



C32 ACERT™ Petroleum Engine

596-1118 kW
(800-1500 bhp)
1800 and 2100 rpm

Dry Manifold

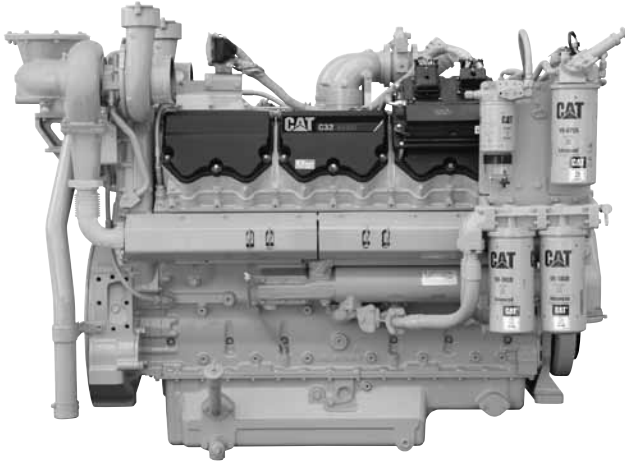


Image is a representation only, and may show optional attachments.

CAT® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle-Diesel

| | |
|---------------------------------|--|
| Emissions | EPA and CARB Non-Road Mobile Tier 2, IMO Tier II |
| Peak Torque at Speed | 6219 lbs-ft |
| Bore | 145 mm (5.7 in) |
| Stroke | 162 mm (6.4 in) |
| Displacement | 32.1 L (1960.5 cu. in) |
| Aspiration | Turbocharged-Aftercooled Governor and Protection |
| Engine Weight, net dry (approx) | 2286 kg (5040 lb) |
| Capacity for Liquids | |
| Lube Oil System (refill) | 72 L (19 gal) |
| Cooling System | 55 L (14.5 gal) |
| Oil Change Interval | 250 hours |
| Rotation (from flywheel end) | Counterclockwise |
| Flywheel and Flywheel Housing | SAE No. 0 or SAE No. 1 |
| Flywheel Teeth | 136 |

FEATURES

Engine Design

- Proven reliability and durability
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range
- High power density — lightweight engine for weight-sensitive applications
- PTO drive options provide flexible access to auxiliary power for pumps and other needs

Advanced Digital Engine Management

ADEM A4 engine management system integrates speed control, air/fuel ratio control and ignition/detonation controls into a complete engine management system with integrated digital ignition, engine protection and monitoring.

Transmissions

Caterpillar has a full line of engine-transmission packages that can be fully integrated with your axle, hydraulics, and operator interface. Cat® transmissions deliver continuous operation under full load, smooth shifting at any speed, and maximum up time, with unmatched durability and easy maintenance.

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 repair-before-failure options

S•O•SSM 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.



STANDARD EQUIPMENT

Air Inlet System

Quad turbocharger — 3 cylinder exhaust to each turbo
Connections configured for ATAAC (Air-to-Air-Aftercooled)
or remote heat exchanger

Control System

ADEM A4 electronic control module
Electronic governing, PTO speed control
Customer programmable ratings
Cold mode start strategy
Automatic altitude compensation
Automatic fuel temperature compensation
Programmable low and high idle, and top engine speed
limit
Electronic diagnostics and fault logging
Engine monitoring system
SAE J1939 broadcast (diagnostic and engine status)

Cooling System

Gear-driven centrifugal jacket water pump — RH
Integrated thermostat and housing
Engine oil cooler
Optional installed transmission oil cooler

Exhaust System

Exhaust manifold — dry
Two vertical exhaust outlets (front and rear)

Fuel System

MEUI
Fuel priming pump
Fuel transfer pump
Primary and secondary fuel filter — RH configured for
remote mounting (installed RH on shipping plate)

Flywheels and Flywheel Housing

SAE No. 0 or SAE No. 1 flywheel iron housing
SAE No. 0 or SAE No. 1 flywheel
Optional transmission adapter

