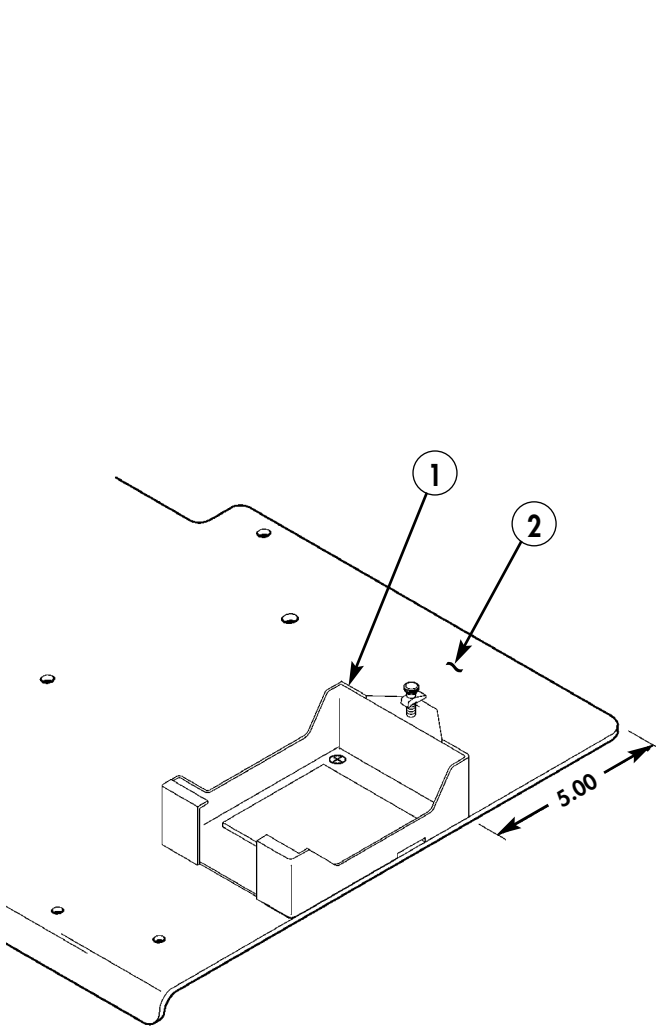
Figure 5-63.

### Section IX. URO MOUNTING BRACKET INSTALLATION

**NOTE**

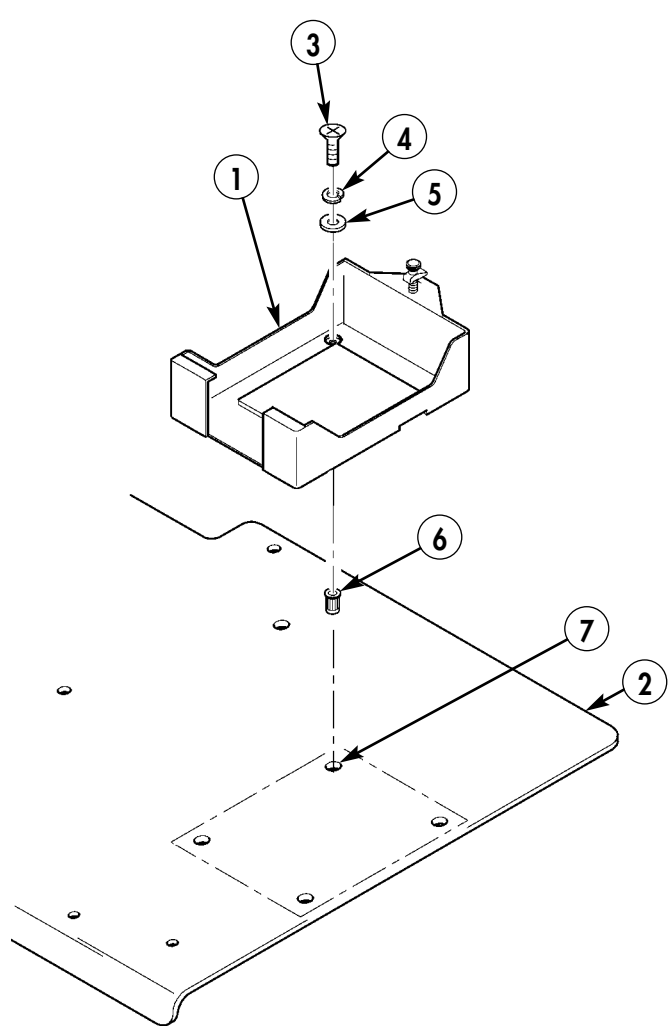
Perform either BFT installation or EPLRS installation. For BFT installation, see section V.

- 9-1. Position URO bracket (1) on left side interface plate (2). Locate and mark four hole positions (7) on left side interface plate (2).
- 9-2. Remove URO bracket (1) from left side interface plate (2).
- 9-3. Drill four 0.295-in. diameter holes (7) in left side interface plate (2).
- 9-4. Install four inserts (6) in left side interface plate (2).
- 9-5. Install URO bracket (1) on left side interface plate (2) with four capscrews (3), lockwashers (4), and washers (5).



1. USER READOUT BRACKET (URO) – A3006206 – QTY. 1

Figure 5-64.



3. CAPSCREW – MS35206-266 – QTY. 4  
 4. LOCKWASHER – MS35338-43 – QTY. 4  
 5. WASHER – 9416128 – QTY. 4  
 6. INSERT – 12446871-7 – QTY. 4

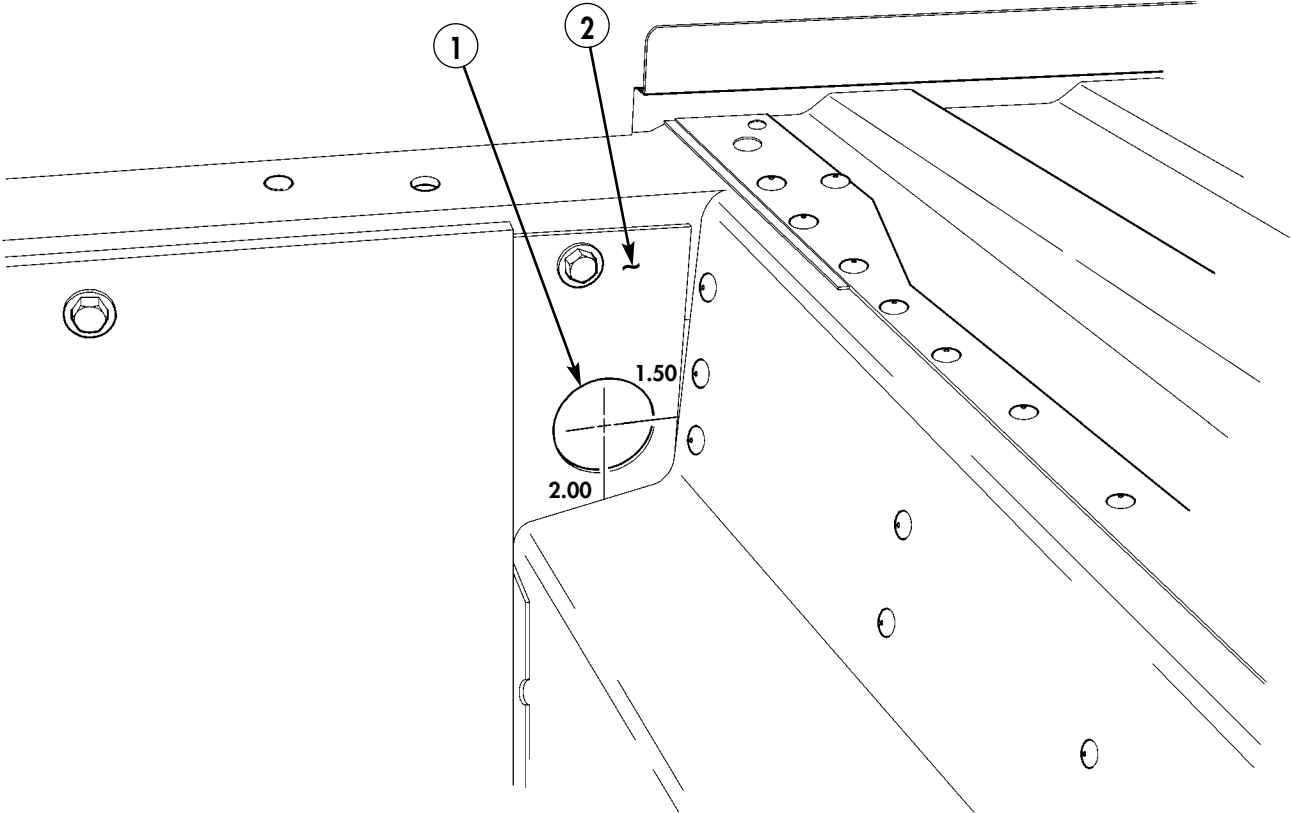
Figure 5-65.

**Section X. EPLRS CABLING**

**NOTE**

Perform either BFT installation or EPLRS installation. For BFT installation, see section V.

**10-1.** Locate, mark, and drill 1.75-in. diameter hole (1) in right-side cab enclosure panel (2).



*Figure 5-66.*

- 10-2. Remove two countersunk screws (3) from interface plate (14).
- 10-3. Remove capscrew (5) from wheelhouse mount bracket (12).

**NOTE**

If EPLRS unit is available, connect power cable, INC-EPUU cable, antenna cable, and ground leads to EPLRS unit. Otherwise route cables to vicinity of EPLRS mount.

- 10-4. Route EPLRS power cable (10), INC-EPUU cable (8), and antenna cable (16) along interface plate (14), left side wheelhouse (15), left rear seat/utility area (22), and along tunnel (25).
- 10-5. Route EPLRS power cable (10) and INC-EPUU cable (8) through hole (1) and into cab of vehicle (26).
- 10-6. Secure three cables (8), (10), and (16) to interface plate (14) with two clamps (9), capscrews (4), lockwashers (6), washers (7), and washers (11).
- 10-7. Secure three cables (8), (10), and (16) to interface plate (14) with clamp (9), capscrew (5), lockwasher (6), washer (7), and washer (11).
- 10-8. Secure three cables (8), (10), and (16) to left side wheelhouse (15) with clamp (9), existing capscrew (17), lockwasher (6), and washer (7).
- 10-9. Locate, mark, and drill 0.147-in. diameter hole (19) in wheelhouse (15).
- 10-10. Secure three cables (8), (10), and (16) to wheelhouse (15) with clamp (18) and self-tapping screw (23).
- 10-11. Secure three cables (8), (10), and (16) along edge in left rear seat/utility area (22) with two capscrews (20), four washers (7), two clamps (9), lockwashers (6), and nuts (21).
- 10-12. Locate, mark, and drill three 0.147-in. diameter holes (24) in tunnel (25).
- 10-13. Secure three cables (8), (10), and (16) to tunnel (25) with three clamps (18) and self-tapping screws (23).
- 10-14. Split grommet (27) and install on EPLRS power cable (10) and INC-EPUU cable (8).
- 10-15. Install grommet (27) in hole (1).
- 10-16. Route EPLRS antenna cable (16) towards overhead mount.

- 4. CAPSCREW – B1821BH025C200N – QTY. 2
- 5. CAPSCREW – B1821BH025C125N – QTY. 1
- 6. LOCKWASHER – MS35338-44 – QTY. 3
- 7. WASHER – 9414920 – QTY. 3
- 8. INC-EPUU CABLE – A3279383-3 – QTY. 1
- 9. CLAMP – MS21333-105 – QTY. 3
- 10. EPLRS POWER CABLE – A3004939 – QTY. 1
- 11. WASHER – MS51412-23 – QTY. 3
- 16. EPLRS ANTENNA CABLE – SM-C-911480 – QTY. 1

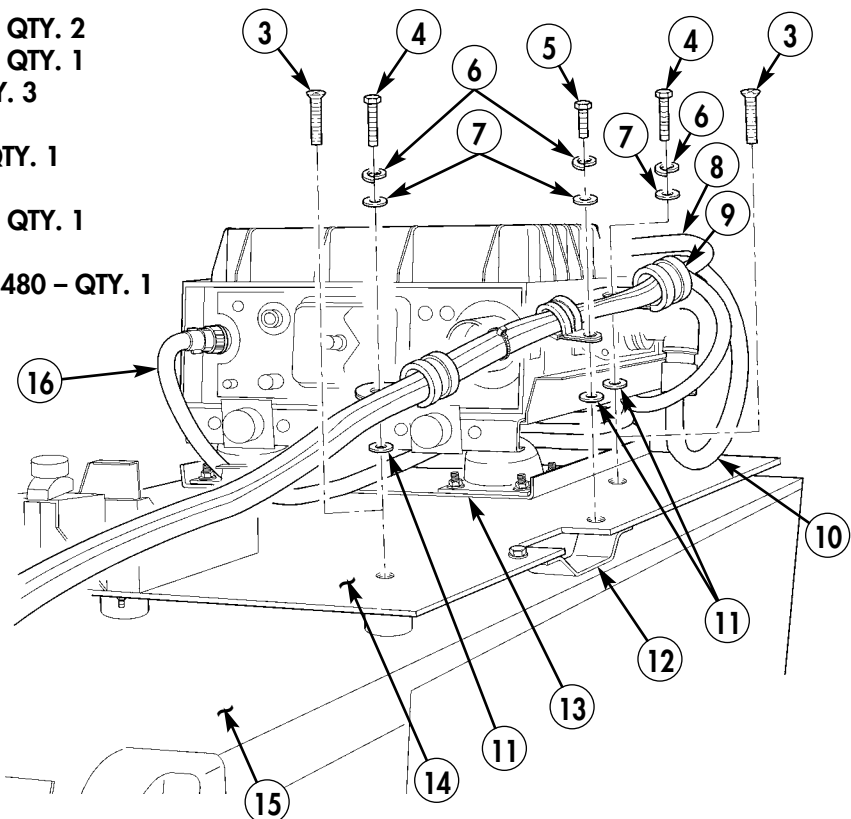
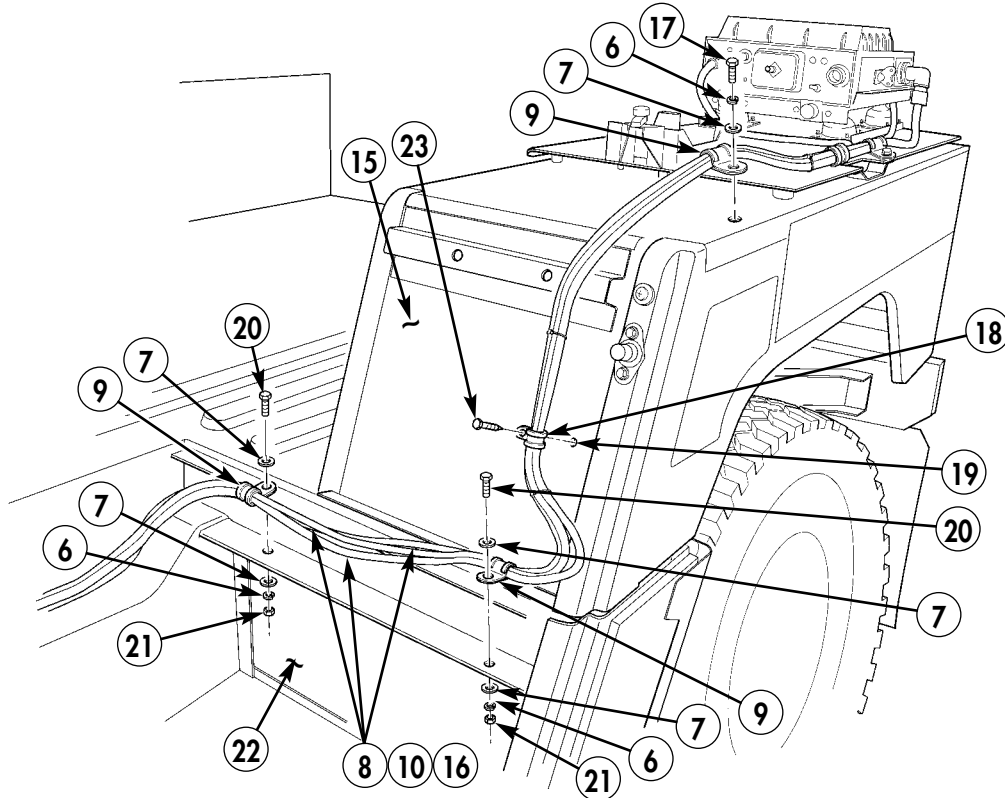


Figure 5-67.

