

BHARAT HEAVY ELECTRICAL LIMITED, JHANSI		
	Specification No.	10574 (R2)
	Item No.	MH-1/40/6302
	Location	BAY-6
	Quantity	ONE NUMBER

SCOPE :

SUPPLY & COMMISSIONING OF 5 T DIESEL OPERATED FORK LIFT TRUCK. COMPLYING AS PER SPECIFICATION BELOW

NOTE :

	1. VENDOR must submit complete information against clause No. 7.0 (Qualifying condition). The offer meeting this clause would only be processed.
	2. The " offered" Column and where applicable, the " Deviations" Column of this format shall be filled in by the Vender and submitted along with the offer. Technical details also submitted with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specification / requirements shall be treated as non - compliance.
	3. The offer and all documents enclosed with offer should be in English language only.

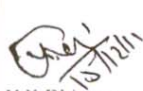
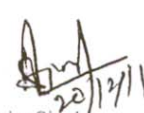
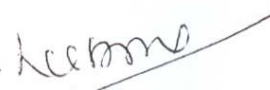
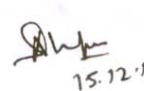
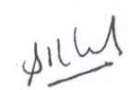

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 5 T FORK LIFT TRUCK

S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATION
1.0	PURPOSE			
1.1	A Single drive forklift truck with simplex clear view mast 5 MT capacity at 600 mm load center operated through diesel is required for transporting of material from outside / inside of the store	VENDER TO CONFIRM		
2.0	WORK PIECE MATERIAL			
2.1	PRIME MOVER	VENDER TO CONFIRM		
2.1.1	Prime mover should be fuel efficient Diesel engine.	VENDER TO CONFIRM		
2.1.2	4 Cylinder direct injection type engine shall be used.	VENDER TO CONFIRM		
2.1.3	Air filtration shall be done through a large, cyclone type air cleaner with replaceable paper element.			
2.1.4	Air cleaner shall be located close to the air intake manifold.			
2.1.5	Gear type oil pump to be provided for lubrication	VENDER TO CONFIRM		
2.1.6	Water pump and radiator to be provided for cooling.	VENDER TO CONFIRM		
2.1.7	Arrangement of cooling of II Lub oil to be provided for maintaining oil viscosity, oil temperature of the engine.	VENDER TO CONFIRM		
2.1.8	Exhaust should be vertical	VENDER TO CONFIRM		
2.1.9	The exposed portion of the muffler and steel pipe shall be adequately graduated, and shall be used steel wire mesh enclosure.			
2.1.10	Engine should be complete with fly wheel, starter, battery , electric self starter, alternator	VENDER TO CONFIRM		
2.1.11	Engine should be neutral start	VENDER TO CONFIRM		
2.1.12	Details of fuel tank to be submitted	VENDER TO SPECIFY		

