SC12E460D2

◎ **POWER RATING**

Engine Speed	Type of	Engine Power	
rpm	Operation	kW	Ps
1500	Prime Power	307	418
	Standby Power	338	460

-. 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

SC12E460D2

○ 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

14°BTDC

○ 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

Flywheel

◎ **FUEL CONSUMPTION**

○ Power

lit/hr

25%	19.8
50%	36.1
75%	53.4
100%	71.6
110%	80.0

◎ **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/cm2 (3556 psi)

○ Fuel filter

Full flow, cartridge type

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

◎ 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.)

◎ VALVE TIMING

	Opening	Close
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/cm2 (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
- Cooling air flow — 9.14 m³ /s

- 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 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

◎ ENGINEERING DATA

- Water flow — 515 liters/min @1,500 rpm
- Heat rejection to coolant — 34.1 kcal/sec @1,500 rpm
- Heat rejection to CAC — 11.6 kcal/sec @1,500 rpm
- Air flow — 18.6 m3/min @1,500 rpm
- Exhaust gas flow — 41.5 m3/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
- Fan power — 10 kW

◎ ELECTRICAL SYSTEM

O Charging generator

28V×70A

O Voltage regulator

Built-in type IC regulator

O Starting motor

24V×5.5kW

O Battery Voltage

24V

O Battery Capacity

180 AH

◆ CONVERSION TABLE

in. = mm × 0.0394

lb/ft = N.m × 0.737

PS = kW × 1.3596

U.S. gal = lit. × 0.264

psi = kg/cm2 × 14.2233

kW = 0.2388 kcal/s

in^3 = lit. × 61.02

lb/PS.h = g/kW.h × 0.00162

hp = PS × 0.98635

cfm = m3/min × 35.336

lb = kg × 2.20462

1787

1294

918