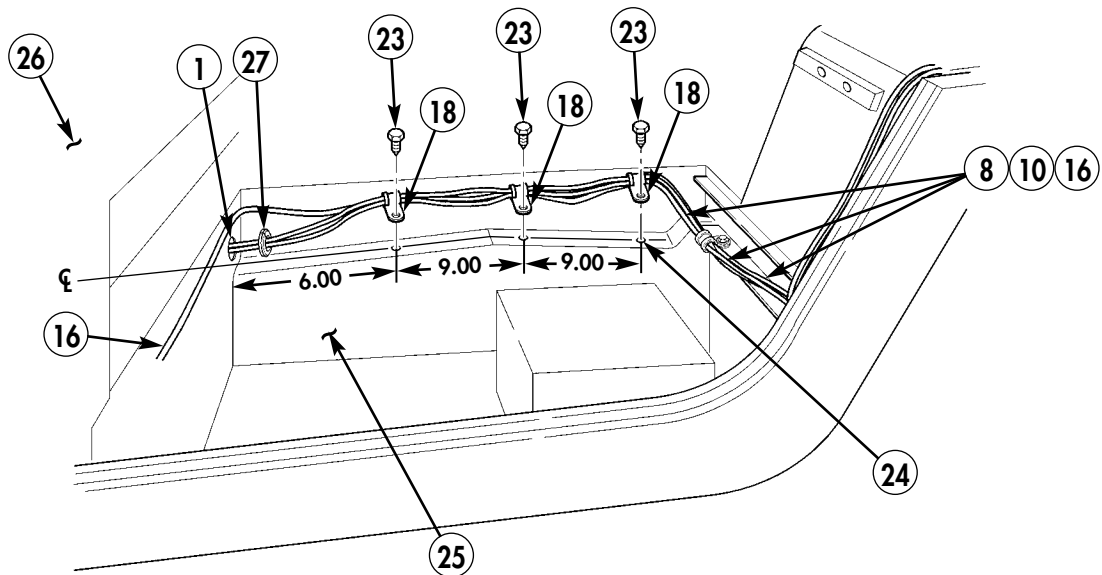




- 6. LOCKWASHER - MS35338-44 - QTY. 5
- 7. WASHER - 9414920 - QTY. 3
- 9. CLAMP, LOOP - MS21333-105 - QTY. 3
- 18. CLAMP, LOOP - MS21333-75 - QTY. 1

- 20. CAPSCREW - B1821BH025C100N - QTY. 2
- 21. NUT - 9419143 - QTY. 2
- 23. SELF-TAPPING SCREW - 9421073 - QTY. 1

Figure 5-68.



- 18. CLAMP, LOOP - MS21333-75 - QTY. 3
- 23. SELF-TAPPING SCREW - 9421073 - QTY. 3
- 27. GROMMET - MS35489-27 - QTY. 1

Figure 5-69.

- 10-17. Remove capscrew (31), lockwasher (6), and washer (30) from back of cab enclosure panel (2). Discard lockwasher (6).
- 10-18. Secure EPLRS antenna cable (16) to back of cab enclosure panel (2) with clamp (29), spacer (28), existing capscrew (31), lockwasher (6), and existing washer (30).
- 10-19. Remove two capscrews (33), lockwashers (6), and washers (32) from left side cab enclosure panel armor plate (34). Discard lockwashers (6).
- 10-20. Secure EPLRS antenna cable (16) to left side cab enclosure panel armor plate (34) with two clamps (29), existing capscrews (33), lockwashers (6), and existing washers (32).
- 10-21. Secure EPLRS antenna cable (16) to existing screw (38) on B-pillar (39) with clamp (37), washer (36), and nut (35).
- 10-22. Remove capscrew (41) and lockwasher (40) from B-pillar (39).
- 10-23. Secure EPLRS antenna cable (16) to B-pillar (39) with clamp (37), existing capscrew (41), and washer (40).
- 10-24. Secure EPLRS antenna cable (16) to overhead antenna mount (43) with capscrew (20), washer (7), clamp (29), lockwasher (6), and nut (21).
- 10-25. Connect EPLRS antenna cable (16) to antenna (42).
- 10-26. Install spiral wrap (45) on cable (16) with electrical tape (44).

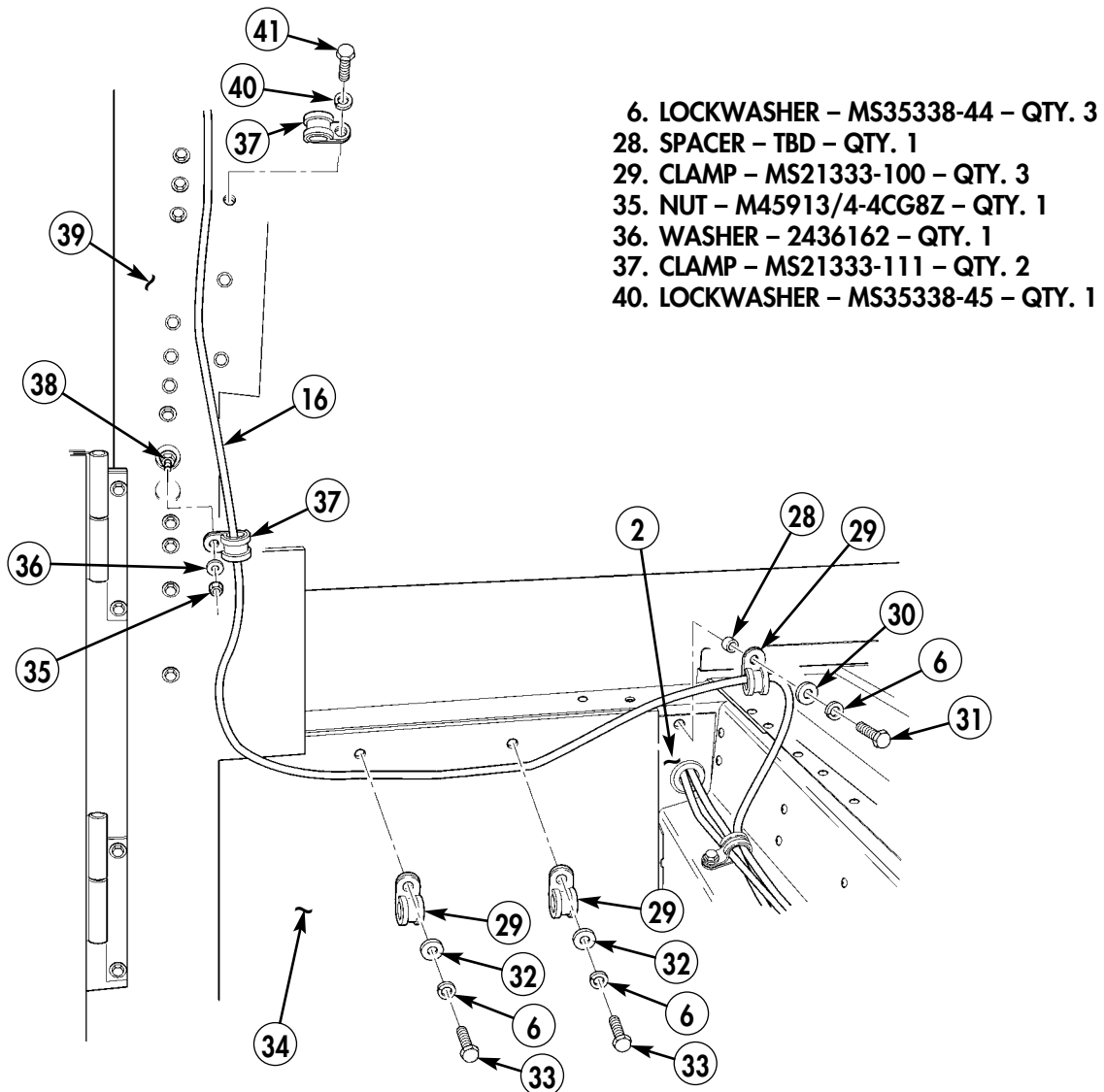


Figure 5-70.

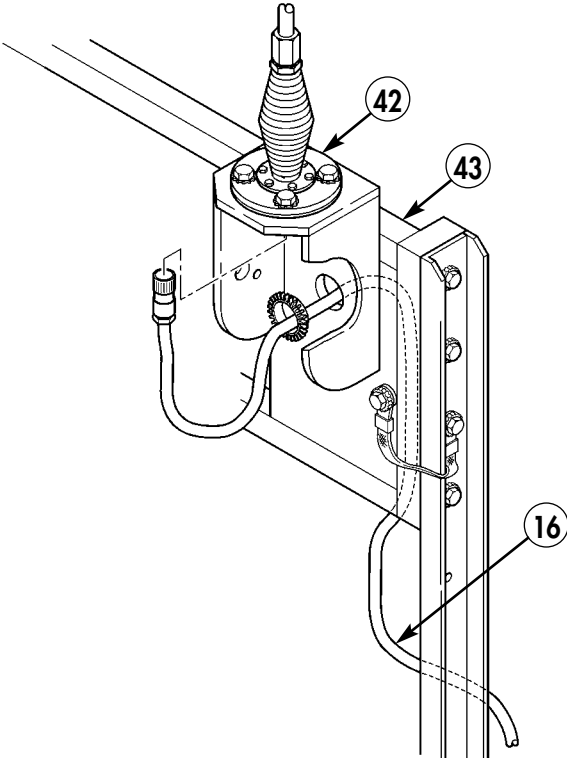
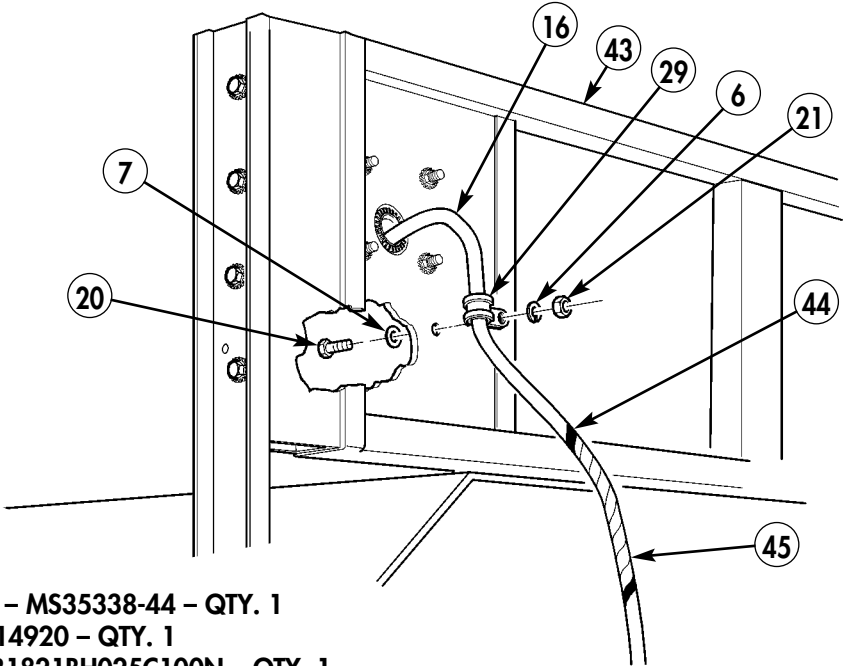


Figure 5-71.



- 6. LOCKWASHER - MS35338-44 - QTY. 1
- 7. WASHER - 9414920 - QTY. 1
- 20. CAPSCREW - B1821BH025C100N - QTY. 1
- 21. NUT - 9419143 - QTY. 1
- 29. CLAMP, LOOP - MS21333-100 - QTY. 1
- 44. ELECTRICAL TAPE - HH-I-595-A-108-0 - QTY. A/R
- 45. SPIRAL WRAP - 11644992 - QTY. A/R

Figure 5-72.

10-27. Route INC-EPUU cable (8) and EPLRS power cable (10) under insulation (46).

