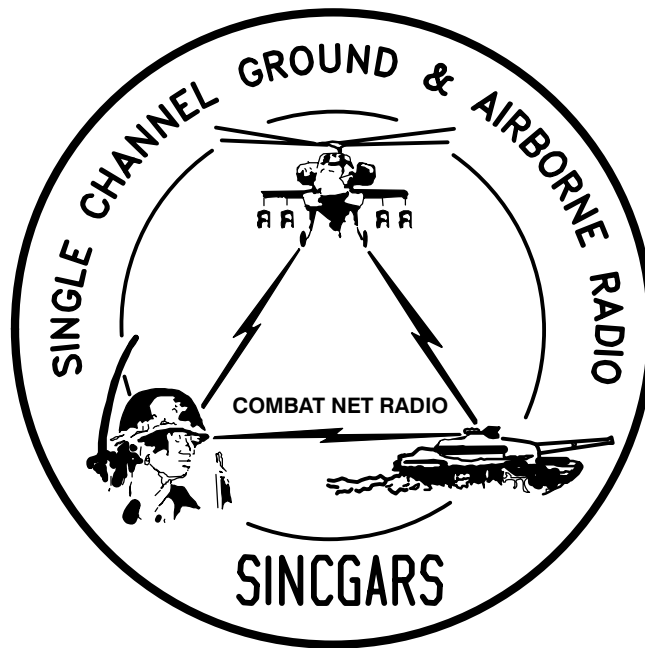


TECHNICAL BULLETIN



**INSTALLATION INSTRUCTIONS FOR
INSTALLATION KIT, ELECTRONIC EQUIPMENT,
MK-2404/VRC (NSN 5895-01-225-0521) (EIC: N/A)
TO PERMIT INSTALLATION OF
RADIO SET AN/VRC-89/91/92 SERIES
IN A
IMPROVED TOW VEHICLE, COMBAT ANTI-TANK
M901**

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

1 AUGUST 1999

**INSTALLATION INSTRUCTIONS FOR
 INSTALLATION KIT, ELECTRONIC EQUIPMENT,
 MK-2404/VRC (NSN 5895-01-225-0521) (EIC: N/A)
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 IN AN
 IMPROVED TOW VEHICLE, COMBAT, ANTI-TANK, M901**

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 11-5820-890-20-73, dated 1 September 1993

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0.1 SCOPE.

This technical bulletin provides Installation Instructions for Installation Kit, Electronic Equipment, MK–2404/VRC, commonly referred to as the Mounting Kit (MK). The MK shall be installed into the following type of vehicle(s):

- Improved Tow Vehicle, Combat, Anti-Tank, M901

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.

Included in the Radio Set AN/VRC–89/91/92 Series is:

- Radio Set AN/VRC–89/91/92 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–2404/VRC (MK) contains the items needed to mount Radio Set AN/VRC–89/91/92 Series in an Improved Tow Vehicle, Combat, Anti-Tank, M901 (vehicle). If Radio Set AN/VRC–92 Series is authorized, see section 5.4 for instructions to install MT–6353/VRC mounting base.

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 4.5 work hours is required. Typical vehicle downtime is 5.0 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–3916/VRC	5.1	1.0
Mounting Base, Electrical Equipment MT–6352/VRC	5.2	1.5
Cables	5.3	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 9–2350–259–20.

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–89/91/92 Series. Refer to Table 4–2 and figure 4–2 to identify additional items required to install Radio Set AN/VRC–92 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-89/91/92 Series

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5985-01-353-4943	Antenna, Vehicular, AS-3916/VRC (A3207487-1)	1	PAOOFA	4-1, 2
5305-00-847-1159	Screw, Cap, Hexagon (3/8-16 x 1 3/4 in) MS35307-365	8	PAOZZA	
5310-00-913-8881	Nut, Hexagon (3/8-16 in) MS51971-3 (Not Used)	8	PAOZZA	
5310-00-061-1258	Washer, Lock, Internal/External-Toothed (3/8 in) MS45904-76 (8 Not Used)	16	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72 n (Not Used)	4	PAOZZA	
5306-00-225-9086	Bolt, Machine (5/16-24 x 5/8 in) MS90726-31 (Not Used)	2	PAOZZA	
5330-01-205-2864	Gasket (A3013655-1) (Not Used)	2	PAOZZA	
5975-01-188-8873	Mounting Base, Electrical Equipment MT-6352/VRC (A3013367-1)	1	PAOOFA	4-1, 1
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34 (1 Not Used)	5	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	10	PAOZZA	
5310-00-880-7746	Nut, Hexagon (5/16-24 in) MS51968-5	5	PAOZZA	
5995-01-225-0503	Cable Assembly, Power, Electrical CX-13306/VRC (5 FT, 0 IN) (A3014043-6)	1	PAOZZA	4-1, 5
5995-01-219-7034	Cable Assembly, Radio Frequency CG-3855/VRC (15 FT, 0 IN) (A3014031-7)	1	PAOZZA	4-1, 6
5995-01-219-7030	Cable Assembly, Radio Frequency CG-3855/VRC (7 FT, 0 IN) (A3014031-3)	1	PAOZZA	4-1, 6
5995-01-303-4951	Cable Assembly, Special Purpose, Electrical CX-13313/VRC (2 FT, 7 IN) (A3018360-1)	1	PAOZZA	4-1, 7
5995-01-219-2008	Cable Assembly, Special Purpose, Electrical CX-13300/VRC (3 FT, 0 IN) (A3014044-2)	2	PAOZZA	4-1, 8
5340-00-809-1490	Clamp, Loop (1/4-1/4 in) MS21333-98	3	PAOZZA	
5340-00-984-8540	Clamp, Loop (1/2-1/4 in) MS21333-102	1	PAOZZA	
5340-00-809-1494	Clamp, Loop (3/4-1/4 in) MS21333-105	3	PAOZZA	
5310-00-880-7746	Nut, Hexagon (5/16-24 in) MS51968-5	1	PAOZZA	
	Nut Strip (A3014085-1)	2	XBOZZA	4-1, 3
	Plate, Mounting (A3014089-1)	1	XBOZZA	4-1, 4

Table 4-1. MK Parts List for Installation of Radio Set AN/VRC-89/91/92 Series Continued

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5305-00-191-3641	Screw, Tapping, Hex-Head (No. 10-24 x 5/8 in) MS51851-65	3	PAOZZA	
5305-00-191-3640	Screw, Tapping, Hex-Head (1/4-20 x 5/8 in) MS51851-85	4	PAOZZA	
5305-00-984-7353	Screw, Machine, Flat-Head (5/16-24 x 3/4 in) MS35191-306	2	PAOZZA	
5975-00-111-3208	Strap, Tiedown, Electrical Components MS3367-5-9	10	PAOZZA	
5310-00-582-5965	Washer, Lock (1/4 in) MS35338-44	4	PAOZZA	
5310-00-045-3296	Washer, Lock (No. 10) MS35338-43	3	PAOZZA	

