MITSUBISHI DIESEL ENGINE TECHNICAL INFORMATION	ITEM NO.	T0212-0002E Rev.1 (1/4)
	DATE	February, 2014

Specification Sheets of S6A3-PTAA Engine

Specification Sheets of S6A3-PTAA Engine are enclosed herein.

Revision				
	First Edition : Mar., 2013((T13-0351-E Feb. '00)	Engine Engineering Department High Speed Engine Designing Section		
	Rev.1 : Feb., 2014			
		Approved by	Checked by	Drawn by
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GENERAL ENGINE DATA

Type	4-Cycle, Water Cooled	
Aspiration	Turbo-Charged, Air to Air Cooler	
Cylinder Arragement	Inline	
No.of Cylinders	6	
Bore mm(in.)	150	(5.91)
Stroke mm(in.)	175	(6.89)
Displacement liter(in^3)	18.56	(1133)
Compression Ratio	14.5:1	
Dry Weight - Engine only - kg(lb)	1800	(3969)
- Radiator & Piping - kg(lb)	320	(706)
Wet Weight - Engine only - kg(lb)	1910	(4212)
- Radiator & Piping - kg(lb)	390	(860)

PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load		
Mechanical - %	±0.5	
Hydraulic (std.) or Electric Governor - %	±0.25 or better	
Maximum Overspeed Capacity - rpm	2300	
Moment of inertia of Rotating Components - kgf·m^2(lbf·ft^2)	32.09	(761.6)
(Includes Std.Flywheel)		
Cyclic Speed Variation with Flywheel at 1800rpm	1/178	
1500rpm	1/112	

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing - kgf·m(lbf·ft)	200	(1447)

AIR INLET SYSTEM

Maximum Intake Air Restriction (Includes piping)		
With Clean Filter Element - mm H_2O (in.H_2O)	400	(15.7)
With Dirty Filter Element - mm H_2O (in.H_2O)	635	(25.0)

EXHAUST SYSTEM

Maximum Allowable Back Pressure - mm H_2O (in.H_2O)	600	(23.6)

LUBRICATION SYSTEM

Oil Pressure at Idle - kgf/cm^2(psi)	2～3	(29～43)
at Rate Speed - kgf/cm^2(psi)	5～6	(71～86)
Maximum Oil Temperature - °C(°F)	110	(230)
Oil Capacity of Standard Pan High - liter (U.S.gal)	70	(18.5)
Low - liter (U.S.gal)	50	(13.2)
Total System Capacity (Includes Oil Filter) - liter (U.S.gal)	80	(21.1)
Maximum Angle of Installation (Std. Pan) Front Down	10°	
(Engine Only) Front Up	12°	
Side to Side	22.5°	

COOLING SYSTEM

Coolant Capactiy - Engine - liter (U.S.gal)	45	(11.9)
- Radiator & Piping - liter (U.S.gal)	70	(18.5)
Maximum External Friction Head at Engine Outlet - kgf/cm^2(psi)	0.35	(5.0)
Maximum Static Head of Coolant above Crankshaft Center - m(ft)	10	(32.8)
Maximum Outlet Pressure of Engine Water Pump - kgf/cm^2(psi)	1.7	(24.3)
Standard Thermostat (modulating)Range- °C(°F)	65～85	(149～185)
Maximum Coolant Temperature at Engine Outlet- °C(°F)	98	(208)
Minimum Coolant Expansion Space - % of System Capacity	10	
Maximum cooling Air Temperature at Air to Air cooler Inlet, TAA type- °C(°F)	40	(104)
Maximum Air Restriction on Discharge Side of Radiator and Fan-mm H_2O(in.H_2O)	10	(0.4)

The specifications are subject to change without notice.

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FUEL SYSTEM

Fuel Injector	Bosch P Type × 1	
Maximum Suction Head of Feed Pump - mm Hg (in. Hg)	75	(3.0)
Maximum Static Head of Return & Leak Pipe - mm Hg (in.Hg)	150	(5.9)

STARTING SYSTEM

Battery Charging Alternator - V-Ah	24-30
Starting Motor Capacity - V -kW	24-6.0
Maximum Allowable Resistance of Cranking Circuit - m Ω	2.5
Recommended Minimum Battery Capacity	
At 5°C(41°F) and above - Ah	200
Below 5°C(41°F) through - 5°C(23°F)	400

ENGINE RATING

All data represent net performance with standard accessories such as air cleaner, inlet /exhaust manifolds, fuel oil system, L.O. pump, etc. under the condition of 100kPa(29.6inHg) barometric pressure, 77°F(25°C) ambient temperature and 30% relative humidity.

ITEM	UNIT	STAND-BY POWER			PRIME POWER		
		60Hz	50Hz		60Hz	50Hz	
Engine Speed	rpm	1800	1500		1800	1500	
No. of Cylinders		6					
Bore	mm (in.)	150 (5.91)					
Stroke	mm (in.)	175 (6.89)					
Displacement	liter ($in.^3$)	18.56 (1133)					
Brake Horse power with Fan	HP (kW)	692 (516)	634 (473)		617 (460)	577 (430)	
Brake Mean Effective Pressure with Fan	kgf/cm^2 (psi)	18.9 (269)	20.8 (296)		16.9 (240)	18.9 (269)	
Mean Piston Speed	m/s (ft/min)	10.5 (2067)	8.8 (1732)		10.5 (2067)	8.8 (1732)	
Maximum Regenerative Power Absorption Capacity without Fan	HP (kW)	73 (54)	53 (40)		73 (54)	53 (40)	
Intake Air flow	m^3/min (CFM)	46 (1624)	40 (1412)		41 (1448)	37 (1306)	
Exhaust Gas Flow	m^3/min (CFM)	121 (4273)	107 (3778)		107 (3778)	97 (3425)	
Coolant Flow	liter/min (U.S. GPM)	650 (172)	580 (153)		650 (172)	580 (153)	
Cooling Air Flow	m^3/min (CFM)	553 (19526)	431 (15219)		553 (19526)	431 (15219)	
Fan Loss Horse Power	HP (kW)	27 (20)	14 (10)		27 (20)	14 (10)	
Radiated Heat to Ambient	kcal/hr (BTU/min)	34304 (2269)	30459 (2015)		30586 (2023)	27720 (1833)	
Heat Rejection to Coolant	kcal/hr (BTU/min)	148650 (9832)	131987 (8729)		132539 (8766)	120121 (7945)	
Heat Rejection to Air to Air Cooler	kcal/hr (BTU/min)	137215 (9075)	121835 (8058)		122344 (8092)	110881 (7334)	
Heat Rejection to Exhaust	kcal/hr (BTU/min)	379420 (25094)	324338 (21451)		338297 (22375)	295178 (19523)	
Noise Level (1 m height & distance) (excludes, Intake,Exhaust & Fan)	dB(A)	TBD	TBD		TBD	TBD	

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