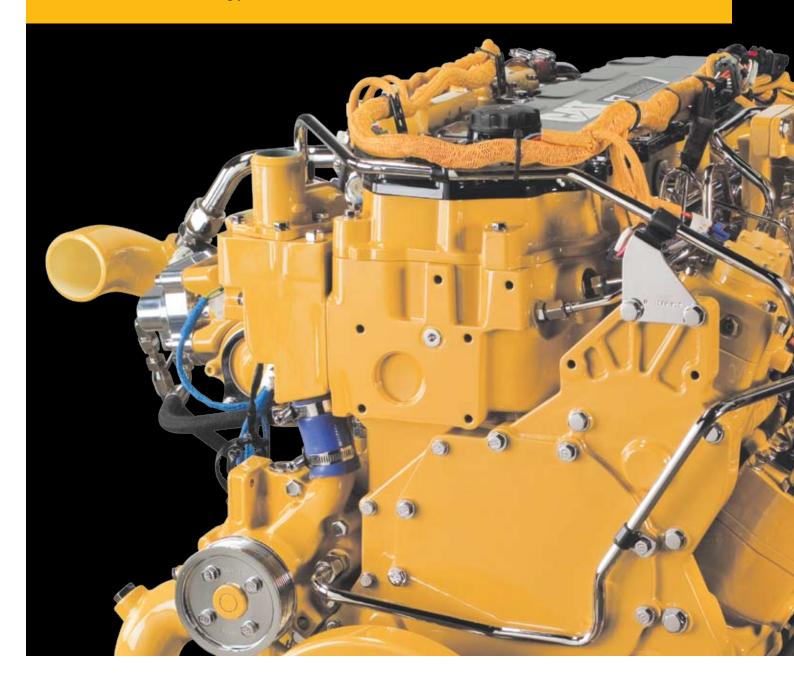
# Cat® C7 for Maximum Mid-Range Versatility

ACERT™ Technology for 2007



**CATERPILLAR®** 

# 210-360 Horsepower

## Reliability

Dealer Repair Frequency statistics show Cat® engines with ACERT<sup>TM</sup> Technology are the most reliable Caterpillar has ever produced.

# **Durability**

The Cat C7 engine has a history of good durability. The 2007 compliant C7 is expected to continue to offer the same durability with a B50 life of 450,000 to 500,000 miles.

# **Fuel Economy**

2007 Cat C7 engines are expected to provide up to a 4% improvement in fuel economy over EPA 2004 compliant engines.

# **Total Owning/Operating Costs**

2007 compliant Cat engines are engineered to offer the same reliability and durability, better fuel economy, and similar maintenance costs as EPA 2004 compliant engines for outstanding overall value.

# **Dealer Support**

Cat sets the industry standard for support with 2,500 authorized North American service locations and a 24/7 call center.



**Cylinders:** In-line 6

**Bore/Stroke:** 4.33 x 5.00 (110 mm x 127 mm)

Displacement: 7.2 L (441 cu in)

Weight: 1425 lb (647 kg)

Truck and Bus Ratings: 210-300 hp @ 2500/2400 rpm

RV and Fire Truck Ratings: 300-360 hp @ 2400 rpm

Torque: 520-925 lb-ft @ 1440 rpm

# Count on the Cat® C7 fo

he Cat® C7 continues to set the standard for versatility and value. Its new Cat Common Rail Fuel System provides greater injection flexibility to comply with tougher 2007 emissions regulations—and increases fuel economy by up to 4%.



**ADEM™ A4 enhanced electronics** — Three times the memory, five times the processing speed of ADEM 2000 technology

Cat Common Rail Fuel System — Engineered and built by Caterpillar for reliability and durability

Variable Nozzle Turbocharger — For optimized air flow, which results in improved engine performance mile after mile

**Front PTO Options** — Makes the C7 a perfect fit for a variety of applications, including construction and utility; pickup and delivery; fire and emergency vehicles; and recreational vehicles

**"Leak-free" technology** — Significantly reduces leaks to cut downtime and improve reliability

**Cat Engine Brake** — Provides lower operating cost, higher productivity, shorter trip times and more braking power

# r Versatility and Value Today

How do Cat® engines with ACERT™ Technology meet tougher 2007 emissions standards while maintaining top performance and excellent fuel economy? With refinements to the same innovative approach proven successful over millions of miles: using more cool, clean air for more efficient combustion.

## **Still a Systems Solution**

The systems solution of ACERT Technology, a proven success, hasn't changed for 2007. Its four basic systems of *Air Management, Precision Combustion, Advanced Electronics* and *Effective Aftertreatment* are still the building blocks for reduced emissions, powerful performance and outstanding fuel economy.

# Precision Combustion Cat Designed Injection Technology Clean Gas Induction Air Management Variable Nozzle Turbocharger ACERT Technology Systems Solution

# Advanced Electronics

Electronic Control Module System Integration

#### **Effective Aftertreatment**

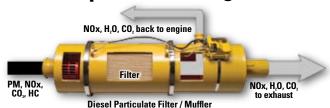
Diesel Particulate Filter Cat Regeneration System

But 2007 emissions regulations require diesels to emit lower levels of oxides of nitrogen (NOx) and particulates. That's why Cat has added two new enhancements: Clean Gas Induction and a Cat Diesel Particulate Filter featuring its own Cat Regeneration System (CRS).

