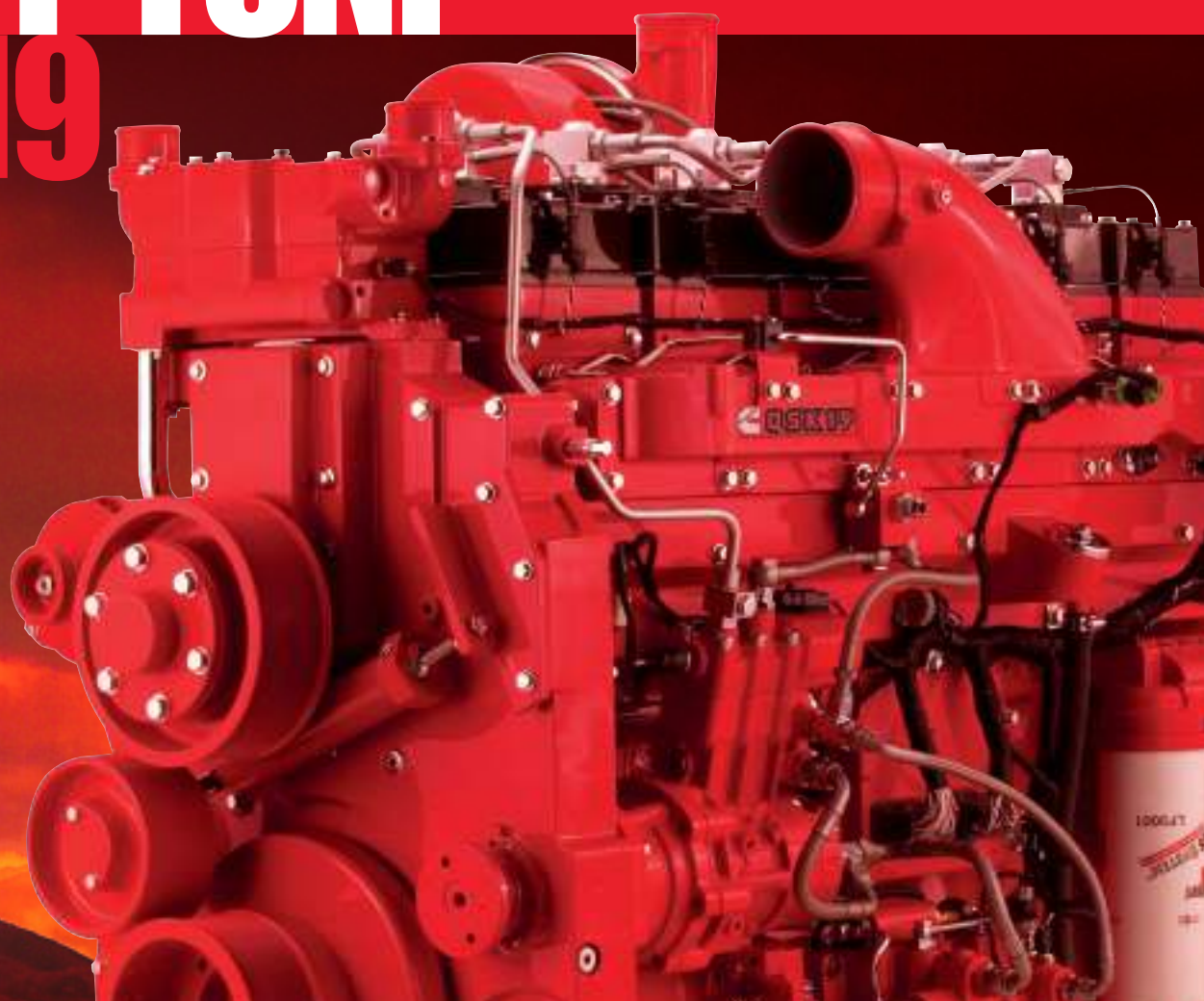




EVERY TON. QSK19



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

FOR MINING APPLICATIONS.

QSK19

The Tier 3 approved QSK19 engine is a powerful example of Cummins Quantum System technology at work. In the QSK19, state-of-the-art electronic controls and Cummins modular common-rail fuel system ensure clean, efficient performance, minimum maintenance and superior uptime for quarry and underground equipment – in the same compact footprint as its predecessor.