Lube System

Crankcase breather
Oil filter — RH standard, optional LH or remote mount
service
Oil level gauge — RH standard, optional LH or dual
service
Oil filler — RH standard, optional LH or dual service
Shallow oil pan, rear sump

Mounting System

Trunnion front support
Vertical and horizontal pads on rear flywheel housing

Protection System

24V electronic
Engine overspeed with optional air shut-offs with
indicators
Low engine oil pressure
Fuel filter restriction
Fuel temperature
High engine coolant temperature
Low engine coolant temperature

General

Vibration damper and optional guard
Lifting eyes
Optional customer wiring connector
Service tool connector
Paint — Cat yellow

OPTIONAL ATTACHMENTS

Air Compressors**Air Inlet System**

Air cleaner
Air inlet adapters
Turbocharger outlet adapters
Air lines

Charging System

Battery chargers
Charging alternators
Alternator mounting
Circuit breakers and mountings

Cooling System

Dry charge coolant conditioners
Thermostat housing
Coolant level sensor
Radiator
Blower fans
Suction fans
Fan adapters
Fan drives

Emissions

IMO certifications

Exhaust System

Elbows
Mufflers

Fuel Systems

Electric fuel priming pump

Instrumentation

Customer management device
Interconnect harness
Gauges and instrument panels

Lube System

Oil pans
Oil service side
Oil level gauge
Oil filters
Lubricating oils

Mounting System

Structural steel base
Engine support — front
Engine support — rear

Power Take-Offs

Auxiliary drive
Damper pulley
Hydraulics gear pumps

Protection System

Mechanical shutoffs
Solenoid shutoffs

Starting System

Electric starting motors — 12V, 24V
Battery sets — 24V
Battery cable
Battery rack
Starting aids

