

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

INSTALLATION OF ELECTRICAL TRANSIENT SUPPRESSOR MX-7778/GRC OR MX-7778A/GRC IN VEHICLES M41, M42A1, M48A2, M48A3, M56, M60, M60A1, M88, M106, M125, M113, M113A1, M132, M132A1, M1114A1, M116, M163, M551, M557, M578, M728, M48A2 (HULL), M60A1 (HULL)

Headquarters, Department of the Army, Washington, DC

12 July 1976

REPORTING OF ERRORS

You can help improve this bulletin by calling attention to errors and by recommending improvements and stating your reasons for the recommendations. Your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) should be mailed direct to Commander, US Army Electronics Command, Attn: DRSEL-MA-Q, Fort Monmouth, N.J. 07703. A reply will be furnished direct to you.

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1. Purpose. This technical bulletin provides installation drawings for Electrical Transient Suppressor MX-7778/GRC and MX-7778A/GRC in the following tracked vehicles:

- a. Tank, Combat, Full-Tracked, 76MM Gun, M41
- b. Gun, Self-Propelled, Full-Tracked, Twin, M42A1
- c. Tank, Combat, Full Tracked, 90MM Gun, M48A2
- d. Tank, Combat, Full-Tracked, 90MM Gun, M48A3
- e. Gun, 90 MM, self-propelled, M56

f. Tank, Combat. Full-Tracked, 105MM Gun M60

g. Tank, Combat, Full-Tracked, 105MM Gun M60A1

h. Recovery Vehicle, Full-Tracked, Medium, M88

i. Carrier, Mortar, 107 MM, M106, M125

j. Carrier, Personnel, Armored, M113, M113A

k. Flame Thrower, Self-Propelled, Full-Tracked M132, M132A1

L Carrier, Personnel, Armored, M114A1

m. Carrier, Cargo, Amphibious M116

n. Gun, AA, Artillery, Self-Propelled, 20MM M163

- o. Armored Reconnaissance, Airborne Assault Vehicle, M551
- p. Carrier, Command Post, M577
- q. Recovery Vehicle, Full-Tracked, Light, Armored, M578
- r. Combat Engineer Vehicle, Self-propelled, Full-Tracked, M728
- s. Armored Vehicle, Launcher, Bridge M48A2 (Hull)
- t. Armored Vehicle, Launcher, Bridge M60A1 (Hull)

2. Installation Kit Parts. The parts which comprise the installation kit for MX-7778/GRC are listed and illustrated on Figure 1-22. The installation kit parts for MX-7778A/GRC are listed and illustrated on Figure 1-23. The installation instructions for the vehicles listed in paragraph 3 below are on the illustrations, Figures 1-1 through 1-21.

3. Illustration List. The following is a list of vehicles and applicable figure numbers.

<i>Figure No.</i>	<i>Vehicle</i>
1-1 ① and ②	M577
1-2 ① and ②	M60A1

<i>Figure No.</i>	<i>Vehicle</i>
1-3 ① and ②	M46A2, M48A3
1-4 ① and ②	M551
1-5	M42A1
1-6	M41
1-7	M113, M113A1, M132, M132A1
1-8	M106, M125
1-9	M113A1, M132A1
1-10	M113, M132
1-11	M88
1-12	M60
1-13	M56
1-14	M114A1
1-15	M114A1
1-16	M116
1-17	M60A1 (Hull)
1-18	M578
1-19	M48A2 (Hull)
1-20	M728
1-21	M163

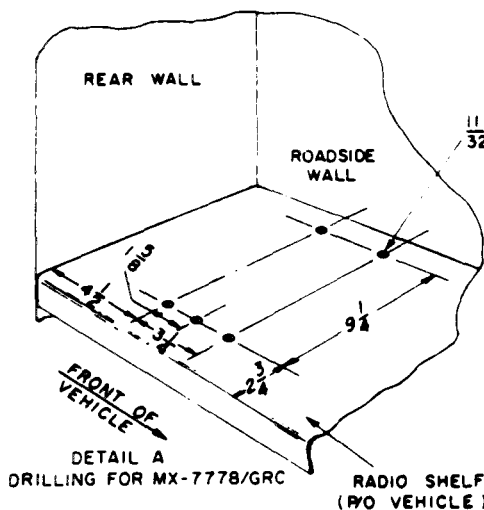
4. Installation Drawings. The following drawings contain the instructions for installing the kit parts for either the MX-7778/GRC or MX-7778A/GRC installation kits.

CAUTION TURN OFF VEHICLE MASTER SWITCH.

(12)

NOTES (SHEET 1)

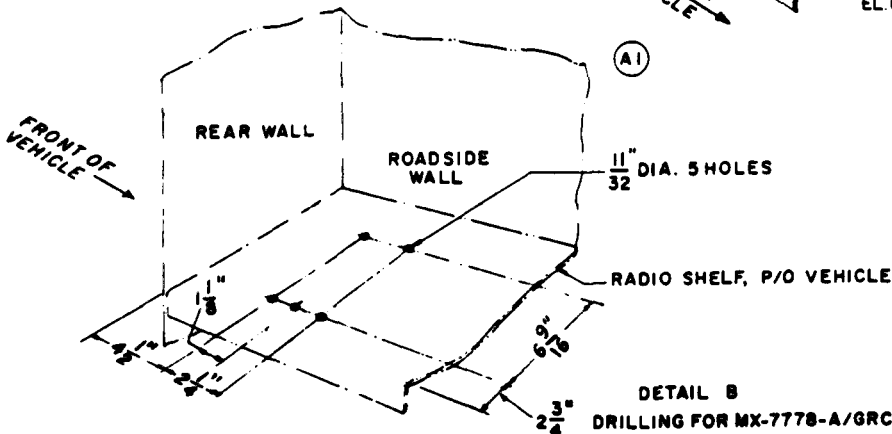
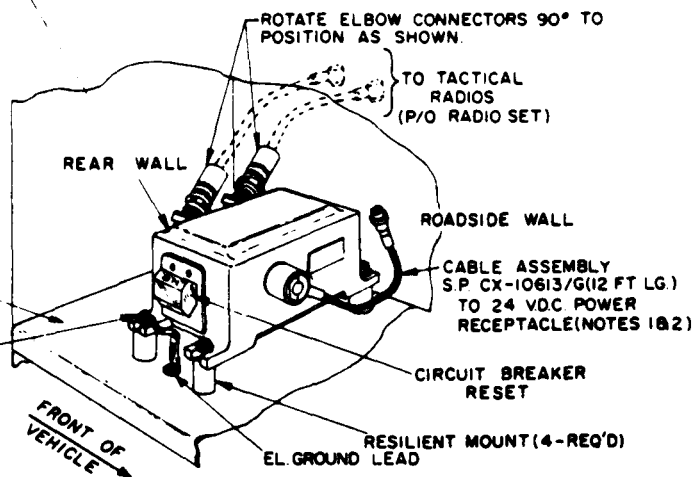
- 1 — REMOVE EXISTING POWER CABLE FROM 24 VDC POWER RECEPTACLE AND ATTACH TO ELBOW CONNECTOR/S. INSTALL CABLE ASSEMBLY SPECIAL PURPOSE CX-10613/G TO POWER RECEPTACLE LOCATED ON SIDE OF SUPPRESSOR. CONNECT THE OTHER END TO THE 24VDC POWER RECEPTACLE
 - 2 — CLAMP CABLE ASSEMBLIES TO EXISTING SPACERS OR HOLES.
 - 3 — FOR MX-7778/GRC MOUNTING HOLES SEE DETAIL A
 - 4 — FOR MX-7778A/GRC MOUNTING HOLES SEE DETAIL B
- ELECTRICAL TRANSIENT SUPPRESSOR MX-7778/GRC (FIG. 1-22). OR MX-7778(A)/GRC (FIG. 1-23).



DETAIL A
DRILLING FOR MX-7778/GRC

SEE FIG 1-22
SEE FIG 1-23

- WASHER, IET, $\frac{5}{16}$ (11-REQ'D)
- NUT, HEX, $\frac{5}{16}$ -18 (9-REQ'D)
- SCREW, HEX HD, $\frac{5}{16}$ -18 x $\frac{3}{4}$ (1-REQ'D)



DETAIL B
DRILLING FOR MX-7778-A/GRC

EL1TA004

Figure 1-1 (1). Installation instructions for Electrical Transient Suppressor MX-7778/GRC, OR MX-7778A/GRC in Command Post Carrier M577, for FM radio sets.

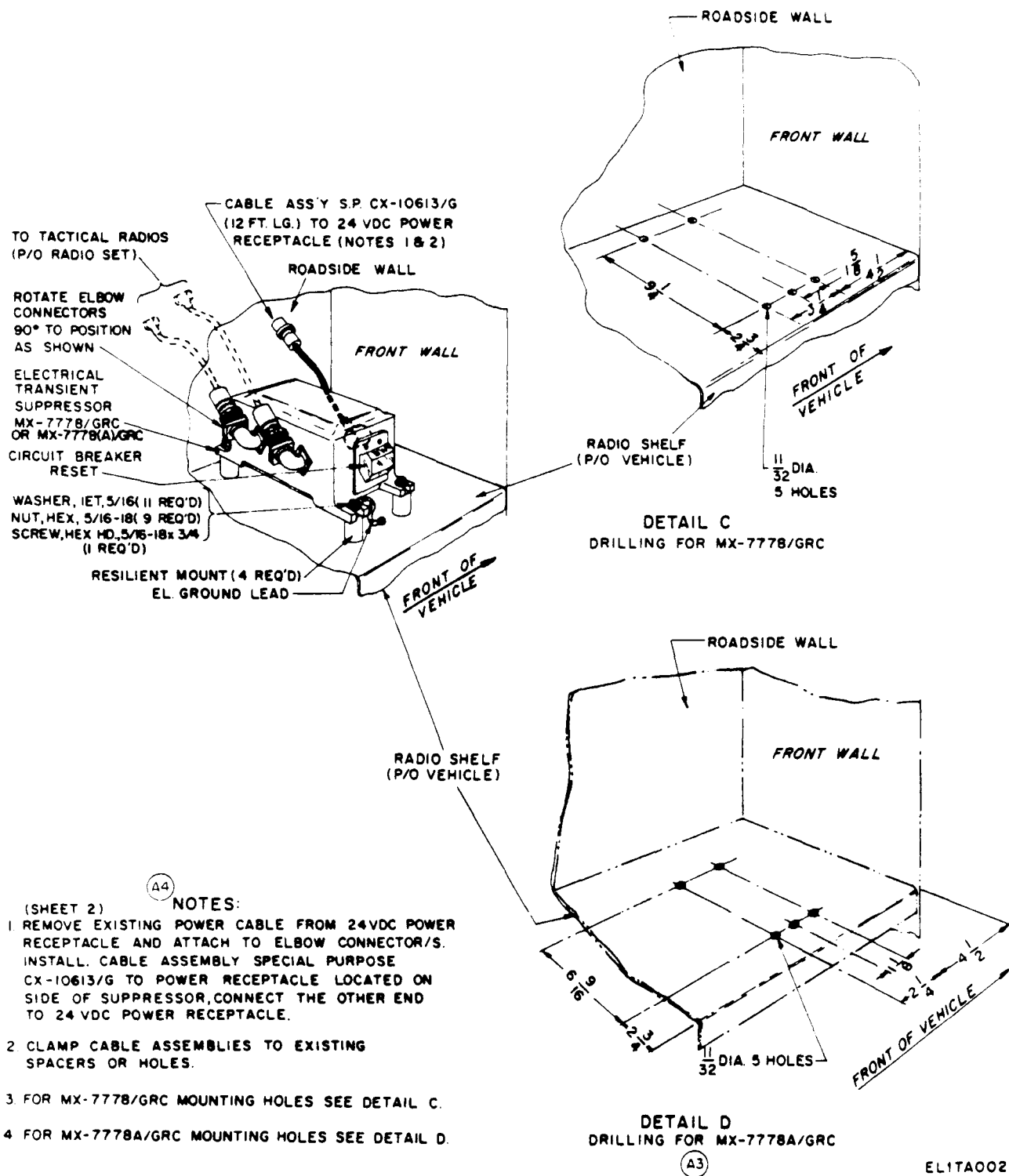
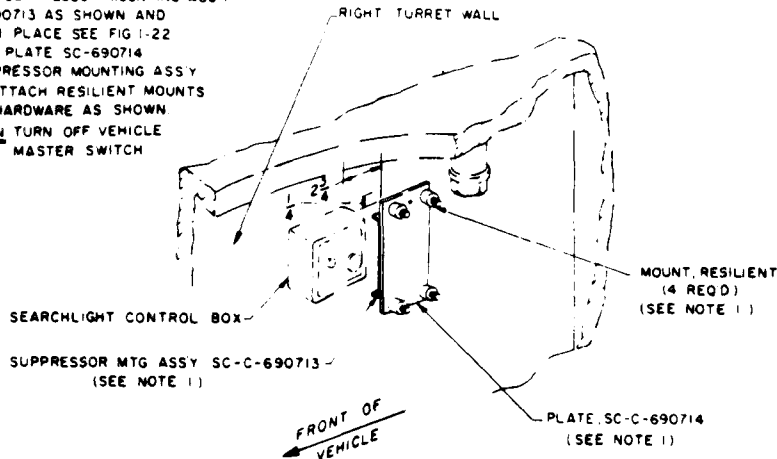


Figure 1-1 © . Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Command Post Carrier M577, for FM radio sets.

