

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

**INSTALLATION OF RADIO SETS AN/VRC-46, AN/VRC-53, OR
AN/GRC-125 IN TRUCK, CARGO, 3/4-TON, 4 X 4, M37**

Headquarters, Department of the Army, Washington, D. C.

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CHAPTER I

INTRODUCTION

I-1. Scope

This manual provides instruction for installing installation unit (Federal stock No. 5820-892-0765) that permits basic units, Federal stock No. 5820-892-0871 (Radio Set AN/VRC-46), and Federal stock No. 5820-086-7586 (Radio Set AN/VRC-53); or basic unit, Federal stock No. 5820-086-7536 (Radio Set AN/-GRC-125) to be mounted in Truck, Cargo, $\frac{3}{4}$ -Ton, 4 X 4, M37.

I-2. Index of Publications

Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to this equipment. Department of the Army Pamphlet 310-4 is an index of current technical manuals, technical bulletins, supply manuals (types 7, 8, and 9), supply bulletins, lubrication orders, and modification work orders available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc.) and the latest changes to and revisions of each equipment publication.

I-3. Forms and Records

a. *Report of Maintenance and Unsatisfactory Equipment.* Use equipment forms and records in accordance with instructions given in TM 38-750.

b. *Report of Damaged or Improper Shipment.* Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSAND A Publication 378 (Navy), and AFR 71-4 (Air Force).

c. *Reporting of Equipment Manual Improvements.* DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting discrepancies and recommendations for improving this equipment publication. The form will be completed by the individual using the manual and forwarded direct to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL MR NMP AD, Fort Monmouth, N.J., 07703.

CHAPTER 2

INSTALLATION

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2-1. Unpacking

Move the packing boxes close to the location where the installation is to be made, and unpack the parts of the installation unit. Be careful not to lose any of the parts.

2-2. Checking Unpacked Equipment

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6 (para 1-3).

b. Check to see that the equipment is complete as listed on the packing slip. If a packing slip is not available, the completeness of the installation unit can be determined by a com-

parison of the parts received with the items listed on installation illustrations (fig. 2-2, 2-4, and 2-5). Report all discrepancies in accordance with TM 38-750. Shortage of a minor assembly or part that does not affect proper installation or functioning of the equipment should not prevent the installation unit from being installed.

c. When vehicles with radio sets are to be turned in or transferred, the communication equipment will be removed and reinstalled in the new replacement vehicles. Additional items which are required to complete the installation should be requisitioned as individual items. To determine the Federal stock No. of authorized items in the installation unit, refer to SB 11-131.

Section II. EQUIPMENT INSTALLATION

2-3. Tools Required for Installation

Tools required for the installation of Radio Set AN/VRC-46, AN/VRC-53, or AN/GRC-125 installation units are a part of Tool Kits, Radio and Radar Repairman TK-87/U and TK-88/U. Additional tools are required as follows:

- a. One $\frac{3}{8}$ -inch electric drill.
- b. One set of $\frac{1}{16}$ -inch to $\frac{3}{8}$ -inch drill bits.

2-4. Installation Instructions

a. To perform the installation of Radio Set AN/VRC-46, AN/VRC-53, or AN/GRC-125

installation units, follow the instructions given on figures 2-1 through 2-5.

b. Additional information is provided as follows:

- (1) To drill the correct size holes for the sheet metal screws that hold the plastic cable clamps, select a drill bit that is slightly smaller in diameter than the sheet metal screw.
- (2) When the installation is completed, check the tightness of all the bolt and screws.

APPENDIX

REFERENCES

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (Types 7, 8, and 9), Supply Bulletins, Lubrication Orders, and Modification Work Orders.
SB 11-131	Vehicular Radio Sets and Authorized Installations.
SB 38-100	Preservation, Packaging, and Packing Materials, Supplies and Equipment Used by the Army.
TB SIG 364	Field Instructions for Painting and Preserving Electronics Command Equipment.
TM 11-5820-401-10	Operator's Manual: Radio Sets AN/VRC-12 and AN/VRC-43, -44, -45, -46, -47, -48, and -49.
TM 11-5820-401-20	Organizational Maintenance Manual (Including Repair Parts and Special Tool Lists) : Radio Sets AN/VRC-12 and AN/VRC-43, -44, -45, -46, -47, -48, and -49.
TM 11-5820-401-35	DS, GS, and Depot Maintenance Manual (Including Repair Parts and Special Tool Lists) : Radio Sets AN/VRC-12 and AN/VRC-43, -44, -45, -46, -47, -48, and -49.
TM 11-5820-498-10	Operator's Manual: Radio Sets AN/VRC-53 and AN/GRC-125 and Amplifier-Power Supply Group OA-3633/GRC.
TM 11-5820-498-20	Organizational Maintenance Manual: Radio Sets AN/VRC-53 and AN/GRC-125 and Amplifier-Power Supply Group OA-3633/GRC.
TM 11-5820-498-35	DS, GS, and Depot Maintenance Manual: Radio Sets AN/VRC-53 and AN/GRC-125 and Amplifier-Power Supply Group OA-3633/GRC.
TM 38-750	Army Equipment Record Procedures.

