Cat® 3516B Industrial Diesel Engine

Industrial



The Cat® 3516B Industrial Diesel Engine is offered in ratings ranging from 1492-1640 bkW (2000-2200 bhp) @ 1800 rpm. These ratings are non-certified and are available for global non-regulated areas. Industries and applications powered by 3516B engines include Bore/Drill Rigs, Chippers/Grinders, Construction, Cranes, Dredgers, Forestry, General Industrial, Material Handling, Mining, Mobile Earthmoving Equipment, Pumps, Shovels/Draglines, Surface Hauling Equipment and Trenchers.

Specifications

Power Rating		
Minimum Power	1492 bkW	2000 bhp
Maximum Power	1640 bkW	2200 bhp
Rated Speed		1800 rpm

Emission Standards	
Emissions	Non-Certified

General	
Engine Configuration	V-16, 4-Stroke-Cycle Diesel
Bore	170 mm (6.7 in)
Stroke	190 mm (7.5 in)
Displacement	69 L (4210 in³)
Aspiration	Turbocharged Aftercooled
Rotation (from flywheel end)	Counterclockwise

Engine Dimensions (Approximate. Final dimensions dependent on selected options)	
Length	3008 mm (119 in)
Width	1443 mm (57 in)
Height	1980 mm (78 in)
Weight, Net Dry (Basic Operating Engine Without Optional Attachments)	7484 kg (16,500 lb)

Benefits and Features

Emissions

Non-certified rating. Available for global non-regulated areas.

Reliable, Quiet and Durable Power

© 2017 Caterpillar All Rights Reserved

World-class manufacturing capability and processes coupled with proven core engine designs assure reliability, quiet operation, and many hours of productive life.

Fuel Efficiency

Fuel consumption optimized to match operating cycles of a wide range of equipment and applications while maintaining low operating costs.

Quality

Every Cat engine is manufactured to stringent quality standards in order to assure customer satisfaction.

World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including SOSSM sample
- Customer Support Agreements (CSA)
- Caterpillar Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

Standard Equipment

Air Inlet System

- Aftercooler core, corrosion resistant coated (air side)
- Air cleaner. Regular duty, dry, panel type with service indicators, turbocharger, jacket water aftercooled.
- Turbocharger, rear mounted
- Jacket water aftercooled

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
- Jacket water pump, centrifugal

Exhaust System

- Exhaust manifold, dry

Flywheels and Flywheel Housing

- SAE No. 00 flywheel
- 183 flywheel teeth
- SAE No. 00 flywheel housing

Fuel System

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

Instrumentation

© 2017 Caterpillar All Rights Reserved

- 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
- Oil dipstick
- 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 Off

- 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

- Vibration damper
- Lifting eyes
- Paint: Caterpillar yellow, with optional colors available at request

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S•O•S, "Caterpillar Yellow" and 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.

© 2017 Caterpillar All Rights Reserved

3516B
1641 bkW (2200 bhp) @ 1800 rpm

Rating Type: IND-C (INTERMITTENT) RATING

Emissions: U.S. EPA Tier 1 Nonroad Equivalent Emission Standards (Not Currently EPA Certified)

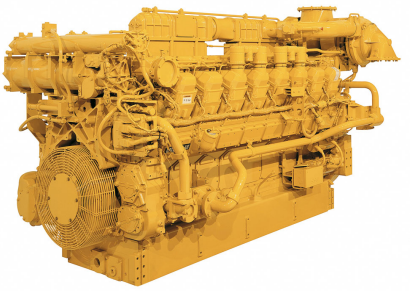


Image shown may not reflect actual configuration

3516B
DITA
1641 bkW (2200 bhp) @ 1800 rpm

	Metric	English
General Engine		
Power Rating	1641 kW	2200 hp
Number of Cylinders	N/A	
Bore	N/A	N/A
Stroke	N/A	N/A
Displacement	N/A	N/A
Compression Ratio	14.0 : 1	

RATING DEFINITIONS AND CONDITIONS

IND-C (INTERMITTENT) RATING: Intermittent service where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

Diesel Engines — up to 7.1 liter All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (.295 in Hg), and 25°C (77°F). Performance measured using fuel to EPA specifications in 40 CFR Part 1065 and EU specifications in Directive 97/68/EC with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

Diesel Engines — greater than 7.1 liter 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.

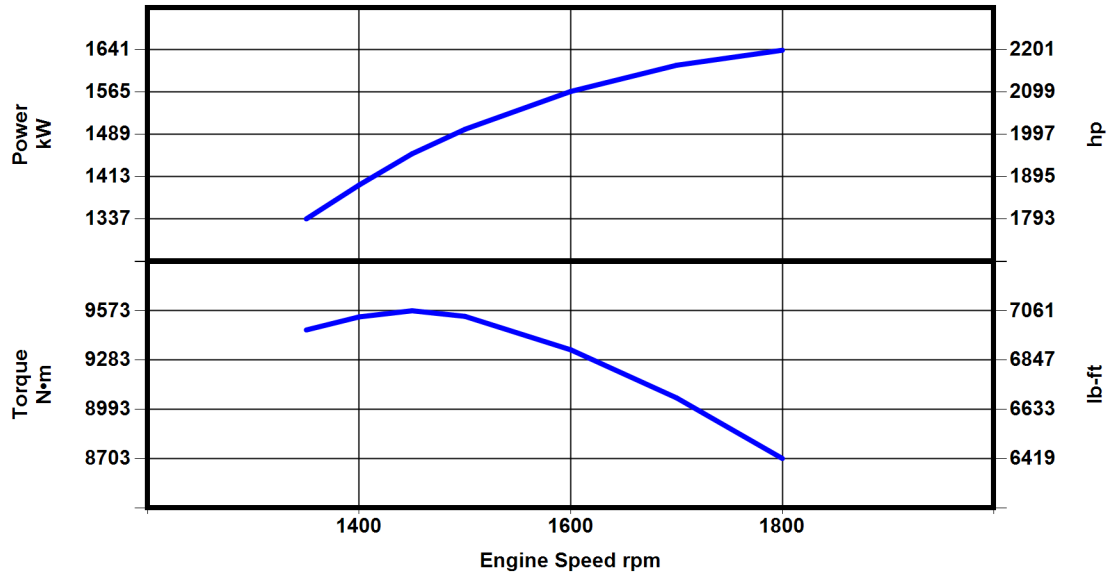
© 2018 Caterpillar All Rights Reserved

3516B

1641 bkW (2200 bhp) @ 1800 rpm

Rating Type: IND-C (INTERMITTENT) RATING

Emissions: U.S. EPA Tier 1 Nonroad Equivalent Emission Standards (Not Currently EPA Certified)



Engine Speed rpm	Engine Power bkW	Engine Power bhp	Torque N*m	Torque lb-ft
1800	1641	2200	8703	6419
1700	1613	2163	9060	6682
1600	1566	2099	9343	6891
1500	1499	2010	9540	7036
1450	1454	1949	9573	7061
1400	1398	1875	9537	7034
1350	1337	1793	9460	6977

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S•O•S, "Caterpillar Yellow" and 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.

© 2018 Caterpillar All Rights Reserved