



# EVERY<sup>TM</sup> TON. QSK78



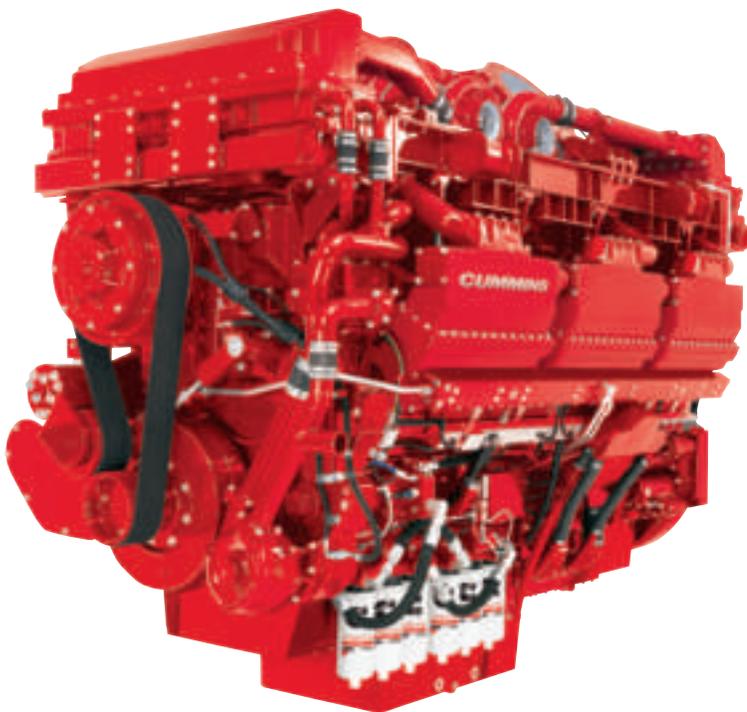
**FOR MINING APPLICATIONS**

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## QSK78

### Performance.

Whether you are mining copper in the Andes or oil sand in Alberta, the Cummins QSK78 provides the optimal combination of productivity and performance in the world's largest class of haul trucks. It incorporates the best features of our QSK Series engines, including advanced combustion technology and robust base engine components. Electronically programmable parameters let you customize engine performance to match the equipment, the environment and operator requirements. Plus, the QSK78 comes with standard features like ELIMINATOR™, CENTINEL™ and Prelub, which help eliminate downtime for routine maintenance and lengthen life-to-overhaul. Put that together with exceptional fuel efficiency, and you have the lowest cost per ton of any engine in its class.



### Ratings

ENGINE MODEL	ADVERTISED HP (KW) @ RPM	PEAK TORQUE LB-FT (N•M) @ RPM	RATING TYPE
QSK78 3500	3500 (2610) @ 1900	10,157 (13,771) @ 1500	INTERMITTENT

Additional ratings may be available. Check with your Cummins distributor or dealer.

### Specifications

ENGINE TYPE	60° VEE 18-CYLINDER	
ASPIRATION	TWO-STAGE TURBOCHARGED, INTERCOOLED AND AFTERCOOLED	
DISPLACEMENT	4,735 CU IN	77.6 LITERS
BORE AND STROKE	6.69 IN X 7.48 IN	170 MM X 190 MM
OIL SYSTEM CAPACITY	304 U.S. QT	288 LITERS
COOLANT CAPACITY	236 U.S. QT	224 LITERS
LENGTH	131 IN	3327 MM
WIDTH	65.5 IN	1663 MM
HEIGHT	95.6 IN	2429 MM
DRY WEIGHT	23,810 LB	10,800 KG
WET WEIGHT	24,912 LB	11,300 KG

### Features And Benefits.

- One-piece cast-iron cylinder block designed to absorb dynamic internal forces. Wide cylinder spacing allows for multiple full-life overhauls.
- Integrated fuel plumbing, metric flat-faced O-ring seals for sensors and ports, and edge-molded gaskets reduce the opportunity for fluid leakage.
- Heavy-duty front gear train modified from the proven QSK60 design has low gear loading and high fatigue strength for dependable service.
- Forged high-strength tensile steel crankshaft with dual viscous dampers to reduce gear train wear and tungsten counterweights to provide vibration damping for long engine and equipment life.
- High-pressure injection (HPI) fuel system provides optimum combustion for low emissions and better fuel economy. "Soft" injection start lowers combustion noise.

- Two-stage Holset® turbocharging from Cummins Turbo Technologies delivers full power and exceptional fuel efficiency at up to an industry-leading 16,400 ft (5,000 meters) altitude without derate.
- Electronic control system allows users to tailor fuel system calibrations to application requirements.
- CENSE™ provides continuous monitoring of engine performance, cylinder-by-cylinder. Fault codes are logged and reported with operational data for quick and accurate diagnosis and repair.
- One-piece Ferrous Cast Ductile (FCD) iron pistons provide increased strength and durability to handle increased cylinder pressures for longer life-to-overhaul.
- Dual piston-cooling nozzles per cylinder direct a cooling stream of oil beneath each piston crown and bowl rim for long life with increased reliability.
- Wiring is safely enclosed inside a foam-filled extruded aluminum channel and is completely sealed from the external environment to prevent chafing and corrosion damage. DIN-style connections have a locking feature that protects against pin-fretting damage.
- CENTINEL continuous oil replacement system eliminates oil changes and extends oil filter life, while maintaining the protective quality of engine oil. Minimizes oil disposal costs, reduces downtime and increases productivity.
- ELIMINATOR self-cleaning filtration system comes standard and combines full-flow and bypass filters with an oil-pressure-powered centrifuge. Stainless steel filter screens trap particles as small as 20 microns; centrifuge removes particles as small as 2 microns.
- The Prelub system distributes oil to rifles and friction surfaces and builds oil pressure before cranking can occur, reducing engine wear and greatly extending life-to-rebuild.

