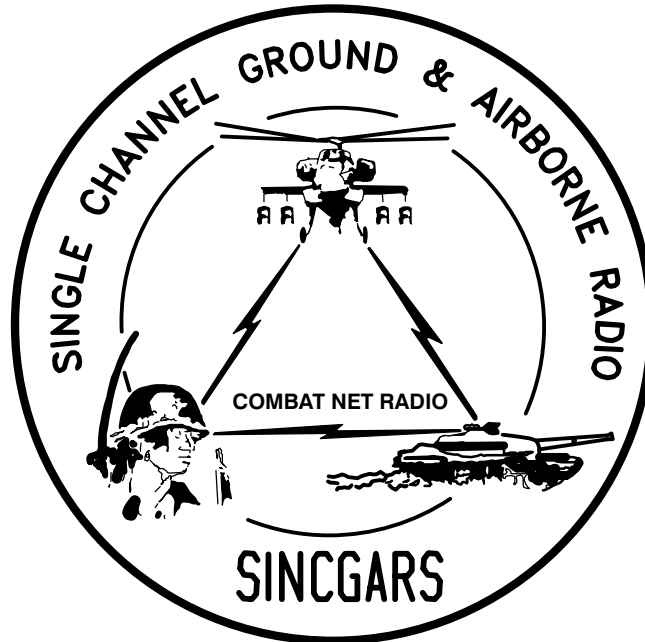


TECHNICAL BULLETIN



**INSTALLATION INSTRUCTIONS FOR
INSTALLATION KIT, ELECTRONIC EQUIPMENT,
MK-2305/VRC (NSN 5895-01-285-2351) (EIC: N/A)
TO PERMIT INSTALLATION OF
RADIO SET AN/VRC-87/88C Series
INTO
CARRIER, CARGO, TRACKED, 6 TON:
M548 AND M548A1**

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

1 AUGUST 1999

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 INTO
 CARRIER, CARGO, TRACKED, 6 TON: M548 AND M548A1**

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command Fort Monmouth, ATTN: AMSEL-LC-LEO-D-CS-CFO, Fort Monmouth, New Jersey 07703-5000. The Fax number is 732-532-1413, DSN 992-1413. You may also e-mail your recommendation to AMSEL-LC-LEO-PUBS-CHG@ce-com3.monmouth.army.mil.

In either case a reply will be furnished direct to you.

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*This manual supersedes TB 11-5820-890-20-19 dated 1 September 1993.

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0.1 SCOPE.

This technical bulletin provides Installation Instructions for Installation Kit, Electronic Equipment, MK–2305/VRC, commonly referred to as the Mounting Kit (MK). The MK shall be installed into the following type of vehicle(s):

- Carrier, Cargo, Tracked, 6 Ton, M548
- Carrier, Cargo, Tracked, 6 Ton, M548A1

The MK is used for installation of radio set components at field locations. The information contained in this technical bulletin is the official authorization to perform the installation at the unit maintenance level.

NOTES

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

This technical bulletin does not contain information on the maintenance or replacement of the MKs. This information is contained in the MAC of TM 11–5820–890–20–2 and RPSTL of TM 11–5820–890–20P.

0.2 GENERAL INFORMATION.

The MK becomes operable when all the radio set components are installed in the vehicle and correct power is supplied. Refer to TM 11–5820–890–20–1 or TM 11–5820–890–20–2 for installation, Operational (OP) Check instructions, and required maintenance procedures. Refer to TM 11–5820–890–20P for repair parts.

Radio Set AN/VRC–87/88C Series includes:

- Radio Set AN/VRC–87/88 Series (for RT–1523(C)/U)

0.3 MAINTENANCE FORMS, RECORDS, AND REPORTS.

0.3.1 Reports of Maintenance and Unsatisfactory Equipment. See section 4.2.2.3 for information.

0.3.2 Report of Packaging and Handling Deficiencies. See section 4.2.2.1 for information.

0.3.3 Discrepancy in Transportation Deficiency Report (TDR) (SF361). See section 4.2.2.2 for information.

0.4 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 equipment.

1. PURPOSE OF INSTALLATION.

The Installation Kit, Electronic Equipment, MK–2305/VRC (MK) contains the items needed to mount Radio Set AN/VRC–87/88C Series in a Carrier, Cargo, Tracked, 6 Ton: M548 and M548A1 (vehicle).

2. END ITEM OR SYSTEM TO BE MODIFIED.

Not applicable.

3. APPLICATION TIMES.

3.1 Time for Completion of Installation. Using two people, a total of 3.5 work hours is required. Typical vehicle downtime is 4.0 hours.

3.2 Time for Installation of One Assembly or Component. The following table lists the time required to install one component. All times have been rounded off to the nearest half hour. The sum of these times will not reflect the typical vehicle downtime.

ITEM	SECTION	TIME
Antenna AS–3900/VRC	5.1	1.0
Mounting Base, Electrical Equipment MT–6576/VRC	5.3	1.5
Cables	5.4	1.0

4. PREPARATION FOR INSTALLATION.

This section explains how to prepare the vehicle and MK for installation.

4.1 Preparation of Vehicle. To prepare the vehicle for installation, insure 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 MK.

4.1.1 Items to be Removed. Remove existing AN/VRC–12 radio family installation kit/harness. See TM 11–5820–401–20–2 for removing items used with intercom systems, or TM 11–5820–401–20–1 (used without intercom systems), and TM 9–2350–247–20.

4.1.2 List of Items to be Retained. Not applicable.

4.2 Preparation of MK. To prepare MK, unpack, inspect and check inventory.

4.2.1 Precautions During Handling. Observe these steps to prevent equipment damage.

- a. Keep dust covers in place on connectors.
- b. Do not disassemble or modify parts in MK unless authorized to do so.
- c. Keep mounting hardware covered and protected until needed.
- d. When exposed to moisture, rain or salt water, keep all parts dry to prevent corrosion.

4.2.2 Unpack and Inspect Equipment.

4.2.2.1 Inspect Packaging for Evidence of Damage. 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 4430.3F.

4.2.2.2 Unpack and Inventory MK. 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 4500.15.

4.2.2.3 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 4430.3F. All damages should be reported as prescribed by DA Pam 738–750, as contained in Maintenance Management Update.

4.3 MK, Distribution, and Consumables.

4.3.1 Items Supplied in MK and/or Required for Installation. Use Table 4–1 and figure 4–1 to identify and inventory MK parts supplied to install Radio Set AN/VRC–87/88C Series.

4.3.2 Distribution and Issue Instructions.

- a. US Forces: Do not requisition MK. They will be shipped automatically.
- b. US Army Depots: Requisition MK through supply channels.
- c. Multiservice: Instructions shall be included for multiservice modifications.
- d. MAP/MAS Countries: Instructions shall be provided for MAP/MAS countries.

Table 4-1. Parts List for Installation of Radio Set AN/VRC-87/88C Series

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5985-01-297-2971	Antenna AS-3900/VRC (A3017899-1)	1	PAOOF A	4-1, 3
5305-00-847-1159	Screw, Cap, Hexagon (3/8-16 x 1 3/4 in) MS35307-365	4	PAOZZA	
5310-00-913-8881	Nut, Hexagon (3/8-16 in) MS51971-3	4	PAOZZA	4-1, 4
5310-00-061-1258	Washer, Lock, Internal/External-Toothed (3/8 in) MS45904-76	8	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	2	PAOZZA	4-1, 1
5306-00-225-9086	Bolt, Machine (5/16-24 x 5/8 in) MS90726-31 (Not Used)	1	PAOZZA	
5330-01-205-2864	Gasket (A3013655-1)	1	PAOZZA	4-1, 15
5965-01-222-1420	Loudspeaker - Control Unit LS-671/VRC (A3014065-1)	1	PAOFFA	
5975-01-285-2352	Mounting Base, Electrical Equipment MT-6576/VRC (A3018353-1)	1	PAOOF A	4-1, 13
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34	4	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	8	PAOZZA	4-1, 14
5310-00-880-7746	Nut, Hexagon (5/16-24 in) MS51968-5	4	PAOZZA	
5995-01-219-1843	Cable Assembly, Power, Electrical CX-13302/VRC (13 FT, 0 IN) (A3014039-2)	1	PAOZZA	4-1, 11
5995-01-225-1660	Cable Assembly, Radio Frequency CG-3855/VRC (21 FT, 0 IN) (A3014031-17)	1	PAOZZA	
5995-01-219-7010	Cable Assembly, Special Purpose, Electrical CX-13292/VRC (3 FT, 0 IN) (A3014038-1)	1	PAOZZA	4-1, 2
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34	6	PAOZZA	
5306-00-225-9093	Bolt, Machine (5/16-24 x 1 1/2 in) MS90726-38	1	PAOZZA	4-1, 8
	Bracket, Angle (A3050743-1)	2	XBOZZA	
	Bracket, Mounting - Antenna (A3014546-1)	1	XBOZZA	4-1, 8
	Bracket, Mounting (A3018307-1)	1	XBOZZA	
5340-00-809-1490	Clamp, Loop (1/4-1/4 in) MS21333-98	5	PAOZZA	4-1, 7
5340-00-088-1254	Clamp, Loop (5/8-1/4 in) MS21333-104	3	PAOZZA	
4020-01-341-8795	Fiber Rope Assembly, Single Leg (A3167672-1)	1	PAOZZA	4-1, 5
5325-00-174-9312	Grommet, Nonmetallic MS35489-36 (1/4 in)	2	PAOZZA	
5325-00-312-2514	Grommet, Nonmetallic MS35489-152 (5/8 in)	1	PAOZZA	4-1, 5
5965-00-043-3463	Handset H-250/U	1	PAOZZA	
5310-00-913-8881	Nut, Hexagon (3/8-16 in) MS51971-3	4	PAOZZA	4-1, 5
5310-00-761-6882	Nut, Hexagon (1/4-20 in) MS51967-2	9	PAOZZA	
5310-00-880-7746	Nut, Hexagon (5/16-24 in) MS51968-5	6	PAOZZA	