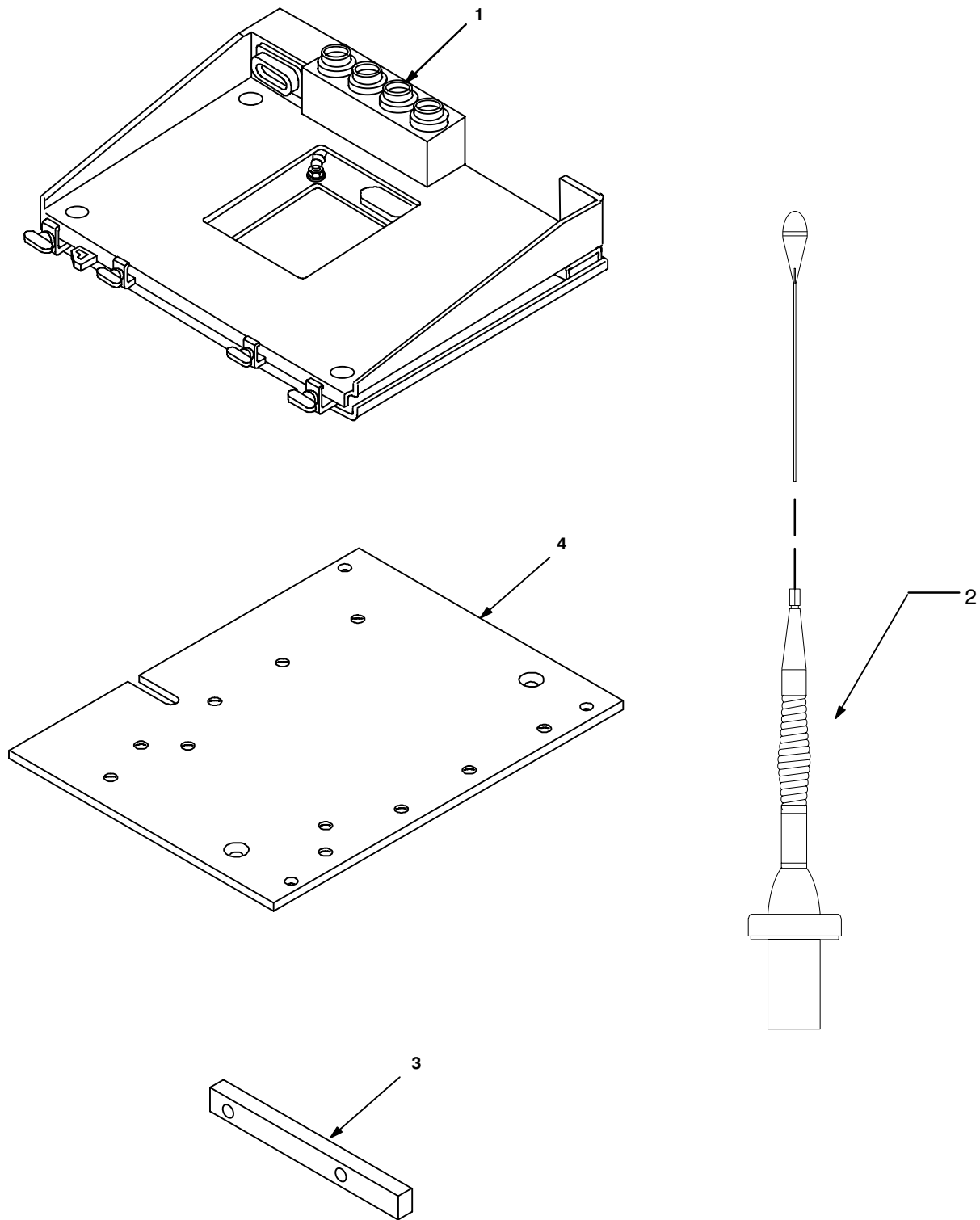


Figure 4-1 (1). MK Illustrated Parts List

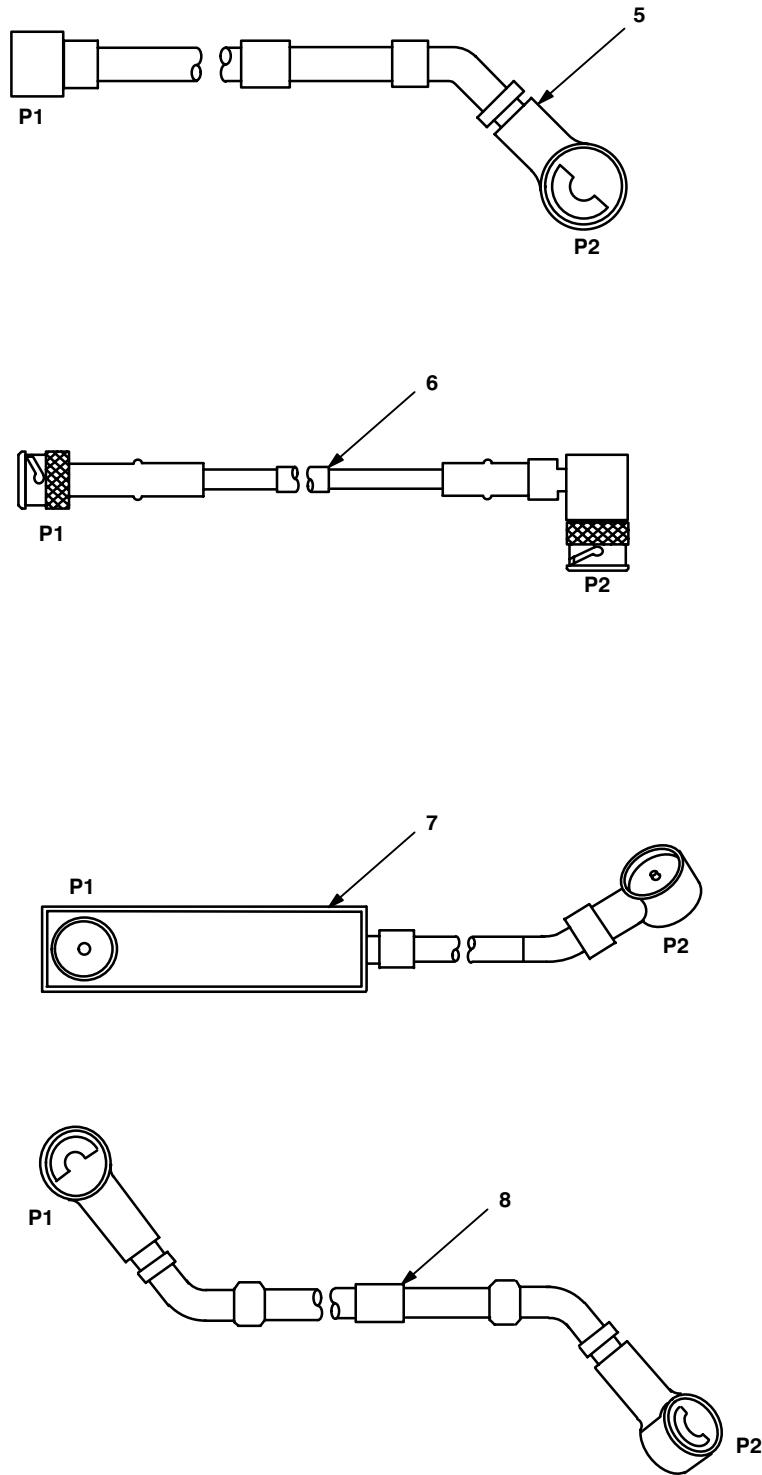


Figure 4-1 (2). MK Illustrated Parts List

Table 4-2. Additional Items Required for Installation of Radio Set AN/VRC-92 Series

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5975-01-235-1962	Mounting Base, Electrical Equipment MT-6353/VRC (A3014053-1)	1	PAOOHA	4-2, 1
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34	4	PAOZZA	
5310-00-880-7746	Nut, Hexagon (5/16-24 in) MS51968-5 (Not Used)	2	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72 (2 Not Used)	6	PAOZZA	
5310-00-081-4219	Washer, Flat (5/16 in) MS27183-12 (Not Used)	2	PAOZZA	
5975-00-111-3208	Nut Strip (A3014064-1) (Not Used)	1	XBOZZA	4-2, 5
5975-00-111-3208	Strap, Tiedown, Electrical Components MS3367-5-9	4	PAOZZA	
5995-01-300-9324	Cable Assembly, Power, Electrical CX-13303/VRC (4 FT, 6 IN) (A3014040-9)	1	PAOZZA	4-2, 4
5995-01-222-4209	Cable Assembly, Special Purpose, Electrical CX-13291/VRC (3 FT, 0 IN) (A3014037-1)	1	PAOZZA	4-2, 2
5995-01-219-7025	Cable Assembly, Radio Frequency CG-3856/VRC (5 FT, 0 IN) (A3014032-3)	1	PAOZZA	4-2, 3

