

# SC7H250D2

## Used for 166kVA generator



### ◎ POWER RATING

Engine Speed	Type of Operation	Engine Power	
		kW	Ps
1500	Prime Power	168	228
	Standby Power	185	252

- 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 SC7H250D2
- Engine Type In-line,4 strokes, water-cooled  
4 valves, Turbo charged  
air-to-air intercooled
- Combustion type Direct injection
- Cylinder Type Dry liner
- Number of cylinders 6
- Bore × stroke 105(4.14) × 124(4.89) mm(in.)
- Displacement 6.44(393) lit.(in<sup>3</sup>)
- Compression ratio 16 : 1
- Firing order 1-5-3-6-2-4
- Injection timing 12°BTDC
- Dry weight Approx. 600 kg (1322.8 lb)
- Dimension 1343×741×1267 mm  
(L×W×H) (52.9×29.2×49.9 in.)
- Rotation Counter clockwise viewed from  
Flywheel

### ◎ FUEL CONSUMPTION

- Power lit/hr
  - 25% 10.7
  - 50% 19.9
  - 75% 29.7
  - 100% 39.7
  - 110% 43.7
- ### ◎ 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

○ Fly wheel housing	SAE NO.3	○ Used fuel	Diesel fuel oil
○ Fly wheel	SAE NO.11.5		

⊙ **MECHANISM**

○ Type	Over head valve
○ Number of valve	Intake 2, exhaust 2 per cylinder
○ Valve lashes at cold	Intake 0.25mm (0.0099 in.) Exhaust 0.50mm (0.0197 in.)

⊙ **VALVE TIMING**

	Opening	Close
○ Intake valve	20.9° BTDC	44.9° ABDC
○ Exhaust valve	51.7° BBDC	11.7° ATDC

⊙ **COOLING SYSTEM**

○ Cooling method	Fresh water forced circulation
○ Water capacity (engine only)	9.6 liters (2.5 gal.)
○ Pressure system	Max. 0.5 kg/cm <sup>2</sup> ( 7.11 psi)
○ Water pump	Centrifugal type driven by belt
○ Water pump Capacity	170liters ( 44.9 gal.)/min at 1,500 rpm (engine)
○ Thermostat	Wax–pellet type Opening temp. 82°C Full open temp. 95°C
○ Cooling fan	Blower type, plastic  660 mm diameter, 10 blades
○ Cooling air flow	4.93 m <sup>3</sup> /s

⊙ **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 17.5 liters ( 4.62 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

⊙ **ENGINEERING DATA**

○ Water flow	170 liters/min @1,500 rpm
○ Heat rejection to coolant	16.9 kcal/sec @1,500 rpm
○ Heat rejection to CAC	10.6 kcal/sec @1,500 rpm
○ Air flow	11.8 m <sup>3</sup> /min @1,500 rpm
○ Exhaust gas flow	26 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	8 kPa max.
○ Max. permissible altitude	2,000 m
○ Fan power	6 kW

◎ ELECTRICAL SYSTEM

- Charging generator 28V×55A
- Voltage regulator Built-in type IC regulator
- Starting motor 24V×6kW
- Battery Voltage 24V
- Battery Capacity 150 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/cm<sup>2</sup> × 14.2233
- kW = 0.2388 kcal/s
- in<sup>3</sup> = lit. × 61.02
- lb/PS.h = g/kW.h × 0.00162
- hp = PS × 0.98635
- cfm = m<sup>3</sup>/min × 35.336
- lb = kg × 2.20462

