## GENERAL ENGINE DATA

- **Type**: 4-Cycle, Water Cooled
- **Aspiration**: Turbo-Charged, Inter Cooler (Fresh water to Cooler)
- **Cylinder Arrangement**: Inline
- **No. of Cylinders**: 6
- **Bore mm(in.)**: 135 (5.31)
- **Stroke mm(in.)**: 170 (6.69)
- **Displacement Liter(in.)**: 14.60 (891)
- **Compression Ratio**: 15.0:1
- **Dry Weight - Engine only - kg(lb)**: 1310 (2889)
- **Wet Weight - Engine only - kg(lb)**: 1407 (3102)

## PERFORMANCE DATA

- **Idling Speed -rpm**: 600～650
- **Maximum Overspeed Capacity - rpm**: 2086
- **Moment of Inertia of Rotating Components J- kg・m²(lbf・ft²)**: 4.20 (399)
  (Includes 14 inch Flywheel)

## ENGINE MOUNTING

- **Maximum Bending Moment at Rear Face of Flywheel Housing - N・m(lbf・ft)**: 1373 (1013)

## AIR INLET SYSTEM

- **Maximum Intake Air Restriction (Includes piping)- kPa (in.H₂O)**: 3.92 (15.7)
- **Maximum Allowable Intake Air Temperature- °C (°F)**: 45 (113)

## EXHAUST SYSTEM

- **Maximum Allowable Back Pressure - kPa (in.H₂O)**: 4.41 (17.7)

## LUBRICATION SYSTEM

- **Oil Pressure at Idle - MPa (psi)**: 0.2～0.3 (29～43)
- **at Rate Speed - MPa (psi)**: 0.5～0.6 (71～86)
- **Maximum Oil Temperature of Oil pan - °C (°F)**: 110 (230)
- **Oil Capacity of Marine Oil pan High - liter (U.S.gal)**: 70 (18.5)
- **Low - liter (U.S.gal)**: 52 (13.7)
- **Total System Capacity (Includes Oil Filter) - liter (U.S.gal)**: 80 (21.1)
- **Maximum Installation Angle (Includes Oil Filter) - °**: Front Up - 22°
  - Front Down - 12.5°
  - Side to Side - 15°
- **Maximum Instantaneous Operating Angle (Engine Level)**: Front Up - 35°
  - Front Down - 12.5°
  - Side to Side - 22.5°

## COOLING SYSTEM

- **Coolant Capacity of Jacket(Engine only) - liter (U.S.gal)**: 30 (7.9)
- **Coolant Capacity of Air cooler(Engine only) - liter (U.S.gal)**: 3 (0.8)
- **Maximum External Friction Head at Engine Outlet-MPa( psi)**: 0.034 (5.0)
- **Recommended Static Head of Coolant above Crankshaft Center - m(ft)**
  - MAX: 10 (32.8)
  - MIN: 7 (23.0)
- **Standard Thermostat (Modulating)Range- °C (°F)**: 71～85 (160～185)
- **Maximum Coolant Temperature at Engine Outlet- °C (°F)**: 95 (203)
- **Recommended Coolant Temperature at Engine outlet- °C (°F)**: 80 (176)
- **Minimum Coolant Expansion Space-% of System Capacity**: 10
- **Maximum Coolant Temperature at Inter Cooler Inlet, PTAW type- °C (°F)**: see page 4/4

In a cold district, water heater installation is recommended to jacket water for starting stability and white smoke control.

The specifications are subject to change without notice.
**FUEL SYSTEM**

- **Fuel Injection Pump**: Bosch S7S Type x 1
- **Maximum Suction Head of Feed Pump - kPa (in. Hg)**: 14.7 (4.3)
- **Maximum Level of Fuel Tank - m**: 2.0
- **Minimum Fuel Oil Supply Pipe Inner Diameter - mm (in.)**: 16 (0.63)
- **Minimum Fuel Oil Leak Pipe Inner Diameter - mm (in.)**: 12 (0.47)

**STARTING SYSTEM**

- **Battery Charging Alternator - V-Ah**: 24-35
- **Starting Motor Capacity - V-kW**: 24-6.0
- **Maximum Allowable Resistance of Cranking Circuit - m Ω**: 2.5
- **Recommended Minimum Battery Capacity (Reference)**
  - At 5°C (41°F) and above - Ah: 200
  - Below 5°C (41°F) through -5°C (23°F) - 400
- **Cranking Ampere of Starter at 5°C (41°F) / -5°C (23°F)**
  - **Static Ampere - A**: 300 / 330
  - **Momentary Ampere - A**: 525 / 585

**ACCESSORY EQUIPMENT**

- **Air Cleaner**: Silencer Type
- **Exhaust Manifold**: Air Cooled
- **Turbocharger**: Air Cooled
- **Air Cooler**: Fresh Water Cooled
- **Breather**: Conduction Type
- **Governor**: Hydraulic PSG Type
- **Fuel Injection Pump**
- **Fuel Feed Pump**
- **Fuel Injection Pipe**: Standard Type
- **Fuel Injection Nozzle**
- **Fuel Filter**: Paper Element Type
- **Lubricating Oil Pump**
- **Lubricating Oil Cooler**
- **Lubricating Oil Filter (Full-Flow)**: Paper Element Type
- **Lubricating Oil Filter (By-Pass Flow)**: Paper Element Type
- **Oil Pan**: Large Capacity, aluminium
- **Cooling Water Pump**
- **Cooling Water Thermostat**
- **Starter**: Earth Float Type
- **Alternator**: Earth Float Type
- **Stop Solenoid**: DC24V-15A
- **Engine Support**: Marine Type
- **Accessory Drive**: Front Drive Pulley

**ACCESSORY EQUIPMENT (LOSE SUPPLY)**

- **Relay Safety**
- **Jack Bolt**
- **Companion Flange**
- **Standard Tools**
- **Standard Spare Parts**

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