

## **TECHNICAL DATA**

### **ENGINE MODEL N3.21**



#### **ENGINE SPECIFICATION**

Number of cylinders: 3  
 Displacement: 719 cc  
 Bore - Stroke: 67 X 68.4 mm  
 Compression ratio: 23/1  
 Minimal compression pressure: 23 bars  
 Compression pressure: 29 to 33 bars  
 Maximum speed without load: 3850 rpm  
 Maximum RPM in load: 3600 rpm  
 Idle RPM: 1050 rpm  
 Firing order: 1 - 2 - 3  
 Rotation: Anti clockwise (flywheel)

#### **INJECTION**

Type of injector: BOSCH JET  
 Fuel injection pressure: 140 bars  
 Injection pump manufacturer: BOSCH MD  
 MINI  
 Injection timing: 20 to 22° before TDC

#### **TIGHTENING TORQUE**

Arm head cover cap nuts: 0.4 to 0.6 kgF  
 Cylinder head bolts: 4 to 4.5 kgF  
 Flywheel bolts: 5.5 to 6 kgF  
 Connecting rod bolts: 2.7 to 3.1 kgF  
 Rocker arm bracket nuts: 1 to 1.15 kgF  
 Main bearing caps bolts: 1.3 to 1.6 kgF  
 Main bearing caps bolts: 2.7 to 3.1 kgF  
 Nozzle holder assembly: 5 to 7 kgF  
 Glow plugs: 0.8 to 1.5 kgF

#### **LUBRIFICATION**

Oil pressure at idle RPM: 1 bar  
 Oil pressure at maximum load: 2 to 4.5bars  
 Recommended oil: API CD 15W40  
 Oil pan capacity: 3 liters  
 Gearbox model: } see model used  
 Oil capacity: }  
 Recommended oil: }

#### **COOLING SYSTEM**

Capacity: 4 liters  
 Liquid : 50% antifreeze + 50% water

#### **DIAGRAMS**

Valve clearance (cold):  
 Inlet: 0.15 to 0.20 mm  
 Exhaust: 0.15 to 0.20 mm  
 Valve recessing: 0.30 mm

#### **PISTON RINGS**

Piston ring gap:  
 Piston top compression: 0.15 to 0.30 mm  
 Intermediate: 0.30 to 0.45 mm  
 Oil control: 0.30 to 0.45 mm

#### **CYLINDER HEAD**

Cylinder head surface flatness : <0.05 mm

#### **SEA WATER PUMP**

Water flow: 22 liters per minutes

#### **GLOW PLUGS**

Resistance:  $\cong$  0.90 ohms