



3516 Industrial Engine

1011 bkW/1355 bhp @ 1200 rpm

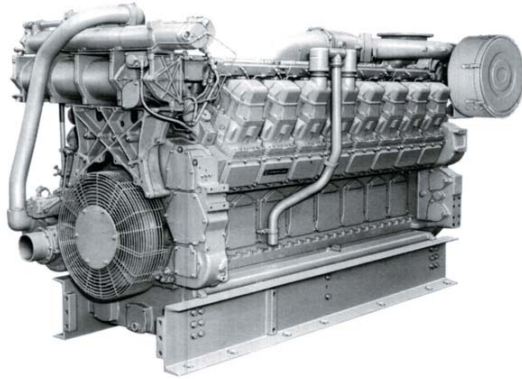


Image shown may not reflect actual engine

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

1011 bkW/1355 bhp @ 1200 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

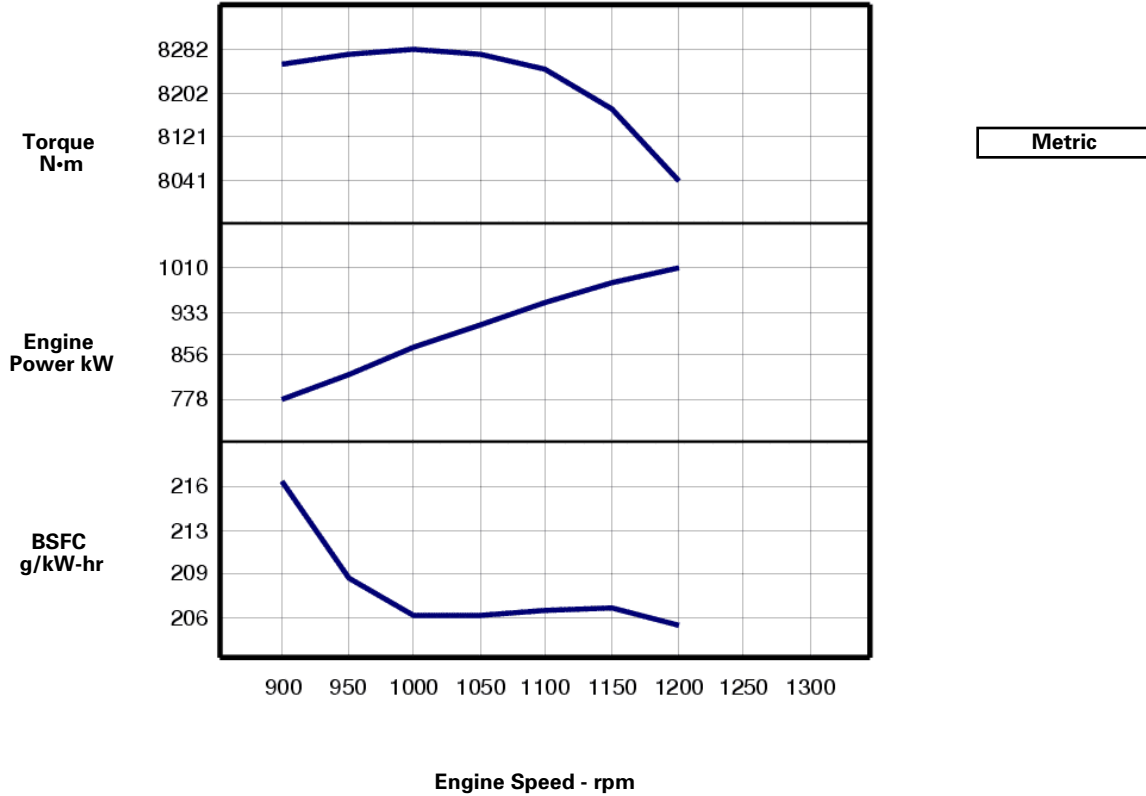
Paint, Caterpillar Yellow,
Vibration damper and guard,
Lifting eyes