Table 4-1. Parts List for Installation of Radio Set AN/VRC-87/88C Series Continued

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
	Plate, Mounting, Flat (A3018308-1)	1	XBOZZA	4-1, 6
	Plate, Mounting - Speaker (A3014550-1)	1	XBOZZA	4-1, 12
	Screw, Externally-Relieved Body (A3018701-2)	2		
5305-00-225-3839	Screw, Cap, Hexagon (1/4-20 x 1 in) MS90725-8	5	PAOZZA	
5305-00-071-2241	Screw, Cap, Hexagon (1/4-20 x 1 1/4 in) MS90725-10	4	PAOZZA	
5305-00-021-3740	Screw, Cap, Hexagon (3/8-16 x 1 1/2 in) MS35307-364	4	PAOZZA	
	Shelf, Electrical Equipment (A3018310-1)	1	XBOZZA	4-1,10
	Strap, Retaining (A3018309-1)	2	XBOZZA	4-1, 9
5975-00-111-3208	Strap, Tiedown, Electrical Components MS3367-5-9	10	PAOZZA	
5310-00-081-4219	Washer, Flat (5/16 in) MS27183-12	6	PAOZZA	
5310-00-809-4058	Washer, Flat (1/4 in) MS27183-10	8	PAOZZA	
5310-00-080-6004	Washer, Flat (3/8 in) MS27183-14	8	PAOZZA	
5310-00-637-9541	Washer, Lock (3/8 in) MS35338-46	4	PAOZZA	
5310-00-582-5965	Washer, Lock (1/4 in) MS35338-44	9	PAOZZA	
5310-00-407-9566	Washer, Lock (5/16 in) MS35338-45	3	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	6	PAOZZA	