NOTE (SHEET 1)

- 1— LOCATE SUPPRESSOR MOUNTING ASSY SC-C-690713 AS SHOWN AND WELD IN PLACE SEE FIG 1-22 ATTACH PLATE SC-690714 TO SUPPRESSOR MOUNTING ASSY THEN ATTACH RESILIENT MOUNTS USING HARDWARE AS SHOWN. CAUTION TURN OFF VEHICLE MASTER SWITCH



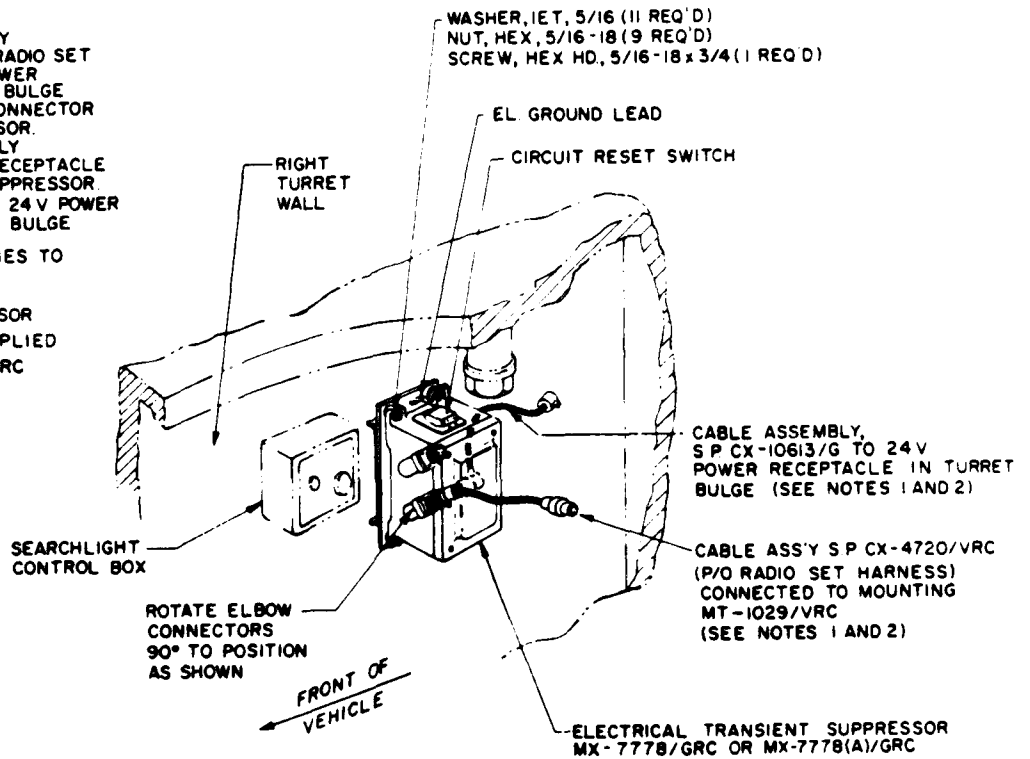
SEE FIG. 1-22
SEE FIG. 1-23

EL1TA003

Figure 1-2 ①. Installation instructions for Electrical Transient Suppressor MX-777B/GRC, or MX-7778A/GRC in Tank, Combat, Full-Track, 105MM Gun, M60A1, for FM radio sets.

NOTES (SHEET 2)

- 1— DISCONNECT CABLE ASS'Y S P CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V POWER RECEPTACLE IN TURRET BULGE & CONNECT TO ELBOW CONNECTOR OF TRANSIENT SUPPRESSOR. CONNECT CABLE ASSEMBLY CX-10613/G TO POWER RECEPTACLE LOCATED ON SIDE OF SUPPRESSOR. CONNECT OTHER END TO 24V POWER RECEPTACLE IN TURRET BULGE
- 2— CLAMP CABLE ASSEMBLIES TO EXISTING SPACERS
- 3— IF TRANSIENT SUPPRESSOR MX-777B(A)/GRC IS SUPPLIED IN LIEU OF MX-777B/GRC REFER TO FIG. 1-23



EL1TA004

Figure 1-2 ①. Installation instructions for Electrical Transient Suppressor MX-777B/GRC, or MX-7778A/GRC in Tank, Combat, Full-Track, 105MM Gun, M60A1, for FM radio sets.

NOTES (SHEET 1)

- 1— REMOVE THE TWO CANTEENS FROM THEIR BRACKETS IN TURRET BULGE.
- 2— BEND TANG OF THE LOWER CANTEEN BRACKET OUT OF WAY AND LOCATE SUPPRESSOR MTG ASSY SC-C-690713 AS SHOWN AND WELD TO VEHICLE. ATTACH PLATE SC-C-690714 TO SUPPRESSOR MTG ASSY ATTACH RESILIENT MOUNTS TO PLATE USING HARDWARE AS SHOWN SEE FIG. 1-22
CAUTION: TURN OFF VEHICLE MASTER SWITCH.

SEE FIG. 1-22
SEE FIG. 1-23

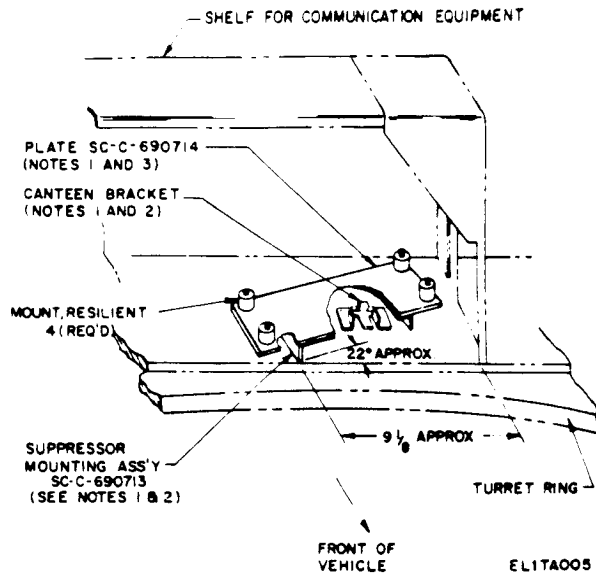


Figure 1-3①. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Tank, Combat, Full-Tracked, 90MM Gun, M48A2 or M48A3, for FM radio sets.

NOTES: (SHEET 2)

- 1— DISCONNECT CABLE ASSEMBLY CX-4720 VRC/(P/O EXISTING RADIO HARNESS) FROM 24 V POWER RECEPTACLE IN TURRET BULGE AND CONNECT TO ELBOW CONNECTOR OF THE MX-7778/GRC.
- 2— CONNECT ONE END OF CABLE ASS'Y CX-10613/G TO POWER RECEPTACLE ON SIDE OF SUPPRESSOR CONNECT THE OTHER SIDE TO 24V POWER RECEPTACLE IN TURRET BULGE.
- 3— CLAMP CABLE ASSEMBLIES TO EXISTING SPACERS.
- 4— IF TRANSIENT SUPPRESSOR S.P. CX-4720/VRC (SEE NOTE 1) IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23

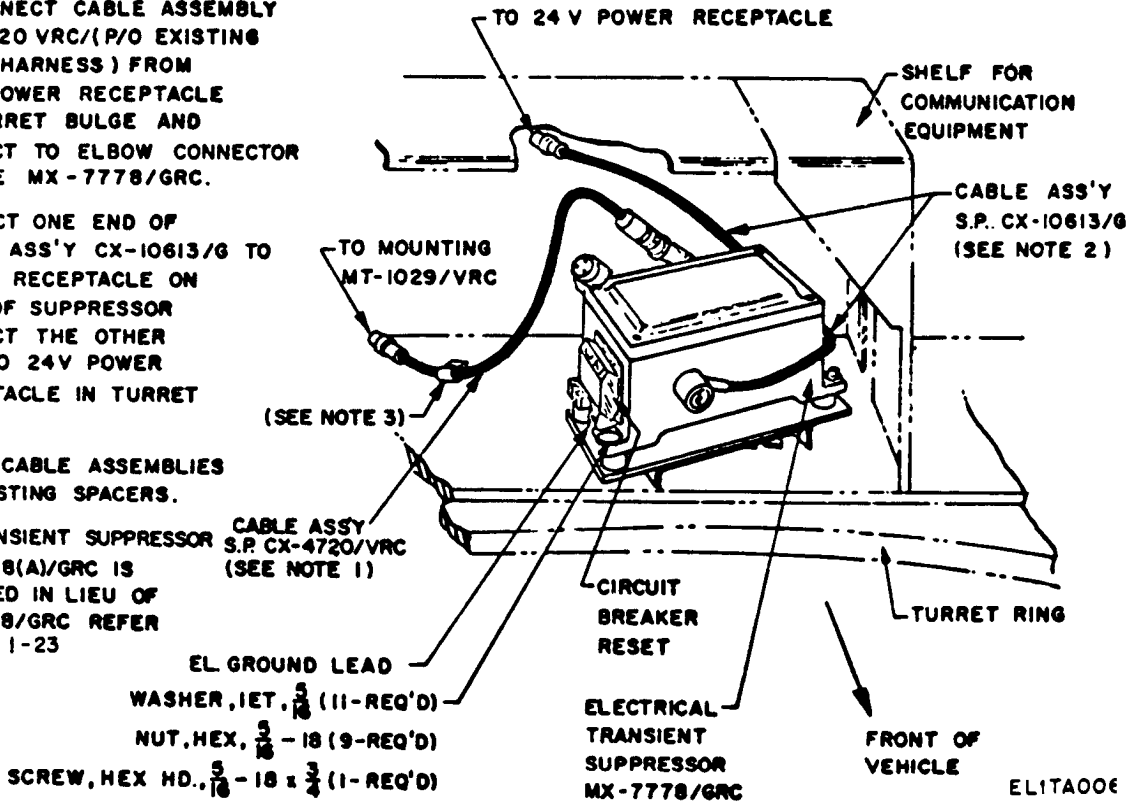
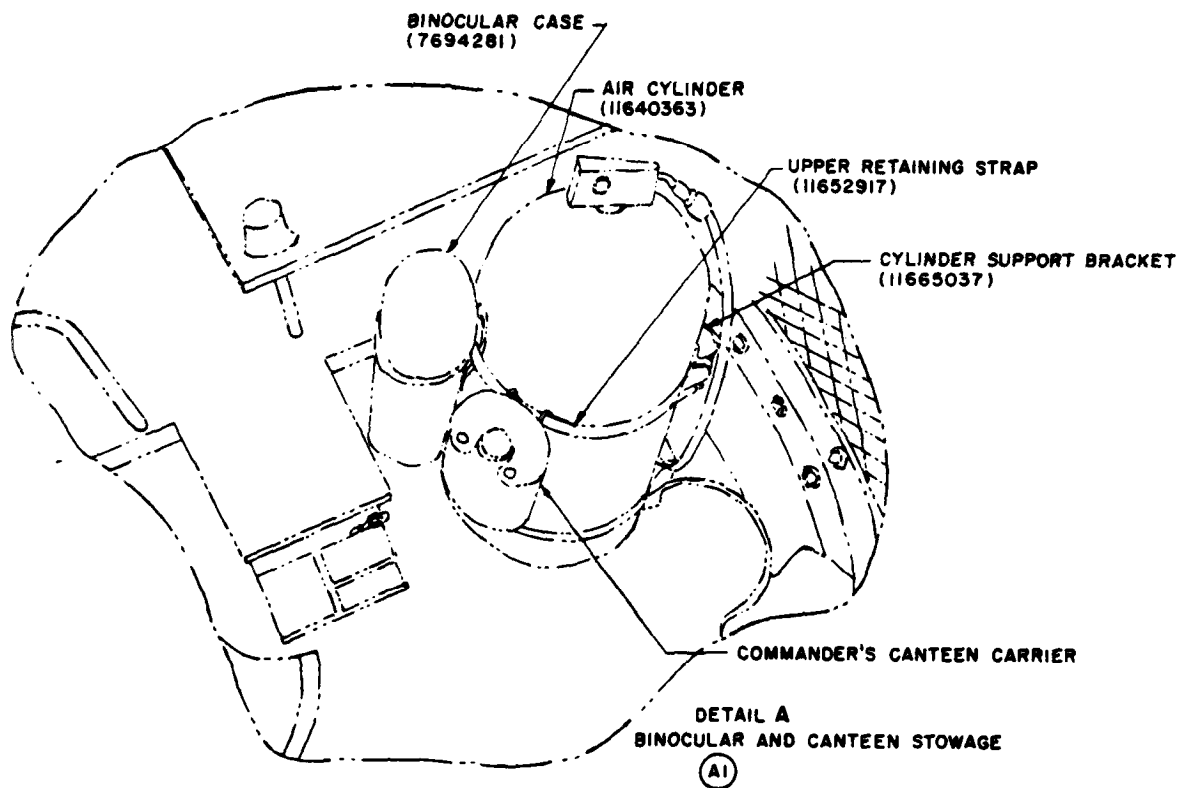
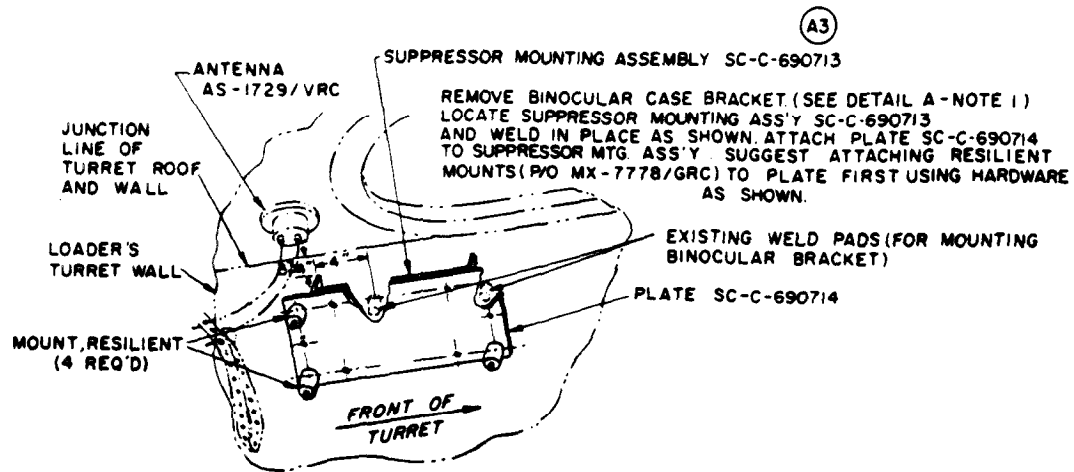


