3516 B
Industrial Engine

1492 bkW/2000 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..... 69.0 L (4,210.64 in^3)
Aspiration.....Turbocharged / SCAC
Compression Ratio.....14.0:1
Rotation (from flywheel end)..... Counterclockwise
Capacity for Liquids
  Cooling System..... 233.0 L (61.6 gal)
  Lube Oil System (refill)..... 181.7 L (48.0 gal)
Engine Weight, Net Dry (approximate)

FEATURES

EMISSIONS

Meets Tier 1 emission requirements. Tier 1 refers to EPA (U.S.) non-road standards.

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

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Air Inlet System

Separate circuit aftercooler core, corrosion resistant coated (air side), Four turbochargers, center mounted

Control System

Caterpillar ADEM™ II Electronic Engine Control, RH, with electronic unit injector fuel system (10 amp DC power required to drive electronic engine control module)

Cooling System

Thermostats and housing
Jacket water pump, gear driven, centrifugal
Connections for radiator cooling

Exhaust System

Exhaust manifold, dry, Four turbochargers with watercooled bearings, Two exhaust outlets 203 mm (8 in) round flange

Flywheels and Flywheel Housings

Flywheel, SAE No. 0, 151 teeth
Flywheel housing, SAE No. 0
SAE standard rotation

Fuel System

Fuel filter, LH spin-on type
Fuel transfer pump
Electronically controlled unit injectors

Instrumentation

No standard instrumentation, Optional, remote instrumentation available

Lube System

Crankcase breather, top mounted
Oil cooler
Oil filler and dipstick, RH
Oil pump
Oil filter, LH, spin-on type
Front sump oil pan, 250 hour change interval

Mounting System

Trunnion front support

Power Take-Offs

Accessory drive, lower LH, Front housing, two sided

Protection System

ADEM™ II monitoring system to provide customer programmable engine, De-rate strategies to protect against adverse operating condition, Emergency stop logic inputs provided at 40-pin customer interface connection

Starting System

Dual 24V electric starting motor, LH, unwired

General

Paint, Caterpillar Yellow
Vibration damper
Lifting eyes

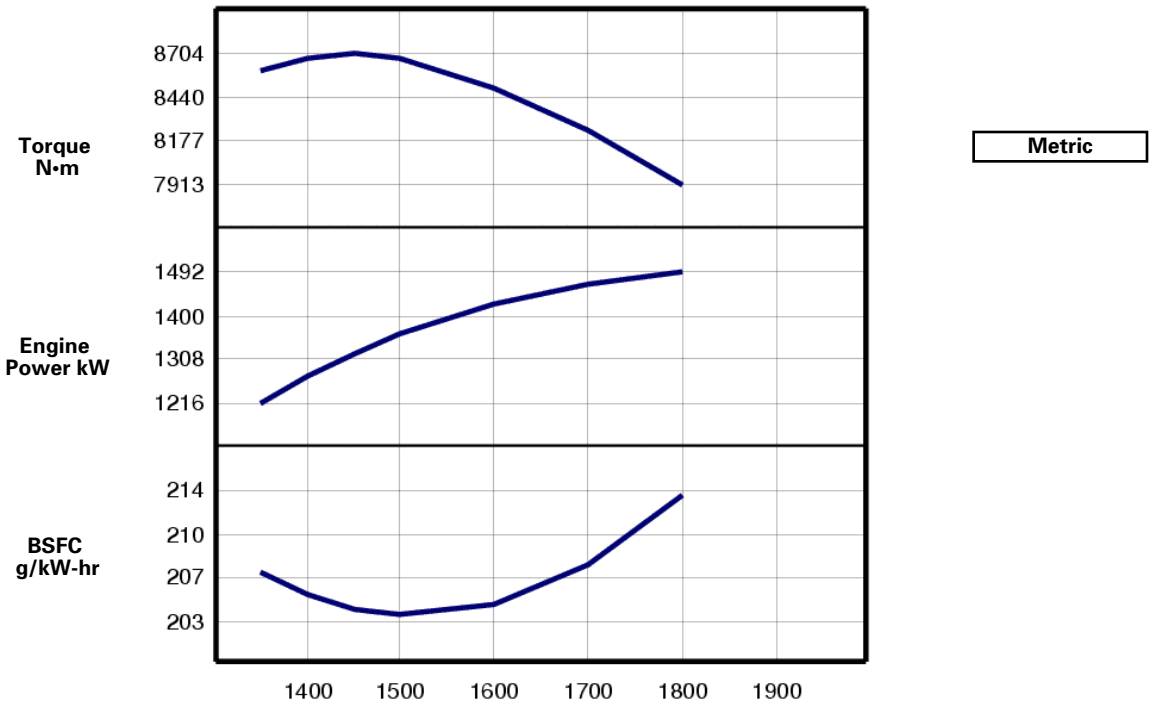
Note

These engines are not configured properly for application in hydraulic excavators or front shovels. To obtain proper rating and configuration for excavators and shovels, please contact your Area/District Industrial Sales Representative or the 3500 Product Group.