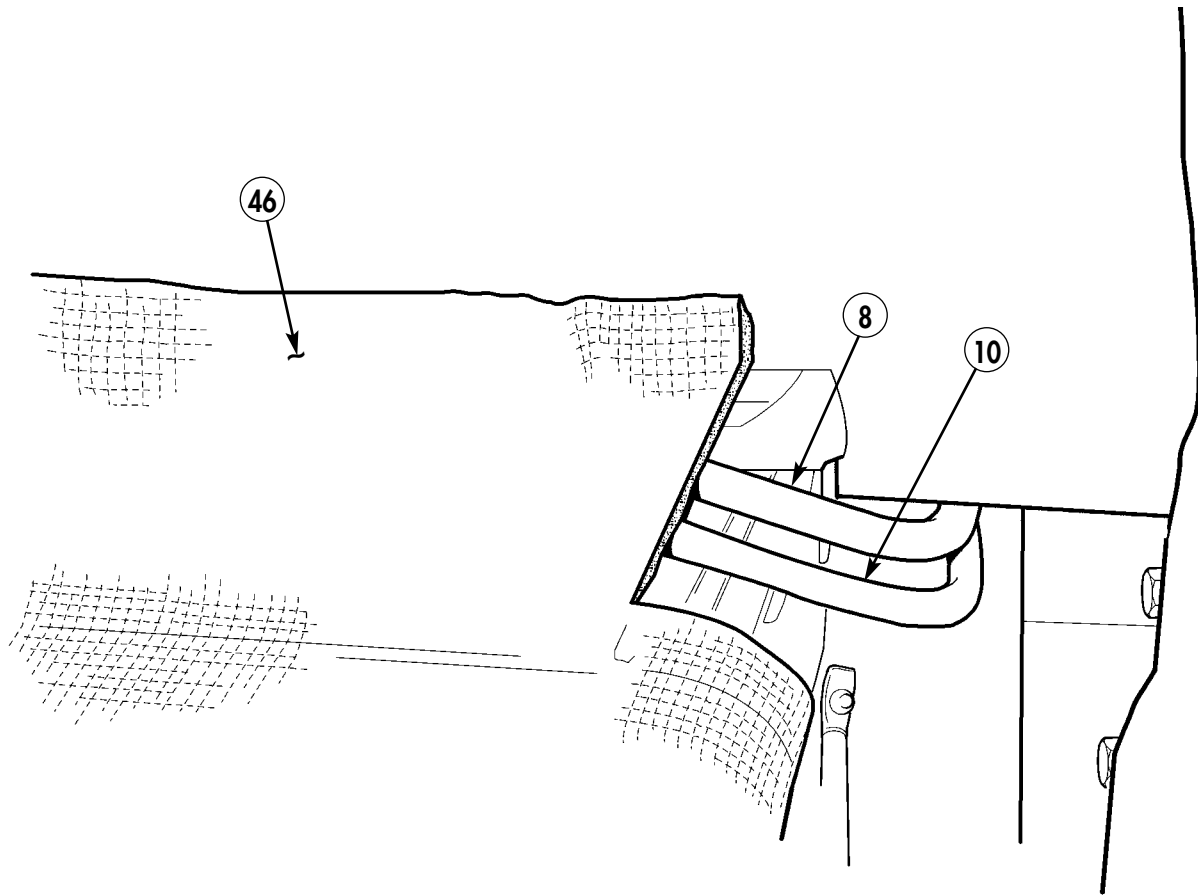
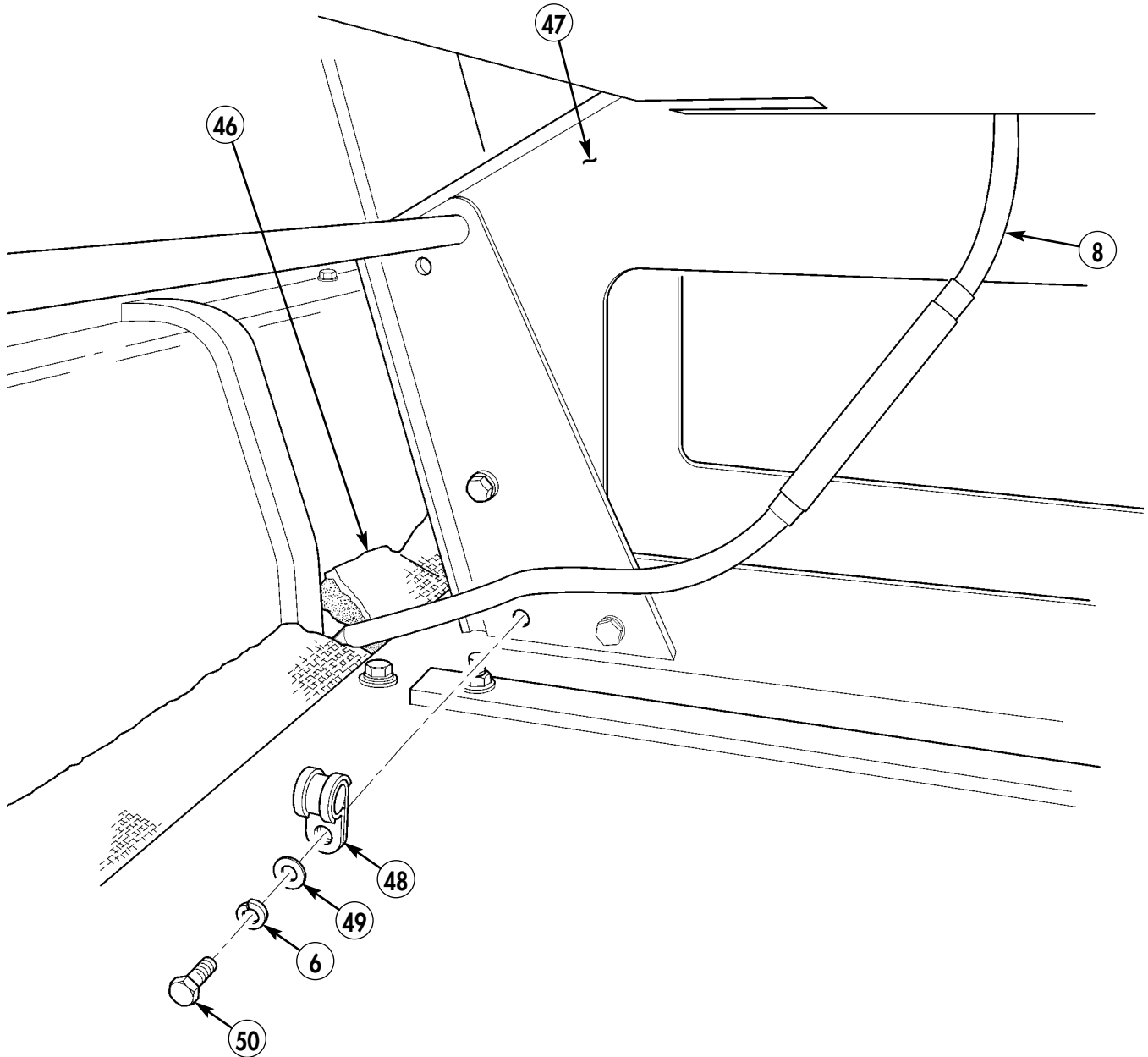


Figure 5-73.

- 10-28. Cut slice in insulation (46).
- 10-29. Route INC-EPUU cable (8) through slice in insulation (46) and route to integrated rack (47).
- 10-30. Remove capscrew (50), lockwasher (6), and washer (49) from integrated rack (47). Discard lockwasher (6).
- 10-31. Secure INC-EPUU cable (8) to integrated rack (47) with clamp (48), existing capscrew (50), lockwasher (6), and existing washer (49).



- 6. LOCKWASHER - MS35338-44 - QTY. 1
- 48. CLAMP, LOOP - MS21333-101 - QTY. 1

Figure 5-74.

10-32. Route EPLRS power cable (10) under insulation (46) to right B-beam (51).

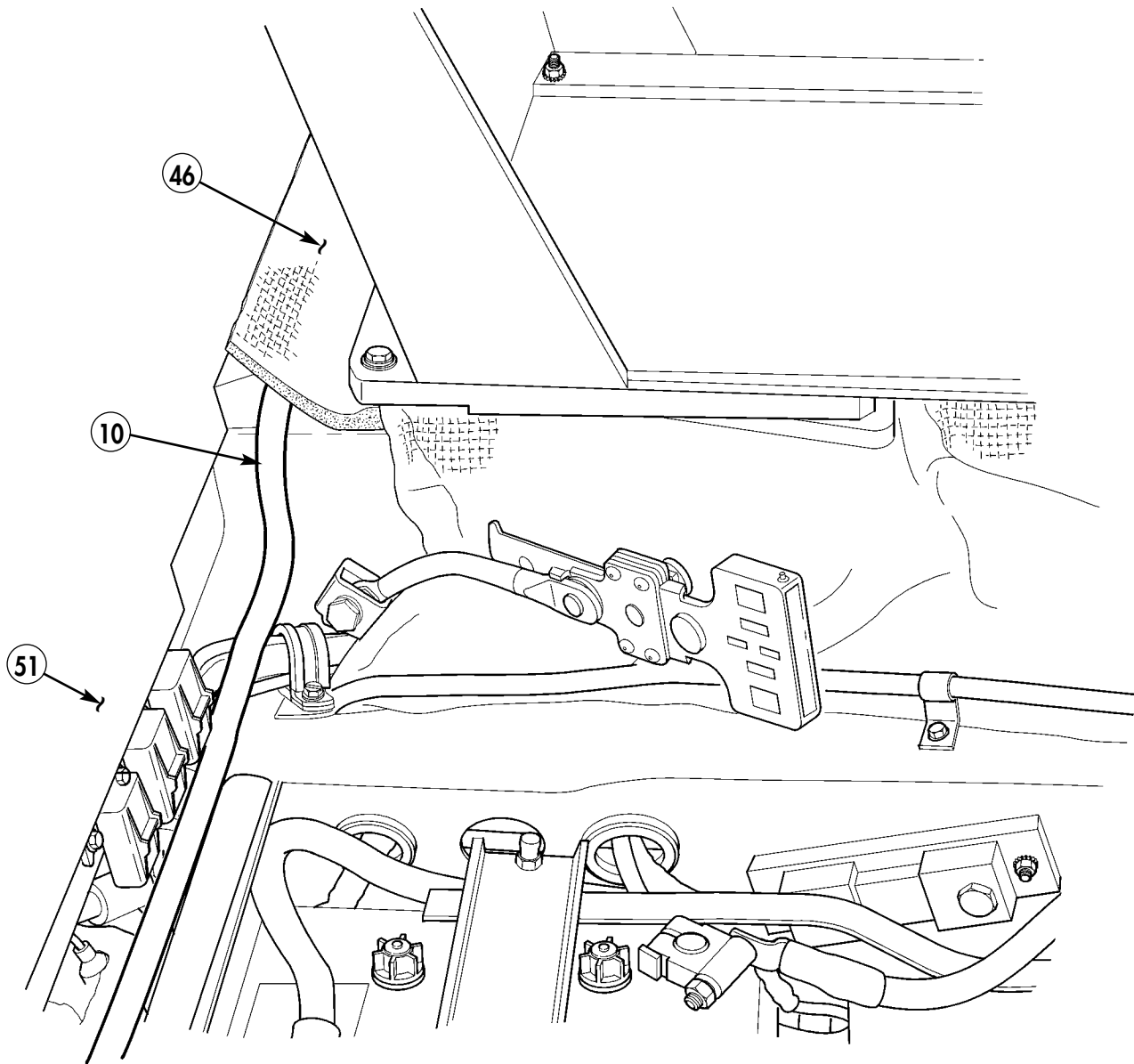
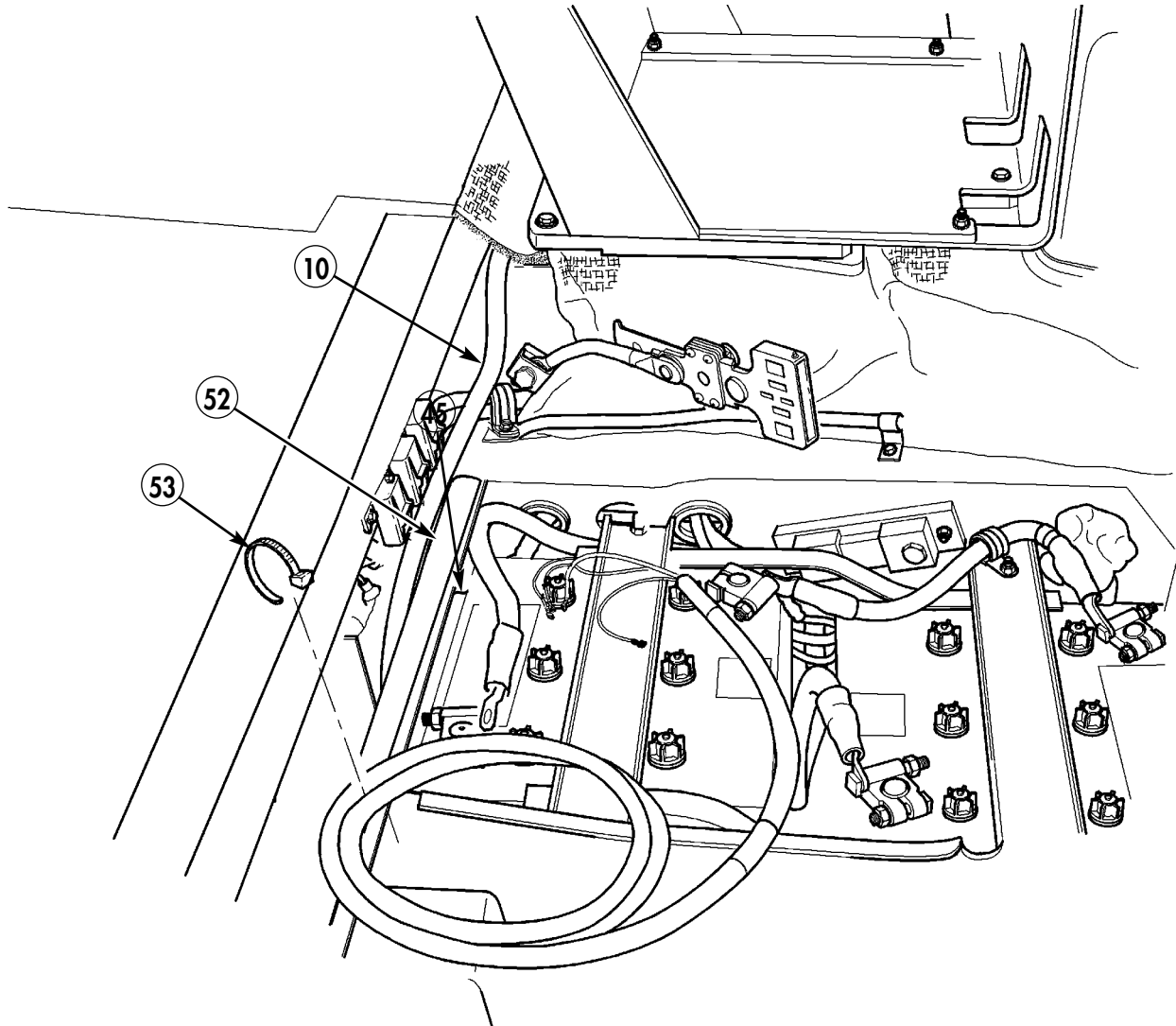


Figure 5-75.

