

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

CAT® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle-Diesel

Emissions	2006 EPA and CARB Tier 2, and EC Stage II Non-Road emissions certified
Peak Torque at Speed	2626 lbs-ft
Bore	137.7 mm (5.4 in.)
Stroke	152.4 mm (6.0 in.)
Displacement	27.2 L (1658 cu. in.)
Aspiration	Turbocharged-Aftercooled
Governor and Protection	Electronic (ADEM™ A3)
Engine Weight, net dry (approx)	2895 kg (6382 lb)
Capacity for Liquids	
Lube Oil System (refill)	68.1 L (18 gal)
Cooling System	54.9 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 (SAE No. 0), 113 (SAE No. 1)

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 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.

Optional Attachments

Optional Turbo Configurations — provides flexibility in air intake and exhaust installations

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.

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.

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

Dual turbochargers side or rear mounted — inlet
152.4 mm (6 in.) hose connection

Control System

Electronic governing, PTO speed control
Programmable ratings
Cold mode start strategy
Automatic altitude compensation
Power compensation for fuel temperature
Programmable low and high idle and TEL
Electronic diagnostics and fault logging
Engine monitoring and protection system (speed, temperature, pressure)
J1939 Broadcast (diagnostic, engine status, and control)

Cooling System

Thermostats and housing — outlet LH vertical orientation
Jacket water pump — gear-driven, centrifugal RH

Exhaust System

Exhaust manifold — dry, heat shields
Dual turbo — rear turbo exhaust, full marmon connection
127 mm (5 in.), maximum load 10 kg for direct connection to turbo
Water-cooled center sections

Flywheels and Flywheel Housings

SAE No. 0 or SAE No. 1
SAE standard rotation

Fuel System

MEUI system
Fuel filter, RH (2 micron high performance)
Fuel transfer pump
Fuel priming pump (optional electric priming pump)

Lube System

Crankcase breather — rear mounted
Oil cooler — RH
Side turbo — oil filler in RH front gear case
Rear turbo — oil filler in RH valve cover
Oil level gauge — RH
Oil filter — RH
Oil pan rear sump

Mounting System

Front support — narrow

Power Take-Offs

Crankshaft pulley — 203.2 mm (8 in), 5 grooves
15.9 mm (.63 in) wide; 292.1 mm (11.5 in.) 1 groove
15.9 mm (.63 in.) wide

General

Vibration damper
Paint — Cat yellow
Lifting eyes
Automatic variable timing, electronic
Electronic installation kit 70-pin connector (connectors, pins, sockets)

OPTIONAL ATTACHMENTS

Air Inlet System

Air lines
Air cleaners
Precleaners

Charging System

Battery chargers
Charging alternators
Alternator mountings

Circuit Breakers

Circuit breaker mounting

Cooling System

Blower fans
Suction fans
Radiators

Exhaust System

Muffler

Flywheel and Flywheel Housings**Fuel Systems**

Electric fuel priming pump

Instrumentation

Gauges and instrument panels

Lube System

Lubricating oil
Oil pan
Oil filter

Mounting System

Engine supports

Power Take-Offs

Hydraulic pump drives
Pulley
Auxiliary drive

Starting System

Electric starting motor
Battery sets — 24V
Battery cable
Battery rack
Starting aids

Packaging

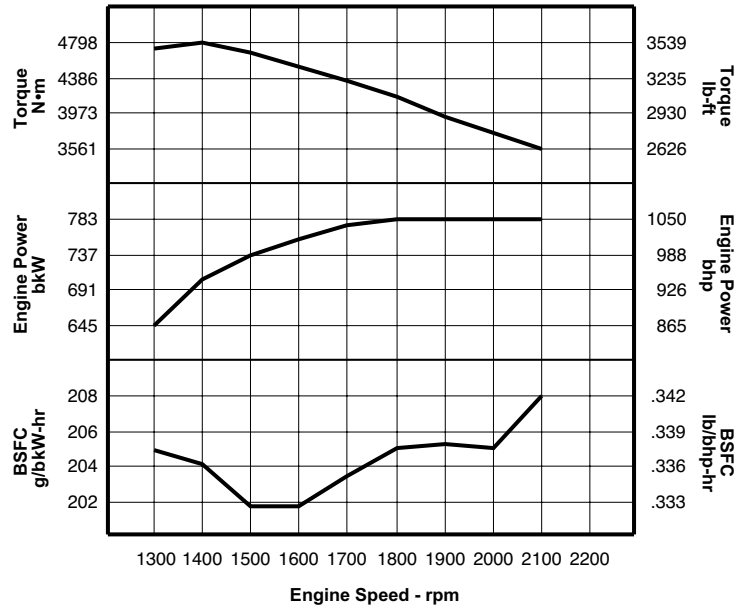
Overseas preservation
Storage preservation
Export packaging

