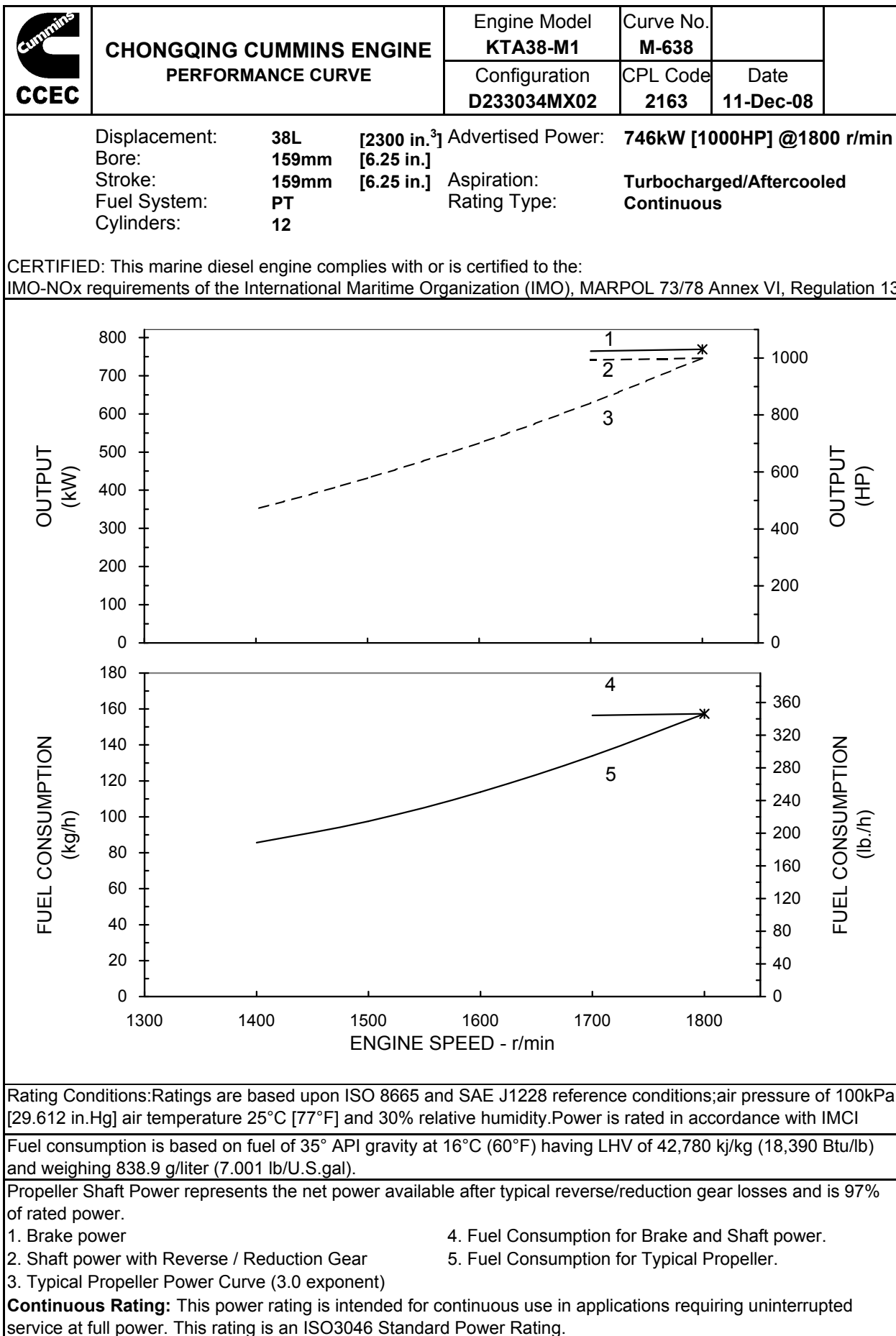






Chongqing Cummins Engine Co. Ltd.

Propulsion Marine Engine Performance Data

Curve No.: M-638
DS: DS-4983
CPL: 2163
DATE: 11-Dec-08

General Engine Data

Engine Model.....	KTA38-M1
Rating Type	Continuous
Rated Engine Power..... hp [kW]	1000 [746]
Rated Engine Speed..... rpm	1800
Peak Engine Torque @ 1400 rpm..... lb.·ft. [N·m]	3088 [4188]
Brake Mean Effective Pressure..... psi [kPa]	190 [1309]
Minimum Idle Speed Setting..... rpm	575-675
Normal Idle Speed Variation..... ±rpm	50
High Idle Speed Range Minimum..... rpm	1815
Maximum..... rpm	2016
Aspiration	Turbocharged/Aftercooled
Compression Ratio	13.9:1
Piston Speed..... ft/min [m/sec]	1870 [9.5]
Weight (Dry) - Engine Only - Average..... lb. [kg]	9291 [4218]
Weight (Dry) - Engine With HeatexchangerSystem - Average	9996 [4538]
Installation Diagram No.....	4061308

Fuel System¹

Fuel Consumption at Rated Speed..... gal/hr [l/hr]	49 [185]
Approximate Fuel Flow to Pump..... gal/hr [l/hr]	103 [390]
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]	171 [3]
Fuel Pressure - Pump Out / Rail Mechanical Gauge..... psi [kPa]	162.0 [1116]

Air System¹

Intake Manifold Pressure..... in. Hg [kPa]	49 [166]
Intake Air Flow..... cfm [l/sce]	2328 [1099]
Heat Rejection to Ambient..... BTU/min [kW]	4383 [77]

Exhaust System¹

Exhaust Gas Flow..... cfm [l/sec]	4727 [2232]
Exhaust Gas Temperature (Turbine Out)..... °F [°C]	736 [391]
Exhaust Gas Temperature (Manifold)..... °F [°C]	N.A.

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]	335 [1268]
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 ³ BTU/min [kW]	27322 [480]

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.

CHONGQING, P.R.CHINA, 400031

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