



PERFORMANCE CURVE

Engine Model
KTA38-M2

Curve No.
M-641

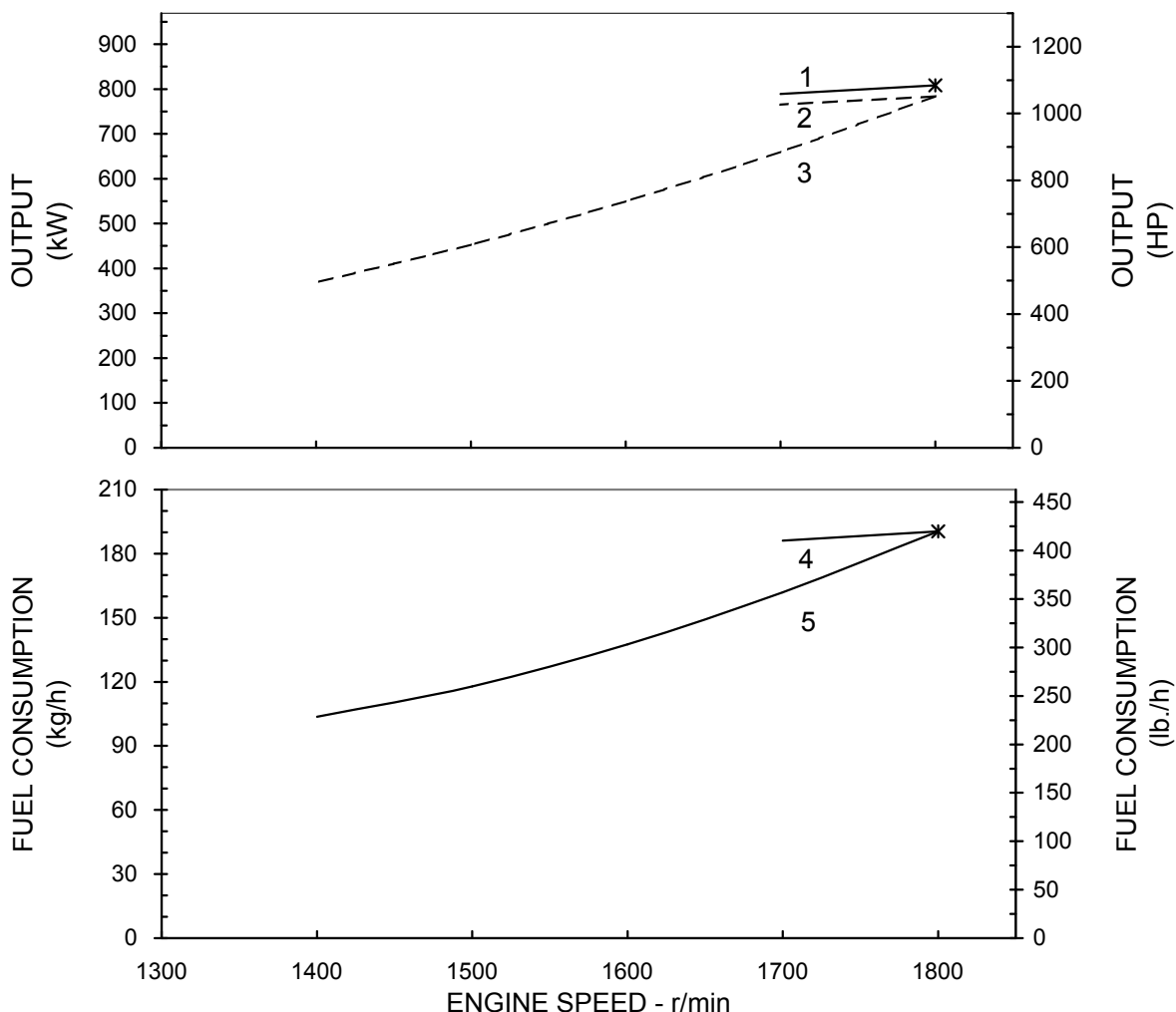
Configuration
D233034MX02

CPL Code
1542

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

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.



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	9996 [4538]
Installation Diagram No.....	4061365

Fuel System¹

Fuel Consumption at Rated Speed..... gal/hr [l/hr]	59 [224]
Approximate Fuel Flow to Pump..... gal/hr [l/hr]	105 [397]
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]	122.0 [841]

Air System¹

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 System¹

Exhaust Gas Flow..... cfm [l/sec]	6290 [2970]
Exhaust Gas Temperature (Turbine Out)..... °F [°C]	849 [454]
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 ² BTU/min [kW]	32046 [563]

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).

All Data is Subject to Change Without Notice.