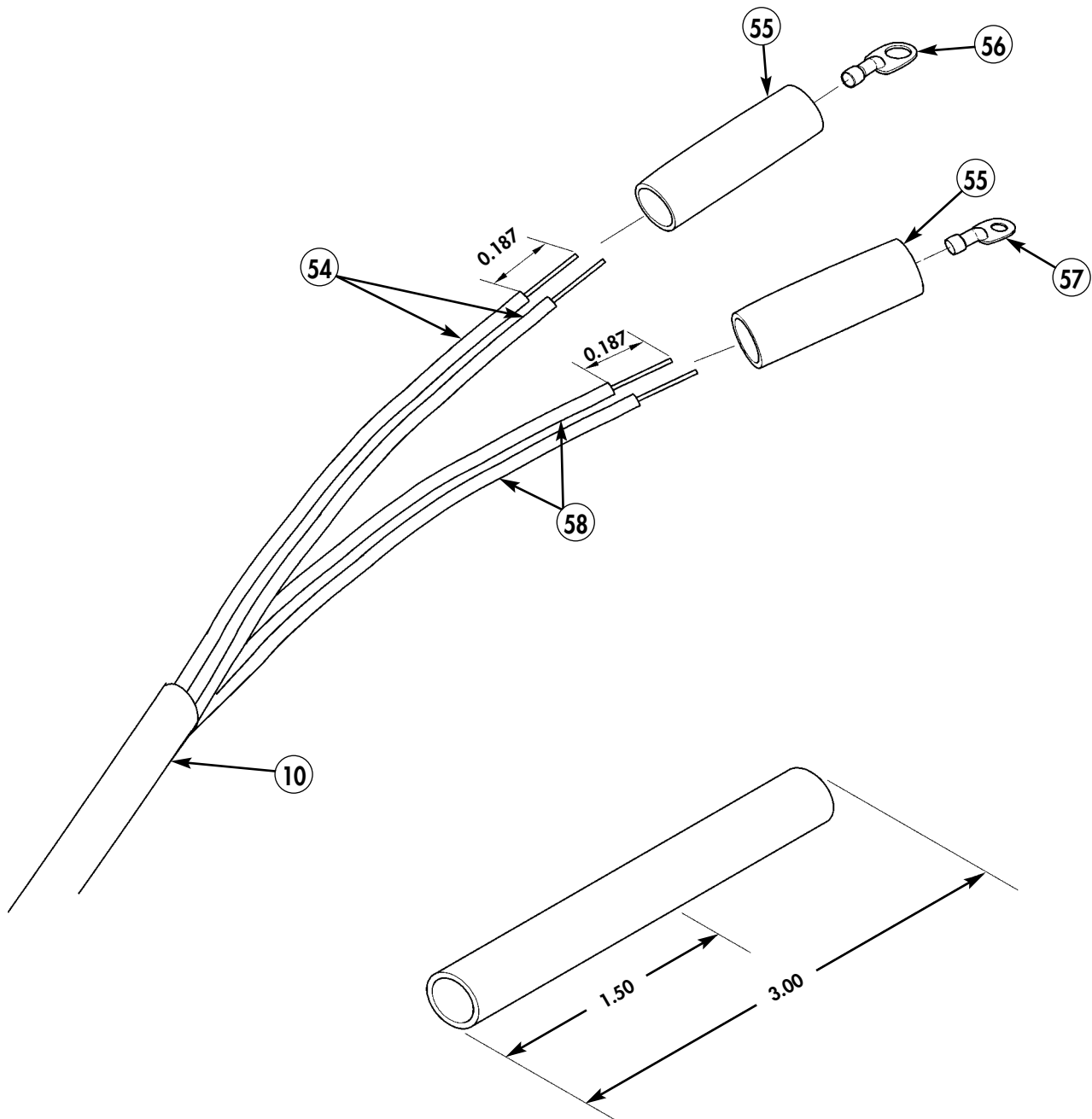
**10-33.** Coil excess EPLRS power cable (10) and secure with two tie-down straps (53). Stow coiled cable behind battery box (52).



**53. TIE-DOWN STRAP – MS3367-1-0 – QTY. 2**

*Figure 5-76.*

- 10-34. Remove 0.187-inch of insulation from negative (58) and positive (54) wires on power cable (10).
- 10-35. Attach shrink tubing (55) and terminal lugs (57) and (56) to power cable negative lead (58) and power cable positive lead (54). (Refer to TM 9-2320-387-24 for terminal connector repair.)

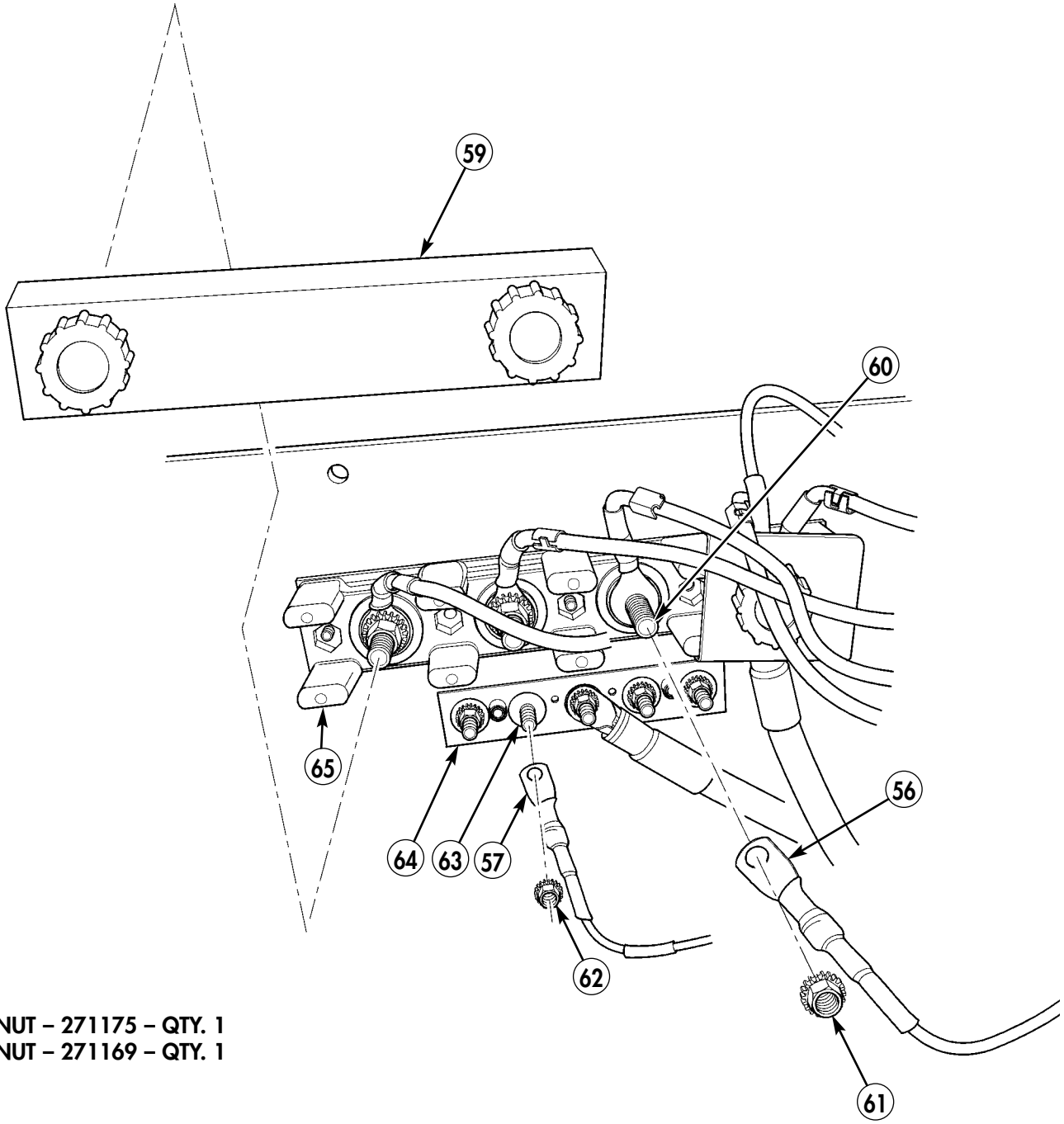


- 55. SHRINK TUBING – MS23054/4-103-0 – QTY. 3 INCHES
- 56. TERMINAL LUG – 7728780 – QTY. 1
- 57. TERMINAL LUG – 7728777 – QTY. 1

Figure 5-77.



- 10-36. Remove terminal board cover (59) from positive terminal board (65).
- 10-37. Remove locknut (61) from positive stud (60) on positive terminal board (65). Discard locknut (61).
- 10-38. Remove locknut (62) from negative stud (63) on negative terminal board (64). Discard locknut (62).
- 10-39. Connect positive terminal (56) to positive stud (60) on positive terminal board (65) with locknut (61).
- 10-40. Connect negative terminal (57) to negative stud (63) on negative terminal board (64) with locknut (62).
- 10-41. Install terminal board cover (59) on positive terminal board (65).

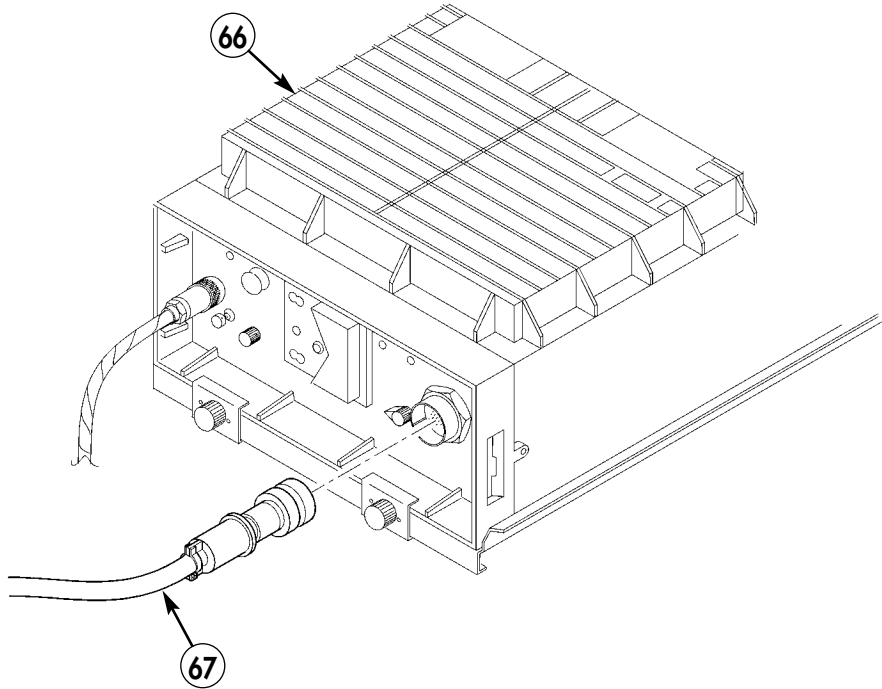


- 61. NUT - 271175 - QTY. 1
- 62. NUT - 271169 - QTY. 1

Figure 5-78.

10-42. If available, attach URO cable (67) to EPLRS unit (66).

10-43. Route URO cable (67) to URO mount (68).



67. URO CABLE - A3109227 - QTY. 1

Figure 5-79.

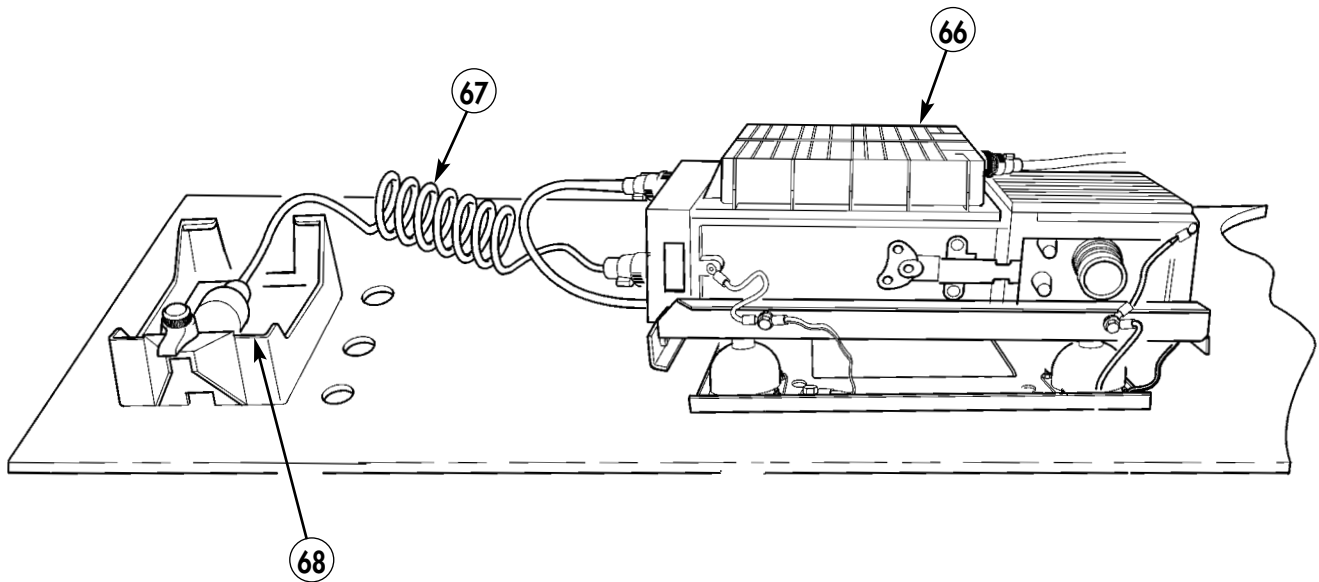


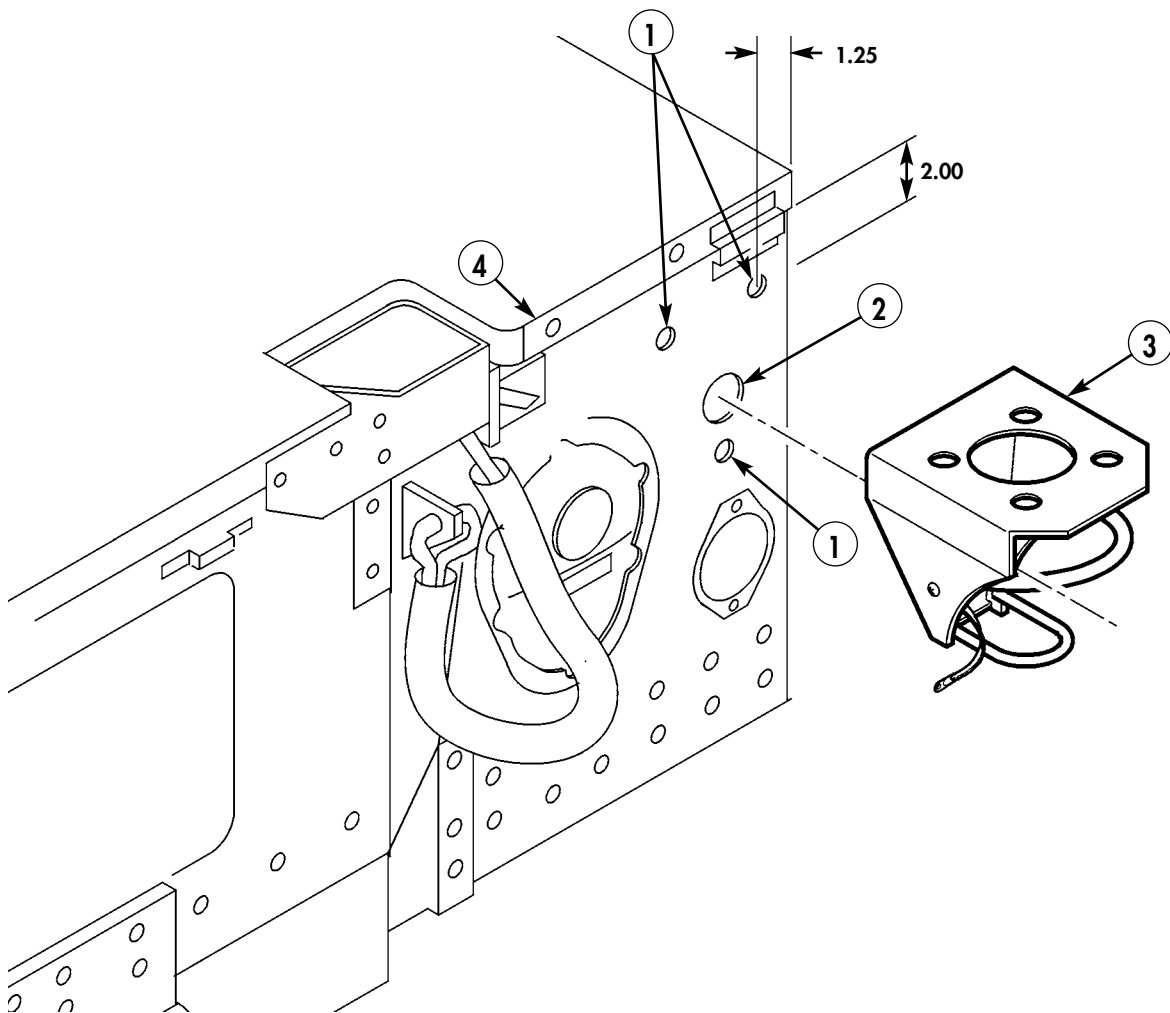
Figure 5-80.

