

'Expression of Interest' for Development of Gear Shift Linkage Assy for BEML Heavy Duty Truck (HDT)

1. Objective:

BEML Limited is a Defence PSU under the Ministry of Defence (MoD), Govt. of India. BEML HDT vehicles are mainly used for General Service and special projects carrying super structures as per MOD requirement. As part of indigenous program, the development and production of Gear Shift Linkage Assy. In this regard, BEML intends to identify reputed developer and supply of Gear Shift Linkage Assy and associate in integration and testing. Annual consumption of Gear Shift Linkage Assy are more than 600 numbers.

2. i) Gear Shift Linkage Assy (in cabin):

Gear Shift Linkage Assembly is applicable for right Hand Drive cabin. A Gear Shift Linkage Assy (GSL) will facilitate shifting of gears in the transmission. Gear-shift lever should be equipped with pre-selector switch to enable shifting from hare mode (high speed) and tortoise mode (low speed) respectively. engine tunnel and it has to have both High & low speed gear selector in it. Design of GSL should be optimised to ensure the effort required to change the gears by the driver should not exceed 2 kgf.

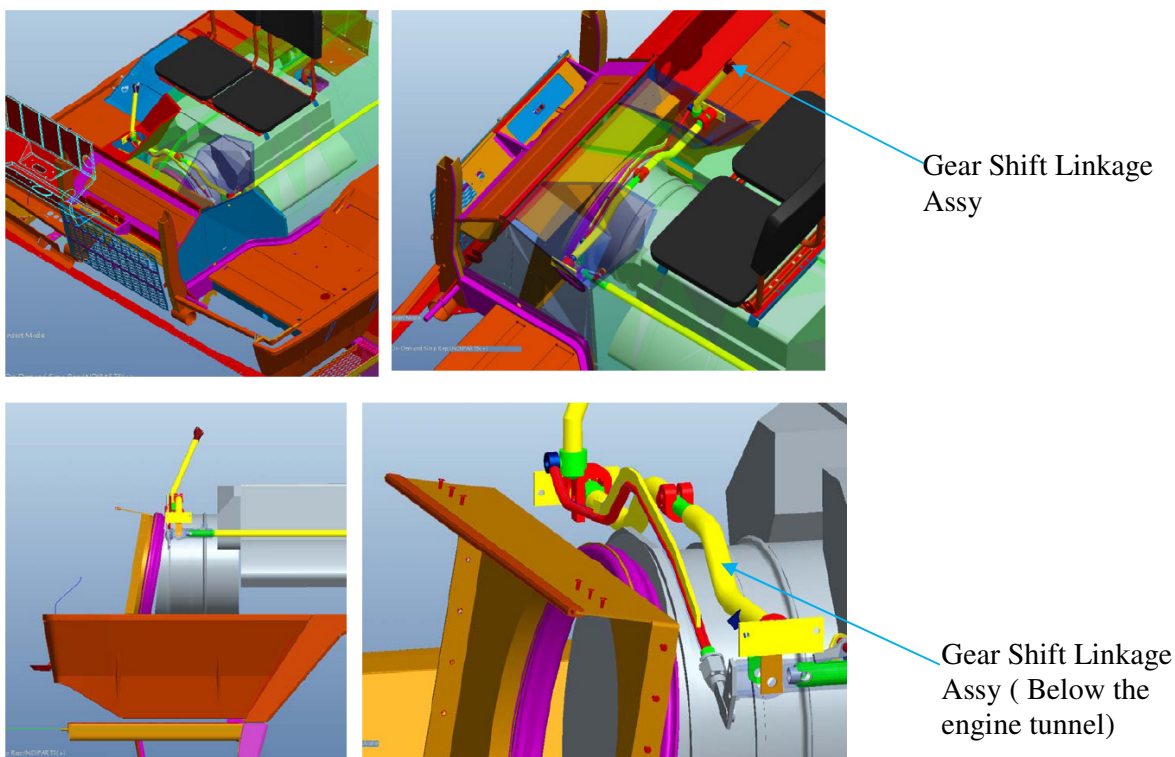


Fig 1: Gear Shift Linkage Assy in the Drivers cabin