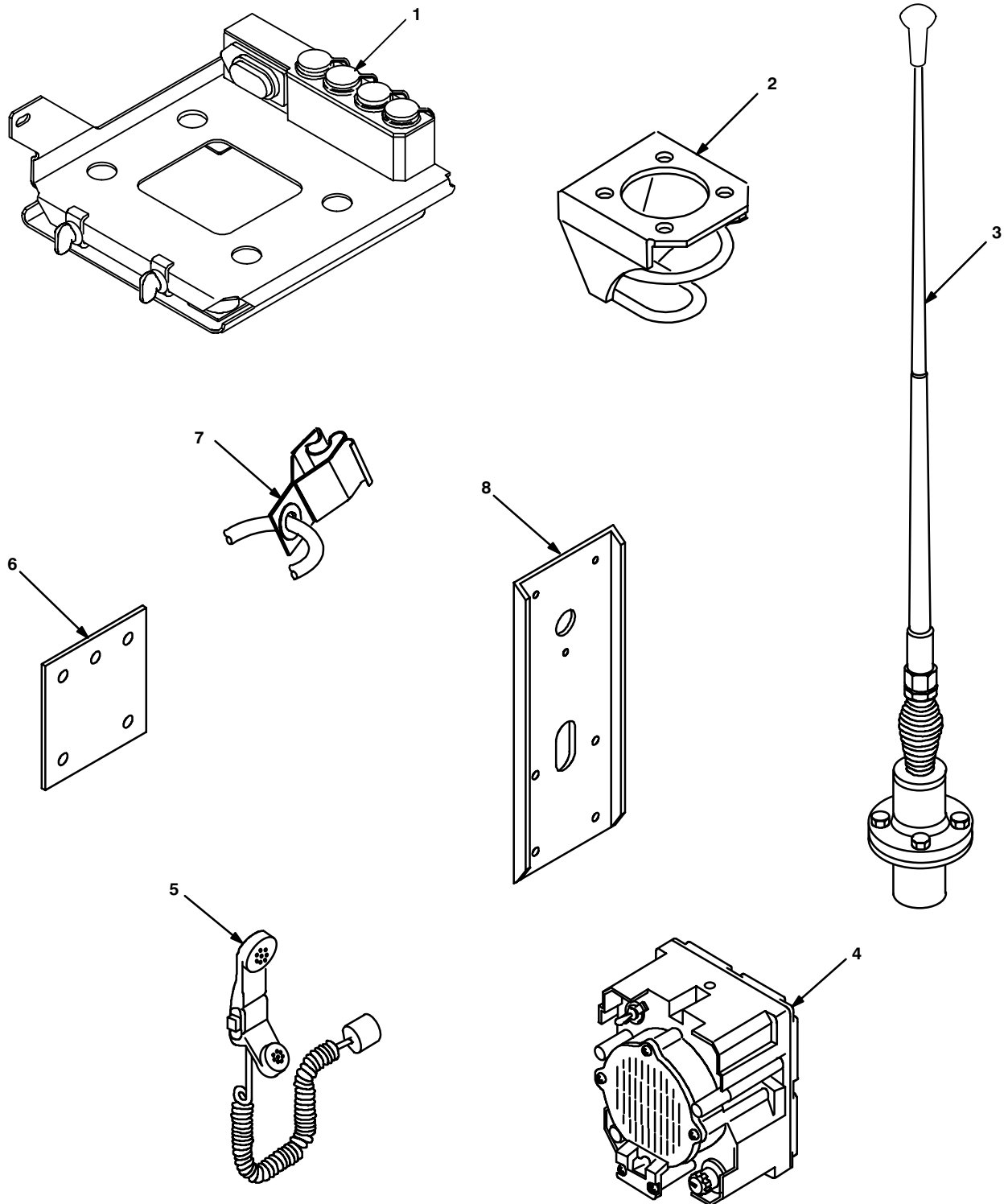


Figure 4-1 (1). MK IIIu strated Parts List

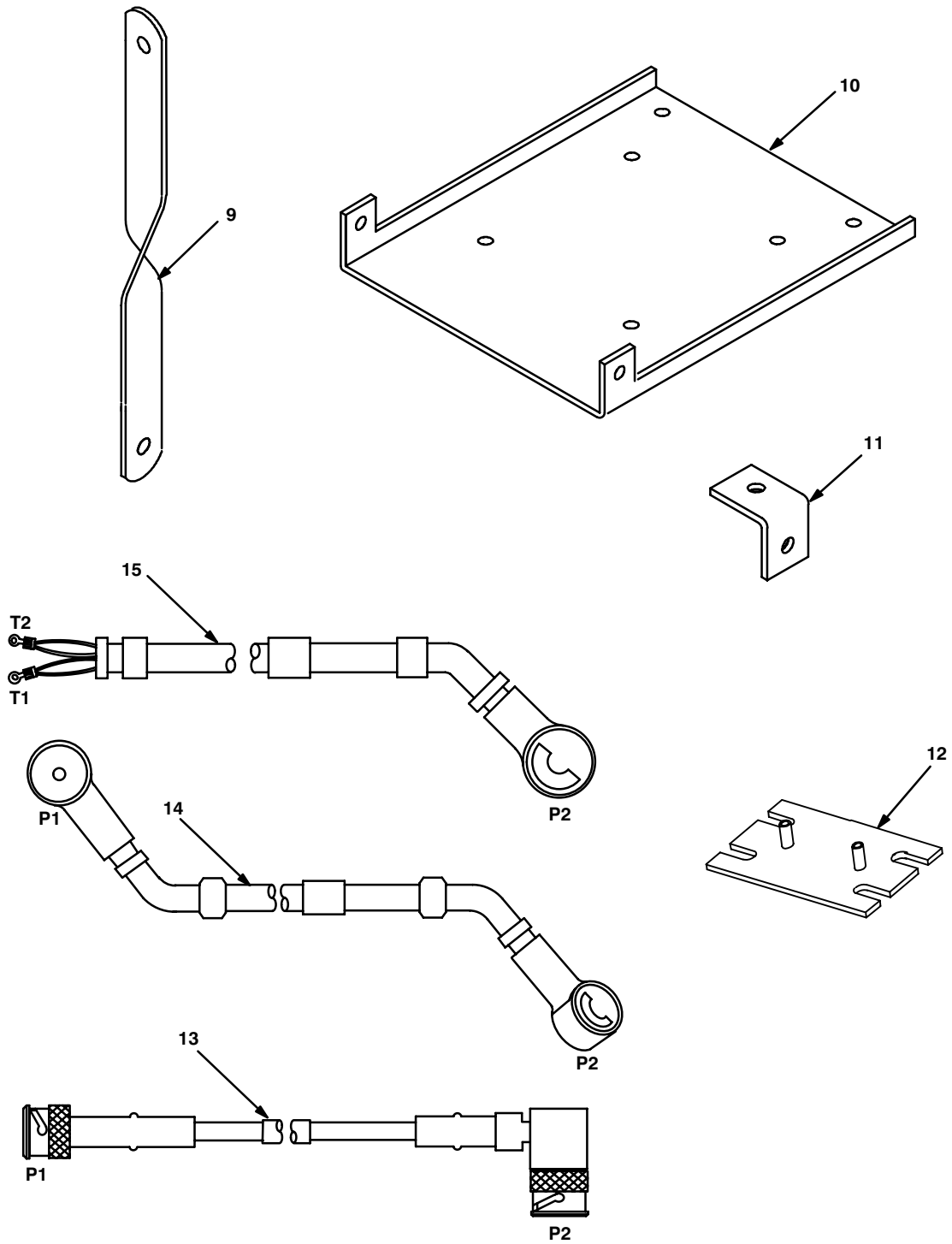


Figure 4-1 (2). MK Illustrated Parts List

4.3.3 Consumable Materials. The table below lists materials required for installation but not supplied with MK.

NSN	NOMENCLATURE
8040-00-117-8510	Adhesive-Sealant, Clear, RTV
6850-00-880-7616	Silicone Compound, MIL-S-8660
8030-00-292-1102	Conductive Anti-seize Compound

4.4 Tools and Test, Measurement, and Diagnostic Equipment (TMDE) Required. The following tools and TMDE are needed for installation.

NOMENCLATURE	NSN	QUANTITY
Radio Set*		1
Electric Grinder or Equivalent		1
Pocket Knife, Electrician's	5110-00-240-5943	1
Screwdriver, No. 2 Point Phillips, 4 in	5120-00-234-8913	1
Screwdriver, 1/4 in Flatblade, 4 in	5120-00-222-8852	1
Pliers, Round Nose	5120-00-240-6172	1
Pliers, Diagonal Cutting	5110-00-965-0974	1
Wrench, Open/Box: 7/16 in	5120-00-228-9505	1
1/2 in	5120-00-228-9506	1
9/16 in	5120-00-228-9507	1
Handle, Socket Wrench	5120-00-240-5364	1
Socket: 7/16 in	5120-00-227-6703	1
1/2 in	5120-00-237-0977	1
9/16 in	5120-00-227-6704	1
Electric Drill	5130-00-889-8994	1
Drill Bits: 9/32 in	5133-00-222-9374	1
7/16 in	5133-00-227-9670	1
11/32 in	5133-00-227-9664	1
3/4 in	5133-00-266-9471	1
1 in	5133-00-222-6393	1

* Use radio issued with your vehicle if available.

5. INSTALLATION PROCEDURES.

This section describes where and how to install MK items in the vehicle. See figure 5-1 for an overall view of where vehicular MK equipment, as well as radio components, typically will be installed. When installing MK equipment, be sure to read and follow instructions and illustrations carefully.

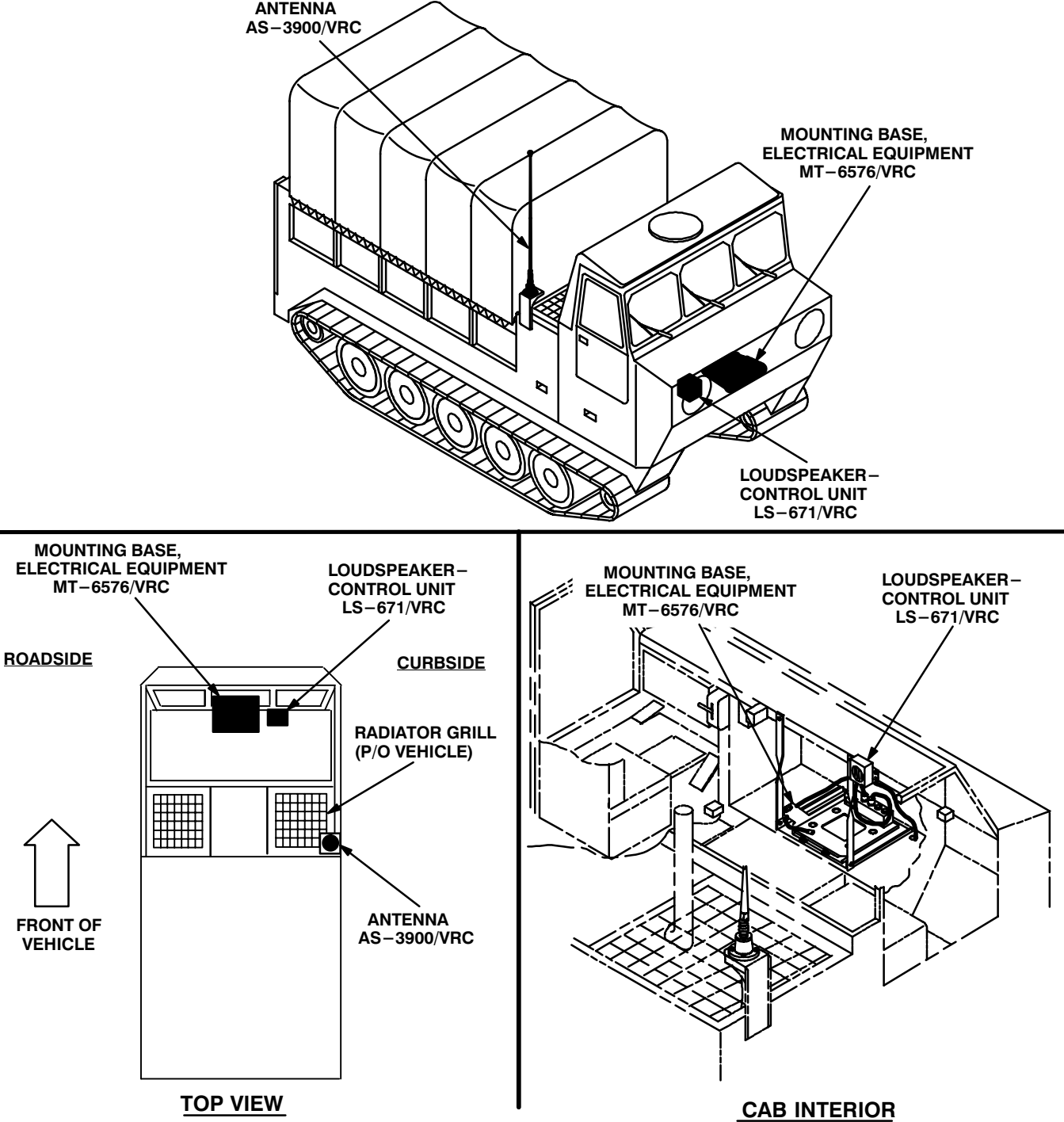
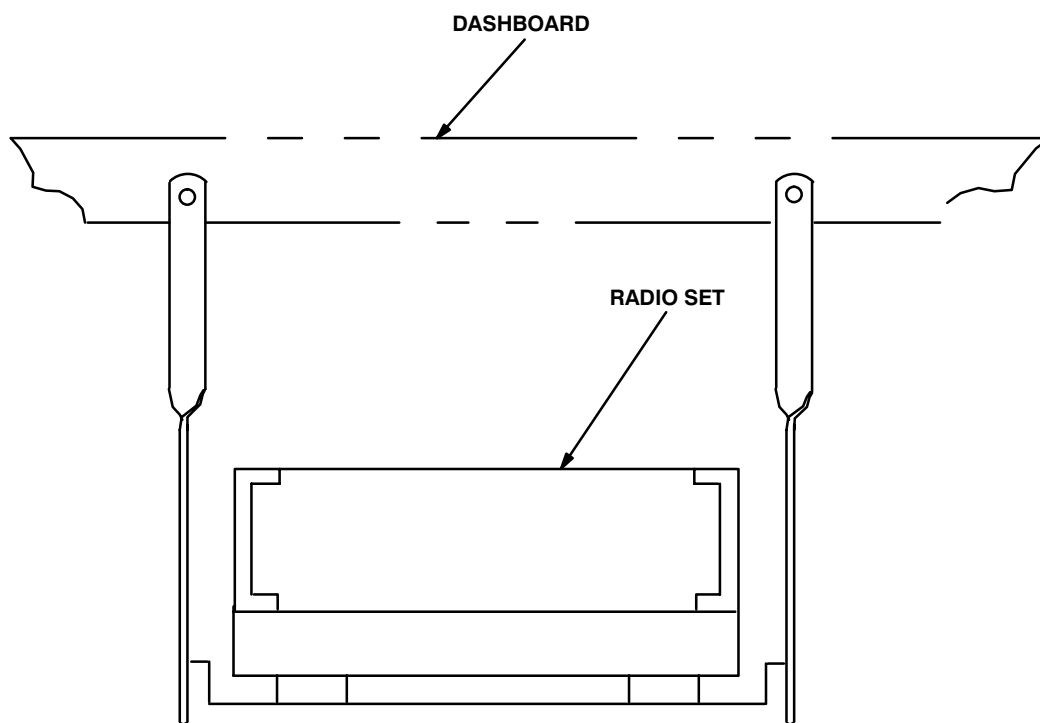


