





# Chongqing Cummins Engine Co. Ltd.

## Propulsion Marine Engine Performance Data

Curve No.: M-652  
DS: DS-4983  
CPL: 0975  
DATE: 17-Dec-08

### General Engine Data

Engine Model.....	KT38-M
Rating Type .....	Continuous
Rated Engine Power..... hp [kW]	780 [ 582 ]
Rated Engine Speed.....rpm	1800
Peak Engine Torque @        rpm.....lb. · ft. [N · m]	N.A.
Brake Mean Effective Pressure.....psi [kPa]	148 [ 1021 ]
Minimum Idle Speed Setting..... rpm	675-725
Normal Idle Speed Variation.....±rpm	25
High Idle Speed Range    Minimum..... rpm	1962
Maximum..... rpm	2106
Aspiration .....	Turbocharged
Compression Ratio .....	15.5:1
Piston Speed..... ft/min [m/sec]	1870 [ 9.5 ]
Weight (Dry) - Engine Only - Average.....lb. [kg]	7943 [ 3606 ]
Weight (Dry) - Engine With HeatexchangerSystem - Average .....	9817 [ 4457 ]
Installation Diagram No.....	4915140

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

Fuel Consumption at Rated Speed.....gal/hr [l/hr]	38 [ 142 ]
Approximate Fuel Flow to Pump.....gal/hr [l/hr]	113 [ 426 ]
Maximum Allowable Fuel Supply to Pump Temperature..... ° F [ ° C]	140 [ 60 ]
Approximate Fuel Return to Tank Temperature..... ° F [ ° C]	154 [ 68 ]
Maximum Heat Rejection to Drain Fuel.....BTU/min [kW]	N.A.
Fuel Pressure - Pump Out / Rail                      Mechanical Gauge.....psi [kPa]	118.0 [ 813 ]

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

Intake Manifold Pressure.....in. Hg [kPa]	32 [ 108 ]
Intake Air Flow.....cfm [l/sce]	1652 [ 780 ]
Heat Rejection to Ambient.....BTU/min [kW]	4326 [ 76 ]

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

Exhaust Gas Flow.....cfm [l/sec]	4109 [ 1940 ]
Exhaust Gas Temperature (Turbine Out).....° F [ ° C]	858 [ 459 ]
Exhaust Gas Temperature (Manifold).....° F [ ° C]	1094 [ 590 ]

### 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]	400 [ 1513 ]
Standard Thermostat Operating Range (Start to Open).....° F [ ° C]	180 [ 82 ]
Standard Thermostat Operating Range (Full Open).....° F [ ° C]	203 [ 95 ]
Heat Rejection to Engine Coolant <sup>3</sup> .....BTU/min [kW]	28289 [ 497 ]

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.

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

## CHONGQING CUMMINS ENGINE CO. LTD.

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