



DONGFENG CUMMINS ENGINE
PROFORMANCE CURVE

Engine Model
EQB170-20

Curve No.
FR92068

CPL Code
1761

Date
March

Displacement:5.9L

Bore: 102mm

Stroke: 120mm

Fuel System:BeiyouP7100/RQV-K

Cylinders: 6

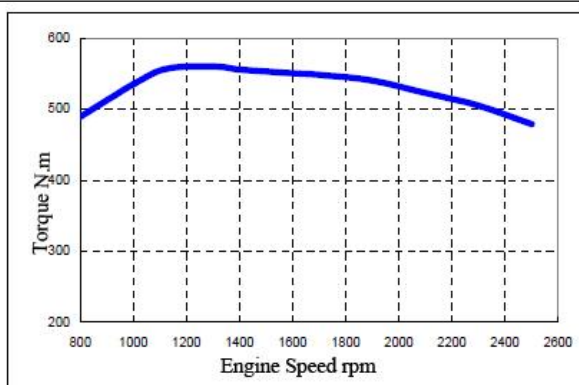
Advertised Power:125kW@2500 rpm

170HP@2500 rpm

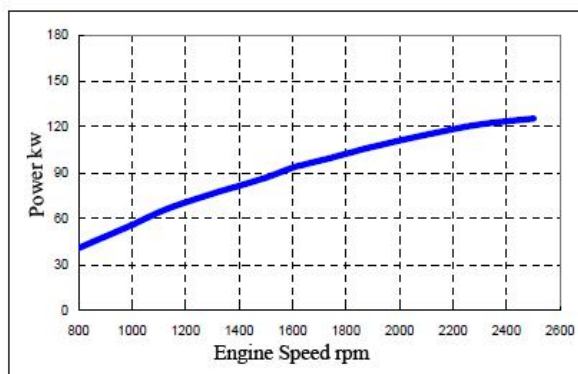
Peak Torque: 560N.m@1300 rpm

Aspiration: Turbocharged & Inter-cooled

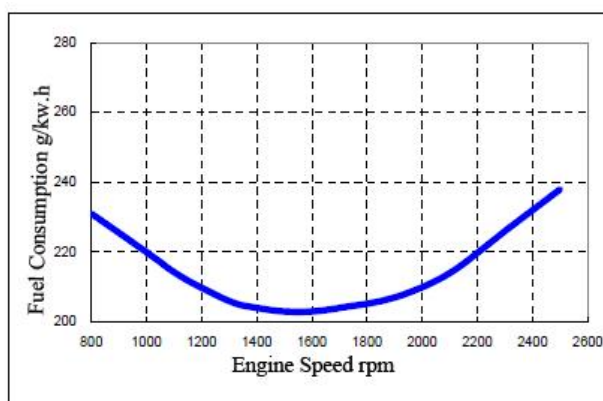
Rating Type: Continuous



Torque	
rpm	N.m
800	489
1000	535
1125	557
1300	560
1400	556
1500	553
1600	551
1700	548
1900	546
2100	523
2300	505
2500	479



Power	
rpm	kW
800	41
1000	56
1125	66
1300	76
1400	82
1500	87
1600	93
1700	98
1900	109
2100	115
2300	122
2500	125



Fuel Consumption	
rpm	g/kw.h
800	231
1000	220
1125	213
1300	206
1400	204
1500	203
1600	203
1700	205
1900	207
2100	214
2300	226
2500	238

Performance data obtain under normal conditions, according to GB/T18297-2001 test conditions

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Diesel Engine for Vehicle Performance Data

Technical Request

Aspiration:	Turbocharged & Inter-cooled
Emission Certification	GB17691/GB14761
Net Weight(Dry)-Engine Only-Average:	407kg
Net Weight(Dry)-Engine with Heat Exchanger-Average	431kg
Compression Ratio:	17.3:1
Distance from Center of Gravity to the Front Engine Block	328mm
Distance from Center of Gravity to the Crankshaft Centerline	155mm
Maximum Bending Moment at Rear Face of Block	1356 N.m
Limit load of Thrust Bearing:	
Instantaneous maximum:	3781 N
Continuous maximum	1780 N
Instantaneous inertia at Rotating: (without Flywheel)	0.25kg.m ²