Figure 5-1 (1). MK and Radio Installation: MK Equipment Locations

5. INSTALLATION PROCEDURES. Continued

INSTALLATION
FOR
AN/VRC-87/88C Series



ELECTRICAL EQUIPMENT SHELF

Figure 5-1 (2). MK and Radio Installation: Radio Equipment Locations

5.1 Installation of Antenna AS-3900/VRC (antenna). See figures 5-1 (1) for location.

5.1.1 Installation of Antenna Base.

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

NOTE

Apply a thin coat of adhesive-sealant to both sides of each internal/external-toothed (IET) washer during installation, and to the area of contact where IET washer is to be placed.

- | | | |
|---|---|--|
| a. Radiator grill. | Temporarily remove. See figure 5-1 (1) for location. | |
| b. Holes for mounting bracket (4) and mounting plate (8). | Using mounting plate and dimensions shown, drill five 7/16 in diameter holes through curbside wall. See figure 5-2 (1). | Tools: Electric drill and 7/16 in bit. |
| c. Mounting bracket (4) and mounting plate (8). | Aline with holes drilled in step b. | |
| d. Four cap screws (7), four lock washers (9), eight flat washers (6) and four nuts (10). | Install and secure to mounting bracket (4), mounting plate (8) and curbside wall. | Tools: 9/16 in socket and 9/16 in open/box wrench. |

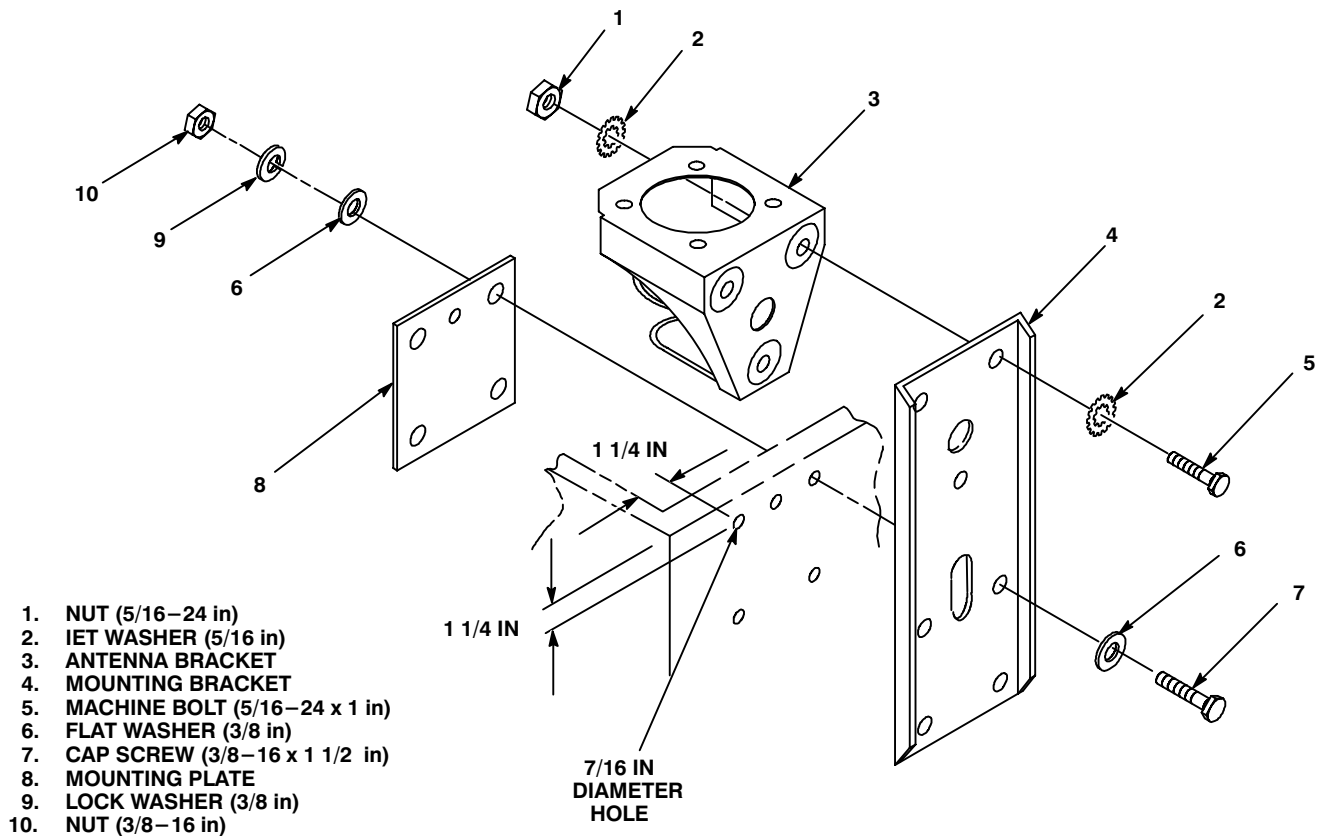


Figure 5-2 (1). Antenna Base Installation: Installing Antenna Bracket

5.1.1 Installation of Antenna Base. Continued

ITEM	ACTION	REMARKS
e. Antenna bracket (3).	Place against mounting bracket (4) and aline mounting holes. See figure 5-2 (1).	
f. Three machine bolts (5) six IET washers (2) and three nuts (1).	Install and secure to mounting holes in antenna bracket (3) and mounting bracket (4).	Tools: 1/2 in socket and 1/2 in open/box wrench.
g. Gasket (2).	Place on antenna bracket (9) and aline mounting holes. See figure 5-2 (2).	
h. Antenna base (1).	Place on top of gasket (2) and antenna bracket (9); then aline mounting holes.	
i. Four cap screws (10), eight IET washers (8) and four nuts (7).	Install and secure to antenna base (1) and antenna bracket (9).	Tools: 9/16 in socket and 9/16 in open/box wrench.
j. Ground strap (4), machine bolt (6) and two IET washers (5).	Install and secure to curbside wall through slotted hole in mounting bracket (3).	Tools: 1/2 in socket.