2.3.1	The fork lifter is provided two speed forward and backward automatic torque flow transmission system (Auto two speed torque converter)	VENDER TO CONFIRM		
2.4.2	A relief valve to be provided in the hydraulic circuit for protection against excessive pressure due to excessive loading.	VENDER TO CONFIRM		
2.4	MAST			
2.4.1	Forklift should be fitted with hydraulically operated telescopic wide view mast for smooth lift, lowering, tilt and other auxiliary functions.	VENDER TO CONFIRM		
2.4.2	A relief valve to be provided in the hydraulic circuit for protection against excessive pressure due to excessive loading.	VENDER TO CONFIRM		
2.5	BRAKES			
2.5.1	The Forklifter should be fitted with heavy duty, self adjustable and self-energizing, Pneumatically assisted hydraulically disc brakes.(Power brakes)	VENDER TO CONFIRM		
2.5.2	Oil seals & sleeves shall be provided so as to prevent entry of grease in the brake area.			
2.5.3	Hand operated parking brakes to be provided	VENDER TO CONFIRM		
2.6	ELECTRICALS			
2.6.1	The battery should be suitable rating for starting of engine. Battery should be exide make. Battery Voltage and rating should be submitted with offer	VENDER TO SPECIFY		
2.6.2	Self starter to be providid	VENDER TO CONFIRM		
2.6.3	An alternator should be provided for charging the battery.	VENDER TO CONFIRM		
2.6.4	Forklifter should be fitted with head & tail lights.	VENDER TO CONFIRM		
2.6.5	Electric horn to be fitted with the fork lifter.	VENDER TO CONFIRM		
2.6.6	Forklifter should be fitted with a warning horn. This warning horn should be operated at the time of backward operation of the forklifter. (Reversing alarm)	VENDER TO CONFIRM		
2.7	GAUGES			
2.7.1	Desh board should be mounted in the front at a convenient place for clear view and fitted with water temp. gauge, engine oil pressure gauge, Battery charging indicator, fuel gauge, parking brake On indicator, Direction indicator, control switches etc.	VENDER TO CONFIRM		
2.8	DRIVER /OPERATOR CABIN			
2.8.1	The operator's seat should be ergonomically designed for best comforts, fully tested and sturdy overhead guard with provision for clear view upwards when stacking.	VENDER TO CONFIRM		
2.8.2	Comfirtable , adjustable cusion seat with back rest to be provided.	VENDER TO CONFIRM		
2.8.3	Ample leg space to be provided in the cabin	VENDER TO CONFIRM		

2.8.4	An overhead guard to be provided	VENDER TO CONFIRM		
2.9	TYRES			
2.9.1	The front and rear wheels to be fitted with standard non-skid cushion rubber type.	VENDER TO CONFIRM		
2.10	CONSTRUCTION			
2.10.1	The frame of forklifter should be rugged in construction and designed for maximum strength for assigned duty.	VENDER TO CONFIRM		
2.10.2	The fork attachment should be of welded steel construction with quick adjustment facility.	VENDER TO CONFIRM		
2.10.3	The fork attachment should be supplied complete with load back rest.	VENDER TO CONFIRM		
2.10.4	The fork lift truck is to be supplied complete with tool kit, canopy and all other accessories needed for successful operation/ commissioning.	VENDER TO CONFIRM		
2.11	List of standard accessories to be submitted with offer	VENDER TO SPECIFY		
2.12	List of optional Accessories with item wise prices to be submitted.	VENDER TO SPECIFY		
3.0	SPECIFICATION:			
3.1	Capacity when used with for attachment at 600 mm load center : 5000 KG	VENDER TO CONFIRM		
3.2	Power type : Diesel Engine	VENDER TO CONFIRM		
3.3	Engine make - Simpsons/Parkins/Kirloskar/Tata	VENDER TO SPECIFY		
3.4	BHP ,RPM & Torque of engine	VENDER TO SPECIFY		
3.5	4 Cylinder , 4 Stroke engine	VENDER TO CONFIRM		
3.6	Gear type oil pump for lubrication	VENDER TO CONFIRM		
3.7	Radiator for cooling	VENDER TO CONFIRM		
3.8	Non-skid cushion rubber type tyres	VENDER TO CONFIRM		
3.9	No. of tyres (4 Nos front / 2 Nos. rear)	VENDER TO CONFIRM		
3.10	Hyd. System for lowering/hoisting/tilting	VENDER TO CONFIRM		
3.11	Power steering	VENDER TO CONFIRM		
3.12	Transmission : Auto two speed torque converter	VENDER TO CONFIRM		
3.13	Over head guard	VENDER TO CONFIRM		
3.14	Overall height with mast lowered (Min/Max) 2500 /2700 mm	VENDER TO CONFIRM		
3.15	Maximum telescopic fork height : 3600 mm	VENDER TO CONFIRM		
3.16	Ground clearance at lowest point and at centre of the wheel base - 160 mm(+ 5 %) and 240 mm(+5%) respectively.	VENDER TO CONFIRM		
3.17	Length of forks : 1200 mm(+ 5%)	VENDER TO CONFIRM		

