

The Cat® 3508 Industrial Diesel Engine is offered in ratings ranging from 507-746 bkW (680-1000 bhp) @ 1200-1800 rpm. These ratings are non-certified and are available for global non-regulated areas. Industries and applications powered by 3508 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	507 bkW	680 bhp
Maximum Power	746 bkW	1000 bhp
Rated Speed	1200-1800 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)
Displacement	34.53 L (2107 in³)
Aspiration	Turbocharged Aftercooled
Compression Ratio	13.0:1
Rotation (from flywheel end)	Counterclockwise
Lube System (refill)	424 L (448 qt)

Engine Dimensions (Approximate. Final dimensions dependent on selected options)	
Length	2136 mm (84 in)
Width	1703 mm (67 in)
Height	1720 mm (68 in)
Weight, Net Dry (Basic Operating Engine Without Optional Attachments)	4309 kg (9500 lb)

Benefits And Features

Emissions

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

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.

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

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

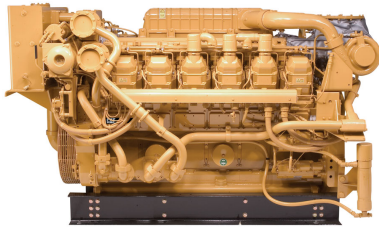
- Vibration damper
- Lifting eyes
- Paint: Caterpillar yellow, with optional colors available at request

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.

3508
612 bkW (820 bhp) @ 1300 rpm

Rating Type: IND-C (INTERMITTENT) RATING

Emissions: Non-certified



3508
DITA
612 bkW (820 bhp) @ 1300 rpm

Image shown may not reflect actual configuration

	Metric	English
General Engine		
Power Rating	612 kW	820 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	13.0 : 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).

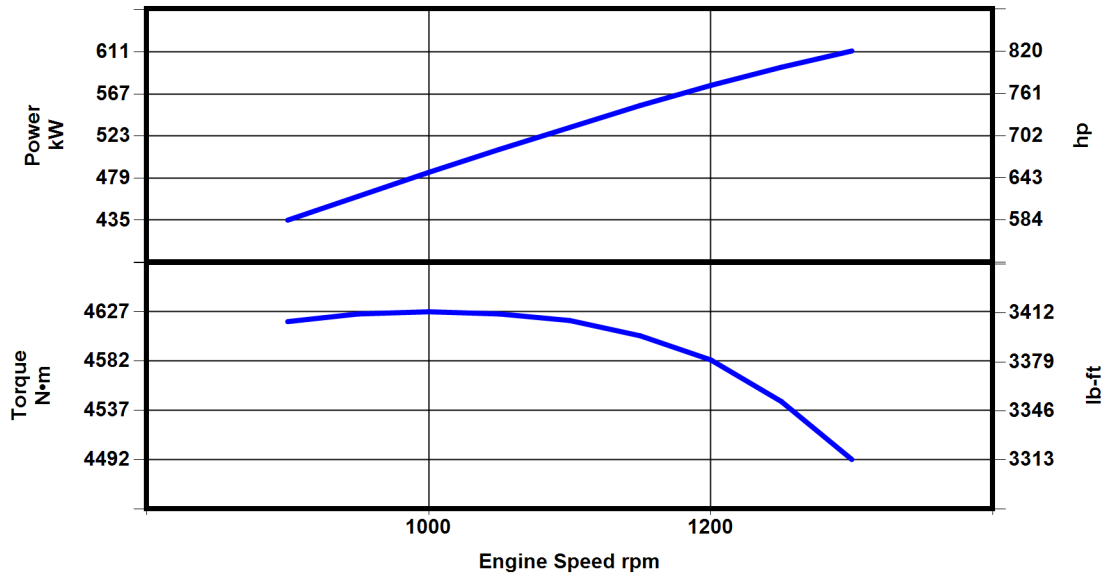
Diesel Engines — greater than 7.1 liter All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) when used at 29°C (84.2°F) with a density of 838.9 g/L.



3508
612 bkW (820 bhp) @ 1300 rpm

Rating Type: IND-C (INTERMITTENT) RATING

Emissions: Non-certified



Engine Speed rpm	Engine Power bkW	Engine Power bhp	Torque N*m	Torque lb-ft
1300	612	820	4492	3313
1250	595	798	4545	3352
1200	576	772	4583	3380
1150	555	744	4605	3396
1100	532	713	4619	3407
1050	509	682	4625	3411
1000	485	650	4627	3413
950	460	617	4625	3411
900	435	584	4618	3406

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.