



C7 ACERT™ Industrial Engine

Tier 3/Stage IIIA
168 bkW/225 bhp @ 2200 rpm



Image shown may not reflect
actual engine

CAT® ENGINE SPECIFICATIONS

I-6, 4-Stroke-Cycle Diesel

Bore.....	110.0 mm (4.33 in)
Stroke.....	127.0 mm (5.0 in)
Displacement.....	7.2 L (442 in ³)
Aspiration.....	Turbocharged ATAAC
Compression Ratio.....	17:1
Rotation (from flywheel end).....	Counterclockwise
Lube Oil System (refill).....	28 L (7.4 U.S. gal)
Weight, Net Dry (approximate kg, lb).....	588 kg (1296 lbs)

FEATURES

Emissions

Meets U.S. EPA Tier 3, EU Stage IIIA emission requirements.

Worldwide Supplier Capability

Caterpillar

- Casts engine blocks and heads
- 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 1,500 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.



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STANDARD ENGINE EQUIPMENT

Air Inlet System

Air to air aftercooled (ATAAC)
Turbocharged

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 Electronic Control Unit (ECU)

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

HEUI™ 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)

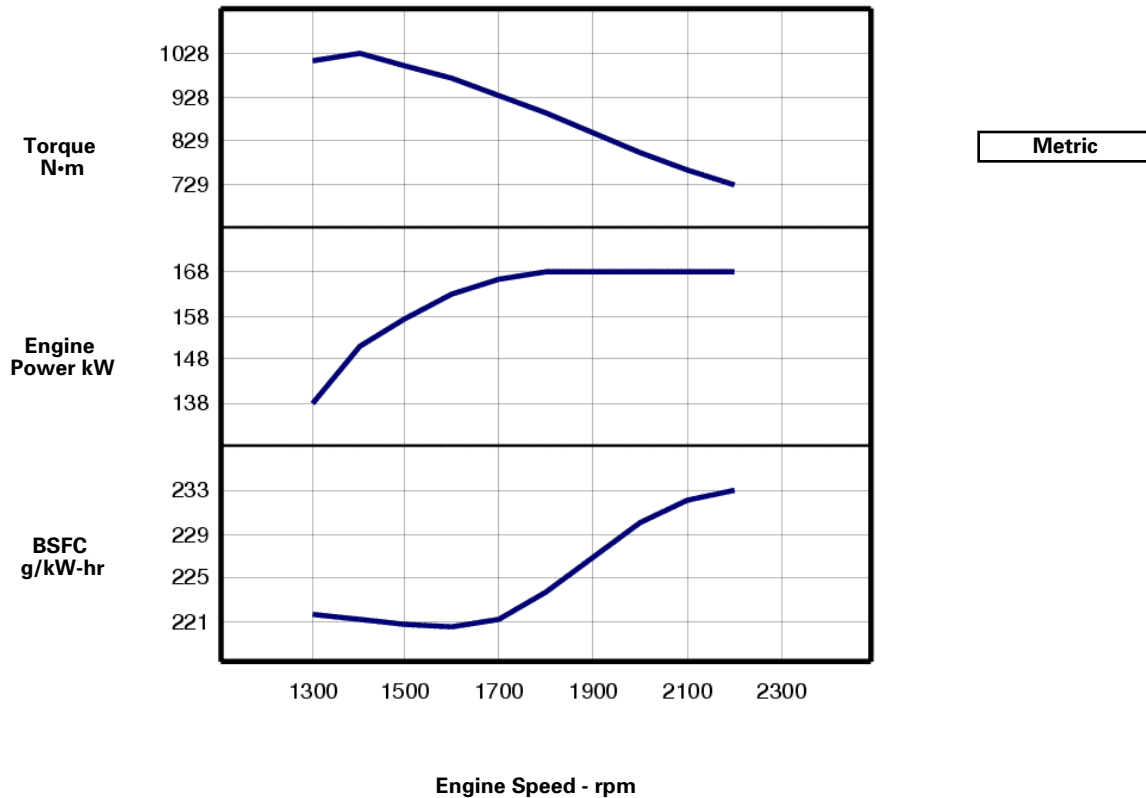
General

Paint, Caterpillar Yellow
Vibration damper
Lifting eyes



PERFORMANCE CURVES

IND - B - DM8170-00



Engine Speed rpm	Engine Power kW	Torque N·m	BSFC g/kW-hr	Fuel Rate L/hr
2200	168	729	233	46.7
2100	168	764	232.1	46.5
2000	168	802	230	46.1
1900	168	844	226.9	45.4
1800	168	891	223.6	44.8
1700	166	934	221.1	43.8
1600	163	970	220.6	42.8
1500	157	1001	220.7	41.4
1400	151	1028	221.1	39.7
1300	138	1013	221.7	36.4



