



Media Information  
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## **High-Performance BMW Diesels to debut in Canada** BMW 335d and X5 xDrive35d to join the BMW lineup in fall of 2008

**Whitby.** BMW Group Canada is pleased to announce today that two new BMW high-performance diesel models will expand the BMW lineup this fall.

BMW 335d and X5 xDrive35d models will introduce BMW's new **Advanced Diesel with BluePerformance** to Canada in the form of a 3.0-litre straight-six diesel engine with Variable Twin Turbo Technology and Selective Catalytic Reduction (SCR) combustion management system with urea injection.

With a maximum output of 265 hp and peak torque of an astonishing 425 lb.-ft., the 3.0-liter six with Advanced Diesel with BluePerformance will not only provide sports-car-like acceleration and driveability, but offer up a whole new level of fuel efficiency and emission reduction in both models.

Preliminary performance figures (based on provisional U.S. figures) for the BMW 335d indicate a potent acceleration capability of 6.2 seconds to achieve 0-100 km/h, nearly matching the gasoline-engined BMW 335i figure of 5.7 seconds. The tenacious performance of the BMW 335d is complemented by an unprecedented fuel economy rating (also based on provisional U.S. figures) of 10.2/7.2 litres per 100 km (city/highway), an advantage of 35.3% and 26.9% (city/highway), respectively, over the gasoline engined variant.

Parallel preliminary acceleration figures for the BMW X5 xDrive35d show a 0-100 km/h time of 7.2 seconds, nipping the BMW X5 3.0si's gasoline-engined stablemate's 0-100 km/h time by over a full second. This exhilarating diesel SAV performance is accompanied by a particularly thrifty fuel consumption rating (based on provisional U.S. figures) of 12.4/9.4 litres per 100 km (city/highway) an improvement of some 26.7% and 19.0%, respectively, over the gasoline-engined X5 3.0si.

Canadian versions of the BMW 335d and X5 xDrive35d are expected to achieve similar performance and fuel economy ratings as their U.S. counterparts.

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Use of SCR technology to reduce nitrogen oxides (NOX) ensures full compliance with the Canadian emission standards along with those of California and other US states, where the BMW Advanced Diesel with BluePerformance will be introduced as a so-called 50-state model (BIN5).

**The world's most sporting straight-six diesel**

BMW's 3.0-litre straight-six diesel engine with Variable Twin T turbo has won the International Engine of the Year Award several times, over and above other prizes and acknowledgements. The engine is featured in a broad spectrum of exciting European BMW models and is now continuing its global story of success as the BMW Advanced Diesel with BluePerformance.

The now well-recognized Variable Twin Turbo diesel utilizes a small, low-inertia turbocharger deploying at low engine speeds, working in combination with a second, larger turbocharger, kicking in at higher engine speeds. Masterminded by a high-performance electronic control unit, the twin turbos precipitate a linear, lag-free delivery of torque, spooling up to the maximum of 425 lb-ft at just 1,750 rpm.

Further technical highlights are an aluminum crankcase and third-generation common-rail direct fuel injection, with fuel being delivered into the combustion chambers by means of piezo-injectors for particularly precise fuel metering with the smallest volume of pre-injection. This, in turn, ensures a particularly clean injection process with optimised fuel consumption and emission figures as well as further enhancement of running smoothness.

**SCR catalyst with AdBlue injection.**

To optimise emission management, Advanced Diesel with BluePerformance incorporates an oxidation catalyst placed close to the engine, a diesel particulate filter housed in the same unit, and an SCR catalyst with the urea injection. In addition to filtering out even the smallest particles from the flow of exhaust gases, this combination ensures effective reduction of nitrogen oxides (NOX) by way of a chemical reaction within the exhaust system initiated by the injection of a small quantity of urea referred to as AdBlue. The ammonia (NH<sub>3</sub>) generated in this process within the SCR catalyst subsequently converts the nitrogen oxides (NO and, respectively, NO<sub>2</sub>) in the exhaust gas into environmentally compatible nitrogen (N<sub>2</sub>) and vapour (H<sub>2</sub>O).



In integrating AdBlue technology, BMW has developed a two-tank system ensuring convenient use of this new technology – the process completely transparent to the driver. The required quantity of AdBlue is withdrawn via pump from a 6-litre “active” tank which is also variably heated, along with delivery lines, to ensure low-temperature efficiency.

The active tank is connected to a second “passive” reservoir. With its additional capacity of approximately 17 litres, the system capacity and refill range has been engineered to coincide with engine oil change intervals typical of normal driving – precluding, in most cases, any special service requirements and optimizing customer convenience.

From the active tank, AdBlue is delivered to the dosing valve and atomised into the exhaust emissions. Consistent distribution of AdBlue within the flow of exhaust emissions is ensured by the SCR mixer, the ammonia generated in this way in the hot emission gas subsequently acting in the SCR catalyst as a reduction agent and converting environmentally harmful nitrogen oxides into nitrogen and vapour in a process referred to as selective catalytic reaction.

The introduction of Advanced Diesel with BlueTechnology in Canada represents another important milestone in the ever-expanding strategy of BMW Efficient Dynamics to ensure industry leadership in the development of dynamic and environmentally sensitive solutions for current and future mobility.