**Section XI. SINGARS ANTENNA INSTALLATION**

**NOTE**

This procedure applies to vehicles without existing antennas, and to either left or right side of vehicle.

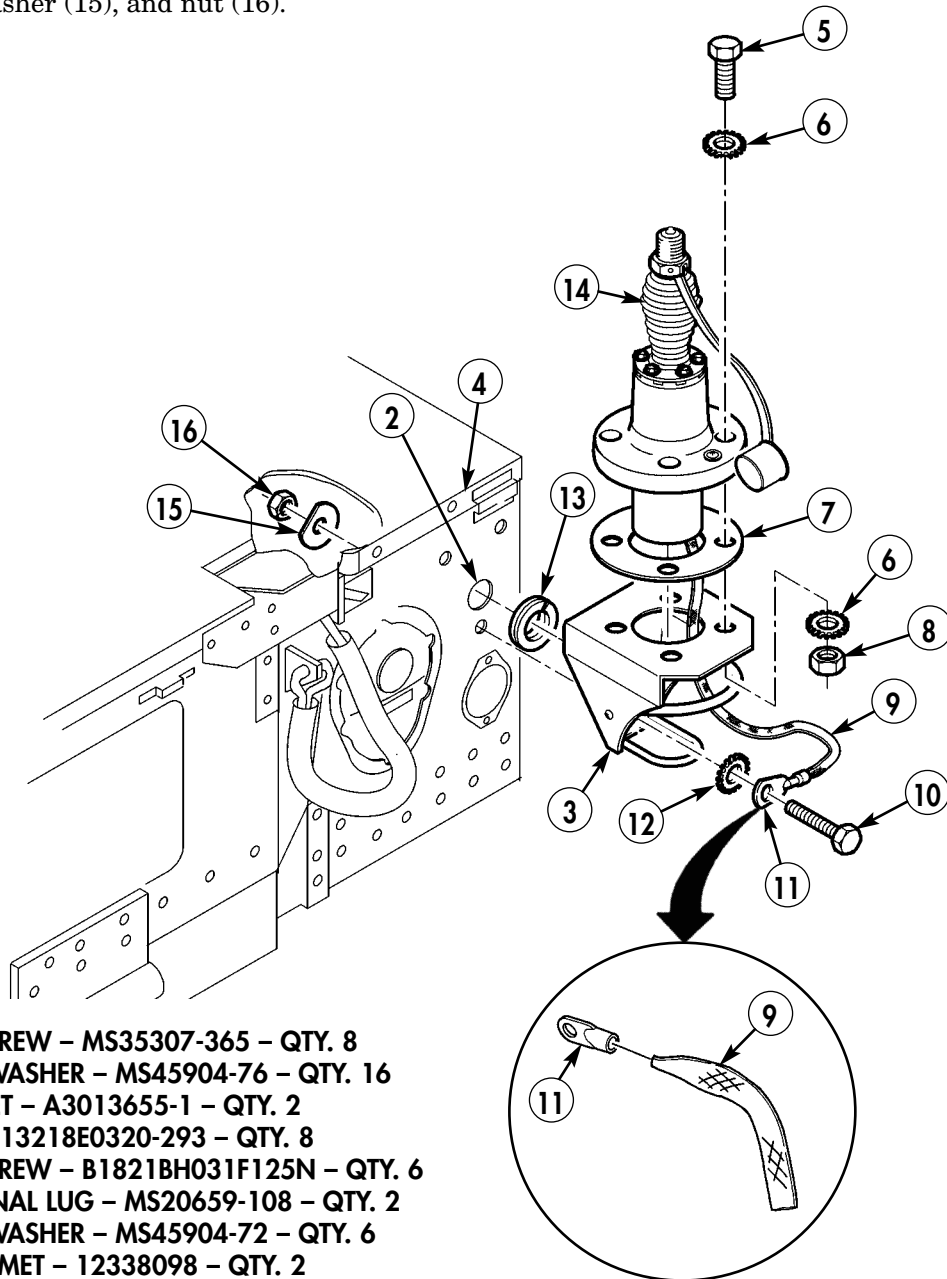
- 11-1. Using antenna mounting bracket (3) as template, locate and mark hole position (2) in rear wall (4).
- 11-2. Locate and mark hole positions (1) in rear wall (4).
- 11-3. Remove antenna mounting bracket (3) from rear wall (4).
- 11-4. Drill 1.375-in. diameter hole (2) in rear wall (4).
- 11-5. Drill three 0.343-in. diameter holes (1) in rear wall (4).
- 11-6. Remove paint from vicinity of three holes (1) and three holes in antenna mounting bracket (3).
- 11-7. Apply antiseize compound to vicinity of three holes (1) and rear of antenna mounting bracket (3).



**3. ANTENNA MOUNTING BRACKET – A3014546-1 – QTY. 2**

*Figure 5-81.*

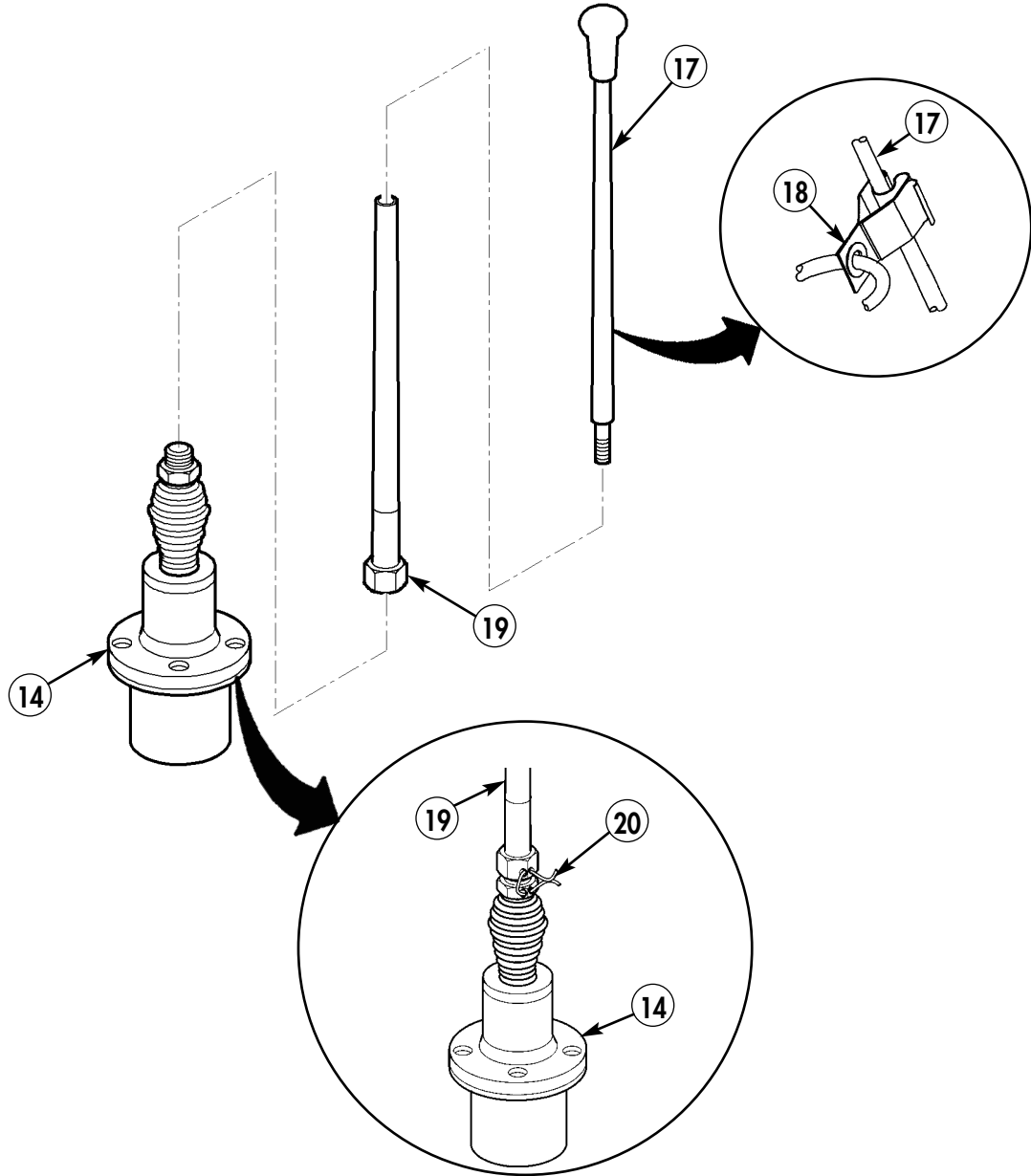
- 11-8. Install grommet (13) in hole (2) of rear wall (4).
- 11-9. Position antenna base (14) and gasket (7) on antenna mounting bracket (3) and route existing ground strap (9) through antenna bracket (3).
- 11-10. Install antenna base (14) on antenna mounting bracket (3) with four capscrews (5), eight lockwashers (6), and four nuts (8).
- 11-11. Install antenna mounting bracket (3) on rear wall (4) with two capscrews (10), lockwashers (12), washers (15), and nuts (16).
- 11-12. Remove old terminal lug, and install new terminal lug (11) on ground strap (9). Install ground strap (9) and antenna mounting bracket (3) on rear wall (4) with capscrew (10), lockwasher (12), washer (15), and nut (16).



- 5. CAPSCREW – MS35307-365 – QTY. 8
- 6. LOCKWASHER – MS45904-76 – QTY. 16
- 7. GASKET – A3013655-1 – QTY. 2
- 8. NUT – 13218E0320-293 – QTY. 8
- 10. CAPSCREW – B1821BH031F125N – QTY. 6
- 11. TERMINAL LUG – MS20659-108 – QTY. 2
- 12. LOCKWASHER – MS45904-72 – QTY. 6
- 13. GROMMET – 12338098 – QTY. 2
- 14. ANTENNA BASE – A3017899-2 – QTY. 2
- 15. WASHER – 12338095 – QTY. 6
- 16. NUT – 9418892 – QTY. 6

Figure 5-82.

- 11-13. Attach upper antenna element (17) to lower antenna element (19).
- 11-14. Attach antenna assembly to antenna base (14).
- 11-15. Attach fiber rope assembly (18) to upper antenna element (17).
- 11-16. Secure lower antenna element (19) to antenna base (14) with lock wire (20).
- 11-17. Repeat steps 11-1 through 11-16 for left side of vehicle, if applicable.



- 17. UPPER ANTENNA ELEMENT – A3017901-2 – QTY. 2
- 19. LOWER ANTENNA ELEMENT – A3018230-1 – QTY. 2
- 20. LOCK WIRE – MS20995C32 – QTY. A/R

Figure 5-83.

## Section XII. SINGARS CABLES INSTALLATION

### NOTE

Tag capscrews, lockwashers, and washers for installation.

- 12-1. Remove thirteen bolts (5), lockwashers (4), fender washers (3), and wheelwell plate (1) from body of vehicle (2).