Figure 1-3②. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Tank, Combat, Full-Tracked, 90MM Gun, M48A2 or M48A3, for FM radio sets.



(A2) NOTE 1:

INSTALLATION PROCEDURE FOR RELOCATING BINOCULAR CASE BRACKET:

STEP 1 - REMOVE COMMANDER'S CANTEEN FROM CYLINDER SUPPORT BRACKET (11665037) ON UPPER RETAINING STRAP (11652917) FOR AIR CYLINDER (11640363) LOCATED ON REAR OF TURRET.

STEP 2 - MOUNT BINOCULAR CASE (7694281) ON CYLINDER SUPPORT BRACKET THROUGH STRAP ON REAR FACE OF BINOCULAR CASE.

STEP 3 - UNFASTEN BINOCULAR CASE NECK STRAP ASSEMBLY - PASS END OF NECK STRAP ASSEMBLY THROUGH ATTACHING HOOKS OF COMMANDER'S CANTEEN CARRIER AND AROUND AIR CYLINDER (11640363), IMMEDIATELY ABOVE CYLINDER'S UPPER RETAINING STRAP (11652917), AND SECURE FIRMLY TO AIR CYLINDER (11640363).

ELITA007

Figure 1-4①. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Armored Reconnaissance Airborne Assault Vehicle M551, for FM radio sets.

CAUTION TURN OFF VEHICLE MASTER SWITCH

NOTE

- 1—DISCONNECT EXISTING RADIO POWER CABLE (P/O VEHICLE) FROM MT-1029/VRC RECEPTACLE J21, ATTACH TO ADAPTER CABLE THE ADAPTER CABLE THEN IS CONNECTED TO CABLE ASSEMBLY S P CX-10613/G ON TRANSIENT SUPPRESSOR MX-7778/GRC.
- 2—ATTACH ONE END OF CABLE ASSEMBLY S P CX-4720/VRC (6 FT) TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC, AS SHOWN, CONNECT OTHER END TO RECEPTACLE J21 OF MOUNTING MT-1029/VRC.
- 3—CLAMP CABLE ASSEMBLIES TO EXISTING SPACERS OR HOLES

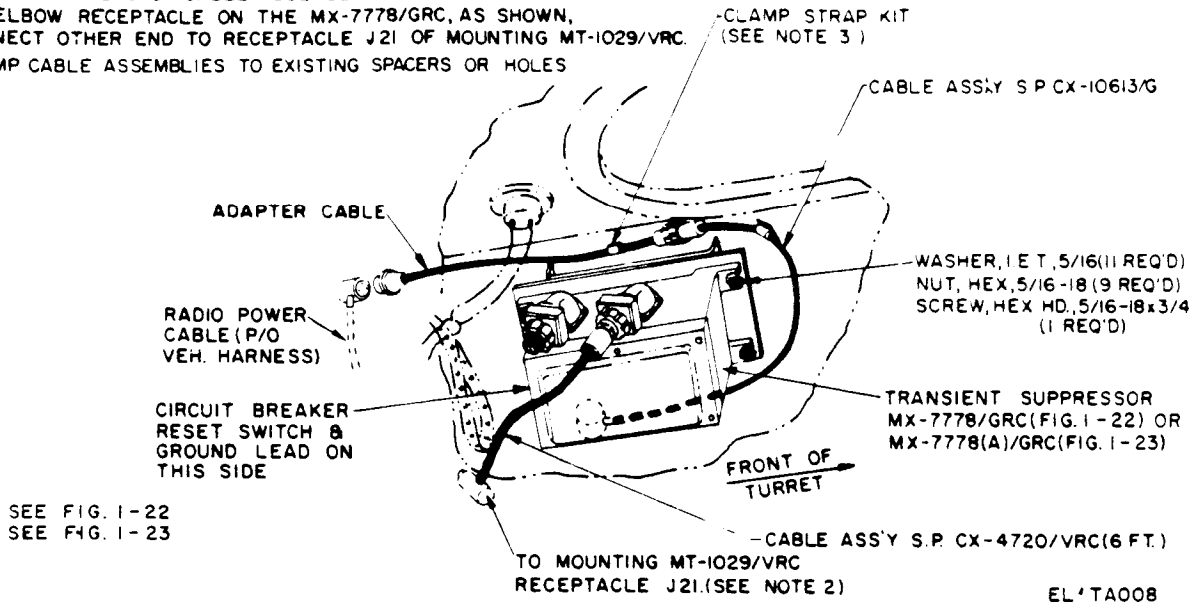


Figure 1-4. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Armored Reconnaissance Airborne Assault Vehicle M551, for FM radio sets.

NOTES

- 1—BEFORE INSTALLING SUPPRESSOR MOUNTING ASS'Y SC-C-690713 REMOVE SPACERS ON SIDE OF LOWER RADIO SUPPORT THEN LOCATE SUPPRESSOR MOUNTING ASS'Y AS SHOWN, AND WELD IN PLACE ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASS'Y THEN ATTACH RESILIENT MOUNTS, USING HARDWARE PROVIDED WITH MX-7778/GRC. **CAUTION** TURN OFF VEHICLE MASTER SWITCH.
- 2—REMOVE CABLE ASS'Y S P CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC, AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y S P CX-10613/G TO POWER RECEPTACLE ON SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE, AS SHOWN.
- 3—CLAMP CABLE ASS'Y TO EXISTING SPACERS OR HOLES
- 4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG 1-23.

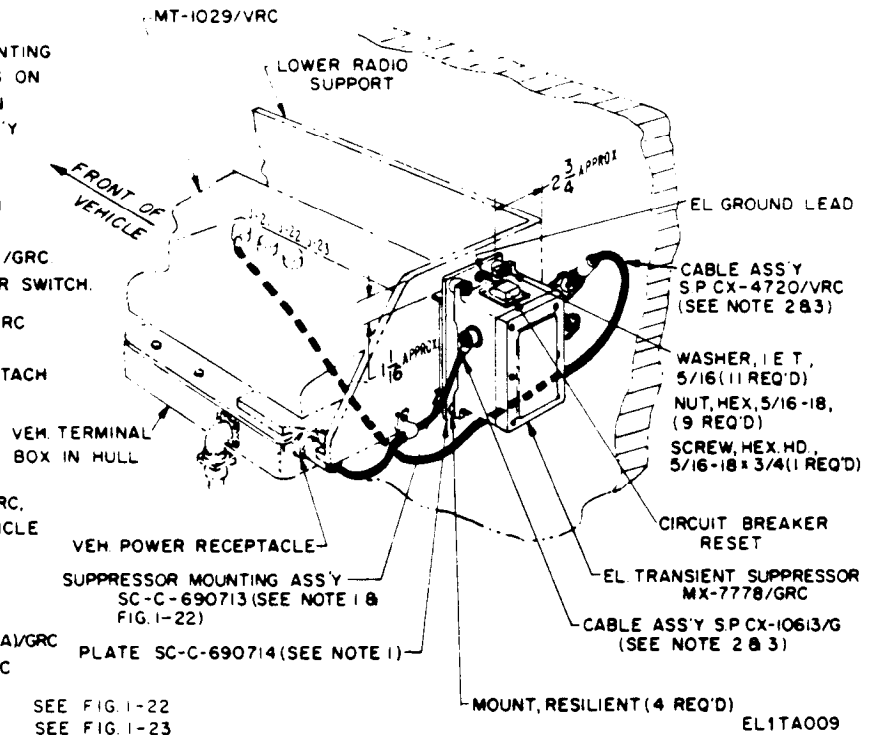


Figure 1-5. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicle M42A1, for FM radio sets.

NOTES

1—LOCATE SUPPRESSOR MOUNTING ASSY, SC-C-690713 AS SHOWN. IF THIS SPACE IS NOT AVAILABLE USE ALTERNATE LOCATION THEN WELD IN PLACE ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASS'Y THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC SEE FIG. 1-22 CAUTION TURN OFF VEHICLE MASTER SWITCH

2—REMOVE CABLE ASS'Y S.P. CX-4720/VRC (PO RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN THEN CONNECT ONE END OF CABLE ASS'Y S.P. CX-10613/G TO THE POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC. CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.

3—CLAMP CABLE ASS'Y TO EXISTING SPACERS OR HOLES.

4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23.

