

Annexure-II

To be submitted by the firm along with offer-

Tender specification as per annexure-I	Specification quoted by the firm	Deviation if any with clarification
<p>Major Parameter</p> <p>1. POWER PACK AND PUMP</p> <ul style="list-style-type: none"> a. Electrically operated single phase (230V) two speed, hydraulic power pack. b. Pump should be able to develop working pressure of minimum 700 kg/cm² and should have internal pressure relief valve set at 700 kg/cm². c. Flow rate of oil at minimum pressure should not be less than 10 litres/min. d. Remote switch of the pump should have stop/start facility. Remote control pendant should be minimum 4 metre in length. e. The pump should have multiport manifold to facilitate simultaneous operation of multiple tools. f. High strength light weight construction. Maximum weight of the pump (without oil) should not exceed 30 Kg. g. 10 litre capacity reservoir with oil sight gauge. h. Twin line steel braided hydraulic hose assembly- minimum 6 m length. <p>2. HYDRAULIC TOOL FOR CRAB NUT APPLICATION</p> <ul style="list-style-type: none"> a. Continuously ratcheting torque wrench with reaction arm for handling crab nut. b. Tool body should be of high strength, low weight uni-body design. Tool weight (Without fixture) should not exceed 4.5 Kg. c. Internal moving parts including piston should be totally enclosed. d. Tools should have double acting cylinder design. e. Should have suitable 360 degree job adjustable reaction arm. f. Drive should have a one-way ratchet mechanism with easy release mechanism. g. The hose connecting arrangement should have 360x180 degree swivel arrangement. h. Ratchet mechanism should be equipped with anti reverse pawl to prevent back ward rotation. i. Should have accuracy of 3% and repeatability within 1%. j. Working pressure-700 Kg/cm². k. Torque capacity-6400N.m or more. l. Suitable connecting hydraulic hose pipes, gauges impact sockets. <p>3. HYDRAULIC TOOL FOR MAIN BEARING NUT APPLICATION</p> <ul style="list-style-type: none"> a. Continuously ratcheting torque wrench with reaction 		

	<p>arm for handling main bearing nut.</p> <ul style="list-style-type: none"> b. Tool body should be of high strength, low weight uni-body design. Tool weight should not exceed 2 Kg. c. Internal moving parts including piston should be totally enclosed. d. Tool should have double acting cylinder design. e. Should have suitable 360 degree job adjustable reaction arm. f. Drive should have a one-way ratchet mechanism with easy release mechanism. g. The hose connecting arrangement should have 360x180 degree swivel arrangement. h. Ratchet mechanism should be equipped with anti reverse pawl to prevent back ward rotation. i. Should have accuracy of 3% and repeatability within 1% j. Working pressure-700 Kg/cm². k. Torque capacity-1600N.m or more. l. Suitable connecting hydraulic hose pipes, gauges, impact sockets. <p>4. MOBILE WORK STATION FOR HOUSING POWER PACK, TORQUE WRENCHES, HOSES TOOLS</p> <ul style="list-style-type: none"> a. Should have separate compartments/deck for housing power pack, Torque Wrenches, hoses, tools etc. b. Suitable wheels with brakes. c. Good aesthetic finish with smooth corners. 		
Concomitant accessories	Nil		
Optional accessories	Nil		
Spares	<ul style="list-style-type: none"> a. Hydraulic hose pipe line (Pressure line and return line)-1 Set. b. Socket for Crab nut and Main Bearing Nut operations-2 set. c. Relief Valve and Gauge for power pack-1set. d. Seal kit and drive pawl spring for hudraulic wrenches-1set. 		
AMC requirement	Nil		
Warranty requirement	<ul style="list-style-type: none"> a. All the equipment supplied will have warranty of 24 months from the date of commissioning. 		
Special requirement	<ul style="list-style-type: none"> 1. COMMISSIONING, TRAINING AND MANUALS a. Supplier will be fully responsible 		

	<p>for successful commissioning and demonstration of the equipment for Crab Nut and Main Bearing mounting/dismounting applications.</p> <p>b. If any fixture/accessory/tool, not explicitly mentioned above, is needed for commissioning and Crab Nut and Main Bearing mounting/dismounting applications.tenderer must include the same in his offer and quote his offer accordingly.</p> <p>c. After commissioning and demonstration supplier will impart 3 days hands on training on operation and maintenance to supervisors and staff of the shed.</p> <p>d. Supplier shall supply 3 copies of detailed literature covering features, operation, maintenance, trouble, shooting, hydraulic and electrical circuit diagrams, spare parts catalogue. Alternatively 1 set of hard copy and 1 set of soft copy shall be provided.</p> <p>2. IMPORTANT</p> <p>a. Tender must have supplied similar hydraulic torque wrenches for Crab Nut and Main Bearing mounting/dismounting applications on HHP locos to at least 2 diesel sheds of Indian Railways which should have provided satisfactory services for 2 years or more.</p> <p>b. Tenderer should submit certificates from the concerned sheds to the effect that the hydraulic torque wrenches have provided satisfactory services for these applications for atleast 2 years.</p> <p>c. In case of inability of tenderer in furnishing the requisite certificates his offer will be rejected.</p>		
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Signature of the firm's