



3516 Industrial Engine

1275 bkW/1710 bhp @ 1800 rpm

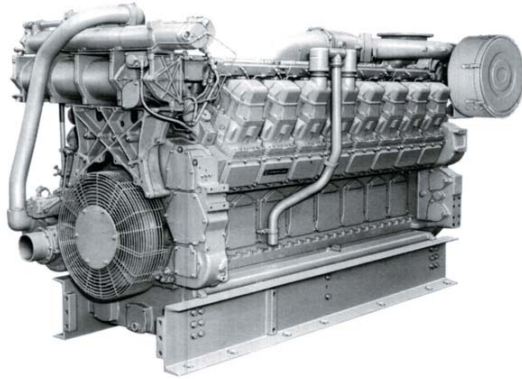


Image shown may not reflect actual engine

CAT® ENGINE SPECIFICATIONS

V-16, 4-Stroke-Cycle Diesel

Bore.....	170.0 mm (6.69 in)
Stroke.....	190.0 mm (7.48 in)
Displacement.....	69.06 L (4,214.3 in ³)
Aspiration.....	Turbocharged / Aftercooled
Compression Ratio.....	13.0:1
Rotation (from flywheel end).....	Counterclockwise
Capacity for Liquids	
Cooling System.....	233.0 L (61.6 gal)
Lube Oil System (refill).....	401.3 L (106.0 gal)
Engine Weight, Net Dry (approximate)	7,484 kg (16,499 lb)

FEATURES

EMISSIONS

Non-certified rating.

SINGLE SOURCE SUPPLIER

Caterpillar:

- Casts engine blocks, heads, cylinder liners, and flywheel housings
- 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 9001:2000 certified facilities

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.



STANDARD ENGINE EQUIPMENT

1275 bkW/1710 bhp @ 1800 rpm

Air Inlet System

Aftercooler core, corrosion resistant coated (air side)
Air cleaner, regular duty with service indicators
Turbochargers, rear mounted

Control System

Governor, RH, 3161 with self contained synthetic oil sump.
Air-fuel ratio control, mechanical speed control, without torque control.
Governor control, positive locking

Cooling System

Thermostats and housing for conventional core radiator
Jacket water pump, gear driven, centrifugal

Exhaust System

Exhaust manifold, dry

Flywheels and Flywheel Housings

Flywheel, SAE No. 00, 183 teeth
Flywheel housing, SAE No. 00

Fuel System

Fuel filter, with service indicators, cartridge type with RH service
Fuel transfer pump

Instrumentation

Instrument Panel, RH
Engine oil pressure gauge
Fuel pressure gauge
Oil filter differential gauge
Jacket water temperature gauge
Service meter, electric
Tachometer

Lube System

Crankcase breather, top mounted
Oil cooler
Oil filler and dipstick, RH
Oil pump
Oil filter, cartridge type with RH service
Shallow oil pan

Mounting System

Rails, mounting, engine length, 254 mm (10 in), industrial-type, C-channel.

Power Take-Offs

Accessory drive, upper RH
Front housing, single sided

Protection System

Junction box
Manual shutoff, RH
Safety shutoff protection, energized to shutdown
Low oil pressure, low idle 69 kPa (10 psi); high idle 207 kPa (30 psi)
Water temperature
Overspeed
3161 governor solenoid energized to shutdown