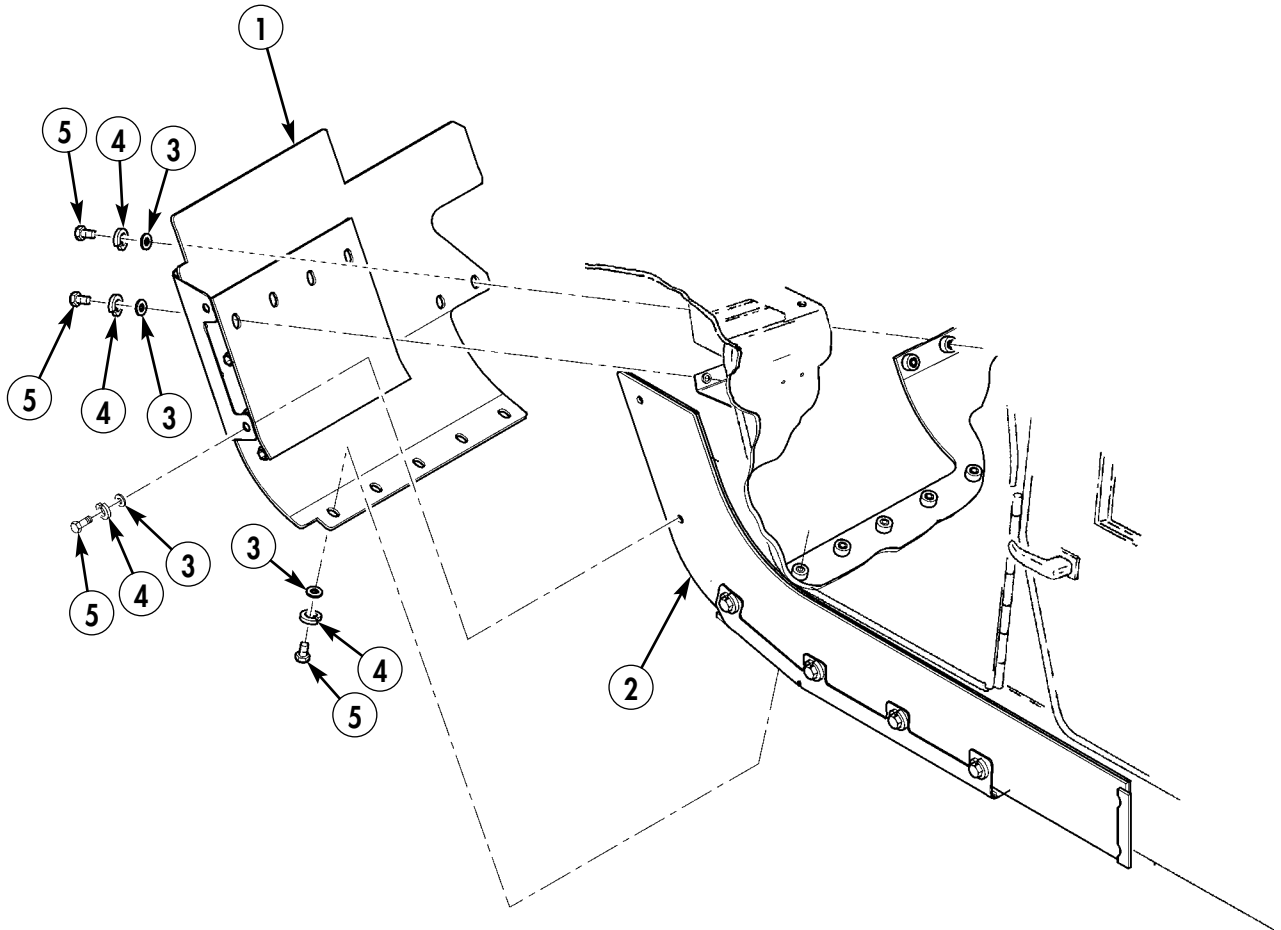


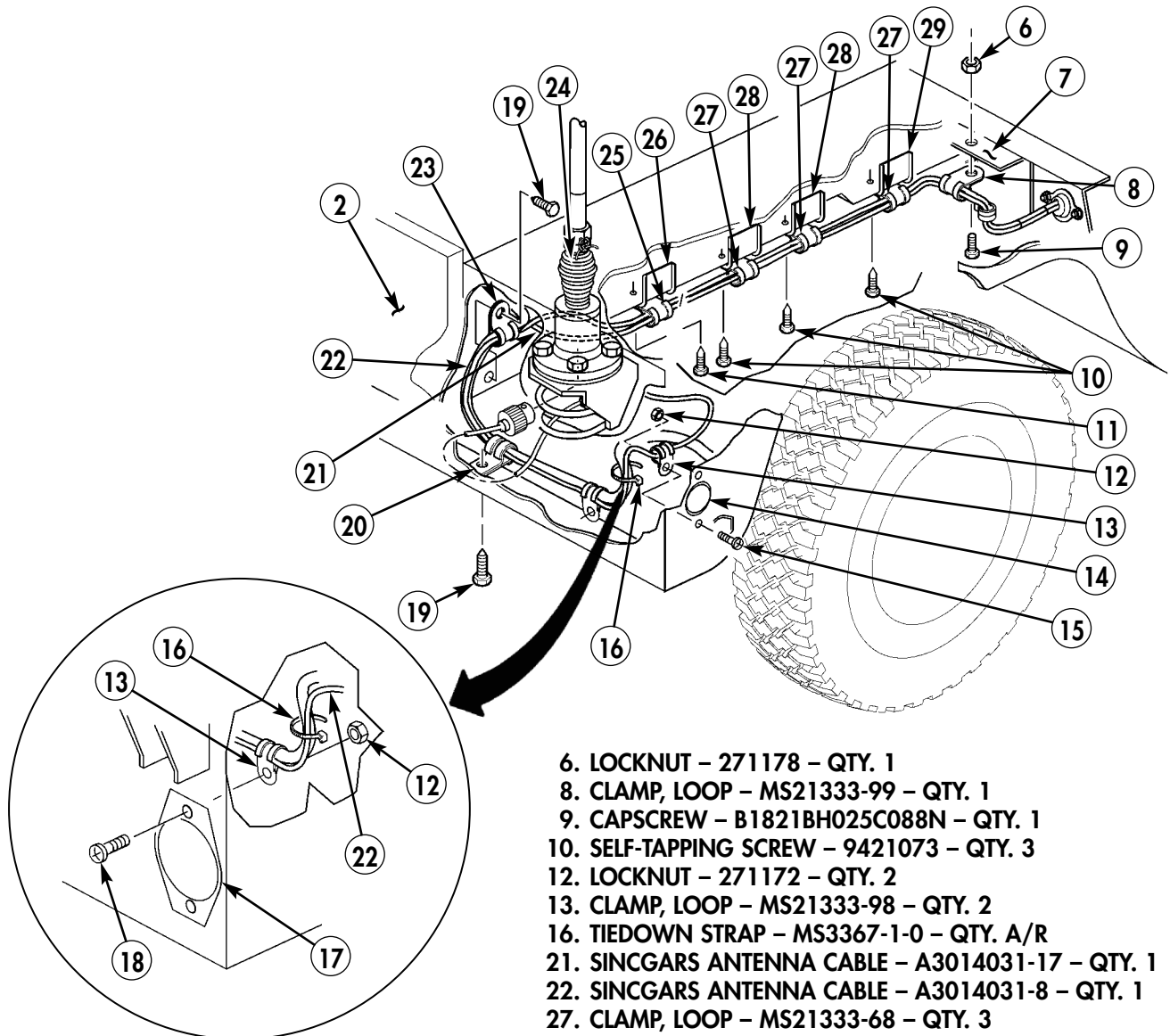
Figure 5-89.

- 12-2. Route antenna cable (22) through vehicle body (2) to antenna base (24).
- 12-3. Attach antenna cable (22) to antenna base (24).
- 12-4. Remove locknut (12) from screw (15) on lower mounting position of reflector (14). Discard locknut (12).
- 12-5. Install clamp (13) on antenna cable (22) and secure to existing screw (15) with locknut (12).
- 12-6. Route antenna cable (22) along taillight wiring harness with two existing loop clamps (23) and (20), and secure with self-tapping screws (19).

**NOTE**

Left side antenna cable may not apply.

- 12-7. Route two antenna cables (21) and (22) along rear (26), two intermediate (28), and front (29) cargo bed supports and along front wheelwell seam (7). Secure with three self-tapping screws (10) and loop clamps (27), existing self-tapping screw (11) and loop clamp (25), screw (9), loop clamp (8), and nut (6).
- 12-8. Coil antenna cable (22) and secure to inside of taillight closeout cover with tiedown strap (16).
- 12-9. Remove locknut (12) from screw (18) on upper mounting position of reflector (17). Discard locknut (12).
- 12-10. Install clamp (13) on antenna cable (22) and secure to existing screw (18) with locknut (12).



- 6. LOCKNUT - 271178 - QTY. 1
- 8. CLAMP, LOOP - MS21333-99 - QTY. 1
- 9. CAPSCREW - B1821BH025C088N - QTY. 1
- 10. SELF-TAPPING SCREW - 9421073 - QTY. 3
- 12. LOCKNUT - 271172 - QTY. 2
- 13. CLAMP, LOOP - MS21333-98 - QTY. 2
- 16. TIEDOWN STRAP - MS3367-1-0 - QTY. A/R
- 21. SINGARS ANTENNA CABLE - A3014031-17 - QTY. 1
- 22. SINGARS ANTENNA CABLE - A3014031-8 - QTY. 1
- 27. CLAMP, LOOP - MS21333-68 - QTY. 3

Figure 5-85.

**NOTE**

If installing right side antenna cable only, proceed to step 12-22.

- 12-11. Route antenna cable (21) to antenna base (30).
- 12-12. Attach antenna cable (21) to antenna base (30).

**NOTE**

Steps 12-13 and 12-14 apply to reflector on side of vehicle.  
Reflector not shown.

- 12-13. Remove locknut (12) from screw (43) on lower mounting position of reflector. Discard locknut (12).
- 12-14. Install clamp (13) on antenna cable (21) and secure to existing screw (43) with locknut (12).

**NOTE**

Steps 12-15 and 12-16 apply to reflector on rear of vehicle.

- 12-15. Remove locknut (12) from screw (42) on lower mounting position of reflector (41). Discard locknut (12).
- 12-16. Install clamp (13) on antenna cable (21) and secure to existing screw (42) with locknut (12).
- 12-17. Remove five existing screws (31) securing taillight wiring harness (32) and SINCGARS antenna cable (21) on rear cargo bed support (37).
- 12-18. Route antenna cable (21) along existing taillight wiring harness (32) on rear cargo bed support (37) and secure with five existing loop clamps (33), (34), (35), (36), (38) and existing self-tapping screws (31).
- 12-19. Remove two existing screws (31) securing taillight wiring harness (32) on side of body (2) and D-beam.
- 12-20. Route antenna cable (21) along existing taillight wiring harness on left-side bed and D-beam with two existing loop clamps (39) and (40), and existing self-tapping screws (31).
- 12-21. Coil antenna cable (21) and secure to inside of taillight closeout cover with tiedown strap (16).

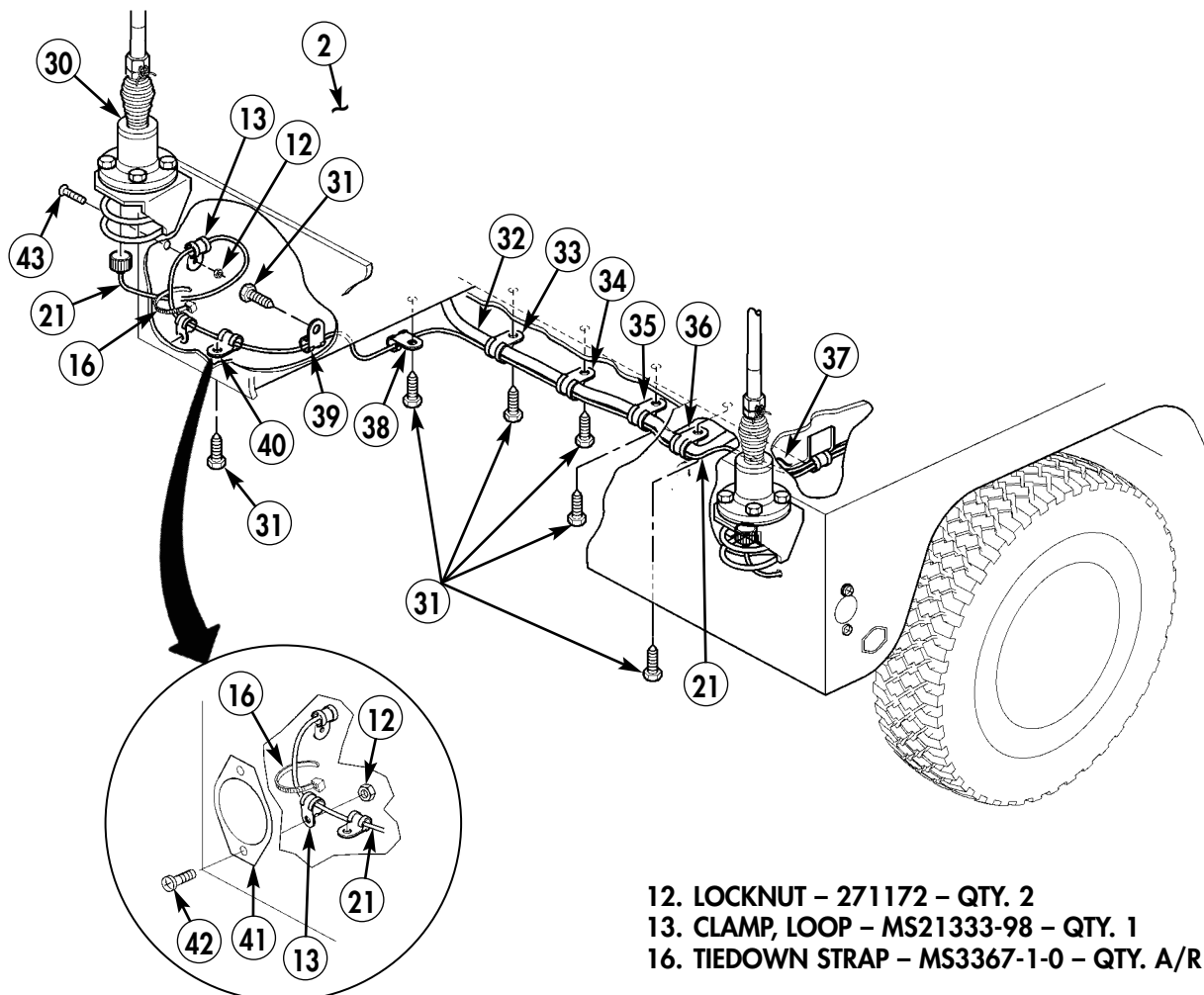
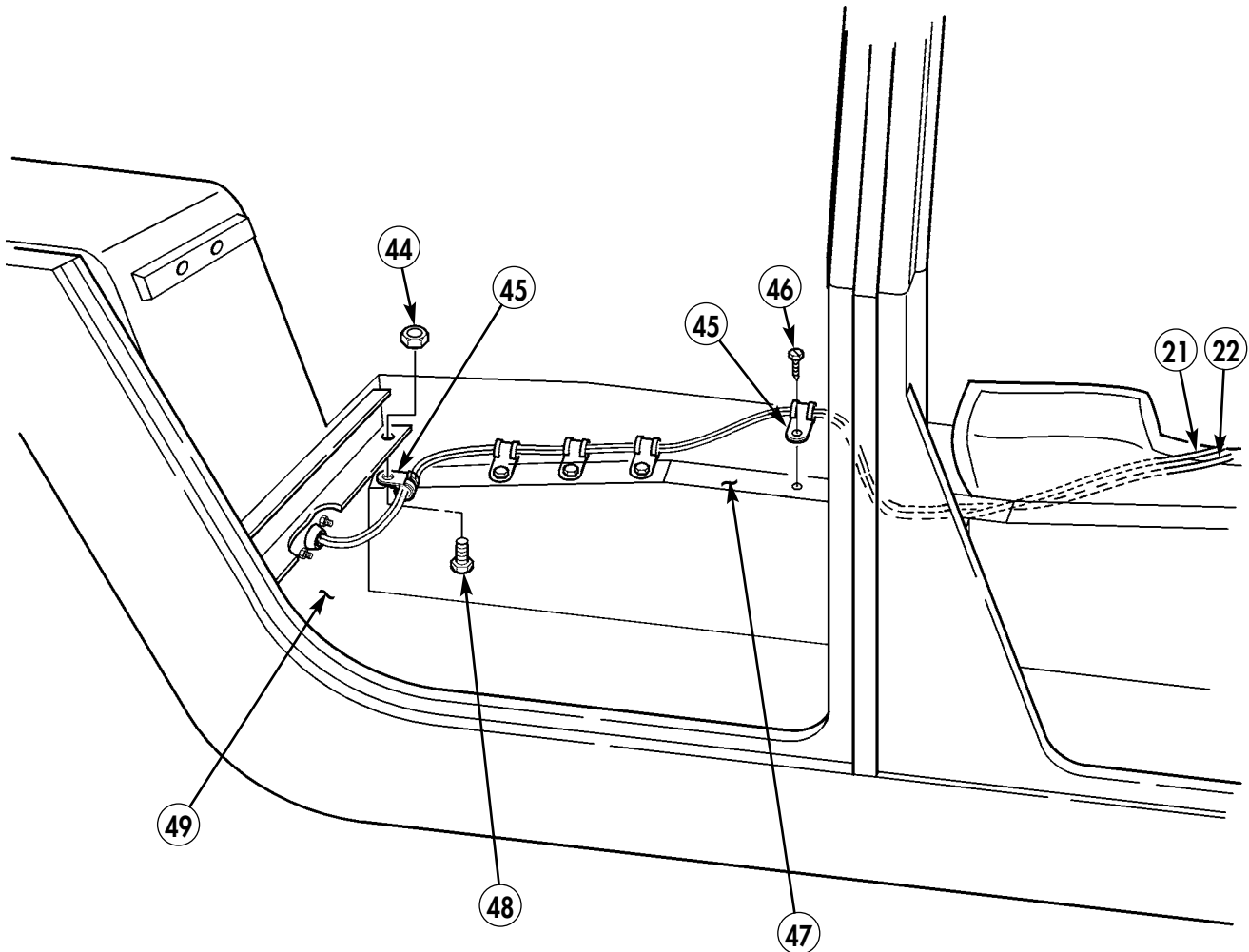


Figure 5-86.



