

mitsubishi Diesel Engine Technical Information		ITEM NO.	T0216-0004E Rev.2 (1/4)	
		DATE	April, 2014	
<p align="center">Specification Sheets of S16R-Y1PTA-4 Engine</p>				
<p>Specification Sheets of S16R-Y1PTA-4 Engine are enclosed herein.</p>				
Revision	First Edition : September, 2007 (T13-0545-E Aug.'06)		Engine Engineering Department	
	Rev.1 : Mar., 2013		High Speed Engine Designing Section	
	Rev.2 : Apr., 2014		Approved by	Checked by
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		Drawn by		
		K.Y		

GENERAL ENGINE DATA

Type	4-Cycle, Water Cooled	
Aspiration	Turbo-Charged, After Cooler (Jacket water to Cooler)	
Cylinder Arrangement	60°V	
No. of Cylinders	16	
Bore mm(in.)	170	(6.69)
Stroke mm(in.)	180	(7.09)
Displacement liter(in ³)	65.37	(3989)
Compression Ratio	15.0:1	
Dry Weight - Engine only - kg(lb)	6750	(14884)
Wet Weight - Engine only - kg(lb)	7127	(15715)

PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load		
Electric Governor - %	±0.25 or better	
Maximum Overspeed Capacity - rpm	2100	
Moment of inertia of Rotating Components - kgf·m ² (lbf·ft ²)	80.83	(1918)
(Includes Std. Flywheel)		
Cyclic Speed Variation with Flywheel at 1500rpm	1/159	

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing - kgf·m(lbf·ft)	450	(3256)
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AIR INLET SYSTEM

Maximum Intake Air Restriction (Includes piping)		
With Clean Filter Element - mm H ₂ O (in. H ₂ O)	400	(15.7)
With Dirty Filter Element - mm H ₂ O (in. H ₂ O)	635	(25.0)

EXHAUST SYSTEM

Maximum Allowable Back Pressure - mm H ₂ O (in. H ₂ O)	600	(23.6)
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LUBRICATION SYSTEM

Oil Pressure at Idle - kgf/cm ² (psi)	2~3	(29~43)
at Rate Speed - kgf/cm ² (psi)	5~6.5	(71~93)
Maximum Oil Temperature - °C(°F)	110	(230)
Oil Capacity of Standard Pan High - liter (U.S. gal)	200	(52.8)
Low - liter (U.S. gal)	140	(37.0)
Total System Capacity (Includes Oil Filter) - liter (U.S. gal)	230	(60.8)
Maximum Angle of Installation (Std. Pan) Front Down	5°	
(Engine Only) Front Up	5°	
Side to Side	22.5°	

COOLING SYSTEM

Coolant Capacity (Engine only) - liter (U.S. gal)	170	(44.9)
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)	2	(28.6)
Standard Thermostat (modulating) Range- °C(°F)	71~85	(160~185)
Maximum Coolant Temperature at Engine Outlet- °C(°F)	98	(208)
Minimum Coolant Expansion Space - % of System Capacity	10	
Maximum Coolant Temperature at Intercooler Inlet, TK type- °C(°F)		
Maximum Air Restriction on Discharge Side of Radiator and Fan-mm H ₂ O(in. H ₂ O)	10	(0.4)

The specifications are subject to change without notice.

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SPECIFICATION SHEET

MITSUBISHI
DIESEL ENGINES

FUEL SYSTEM

Fuel Injector	Mitsubishi PS8 × 2
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	24-7.5×2
Maximum Allowable Resistance of Cranking Circuit - m Ω	1.5
Recommended Minimum Battery Capacity	
At 5 °C(41°F) and above - Ah	300
Below 5 °C(41°F) through - 5 °C(23°F)	600

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Comparable for US EPA-Tier 1 / Constant Speed Only (D2)

MITSUBISHI
DIESEL ENGINES

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SPECIFICATION SHEET

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	CONTINUOUS C	CONTINUOUS D
		50Hz	50Hz		
Engine Speed	rpm	1500	1500		
No. of Cylinders		16			
Bore	mm (in.)	170 (6.69)			
Stroke	mm (in.)	180 (7.09)			
Displacement	liter (in. ³)	65.37 (3989)			
Brake Horse power without Fan	HP (kW)	2280 (1701)	2072 (1546)		
Brake Mean Effective Pressure without Fan	kgf/cm ² (psi)	21.2 (301)	19.3 (274)		
Mean Piston Speed	m/s (ft/min)	9.0 (1772)	9.0 (1772)		
Maximum Regenerative Power Absorption Capacity without Fan	HP (kW)	188 (140)	188 (140)		
Intake Air flow	m ³ /min (CFM)	146 (5155)	131 (4626)		
Exhaust Gas Flow	m ³ /min (CFM)	385 (13594)	347 (12253)		
Coolant Flow	liter/min (U.S. GPM)	1650 (436)	1650 (436)		
Coolant Flow to Intercooler (TK only)	liter/min (U.S. GPM)	—	—		
Cooling Air Flow (Std. Fan)	m ³ /min (CFM)	1950 (68855)	1950 (68855)		
Fan Loss Horse Power (Std. Fan)	HP (kW)	40 (30)	40 (30)		
Radiated Heat to Ambient	kcal/hr (BTU/min)	109683 (7254)	98737 (6530)		
Heat Rejection to Coolant	kcal/hr (BTU/min)	914025 (60452)	822810 (54420)		
Heat Rejection to Inter Cooler (TK Version)	kcal/hr (BTU/min)	—	—		
Heat Rejection to Exhaust	kcal/hr (BTU/min)	1169820 (77370)	1040394 (68810)		
Noise Level (1 m height & distance) (excludes, Intake, Exhaust & Fan)	dB(A)	TBD	TBD		

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