

TRUCK MEDIUM MC2 UNIMOG - ALL TYPES

LIFTING AND TIE DOWN ATTACHMENTS

MODIFICATION INSTRUCTION

- Reference: A. Change Authority PCR B Veh 161/86
B. Logistic Command (EME Division) programme 9/86

Introduction

1. This instruction details replacement of the cast iron lifting and tie down attachments fitted to the subject vehicles with cast steel attachments. This will enable the vehicles to be flat towed using the emergency towing lugs.
2. Towing restrictions that currently apply to vehicles fitted with the cast iron attachments are cancelled on completion of this modification.

Note:

1. 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

3. Estimated Manhours to Perform. 2.0 (initial planning only).
4. Priority. Group 1 - Vehicles can be tasked for normal operations but are not to be flat towed.
5. Modification to be Applied to. Vehicles up to and including ARN 43219. Vehicles manufactured after this ARN have the cast steel brackets fitted in production.
6. Items Affected. Front Lift and Tie Down Attachments.
7. Action Required. By RAEME units authorised to carry out unit, field and base repairs in accordance with WKSP A 850.

TABLE 1 - STORES REQUIRED (To be demanded from 32 Supply Bn)

Item	NSN/DSN	MPN	Designation	Qty per Equip
1.	2510-66-130-1072	YA435.551.0043	COMBINED LIFTING TIE DOWN AND EMERGENCY TOWING EYE LH	1
2.	2510-66-130-1073	YA435.551.0143	COMBINED LIFTING TIE DOWN AND EMERGENCY TOWING EYE RH	1
3.	2510-97-221-1384	YA435.586.0055	LIFTING EYE AIR CERTIFICATION MODIFICATION KIT	As Required (Vehicles with Type 1 attachments only)
4.		435.551.01.52	SPACER WASHER 0.25MM THK	As Required
5.		435.551.02.52	SPACER WASHER 1.0MM THK	As Required

TABLE 2 - STORES REMOVED

(One mounting lug on each item is to be cut or broken prior to stores
being disposed of as scrap in accordance with GEN P Series)

Item	NSN	MPN	Designation	Qty per Equip
1.	2510-66-122-6429	435.551.07.43 or 435.551.09.43	LIFTING EYE RIGHT	1
2.	2510-66-120-4726	435.551.06.43 or 435.551.08.43	LIFTING AND TIE DOWN ATTACHMENT LEFT HAND	1

Detail

8. Inspect the attachments as detailed in VEH G 619-15 to ensure that they are the cast iron type (see also Figs 1, 2 and 3).

