

CHONGQING CUMMINS ENGINE PERFORMANCE CURVE

 Engine Model
 Curve No.

 NTA855-D(M)
 D(M)-169

 Configuration
 CPL Code
 Date

 D093641MX02
 CQ126
 11-Sep-08

Prime Power

bhp

19.7

5.2

kW

0.388

Displacement: 14L [855 in.³] kW [HP] @ r/min Bore: 140mm [5.50 in.] Prime Power: 284 [380] @1500

Stroke: **152mm** [6.00in.]

Engine Speed

r/min

1500

25

Fuel System: PT Aspiration: Turbocharged/Aftercooled

Cylinders: 6 Exhaust: Wet

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

71

95

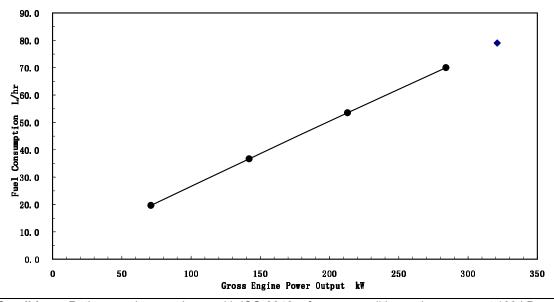
IMO-NOx requirements of the International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13

Overload Capacity

1500		321	430	284	380	
Engine Performance Data @ 1500 r/min						
OUTPUT POWER			FUEL CONSUMPTION			
%	kW	bhp	kg/kW.h	lb/bhp.h	l/hr	gal/hr
10% Overload Capacity						
110	321	430	0.209	0.347	79.0	21.0
Prime Po	wer					
100	284	380	0.210	0.346	70.0	18.5
75	213	285	0.214	0.352	53.5	14.1
50	142	190	0.220	0.362	36.7	9.7

0.236

bhp



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.:

11726 [206]

13319 [234]

N.A. = Not Avaliable

D(M)-169

DS: DS-D093641 CPL: **CQ126** DATE: 11-Sep-08 General Engine Data¹ NTA855-D(M) Engine Model..... Rating Type Prime Power Overload Rated Engine Power......hp [kW] 380 [284] 430 [321] 1500 Governed Engine Speed.....rpm 1500 Rated HP Production Tolerance..... ±2% Rated Engine Torque......lb.·ft. [N·m] 1507 [2043] Idle Speed Range......rpm 575-650 Brake Mean Effective Pressure......psi [kPa] 235 [1623] 266 [1834] Compression Ratio 14.0:1 1496 [7.6] Friction Power.....hp [kW] 29 [22] Fuel System¹ Fuel Consumption.....gal/hr [l/hr] 18.5 [70] 21 [79] Approximate Fuel Flow to Pump......gal/hr [l/hr] 55 [210] 63 [237] Maximum Allowable Fuel Supply to Pump Temperature.....°F [°C] 160 [71] Approximate Fuel Flow Return to Tank.......°F [°C] N.A. Fuel Rail Pressure.....psi [kPa] 166 [1144] Weight 1 Dry - Engine Onlylb. [kg] 2896 [1315] Dry - Engine With Heatexchangerlb. [kg] 3128[1420] 4914572 Installation Diagram No..... Hookup Diagram & Drawing, electrical circuit No..... 4061349、4061350 Air System¹ Intake Manifold Pressure......in. Hg [kPa] N.A. 43 [146] 794 [375] 885 [418] Heat Rejection to Ambient......BTU/min [kW] 1935 [34] 2220 [39] Exhaust System¹ 2097 [990] 2372 [1120] Exhaust Gas Temperature (Turbine Out).....°F [°C] 905 [485] 930 [499] Heat Rejection to Exhaust......BTU/min [kW] 9790 [172] 11099 [195] Cooling System¹ Sea Water Pump Specifications......MAB 0.08.17-07/16/2001 Pressure Cap Rating (With Heat Exchanger Option).....psi [kPa] 7 [50] **Engines without Low Temperature Aftercooler (LTA) Jacket Water Aftercooled Engine (JWAC)** Coolant Flow to Engine Heat Exchanger......gal/min [l/min] 52 [195] Standard Thermostat Operating Range (Min).....°F [°C] 180 [82] Standard Thermostat Operating Range (Max).....°F [°C] 201 [94]

- 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).

Heat Rejection to Engine Coolant BTU/min [kW]

CHONGQING CUMMINS ENGINE CO. LTD.

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