

TRUCK UTILITY LIGHTWEIGHT MC2 - LANDROVER SERIES 3 - ALL TYPES
FRONT BUMPER BAR MOUNTING

MODIFICATION INSTRUCTION

Reference: A. MEA Signal HVH AUTO 4568 of 31 Oct 86.

Issue of this instruction is authorized by the CONMEA.

Introduction

1. This instruction details the action required to overcome problems of weld failure and cracking occurring in the front bumper bar mounting brackets.

Notes:

- Vehicles already modified in accordance with Reference A and identified by a white horizontal stripe painted across the face of the front air lift brackets, do not need to be completely reworked as detailed in this instruction. These vehicles need only be modified as detailed in subparagraph 7g and 7h.
- NSN and Designation used in this instruction were current at the date of issue. If twelve months or more have expired since issue, the NSN should be checked for supersession.

General

- Estimated Manhours to Perform. 5.0 (initial planning only).
- Priority. Group 1.
- Modification to be Applied to. All subject vehicles.
- Item Affected. Front Bumper bar mounting brackets.
- Action Required. By RAEME workshops authorized to carry out unit, field and base repairs in accordance with WKSP A 850.

TABLE 1 - STORES REQUIRED (To be demanded through normal supply channels)

Item	NSN	Designation	Qty per Equip
1.	3439-66-016-2218	ELECTRODE, WELDING, MILD STEEL, E4113 2.5MM DIA	As Required
2.	3439-66-033-0215	ELECTRODE, WELDING, MILD STEEL, ER70S-4, 1.2MM DIA	As Required
3.	6830-66-118-5919	ARGON TECHNICAL CODE 0-65 (ARGOSHIELD - 51)	As Required
4.	5306-66-019-3898	BOLT, MACHINE, UNF, 2A, SAE GRADE 5 STEEL, HEX HD, ZINC COATED, 1/2 INCH BY 4-1/2 INCH LG	4
5.	5310-66-019-3960	NUT, PLAIN, HEXAGON, UNF, 2B, STEEL FORMED, ZINC COATED, 1/2 INCH	4
6.	5310-66-016-5993	WASHER, LOCK, SPRING, STEEL, SINGLE TURN, RECTANGULAR SECTION, CAD PLATED 1/2 INCH BOLT SIZE	4
7.	9515-66-095-8990	METAL, SHEET, CARBON, STEEL, HOT ROLLED, GRADE HRC, 5MM THK BY 900MM W BY 2.40M LG	As Required
8.	5306-66-019-3784	BOLT, MACHINE, UNF, 2A, SAE GRADE 5 STEEL, HEX HD, ZINC COATED, 3/8 INCH BY 1-1/2 INCH LG	8
9.	5310-66-019-3958	NUT, PLAIN, HEXAGON, UNF, 2B, STEEL, FORMED, ZINC COATED, 3/8 INCH	8
10.	5310-66-016-5996	WASHER, LOCK, SPRING, STEEL, SINGLE TURN, RECTANGULAR SECTION, CAD PLATED, 3/8 INCH BOLT SIZE	8

Detail

7. To carry out the modification proceed as follows:
- Disconnect the vehicle battery and the wiring from the rear of the alternator. On FFR vehicles, disconnect the radio batteries, vehicle alternator and 28 volt generator wiring. Remove all communications equipment from the vehicle.
 - Remove the front bumper bar assembly from the vehicle.
 - Clean and inspect the condition of all welds securing the bumper bar mounting brackets to the L and RH chassis rails as shown in Fig 1.
 - Clean and inspect the bumper bar mounting bracket flanges (Fig 2) for signs of cracking.