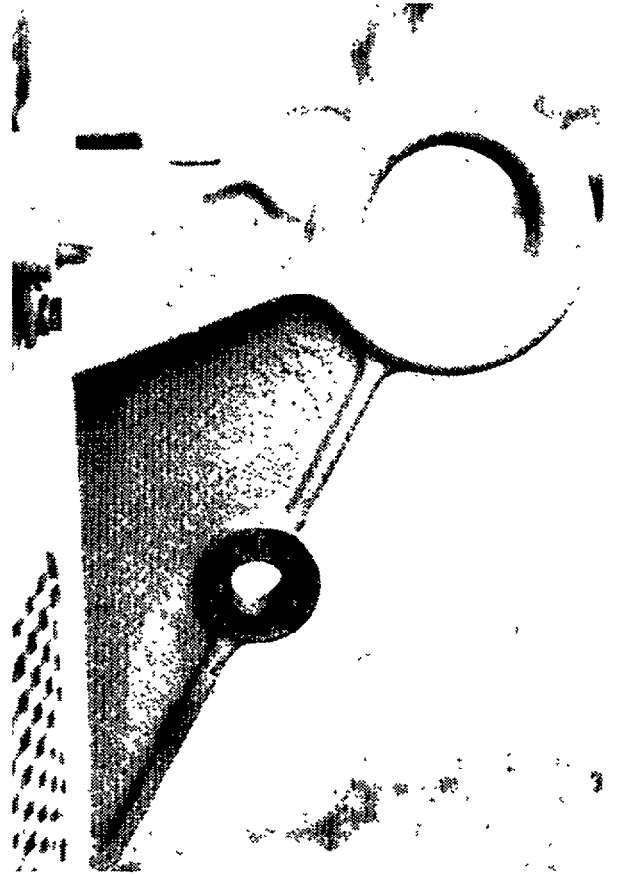
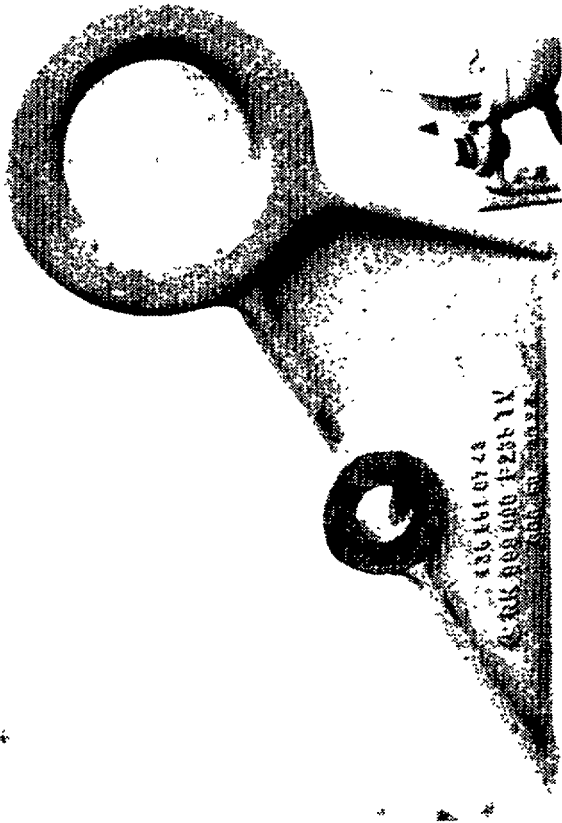


FIG 1 - CAST IRON LIFTING AND TIE DOWN ATTACHMENT TYPE 1

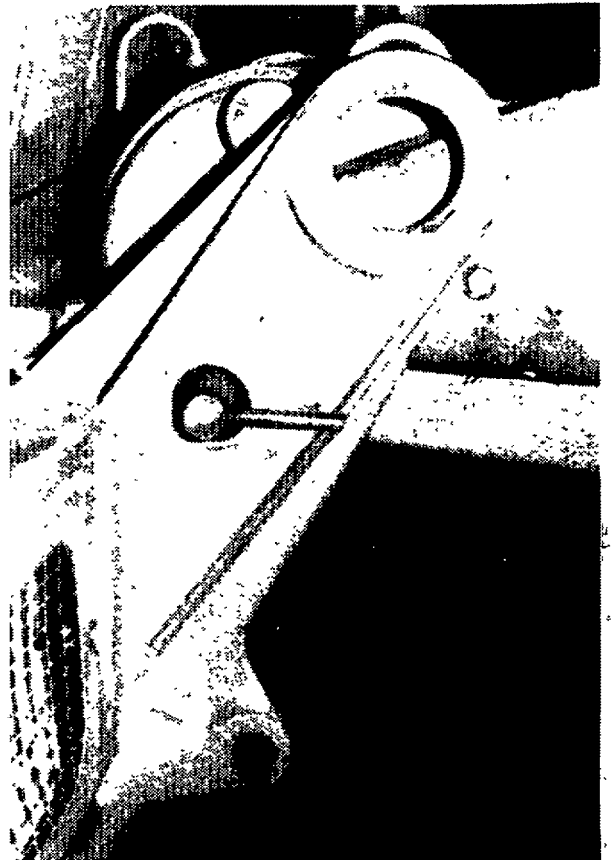
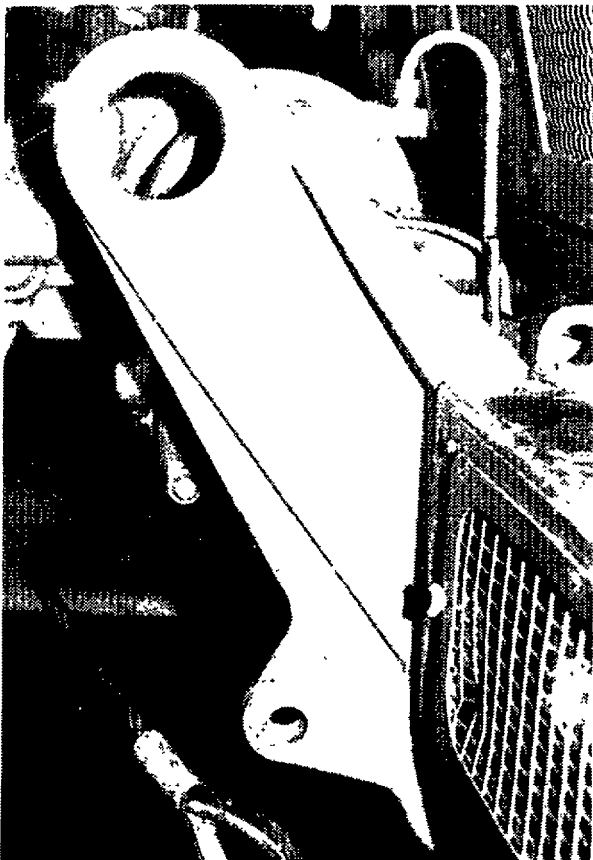