By Order of the Secretary of the Army:

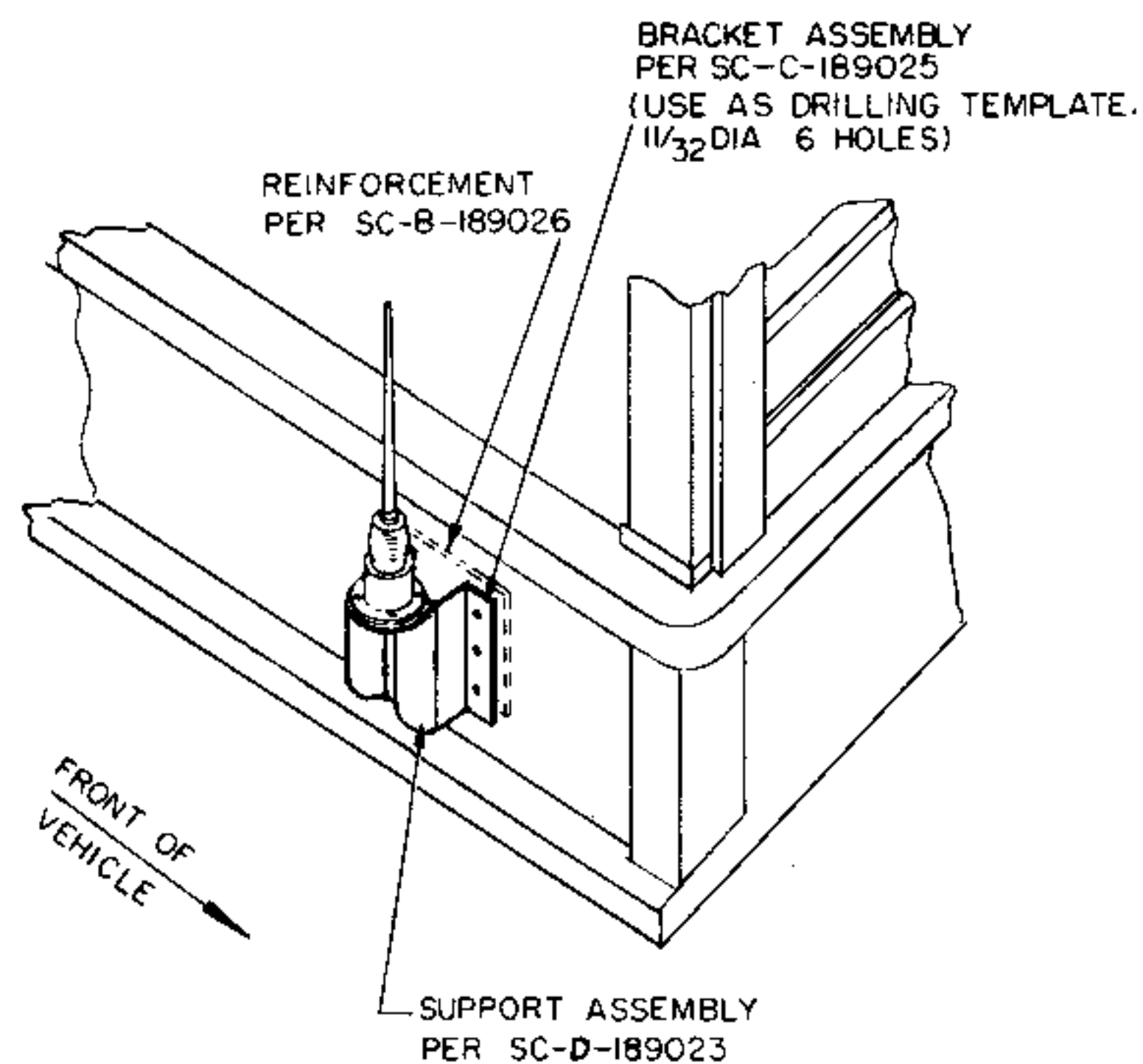
