



**EVERY<sup>TM</sup> SITE.**

**QSC**



**FOR INDUSTRIAL APPLICATIONS  
TIER 3/STAGE IIIA**

# FOR INDUSTRIAL APPLICATIONS.



The world is full of uncertainties, from weather predictions to economic forecasts. But you can always count on Cummins QSC-powered equipment to pull you through. Cummins QSC engines are built on one of the world's most successful – and durable – engine block designs. In fact, there are over three quarters of a million in use around the globe every day.

The QSC advanced electronics provide enhanced engine performance with higher torque and better throttle response at every rpm. Electronic engine control provides additional advantages that include increased fuel economy, precision diagnostics and engine protection. And the impressive durability of the QSC is enhanced by long maintenance intervals, improved cold starting plus up to 50% quieter operation for improved operator comfort.

The QSC meets every Tier 3/Stage IIIA emissions standard without compromise. There's no fuel economy penalty when compared to Tier 2 mechanical engines. Plus, its in-cylinder solution is simpler than other alternatives, giving the QSC the capability to meet Tier 4/Stage IV emissions with the addition of aftertreatment. With its ideal combination of electronic controls and durable block design, the QSC is ready to meet every one of your toughest applications.



## Ratings

ENGINE MODEL	ADVERTISED HP (KW) @ RPM	PEAK HP (KW) @ RPM	PEAK TORQUE LB-FT (N•M) @ RPM
QSC 305	305 (227) @ 2200	333 (248) @ 2000	1020 (1383) @ 1500
QSC 305	305 (227) @ 2100	320 (239) @ 1900	1020 (1383) @ 1500
QSC 300	300 (224) @ 2200	333 (248) @ 2000	1000 (1356) @ 1500
QSC 300	300 (224) @ 2100	320 (239) @ 1900	1000 (1356) @ 1500
QSC 290	290 (216) @ 2200	310 (231) @ 2000	940 (1274) @ 1500
QSC 280	280 (209) @ 2200	300 (224) @ 2000	1000 (1356) @ 1500
QSC 280	280 (209) @ 2100	300 (224) @ 1900	1000 (1356) @ 1500
QSC 275	275 (205) @ 2200	290 (216) @ 2000	895 (1213) @ 1500
QSC 260	260 (194) @ 2200	280 (209) @ 2000	870 (1180) @ 1500
QSC 250	250 (186) @ 2200	265 (198) @ 2000	830 (1125) @ 1500
QSC 245	245 (183) @ 2200	278 (207) @ 2000	857 (1162) @ 1500
QSC 245	245 (183) @ 2000	280 (209) @ 1800	935 (1268) @ 1400
QSC 240	240 (179) @ 2200	260 (194) @ 2200	800 (1085) @ 1500
QSC 230	230 (172) @ 2200	250 (186) @ 2000	800 (1085) @ 1500
QSC 215	215 (160) @ 2200	230 (172) @ 2000	675 (915) @ 1500

All ratings are intermittent unless otherwise noted. Additional ratings may be available. Check with your Cummins distributor or dealer.

## Specifications

ENGINE TYPE	IN-LINE, 6-CYLINDER	
DISPLACEMENT	506 CU IN	8.3 L*
ADVERTISED HORSEPOWER	215-305 HP	160-227 kW
PEAK POWER	230-333 HP	172-248 kW
PEAK TORQUE	675-1020 LB-FT	915-1383 N•M
BORE AND STROKE	4.49 IN X 5.31 IN	114 MM X 135 MM
ASPIRATION	TURBOCHARGED AND CHARGE AIR COOLED	
OIL SYSTEM CAPACITY	21 U.S. QT	19.9 L*
COOLANT CAPACITY	11 U.S. QT	10.4 L*
LENGTH	44.4 IN	1128 MM
WIDTH	30.9 IN	785 MM
HEIGHT	41.8 IN	1062 MM
WET WEIGHT	1,594 LB	723 KG

\*L = LITERS/LITRES

## Features And Benefits.

Standard features include:

- Full-Authority Electronic Controls – Provide seamless integration with other components to optimize engine operation.
- Stiffer Block and Head – For reduced noise and vibration. Fluid circuits are integrated, replacing hoses and eliminating potential leaks.
- High Pressure Common Rail Fuel System – Allows multiple injection events for cleaner, quieter operation with consistent performance at every rpm. Also improves cold-weather starting.
- Wastegated Turbocharger – Delivers maximum power and torque.
- Mid-Stop Cylinder Liners – Reduce cavitation and improve rebuildability.
- Auto-Tensioning Belt Drive – Self-adjusting for optimum tension, which increases fan, alternator and fan belt life.
- Heavy-Duty Roller Followers – Cam roller followers give the QSC superior durability and cam life.



