

QSK23

Well Servicing Applications



In demanding oil and gas applications, dependability is everything. That's where the superior uptime and productivity of the QSK23 makes the difference.

Dependability makes the QSK23 the right engine choice. Every time. Its Inline-6 configuration offers up to 950 hp (708 kW) to easily handle high load factors.

So whether you are specifying new equipment or repowering an existing unit, the QSK23 is the best way to improve performance, productivity and profits.

Designed for the well servicing market, the QSK23 delivers exceptional reliability and low cost of operation.

General Specifications

Inline 6-Cylinder, 4-Cycle, Diesel Engine

Bore	6.69 in (170 mm)
Stroke	6.69 in (170 mm)
Displacement	23 L (1404 cubic in)
Engine Power*	760-950 hp (567-708 kW)
Aspiration	Turbocharged/Charge Air Cooled
Wet Weight**	6,000 lb (2,722 kg)
Coolant Capacity	12.2 gal (46.2 L)
Lube Oil Capacity	13.7 us qt (52 L)
Rotation	Clockwise (viewed from the front of the engine)

* Rating dependent

** Weight is approximate and varies with options.

Performance

Its high-pressure injection (HPI) fuel system results in more complete combustion for superior engine response across the entire power curve and the lowest fuel consumption in its class. Its compact and balanced inline six-cylinder design and proven durability in the toughest well sites make it a great choice to repower vee engines of similar displacement.

The one-piece Ferrous Cast Ductile (FCD) iron pistons and robust cylinder head work to improve long-term durability and dependability. A one-piece cast-iron block, forged-steel crankshaft and a large-diameter camshaft ensure long, reliable performance between overhauls, with the capability of multiple rebuild cycles.

Rated from 760-950 hp (567-708 kW) in both emissions-certified and non-certified specifications, the QSK23 is the ideal choice for high power density applications. It has the proven technology you need to raise productivity and lower costs. Every Well.

Warranty

The best warranty in the business, which includes full coverage for unlimited hours during the first year, extending through two years or 2,000 cumulative 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.

*The QSK23 meets Tier 2 standards in the U.S. now, which go into effect in 2006 for engines over 750 hp (560 kW).

Rating Details.

Model	Advertised Power BHP (kW)	Peak Torque lb-ft (Nm)	Turbo Arrangement
QSK23-950	950 (708) @ 2100	2897 (3928) @ 1400	1-STAGE
QSK23-860	860 (641) @ 2100	2785 (3776) @ 1400	1-STAGE

Standard Equipment.

Base Engine Components

- One-piece cast-iron block features wide cylinder spacing for long life and excellent rebuild capability
- One-piece FCD iron pistons provide the strength and durability to handle high cylinder pressures for long life
- Twin piston-cooling nozzles direct cooling streams of oil beneath each piston crown and bowl rim for long life in high-load applications with increased reliability
- Precision-honed FCD iron cylinder liners are machined for durability-expansion and contraction will not create excess wear
- Large 105-mm camshaft handles the loads associated with high-pressure fuel injection
- Seven-bolt cylinder head supports increased power output with improved breathing and improved cooling efficiency

Electronic Engine Management

- An advanced integrated electronic control system allows users to tailor fuel system calibrations to unique well servicing application requirements

Fuel System

- High-pressure injection (HPI) fuel system provides optimum combustion for low emissions and good fuel economy

Turbocharging

- Single stage turbocharger from Cummins Turbo Technologies features titanium wheel for long-term reliability and altitude capability, provides higher airflows for maximum power and long life

Cooling System

- One-Pump, One-Loop cooling system with high capacity coolant pump to provide increased coolant pressure

Oil Filtration

- Two-stage Cummins oil filters, also available as Fleetguard®, combine full-flow and bypass filtration to effectively remove harmful sludge and up to three times as many contaminants to reduce engine wear

Worldwide Service Network

- An established worldwide network with over 500 distributor facilities in nearly 190 countries, dedicated and empowered with the latest technical support tools and training to service your needs

Optional Equipment.

INSITE™

- Proprietary software with step-by-step engine diagnostics, drawings and diagrams to improve troubleshooting and repair accuracy

Cummins QuickCheck III

- 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)
- Even logs fault codes, which can be used with Cummins INSITE to get detailed repair instructions for faster service

QuickServe™ Online

- QuickServe Online (quickserve.cummins.com) gives you easy access to parts and service information for all Cummins engines
- You can find the information you need in seconds with our high-speed search function and your engine's serial number

Engine Technical Data.

