

TRUCK, TRANSPORTER, FLOATING BRIDGE, MC3, MACK, LAUNCH AND RECOVERY VEHICLE (LRV), NSN 2320-66-131-6653

EQUIPMENT INSPECTION AND EXAMINATION DATA

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 EMEI details all criteria for the inspection and examination of the Launch and Recovery Vehicle (LRV) to establish its:

- a. operability, and
- b. functionality.

Associated Publications

2. Reference may be required to the current issue of the following publications to assist with inspection of the equipment:

- a. EMEI Vehicle G 780, Truck, Transporter, Floating Bridge, MC3, W/Winch, Mack, Launch and Recovery Vehicle (LRV), Data Summary;
- b. EMEI Vehicle G 782, Truck, Transporter, Floating Bridge, MC3, W/Winch, Mack, Launch and Recovery Vehicle (LRV), Technical Description;
- c. EMEI Vehicle G 783, Truck, Transporter, Floating Bridge, MC3, W/Winch, Mack, Launch and Recovery Vehicle (LRV), Light Grade Repair;
- d. EMEI Vehicle G 784, Truck, Transporter, Floating Bridge, MC3, W/Winch, Mack, Launch and Recovery Vehicle (LRV), Medium and Heavy Grade Repair;
- e. Technical Regulation of Army Materiel Manual (TRAMM).

3. Reference may be required to the current issue of the following publications to ensure safety of personnel and prevent damage to equipment:

- a. EMEI Workshop E series – Occupational Health and Safety Instructions;
- b. Defence Safety Manual, (SAFETYMAN);
- c. product Material Safety Data Sheets (MSDS); and
- d. relevant equipment User/Operator and Servicing Handbooks.

General

4. **General Condition.** The general condition of the LRV is to be inspected. A visual inspection is to be conducted paying particular attention to:

- a. Log Books;
- b. Cleanliness;
- c. Currency of servicing;
- d. Physical damage;
- e. Useability of lifting and tie-down points;
- f. POL leaks; and
- g. Complete and Fully Functional CES.

Inspection

5. Technical Inspection of the LRV is to occur as follows:
 - a. at Minor, Major and Alternate Major services of the cab/chassis;
 - b. when the Non Technical Inspection report has safety tasks or 'XX' items required to be rectified;
 - c. when a period of 12 months has expired from the last service or inspection;
 - d. when damage to equipment occurs;
 - e. as directed by higher authority; and
 - f. for equipment disposal action.
6. The Technical Inspection described in this document is also to be conducted as a part of any repair procedure to the lifting frame (undertaken at Light, Medium or Heavy Repair facilities). A full dimensional check of the LRV frame and mounting system is to be undertaken, both before and after repair, and the measurements recorded.
7. Technical Inspections of the launch and recovery system on the LRV are to be conducted by ECN 146-2 Fitter Armament or equivalent.
8. Technical Inspections of the LRV cab chassis are to be conducted by ECN 229 Vehicle Mechanic or equivalent.

Recording the Technical Inspection

9. At the completion of the Technical Inspection described in this document a Technical Inspection Report (Form GI 42) is to be completed or an Inspection Report completed and printed from the DDQ541 screen in MMM and inserted in the vehicle GM 120. After classification, the equipment is to be labelled utilising the applicable coloured label as defined in the TRAMM.

NOTE

The LRV Launch and Recovery System is only to be operated by qualified operators.

This EMEI does not preclude the requirement for inspectors to use their trade training, skills and experience when identifying faults on the Launch and Recovery System.

DETAIL

Dimensional Checks

10. The procedure for the LRV dimensional checks is as follows:
 - a. Place the LRV on level ground so that the chassis sub-frame, indicated as DATUM in Figure 2 is perfectly level; check with a spirit level.
 - b. Extend both forward and rear rollers to their full extension. Check that the wear plates contained within the roller arms are present. If not, then cease the dimensional checks and raise a work order for repair action.
 - c. Using a tape measure, record the dimensions A to D as shown in Figure 1 and detailed in Table 1.

