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DEPARTMENT OF THE ARMY TECHNICAL MANUAL

INSTALLATION OF RADIO SET AN/GRC-106 IN TRUCK, 1/4-TON, 4 BY 4, M151

Headquarters, Department of the Army, Washington, D.C.
29 April 1966

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CHAPTER 1

INTRODUCTION

1-1. Scope

This manual provides instructions for mounting the installation unit (FSN 5820-082-3475) that permits mounting Radio Set AN/GRC-106 in Truck, 1/4-ton, 4 by 4, M151.

1-2. 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. DA Pam 310-4 is a current index of 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 publication.

1-3. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Use equipment forms and records in accordance with instructions 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), NAVSANDA Publication 378 (Navy), and AFR 71-4 (Air Force).

c. Reporting of Equipment Manual Improvements. The direct reporting by the individual user of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvement recommendations. This form will be completed by using pencil, pen, or typewriter, and forwarded direct to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-MR-(NMP)-MA, Fort Monmouth, N. J. 07703.

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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 take place 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. See that the equipment is complete as listed in the packing slip. If a packing slip is not available, the completeness of the installation unit can be determined by comparing the parts received with the items listed on the installation drawing (fig. 2-4). 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 equipment from being installed.

c. When vehicles with radio sets are to be turned in or transferred, communication equipment will be removed and reinstalled in new replacement vehicles. Additional items which are required to complete installations should be requisitioned as individual items. To determine the Federal stock number of authorized items in the installation unit, refer to SB 11-131.

Section II. EQUIPMENT INSTALLATION

2-3. Tools Required for Installation

The tools required for installation of Radio Set AN/GRC-106 are a part of Tool Kits, Radar and Radio Repairman TK-87( )/U, and Supplementary, Radar and Radio Repair, TK-88( )/U. The following additional items are needed:

a. 1 electric drill (3/8 inch).

b. 1 set of drill bits (1/16 inch to 3/8 inch).

2-4. Installation Instructions

a. To accomplish the installation, follow the instructions shown on figures 2-1 through 2-4.

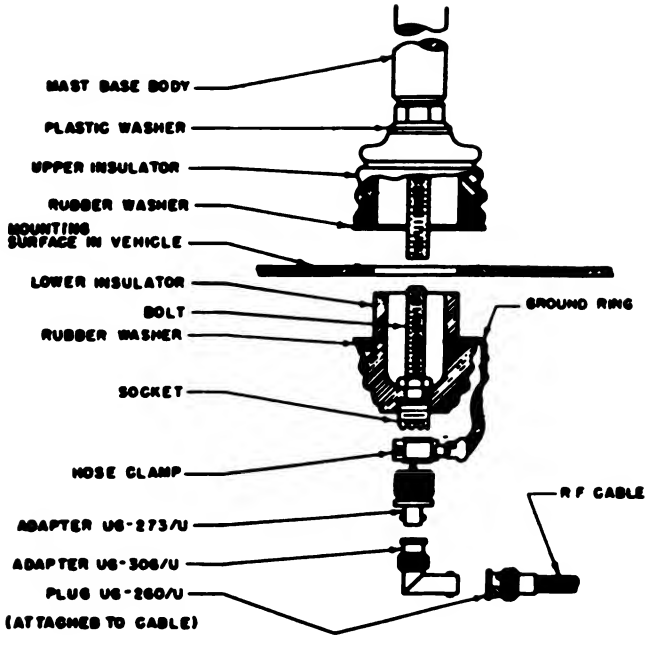
b. The following additional information is provided:

(1) The positive terminal of the 24-volt vehicle battery is marked with a plus (+) and is larger in diameter than the negative (-) terminal.

(2) To drill the correct size holes for the sheet metal screws which hold the plastic cable clamps, select a drill bit that is slightly *smaller* in diameter than the screw.

(3) When the installation is completed, check the tightness of all bolts and screws.