FIG 2 - CAST IRON LIFTING AND TIE DOWN ATTACHMENT TYPE 2

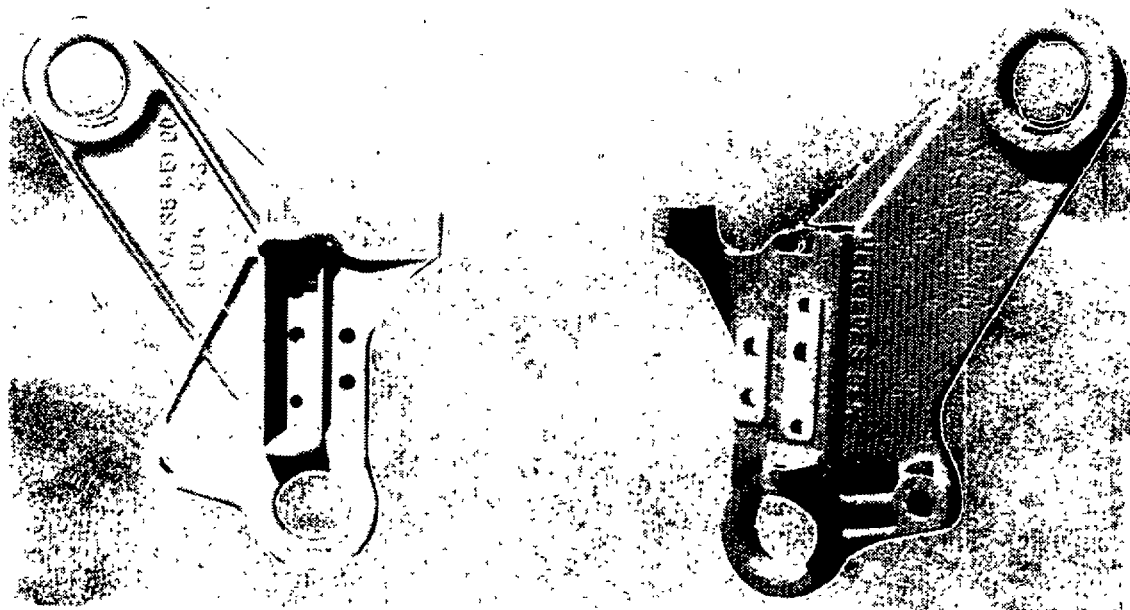


FIG 3 - CAST STEEL LIFTING AND TIE DOWN ATTACHMENT

9. Prior to removing Type 2 attachments it is necessary to confirm that the Lifting Eye Air Certification modification has been completed. This modification strengthens the attachment mounting system so that vehicles can be safely air lifted using the lifting eye. Most vehicles fitted with Type 2 attachments have been modified wide reference B and these can be identified as follows:

