



**DONGFENG CUMMINS ENGINE
PERFORMANCE CURVE**

Engine Model 4BTA3.9-G2	Curve No. FR L004	
Engine Family D38	CPL Code PP L006	Date 04-2006

Displacement: 3.9L	Advertised Power: 50kW@1500 rpm
Bore: 102mm	67HP@1500 rpm
Stroke: 120mm	
Fuel System:Beiyou A Pump, GAC Electric Governor	Aspiration: Turbocharged & Intercooled
Cylinders:4 Cylinders, in Line	Rating Type: Continuous

Engine Speed	Standby Power		Rated Power		Continuous Power	
RPM	KW	HP	KW	HP	KW	HP
1500	55	74	50	67	N/A	N/A

Output Power			Fuel Consumption	
%	KW	HP	g/kw.h	L/h
Standby Power				
100	55	74	212	14.1
Rated Power				
100	50	67	213	12.9
75	38	51	219	10.1
50	25	34	230	7.0
25	13	17	277	4.3
Continuous Power				
N/A	N/A	N/A	N/A	N/A



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

Technical Request

Aspiration.....	Turbocharged& Intercooled
Net Weight(Dry)-Engine Only.....	350kg
Instantaneous inertia at Rotating: (without Flywheel).....	0.143kg.m ²
Distance from Center of Gravity to the Front Engine Block.....	373mm
Distance from Center of Gravity to the Crankshaft Centerline.....	163mm

Engine Mounting

Maximum (Static) Bending Moment at Rear Face of Block.....	1356 N.m
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Exhaust System

Maximum Back Pressure.....	76 mmHg
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Air Intake System

Maximum Intake Air Restriction:

— with Dirty Filter Element.....	635 mmH ₂ O
— with Normal Clean Air Filter and Clean Filter Element.....	254 mmH ₂ O
—with Heavy-duty Clean Air Filter and Clean Filter Element.....	381 mmH ₂ O

Lubrication System

Normal Operating Oil Pressure Range:

— at Idle Speed.....	207 kPa
— at Rated Speed	345 kPa

Maximum Sump Oil Temperature.....	121 °C
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Angularity of Standard Oil Pan: Oil Capacity(Max.-Min.).....	9.5-8.5 litre
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Minimum Required Lube System Capacity - Sump plus Filters.....	10.9 litre
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Angularity of Standard Oil Pan:

— Front Down.....	40°
— Front Up.....	40°
— Side to Side.....	40°

Fuel System

Type of Fuel System.....	BYC A Type Direct Fuel Injection Pump
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The Maximum Resistance of Fuel Pump When Use Clean Filter.....	102mmHg
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Maximum Fuel Return Oil Resistance.....	508mmHg
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Return Fuel in Total(Constant Load).....	30litre/hr
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Cooling System

Coolant Capacity - Engine Only.....	7.9 L
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Maximum Engine Cooling Circuit External Resistance.....	28kPa
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Minimum Pump Inlet Pressure with Open Thermostat and no Pressure Cap.....	14m
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Standard (modulating) Thermostat Range.....	82-95 °C
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Minimum Pressure Cap.....	69 kPa
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The Highest Coolant Temperature(Standby/Rated Power)..... 104/100 °C

Electrical System

Starter Motor..... 12V 24V
 Battery Charging System(Polarity Negative Ground)..... 63amp 40amp
 Maximum Resistance of Starting Circuit..... 0.00075Ω 0.002Ω

Specification Data:

Engine Speed.....rpm
 Output Power.....kw
 Torque.....N.m
 Idle Speed.....rpm
 Frictional Loss Power.....kw
 Piston Speed.....m/s
 Coolant Flow.....l/s
 Air Intake Flow..... l/s
 Air Exhaust Flow..... l/s
 Exhaust Temperature..... °C
 Heat Loss in The Environment.....kw
 Coolant Heat Loss.....kw
 Fuel Heat Loss.....kw

Rated Power	Standby Power
1500	1500rpm
50	55
318	350
950-1050	950-1050
8.2	8.2
6.0	6.0
2.2	2.2
48.8	51.6
125.0	134.3
526	548
N/A	N/A
25.9	29
N/A	N/A

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.