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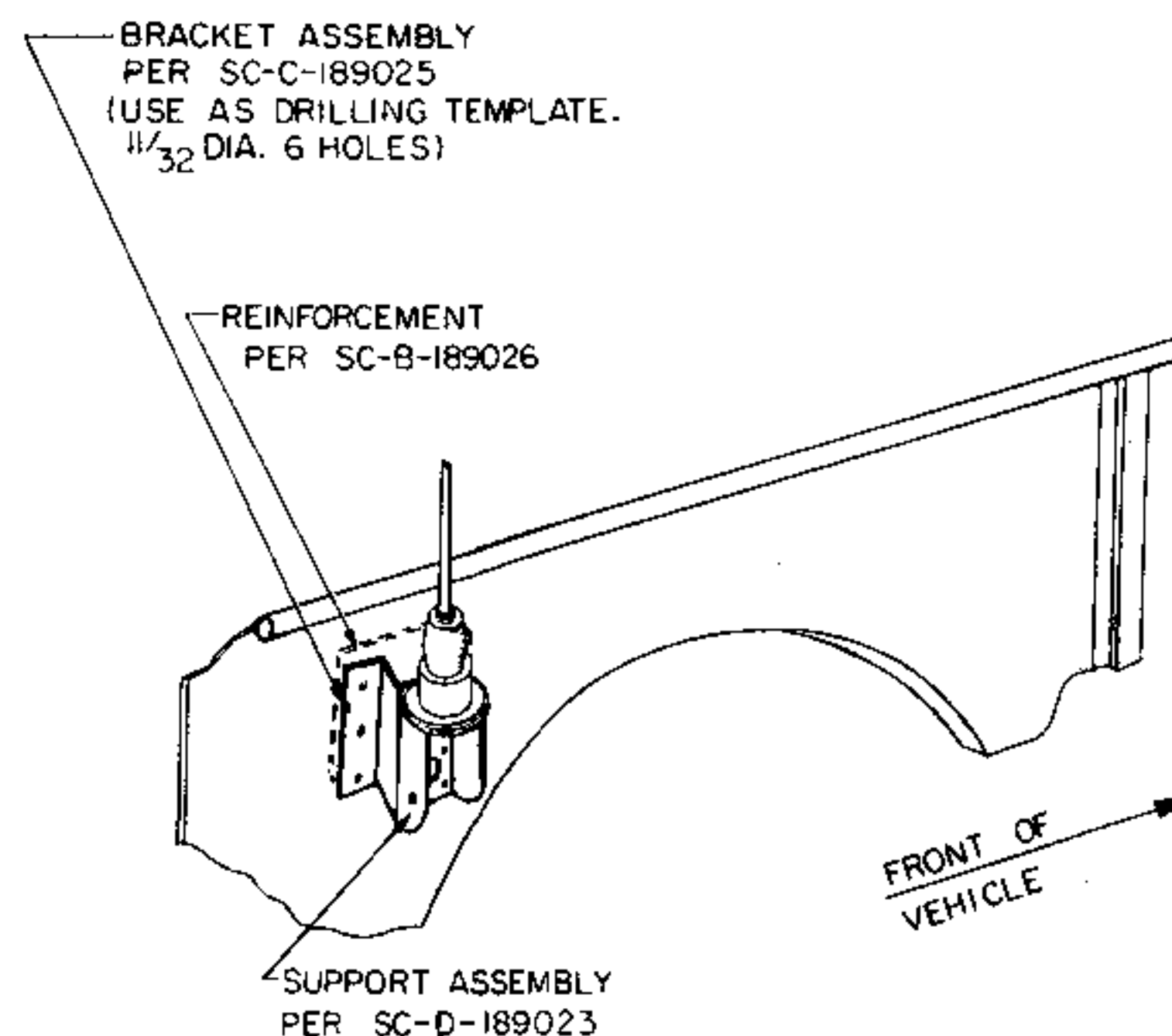
Distribution:

