

## **TECHNICAL DATA**

### **ENGINE MODEL N3.30**



#### **ENGINE SPECIFICATION**

Number of cylinders: 3  
 Displacement: 1001 cc  
 Bore - Stroke: 76 X 73.6 mm  
 Compression ratio: 22/1 mm  
 Max. Pressure difference between cyl. : 10%  
 Compression pressure: 29 to 33 bars  
 Maximum speed without load: 3900 rpm  
 Maximum RPM in load: 3600 rpm  
 Idle RPM in forward gear: 950 rpm  
 Max. Torque: 58.4Nm  
 Firing order: 1 - 2 - 3 -  
 Rotation: Anti clockwise (Flywheel)

#### **INJECTION**

Type of injector: MINI (DNOP)  
 Fuel injection pressure:  
 140 bars to 150 bars  
 Injection pump manufacturer: BOSCH MD  
 Injection timing: 21 to 23° before TDC

#### **TIGHTENING TORQUE**

Arm head cover cap nuts: 0.7 to 0.9 kgF.m  
 Cylinder head bolts: 6.5 to 7.0 kgF.m  
 Flywheel bolts: 5.5 to 6.0 kgF.m  
 Connecting rod bolts: 4.2 to 4.7 kgF.m  
 Rocker arm bracket nuts: 2.2 to 2.7 kgF.m  
 Main bearing caps bolts  
 M8: 3.0 to 3.5 kgF.m  
 M9: 5.0 to 5.5 kgF.m  
 Nozzle holder assembly: 0.5 to 7.0  
 Glow plugs M8: 2.0 to 2.5 kgF.m

#### **LUBRIFICATION**

Oil pressure at idle RPM: 0.5 bar  
 Oil pressure at maximum load:  
 2 to 4.5 bars  
 Recommended oil: 15W40 API CD  
 Oil pan capacity: 4 liters <angle> 5 litres  
 Gearbox model:  
 Oil capacity: } depending on type  
 Recommended oil: }

#### **DIAGRAMS**

Valve clearance (cold)  
 Inlet: 0.15 to 0.18 mm  
 Exhaust: 0.15 to 0.18 mm  
 Valve recessing: - 0.05 to + 0.15 mm

#### **PISTON RINGS**

Piston ring gap:  
 Piston top compression: 0.30 to 0.45 mm  
 Intermediate: 0.30 to 0.45 mm  
 Oil control: 0.25 to 0.40 mm

#### **CYLINDER HEAD**

Cylinder head surface flatness : <0.05 mm

#### **SEA WATER PUMP**

Water flow: 38 litres per minutes

#### **GLOW PLUGS**

Resistance: 0.90 to 1.1 ohms