- a. The two centre horizontal mounting bolts are a smaller diameter than the lower bolt (see Fig 4).
- b. These smaller bolts will usually have 'M 10.9' on the head.
- c. The letter 'M' may be stamped on each chassis rail and on the centre of each lift tie down attachment.

Note:

1. Vehicles fitted with Type 2 attachments that do not have the Lifting Eye Air Certification modification are to be submitted to the nearest Mercedes Benz distributor together with the cast steel attachments (items 1 and 2 from Table 1) for modification in accordance with reference B. Units are to ensure that modification recording action is complete on return of the vehicle.

10. All vehicles fitted with Type 1 attachments (see Fig 1) are to have the mounting system modified by workshop personnel prior to installing the cast steel lifting eyes. Details of this modification are contained in paragraph 12.

11. To remove the cast iron attachments, proceed as follows:

- a. Remove the brush-guard, mount and grille.
- b. Remove the bumper segments by unbolting them from the headlamp console on the chassis frame, the radiator and the mudguard. Secure the headlamp console to the vehicle to prevent cable harness damage.
- c. Undo the bolts holding each attachment and remove them from the vehicle. Ensure that any spacer washers (items 4 and 5 from Table 1) are retained for further use.

Note smaller diameter bolts.

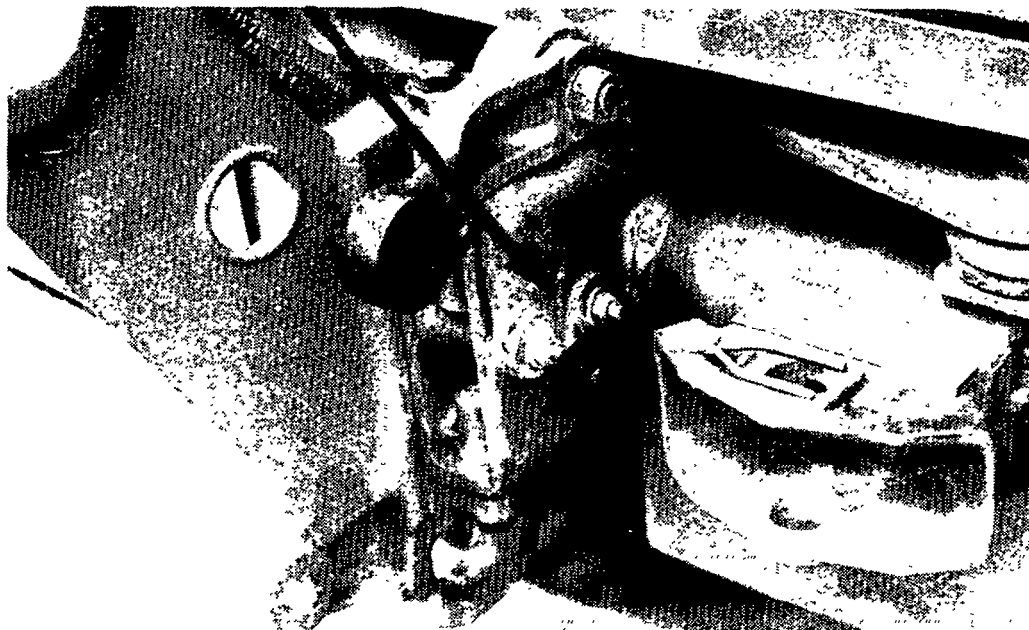


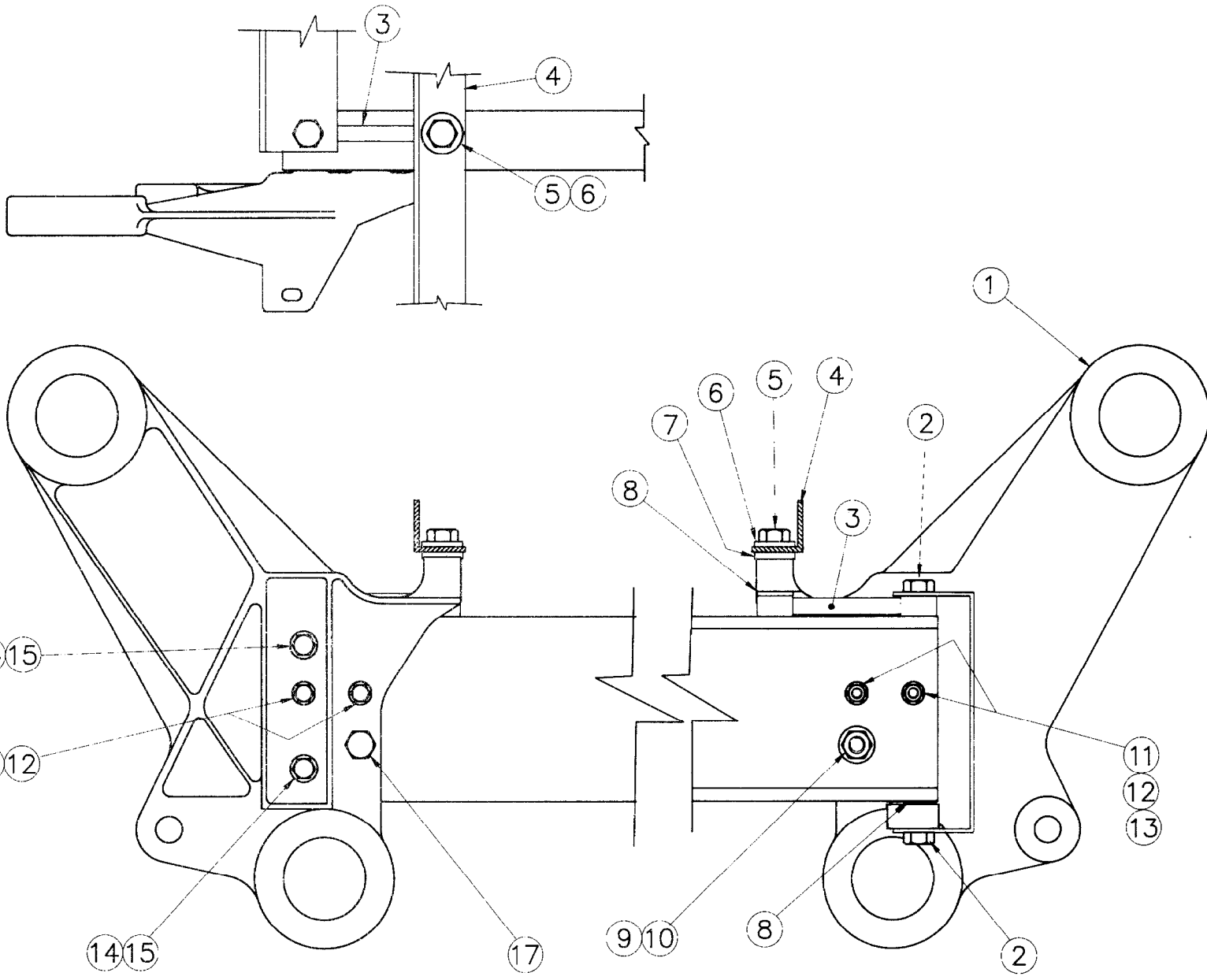
FIG 4 - IDENTIFICATION OF VEHICLES WITH THE LIFTING EYE AIR CERTIFICATION MODIFICATION COMPLETE

12. To complete the Lifting Eye Air Certification modification proceed as follows:
 - a. Using a very low speed drilling machine and an 18mm diameter three fluted core drill (a special drill with 3 cutting edges), enlarge the two centre bolt holes in the chassis rails (refer item 13 of Fig 5).
 - b. Insert the tension sleeves (item 16 from Table 3).
 - c. Discard those items replaced by the Lifting Eye Air Certification modification kit (see Fig 5 and Table 3).