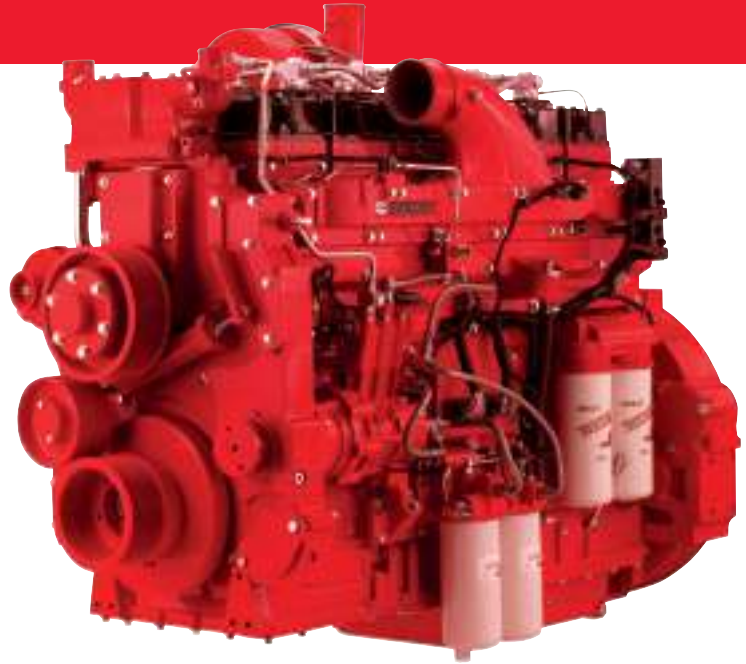
Advanced in-cylinder combustion technology and the modular common-rail fuel system reduce NOx emissions by 40% while providing responsive power delivery. The QSK19 meets every Tier 3/Stage IIIA emissions standard without compromise – or aftertreatment.

This fuel system is tolerant to a wide variety of worldwide fuels, including high-sulfur diesel and Japanese kerosene.

Performance.

With Cummins modular common-rail fuel system, injection pressure can be virtually constant at all speeds – realizing greater flexibility and precision in controlling both injection rates and timing. Proven single-piece ferrous cast ductile iron pistons work in combination with nitrided liners and cast-iron top rings for maximum durability and reliability. The QSK19 is designed to have the lowest life cycle cost with the longest life-to-overhaul of any engine in its class.

Over 5,000 QSK19 engines in haul trucks, excavators, drills and wheel loaders deliver proven durability and uptime. Every time.



Ratings

ENGINE MODEL	ADVERTISED HP (KW) @ RPM	PEAK TORQUE LB-FT (N•M) @ RPM
QSK19-700	700 (522) @ 2000	2101 (2849) @ 1500
QSK19-650*	650 (485) @ 2100	2100 (2847) @ 1400
QSK19-600	600 (447) @ 2100	1950 (2644) @ 1300
QSK19-600**	600 (447) @ 1800	1950 (2644) @ 1300
QSK19-530	530 (395) @ 2000	1625 (2203) @ 1300
QSK19-525	525 (391) @ 2100	1775 (2407) @ 1300
QSK19-510**	510 (379) @ 1800	1650 (2237) @ 1300

* Approved by CANMET and MSHA for underground mining.

** Indicates a continuous rating.

All ratings are Tier 3/Stage IIIA approved. All ratings are intermittent unless otherwise noted.

Additional ratings are available. Check with your Cummins distributor or dealer.

Specifications

ENGINE TYPE	IN-LINE, 4-CYCLE, 6-CYLINDER	
DISPLACEMENT	1159 CU IN	19 L*
ADVERTISED HORSEPOWER	510-700 HP	379-522 kW
PEAK TORQUE	1625-2101 LB-FT	2203-2849 N•M
BORE AND STROKE	6.25 IN X 6.25 IN	159 MM X 159 MM
ASPIRATION	AIR-TO-AIR CHARGE AIR COOLED	
OIL SYSTEM CAPACITY	80 U.S. QT	76 L*
COOLANT CAPACITY**	44 U.S. QT	41.6 L*
LENGTH	66.1 IN	1679 MM
WIDTH	34.3 IN	872 MM
HEIGHT	63.6 IN	1616 MM
WET WEIGHT	4,250 LB	1,928 KG

* L = Liters/Litres

** Engine only

Features And Benefits.

