

C9.3 Diesel Engine

With Cat® PowerSWITCH technology

392-447 kW (525-600 hp)

2005-2214 Nm (1479-1633 lb-ft)



Shown with
optional equipment

STANDARD EQUIPMENT

Series sequential turbochargers
Integrated electronic control management, automatic compensation for altitude; coolant and fuel temperatures, configurable software features, engine monitoring system
SAE J1939 broadcast and control

Standard hardware includes:

- High pressure common rail, primary fuel filter
- Air to water charge pre-cooler
- Vertical outlet thermostat housing
- SAE No. 1 or SAE No. 2 flywheel housing
- Open crankcase ventilation system
- SAE A, SAE B and SAE C drives available

Remote mounted filters; fuel and oil

CAT ENGINE SPECIFICATIONS

In-line 6-Cylinder, 4-Stroke-Cycle Diesel

Bore 115 mm (4.53 in)

Stroke 149 mm (5.87 in)

Displacement 9.3 L (567.5 in³)

Aspiration Series Turbocharged; Pre and After-cooled

Compression Ratio 17.0:1

Combustion System Direct Injection

Rotation (from flywheel end) Anti-clockwise

Cooling System¹ 19.8 L (5.3 gal US)

Lubrication Oil System (refill) 30 L (8.0 gal US)

Engine Weight, Net Dry (approximate) with:

Standard equipment 898 kg (1980 lbs)

Maximum engine tilt angle² of operation:

Longitudinal 35° (70%)

Transverse 35° (70%)

¹ Engine only. Capacity will vary with radiator size and coolant ancillaries

² Dependent upon type of oil sump

ACCESSORY EQUIPMENT

Air compressor - gear driven; 297-1,019 L/min (13.5-36.0 cfm) with drive-through (1:1) capability, SAE A

Air conditioner compressor mounting

Air inlet elbow

Air, oil or water cooled electrical generator with belt or direct drive options

Dual rear PTO SAE No. 1 flywheel housing

Front engine support

Front PTO adapter

Fuel priming pump

Jacket water heater

Single or dual starter motor (24V)

Transmission coupling

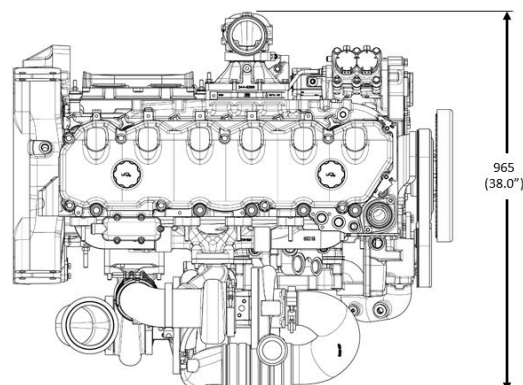
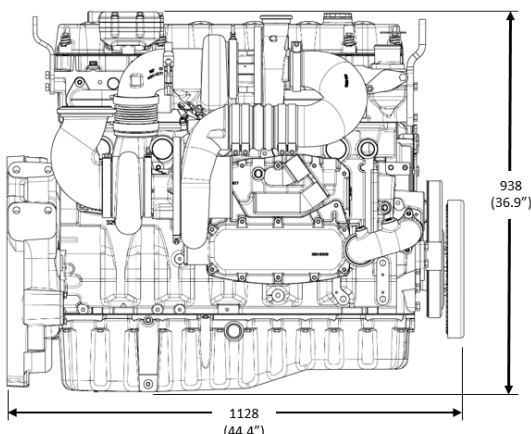
Turbocharger interface connections

Wide range of hydraulic pumps; fixed and variable displacement, with belt or direct drive options

RATING DEFINITIONS AND CONDITIONS

Performance is based upon SAE J1995 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F)