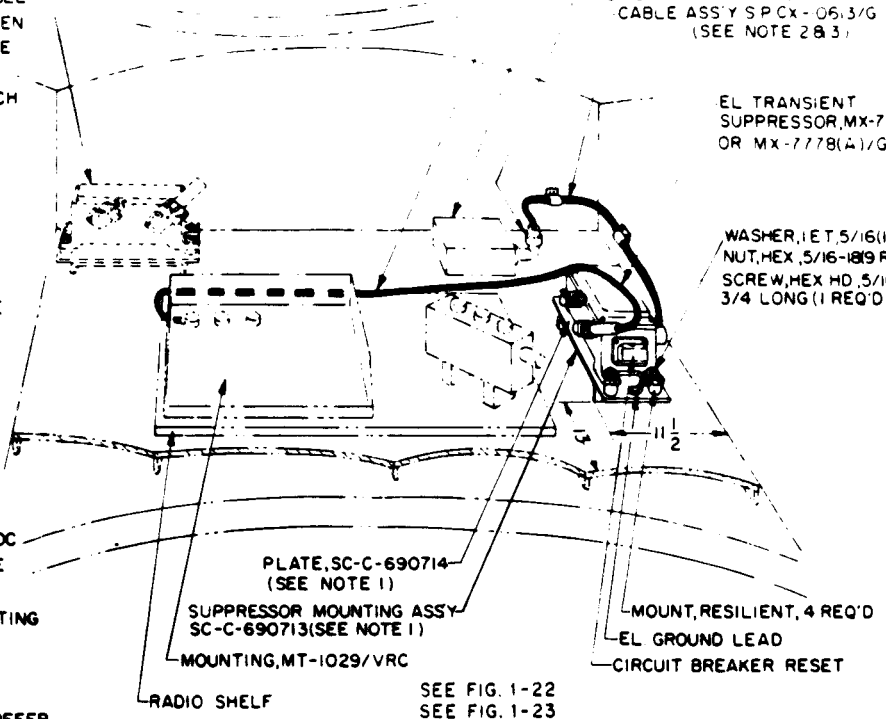
ALTERNATE LOCATION FOR TRANSIENT SUPPRESSOR

CABLE ASS'Y S.P. CX-4720/VRC (SEE NOTE 2 & 3)

RADIO TERMINAL BOX
POWER RECEPTACLE, 24 VDC
CABLE ASS'Y S.P. CX-10613/G (SEE NOTE 2 & 3)

EL TRANSIENT SUPPRESSOR, MX-7778/GRC OR MX-7778(A)/GRC

WASHER, 1/2, 5/16 (1 REQ'D)
NUT, HEX, 5/16-18 (9 REQ'D)
SCREW, HEX HD, 5/16-18 x 3/4 LONG (1 REQ'D)



PLATE, SC-C-690714 (SEE NOTE 1)

SUPPRESSOR MOUNTING ASSY SC-C-690713 (SEE NOTE 1)

MOUNTING, MT-1029/VRC

RADIO SHELF

SEE FIG. 1-22
SEE FIG. 1-23

MOUNT, RESILIENT, 4 REQ'D

EL GROUND LEAD

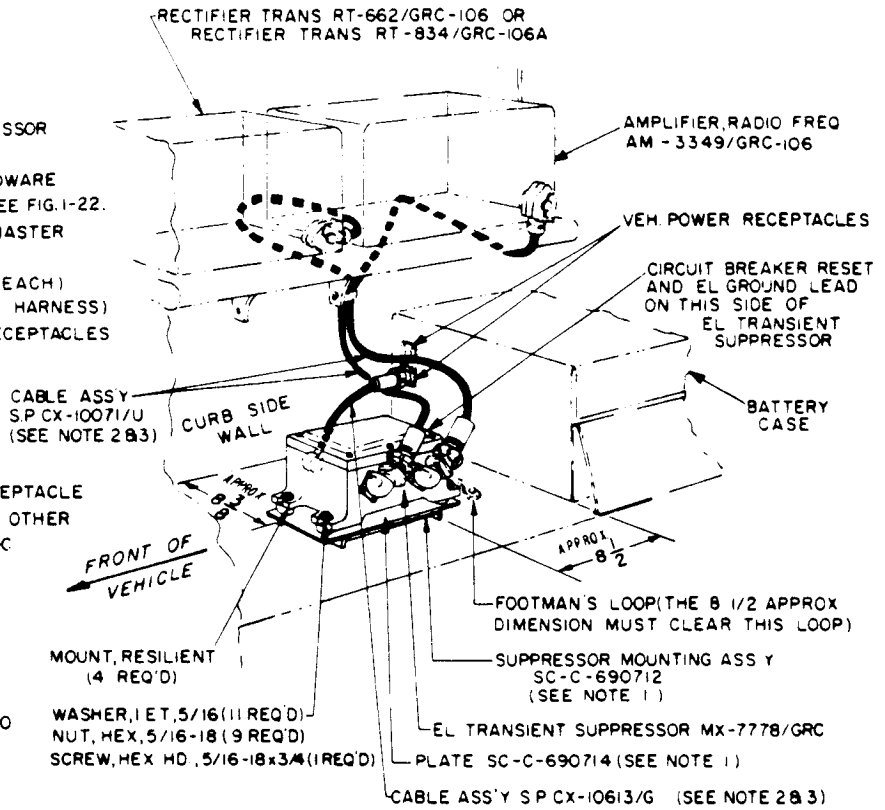
CIRCUIT BREAKER RESET

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Figure 1-6. Installation instructions for Electrical Transient Suppressor for MX-7778/GRC, or MX-7778A/GRC in vehicle M41, for FM radio sets.

NOTES

- 1—LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690712 AS SHOWN AND WELD IN PLACE ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASS'Y THEN ATTACH RESILIENT MOUNTS, USING HARDWARE PROVIDED WITH MX-7778/GRC. SEE FIG. 1-22. CAUTION: TURN OFF VEHICLE MASTER SWITCH.
 - 2—REMOVE CABLE ASSEMBLY'S (2 EACH) S P CX-10071/U (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLES AND ATTACH TO 90° ELBOW RECEPTACLES ON THE MX-7778/GRC AS SHOWN. CONNECT ONE END OF CABLE ASS'Y S P CX-10613/G TO THE SINGLE POWER INPUT RECEPTACLE ON SIDE OF MX-7778/GRC, THE OTHER END IS ATTACHED TO THE 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.
 - 3—CLAMP CABLE ASSEMBLY TO EXISTING SPACERS OR HOLES.
 - 4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23.
- SEE FIG. 1-22
SEE FIG. 1-23



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Figure 1-7. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicles M113, M113A1, M132, or M132A1, for Radio Sets AN/GRC-106 and AN/GRC-106A.

NOTES

- 1— REMOVE AF AMPLIFIER AM-1780/VRC CABLE ASSEMBLIES (CAUTION MARK CABLE ASSEMBLIES WITH APPROPRIATE RECEPTACLE NUMBER) AND MOUNTING BRACKET BEFORE LOCATING TRANSIENT SUPPRESSOR MX-7778/GRC. SET ASIDE MOUNTING HARDWARE FOR USE WITH NOTE 5
- 2— LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690712 AS SHOWN, AND WELD IN PLACE. ATTACH PLATE SC-C-690714 TO SUPPRESSOR MTG. ASS'Y THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC.
- 3— REMOVE CABLE ASS'Y S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y S.P. CX-10613/G TO THE POWER RECEPTACLE ON SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24VDC VEH POWER RECEPTACLE AS SHOWN.
- 4— CLAMP CABLE ASS'Y TO EXISTING SPACERS OR HOLES.
- 5— INSTALL BRACKET, SC-C-690732 ON RADIO SHELF USING EXISTING MOUNTING HOLES AND HARDWARE SECURE AF AMPLIFIER AM-1780 TO BRACKET, SC-C-690732 WITH EXISTING HARDWARE. RE-INSTALL CABLE ASS'YS IN PROPER RECEPTACLES.

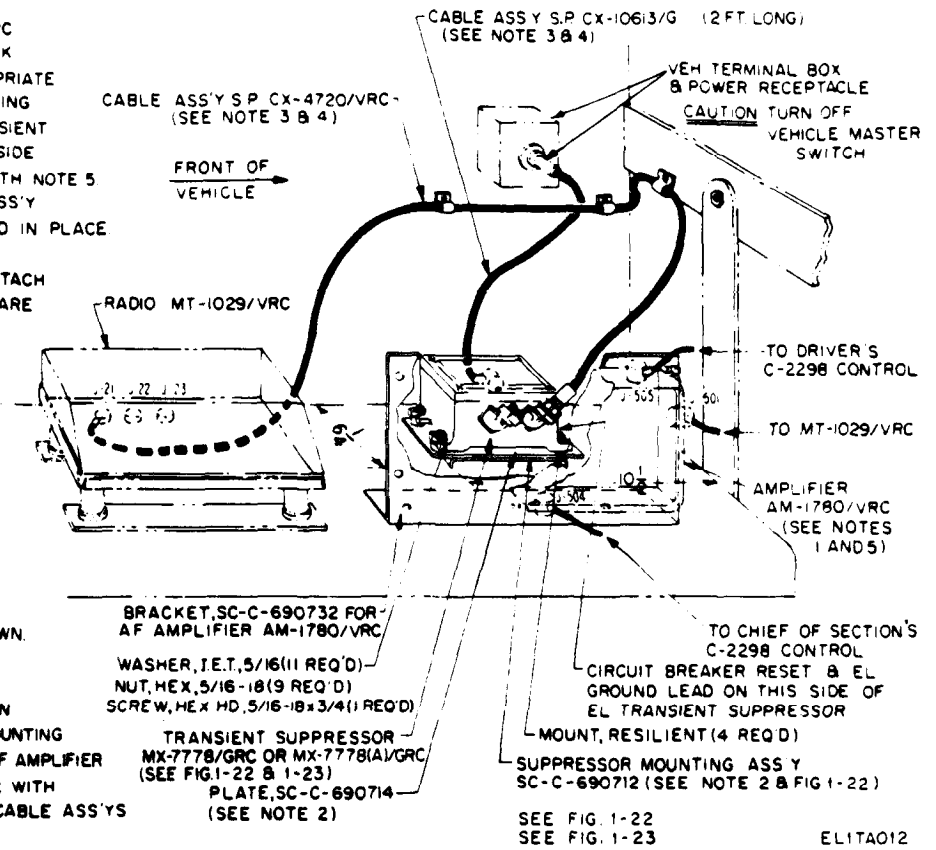
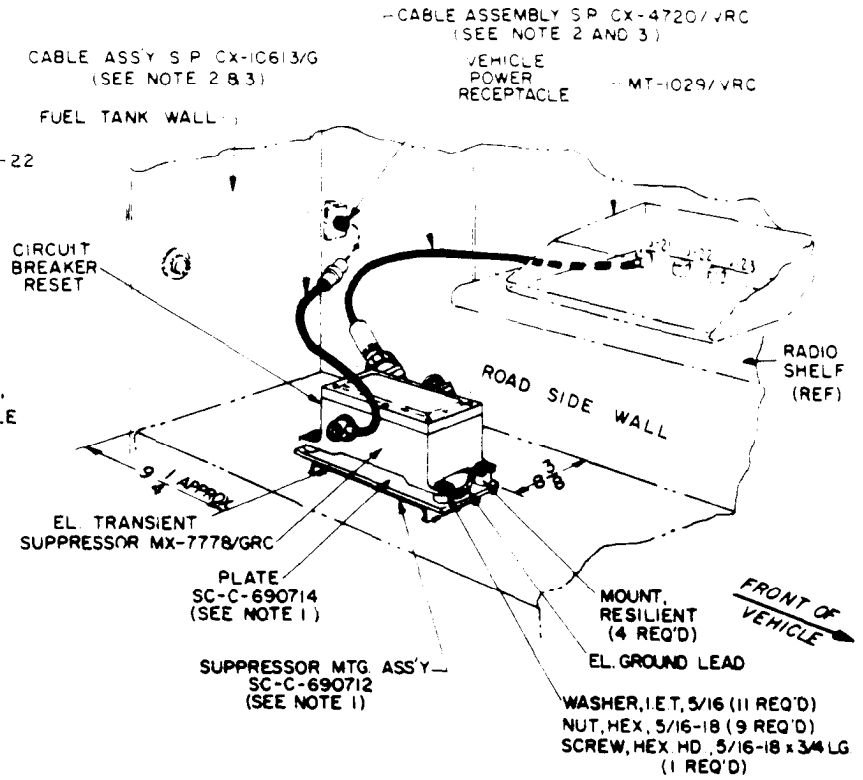


Figure 1-8. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicles M106 and M125, for FM radio sets.

NOTES

- 1—LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690712 AS SHOWN, AND WELD IN PLACE ATTACH PLATE SC-C-690714 TO SUPPRESSOR MTG ASS'Y THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC SEE FIG. 1-22
- 2— REMOVE CABLE ASS'Y S P CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24 V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y S P CX-10613/G TO THE POWER RECEPTACLE ON SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.
- 3— CLAMP CABLE ASS'Y TO EXISTING SPACERS OR HOLES.
- 4— IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23.
CAUTION: TURN OFF VEHICLE MASTER SWITCH.

SEE FIG. 1-22
SEE FIG. 1-23



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Figure 1-9. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicles M113A1, or M132A1, for FM radio sets.

NOTES:

1— LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690712 AS SHOWN, AND WELD IN PLACE ATTACH PLATE SC-C-690714 TO SUPPRESSOR MTG. ASS'Y. THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC.