- 12-22.** Route two antenna cables (21) and (22) through right wheelwell/utility area (49) with existing grommet, retainer, screws, and plain-assembled nuts. (Refer to TM 9-2320-387-24.)
- 12-23.** Remove screw (48), loop clamp (45), and nut (44) from right wheelwell utility area (49).
- 12-24.** Remove four self-tapping screws (46), and loop clamps (45) from tunnel shelf (47).
- 12-25.** Route two antenna cables (21) and (22) along right rear seat/utility area (49).
- 12-26.** Secure two antenna cables (21) and (22) to rear seat/utility area (49) with existing loop clamp (45), screw (48), and nut (44).
- 12-27.** Route two antenna cables (21) and (22) through four existing loop clamps (45).
- 12-28.** Install two antenna cables (21) and (22) to tunnel shelf (47) with four existing self-tapping screws (46) and loop clamps (45).



- 44.** LOCKNUT - 271166 - QTY. 1  
**45.** CLAMP, LOOP - MS21333-68 - QTY. 5  
**48.** SCREW - MS35206-267 - QTY. 1

*Figure 5-87.*

12-29. Route cables (21) and (22) through integrated rack (51) to VAA (50).

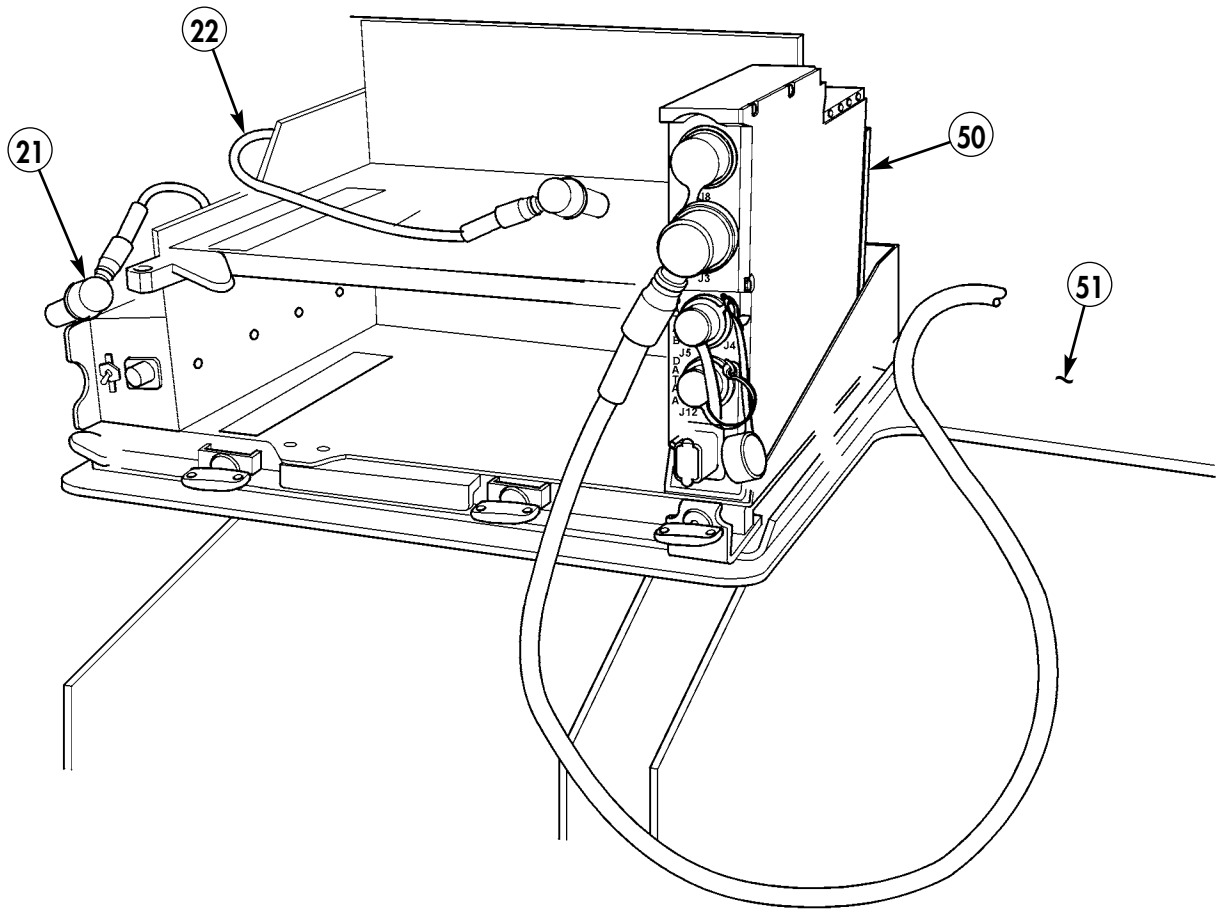
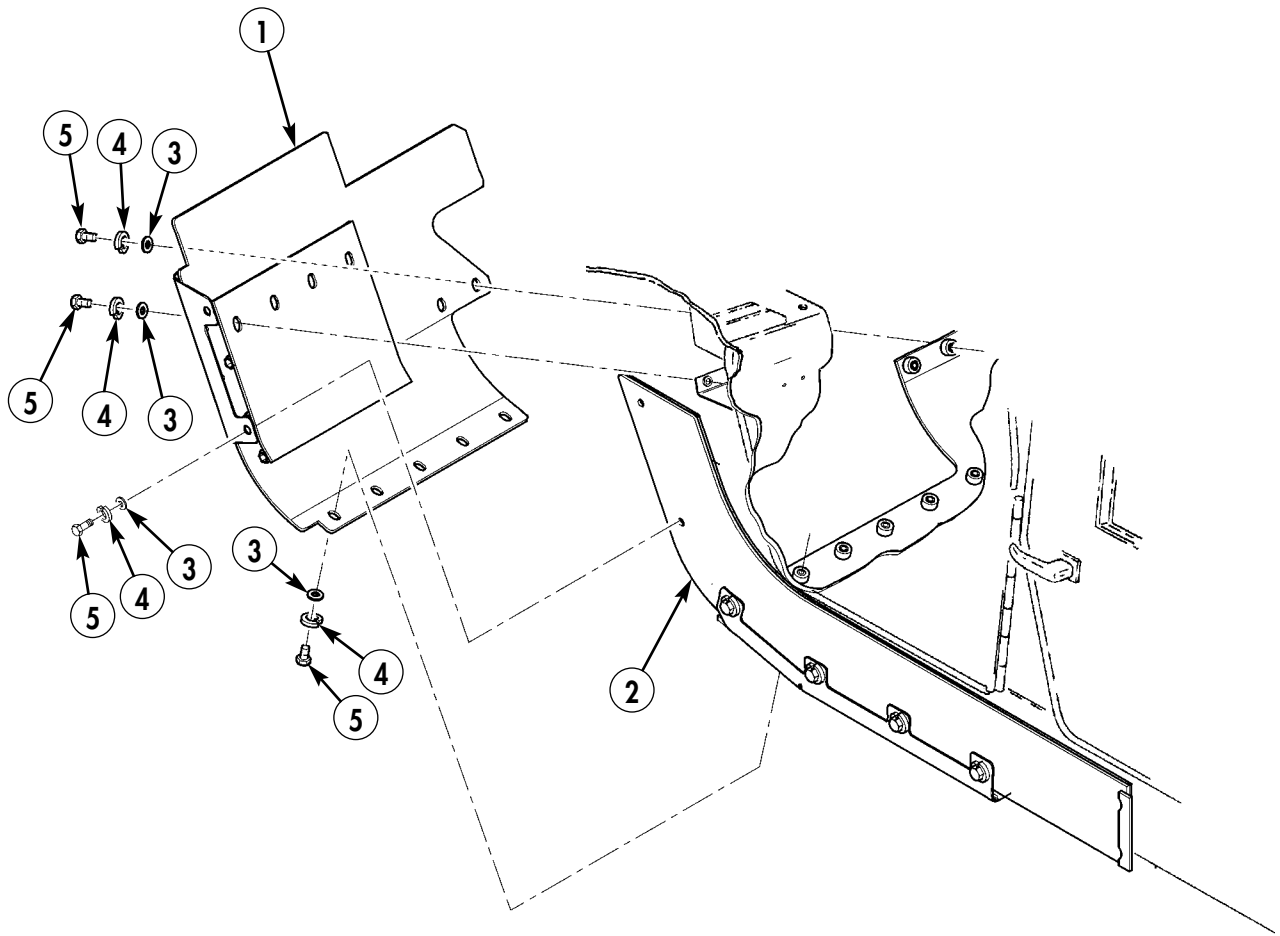


Figure 5-88.

- 12-30.** Install wheelwell plate (1) on vehicle (2) with thirteen existing bolts (5), lockwashers (4), and fender washers (3).



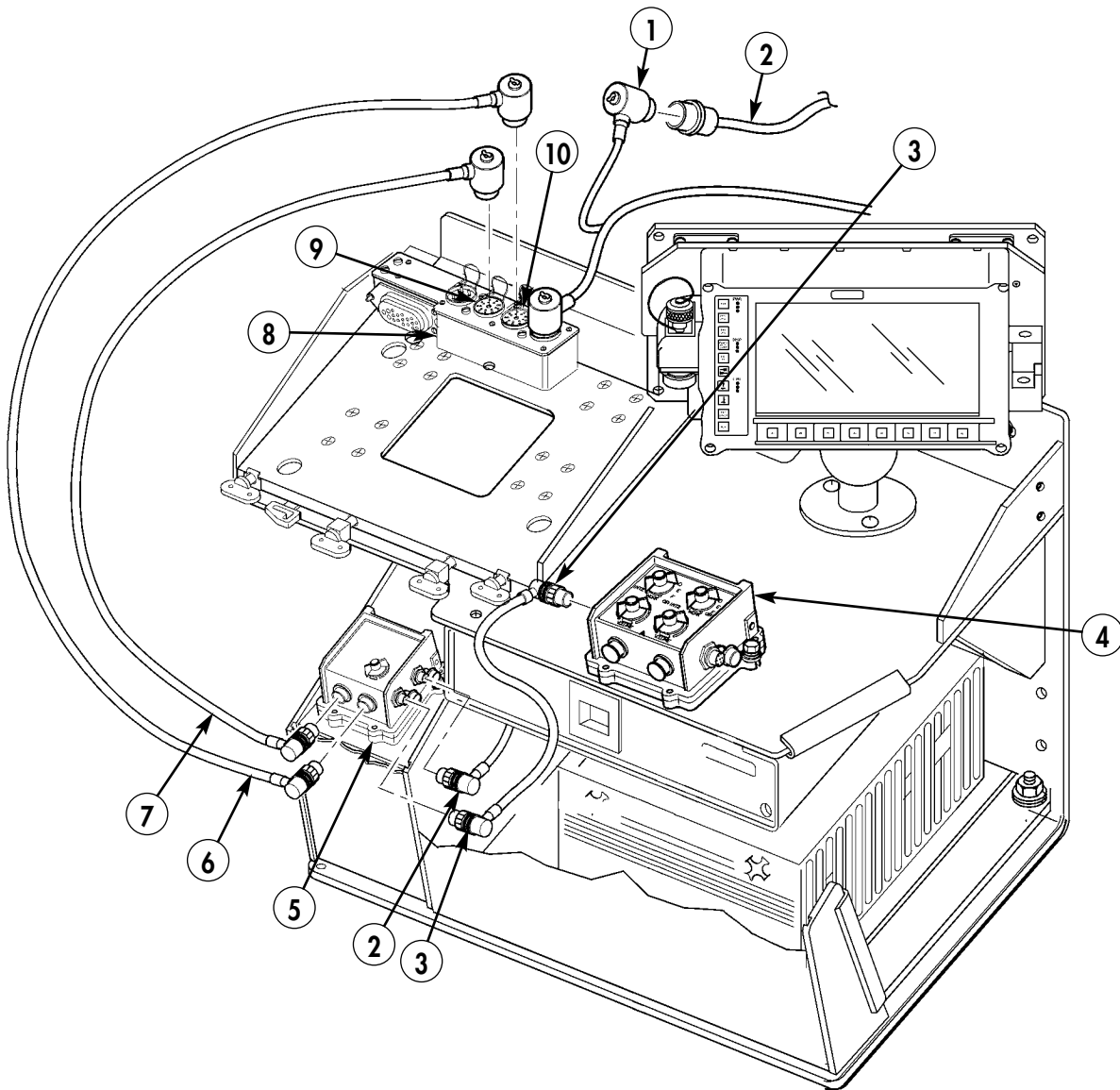
*Figure 5-89.*

### Section XIII. VIC-3 MOUNTING INSTALLATION: FFCS/L

**NOTE**

Cables removed for clarity.

- 13-1. Install P2 connector of cable assembly (3) to "Station Out" on front FFCS/L (4).
- 13-2. Install P1 connector of cable assembly (3) to "Station In" on MCS/L (5).
- 13-3. Install P1 connector of power cable assembly (2) to "Power" on MCS/L (5).
- 13-4. Route power cable (2) to power connection (1).
- 13-5. Install P1 connector of R/T cable assembly (6) to "Radio B" on MCS/L (5). Connect P2 connector of R/T cable assembly (6) to A4J4 connector (10) on SINGARS mount (8).
- 13-6. Install P1 connector of R/T cable assembly (7) to "Radio A" on MCS/L (5). Connect P2 connector of R/T cable assembly (7) to A4J3 connector (9) on SINGARS mount (8).



- 2. POWER CABLE ASSEMBLY – A3206017-3 – QTY. 1
- 3. CABLE ASSEMBLY – A3206018-2 – QTY. 1

- 6. CABLE ASSEMBLY, R/T – A3206019-3 – QTY. 1
- 7. CABLE ASSEMBLY, R/T – A3206127-3 – QTY. 1

Figure 5-90.

## Section XIV. DAGR POWER CABLE ROUTING

### NOTE

- Positive wire includes fusible link.
- Refer to TM 9-2320-387-24 for terminal-type connector repair.

- 14-1.** Remove screw (5) and air conditioning close out panel (4) from air conditioning duct (3).
- 14-2.** Route DAGR power cable (2) behind air conditioning duct (3) to radio rack (1).
- 14-3.** Install air conditioning close out panel (4) on air conditioning duct (3) with screw (5).