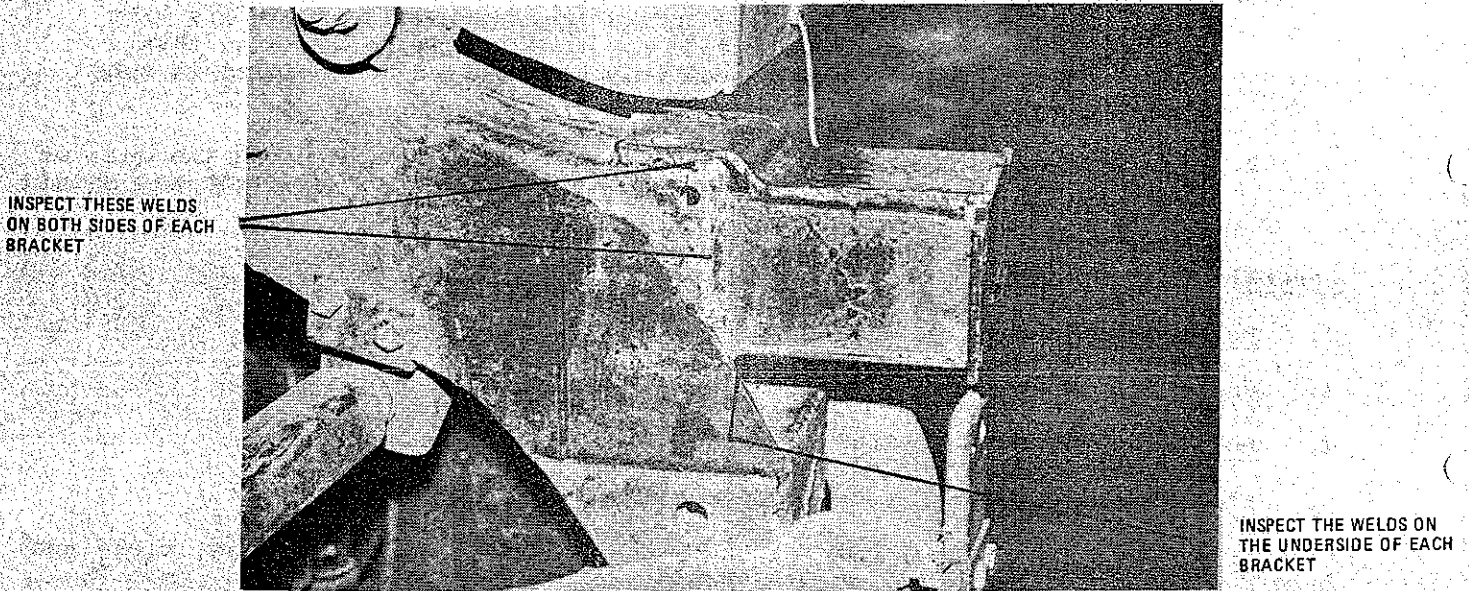


FIG 1 - LH BUMPER BAR MOUNTING BRACKET

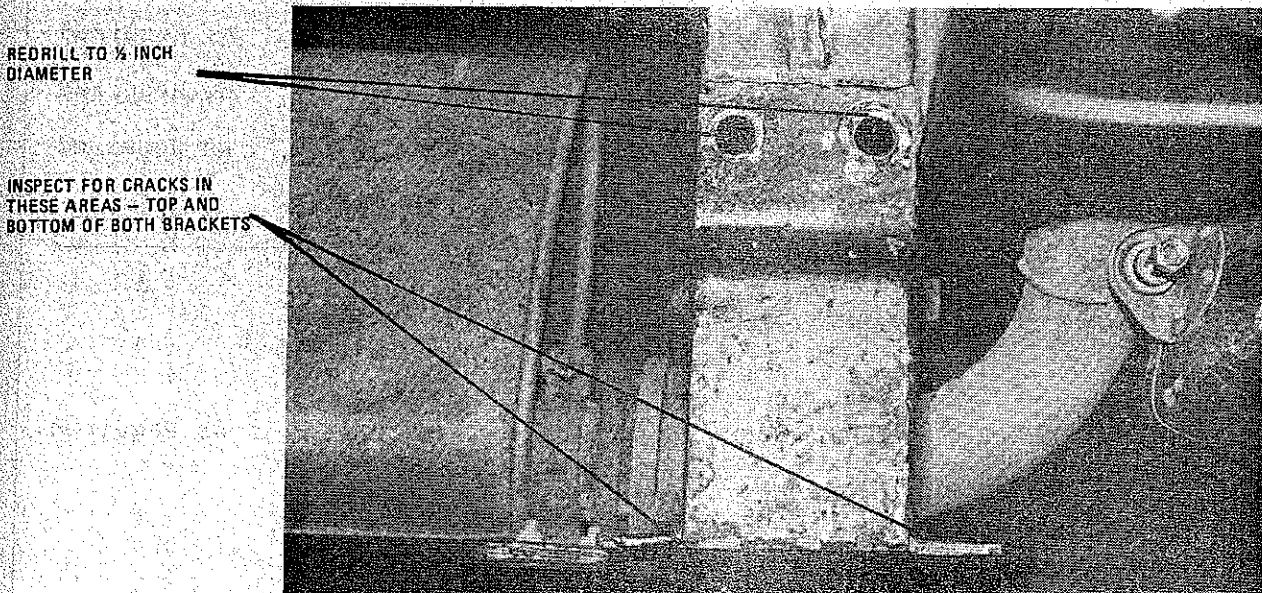


FIG 2 - LH BUMPER BAR MOUNTING BRACKET

- e. Where the condition of any weld is in doubt or where cracking has been identified, repair by re-welding.
- f. All welding repairs are to be carried out in accordance with WKSP B 002-1 employing either Manual Metal Arc Welding (MMAW) and item 1 from Table 1 or Gas Metal Arc Welding (GMAW) using items 2 and 3 from Table 1.
- g. Re-drill the existing two holes in the ends of each chassis rail as shown in Fig 2 to 1/2 inch diameter.
- h. Fit item 4 from Table 1 to the holes in the ends of the chassis rails as shown in Fig 3 and secure as shown in Fig 4 using items 5 and 6 from Table 1. Torque to 95Nm (70 ftlbs).

