



SC33W990D2

◎ POWER RATING

Engine Speed rpm	Type of Operation	Engine Power	
		kW	Ps
1500	Prime Power	660	897
	Standby Power	726	987

-. 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	SC33W990D2
○ Engine Type	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	180(7.09) × 215(8.47) mm(in.)
○ Displacement	32.8(2001) lit.(in3)
○ Compression ratio	15 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	22 °BTDC
○ Dry weight	Approx. 3400kg (7495.7 lb)
○ Dimension (L×W×H)	2307×1371×1983 mm (90.9×54.0×78.1 in.)
○ Rotation	Counter clockwise viewed from Flywheel
○ Fly wheel housing	SAE NO.0
○ Fly wheel	SAE NO.18

◎ MECHANISM

○ Type	Over head valve
○ Number of valve	Intake 1, exhaust 1 per cylinder
○ Valve lashes at cold	Intake 0.4mm (0.0158 in.) Exhaust 0.45mm (0.0177 in.)

◎ VALVE TIMING

	Opening	Close
○ Intake valve	58° BTDC	48° ABDC
○ Exhaust valve	54° BBDC	48° ATDC

◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity	56L (14.78 gal.)

◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	44.8
50%	84.3
75%	123.9
100%	163.7
110%	182.3

◎ FUEL SYSTEM

○ Injection pump	Longkou in-line “P11” type
○ Governor	Electric type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ Opening pressure	290kg/cm2 (4125 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 75 L (19.8 gal.) Low level 50 L (13.2 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	1150L/min @1,500 rpm
○ Heat rejection to coolant	66.4kcal/sec @1,500 rpm

(engine only)

- Pressure system Max. 0.5 kg/cm² (7.11 psi)
- Water pump Centrifugal type driven by belt
- Water pump Capacity 1150L(303.6gal.)/min at 1,500 rpm (engine)
- Thermostat Wax–pellet type
Opening temp. 77 °C
Full open temp. 90 °C
- Cooling fan Blower type,iron
1371 mm diameter, 8 blades
- Cooling air flow 20.82 m³ /s

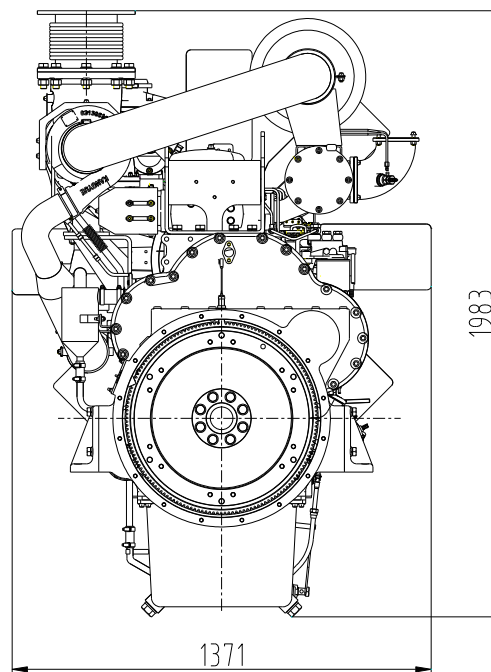
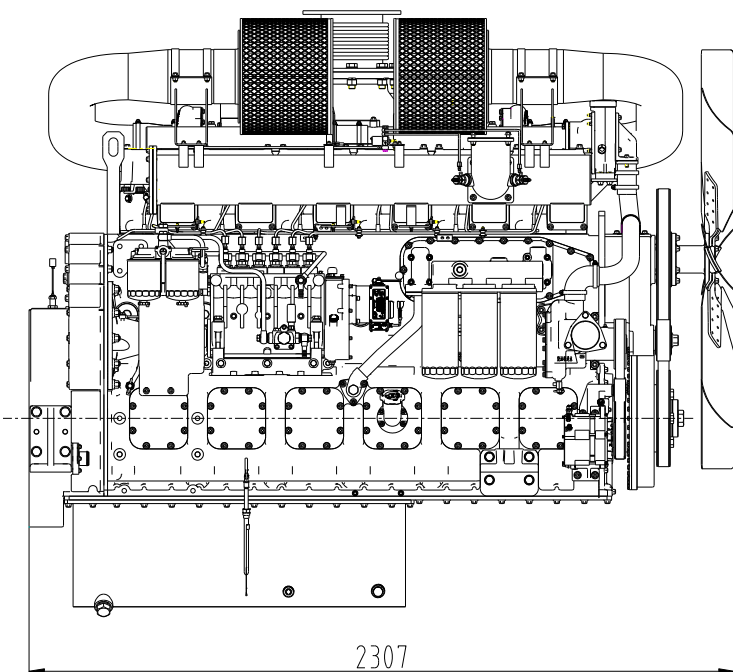
◎ **ELECTRICAL SYSTEM**

- Charging generator 28V×55A
- Voltage regulator Built-in type IC regulator
- Starting motor 24V×11kW
- Battery Voltage 24V
- Battery Capacity 200 AH

- Heat rejection to CAC 41.5kcal/sec @1,500 rpm
- Engine waste heat 20.7 kcal/sec @1,500 rpm
- Air flow 62.9m³/min @1,500 rpm
- Exhaust gas flow 152.6m³/min @1,500 rpm
- Exhaust gas temp. 680 °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 25 kW

◆ **CONVERSION TABLE**

- in. = mm × 0.0394
- PS = kW × 1.3596
- psi = kg/cm² × 14.2233
- in³ = 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 = m³/min × 35.336



Engine speed	Initial load acceptance when engine reaches rated speed (15 seconds maximum after engine starts to crank)				2nd load application Immediately after engine has recovered to rated speed (5 seconds after initial load application)			
	Prime power %	Load kWm (kWe) Nett	Transient Frequency deviation %	Frequency recovery time seconds	Prime power %	Load kWm (kWe) Nett	Transient Frequency deviation %	Frequency recovery time seconds
1500 rev/min	50	330	≤7	3	35	231	≤7	3