Table 1 Dimensions Side View

Serial	Dimension	Measurement (mm)
1	A	5328.5 ± 5
2	B	40 minimum
3	C	2580 nominal
4	D	4340 nominal

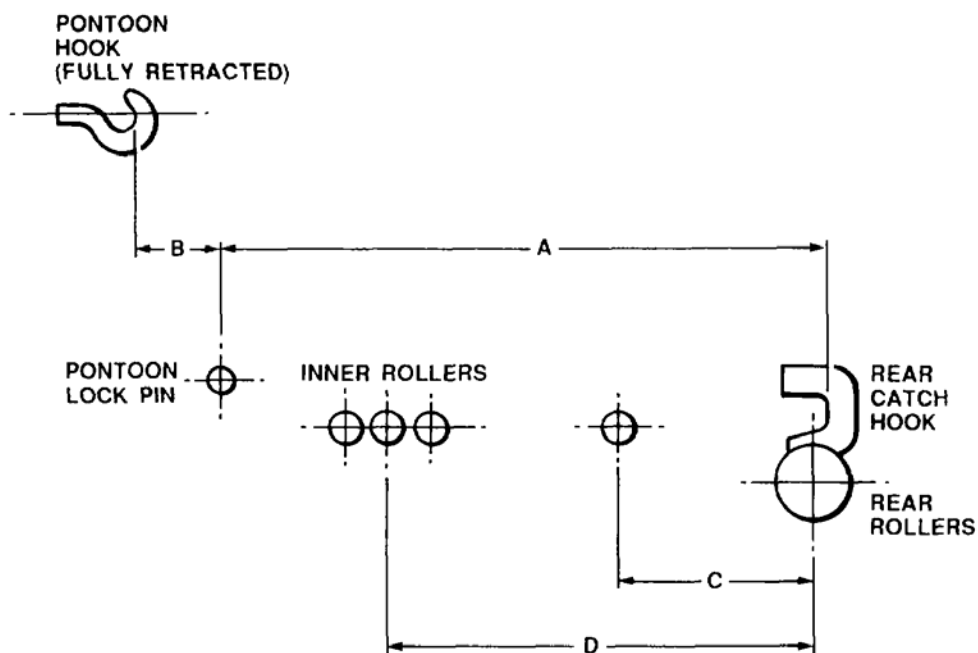


Figure 1 Dimensional Check - Side View

- d. Compare the recorded figures against those figures detailed in Table 1. If any of the dimensions are outside specified tolerances, then adjustment is required. This is to be performed by the supporting workshop; therefore, a work order is to be raised.
- e. Using a straight edge, spirit level and tape measure, record the dimensions A to F as detailed in Figure 2. Compare the recorded figures against those figures detailed in Table 2.