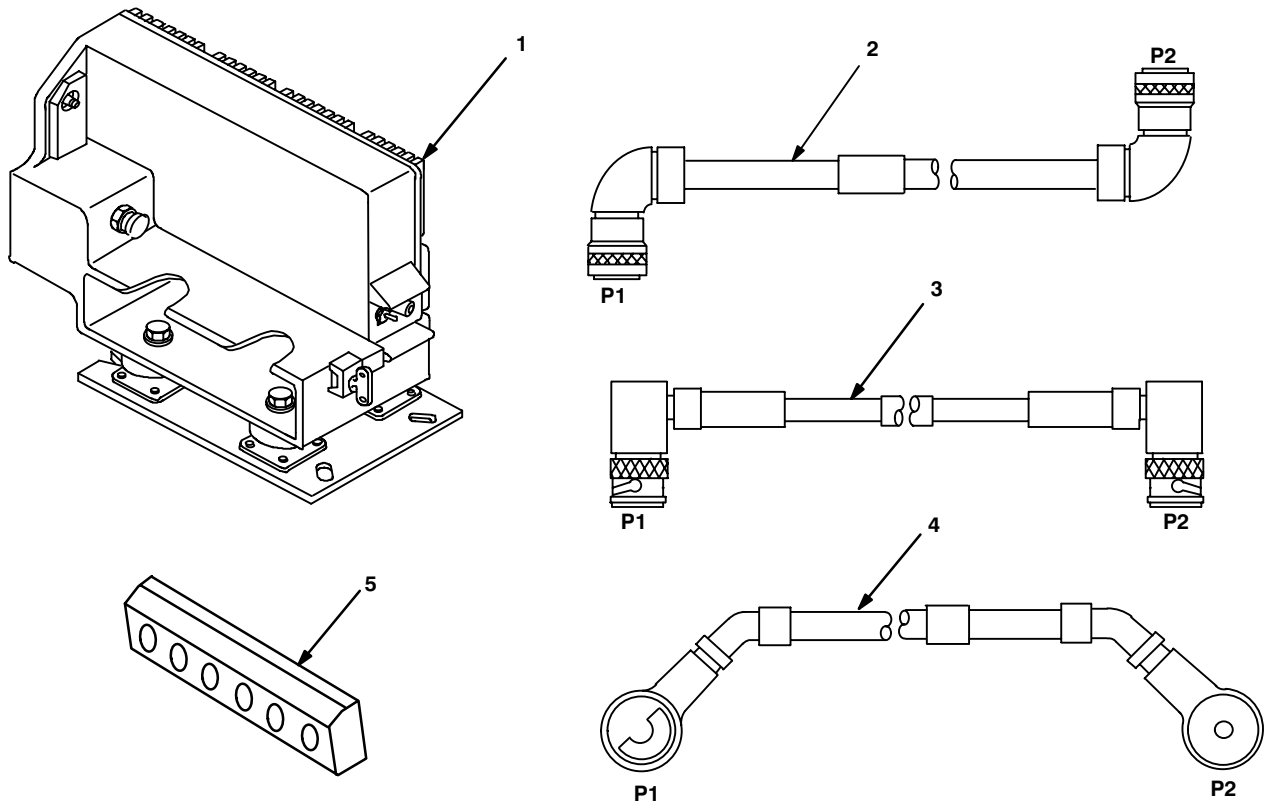


Figure 4-2. Illustrated Parts List for Table 4-2

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 TMD are needed for Installation.

NOMENCLATURE	NSN	QUANTITY
Radio Set*		1
Electronic 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: 3/8 in	5120-00-228-9504	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: 3/8 in	5120-00-227-6702	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 Bit: 15/64 in	5133-00-227-9664	1
11/32 in	5133-00-227-9664	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. If Radio Set AN/VRC-92 Series is authorized, see section 5.4 for instructions to install MT-6353/VRC mounting base.

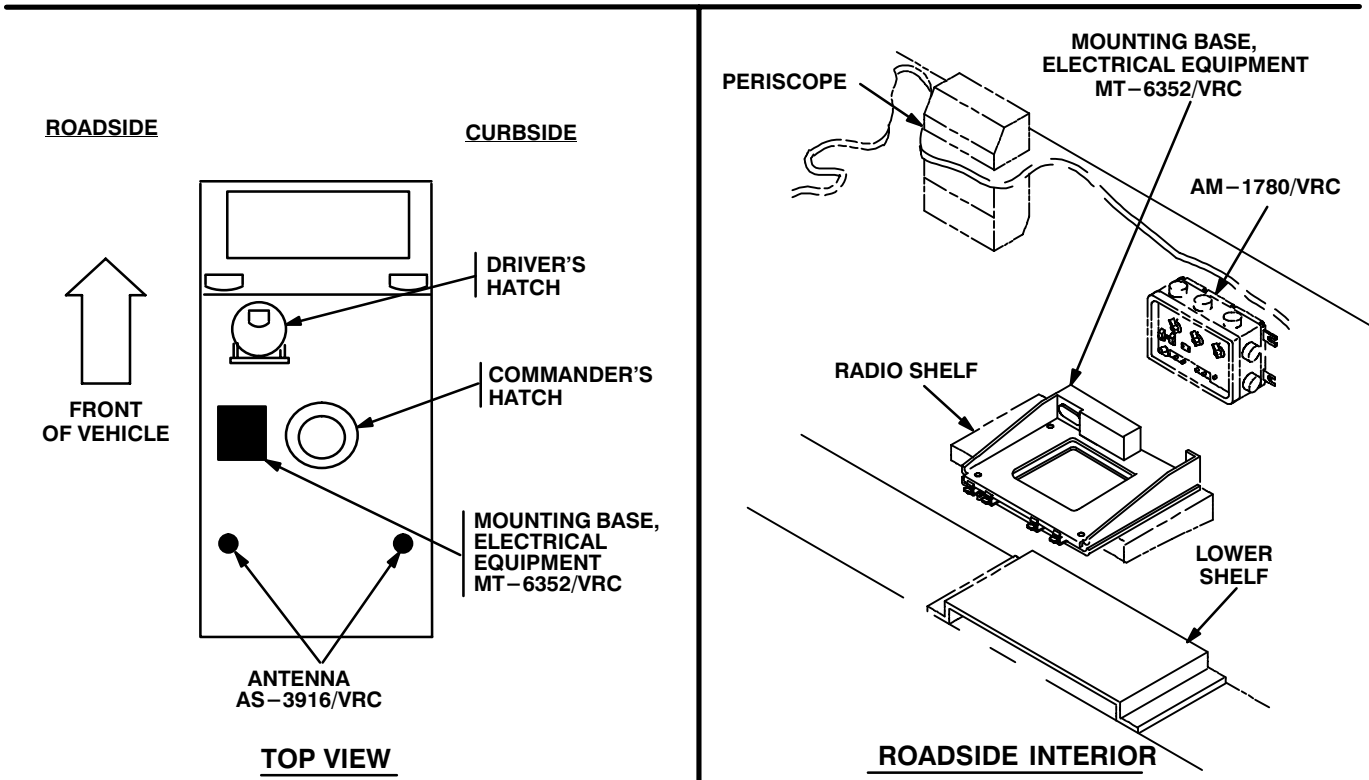
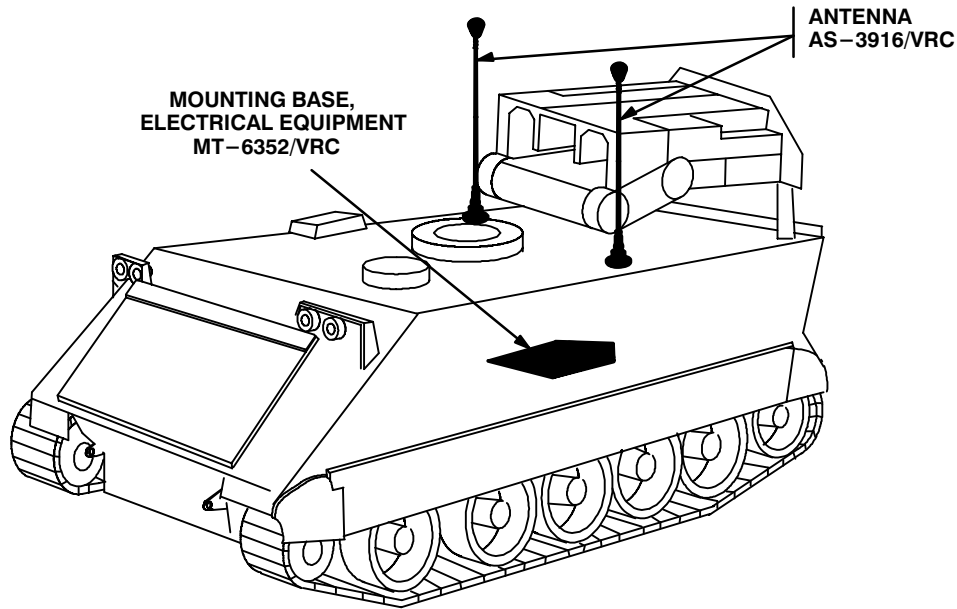


