



FOR INDUSTRIAL APPLICATIONS TIER 3/STAGE IIIA

# FOR INDUSTRIAL APPLICATIONS.

# QSL

There is no substitute for power when your equipment needs it. That's why Cummins QSL offers ratings from 280-365 hp (209-272 kW) and a torque rise of up to 50%. QSL engines combine advanced in-cylinder combustion technology and a High-Pressure Common-Rail (HPCR) fuel system to increase power and reduce emissions. At the same time, the QSL delivers better cold starting and runs 50% quieter for increased operator comfort. Every day.

QSL engines currently meet Tier 3/Stage IIIA emissions standards with an in-cylinder solution that doesn't require complex add-ons. The advanced QSL engine platform will be carried forward with the addition of aftertreatment to meet Tier 4/Stage IV emissions through 2011 and beyond.

## Performance.

Cummins QSL engines are built to deliver heavy-duty performance in every piece of machinery. Full-authority electronic engine controls combine with the High-Pressure Common-Rail fuel system for strong performance at every rpm. Its free-breathing 24-valve design and centered injectors give the QSL one of the highest power-to-weight ratios in its class. Plus, the QSL is capable of running on high-sulfur fuels, so it's at home in every corner of the globe.



### **Ratings**

ENGINE MODEL	ADVERTISED HP (KW) @ RPM	PEAK HP (KW) @ RPM	PEAK TORQUE LB-FT (N•M) @ RPM
QSL 365*	365 (272) @ 2100	375 (280) @ 2000	1113 (1509) @ 1500
QSL 350*	350 (261) @ 2100	370 (276) @ 1900	1120 (1519) @ 1500
QSL 325	325 (242) @ 2100	350 (261) @ 1900	1050 (1424) @ 1500
QSL 305	305 (227) @ 2000	340 (254) @ 1800	1110 (1505) @ 1400
QSL 300	300 (224) @ 2100	325 (242) @ 1900	1010 (1369) @ 1500
QSL 300	300 (224) @ 2000	300 (224) @ 2000	1010 (1369) @ 1500
QSL 300**	300 (224) @ 1800	300 (224) @ 1800	1000 (1356) @ 1400
QSL 280	280 (209) @ 2100	307 (229) @ 1800	1050 (1424) @ 1500
QSL 280	280 (209) @ 2000	300 (224) @ 1800	1000 (1356) @ 1500
QSL 280**	280 (209) @ 1800	280 (209) @ 1800	950 (1288) @ 1400

<sup>\*</sup>Indicates a restricted rating.

## **Specifications**

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ENGINE TYPE	IN-LINE, 6-CYLINDER	
DISPLACEMENT	543 CU IN	8.9 L*
ADVERTISED HORSEPOWER	280-365 HP	209-272 KW
PEAK POWER	280-375 HP	209-280 KW
PEAK TORQUE	950-1120 LB-FT	1288-1519 N•M
BORE AND STROKE	4.49 IN X 5.69 IN	114 MM X 144.5 MM
ASPIRATION T	IRATION TURBOCHARGED AND CHARGE AIR COOLED	
OIL SYSTEM CAPACITY	24 U.S. QT	22.7 L*
COOLANT CAPACITY	11.6 U.S. QT	11.0 L*
LENGTH	44.4 IN	1128 MM
WIDTH	27.7 IN	704 MM
HEIGHT	45.9 IN	1166 MM
WET WEIGHT	1,627 LB	738 KG

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

<sup>\*\*</sup>Indicates a continuous rating.

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

## **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 QSL 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.

### Versatility.

Its ECM (Electronic Control Module) is totally programmable, so you can specify performance parameters to match a wide range of operating conditions and load factors. For every job.

## **Maintenance And Service.**

Minimum maintenance has been designed into every QSL 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. QSL 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.

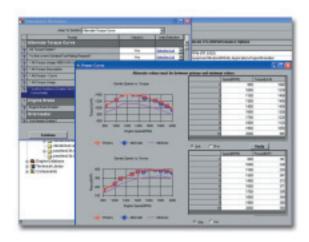
#### **Cummins Advisor.**

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 9 million engines, finding the information for your QSL 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.**

QSL 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 QSL 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 QSL 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 QSL 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.