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ASSEMBLY INSTRUCTIONS

1. REPLACE ALL ITEMS OF MAST BASE MP-65-( ) EXCEPT THE MAST BASE BODY WITH ADAPTER KIT M-459. THIS STEP IS NOT REQUIRED FOR LATE PRODUCTION MODELS OF MP-65-D WHICH ARE ALREADY EQUIPPED WITH A COAXIAL TYPE SOCKET WITH REMOVABLE BINDING POST ASSEMBLY.
2. PLACE ONE LARGE RUBBER WASHER AND THE UPPER INSULATOR OVER THE MOUNTING HOLE.
3. PLACE THE SMALL PLASTIC WASHER ON THE STEM OF THE MAST BASE BODY.
4. INSERT THE MAST BASE BODY INTO THE HOLE IN THE UPPER INSULATOR.
5. PLACE THE OTHER LARGE RUBBER WASHER ON THE LOWER INSULATOR.
6. PLACE THE GROUND RING ON TOP OF THE WASHER. GROUND RING IS NOT REQUIRED WHEN R F CABLE CG-306/U IS EMPLOYED.
7. INSERT THE LOWER INSULATOR INTO THE MOUNTING HOLE FROM UNDERNEATH.
8. ASSEMBLE THE MAST BASE BY HOLDING THE LOWER INSULATOR AND TURNING THE MAST BASE BODY UNTIL THE MAST BASE IS SECURE.

TO ATTACH ANTENNA LEAD-IN TO MAST BASE

1. UNSCREW BINDING POST ASSEMBLY FROM LOWER INSULATOR AND DISCARD.
2. ATTACH ADAPTER UG-273/U TO THE ADAPTER SOCKET ON THE LOWER INSULATOR.
3. SLIP HOSE CLAMP OVER ADAPTER AND TIGHTEN SECURELY. HOSE CLAMP IS NOT REQUIRED WHEN R F CABLE CG-306/U IS USED.
4. ADAPTER UG-306/U MAY BE ATTACHED TO ADAPTER UG-273/U IF A RIGHT ANGLE CONNECTOR IS DESIRED.
5. ATTACH BNC CONNECTOR (PLUG UG-260/U ON THE ANTENNA LEAD-IN TO ADAPTER UG-273/U OR UG-306/U.

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Figure 2-1. Assembly instructions for Mast Base MP-65( ) (for antenna cable connectors using BNC connectors).