TABLE 3 - PARTS LIST FOR LIFTING EYE AIR CERTIFICATION MODIFICATION KIT

Item	MPN	Designation	Qty per Equip
1.	000960 016123	SCREW (M16*85 DIN 960-10.9)	4
2.	435 551 05 53	SPACER BRACKET	2
3.	000960 016291	SCREW (M16*130 DIN 960-10.9)	2
4.	913004 010006	NUT (M10 N 13004-10)	4
5.	007349 010002	WASHER (10.5 DIN 7349 ST)	8
6.	001481 018015	TENSION SLEEVE (18*75 DIN 1481)	4
7.	000961 012043	SCREW (M12*35 DIN 961-10.9)	4
8.	000125 013019	WASHER (A 13 DIN 125 ST)	4
9.	000931 010147	SCREW (M10*100 DIN 931-10.9)	4
10.	435.551.01.52	SPACER WASHER 0.25MM THK	4
11.	435.451.02.52	SPACER WASHER 1.0MM THK	2

UNCONTROLLED WHEN PRINTED



1. LIFTING TIE DOWN ATTACHMENT
2. BOLT, M16 X 85MM (ITEM 1, TABLE 3) - W/O WINCH VARIANT ONLY
3. SPACER BRACKET (ITEM 2, TABLE 3) - W/O WINCH VARIANT ONLY
4. BRUSH GUARD MOUNTING BRACKET
5. BOLT, M16 X 130MM (ITEM 3, TABLE 3)
6. BRUSH GUARD TOP WASHER
7. BRUSH GUARD BOTTOM WASHER (CUT)
8. SPACER(S) (ITEMS 4 & 5, TABLE 1 AND ITEMS 10 & 11 TABLE 3)
9. NUT, M16
10. WASHER
11. NUT, M10 (ITEM 4, TABLE 3)
12. WASHER (ITEM 5, TABLE 3)
13. TENSION SLEEVE (ITEM 6, TABLE 3) (IN CHASSIS)
14. BOLT, M12 X 35MM (ITEM 7, TABLE 3)
15. WASHER (ITEM 8, TABLE 3)
16. BOLT, M10 X 100MM (ITEM 9, TABLE 3)
17. BOLT, M16 X 95MM

Note:

1. Items listed are for reference purposes only.

FIG 5 - CAST STEEL LIFTING EYE ASSEMBLY

13. Fit the cast steel attachment as follows:
- a. Position the attachment on the chassis rails and fit the five horizontal mounting bolts (items 14, 16 and 17 from Fig 5).
 - b. Fit the spacer washers (items 4 and 5 from Table 1) as shown in Fig 5 so that there is no space between the casting and the chassis rail at the upper and lower mounting points.
 - c. Install the remaining mounting bolts and tighten all the bolts as specified in Table 4.

TABLE 4 - TORQUE SPECIFICATIONS FOR THE LIFTING TIE DOWN
ATTACHMENT MOUNTING BOLTS

Serial	Description	Torque (Nm)
1.	VERTICAL SECURING BOLTS (ITEMS 2 AND 5, FIG 5)	240
2.	UPPER AND LOWER HORIZONTAL SECURING BOLTS (ITEM 14, FIG 5)	120
3.	CENTRE HORIZONTAL SECURING BOLTS (ITEM 16, FIG 5)	90

- d. Refit the bumper segments, grille and brush-guard.

14. Modification Record Plate. On completion of the modification deface the numeral 17 from the modification record plate situated on the right hand side of the drivers seat base. Trucks produced with the cast steel attachments will have the modification plate defaced by the manufacturer before delivery to Supply Battalions.

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