

Contact: Kristin Starnes
Kathy Graham

Jeep® Compass Powertrain and Chassis Offer World-class Performance, Capability and Fuel Economy

- *Freedom Drive I* 4x4 system provides confidence in all weather driving conditions
- 2.4-liter World Engine targeted to improve fuel efficiency by 5 percent compared with other four-cylinder engines
- Second-generation continuously variable transaxle (CVT2) gives customers improved performance and fuel economy
- 2.0-liter turbo diesel with 2000-bar direct injection delivers excellent performance and fuel economy for markets outside of North America

June 15, 2006, Auburn Hills, Mich. -

The all-new 2007 Jeep® Compass gives the Jeep brand a leg up in the competitive compact sport-utility vehicle (SUV) segment, providing a fuel-efficient, capable and fun-to-drive vehicle that also offers Jeep 4x4 capability. The Compass is the first Jeep vehicle to offer 30 miles per gallon on the highway — fuel-economy numbers not often found on an SUV. Compass also is the first Jeep vehicle available with both a standard front-wheel-drive system and an available four-wheel-drive system called *Freedom Drive I*.

"We've engineered Jeep Compass to give customers the best of both worlds — excellent fuel efficiency combined with the capability and functionality of an SUV," said Larry Lyons, Vice President – Front-wheel-drive Product Team. "Compass' front-wheel-drive configuration provides the fuel efficiency of a compact car or small truck, while its available *Freedom Drive I* four-wheel-drive system provides true Jeep 4x4 capability."

Freedom Drive I is an available full-time, active four-wheel-drive system with lock mode designed to give drivers year-round assurance. This active four-wheel-drive system is recommended for daily use, including driving in snow and rain. *Freedom Drive I* also features a lockable center coupling, giving drivers the ability to put Jeep Compass in four-wheel-drive lock mode to handle deeper snow, sand and other low-traction surfaces.

New Technology Creates Jeep 4x4 Capability

An electronically controlled coupling (ECC), which is attached to the Compass' rear differential, is the heart of the Jeep Compass's *Freedom Drive I* four-wheel-drive system. Compass' ECC system is easier to calibrate, more flexible, more precise and lighter than viscous-coupling or gerotor systems.

The ECC transmits torque to the rear wheels through a two-stage clutch system. An electromagnet powered by current from the electronic control module operates a low-torque clutch. A cam-and-ball mechanism amplifies the force of the low-torque clutch, applying the main clutch that transmits torque to the rear wheels. The control module calculates vehicle speed, turning radius and wheel slip and transfers torque based on these conditions. The unit seamlessly interacts with the Electronic Stability Program (ESP), anti-lock brakes (ABS) and Brake Traction Control systems to ensure torque is transferred as needed, providing the best handling and traction characteristics.

Unlike other on-demand four-wheel-drive systems that rely on pumps or viscous fluids to transfer torque, the Jeep Compass' four-wheel-drive system requires no front-to-rear slippage for activation. Compass' state-of-the-art electronic four-wheel-drive system anticipates the need for added traction and responds to wheel-slippage by automatically transferring power to the rear wheels. The system contributes to good fuel economy by operating only when needed, minimizing power-robbing friction and inertia.

To activate the Jeep Compass' lock mode, the driver pulls up on the chrome T-handle. This lock mode ensures that

the electronically controlled coupling sends the maximum amount of torque to the rear axle (up to 60 percent) for improved traction.

Compass' Broad Safety Scope Provides Confidence in all Driving Conditions

Jeep Compass also demonstrates that capability and safety go hand in hand. Compass features many standard safety features, including:

- Side-curtain air bags
- ESP
- Brake Assist
- Electronic Roll Mitigation
- ABS with rough-road detection
- Brake Traction Control

Side-curtain air bags extend protection to all outboard front- and rear-seat passengers. Each side-curtain air bag has its own impact sensor that autonomously triggers the air bag where the side impact occurs.

ESP helps the driver maintain stability and does everything within the limits of available traction to keep the Jeep Compass on course. ESP also helps maintain forward traction by constantly monitoring wheel speed sensor signals. If there is any indication of slippage, ESP engages, applying the brakes and, if necessary, closing the throttle as a way to maintain traction.

Hydraulic Brake Assist is bundled with ESP on the Jeep Compass. A pressure sensor in the ESP hydraulic module determines when the driver is making an emergency stop by measuring the rate at which the driver applies the brake. If the driver slams on the brakes, the application causes the ESP system to apply maximum hydraulic pressure to the brakes.

Jeep Compass also features standard Electronic Roll Mitigation, which uses the input from the ESP sensors to anticipate if Compass is at risk of entering a potential roll situation, then reacts immediately, applying the brakes individually and modulating throttle position as needed to mitigate the roll situation.

Anti-lock brakes with Brake Traction Control also are standard on Jeep Compass. Compass' standard four-wheel anti-lock brakes provide an excellent 60–0 mph dry pavement stopping distance of 127 ft.

Jeep Compass features standard 17-inch aluminum wheels and all-season touring tires. Available all-terrain outlined white letter (OWL) tires also are available and contribute to Compass' 8.4 inches of ground clearance, a 20.6-degree approach angle, 32-degree departure angle and 21-degree breakover angle. The Jeep Compass Limited model features standard 18-inch aluminum wheels and all-season performance tires. An 18-inch aluminum chrome-clad wheel also is available as an option on the Compass Limited.

