

FUJIAN EPOS ELECTRIC MACHINERY CO., LTD

EMEAN
POWER



ENGINE MODEL: 6CTAA8.3-G9
CURVE & DATASHEET: FR94434

EMEAN POWER

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WHATSAPP



WECHAT





Generator Engine Performance Data
DONGFENG CUMMINS ENGINE Co., LTD

Xiangfan, Hubei Province, China
<http://www.dcec.com.cn>

Basic Engine Model:

6CTAA8.3-G9

FR94434

**FR94434 @ 1500 RPM
 &1800RPM**

Configuration
D413058GX03

CPL Code
CPL: 4322

Revision
2013/3/18

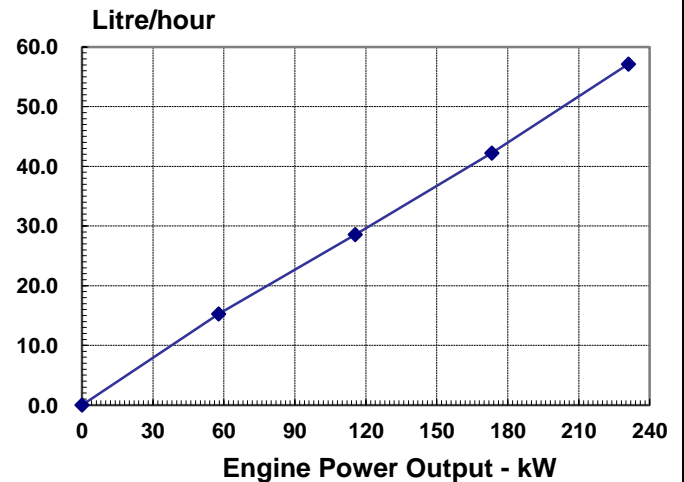
Compression Ratio:	16.7:1	Aspiration:	Turbocharged and Charge Air Cooled
Bore:	114 mm	Displacement:	8.3 L
Stroke:	135 mm	No. of Cylinders:	6
Emission Certification:		Fuel System:	BYC P7100/Electronic Governor
Governor Regulation:	≤5%		

All data is based on the engine operating with fuel system, water pump, and 14.3 in H₂O (3.7 kPa) inlet air restriction with 5.98 in (152mm) inner diameter, and with 2.9 in Hg (10 kPa) exhaust restriction with 4.02 in (102 mm) inner diameter; not included are alternator, fan, optional equipment and driven components. Coolant flows and heat rejection data based on coolants as 50% ethylene glycol/50% water. All data is subject to change without notice.

Engine Speed	Standby Power	
	kW	HP
RPM		
1500	231	310
1800	263	352

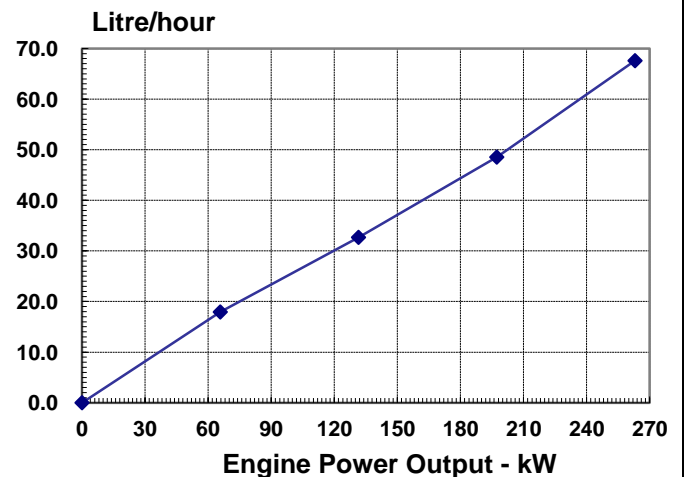
Engine Performance Data @ 1500 RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	kW	HP	g/kW.h	L/h
STANDBY POWER				
100	231	310	204	57
75	173	232	201	42
50	116	155	204	29
25	58	77	218	15



Engine Performance Data @ 1800 RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	kW	HP	g/kW.h	L/h
STANDBY POWER				
100	263	352	212	68
75	197	264	203	49
50	132	176	205	33
25	66	88	225	18



Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with GB/T18297 conditions of 100kPa (29.61 in. Hg) barometric pressure, 25°C (77°F) inlet air temperature, and 1 kPa (0.30 in. Hg) water vapor pressure.

