C32 ACERT™ Petroleum Engine

597-914 bkW (800-1225 bhp) 2100 rpm

Wet Manifold

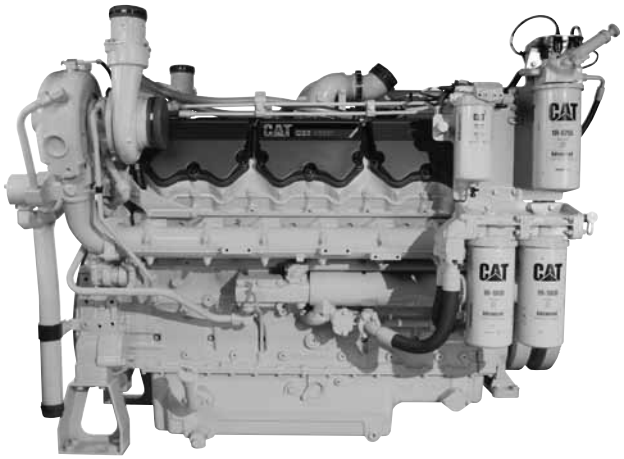


Image is a representation only, and may show optional attachments.

CAT® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle-Diesel

Emissions	EPA and CARB Non-Road Mobile Tier 2, EPA Marine Tier 2, IMO Tier II
Peak Torque at Speed	3064 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	Electronic (ADEM™ A4)
Engine Weight, net dry (approx)	2306 kg (5084 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
- PTO drive options provide flexible access to auxiliary power for pumps and other needs

Optional Attachments
SCAC HEX — allows for sea watercooling capabilities

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•S℠ 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
Connections configured for SCAC and 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
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
Optional aftercooler and auxiliary water pump
Optional jacket water heat exchanger

Exhaust System
Exhaust manifold — watercooled

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
24 volt 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
Lifting eyes
Optional customer wiring connector
Service tool connector
Paint — Cat yellow
Optional two-part primer and mastic caulk

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

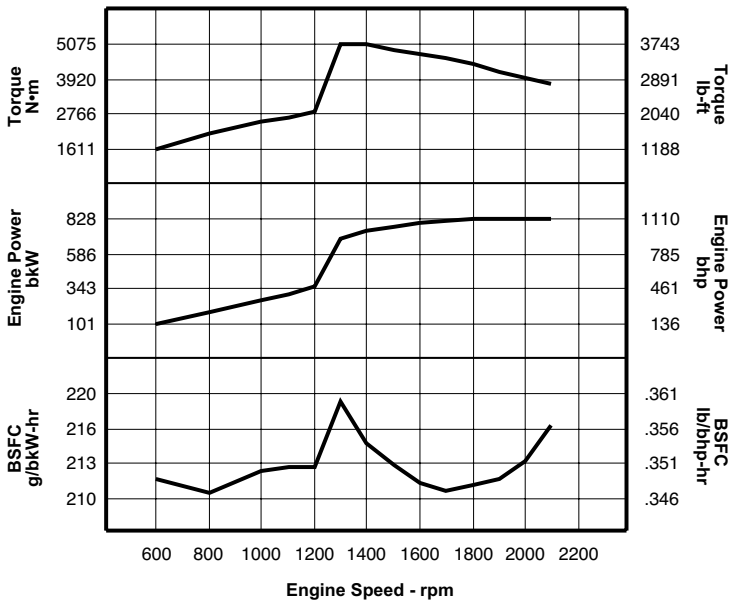
Protection System
Mechanical shutoffs
Solenoid shutoffs

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

Transmission Arrangement
Transmission water lines
Transmission cooler

PERFORMANCE CURVES

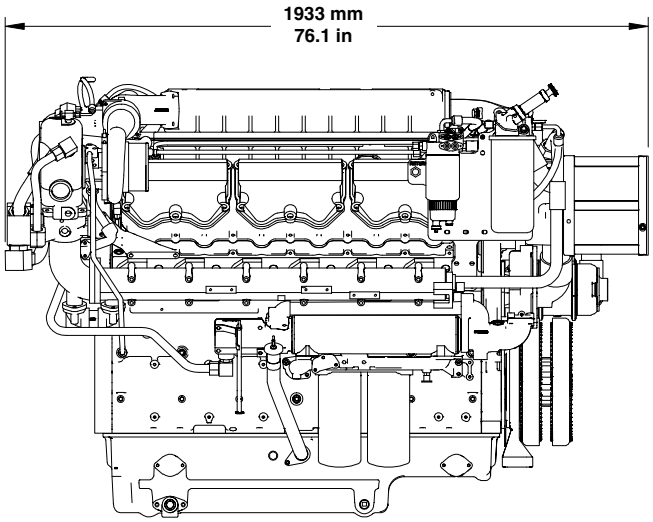
Turbocharged-Aftercooled
D Rating — 828 bkW (1110 bhp) @ 2100 rpm*
DM9685-00



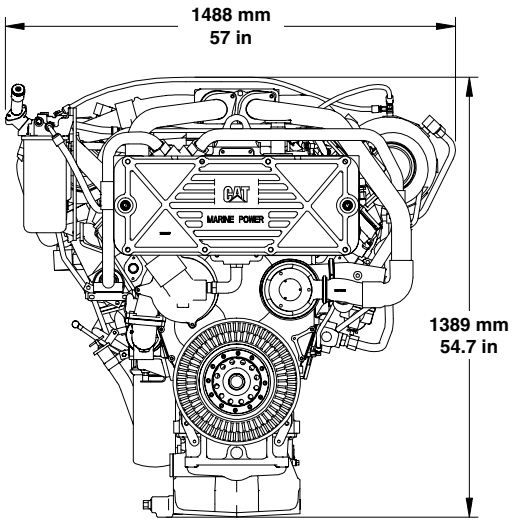
Heat Rejection Data										
Engine Speed rpm	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
2100	827.7	1110.0	549	31222	168	9554	582	33098	166.0	9440.4
1900	827.8	1110.1	514	30767	142	8076	566	32188	143.0	8132.4
1700	817.8	1096.7	535	30425	122	6938	567	32245	119.0	6767.5
1500	767.0	1028.6	552	31392	138	7848	558	31733	95.0	5402.6
1300	690.3	925.7	541	30767	146	8303	508	28890	60.0	3412.2
1100	307.9	412.9	289	16435	105	5971	217	12341	4.0	227.5
800	179.4	240.6	143	8132	103	5858	112	6369	N/A	N/A

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

PETROLEUM ENGINE



Right Side View



Front View

Engine Dimensions		
Length	1933 mm	76.1 in
Width	1488 mm	57 in
Height	1389 mm	54.7 in
Engine Weight (dry)	2306 kg	5084 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #310-1652).

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.

Performance Number: DM9685-00
LEHW0050-01 (11-10)