C13 ACERT™
Industrial Engine
Tier 3/Stage IIIA
388 bkW/520 bhp @ 2100 rpm

Image shown may not reflect actual engine

CAT® ENGINE SPECIFICATIONS

I-6, 4-Stroke-Cycle Diesel

Bore.....130.0 mm (5.12 in)
Stroke.....157.0 mm (6.18 in)
Displacement..... 12.5 L (762.8 in^3)
Aspiration.....Turbocharged Aftercooled
Compression Ratio.....17.3:1
Rotation (from flywheel end)..... Counterclockwise
Weight, Net Dry (approximate kg, lb)..... 939 kg, 2070 lb

FEATURES

Emissions

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

Worldwide Supplier Capability

Caterpillar
- Casts engine blocks, heads, and cylinder liners.
- Machines critical components
- Assembles complete engine

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable product.
Factory-designed systems built at Caterpillar ISO certified facilities.

Testing

Prototype testing on every model:
- proves computer design
- verifies system torsional stability
- tests functionality on 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.

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

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

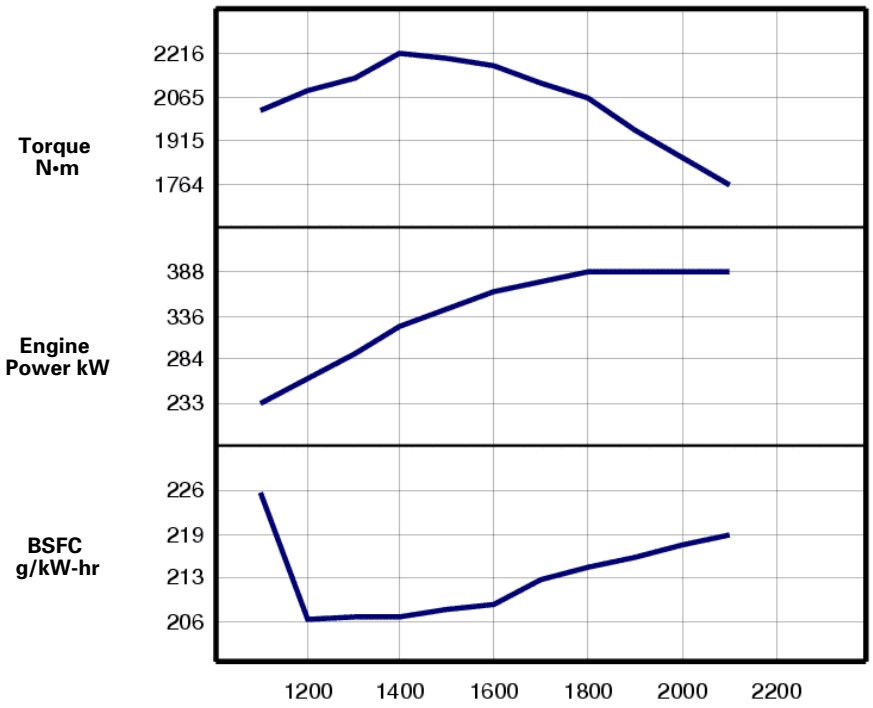
Crankcase breather
Oil cooler
Oil filler
Oil filter
Oil pan front sump
Oil dipstick
Oil pump (gear driven)

