	<b>CHONGQING CUMMINS ENGINE</b> <b>PERFORMANCE CURVE</b>	Engine Model <b>NT855-D(M)</b>	Curve No. <b>D(M)-865</b>	
		Configuration <b>D092642MX02</b>	CPL Code <b>CQ138</b>	Date <b>16-Dec-08</b>

Displacement: **14L [855 in.<sup>3</sup>]**  
 Bore: **140mm [5.50 in.]**  
 Stroke: **152mm [6.00in.]**  
 Fuel System: **PT**  
 Cylinders: **6**

Prime Power: **kW [HP] @ r/min**  
**230 [308] @1500**

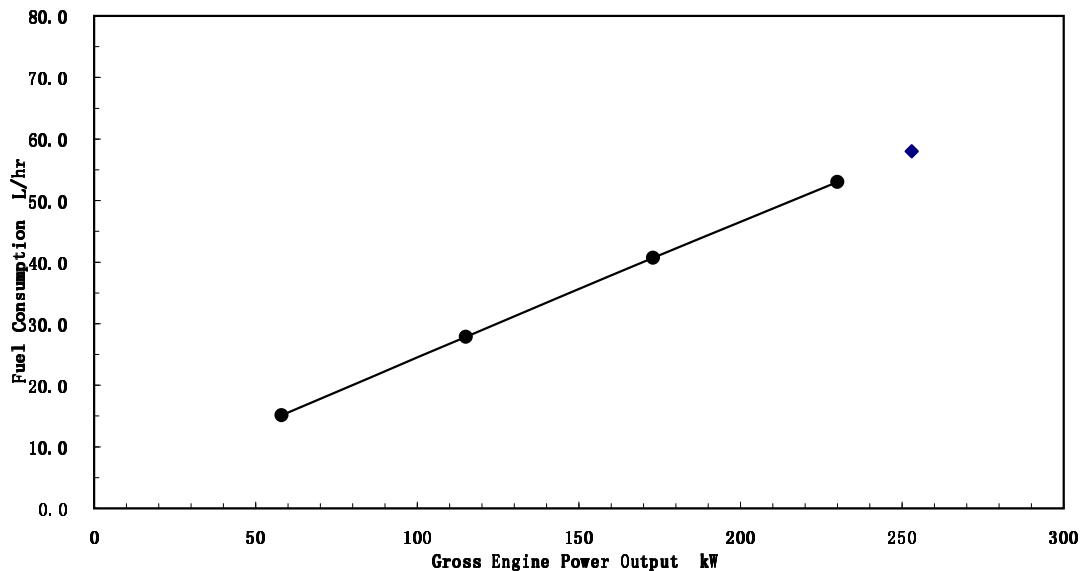
Aspiration: **Turbocharged**  
 Exhaust: **Wet**

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
1500	253	339	230	308

**Engine Performance Data @ 1500 r/min**

OUTPUT POWER			FUEL CONSUMPTION			
%	kW	bhp	kg/kW.h	lb/bhp.h	l/hr	gal/hr
<b>10% Overload Capacity</b>						
110	253	339	0.195	0.314	58.0	15.0
<b>Prime Power</b>						
100	230	308	0.196	0.323	53.0	14.0
75	173	231	0.200	0.330	40.7	10.7
50	115	154	0.206	0.339	27.9	7.4
25	58	77	0.222	0.369	15.1	4.0



**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.:** D(M)-865  
**DS:** DS-D093641  
**CPL:** CQ138  
**DATE:** 16-Dec-08

### General Engine Data<sup>1</sup>

Engine Model.....	NT855-D(M)	
Rating Type .....	Prime Power	Overload
Rated Engine Power..... hp [kW]	308 [ 230 ]	339 [ 253 ]
Governed Engine Speed..... rpm	1500	1500
Rated HP Production Tolerance.....	±2%	
Rated Engine Torque.....lb. ft. [N·m]	1080 [ 1464 ]	1188 [ 1611 ]
Idle Speed Range..... rpm	575-650	
Brake Mean Effective Pressure..... psi [kPa]	190 [ 1314 ]	210 [ 1446 ]
Compression Ratio .....	14.5:1	
Piston Speed..... ft/min [m/sec]	1496 [ 7.6 ]	
Friction Power..... hp [kW]	29 [ 22 ]	

### Fuel System<sup>1</sup>

Fuel Consumption.....gal/hr [l/hr]	14 [ 53 ]	15 [ 58 ]
Approximate Fuel Flow to Pump.....gal/hr [l/hr]	56 [ 212 ]	61 [ 232 ]
Maximum Allowable Fuel Supply to Pump Temperature.....°F [°C]	160 [ 71 ]	
Approximate Fuel Flow Return to Tank..... gal/hr	42 [ 159 ]	46 [ 174 ]
Fuel Rail Pressure.....psi [kPa]	167 [ 1151 ]	

### Weight<sup>1</sup>

Dry - Engine Only .....	lb. [kg]	2797 [ 1270 ]
Dry - Engine With Heatexchanger .....	lb. [kg]	3040 [ 1380 ]
Installation Diagram No.....	4914571	
Hookup Diagram & Drawing, electrical circuit No.....	4061349, 4061350	

### Air System<sup>1</sup>

Intake Manifold Pressure.....in. Hg [kPa]	N.A.	46 [ 156 ]
Intake Air Flow..... cfm [l/sce]	566 [ 267 ]	595 [ 281 ]
Heat Rejection to Ambient..... BTU/min [kW]	1651 [ 29 ]	1765 [ 31 ]

### Exhaust System<sup>1</sup>

Exhaust Gas Flow..... cfm [l/sec]	1550 [ 732 ]	1669 [ 788 ]
Exhaust Gas Temperature (Turbine Out).....°F [°C]	964 [ 518 ]	995 [ 535 ]
Heat Rejection to Exhaust..... BTU/min [kW]	8424 [ 148 ]	9107 [ 160 ]

### Cooling System<sup>1</sup>

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 ]	
Heat Rejection to Engine Coolant <sup>2</sup> ..... BTU/min [kW]	9278 [ 163 ]	10189 [ 179 ]

TBD = To Be Determined

N/A = Not Applicable

N.A. = Not Available

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 .