



DONGFENG CUMMINS ENGINE
PERFORMANCE CURVE

Engine Model
6BT5.9-M120

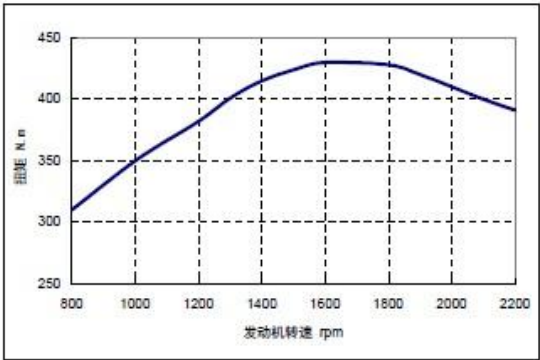
Curve No.

CPL Code
834-02

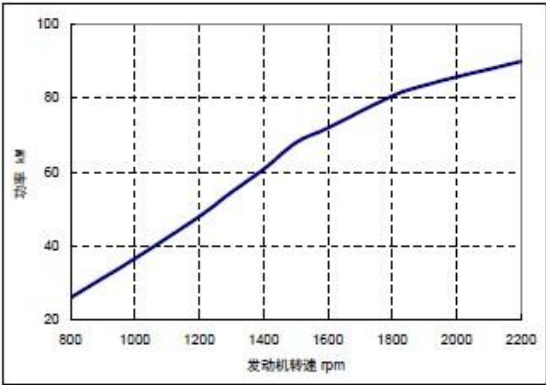
Date
2006-7

Displacement: 5.9L
Bore: 102mm
Stroke: 120mm
Fuel System: Weifu AD/RSV
Cylinders: 6 Cylinders, in Line

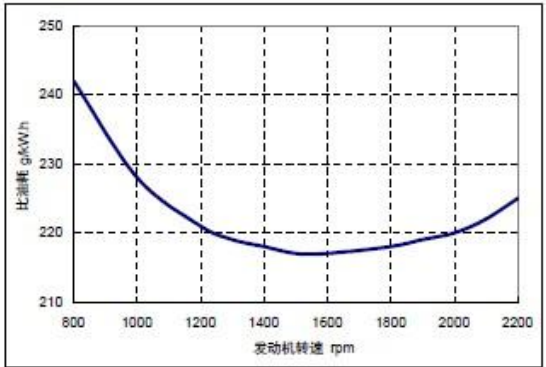
Advertised Power: 90kW@2200 rpm
120HP@2200 rpm
Peak Torque: 430N.m@1600 rpm
Aspiration: Turbocharged
Rating Type: Continuous



扭矩	
rpm	N.m
800	310
1000	350
1200	382
1300	401
1400	415
1500	424
1600	430
1800	428
1900	420
2000	410
2100	400
2200	391



功率	
rpm	kW
800	26
1000	37
1200	48
1300	55
1400	61
1500	68
1600	72
1800	81
1900	84
2000	86
2100	88
2200	90



比油耗	
rpm	g/kW.h
800	242
1000	228
1200	221
1300	219
1400	218
1500	217
1600	217
1800	218
1900	219
2000	220
2100	222
2200	225

All performance data based on the standard status and GB/T18297 conditions.



Cummins Engine Co. Ltd

Diesel Engine for Marine Propulsion Performance Data

General Engine Data

Dry Weight (Pricing Configuration).....	432 kg
Moment of Inertia of Rotating Components (No Flywheel).....	0.25 kg·m ²
Center of Gravity from Front Face of Block.....	391 mm
Center of Gravity above Crankshaft Centerline.....	140 mm

Engine Mounting

Maximum (Static) Bending Moment at Front Support Mounting Surface.....	435N.m
Maximum (Static) Bending Moment at Side Pad Mounting Surface.....	TBD N.m
Maximum (Static) Bending Moment at Rear Face of Block.....	1356N.m
Moment of Inertia of Complete Engine	
— Roll Axis.....	16.5 kg·m ²
— Pitch Axis.....	41.1 kg·m ²
— Yaw Axis.....	35.4kg·m ²

