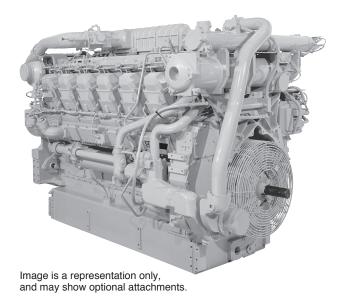
CATERPILLAR®

3512B Petroleum Engine

1492-1678 bkW (2000-2250 bhp) 1900 rpm

Dry Manifold with SCAC



CAT® ENGINE SPECIFICATIONS

| V-12, 4-Stroke-Cycle-Diesel Emissions Non-Current EPA, Non-Road Mobile Tier 1 |
|---|
| Peak Torque at Speed |
| Bore |
| Stroke |
| Displacement |
| Aspiration Turbocharged-Aftercooled |
| Governor and Protection Electronic (ADEM™ A3) |
| Engine Weight, net dry (approx) 4803.6 kg (10,590 lb) |
| Capacity for Liquids |
| Lube Oil System (refill) 151.4 L (40 gal) |
| Cooling System |
| Oil Change Interval250 hours |
| Rotation (from flywheel end) Counterclockwise |
| Flywheel and Flywheel Housing SAE No. 0 |

FEATURES

Engine Design

- Proven reliability and durability
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range
- Separate circuit aftercooler provides industry-leading ambient capability; ease-of-cooling system integration; enables sea water cooling
- Air shutoff integrated with engine controls

Optional Attachments

Engine-mounted transmission oil cooler — integration with engine cooling system allows ease of installation and a tighter overall engine package

Advanced Digital Engine Management

ADEM A3 control system providing integrated ignition, speed governing, protection, and controls, including detonation-sensitive variable ignition timing. ADEM A3 has improved: user interface, display system, shutdown controls, and system diagnostics.

Custom Packaging

For any petroleum application, trust Caterpillar to meet your exact needs with a factory custom package. Cat® engines, generators, enclosures, controls, radiators, transmissions — anything your project requires — can be custom designed and matched to create a one-of-a kind solution. Custom packages are globally supported and are covered by a one-year warranty after startup.

Full Range of Attachments

Large variety of factory-installed engine attachments reduces packaging time

Testing

Every engine is full-load tested to ensure proper engine performance.

Product Support Offered Through Global Cat Dealer Network

More than 2,200 dealer outlets

Cat factory-trained dealer technicians service every aspect of your petroleum engine

Cat parts and labor warranty

Preventive maintenance agreements available for repairbefore-failure options

 $S {\hspace{-0.1em}\raisebox{1.5pt}{\text{-}}} O {\hspace{-0.1em}\raisebox{1.5pt}{\text{-}}} S^{{\scriptscriptstyle SM}}$ program matches your oil and coolant samples against Caterpillar set standards to determine:

- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

Over 80 Years of Engine Manufacturing Experience

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products.

- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

Web Site

For all your petroleum power requirements, visit www.catoilandgas.cat.com.

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CATERPILLAR®

3512B

PETROLEUM ENGINE

1492-1678 bkW (2000-2250 bhp)

STANDARD EQUIPMENT

Air Inlet System

Separate circuit aftercooler core — corrosion resistant coated (air side), air cleaner (single element w/service indicator)

Dual rear-mounted turbochargers

Control System

ADEM A3 ECU - LH

Electronic fuel injector fuel system (10 amp DC power required to drive electronic engine control unit)

Cooling System

Torque converter connections

Thermostats and housing, jacket water pump, gear-driven centrifugal

Connections for radiator cooling Dual outlets: 88.9 mm O.D. (3.5 in) elbow hose connections

Separate Circuit Aftercooler (SCAC)

Exhaust System

Exhaust manifold - dry, stainless steel bellows

Dual turbochargers with watercooled bearings Exhaust outlet: 292 mm I.D. (11.5 in), 12-10.5 mm dia. holes EQ SP, 376 mm bolt hole dia.

Flywheels and Flywheel Housing Flywheel, SAE No. 0 — 151 teeth Flywheel housing — SAE No. 0

Fuel System

Primary fuel filter

Fuel priming pump

Fuel filter - RH spin-on type

Fuel transfer pump

Electronically controlled unit injectors

Instrumentation

No standard instrumentation

Optional, remote instrumentation available

Service meter

Lube System

Crankcase breather - top-mounted

Oil cooler

Oil filler and dipstick - RH

amua liO

Oil filter - RH spin-on type

Rear sump oil pan, 250-hour change interval

Oil pan drain valve — 3/4" NPT female connection

Mounting System

Trunion front support

Power Take-Offs

Front housing - two-sided

Protection System

ADEM A3 ECU system to provide customer-programmable engine deration strategies to protect against adverse operating

