

TECHNICAL DATA ENGINE TYPE N4.85

CARACTERISTICS

Number of cylinders: 4
Displacement: 3053 Cm³
Bore - Stroke : 94 X 110 mm
Compression ratio: 20 / 1
Compression pressure : 40 bar
Max. pressure diff. Between cyl. : 29.6 bar
Maximum rpm in load: 2800 RPM
Maximum speed without load: 3020 RPM
Idle speed: 825 RPM
Firing order: 1-3-4-2
Rotation: counter clockwise (from flywheel)

INJECTION

Injectors: Type Bosh DN-OPD mini
Injection type: Direct (E-CDIS)
Injection pump: Type Bosh 4M mini
Injection pressure: 1st stage : 190 bar
 2nd stage : 240 bar
Injection timing : 7.5° - 9.5° before TDC

TURBO COMPRESSOR

Delivery pressure:
0.55 to 0.6 bar
Exhaust gas temperature:
600°C maxi
Axial play: 0.12 mm

TIGHTENING TORQUE

Cylinder head cover bolts: 10 Nm
Cylinder head bolts : 190 Nm
Flywheel bolts : 103 Nm
Connecting rods bolts : 71 Nm
Crankcase 2 bolts (bearing case): 143Nm
Crankcase 2 nuts (bearing case): 61Nm
Rocker arm bracket bolts: 52 Nm
Crankshaft pulley bolt : 265 Nm
Injector nozzle clamp bolt: 26Nm
Glow plugs: 8.5 Nm
Injection pumps gear nut (LH): 148 Nm
Nut B+ starter : 10 Nm



LUBRICATION

Oil pressure at idle: 0.5 bar mini
Oil pressure at max. load : 2 to 4 bar
Recommended oil : API CD 15W40
(MOTUL TEKMA MEGA OR
MOTUL MARINE 4T)
Oil pan Capacity : 9 litres
inclinaison depending

COOLING CIRCUIT

Capacity: 9.5 litres
Thermostat opening temperature: 82 °C

DIAGRAMS

Valve clearance (engine cold):
Intake: 0.13~0.17 Exhaust: 0.13~0.17
Valve recessing:
Inlet and Exhaust : 0.65-0.85 mm
Max : 1.2 mm

PISTON RINGS

Cut value clearance:
- Firing piston ring: 0.25-0.40 mm
limit: 1.25 mm -
Compression Ring : 0.30-0.45 mm
limit : 1.25 mm
Oil ring : 0.25-0.45 mm
limit: 1.25 mm

CYLINDEAR HEAD

Surface flatness: < 0.05 mm

SEA WATER PUMP

Flow: 130 litres/mn @ 2800 RPM

ELECTRICITY

Glow plug resistance: 1 Ω
Recommended Battery: 136 A/h
Alternator 12V 100A