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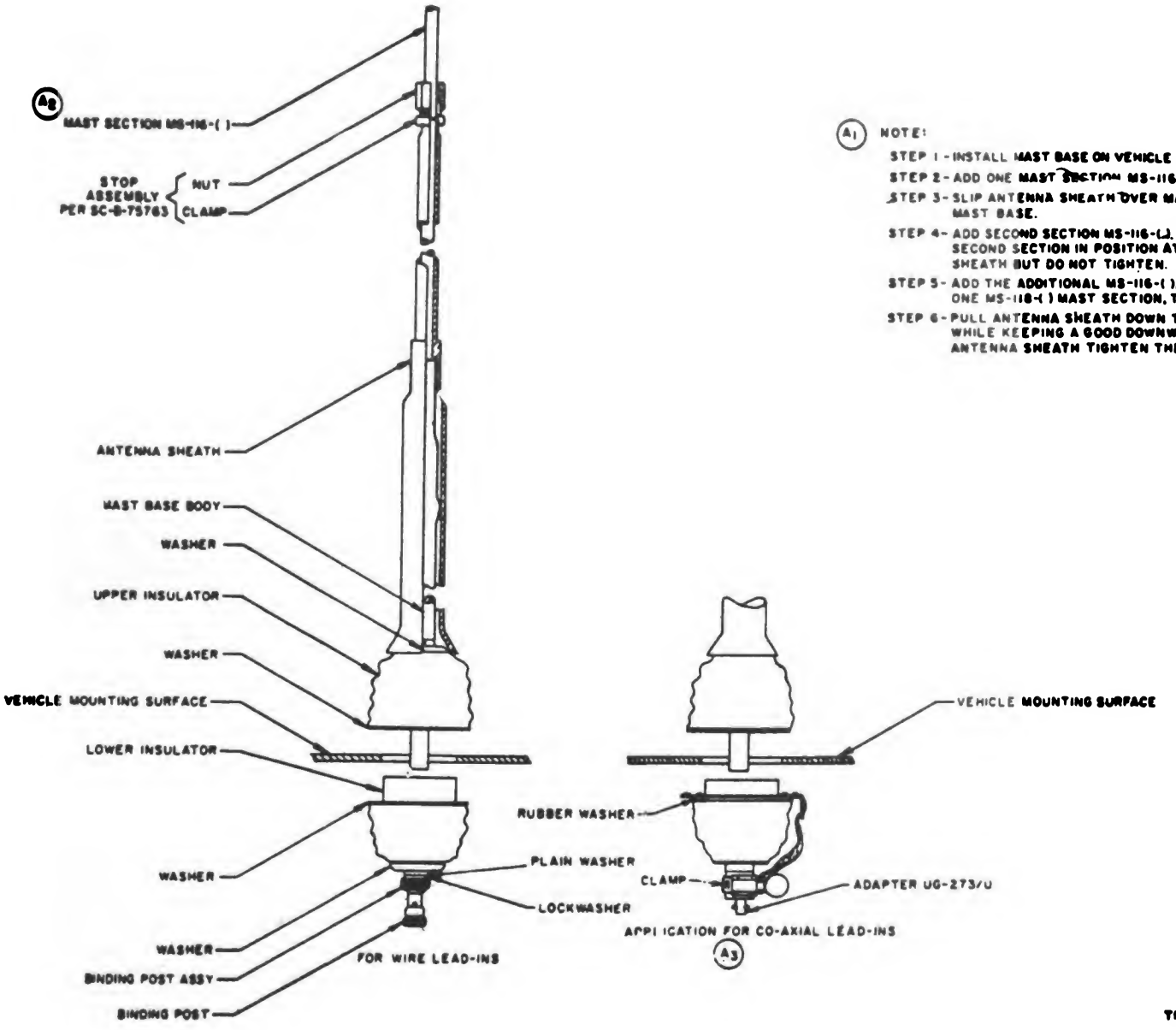
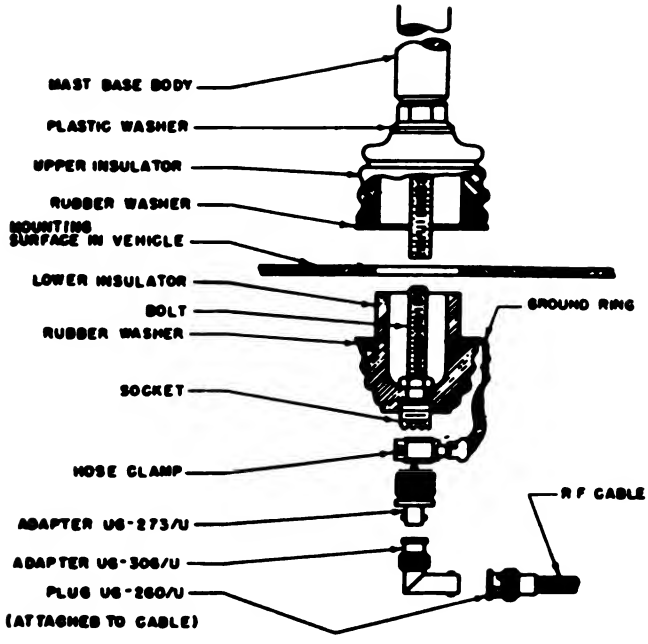


Figure 2-2. Antenna assembly procedure.

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ASSEMBLY INSTRUCTIONS

1. REPLACE ALL ITEMS OF MAST BASE MP-65-( ) EXCEPT THE MAST BASE BODY WITH ADAPTER KIT M-490 THIS STEP IS NOT REQUIRED FOR LATE PRODUCTION MODELS OF MP-65-B WHICH ARE ALREADY EQUIPPED WITH A COAXIAL TYPE SOCKET WITH REMOVABLE BINDING POST ASSEMBLY.
2. PLACE ONE LARGE RUBBER WASHER AND THE UPPER INSULATOR OVER THE MOUNTING HOLE.
3. PLACE THE SMALL PLASTIC WASHER ON THE STEM OF THE MAST BASE BODY.
4. INSERT THE MAST BASE BODY INTO THE HOLE IN THE UPPER INSULATOR.
5. PLACE THE OTHER LARGE RUBBER WASHER ON THE LOWER INSULATOR.
6. PLACE THE GROUND RING ON TOP OF THE WASHER. GROUND RING IS NOT REQUIRED WHEN R F CABLE CG-306/U IS EMPLOYED.
7. INSERT THE LOWER INSULATOR INTO THE MOUNTING HOLE FROM UNDERNEATH.
8. ASSEMBLE THE MAST BASE BY HOLDING THE LOWER INSULATOR AND TURNING THE MAST BASE BODY UNTIL THE MAST BASE IS SECURE.

