



C27 ACERT™ Industrial Engine

Tier 2
597 bkW/800 bhp @ 2100 rpm

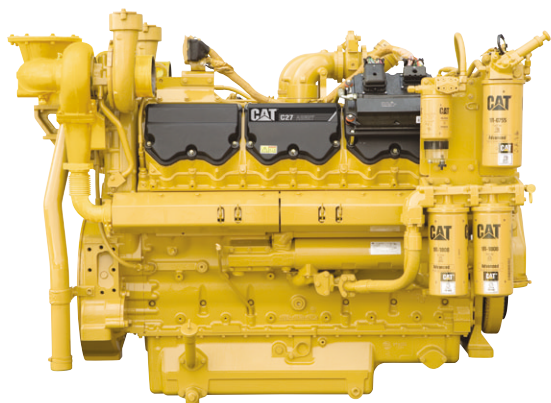


Image shown may not reflect
actual engine

CAT® ENGINE SPECIFICATIONS

Vee 12 Cylinder, 4-Stroke-Cycle Diesel

Bore.....137.2 mm (5.4 in)
Stroke.....152.4 mm (6.0 in)
Displacement..... 27.03 L (1,649.47 in³)
Aspiration.....Turbocharged Aftercooled
Compression Ratio.....16.5:1
Rotation (from flywheel end)..... Counterclockwise
Weight, Net Dry (approximate kg. lb).. 2946 kg (6495 lb)

FEATURES

Emissions

Meets U.S. EPA Tier 2 emissions requirements.

Worldwide Supplier Capability

Caterpillar

- Casts engine blocks, heads, cylinder liners, and flywheel housings
 - Machines critical components
 - Assembles complete engine
 - Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities
- Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable product.

Testing

Prototype testing on every model:

- proves computer design
- verifies system torsional stability
- functionality tests every model

Every Caterpillar engine is dynamometer tested under full load to ensure proper engine performance.

Full Range of Attachments

Wide range of bolt-on system expansion attachments, factory designed and tested.

Unmatched Product Support Offered Through Worldwide Caterpillar Dealer Network

More than 1,800 dealer outlets
Caterpillar factory-trained dealer technicians service every aspect of your industrial engine
99.7% of parts orders filled within 24 hours worldwide
Caterpillar parts and labor warranty
Preventive maintenance agreements available for repair before failure options

Scheduled Oil Sampling program matches your oil sample against Caterpillar set standards to determine:

- internal engine component condition
- presence of unwanted fluids
- presence of combustion by-products

Web Site

For all your industrial power requirements, visit www.cat-industrial.com.



STANDARD ENGINE EQUIPMENT

Air Inlet System

Turbocharged Air to Air Aftercooled

Control System

Electronic governing
PTO speed control
Programmable ratings
Cold mode start strategy
Automatic altitude compensation
Power compensation for fuel temperature
Programmable low and high idle and total engine limit
Electronic diagnostics and fault logging
Engine monitoring system
J1939 Broadcast (diagnostic and engine status)
ADEM™ A4

Cooling System

Thermostats and housing, vertical outlet
Jacket water pump, centrifugal
Water pump, inlet

Exhaust System

Exhaust manifold, dry
Optional exhaust outlet

Flywheels and Flywheel Housing

SAE No. 1 Flywheel housing

Fuel System

MEUI injection
Fuel filter, secondary (2 micron high performance)
Fuel transfer pump
Fuel priming pump
ACERT™ Technology

Lube System

Crankcase breather
Oil cooler
Oil filler
Oil filter
Oil pan front sump
Oil dipstick
Oil pump (gear driven)