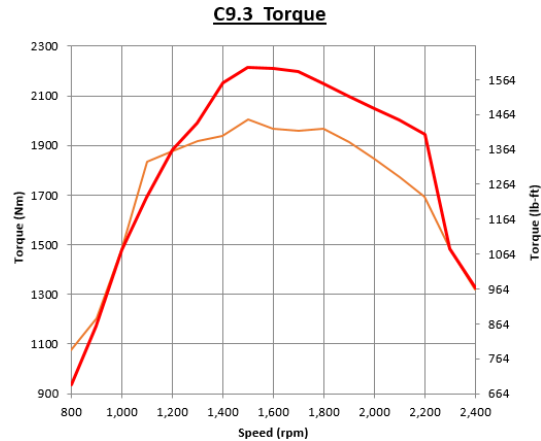
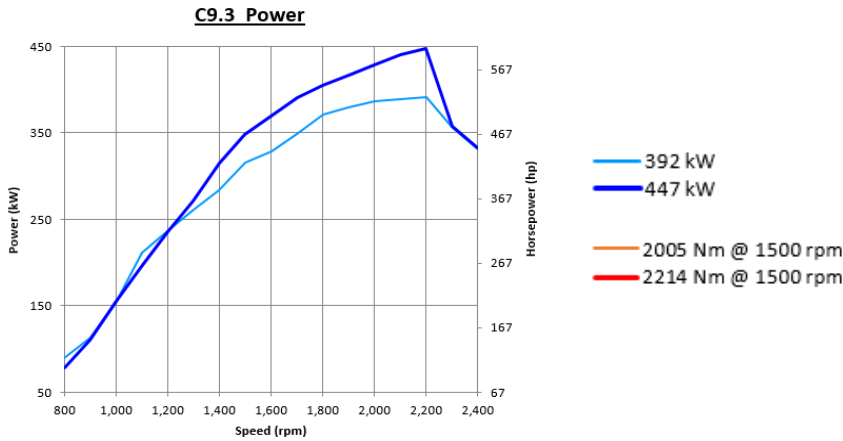
DIMENSIONS



PERFORMANCE

Power (kW)	Power (hp)	Torque (Nm)	Torque (lb.ft)	Rated Speed (rpm)	Peak Torque (Nm)	Peak Torque (lb.ft)	Peak Torque Speed (rpm)	Emissions
392	525	1694	1249	2200	2005	1479	1500	Euro III ³
447	600	1943	1433	2200	2214	1633	1500	Unregulated ³

³ Switchable mapping parameters offered as an option



ELECTRONIC FEATURES

- SAE J1939 compatible
- ECM storage of operational, maintenance, diagnostics codes and diagnostic data
- Electronic self-diagnostics
- Customer selectable, re-programmable operational parameters:
 - 2-speed fast idle capabilities
 - Adjustable low idle rpm
 - Cruise control
 - Engine protection system; selectable warning, derate, or shutdown
 - Fleet information software capability
 - Idle shutdown timer and override

- Maintenance monitor [kilometres (miles) or hours]
- Vehicle speed [km/h (mph)] limiting and protection
- Programmable Power Take-Off (PTO) functions:
 - Adjustable minimum and maximum engine rpm speed
 - Adjustable ramp rate up or down between PTO and speed(s)
 - Adjustable rpm "bump" intervals
 - Adjustable speed control [km/h (mph)] of that vehicle while in PTO mode
 - Limit engine torque to driven equipment
- Cold weather start-up strategy and electronic idle control functions
- Compatible with Caterpillar Electronic Technician (ET)

ENGINE FEATURES

Utilises latest in two-stage series sequential turbocharging. Provides low pressure turbo efficiency and reduced package size attributable to the dual port waste-gate. Large diameter high pressure turbine bypass improves pumping work, allows the high pressure turbo to spool up rapidly, then gently transfer boosting work to the extremely efficient, compact, low pressure turbine. Meanwhile the bypassed high pressure turbine still provides some boosting on top of the low pressure turbo at high speeds and loads, which affords a wider range of high boost capabilities for power density and low end torque.

This high performance air system enables this engine to deliver industry leading power density, in Euro III equivalent and unregulated performances, from a single hardware set. The software will provide functionality to switch between two ratings; this will be achieved via either a discrete input, CAN-bus or a configurable parameter within ET

FEATURES

Unmatched Product Support Offered Through Worldwide Caterpillar Dealer Network

Design and development consultancy service available for bespoke fully integrated powerpack solutions

Global presence; in excess of 1,800 approved Dealer outlets

Caterpillar factory-trained dealer technicians service every aspect of your engine

99.7% of parts orders filled within 24 hours worldwide

Caterpillar parts and labour warranty

For more information contact: cat_defence_products@cat.com Or visit: www.catdfp.com

Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.

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