TO ATTACH ANTENNA LEAD-IN TO MAST BASE

1. UNSCREW BINDING POST ASSEMBLY FROM LOWER INSULATOR AND DISCARD.
2. ATTACH ADAPTER UG-273/U TO THE ADAPTER SOCKET ON THE LOWER INSULATOR.
3. SLIP HOSE CLAMP OVER ADAPTER AND TIGHTEN SECURELY. HOSE CLAMP IS NOT REQUIRED WHEN R F CABLE CG-306/U IS USED.
4. ADAPTER UG-306/U MAY BE ATTACHED TO ADAPTER UG-273/U IF A RIGHT ANGLE CONNECTOR IS DESIRED.
5. ATTACH BNC CONNECTOR (PLUG UG-260/U ON THE ANTENNA LEAD-IN TO ADAPTER UG-273/U OR UG-306/U.

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Figure 2-1. Assembly instructions for Mast Base MP-65( ) (for antenna cable connectors using BNC connectors).

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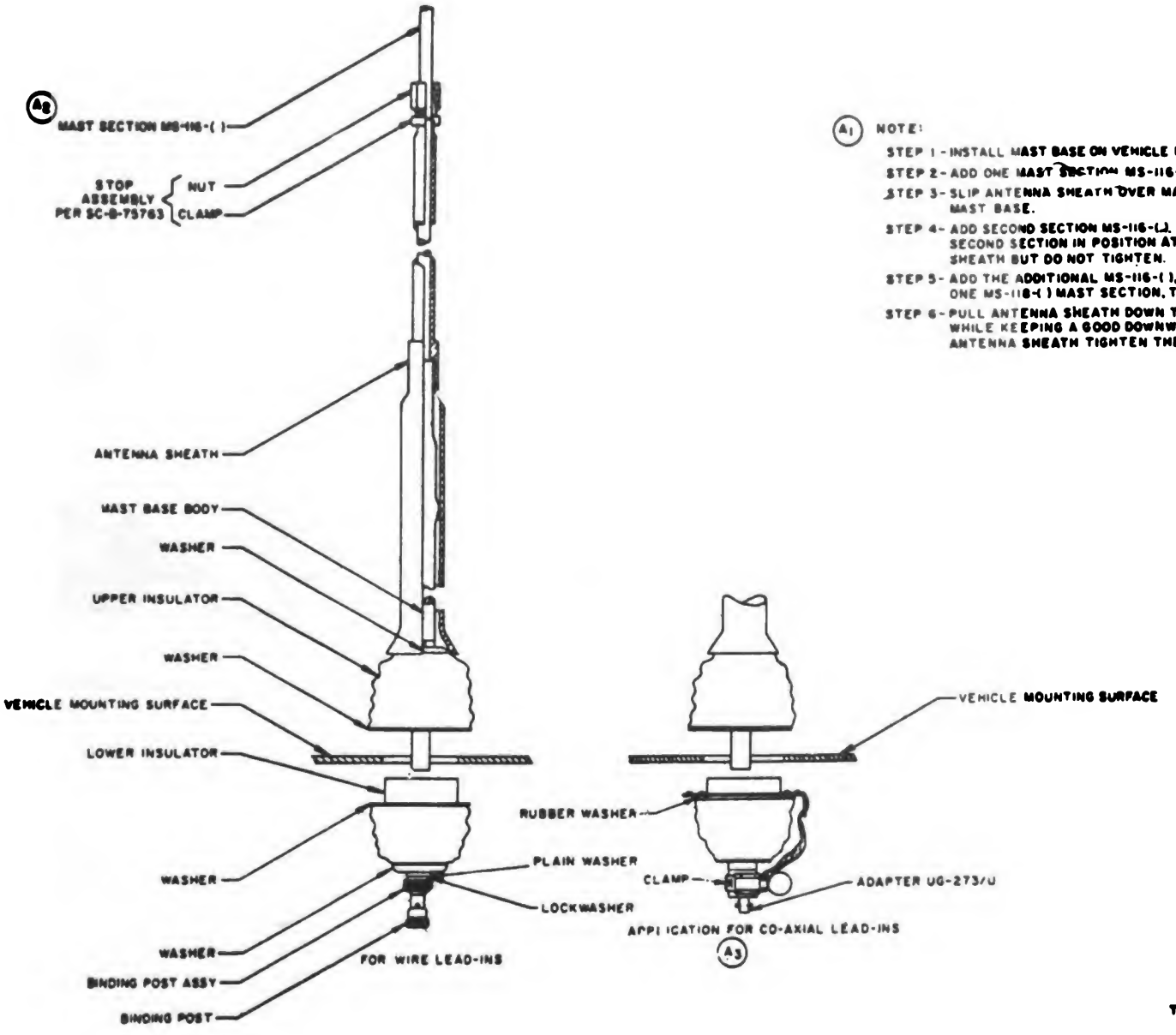
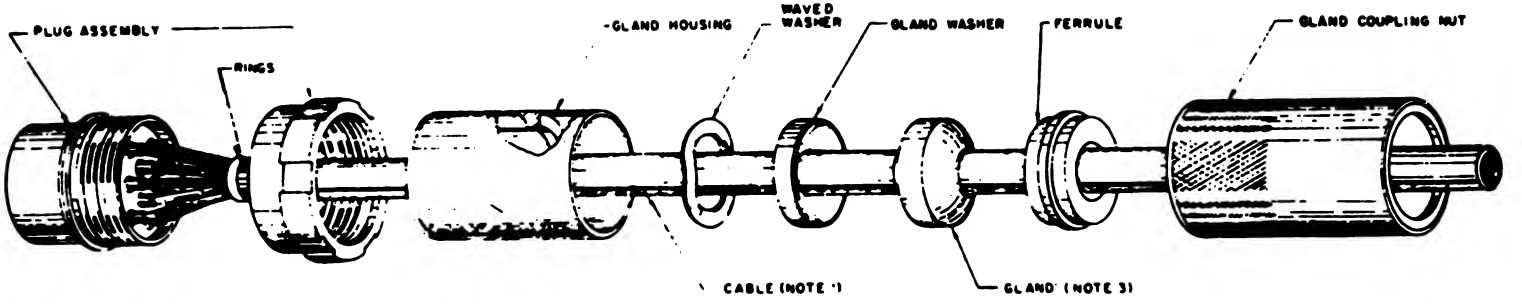