3.18	No. of forks : Two	VENDER TO CONFIRM		
3.19	Width of forks : 150 mm($\pm 2\%$)	VENDER TO CONFIRM		
3.20	Cener distance of Fork adjustable beween : 350-1500 mm	VENDER TO CONFIRM		
3.24	Minimum outside turning radius : 3000 mm	VENDER TO CONFIRM		
3.25	Tilt - Forward - 6 degree & Backward - 10 degree	VENDER TO CONFIRM		
3.26	Maximum speed of truck in Forward / reverse at full load : 16KM /Hr	VENDER TO CONFIRM		
3.27	Minimum Lifting speed at full load : 16 Meter / hr.	VENDER TO CONFIRM		
3.28	Minimum Lowering speed at full load : 16Meter/ hr.	VENDER TO CONFIRM		
3.29	Maximum gradient at full load /No load : 16 /21 %	VENDER TO CONFIRM		
4.0	INSPECTION / TESTING			
4.1	The equipment shall be tested/ inspected by BHEL engineer at suppliers works as per test chart in accordance to IS for all accessories & performance before dispatch.	VENDER TO CONFIRM		
5.0	MISCELANIOUS			
5.1	The forklift to be supplied complete with tool kit, canopy and all other standard accessories needed for successful operation.	VENDER TO CONFIRM		
5.2	The offer should be complete with dimensional details outline general arrangement drawing with complete details of engine, power transmission, hydraulic system with circuit diagram and write up explaining special features.	VENDER TO CONFIRM		
5.3	Recommended spares for 2 years normal working to be quoted with item wise prices.	VENDER TO CONFIRM		
5.4	Optional equipment to be quoted for environmental protection.	VENDER TO CONFIRM		
5.5	Four copies of test, operation , maintenance manual & spare part list to be supplied with the forklifter.	VENDER TO CONFIRM		
5.6	Not withstanding anything, the details in this specification, if any thing else is required for its functioning, the same shall be specifically brought out & indicated.	VENDER TO CONFIRM		
5.7	The equipment should be commissioned by the supplier at BHEL, Jhansi	VENDER TO CONFIRM		
6.0	GUARANTEE			
6.1	The equipment is to be guaranteed in respect of material, construction and operation and against any manufacturing defect for a period of 24 months from the date of commissioning. Any parts of units found defective have to be replaced free of cost.	VENDER TO CONFIRM		
7.0	QUALIFYING CONDITION			

7.1	Only those vendor who have supplied & commissioned at least 02 No. 5T or higher capacity diesel fork lifter of similar specification in the past ten year and such forklifters presently working satisfactorily for more then one year after commssioning, should quote. The following information is to be submitted by the Vendor about the companies where similar forklifters have been supplied. This is required from all the vendors for qualification of their offer.	VENDER TO CONFIRM		
	1 . Name of the customer / company where similar forklifter is installed. (copy of purchase order to be furnished)	VENDER TO CONFIRM		
	2 . Complete postal address of the customer.	VENDER TO CONFIRM		
	3. Year of suppling / commissioning.	VENDER TO CONFIRM		
	4 . Application for which forklifter is supplied.	VENDER TO CONFIRM		
	5 . Name and designation of the contact person of the customer.	VENDER TO CONFIRM		
	6 . Phone. FAX, no andE-mail address of the contact person of the customer.	VENDER TO CONFIRM		
	7 . Performance certificate from the customer regarding satisfactory performance of forklifter.	VENDER TO CONFIRM		
8.0	BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false / incorrect, the offer shall be rejected.	VENDER TO CONFIRM		
	 Y.K.Dhingra Sr. Engineer(WE&S)	 ArjunSingh Manager(WEX)	 H.V.BHATIA Sr. Manager (TRM)	 15.12.11 A.K.Shivpuri Sr.Manager(WEX)
	 S.J.CHAKRABORTY Sr. DGM (WE&S)			
	 CHAIRMAN			