POWER RATING APPLICATION GUIDELINES FOR GENERATOR DRIVE ENGINES

These guidelines have been formulated to ensure proper application of generator drive engines in A.C. generator set installations. Generator drive engines are not designed for and shall not be used in variable speed D.C. generator set applications.

STANDBY POWER RATING is applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. Under no condition is an engine allowed to operate in parallel with the public utility at the Standby Power rating.

This rating should be applied where reliable utility power is available. A standby rated engine should be sized for a maximum of an 80% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Standby Power rating. Standby ratings should never be applied except in true emergency power outages. Negotiated power outages contracted with a utility company are not considered an emergency.

CONTINUOUS POWER RATING is applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.

PRIME POWER RATING is applicable for supplying electric power in lieu of commercially purchased power. Prime Power applications must be in the form of one of the following two categories:

UNLIMITED TIME RUNNING PRIME POWER

Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 250 hours.

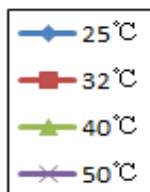
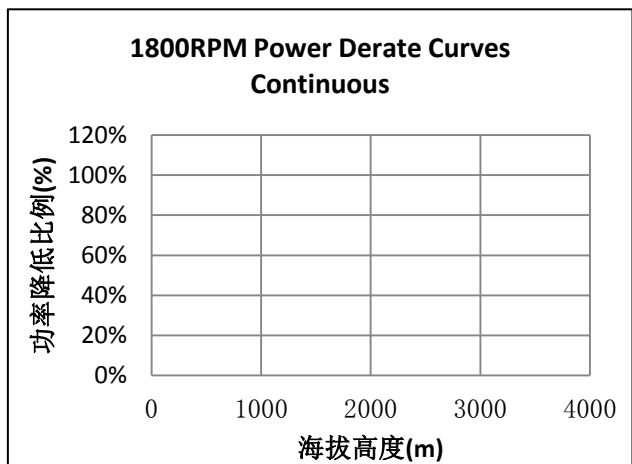
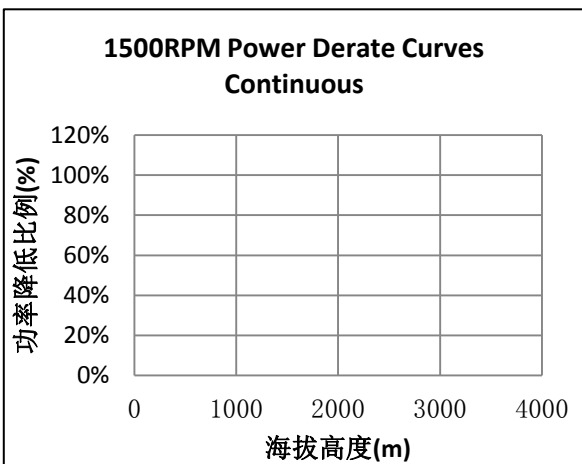
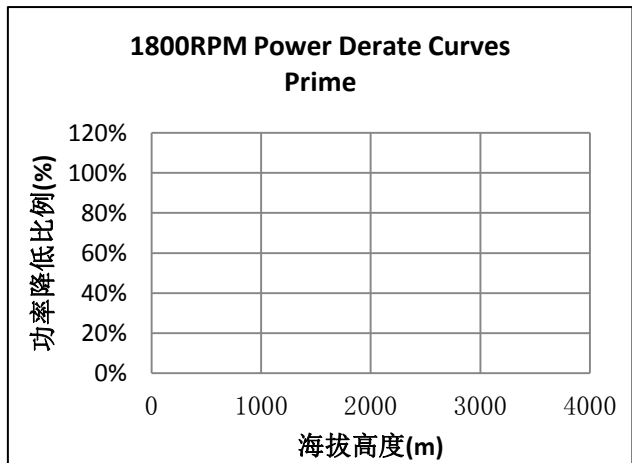
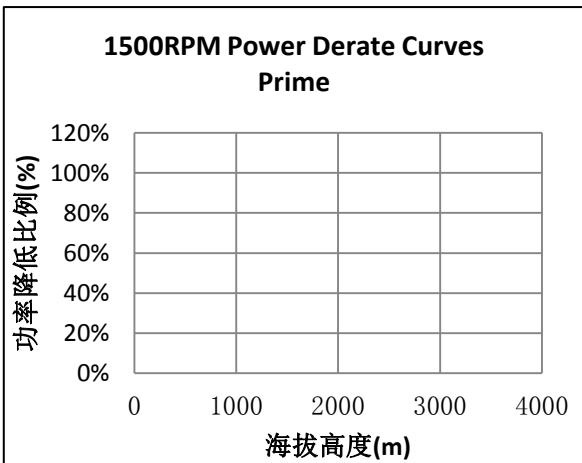
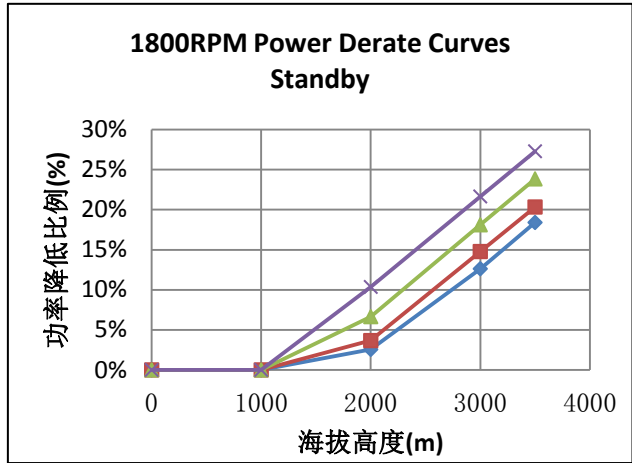
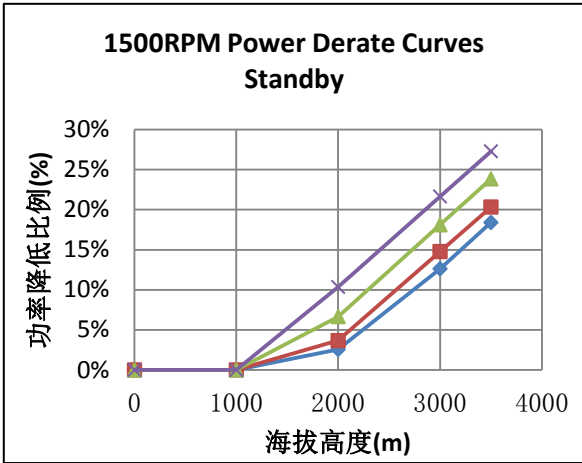
The total operating time at 100% Prime Power shall not exceed 500 hours per year.

A 10% overload capability is available for a period of 1 hour within a 12 hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year.

LIMITED TIME RUNNING PRIME POWER

Prime Power is available for a limited number of hours in a non-variable load application. It is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engines may be operated in parallel to the public utility up to 750 hours per year at power levels never to exceed the Prime Power rating. The customer should be aware, however, that the life of any engine will be reduced by this constant high load operation. Any operation exceeding 750 hours per year at the Prime Power rating should use the Continuous Power rating.

