



FOR INDUSTRIAL APPLICATIONS TIER 3/STAGE IIIA

## FOR INDUSTRIAL APPLICATIONS.

# QSB

When you have a tough job to do, you need the power, precision and flexibility of Cummins QSB diesel engines. These 4-cylinder and 6-cylinder electronic QSB engines feature major enhancements to make every piece of equipment work harder, smarter, quieter and longer. Plus, they achieve Tier 3/Stage IIIA compliance with in-cylinder technology that maintains a compact, simple and cost-effective design solution.

The QSB Series is based on the highly successful B Series engines and features power ratings from 110-275 hp (82-205 kW), an increase of up to 18%, with charge air cooling and turbocharging for strong performance. These engines combine proven full-authority electronic controls with the reliable performance you expect from one of the world's most successful and durable engine designs.

In addition, every QSB has improved cold-start capability and is 5 to 9 decibels quieter in operation than its predecessor. It runs as quietly at full load as the previous QSB did at unloaded conditions!



#### **Ratings**

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ENGINE MODEL	ADVERTISED HP (KW) @ RPM	PEAK HP (KW) @ RPM	PEAK TORQUE LB-FT (N•M) @ RPM
QSB6.7			
QSB 275*	275 (205) @ 2500	275 (205) @ 2300	730 (990) @ 1500
QSB 260	260 (194) @ 2500	270 (201) @ 2300	728 (987) @ 1500
QSB 260	260 (194) @ 2400	270 (201) @ 2200	728 (987) @ 1500
QSB 260	260 (194) @ 2300	270 (201) @ 2100	730 (990) @ 1500
QSB 260	260 (194) @ 2200	270 (201) @ 2000	728 (987) @ 1400
QSB 250	250 (186) @ 2500	260 (194) @ 2300	728 (987) @ 1500
QSB 240	240 (179) @ 2500	250 (186) @ 2300	728 (987) @ 1500
QSB 220	220 (164) @ 2200	230 (172) @ 2000	700 (949) @ 1500
QSB 220	220 (164) @ 2000	230 (172) @ 1800	702 (952) @ 1400
QSB 215	215 (160) @ 2500	225 (168) @ 2300	655 (888) @ 1500
QSB 205**	205 (153) @ 1800	205 (153) @ 1800	687 (931) @ 1300
QSB 203	203 (151) @ 2000	205 (153) @ 1800	695 (942) @ 1450
QSB 200	200 (149) @ 2100	200 (149) @ 2100	546 (740) @ 1500
QSB 190	190 (142) @ 2400	205 (153) @ 2200	686 (930) @ 1500
QSB 190**	190 (142) @ 2300	203 (151) @ 1900	686 (930) @ 1500
QSB 190**	190 (142) @ 2200	195 (145) @ 2000	687 (931) @ 1400
QSB 185	185 (138) @ 2500	190 (142) @ 2300	575 (780) @ 1500
QSB 173	173 (129) @ 2500	183 (136) @ 2000	592 (803) @ 1500
QSB 173**	173 (129) @ 2200	178 (133) @ 2000	589 (799) @ 1400
QSB 170**	170 (127) @ 2000	170 (127) @ 2000	484 (656) @ 1400
QSB 160	160 (119) @ 2500	165 (123) @ 2300	539 (731) @ 1500
QSB 160**	160 (119) @ 2200	165 (123) @ 2000	540 (732) @ 1400
QSB 155**	155 (116) @ 2000	155 (116) @ 2000	456 (618) @ 1500
QSB 133**	133 (99) @ 2200	133 (99) @ 2200	431 (584) @ 1450
QSB4.5			
QSB 170*	170 (127) @ 2500	170 (127) @ 2500	459 (622) @ 1500
QSB 160	160 (119) @ 2500	165 (123) @ 2300	459 (622) @ 1500
QSB 152	152 (113) @ 2200	152 (113) @ 2200	405 (549) @ 1500
QSB 130	130 (97) @ 2300	130 (97) @ 2300	378 (512) @ 1500
QSB 130**	130 (97) @ 2200	135 (101) @ 2000	459 (622) @ 1500
QSB 121**	121 (90) @ 2200	121 (90) @ 2200	347 (470) @ 1500
QSB 110	110 (82) @ 2500	115 (86) @ 2300	360 (488) @ 1500
QSB 110**	110 (82) @ 2200	115 (86) @ 2000	360 (488) @ 1500

<sup>\*</sup>Indicates a restricted rating. \*\*Indicates a continuous rating. All ratings are intermittent unless otherwise noted. Additional ratings may be available. Check with your Cummins distributor or dealer. All ratings are Tier 3 approved.

