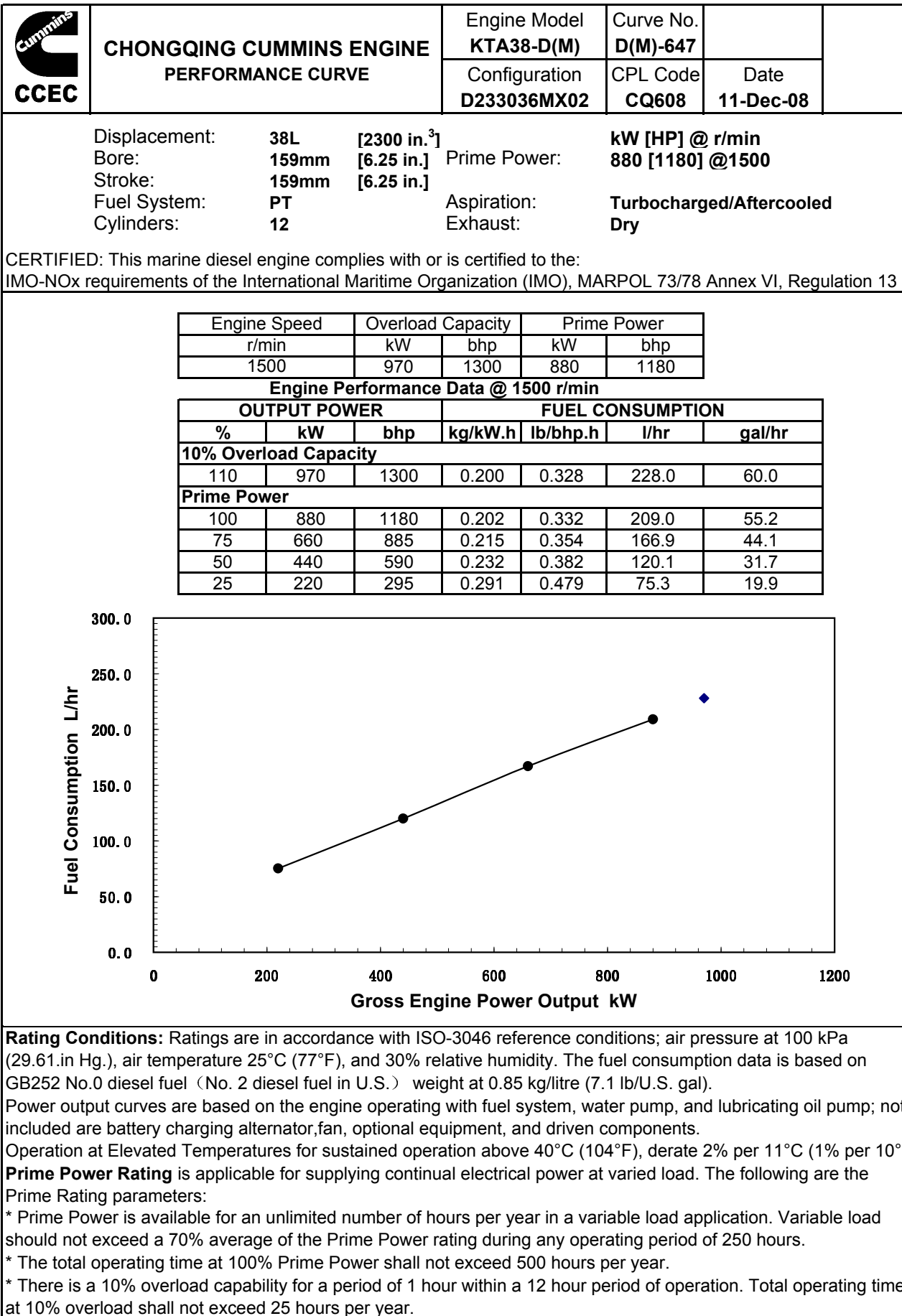






# Chongqing Cummins Engine Co. Ltd.

## Auxiliary Marine Engine Performance Data

Curve No.: D(M)-647  
DS: DS-4983  
CPL: CQ608  
DATE: 11-Dec-08

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

|                                             |               |               |
|---------------------------------------------|---------------|---------------|
| Engine Model.....                           | KTA38-D(M)    |               |
| Rating Type .....                           | Prime Power   | Overload      |
| Rated Engine Power..... hp [kW]             | 1180 [ 880 ]  | 1300 [ 970 ]  |
| Governed Engine Speed.....rpm               | 1500          | 1500          |
| Rated HP Production Tolerance.....          | ±2%           |               |
| Rated Engine Torque.....lb. ft. [N·m]       | 4131 [ 5602 ] | 4554 [ 6175 ] |
| Idle Speed Range..... rpm                   | 725-775       |               |
| Brake Mean Effective Pressure.....psi [kPa] | 269 [ 1853 ]  | 296 [ 2042 ]  |
| Compression Ratio .....                     | 14.5:1        |               |
| Piston Speed..... ft/min [m/sec]            | 1565 [ 7.95 ] |               |
| Friction Power.....hp [kW]                  | 115 [ 86 ]    |               |

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

|                                                               |              |              |
|---------------------------------------------------------------|--------------|--------------|
| Fuel Consumption.....gal/hr [l/hr]                            | 55.2 [ 209 ] | 60 [ 228 ]   |
| Approximate Fuel Flow to Pump.....gal/hr [l/hr]               | 80 [ 303 ]   | 85 [ 322 ]   |
| Maximum Allowable Fuel Supply to Pump Temperature.....°F [°C] | 140 [ 60 ]   | 140 [ 60 ]   |
| Approximate Fuel Flow Return to Tank..... gal/hr              | 25 [ 94 ]    | 25 [ 93 ]    |
| Fuel Rail Pressure.....psi [kPa]                              | 152 [ 1047 ] | 168 [ 1158 ] |

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

|                                                      |          |                  |
|------------------------------------------------------|----------|------------------|
| Dry - Engine Only .....                              | lb. [kg] | 9474 [ 4301 ]    |
| Dry - Engine With Heatexchanger .....                | lb. [kg] | 9914 [ 4501 ]    |