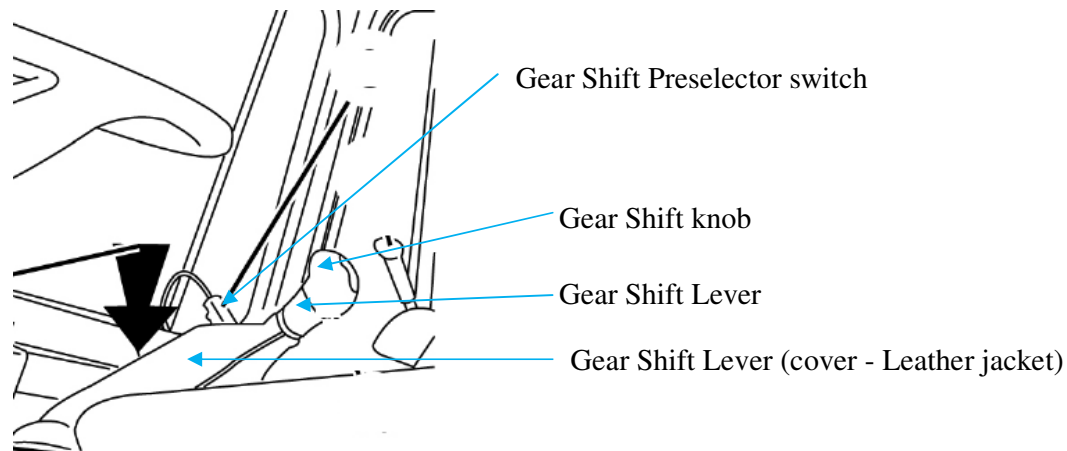


Fig 2: Gear Shift Lever in the Drivers cabin

Gear shift linkage should facilitate smooth shifting of gears from the mating 5 speeds gear box as shown below.

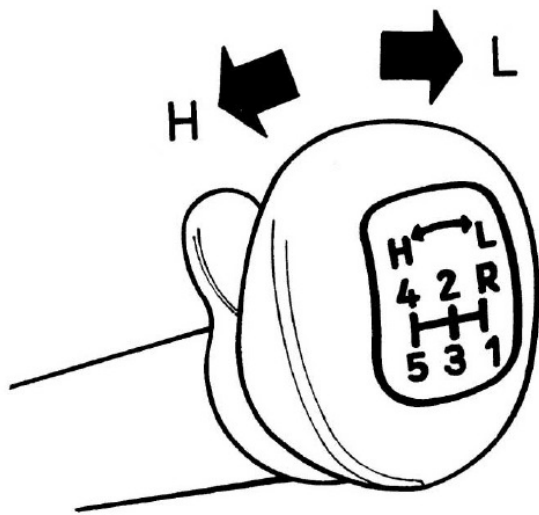


Fig 3: Gear Shift knob with preselector switch

In normal driving, shift in the gear speeds from first up to fifth gear speed while using the gearshift lever according to a shift pattern on its ball handle (Fig. 3). Except for the first and reverse gear speeds, the other gear speeds are synchromeshed, this enabling shifting "up and down" by one depression of the clutch pedal. Reverse gear speed is to be shifted in only with the vehicle at standstill.

Gear shift lever should be provided with leather cover jacket (double layer) to avoid any dust ingress inside the drivers cabin.

Under the gearshift knob there should be a pre-selector lever, which serves to pre-select the constant meshes during the driving. In the LH extreme position the "normal" (H) constant mesh and in the RH extreme position the "reduced" (L) constant mesh is preselected. The pre-selected mesh is to be engaged on the first full depression of the clutch pedal.

2. ii) Gear Shift Linkage Assy (in Transmission):

