

CHONGQING CUMMINS ENGINE PERFORMANCE CURVE

Engine Model Curve No.

KTA38-M2 M-641

Configuration CPL Code Date

D233034MX02 1542 11-Dec-08

Displacement: 38L [2300 in.3] Advertised Power: 895kW [1200HP] @1800 r/min

Bore: 159mm [6.25 in.]

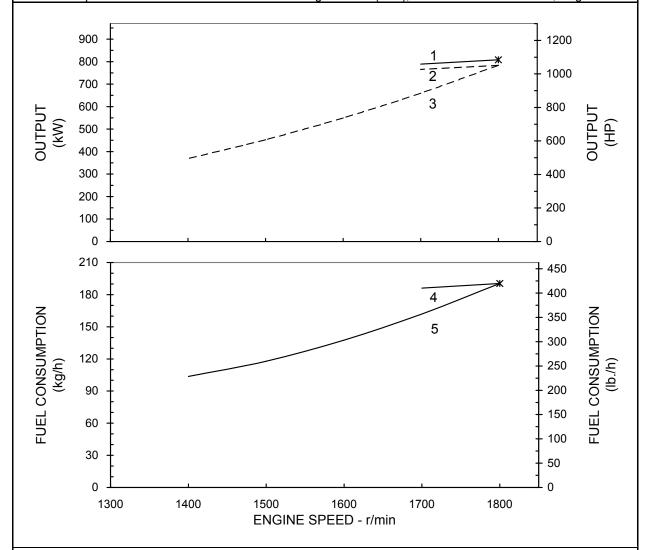
Stroke: 159mm [6.25 in.] Aspiration: Turbocharged/Aftercooled

Fuel System: PT Rating Type: Continuous

Cylinders: 12

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



Rating Conditions:Ratings are based upon ISO 8665 and SAE J1228 reference conditions;air pressure of 100kPa [29.612 in.Hg] air temperature 25°C [77°F] and 30% relative humidity.Power is rated in accordance with IMCI

Fuel consumption is based on fuel of 35° API gravity at 16°C (60°F) having LHV of 42,780 kj/kg (18,390 Btu/lb) and weighing 838.9 g/liter (7.001 lb/U.S.gal).

Propeller Shaft Power represents the net power available after typical reverse/reduction gear losses and is 97% of rated power.

1. Brake power

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- 4. Fuel Consumption for Brake and Shaft power.
- 2. Shaft power with Reverse / Reduction Gear
- 5. Fuel Consumption for Typical Propeller.
- 3. Typical Propeller Power Curve (3.0 exponent)

Continuous Rating: This power rating is intended for continuous use in applications requiring uninterrupted service at full power. This rating is an ISO3046 Standard Power Rating.



Chongqing Cummins Engine Co. Ltd.

Propulsion Marine Engine Performance Data

Curve No.: M-641
DS: DS-4983
CPL: 1542
DATE: 11-Dec-08

General Engine Data		
Engine Model		KTA38-M2
Rating Type		Continuous
Rated Engine Power	hp [kW]	1200 [895]
Rated Engine Speed	rpm	1800
Peak Engine Torque @ 1500 rpm	lb.·ft. [N·m]	3842 [5210]
Brake Mean Effective Pressure	psi [kPa]	228 [1570]
Minimum Idle Speed Setting	rpm	625-675
Normal Idle Speed Variation	±rpm	25
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	lb. [kg]	9996 [4538]
Installation Diagram No		4061365
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Fuel Consumption of Retail Consul	~ a l /b ~ [1 /b ~]	50 10041
Fuel Consumption at Rated Speed		59 [224]
Approximate Fuel Flow to Pump	•	105 [397]
Maximum Allowable Fuel Supply to Pump Temperature		140 [60]
Approximate Fuel Return to Tank Temperature		154 [68]
Maximum Heat Rejection to Drain Fuel.		171 [3]
Fuel Pressure - Pump Out / Rail Mechanical Gauge	psi [kPa]	122.0 [841]
Air System ¹		
Intake Manifold Pressure	in. Hg [kPa]	54 [183]
Intake Air Flow	cfm [l/sce]	2599 [1227]
Heat Rejection to Ambient	BTU/min [kW]	4440 [78]
Exhaust System ¹		
Exhaust Gas Flow	cfm [l/sec]	6290 [2970]
Exhaust Gas Temperature (Turbine Out)		849 [454]
Exhaust Gas Temperature (Manifold)		N.A.
Exhaust Gas Temperature (Manifold)	1 [0]	N.A.
Cooling System ¹		
Sea Water Pump SpecificationsMAB 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		335 [1268]
Standard Thermostat Operating Range (Start to Open)		180 [82]
Standard Thermostat Operating Range (Full Open)		203 [95]
Heat Rejection to Engine Coolant ³	BTU/min [kW]	32046 [563]

TBD = To Be Determined

N/A = Not Applicable

N.A. = Not Avaliable

- 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 .