DCEC CUMMINS ENGINE Co.,LTD

Generator Engine Performance Data

Basic Engine Model:

6BT5.9-GM83

FR92305

83kW @ 1500 RPM

Configuration	CPL Code	Revision
D402051MX02	CPL:3117	2009-4-15

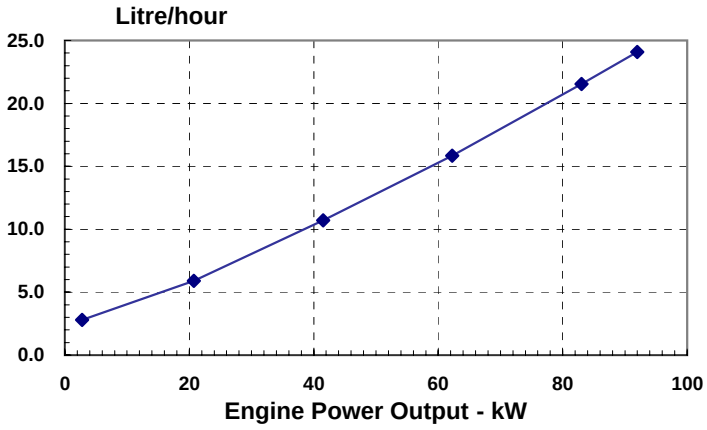
Compression Ratio:	**17.3 : 1**	Aspiration:	**Turbocharged**
Bore:	**102 mm**	Displacement:	**5.9 L**
Storke:	**120 mm**	No. of Cylinders:	**6**
Governor Regulation:	**⩽3%**	Fuel System:	**BYC PB/GAC 24V**

All data is based on the engine operating with fuel system, water pump, and 10 in H_2O (2.488 kPa) inlet air restriction with 5.98 in (152mm) inner diameter, and with 2.01 in Hg (7 kPa) exhaust restriction with 4.02 in (102 mm) inner diameter; not included are alternator, fan, optional equipment and driven components. Coolant flows and heat rejection data based on coolants as 50% ethylene glycol/50% water. All data is subject to change without notice.

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kW	HP	kW	HP	kW	HP
1500	92	123	83	111	TBD	TBD

Engine Performance Data @ 1500 RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	kW	HP	g/kW.h	L/h
STANDBY POWER				
100	92	123	216	24
PRIME POWER				
100	83	111	214	22
75	62	83	210	16
50	42	56	213	11
25	21	28	235	6
CONTINUOUS POWER				
TBD	TBD	TBD	TBD	TBD



Engine Performance Data @ 1800 RPM

Not Available at 1800 RPM

Not Available at 1800 RPM

Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with GB/T18297 conditions of 100kPa (29.61 in. Hg) barometric pressure [80 m (263 ft.) altitude], 25°C (77°F) inlet air temperature, and 1 kPa (0.30 in. Hg) water vapor pressure with No.0# diesel fuel.

GENERAL ENGINE DATA

Weight (Dry) Engine only - Average	-kg	426
Idle Speed Setting	-rpm	1000±50
Compression Ratio		17.3 : 1
Piston Speed*	-m/sec	7.2
Firing Order		1-5-3-6-2-4

ENGINE MOUNTING

Maximum (Static) Bending Moment at Rear Face of Block	-N•m	1356

EXHAUST SYSTEM*

Maximum Back Pressure	-kPa	10.1
Exhaust Gas Flow	-litre/sec	TBD
Exhaust Gas Temperature Turbine Out (Rated Power)	-°C	525
Exhaust Gas Temperature Turbine Out （Standby Power)	-°C	560
Maximum Static Supported Weight at the Turbocharger Outlet Flange	-N•m	6

AIR INTAKE SYSTEM*

Maximum Intake Air Restriction with Heavy Duty Air Cleaner		
— Dirty Element	-kPa	6
— Clean Element	-kPa	4
Minimum Dirt Holding Capacity with Heavy Duty Air Cleaner	-g/cfm	53
Maximum Temperature Rise from Ambient to the Inlet of the Turbocharger	-℃	17
Intake Manifold Pressure	-mmHg	TBD
Intake Air Flow*	-litre/sec	TBD
Heat Rejection to Ambient	-kW	TBD

FUEL SYSTEM*

Maximum Fuel Flow on the Supply Side of the Fuel Pump	-litre/hr	127
Maximum fuel supply restriction at fuel pump inlet		
— with clean fuel filter element(s) at maximum fuel flow	-kPa	8
— with dirty fuel filter element(s) at maximum fuel flow	-kPa	14
Maximum fuel inlet temperature	-℃	60
Maximum Allowable Return Line Pressure	-kPa	34

LUBRICATION SYSTEM

Normal Operating Oil Pressure Range		
— minimum low idle	-kPa	69
— rated speed (Min/Max)	-kPa	241/345
Maximum Sump Oil Temperature	-℃	121
Minimum Required Lube System Capacity - Sump plus Filters	-litre	16.3
By-pass Filtration Required	-Yes/No	Yes

COOLING SYSTEM*

Coolant capacity - engine only	-litre	9.9
Minimum Coolant Makeup Capacity	-litre	3
Standard (modulating) Thermostat Range	-℃	82-95
Minimum pressure cap rating at sea level	-kPa	69
Maximum coolant operating temperature at engine outlet (max. top tank temp):	-℃	96
Minimum operating block coolant temperature	-℃	71
Minimum coolant expansion space (% of system capacity)	- %	5
Heat Rejection to Coolant	-kW	TBD
Maximum recommended external coolant flow restriction in engine circuit:	-kPa	34

CRANKING SYSTEM

		12V	24V
Minimum Battery Capacity - Cold Soak at 0°F (–18°C) or Above			
— Engine Only - Cold Cranking Amperes	-CCA	950	475
— Engine Only - Reserve Capacity	-min.	160	160
Maximum Starting Circuit Voltage Drop	-Volts	TBD	
Minimum Ambient Temperature for Unaided Cold Start	-℃(℉)	-12	（10）
Minimum Cranking Speed Required for Unaided Cold Start	-rpm	125	
Maximum starting circuit resistance	-Ohm	0.00075	0.002

EMISSIONS DATA (in accordance with ISO8178 Cycle D2)

NO_X(Oxides of Nitrogen)	-g/kW.h	N.A.

*All Data at Rated Conditions

ALL DATA CERTIFIED WITHIN 5%

TBD = To Be Decided N/A = Not Applicable N.A. = Not Available

All data is subject to change without notice, sorry for inform.