

## TRUCK, FUEL TANKER, HEAVY, MC3 – MACK

### HOSE-REEL ISOLATION VALVES

## MODIFICATION 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.

### Introduction

1. This instruction details the fitting of isolating ball valves to the four hose-reel inlet pipes. In the present configuration there is no exposure-free means of isolating a faulty hose-reel, resulting in unacceptable downtime, safety and environmental implications.

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) ENGSP0 (BLD) 25/01 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. Hose-reel Pipe Assembly – Left Front;
- b. Hose-reel Pipe Assembly – Left Rear;
- c. Hose-reel Pipe Assembly – Right Front; and
- d. Hose-reel Pipe Assembly – Right Rear.

6. *Priority – Group 2.* All applicable equipment is to be modified:

- a. when next in a workshop for a Heavy Repair, or
- 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 RAEME or civilian workshops authorised to carry out Heavy Repairs. Metalsmith ECN 235-2 or civilian equivalent is authorised to undertake this modification.

### 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 four workhours to perform.

- a. *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:

PSI Supplies, Unit 10/277  
Middleborough Rd  
BOX HILL VIC 3128  
Tel (03) 9899 6444

### NOTE

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

9. *Items to be Removed.* The items to be removed are listed in Table 2. All stores removed are to be processed in accordance with the MEMA, Volume 1, Chapter 9, and MEMA, Volume 2, Chapter 20.

**10. Drawings Required.** The following drawings are available on request from:

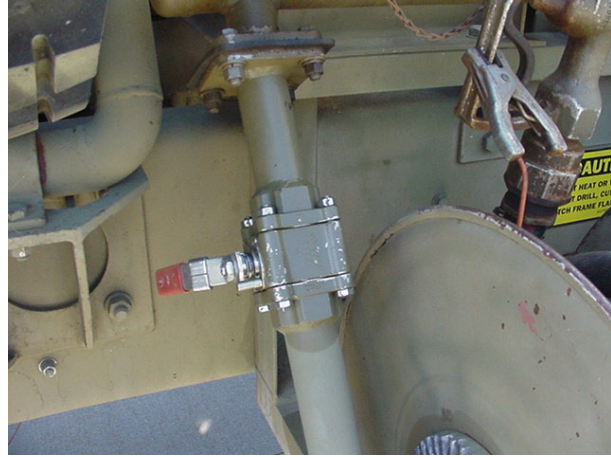
Drawing Office, Technical Publications  
Section, TDC, LEA  
Defence Plaza  
Level 5 (North), 661 Bourke St  
MELBOURNE VIC 3000  
Tel: (03) 9282 7540

- a. DRG No. TDC 3033-1 Titled: HRIV Modification Driver's Side – Front and Rear Passenger Side – Front.
- b. DRG No. TDC 3033-2 Titled: Mack TTF – Hose-reel Isolation Valve Modification – Assembly Driver's Side – Front.
- c. DRG No. TDC 3033-3 Titled: Mack TTF HRIV Modification – Assembly Driver's Side – Rear.
- d. DRG No. TDC 3033-4 Titled: Mack TTF HRIV Modification – Assembly Passenger Side – Front.
- e. DRG No. TDC 3033-5 Titled: Mack TTF HRIV Modification – Passenger Side Rear.
- f. DRG No. TDC 3033-6 Titled: Mack TTF HRIV Modification – Assembly Passenger Side – Rear.

#### Detail

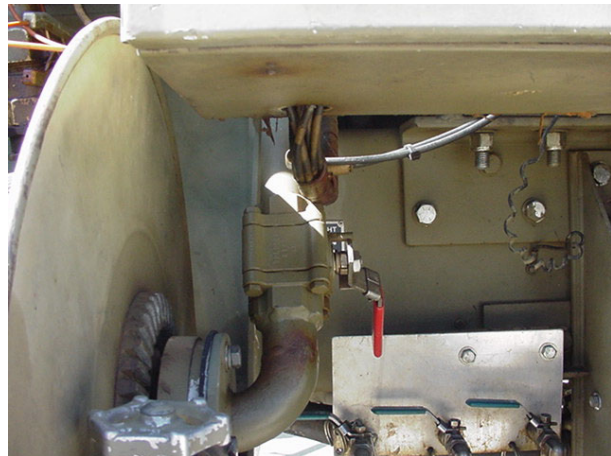
**11. Modification of Hose-reel Inlet Pipes.** The procedure is as follows:

- a. Ensure the tanker is empty of all product and is parked in a safe area, away from any ignition source.
- b. Remove the four hose-reel inlet pipes, noting the position they came from on the vehicle with a stencil or marker pen.
- c. Discard both the square and round nitrile rubber gaskets (Table 2, Items 1 and 2) and cover all outlets to prevent ingress of water and particulate matter.
- d. Steam clean the pipes inside and out to remove any residual fuel/oil residue.
- e. Cut and join the pipes, as described in the Drawing Package listed in Para 10.
- f. Orientate the LHF pipe to the ball valve (Table 1, Item 2), as shown in Figure 1, and assemble the pipe applying Loctite 243 to the male threads. Ensure that the spare wheel will not strike the valve handle when it is being lowered.



