

Press Release

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VOLVO DRIVES DOWN CO₂ EMISSIONS AND TAX BILLS WITH TWO IMPROVED FIVE-CYLINDER DIESEL ENGINES

- New and improved D5 and 2.4D diesel engines available from Spring 2009 in the Volvo S80, V70, XC60 and XC70
- New 2.4D brings CO₂ emissions down below the all-important 160 g/km Writing Down Allowance threshold for company cars due for introduction on 1 April 2009

Volvo has sharpened its diesel range with the introduction of two new five-cylinder, 2.4-litre turbo diesels, the 2.4D and D5. The new engines have resulted in a significant reduction in CO₂ emissions whilst also offering a power boost.

Both engines carry the familiar 2.4D and D5 engine names and will be available in the Volvo S80 executive saloon, Volvo XC60 crossover and Volvo V70 and XC70 premium estates from late Spring 2009. The new D5 engine offers a 20 PS performance boost to give 205 PS and 420 Nm of torque. The 2.4D single turbo features 175 PS, an improvement of 12 PS, and 420 Nm of torque. The new technology has allowed CO₂ emissions to drop as follows:

CO₂ figures

Model	Previous 2.4D engine	New 2.4D engine	Previous D5 engine	New D5 engine
Volvo S80	169 g/km	155 g/km	169 g/km	164 g/km
Volvo V70	178 g/km	159 g/km preliminary	178 g/km	169 g/km preliminary
Volvo XC60	199 g/km	159 g/km preliminary	199 g/km	183 g/km preliminary
Volvo XC70	199 g/km	159 g/km preliminary	199 g/km	186 g/km preliminary

"This is yet another step in our determination to reduce the combustion engine's environmental impact, at the same time as we give customers even more refined and sophisticated engines with excellent performance," says Derek Crabb, Vice President, Powertrain Engineering at Volvo Cars.

New high-performance D5 engine

The performance and drivability requirements in the high-performance D5-engine have been solved with twin turbochargers of different sizes that operate in sequence to provide added power over a broader rev range. The result is an engine that delivers an immediate response from the lowest engine revs without any perceptible turbo lag. It also offers rapid acceleration at all speeds, with smooth power delivery between the power bands of both turbo-charger ranges.

This twin-turbo technology in the D5 has also made it possible to introduce higher levels of exhaust gas recirculation (EGR) across a wider rev range. This harnesses the two turbochargers' different properties to deliver a combination of high performance and low fuel consumption.

The advanced fuel injection technology uses piezoelectric fuel injectors. This provides precise distribution of the atomised fuel in the combustion chamber, resulting in efficient combustion and low emissions.

New single-turbo 2.4D

The main focus for the new 2.4D engine was to reduce fuel consumption and consequent emissions. The injection system features a different type of piezoelectric fuel injectors to the D5, which aims to cut fuel consumption through extremely rapid and precise injection sequences. The high injection pressure results in an effective combustion. To promote the drivability, the single turbocharger has been optimised to produce high torque from low revs.

Mutual technology

The two new diesel engines share a number of technology solutions. The engines have lower compression, more efficient combustion and the latest generation of engine management. Volvo Cars' powertrain experts have reduced internal friction and pump losses in the diesel engines. The pressure drop in the intake and exhaust system has also been reduced.

The new turbo diesels have also been equipped with ceramic glow plugs, a high-tech solution that delivers improved starting properties owing to very quick warming up. They reach a temperature of 1,000 degrees Celsius in just two seconds, making the engine easy to start and helping to cut emissions. In certain driving conditions, such as at really low engine revs, the ceramic glow-plugs can also be used to increase the temperature in the cylinders, further improving combustion efficiency.

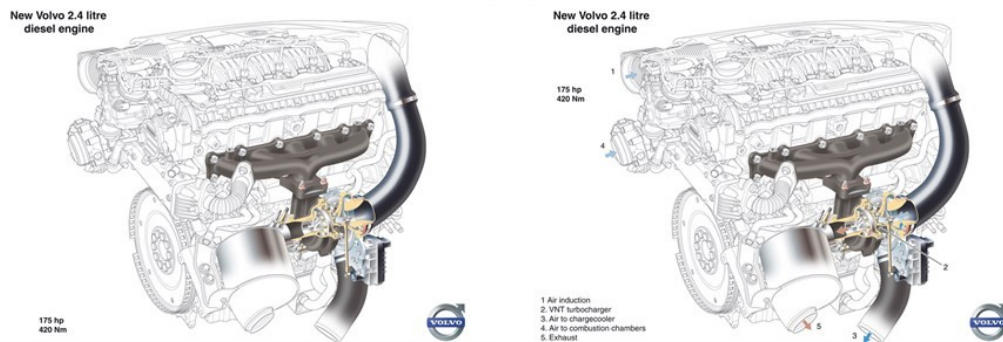
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