Figure 5-1 (1). MK and Radio Installation: MK Equipment Locations

5. INSTALLATION PROCEDURES. Continued

INSTALLATION
FOR
AN/VRC-89/91/92 Series

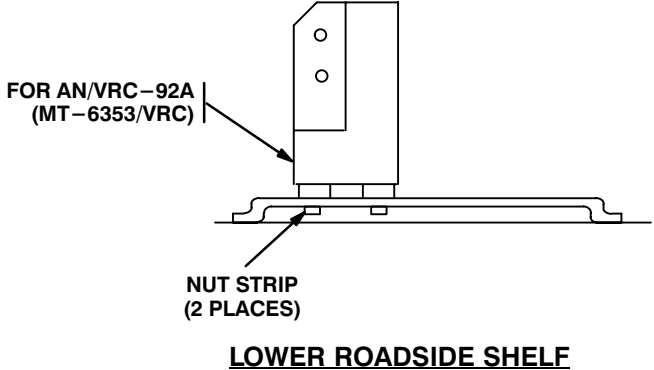
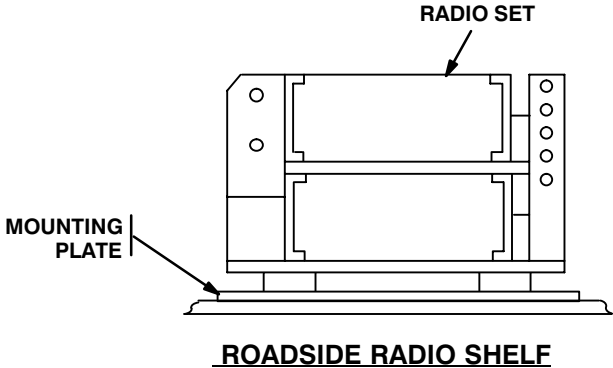


Figure 5-1 (2). MK and Radio Installation: Radio Equipment Locations

5.1 Installation of Antenna, Vehicular, AS-3916/VRC (antenna).

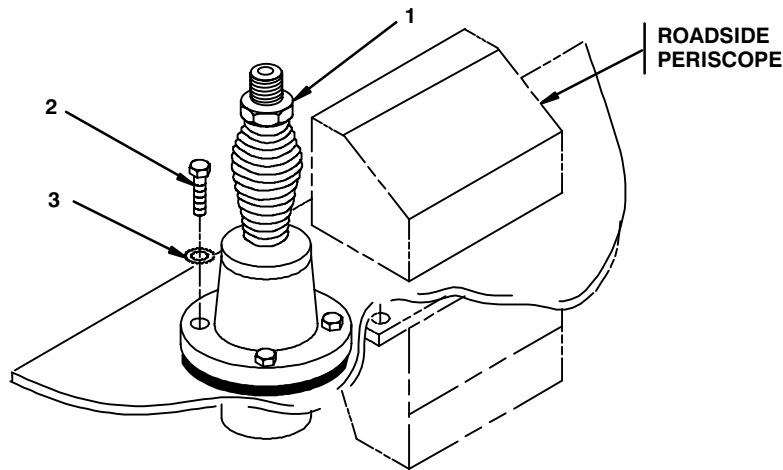
5.1.1 Installation of Antenna Base. Use the following procedures to install both antenna bases. See figure 5-2 (1) and 5-2 (2) for locations. Remove ground strap from antenna base(s).

ITEM	ACTION	REMARKS
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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.

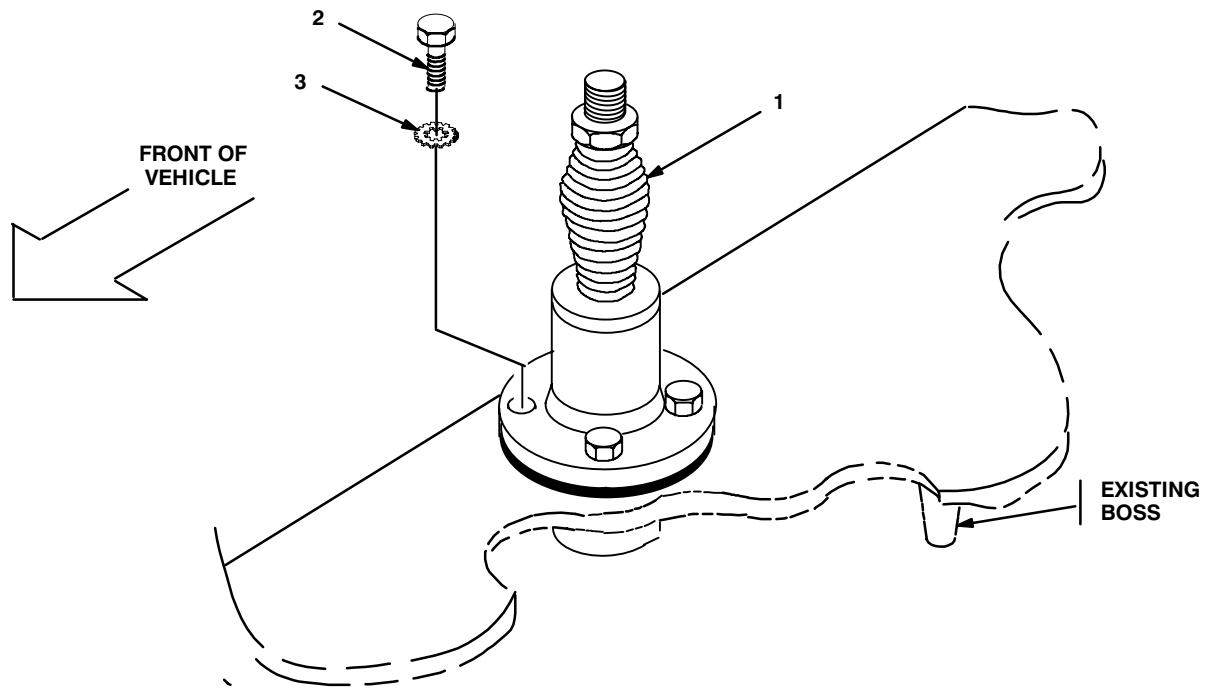
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| a. Existing antenna port. | Remove the paint (1" strip) for 360° centered around the four mounting holes. Clean the paint removed area and apply a thin coat of conductive anti-seize compound (CASC). | Tools: Electric grinder or equivalent |
| b. Antenna base (3). | Place on top of antenna port; then align mounting holes. | |
| c. Four cap screws (1) and four internal/external-toothed IET washers (2). | Install and secure to antenna base (3) and antenna port. | Tools: 9/16 in socket. |
| d. Antenna base (3) and antenna port. | Apply a bead of adhesive-sealant/silicon compound 360° around the seam between antenna base (3) and antenna port. | |



- 1. ANTENNA BASE
- 2. CAP SCREW (3/8-16 x 1 3/4 in)
- 3. IET WASHER (3/8 in)

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

5.1.1 Installation of Antenna Base. Continued.



1. ANTENNA BASE
2. CAP SCREW (3/8-16 x 1 3/4 in)
3. IET WASHER (3/8 in)

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

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 element (1).	Apply silicone compound to element threads and assemble. See figure 5-3.	
b. Wire rope assembly (3).	Attach clip to antenna element (1). Tie rope to vehicle to position antenna in desired location. See Figure 5-3, Detail A.	