To be distributed in accordance with DA Form 12-38 (Unclass) requirements for Direct and General Support Maintenance Literature applicable to the Truck, Cargo, 34 Ton, M37 and M37B1.



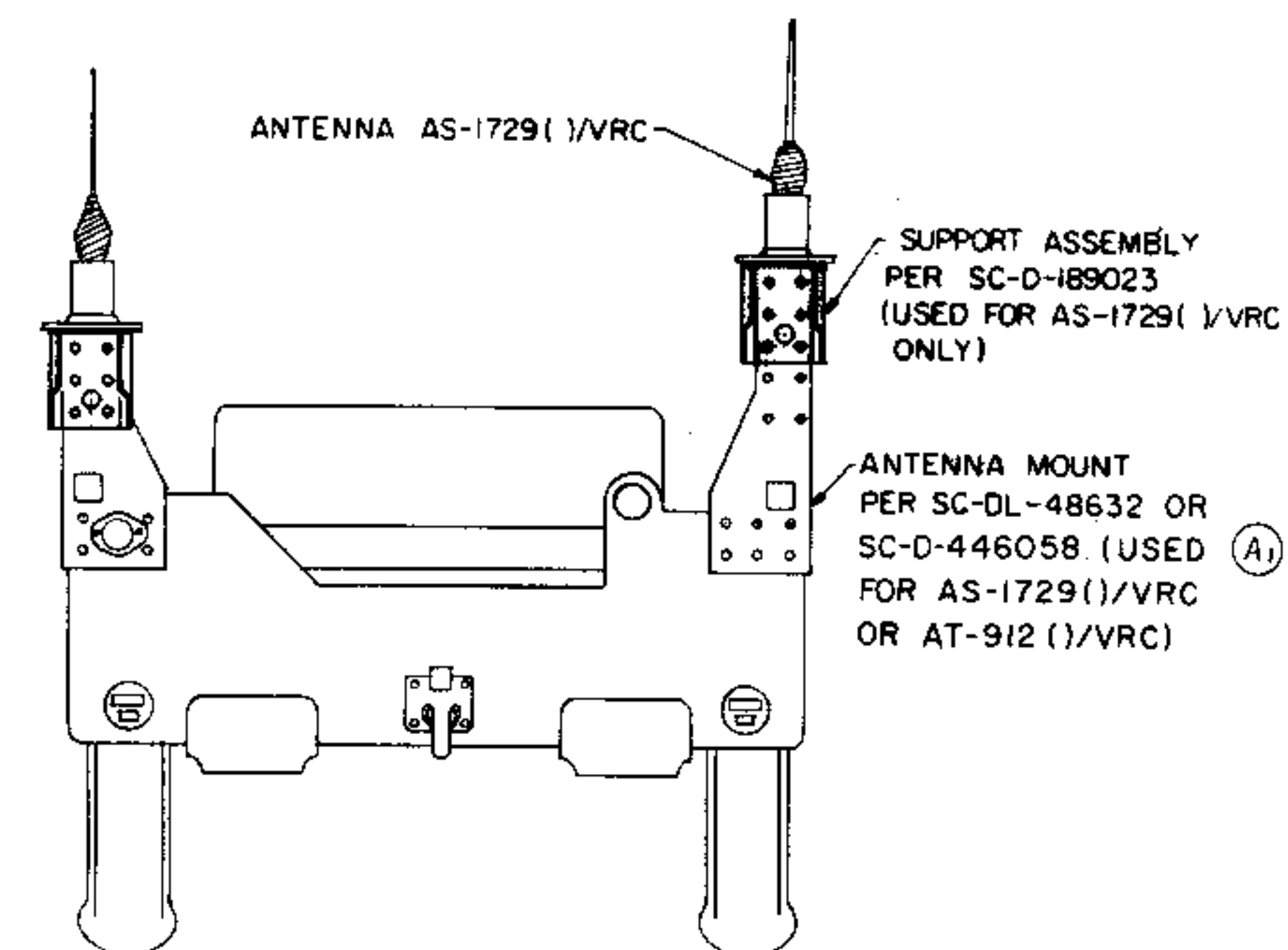
DISCARD BRACKET SC-D-425908