#### **New Clean Gas Induction**

Clean Gas Induction (CGI) is a proprietary ACERT Technology process that draws off a small amount of non-combustible gas after it has passed through the engine's aftertreatment system. The gas is then cooled, blended with more incoming cool, clean air and returned to the combustion chamber. Since it has passed through the diesel particulate filter, most contaminants have been removed before the gas re-enters the intake system.

# The CGI process through the DPF



The CGI process filters and cools exhaust before re-routing it to the engine.

The CGI advantage is clear. It recycles cool, clean air, which is key to good fuel economy, reliability and durability.

#### **New Diesel Particulate Filter**

For 2007, all engines require a diesel particulate filter (DPF) to further reduce emissions of hydrocarbons and other contaminants. But the Cat manufactured DPF is designed for self-regeneration under all conditions. When the electronic control module detects soot buildup, the Cat Regeneration System (CRS) activates. CRS works automatically, using only the precise amount of fuel necessary to oxidize soot. With CRS, no driver action is required for regeneration. Ash that collects in the Cat DPF can be cleared with a special removal tool.

# and Down the Road.

## **Horsepower Ratings for Every Application**

Cat C7 2007 Compliant EPA Ratings			
Advertised Horsepower	Maximum Horsepower	Peak Torque lb-ft	Governed Speed RPM
210	210	520	2500
210	210	620	2500
230	230	560	2500
230	230	620	2500
230	230	660	2400
250	250	660	2400
250	250	800	2400
275	275	800	2400
300(a)	300	860	2400
330(b)	330	860	2400
350(b)	350	860	2400
360(b)	360	925	2400

<sup>(</sup>a) Also available for RV and Fire Truck.

## **Gearing Considerations**

The C7 engine offers a wide range of horsepower ratings, which promotes compatibility with a wide range of transmissions. For best performance, trucks should be geared to achieve the appropriate balance between startability and desired road speed.

The following spec recommendations are for vehicles that are 50,000 lbs. or less GVW or GCW.

- For the best balance of performance and economy, spec axle ratios and tire size to obtain 2000 rpm @ 60 mph (97 km/hr).
- Maximum recommended engine cruise speed is 65 mph (105 km/hr).
- Minimum recommended engine speed is 1800 rpm, typically with a cruise speed of 55 mph (89 km/hr).
- If additional startability or performance is required, spec your truck to cruise at 2200 rpm @ 60 mph.
- To optimize your truck's performance characteristics, the minimum startability requirements are 10% for pickup and delivery, 14% for line haul, 20% for on/off-highway and 25% for off-highway.
- At peak torque rpm in top gear, the recommended gradeability is 1.8% (1.5% minimum). At cruise speed in top gear, 1.0% is the ideal gradeability.

A computerized spec'ing tool called Design Pro 2.0, offered by your Caterpillar® dealer or authorized truck dealer, calculates the effects that various driveline variables such as transmissions, axles and tires have on engine operation. This analysis allows you to verify that your truck's driveline specifications are best suited for your application.

<sup>(</sup>b) RV and Fire Truck ratings only.

# Genuine Network. Genuine Value.



## 24-Hour Coast-to-Coast Support

Count on the Cat® dealer and truck dealer network of more than 2,500 authorized locations for convenient access to genuine Cat parts and service across North America. Our industry-leading support even includes the Caterpillar On-Highway Engine Call Center, where technicians are available 24 hours a day, seven days a week to answer technical questions, direct you to a dealer or help arrange on-the-road assistance. Just dial 1-800-447-4986 or send an email to Call CAT@cat.com.

## **Peace of Mind Mile After Mile**

The standard warranty\* for Cat C7 on-highway engines is 36 months/150,000 miles or 3,600 operating hours.

Extended Service Coverage (ESC)\* is an optional repair cost protection plan for owners of all on-highway trucks powered by Cat truck engines including engines with ACERT Technology. The coverage pays 100% of parts and labor charges for any covered failures caused by defects in materials or workmanship under normal use and service.

\*See your dealer for full details and conditions.

## **Delivering Excellence**

Caterpillar has earned the J.D. Power and Associates award for "Highest in Customer Satisfaction with Vocational Heavy Duty Diesel Engines" six times.

No other engine manufacturer has ever received this satisfaction award — not even once.

Caterpillar C-12 received the highest numerical score in the proprietary J.D. Power and Associates 2000-2003, 2005-2006 Heavy Duty Truck Engine/ Transmission Customer Satisfaction Study. SM 2006 study based on 2,529 total telephone interviews measuring opinions of principal maintainers (owner/operators and fleet managers) of Class 8 heavy duty trucks. Proprietary study results are based on experiences and perceptions of principal maintainers surveyed in April-June 2006. Your experiences may vary. Visit jdpower.com