#### **Specifications**

	QSB4.5	QSB6.7
ENGINE TYPE	IN-LINE, 4-CYLINDER	In-Line, 6-Cylinder
DISPLACEMENT	275 CU IN (4.5 L*)	408 CU IN (6.7 L*)
ADVERTISED HORSEPOWER	R 110-170 HP (82-127 KW)	133-275 HP (99-205 KW)
PEAK TORQUE	459 LB-FT (622 N•M)	730 LB-FT (990 N•M)
ASPIRATION TUF	RBOCHARGED AND CHARGE AIR CC	OOLED
OIL SYSTEM CAPACITY	11.6 U.S. QT (11 L*)	15-25.3 U.S. QT (14.2-23.9 L*)
COOLANT CAPACITY	9 U.S. QT (8.5 L*)	10.6 U.S. QT (10 L*)
LENGTH	32.2 IN (818 MM)	41.7 IN (1059 MM)
WIDTH	28.1 IN (713 MM)	28.6 IN (725 MM)
HEIGHT	34.5 IN (878 MM)	37.8 IN (960 MM)
WET WEIGHT	818 LB (371 KG)	1,047 LB (475 KG)

<sup>\*</sup>L = Liters/Litres



#### **Features And Benefits.**

The advanced features of the QSB provide many benefits for your operation:

- High Pressure Common Rail Fuel System Delivers high injection pressure (1600 bar) for improved performance and fuel efficiency at every rpm.
- In-Cylinder Combustion Technology Meets emissions standards without external components, is compatible with high-sulfur fuels for worldwide use.
- Rear Gear Train Significantly lowers noise output to meet worldwide noise emissions standards.
- Full-Authority Electronic Controls Optimize engine performance and provide seamless integration with other components, advanced diagnostics, plus a complete set of programming options. Upgraded ECM has twice the processing speed of the previous model.
- New Cylinder Block Increased displacement with a deep stiff crankcase for higher power and torque, lower noise and increased engine life.
- Holset Wastegated Turbocharger Designed by Holset, a Cummins subsidiary. Wastegated for better low-speed performance and high-speed boost.

- Two-Stage Dual Fuel Filtration Provides a balanced level of particle separation to maximize fuel filter life and protect the vital fuel system components.
- Centered Injectors with Symmetrical Piston Bowls Improved airflow and even fuel dispersion, resulting in increased power, improved transient response and reduced fuel consumption on 24-valve versions of the QSB.
- Parent Bore Cylinder Block Designed for reduced noise and increased durability.
- Directed Piston Cooling Lower piston temperatures lead to longer life.
- Wider Camshaft Lobes and Larger Tappet Wear Surface – Enhance durability and reliability.

#### Options.

■ Noise reduction packages that include isolated oil pans and isolated valve covers to reduce overall noise levels.

#### **Maintenance Intervals.**

Minimum maintenance has been designed into every QSB engine. A two-stage dual fuel filter approach consisting of a 10-micron filter and a pressure-side 3-micron filter maximizes fuel filter life. QSB engines are designed to run up to 500 hours between scheduled fuel and oil filter changes.

## **Every Installation.**

Getting every installation right – the first time – is as important to Cummins as it is to you. PowerMatch and Advisor help ensure that we get it right, every time.

## **Cummins PowerMatch.**

PowerMatch helps OEMs optimize engine performance so you can lower fuel consumption, increase operator satisfaction, improve equipment life and protect the customer's investment. PowerMatch tailors engine performance to specific equipment models and applications. Advanced electronics are used to enhance power curves and trim ratings, matching the job the equipment will be doing while taking into account variables such as work environment, load factors, ambient temperature and altitude.

PowerMatch can also be used to create a unique torque curve, set up alternate torque curves, alternate governor settings or set up engine protection features. Turn on the Boost Power feature, and the equipment user gets an extra burst of power needed to get through tough spots – but only for as long as needed – so fuel economy and durability are not compromised. Because PowerMatch allows for immediate field-testing of new calibrations, application engineers can quickly develop the optimum calibration for every customer.

## **Cummins Advisor.**

Getting every installation right is what Cummins Advisor is all about. Advisor puts a virtual engineer on the OEM team, allowing the OEM to focus on machine requirements instead of



engine requirements. This shortens engineering cycle times and cost. Cummins Advisor models equipment installation for exceptional productivity, reliability and durability.

