



# QSB6.7

## QUANTUM SERIES ENGINE

### Features

**Fuel System:** Bosch HPCR with hardened components to safely operate alternative fuels such as kerosene and JP8/JP5

**Lubrication System:** Front mounted filters, LO service interval increased to 500 hours if use ULSD fuels

**Electrical System:** 12v and 24v, isolated and non-isolated, systems available

**Air Intake System:** New Walker air filter significantly reduces noise

**Seawater System:** Optional dry run capability

**Emissions:** EPA Tier 3, RCD and IMO2

**Breather System:** Closed Crankcase Ventilation available on all ratings

### Engine Overview

- Unmatched performance driven through a perfectly matched turbocharger and a new 24-valve cylinder head that delivers industry-leading power density
- Quiet operation, including an 80-percent reduction in noise at idle, is one of the many benefits from the common-rail fuel system
- Enhanced sociability from the high-pressure common-rail design virtually eliminates smoke and improves the whole boating experience
- Maximize vessel performance and access comprehensive vessel diagnostic information via SmartCraft® electronics
- Peace of mind delivered by the Cummins Captain's Briefing and global service network

### Engine Specifications

|               |                                     |
|---------------|-------------------------------------|
| Configuration | In-line 6-cylinder, 4-stroke diesel |
| Bore & Stroke | 107 mm x 124 mm (4.21 in x 4.88 in) |
| Displacement  | 6.7 L (408 in <sup>3</sup> )        |
| Aspiration    | Turbocharged / Aftercooled          |
| Rotation      | Counterclockwise facing flywheel    |



### Power Ratings

| Rating            | HO/GS | ID/HO | ID/HO | MD/HO | HD/HO |
|-------------------|-------|-------|-------|-------|-------|
| Metric hp         | 480   | 425   | 380   | 305   | 250   |
| bhp               | 473   | 419   | 375   | 295   | 246   |
| KW                | 353   | 312   | 280   | 220   | 183   |
| Rated rpm         | 3300  | 3000  | 3000  | 2600  | 2600  |
| Max Torque ft-lbs | 1165  | 1050  | 1000  | TBD   | TBD   |
| Max Torque N-m    | 1580  | 1424  | 1356  | TBD   | TBD   |
| rpm @ max torque  | 2000  | 2000  | 2000  | TBD   | TBD   |

*Ratings and specifications subject to change without notice. Not responsible for typographical errors.*

## Fuel Consumption (Prop Curve)

| Rating        | QSB6.7 - 480 HO/GS |       |       |      | QSB6.7 - 425 ID/HO |      |      |      | QSB6.7 - 380 ID/HO |      |      |      | QSB6.7 - 305 MD/HO |      |      |      | QSB6.7 - 250 HD/HO |      |      |      |
|---------------|--------------------|-------|-------|------|--------------------|------|------|------|--------------------|------|------|------|--------------------|------|------|------|--------------------|------|------|------|
| <b>rpm</b>    | 3300               | 3100  | 3000  | 2800 | 3000               | 2800 | 2600 | 2400 | 3000               | 2800 | 2600 | 2400 | 2600               | 2400 | 2200 | 2000 | 2600               | 2400 | 2200 | 2000 |
| <b>KW</b>     | 353                | 298   | 273   | 226  | 313                | 260  | 172  | 135  | 280                | 232  | 190  | 153  | 220                | TBD  | TBD  | TBD  | 183                | TBD  | TBD  | TBD  |
| <b>l/hr</b>   | 96                 | 87.7  | 71.2  | 58.4 | 82                 | 66.5 | 55   | 43.8 | 73.9               | 60.8 | 49.6 | 40.1 | TBD                | TBD  | TBD  | TBD  | TBD                | TBD  | TBD  | TBD  |
| <b>bhp</b>    | 473                | 399.5 | 365.7 | 304  | 419                | 348  | 230  | 182  | 375                | 311  | 255  | 205  | 295                | TBD  | TBD  | TBD  | 246                | TBD  | TBD  | TBD  |
| <b>gal/hr</b> | 25.4               | 20.8  | 18.8  | 15.4 | 21.7               | 17.6 | 14.5 | 11.6 | 19.5               | 16.1 | 13.1 | 10.6 | TBD                | TBD  | TBD  | TBD  | TBD                | TBD  | TBD  | TBD  |