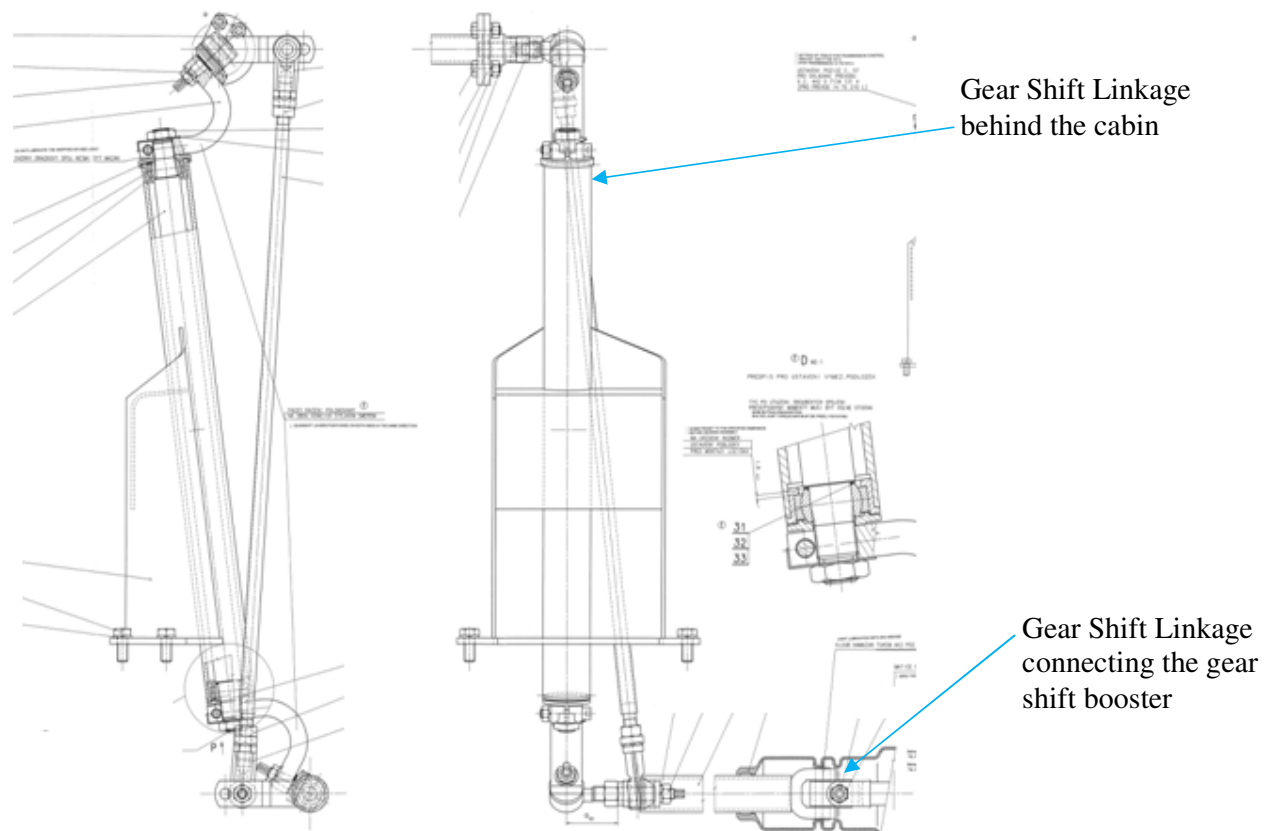


Fig 4: Gear Shift Linkage (in Transmission)

Gear shift linkage in transmission will interface the gear shift booster which enables shifting the lever in the gear box pneumatically.

2. Scope of work:

Based on the response from Interested Firms for this EOI, Separate RFQs will be floated to shortlist one capable firm for development of Gear Shift Linkage Assy.

NDA and MoU will be signed with the final firm evaluated in the RFQ. BEML will issue drawing & specifications to the firm.

- A. The Gear Shift Linkage Assy development and Production is planned in three phases

- 1) Development stage: 5 sets Gear Shift Linkage Assy to be developed within 1 month of contract.
- 2) Pilot Production stage: 10 sets of Gear Shift Linkage Assy to be produced based on feedback of prototypes within 1 month from prototype clearance.
- 3) Bulk Production stage: More than 600 numbers in the first year after pilot batch clearance by BEML/MoD.

B. The brief scope of work is,

- a. The firm has to offer the Gear Shift Linkage Assy assembly for inspection and clearance by BEML.
- b. Supply the Gear Shift Linkage Assy to BEML along with quality records for having complied for materials, processes and dimensions.
- c. Associate with BEML during integration, furnishing, internal trials and MoD performance evaluation trials.

C. Firm has to give test certificates along with Gear Shift Linkage Assy.

3. Pre-Qualification Criteria:

Interested firms shall fulfill the following criteria while submitting the EOI.

- i. Firm having more than 5 years of experience in design, development, and development of Gear Shift Linkage Assy.
- ii. Firm with sound financial status – Consistently profit making for the past 3 years.
- iii. Firm should be certified for the latest Quality Management System.
- iv. EOI may be responded by individual firm or a consortium of firms represented by a lead member. In case of consortium, lead member shall respond to the EOI and will be responsible for the success of the program.
- v. The firm shall have the following basic and essential facilities to qualify to this EOI.
 - a) Latest CAD software & hardware for handling Design & Documentation
 - b) Capability to design and development of Gear Shift Linkage Assy.
 - c) Possess requisite for Gear Shift Linkage Assy testing facilities as per CMVR / equivalent.

4. Details of the firm to be provided with necessary supporting documents:

- i. Company Registration certificate indicating name of the firm, year of establishment, incorporation details, Members of the Board, URL of the firm's website.
- ii. Name of the contact person, address, Telephone, Fax & email
- iii. Number of years of experience in design and development of Gear Shift Linkage Assy.
- iv. Copy of the Supply Orders to brief the past and similar ongoing projects, if any.
- v. Details of IT infrastructure and certificates of quality management system of the firm.
- vi. Financial performance documents (Audited Balance sheets and Profit & Loss statements etc.) with details of turnover for last three (3) years
- vii. Details of Contract(s) or order(s) terminated before completion, if any
- viii. Details of any premature termination of job/supply order/contract for Min of Defence, India or any other Government / Quasi Government organization in India.
- ix. Value of largest two projects executed in last 5 years
- x. Capability to furnish Bank guarantees.
- xi. Details of important customers

Note: The responses from Firms/OEMs that are black listed/restricted by Government of India or its Agencies will not be considered.

Submission of EOI:

In this context, EOI in sealed cover, Providing manufacturing capability details, documents, similar existing product development details, covering letter and certificates (MSME, ISO etc) shall be submitted by interested reputed firms, superscribing **“Expression of Interest’ for development of Gear Shift Linkage Assy”** on or before 14:00 hours of 16.09.2019, to

DGM–Materials
BEML Ltd.,Palakkad Complex,
Kinfra Wise Park,
Menonpara Road,

Kanjikode
Palakkad-678 621
Kerala,
India.

For any queries please contact below mentioned details:
Tel(Off):04912568178

Email: pm@beml.co.in

The last date for receipt of EOI at the above address will be as per the information published and will be opened on the same date at 1515 hrs.

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