Model: QSK23 - 950

Output Power: 950 bhp

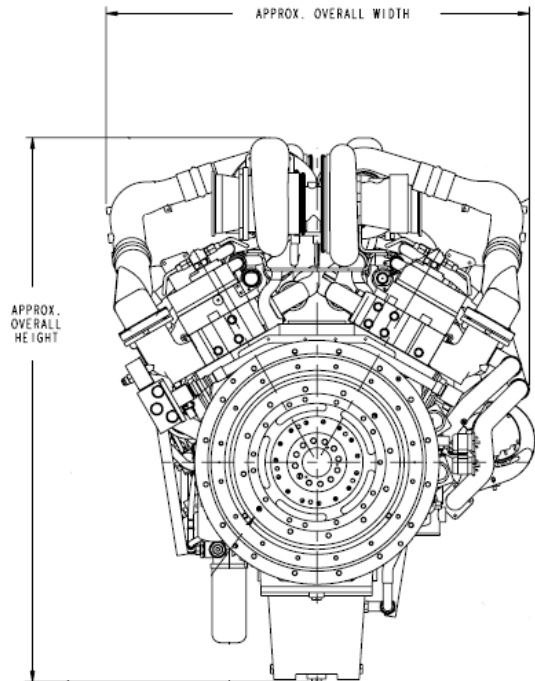
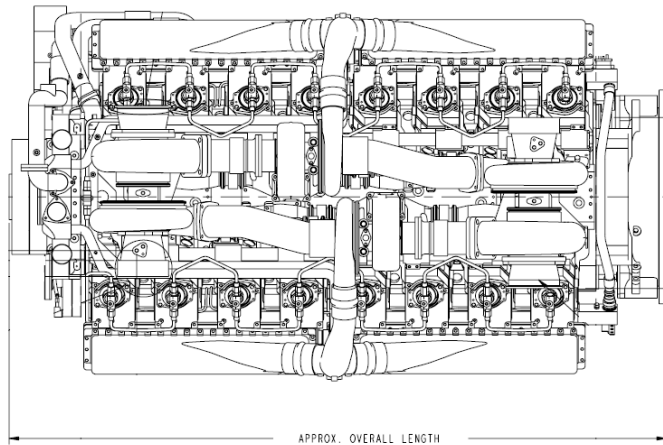
Engine Speed		Torque Output		Power Output		BSFC	
RPM	lb-ft	N-m	hp	kW	lb/hp-hr	g/kW-hr	
1400	2,897	3,928	772	576	0.334	203.165	
1500	2,823	3,827	806	601	0.334	203.165	
1600	2,748	3,726	837	624	0.334	203.165	
1800	2,599	3,524	891	664	0.335	203.773	
2000	2,451	3,323	933	696	0.334	203.165	
2100	2,376	3,221	950	708	0.339	206.206	

Model: QSK23 - 860

Output Power: 860 bhp

Engine Speed		Torque Output		Power Output		BSFC	
RPM	lb-ft	N-m	hp	kW	lb/hp-hr	g/kW-hr	
1400	2,785	3,776	742	553	0.335	203.773	
1500	2,775	3,762	793	591	0.334	203.165	
1600	2,748	3,726	837	624	0.335	203.773	
1800	2,510	3,403	860	641	0.335	203.773	
2000	2,258	3,061	860	641	0.338	205.598	
2100	2,151	2,916	860	641	0.346	210.464	

General Dimensions.



	English Units	SI
Length	78.5 in	1,994 mm
Width	41.2 in	1,046 mm
Height	67.7 in	1,720 mm
Weight	6,000 lb	2,722 kg

Definitions and Conditions.

Drawings are just for illustration purpose, do not represent actual engine. Data shown above represent gross engine performance capabilities obtained and corrected in accordance with SAE J1995 conditions of 29.61 in Hg (100 kPa) barometric pressure [300ft (91m) altitude] 77 deg F (25 deg C) inlet air temperature, and 0.30 in Hg (1kPa) water vapor pressure with No. 2 diesel fuel. Not included are alternator, fan, optional equipment and driven components. Electronic derate based on altitude applies.

All data is subject to change without notice. Consult your authorized Cummins Distributor for details.

Load Rating

Maximum Rating. May be used for intermittent load applications (full throttle operation is cyclically interrupted) where the average load factor does not exceed the continuous rating, and where full throttle operation does not exceed 60 minutes without interruption.

International Rating Guidelines

These ratings represent gross engine performance capabilities obtained and corrected in accordance with SAE J1995 and the conditions as stated above. The ratings are in conformance with the requirements specified in ISO 3046, BS 5514 and DIN 6271. The Maximum Rating conforms to ISO 3046 overload power and fuel stop power. Reference standards: BS 5514 and DIN 6271 standards are based on ISO 3046.



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