- Two-Stage Dual Fuel Filtration – Provides a balanced level of particle separation to maximize fuel filter life and protect the vital fuel system components.
- Gear Housing Design and Front-End Support – The gear housing and accessories mount directly to the block for improved durability.
- Improved Piston Design – Symmetrical piston bowl combines with centered injectors to deliver optimal combustion.
- Heavy-Duty Lube System – Targeted piston cooling and increased lube flow to the power cylinder result in increased piston reliability and durability. Improved lube and bypass filtration system increase ring and bearing life by as much as 63%.
- Improved Crankcase Ventilation – Virtually eliminates oil carryover.
- Valve Cover and Gasket – Isolated design with perimeter bolting for better sealing and improved reliability.

## Options.

- 12- or 24-volt electrical capacity.
- Front-mount accessory drive option available for hydraulic pumps or air compressors.
- Rear Engine Power Take-Off (REPTO) available for hydraulic pumps or air compressors.

## Performance.

The QSC 24-valve cylinder head, High Pressure Common Rail (HPCR) fuel system and robust electronic controls make for a completely programmable, highly durable, highly fuel-efficient power plant. With one of the highest power-to-weight ratios and lowest cost of operation of any engine in its class. And ratings that range from 215-305 hp (160-227 kW) to deliver the power and the versatility you need to match your equipment. Every time.

## Maintenance And Service.

Minimum maintenance has been designed into every QSC 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. An integrated water pump, lube pump, and cooler housings and coolant bypass eliminate possible leak points. QSC engines are designed to run up to 500 hours between scheduled fuel and oil filter changes.

## Every Installation.

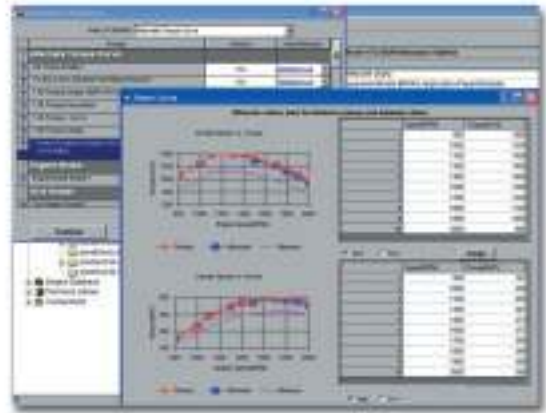
Getting every installation right – the first time – is as important to Cummins as it is to you. PowerMatch and Advisor help ensure that we get it right, every time.

## Cummins 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.



## 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.





## QuickServe® Online.

As a Cummins owner, you have access to one of the most comprehensive and powerful parts and service tools in the industry – Cummins QuickServe Online.

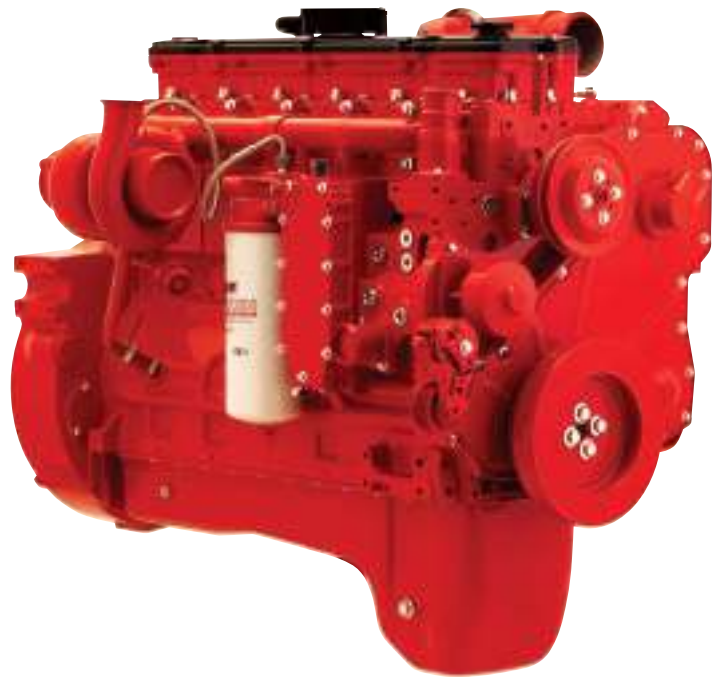
This is the same web site used by Cummins certified technicians to get parts and service information about your engine. And while it contains parts and service data for 8 million engines, finding the information for your QSC engine takes just seconds.

