



**CUMMINS INC.**  
Columbus, IN 47201  
Marine Performance Curves

Basic Engine Model  
**QSC8.3-500 HO**

Curve Number:  
**M-92043**

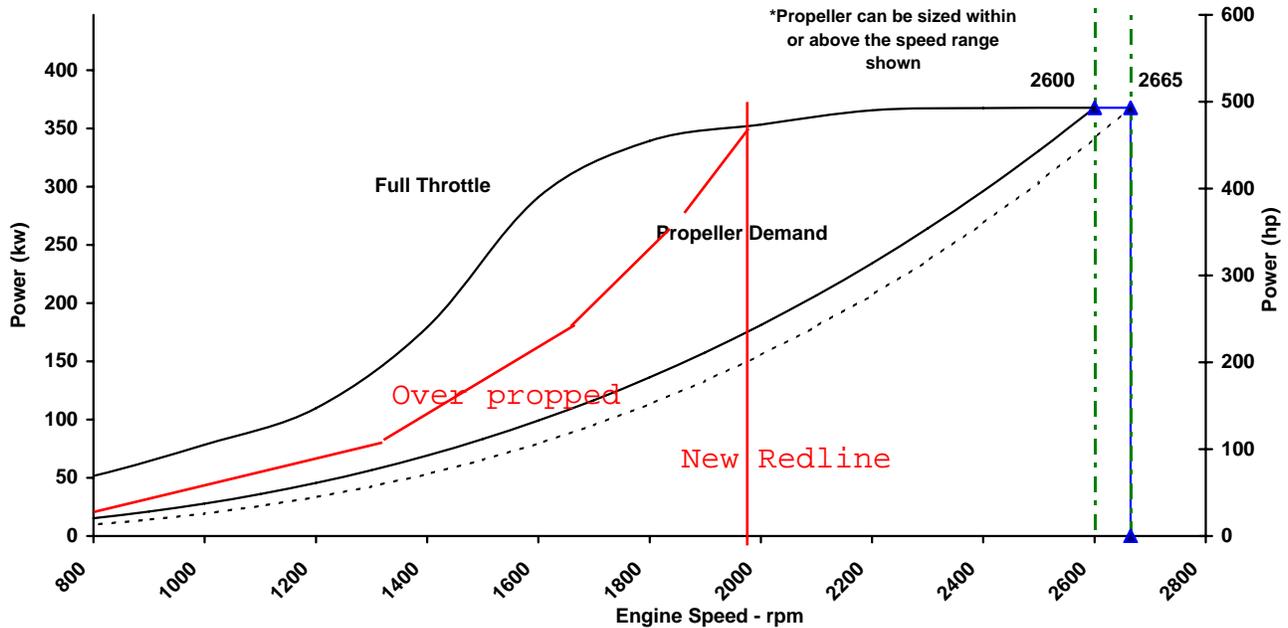
Engine Configuration  
**D413038MX03**

CPL Code:  
**0906**

Date:  
**12-May-10**

Displacement: **8.3 liter** [505 in³]      Rated Power: **368 kw** [493 bhp, 500 mhp]  
 Bore: **114 mm** [4.49 in]      Rated Speed: **2600 rpm**  
 Stroke: **135 mm** [5.31 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:  
 IMO Tier I - Tier 1 (One) NOx requirements of International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13  
 EPA Tier 2 - Model year requirements of the EPA marine regulation (40CFR94)



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	368	(493)	1317	(972)		
2600	368	(493)	1350	(996)	96.1	(25.4)
2400	367	(493)	1462	(1078)	76.1	(20.1)
2200	365	(490)	1586	(1170)	59.4	(15.7)
2000	353	(474)	1687	(1244)	46.2	(12.2)
1800	339	(455)	1799	(1327)	35.7	(9.4)
1600	291	(390)	1735	(1280)	26.5	(7.0)
1400	179	(240)	1223	(902)	18.9	(5.0)
1200	110	(147)	874	(645)	12.4	(3.3)
1000	79	(105)	750	(553)	7.8	(2.1)
800	52	(69)	617	(455)	5.0	(1.3)

\* 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