**BMW's competence in diesel technology:**

**A story of success since 1983.**

The performance and fuel economy offered by new BMW Advanced Diesel with BluePerformance is a further example of the exceptional potential this engine concept has to offer. In recent years BMW has worked more thoroughly and consistently than any other manufacturer worldwide to promote and further the development of its EfficientDynamics strategy. As a result, BMW has consistently enhanced the benefits and attractiveness of diesel technology, increasing engine output (performance), while reducing fuel consumption and emissions.

Through their unique motoring refinement and smoothness – a feature which was thought to be impossible with a diesel engine – BMW's diesel engines stand out among the competition, setting the industry standard for diesel engine technology today.



The story of success of BMW's diesel engines is characterized by numerous milestones in technical development, dating back to 1983. Back then BMW presented the first inline-six diesel in the history of the company, with maximum output of 85 kW/115 hp and peak torque of 210 Newton-metres/155 lb-ft. The BMW 524td that featured this engine was acknowledged as the fastest diesel of its time and was the last BMW diesel model to be sold in North America.

In the years to come BMW's engine development specialists enhanced a wide range of innovations, ensuring their alignment with series production standards, increasing power and performance, reducing fuel consumption and emissions in the process. In 1987, for example, BMW introduced DDE Digital Diesel Electronics followed three years later by BMW's first diesel engine with an oxidation catalyst.

**BMW diesel engines:**

**Making a unique contribution to The Ultimate Driving Experience.**

From the outset, BMW's engine development specialists recognized the potential of the diesel in enhancing motoring efficiency. They focused on the unique performance characteristics offered by the diesel in order to provide a new concept of The Ultimate Driving Experience. Above all, the development specialists used the performance of the diesel engine to develop superior torque from low engine speeds.

As a result, the BMW diesel was soon able to offer its unique sporting character – in everyday driving situations, as well as on the race track. Indeed, it was this performance and reliability which made a BMW 320d the superior winner of the 24 Hours of Nürburgring as early as in 1998.

In the same year BMW presented its first diesel engine with direct fuel injection ensuring even greater spontaneity in the development of power. In the process, the precise dosage of fuel helped to reduce fuel consumption and optimize combustion in the interest of even greater smoothness and refinement. Ultimately, given these qualities, the BMW diesel was appropriately prepared for the luxury performance class, with the first V8 diesel engine featuring direct fuel injection, which made its debut in the BMW 7 Series luxury sedan in 1999.



**Milestones in progress:**

**Common-rail direct fuel injection, Variable Twin Turbo Technology, maintenance-free diesel particulates filter, BluePerformance.**

In the years that followed, BMW made significant – perhaps revolutionary – progress in the areas of injection technology and diesel turbocharging: As early as 2001, the second generation of common-rail fuel injection pumped fuel into the combustion chambers at a pressure of up to 1,600 bar. In 2004, the BMW 535d became the first car to feature an inline-six diesel with Variable Twin Turbo Technology.

BMW also introduced the second generation of the diesel particulates filter now featured as standard in all of the diesel models from Germany's premium manufacturer. The exhaust gas-cleaning unit is positioned directly on the exhaust manifold itself in order to ensure optimum efficiency very quickly and smoothly. The particulates filter does not require any maintenance and regenerates itself by incinerating the diesel particles. This filtering function is performed at all engine speeds and under all loads, without any reduction of engine power or increase in fuel consumption.

BMW's current range comprises no less than seven diesel engines, including four-cylinder, six-cylinder and V8 versions. Both the six- and four-cylinder engines have aluminum crankcases helping to significantly reduce the weight of these engines. A traditional handicap of the diesel engine, which adds weight due to the use of a cast iron crankcase (a much heavier material than aluminum), has nearly been phased out completely. The reduction of weight enhances the car's agility and, as a result, the sporting character of BMW's diesel models.

Comparing the first six-cylinder BMW diesels from 1983 with the most powerful diesel engines of today, one can easily appreciate the progress made. Consider the following facts and figures: Maximum output of the inline-six engine is up 135 percent, maximum torque is up an even more impressive 170 percent. And despite this immense increase in power and muscle, average fuel consumption of the 3.0-liter engine featuring Variable Twin Turbo Technology is 20 percent lower than diesel engines of 1983. At the same time, exhaust emissions have been reduced dramatically, thanks to several new technologies. Indeed, a BMW diesel in the 2008 model year generates only 1 percent of the particulate emissions originally contained in the exhaust gas of a 1983 diesel model.



Despite these impressive facts and figures, BMW is continuing to upgrade the diesel engine to an even higher standard, and BMW Advanced Diesel with BluePerformance marks the next stage of development.

The new BMW 335d and X5 xDrive35d, featuring Advanced Diesel with BluePerformance, will have its North American premiere at the 2008 Detroit International Auto Show. Pricing and additional technical details will be communicated closer to market launch in the fall of 2008.

BMW Group Canada, based in Whitby, Ontario, is a wholly-owned subsidiary of BMW AG and is responsible for the distribution of BMW luxury performance automobiles, Sports Activity Vehicles, Motorcycles, and MINI. BMW Group Financial Services Canada is a division of BMW Group Canada and offers retail financing and leasing programs on new and pre-owned BMW and MINI automobiles, as well as retail financing for new and pre-owned BMW Motorcycles. A total network of 38 BMW automobile retail centres, 17 BMW motorcycle retailers, and 23 MINI retailers represents the BMW Group across the country.

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