2 1/2 TON TRUCK M211 & M135



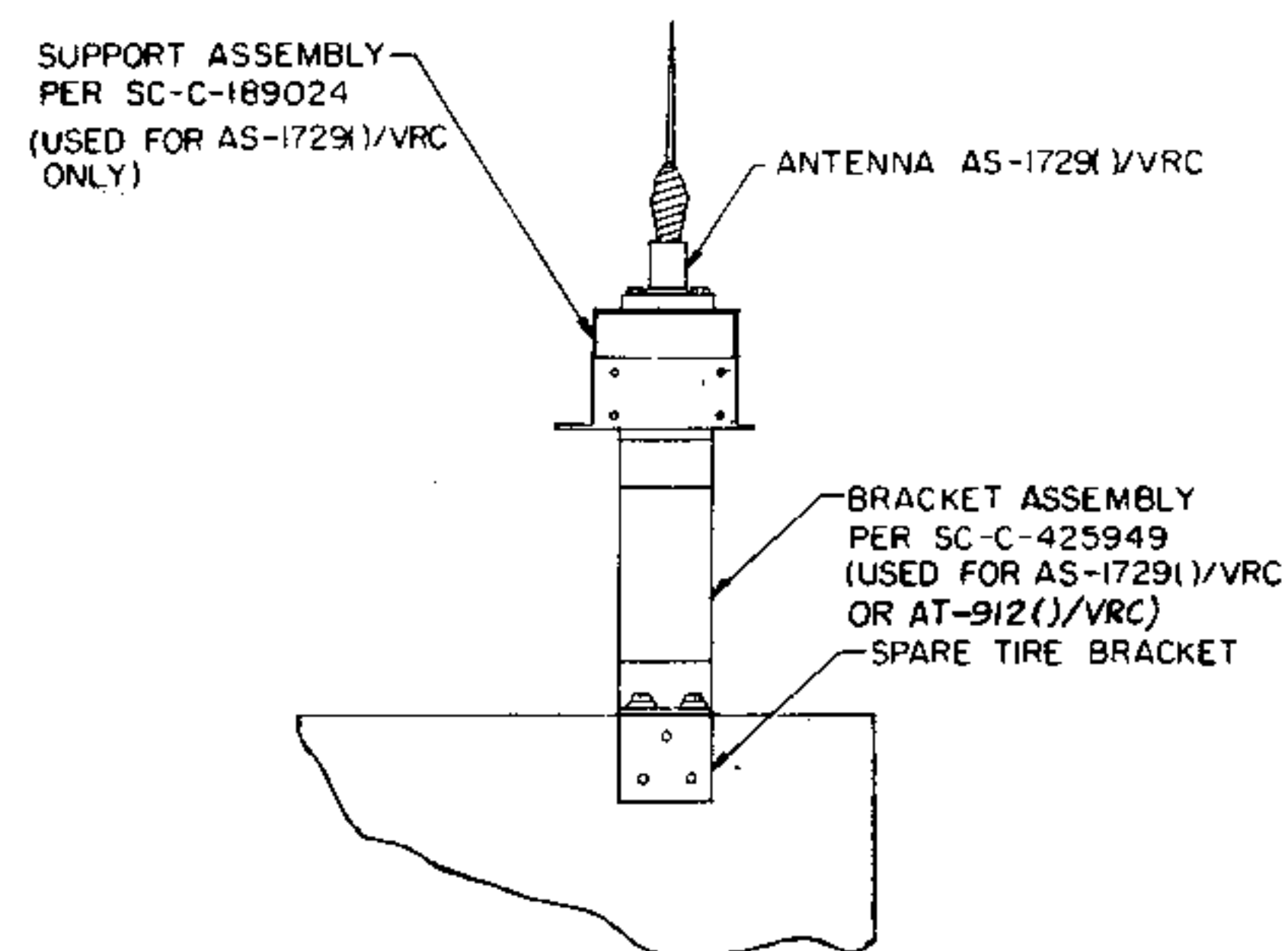
DISCARD BRACKET SC-D-425908

3/4 TON TRUCK M37



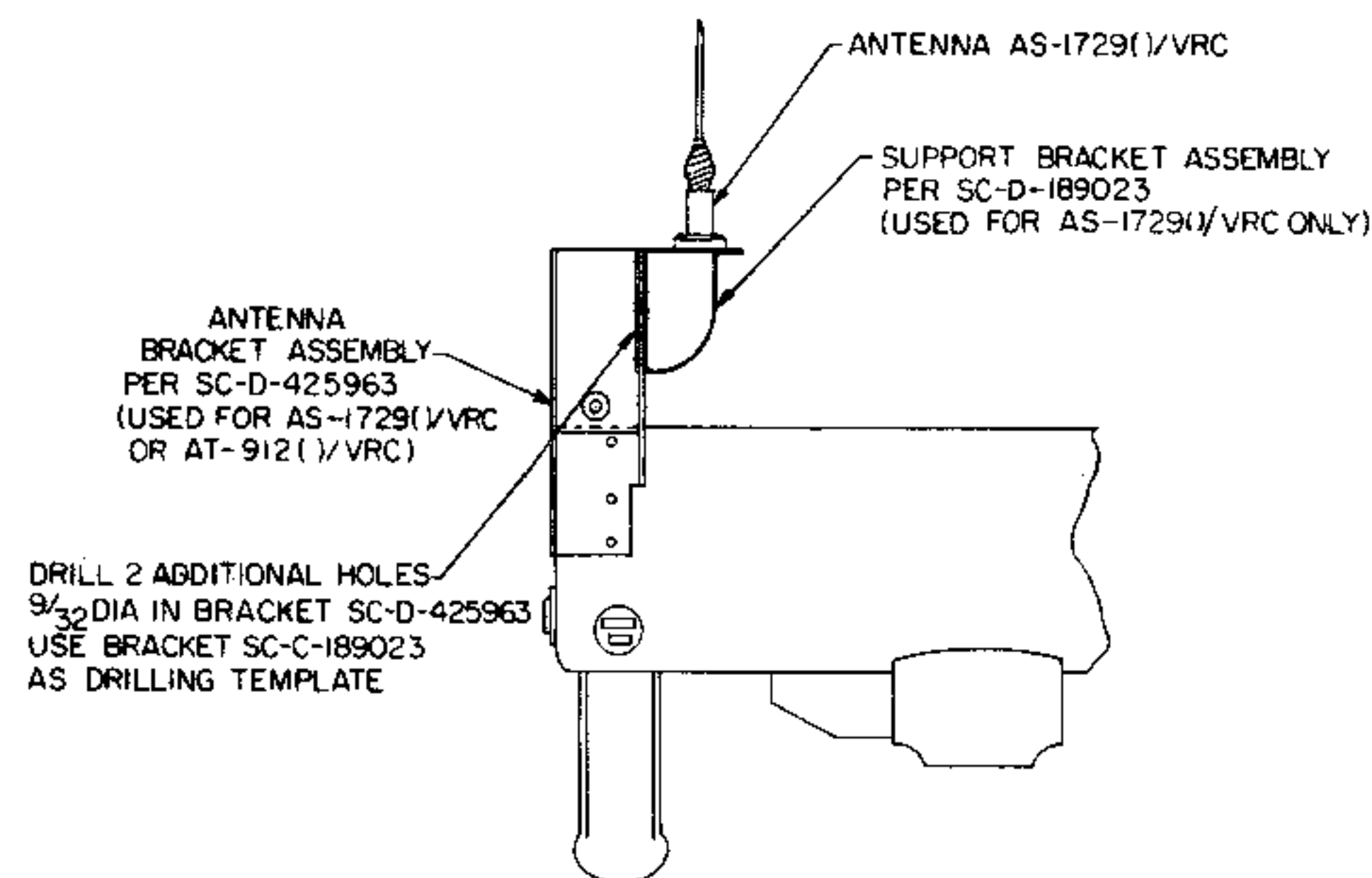
ANTENNA ON ROAD SIDE REAR CORNER MAY BE LOCATED
IN THE HIGH OR LOW POSITION.