- Extra-Wide Gear Train – Quieter, longer-lasting and capable of handling high loads with ease.
- Single-Stage Holset Turbocharger – Lower intake air temperatures provide increased air density, resulting in more power and lower emissions from less fuel.
- Full-Authority Electronics – Programmable electronic controls optimize combustion at all altitudes and conditions. Superior performance is driven by an upgraded CM850 ECM with twice the processing speed of its predecessor.
- Two-Stage Oil Filter – Combination full-flow and bypass oil filter reduces maintenance costs as it extends service intervals.
- Precision-Honed Cylinder Liners – Precise liner machining with superior metal technology creates exceptional surface smoothness and durability.
- Power Cylinder Package – Proven single-piece ferrous cast ductile iron pistons for maximum durability and reliability. This advanced design also uses nitrided liners and cast-iron top rings to handle injection pressures with exceptional durability.
- High-Durability Camshaft – Microfinishing makes it last twice as long as previous designs. Improved contact between the crosshead and rocker lever reduces wear and improves durability.
- Fleetguard® ES Filtration – Fleetguard's ES oil filter keeps your equipment on the job with a combination full-flow and bypass design that simplifies service and reduces replacement costs.

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.

Maintenance Intervals.

Minimum maintenance has been built into every QSK19 engine. One example is the single-piece ferrous cast ductile iron pistons that provide exceptional durability and cut oil consumption by 20%. Cummins QSK19 engines only require an oil change every 250 hours.



Cummins QuickCheck III.

Questions about engine information? Cummins QuickCheck III* puts every answer in the palm of your hand! QuickCheck III software, together with your handheld device, reads and captures engine data quickly and conveniently from any Cummins electronic diesel engine or other engines you run (via J2587 and J1939). Use it to check everything from fuel burned and total engine hours to coolant temperature and boost pressure. QuickCheck III even logs fault codes, which can be used with Cummins INSITE™ to get detailed repair instructions for faster service.

*For information on hardware compatibility, please visit us online at <http://quickcheck.cummins.com> or see Bulletin 4081450.



INSITE.

For years INSITE has been making it easy for technicians to troubleshoot, repair and service our mining engines through easy-to-follow steps on the computer. Proprietary software includes step-by-step engine diagnostics, drawings and diagrams to improve troubleshooting and repair accuracy. Providing the kind of uptime you demand from your equipment, every hour of every day!



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.

The parts section of QuickServe Online includes:

- Parts catalogs including complete parts listing by engine serial number and exploded-parts diagrams
- Service parts topics
- Engine data plate information
- Online pick-list for placing orders
- A related parts guide

The service section contains:

- Operation and maintenance manuals
- Troubleshooting and repair manuals
- Service bulletins
- Shop manuals
- Temporary Repair Practices (TRPs)

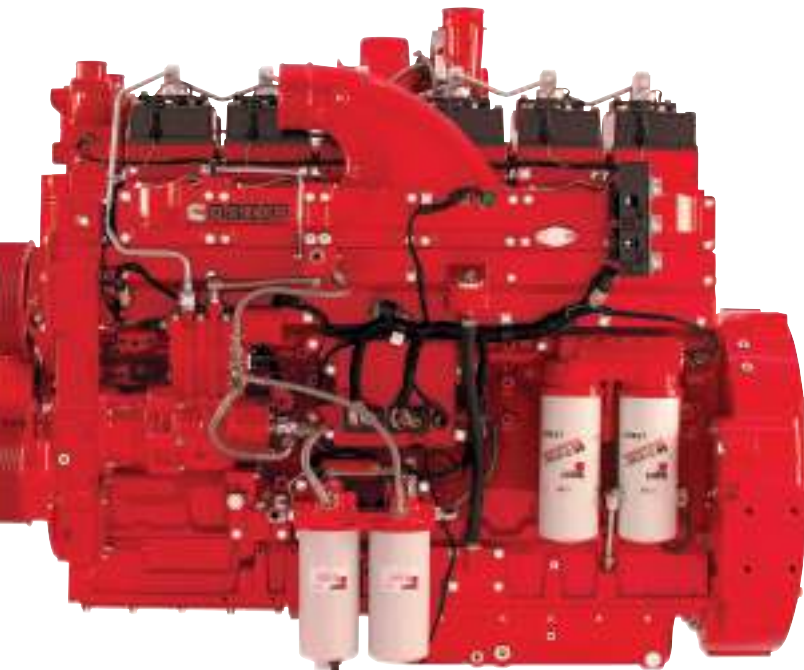
In the warranty section, authorized users will find:

- Warranty manuals
- Standard Repair Times (SRTs)
- Campaigns and alerts
- Link to the RapidServe™ web site for filing claims



Cummins MiningGateway – Your Gateway To Performance.

Whether you are in your office or at home, MiningGateway (www.MiningGateway.com) gives you access to a complete mining information station with links to current news stories of interest, maintenance updates and success stories from Cummins users around the world. In addition, there is a forum where you can talk to Cummins mining experts and ask them your toughest questions. Every time.