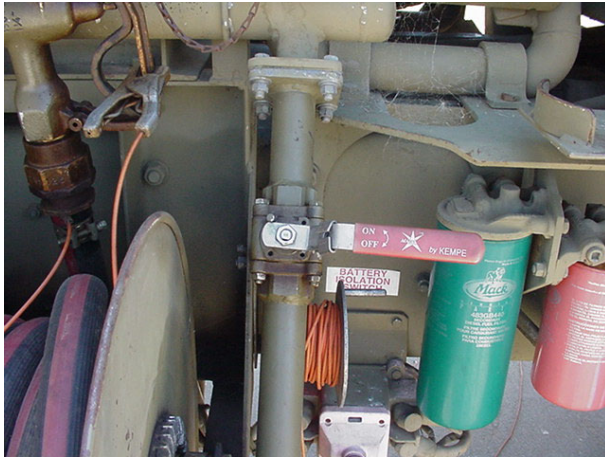
**Figure 1 – LHF Valve Fitted**

- g. Using gaskets (Table 1, Items 3 and 4), fit the pipe to the LHF Hose-reel and Header Pipe, applying Loctite 243 to the male threads.
- h. Orientate the LHR pipe to the ball valve (Table 1 Item 2), as shown in Figure 2, and assemble the pipe, applying Loctite 243 to the male threads.



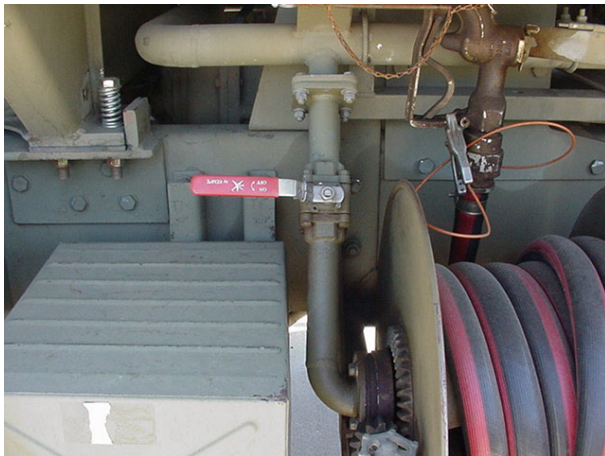
**Figure 2 – LHR Valve Fitted**

- i. Using gaskets (of Table 1, Items 3 and 4), fit the pipe to the LHR Hose-reel and Header Pipe, applying Loctite 243 to the male threads.
- j. Orientate the RHF pipe to the ball valve (Table 1, Item 2), as shown in Figure 3, and assemble the pipe, applying Loctite 243 to the male threads.



**Figure 3 – RHF Valve Fitted**

- k. Using gaskets (Table 1, Items 3 and 4), fit the pipe to the RHF Hose-reel and Header Pipe, applying Loctite 243 to the male threads.
- l. Orientate the RHR pipe to the ball valve (Table 1, Item 2), as shown in Figure 4, and assemble the pipe, applying Loctite 243 to the male threads.



**Figure 4 – RHR Valve Fitted**

- m. Using gaskets (Table 1, Items 3 and 4), fit the pipe to the RHR Hose-reel and Header

Pipe, applying Loctite 243 to the male threads.

- n. Remove the plastic ball valve handle cover and apply a silicon-based adhesive to the metal handle and replace the cover.
- o. Isolate all hose-reels by closing all isolation valves.

**12. Post Modification Testing**

- a. With the assistance of a qualified operator, partially fill the tank with product, enough to flood the Header Pipe Manifold.
- b. Pressurise the fuel system and open all hose-reel isolation valves. Observe for leaks and rectify if necessary.

**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 30 on the equipment 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 747-7
  - (2) Unit:
  - (3) ARN:
  - (4) Completion Date:

**Table 1 – Stores Required**

Item	NSN	Mfr Part No	Designation or Description	Unit of Issue	Qty per Kit	Qty per Equip
1	NIC	VEHG747-7	Kit, Modification, Hose-reel Isolation Valves (kit comprises Items 2, 3 and 4)	ea	-	1
2	NIC	833006FSRPL	1¼ Inch Mars Series 83 – 3-Piece Full Bore Stainless Steel Ball Valve	ea	4	-
3	NIC	FADFT-63	Gasket – Hose-reel to Main Header Pipe (Nitrile Rubber)	ea	4	-
4	NIC	FADFT-63D	Gasket – Hose-reel (Nitrile Rubber)	ea	4	-

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Table 2 – Items to be Removed

Item	NSN	Mfr Part No	Designation or Description	Qty per Equip
1	NIC	FADFT-63	Gasket – Hose-reel to Main Header Pipe (Nitrile Rubber)	4
2	NIC	FADFT-63D	Gasket – Hose-reel (Nitrile Rubber)	4

UNCONTROLLED WHEN PRINTED

**END**

Distribution List: **VEH G 54.0 – Code 4** (Maint Level)  
(EMEI Sponsor: ENG SPO, Bulk Liquid Distribution)  
Job No: ENG SPO (BLD) 25/01