Performance Characteristic

Idle Speed:	750rpm
Maximum non-load speed:	2750rpm
Over speed performance(within 15 seconds):	4200rpm
Maximum Altitude at Continuous Operation:	3000m
The clutch torque @ 800rpm:	350N.m
When install exhaust braking:	
The limit exhaust pressure of Turbocharger export @3150 rpm	414 kPa
Maximum power of Exhaust brake	112kw

Engine Speed (RPM)	Oil Pressure (kPa)	Air Flow (kg/h)	Air Pressurized		Exhaust Flow (kg/h)	Exhaust Temperature (°C)	Fuel Consumption (kg/h)	Heat Energy Loss	
			Flow (kg/min)	Pressure kPa				Coolant (KW)	Air (KW)
2500	329	886		140	916	565	29.8	79	35
1300	253	342		69	358	358	16.2	49	17

Engine Model: EQB170-21

Curve No.: FR92068

All values within $\pm 5\%$.

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Diesel Engine for Vehicle Performance Data

LUBRICATION SYSTEM

Oil Sump Capacity:

Upper Limit: 14.2L

Lower Limit: 12.4L

Capacity of the whole system: 16.4 L

AIR SYSTEM

Air intake maximum temperature rise from Outside to the Turbocharger 15°C

The allowable maximum restriction when use Dry Air Filter

Medium: kPa (mmH₂O) 2.9(300)

Heavy: kPa (mmH₂O) 3.7(380)

The allowable maximum restriction when use dirty Filter Element: kPa (mmH₂O) 6.2(635)

TURBOCHARGED & INTERCOOLED

Environment design parameters

	Stage II	Stage III
The highest temperature of intake manifold:	55°C	50°C
Temperature after the cooling of the intercooler	25°C	20°C
The maximum allowable cold pressure difference before and after the intercooler:	16.7(125) kPa(mmHg)	
The allowable minimum diameter of the intake manifold:	75mm	

EXHAUST SYSTEM

The maximum exhaust resistance with exhaust manifold and muffler: kPa(mmHg) 10.0(75)

The allowable minimum diameter of the exhaust manifold: 75mm

The allowable maximum static bending moment of the Turbocharger exhaust flange 27N.m

FUEL SYSTEM

The maximum resistance of Fuel Pump when use clean filter 150mmHg

Maximum fuel return oil resistance: 520mmHg

COOLING SYSTEM

Engine Coolant Capacity: 9.0 L

The range of temperature adjustment for the Thermostat: 83-95 °C

The maximum pressure of Coolant(without pressure cap and thermostat closed) 276kPa

The highest coolant temperature (at engine exports): 100°C

Maximum degassing time 25mins

Maximum coolant flow to accessories 41 L/min

The lowest coolant temperature 70°C

Minimum speed of water-filling 19 l/min

Minimum coolant expansion volume relative to the system capacity 6 %

Water tank capacity without water expansion	5 L	
Minimum allows pressure of pressure cap:	50 kPa	
The alarm temperature of the coolant	100°C	
The open temperature of louver	N/A	
Cooling ability of cooling system:	Stage II	Stage III
The limit environmental temperature at rated speed	45 °C	42 °C
The limit environmental temperature at peak torque	40°C	37°C
24V ELECTRICAL SYSTEM		
Maximum resistance of starting circuit	0.002Ω	
The cold start current when engine and the clutch separate: CCA	12V 500	24V 250
COLD STARTING SYSTEM		
The lowest cold starting temperature without auxiliary starting device	-10°C @120rpm	
The lowest cold starting temperature with starting device	-35°C @ 110rpm	
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<i>All data is subject to change without notice- contact Cummins for most recent data.</i>		