

## **CHONGQING CUMMINS ENGINE** PERFORMANCE CURVE

**Engine Model** Curve No. NTA855-D(M) D(M)-168 Configuration CPL Code Date D093641MX02 CQ125 10-Sep-08

Prime Power

kW

Displacement: 14L [855 in.<sup>3</sup>] kW [HP] @ r/min Bore: Prime Power: 140mm [5.50 in.] 287 [385] @1800

Stroke: 152mm [6.00in.]

Engine Speed

r/min

Fuel System: PT Aspiration: Turbocharged/Aftercooled

Cylinders: Exhaust:

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

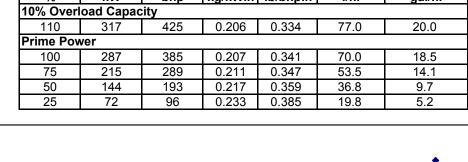
IMO-NOx requirements of the International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13

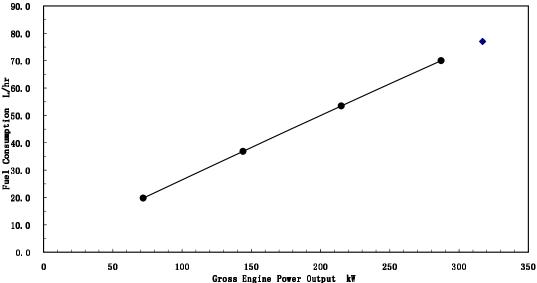
**Overload Capacity** 

kW

18	800	317	425	287	385				
Engine Performance Data @ 1800 r/min									
OUTPUT POWER			FUEL CONSUMPTION						
%	kW	bhp	kg/kW.h	lb/bhp.h	l/hr	gal/hr			
10% Overload Capacity									
110	317	425	0.206	0.334	77.0	20.0			
Prime Power									
100	287	385	0.207	0.341	70.0	18.5			

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**

	DS:	DS-D093641	
	CPL:	CQ125	
	DATE:	10-Sep-08	
General Engine Data <sup>1</sup>			
Engine Model	NTA855-D(M)		
Rating Type	Prime Power	Overload	
Rated Engine Powerhp [kW]	385 [ 287 ]	425 [ 317 ]	
Governed Engine Speedrpm	1800	1800	
Rated HP Production Tolerance	±2%		
Rated Engine Torquelb.·ft. [N·m]		1240 [ 1682 ]	
Idle Speed Range rpm	575-650		
Brake Mean Effective Pressurepsi [kPa]	198 [ 1367 ]	219 [ 1510 ]	
Compression Ratio	14.5:1		
Piston Speed	1795 [ 9.12 ]		
Friction Power	47 [ 35 ]		
Fuel System <sup>1</sup>			
Fuel Consumptiongal/hr [l/hr]	18.5 [ 70 ]	20 [ 77 ]	
Approximate Fuel Flow to Pumpgal/hr [l/hr]		61 [ 231 ]	
Maximum Allowable Fuel Supply to Pump Temperature°F [°C]	160 [71 ]		
Approximate Fuel Flow Return to Tank°F [°C]	N.A.		
Fuel Rail Pressurepsi [kPa]		235 [ 1619 ]	
week.			
Weight 1	0000 [ 4045 ]		
Dry - Engine Only			
Dry - Engine With Heatexchanger		4570	
Installation Diagram No.		4572	
Hookup Diagram & Drawing, electrical circuit No	. 4061349	. 4061350	
Air System <sup>1</sup>			
Intake Manifold Pressurein. Hg [kPa]	N.A.	56 [ 190 ]	
Intake Air Flow		981 [ 463 ]	
Heat Rejection to AmbientBTU/min [kW]	1935 [ 34 ]	2163 [ 38 ]	
Exhaust System <sup>1</sup>			
Exhaust Gas Flowcfm [I/sec]		2648 [ 1250 ]	
Exhaust Gas Temperature (Turbine Out)°F [°C]	937 [ 503 ]	970 [ 521 ]	
Heat Rejection to ExhaustBTU/min [kW]	9733 [ 171 ]	10758 [ 189 ]	
Capling System <sup>1</sup>			
Cooling System <sup>1</sup> Sea Water Pump SpecificationsMAB 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)	60.10043		
Coolant Flow to Engine Heat Exchanger			
Standard Thermostat Operating Range (Min)°F [°C]			
Standard Thermostat Operating Range (Max)°F [°C]		40004 5007 5	
Heat Rejection to Engine Coolant <sup>3</sup> BTU/min [kW]	11669 [ 205 ]	12921 [ 227 ]	

TBD = To Be Determined

N/A = Not Applicable

N.A. = Not Avaliable

D(M)-168

DC D002644

De.

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

## **CHONGQING CUMMINS ENGINE CO. LTD.**

CHONGQING, P.R.CHINA, 400031

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