

## ◎ POWER RATING

Engine Speed rpm	Type of Operation	Engine Power	
		kW	Ps
1500	Prime Power	208	287
	Standby Power	228	310

-. The engine performance is as per GB/T2820.

-. Ratings are based on GB/T1147.1.

---Prime power is available for an unlimited number of hours per year in a variable load application. The permissible average power output over 24 hours of operation shall not exceed 80% of the prime power rating.

---Standby power is available in the event of a utility power outage or under test conditions for up to 200 hours of operation per year.

The permissible average power output over 24 hours of operation shall not exceed 80% of the standby power rating.

## ◎ SPECIFICATIONS

○ Engine Model	SC9D310D2
○ Engine Type	In-line,4 strokes, water-cooled Turbo charged air-to-air intercooled
○ Combustion type	Direct injection
○ Cylinder Type	Wet liner
○ Number of cylinders	6
○ Bore × stroke	114(4.49) × 144(5.67) mm(in.)
○ Displacement	8.82(538.2) lit.(in <sup>3</sup> )
○ Compression ratio	18 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	6°BTDC
○ Dry weight	Approx. 740kg (1631b)
○ Dimension (L×W×H)	1455×762×1273 mm (57.3×30.0×50.2 in.)
○ Rotation	Counter clockwise viewed from Flywheel
○ Fly wheel housing	SAE NO.2
○ Fly wheel	SAE NO.11.5

## ◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	13.9
50%	26.3
75%	38.2
100%	50.6
110%	55.6

## ◎ FUEL SYSTEM

○ Injection pump	Longkou in-line “P” type
○ Governor	Electric type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ Opening pressure	250 kg/cm <sup>2</sup> (3556 psi)
○ Fuel filter	Full flow, cartridge type
○ Used fuel	Diesel fuel oil

## ◎ LUBRICATION SYSTEM

○ Lub. Method	Fully forced pressure feed type
○ Oil pump	Gear type driven by crankshaft
○ Oil filter	Full flow, cartridge type
○ Oil pan capacity	High level 19 liters ( 5.02 gal.) Low level 15 liters ( 3.96 gal.)
○ Angularity limit	Front down 25 deg. Front up 35 deg. Side to side 35 deg.
○ Lub. Oil	Refer to Operation Manual

## ◎ MECHANISM

○ Type	Over head valve
○ Number of valve	Intake 1, exhaust 1 per cylinder
○ Valve lashes at cold	Intake 0.30mm (0.0118 in.) Exhaust 0.50mm (0.0197 in.)

## ◎ VALVE TIMING

	Opening	Close
○ Intake valve	22.5 deg. BTDC	34.5 deg. ABDC
○ Exhaust valve	67.5 deg. BBDC	25.5 deg. ATDC

## ◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity	12 liters ( 3.17 gal.)

## ◎ ENGINEERING DATA

○ Water flow	200 liters/min @1,500 rpm
○ Heat rejection to coolant	20.35 kcal/sec @1,500 rpm

- (engine only)
- Pressure system Max. 0.5 kg/cm<sup>2</sup> ( 7.11 psi)
- Water pump Centrifugal type driven by belt
- Water pump Capacity 200 liters ( 52.8 gal.)/min at 1,500 rpm (engine)
- Thermostat Wax-pellet type  
Opening temp. 82°C  
Full open temp. 93°C
- Cooling fan Blower type, plastic  
762 mm diameter, 10 blades

- Heat rejection to CAC 10.4 kcal/sec @1,500 rpm
- Air flow 16.4 m<sup>3</sup>/min @1,500 rpm
- Exhaust gas flow 35.9 m<sup>3</sup>/min @1,500 rpm
- Exhaust gas temp. 600 °C @1,500 rpm
- Max. permissible restrictions  
Intake system 3 kPa initial  
6 kPa final  
Exhaust system 6 kPa max.
- Max. permissible altitude 2,000 m

◎ ELECTRICAL SYSTEM

- Charging generator 28V×55A
- Voltage regulator Built-in type IC regulator
- Starting motor 24V×7.5kW
- Battery Voltage 24V
- Battery Capacity 180 AH

◆ CONVERSION TABLE

- in. = mm × 0.0394
- PS = kW × 1.3596
- psi = kg/cm<sup>2</sup> × 14.2233
- in<sup>3</sup> = lit. × 61.02
- hp = PS × 0.98635
- lb = kg × 2.20462
- lb/ft = N.m × 0.737
- U.S. gal = lit. × 0.264
- kW = 0.2388 kcal/s
- lb/PS.h = g/kW.h × 0.00162
- cfm = m<sup>3</sup>/min × 35.336

