SC8D280D2

Used for 180kVA generator

◎ POWER RATING

Engine Speed	Type of	Engine Power	
rpm	Operation	kW	Ps
1500	Prime Power	185	251
	Standby Power	204	280

-. 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

O Engine Model	SC8D280D2
O Engine Type	In-line,4 strokes, water-cooled Turbo charged air-to-air intercooled
O Combustion type	Direct injection
O Cylinder Type	Wet liner
O Number of cylinders	6
O Bore × stroke	114(4.49) × 135(5.32) mm(in.)
O Displacement	8.27(504.6) lit.(in3)
O Compression ratio	18 : 1
O Firing order	1-5-3-6-2-4
O Injection timing	6°BTDC
O Dry weight	Approx. 740kg (1631lb)
O Dimension (L×W×H)	1455×762×1273 mm (57.3×30.0×50.2 in.)
O Rotation	Counter clockwise viewed from Flywheel

◎ FUEL CONSUMPTION

O Power	lit/hr
25%	12.4
50%	22.5
75%	33.5
100%	44.9
110%	49.7

◎ FUEL SYSTEM

O Injection pump	Longkou in-line “P” type
O Governor	Electric type
O Feed pump	Mechanical type
O Injection nozzle	Multi hole type
O Opening pressure	250 kg/cm2 (3556 psi)
O Fuel filter	Full flow, cartridge type

○ Fly wheel housing	SAE NO.2
○ Fly wheel	SAE NO.11.5

◎ 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.)
(engine only)	
○ Pressure system	Max. 0.5 kg/cm2 (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
○ Cooling air flow	5.57 m^3 /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 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

◎ ENGINEERING DATA

○ Water flow	200 liters/min @1,500 rpm
○ Heat rejection to coolant	18.6 kcal/sec @1,500 rpm
○ Heat rejection to CAC	11.6 kcal/sec @1,500 rpm
○ Air flow	12.3 m3/min @1,500 rpm
○ Exhaust gas flow	27.2 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	10 kPa max.
○ Max. permissible altitude	2,000 m
○ Fan power	8 kW

◎ 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	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