World-class Engineering

The 2007 Jeep Compass' powertrain delivers world-class performance, fuel economy and refinement.

Compass features a standard 172 horsepower 2.4-liter World Engine with dual Variable Valve Timing (VVT), which helps optimize the torque curve at all speeds. This World Engine produces more power, better fuel economy and a smoother, quieter ride than engines without dual VVT. Dual VVT is a technology typically not available on vehicles sold in the United States in the Compass' price class.

Jeep Compass also features a standard five-speed manual transaxle and an available Continuously Variable Transaxle (CVT2). CVT2 is a second-generation CVT that Chrysler Group engineers calibrated for pleasing engine response, precise ratio control and an available AutoStick® feature on the Compass Limited model that allows for manual control with the simulation of six stepped gears. CVT2 contributes to a fuel economy improvement of 6 – 8 percent compared with a traditional four-speed automatic transaxle.

A 2.0-liter turbo diesel engine will be available in key diesel markets outside North America. Providing very competitive levels of power, torque and fuel efficiency, the diesel engine is paired with a six-speed manual transaxle.

World-class Engine Performance

Fuel economy is a key factor in the four-cylinder gasoline engine market. The Chrysler Group World Engine family, which is based on a joint venture between DaimlerChrysler Corp., Hyundai Motor Co. and Mitsubishi Motor Co., is

targeted to improve fuel efficiency by 5 percent compared with the engines they replace — rivaling the best four-cylinder engines in the world.

The 2007 Jeep Compass is available with the 2.4-liter World Engine. Performance objectives are targeted to match the best in the segment, and the 2.4-liter engine provides 172 horsepower (128 kW) and 165 lb.-ft. (223 N•m) of torque.

"The World Engine program allows us to build premium features into the Jeep Compass' power plant without a premium price," Lyons said. "We set high targets and achieved those targets to meet customers' high demands for fuel economy, refinement, durability, quality and performance."

Chrysler Group brought its engineering expertise to the World Engine program in the areas of cylinder port and intake manifold design using advanced Computational Fluid Dynamics tools. Chrysler Group engineers led the development work on dual Variable Valve Timing (VVT), as well as an integrated 2:1 oil pump/balance shaft assembly. Chrysler Group engineers also refined the engines for exceptional smoothness and sound quality, resulting in a pleasant engine feel and sound for the customer.

2.0-liter Turbo Diesel

Nearly half of all passenger vehicles sold in Europe are powered by diesel engines, and approximately 65 percent of the Chrysler Group vehicles sold in Europe are diesel powered. For Europe and other key diesel markets, the all-new 2007 Jeep Compass also is available with an advanced 2.0-liter turbo diesel engine.

"Advanced diesel engine technology is readily available and can dramatically reduce the amount of crude oil consumed worldwide," Lyons added. "European customers especially want modern diesel engines with outstanding performance and efficiency, so from the beginning of the program, our engineers included a diesel engine as part of Jeep Compass' powertrain plan."

The 2.0-liter engine is a state-of-the-art, direct-injection turbo diesel power plant with high-pressure fuel injection, a variable geometry turbocharger and four valves per cylinder. The injectors are electronically controlled, leading to high power and torque and optimal fuel efficiency. The turbo diesel engine is expected to position the Jeep Compass sold in Europe among the best in its class for power, torque, acceleration and towing capacity. Maximum power is estimated at 140 hp DIN (103 kW), and peak torque is estimated at 229 lb.-ft. (310 N•m).

New-generation Continuously Variable Transaxle Improves Fuel Economy

The all-new Jeep Compass uses the newest generation of continuously variable transaxles, CVT2, offering several advantages compared with previous CVTs.

The Jeep Compass' CVT2 continuously varies the transaxle ratio, providing an infinite number of gear ratios and allowing the engine to stay in its most efficient operating range. The transaxle uses two "V" pulleys and a steel push belt to vary the input speed to output speed ratio instead of traditional discrete gear ratios activated by clutches or bands.

Through the use of electronic controls, Jeep Compass' CVT2 provides a familiar engine feel while delivering improved fuel economy. For example, drivers will experience an appropriate rise in engine RPM during acceleration rather than an instant rise to the maximum engine RPM.

"Our engineers have calibrated Compass' CVT2 to provide a throttle response that feels very natural to the driver," said Lyons. "We've also created an available AutoStick feature that gives the driver manual control and the feeling of six stepped gears," Lyons added.

Chrysler Group's CVT2 contributes a 6 – 8 percent improvement in fuel economy compared with a traditional four-speed automatic transaxle. Eliminating upshifts allows the transaxle to engage the torque converter clutch almost immediately when accelerating and to keep it engaged throughout speed changes. This eliminates torque converter slippage common in stepped transaxles and results in more efficient operation, especially during city driving.

The CVT2 also improves vehicle performance compared with a traditional automatic transaxle. Optimized gear ratios, especially in the 30 – 60 mph range, improve Compass' passing maneuvers and contribute to a responsive feel, and ultimate smoothness.

-###-

Additional information and news from Stellantis are available at: <https://media.stellantisnorthamerica.com>