1/4 TON TRUCK M151



CURBSIDE REAR

1/4 TON TRUCK M38A1



ROADSIDE REAR CORNER

1/4 TON TRUCK M38A1

Figure 2-1. Installation methods for Antenna AS-1729/VRC.

Item	Name of items	Qty each	Remarks
1	Gasket, rubber	1	SC-B-160382
2	Ground strap (6 in. lg)	1	SC-C-27813GP9
3	Capscrew, hexagonal head 5/16-16 by 1 3/4 lg	4	MS35291-65
4	Capscrew, hexagonal head 5/16-24 by 1 1/2 lg	1	MS35292-38
5	Capscrew, hexagonal head #10-32 by 1/2 lg	1	MS9122-03
6	Hexagonal nut, plain 5/16-16	4	MS35690-602
7	Hexagonal nut, plain 5/16-24	1	MS35690-522
8	Washer, split 5/16 1 3/32 id	4	MS35338-27
9	Washer, flat 1 3/32 id 1 1/8 od	4	MS15795-214
10	Lockwasher, 5/16 iet	3	MS45904-72
11	Lockwasher, No. 10 iet	2	MS45904-60

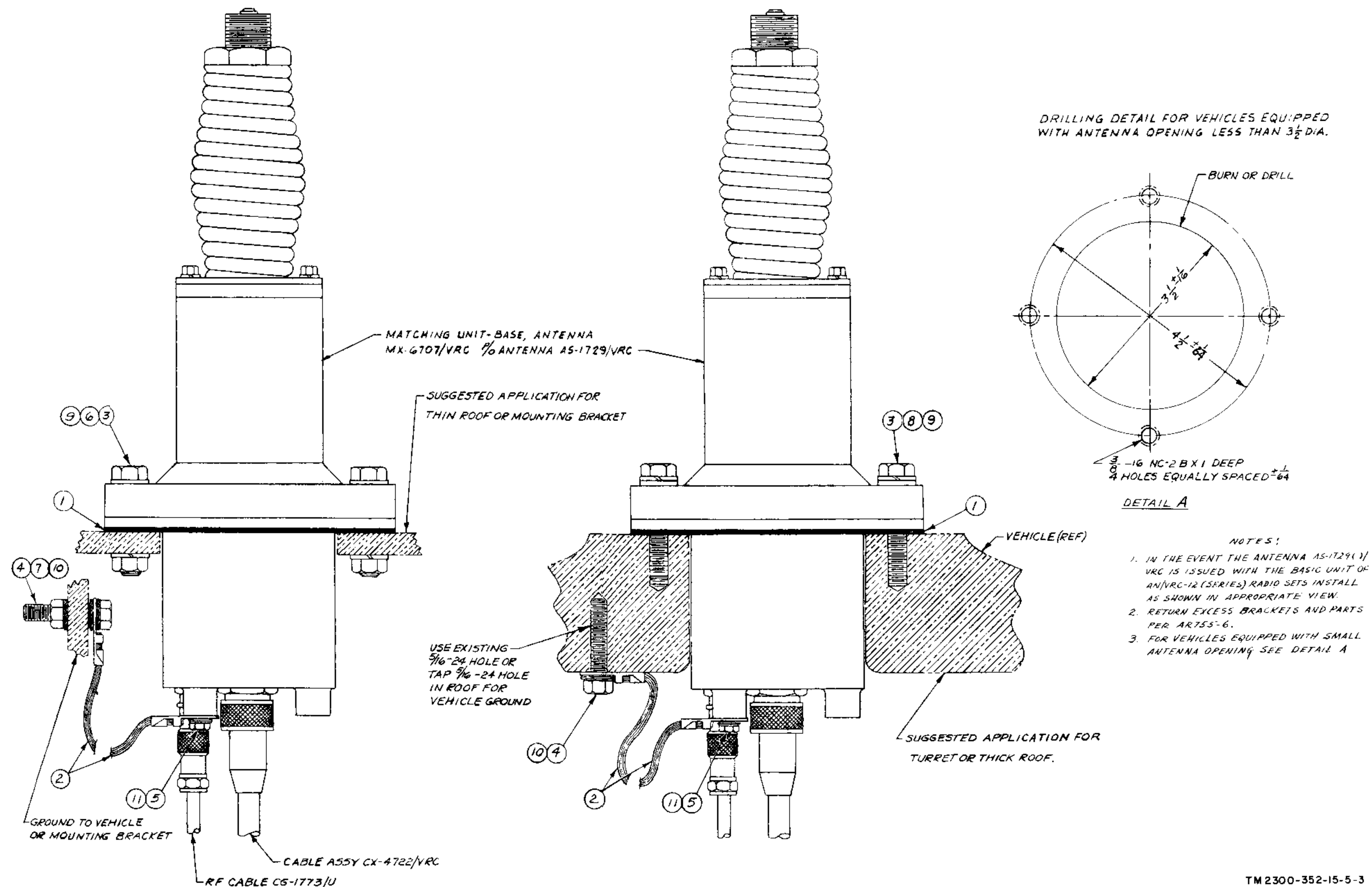


Figure 2-2. Drilling details for Antenna AS-1729/VRC.