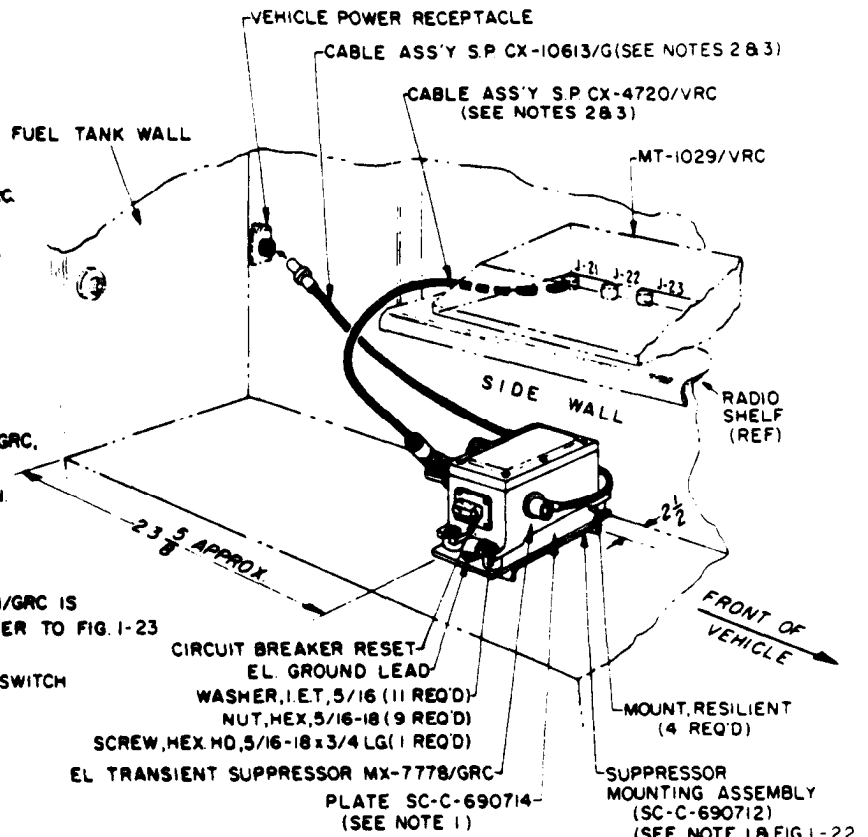
2— REMOVE CABLE ASS'Y S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y S.P. CX-10613/G TO THE POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC. CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.

3— CLAMP CABLE ASS'Y TO EXISTING SPACERS OR HOLES

4— IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23

CAUTION: TURN OFF VEHICLE MASTER SWITCH

SEE FIG 1-22
SEE FIG 1-23



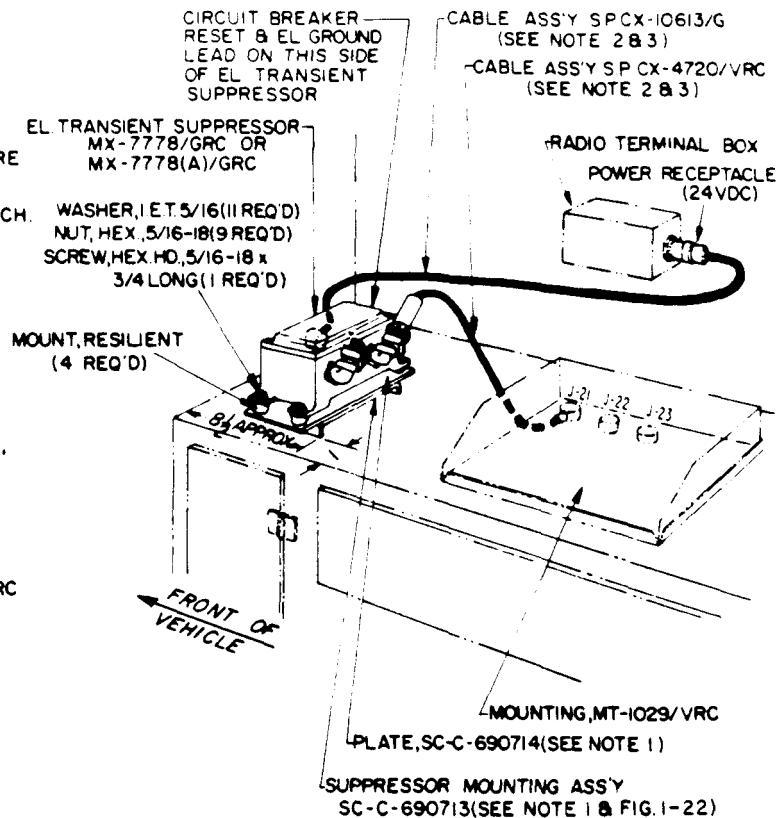
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Figure 1-10. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicles M113 or M132, for FM radio sets.

NOTES

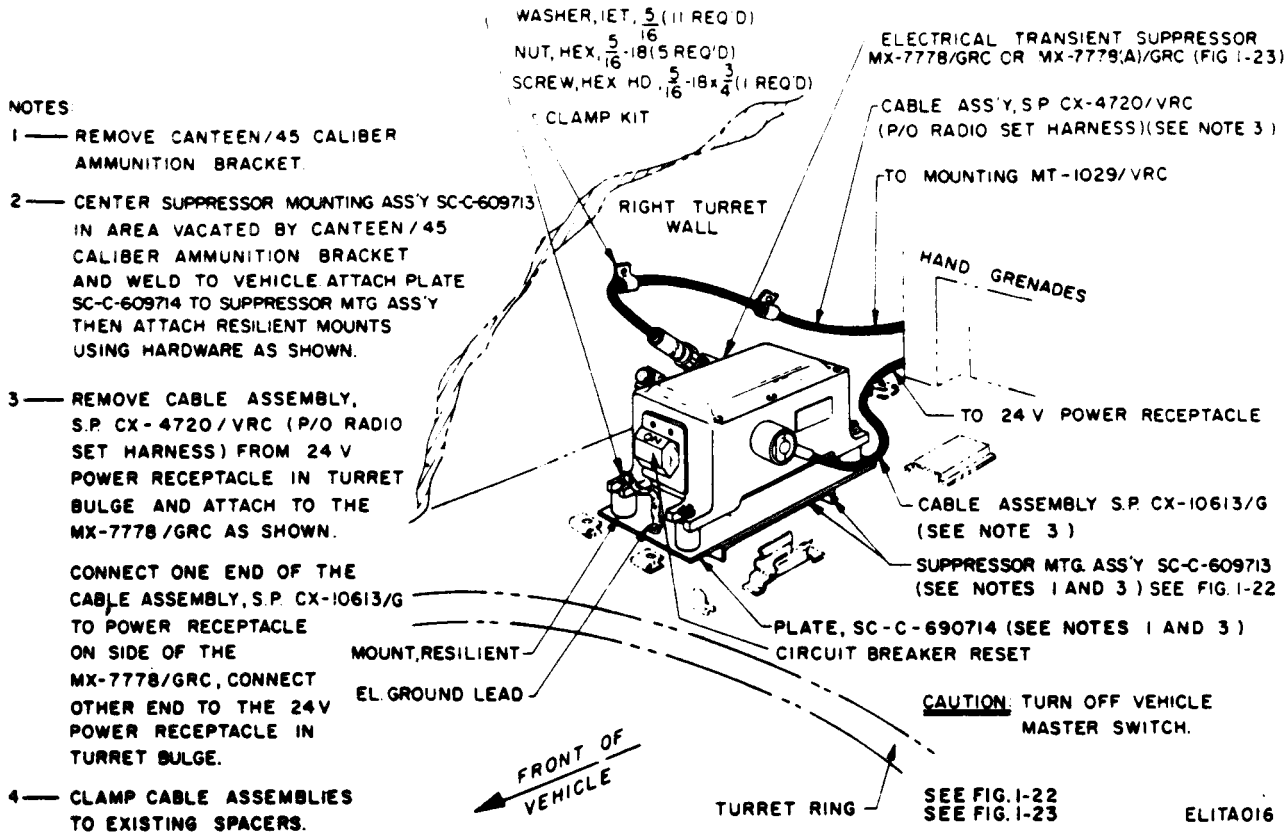
- 1—LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690713 AS SHOWN, AND WELD IN PLACE. ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASS'Y. THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC.
CAUTION: TURN OFF VEHICLE MASTER SWITCH.
- 2—REMOVE CABLE ASS'Y S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24 V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y S.P. CX-10613/G TO THE POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.
- 3—CLAMP CABLE ASS'Y TO EXISTING SPACERS OR HOLES.
- 4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23

SEE FIG. 1-22
SEE FIG. 1-23



EL1TA015

Figure 1-11. Installation instructions for Electrical Transient Suppressor for MX-7778/GRC, or MX-7778(A)/GRC in vehicle M88, for FM radio set.



NOTES:

- 1 — REMOVE CANTEEN/45 CALIBER AMMUNITION BRACKET.
- 2 — CENTER SUPPRESSOR MOUNTING ASS'Y SC-C-609713 IN AREA VACATED BY CANTEEN/45 CALIBER AMMUNITION BRACKET AND WELD TO VEHICLE ATTACH PLATE SC-C-609714 TO SUPPRESSOR MTG ASS'Y THEN ATTACH RESILIENT MOUNTS USING HARDWARE AS SHOWN.

- 3 — REMOVE CABLE ASSEMBLY, S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24 V POWER RECEPTACLE IN TURRET BULGE AND ATTACH TO THE MX-7778/GRC AS SHOWN.

CONNECT ONE END OF THE CABLE ASSEMBLY, S.P. CX-10613/G TO POWER RECEPTACLE ON SIDE OF THE MX-7778/GRC, CONNECT OTHER END TO THE 24V POWER RECEPTACLE IN TURRET BULGE.

- 4 — CLAMP CABLE ASSEMBLIES TO EXISTING SPACERS.

Figure 1-12. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Tank M60, for FM radio sets.

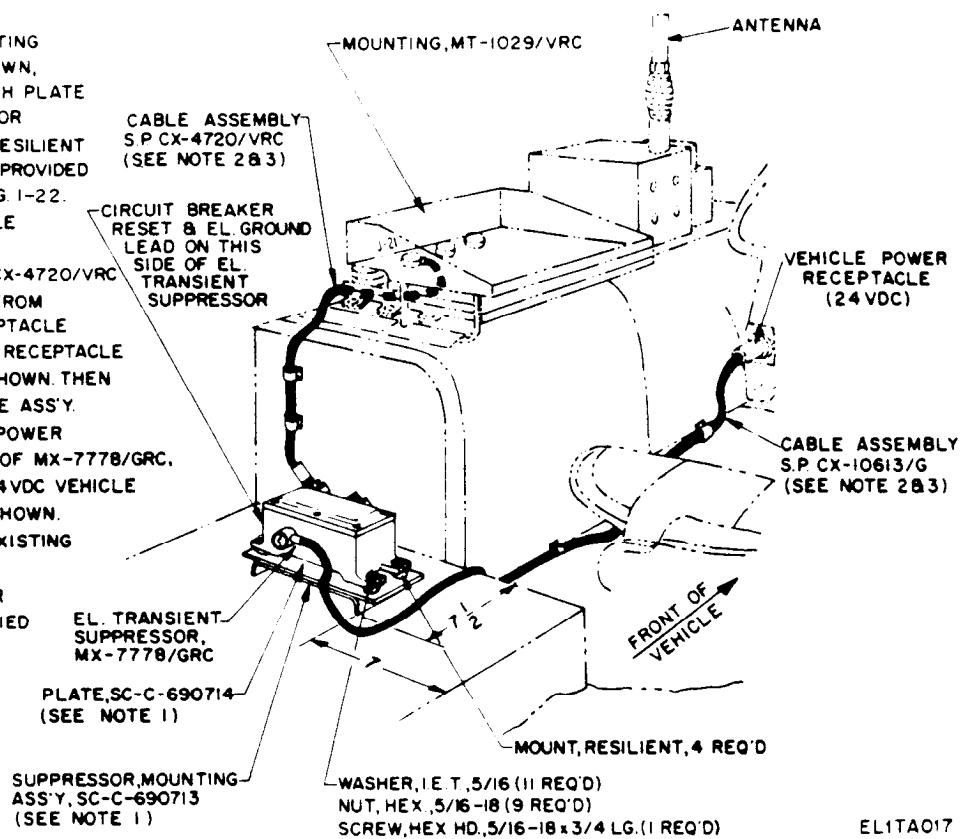
NOTES:

- 1—LOCATE SUPPRESSOR MOUNTING ASS'Y, SC-C-690713 AS SHOWN, AND WELD IN PLACE. ATTACH PLATE SC-C-690714 TO SUPPRESSOR MTG. ASS'Y. THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC. SEE FIG. 1-22.

CAUTION: TURN OFF VEHICLE MASTER SWITCH.

- 2—REMOVE CABLE ASS'Y S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24 V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y. S.P. CX-10613/G TO THE POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC. CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.
- 3—CLAMP CABLE ASS'Y TO EXISTING SPACERS OR HOLES.
- 4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23.

