

S12U-TA

SPECIFICATION SHEET

**MITSUBISHI
DIESEL ENGINES**

GENERAL ENGINE DATA

Type	4-Cycle, Water Cooled
Aspiration	Turbo-Charged, After Cooler (Jacket Water to Cooler)
Cylinder Arrangement	60°V
No. of Cylinders	12
Bore mm (in.)	240 (9.45)
Stroke mm (in.)	260 (10.24)
Displacement liter (in ³)	141.145 (8614)
Compression Ratio	13.5 : 1
Dry Weight - Engine only - kg (lb)	15500 (34171)
Wet Weight - Engine only - kg (lb)	16600 (36596)

PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load - %	±0.5
Maximum Overspeed Capacity - min ⁻¹	1400
Moment of Inertia of Rotating Components GD ² - kgf · m ² (lbf · ft ²)	337.8 (8019)
(Includes Std. Flywheel)	
Cyclic Speed Variation with Flywheel at 1200 min ⁻¹	1/392
1000 min ⁻¹	1/257

AIR INLET SYSTEM

Maximum Allowable Intake Air Restriction	
With Clean Filter Element - mm H ₂ O (in. H ₂ O)	300 (11.8)
With Dirty Filter Element - mm H ₂ O (in. H ₂ O)	760 (29.9)

EXHAUST SYSTEM

Maximum Allowable Back Pressure - mm H ₂ O (in. H ₂ O)	450 (17.7)
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LUBRICATION SYSTEM

Oil Pressure at Idle - MPa (psi)	0.15 (21.3)
at Rate Speed - MPa (psi)	0.44 - 0.69 (64 - 100)
Maximum Oil Temperature - °C (°F)	95 (203)
Oil Capacity of Standard Pan High - liter (U.S. gal.)	470 (124.2)
Low - liter (U.S. gal.)	330 (87.1)
Total System Capacity (Includes Oil Filter) - liter (U.S. gal.)	520 (137.4)
Maximum Installation Angle (Std. Pan)	
(Engine only)	
Front Down - °	14
Front Up - °	14
Side to Side - °	25

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COOLING SYSTEM

Coolant Capacity (Engine only) - liter (U.S. gal.)	520 (137.4)
Maximum External Friction Head at Engine Outlet - MPa (psi)	0.1 (14.2)
Maximum Static Head of Coolant above Crankshaft Center - m (ft)	12.5 (41.0)
Maximum Outlet Pressure of Engine Water Pump - MPa (psi)	0.25 (35.6)
Standard Thermostat (modulating) Range - °C (°F)	65 -75 (149 - 167)
Maximum Coolant Temperature at Engine Outlet -°C (°F)	95 (203)
Minimum Coolant Expansion Space - % of System Capacity	10

FUEL SYSTEM

Fuel Injection Pump Type	Bosch Type × 12
Maximum Suction Head of Feed Pump - mmHg (in. Hg)	110 (4.3)
Maximum Static Head of Leak Pipe - mmHg (in. Hg)	370 (14.6)

STARTING AIR SYSTEM

Air Reservoir Capacity - liter (U.S. gal)	300 (79.2)
No. of Air Reservoir	2
Air Pressure - MPa (psi)	2.94 (427)

The specifications are subject to change without notification.

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ENGINE RATING

All data represent net performance with standard accessories such as fuel injection pump, water pump, L.O. pump under the following conditions;

Barometric pressure ; 100 kPa (750 mmHg)

Ambient temperature ; 298 K (25 °C)

Relative humidity ; 30%

Calorific value of fuel ; 42,700kJ/kg

ITEM	UNIT	Engine Speed min^{-1}				Remarks
		1200	1000	900	750	
Brake Horse Power	kW	2576	2428	2182	1618	Prime power
Specific Fuel Consumption	g/kWh	209	200	198	199	Allowance +5%
Break Mean Effective Press.	MPa	1.83	2.06	2.06	1.83	
Mean Piston Speed	m/s	10.4	8.7	7.8	6.5	
Intake Air Flow	m^3/min	270.7	231.8	198.0	124.0	
Exhaust Gas Flow	m^3/min	594.3	515.8	434.6	344.0	
Jacket Water Flow	l/min	1700	1430	1300	1100	
Jacket Water Pressure	MPa	0.17	0.13	0.11	0.08	
Cooling water (A/C & O/C) Flow	l/min	1700	1430	1300	1100	
Oil Flow	l/min	1024	850	770	610	
Radiated Heat to Ambient	$\times 10^4 \text{kcal/h}$	16.47	14.86	13.22	N.A.	
Heat Rejection to Jacket Water	$\times 10^4 \text{kcal/h}$	49.42	44.58	39.66	N.A.	
Heat Rejection to Air & Oil Cooler	$\times 10^4 \text{kcal/h}$	57.66	55.49	48.47	N.A.	
Heat Rejection to Exhaust	$\times 10^4 \text{kcal/h}$	204.10	172.62	151.70	N.A.	
Noise Level	dB(A)	107	103	102	N.A.	Mechanical 1 m Dis. 1.5m H.
Max. No Load Governored Speed	min^{-1}	1250	1050	945	790	

Note: Break horse power at flywheel end

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APPLICATION:LAND-USE GENERATOR