

## 'Expression of Interest' for Overhauling / Revalidate of ARV WZT3 Aggregates

### 1. Preamble:

BEML Limited is a Defence PSU under the Ministry of Defence (MoD), Govt. of India. The Defence vertical is involved in Design, Development, Production, Testing & Evaluation, Supply and After sales service of various High mobility vehicles and aggregates for Indian MoD. Among the A class vehicles, BEML is involved in supply of Recovery Vehicles such as ARV WZT-3 and Arjun ARR.V.

### 2. ARV WZT3 Brief:

ARV WZT-3 recovery vehicle is a variant of T-72, maintaining commonality in the Chassis & Automotive system (mobility, range & protection) and communication system. For Recovery operations viz., Winching (Recovering bogged tanks), Lifting loads, Repair functions such as welding & cutting, several systems are built on the chassis. A brief specification of ARV WZT-3 is as follows

- Crane capacity - 15 T
- Winch capacity - 30 T
- Combat weight - 42 T
- Crew - 2 to 4 persons
- Power to weight ratio - 13.6 kW/T
- Overall length - 8500 mm
- Overall height - 2700 mm
- Ground clearance - 395 mm
- Width with / without side shields - 3600 / 3370 mm
- Max. speed on road - 60 km/h
- Transmission - 7 Forward 1 Reverse
- Engine - 572 KW, 12 Cyl V type
- No of Assembly groups - 57



### 3. Objective:

BEML has taken up overhauling of 2 numbers ARV WZT-3 to meet urgent requirement of Army. Overall there are 57 sub systems in ARV and around 22 subsystems undergo detailed overhauling process. BEML intends to perform overhauling of critical systems while it intends to outsource around 15 systems to interested firms for overhauling these aggregates. Overhauling activity involves each stage inspection, parts disposal order, rectification/replacement, QAP and ATP. The firm has to maintain complete documentation throughout the process of overhauling. BEML/CQA will involve in inspection and acceptance of overhauled aggregates. List of systems and the brief scope of work is described below in this document. After overhauling each aggregate, the firm has to associate with BEML

in integration & validating those aggregates on the vehicle before delivery to Army. Based on the successful overhauling of 2 Nos, BEML can take up further overhauling of more than 50 nos annually in a phased manner.

BEML would **PREFER** to offer 15 systems as a single kit for overhauling, however BEML may also consider responses for maximum 2 or 3 kits (small groups of 4 to 6 systems), but the systems in the kit should be inter dependent for performance after overhauling.

RFQ will be floated to the firms responding to this EOI. NDA and MoU will be signed with the Firm / Firms, Techno-Commercially evaluated in the RFQ.

The overhauling is planned to be completed within 6 months of issue of Kit / Kits.

#### 4. Scope of work:

The scope of work planned for outsourcing the systems are as follows,

- 1) After receipt of ARV ZWT-3 equipment from User at BEML Premises along with documents, Inspection of equipment will be conducted by BEML in the presence of DGQA.
- 2) BEML will clean the vehicle and dismantle all the aggregates.
- 3) A joint inspection of each aggregate/system will be again carried out by BEML and DGQA rep. The Firm has to depute their rep to participate in this joint inspection.
- 4) The Firm has to collect the Kit from BEML premises.
- 5) The 15 systems and overhauling to be carried out is briefed below -

SN	Main Group Name	Scope Of Work
1	ENGINE	Engine V-46 to be overhauled to set zero hour running setting.
2	ASSEMBLY OF LININGS IN THE HULL	<ol style="list-style-type: none"> <li>1. Damaged Liners to be replaced</li> <li>2. Damaged hardware to be replaced.</li> </ol>
3	COOLING SYSTEM	<ol style="list-style-type: none"> <li>1. Rubber Hoses, seals to be replaced</li> <li>2. Radiator, pump, filters to be revalidate.</li> <li>3. Metal pipes to be cleaned thoroughly</li> <li>4. Integration and performance test of the system on vehicle</li> </ol>

4	LUBRICATION SYSTEM	<ol style="list-style-type: none"> <li>1. Rubber Hoses, seals to be replaced</li> <li>2. Radiator, pump, filters to be revalidate.</li> <li>3. Metal pipes to be cleaned thoroughly</li> <li>4. Integration and performance test of the system on vehicle</li> </ol>
5	FUEL SYSTEM	<ol style="list-style-type: none"> <li>1. Rubber Hoses, seals to be replaced</li> <li>2. Fuel Tanks to be cleaned and repaired.</li> <li>3. Radiator, pump, filters to be revalidated.</li> <li>4. Metal pipes to be cleaned thoroughly</li> <li>5. Integration and performance test of the system on vehicle</li> </ol>
6	SEATING OF THE HEATER	<ol style="list-style-type: none"> <li>1. Complete revalidation of Heating and seating element</li> <li>2. Integration and performance test on vehicle</li> </ol>
7	DRIVE OF FAN	<ol style="list-style-type: none"> <li>1. Complete revalidation of Fan Drive System.</li> <li>2. All Gaskets, rubber items to be replaced.</li> <li>3. Integration and performance test on vehicle</li> </ol>
8	SUSPENSION TORSION BAR WITH	<ol style="list-style-type: none"> <li>1. Repair of Suspension Crank Forging</li> <li>2. Complete replacement of Torsion Bar.</li> <li>3. All Gaskets and Rubber items to be replaced.</li> <li>4. Integration and performance test on Vehicle.</li> </ol>
9	ASSEMBLY OF HYDRAULIC SHOCK ABSORBER AND BLOCKADE	<ol style="list-style-type: none"> <li>1. Repair / Replacement of Damaged Forging items</li> <li>2. All Gaskets and Rubber items to be replaced.</li> <li>3. Integration and performance test on Vehicle.</li> </ol>
10	A. HYDRAULIC CONTROL DUCTS AND NODES	<ol style="list-style-type: none"> <li>1. All the Filters / Cyclone Filters to be revalidated damaged filters to be replaced.</li> <li>2. All Flexible hoses to be replaced with a new one.</li> <li>3. Distribution Valves to be revalidated.</li> <li>4. Metal pipe to be cleaned and rectified.</li> <li>5. Gaskets, Seals and damaged hardware to be replaced.</li> <li>6. Integration and performance test on vehicle.</li> </ol>
	B. HYDRAULIC SYSTEM WITHOUT HYDRAULIC CYLINDER	