SEE FIG. 1-22
SEE FIG. 1-23



EL1TA017

Figure 1-13. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Vehicle M56, for FM radio sets.

CABLE ASS'Y S P CX-10613/G (SEE NOTE 2B3)

RECTIFIER TRANS RT-662/GRC-106 OR
RECTIFIER TRANS RT-834/GRC-106A

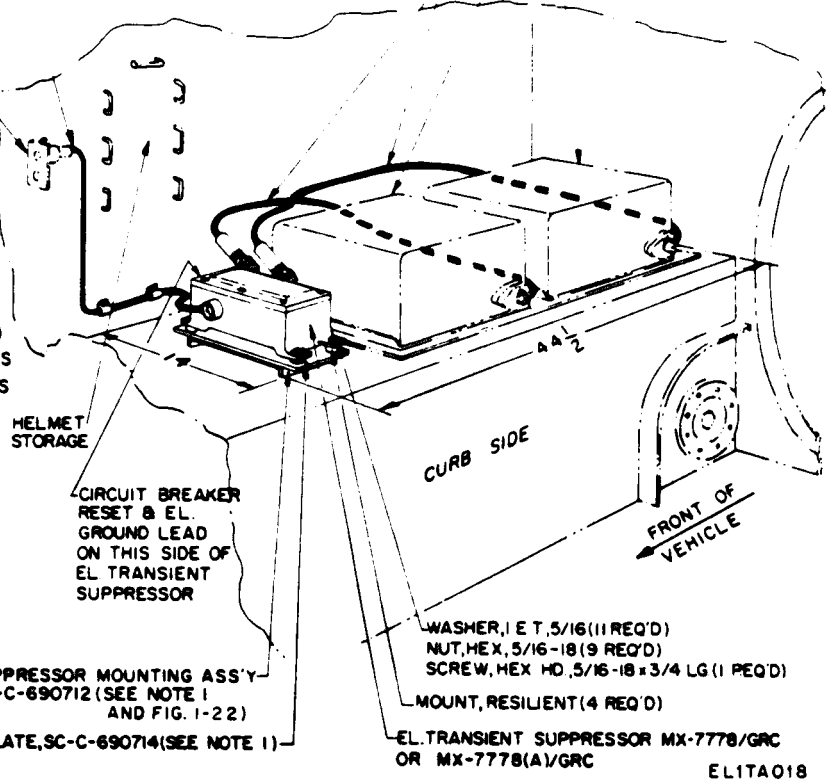
AMPLIFIER, RADIO FREQ
AM-3349/GRC-106

VEHICLE POWER RECEPTACLE

CABLE ASS'Y S P CX-10071/U(SEE NOTE 2B3)

NOTES:

- 1—LOCATE SUPPRESSOR MOUNTING ASSY SC-C-690712 AS SHOWN, AND WELD IN PLACE ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASSY. THEN ATTACH RESILIENT MOUNTS, USING HARDWARE PROVIDED WITH MX-7778/GRC. CAUTION TURN OFF VEHICLE MASTER SWITCH
- 2—REMOVE CABLE ASSEMBLY'S (2 EACH) S P CX-10071/U (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLES AND ATTACH TO 90° ELBOW RECEPTACLES ON THE MX-7778/GRC AS SHOWN. CONNECT ONE END OF CABLE ASS'Y S P CX-10613/G TO THE SINGLE POWER INPUT RECEPTACLE ON SIDE OF MX-7778/GRC, THE OTHER END IS ATTACHED TO THE 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.
- 3—CLAMP CABLE ASSEMBLY TO EXISTING SPACERS OR HOLES.
- 4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23.



SUPPRESSOR MOUNTING ASSY
SC-C-690712 (SEE NOTE 1
AND FIG. 1-22)
PLATE, SC-C-690714 (SEE NOTE 1)

HELMET STORAGE

CIRCUIT BREAKER
RESET & EL.
GROUND LEAD
ON THIS SIDE OF
EL TRANSIENT
SUPPRESSOR

CURB SIDE

FRONT OF
VEHICLE

WASHER, I E T, 5/16 (11 REQ'D)
NUT, HEX, 5/16-18 (9 REQ'D)
SCREW, HEX HD, 5/16-18 x 3/4 LG (1 REQ'D)
MOUNT, RESILIENT (4 REQ'D)

EL. TRANSIENT SUPPRESSOR MX-7778/GRC
OR MX-7778(A)/GRC

EL1TA018

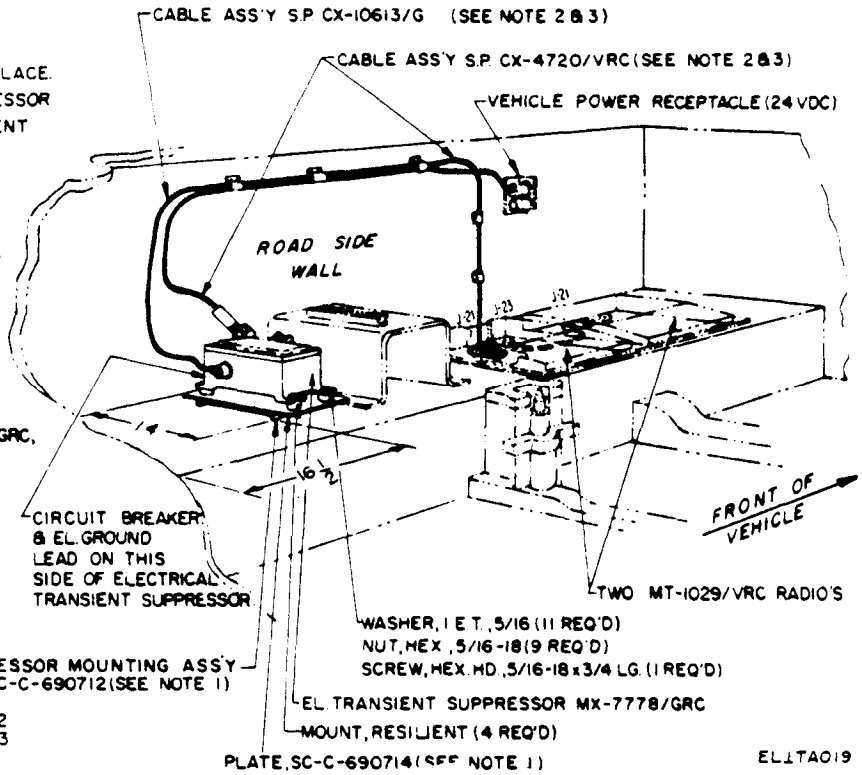
Figure 1-14. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicle M114A1, for Radio Sets AN/GRC-106, and AN/GRC-106A.

NOTE:

- 1—LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690712 AS SHOWN, AND WELD IN PLACE. ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASS'Y THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC SEE FIG. 1-22 CAUTION TURN OFF VEHICLE MASTER SWITCH.
- 2—REMOVE CABLE ASS'Y S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN THEN CONNECT ONE END OF CABLE ASS'Y S.P. CX-10613/G TO THE POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.
- 3—CLAMP CABLE ASSEMBLY TO EXISTING SPACERS OR HOLES.
- 4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23

SEE FIG. 1-22
SEE FIG. 1-23

SUPPRESSOR MOUNTING ASS'Y
SC-C-690712 (SEE NOTE 1)



PLATE, SC-C-690714 (SEE NOTE 1)

EL1TA019

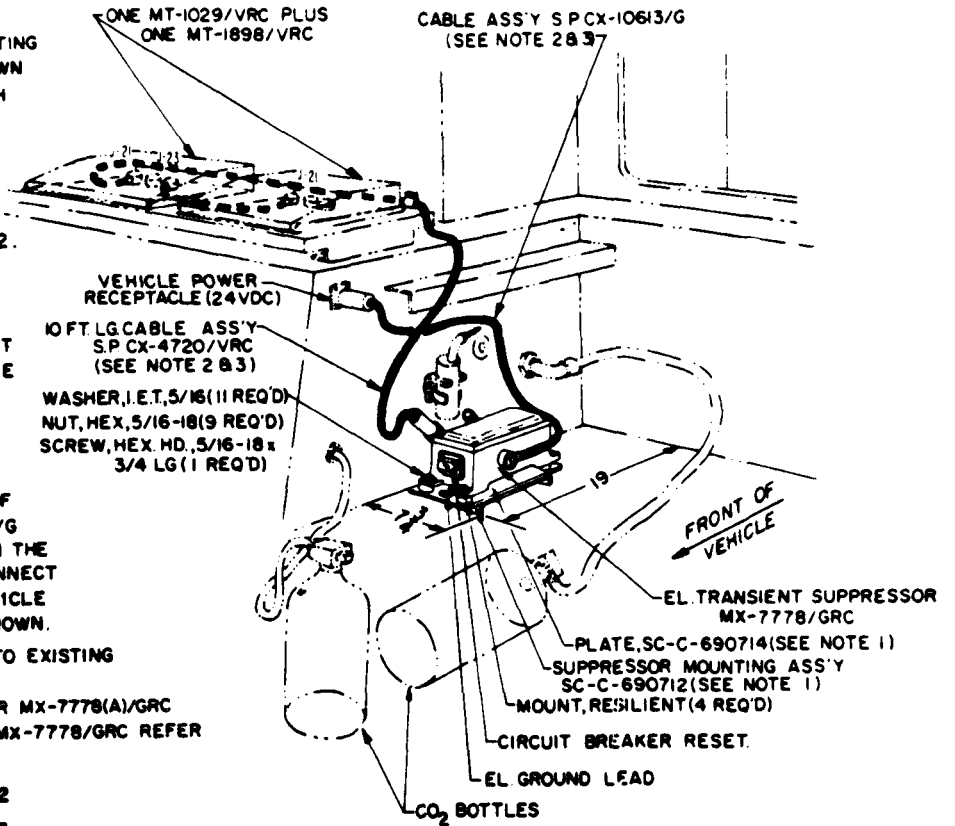
Figure 1-15. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicle M114A1, for FM radio sets.

NOTES:

- 1—LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690712 AS SHOWN AND WELD IN PLACE. ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASS'Y THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC. SEE FIG. 1-22.
CAUTION: TURN OFF VEHICLE MASTER SWITCH.
- 2—REMOVE CABLE ASS'Y S P CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y S P CX-10613/G TO POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.
- 3—CLAMP CABLE ASSEMBLY TO EXISTING SPACERS OR HOLES.
- 4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23.

SEE FIG. 1-22

SEE FIG. 1-23



EL 1TA020

Figure 1-16. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicle M116, for FM radio sets.

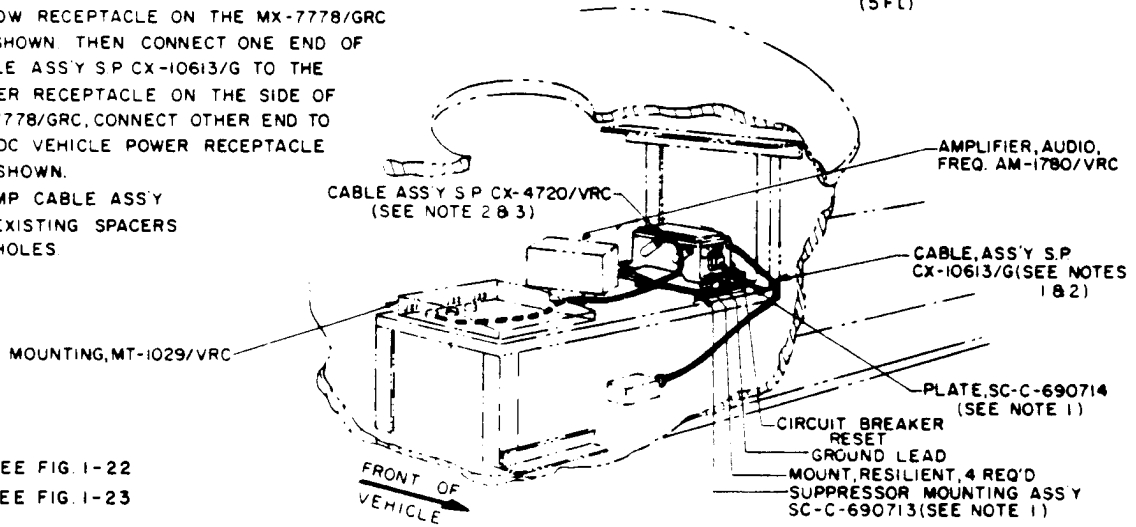
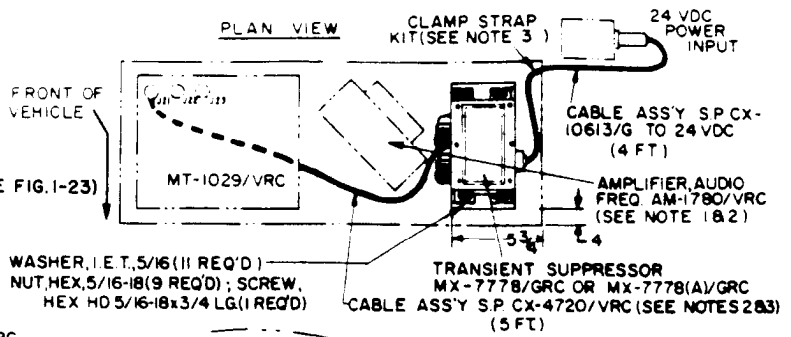
NOTES

1 LOCATE SUPPRESSOR MOUNTING ASSY SC-C-690713 AS SHOWN AND WELD IN PLACE ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASSY THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC (SEE FIG 1-22) OR MX-7778(A)/GRC(SEE FIG.1-23)
CAUTION TURN OFF VEHICLE MASTER SWITCH.