Figure 2-2. Antenna assembly procedure.

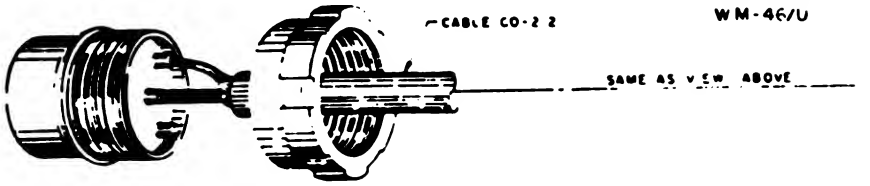
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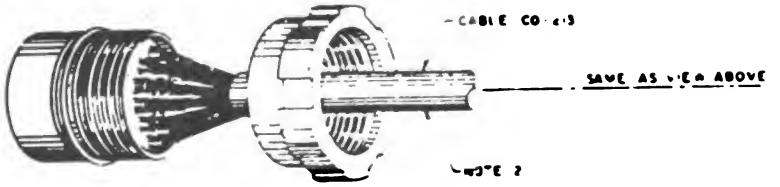
NOTE:
1. PREPARE CABLE PER SC-D-28209
2. PREPARE CABLE PER SC-A-9185.
3. USE LUBRICANT "PETROLATUM, WHITE PRAMEL" PER FEDERAL SPEC. VV-G-236 OR EQUAL IN CASE OF TIGHT FIT.

IMPORTANT CAUTION SHOULD BE EXERCISED IN TIGHTENING THE COUPLING NUT OF THE ACCESSORY ASSEMBLY TO THE PLUG ASSEMBLY. ANCHOR CABLE AND PLUG ASSEMBLY IN A STATIC POSITION AND ROTATE THE GLAND COUPLING NUT BY HAND CLOCKWISE TO TIGHTEN GROMMET SNUGLY AGAINST THE CABLE, WITHOUT EXCESSIVE FORCE.



EXPLODED VIEW OF PLUG ASSEMBLY
WITH CABLE
WM-46/U





TM2300-351-15-1-3

Figure 2-3. Assembly of waterproof vehicle terminal box plugs.

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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 Electronic Command Equipment.
TM 11-5820-520-12	Operator and Organizational Maintenance Manual Radio Set AN/GRC-106.
TM 38-750	Army Equipment Record Procedures

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128th Sig Co (10)
336th Sig Det (10)
363d Sig Det (10)
364th Sig Det (10)
365th Sig Dep (10)
369th Sig Det (10)
Depots (2) except
TOAD (25)
SAAD (25)
LBAD (25)
LEAD (7)
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NG: None.

USAR: None.

For explanation of abbreviations used see AR 320-50.

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