

CHONGQING CUMMINS ENGINE PERFORMANCE CURVE

Engine Model	Curve No.	
KT38-D(M)	D(M)-644	
Configuration	CPL Code	Date
D232018DX02	CQ606	18-Dec-08

Displacement: 38L [2300 in.³] kW [HP] @ r/min Bore: 159mm [6.25 in.] Prime Power: 679 [910] @1800

Stroke: 159mm [6.25 in.]

Fuel System: PT Aspiration: Turbocharged

Cylinders: 12 Exhaust: Dry

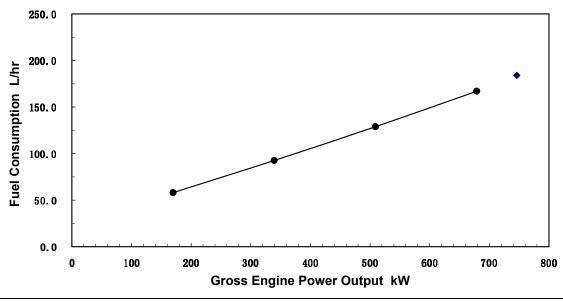
CERTIFIED: This marine diesel engine complies with or is certified to the:

IMO-NOx requirements of the International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13

Engine Speed	Overload Capacity		Prime Power	
r/min	kW	bhp	kW	bhp
1800	746	1000	679	910

Engine Performance Data @ 1800 r/min

Zingino i oriormanoo Bata & 1000 mini						
OUTPUT POWER		FUEL CONSUMPTION			ON	
%	kW	bhp	kg/kW.h	lb/bhp.h	l/hr	gal/hr
10% Overload Capacity						
110	746	1000	0.210	0.348	184.0	49.0
Prime Power						
100	679	910	0.209	0.344	167.0	44.1
75	509	683	0.215	0.354	128.8	34.0
50	340	455	0.232	0.382	92.7	24.5
25	170	228	0.291	0.479	58.1	15.4



Rating Conditions: Ratings are in accordance with ISO-3046 reference conditions; air pressure at 100 kPa (29.61.in Hg.), air temperature 25°C (77°F), and 30% relative humidity. The fuel consumption data is based on GB252 No.0 diesel fuel (No. 2 diesel fuel in U.S.) weight at 0.85 kg/litre (7.1 lb/U.S. gal).

Power output curves are based on the engine operating with fuel system, water pump, and lubricating oil pump; not included are battery charging alternator, fan, optional equipment, and driven components.

Operation at Elevated Temperatures for sustained operation above 40°C (104°F), derate 2% per 11°C (1% per 10° **Prime Power Rating** is applicable for supplying continual electrical power at varied load. The following are the Prime Rating parameters:

- * 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.
- * There is a 10% overload capability for a period of 1 hour within a 12 hour period of operation. Total operating time at 10% overload shall not exceed 25 hours per year.



Chongqing Cummins Engine Co. Ltd.

Auxiliary Marine Engine Performance Data

Curve No.:

7 [50]

N.A. = Not Avaliable

DS:

D(M)-644

DS-4983

	DS: DS-4983	
	CPL:	CQ606
	DATE:	18-Dec-08
General Engine Data ¹		
Engine Model		i-D(M)
Rating Type		Overload
Rated Engine Powerhp [kW]	910 [679]	1000 [746]
Governed Engine Speedrpm		1800
Rated HP Production Tolerance	±2%	
Rated Engine Torquelb.·ft. [N·m]	2656 [3602]	2919 [3958]
Idle Speed Range rpm		
Brake Mean Effective Pressurepsi [kPa]	173 [1191]	190 [1309]
Compression Ratio	15.5:1	
Piston Speed	1878 [9.54]	
Friction Powerhp [kW]	170 [127]	
E 10 41.1		
Fuel System ¹	44 4 5 407 1	40 [404]
Fuel Consumption		49 [184]
Approximate Fuel Flow to Pump		194 [736]
Maximum Allowable Fuel Supply to Pump Temperature°F [°C]		140 [60]
Approximate Fuel Flow Return to Tank		146 [552]
Fuel Rail Pressurepsi [kPa]	151 [1040]	166 [1144]
Weight ¹		
Dry - Engine Onlylb. [kg]	8200 [3723]	
Dry - Engine With Heatexchangerlb. [kg]		
Installation Diagram No.		
Hookup Diagram & Drawing, electrical circuit No		4061350
Hoorap Blagram a Brawnig, Globarda Grout No.	. 1001010	1001000
Air System ¹		
Intake Manifold Pressurein. Hg [kPa]	39 [132]	43 [146]
Intake Air Flowcfm [I/sce]	2550 [1204]	2749 [1298]
Heat Rejection to AmbientBTU/min [kW]	6603 [116]	7286 [128]
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Exhaust System ¹		
Exhaust Gas Flow		7097 [3351]
Exhaust Gas Temperature (Turbine Out)°F [°C]		986 [530]
Heat Rejection to ExhaustBTU/min [kW]	38250 [672]	41950 [737]
Cooling System ¹		
Coolant Flow to Engine Heat Exchanger/Keel Cooler		
Jacket Water Aftercooled Engines (JWAC)		
	100 [108]	
Coolant Flow to Main Cooler (with open thermostat)/min [gal/min] Standard Thermostat Operating Range (Min)°F [°C]		
Standard Thermostat Operating Range (Min)		
		20541 [540]
Heat Rejection to Engine Coolant BTU/min [kW]	26809 [471]	29541 [519]
Heat Rejection to LTA Coolant ³ BTU/min [kW] Sea Water Flow @ 10 psi Pump Discharge Pressure/min [gal/min]	N.A.	
Sea water Flow @ 10 psi Pump Discharge Pressure/min [gai/min]	N.A.	

- TBD = To Be Determined

 1. All Data at Rated Conditions.
 - 2. Consult Installation Direction Booklet for Limitations.
 - 3. Heat rejection to coolant values are based on 50% water/50% ethylene glycol mix and do NOT include fouling factors. If sourcing your own cooler, a service fouling factor should be applied according to the cooler manufacturer's recommendation.

N/A = Not Applicable

4. Consult option notes for flow specifications of optional Cummins seawater pumps (if applicable).

Pressure Cap Rating (With Heat Exchanger Option).....psi [kPa]

CHONGQING CUMMINS ENGINE CO. LTD.

CHONGQING, P.R.CHINA, 400031

All Data is Subject to Change Without Notice - contact CCEC for most recent data .