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## All-new Jeep® Grand Cherokee Now Powered by New 3.0-liter Turbo Diesel Engine

- **New 3.0-liter turbo, direct-injection V-6 diesel engine now available for the all-new Jeep® Grand Cherokee**
- **Fitted with MultiJet II technology developed by Fiat Powertrain**
- **New engine delivers more power and torque with improved fuel efficiency and lower emissions**
- **New 3.0-liter turbo diesel will arrive to European markets by the end of the first half of 2011**
- **Diesel engine joins the 3.6-liter Pentastar V-6 and 5.7-liter MDS V-8 petrol engines**
- **Laredo and Limited versions now available in Europe**

February 20, 2011, Auburn Hills, Mich. -

At the 2011 Geneva Motor Show, the all-new Jeep® Grand Cherokee will debut a new, optional 3.0-liter turbo diesel engine available for Europe and other diesel markets. The new engine is more powerful, more fuel efficient and produces lower emissions than its predecessor.

Built by VM Motori and developed together with Fiat Powertrain, a company of Fiat S.p.a., the new 3.0-liter turbo diesel engine produces maximum horsepower of 177 kW (241 hp DIN) at 4,000 rpm and torque of 550 N•m (406 lb-ft) at 1,800-2,800 rpm. This translates to 10 percent more power and eight percent more torque than the engine it replaces.

Even with its improved performance, fuel economy for the new 3.0-liter turbo diesel engine is 8.3 L/100km on the combined cycle, an improvement of 19 percent over the prior diesel engine. $CO_2$ emissions (combined cycle) are also reduced by 20 percent, now at 218 g/km.

The V-6 turbo diesel engine is fitted with new-generation, 1,800-bar injectors with new MultiJet II technology, developed and patented by Fiat Powertrain and which made its debut in 2009 on the 1.3-liter diesel engine equipped on the Punto Evo.

**Engine Block Structure**

The new 3.0-liter turbo diesel engine features a compressed graphite iron, 60-degree block with aluminum cylinder heads and a two-piece structural aluminum oil pan. Bore is 83 mm (3.27 in) and stroke is 92 mm (3.62 in) for a total displacement of 2987 $cm^3$ (182 $in^3$). Bore spacing is 96 mm (3.78 in).

The engine is compact and lightweight, with overall dimensions of 695 mm (27.36 in) in length, 729 mm (28.7 in) in width and 697.5 mm (27.46 in) in height. Weight of the fully dressed new engine is 230 kg (507 lbs).

The engine block features a crankcase architecture with stiffened construction, including a bedplate that provides a rigid and stiff carrier for the crankshaft. This in turn helps reduce overall noise from the lower reciprocating assembly and contributes to significant improvements in overall noise, vibration and harshness.

Adding to the structural rigidity of the block, the two-piece aluminum oil pan has been designed to provide strength and contribute to the quietness of the engine. The lower pan has been reinforced for off-road use. Crankcase capacity is 7.7 L (2 gal).

Cylinder heads are constructed of aluminum and feature a chain-driven, dual overhead-camshaft design with four valves per cylinder. Intake valves measure 28 mm (1.1 in), and exhaust valves are 24.5 mm (0.96 in) in diameter. Combustion-chamber volume is 24.68 $cm^3$ (1.51 $in^3$).

A forged-steel crankshaft is supported by four main bearing journals fitted with four-bolt main bearing caps incorporated into the bedplate. Externally balanced, the crankshaft measures 442.2 mm (17.41 in), reducing the overall packaging requirements of the engine. Connecting rods, with an overall length of 162.9 mm (6.41 in), are constructed of cast iron.

Lightweight, cast-aluminum pistons are redesigned to provide minimal friction. The compression ratio of the new diesel engine is now 16.5:1, reduced from 18.1:1 on the previous model, contributing to cleaner combustion and providing more power.

All main bearings are a "lead free" design for reduced environmental impact during construction and later recycling of the engine.

**Engine Performance Features**

The induction system includes swirl control to optimize combustion. Fitted between the intake system and the combustion chamber, the swirl control effectively provides an ideal air/fuel mixture at all levels of engine speed.

Precise fuel delivery is through a 1,800-bar common-rail fuel-injection system. Thanks to the new MultiJet II technology, which makes use of a special balanced solenoid valve, the new injector is capable of making up to eight injections per cycle with the possibility of managing the two main injections in a single modular profile (IRS - Injection Rate Shaping). This guarantees a reduction in consumption and polluting emissions of approximately 2 percent compared to a traditional injector and ensures a drastic reduction in noise levels.