After a comprehensive review of load factors, climates, duty cycle and equipment usage, Advisor recommends the best engine and rating match for the equipment and operating conditions. It then builds a virtual model of the intake, exhaust, cooling, fuel and mounting systems. When Advisor identifies an issue, it lists acceptable alternatives. This approach allows changes while the equipment design is still "on paper," ensuring optimum performance while minimizing costs – every time.

## **Base Warranty.**

QSB engines come with a full 2-year/2,000-hour warranty that covers all Cummins branded components, including electrics such as starters and



alternators. Major components coverage continues into the third year, up to 10,000 hours of operation from the time your QSB engine goes in service.

Three simple steps explain everything you need to know:

**Step One:** Full coverage on all Cummins industrial engines and branded components with unlimited hours during the first year of operation. This includes Cummins branded electrics such as alternators, starters, etc.

**Step Two:** Full coverage is extended for the second year, up to 2,000 hours of operation. Total hours are cumulative from the time the engine goes in service.

**Step Three:** Major components coverage including block, crankshaft, camshaft and rods on all products for the third year or up to 10,000 hours of operation. Total hours are cumulative from the time the engine goes in service.

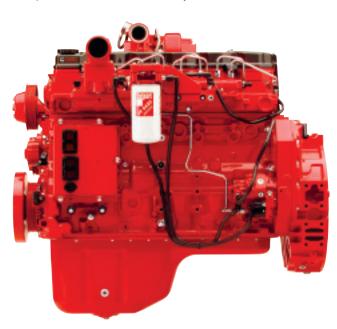
## **Encompass Extended Coverage.**

Unlike plans offered by other diesel manufacturers, Encompass gives you a choice of plans that include parts only, parts and labor, or parts, labor and travel coverage. Encompass protection plans are available for your QSB engine with your choice of up to 5 years of extended coverage with unlimited hours. 5-year to 7-year coverage is available for up to 6,000 hours of operation.

These plans cover all Cummins-manufactured components. Maintenance components are included through the end of the third year.

Encompass protection plans may be purchased up to six months after the in-service date of your QSB engine. See your Cummins distributor for pricing. For additional details, ask to see Bulletin 3624570.

A \$200 deductible applies per service visit after the expiration of the base warranty.





## **Every Part. Online.**

QuickServe® Online (http://quickserve.cummins.com) gives you easy access to parts and service information. While there are part numbers for over eight million engines indexed in the QuickServe Online database, you can find the information you need in seconds with our high-speed search function and your engine's serial number.

