



DONGFENG CUMMINS ENGINE
PERFORMANCE CURVE

Engine Model
EQB235-20

Curve No.
FR91390

CPL Code
2249

Date
24-October

Displacement: 5.9L

Bore: 102mm

Stroke: 120mm

Fuel System: Boshi P7100 Pump

Cylinders: 6 Cylinders, in Line

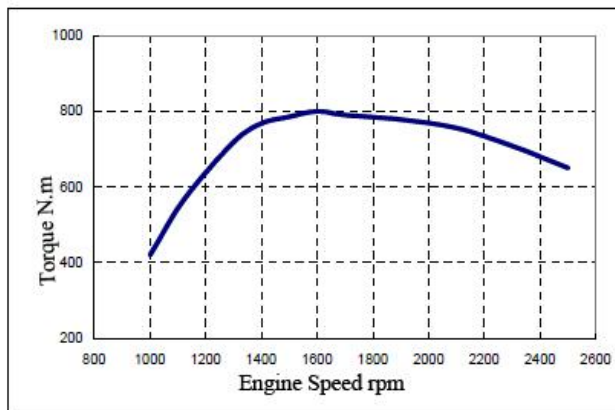
Advertised Power: 173kW@2500 rpm

235HP@2500 rpm

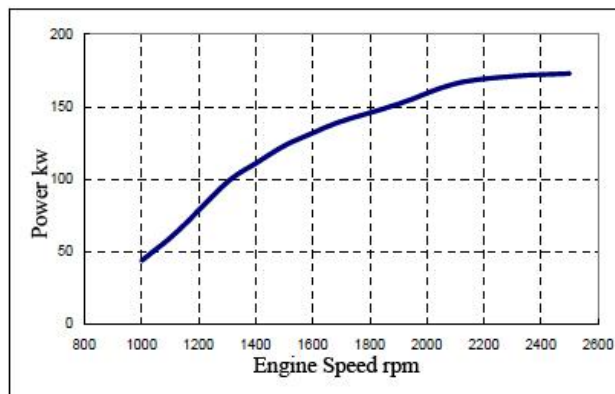
Peak Torque: 800N.m@1600 rpm

Aspiration: Turbocharged & Inter-cooled

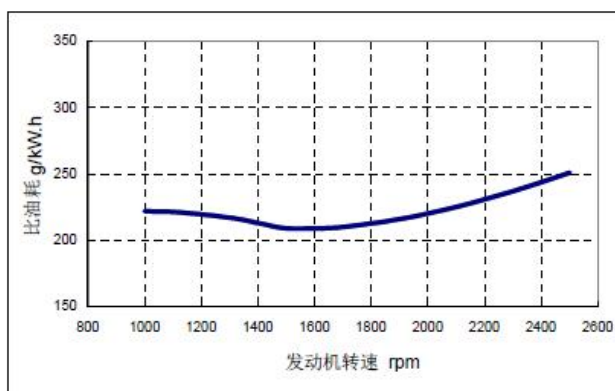
Rating Type: Continuous



Torque	
rpm	N.m
1000	420
1125	570
1300	719
1400	768
1500	786
1600	800
1700	790
1900	778
2100	756
2300	708
2500	650



Power	
rpm	kW
1000	44
1125	64
1300	98
1400	111
1500	123
1600	132
1700	140
1900	152
2100	166
2300	171
2500	173



比油耗	
rpm	g/kW.h
1000	222
1125	221
1300	217
1400	213
1500	209
1600	209
1700	210
1900	216
2100	225
2300	237
2500	251

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:	413kg
Net Weight(Dry)-Engine with Heat Exchanger-Average	437kg
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:	750±100rpm
Maximum non-load speed:	2800rpm
Over speed performance(within 15 seconds):	4200rpm
Maximum Altitude at Continuous Operation:	2000m
The clutch torque @ 800rpm:	400N.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 (m ³ /min)	Air Pressurized		Exhaust Flow (m ³ /min)	Exhaust Temperature (°C)	Fuel Consumption (l/hr)	Heat Energy Loss	
			Flow (kg/min)	Pressure kPa				Coolant (KW)	Air (KW)
2500	400	18.5	21.3	180	51.8	546	50.4	86.5	43.2
1500	350	10.5	12.1	115	29.4	500	30.0	56.7	21.5

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All values within ±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
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The highest temperature of intake manifold:	55°C	50°C
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Temperature after the cooling of the intercooler	25°C	20°C
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The maximum allowable cold pressure difference before and after the intercooler:	16.7(125) kPa(mmHg)	
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The allowable minimum diameter of the intake manifold:	65mm	
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EXHAUST SYSTEM

The maximum exhaust resistance with exhaust manifold and muffler: kPa(mmHg)	10.0(75)
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The allowable diameter of the exhaust manifold:	75mm
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FUEL SYSTEM

The maximum resistance of Fuel Pump when use clean filter	150mmHg
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Maximum fuel return oil resistance:	520mmHg
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COOLING SYSTEM

Engine Coolant Capacity:	9.0 L
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The range of temperature adjustment for the Thermostat:	83-95 °C
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The maximum pressure of Coolant(without pressure cap and thermostat closed)	276kPa
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The highest coolant temperature (at engine exports):	100°C
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Maximum degassing time	25mins
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Maximum coolant flow to accessories	37 L/min
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The lowest coolant temperature	70°C
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Minimum speed of water-filling	19 l/min
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Minimum coolant expansion volume relative to the system capacity	6 %
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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	-25°C @110rpm	
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<i>All data is subject to change without notice- contact Cummins for most recent data.</i>		