



DONGFENG CUMMINS ENGINE
PERFORMANCE CURVE

Engine Model
6BT5.9-C135

Curve No.
FR91479

CPL Code
8541

Date
2005-2

Displacement: 5.9L

Bore: 102mm

Stroke: 120mm

Fuel System: Nanyue PW/RSV

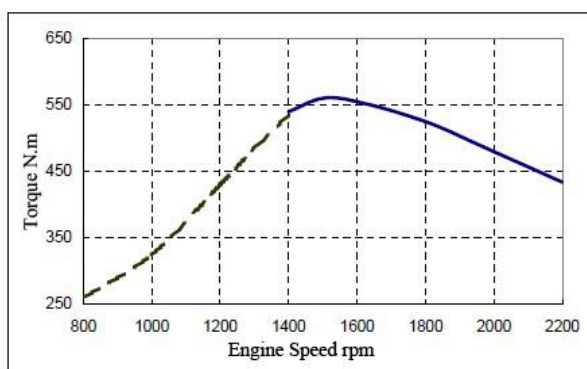
Cylinders: 6 Cylinders, in Line

Advertised Power: 100kW@2200 rpm

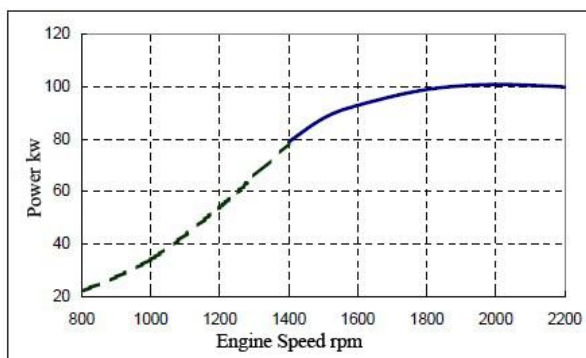
135HP@2200 rpm

Aspiration: Turbocharged & Inter-cooled

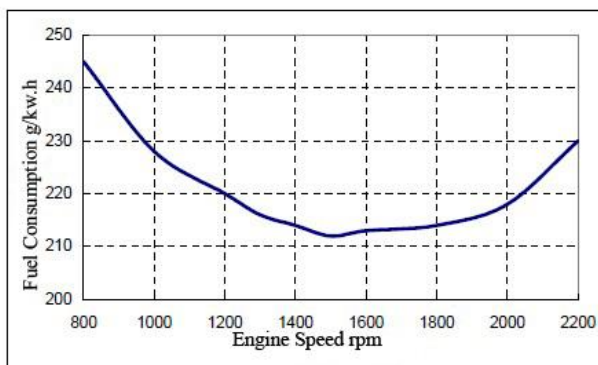
Rating Type: Continuous



Torque	
rpm	N.m
800	250
1000	310
1200	360
1300	390
1400	540
1500	560
1600	555
1800	525
2000	480
2200	434



Power	
rpm	kW
800	21
1000	32
1200	45
1300	53
1400	79
1500	88
1600	93
1800	99
2000	101
2200	100



Fuel Consumption	
rpm	g/kW.h
800	245
1000	228
1200	220
1300	216
1400	215
1500	212
1600	213
1800	215
2000	217
2200	230

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



Cummins Engine Co. Ltd

Diesel Engine for Engineering Performance Data

General Engine Data

Engine Wet Weight (Pricing Configuration).....	432kg
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.....	435 N.m
Maximum (Static) Bending Moment at Side Pad Mounting Surface.....	TBD N.m
Maximum (Static) Bending Moment at Rear Face of Block.....	1356 N.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.....	13.5 N·m
Exhaust Manifold Insulation Acceptable.....	N/A
Turbocharger Insulation Acceptable.....	N/A

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 kPa

Lubrication System

Normal Operating Oil Pressure Range.....	200-450 kPa
Maximum Lube Oil Flow for Engine Accessories.....	4.0 litre/min.
Maximum Sump Oil Temperature.....	121 °C
Minimum Engine Oil Pressure for Engine Protection Devices:	
— At Rated Speed and Load.....	276 kPa
— At Torque Peak Speed and Load.....	207 kPa
— At Low Idle.....	69 kPa
Minimum Required Lube System Capacity - Sump plus Filters.....	16.3 litre
By-pass Filtration Required.....	N/A
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.....	34 kPa
Minimum Pump Inlet Pressure with Open Thermostat and no Pressure Cap.....	N/A
Maximum Static Head of Coolant Above Engine Crankshaft Centerline.....	N/A
Standard (modulating) Thermostat Range.....	82-93 °C
Maximum Block Coolant Pressure with Closed Thermostat and no Pressure Cap.....	276 kPa
Minimum Pressure Cap.....	50 kPa
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.....	6% of System Capacity
Maximum Deaeration Time.....	25 min.
Minimum Drawdown.....	11% of Total System Capacity
(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

Fueling System

Maximum Fuel Flow on the Supply Side of the Fuel Pump.....	190litre/hr
— 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.....	340 litre/hr
Low Idle Set Speed.....	750 rpm
Maximum Governed Speed (10% of Rated Torque)	2360 rpm
Maximum Over speed Capability.....	3750 rpm

Emission

Estimated Free Field Sound Pressure Level At 15 m (50 ft.) and Full-Load Governed Speed
(Excludes Noise from Intake, Exhaust, Cooling System and Driven Components)

—Right Side.....	N/A
—Left Side.....	N/A
—Front.....	N/A

—Rear..... N/A

Fuel Rating Option used for these Data: FR91536

Engine Speed..... -rpm
 Gross Power Output..... -kW
 Torque..... -N.m
 Intake Manifold Pressure..... -kPa
 Motoring Friction Horsepower..... -kW
 Turbocharger Compressor Outlet Pressure..... -kPa
 Intake Air Flow..... -litre/sec
 Exhaust Gas Flow..... -litre/sec
 Exhaust Gas Temperature - Dry Stack..... -°C
 Heat Rejection to Ambient (Dry Manifold)..... -kW
 Heat Rejection to Coolant (Dry Manifold)..... -kW
 Heat Rejection to Fuel..... -kW
 Engine Coolant Flow..... -litre/sec
 External Cooling Circuit Resistance..... - KpaΔP
 Altitude Limitations:
 —Intermittent..... -m
 —Continuous..... -m
 Steady State Smoke..... -Bosch

Rated Power	Max. Power Point	Peak Torque
2200		1500
100		88
434		560
114		55
18		11
120		56
190		125
475		310
470		510
N/A		N/A
78		53.6
0.6		0.3
3.1		2.0
N/A		N/A
3500		3500
3000		3000
1.5		2.5

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.