Exhaust System

Maximum Back Pressure.....	76 mmHg
Exhaust Pipe Size Normally Acceptable.....	75 mm
Maximum Static Supported Weight at the Turbocharger Outlet Flange.....	13.5N·m
Exhaust Manifold Insulation Acceptable.....	No
Turbocharger Insulation Acceptable.....	No

Air Intake System

Maximum Intake Air Restriction with Heavy Duty Air Cleaner	
— Clean Element.....	381 mmH ₂ O
— Dirty Element.....	635 mmH ₂ O
Minimum Dirt Holding Capacity with Heavy Duty Air Cleaner.....	53 g/litre/sec.
Maximum Temperature Rise from Ambient to the Inlet of the Turbocharger.....	17 °C
Maximum Pressure Drop from the Turbocharger Outlet to the Intake Manifold.....	TBD mmHG

Lubrication System

Normal Operating Oil Pressure Range.....	200 –450kPa
Maximum Lube Oil Flow for Engine Accessories.....	4.0 liter/min.
Maximum Sump Oil Temperature.....	121 °C
Minimum Engine Oil Pressure for Engine Protection Devices:	
— At Rated Speed and Load.....	276kPa
— At Torque Peak Speed and Load.....	207kPa
— At Low Idle.....	69kPa
Minimum Required Lube System Capacity - Sump plus Filters.....	16.3litre
By-pass Filtration Required.....	No
Angularity of Standard Oil Pan: (Values stated are for intermittent operation only):	
— Front Down.....	35 °
— Front Up.....	35°
— Side to Side.....	35°

Cooling System

Coolant Capacity - Engine Only.....	9.9 L
Maximum Engine Cooling Circuit External Resistance.....	34kPa
Minimum Pump Inlet Pressure with Open Thermostat and no Pressure Cap.....	TBD
Maximum Static Head of Coolant Above Engine Crankshaft Centerline.....	TBD
Standard (modulating) Thermostat Range.....	82-93 °C
Maximum Block Coolant Pressure with Closed Thermostat and no Pressure Cap.....	276kPa
Minimum Pressure Cap.....	50kPa
Maximum Engine Coolant Temperature at Engine Outlet.....	100°C
Maximum Engine Coolant Temperature for Engine Protection Devices.....	101.6°C
Minimum Engine Coolant Temperature.....	71°C
Minimum Fill Rate.....	19 litre/min
Maximum Initial Fill Time.....	5 min
Minimum Coolant Expansion Space of System Capacity.....	6%
Maximum Deaeration Time.....	25 min.
Minimum Drawdown of Total System Capacity.....	11%
(Drawdown Must Exceed the Volume Not Filled at Initial Fill & Must Not Include Expansion Space)	
Fan-on Engine Coolant Outlet Temperature.....	93°C
Shutter Opening Coolant Outlet Temperature.....	85°C
Shutter Opening Intake Manifold Air Temperature.....	N/A

Cool Start System

	12V	24V
Minimum Battery Capacity(below -18°C)		
— Engine Cold Starting Current.....CCA	950	475
—Engine Reserve Capacity.....min	260	130
Minimum Environmental Temperature When Cold Start Unassisted.....-°C	-12	
Minimum Engine Speed When Cold Start Unassisted.....rpm	125	

Fuel System

Maximum Fuel Flow on the Supply Side of the Fuel Pump.....	190litre/hr
Maximum Fuel intake Restriction	
— with clean fuel filter.....	102 mmHg
— with dirty fuel filter.....	203 mmHg
Maximum Fuel Drain Restriction	
— with check valves.....	N/A
— less check valves.....	510mmHg
Maximum Fuel Inlet Temperature.....	71°C
Minimum Fuel Tank Air Venting Capability Required at 6 in. H2O Back Pressure.....	340litre/hr

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.