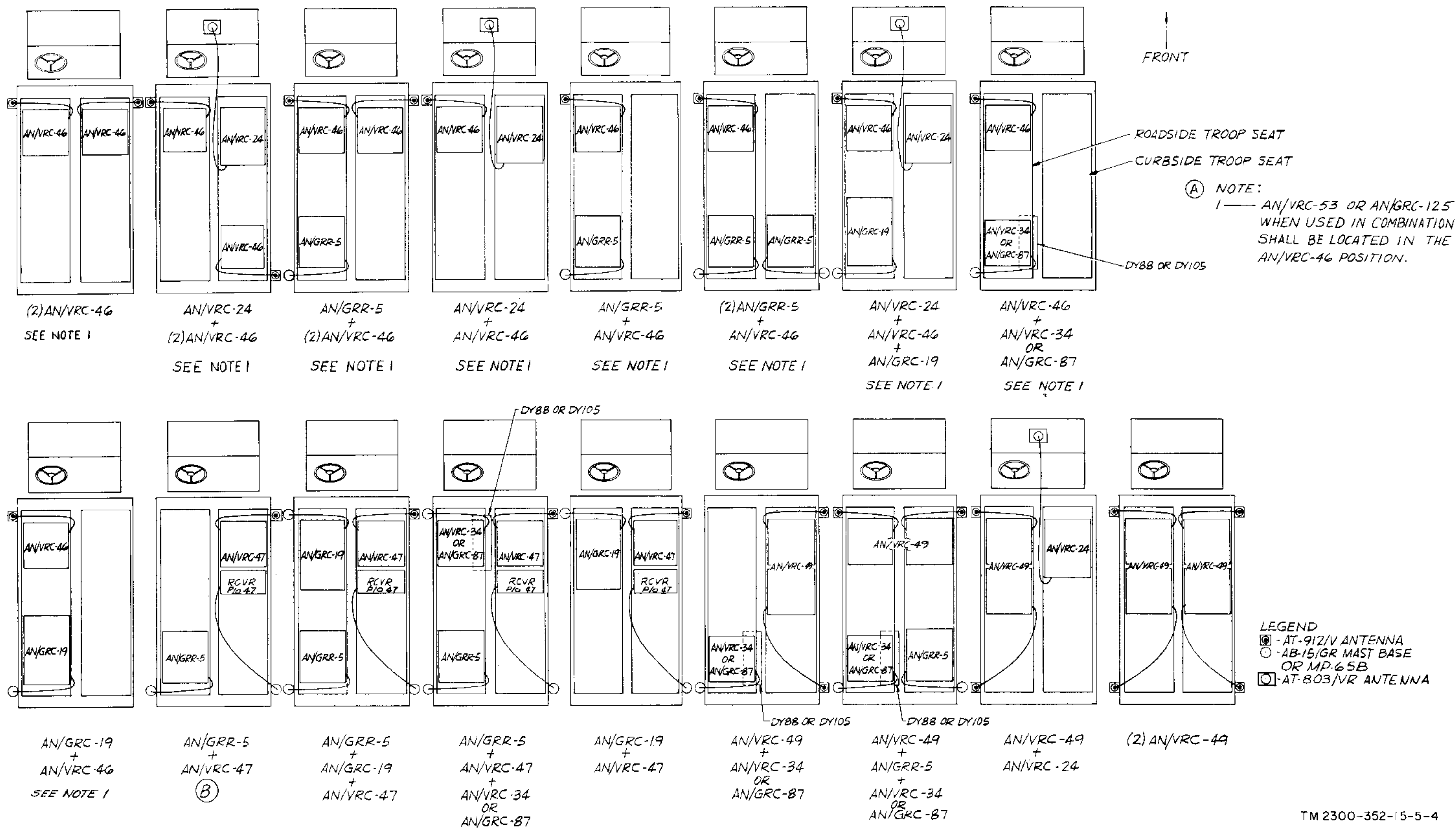


Figure 2-3. Combination positions of radio communication equipment installed in Truck, Cargo, ¾-Ton, 4 X 4, M37.

