



The Cat® 3508 Industrial Diesel Engine is offered in ratings ranging from 507-746 kW (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 kW | 680 bhp |
| Maximum Power | 746 kW | 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

SS-7157026-18377766-010

MSS-IND-18377766-006.pdf

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

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3508

578 bkW (775 bhp) @ 1800 rpm

Rating Type: IND-A (CONTINUOUS) RATING

Emissions: Non-certified Emission Standards

3508

DITA

578 bkW (775 bhp) @ 1800 rpm



Image shown may not reflect actual configuration

Metric English

| General Engine | | |
|---------------------|----------|---------------|
| Power Rating | 578 kW | 775 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-A (CONTINUOUS) RATING: 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.

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.

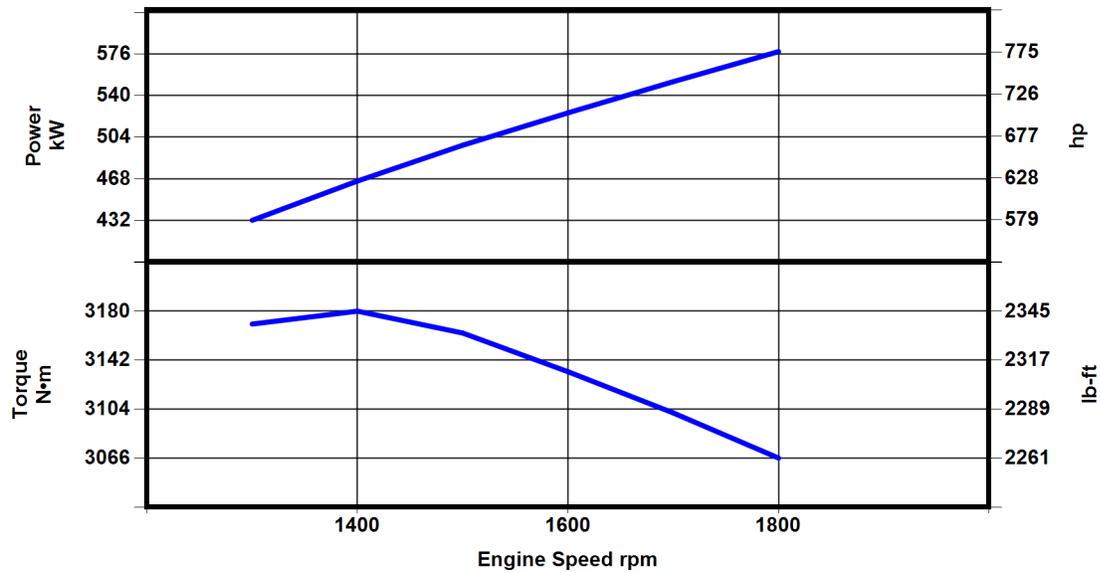


3508

578 bkW (775 bhp) @ 1800 rpm

Rating Type: IND-A (CONTINUOUS) RATING

Emissions: Non-certified Emission Standards



| Engine Speed rpm | Engine Power bkW | Engine Power bhp | Torque N*m | Torque lb-ft |
|------------------|------------------|------------------|------------|--------------|
| 1800 | 578 | 775 | 3066 | 2261 |
| 1700 | 552 | 740 | 3101 | 2287 |
| 1600 | 525 | 704 | 3133 | 2311 |
| 1500 | 497 | 666 | 3163 | 2333 |
| 1400 | 466 | 625 | 3180 | 2345 |
| 1300 | 432 | 579 | 3170 | 2338 |

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