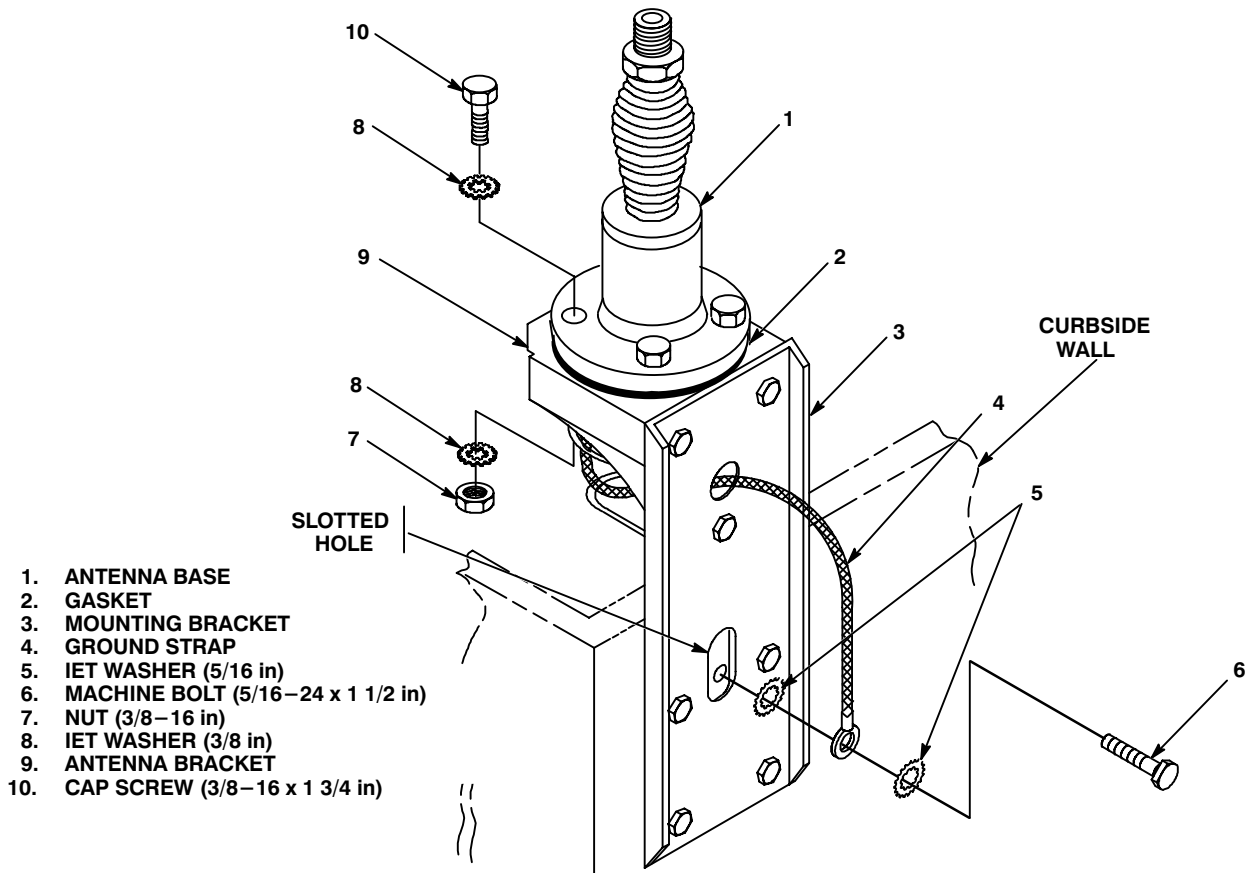
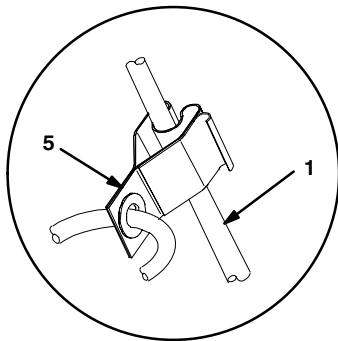


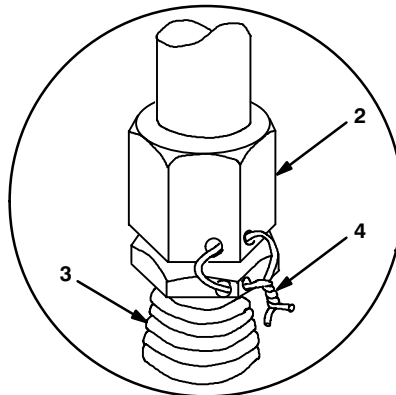
Figure 5-2 (2). Antenna Base Installation: Installing Antenna Base

5.1.2 Installation of Top Antenna Assembly. The top portion of the antenna includes a lower element and an upper element (with installed cap). Use the following procedure to assemble, install and tie down all antennas.

ITEM	ACTION	REMARKS
a. Antenna elements (1, 2).	Apply silicone compound to element threads and assemble. See figure 5-3.	
b. Antenna element (2).	Install and hand-tighten to antenna base (3).	
c. Lock wire (4).	Install to antenna element (2) and antenna base (3). See figure 5-3, detail A.	
d. Fiber rope assembly (5).	Attach clip to antenna element (1). Tie rope to vehicle to position antenna in desired location. See figure 5-3, detail B.	



DETAIL B



DETAIL A

- 1. ANTENNA ELEMENT (UPPER)
- 2. ANTENNA ELEMENT (LOWER)
- 3. ANTENNA BASE
- 4. LOCK WIRE
- 5. FIBER ROPE ASSEMBLY

Figure 5-3. Top Antenna Assembly Installation

5.2 Installation of Equipment Shelf and Loudspeaker – Control Unit LS-671/VRC (speaker). See figure 5-1 (1) for location.

ITEM	ACTION	REMARKS
a. Mounting holes for equipment shelf and speaker.	Using dimensions shown, drill two 11/32 in diameter holes through dashboard. See figure 5-4 (1).	Tools: Electric drill and 11/32 in drill bit.

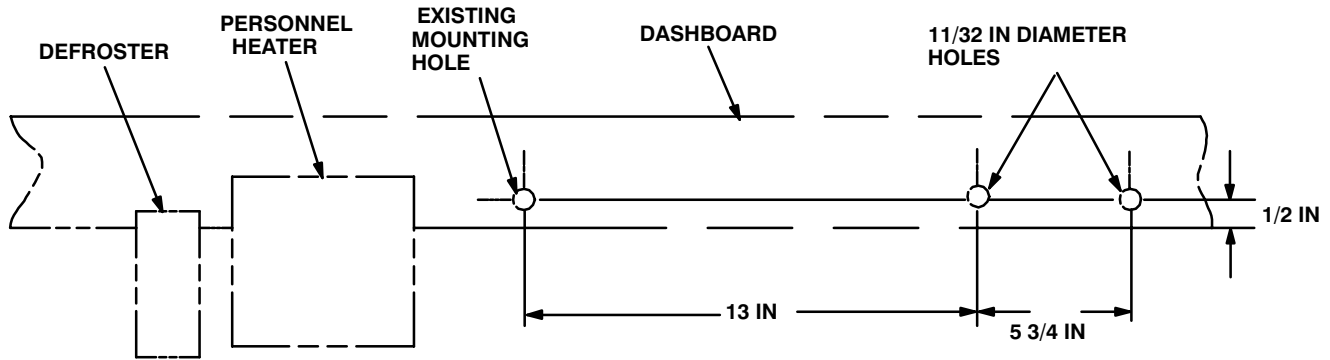


Figure 5-4 (1). Equipment Shelf and Speaker Installation: Drilling Dimensions

b. Two angle brackets (3) and existing mounting hardware.	Install and secure to existing bracket mounts below dashboard. See figure 5-4 (2).	
c. Left retaining strap (6) and equipment shelf (7).	Remove a 1" square area of paint on both left and right of top and bottom of retaining strap (6) around mounting holes that mate with dashboard on top and equipment shelf (7) on bottom. Remove a 1" square area of paint on equipment shelf (7) around mounting hole that mates with bottom of retaining strap (6). Clean the paint removed areas and apply a thin coat of conductive anti-seize compound.	Tools: Electric grinder or equivalent.
d. Two retaining straps (6), two cap screws (1), four flat washers (2), two lock washers (4), and two nuts.	Install and secure to each side of equipment shelf.	Tools: 7/16 in socket and 7/16 in open/box wrench.
e. Equipment Shelf (7).	Position on top of two angle brackets (3); then align mounting holes.	
f. Two cap screws (1), four flat washers (2), two lock washers (4) and two nuts.	Install and secure to equipment shelf (7) and two angle brackets (3). See Figure 5-4(2).	Tools: 7/16 in socket and 7/16 in open/box wrench.