The first step is to register your engine (free). Enter the engine serial number listed on your data plate and you will be able to view an online Owner's Manual, the parts catalog for your engine, engine data plate information and more. QuickServe Online even gives exploded parts diagrams to help with identification of components in subassemblies.

For an annual subscription fee you can become a "Preferred Customer" with access to a cross-reference of Cummins ReCon® parts, service bulletins and the latest repair procedures.

Preferred Customers can use the shopping cart feature to view price and availability of the parts you need at your nearest Cummins distributor. Contact information is available online so you can review your parts list with a Cummins distributor and make sure you have every part you need to complete your engine repair.

To register, visit <http://quickserve.cummins.com>.



## INSITE™ And INFORM.™

Cummins INSITE software makes every service technician's job easier. Not only does it include step-by-step engine diagnostics, it includes built-in drawings and diagrams to improve troubleshooting and repair accuracy.

INFORM extracts raw data from your ECM and converts it into useful reports on everything from fuel use to operator performance. It creates exception and comparison reports, and even lets you break the data down by fleet, subfleet, operator, equipment and time period. This detailed analysis can help you improve efficiency, reliability and safety.



## Base Warranty.

QSC 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 QSC 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 QSC 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 QSC 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.



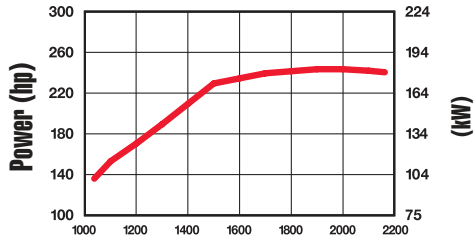
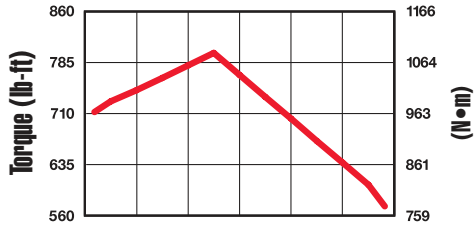
## Every Question. Answered.

- 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 and service locations, 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](mailto:cabo.customerassistance@cummins.com).
- Cummins E-Mail – For online assistance to Cummins-related questions, click on the Contact Us link in the header at [everytime.cummins.com](http://everytime.cummins.com).
- Cummins Online Registration – Register all your Cummins engines quickly and easily at [everytime.cummins.com](http://everytime.cummins.com) to ensure quality parts and service for your engine.

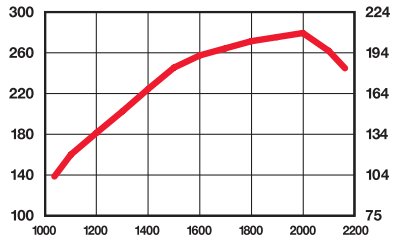
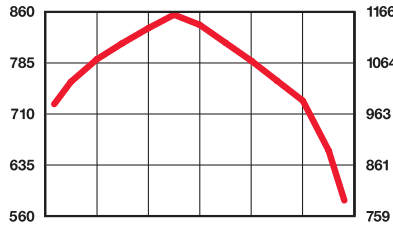