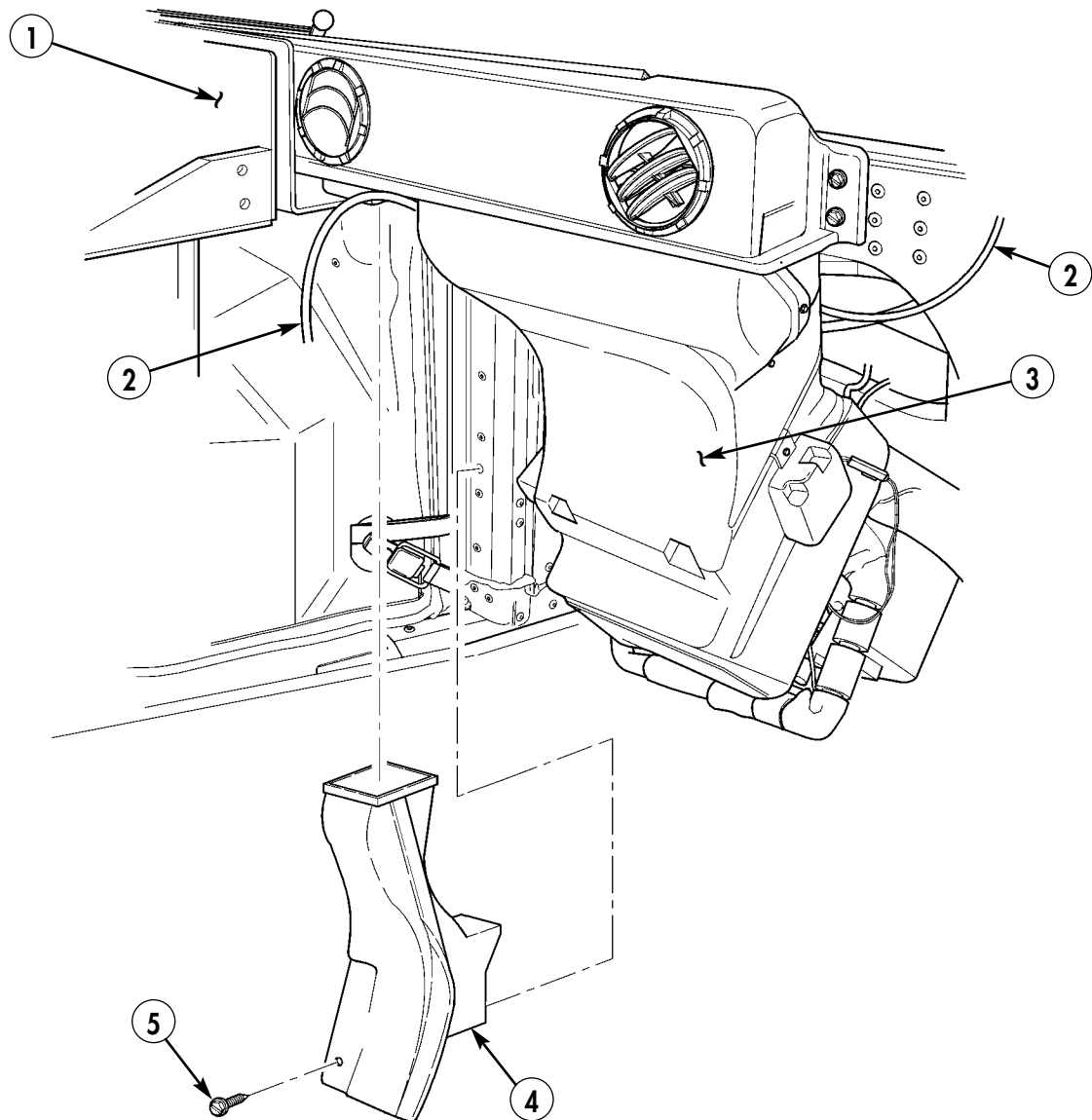


Figure 5-91.

**NOTE**

Keep excess power cable under insulation.

- 14-4. Route power cable (2) behind A/C unit (6), under right tunnel insulation (7), to right-hand cab enclosure panel (8).

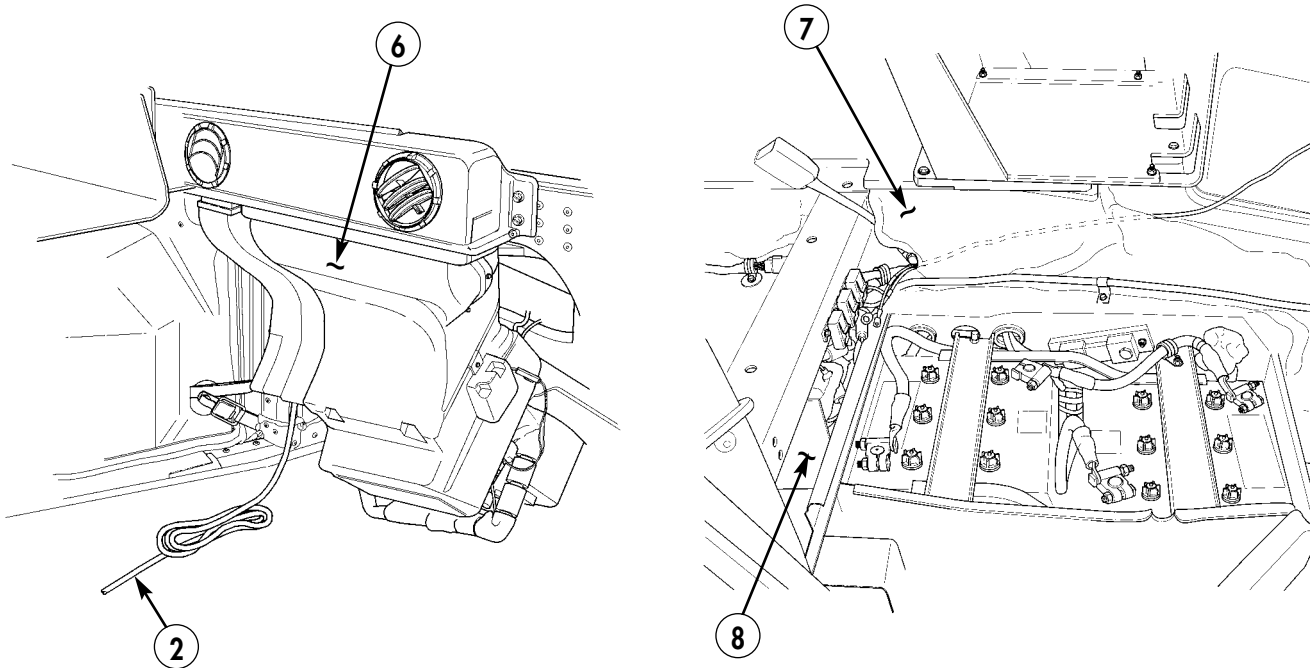
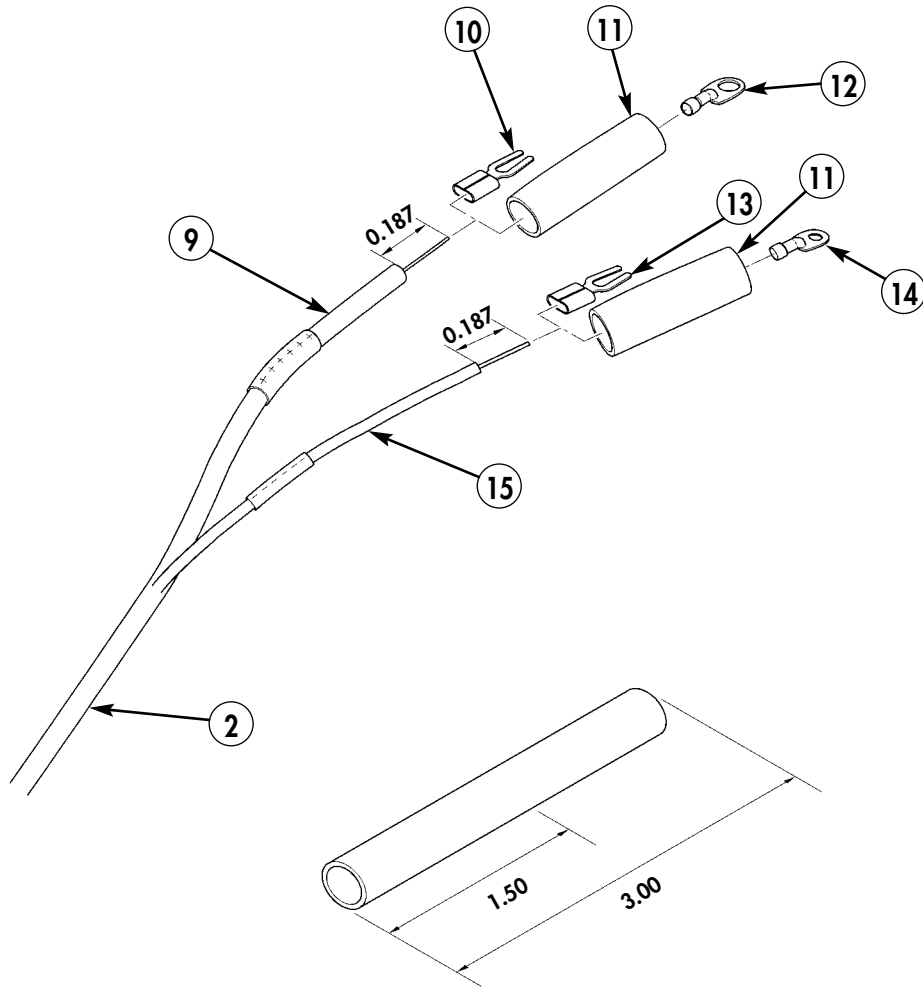


Figure 5-92.

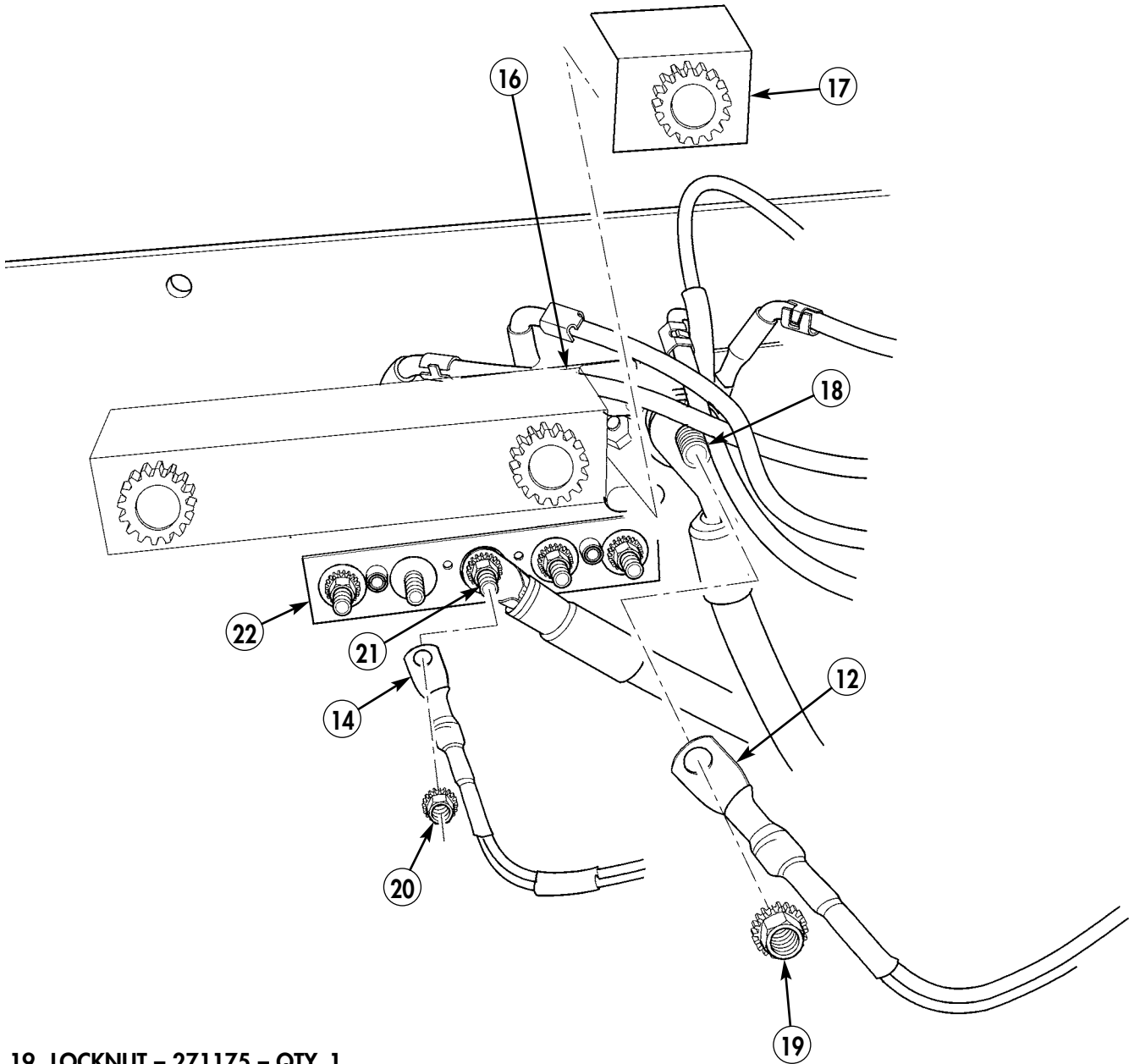
- 14-5. Remove two electrical connectors (10) and (13) from positive (9) and negative (15) wires on DAGR power cable (2).
- 14-6. Remove 0.187-inch of insulation from positive (9) and negative (15) wires on power cable (2).
- 14-7. Attach shrink tubing (11) and terminal lugs (12) and (14) to power cable positive lead (9) and power cable negative lead (15). (Refer to TM 9-2320-387-24 for terminal connector repair.)



- 11. SHRINK TUBING – MS23054/4-103-0 – QTY. 3 INCHES.
- 12. TERMINAL LUG – 7728780 – QTY. 1
- 14. TERMINAL LUG – 7728777 – QTY. 1

Figure 5-93.

- 14-8. Remove terminal board cover (17) from positive terminal board (16).
- 14-9. Remove locknut (19) from positive stud (18) on positive terminal board (16). Discard locknut (19).
- 14-10. Remove locknut (20) from negative stud (21) on negative terminal board (22). Discard locknut (20).
- 14-11. Connect positive terminal (12) to positive stud (18) on positive terminal board (16) with locknut (19).
- 14-12. Connect negative terminal (14) to negative stud (21) on negative terminal board (22) with locknut (20).
- 14-13. Install terminal board cover (17) on positive terminal board (16).



- 19. LOCKNUT - 271175 - QTY. 1
- 20. LOCKNUT - 271169 - QTY. 1

Figure 5-94.



By Order of the Secretary of the Army:

GEORGE W. CASEY  
*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*  
0725303

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---	--	---

<b>ITEM NO.</b>	<b>PAGE NO.</b>	<b>PARA-GRAPH</b>	<b>LINE NO.*</b>	<b>FIGURE NO.</b>	<b>TABLE NO.</b>	<b>RECOMMENDED CHANGES AND REASON</b> <i>(Provide exact wording of recommended changes, if possible)</i>
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	<b>5-49</b>			<b>5-57</b>		<b>Spacer should be part number 6501138.</b>
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**SAMPLE**

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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
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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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