5.2 Installation of Equipment Shelf and Loudspeaker – Control Unit LS-671/VRC (speaker). Continued

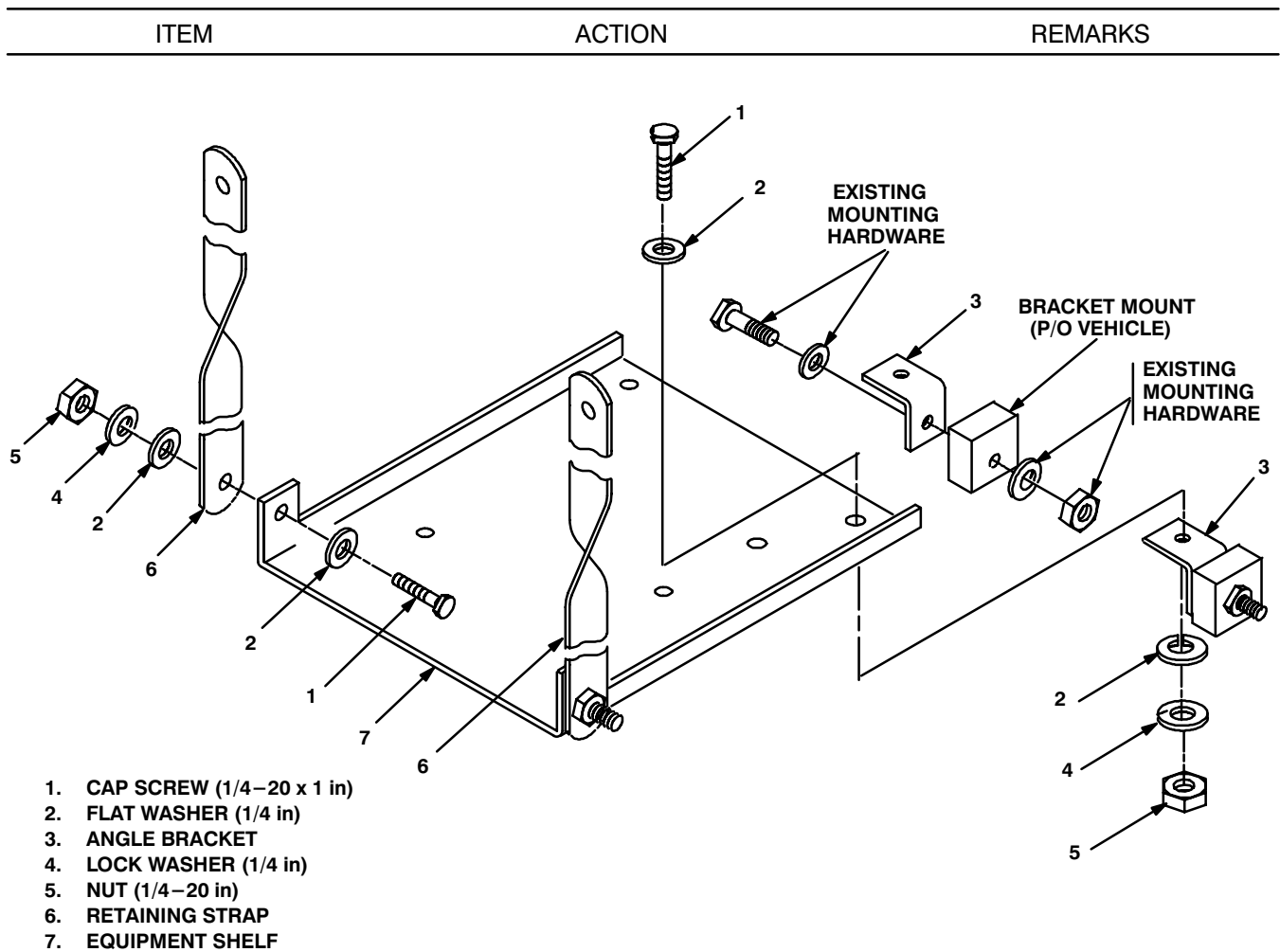


Figure 5-4 (2). Equipment Shelf and Speaker Installation: Installing Shelf (Below Dashboard)

- | | | | |
|----|--|--|--|
| g. | Left retaining strap (4). | Position against dashboard over existing hole. See Figure 5-4(2) | |
| h. | Machine bolt (9), two flat washers (3), lock washer (2) and nut (1). | Install and secure to left retaining strap and dashboard. | Tools: 1/2 socket and 1/2 in open/box wrench. |
| i. | Mounting plate (5). | Align top slots over holes drilled in step a. | |
| j. | Right retaining strap (4). | Position against mounting plate (5) over top slotted hole. | |
| k. | Two machine bolts (9), four flat washers (3), two lock washers (2) and two nuts. | Install and secure to right retaining strap (4), both sides of mounting plate (5) and dashboard. | Tools: 1/2 in socket and 1/2 in open/box wrench. |

5.2 Installation of Equipment Shelf and Loudspeaker – Control Unit LS-671/VRC (speaker). Continued

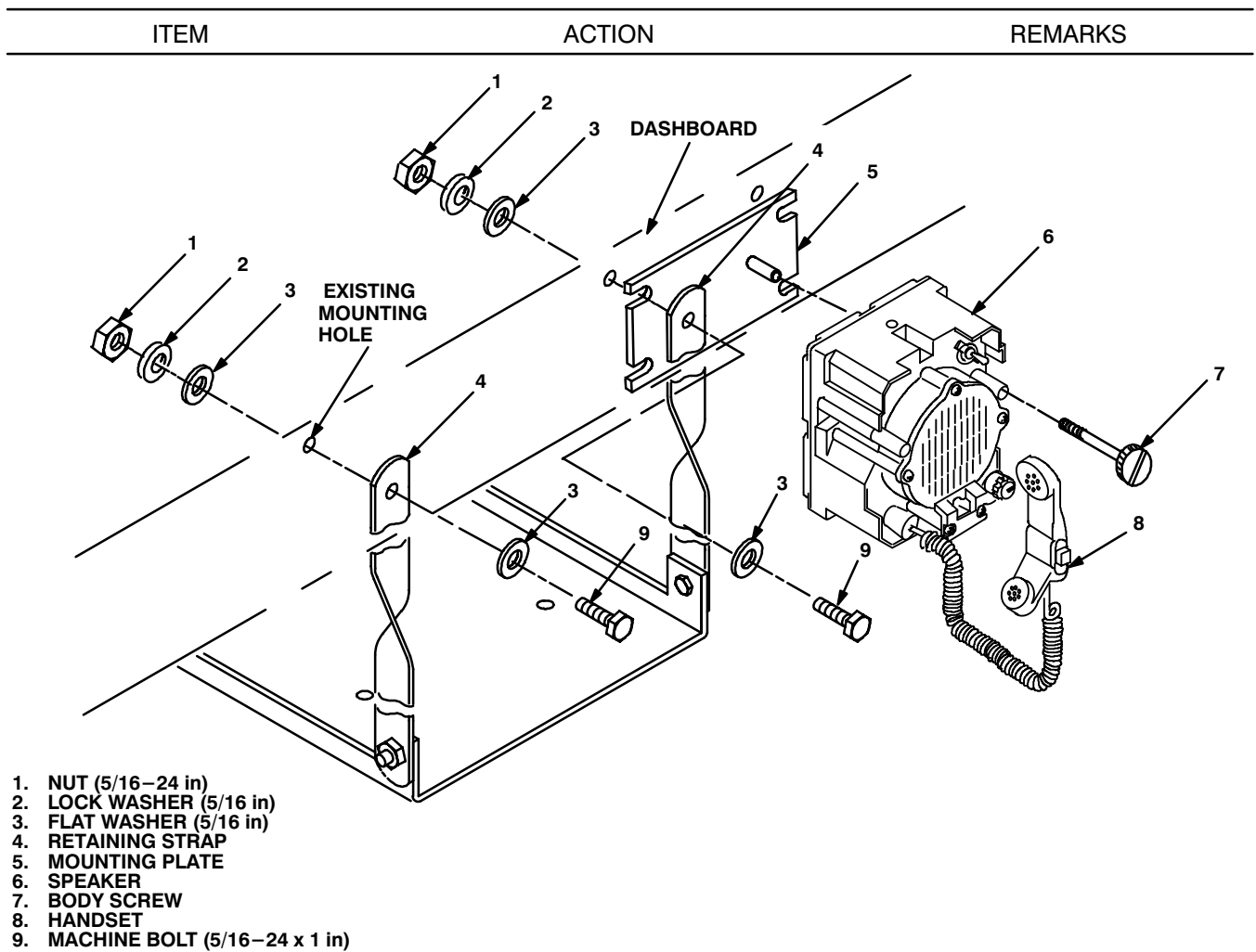


Figure 5-4 (3). Equipment Shelf and Speaker Installation: Installing Speaker

- | | | |
|---|--|-------------------------------|
| l. Speaker (6). | Place on mounting plate (5). See Figure 5-4(3). | |
| m. Two externally-relieved body screws (7). | Thread through speaker (6) and secure to mounting plate (5). | Tools: Flatblade screwdriver. |
| n. Handset (8). | Connect and secure to speaker (6) connector J2. | |

5.3 Installation of Mounting Base, Electrical Equipment MT-6576/VRC (mounting base). Remove and retain attaching bag of 5/16 in mounting hardware for installation. To insure good electrical grounding, any rust, corrosion or paint around mounting holes in equipment shelf should be removed before installing the mounting base. See figure 5-5 and perform the following steps.

ITEM	ACTION	REMARKS
NOTE		
Apply a thin coat of adhesive-sealant to both sides of each internal/external-toothed (IET) washer during installation, and to the area of contact where IET washer is to be placed.		
a. Mounting base (1) and equipment shelf (2).	Remove a 2" square area of paint on the underside of mounting base (1) around four mounting holes. Remove a 2" square area of paint on equipment shelf (2) around the existing mounting holes that mate with mounting holes of mounting base (1). Clean the paint removed areas and apply a thin coat of conductive anti-seize compound.	Tools: Electric grinder or equivalent.
b. Mounting base (1).	Place on equipment shelf (2) and align mounting holes. See Figure 5-5.	
c. Four cap screws (5), eight internal/external-toothed (IET) washers (4) and four nuts (3).	Install and secure to mounting base (1) and equipment shelf (2).	Tools: 1/2 in socket.