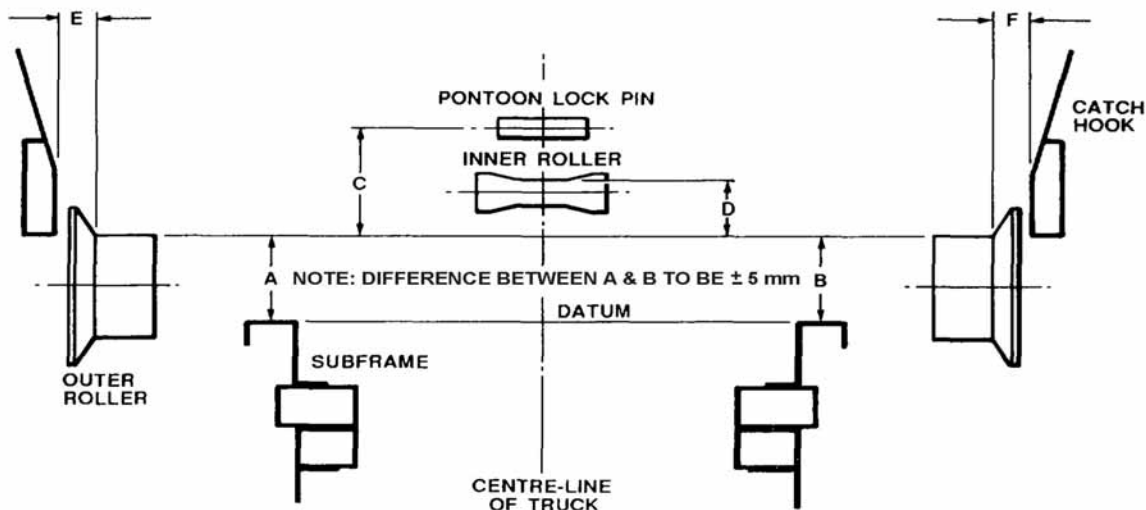


Figure 2 Dimensional Check - End View

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Table 2 Dimensions - End View

Serial	Dimension	Measurement (mm)
Rear Rollers		
1	A	170 nominal
2	B	170 nominal
3	E	68 + 3, - 0
4	F	68 + 3, - 0
Front Rollers		
5	A	170 nominal
6	B	170 nominal
7	C	161 + 2, - 1.5
8	D	85 maximum

- f. If any of the dimensions are outside of the specified tolerances then adjustment is required. This is to be performed by the supporting workshop; therefore, a work order is to be raised.
- g. Using a tape measure record the dimensions A to F as detailed in Figure 3. Compare the recorded figures against those figures detailed in Table 3.
- h. If any of the dimensions are outside of the specified tolerances then adjustment is required. This is to be performed by the supporting workshop; therefore, a work order is to be raised.

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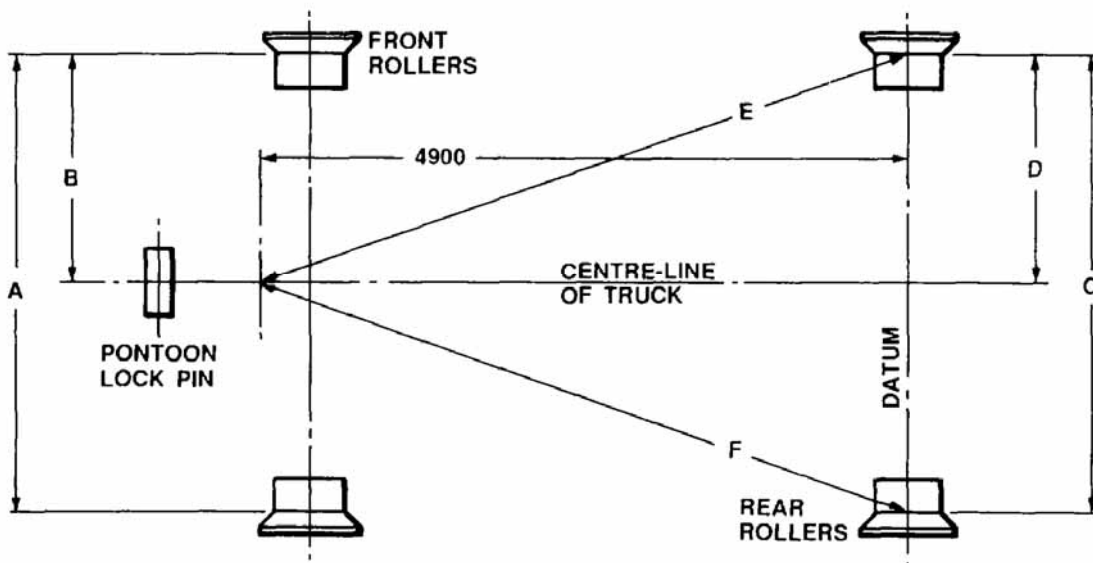