Starting System

Starting switch

General

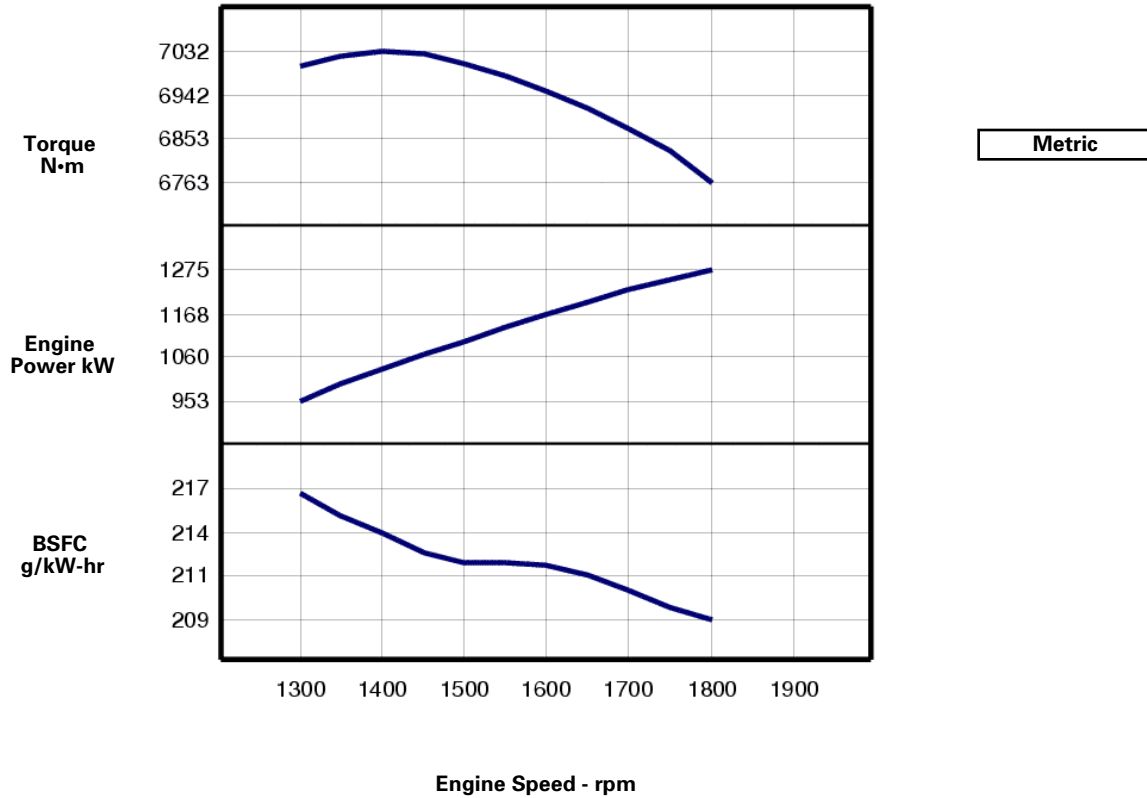
Paint, Caterpillar Yellow,
Vibration damper and guard,
Lifting eyes



PERFORMANCE CURVES

1275 bkW/1710 bhp @ 1800 rpm

IND - A (Continuous) - TM3449-06



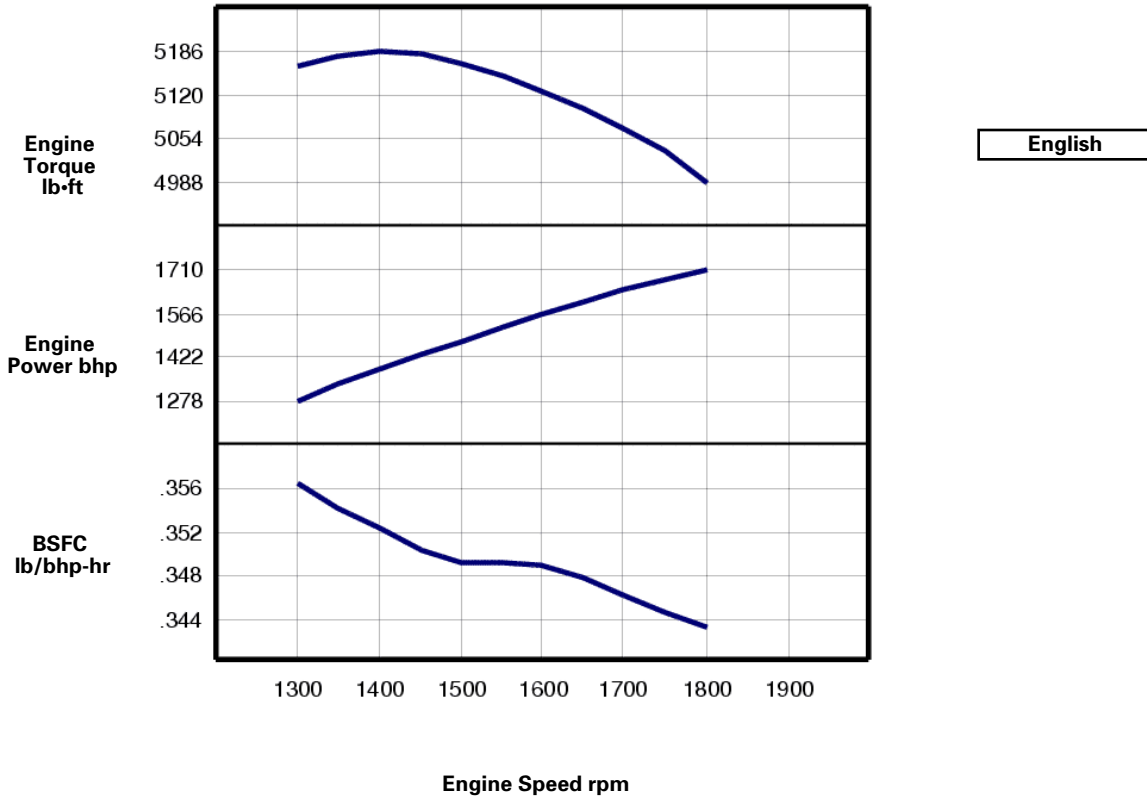
Engine Speed rpm	Engine Power kW	Torque N·m	BSFC g/kW-hr	Fuel Rate L/hr
1800	1275	6763	208.8	317.3
1750	1251	6829	209.6	312.4
1700	1224	6875	210.6	307.2
1650	1195	6914	211.6	301.4
1600	1164	6949	212.3	294.6
1550	1133	6980	212.4	286.6
1500	1100	7004	212.4	278.6
1450	1067	7025	213.1	270.7
1400	1031	7032	214.3	262.9
1350	993	7021	215.5	254.9
1300	953	7000	216.8	246.3