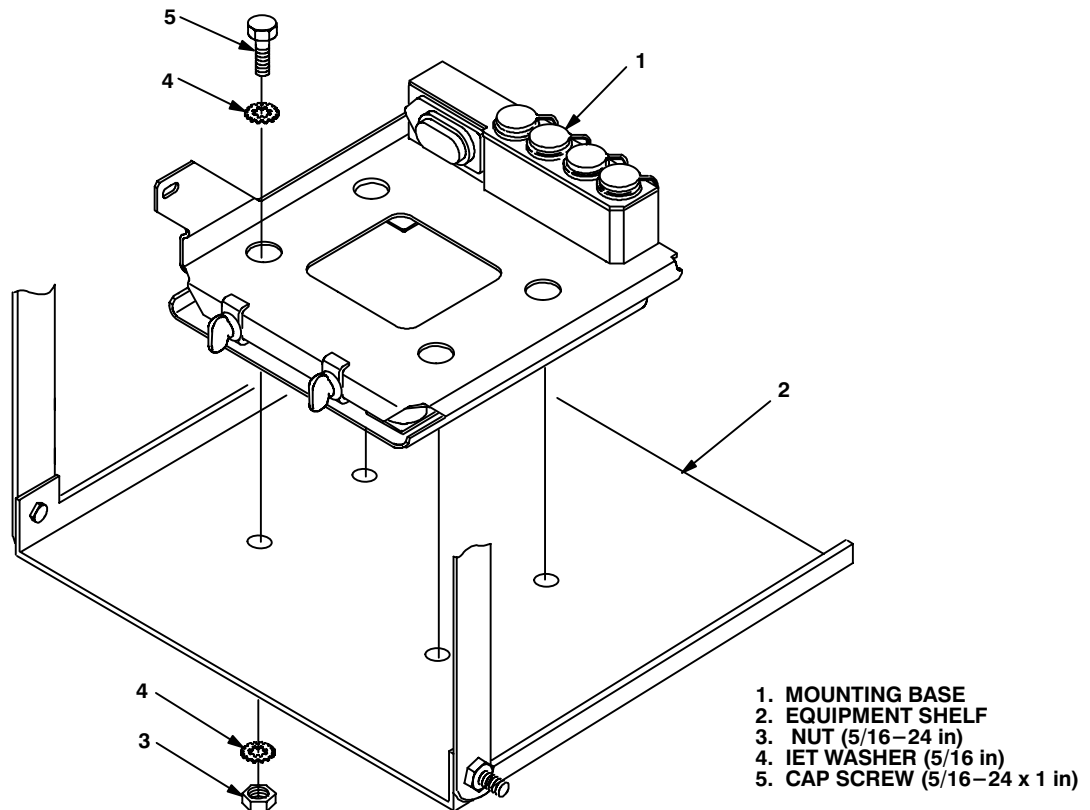


Figure 5-5. Mounting Base Installation

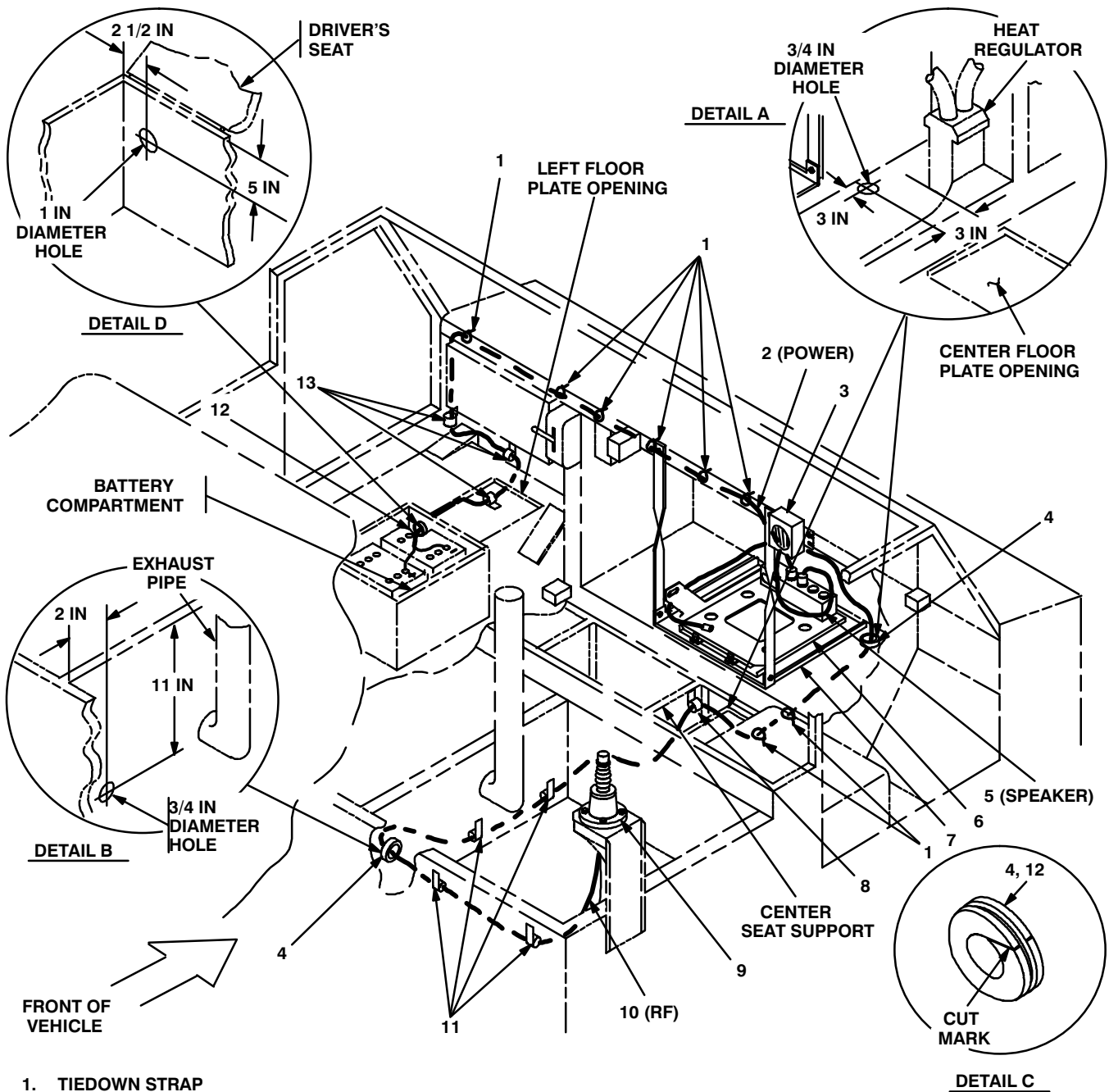
5.4 Installation of Cables. To accomplish the installation, leave loop clamps and tiedown straps loose enough to adjust cable slack and allow easy adjustment of equipment. When installation is complete, tighten and secure clamps and tiedown straps.

WARNING

Make sure vehicle power source is positioned OFF or disconnected before installing cables.

ITEM	ACTION	REMARKS
a. Center floor plate.	Raise and secure to open position. See figure 5–6, detail A, for location.	Floor plate not shown.
b. Holes for two grommets (4).	Using dimensions shown, drill a 3/4 in diameter hole through cab floor and radiator compartment wall. See figure 5–6, details A and B.	Tools: Electric drill and 3/4 in drill bit.
c. RF cable (10) connector P1.	Connect and secure to antenna base (9). See figure 5–6.	
d. RF cable (10) connector P2.	Insert through hole drilled in step b (through radiator compartment wall).	
e. RF cable (10).	Route along outer wall of radiator compartment (below exhaust pipe) to center floor plate opening.	
f. Grommet (4).	Cut through on mark shown; then wrap around RF cable (10) and install to drilled hole in radiator compartment wall. See figure 5–6, detail C and figure 5–6.	Tools: Pocket knife.
g. Holes for four loop clamps (11).	Drill four 9/32 in diameter holes through radiator compartment wall. See figure 5–6 for approximate location(s).	Tools: Electric drill and 9/32 in drill bit.
h. Four loop clamps (11), four cap screws (1/4–20 x 1 1/4 in), four lock washers (1/4 in) and four nuts (1/4–20 in).	Wrap clamps around RF cable (10); then install to holes drilled in step g.	Tools: 7/16 in socket and 7/16 in open/box wrench.
i. Center seat cushion.	Raise and secure to open position.	Seat cushion not shown.
j. Hole for one loop clamp (8).	Drill a 9/32 in diameter hole through center seat support. See figure 5–6 for location(s).	Tools: Electric drill and 9/32 in drill bit.
k. Loop clamp (8), cap screw (1/4–20 x 1 in), lock washer (1/4 in) and nut (1/4–20 in).	Wrap clamp around RF cable (10); then install to hole drilled in step j.	Tools: 7/16 in socket and 7/16 in open/box wrench.

