TRUCK, TANK WATER, HEAVY, MC3 – MACK

WEAR LIMITS AND INSPECTION OF THE TANKER BARREL BEARING MOUNTS, NSN 2320-66-112-8853

MISCELLANEOUS INSTRUCTION

This instruction is authorised for use by command of the Chief of Army. It provides direction, mandatory controls and procedures for the operation, maintenance and support of equipment. Personnel are to carry out any action required by this instruction in accordance with EMEI General A 001.

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GENERAL

Introduction

1. This instruction details the conduct of an annual inspection to determine the serviceability of the front and rear tanker barrel bearing mounts on the Mack R series TTW, NSN 66-112-8853. This inspection procedure was developed by the OEM, Holmwood Highgate.

Actions Required

2. The inspection is to be performed with the vehicle parked on flat level ground, and with no load in the tanker barrel.

3. The actions required during this inspection can be performed by technical maintenance organisations authorised to carry out Light, Medium or Heavy Grade repairs. The inspection procedure is to be performed by Army tradespersons Vehicle Mechanic (ECN 229) or their civilian equivalents.

NOTE

There are comparative measurements to be taken whilst force is applied to a crowbar or lever. It is therefore recommended that at least two tradespersons conduct the inspection.

4. To ensure measuring consistency, the measurements should be taken at the same point by the same tradesperson.

5. The specialist tools required to perform this inspection are a suitable crowbar of approximately 1 500 mm in length, a suitable timber wedge and timber packing. Minor differences in build states across the fleet may require slightly different size timber wedges and packing to suit different vehicles.

Task Recording

6. This inspection procedure has been incorporated into the following MILIS Standard Jobs:

a. 323 – Mack R Water Tanker Minor Svc & Insp;

b. 6642 – Mack R Water Tanker Major Svc & Insp; and

c. 6643 – Mack R Water Tanker Alt Major Svc & Insp.

Associated Publications

7. Reference may be necessary to the current issue of the following publications:

a. EMEI Workshop E series – Occupational Health and Safety Instructions;

b. Defence Safety Manual (SAFETYMAN)

c. EMEI Vehicle G 709 – Truck, Cargo, Heavy, MC3 – Mack – Servicing Instruction;

d. EMEI Vehicle G 753 – Truck, Tank Water, Heavy, MC3 – Mack – Light Grade Repair;

e. EMEI Vehicle G 754 – Truck, Tank Water, Heavy, MC3 – Mack – Field And Base Repair; and

f. RPS 02168 – Distributor, Water, Tank Type, Truck Mounted, 8 tonne chassis, Mack

DETAIL

Checking the Rear Centre Mount for Wear

8. Inspect the rear barrel bearing mount as follows:

a. On the passenger side of the vehicle, place suitable adequate timber packing material between the aluminium tank saddle and the mild steel tank mount at the rear of the tanker barrel to stop any rotational movement. Drive the packing gently home with a soft hammer to prevent slippage or ejection (Figure 1).

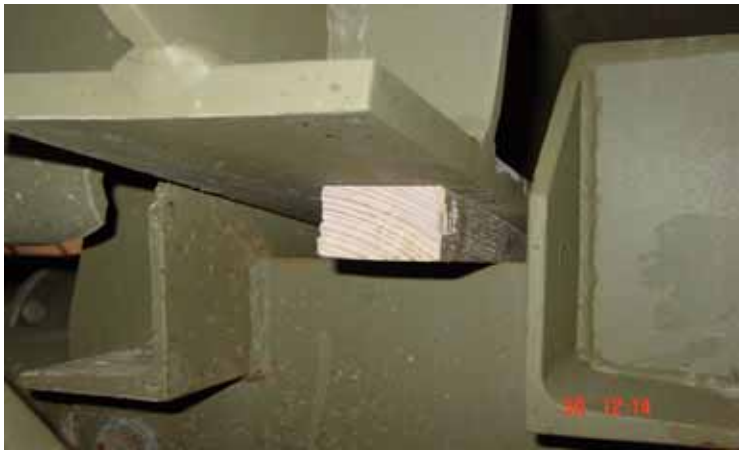

Figure 1 Wooden Wedge – Between Tank Saddle and Tank Mount Passenger Side

b. On the driver side of the vehicle, at the rear mount, measure and record the distance of the gap between the aluminium tank saddle and the mild steel tank mount, using a 12-inch steel rule (Figure 2).

Figure 2 Measuring and Recording the Gap – Driver Side

c. Using a 1 500 mm crowbar as a lever at the driver side rear mount , place the end of the crowbar in the gap between the tank saddle and the mild steel tank mount (Figure 3).

Figure 3 Crowbar Between Tank Saddle and Tank Mount – Driver Side

d. Apply sufficient force on the crowbar until the tank saddle stops rotating and, while still applying the same amount of force on the crowbar, measure and record the distance between the aluminium tank saddle and the mild steel tank mount.

e. The maximum permissible difference between the initial measurement taken (Paragraph 8.b) and the final measurement taken (Paragraph 8.d) is 4 mm. Repeat these steps several times to gain a consistent result.

f. If the recorded measurements exceed 4 mm, disassemble the rear mount and inspect the wearing components. Inspect the bearing, the 3-point mount pin, the bearing housing and the mild steel mount. Replace as required.

g. Grease the 3-point bearing upon completion of the inspection via the grease nipple depicted in Figure 4.

