FUJIAN EPOS ELECTRIC MACHINERY CO., LTD





ENGINE MODEL: 6CTAA8.3-G2

CURVE & DATASHEET: FR93271

EMEAN POWER

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WECHAT





Compression Ratio:

Generator Engine Performance Data

DONGFENG CUMMINS ENGINE Co.,LTD

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

Basic Engine Model:

6CTAA8.3-G2

FR93271

Configuration D413058GX03 CPL Code **CPL: 1783**

FR93271 @ 1500 RPM &1800RPM

Revision 2020/5/15

17.3:1

Bore: 114 mm Storke: 135 mm Aspiration: **Charge Air Cooled** Displacement: 8.3 L

No. of Cylinders:

BYC P7100 ELECTRONIC GOVERNOR Fuel System:

Emission Certification:

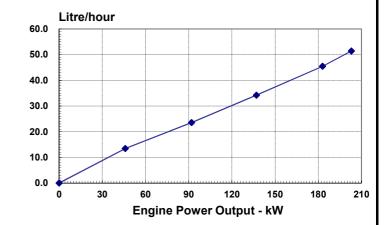
Governor Regulation: ≤3%

All data is based on the engine operating with fuel system, water pump, and 14.8 in H₂O (3.7 kPa) inlet air restriction with 5.98 in (152mm) inner diameter, and with 2.95 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		Prime Power		Continuous Power	
RPM	kW	HP	kW	HP	kW	HP
1500	203	272	183	245	149	200
1800	210	281	190	255	TBD	TBD

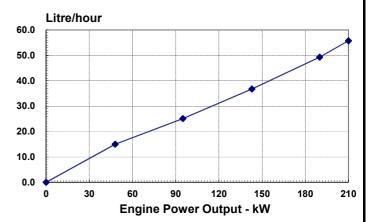
Engine Performance Data @ 1500 RPM

OUTPUT POWER		FUEL CONSUMPTION			
%	kW	HP	g/kW.h	L/h	
STANDE	STANDBY POWER				
100	203	272	209	51.0	
PRIME F	PRIME POWER				
100	183	245	205	45.0	
75	137	184	206	34.0	
50	92	123	211	23.0	
25	46	61	241	13.0	
CONTIN	CONTINUOUS POWER				
100	149	241	205	37	



Engine Performance Data @ 1800 RPM

OUTPUT POWER		FUEL CONSUMPTION			
%	kW	HP	g/kW.h	L/h	
STANDE	STANDBY POWER				
100	210	281	219	56.0	
PRIME POWER					
100	190	255	214	49.0	
75	143	191	212	37.0	
50	95	127	218	25.0	
25	48	64	258	15.0	
CONTINUOUS POWER					
TBD	TBD	TBD	TBD	TBD	



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 [80 m (263 ft.) altitude], 25°C (77°F) inlet air temperature, and 1 kPa (0.30 in. Hg) water vapor pressure with No.0 diesel fuel.

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

FR93271 (Continued) Page: 2

	1 K9321 1 (COII	tinued) Page: 2
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
EXHAUST SYSTEM		
Maximum Back Pressure	-kPa	10
		.0
AIR INTAKE SYSTEM		
Maximum Intake Air Restriction with Heavy Duty Air Cleaner		
— Dirty Element	kPa	6.2
— Clean Element	kPa	3.7
LUBRICATION SYSTEM		
Engine Oil Pressure for Engine Protection Devices:		100
— Idle Speed(Minimum)		103
— Governed Speed(Maximum)		414
Maximum Oil Temperature		121
Minimum Required Lube System Capacity - Sump plus Filters	litre	23.8
FUEL SYSTEM		
Type Injection System	BYC P7	100 Direct Injection
Maximum Restriction at Lift Pump		20.3
Maximum Fuel Inlet Temperature		33.9
Total Drain Flow (constant for all loads)		30
COOLING SYSTEM		
Coolant Capacity - Engine Only	-litro	12.3
Maximum Coolant Friction Head External to Engine1800 rpm		35
-1500 rpm		28
Maximum Static Head of Coolant Above Engine Crank Centerline		18.3
Standard Thermostat (Modulating) Range		83 - 95
Minimum Pressure Cap.		69
Maximum Top Tank Temperature for Standby / Prime Power		
waximum rop rank remperature for Standby / Prime Power	C	110/ 104

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ELECTRICAL SYSTEM		
Cranking Motor (Heavy Duty, Positive Engagement)	24V	12V
Battery Charging System, Negative Groundampere	40	63
Maximum Allowable Resistance of Cranking Circuitohm	0.002	0.00075
Minimum Recommended Battery Capacity		
—Cold Soak @ 0 to 32-F (-18 to 0-C)0°F CCA	TBD	TBD
EMISSIONS		
Gaseous Emissions per GB 20891-2007, at 1500rpm:		
—Weight-Specific NOx	g/kW.h	
—Weight-Specific HC	-	
—Weight-Specific CO		
—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: FR93271

Governed Engine Speed	-rpm
Engine Idle Speed	-rpm
Gross Engine Power Output	-kW
Piston Speed	-m/s
Friction Horsepower	-kW
Engine Water Flow to Engine:	-litre/sec.
Intake Air Flow	-litre/sec.
Exhaust Gas Flow	-litre/sec.
Exhaust Gas Temperature	-°C
Radiated Heat to Ambient	-kW
Heat Rejection to Coolant	-kW
Heat Rejection to Fuel	-kW

STANDBY POWER		PRIME POWER		
1800	1500	1800	1500	
700-900	700-900	700-900	700-900	
210	203	190	183	
8.1	6.8	8.1	6.8	
22	17	22	17	
4	3.3	4	3.3	
262	191	254	183.0	
755	547	675	480	
585	580	520	510	
33	26	29	24	
117	95	107	83	
180	139	157	123	

ALL DATA CERTIFIED WITHIN 5%

TBD = To Be Decided N/A = Not Applicable
All data is subject to change without notice, sorry for inform.
Dongfeng Cummins Engine Co., Ltd.

N.A. = Not Available