CUMMINS ENGINE COMPANY, INC
Columbus, Indiana 47201

Marine Performance Curve

Basic Engine Model: 6BT5.9-M
Engine Configuration: D402013MX02
CPL Code: 2891
Date: 28Aug04

Displacement: 6 liters [359 in.³]
Bore: 102 mm [4.02 in.]
Stroke: 120 mm [4.72 in.]
Fuel System: Lucas CAV
Cylinders: 6

Rated Curves (upper) represent rated power at the crankshaft. Propeller Curve (lower) is based on a typical fixed propeller demand curve using a 2.7 exponent. 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° API gravity at 16°C [60°F] having LHV of 42,780 kJ/kg [18390 Btu/lb] and weighing 838.9 g/liter [7.001 lb/U.S. gal].

Medium Continuous Rating: This power rating is intended for continuous use in variable load applications where full power is limited to six (6) hours out of every twelve (12) hours of operation. Also, reduced power operations must be at or below 200 RPM of the maximum rated RPM. This is an ISO 3046 Fuel Stop Power Rating and is for applications that operate 3,000 hours per year or less.

CERTIFIED: This marine diesel engine conforms with the NOx requirements of the International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13 as applicable.
### Marine Engine Performance Data

#### Engine Model
6BT5.9-M

#### Rating Type
Medium Continuous

#### Rated Engine Power
134 [180] kW [HP]

#### Rated Engine Speed
2500 rpm

#### Rated HP Production Tolerance
±5

#### Peak Engine Torque @ 1700 RPM
630 [465] Nm [ft/lb]

#### Brake Mean Effective Pressure
1095 [159] kPa [PSI]

#### Air System

<table>
<thead>
<tr>
<th>Water Flow</th>
<th>Sea Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 [3] m³/hr [GPH]</td>
<td>N/A</td>
</tr>
</tbody>
</table>

#### Fuel System

<table>
<thead>
<tr>
<th>Exhaust Gas Temperature (Turbo Out)</th>
<th>°C [°F]</th>
</tr>
</thead>
<tbody>
<tr>
<td>405 [760]</td>
<td></td>
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</tbody>
</table>

#### Emissions (in accordance with ISO8178 Cycle E3)

<table>
<thead>
<tr>
<th>NOx (Oxides of Nitrogen)</th>
<th>g/kW-hr [g/bhp-hr]</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.71 [5.00]</td>
<td></td>
</tr>
</tbody>
</table>

#### Cooling System

<table>
<thead>
<tr>
<th>Water Flow (With Heat Exchanger Option)</th>
<th>m³/hr [GPM]</th>
</tr>
</thead>
<tbody>
<tr>
<td>76 [20]</td>
<td></td>
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</tbody>
</table>

#### INSTALLATION DRAWINGS

With Twin Disc MG 502-1 Marine Gear .................................................. 3884426-A
With Twin Disc MG 5011-A Marine Gear .............................................. 3884826
With ZF IRM-220A Marine Gear ............................................................ 3884425-A

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1. All Data at Rated Conditions
2. Consult Installation Direction Booklet for Limitations
3. Heat 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.
4. Consult option notes for flow specifications of optional Cummins seawater pumps, if applicable.
5. May not be at rated load and speed. Maximum heat rejection may occur at other than rated conditions.

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All Data is Subject to Change Without Notice - consult the following Cummins intranet site for most recent data:
http://www.cummins.com