



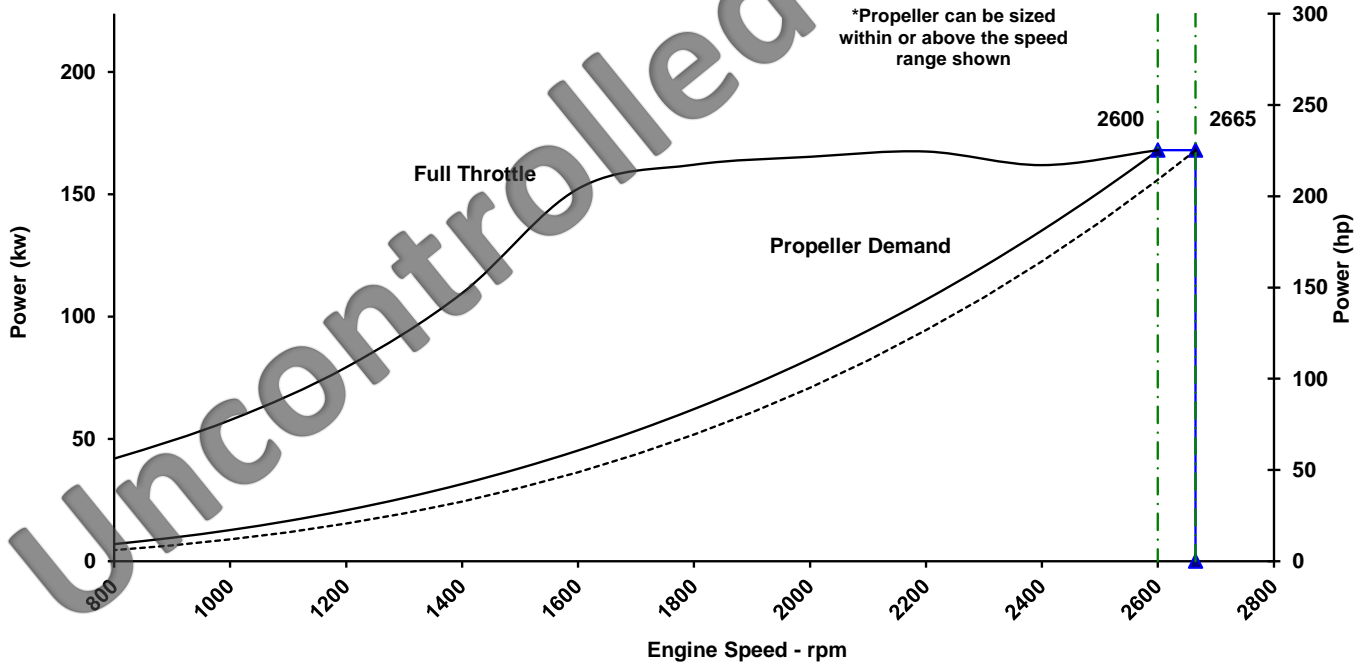
CUMMINS INC.
Columbus, IN 47201
Marine Performance Curves
marine.cummins.com

Basic Engine Model
QSB5.9-230 HO
Engine Configuration
D403075MX03

Curve Number:
M-91370
CPL Code: **8464**
Date: **10-Dec-12**

Displacement: **5.9 liter [359 in³]** Rated Power: **168 kw [225 bhp, 230 mhp]**
Bore: **102 mm [4.02 in]** Rated Speed: **2600 rpm**
Stroke: **120 mm [4.72 in]** Rating Type: **High Output**
Fuel System: **HPCR** Aspiration: **Turbocharged / Sea Water Aftercooled**
Cylinders: **6**

CERTIFIED: This diesel engine complies with or is certified to the following agencies requirements:
EPA Tier 2 - Model year requirements of the EPA marine regulation (40CFR94)
IMO Tier II - Tier 2 (Two) NOx requirements of International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13
RCD - meets the requirements of the Recreational Craft Directive 94/25/EC as amended by 2003/44/EC in accordance with ISO 8178-1



Speed	Full Throttle- Power		Full Throttle- Torque		Fuel Cons.- Prop. Curve 2.7 Exp.	
	rpm	kw (hp)	N·m (ft-lb)		L/hr (gal/hr)	
2665	168	(225)	602	(444)		
2600	168	(225)	617	(455)	42.2	(11.1)
2400	162	(217)	644	(475)	36.8	(9.7)
2200	167	(225)	727	(536)	29.7	(7.9)
2000	165	(222)	789	(582)	23.2	(6.1)
1800	162	(217)	860	(634)	17.8	(4.7)
1600	152	(204)	908	(670)	13.0	(3.4)
1400	110	(147)	747	(551)	9.7	(2.6)
1200	79	(106)	630	(465)	7.0	(1.9)
1000	58	(77)	550	(406)	4.9	(1.3)
800	42	(56)	500	(369)	3.2	(0.9)

* Cummins Full Throttle Requirements:

- Engine achieves or exceeds rated rpm at full throttle under any steady operating condition
- Engines in variable displacement boats (such as pushboats, tugboats, net dragners, etc.) achieve no less than 100 rpm below rated speed at full throttle during a dead push or bollard pull
- Engine achieves or exceeds rated rpm when accelerating from idle to full throttle

Rated Conditions: Ratings are based upon ISO 15550 reference conditions; air pressure of 100 kPa [29.612 in Hg], air temperature 25deg. C [77 deg. F] and 30% relative humidity. Power is in accordance with IMCI procedure. Member NMMA. Unless otherwise specified, tolerance on all values is +/-5%.

Full Throttle curve represents power at the crankshaft for mature gross engine performance corrected in accordance with ISO 15550. Propeller Curve represents approximate power demand from a typical propeller. 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 (HO): Intended for use in variable load applications where full power is limited to one hour out of every eight hours of operation. Also, reduced power must be at or below 200 rpm of the maximum rated rpm. This power rating is for pleasure/non-revenue generating applications that operate 500 hours per year or less.

CHIEF ENGINEER

TECHNICAL DEPT.