Transmission Arrangement

Transmissions water lines
Transmissions cooler

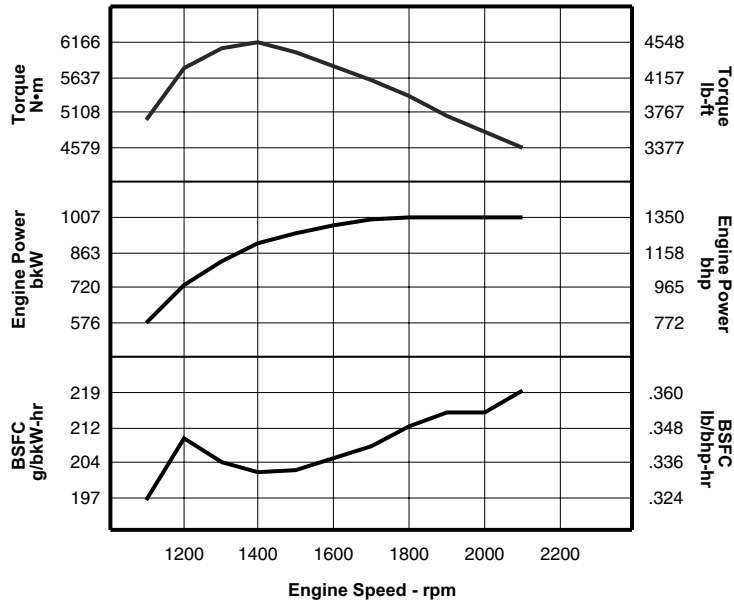


PERFORMANCE CURVES

Turbocharged-Aftercooled

E Rating — 1007 bkW (1350 bhp) @ 2100 rpm*

DM9033-00

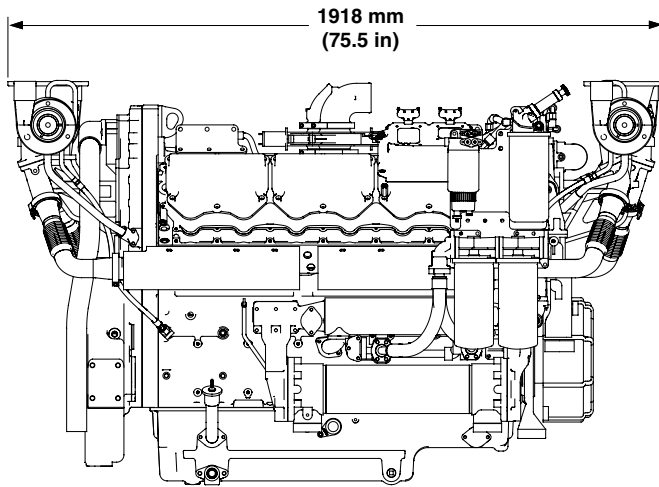


| Heat Rejection Data | | | | | | | | | | |
|---------------------|--------------|--------|-----------|---------|--------------|---------|------------|---------|--------------|---------|
| Engine Speed rpm | Engine Power | | Rej to JW | | Rej to Atmos | | Rej to Exh | | From Aft Clr | |
| | bkW | bhp | bkW | Btu/min | bkW | Btu/min | bkW | Btu/min | bkW | Btu/min |
| 2100 | 1007.0 | 1350.4 | 377 | 21440 | 230 | 13080 | 1013 | 57609 | 190.0 | 10805.3 |
| 2000 | 1007.0 | 1350.4 | 370 | 21042 | 222 | 12625 | 977 | 55562 | 184.0 | 10464.1 |
| 1900 | 1007.0 | 1350.4 | 373 | 21212 | 219 | 12455 | 981 | 55789 | 179.0 | 10179.7 |
| 1800 | 1007.0 | 1350.4 | 375 | 21326 | 208 | 11829 | 966 | 54936 | 172.0 | 9781.6 |
| 1700 | 996.0 | 1335.7 | 367 | 20871 | 201 | 11431 | 927 | 52718 | 159.0 | 9042.3 |
| 1600 | 974.0 | 1306.2 | 360 | 20473 | 206 | 11715 | 882 | 50159 | 138.0 | 7848.0 |
| 1500 | 945.0 | 1267.3 | 349 | 19848 | 209 | 11886 | 830 | 47202 | 124.0 | 7051.9 |
| 1400 | 904.0 | 1212.3 | 339 | 19279 | 215 | 12227 | 780 | 44359 | 110.0 | 6255.7 |
| 1300 | 829.0 | 1111.7 | 340 | 19336 | 200 | 11374 | 711 | 40434 | 94.0 | 5345.8 |
| 1200 | 727.3 | 975.3 | 322 | 18312 | 186 | 10578 | 631 | 35885 | 80.0 | 4549.6 |
| 1100 | 575.9 | 772.3 | 233 | 13251 | 158 | 8985 | 437 | 24852 | 40.0 | 2774.8 |

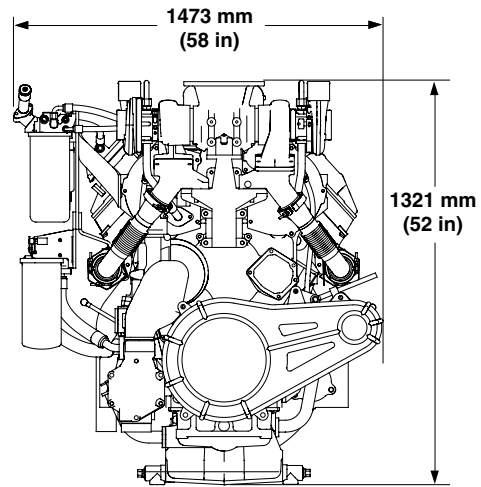
*Other engine ratings are available. Please contact dealer for performance data.



PETROLEUM ENGINE



Right Side View



Front View

| Engine Dimensions | | |
|---------------------|---------|---------|
| Length | 1918 mm | 75.5 in |
| Width | 1473 mm | 58 in |
| Height | 1321 mm | 52 in |
| Engine Weight (dry) | 2286 kg | 5040 lb |

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #276-8867).

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.

IND-E

For service where maximum power is required for a short time for initial starting or sudden overload. For emergency service where standard power is unavailable (time at full load not to exceed 5% of the duty cycle).

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