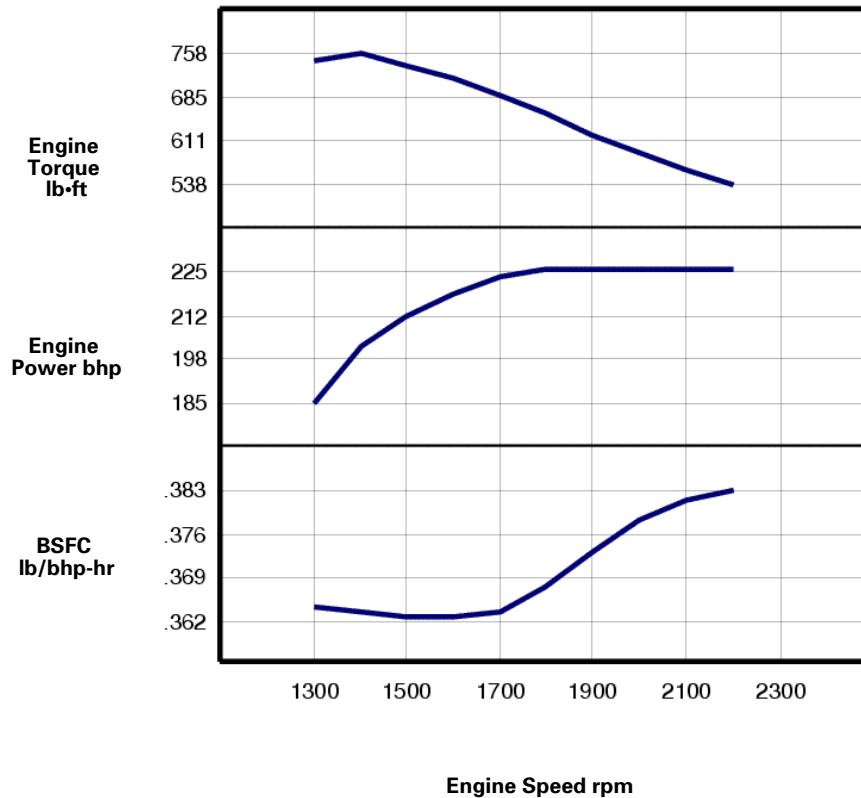
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PERFORMANCE CURVES

IND - B - DM8170-00



Engine Speed rpm	Engine Power bhp	Engine Torque lb·ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
2200	225	538	.383	12.3
2100	225	563	.382	12.3
2000	225	592	.378	12.2
1900	225	623	.373	12.0
1800	225	657	.368	11.8
1700	223	689	.363	11.6
1600	218	715	.363	11.3
1500	211	738	.363	10.9
1400	202	758	.363	10.5
1300	185	747	.364	9.6



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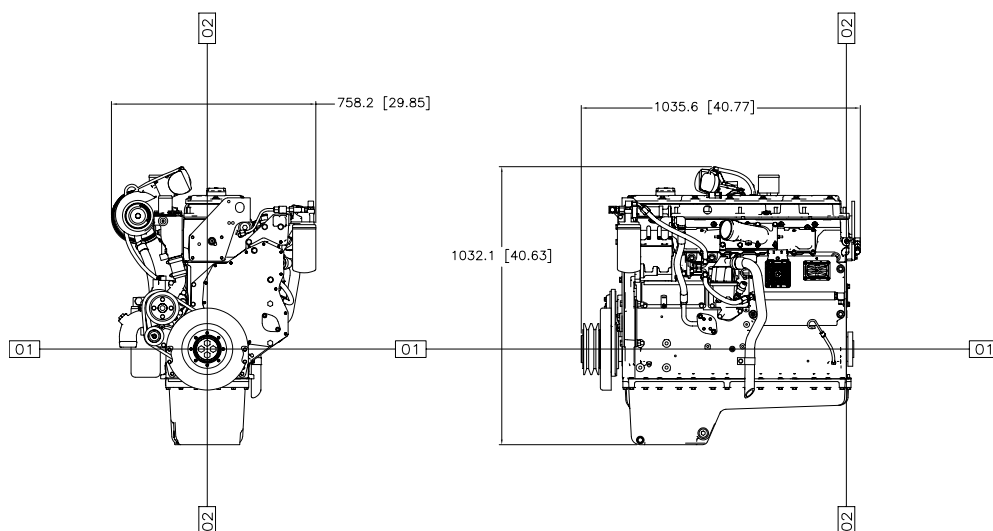
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RATINGS AND CONDITIONS

IND - B For service where power and/or speed are cyclic (time at full load not to exceed 80%).

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	1052.7 mm (41.44 in)
(2) Width	758.2 mm (29.85 in)
(3) Height	1032.1 mm (40.63 in)

Note: Do not use for installation design.
See general dimension drawings for
detail (Drawing # 2835788).

Performance Number: DM8170-00

Feature Code: C07DI00 Arr. Number: 2707235

Materials and specifications are subject to change without notice.

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