


# CUMMINS ENGINE DATASHEET



**ENGINE MODEL: 6CT8.3-G1**

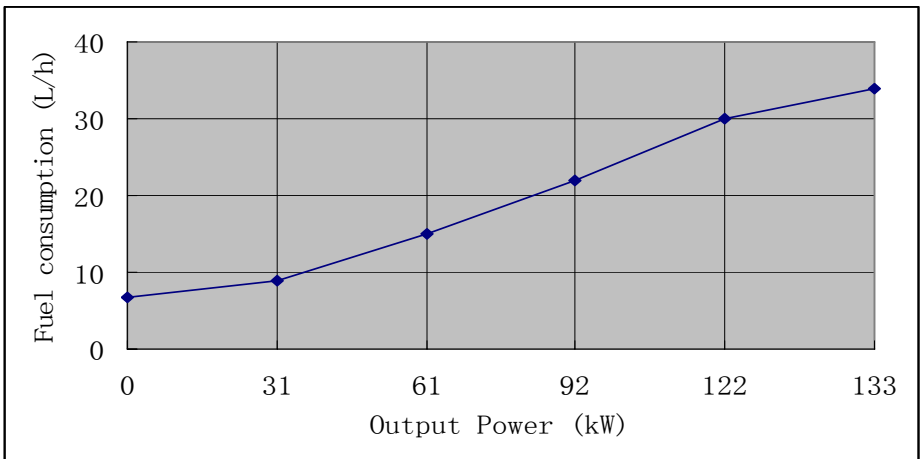
**PERFORMANCE CURVE: FR91254**


VERSION 01 2004/06

	<b>DONGFENG CUMMINS ENGINE Co., Ltd.</b> XiangFan HuBei P.R.CHINA <b>ENGINE DATASHEET—for G-drive</b>		<b>ENGINE MODEL</b> 6CT8.3-G1		<b>PERFORMANCE CURVE</b> FR91254
			<b>ENGINE FAMILY</b> D41	<b>CPL</b> 2216	<b>2004/06</b>
Displacement	8.3 L	Air intake way	turbo-charged		
Cylinder bore	114 mm	Cylinder quantity	6	<b>kW(BHP)</b>	<b>@RPM</b>
Stroke	135 mm			122(164)	1500
Fuel system	AD pump _ mechanical governor / BYC ASIMCO			Speed-droop	5%
Engine testing with fuel system, water pump and oil pump, without air compressor, alternator, fan, other options and driving accessory. Testing condition: air intake resistance 250 mmHg, exhaust back pressure 50 mmHg.					

Engine Speed-RPM	Standby Power		Base Output Power		Continuous Power	
	kW	HP	kW	HP	kW	HP
1500	133	180	122	164	102	137

Output Power			Fuel consumption	
%	kW	HP	g/kW.h	L/h
<b>Standby Power</b>				
100	133	180	214	34
<b>Base Output Power</b>				
100	122	164	209	30
75	92	123	203	22
50	61	82	209	15
25	31	41	247	9
<b>Continuous Power</b>				
100	102	137	206	25



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### Typical engine data

Net weight	kg	684
Rotate part instantaneous inertia _ without flywheel	kg.m <sup>2</sup>	0.37
Distance between gravity center and rear surface of cylinder block	mm	541
Distance between gravity center and center line above of crankshaft	mm	163

### Engine installation

Static bent torque permitted—rear surface of cylinder block	Nm	1356
Static bent torque permitted—front surface of cylinder block	Nm	495
Static bent torque permitted—flank surface of flywheel-house	Nm	250
Engine instantaneous inertia		
-Rotate axle	kg.m <sup>2</sup>	23.6
-down and elevation axle	kg.m <sup>2</sup>	65.2
-deflexion axle	kg.m <sup>2</sup>	55.9

### Exhaust system

Max. back pressure	mmHg	76
Diameter of exhaust pipe recommended	mm	100

### Air intake system

Max. air intake resistance		
Dirty filter	mmH <sub>2</sub> O	635
Normal air cleaner and clean filter	mmH <sub>2</sub> O	254
Heavy duty cleaner and clean filter	mmH <sub>2</sub> O	381
Diameter of intake pipe recommended	mm	125

Max. temperature raising permitted at intake port of turbocharger	°C	17
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### Lubrication system

Normal oil pressure range

Low idle	kPa	207
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Rated speed	kPa	276_414
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Max. oil temperature permitted in oil pan	°C	121
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Oil pan capacity (Max _ Min)	L	18.9_15.1
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Lubrication system Min. capacity (oil pan + oil filter)	L	23.8
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Usage inclining degree permitted (any direction)	°	45
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### Fuel system

Fuel injection pump model	BYC AD pump with mechanical governor	
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Max. fuel input resistance of transfer pump	mmHg	102
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Max. overflow fuel resistance at overflow pipe of injector	mmHg	254
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Total fuel overflow amount	L/h	208
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### Cooling system

Coolant capacity-engine only	L	12.3
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Max. coolant cycling resistance exterior engine	kPa	28
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Thermostat adjusting temperature (range)	°C	83_95
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Max. coolant pressure (without pressure cap and thermostat closed)	kPa	276
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Min. opening pressure of cap	kPa	50
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Max. coolant temperature (at output point)	°C	99
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Max. coolant temperature	°C	104
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Min. coolant temperature	°C	79
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Min. coolant filling speed	L/min	19
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Max. coolant filling time	min	5
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Min. expansion space rate compared with whole system	%	6
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Min. deaeration time	min	25
Min. coolant lose capacity rate compared with whole system	%	11

**Electric system**

Starter	12V	24V
Battery charging system	63A	40A
Max. starting circuit resistance	0.00075Ω	0.002Ω
Min. battery capacity_ -12°C (CCA: Cold Cranking Ampere)	950CCA	475CCA
Min. starting speed needed without cold starting added	RPM	120
Starting torque at Min. independent starting temperature	Nm	508

**Technical data** \_ under standard fuel delivery rate FR91254

	<b>Base output Power</b>	<b>Standby Power</b>
Engine speed _ RPM	1500	1500
Output Power _ kW	133	146
Torque _ Nm	847	929
Low idle _ RPM	750-950	750-950
Air intake pressure _ kPa	140	150
Friction energy output _ kW	17	17
Piston speed _ m/s	6.8	6.8
Engine coolant flow _ L/sec	3.3	3.3
Air intake flow _ L/sec	177	190
Exhaust flow _ L/sec	496	520
Exhaust temperature _ °C	540	550
Environment energy output _ kW	N/A	N/A
Coolant energy output _ kW	83	97
Fuel energy output _ kW	N/A	N/A
Stability smoke _ FSN	1.5	1.8

All data's error within  $\pm 5\%$ .

**Excuse for none notice anymore in case of data changed**

**DONGFENG CUMMINS ENGINE Co., Ltd.**