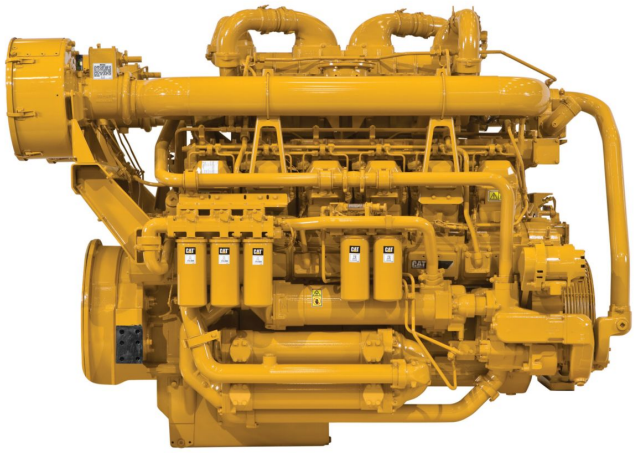
Cat® 3508B Industrial Diesel Engine

Industrial



The Cat® 3508B Industrial Diesel Engine is offered in ratings ranging from 746-820 bkW (1000-1100 bhp) @ 1800 rpm. These ratings are non-certified and are available for global non-regulated areas. Industries and applications powered by 3508B 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	746 bkW	1000 BHP
Maximum Power	820 bkW	1100 BHP
Rated Speed		1800 rpm

Emission Standards	
Emissions	Non-certified

General	
Engine Configuration	V-8, 4-Stroke-Cycle Diesel
Bore	170 mm (6.7 in)
Stroke	190 mm (7.5 in)
Aspiration	Turbocharged Aftercooled
Displacement	34.5 L (2105 in³)
Rotation from Flywheel End	Counterclockwise

Engine Dimensions - Approximate	
Height	1720 mm (68 in)
Length	2462 mm (97 in)
Weight - Net Dry - Basic Operating Engine Without Optional Attachments	4309 kg (9500 lb)
Width	1703 mm (67 in)

Benefits and Features

Reliable, Quiet and Durable Power

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

© 2018 Caterpillar All Rights Reserved

Fuel Efficiency

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

Emissions

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

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

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. 0 flywheel
- 151 flywheel teeth
- SAE No. 0 flywheel housing
- SAE standard rotation

© 2018 Caterpillar All Rights Reserved

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
- Oil dipstick
- Oil pump
- Oil filter, cartridge type with RH service
- Shallow oil pan
- Fumes disposal (not installed)

Mounting System

- Rails, mounting, engine length, 254 mm (10 in), industrial-type, C-channel.
- Included on selected top level engines

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

© 2018 Caterpillar All Rights Reserved

- 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.

© 2018 Caterpillar All Rights Reserved

INDUSTRIAL - Technical Spec Sheet

CONSTRUCTION, FORESTRY, GENERAL INDUSTRIAL, MATERIAL HANDLING, MINING

3508B

783 bkW (1050 bhp) @ 1800 rpm

Rating Type: IND-B RATING

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

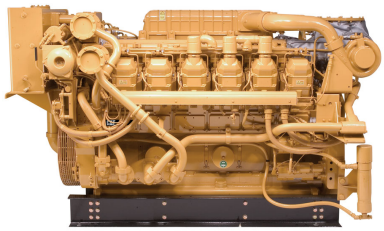


Image shown may not reflect actual configuration

3508B

DITA

783 bkW (1050 bhp) @ 1800 rpm

	Metric	English
General Engine		
Power Rating	783 kW	1050 hp
Number of Cylinders	8	
Bore	170 mm	6.7 in
Stroke	190 mm	7.5 in
Displacement	34.5 L	2105.0 cu in.
Compression Ratio	14.0 : 1	

RATING DEFINITIONS AND CONDITIONS

IND-B RATING: For service where power and/or speed are cyclic (time at full load not to exceed 80%).

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.

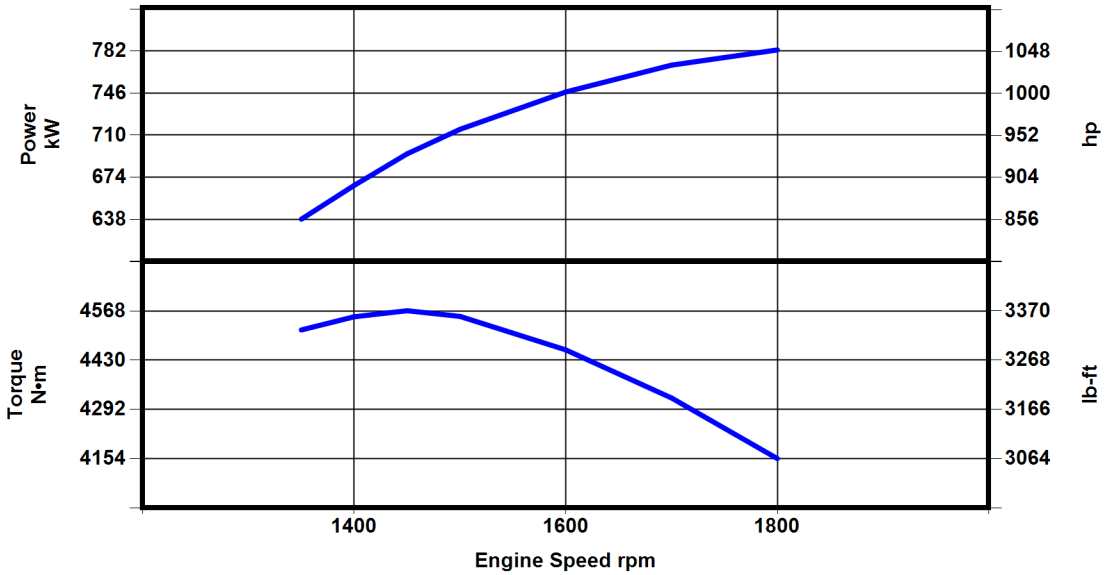
© 2017 Caterpillar All Rights Reserved

3508B

783 bkW (1050 bhp) @ 1800 rpm

Rating Type: IND-B 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	783	1050	4154	3064
1700	770	1032	4324	3189
1600	747	1002	4459	3289
1500	715	959	4553	3358
1450	694	930	4569	3370
1400	667	895	4552	3357
1350	638	856	4515	3330

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