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**A Quantum Leap Ahead  
In Electronics.**



**Q S B**





## Cummins QSB Electronic Engines. A Quantum Leap Ahead In Experience.

**W**hile some industrial diesel manufacturers launch their first ever electronic control systems – Cummins is taking its proven Quantum System and extending it to cover 4-cylinder and 6-cylinder models from 110-275 hp. These engines combine proven full-authority electronic controls with the reliable performance you've come to expect from Cummins B Series engines.

What is the Quantum System? It's an approach to engine design that improves everything from manufacturing to maintenance. Customers, engineers, suppliers, service technicians, equipment manufacturers – we involved everyone, every step of the way, to improve every aspect of engine performance.



**The 24-valve version of the QSB has been a proven workhorse in ag tractors since 1999.**



**The QSB provides dependable performance in tough applications.**

### **You've Got The Equipment. We've Got The Engine.**

The 24-valve version of the 6-cylinder QSB has earned its reputation as a powerful performer in the most demanding equipment applications. But not everyone needs all that extra muscle. So we've developed a 12-valve version of the same engine, complete with all the same electronic features, as an economical alternative.

We then applied the same Quantum technology to our 4-cylinder versions of this engine (110 to 130 horsepower).

So now you have an entire lineup of Quantum System engines to choose from, to cover all your equipment needs.



## Tougher Than A Steel-Toed Boot.

These QSB engines have faced extreme operating conditions, endured repeated field tests and stood up to rigorous equipment validation testing.



**PowerMatch Ratings allow the QSB to be optimized for any application.**

The electronics in the QSB have been proven in our high-horsepower products, working in the harshest, most demanding environments – like dusty, nonstop mining operations. And still meeting emissions regulations worldwide.

No matter how tough the work environment is, our QSB engines are tougher.

## Full-Authority Electronics.

The QSB's full-authority electronics mean more precise control over the performance of the engine. And our Electronic Control Module is totally programmable, so you can specify performance parameters to exactly match your equipment.

It's a concept we call PowerMatch.



## PowerMatch Ratings.

Cummins can work with you to match the power of our QSB engine to a specific equipment model and/or application. We use our advanced electronics to shape torque curves and ratings to match the jobs your equipment will be doing, taking into account factors such as your equipment's work environment, load factors, ambient temperatures and operating modes. Then, we optimize the engine's performance with other vehicle components, using the Cummins Advisor program.

## Making Installation Easier.

Cummins Advisor software builds a virtual model to show how our engine is installed in your equipment.

Advisor takes into account everything from load factors to fuel lines, operating climates to duty cycles – then checks to see how these factors could affect overall reliability and equipment performance, making sure that all systems work as a team for optimum performance.

When Advisor identifies a problem, it lists alternative options that deliver the equipment performance you expect – so you get it right the first time.

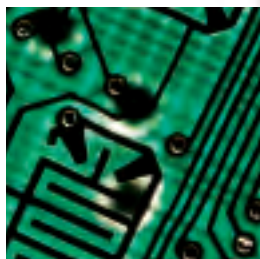
Advisor takes engine installations a quantum leap forward. And only Cummins has it.

# Q S B

## Technology

### Vital Stats

<b>Displacement</b>	<b>3.9 liters (240 cu in)</b>	<b>4.5 liters (274 cu in)</b>	<b>5.9 liters (360 cu in)</b>
<b>Bore</b>	<b>102 mm (4.02 in)</b>	<b>102 mm (4.02 in)</b>	<b>102 mm (4.02 in)</b>
<b>Stroke</b>	<b>120 mm (4.72 in)</b>	<b>137 mm (5.39 in)</b>	<b>120 mm (4.72 in)</b>
<b>Weight (Wet)</b>	<b>359 kg (790 lb)</b>	<b>359 kg (790 lb)</b>	<b>437-457 kg (962-1005 lb)</b>
<b>Oil Capacity</b>	<b>9.4 liters (10 U.S. quarts)</b>	<b>9.4 liters (10 U.S. quarts)</b>	<b>14.2-16.3 liters (15-17.2 U.S. quarts)</b>



### Full-Authority Electronic Controls

Cummins proprietary design with Motorola microprocessor. Features advanced diagnostics, plus a complete set of programming options. Industry standard J1587 and J1939 datalinks compatible with Cummins INSITE™ and INFORM™ software programs.