11	RADIO EQUIPMENT	Complete Communication system to be re validated and New CNR 5 W and CNR 50 W Radio Set to be provided.
12	OBSERVATION INSTRUMENTS	The following observation instruments to be revalidated - <ul style="list-style-type: none"> <li>• OBSERVATION INSTRUMENT –</li> <li>• POD 72 (QTY- 1 NO)</li> <li>• TNPO-160 (QTY- 3 NOS)</li> <li>• TNPO-168W (QTY- 2 NOS)</li> <li>• TNP-165A (QTY- 1 NO)</li> <li>• TNPA-65 (QTY- 5 NOS)</li> </ul>
13	NIGHT VISION DEVICE PNK-72 ASSEMBLY	Night Vision System PNK-72 to be revalidated.
14	ARRANGEMENT OF COMBAT SET	The following items have to be replaced by new ones – <ul style="list-style-type: none"> <li>• Bag (for grenades and fuses)</li> <li>• Holster for signaling pistol</li> <li>• Bag for signaling cartridges</li> <li>• Protective cover (for MP carbine)</li> </ul>
15	Deep Water Fording Equipment	<ol style="list-style-type: none"> <li>1. Complete Re validation of Pipe Set</li> <li>2. All Rubber items and gasket to be replaced.</li> <li>3. Re assembly and installation on the vehicle.</li> </ol>

- 6) The firm shall overhaul aggregates and test the systems meeting the acceptance levels as per QAP / Acceptance test plan provided by BEML. The firm shall prepare all requisite documentation for overhauling and testing the systems.
- 7) Any parts to be replaced should be from the current period / year of manufacturing.
- 8) Obtaining DGQA / CQA clearance for the overhauled aggregates will be the firm's responsibility.
- 9) Tested and cleared aggregates shall be supplied to BEML KGF. The firm shall associate with BEML to reassemble the aggregates back to the vehicle. Required Tools, Tackles and Test equipment shall be brought by the firm.
- 10) Any Special Test to be carried out during overhaul at BEML premises, the firm shall arrange at their cost from outside agencies.

- 11) The firm should provide product support for 2 years covering warranty from the date of acceptance of overhauled system.
- 12) The firm should also provide Training to User reps after completing overhauled integration & testing at BEML's premises.

## **5. 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, manufacture of Armoured Fitting Vehicle / Armoured Recovery Vehicle aggregates (OEM or OEM authorized firm) will be preferred.
- 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 Indian MSME Company having Long term association with OE of Armoured Vehicle of Soviet Era will be considered. The Indian MSME company should have registrations specifically for Armoured Vehicles / Spares of Armoured Vehicles and its repair in their registration certificate failing which the offer shall not be considered
- vi. Indian Company should have specific contract for Armoured Recovery Vehicle with Soviet Era OE and should have a long term Contract of minimum 5 years. There should not be any restriction from OE country for Supply, Installation, Repair, Overhaul, and Training for such systems / Sub systems with continuous support.
- vii. The Contract should be authorized and backed by the OE Country facilitating the entire programme.
- viii. All Systems / Sub Systems should be of latest manufacturing and should carry warranty of Min. two years. The sub assemblies/spares should be supplied with valid product passport for the respective item.
- ix. The Indian Company along with its OE Partner should be able to undertake repair of Sub Systems up to component level so as to curtail cost of overhaul.

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

1. Company Registration certificate indicating name of the firm, year of establishment, incorporation details, Members of the Board, URL of the firm's website.
2. Agreement copy of the firm with OE having minimum 5 years live association.
3. Name of the contact person, address, Telephone, Fax & email
4. Number of years of experience in design / manufacturing / overhauling of Armoured Fitting vehicle / Armoured Recovery Vehicle.
5. Brief on your aggregates which are in-service military equipment.
6. Detailed Technical Capabilities, manufacturing facilities, test facilities of the firm or in collaboration with OEM for having designed and developed similar aggregates for Armoured Fitting vehicle / Armoured Recovery Vehicle.
7. Copy of the Supply Orders to brief the past and similar ongoing projects, if any.
8. Details of IT infrastructure and certificates of quality management system of the firm.
9. Financial performance documents (Audited Balance sheets and Profit & Loss statements etc.) with details of turnover for last three (3) years
10. Details of Contract(s) or order(s) terminated before completion, if any
11. Details of any premature termination of job/supply order/contract for Min of Defence, India or any other Government / Quasi Government organization in India.
12. Value of largest two projects executed in last 5 years
13. Capability to furnish Bank guarantees.
14. 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.

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**7. Submission of EOI:**

In this context, Eoi in sealed cover, Providing all details, documents and certificates shall be submitted by interested reputed firms, superscribing **“Expression of Interest’ for ARV aggregates overhauling”** on or before 14:00 hours of 24.09.2019

**Dy. General Manager –Materials**

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