General

Paint, Caterpillar Yellow
Vibration damper
Lifting eyes

PERFORMANCE CURVES

IND - E - DM7689-02

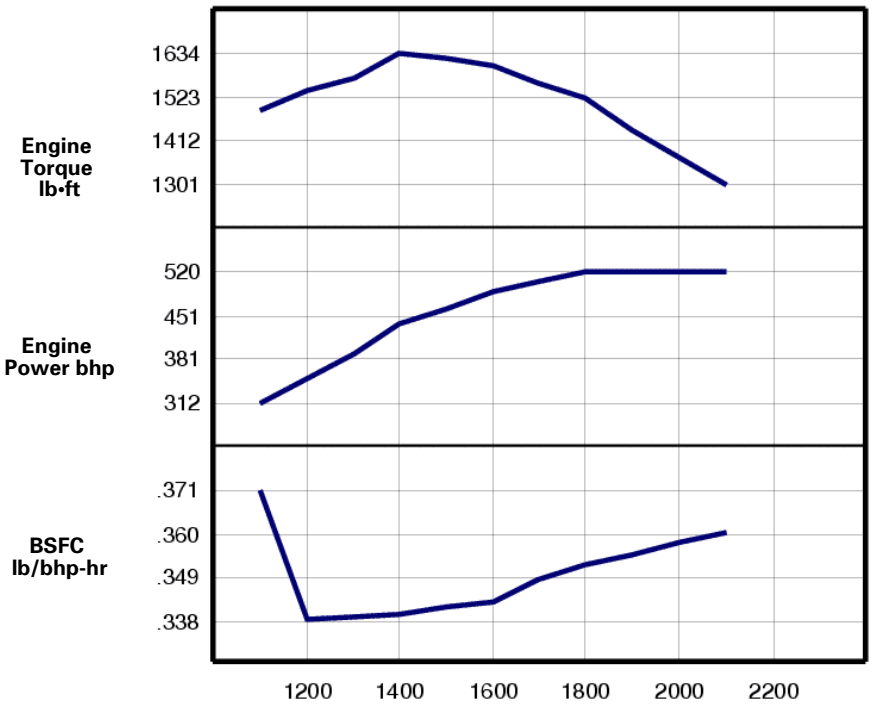


Metric

Engine Speed rpm	Engine Power kW	Torque N•m	BSFC g/kW-hr	Fuel Rate L/hr
2100	388	1764	219.3	101.4
2000	388	1852	217.6	100.6
1900	388	1949	215.8	99.8
1800	388	2058	214.1	99.0
1700	377	2116	212.1	95.2
1600	364	2171	208.4	90.4
1500	345	2196	207.7	85.4
1400	325	2216	206.5	80.0
1300	290	2131	206.3	71.3
1200	263	2089	206	64.4
1100	233	2018	225.8	62.6

PERFORMANCE CURVES

IND - E - DM7689-02



English

Engine Speed rpm	Engine Power bhp	Engine Torque lb•ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
2100	520	1301	.361	26.8
2000	520	1366	.358	26.6
1900	520	1438	.355	26.4
1800	520	1518	.352	26.2
1700	505	1561	.349	25.1
1600	488	1601	.343	23.9
1500	463	1620	.341	22.6
1400	436	1634	.339	21.1
1300	389	1572	.339	18.8
1200	352	1541	.339	17.0
1100	312	1488	.371	16.5

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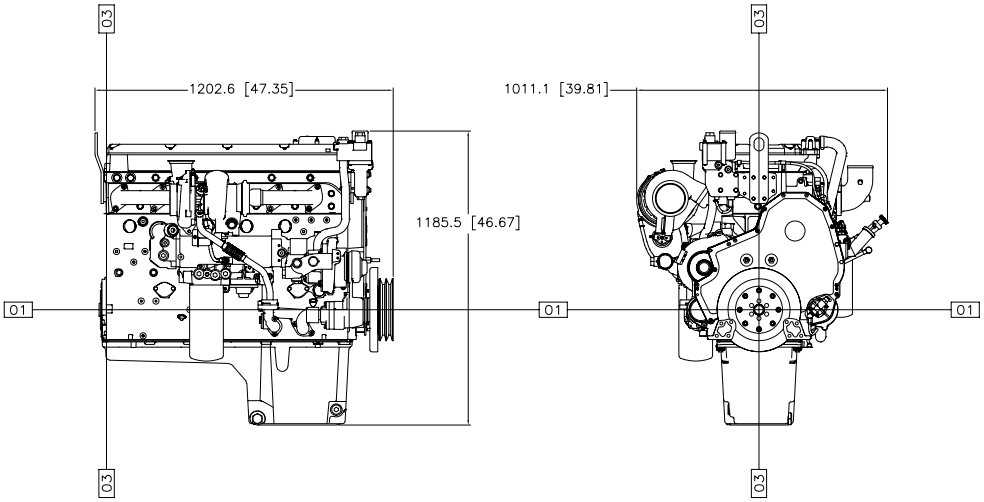
RATINGS AND CONDITIONS

IND - E For service where maximum power is required for a short time for initial starting or sudden overload. For emergency service where standard power is unavailable.

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 25ºC (77ºF) temperature. Performance measured using a standard fuel with fuel gravity of 35º API having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) when used at 29º C (84.2º F) with a density of 838.9 g/L.



Engine Dimensions	
(1) Length	1202.6 mm (47.35 in)
(2) Width	1012.8 mm (39.87 in)
(3) Height	1185.5 mm (46.67 in)

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 2741593).

Performance Number: DM7689-02

Feature Code: C13DI04 Arr. Number: 2364575

Materials and specifications are subject to change without notice.

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The International System of Units (SI) is used in this publication.