### Wastegated HX35 Turbocharger

Custom-designed by Holset, a Cummins subsidiary, for high-speed ratings. Wastegated for better low engine speed performance and high engine speed boost.



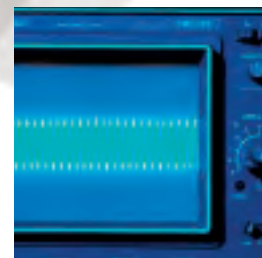
### Parent Bore Cylinder Block

Structurally redesigned for reduced noise and increased durability. Integrated water pump, lube pump and cooler housings, and coolant bypass to eliminate potential leak points.



### Forged-Steel Crankshaft

Full fillet-hardened and integrally balanced, with internal cross-drilling for lubrication.



### Noise-Reduction Packages

Optional packages reduce overall noise level (up to 4 dBA less).





#### **Electronic Fuel Injection**

Combines high injection pressures with electronic-controlled timing and fueling for precise and instantaneous control.



#### **Low-Maintenance Fuel Filter Assembly**

500-hour fuel filter life with integral water separator and water-in-fuel sensor. Top-load for easy paper filter replacement with standard Fleetguard® filters. Environmentally friendly. Also available: 300W fuel heater integrated into assembly.

## **Keeping Downtime Down.**

Uptime is what QSB engines are designed to deliver. Our complete engine diagnostics help technicians get the right diagnosis the first time, every time.

Of course, if something suddenly does go wrong without warning – the QSB has active engine protection features to protect your investment. The ECM reads the warning signal sent by the engine sensors, then limits power output or shuts the engine down to prevent serious damage.

## **Extended Service Intervals.**

Your customers don't have to pay extra to get extra – these QSB engines have been designed to run up to 500 hours between scheduled maintenance stops.

Plus, Cummins, Fleetguard and Valvoline have teamed up to develop extended-service filters and lubricants that will let your customers go even longer with reduced downtime and cleaner operation.

## **The 24-Valve QSB: Stronger Than Yesterday's Coffee.**

The 24-valve version of the QSB is the only engine in its class to feature 24-valve design with centered injectors and a symmetrical piston bowl. The combination of improved airflow and evenly dispersed fuel results in increased power, improved transient response and reduced fuel consumption.

Throw in reduced maintenance, an impressive power-to-weight ratio, plus a significant reduction in noise and you'll see – the QSB is everything you'd expect in a Cummins B Series – and a whole lot more.

## **Coverage Is Critical.**

One of the simplest and most comprehensive plans anywhere, with 3-year/10,000-hour standard protection on major components. Encompass extended protection plans add up to seven years of coverage with no hourly limits. Ask your dealer/distributor for details.

## **QuickServe® Says It All.**



One-hour diagnosis. Repairs in four hours or less. QuickServe trucks that come to your location. Huge in-stock inventories. Guaranteed next-day delivery on out-of-stock parts almost anywhere in North America. Get all this and more from any authorized QuickServe location.

## **For More Information...**

To learn more about the full lineup of QSB engines, contact your local Cummins dealer or distributor or call the Cummins Customer Assistance Center at 1-800-DIESELS (1-800-343-7357). You can also contact us by e-mail at [powermaster@cummins.com](mailto:powermaster@cummins.com). Internet users will find us at [www.cummins.com](http://www.cummins.com).

