

# Engine Specification

Specification  
Issue Date:  
Nov. 27, 2003

MHI Engine Model: **S4S-Y2DT65DPA**  
MENA Engine Model: **S4S-DT - VS**  
MHI Engine Number: 32A00-06390  
Specification Number: SPC-S4S-232

Engine Specification for: **Mitsubishi Engine North America, Inc.**  
**Variable Speed Standard - 2500 rpm**

Certifications: CARB / EPA (Tier 2 Certified)  
Standards: All items, unless otherwise specified, are in accordance with JIS and maker's standards.  
Type: 4 cycle water-cooled, vertical overhead valve, cylinder inline, swirl chamber type.  
Number of Cylinders: 4  
Bore x Stroke: 94 mm x 120 mm  
Piston Displacement: 3.331 Liters  
Compression Ratio: 19:1  
Rotation: Anti-Clockwise rotation as viewed from flywheel side  
Firing Order: 1-3-4-2  
Engine Weight (Dry): Approx. 260 kg (573 lbs)  
Dimensions mm (in):  
Length: Approx. 810 mm (31.9 in)  
Width: Approx. 568 mm (22.4 in)  
Height: Approx. 821 mm (32.3 in)  
Inclination:  
Continuous: 15°  
Temporary: 25° (Maximum of 30 Minutes)  
Fuel: ASTM diesel fuel oil No.2-D (JIS K2204 gas oil specification No. 2 or 3)  
Lubricating Oil: API classification service CD, CF-4 class  
Output: (SAE J1349, w/o Fan)  
57.5 kWm (77.0 HP) / 2500 rpm  
Max Torque 25 kgf-m @ 1600 rpm

Fuel Consumption: 245 g/kW-h (183 g/HP-h) at standard air conditions  
Oil Consumption: Within 2.7 g/kW-h (2.0 g/HP-h)  
Fuel Injection Timing: 6° BTDC at 0.5 mm Cam Lift of Injection Pump  
Idling Engine Speed: Low: 900<sup>+20</sup>/<sub>-0</sub> rpm High: 2800<sup>+25</sup>/<sub>-0</sub> rpm  
Speed Regulation: Steady state speed regulation at rated speed (within 14%)  
Mean Effective Pressure: 0.83MPa (8.44kg/cm<sup>2</sup>)  
Piston Speed: 10 m/s at 2500 rpm  
Fuel Injection Pump: Distributor Type  
Fuel Injection Nozzle: Throttle type  
Governor: Mechanical centrifugal type  
Fuel Filter: Filtering paper type  
Lubricating System: Forced circulation by trochoid pump  
Lubricating Oil Filter: Filtering paper type, full flow  
Oil Pressure: 0.19MPa ~ 0.39MPa (2~4kg/cm<sup>2</sup>) at duty run  
0.1 MPa (1.0kg/cm<sup>2</sup>) min. at low idling  
Oil Capacity: 10 liters (Oil pan 9 liters, high level / Oil filter etc. 1 liters)  
Cooling System: Forced circulation of fresh water by centrifugal pump with thermostat  
Engine Coolant Capacity: Approx. 5.5 liters  
Alternator: 12V - 50A  
Voltage Regulator: IC Type (Built in Alternator)  
Starting System: Electric starting, Starter Motor 12V - 2.2kW, With heater plugs 10.5V, 9.7A  
Engine Shut-off System: Electric solenoid, Energize To Run (ETR)  
Recommendatory Back Pressure: Max. 6.57kPa (0.67mH<sub>2</sub>O)  
Recommendatory Induction Resistance: 0.98~1.96kPa (0.1~0.2mH<sub>2</sub>O)  
Turbocharger: TD04HL  
Oil Cooler: Plate Type  
Engine Color: Clear Lacquer  
Fan Specs: 440 mm diameter Suction Fan; Pulley Ratio: 1.3  
Flywheel Specs: Flywheel:SAE#11-1/2 Flywheel Housing: SAE#3

Accessories (Loose Supply)		
Part Number	Description	Qty.
MM130-066	Switch, Oil Pressure (Attached to Engine)	1
MC880-900	Switch, Thermo (Attached to Engine)	1