

◎ **POWER RATING**

Engine Speed rpm	Type of Operation	Engine Power	
		kW	Ps
1500	Prime Power	339	461
	Standby Power	373	507

- 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 SC12E500D3
- Engine Type In-line,4 strokes, water-cooled  
4 valves, Turbo charged  
air-to-air intercooled
- Combustion type Direct injection
- Cylinder Type Wet liner
- Number of cylinders 6
- Bore × stroke 128(5.04) × 153(6.03) mm(in.)
- Displacement 11.8(720) lit.(in3)
- Compression ratio 17 : 1
- Firing order 1-5-3-6-2-4
- Injection timing Electronic control
- Dry weight Approx.1070 kg (2,359 lb)
- Dimension 1787×918×1294 mm  
(L×W×H) (70.4×36.2×51 in.)
- Rotation Counter clockwise viewed from

◎ **FUEL CONSUMPTION**

- Power lit/hr
- 25% 19.9
- 50% 36.4
- 75% 53.7
- 100% 71.9
- 110% 80.5

◎ **FUEL SYSTEM**

- Injection pump Longkou in-line “P” type
- Governor Electronic control
- Feed pump Electronic control
- Injection nozzle Multi hole type
- Fuel filter Full flow, cartridge type

- Fly wheel housing      Flywheel
- Fly wheel housing      SAE NO.1
- Fly wheel                 SAE NO.14

- Used fuel                      Diesel fuel oil

**◎ MECHANISM**

- Type                            Over head valve
- Number of valve            Intake 2, exhaust 2 per cylinder
- Valve lashes at cold
  - Intake 0.40mm (0.0158 in.)
  - Exhaust 0.65mm (0.0256 in.)

**◎ 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 41 liters ( 10.82 gal.)  
Low level 33 liters ( 8.71 gal.)
- Angularity limit                Front down 25 deg.  
Front up 35 deg.  
Side to side 35 deg.
- Lub. Oil                         Refer to Operation Manual

**◎ VALVE TIMING**

- |                 | <b>Opening</b> | <b>Close</b> |
|-----------------|----------------|--------------|
| ○ Intake valve  | 15 deg. BTDC   | 30 deg. ABDC |
| ○ Exhaust valve | 45 deg. BBDC   | 13 deg. ATDC |

**◎ COOLING SYSTEM**

- Cooling method                Fresh water forced circulation
- Water capacity                23.2 liters ( 6.12 gal.)  
(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         515 liters ( 136 gal.)/min  
at 1,500 rpm (engine)
- Thermostat                      Wax-pellet type  
Opening temp. 85°C  
Full open temp. 95°C
- Cooling fan                      Blower type, plastic  
840 mm diameter, 8 blades

**◎ ENGINEERING DATA**

- Water flow                      515 liters/min @1,500 rpm
- Heat rejection to coolant     34.6 kcal/sec @1,500 rpm
- Heat rejection to CAC         12.6 kcal/sec @1,500 rpm
- Air flow                         19.3 m<sup>3</sup>/min @1,500 rpm
- Exhaust gas flow                43.5 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

○ Cooling air flow 9.14 m<sup>3</sup>/s

○ Fan power 10 kW

◎ **ELECTRICAL SYSTEM**

◆ **CONVERSION TABLE**

○ Charging generator 28V×70A

○ Voltage regulator Built-in type IC regulator

in. = mm × 0.0394 lb/ft = N.m × 0.737

PS = kW × 1.3596 U.S. gal = lit. × 0.264

○ Starting motor 24V×5.5kW

psi = kg/cm<sup>2</sup> × 14.2233 kW = 0.2388 kcal/s

○ Battery Voltage 24V

in<sup>3</sup> = lit. × 61.02 lb/PS.h = g/kW.h × 0.00162

○ Battery Capacity 180 AH

hp = PS × 0.98635 cfm = m<sup>3</sup>/min × 35.336

lb = kg × 2.20462

