



Marine Engine Performance Data

Curve No. M-90208

DS-4960

DATE: 17Aug04

General Engine Data

Engine Model.....	330B (SW)
Rating Type.....	High Output
Rated Engine Power.....kW [bhp]	235 [315]
Rated Engine Speed.....rpm	2800
Rated HP Production Tolerance.....±%	5
Rated Engine Torque.....N•m [ft•lb]	801 [591]
Peak Engine Torque @ 2000 rpm.....N•m [ft•lb]	926 [683]
Brake Mean Effective Pressure.....kPa [psi]	1727 [250]
Indicated Mean Effective Pressure.....kPa [psi]	N.A.
Minimum Idle Speed Setting.....rpm	600
Normal Idle Speed Variation.....rpm	± 50
High Idle Speed Range Minimum.....rpm	3100
Maximum.....rpm	3200
Maximum Allowable Engine Speed.....rpm	N/A
Maximum Torque Capacity from Front of Crank ²N•m [ft•lb]	N/A
Compression Ratio.....	15.3:1
Piston Speed.....m/sec [ft/min]	11.2 [2203]
Firing Order.....	1-5-3-6-2-4
Weight (Dry) Engine With Heat Exchanger System - Average.....kg [lb]	581 [1280]

Exhaust System¹

Exhaust Gas Flow.....l/sec [cfm]	723 [1531]
Exhaust Gas Temperature (Turbine Out).....°C [°F]	485 [905]
Exhaust Gas Temperature (Manifold).....°C [°F]	N.A.

Fuel System¹

Fuel Consumption @ Rated Speed.....l/hr [gal/hr]	65.8 [17.4]
Approximate Fuel Flow to Pump.....l/hr [gal/hr]	258 [68]
Maximum Allowable Fuel Supply to Pump Temperature.....°C [°F]	60 [140]
Approximate Fuel Flow Return to Tank.....l/hr [gal/hr]	N.A.
Approximate Fuel Return to Tank Temperature.....°C [°F]	N.A.
Maximum Heat Rejection to Drain Fuel ⁵kW [Btu/min]	N.A.
Fuel Transfer Pump Pressure Range.....kPa [psi]	124-172 [18-25]

Air System¹

Intake Manifold Pressure.....kPa [in Hg]	190 [56]
Intake Air Flow.....l/sec [cfm]	310 [657]
Heat Rejection to Ambient.....kW [Btu/min]	N.A.

Emissions (in accordance with ISO 8178 Cycle E3)

NOx (Oxides of Nitrogen).....g/kw-hr [g/hp-hr]	7.97 [5.94]
HC (Hydrocarbons).....g/kw-hr [g/hp-hr]	0.30 [0.22]
CO (Carbon Monoxide).....g/kw-hr [g/hp-hr]	1.73 [1.29]
PM (Particulate Matter).....g/kw-hr [g/hp-hr]	0.21 [0.16]

Cooling System¹

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

Engines with Standard Aftercooling

Coolant Flow to Engine Heat Exchanger/Keel Cooler.....l/min [gal/min]	189 [50]
Standard Thermostat Operating Range Start to Open.....°C [°F]	83 [181]
Full Open.....°C [°F]	95 [203]
Heat Rejection to Engine Coolant ³kW [Btu/min]	149 [8500]

TBD = To Be Decided

N/A = Not Applicable

N.A. = Not Available

¹All Data at Rated Conditions²Consult Installation Direction Booklet for Limitations³Heat 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>