

Press Release

Oct 25, 2013 | ID: 134802

The new Volvo Drive-E powertrain family – world-leading engine output versus CO₂ emissions

Volvo Car Group's new two-litre, four-cylinder Drive-E powertrain family can truly be considered as offering customers a world-class blend of drivability and low CO₂ emissions. The D4 with 181 horsepower and manual gearbox is the first diesel car with this level of power output in the premium D-segment with CO₂ emissions under 100 g/km.

The Volvo S60 T6 FWD with 306 horsepower and the new 8-speed automatic is the first car in the segment that delivers over two horsepower per gram of CO₂ from a combustion engine only. The car accelerates from 0-62 mph in 5.9 seconds.

"During the development phase of our Drive-E powertrains, we promised to bring efficient driving pleasure into a new dimension. The official European NEDC certification now confirms that we outperform competitors when it comes to power versus CO₂ emissions", says Derek Crabb, Vice President Powertrain Engineering at Volvo Car Group.

The new D4 FWD can be ordered now and is available in the new S60, V60, XC60, V70, XC70 and S80. It is also available to order with the new 8-speed automatic. The new T6 engine is expected to be available during 2014.

Class-leading diesel at 99 g/km

The Volvo S60 D4 with 181 horsepower and manual gearbox has class-leading CO₂ emissions at 99 g/km, which translates into fuel consumption of 74.3 mpg. A Volvo V60 D4 with up to 17-inch tyres also breaks the 100-gram barrier according to the NEDC certification with CO₂ emissions the same as its' sister saloon at 99 g/km.

The Drive-E diesels feature world-first i-ART technology with pressure feedback from each fuel injector instead of using a traditional single pressure sensor in the common rail. Each injector has an intelligent chip on top of it that monitors injection pressure. Using this information, the self-adapting i-ART system makes sure that the ideal amount of fuel is injected during each combustion cycle.

"The combination of injection pressure at 2,500 bar and i-ART technology gives the customer an engine with high performance, improved fuel economy and considerably lower emissions. It is a breakthrough comparable to our invention of the lambda sensor for the catalytic converter in 1976," says Derek Crabb.

Petrol engine with compressor and turbo

The new two-litre, four-cylinder T6 engine features both a supercharger and a turbo charger. Using the supercharger to fill in the bottom end torque gives the petrol engine a big, naturally aspirated feel. The mechanically linked compressor starts to function immediately at low revs, while the turbocharger kicks in when the airflow builds up.

"We have created a range of smaller, more intelligent engines with power curves that give exciting driveability compared with engines with more cylinders. At the same time we continue to reduce fuel consumption and CO₂ emissions," says Derek Crabb.

Prepared for electrification

The Drive-E engines are prepared for future electrification from the start. The compact size of the four-cylinder engines means that the electric motor can be fitted in the front or rear of the vehicle. The battery pack will be located in the centre of the car.

"The success of our V60 Plug-in Hybrid has also proved there is no contradiction between driving pleasure and low emissions. And we have already confirmed that the all-new XC90 will be introduced in 2014 with a petrol plug-in hybrid at the top of the range," says Derek Crabb. He concludes: "The first Volvo car back in 1927 featured a two-litre, four-cylinder engine. So you can safely say that the new Drive-E powertrain family remains true to our heritage."

Keywords:

Old S60, Old V60, Volvo XC60, Press Releases, 2014, XC70 (2008-2016), V70 (2008-2016), S80 (2008-2016), Product News

Descriptions and facts in this press material relate to Volvo Car UK's car range. Described features might be optional. All information is correct at time of going to press and may be altered without prior notification.

Related Images



[More Images >](#)

Related Videos



[More Videos >](#)

media.volvocars.com >

volvocars.com >

Copyright © 2025 Volvo Car Corporation (or its affiliates or licensors).