The new 3.0-liter diesel engine utilizes a single Garrett VGT 2056 turbocharger with variable turbine geometry. Compact and lightweight, the turbocharger provides near-instant response and includes an air-to-air intercooler.

**Fuel Economy and Emissions**

Fuel economy for the Jeep Grand Cherokee with the 3.0-liter turbo diesel engine is rated at 10.3 L/100 km on the urban cycle and 7.2 L/100 km on the extra-urban cycle. For the combined cycle, the fuel economy is rated at 8.3 L/100 km.

The engine is designed to run on EN590 ultra-low-sulfur diesel fuel.

For this engine, cast-iron exhaust manifolds are utilized. Additional emissions controls include a close-coupled diesel oxidation catalyst and standard diesel particulate filter. Euro 5 emissions are met through an exhaust-gas recirculation (EGR) system that includes an EGR valve with DC motor and a high-performance EGR cooler with bypass valve.

$CO_2$ emissions are reduced to 270 g/km for the urban cycle and 188 g/km for the extra-urban cycle. Combined-cycle $CO_2$ emissions are now 218 g/km.

**Lineup**

Jeep Grand Cherokee will be now offered in Europe in Laredo and Limited trim lines in addition to the Overland version. The Laredo and Limited trim lines will be available with the 3.6-liter V-6 Pentastar engine and new 3.0-liter turbo diesel, while Overland will be available for the total engine lineup.

The 3.0-liter turbo diesel engine for the new-generation Jeep Grand Cherokee will be offered in European markets also as a low-output version, with 140 kW (190 hp DIN) of power at 4,000 rpm and 440 N•m (324 lb-ft) of torque across 1,600-2,800 rpm. The low-output version of the turbo diesel engine will be standard on Laredo models (optional on Limited). This will allow Grand Cherokee to meet a wider potential market in Europe.

The new diesel engine will be available in Jeep showrooms by the end of the first half of the year and will join two petrol engines to round out the powertrain lineup.

The all-new Jeep Grand Cherokee features the first application of the all-new 3.6-liter Pentastar V-6 petrol engine. This V-6 engine with variable valve timing (VVT) delivers 210 kW (286 hp DIN) of power and 347 N•m (256 lb-ft) of torque.

The Grand Cherokee is also available with the legendary 5.7-liter V-8 petrol engine. Also with VVT, this powerful engine delivers 259 kW (352 hp DIN) of power and 520 N•m (384 lb-ft) of torque. The engine's Multi-displacement System (MDS) helps manage fuel efficiency and can cut fuel delivery to up to four cylinders under certain driving conditions.

**All-new Jeep Grand Cherokee**

Nearly two decades ago, Jeep reinvented the premium sport-utility vehicle (SUV) segment with the introduction of the Jeep Grand Cherokee. More than 4 million sales later, Jeep improves the formula and provides the ideal balance between iconic 4x4 capability and on-road refinement with the all-new Grand Cherokee.

The all-new Grand Cherokee delivers premium on-road performance while maintaining the Jeep brand's legendary four-wheel-drive, torque-on-demand two-speed transfer case and unsurpassed towing capability. It also offers true American craftsmanship, a sleek new exterior design, a world-class interior cabin, improved fuel economy and a host of safety and technology features.

The all-new Quadra-Lift™ air suspension system is a first for Jeep, providing a total of 105 mm (4.1 in) of lift span. Quadra-Lift features five height settings and operates automatically or may be controlled manually via console controls. In addition, the all-new Selec-Terrain™ traction control system allows the driver to choose from five driving conditions in order to achieve the best driving experience on all terrains. New front and rear independent suspension systems deliver premium on-road handling and comfort.

**Jeep Brand**

Celebrating its 70th anniversary in 2011, Jeep is the authentic SUV with class-leading capability, craftsmanship and versatility for people who seek extraordinary journeys. The Jeep brand delivers an open invitation to live life to the fullest by offering a full line of vehicles that continue to provide owners with a sense of security to handle any journey with confidence.

The Jeep vehicle lineup consists of the Wrangler, Wrangler Unlimited, Grand Cherokee, Cherokee, Compass and Patriot. To meet consumer demand around the world, all six Jeep models are sold outside North America - and all are available in right-hand drive versions and with petrol and diesel powertrain options. Chrysler Group LLC sells and services vehicles in approximately 120 countries around the world.

For the year 2010, Jeep sales globally were up 24 percent versus 2009. Jeep was the top-selling brand and currently comprises 50 percent of Chrysler Group's international sales.

For more information about the Jeep brand, please visit the European media site at www.jeeppress-europe.com or the Chrysler Group media site at www.media.chrysler.com.

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