



Generator Engine Performance Data

DONGFENG CUMMINS ENGINE Co.,LTD

Xiangfan, Hubei Province, China
<http://www.dcec.com.cn>

Basic Engine Model:

6BTA5.9-GM120

FR92438

120kW @ 1800 RPM

Configuration

D403096MX02

CPL Code

CPL:2976

Revision

2009-4-15

Compression Ratio: **17.3 : 1**

Bore: **102 mm**

Stroke: **120 mm**

Governor Regulation: **≤3%**

Aspiration:

Displacement:

No. of Cylinders:

Fuel System:

Turbocharged and Aftercooled

5.9 L

6

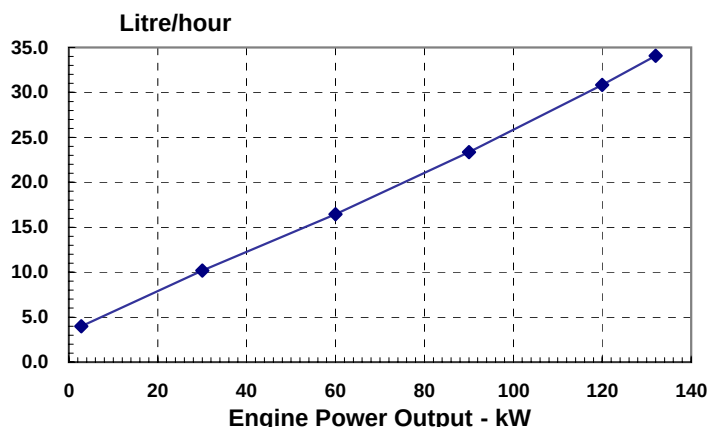
BYC PB/GAC 24V

All data is based on the engine operating with fuel system, water pump, and 10 in H₂O (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
1800	132	177	120	161	75	101

Engine Performance Data @ 1800 RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	kW	HP	g/kW.h	L/h
STANDBY POWER				
100	132	177	213	34
PRIME POWER				
100	120	161	212	31
75	90	121	214	23
50	60	80	226	16
25	30	40	280	10
CONTINUOUS POWER				
100	75	101	216	20



Engine Performance Data @ 1500 RPM

Not Available at 1500 RPM

Not Available at 1500 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	453
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
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EXHAUST SYSTEM*

Maximum Back Pressure.....	-kPa	10.1
Exhaust Gas Flow.....	-litre/sec	TBD
Exhaust Gas Temperature Turbine Out (Rated Power).....	-°C	510
Exhaust Gas Temperature Turbine Out (Standby Power).....	-°C	550
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.....	-°C	17
Intake Manifold Pressure	-mmHg	840
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.....	-°C	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.....	-°C	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	10.4
Minimum Coolant Makeup Capacity	-litre	3
Standard (modulating) Thermostat Range.....	-°C	82-95
Minimum pressure cap rating at sea level.....	-kPa	69
Maximum coolant operating temperature at engine outlet (max. top tank temp):.....	-°C	96
Minimum operating block coolant temperature.....	-°C	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

Minimum Battery Capacity - Cold Soak at 0°F (–18°C) or Above	12V	24V
— 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.....	-°C(°F)	-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.
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*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.

Dongfeng Cummins Engine Co., Ltd.