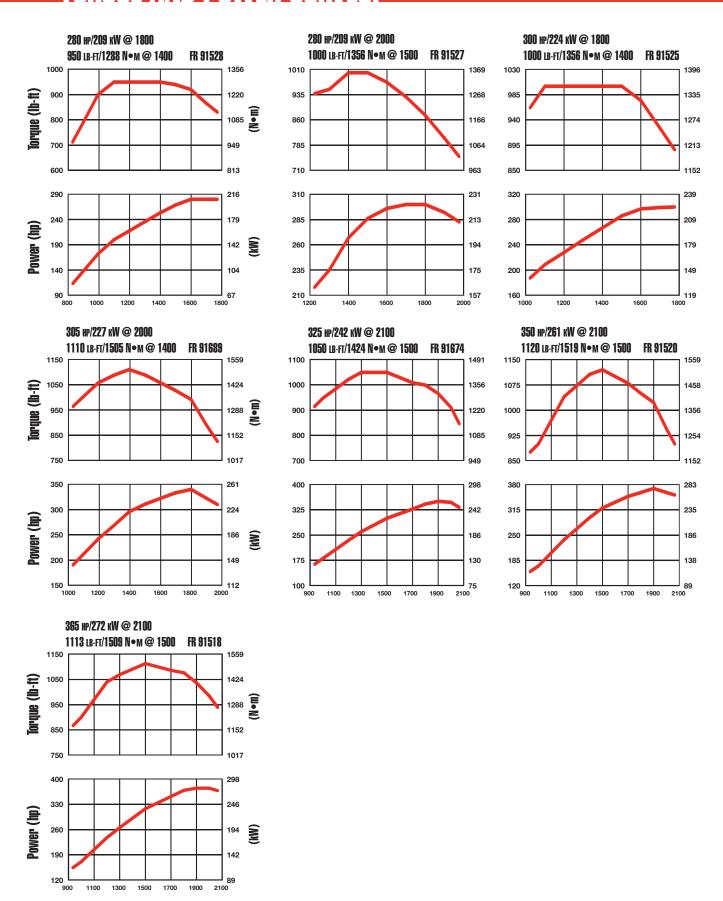


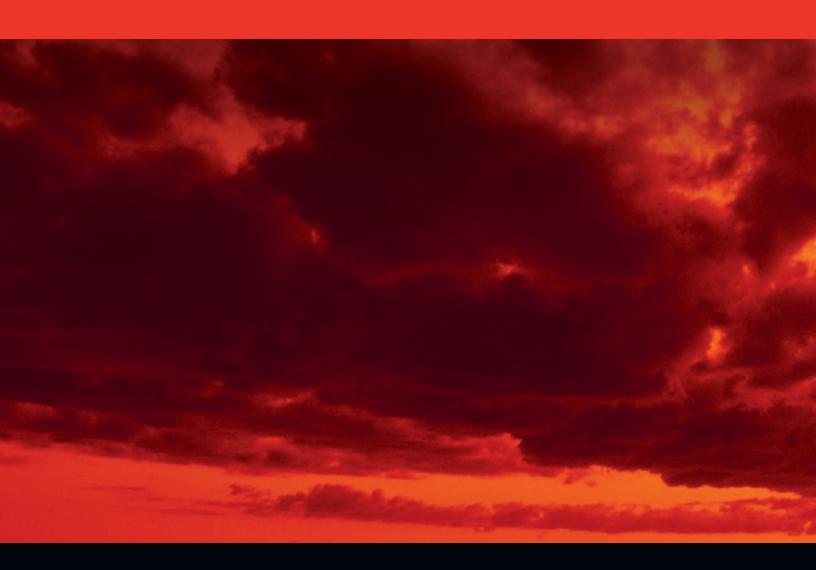
## **Every Question. Answered.**

- 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, 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 Cummins-related 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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