PERFORMANCE CURVES

1011 bkW/1355 bhp @ 1200 rpm

IND - A (Continuous) - TM7602-06



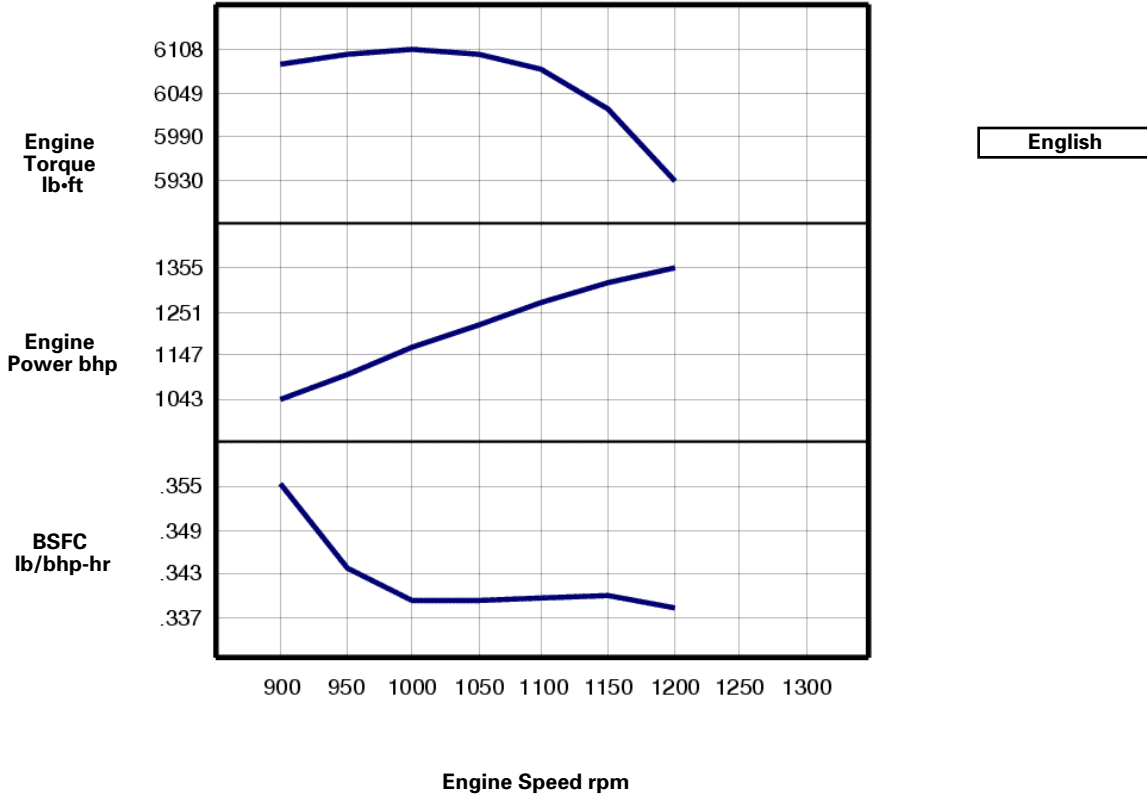
Engine Speed rpm	Engine Power kW	Torque N·m	BSFC g/kW-hr	Fuel Rate L/hr
1200	1011	8041	205.7	247.8
1150	984	8173	206.8	242.4
1100	950	8243	206.7	233.7
1050	910	8274	206.3	223.4
1000	867	8282	206.3	213.1
950	823	8273	209.1	205.0
900	778	8255	216.2	200.5



PERFORMANCE CURVES

1011 bkW/1355 bhp @ 1200 rpm

IND - A (Continuous) - TM7602-06



Engine Speed rpm	Engine Power bhp	Engine Torque lb-ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
1200	1355	5931	.338	65.5
1150	1320	6028	.340	64.0
1100	1273	6080	.340	61.7
1050	1220	6103	.339	59.0
1000	1163	6108	.339	56.3
950	1104	6102	.344	54.2
900	1043	6089	.355	53.0



RATINGS AND CONDITIONS

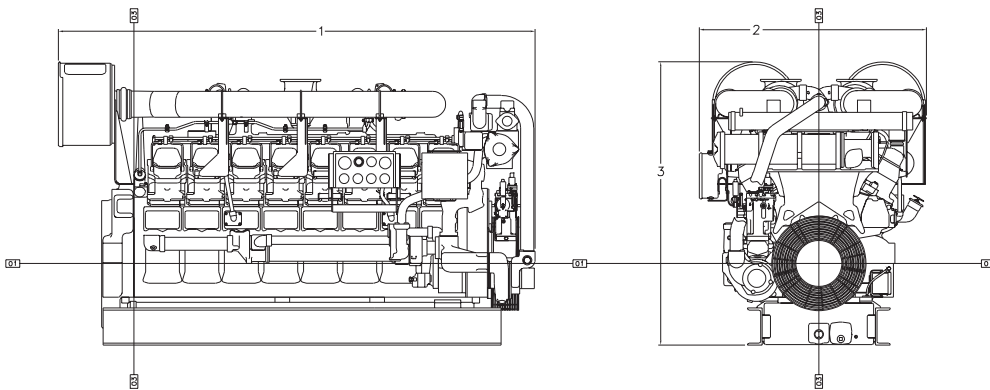
1011 bkW/1355 bhp @ 1200 rpm

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	3215.8 mm (126.61 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: TM7602-06

Feature Code: 516DI03 Arr. Number: 4W0285

Materials and specifications are subject to change without notice.

16304962

© 2012 Caterpillar

All rights reserved.

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

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow," the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.