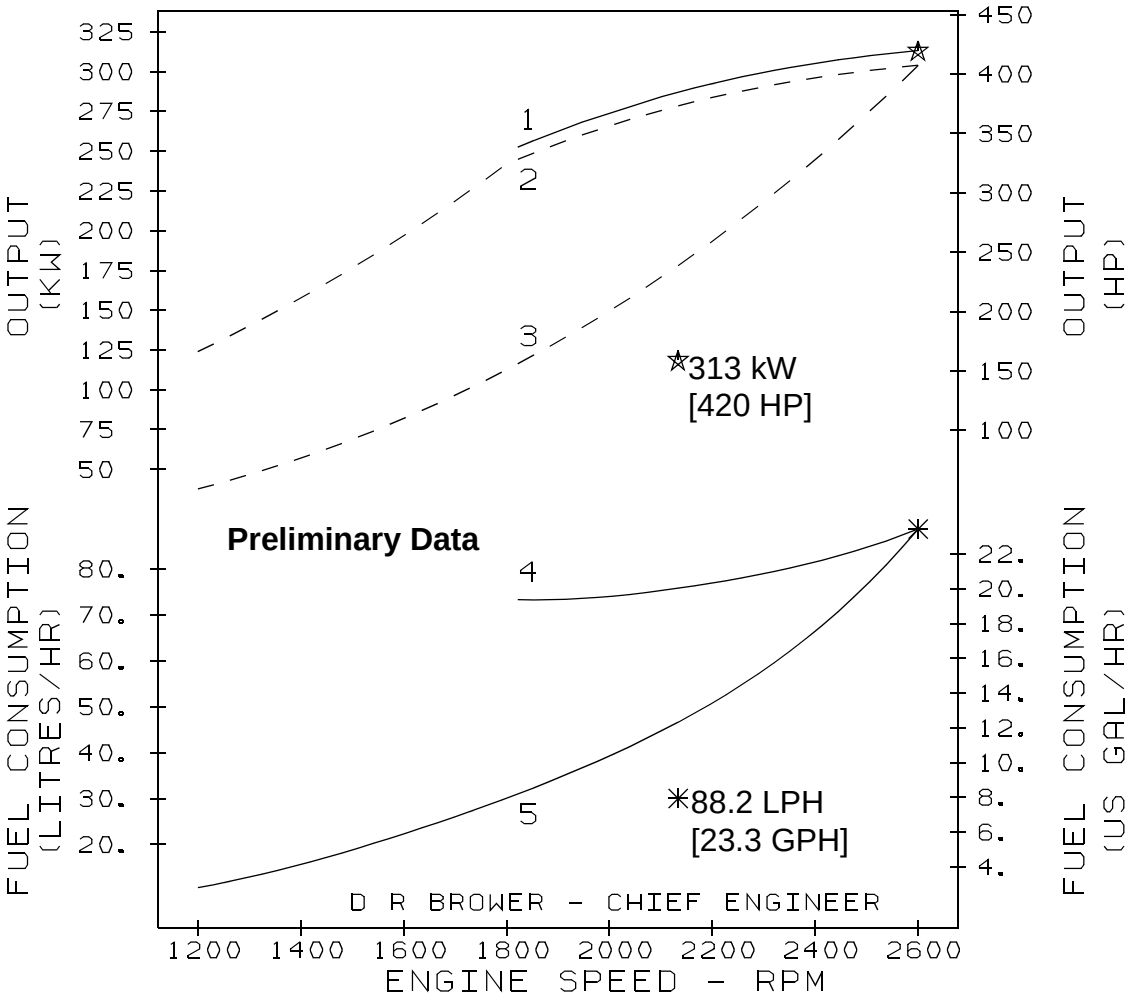
CUMMINS ENGINE COMPANY, INC Columbus, Indiana 47201 **Marine Performance Curve**	Basic Engine Model: **6CTA8.3-M2**		Curve Number: **M-90008**	*Marine* *Pg. No.* **C8.3** **47**
	Engine Family: **D41**	CPL Code: **1929**	Date: **29Apr94**	

Displacement: **8.3 litre [504.5 in.^{3}]** Aspiration: **Turbocharged/Aftercooled**
Bore: **114 mm [4.49 in.]**
Stroke: **135 mm [5.32 in.]**
Fuel System: **Inline**
Cylinders: **6**

kW [BHP] @ RPM
Advertised kW **313 [420] @ 2600**

All data are based on the engine operating with fuel system, water pump, lubricating oil pump, and 250 mm [10 in. H_2O] inlet air restriction and with 50 mm [2.0 in. Hg] exhaust restriction; not included are alternator, optional equipment and driven components.