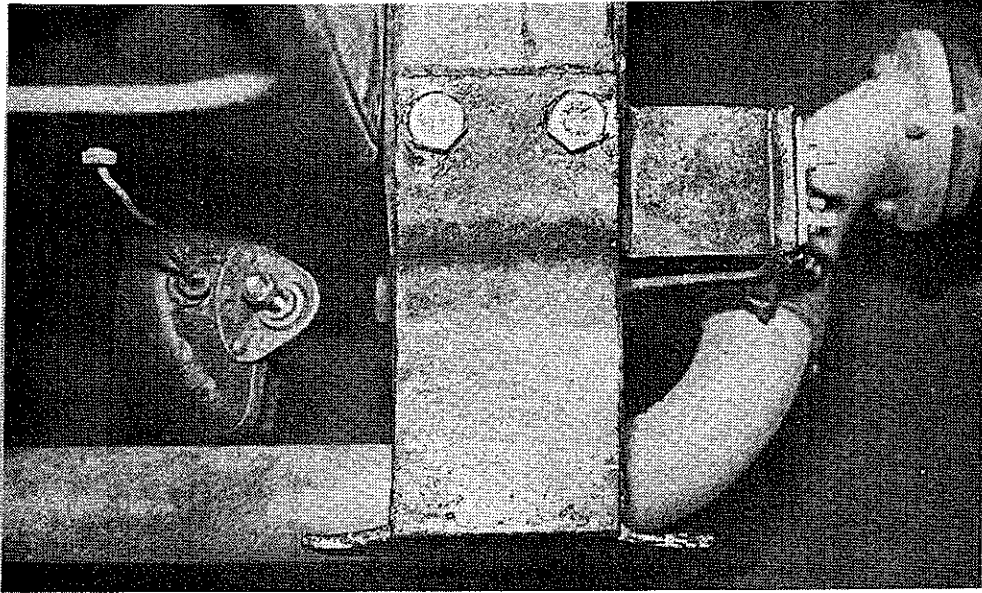


FIG 3 - BOLTS FITTED TO RE-DRILLED HOLES IN END OF
RH CHASSIS RAIL

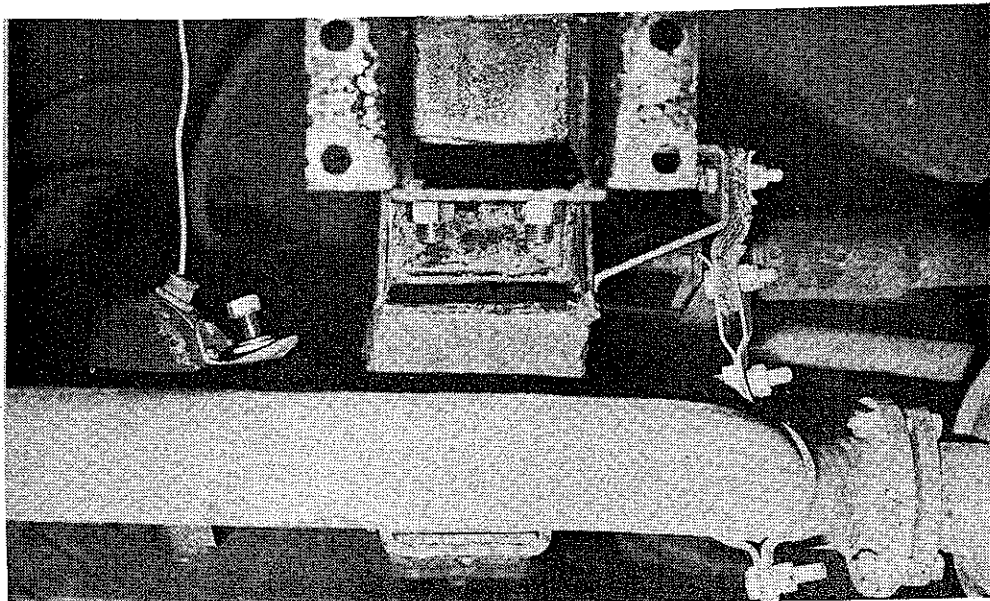
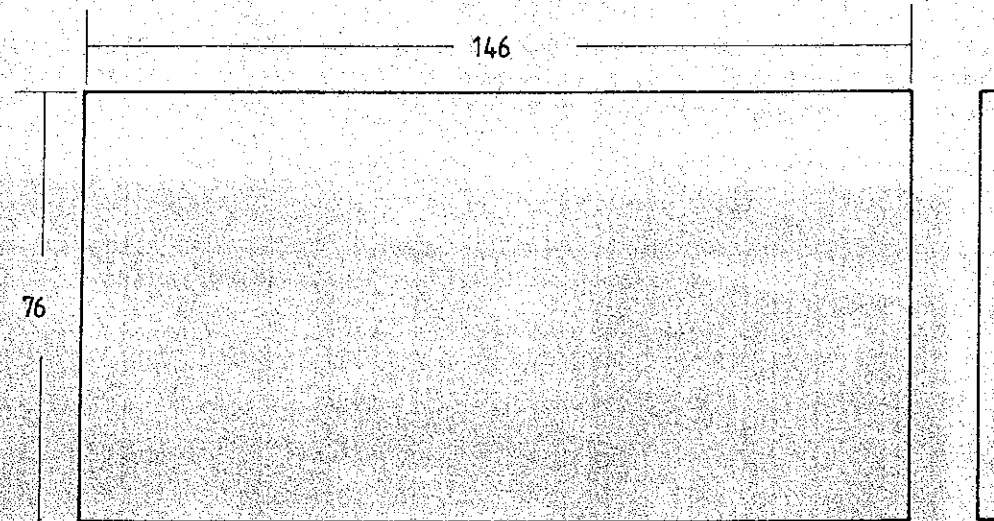


FIG 4 - BOLTS SECURED IN END OF RH CHASSIS RAIL

Note:

1. Some difficulty may be encountered on some vehicles in fitting the bolts (item 4) into the outer bolt holes due to the close proximity of the front fenders.
- i. Using item 7 from Table 1 manufacture two reinforcement plates as detailed in Fig 5. Position one plate against the end of each mounting bracket and using the existing holes in the mounting bracket flanges as a template, mark and drill the four mounting bolt holes in each reinforcement plate.



NOTE: DIMENSIONS ARE IN MM AND ARE APPROXIMATE ONLY

FIG 5 - BUMPER BAR MOUNTING BRACKET REINFORCEMENT PLATE

- j. Remove all rust and paint from the face and edges of the mounting bracket flanges.
- k. Position one plate against the end of each mounting bracket as shown in Fig 6. Using either of the methods identified in sub-paragraph 7f, weld all round as shown in Fig 7.

