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## **Dodge Introduces Cleaner, Quieter and More Powerful 6.7-liter Cummins Turbo-Diesel Engine at State Fair of Texas**

Engine Available in January on New 2007 Dodge Ram 2500 / 3500 Models

- Increased output with 350 horsepower and 650 lb.ft. of torque
- New, fuel-savings six-speed automatic transmission features best-in-class gear-ratio spread; standard Electronic Range Select (ERS)
- First-ever integrated exhaust brake available direct from factory
- 50-percent quieter engine; 3DbA reduction in cabin sound levels
- Life-to-major overhaul intervals of 350,000 miles, providing more than a 100,000-mile advantage over the competition

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The war among America's diesel-powered pickup trucks rumbles into a new round with Dodge announcing more horsepower, torque, refinement and a host of advanced towing features.

Today at the State Fair of Texas, Dodge will reveal more details about the 2007 Dodge Ram Heavy Duty's new 6.7-liter Cummins turbo-diesel engine, which replaces the current 5.9-liter engine. Producing 350 horsepower at 3,000 rpm and 650 lb.-ft. of torque at 1,500 rpm, the 6.7-liter engine features an all-new six-speed automatic transmission that delivers improved fuel economy and performance.

The engine will be available in 2007 Dodge Ram 2500 and 3500 models beginning January 2007. A commercial-use 6.7-liter Cummins turbo-diesel engine was introduced in early 2006 with the all-new Dodge Ram Chassis Cab, which is available now.

"The 2007 Dodge Ram Heavy Duty's new 6.7-liter Cummins turbo-diesel engine sets the performance standard with an outstanding combination of horsepower, torque, refinement and emissions-reducing technology," said Scott Kunselman, Chief Engineer – Dodge Ram. "Providing superior trailer towing, acceleration, throttle response and drivability, the new 6.7-liter engine is not only more powerful, it's also cleaner with B5 biodiesel compatibility and a reduction in particulates and nitrogen oxide (NOx) that comply with the 50-state 2007 heavy-duty emission standards."

Based on the proven DNA of the 5.9-liter Cummins turbo-diesel engine, the new 6.7-liter engine is 50-percent quieter, while featuring a 107mm bore by 124mm stroke (versus 102mm bore by 120mm stroke for the 5.9-liter engine). The new engine retains more than 40 percent of its components from the 5.9-liter engine and shares more than 80 percent of its components with the new Dodge Ram chassis cab.

The high-performance 408-cubic-inch inline-six intercooled turbo-diesel is clean and quiet, and meets all 2007 U.S. federal and state emission requirements, which require a 90-percent reduction in particulate matter and 50-percent reduction in NOx.

Offered for the first time in Dodge Ram Heavy Duty trucks are features including an integrated exhaust brake, standard Electronic Range Select (ERS) and "Smart" tow/haul controls that provide customers flexibility and increased safety when towing heavy loads.

### **Improved Performance, Durability and Emissions**

Dodge Ram Heavy Duty's new 6.7-liter turbo-diesel engine features improved performance, durability and

significantly reduced emissions.

Enhancing diesel-powered performance of 2007 Dodge Ram Heavy Duty trucks is an electronically-controlled Variable Geometry Turbocharger (VGT), which precisely matches boost pressure with the engine's needs. The 6.7-liter engine's VGT utilizes 16 fixed vanes and a sliding yoke, providing variable geometry, as well as an electric valve. The VGT produces optimum combustion control, reduced emissions and a quiet and lag-free throttle response.

Decreasing NOx emissions is a next-generation cooled Exhaust Gas Recirculation (EGR) system. The Cummins 6.7-liter engine's EGR system is water cooled, with the air reintroduced into the intake system, keeping turbo and intercooler components clean, which increases the engine's durability.

Within the 6.7-liter Dodge Ram Heavy Duty exhaust system, reducing particulate matter is achieved through a self-cleaning Diesel Particulate Filter (DPF). The muffler is isolated from the emissions control system, therefore customers may remove the muffler without violating emissions compliance. The emissions system is designed for a government-certified 120,000 miles.

As durable as it is powerful, the Cummins 6.7-liter turbo-diesel engine has life-to-major overhaul intervals of 350,000 miles, providing more than a 100,000-mile advantage over the competition.

### **Quiet and Refined Driving Experience**

In addition to improving emissions and durability, occupant comfort is central to the 2007 Dodge Ram Heavy Duty. The new 6.7-liter turbo-diesel engine incorporates several new features that contribute to a 50-percent quieter engine and a 3 DbA reduction in cabin sound levels, increasing the vehicle's overall refinement.

