

497 CPCB II 47KW ENGINE SPECIFICATIONS		
ENGINE CATEGORY(Domestic/Imported)		Domestic
GENSET CATEGORY(Constant Speed/Variable Speed)		Constant Speed
NAME AND ADDRESS OF THE ENGINE MANUFACTURER (Type Approval Certificate Owner)		M/s TATA MOTORS LIMITED.
ADDRESS OF THE MANUFACTURING PLANT/S		Pune
1	ENGINE	
1.1	Engine Type	Compression Ignition, Direct Injection
1.2	Engine Layout (INLINE/V)	INLINE
1.3	Type of Aspiration	Turbocharged & Intercooled
1.4	Working principle (Four-Stroke/Two-Stroke)	Four-Stroke
1.5	Emission Compliant	CPCB-II
1.5	Bore (mm)	97
1.6	Stroke (mm)	128
1.7	Number of Cylinders	4
1.8	Firing Order	1-3-4-2
1.9	Engine Displacement (l)	3.8
1.10	Type of fuel used	Diesel
1.11	Gross Rated Power (kW)	47
1.12	Rated Speed (RPM)	1500
1.13	Frequency (Hz)	50
1.13	Max No Load Speed (rpm)	1575
1.14	Piston Speed (m/s)	6.4
1.14	Over load Capability (RPM)	Rating is with overload capability.
1.15	Compression Ratio (With Tolerance)	17.5 : 1
1.16	Type of combustion chamber (Hemispherical / squish/others)	Re-Entrant Toroidal Type
1.17	Max. Dry Weight kg	390
1.18	Max. Wet Weight kg	410
2	COOLING SYSTEM	
2.1	Type	Liquid cooled
2.2	Nature of liquid and proportion	Water : Coolant (50:50)
2.4	Circulating pump yes/no	Yes
2.5	Circulating pump type	Centrifugal

2.6	Drive ratio	1.38 : 1
2.7	Thermostat type and setting	Wax type, 76°C ± 2°C
2.8	Minimum CAP Pressure (Psi)	7
2.9	Max. Top tank temperature	100° C
2.10	Charge air cooler	
a	Pressure drop across intercooler	Max. 60 mbar
b	Intercooler Inlet temperature	90° C
3	LUBRICATING SYSTEM	
3.1	Type of lubrication	Forced Lubrication
3.2	Minimum oil pressure	1
3.3	Minimum Oil pressure	8
3.4	Maximum Oil temperature	125° C
3.5	Oil sump capacity low	7
3.6	Oil sump capacity high	9
3.7	Total system oil capacity	12
3.8	Lubricating oil grade	SAE 15W40 CH4
4	AIR INTAKE SYSTEM	
4.1	Air filter type	Dry Type
5	FUEL SYSTEM	
5.1	Type of injection System	Mechanical Inline
5.2	Make	Bosch India Ltd
5.5	Injection timing deg BTDC (specify tolerance)	9 ±1 deg BTDC
5.6	Governor	
a	Make	M/s Bosch (India)
b	Type	Mechanical/ Electronic (Optional)
6	ELECTRICALS	
6.1	Starter Motor Type/Voltage	Positive engagement /12 V
6.2	Charging Alternator Specifications	12 V
7	COLD START	
7.1	Cold start capability	Min. 5°C