Emergency stop logic inputs provided at 40-pin customer interface connection

Air inlet shutoff

General

Paint — Cat yellow Vibration damper and guard

Lifting eyes

B-Series LAND

OPTIONAL ATTACHMENTS

Air Compressors

Air Inlet System

Air cleaner and air cleaner mounting

Remote air inlet adapters

Air inlet heater

Charging System

Battery chargers

Charging alternators

Control System

Local speed throttle control

Throttle position sensors

Load sharing modules

Governor conversion

Cooling System

High gloss black folded core radiators

Coolant regulator conversion

Belt quard and radiator quard

Blower fan

Radiator cover

Fan drive and fan pulleys

Water level switch gauge

Coolant level sensors Coolant conditioner

Expansion tank

Heat exchanger cooling conversion

Auxiliary water pump

Air separator

Emissions Certifications

IMO Certification and European Union Certification

Exhaust System

Flexible exhaust fitting

Elbows and flange

Flange and exhaust adapters

Manifold and mufflers

Fuel Systems

Flexible fuel lines

Fuel cooler

Water/fuel separator

Fuel level switch

Instrumentation

Customer management device

Remote panel display and remote cylinder temperature display

Switches and contactors

Gauges and instrument panels

Lube System

Fumes disposal

Oil pans

Prelube options

Sump pumps Oil Filters

Mounting System

Base removal

Vibration isolators

Rails

Power Take-Offs

Front housing

Flexible couplings

Coupling hub

Front accessory drives

Auxiliary drive shaft

Auxiliary drive pulleys

Front stub shaft

Front crankshaft adapter

Damper guard removal

Pulleys

Flywheel stub shaft

Marine Society Requirements

Marine society conversion

Spray shielding

Protection System

Shutoffs

Switches and contractors

Explosion relief valve

Sensors

Oil pressure monitor

Shutoff controls Corrosion protection

Spare Parts Kits

Starting System

Air starting motors — electric

Air pressure regulator

Air silencer

Hydraulic starter Air start controls - manual, electric

Redundant start Starting aids

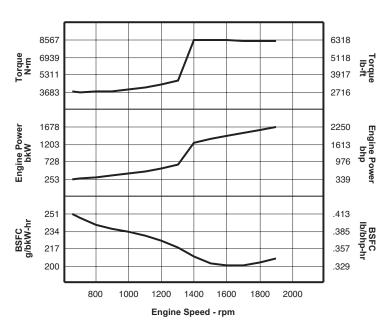
Battery sets - 24V

Battery cable and battery rack

1492-1678 bkW (2000-2250 bhp)

PERFORMANCE CURVES

Turbocharged-Aftercooled Well Service Rating — 1678 bkW (2250 bhp) @ 1900 rpm* DM4584-03



| Heat Rejection Data | | | | | | | | | | |
|---------------------|--------------|--------|-----------|---------|--------------|---------|------------|---------|--------------|---------|
| Engine Speed | Engine Power | | Rej to JW | | Rej to Atmos | | Rej to Exh | | From Aft Clr | |
| rpm | bkW | bhp | bkW | Btu/min | bkW | Btu/min | bkW | Btu/min | bkW | Btu/min |
| 1900 | 1678.0 | 2250.2 | 664 | 37762 | 134 | 7621 | 1583 | 90025 | 355 | 20189 |
| 1700 | 1514.0 | 2030.3 | 578 | 32871 | 127 | 7222 | 1368 | 77798 | 274 | 15582 |
| 1500 | 1345.0 | 1803.7 | 524 | 29800 | 143 | 8132 | 1228 | 69836 | 193 | 10976 |
| 1300 | 650.0 | 871.7 | 328 | 18653 | 158 | 8985 | 675 | 38387 | 21 | 1194 |
| 1100 | 476.0 | 638.3 | 280 | 15924 | 163 | 9270 | 464 | 26388 | N/A | N/A |
| 900 | 357.0 | 478.7 | 247 | 14047 | 161 | 9156 | 307 | 17459 | N/A | N/A |
| 700 | 270.0 | 362.1 | 215 | 12227 | 157 | 8929 | 208 | 11829 | N/A | N/A |

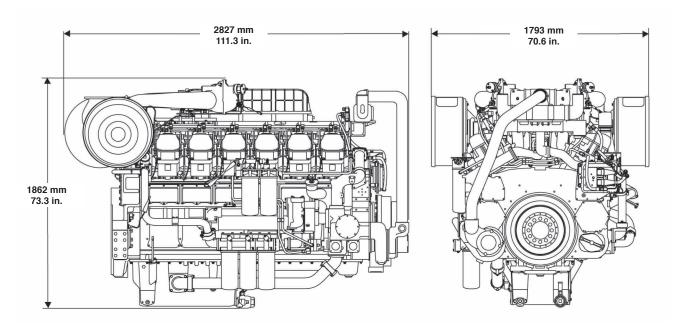
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^{*}Other engine ratings are available. Please contact dealer for performance data.

CATERPILLAR®

1492-1678 bkW (2000-2250 bhp)

PETROLEUM ENGINE



Right Side View

Front View

| Engine Dimensions | | | | | | | |
|---------------------|-----------|-----------|--|--|--|--|--|
| Length | 2827 mm | 111.3 in | | | | | |
| Width | 1793 mm | 70.6 in | | | | | |
| Height | 1862 mm | 73.3 in | | | | | |
| Engine Weight (dry) | 4803.6 kg | 10,590 lb | | | | | |

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #173-0737).

RATING DEFINITIONS AND CONDITIONS

Engine Performance is corrected to inlet air standard conditions of 99 kPa (29.31 in. Hg) dry barometer and 25°C (77°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°C (84.2°F) where the density is 838.9 g/L (7.001 lb/U.S. gal).

The corrected performance values shown for Cat engines will approximate the values obtained when the observed performance data is corrected to SAE J1995, ISO 3046-2, ISO 8665, ISO 2288, ISO 9249, ISO 1585, EEC 80/1269, and DIN 70020 standard reference conditions.

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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.

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