PERFORMANCE CURVES

1492 bkW/2000 bhp @ 1800 rpm

IND - A (Continuous) - DM4640-02

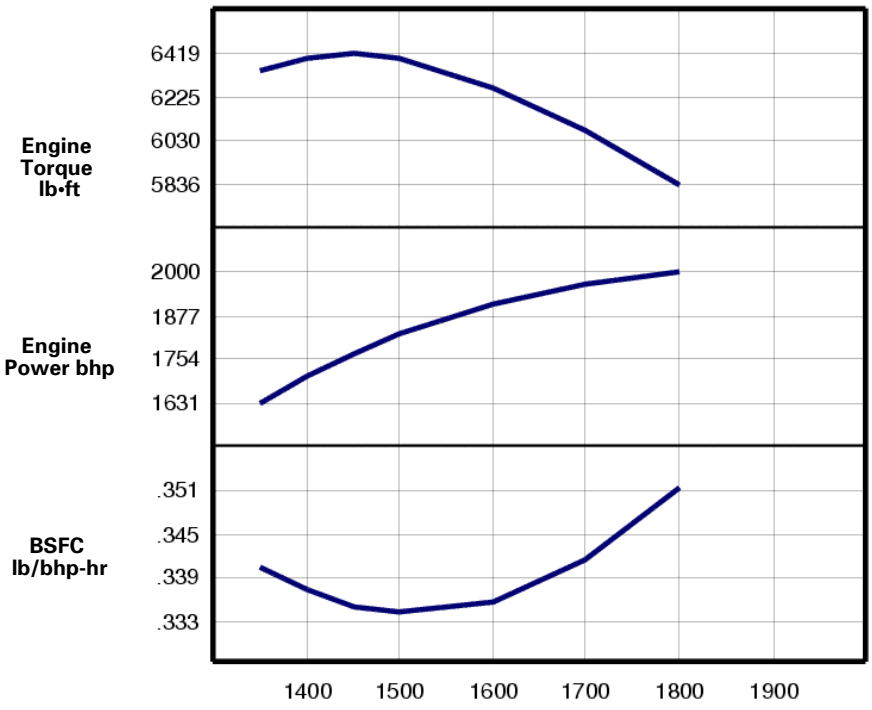


Engine Speed rpm	Engine Power kW	Torque N•m	BSFC g/kW-hr	Fuel Rate L/hr
1800	1492	7913	213.7	380.0
1700	1466	8237	207.7	363.0
1600	1423	8495	204.2	346.5
1500	1363	8674	203.3	330.2
1450	1322	8704	203.8	321.1
1400	1271	8671	205.1	310.8
1350	1216	8601	207	300.1

PERFORMANCE CURVES

1492 bkW/2000 bhp @ 1800 rpm

IND - A (Continuous) - DM4640-02



English

Engine Speed rpm	Engine Power bhp	Engine Torque lb•ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
1800	2000	5836	.351	100.4
1700	1966	6075	.341	95.9
1600	1909	6266	.336	91.5
1500	1827	6398	.334	87.2
1450	1772	6420	.335	84.8
1400	1705	6395	.337	82.1
1350	1631	6344	.340	79.3

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RATINGS AND CONDITIONS

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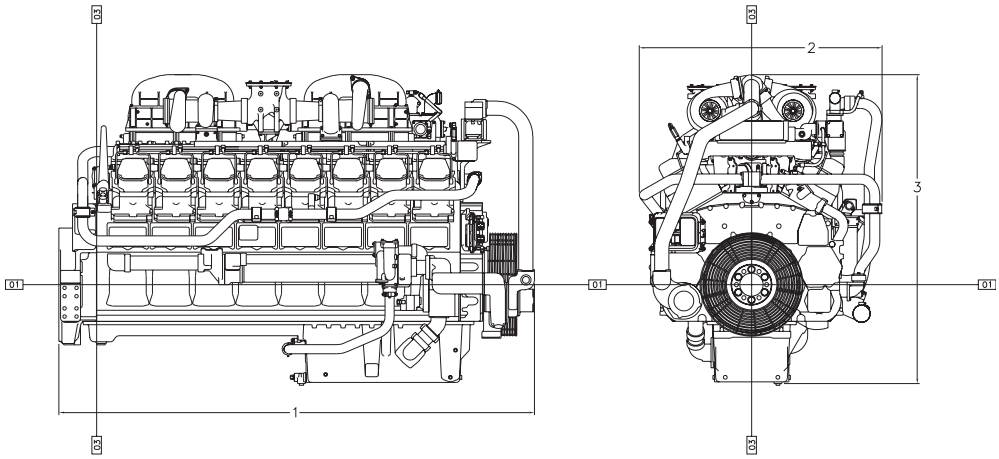
IND - A (Continuous) Continuous heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling. Time at full load can be up to 100% of the duty cycle. Typical service examples are: pumping, ventilation, customer specs.

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	2982.6 mm (117.42 in)
(2) Width	1522.2 mm (59.93 in)
(3) Height	1937.9 mm (76.3 in)

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 2002738).

Performance Number: DM4640-02

Feature Code: 516DO02 Arr. Number: 1918416

Materials and specifications are subject to change without notice.

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