Figure 4 Grease the Rear Mount via the Grease Nipple

Checking the Two Front Mounts for Wear

9. The procedure for checking the two front barrel bearing mounts for wear is as follows:

a. **Checking the Driver Side Front Mounts.** Place adequate packing material between the rear tank saddle and the mild steel tank mount on the passenger side to stop any rotational movement of the tank barrel, as shown in Figure 1.

b. On the driver side of the vehicle, just rear of the front bearing mount, measure and record the distance between the top of the chassis rail and the underside of the aluminium leg section of the tank as shown in Figure 5.

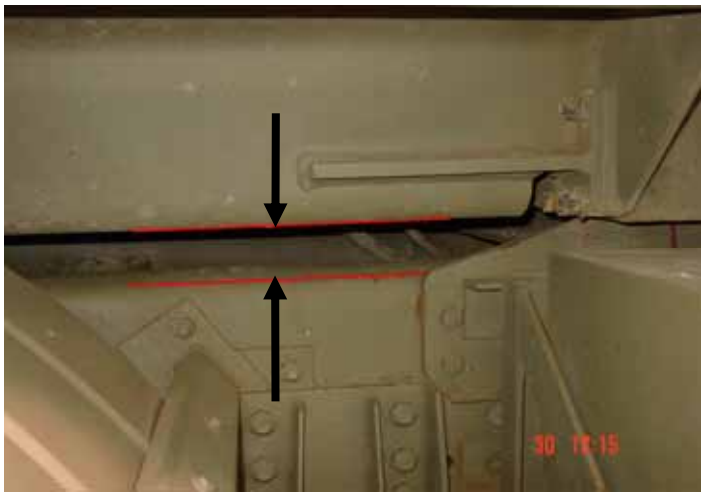

Figure 5 Measure the Gap Between the Chassis Rail and Tank Leg – Driver Side Front

NOTE

Take note of the position in which the measurement is taken, so that subsequent measurements can be taken in the same location.

c. Position a suitable piece of timber packing on the upper edge of the chassis rail and parallel to the chassis rail as shown in Figure 6.

Figure 6 Timber Packing and Crowbar – Driver Side Front Mount

d. Insert the tip of the crowbar between the timber packing and the aluminium tank leg as shown in Figure 6.

e. Apply sufficient force on the crowbar to take up the tank saddle rotational movement and, while still applying the same amount of force, measure and record the gap between the top of the chassis rail and the underside of the aluminium leg section. The measurement must be taken in the same position as Paragraph 9.b.

f. The maximum permissible difference between the initial measurement taken (Paragraph 9.b) and the final measurement taken (Paragraph 9.e) is 4 mm. Repeat these steps several times to gain a consistent result.

g. If the recorded gap difference exceeds 4 mm, disassemble the driver side front mount and inspect the wearing components. Inspect the bearing, the 3-point mount pin, the bearing housing and the mild steel mount. Replace as required.

h. Grease the 3-point bearing on the driver side mount block upon completion of the inspection. The grease nipple location is depicted in Figure 7.

Figure 7 Driver Side Front Mount – Grease Nipple

i. **Checking the Passenger Side Front Mount.** Repeat the inspection on the passenger side of the vehicle as per Paragraphs 9.a through 9.h.

j. Place the crowbar and timber packing for the passenger side as per Figure 8.

Figure 8 Timber Packing and Crowbar – Passenger Side Front Mount

k. On completion of the inspection, grease the 3-point bearing on the passenger side front mount block via the grease nipple depicted in Figure 9.

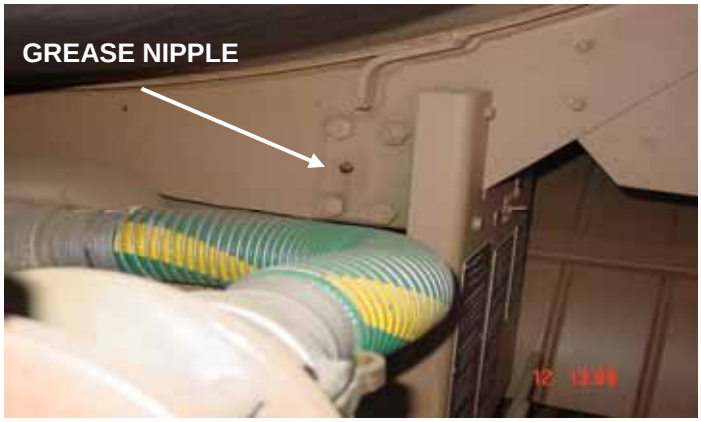

Figure 9 Passenger Side Front Mount – Grease Nipple

10. During the scheduled services, remove the eight bolts from the front bearing mounts and apply Silver Grade Anti-seize lubricant to the shaft and threads, then refit and tension the bolts.

Figure 10 Front Mount Bearing Block Bolts

END

Distribution List: **VEH G 55.0 – Code 1** (Maint Code)
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