High Output Rating



Rating Conditions: Ratings are based upon ISO 8665 conditions of 100 kPa [29.612 in. Hg] 27°C [81°F] and 60% relative humidity. Propeller Shaft Power represents the net power available after typical reverse/reduction gear losses and is 97% of rated power. Fuel consumption is based upon No.2 diesel fuel with a fuel weight of 0.85 kg/litre [7.1 lbs per U.S. gal] and the power requirements of a typical fixed pitch propeller. Power rated in accordance with IMCI procedure.

1. Brake power BkW / (BHP)
2. Shaft power SkW / (SHP) with Reverse Reduction Gear
3. Typical Propeller Power Curve (2.7 exponent)
4. Fuel Consumption for Brake and Shaft power.
5. Fuel Consumption for Typical Propeller.

High Output Rating: This rating is for use in variable load application 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 an ISO 3046 Fuel Stop Power Rating and is for pleasure/non-revenue generating applications that operate less than 300 hours per year.

CERTIFIED WITHIN 5% **CHIEF ENGINEER**

Marine Engine Performance Data

Curve No. M-90008
DS-4961
CPL: 1929
DATE: April 1994

General Engine Data*

Engine Model	6CTA8.3-M2
Rating Type	High Output
Rated Engine Power - kW [BHP]	313 [420]
Rated Engine Speed - RPM	2600
High Idle Speed Range - RPM	2800 - 2950
Idle Speed Range - RPM	550 - 750
Engine Torque - N•m [ft/lb]	1095 [808]
Brake Mean Effective Pressure - kPa [PSI]	1744 [253]
Compression Ratio	15.5:1
Piston Speed - m/sec [ft/min.]	11.7 [2305]
Average Noise Level - dBA at 1m	102
Maximum Torque Capacity from Front of Crank**	
Firing Order	1-5-3-6-2-4

Fuel System*

Fuel Consumption - litre/hr [GPH]	88.2 [23.3]
Approximate Fuel Flow to Pump - litre/hr [GPH]	159 [42]
Fuel Transfer Pump Pressure Range - kPa [PSI]	124 - 172 [18 - 25]

Engine Weights (Dry Weights)

Engine Only - kg [lb]	801 [1765]
With Heat Exchanger Cooling System - kg [lb]	+55 [120]
With Twin Disc MG-507A-1 Marine Gear - kg [lb]	+160 [354]
With Twin Disc MG-5061A Marine Gear - kg [lb]	+95 [210
With ZF IRM-301A2 Marine Gear - kg [lb]	+110 [243]

Air System*

Intake Manifold Pressure - mm Hg [in. Hg]	1626 [64]
Intake Air Flow - litre/sec [CFM]	419 [888]
Heat Rejection to Ambient - kW [BTU/min.]	42 [2415]
Minimum Ambient Temperature for Cold Start (No Aids) - °C [°F]	10 [50]

Exhaust System*

Exhaust Gas Flow - litre/sec [CFM]	998 [2100]
Exhaust Gas Temperature - °C [°F]	463 [867]

Cooling System*

Heat Rejection to Coolant - kW [BTU/min.]	276 [15750]
Engine Water Flow - litre/min. [GPM]	322 [85]
Raw Water Flow - litre/min. [GPM]	238 [63]
Pressure Cap Rating w/Heat Exchanger-kPa [PSI]	103 [15]

INSTALLATION DIAGRAMS:

With Twin Disc MG-507A-1 Marine Gear (keel cool)	3884599
With Twin Disc MG-5061-1 Marine Gear (keel cool)	3884609
With ZF IRM-301A-2 Marine Gear (keel cool)	N/A
With Twin Disc MG-5062-V Marine Gear (keel cool)	3884599

***All Data at Rated Conditions**
****Consult Installation Direction Booklet for Limitations**

CUMMINS ENGINE COMPANY, INC.
COLUMBUS, INDIANA