

TECHNICAL DATA
ENGINE TYPE
N4.100

CARACTERISTICS

Number of cylinders: 4
Displacement : 3053 cm³
Bore - Stroke : 94 X 110 mm
Compression ratio : 20 / 1
Compression pressure : 4.0 MPa
2.9 MPa mini
Max. pressure diff . between cyl. : 0.4 MPa
Maximum rpm in load : 2800 tr/min
Maximum speed without load : 3020 tr/mn
Idle speed : 850 tr/mn
Max. torque : 313 Nm @ 2000 tr/mn
Firing order : 1-3-4-2
Rotation : CCW view from flywheel
Cylinder n°1 Timing side

INJECTION

Injection system : Direct E-CDIS
Injectors : Denso P Type
Fuel pump : Denso Type Mini Bosh
Injection pressure : 1st stage : 19 MPa
2nd stage : 24 MPa
Injection Timing : 7.5° - 9.5° before TDC

TURBO COMPRESSOR

Delivery pressure :
55 +/- 5 kPa
Exhaust gas temperature :
490°C - 550°C / 600°C maxi
Axial play : 0.173 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: 49 kPa mini
Oil pressure at max. load : 197 – 392 kPa
Recommended oil : API CD15W40
(MOTUL TEKMA MEGA OU
MOTUL MARINE 4T)
Oil pan Capacity : 10-11.2 litres
inclinaison depending
Gearbox : see type
Capacity : see type
Oil : see type

COOLING CIRCUIT

Capacity : 12 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

CYLINDER HEAD

Surface flatness: < 0.05 mm

SEA WATER PUMP

Flow: 130 litres/mn @ 2800 tr/mn

ELECTRICITY

Glow plug resistance: 0.95 Ω
Recommended Battery: 12V 100/110Ah
Alternator 14V 100A
Starter: 12V 3.0 kW