PERFORMANCE CURVES

Turbocharged-Aftercooled

D Rating — 783 bkW (1050 bhp) @ 2100 rpm*

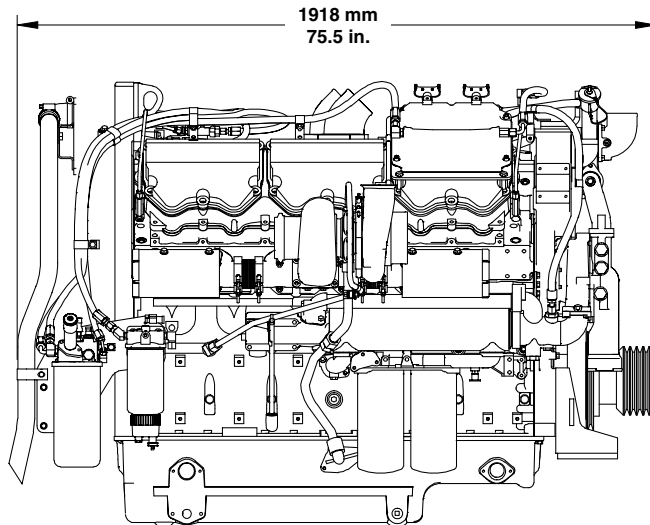
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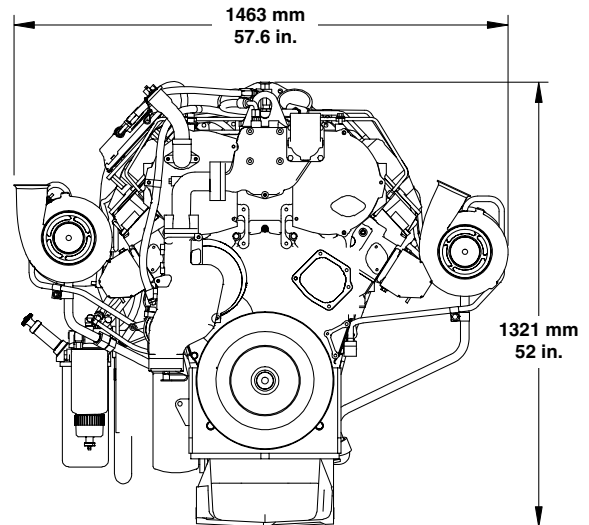
Heat Rejection Data										
Engine Speed rpm	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
2100	783.0	1050.0	295	16777	144	8189	687	39070	169.0	9611.0
2000	783.0	1050.0	284	16151	143	8132	672	38217	158.0	8985.4
1900	783.0	1050.0	285	16208	139	7905	680	38672	156.0	8871.7
1800	783.0	1050.0	292	16606	138	7848	681	38728	149.0	8473.6
1700	774.6	1038.8	289	16435	139	7905	670	38103	139.0	7904.9
1600	757.9	1016.4	282	16037	140	7962	649	36909	126.0	7165.6
1500	734.9	985.5	281	15980	138	7848	629	35771	115.0	6540.0
1400	703.4	943.3	284	16151	141	8019	609	34634	105.0	5971.3
1300	644.8	864.7	281	15980	129	7336	557	31677	85.0	4833.9

*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	1463 mm	57.6 in
Height	1321 mm	52 in
Engine Weight (dry)	2895 kg	6382 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #282-3892).

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-D

For service where maximum power is required for periodic overloads.

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