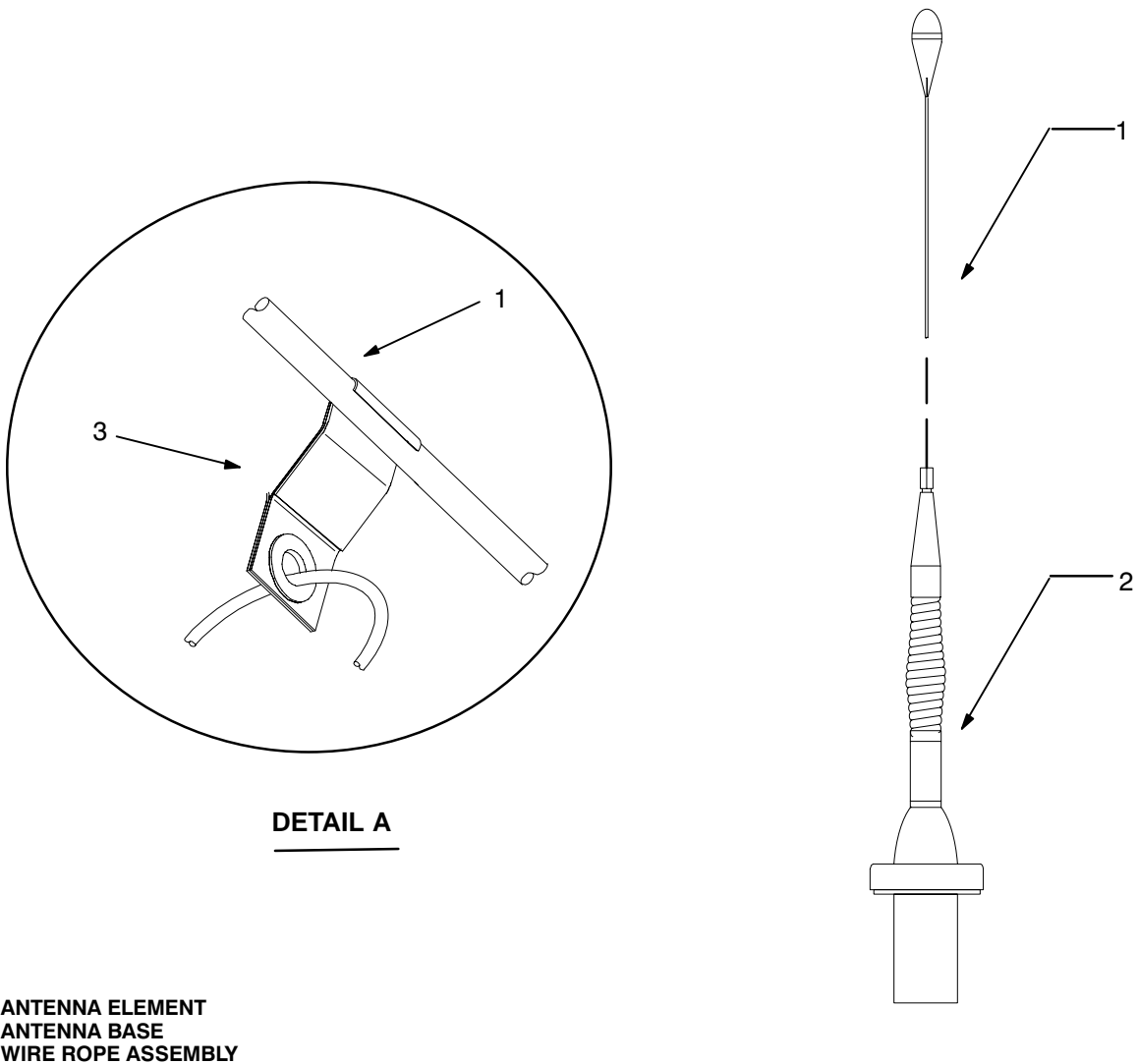


Figure 5-3. Top Antenna Assembly Installation

5.2 Installation of Mounting Base, Electrical Equipment MT-6352/VRC (mounting base). Remove and retain attaching bag of 5/16 in mounting hardware. To insure good electrical grounding, any rust, corrosion or paint around mounting holes in mounting plate should be removed before installing the mounting base. See figure 5-1(1) for location; then see Figure 5-4 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. Existing roadside radio shelf. | Using dimensions shown, drill four 11/32 in diameter holes. See figure 5-4 (1). | Tools: Electric drill and 11/32 in drill bit. |
| b. Mounting base (1), mounting plate (7), and existing radio shelf. | Remove a 2" square area of paint around holes drilled in step a. Remove a 2" square area of paint on the underside of the mounting base (1) around four mounting holes. Remove a 2" square area of paint on both sides of mounting plate (7) around six existing mounting holes that mate with mounting holes of mounting base (1) and existing radio shelf. Clean the paint removed areas and apply a thin coat of conductive anti-seize (CASC) compound. | Tools: Electric grinder or equivalent. |

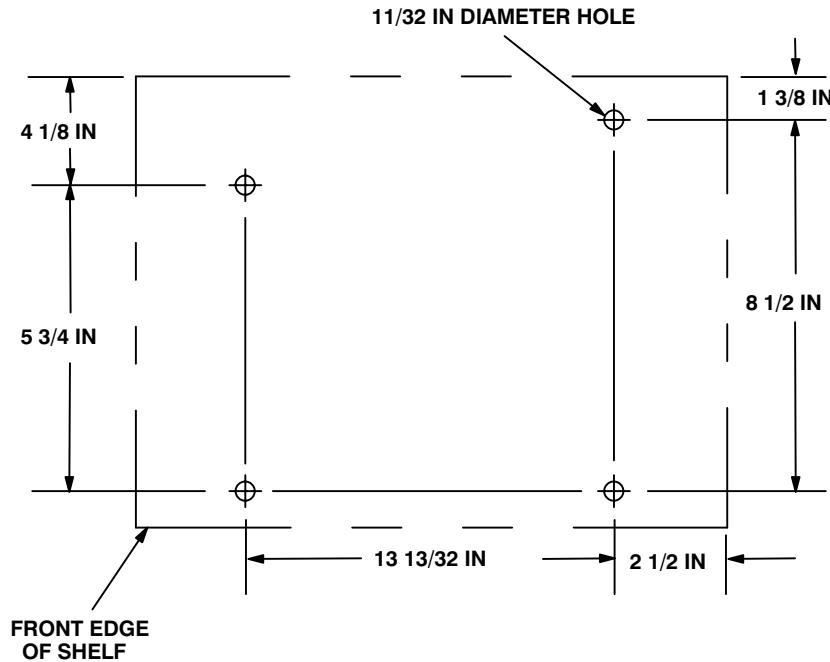


Figure 5-4 (1). Mounting Base Installation: Drilling Dimensions

5.2 Installation of Mounting Base, Electrical Equipment MT–6352/VRC (mounting base). Continued.

ITEM	ACTION	REMARKS
c. Mounting plate (7).	Place on radio shelf and align with holes drilled in step a. See Figure 5–4(2).	
d. Two flat head machine screws (6), two internal/external–toothed (IET) washers (2), and two nuts (8).	Install and secure to mounting plate (7) and shelf.	Tools: 1/2 in open/box wrench and Phillips screwdriver.
e. Two outer thumbscrews (5).	Turn ccw until both sets of threads have cleared center of holes.	
f. Mounting base (3).	Place on mounting plate (7) over mounting holes.	
g. Mounting base (3).	Align four holes with matching hole pattern in mounting plate (7) shelf.	
h. Four machine bolts (1), eight internal/external–toothed (IET) washers (2) and four nuts (8).	Install and secure to mounting base (3), mounting plate (7), and radio shelf. See Figure 5–4(2).	Tools: 1/2 in socket and 1/2 in open/box wrench.
i. Two outer thumbscrews (5).	Tighten and secure to rim clenching clamps (4) and mounting base.	

