



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 ³)
Aspiration	Turbocharged / Aftercooled
Rotation	Counterclockwise facing flywheel



Power Ratings

Rating	HO/GS	HO/GS	ID/HO	ID/HO	MD/HO	HD/HO
Metric hp	550	480	425	380	305	250
bhp	542	473	419	375	295	247
KW	404	353	312	280	224	184
Rated rpm	3300	3300	3000	3000	2600	2600
Max Torque ft-lbs	1250	1165	1050	985	866	720
Max Torque N-m	1695	1580	1425	1335	1174	976
rpm @ max torque	2000	2000	2000	2000	1700	1700

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

Fuel Consumption (Prop Curve)

Rating	550 HO/GS				480 HO/GS				425 ID/HO				380 ID/HO				305 MD/HO				250 HD/HO			
rpm	3300	3100	3000	2800	3300	3100	3000	2800	3000	2800	2600	2400	3000	2800	2600	2400	2600	2400	2200	2000	2600	2400	2200	2000
KW	404	341	312	259	353	298	273	226	313	260	172	135	280	232	190	153	220	181	143	111	184	148	117	91
l/hr	110	89.8	80.6	65.4	96	87.7	71.2	58.4	82	66.5	55	43.8	73.9	60.8	49.6	40.1	55.7	45.8	35.6	27.7	46.9	38.4	30.1	23.3
bhp	542	458	419	348	473	399.5	365.7	304	419	348	230	182	375	311	255	205	295	243	192	148	247	199	157	122
gal/hr	29.1	23.7	21.3	17.3	25.4	20.8	18.8	15.4	21.7	17.6	14.5	11.6	19.5	16.1	13.1	10.6	14.7	12.1	9.4	7.3	12.4	10.1	8	6.2

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
1097	43.1	910	35.8	857	33.74	659	1450

*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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