# TORQUE AND POWER CURVES.

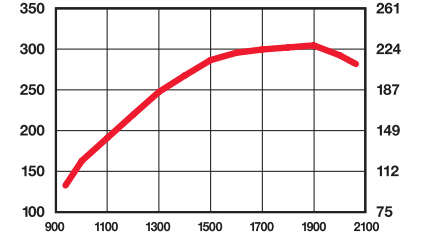
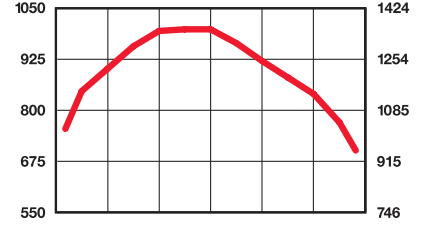
**240 HP/800 LB-FT @ 1500**  
**179 kW/1085 N•M @ 1500 FR 91357**



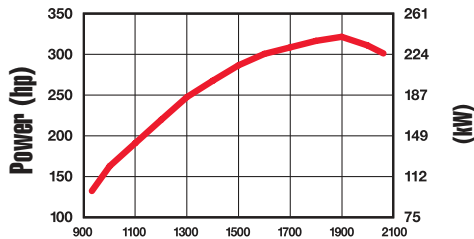
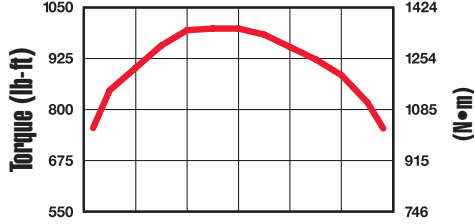
**245 HP/857 LB-FT @ 1500**  
**183 kW/1162 N•M @ 1500 FR 91698**



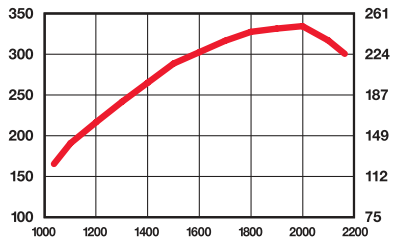
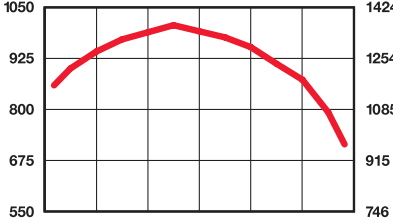
**280 HP/1000 LB-FT @ 1500**  
**209 kW/1356 N•M @ 1500 FR 91502**



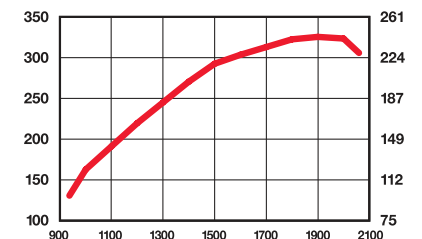
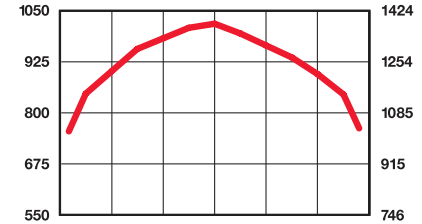
**300 HP/1000 LB-FT @ 1500**  
**224 kW/1356 N•M @ 1500 FR 91508**



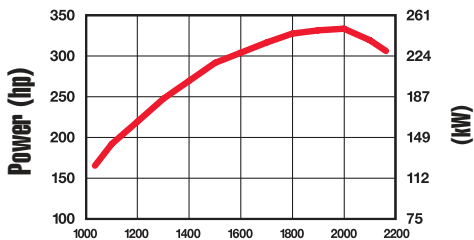
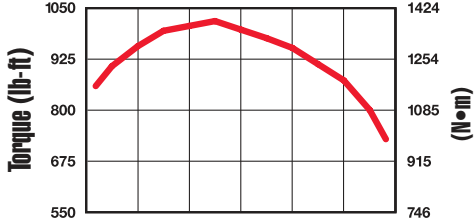
**300 HP/1000 LB-FT @ 1500**  
**224 kW/1356 N•M @ 1500 FR 91509**



**305 HP/1020 LB-FT @ 1500**  
**227 kW/1383 N•M @ 1500 FR 91507**



**305 HP/1020 LB-FT @ 1500**  
**227 kW/1383 N•M @ 1500 FR 91506**





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