5.2 Installation of Mounting Base, Electrical Equipment MT-6352/VRC (mounting base). Continued.

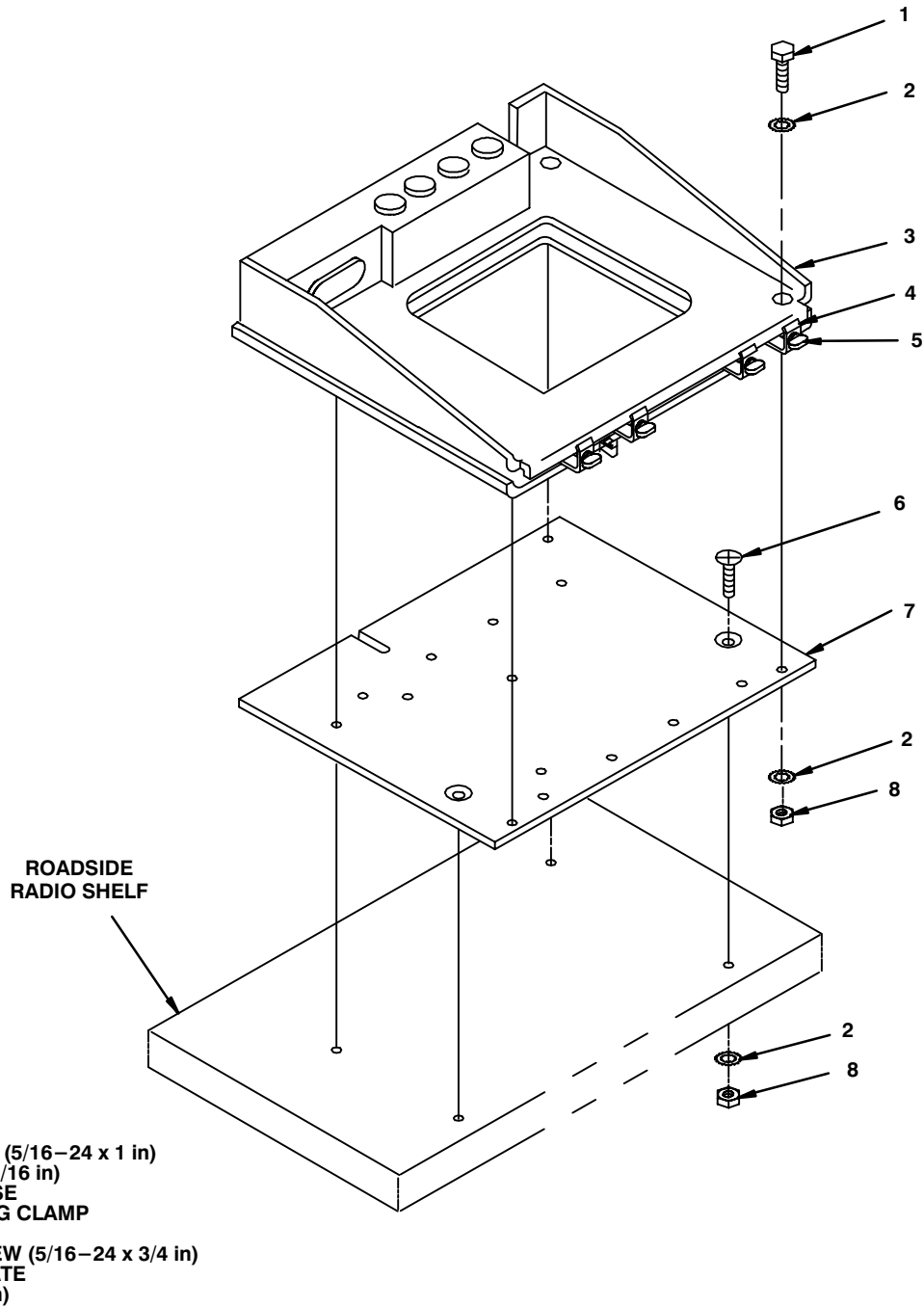


Figure 5-4 (2). Mounting Base Installation: Installing Mounting Base

5.3 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.

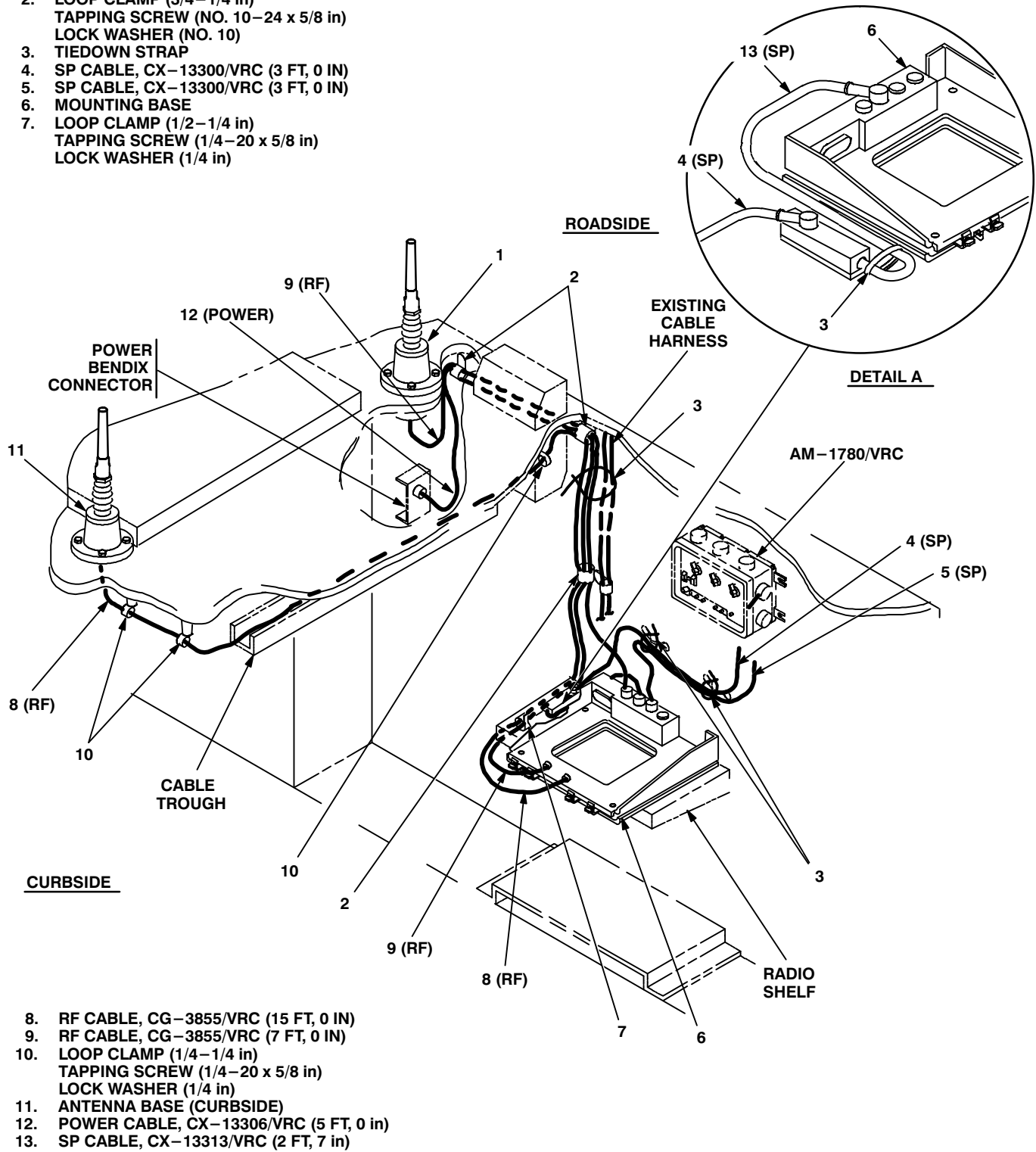
WARNING

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

ITEM	ACTION	REMARKS
a. RF cable (8) connector P1.	Connect and secure to curbside antenna base (11) connector J1. See figure 5–5.	
b. Two loop clamps (10), two hex-head tapping screws (1/4–20 x 5/8 in) and two lock washers (1/4 in).	Wrap clamps around RF cable (8) and install to existing bosses. See figure 5–5 for location(s).	Tools: 3/8 in socket.
c. RF cable (8).	Route across ceiling through cable trough.	
d. Loop clamp (10), hex–head tapping screw (1/4–20 x 5/8 in) and lock washer (1/4 in).	Wrap clamp around RF cable (8); then install to existing boss.	Tools: 3/8 in socket.
e. RF cable (9) connector P1.	Connect and secure to roadside antenna base (1) connector J1. See figure 5–5.	
f. Power cable (12) connector P1.	Connect and secure to power Bendix connector.	
g. RF cables (8, 9) and power cable (12).	Route cables along roadside wall to existing cable harness and down to radio shelf.	
h. Tiedown strap (3).	Install loosely around RF cables (8, 9), power cable (12) and existing cable harness. See figure 5–5 for location(s).	
i. Loop clamp (2), hex-head tapping screw (no. 10–24 x 5/8 in) and lock washer (no. 10).	Wrap clamp around RF cable (9) and power cable (12); then install to existing boss.	Tools: 5/16 in socket.
j. Loop clamp (2), hex-head tapping screw (no. 10–24 x 5/8 in) and lock washer (no. 10).	Wrap clamp around RF cables (8, 9) and power cable (12); then install to existing boss.	Tools: 5/16 in socket.
k. Existing loop clamp securing cable harness.	Remove existing mounting hardware. See figure 5–5 for location(s)	