PERFORMANCE CURVES

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IND - A (Continuous) - TM3449-06



Engine Speed rpm	Engine Power bhp	Engine Torque lb-ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
1800	1710	4988	.343	83.8
1750	1678	5037	.345	82.5
1700	1641	5071	.346	81.2
1650	1602	5099	.348	79.6
1600	1561	5125	.349	77.8
1550	1519	5148	.349	75.7
1500	1475	5166	.349	73.6
1450	1430	5181	.350	71.5
1400	1382	5187	.352	69.5
1350	1331	5178	.354	67.3
1300	1278	5163	.356	65.1



RATINGS AND CONDITIONS

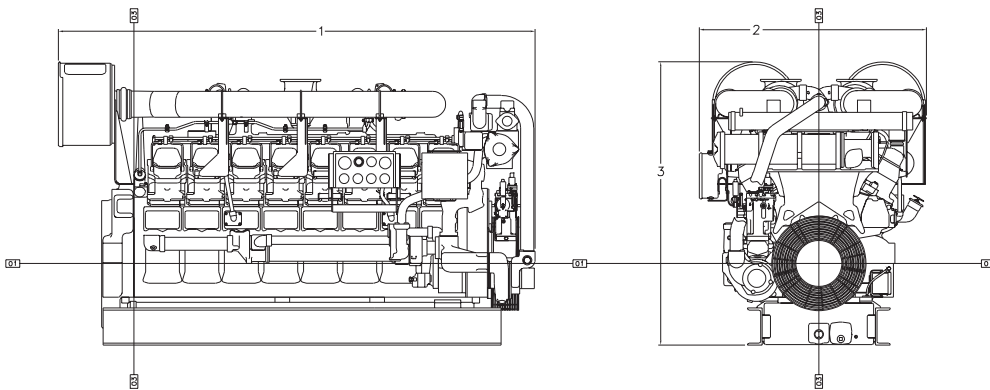
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IND - A (Continuous) Continuous heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling. Time at full load can be up to 100% of the duty cycle. Typical service examples are: pumping, ventilation, customer specs.

Engine Performance Engine performance is corrected to inlet air standard conditions of 99 KPA (29.31 IN HG) dry barometer and 25 deg C (77 deg F) temperature. These values correspond to the standard atmospheric pressure and temperature as shown in SAE J1995.

Performance measured using a standard fuel with fuel gravity of 35 degrees API having a lower heating value of 42,780 KJ/KG (18,390 BTU/LB) when used at 29 DEG (84.2 DEG F) where the density is 838.9 G/L (7.001 LB/US GAL).

The corrected performance values shown for Caterpillar engines will approximate the values obtained when the observed performance data is corrected to SAE J1995, ISO 3046-2 and 8665 and 2288 and 9249 and 1585, EEC 80/1269 and DIN 70020 standard reference conditions.



Engine Dimensions	
(1) Length	3365.8 mm (132.51 in)
(2) Width	1703.0 mm (67.05 in)
(3) Height	1719.6 mm (67.7 in)

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 1729243).

Performance Number: TM3449-06

Feature Code: 516DI01 Arr. Number: 4W0284

Materials and specifications are subject to change without notice.

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