





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 ³BTU/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).

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