



CUMMINS ENGINE COMPANY, INC
Columbus, Indiana 47201

Marine Performance Curve

Basic Engine Model:
270B (JW)

Curve Number:
M-90212

Marine
Pg. No.
B
41

Engine Configuration:
D403045MX02

CPL Code:
2205

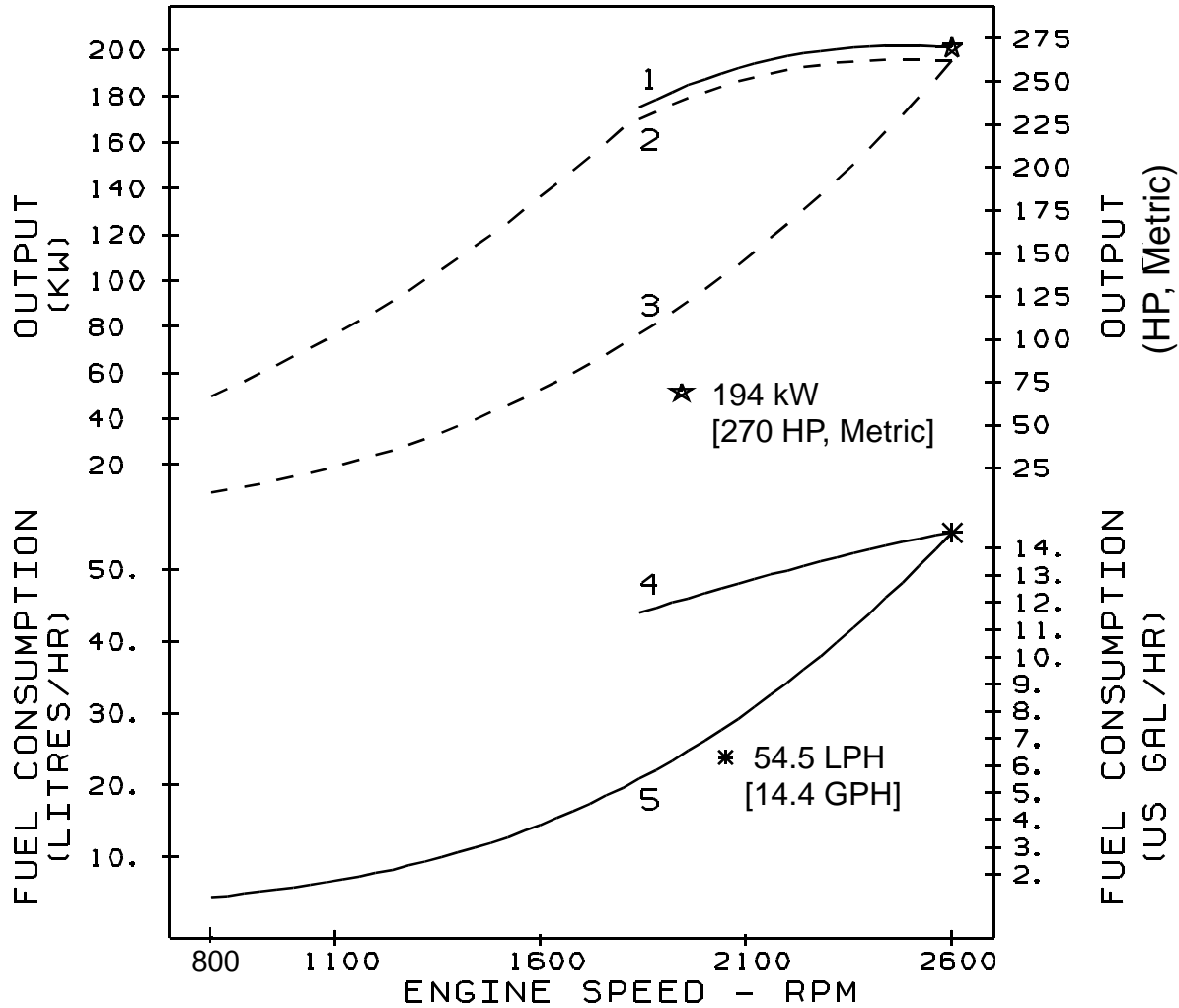
Date:
12May99

Displacement: **5.9 litre [359 in.³]**
Bore: **102 mm [4.02 in.]**
Stroke: **119 mm [4.72]**
Fuel System: **Inline Bosch P7100**
Cylinders: **6**

Aspiration: **Turbocharged & Jacket Water Aftercooled**

Advertised Power **194 * [270] @ 2600** kW [HP, Metric]

High Output Rating



Rating Conditions: Ratings are based upon ISO 8665 reference conditions; air pressure of 100 kPa [29.612 in. Hg] air temperature of 25°C [77°F] and 30% relative humidity. Power is rated in accordance with IMCI procedures.

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. Rated Power Kw / (HP, Metric)
- 2. Shaft power kW / (HP) 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 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 300 hours per year or less.

D.R. Bond
CHIEF ENGINEER

Marine Engine Performance Data

Curve No. M-90212
DS-4960
CPL: 2205
DATE: 12May99

General Engine Data*

Engine Model.....	270B (JW)
Rating Type	High Output
Rated Engine Power..... kW [HP, Metric]	194 [270]
Rated Engine Speed	RPM 2600
High Idle Speed Range	RPM 2900 - 3000
Idle Speed Range.....	RPM 550 - 650
Engine Torque	Nm [ft/lb] 728 [537]
Brake Mean Effective Pressure	kPa [PSI] 1559 [226]
Compression Ratio.....	15.3:1
Piston Speed	m/sec [ft/min] 10.4 [2047]
Maximum Torque Capacity from Front of Crank**	
Firing Order	1-5-3-6-2-4

Fuel System*

Fuel Consumption	litre/hr [GPH] 54.5 [14.4]
Approximate Fuel Flow to Pump	litre/hr [GPH] 240 [63.4]
Fuel Transfer Pump Pressure Range.....	kPa [PSI] 124-172 [18-25]

Weight (Dry)

Engine With Heat Exchanger Cooling System	kg [lb] 513 [1130]
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Air System*

Intake Manifold Pressure.....	mm Hg [in Hg] 1593 [63]
Intake Air Flow	litre/sec [CFM] 283 [599]
Heat Rejection to Ambient.....	kW [BTU/min] N.A.
Minimum Ambient Temperature for Cold Start (No Aids)	°C [°F] 10 [50]

Exhaust System*

Exhaust Gas Flow (after turbine).....	litre/sec [CFM] 686 [1454]
Exhaust Gas Temperature (after turbine)	°C [°F] 428 [802]

Cooling System*

Heat Rejection to Coolant.....	kW [BTU/min] 185 [10,500]
Engine Water Flow	litre/min [GPM] 173 [46]
Raw Water Flow	litre/min [GPM] 193 [51]
Pressure Cap Rating w/Heat Exchanger.....	kPa [PSI] 103 [15]

INSTALLATION DIAGRAMS:

Engine Only	3884673
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*All Data at Rated Conditions

**Consult Installation Direction Booklet for Limitations

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://ibu.cummins.com/ibu/ibuweb/TechHome.nsf/pages/TechPubsHome>