



Cat® C18 ACERT™ Fire Pump Engines, with ratings: 447-597 kW (600-800 bhp) @ 1750-2100 rpm, meet U.S. EPA Tier 3 or U.S. EPA Tier 2 emission standards for stationary emergency fire pump engines. Rating: 522 kW (700 bhp) @ 1500 rpm is Non-certified. All ratings are FM Approved and UL Listed. Starting on demand is a must for a fire pump engine - always. Cat® fire pump engines have a reputation for reliable starts and long efficient service. The Cat line of fire engine pumps covers a wide range of installations. At 447-597 kW (600-800 bhp) the C18 ACERT is the newest addition to the Cat fire pump engine line and continues the strong legacy of dependable starts and long, durable life.

Specifications

Power Rating		
Minimum Power	447 kW	600 bhp
Maximum Power	597 kW	800 bhp
Rated Speed	1500-2100 rpm	

Emission Standards	
Emissions	U.S. EPA Tier 3, Tier 2 or Non-certified emission standards for stationary emergency fire pump engines. FM Approved, UL Listed

General	
Engine Configuration	Inline 6, 4-Stroke-Cycle Diesel
Bore	145 mm (5.71 in)
Stroke	183 mm (7.2 in)
Displacement	18.1 L (1104.53 in ³)
Aspiration	Turbocharged Aftercooled (TA)
Compression Ratio	16.3:1
Rotation (from flywheel end)	Counterclockwise

Engine Dimensions (Approximate. Final dimensions dependent on selected options)	
Width	1081.7 mm (42.6 in)
Height	1379.6 mm (54.3 in)
Length	1889 mm (74.37 in)
Weight - Approximate, Net Dry (Basic Operating Engine Without Optional Attachments)	1953 kg (4306 lb)

Benefits And Features

Emissions

Ratings--447 bkW (600 bhp) @ 1750, 1900, 2100 rpm and 522 bkW (700 bhp) @ 1750, 1900 and 2100 rpm--meet U.S. EPA Tier 3 emission standards for stationary emergency fire pump engines. FM approved. UL listed - U.S. and Canada. Meets NFPA 20 standards.

Ratings--597 bkW (800 bhp) @ 1750, 1900 and 2100 rpm--meet U.S. EPA Tier 2 emission standards for stationary emergency fire pump engines. FM approved. UL listed - U.S. and Canada. Meets NFPA 20 standards.

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.

Quality

Every Cat engine is manufactured to stringent 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

- Dual turbocharger: front and rear inlet 127.mm (5.0 in)
- Separate Circuit Aftercooled (SCAC)
- Optional Air Cleaner - dual element, installed

Charging System

- Charging alternator 24 volt, 50 amp

Control System

- Dual Electronic Control Units (ECU), primary and secondary with auto switching capability
- Electronic governing, PTO speed control
- Cold mode start strategy
- Automatic altitude compensation
- Power compensation for fuel temperature
- Programmable low and high idle and top engine limit
- Electronic diagnostics and fault logging
- Engine monitoring and protection system (speeds, temperature, pressure)
- SAE J1939 broadcast (diagnostic, engine status, and control)

Cooling System

- Thermostats and housing, vertical outlet
- Jacket water pump, gear driven, centrifugal
- Heat exchanger installed
- Expansion tank
- FM Required Raw Water Cooling Loops: 1.5" iron, horizontal or vertical, 1.5" 316 stainless steel, horizontal or vertical, 2" iron, horizontal or vertical (2100 rated rpm only), or 2" 316 stainless steel, horizontal or vertical (2100 rated rpm only)

Exhaust System

- Exhaust manifold, dry
- Dual turbo: exhaust elbow, dry 203 mm (8 in)

Flywheels and Flywheel Housing

- SAE No. 1 flywheel
- SAE No. 1 flywheel housing
- SAE standard rotation

Fuel System

- Electronic unit injector
- Fuel filter, secondary (2 micron)
- Fuel transfer pump
- Fuel sample valve, mounted on fuel filter base
- Primary fuel filter / water separator

Instrumentation

- Digital Display mounted in Junction Box, LH side of engine. Displays: Oil pressure, Fuel pressure, Charging voltage, Coolant temperature, Raw water temperature, and Engine hours

Lube System

- Crankcase breather, front valve cover
- Oil cooler
- Lube oil filter
- Front sump oil pan
- Oil filler
- Oil dipstick
- Oil pump

Mounting System

- Front and rear support

Power Take-Offs

- Flywheel stub shaft

Protection System

- Stop-Start System, automatic (compatible with NFPA 20 requirements, able to be energized from either of two battery sources and capable of manual starter actuation)

Starting System

- 24 volt, LH electric starting motor
- Jacket water heater (3 kW, 120-240 volt)

General

- Vibration damper and guard
- Lifting eyes
- Automatic variable timing, electronic
- Paint - fire pump red

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S•O•S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.