5.4 Installation of Cables. Continued



- 1. TIEDOWN STRAP
- 2. POWER CABLE, CX-13302/VRC (13 FT, 0 IN)
- 3. SPEAKER
- 4. GROMMET (1/4 in)
- 5. SPEAKER CABLE, CX-13292/VRC (3 FT, 0 IN)
- 6. MOUNTING BASE
- 7. EQUIPMENT SHELF
- 8. LOOP CLAMP (1/4-1/4 in)
CAP SCREW (1/4-20 x 1 in)
LOCK WASHER (1/4 in)
NUT (1/4-20 in)

- 9. ANTENNA BASE
- 10. RF CABLE, CG-3855/VRC (21 FT, 0 IN)
- 11. LOOP CLAMP (1/4-1/4 in)
CAP SCREW (1/4-20 x 1 1/4 in)
LOCK WASHER (1/4 in)
NUT (1/4-20 in)
- 12. GROMMET (5/8 in)
- 13. LOOP CLAMP (5/8-1/4 in)

Figure 5-6. Cable Installation: Power, Speaker and RF Cabling

5.4 Installation of Cables. Continued

ITEM	ACTION	REMARKS
l. RF cable (10).	Route down through center floor opening along existing cable harness to hole drilled in step b (through cab floor). See figure 5–6.	
m. RF cable (10) connector P2.	Insert up through hole drilled in cab floor and position on top on mounting base (6).	
n. Two tiedown straps (1).	Wrap around RF cable (10); then install loosely to existing cable harness below cab floor. See figure 5–6 for location(s).	
o. Grommet (4).	Cut through on mark shown; then wrap around RF cable (10) and install to hole drilled through cab floor. See figure 5–6, detail C and figure 5–6.	Tools: Pocket knife.
p. Speaker cable (5) connector P1.	Connect and secure to speaker (3) connector J1. See figure 5–6.	
q. Speaker cable (5) connector P2.	Connect and secure to mounting base (6) connector J3.	
r. Left floor plate.	Temporarily remove. See figure 5–6 for location.	Floor plate not shown.
s. Driver’s seat.	Unlatch and lift forward. See figure 5–6, detail D.	
t. Hole for grommet (12).	Using dimensions shown, drill a 1 in diameter hole through battery compartment.	Tools: Electric drill and 1 in drill bit.
u. Power cable (2) terminal leads: T1 (red) and T2 (black).	Insert through hole drilled in step t; then connect and secure to proper battery posts. See figure 5–6.	Red (+) secures to positive post. Black (–) secures to negative post.
v. Grommet (12).	Cut through on mark shown; then wrap around power cable (2) and install to hole drilled in step t.	Tools: Pocket knife.
w. Driver’s seat.	Return to normal driving position and secure.	
x. Power cable (2).	Route below left floor plate opening to forward edge of cab floor.	
y. Three existing clamps.	Remove and discard. Retain existing mounting hardware. See figure 5–6, item 13, for location(s).	

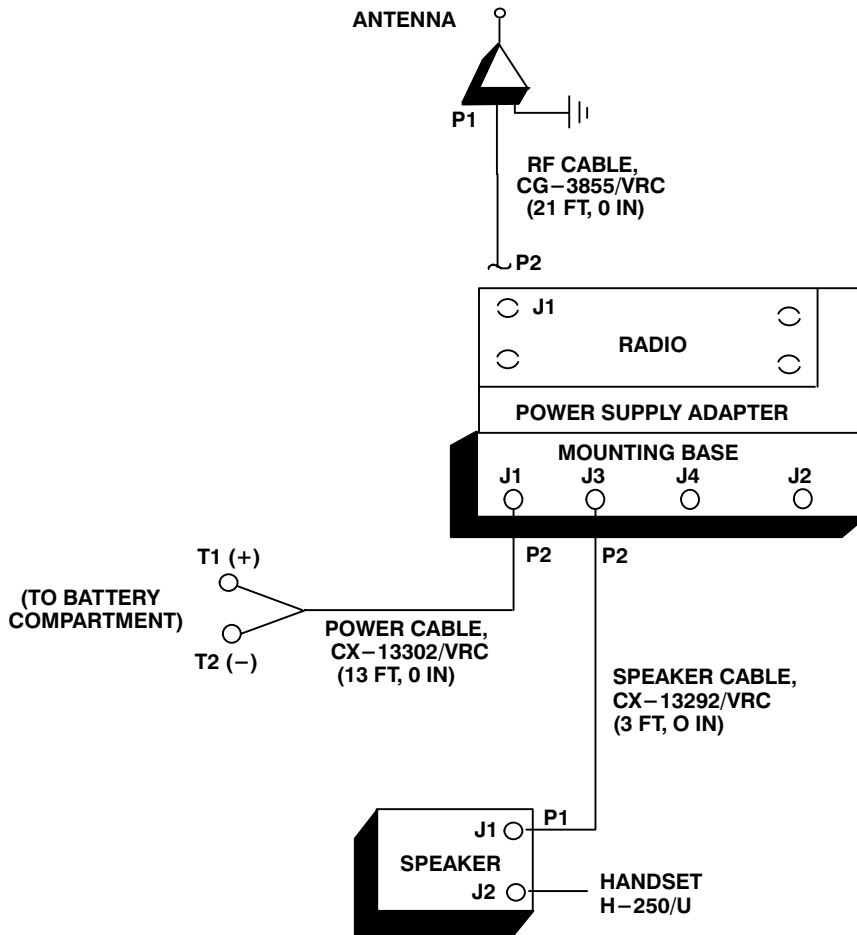
5.4 Installation of Cables. Continued

ITEM	ACTION	REMARKS
z. Three loop clamps (13) and existing mounting hardware (retained in step y).	Wrap clamps around power cable (2); then install to existing mounting holes. See figure 5-6 for location(s).	
aa. Power cable (2).	Route behind dashboard to equipment shelf (7). See figure 5-6.	
ab. Six tiedown straps (1).	Wrap around power cable (2) and install loosely to existing harness behind dashboard. See figure 5-6 for location(s).	
ac. Left floor plate.	Reinstall and secure. See figure 5-6 for location(s).	
ad. Center floor plate and seat cushion.	Return to normal positions and secure. See figure 5-6.	
ae. Radiator grill.	Reinstall and secure. See figure 5-1 (1) for location.	
af. Adhesive-sealant.	Apply to and around all previously installed grommets and drilled holes.	
ag. Power cable (2) connector P2.	Connect and secure to mounting base (6) connector J1. See figure 5-6.	

5.5 Post–Installation and Checkout. After equipment is installed and cables are connected, perform the following steps.

ITEM	ACTION	REMARKS
a. Equipment.	Check for secure mounting. Check for loose parts, connectors and mounting hardware.	
b. Cables.	Check for proper installation and connection of cables. See figure 5–7 for cable connections. Unused cables should be stowed in appropriate place inside the vehicle.	
c. Loop clamps.	Check that all have been properly installed and tightened.	
d. Protective covers.	Insure that all installed cables are covered when not in use or connected.	
e. Radio issued with vehicle.	Install and connect cables. See TM 11–5820–890–20–1 or TM 11–5820–890–20–2 for installation and Operational (OP) Check instructions.	
f. MK line replaceable units.	See TM 11–5820–890–20P for Repair Parts and Special Tools List (RPSTL) information.	

5.5 Post-Installation and Checkout. Continued



CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CX-13302/VRC (13 FT, 0 IN)	P2	Mounting base	J1	T1: Red (+) T2: Black (-)	Battery compartment	Post (+) Post (-)
CX-13292/VRC (3 FT, 0 IN)	P2	Mounting base	J3	P1	Speaker	J1
CG-3855/VRC (21 FT, 0 IN)	P1	Antenna base	J1	P2	Radio	J1

Figure 5-7. Cable Diagram: For AN/VRC-87/88C Series

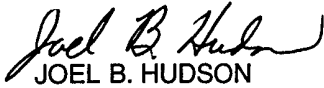
APPENDIX A

REFERENCES

AMDF	Army Master Data File (Microfiche)
AR 710-2	Supply Policy Below the Wholesale Level as Contained in Unit Supply UPDATE
AR 725-50	Requisitioning, Receipt and Issuing System in UPDATE
DA Pam 25-30	Consolidated Index of Army Publications (Microfiche)
DA Pam 710-2-1	Using Unit Supply System Manual Procedures as Contained in Unit Supply UPDATE
SB 11-131-2	Vehicular Radio Sets and Authorized Installations (SINCGARS)
TM 11-5820-890-10-1	Operator's Manual (ICOM Radio Sets)
TM 11-5820-890-10-3	Operator's Manual (Non-ICOM Radio Sets)
TM 11-5820-890-20-1	Unit Maintenance Manual (ICOM Radio Sets)
TM 11-5820-890-20-2	Unit Maintenance Manual (Non-ICOM Radio Sets)
TM 11-5820-890-20P	Repair Parts and Special Tools List

By Order of the Secretary of the Army:

Official:



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3-10	3-3		3-1
5-6	5-8		
		FO-3	

Recommend that the installation antenna alignment procedure be changed throughout to specify a 20 IFF antenna lag rather than 10

REASON: Experience has shown that with only a 10 lag, the antenna servo system is too sensitive to gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 20 without degradation of operation.

Item 5, Functional column. Change 2 dB" to 3 dB".

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

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

REASON: To replace the cover plate.

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

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

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