



CUMMINS MERCURISER DIESEL
Charleston, SC 29405
Marine Performance Curves

Basic Engine Model:
QSB5.9-425 HO
 Engine Configuration:
D403075MX03

Curve Number:
M-91632

CPL Code	Date:
8732	31-Aug-06

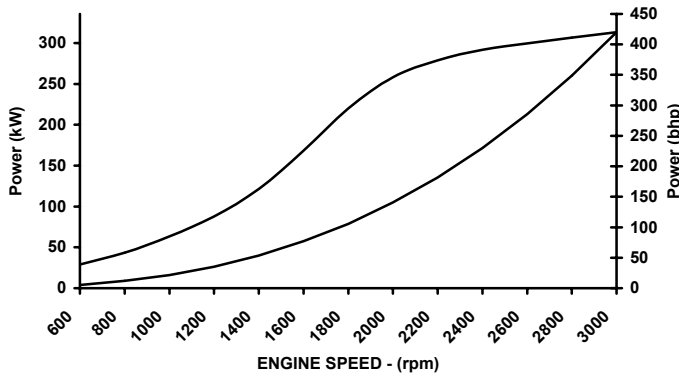
Displacement: **5.9 liter [359 in³]**
 Bore: **102 mm [4.02 in]**
 Stroke: **120 mm [4.72 in]**
 Fuel System: **HPCR**
 Cylinders: **6**

Advertised Power: **313 [420, 425] @ 3000**
 kW [bhp, mhp] @ rpm

Aspiration: **Turbocharged / Sea Water Aftercooled**
 Rating Type: **High Output**

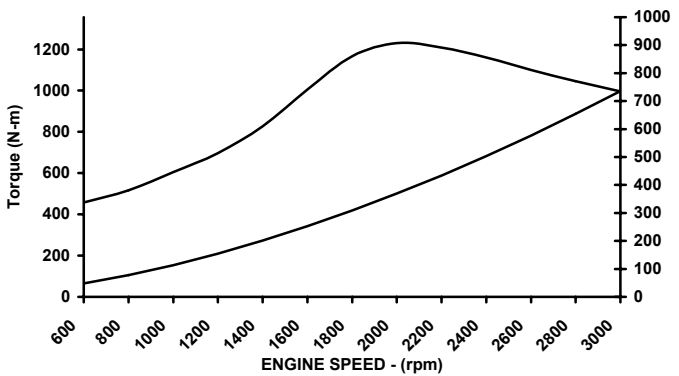
CERTIFIED: This marine diesel engine is certified to the model year requirements of EPA Marine Tier 2 per 40 CFR 94 and conforms with the NOx requirements of the International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13 as applicable.

RATED POWER OUTPUT CURVE



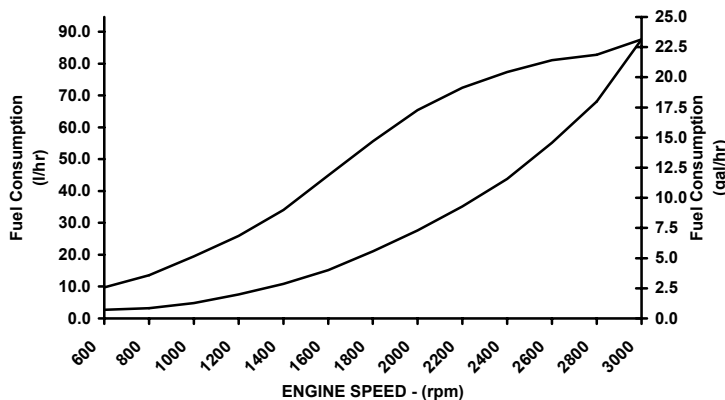
rpm	kW	bhp
3000	313	420
2800	307	411
2600	300	401
2400	292	391
2200	279	374
2000	258	346
1800	220	295
1600	169	226
1400	121	163
1200	88	117
1000	63	85
800	43	58
600	29	39

FULL LOAD TORQUE CURVE



rpm	N-m	ft-lb
3000	997	735
2800	1045	771
2600	1100	811
2400	1161	856
2200	1209	892
2000	1231	908
1800	1167	861
1600	1006	742
1400	827	610
1200	697	514
1000	605	446
800	517	381
600	458	338

FUEL CONSUMPTION - PROP CURVE



rpm	l/hr	gal/hr
3000	87.6	23.1
2800	68.1	18.0
2600	55.2	14.6
2400	43.8	11.6
2200	35.2	9.3
2000	27.6	7.3
1800	21.1	5.6
1600	15.1	4.0
1400	10.8	2.9
1200	7.6	2.0
1000	4.9	1.3
800	3.2	0.9
600	2.7	0.7

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

Rated Curves (upper) represents rated power at the crankshaft for mature gross engine performance capabilities obtained and corrected in accordance with ISO 3046. Propeller Curve (lower) is based on a typical fixed propeller demand curve using a 2.7 exponent. Propeller Shaft Power is approximately 3% less than rated crankshaft power after typical reverse/reduction gear losses and may vary depending on the type of gear or propulsion system used.

Fuel Consumption is based on fuel of 35 deg. API gravity at 16 deg. C [60 deg. F] having LHV of 42,780 kJ/kg [18390 Btu/lb] and weighing 838.9 g/liter [7.001 lb/U.S. gal].

High Output Rating: This Rating is for use in variable load applications where full power is limited to one (1) hour out of every eight (8) hours of operation. Also, reduced power operations must be at or below 200 RPM of the maximum rated RPM. This rating is for pleasure/non-revenue generating applications that operate 500 hours per year.

James D. Kuhlber

CHIEF ENGINEER

Marine Engine Performance Data

Curve No.: M-91632
DS-3075
DATE: 31Aug06

Emissions (in accordance with ISO 8178 Cycle E3)

NOx (Oxides of Nitrogen)	g/kw-hr [g/hp-hr]	5.168 [3.854]
HC (Hydrocarbons).....	g/kw-hr [g/hp-hr]	0.158 [0.118]
CO (Carbon Monoxide).....	g/kw-hr [g/hp-hr]	0.506 [0.377]
PM (Particulate Matter).....	g/kw-hr [g/hp-hr]	0.066 [0.049]

Cooling System¹

Sea Water Pump Specifications	MAB 0.08.17-07/16/2001	
Pressure Cap Rating (With Heat Exchanger Option)	kPa [psi]	103 [15]

Sea Water Aftercooled Engine (SWAC)

Coolant Flow to Engine Heat Exchanger.....	l/min [gal/min]	273 [72]
Standard Thermostat Operating Range Start to Open.....	°C [°F]	74 [165]
Full Open	°C [°F]	85 [185]
Heat Rejection to Engine Coolant ³	kW [Btu/min]	258 [14700]

TBD = To Be Decided

N/A = Not Applicable

N.A. = Not Available

1All Data at Rated Conditions

2Consult Installation Direction Booklet for Limitations

3Heat rejection 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.

4Consult option notes for flow specifications of optional Cummins seawater pumps, if applicable.

5May not be at rated load and speed. Maximum heat rejection may occur at other than rated conditions.

CUMMINS ENGINE COMPANY, INC.
COLUMBUS, INDIANA

All Data is Subject to Change Without Notice - Consult the following Cummins intranet site for most recent data:

<http://www.cummins.com>