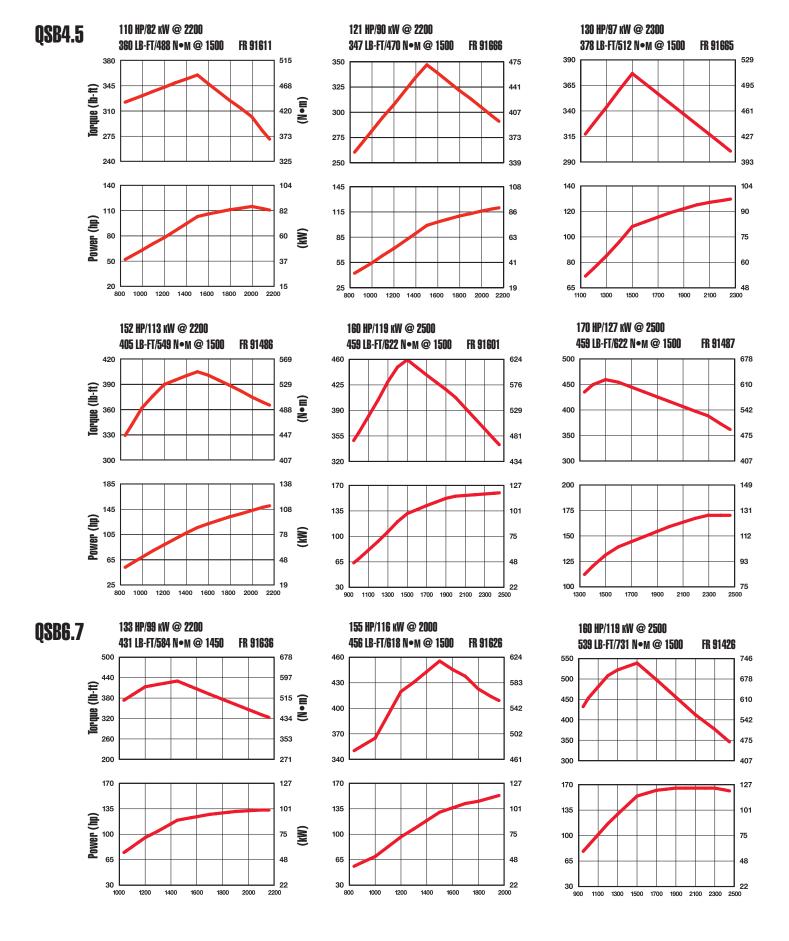
## **Every Question. Answered.**

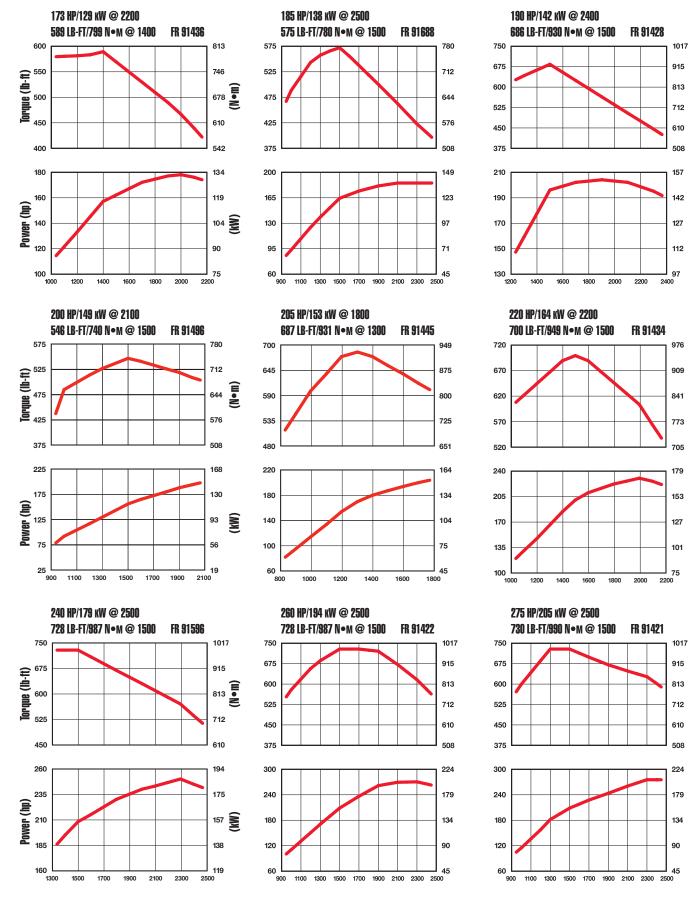
■ Service Network – Cummins engines are backed by the strength of Cummins global network of over 5,500 service locations worldwide.

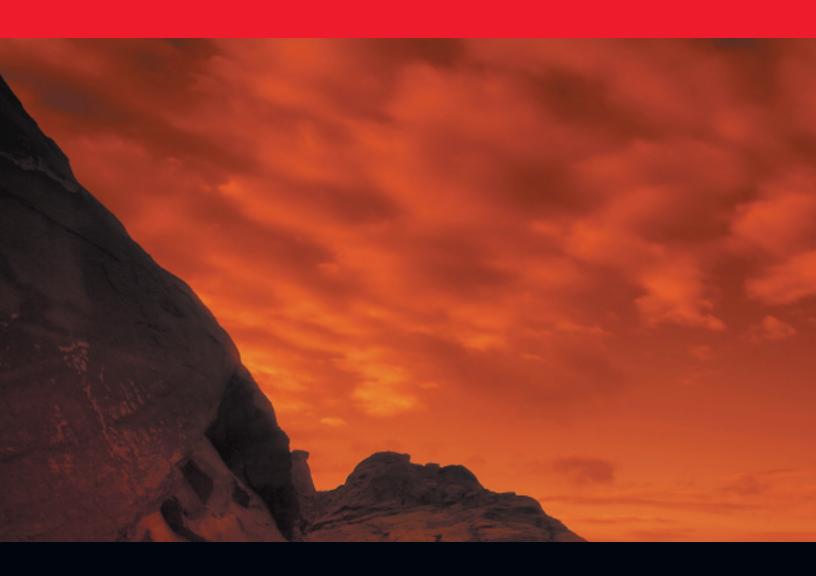


- Customer Assistance Center For technical assistance, service locations and product literature, call 1-800-DIESELS (1-800-343-7357). For customers in Europe, the Middle East and Africa, call +44 (0) 1327 886464 or e-mail to cabo.customerassistance@cummins.com.
- Cummins E-Mail For online assistance to Cumminsrelated questions, click on the Contact Us link in the header at everytime.cummins.com.
- Cummins Online Registration Register all your Cummins engines quickly and easily at everytime.cummins.com to ensure quality parts and service for your engine.

# **TOROUE AND POWER CURVES.**









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