5.3 Installation of Cables. Continued.

1. ANTENNA BASE (ROADSIDE)
2. LOOP CLAMP (3/4-1/4 in)
TAPPING SCREW (NO. 10-24 x 5/8 in)
LOCK WASHER (NO. 10)
3. TIEDOWN STRAP
4. SP CABLE, CX-13300/VRC (3 FT, 0 IN)
5. SP CABLE, CX-13300/VRC (3 FT, 0 IN)
6. MOUNTING BASE
7. LOOP CLAMP (1/2-1/4 in)
TAPPING SCREW (1/4-20 x 5/8 in)
LOCK WASHER (1/4 in)



8. RF CABLE, CG-3855/VRC (15 FT, 0 IN)
9. RF CABLE, CG-3855/VRC (7 FT, 0 IN)
10. LOOP CLAMP (1/4-1/4 in)
TAPPING SCREW (1/4-20 x 5/8 in)
LOCK WASHER (1/4 in)
11. ANTENNA BASE (CURBSIDE)
12. POWER CABLE, CX-13306/VRC (5 FT, 0 in)
13. SP CABLE, CX-13313/VRC (2 FT, 7 in)

Figure 5-5. Cable Installation: Rear Roadside Interior

5.3 Installation of Cables. Continued

ITEM	ACTION	REMARKS
l. Loop clamp (2), hex-head tapping screw (no. 10–24 x 5/8 in) and lock washer (no. 10).	Wrap clamp around RF cables (8, 9) and power cable (12); then install on top of existing clamp. See figure 5–5 for location(s).	Tools: 5/16 in socket.
m. Power cable (12) connector P2.	Position on top of mounting base (6). See figure 5–5.	
n. RF cables (8, 9).	Route under radio shelf, then position P2 connectors on top of mounting base (6). See figure 5–5.	
o. Mounting hole for loop clamps (7).	Drill a 15/64 in diameter hole through left side of radio shelf. See figure 5–5 for location.	Tools: Electric drill and 15/64 in drill bit.
p. Loop clamp (7), hex-head tapping screw (1/4–20 x 5/8 in) and lock washer (1/4 in).	Wrap clamp around RF cables (8, 9); then install to hole drilled in step o.	Tools: 3/8 in socket.
q. SP cable (4) connector P1.	Connect and secure to AM–1780/VRC connector J501.	
r. SP cable (5) connector P1.	Connect and secure to AM–1780/VRC connector J503.	
s. SP cable (13) connector P2.	Connect and secure to mounting base (6) connector J3. See figure 5–5, detail A.	
t. SP cable (13).	Position on left side of mounting base (6); then secure with tiedown strap (3).	
u. SP cable (4) connector P2.	Connect and secure to SP cable (13) connector P1. See figure 5–5, detail A.	
v. SP cable (5) connector P2.	Connect and secure to mounting base (6) connector J4. See figure 5–5.	
w. Two tiedown straps (3).	Wrap around SP cables (4, 5) and footman loops on roadside wall; then secure. See figure 5–5 for location(s).	
x. Power cable (12) connector P2.	Connect and secure to mounting base (6) connector J1. See figure 5–5.	

5.4 Installation of Mounting Base, Electrical Equipment MT-6353/VRC. Use the following instructions to install MT-6353/VRC mounting base. Refer to Section 5.5 for connection of cables.

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

NOTE

Apply a thin coat of adhesiv-sealant to both sides of each internal/external-toothed (IET) washers during installation and to the area of contact where IET washer is placed. Before proceeding, connect and secure CX-13291/VRC control cable and CX-13303/VRC power cable to MT-6353/VRC mounting base. (Refer to section 5.5, step b.)

- | | | |
|---|--|---|
| a. Existing lower roadside shelf. | Drill four 11/32 in holes in locations shown in figure 5-6(1). | Tools: Electric drill and 11/32 in drill bit. |
| b. MT-6353/VRC mounting base (1) and lower shelf. | Remove a 2" square area of paint on the underside of the mounting base (1) around the front two mounting holes. Remove a 2" square area of paint on the lower shelf around the two front mounting holes. Clean the paint removed areas and apply a thin coat of conductive anti-seize compound (CASC). | Tools: Electric grinder or equivalent. |

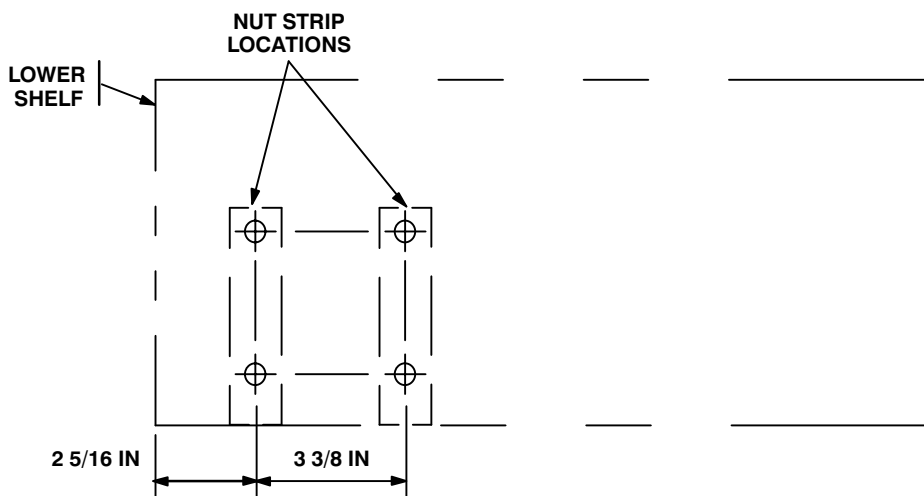
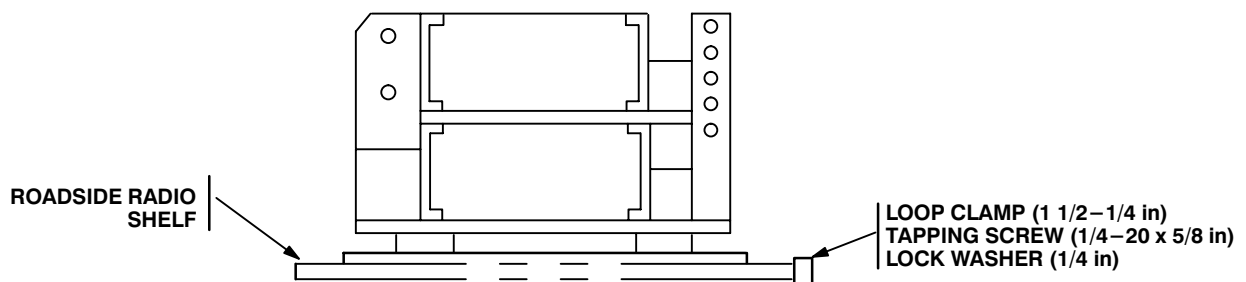


Figure 5-6(1). Drilling Dimensions for MT-6353/VRC Mounting Base

5.4 Installation of Mounting Base, Electrical Equipment MT-6353/VRC. Continued

ITEM	ACTION	REMARKS
c. MT-6353/VRC mounting base (1).	Align front and middle holes with matching hole pattern in shelf. See Figure 5-6(2).	
d. Two machine bolts (2) and two internal-toothed IET washers (3).	Install and secure to middle holes of MT-6353/VRC mounting base (1), and rear holes of two nut strips (4) and shelf.	Tools: 1/2 in socket.
e. Two machine bolts (2) and two internal-toothed IET washers (3).	Install and secure to front holes of MT-6353/VRC mounting base (1), two nut strips (4) and shelf.	Tools: 1/2 in socket.

