TECHNICAL DATA
ENGINE MODEL N4.115

nanni diesel
energy in blue

ENGINE SPECIFICATION

Number of cylinders: 4
Displacement: 3769 cm3
Bore - Stroke: 100 x 120 mm
Compression ratio: 20/1
Max. pressure difference between cyl. : 10%
Compression pressure: 40 bars
Minimum compression pressure: 29.6 bars
Maximum speed without load: 2600rpm
Maximum RPM in load: 2820 rpm
Idle RPM in forward gear: 780 – 800 rpm
Max. torque:
Firing order: 1-3-4-2
Rotation: counter clockwise (Flywheel)

INJECTION

Direct injection type: E-CDIS
Injectors : BOSCH type P
Fuel injection pressure: 1st phase: 190 bars
2nd phase: 240 bars
Injection pump manufacturer:
BOSCH MINI
Injection timing: 12 to 14° before TDC

TIGHTENING TORQUE

Arm head cover cap nuts: 6.9 to 11.3 Nm
Cylinder head bolts M12:
98.1 to 107.9 Nm
Flywheel bolts M12: 98.1 to 107.9 Nm
Connecting rod bolts M10: 78 to 83.4 nm
Rocker arm bracket nuts M10:
49 to 55.9 Nm
Main bearing caps bolts M14:
137.3 to 147.1 Nm
Crankshaft end bolts M16: 255 to 274 Nm
Nozzle holder bolt M8: 17.7 to 20.6 Nm
Injection pump shaft bolts M14:
73.6 to 83.4 Nm
B+ starter nut M8: 9.8 to 11.8 Nm

LUBRIFICATION

Oil pressure at idle RPM: 0.5 bar
Oil pressure at maximum load: 2 to 4 bars
Recommended oil: MOTUL MARINE 4T SAE 15W40 API mini CD
Oil pan capacity: 13.2 liters horizontal engine
Gearbox model:
Oil capacity: } depending type
Recommended oil:

COOLING CIRCUIT

Capacity: 12 liters
Liquid: 50% antifreeze + 50% water

DIAGRAMS

Valves clearance (cold):
0.23 to 0.27 mm
Valve recessing:
Inlet: 0.6 to 0.8 mm
Exhaust: 0.85 to 01.05 mm

PISTON RINGS

Piston ring gap:
Piston compression: 0.30 to 0.45 mm
Limit: 1.25mm
Oil control: 0.25 to 0.45 mm
Limit: 1.25 mm

CYLINDER HEAD

Cylinder head surface flatness: < 0.05mm

SEA WATER PUMP

Water flow: 80 liters per minutes

ELECTRICITY

Intake air resistance (cold): 0.3 ohms
Recommended battery: 12v 136 AH