Fuel consumption data represents performance along a 2.7 fixed pitch propeller curve (for HO, ID, MCD, 3.0 for HD and CON ratings). Fuel consumption is based on fuel of 35° API gravity at 16°C (60°F) having an LHV of 42,780 KJ/KG (18,390 BTU/lb) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lb/US gal). Observed horsepower is certified within ±5% of rated horsepower. Consult your local Cummins professional for further information.

## Engine Dimensions

| Length |      | Width |       | Height |       | Weight (Dry)* |      |
|--------|------|-------|-------|--------|-------|---------------|------|
| mm     | in   | mm    | in    | mm     | in    | kg            | lb   |
| 1074   | 42.3 | 897.8 | 35.35 | 857    | 33.74 | 634.1         | 1398 |

\*Length measured from back of flywheel to engine front.

Weight does not include customer specific options (alternator, starter, engine mounts).

## Available Accessories

**Engine Controls:** Digital Throttle and Shift

**Instrumentation:** SmartCraft® 2.5 digital displays standard with Zeus®, optional as inboard

**Vessel System Integration:** SmartCraft® 2.2 monitors fluid level, vessel range, depth, vessel speed, rudder position, temperatures and more

## Ratings Definitions

**Heavy Duty (HD):** Intended for nearly continuous use in variable load applications, where full power is limited to eight hours out of every ten hours of operation. Also, reduced power operation must be at or below cruise rpm, which is 200 rpm below the maximum rated speed. This rating is for applications operating less than 5000 hours per year.

**Medium Continuous (MD):** Intended for moderate use in variable load applications, where full power is limited to six hours out of every twelve hours of operation. Also, reduced power operation must be at or below cruise rpm, which is 200 rpm below the maximum rated speed. This rating is for applications operating less than 3000 hours per year.

**Intermittent (ID):** Intended for intermittent use in variable load applications, where full power is limited to two hours out of every eight hours of operation. Also, reduced power operation must be at or below cruise rpm, which is 200 rpm below the maximum rated speed. This rating is for applications operating less than 1500 hours per year.

**Government Service (GS):** Intended for infrequent use in variable load applications, where full power is limited to one hour out of every eight hours of operation. Also, reduced power operation must be at or below cruise speed (rpm). Cruise speed (rpm) is dependent on the engine rated speed (rpm), Refer to Table 1 below. For applications operating less than 500 hours per year. Engines with this rating are restricted to non-revenue generating government service propulsion applications. It is not to be used in any revenue generating commercial applications, nor is it to be used in recreational/pleasure applications

**High Output (HO):** Intended for infrequent use in variable load applications, where full power is limited to one hour out of every eight hours of operation. Also, reduced power operation must be at or below cruise speed (rpm). Cruise speed (rpm) is dependent on the engine rated speed (rpm), Refer to Table 1 below. For applications operating less than 500 hours per year. Engines with this rating are intended for powering recreational/pleasure use vessels only. Commercial use is defined as any work or employment related use of the product, or any use of the product which generates income, for any part of the warranty period, even if the product is only occasionally used for such purposes.

**Rating Conditions:** Declared power ratings are based upon ISO 15550 reference conditions/ air pressure of 100kPa (29.612 in Hg) air temperature of 25° C (77°F) and 30% relative humidity. Propeller Shaft Power represents the net power available after typical reverse/reduction gear losses and is 97% of rated power. Power rated in accordance with IMCI procedures.

Table 1

| Rated Speed      | Cruise Speed (reduction from rated) |
|------------------|-------------------------------------|
| 2000 to 2800 rpm | 200 rpm                             |
| 2801 to 3500 rpm | 300 rpm                             |
| 3501 to 4500 rpm | 400 rpm                             |

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Bulletin 4087252 Printed in U.S.A. 5/12  
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