⑧ USE ITEM ⑧ AS TEMPLATE. LOCATE MTG HOLES & DRILL TROOP SEAT TO MATCH (STANDARD LOCATION)

NOTE:
ALL HOLES FOR ⑧ TO BE $\frac{1}{32}$ " DIA UNLESS OTHERWISE SPECIFIED

⑦ FORWARD

⑨ USE AS TEMPLATE

CARGO SECTION

ALTERNATE POSITION NO. 1 } SEE NOTE 1

USE MOUNTING SCC-425882 (REF) AS TEMPLATE WHEN REQD (PART OF COMB. KITS)

ALTERNATE POSITION FOR SEAT BRACKET

ALTERNATE POSITION NO. 2 (SEE NOTE 1)

DETAIL B

VEHICLE BTRY SEE DETAIL E

⑪ SEE DETAIL G

RADIO SET CONTROL C 2299/V & BRACKET (REF) FURNISHED AS PART OF COMBINATION KITS FOR RE-TRANSMISSION

ALTERNATE POWER CABLE ROUTING (SEE DETAIL "F")

REAR VIEW OF CARGO SECTION, LOOKING FORWARD

④ SEE DETAIL G FOR CABLE ROUTING TO BATTERY

⑤ SEE DETAIL D

①

②

③

⑥

⑦

⑧

⑫

⑬

⑭

⑮

⑯

⑰

SEE DETAIL C

FORWARD

DETAIL A

Spare Tire (REF)

FLOOR (REF)

POWER CABLE ASSY CX4720/U

RED WHITE BLACK GREEN

SOLDER NO. 316 SHERMAN LUG TO POWER CABLE BEFORE MAKING CONNECTIONS TO BATTERY TERMINALS. SUPPLIED IN HWDR BAG ATTACHED TO MT-1029/VR

DETAIL E

TROOP SEAT

VEHICLE

5/16-24 HDWR (P/O 7)

5/16-18 HDWR (P/O 9)

REINFORCEMENT (P/O 7)

DETAIL C

VEHICLE

⑩

⑤

⑥

DETAIL D

LOCATE FROM SEAT BRACKET.

ENLARGE VEHICLE KNOCKOUT TO $\frac{1}{32}$ " DIA FOR ITEM ⑩

CURBSIDE (ALTERNATE LOCATIONS FOR ANTENNA) FORWARD

Figure 2-4. Installation of Radio Set AN/VRC-46 in Truck, Cargo,

Figure 2-4. Installation of Radio Set AN/VRC-46 in Truck, Cargo, $\frac{3}{4}$ -Ton, 4 X 4, M37.

CARGO SECTION

- (11) USE (11) AS TEMPLATE. LOCATE MTG HOLES & DRILL TROOP SEAT TO MATCH SEE NOTE 5
- (10)
- (13) USE AS TEMPLATE
- ALTERNATE POSITION NO. 1 } SEE NOTE 1
- USE MOUNTING SC-C-425882(REF) AS TEMPLATE WHEN REQD PART OF COMB. KITS
- ALTERNATE POSITION FOR SEAT BRACKET
- ALTERNATE POSITION NO. 2 SEE NOTE 1

REAR VIEW OF CARGO SECTION, LOOKING FORWARD

- RADIO SET CONTROL C 22391VLC & BRACKET(REF) FURNISHED AS PART OF COMBINATION KITS FOR RE-TRANSMISSION
- (18)
- (17)
- (15) SEE DETAIL G
- SEE DETAIL A
- (5)
- (6)
- (20)
- (3)
- (1)
- (12)
- (2)
- (10)
- (11)
- (7)
- (9)
- ALTERNATE POSITION NO. 1 SEE NOTE 1
- ALTERNATE POSITION NO. 2 SEE NOTE 1
- ALTERNATE POWER CABLE ROUTING SEE DETAIL F
- SEE DETAIL B

DETAIL B

DETAIL G

- VEHICLE BATTERY SEE DETAIL E
- (15)
- (6)
- (16)

-
- DETAIL A**
- USE SEAT BRACKET AS TEMPLATE FOR DRILLING SEAT & BOTTOM HOLES IN FENDER WELL.
- 10 USE AS TEMPLATE FORWARD ROADSIDE
- 1 8 DIA IN VEHICLE FOR (M)
- 15
- 7
- 4
- SEE DETAIL C
- SEE DETAIL D
- 6 SEE DETAIL G FOR CABLE ROUTING TO BATTERY
- 9
- 17
- 2
- 4
- 11
- 5
- 12
- 8
- 9
- FORWARD
- 1 8 DIA IN CARGO SECTION E CAB
- 27
- 13
- Spare Tire Ref
- FLOOR REF
- DETAIL B**
- CURBSIDE ALTERNATE LOCATIONS FOR ANTENNA FORWARD
- 5 1/2
- 2
- 7
- 2 1/2
- 5
- 9
- LOCATE FROM SEAT BRACKET
- ENLARGE VEHICLE KNOCKOUT TO 1 8 DIA FOR (M)
- DETAIL C**
- TROOP SEAT
- VEHICLE
- 5/16-24 HDW P/O 10
- 5/16-18 HDW P/O 13
- REINFORCEMENT P/O 10
- DETAIL D**
- VEHICLE
- 14
- 9
- 8
- DETAIL E**
- POWER CABLE ASSY GX-920(1)/VRC
- RED
- WHITE
- BLACK
- GREEN
- SOLDER NO. 316 SHERMAN LUG TO POWER CABLE BEFORE MAKING CONNECTIONS TO BATTERY TERMINALS. SUPPLIED IN HDW BAG ATTACHED TO MT-1029(1)/VRC

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