### Basic Engine Model Curve Number:

**Marine Performance Curves**

<table>
<thead>
<tr>
<th>Engine Configuration</th>
<th>CPL Code</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>D092347MX02</td>
<td>0731</td>
<td>6-Jul-11</td>
</tr>
</tbody>
</table>

**Displacement:** 14.0 liter [857 in³]

**Rated Power:** 201 kw [270 bhp]

**Bore:** 140 mm [5.51 in]

**Rated Speed:** 1800 rpm

**Stroke:** 152 mm [5.98 in]

**Rating Type:** Continuous Duty

**Cylinders:** 6

**Aspiration:** Turbocharged

**Fuel System:** PT

** IMO Tier I NOx requirements of International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13**

**NT855-M Engine Configuration**

**D092347MX02**

**M-178**

**CERTIFIED:** This diesel engine complies with or is certified to the following agencies requirements:

- IMO Tier I NOx requirements of International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13

### Engine Performance Curves

- **Full Throttle:**
  - Power (hp) vs. Engine Speed (rpm)
  - Power (kw) vs. Engine Speed (rpm)
  - Torque (N·m) vs. Engine Speed (rpm)

- **Propeller Demand:**
  - Power (hp) vs. Engine Speed (rpm)
  - Power (kw) vs. Engine Speed (rpm)
  - Torque (N·m) vs. Engine Speed (rpm)

### Power, Torque, and Fuel Consumption Table

<table>
<thead>
<tr>
<th>Speed (rpm)</th>
<th>Full Throttle</th>
<th>Propeller Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Power (kw)</td>
<td>Torque (N·m)</td>
</tr>
<tr>
<td>1860</td>
<td>201 (270)</td>
<td>1035 (789)</td>
</tr>
<tr>
<td>1800</td>
<td>201 (270)</td>
<td>1070 (789)</td>
</tr>
<tr>
<td>1700</td>
<td>198 (266)</td>
<td>1116 (823)</td>
</tr>
<tr>
<td>1600</td>
<td>191 (256)</td>
<td>1140 (841)</td>
</tr>
<tr>
<td>1500</td>
<td>179 (240)</td>
<td>1140 (841)</td>
</tr>
<tr>
<td>1400</td>
<td>166 (223)</td>
<td>1132 (835)</td>
</tr>
<tr>
<td>1300</td>
<td>152 (204)</td>
<td>1120 (826)</td>
</tr>
<tr>
<td>1200</td>
<td>139 (187)</td>
<td>1108 (817)</td>
</tr>
<tr>
<td>1100</td>
<td>124 (166)</td>
<td>1076 (794)</td>
</tr>
<tr>
<td>1000</td>
<td>109 (146)</td>
<td>1037 (765)</td>
</tr>
<tr>
<td>900</td>
<td>98 (133)</td>
<td>990 (735)</td>
</tr>
<tr>
<td>800</td>
<td>87 (120)</td>
<td>944 (705)</td>
</tr>
</tbody>
</table>

* 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 draggers, 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 25 deg. C [77 deg. F] and 30% relative humidity.
- Member NMMA. Unless otherwise specified, tolerance on all values is +/-5%. Values from engine control modules and displayed on instrument panels are not absolute. Tolerance varies, but is generally less than +/-5% when operating within 30% of rated power.

- 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].

**Continuous Rating (CON):**
- Intended for continuous use in applications requiring uninterrupted service at full power. This rating is an ISO 15550 standard power rating.
### General Engine Data

- **Engine Model**: NT855-M
- **Rating Type**: Continuous Duty
- **Rated Engine Power**: 201 [270] kW [hp]
- **Rated Engine Speed**: 1800 rpm
- **Rated Power Production Tolerance**: ±3%
- **Rated Engine Torque**: 1068 [788] N·m [lb·ft]
- **Peak Engine Torque @ 1500 rpm**: 1174 [866] N·m [lb·ft]
- **Brake Mean Effective Pressure**: 956 [139] kPa [psi]
- **Indicated Mean Effective Pressure**: N.A. [N.A.]
- **Maximum Allowable Engine Speed**: N.A.
- **Compression Ratio**: 14.5:1
- **Piston Speed**: 9.1 [1795] m/sec [ft/min]
- **Weight (Dry) - Engine Only - Average**: 1257 [2771] kg [lb]
- **Weight (Dry) - Engine With Heat Exchanger System - Average**: 1384 [3051] kg [lb]
- **Weight Tolerance (Dry) Engine Only**: 11.4
- **Governor Settings**
  - **Default Droop Value**: Refer to MAB 2.04.00-03/23/2006 for Droop explanation 6%
  - **Maximum Droop Allowed**: 16%
  - **High Speed Governor Break Point**: 1860 rpm
  - **Minimum Idle Speed Setting**: 575 rpm
  - **Normal Idle Speed Variation**: ±25 rpm
  - **High Idle Speed Range Minimum**: 1860 rpm
  - **Maximum**: 1972 rpm

### Noise and Vibration

- **Average Noise Level - Top**
  - (Idle): N.A.
  - (Rated): N.A.
- **Average Noise Level - Right Side**
  - (Idle): N.A.
  - (Rated): N.A.
- **Average Noise Level - Left Side**
  - (Idle): N.A.
  - (Rated): N.A.
- **Average Noise Level - Front**
  - (Idle): N.A.
  - (Rated): N.A.