| Installation Diagram No.....                         |          | 4061308          |
| Hookup Diagram & Drawing, electrical circuit No..... |          | 4061349, 4061350 |

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

|                                            |               |               |
|--------------------------------------------|---------------|---------------|
| Intake Manifold Pressure.....in. Hg [kPa]  | N.A.          | 65            |
| Intake Air Flow.....cfm [l/sce]            | 2415 [ 1140 ] | 2569 [ 1213 ] |
| Heat Rejection to Ambient.....BTU/min [kW] | 7115 [ 125 ]  | 7798 [ 137 ]  |

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

|                                                   |               |               |
|---------------------------------------------------|---------------|---------------|
| Exhaust Gas Flow.....cfm [l/sec]                  | 6462 [ 3051 ] | 7002 [ 3306 ] |
| Exhaust Gas Temperature (Turbine Out).....°F [°C] | 930 [ 499 ]   | 955 [ 513 ]   |
| Heat Rejection to Exhaust.....BTU/min [kW]        | 30964 [ 544 ] | 33583 [ 590 ] |

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

|                                                                        |               |               |
|------------------------------------------------------------------------|---------------|---------------|
| Coolant Flow to Engine Heat Exchanger/Keel Cooler                      |               |               |
| Jacket Water Aftercooled Engines (JWAC)                                |               |               |
| Coolant Flow to Main Cooler (with open thermostat).....l/min [gal/min] | 409 [108 ]    |               |
| Standard Thermostat Operating Range (Min).....°F [°C]                  | 180 [ 82 ]    |               |
| Standard Thermostat Operating Range (Max).....°F [°C]                  | 199 [ 93 ]    |               |
| Heat Rejection to Engine Coolant <sup>3</sup> .....BTU/min [kW]        | 30680 [ 539 ] | 33810 [ 594 ] |
| Heat Rejection to LTA Coolant <sup>3</sup> .....BTU/min [kW]           | N.A.          |               |
| Sea Water Flow @ 10 psi Pump Discharge Pressure .....l/min [gal/min]   | N.A.          |               |
| Pressure Cap Rating (With Heat Exchanger Option).....psi [kPa]         | 7 [ 50 ]      |               |

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.

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