General

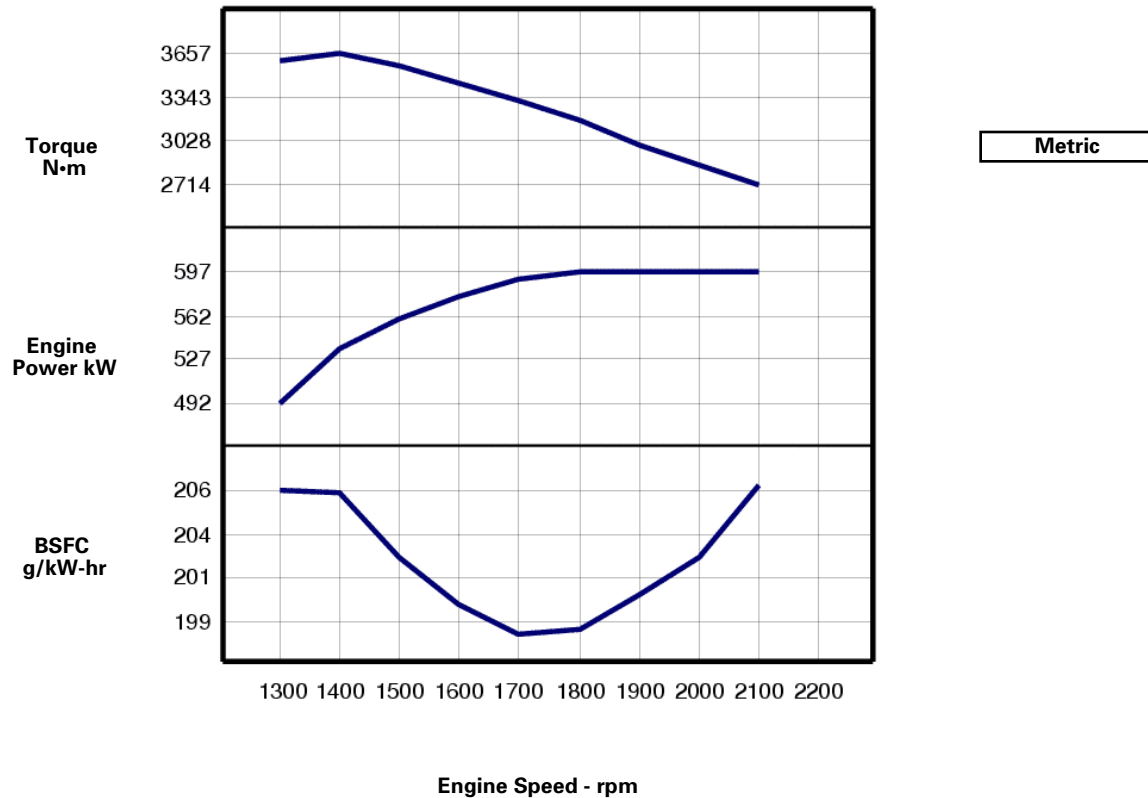
Paint, Caterpillar Yellow
Vibration damper
Lifting eyes