New engine mounts, a constrained-layered oil pan, intake silencer and engine-block shield create a quiet cabin environment inside the 2007 Dodge Ram Heavy Duty. In addition, an over-running alternator pulley eliminates sounds generated from the diesel-engine shut down process, and machined crankshaft counter weights significantly contribute to quiet acceleration.

### **First-ever Optional Exhaust Brake**

For the first time in a Dodge Ram Heavy Duty truck, an integrated exhaust brake is available direct from the factory. Utilizing the 6.7-liter Cummins turbo-diesel engine's new turbocharger, the exhaust brake significantly improves control when towing heavy applications, such as pulling RV fifth wheels and horse trailers, providing added control and brake savings by transforming horsepower into braking power.

"Towing and hauling capability is critical for our customers, as more than 90 percent of Dodge Ram Heavy Duty customers tow with their truck," said Kunselman.

Benefits of the exhaust brake include:

- Increased vehicle control to provide the owner additional peace of mind when towing
- Enhanced safety by reducing overheating and fading of brakes on downhill grades
- Lower cost of ownership, extending brake life by as much as three times
- Capability for faster cold-weather cab warming

The 2007 Dodge Ram Heavy Duty's 6.7-liter Cummins turbo-diesel engine's VGT is capable of creating the maximum exhaust restriction through a wide range of operating speeds, improving braking performance at low and high engine speeds. Testing has shown more than a 30 percent improvement in retarding torque at 2000 rpm compared with traditional brake exhaust methods.

### **Six-speed Automatic Transmission with Electronic Range Select (ERS)**

Mated to the 6.7-liter Cummins turbo-diesel engine is a new six-speed 68RFE automatic transmission, which delivers optimum fuel economy and performance. A new Electronic Range Select (ERS) system is integrated with the transmission, enabling customers to select desired gears that match driving conditions.

The new six-speed automatic transmission features a best-in-class gear ratio spread of 5.16:1, allowing for superior launch capability. The sixth gear, also known as the second overdrive gear, provides an extremely low rpm at highway speeds, improving Dodge Ram Heavy Duty's fuel economy and passenger comfort. In addition, an added compounder and two clutches provide optimal shift quality, improved quietness and durability.

The transmission's new ERS system complements the 2007 Dodge Ram Heavy Duty's tow/haul mode, allowing for driver-actuated gear selection with a shifter-mounted switch. ERS provides greater control in unique driving conditions, such as towing heavy loads on severe inclines. The system includes electronic safeguards to prevent shifting that could cause engine damage.

### **Towing/Hauling**

In addition to more horsepower and torque, Dodge Ram Heavy Duty boasts towing capability of 16,400 lbs., a payload of 5,020 lbs. and Gross Combined Weight Rating (GCWR) and Gross Vehicle Weight Rating (GVWR) of 23,000 lbs. and 12,200 lbs., respectively.

The 2007 Dodge Ram Heavy Duty provides a combination of standard and optional features that make towing easier, such as a Class IV hitch receiver with a seven-circuit wiring harness, 750-amp battery, heavy-duty engine cooling and an auxiliary transmission oil cooler.

Distinctive trailer-tow mirrors featured on Dodge Ram Heavy Duty trucks offer a large rear-viewing area that may be customized to drivers' needs and preferences. Mirrors provide two views on both sides: close-up and wide-out. In addition, mirrors flip up 90 degrees for viewing beyond wide trailers.

### **Chrysler Group Diesel-powered Models**

In the United States, current diesel-powered models include the Dodge Ram Heavy Duty, Dodge Sprinter and the new 3.0-liter V6 diesel Jeep Grand Cherokee, which hits the market in early 2007. In 1988, the Chrysler Group made a significant impact with the introduction of the Cummins 5.9-liter I-6 in heavy duty applications. Customer recognition is still exceptional and will continue with the new Cummins 6.7-liter turbo diesel.

In Europe, diesel-powered models account for more than half of Chrysler Group sales. The Chrysler 300C, Chrysler PT Cruiser and Dodge Caravan models continue to be popular.

Advanced diesel technology is part of the Chrysler Group's advanced propulsion technology umbrella, which also includes efficient gasoline engines, hybrids, flex-fuel vehicles and biodiesel capability.

### **Dodge Brand**

With a U.S. market share of 7 percent, Dodge is the Chrysler Group's best-selling brand and the fifth largest nameplate in the U.S. automotive market. In 2005, Dodge sold more than 1.4 million vehicles in the global market. Dodge continues to lead the minivan market with a 19 percent market share in the U.S. In the highly competitive truck market, Dodge has a 16 percent market share. This year, Dodge enters key European volume segments.

