

TECHNICAL SPECIFICATION FOR HYDRAULIC EQUIPMENT SET FOR MOUNTING AND DISMOUNTING OF CRAB NUT AND BEARING NUT OF HIGH HORSE POWER DIESEL (WDG4/WDP4) LOCOS

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(Indent No. 52626058 Dt. 29.12.11)

DATE 31.10.13

Major Parameter	1
	<p>1. POWER PACK AND PUMP</p> <p>a. Electrically operated single phase (230V.) two speed, hydraulic power pack.</p> <p>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.</p> <p>c. Flow rate of oil at minimum pressure should not be less than 10 litres/min.</p> <p>d. Remote switch of the pump should have stop / start facility. Remote control pendant should be minimum 4 metre in length.</p> <p>e. The pump should have multiport manifold to facilitate simultaneous operation of multiple tools.</p> <p>f. High strength light weight construction. Maximum weight of the pump (without oil) should not exceed 30 kg.</p> <p>g. 10 litre capacity reservoir with oil sight gauge.</p> <p>h. Twin line steel braided hydraulic hose assembly - minimum 6 m length.</p> <p>2. HYDRAULIC TOOL FOR CRAB NUT APPLICATION</p> <p>a. Continuously ratcheting torque wrench with reaction arm for handling crab nut.</p> <p>b. Tool body should be of high strength, low weight, uni-body design. Tool weight (without fixture) should not exceed 4.5 kg.</p> <p>c. Internal moving parts including piston should be totally enclosed.</p> <p>d. Tool should have double acting cylinder design.</p> <p>e. Should have suitable 360 degree job adjustable reaction arm.</p> <p>f. Drive should have a one-way ratchet mechanism with easy release mechanism.</p> <p>g. The hose connecting arrangement should have 360x180 degree swivel arrangement.</p> <p>h. Ratchet mechanism should be equipped with anti reverse pawl to prevent backward rotation.</p> <p>i. Should have accuracy of 3% and repeatability within 1%.</p> <p>j. Working pressure - 700 kg/cm².</p> <p>k. Torque capacity - 6400 N.m or more</p> <p>l. Suitable connecting hydraulic hose pipes, gauges, impact sockets</p> <p>3. HYDRAULIC TOOL FOR MAIN BEARING NUT APPLICATION</p> <p>a. Continuously ratcheting torque wrench with reaction arm for handling main bearing nut.</p> <p>b. Tool body should be of high strength, low weight, uni-body design. Tool weight should not exceed 2 kg.</p> <p>c. Internal moving parts including piston should be totally enclosed.</p> <p>d. Tool should have double acting cylinder design.</p> <p>e. Should have suitable 360 degree job adjustable reaction arm.</p> <p>f. Drive should have a one-way ratchet mechanism with easy release mechanism.</p> <p>g. The hose connecting arrangement should have 360x180 degree swivel arrangement.</p> <p>h. Ratchet mechanism should be equipped with anti reverse pawl to prevent backward rotation.</p> <p>i. Should have accuracy of 3% and repeatability within 1%.</p> <p>j. Working pressure - 700 kg/cm².</p> <p>k. Torque capacity - 1600 N.m or more</p> <p>l. Suitable connecting hydraulic hose pipes, gauges, impact sockets</p> <p>4. MOBILE WORK STATION FOR HOUSING POWER PACK, TORQUE WRENCHES, HOSES, TOOLS</p> <p>a. Should have separate compartments/deck for housing power pack, Torque Wrenches, hoses, tools etc.</p> <p>b. Suitable wheels with brakes.</p> <p>c. Good aesthetic finish with smooth corners.</p>

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CRAB NUT AND BEARING NUT OF HIGH HORSE POWER DIESEL (WDG4/WDP4) LOCOS**

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Concomitant accessories	Nil
Optional accessories	Nil
Spares	<p>a. Hydraulic hose pipe line (pressure line and return line) – 1 set.</p> <p>b. Socket for Crab nut and Main Bearing Nut operations - 2 set.</p> <p>c. Relief Valve and Gauge for power pack – 1 set.</p> <p>d. Seal kit and drive pawl springs for hydraulic wrenches – 1 set.</p>
AMC requirement	Nil
Warranty requirement	a. All the equipment supplied will have warranty of 24 months from the date of commissioning.
Special requirement	<p>1. COMMISSIONING, TRAINING AND MANUALS</p> <p>a. Supplier will be fully responsible 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. Tenderer must have supplied similar hydraulic torque wrenches for Crab Nut and Main Bearing mounting / dismounting applications on HHP locos to atleast 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 <u>his offer will be rejected.</u></p>


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Annexure-II

To be submitted by the firm along with offer-

Tender specification	Specification quoted by the firm	Deviation if any with clarification