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PERFORMANCE CURVES

IND - A (Continuous) - DM9037-00



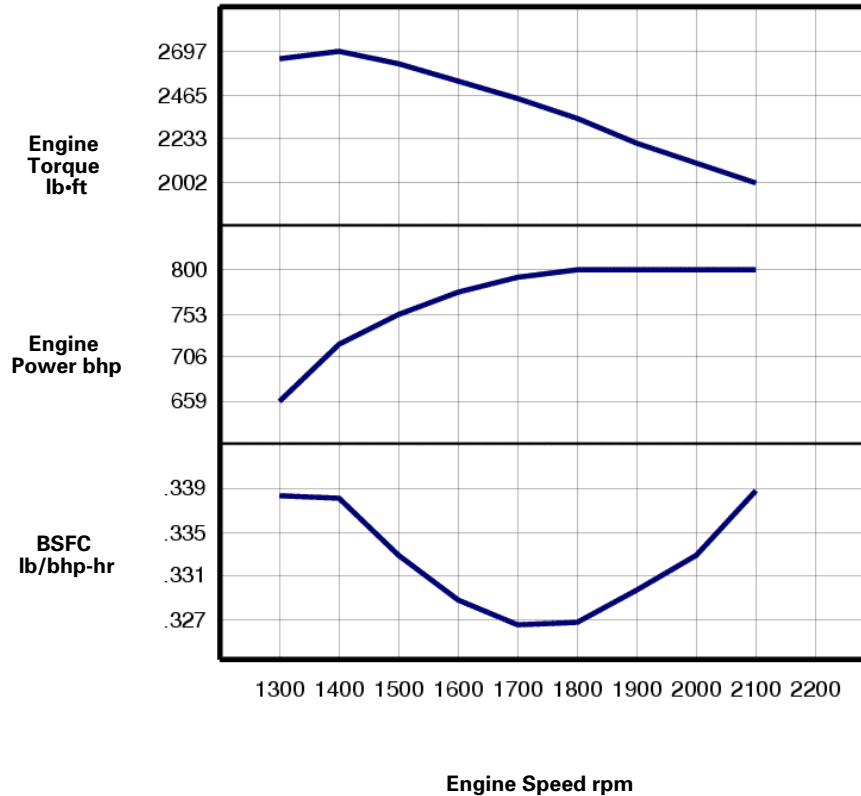
Engine Speed rpm	Engine Power kW	Torque N·m	BSFC g/kW-hr	Fuel Rate L/hr
2100	597	2714	206	146.5
2000	597	2850	202.4	144.0
1900	597	3000	200.5	142.6
1800	597	3166	198.8	141.4
1700	590	3317	198.6	139.8
1600	578	3448	200	137.7
1500	560	3566	202.4	135.2
1400	536	3657	205.7	131.5
1300	492	3610	205.8	120.6



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Engine Speed rpm	Engine Power bhp	Engine Torque lb-ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
2100	800	2002	.339	38.7
2000	800	2102	.333	38.0
1900	800	2213	.330	37.7
1800	800	2335	.327	37.4
1700	792	2446	.326	36.9
1600	775	2543	.329	36.4
1500	751	2630	.333	35.7
1400	719	2697	.338	34.7
1300	659	2663	.338	31.9

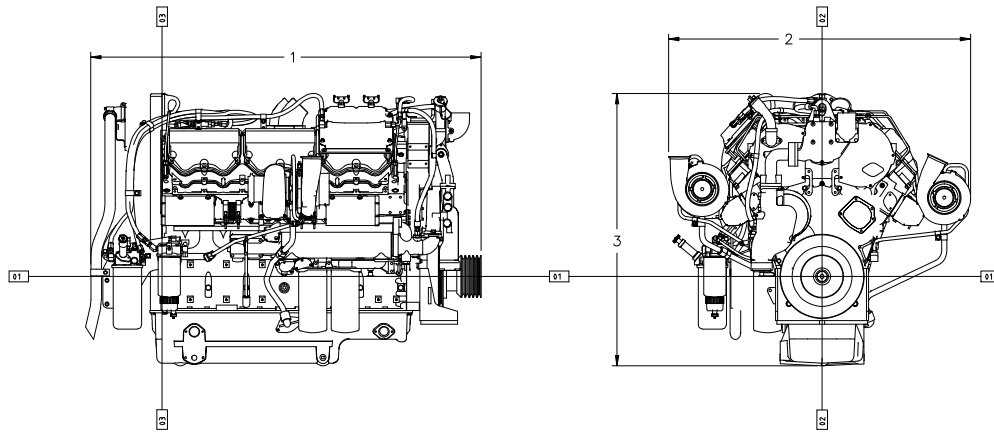


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RATINGS AND CONDITIONS

IND - A (Continuous) Continuous heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling.

Engine Performance Diesel Engines — 7 liter and higher
All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in. Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) when used at 29° C (84.2° F) with a density of 838.9 g/L.



Engine Dimensions	
(1) Length	See page Specifications for Dimensions
(2) Width	
(3) Height	

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # null).

Performance Number: DM9037-00

Feature Code: C27DI06 Arr. Number: 3531664

Materials and specifications are subject to change without notice.
16301308

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