2 REMOVE CABLE ASSY S P CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEH. POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASSY S P CX-10613/G TO THE POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24 VDC VEHICLE POWER RECEPTACLE AS SHOWN.

3 CLAMP CABLE ASSY TO EXISTING SPACERS OR HOLES

SEE FIG 1-22
SEE FIG 1-23

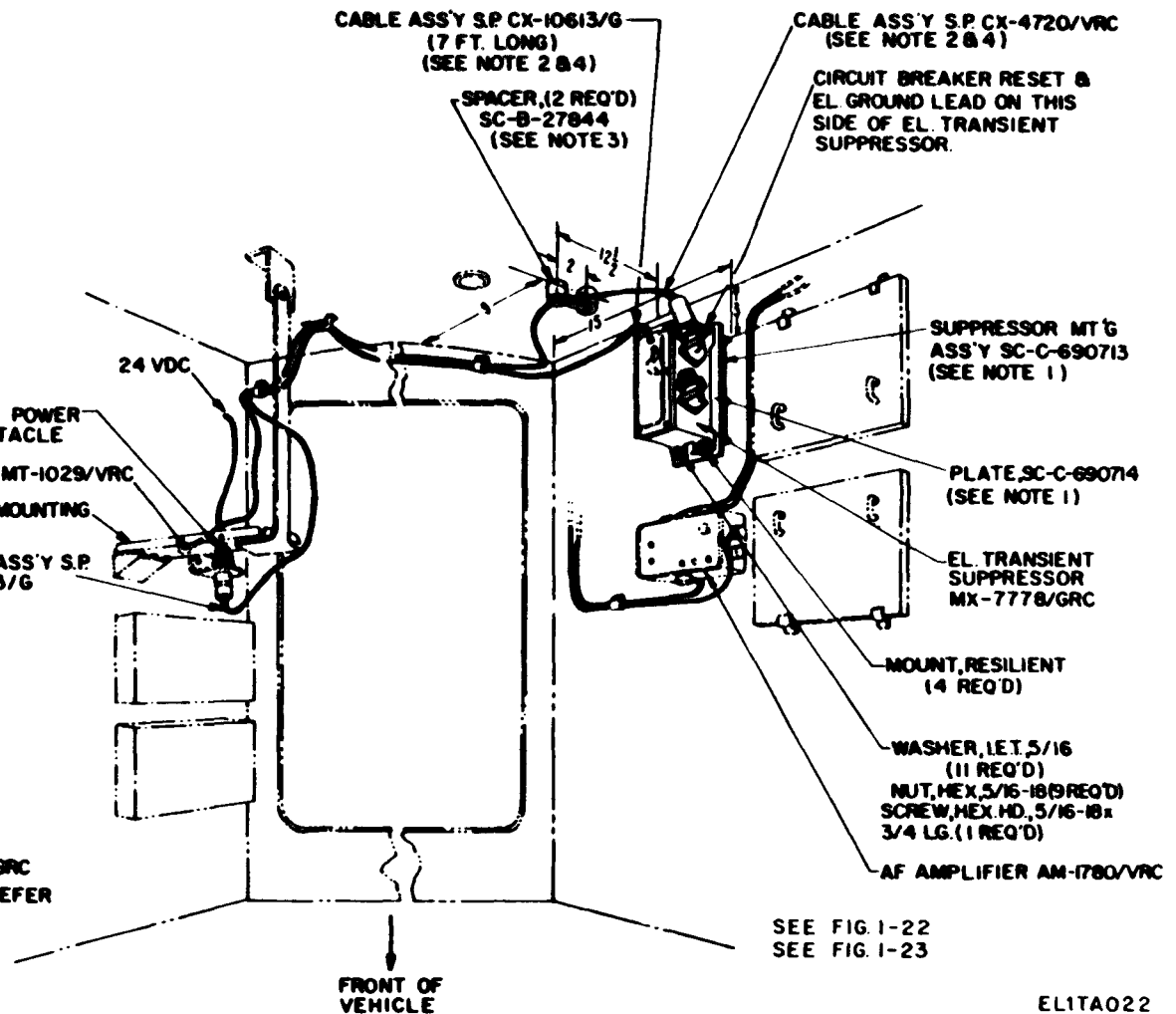


EL 1TA021

Figure 1-17. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Amplifier Vehicle, Launcher, Bridge (AVLB) VEH. M48A3 (HULL) for FM radio sets.

NOTES:

- 1—LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690713 AS SHOWN, AND WELD IN PLACE. ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASS'Y. THEN ATTACH RESILIENT MOUNTS, USING HARDWARE PROVIDED WITH MX-7778/GRC. SEE FIG. 1-22
CAUTION: TURN OFF VEHICLE MASTER SWITCH.
- 2—REMOVE CABLE ASS'Y S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y S.P. CX-10613/G TO POWER RECEPTACLE ON SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24 VDC VEHICLE POWER RECEPTACLE AS SHOWN.
- 3—LOCATE AND WELD TWO(2) WELD PADS PER DWG. SC-B-27844, 1/4-28'S TO CEILING OF CAB, AS SHOWN, FOR SECURING CABLE ASS'Y S.P. CX-4720/VRC IN PLACE.
- 4—CLAMP CABLE ASS'YS TO EXISTING SPACERS OR HOLES.
- 5—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23



SEE FIG. 1-22
SEE FIG. 1-23

EL1TA022

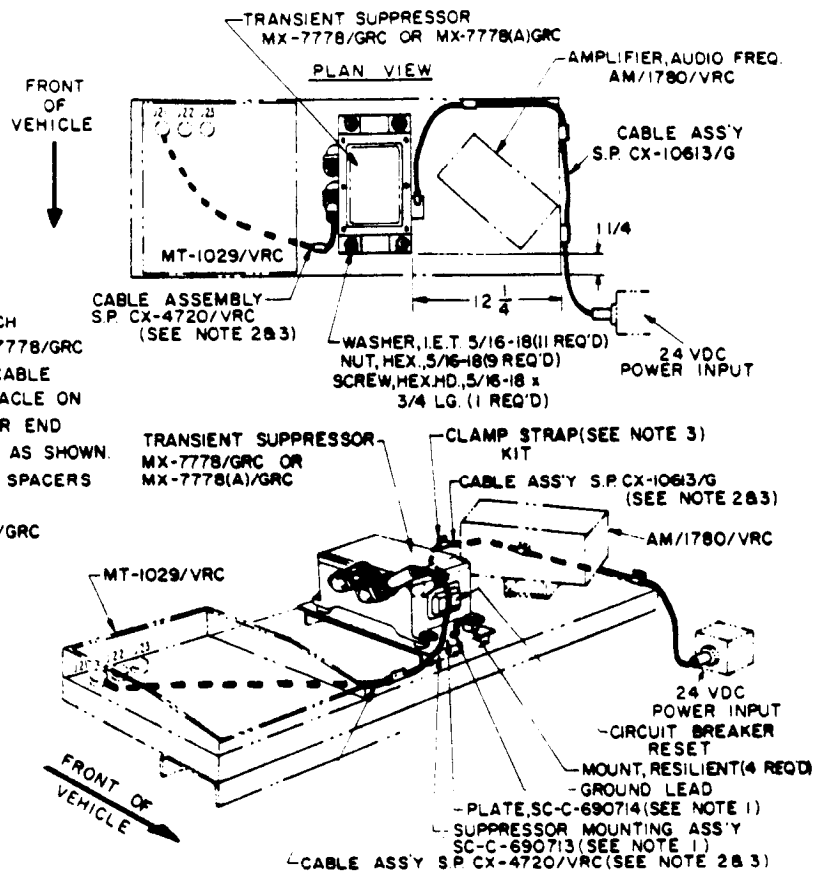
Figure 1-18. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicle M578, for FM radio sets.

NOTE

1—LOCATE SUPPRESSOR MOUNTING ASS'Y SC-C-690713 AS SHOWN, AND WELD IN PLACE. ATTACH PLATE SC-C-690714 TO SUPPRESSOR MOUNTING ASS'Y THEN ATTACH RESILIENT MOUNTS USING HARDWARE PROVIDED WITH MX-7778/GRC. SEE FIG. 1-22.

CAUTION: TURN OFF VEHICLE MASTER SWITCH.

- 2—REMOVE CABLE ASS'Y S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE AND ATTACH TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC AS SHOWN. THEN CONNECT ONE END OF CABLE ASS'Y S.P. CX-10613/G TO POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC, CONNECT OTHER END TO 24VDC VEHICLE POWER RECEPTACLE AS SHOWN.
- 3—CLAMP CABLE ASSEMBLY TO EXISTING SPACERS OR HOLES.
- 4—IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF MX-7778/GRC REFER TO FIG. 1-23.



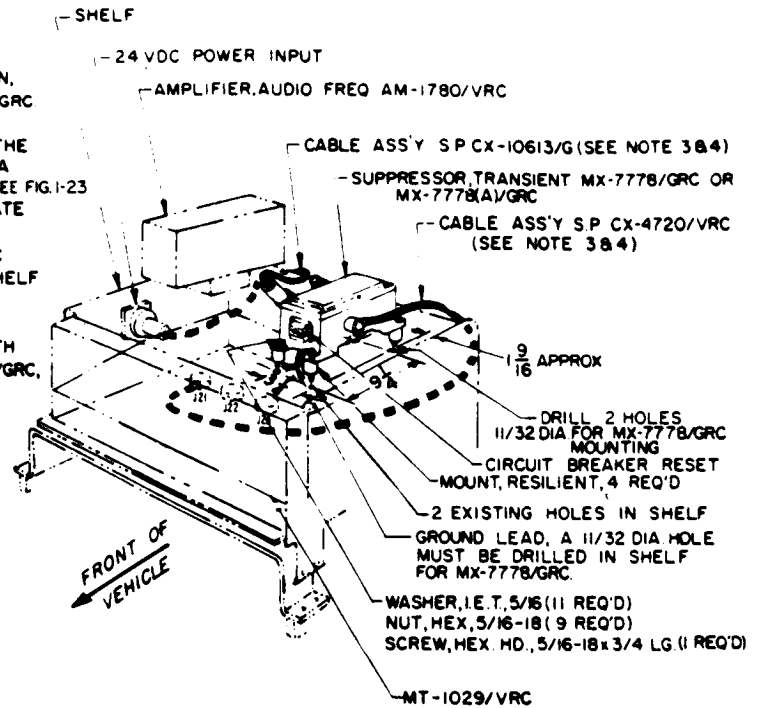
FI1TA023

Figure 1-19. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in Amplifier Vehicle, Launcher, Bridge in (AVLB) VEH. M48A2 (HULL). for FM radio sets.