Above Source From CUMMINS AEB 26.02



GENERAL ENGINE DATA

Approximate Engine Weight (wet).....	-kg	684
Mass Moment of Inertia of Rotating Components (No Flywheel).....	-kg·m ²	0.37
Center of Gravity from Rear Face of Block.....	-mm	541
Center of Gravity above Crankshaft Centerline.....	-mm	163
Engine Idle Speed.....	-RPM	700-900
Fire Order.....		1-5-3-6-2-4

ENGINE MOUNTING

Maximum (Static) Bending Moment at Rear Face of Block.....	-N.m	1356
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EXHAUST SYSTEM

Maximum Back Pressure.....	-kPa	10
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AIR INTAKE SYSTEM

Maximum Intake Air Restriction with Heavy Duty Air Cleaner		
— Dirty Element.....	-kPa	2.5
— Clean Element.....	-kPa	6.2

CHARGE AIR COOLING SYSTEM

Maximum Temp. Rise Between Engine Air Intake and Intake Manifold	-°C	25
Maximum Air Pressure Drop from Turbo Air outlet to Intake Manifold		
— 1500RPM.....	-kPa	13
— 1800RPM.....	-kPa	13
Maximum Intake Manifold Temperature Differential (Ambient to IMT) (IMTD).....	-°C	50
Maximum Intake Manifold Temperature for engine protection (Warning Threshold)....	-°C	58

LUBRICATION SYSTEM

Minimum Engine Oil Pressure for Engine Protection Devices:		
— Idle Speed.....	-kPa	103
— Governed Speed.....	-kPa	276-414
Maximum Oil Temperature.....	-°C	121
Minimum Required Lube System Capacity - Sump plus Filters.....	-litre	23.8

FUEL SYSTEM

Type Injection System.....		BYC P7100 Direct Injection
Maximum Restriction at Lift Pump.....	-kPa	13.6
Maximum Fuel Flow on the Supply Side of the Fuel Pump.....	-litre/hr	208
Maximum Fuel Inlet Temperature.....	-°C	42
Maximum Allowable Head on Injector Return Line.....	-kPa	33.9

COOLING SYSTEM

Coolant Capacity - Engine Only.....	-litre	12.3
Maximum Coolant Friction Head External to Engine...		
— 1800 rpm.....	-kPa	35
— 1500 rpm.....	-kPa	28
Maximum Static Head of Coolant Above Engine Crank Centerline.....	-m	18.3
Standard Thermostat (Modulating) Range.....	-°C	82 - 95
Minimum Pressure Cap.....	-kPa	67
Maximum Top Tank Temperature for Standby / Prime Power.....	-°C	104 / 104

ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty, Positive Engagement).....	-volt	12V	24V
Battery Charging System, Negative Ground.....	-ampere	63	40
Maximum Allowable Resistance of Cranking Circuit.....	-ohm	0.00075	0.002
Minimum Recommended Battery Capacity			
—Cold Soak @ 0 to 32-F (-18 to 0-C).....	-0°F CCA	950	475

EMISSIONS

Gaseous Emissions per GB 20891-2007, at 1500rpm:

—Weight-Specific NOx.....	g/kW.h
—Weight-Specific HC.....	g/kW.h
—Weight-Specific CO.....	g/kW.h
—Weight-Specific Particulates.....	g/kW.h

Gaseous Emissions per GB 20891-2007, at 1800rpm:

—Weight-Specific NOx.....	g/kW.h
—Weight-Specific HC.....	g/kW.h
—Weight-Specific CO.....	g/kW.h
—Weight-Specific Particulates.....	g/kW.h

Fuel Rating Option used for these Data: **FR94434**

	STANDBY POWER		
	1800	1500	
Governed Engine Speed.....	-rpm	700 - 900	700 - 900
Engine Idle Speed.....	-rpm	700 - 900	700 - 900
Gross Engine Power Output.....	-kW	263	231
Piston Speed.....	-m/s	8.1	6.8
Friction Horsepower.....	-kW	22	17
Engine Water Flow to Engine:.....	-litre/sec.	4.3	3.7
Intake Air Flow.....	-kg/min.	21	17
Exhaust Gas Flow.....	-litre/sec.		
Exhaust Gas Temperature.....	-°C	543	520
Air to Fuel Ratio.....	-air:fuel	23.0 : 1	22.1: 1
Radiated Heat to Ambient.....	-kW	24	24
Heat Rejection to Coolant.....	-kW	93	83
Heat Rejection to Fuel.....	-kW	213	265

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.

Dongfeng Cummins Engine Co., Ltd.