Cummins QuickServe®

Cummins QuickServe is dedicated to performing fast, accurate maintenance and repair services – using Genuine Cummins and Cummins ReCon® parts – to minimize downtime and maximize productivity. Our distributors' service record is so reliable, we offer an exclusive QuickServe Guarantee* to customers in the majority of our industrial markets.



Cummins distributors guarantee that engine service performed in their shop with a standard repair time of four hours or less will be completed that same day – or you'll receive a \$75 credit toward future Cummins parts or service work.

If your equipment is down and you can't bring it to one of our locations, we'll come to yours. A Cummins QuickServe truck and certified service technician will be dispatched within four hours of your call, or you'll receive a \$75 credit toward future Cummins parts or service work.

To schedule or request service, call your local Cummins distributor today. For additional details or to learn more about the QuickServe Guarantee, see our web site at www.everytime.cummins.com.

*\$75 credit applies only to service in the U.S. and Canada. The QuickServe Guarantee varies by country. Please contact your local Cummins distributor for details.

Base Warranty.

Cummins QSK19 gives you everything you need, with one of the simplest and most comprehensive plans anywhere. It includes full 2-year/2,000-hour complete coverage, with 3-year/10,000-hour standard protection on major components. 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 QSK19 engine with your choice of up to 4 years of extended coverage and unlimited hours. Or, you can choose from 5 years/2,000 hours, 5 years/6,000 hours or 5 years/10,000 hours.

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

Encompass protection plans may be purchased up to six months after the in-service date of your QSK19 engine. See your Cummins distributor for pricing. For additional details, ask to see Bulletin 3624570.

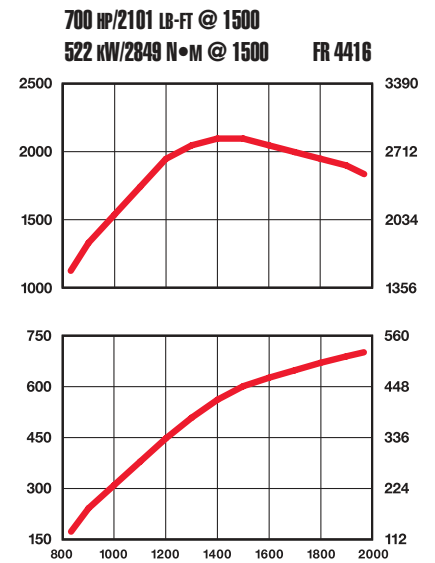
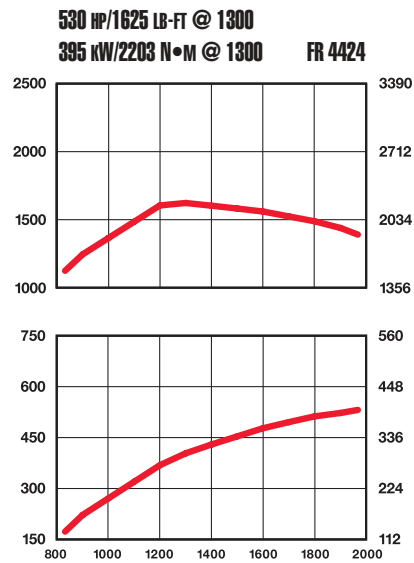
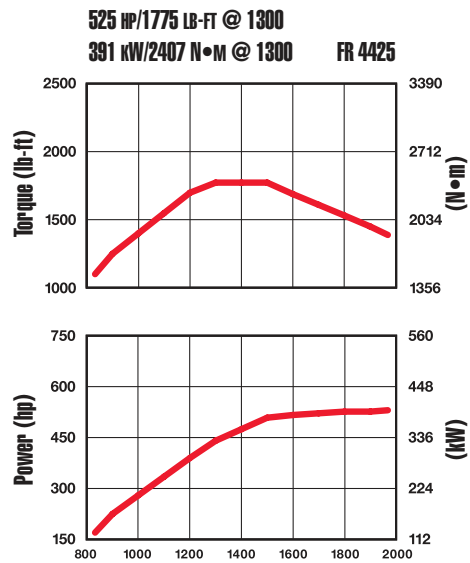
A \$300 deductible applies per service visit after the expiration of the base warranty.



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 www.everytime.cummins.com.
- **Cummins Online Registration** – Register all your Cummins engines quickly and easily at www.everytime.cummins.com to ensure quality parts and service for your engine.

TORQUE AND POWER CURVES.





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