CAUTION: TURN OFF ENGINE AND VEHICLE MASTER SWITCH

NOTES

- 1— USING THE TWO EXISTING MOUNTING HOLES ON RADIO SHELF AS A REFERENCE POINT, LOCATE AND DRILL TWO ADDITIONAL 11/32" DIA HOLES, AS SHOWN, FOR MOUNTING TRANSIENT SUPPRESSOR MX-7778/GRC IF TRANSIENT SUPPRESSOR MX-7778(A)/GRC IS SUPPLIED IN LIEU OF THE MX-7778/GRC, CENTER THE MX-7778(A)/GRC ON THE RADIO SHELF IN THE AREA PREVIOUSLY ALLOCATED FOR THE MX-7778/GRC, SEE FIG. 1-23 USING THE MX-7778(A)/GRC AS A TEMPLATE, LOCATE AND DRILL FOUR (4) 9/32" DIA. MOUNTING HOLES.
- 2— INSTALL RESILIENT MOUNTS ON THE MX-7778/GRC OR MX-7778(A)/GRC AND MOUNT UNIT TO RADIO SHELF USING PROVIDED HARDWARE. TO GROUND THE MX-7778/GRC LOCATE AND DRILL A 11/32" HOLE ON THE RADIO SHELF, AS SHOWN, AND SECURE WITH PROVIDED HARDWARE TO GROUND THE MX-7778(A)/GRC, LOCATE & DRILL A 9/32" HOLE ON RADIO SHELF AND SECURE GROUND STRAP WITH PROVIDED HARDWARE.
- 3— REMOVE CABLE ASSEMBLY S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24V VEHICLE POWER RECEPTACLE & ATTACH PLUG TO 90° ELBOW RECEPTACLE ON THE MX-7778/GRC OR MX-7778(A)/GRC, AS SHOWN. THEN CONNECT ONE END OF CABLE S.P. CX-10613/G TO POWER RECEPTACLE ON THE SIDE OF MX-7778/GRC OR MX-7778(A)/GRC CONNECT OTHER END TO 24V VEHICLE POWER RECEPTACLE, AS SHOWN.
- 4— CLAMP CABLE ASSEMBLIES INTO POSITION USING EXISTING SPACERS OR HOLES.



SEE FIG. 1-23
EL1TA024

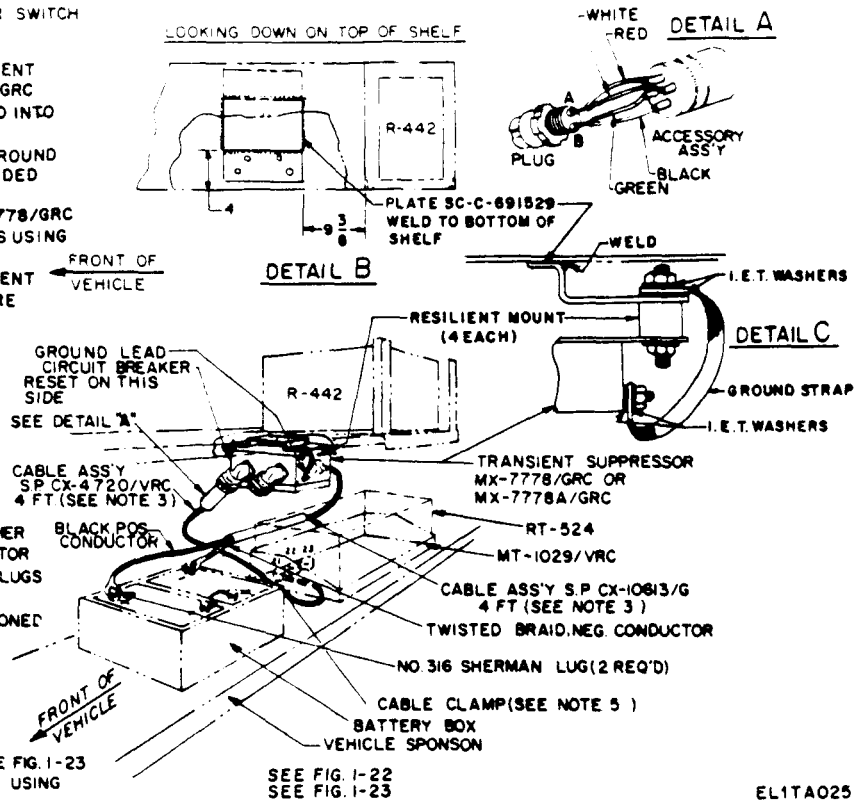
Figure 1-20. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778(A)/GRC in Combat Engineering Vehicle M728, for FM radio sets.

CAUTION TURN OFF ENGINE & VEHICLE MASTER SWITCH

NOTES

- 1--- CENTER SUPPRESSOR PLATE FOR TRANSIENT SUPPRESSOR MX-7778/GRC OR MX-7778A/GRC ON UNDERSIDE OF RADIO SHELF AND WELD INTO PLACE AS SHOWN DETAIL "B".
- 2--- INSTALL RESILIENT MOUNTS (4EA) AND GROUND STRAP ON MOUNTING PLATE WITH PROVIDED HARDWARE SEE DETAIL "C".
INSTALL TRANSIENT SUPPRESSOR MX-7778/GRC OR MX-7778A/GRC ON RESILIENT MOUNTS USING PROVIDED HARDWARE SEE DETAIL "C".
INSTALL GROUND STRAP ON THE TRANSIENT SUPPRESSOR WITH PROVIDED HARDWARE SEE DETAIL "C".

- 3--- REMOVE CABLE ASS'Y S.P. CX-4720/VRC (P/O RADIO SET HARNESS) FROM 24 V VEH BATTERIES. DISCONNECT PLUG & ACCESSORY ASS'Y FROM CABLE ASS'Y S.P. CX-10613/G AND SET ASIDE. SOLDER TWO(2) NO 316 SHERMAN LUGS, ONE TO THE BLACK POSITIVE CONDUCTOR, THE OTHER TO THE TWISTED BRAID NEGATIVE CONDUCTOR AND THEN ATTACH THE TWO(2) SHERMAN LUGS TO BATTERY, AS SHOWN.
- 4--- PLACE PLUG & ACCESSORY ASS'Y MENTIONED ABOVE ON CABLE ASS'Y S.P. CX-4720/VRC. CONNECT RED & WHITE CONDUCTORS TO PIN A, GREEN & BLACK CONDUCTORS TO PIN B OF PLUG, SEE DETAIL "A". NEXT ATTACH PLUG & ACCESSORY ASS'Y TO 90° DEGREE ELBOW LOCATED ON SIDE OF MX-7778/GRC, AS SHOWN, MX-7778A/GRC SEE FIG. 1-23
- 5--- CLAMP CABLE ASSEMBLIES TO POSITION USING EXISTING SPACERS OR HOLES.



EL1TA025

Figure 1-21. Installation instructions for Electrical Transient Suppressor MX-7778/GRC, or MX-7778A/GRC in vehicle M163, for FM radio sets.

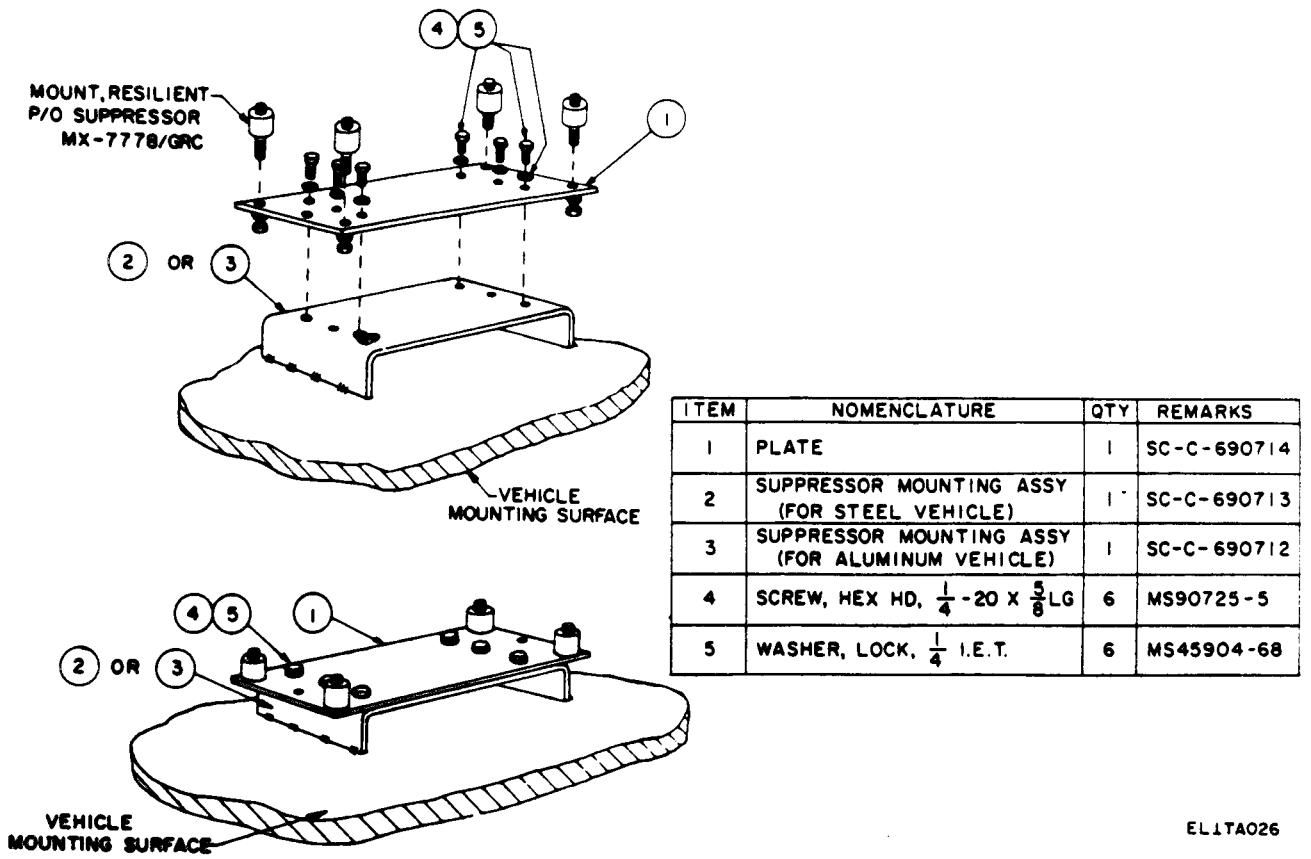
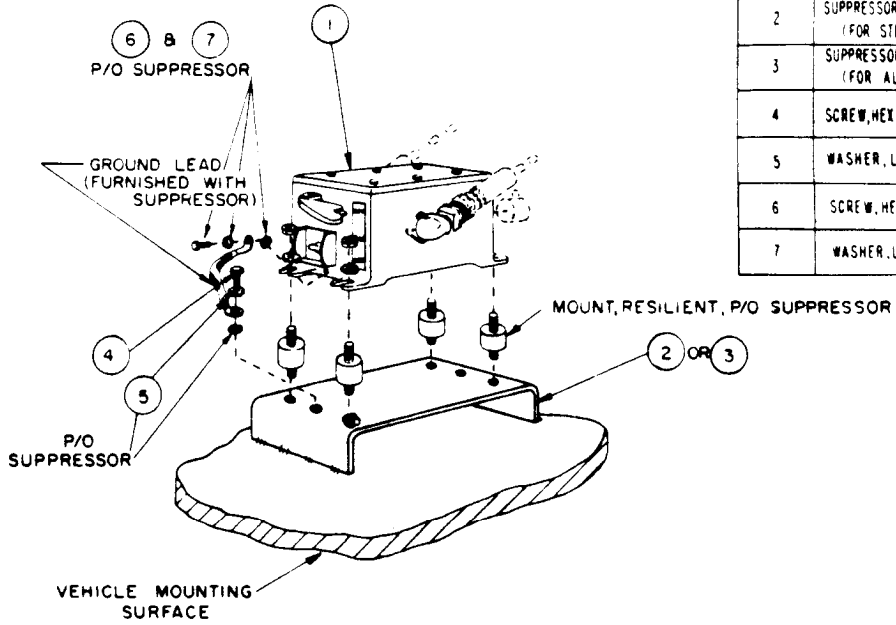


Figure 1-22. Exploded parts view of installation kit components for MX-7778/GRC.



ITEM	NOMENCLATURE	QTY	REMARKS
1	SUPPRESSOR MX-7778(A)/GRC	1	
2	SUPPRESSOR MOUNTING ASSY (FOR STEEL VEHICLE)	1	SC-C-690713
3	SUPPRESSOR MOUNTING ASSY (FOR ALUMINUM VEH.)	1	SC-C-690712
4	SCREW, HEX HD., 1/4-20 X 5/8 LG.	1	
5	WASHER, LOCK, 1/4 I.E.T.	2	
6	SCREW, HEX HD., 6-32 X 3/8 LG.	1	
7	WASHER, LOCK, 6-32	2	

EL1TA027

Figure 1-23. Exploded parts view of installation kit components for MX-7778A/GRC.

By Order of the Secretary of the Army:

Official:

PAUL T. SMITH

Major General United States Army

The Adjutant General

FRED C. WEYAND

General, United States Army

Chief of Staff

DISTRIBUTION:

**To be distributed in accordance with DA Form 12-51, TB requirements for MX.
7778/GRC.**