### **Cummins**

Cummins Inc., a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service engines and related technologies, including fuel systems, controls, air handling, filtration, emission solutions, and electrical power generation systems. Headquartered in Columbus, Indiana, Cummins serves customers in more than 160 countries through its network of 550 company-owned and independent distributor facilities and more than 5,000 dealer locations. Cummins produces the diesel for the Dodge Ram 2500 and 3500 series.

### **2007 Dodge Ram Heavy Duty Cummins 6.7-liter Turbo-diesel Engine Details**

#### **Engine**

6.7L 107mm bore x 124mm stroke  
High swirl (2.4 DCS) combustion system  
17.2:1 Compression ratio  
Machined crankshaft counter weights  
Viscous vibration damper

#### **Air Handling**

VGT – sliding nozzle (16 vane to eliminate turbine blade pass whistle)  
Cooled EGR with cold-side EGR valve  
Air inlet throttle  
EGR cooler bypass

CCV with coalescing filter

### **Oil system**

Tested with low ash oil API CJ4 (PC10)  
Drain interval – 7500 miles  
Total capacity – 13 qts on initial fill  
Sump capacity – 9 qts low, 11 qts high  
Typical oil change capacity – 12 qts  
Dump to sump to provide oil pressure quicker  
Constrained layer oil pan to reduce transmitted noise

### **Fuel system**

Bosch 3rd generation common rail system  
7 micron spin on filter  
Tested with ultra low sulfur fuel – 15 ppm  
Approved for bio-diesel fuel

### **Cooling system**

Molded composite impeller for improved coolant flow

### **Electronics**

CM2100 ECM  
Double the CPU processing speed (40 to 80 MHz)  
40% increase in memory

### **NVH**

Constrained layer oil pan  
Over running alternator pulley (eliminate shut down squeal)  
Intake silencer  
Machined crankshaft counter weights  
Combustion system (multi injection events)  
Block shields  
Pulleys modified to reduce 'speaker' effect  
Stuffer between transmission adapter and pan  
Viscous vibration damper

### **Specifications**

#### **ENGINE: 6.7-LITER High Output CUMMINS TURBO DIESEL I-6**

Availability \_\_\_\_\_ Opt.—2500, 3500; available Jan. 1, 2007  
Type and Description \_\_\_\_\_ Six-cylinder, inline, liquid-cooled, turbocharged, intercooled  
Displacement \_\_\_\_\_ 408 cu. in. (6690 cu. cm)  
Bore x Stroke \_\_\_\_\_ 4.21 x 4.88 (107 x 124)  
Valve System \_\_\_\_\_ OHV, 24 valves, solid lifters  
Fuel Injection \_\_\_\_\_ Electronic high-pressure common rail  
Construction \_\_\_\_\_ Cast-iron block and head  
Compression Ratio \_\_\_\_\_ 17.3:1  
Power (SAE net) \_\_\_\_\_ 350 bhp (261 kW) @ 3,000 rpm  
Torque (SAE net) \_\_\_\_\_ 650 lb.-ft. (881 N•m) @ 1,500 rpm w/6-spd. automatic; 610 lb.-ft. (827 N•m) @ 1,400 rpm w/6-spd. manual  
Maximum High-idle Engine Speed \_\_\_\_\_ 3,500 rpm  
Fuel Requirement \_\_\_\_\_ Ultra Low Sulfur Diesel  
Oil Capacity \_\_\_\_\_ 12 qt. (11.3L) with filter  
Coolant Capacity \_\_\_\_\_ 29.5 qt. (28.0L)  
Emission Controls \_\_\_\_\_ Exhaust after-treatment systems and internal engine features

#### **TRANSMISSION: 68RFE Orion—AUTOMATIC, SIX-SPEED**

Availability\_\_\_\_\_ Opt. with 6.7L turbo diesel engine; available Jan. 1, 2007

Description\_\_\_\_\_ Three planetary gear sets, one overrunning clutch, full electronic control, electronically controlled converter clutch

Gear Ratios

\_\_\_ 1st\_\_\_\_\_ 3.231

\_\_\_ 2nd\_\_\_\_\_ 1.837

\_\_\_ 3rd\_\_\_\_\_ 1.410

\_\_\_ 4th\_\_\_\_\_ 1.0

\_\_\_ 5<sup>th</sup>\_\_\_\_\_ 0.816

\_\_\_ 6<sup>th</sup>\_\_\_\_\_ 0.625

\_\_\_ Reverse\_\_\_\_\_ 4.444

Overall Top Gear Ratio\_\_\_\_\_ 2.33 with 3.73 axle ratio; 2.56 with 4.10 axle ratio

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