Figure 3 Dimensional Check - Plan View

Table 3 Dimensions - Plan View

Serial	Dimension	Measurement (mm)
Rollers at "IN" position		
1	A	2097 ± 5
2	B	1048.5 ± 5
3	C	2082 ± 5
4	D	1041 ± 5
Rollers at "OUT" position		
5	A	2910 + 4, - 2
6	B	1455 ± 5
7	C	3200 ± 5
Rear rollers against location stops		
8	C	2928 + 5, - 1
9	D	1464 ± 5
10	E	5115 ± 5
11	F	5115 ± 5

Adjustment Procedure

11. Dimensional requirements as detailed in Figure 2 can be achieved by the following methods:
 - a. The front roller arms can be adjusted in height by adding shims between the bolted backing plate of the arm and the sub-frame.
 - b. The lifting arm's position relative to the sub-frame can be adjusted up by adding shims to the frame.

Hydraulic System Checks

12. Test all the functions of the hydraulic system as follows:
 - a. Remove the rear control panel; located on the operator's platform, and connect the test kit to the test connection; refer to Figure 4.

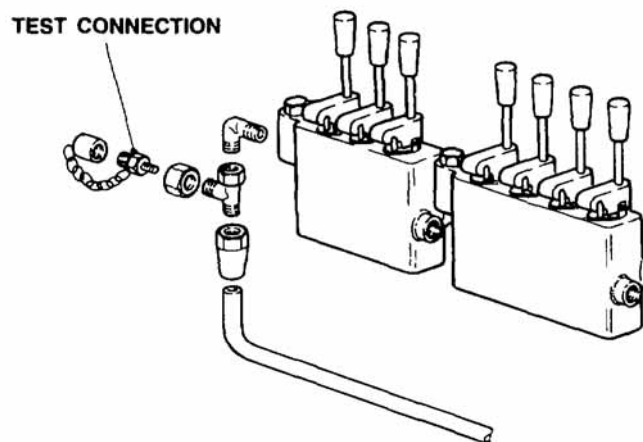


Figure 4 Control Test Connector

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NOTE

Testing of the lift cylinders should be conducted with the lift frame unlocked so that the safety limit switch will not be tripped.

- b. Run the vehicle engine at 1350 ± 50 rpm and engage the PTO.
- c. Check each recovery function is within the parameters described in Table 4.

Table 4 Recovery Unit Performance Parameters

Serial	Recovery Function	Pressure (MPa)	Cycle Time (seconds)
1	Hook Arm - Forward	16.9 ± 0.5	8 ± 1
2	Hook Arm - Backwards	17.5 ± 0.5	10 ± 1
3	Lift Frame - Raise	16.9 ± 0.5	60 ± 5
4	Lift Frame - Lower	$14.8 \text{ to } 16.9 \pm 0.5$	40 ± 5
5	Forward Rollers - Extend	16.9 ± 0.5	3 ± 1
6	Forward Rollers - Retract	17 ± 0.5	6 ± 1
7	Rear Rollers - Extend	16.9 ± 0.5	4 ± 1
8	Rear Rollers - Retract	17 ± 0.5	6 ± 1

- 13. If all functions are performed and the pressures and cycle-times are achieved, the recovery unit hydraulic system is to be classified **Fully Functional**.
- 14. If the nominal working pressure of 21 MPa cannot be achieved, check the following:
 - a. the directional control valve relief; refer to EMEI Vehicle G 783; and
 - b. the PTO and hydraulic pump; refer to EMEI Vehicle G 783.
- 15. If the required pressure and/or cycle-time is not achieved for each recovery function, or if the correct pressure is available but a recovery function fails to operate, check the function of each hydraulic sub-system as described in EMEI Vehicle G 783.

END

Distribution List: **VEH G 59.0 – Code 1** (Maint Level)
(Sponsor: ENG SPO, Engr Equip)
(Authority: ECO EE 18/07)

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