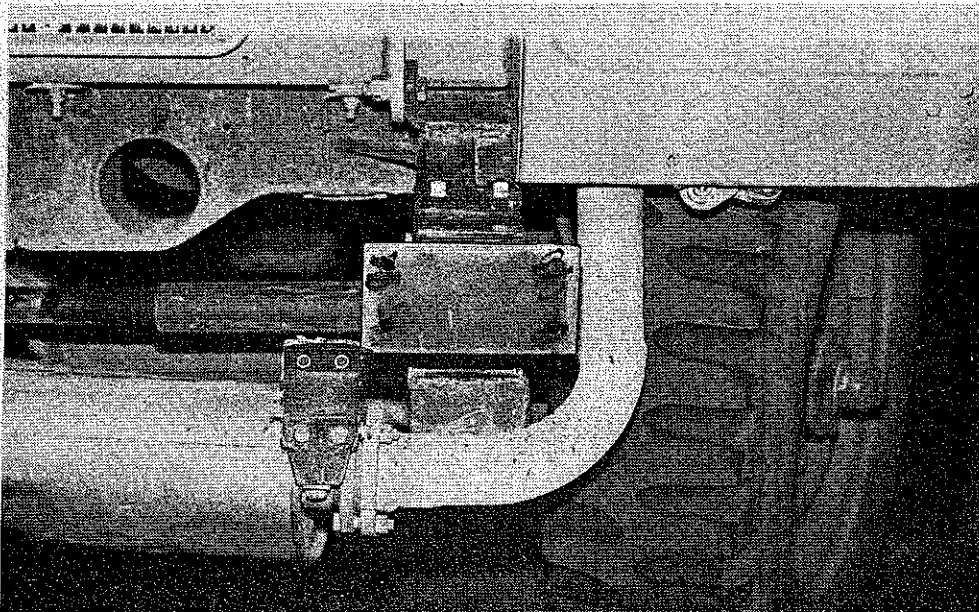


FIG 6 - REINFORCEMENT PLATE CORRECTLY POSITIONED ON THE END OF THE LH BUMPER BAR MOUNTING BRACKET

GRIND BACK THIS
WELD TO PERMIT
RE-FITTING OF THE
BUMPER BAR

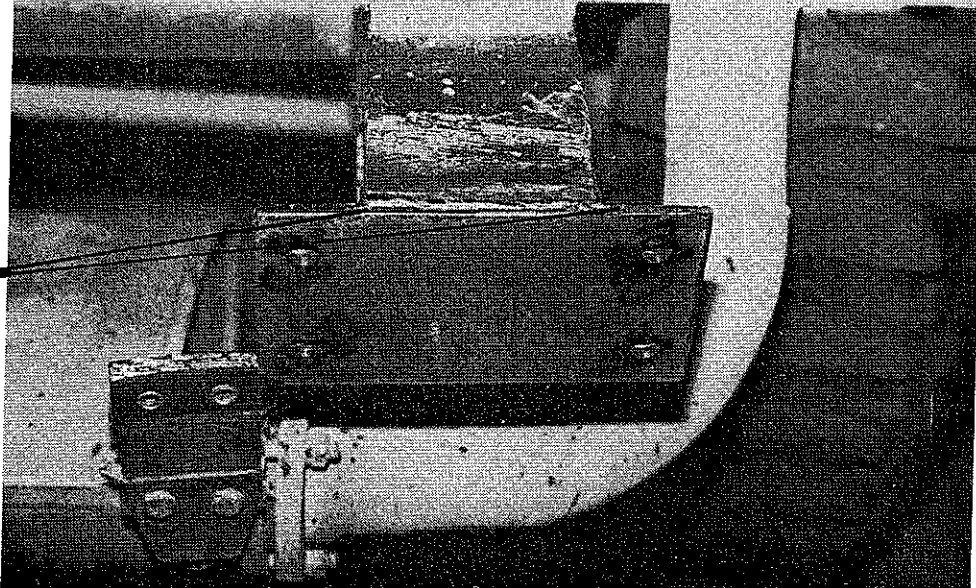


FIG 7 - REINFORCEMENT PLATE WELDED IN POSITION

Note:

1. If necessary grind back the top welds as shown in Fig 7 to permit the bumper bar to be refitted.
 1. Paint all reworked areas in accordance with WKSP B 700. Those vehicles whose front air lift brackets are painted with a white horizontal stripe are also to be painted in accordance with WKSP B 700.
 - m. Refit the front bumper bar assembly using items 8, 9 and 10 from Table 1.
 - n. Reconnect all wiring and batteries that were disconnected in sub-paragraph 7a.
8. Modification Record Plate. On completion of the modification deface the numeral 21 on the vehicle modification plate. Enter the details of this modification in Part 3 of the vehicle Record Book for Service Equipment TGM 120.

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