### Fuel System¹

- **Avg. Fuel Consumption - ISO 8178 E3 Standard Test Cycle**: 35.1 [9.3] l/hr [gal/hr]
- **Fuel Consumption at Rated Speed**: 51.0 [13.5] l/hr [gal/hr]
- **Approximate Fuel Flow to Pump**: 155.2 [41.0] l/hr [gal/hr]
- **Maximum Allowable Fuel Supply to Pump Temperature**: 60.0 [140] °C [°F]
- **Approximate Fuel Flow Return to Tank**: 104.2 [27.5] l/hr [gal/hr]
- **Approximate Fuel Return to Tank Temperature**: 71.2 [160] °C [°F]
- **Maximum Heat Rejection to Drain Fuel**: 1.7 [95] kW [Btu/min]
- **Fuel Pressure - Pump Out/Rail - Mechanical Gauge**: 710 [103] kPa [psi]
- **INSITE Reading**: N.A.

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¹ Unless otherwise specified, all data is at rated power conditions and can vary ±5%.

² No rear loads can be applied when the FPTO is fully loaded. Max PTO torque is contingent on torsional analysis results for the specific drive system. Consult Installation Direction Booklet for Limitations.

³ Heat rejection to coolant 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.
### Curve No. M-178
### DS : 4962  
### CPL : 0731  
### DATE: 6-Jul-11

#### Propulsion Marine Engine Performance Data

<table>
<thead>
<tr>
<th>System</th>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air System</strong>¹</td>
<td>Intake Manifold Pressure</td>
<td>78 [23] kPa [in Hg]</td>
</tr>
<tr>
<td></td>
<td>Intake Air Flow</td>
<td>280 [593] l/sec [cfm]</td>
</tr>
<tr>
<td></td>
<td>Heat Rejection to Ambient</td>
<td>26 [1480] kW [Btu/min]</td>
</tr>
<tr>
<td><strong>Exhaust System</strong>¹</td>
<td>Exhaust Gas Flow</td>
<td>640 [1,356] l/sec [cfm]</td>
</tr>
<tr>
<td></td>
<td>Exhaust Gas Temperature (Turbine Out)</td>
<td>433 [810] °C [°F]</td>
</tr>
<tr>
<td></td>
<td>Exhaust Gas Temperature (Manifold)</td>
<td>554 [1,029] °C [°F]</td>
</tr>
<tr>
<td><strong>Emissions (in accordance with ISO 8178 Cycle E3)</strong></td>
<td>NOx (Oxides of Nitrogen)</td>
<td>N.A. g/kw·hr [g/hp·hr]</td>
</tr>
<tr>
<td></td>
<td>HC (Hydrocarbons)</td>
<td>N.A. g/kw·hr [g/hp·hr]</td>
</tr>
<tr>
<td></td>
<td>CO (Carbon Monoxide)</td>
<td>N.A. g/kw·hr [g/hp·hr]</td>
</tr>
<tr>
<td><strong>Emissions (in accordance with ISO 8178 Cycle E2)</strong></td>
<td>NOx (Oxides of Nitrogen)</td>
<td>N.A. g/kw·hr [g/hp·hr]</td>
</tr>
<tr>
<td></td>
<td>HC (Hydrocarbons)</td>
<td>N.A. g/kw·hr [g/hp·hr]</td>
</tr>
<tr>
<td></td>
<td>CO (Carbon Monoxide)</td>
<td>N.A. g/kw·hr [g/hp·hr]</td>
</tr>
<tr>
<td><strong>Cooling System</strong>³</td>
<td>Sea Water Pump Specifications</td>
<td>MAB 08.17-07/16/2001</td>
</tr>
<tr>
<td></td>
<td>Pressure Cap Rating (With Heat Exchanger Option)</td>
<td>48 [7] kPa [psi]</td>
</tr>
<tr>
<td><strong>Engines without Low Temperature Aftercooling (LTA )</strong></td>
<td>Coolant Flow to Engine Heat Exchanger</td>
<td>428 [113] l/min [gal/min]</td>
</tr>
<tr>
<td></td>
<td>Standard Thermostat Operating Range (Start to Open)</td>
<td>82 [180] °C [°F]</td>
</tr>
<tr>
<td></td>
<td>Standard Thermostat Operating Range (Full Open)</td>
<td>95 [203] °C [°F]</td>
</tr>
<tr>
<td></td>
<td>Heat Rejection to Engine Coolant³</td>
<td>171 [9733] kW [Btu/min]</td>
</tr>
</tbody>
</table>

**N/A = Not Applicable  
TBD= To Be Determined  
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