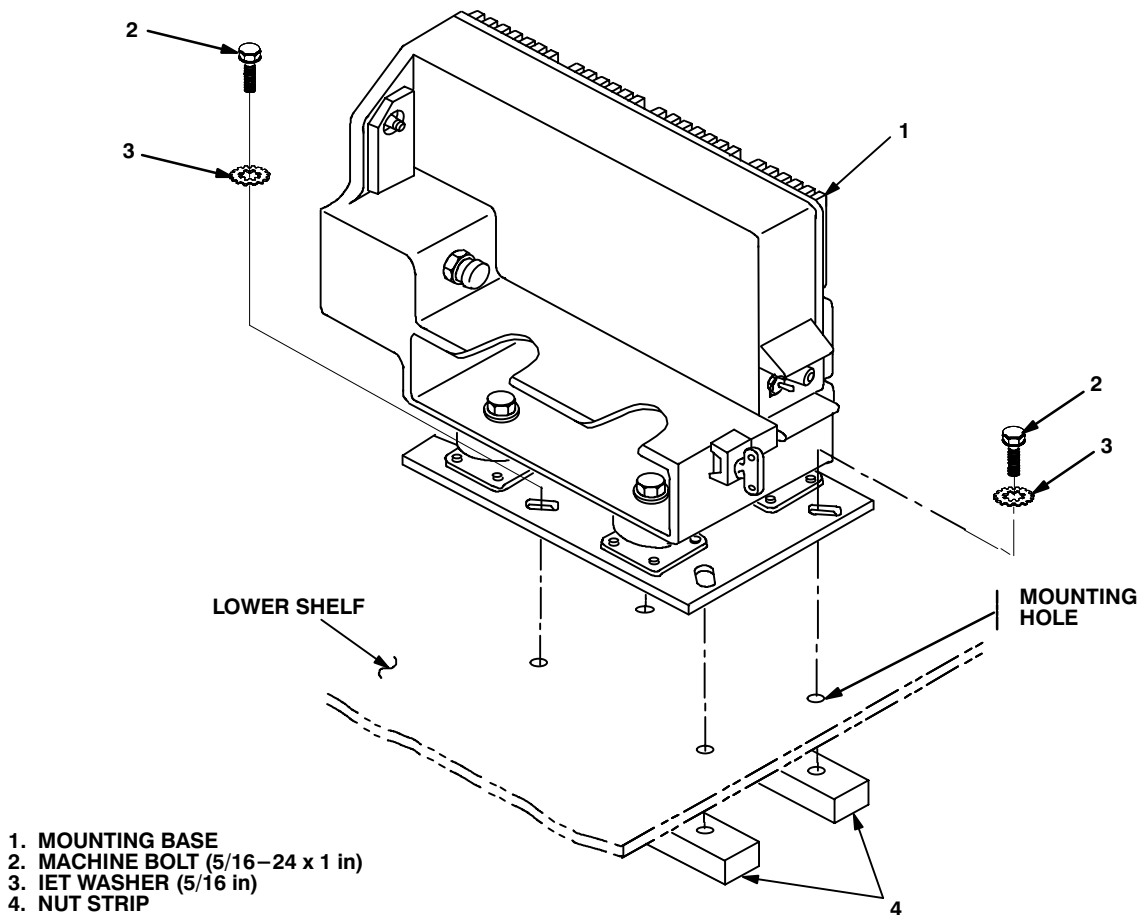
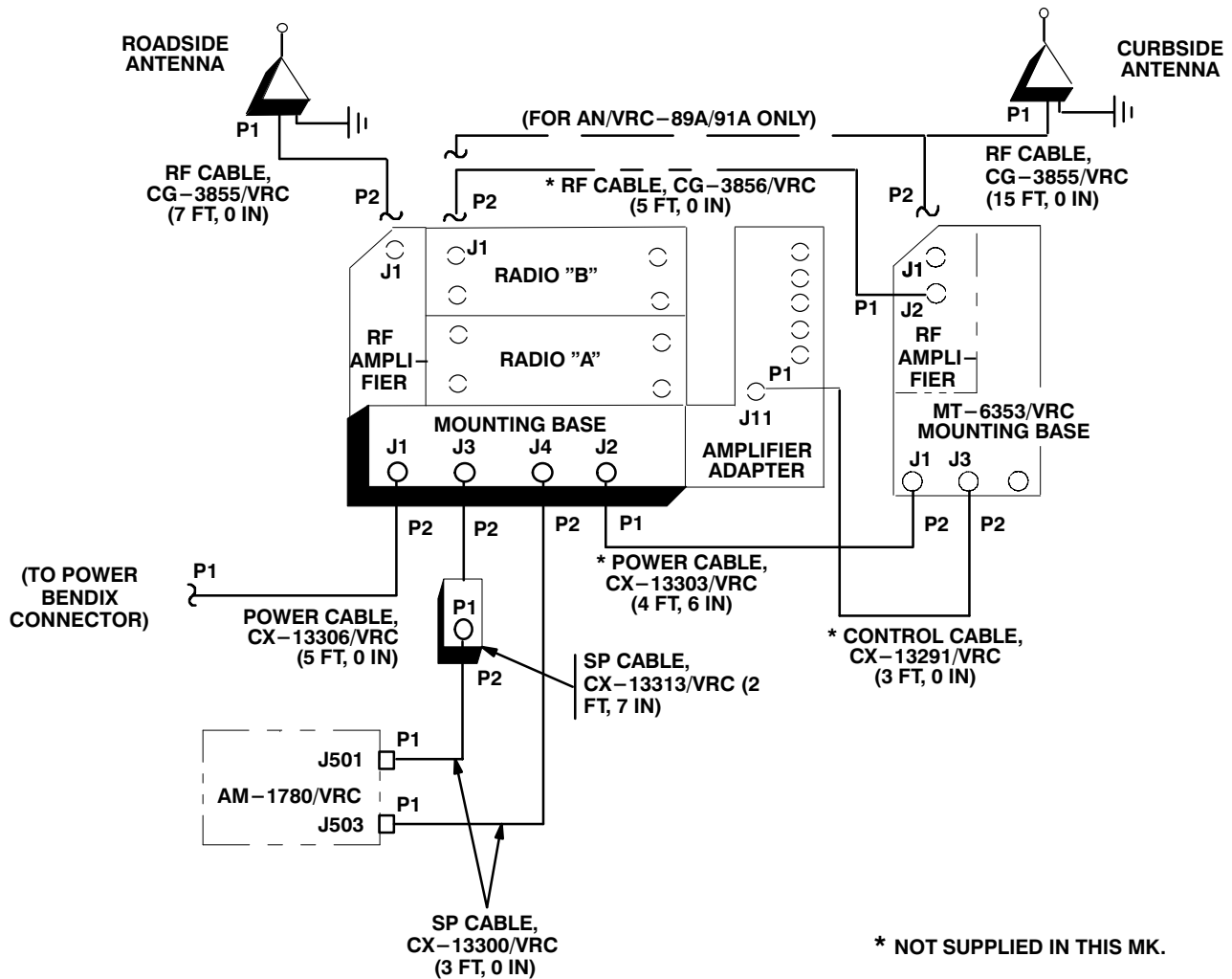


Figure 5-6(2). MT-6353/VRC Mounting Base Installation

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-13306/VRC (5 FT, 0 IN)	P2	Mounting base	J1	P1	Power Bendix connector	
CG-3855/VRC (7 FT, 0 IN)	P2	RF amplifier	J1	P1	Roadside antenna base	J1
CG-3855/VRC (15 FT, 0 IN)	P2	Radio "B" or RF amplifier (MT-6353/VRC)	J1	P1	Curbside antenna base	J1
CX-13313/VRC (2 FT, 7 IN)	P2	Mounting base	J3	P1	CX-13300/VRC (3 FT, 0 IN)	P2

Figure 5-7. Cable Diagram: For AN/VRC-89/91/92 Series

5.5 Post-Installation and Checkout. Continued

CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CX-13300/VRC (3 FT, 0 IN)	P2	CX-13313/VRC (2 FT, 7 IN)	P1	P1	AM-1780/VRC	J501
CX-13300/VRC (3 FT, 0 IN)	P2	Mounting base	J4	P1	AM-1780/VRC	J503
* CX-13291/VRC (3 FT, 0 IN)	P1	Amplifier-adapter	J11	P2	MT-6353/VRC mounting base	J3
* CG-3856/VRC (5 FT, 0 IN)	P2	Radio "B"	J1	P1	RF amplifier (MT-6353/VRC)	J2
* CX-13303/VRC (4 FT, 6 IN)	P1	Mounting base	J2	P2	MT-6353/VRC mounting base	J1

* Not supplied in this MK.

Figure 5-7. Cable Diagram: For AN/VRC-89/91/92 Series. Continued

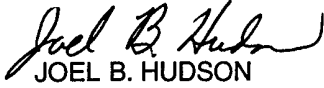
APPENDIX A

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

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2-25	2-28		
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.

SAMPLE

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