TRUCK, FUEL TANKER, HEAVY, MC3, MACK

NON-SLIP LADDER RUNGS AND TREAD PLATES

MODIFICATION INSTRUCTION

Introduction

1. This instruction details the fitting of non-slip ladder rung covers and tread plates. The current ladder rungs and tread plates offer poor grip for the operator’s boots particularly under wet, muddy and oily conditions.

2. Associated Publications. Reference may be necessary to the latest issue of the following documents:
   a. Technical Regulation of Army Materiel Manual (TRAMM);
   b. TRAMM, Volume 3, Section 2, Chapter 2, Fleet Engineering Change Management Process;
   c. MEMA, Volume 1, Chapter 9 – Army Unit Stores Accounts;
   d. MEMA, Volume 2, Chapter 20 – Accounting for Repair Parts; and
   e. DEF(AUST)5695 – Minimum Standards of Practice for the Storage, Handling and Quality Control of Fuels, Lubricants and Allied Products.

3. Authority. Engineering Change Order (ECO) ENG SPO (BLD) 045/03 is the authority to carry out this modification.

General

4. Modification Application. This modification is to be applied to all stocks of Truck, Tank, Fuel, Heavy, MC3 (Mack), NSN 2320-66-112-8852.

5. Items Affected. This modification alters the following assemblies:
   a. Rear Ladder,
   b. Ladder Drop,
   c. Cab Step LH, and
   d. Cab Step RH.

6. Priority – Group 2. All applicable equipment is to be modified:
   a. when next in a workshop for Heavy Repair;
   b. prior to issue from depot or pool stock.

NOTE

Where modification would delay priority issues of depot or pool stock, equipment may be issued unmodified providing the equipment record book is endorsed appropriately.

7. Action Required. Actions detailed in this instruction are to be performed by workshops (or unit tradespeople) authorised to carry out Heavy Repairs.

NOTE

On receipt of this instruction, enter all relevant information other than date completed in the modifications section of the Record Book for Service Equipment (GM 120).

8. Estimated Workhours. For initial planning purposes only, it is estimated that this modification will take one workhour to perform.

9. Stores Required. The stores required are listed in Table 1. Mod kits (Table 1, Item 1) are to be ordered on an as required basis direct from the supplier:

   Haulmark Trailers (Tanker Division)
   32 Suscatand Street
   ROCKLEA QLD 4106
   Tel: (07) 3277 8844

NOTE

NFM BLD will meet the cost of the mod kit free into store. Repair facilities need only order stock.

10. Special Equipment Required. In order to carry out this modification it will be necessary to obtain the following special tool:

   a. standard industrial cartridge gun for adhesive application.
Detail

11. Modification of Ladder and Cab Steps. The procedure is as follows:

   a. Ensure the tanker is empty of all product and is parked in a safe area away from any ignition source.
   b. Thoroughly clean all mud and oil residue from ladder rungs and tread plates.
   c. Allow all surfaces to dry.
   d. Open the mod kit (Table 1, Item 1) and remove contaminants on all bonding surfaces by using a solvent to wipe them clean.

   **CAUTION**

   USE NITRILE RUBBER GLOVES WHEN USING SOLVENT CLEANER OR APPLYING ADHESIVE.

   e. Insert the cartridge of Sikaflex 291 (Table 1, Item 2) into a cartridge gun and screw a nozzle onto the cartridge.
   f. Cut approximately 25 mm from the end of the nozzle leaving a hole of about 6 mm diameter.
   g. Select the bull nose tread plate (Table 1, Item 3) from the mod kit.
   h. Apply a generous bead of adhesive along the centre of the perpendicular bonding face of the bull nose tread plate.
   i. Place the tread plate into position at the top of the ladder by applying pressure both downward and towards the tanker.

   **CAUTION**

   ALWAYS ENSURE THAT CAUTION IS TAKEN ON LADDERS, AND WEAR APPROPRIATE PPE AND HARNESS IF REQUIRED.

   j. Using a 3 mm bit, drill four equidistant pilot holes through the centre of the tread plate ensuring they bite through the original plate underneath.
   k. Secure the tread plate using four Tek screws (Table 1, Item 4) (refer Figure 1).

   l. Select a tubular rung cover of (Table 1, Item 5) and apply three beads of adhesive to the bonding surface using two straight beads and a zigzag bead in the middle (refer Figure 2).

   m. Starting with the top ladder rung, place a tubular ladder rung cover over it and, while swivelling it back and forth, apply downward pressure until adhesive oozes out each end (refer Figure 3).
n. Ensure that the ladder rung cover is in the desired position and clean the excess adhesive from each end if required.

o. Wipe over the second top ladder rung with a solvent soaked rag and repeat the procedure for the remaining rungs.

p. Select the metal deck piece (Table 1, Item 6) and apply approximately four zigzag beads across the bonding surface as well as a single bead around the edge.

q. Place the metal deck piece squarely over the existing tread plate on the rear cross member and apply an even downward pressure until adhesive oozes from the edges (refer Figure 4).

r. Select the two long bull nose pieces (Table 1, Item 7) and screw them to the existing tread plates using the same method as described in Paras 13j and 13k. Use only three Tek screws on each side for this procedure (refer Figure 5).

s. Allow 6 to 8 hours for the adhesive to cure.

t. Clean up excess adhesive with acetone.

12. Post Modification Testing. Ensure that the adhesive is fully cured and that all non-slip surfaces are firmly anchored before releasing tanker from workshops.

13. Recording Action. On completion of the modification, the following action is to be taken IAW TRAMM, Volume 3, Section 2, Chapter 2, Annex D:

a. Deface the number 32 on the modification record plate.

b. Complete the modification details in the GM 120 – Record Book for Service Equipment.

c. Forward the modification completion details using form GM 119 – Advice of Change in Build State (TRAMM, Volume 3, Section 2, Chapter 3, Annex C) to:

   Fleet Manager Bulk Liquid Distribution
   ENG SPO, DMO
   Victoria Barracks, St Kilda Rd
   SOUTHBANK VIC 3006

d. The return should include the following information:

   (1) Modification No: EMEI Vehicle G 747-9

   (2) Unit:

   (3) Equip ARN:

   (4) Completion Date:

Table 1 – Stores Required

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<th>Item</th>
<th>NSN</th>
<th>Mfr Part No</th>
<th>Designation or Description</th>
<th>Unit of Issue</th>
<th>Qty per Kit</th>
<th>Qty per Equip</th>
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<td>Mod Kit – Non-slip Ladder Rungs and Tread Plates</td>
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END
Distribution List: VEH G 54.0 – 2 (Maint Level)
(Sponsor: ENG SPO, Bulk Liquid Distribution)