# QSB Ratings

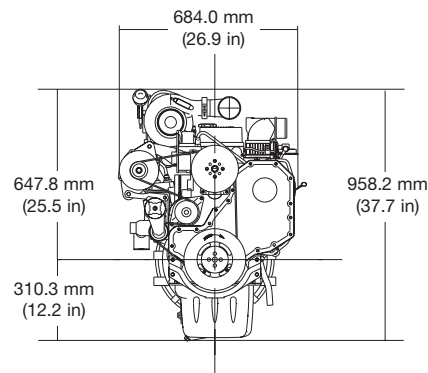
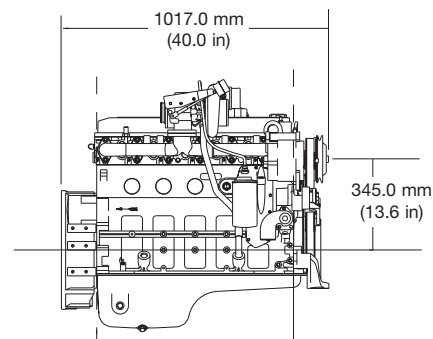
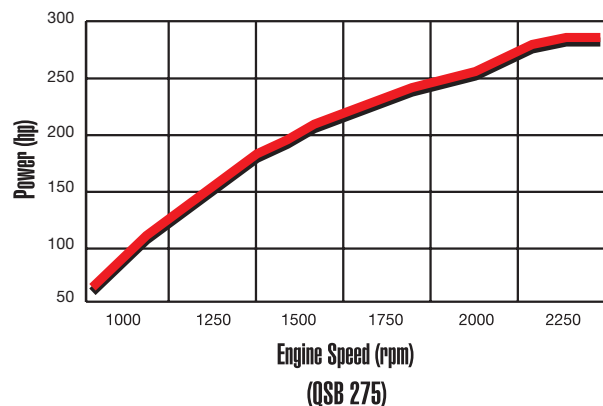
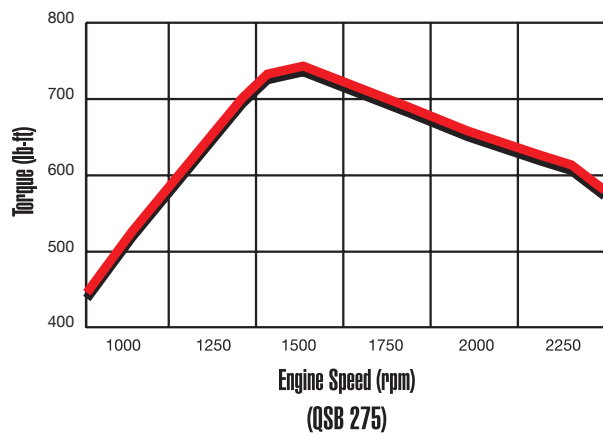
ENGINE MODEL	ADVERTISED HORSEPOWER	PEAK HORSEPOWER	PEAK TORQUE	ASPIRATION
QSB 275*	275 @ 2500 RPM	275 @ 2300 RPM	730 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 240†	240 @ 2500 RPM	240 @ 2300 RPM	652 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 230	230 @ 2200 RPM	230 @ 2000 RPM	652 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 220	220 @ 2500 RPM	230 @ 2300 RPM	670 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 215†	215 @ 2500 RPM	225 @ 2300 RPM	655 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 205†	205 @ 2500 RPM	215 @ 2300 RPM	625 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 190	190 @ 2200 RPM	200 @ 2000 RPM	658 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 180	180 @ 2200 RPM	190 @ 2000 RPM	624 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 185†	185 @ 2500 RPM	190 @ 2300 RPM	575 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 173†	173 @ 2500 RPM	179 @ 2300 RPM	530 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 155†	155 @ 2500 RPM	160 @ 2300 RPM	440 LB-FT @ 1500 RPM	TURBOCHARGED
QSB 140	140 @ 2200 RPM	145 @ 2000 RPM	434 LB-FT @ 1500 RPM	TURBOCHARGED
QSB 130†	130 @ 2500 RPM	130 @ 2300 RPM	373 LB-FT @ 1500 RPM	TURBOCHARGED
QSB 130	130 @ 2500 RPM	135 @ 2300 RPM	355 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 125	125 @ 2200 RPM	130 @ 2000 RPM	355 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 120	120 @ 2500 RPM	125 @ 2300 RPM	350 LB-FT @ 1500 RPM	CHARGE AIR COOLED
QSB 110†	110 @ 2500 RPM	110 @ 2300 RPM	305 LB-FT @ 1500 RPM	TURBOCHARGED

ALL RATINGS ARE INTERMITTENT UNLESS OTHERWISE NOTED.

\*RESTRICTED RATING.

†2200 RPM RATING IS AVAILABLE.

ADDITIONAL RATINGS MAY BE AVAILABLE. CHECK WITH YOUR CUMMINS DISTRIBUTOR OR DEALER.



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