## A Name You Can Trust. Every Time. Everywhere.

Cummins possesses a vast amount of knowledge in mine operations. We are ready to assist you with experienced and dedicated local mining business leaders and high-horsepower-engine technical support – fully backed by the strength of Cummins industry-leading technology and total support of top management. When you buy a piece of equipment with a Cummins QSK78, you get more than just an engine. You get:

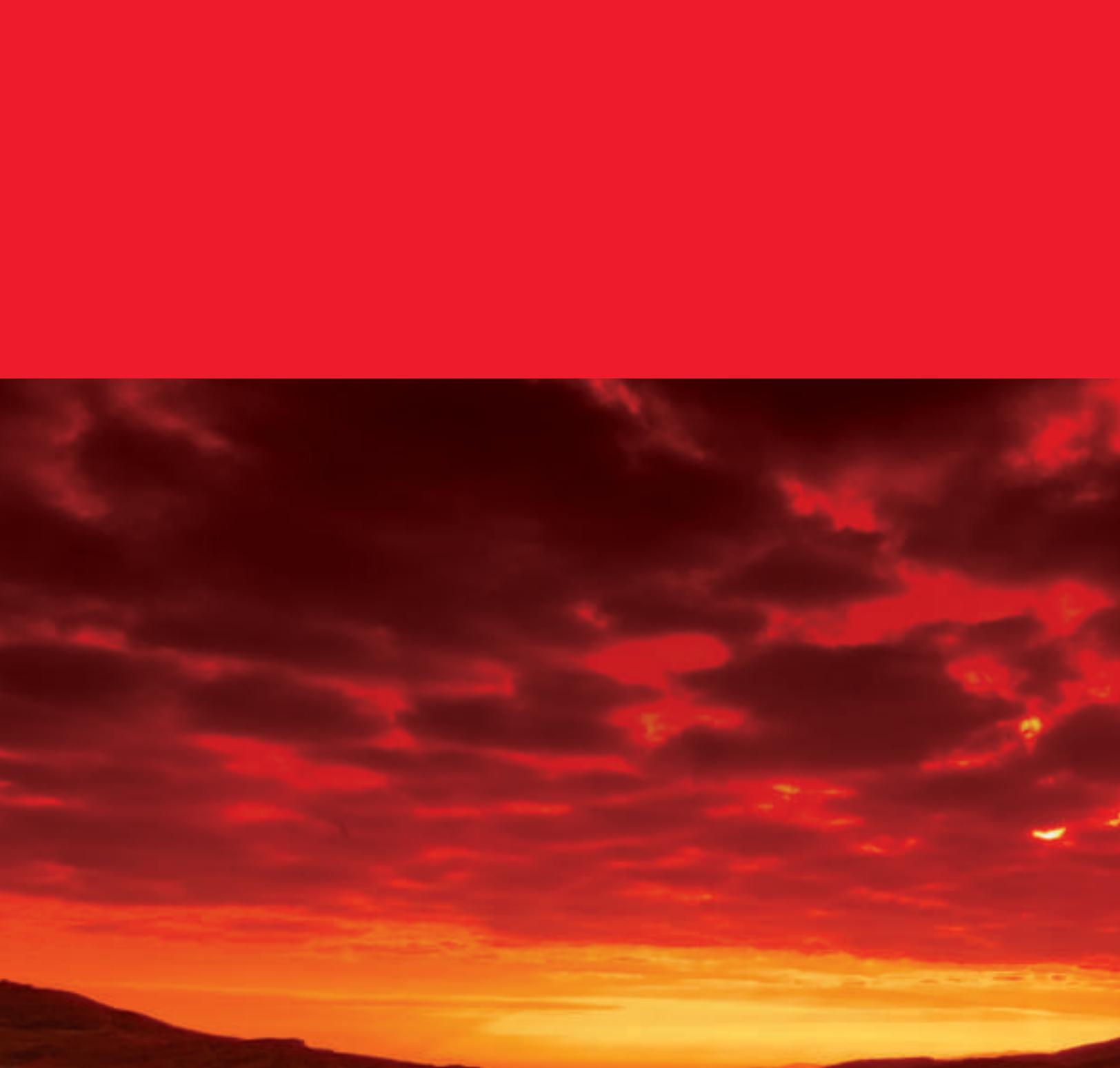
- Full life cycle support, with proven engineering expertise from engine commissioning through final overhaul.
- Immediate parts and service availability.
- An established worldwide network with over 500 distributor facilities in nearly 190 countries, dedicated and empowered to service your needs. Every hour, every day.
- The best warranty in the business, which includes full coverage for unlimited hours during the first year, extending through two years or 2,000 hours (whichever comes first).



The base warranty also includes 3-year/10,000-hour standard protection on major components. Extended warranties are available as well.

With the strength of Cummins at your side, your mine can process more material with increased uptime and greater productivity at a low cost per ton. Most important, our worldwide presence and comprehensive support make Cummins a proven, committed mining partner you can always depend on.

For more about the proven advantages of Cummins QSK78 and all our advanced technology for mining applications, see your local Cummins distributor.



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