

## Press Release

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# Volvo Car Corporation's world-class technology initiative: New downsized engine range – without compromising luxury or driving pleasure

### **Volvo Car Corporation's world-class technology initiative: New downsized engine range - without compromising luxury or driving pleasure**

The Volvo Car Corporation is taking the next step towards zero emissions and climate impact through a new, downsized engine range consisting solely of four-cylinder petrol and diesel engines.

"It's time to stop counting cylinders. At the Frankfurt Motor Show we will reveal a new concept car. It proves that downsized engines can go hand in hand with our customers' expectations on luxury and driving pleasure," says Peter Mertens, Senior Vice President Research and Development at the Volvo Car Corporation.

The Volvo Car Corporation's upcoming four-cylinder VEA (Volvo Environmental Architecture) engine range includes common rail diesels and direct injected petrol engines. It covers the whole range from high power and torque variants to fuel-efficient derivatives.

"Our four-cylinder focus is the perfect way for us to quickly reduce CO<sub>2</sub> emissions and fuel consumption. We will develop four-cylinder engines with higher performance than today's six-cylinder units and lower fuel consumption than the current four-cylinder generation," continues Peter Mertens.

The new VEA engines reduce the number of unique parts by 60 percent. The new powertrains are also up to 90 kg lighter than the present ones and fuel economy is improved by up to 35 percent.

### **Pioneering flywheel technology**

Modularity and compact transverse design are also ideal for future electrification developments. To cover all customer requirements, certain engines will gain added performance via hybrid or other spearhead technology, such as flywheel drive.

Later this autumn, for instance, the Volvo Car Corporation will become one of the first car makers in the world to test the potential of flywheel drive on public roads. The so-called KERS (Kinetic Energy Recovery System) captures braking energy in a flywheel that spins at up to 60,000 revs a minute. Once released, this stored energy can either accelerate the car or propel the vehicle once it reaches cruising speed.

"The flywheel system offers the driver an additional 80 horsepower while reducing fuel consumption by up to 20 percent," says Peter Mertens.

### **Competing with the best**

The Volvo Car Corporation will promote economies of scale within the company's own model range via a new vehicle architecture: SPA (Scalable Product Architecture). SPA allows most Volvo models to be built on the same production line irrespective of vehicle size and complexity.

"We're taking our technological future into our own hands. Both our new architecture and the new engine range will enable us to be on par or even beat our toughest competitors in crucial areas such as driving dynamics and fuel economy," says Peter Mertens.

### **Volvo takes the lead in lightweight design**

In addition to the industrial benefits of common vehicle architecture there are also significant product-related advantages. The Volvo Car Corporation will take the lead in automotive lightweight

design with upcoming SPA models being 100-150 kg lighter than current models of the same size. The new architecture enables electrification at all levels - and new chassis technologies combined with the lower weight and improved weight distribution will boost driving dynamics. The electrical architecture is the backbone of the company's drive to reinforce its leading position in active safety.

### Promoting exciting design

The new concept car unveiled next week in Frankfurt also shows that SPA offers the Volvo Car Corporation's design team greater freedom to give forthcoming Volvo models more exciting looks. "The new architecture means we can sharpen our design language, carving out just the right athletic and dynamic aura that is so important to the most demanding prestige car buyers. The Frankfurt concept car is a great example of what we can achieve with the new architecture," relates Peter Horbury, Vice President Design at the Volvo Car Corporation.

### Note:

Stefan Jacoby, President and CEO of the Volvo Car Corporation and Peter Mertens, Senior Vice President Research & Development, presented the new strategies at a press conference that took place on Sept 5, at 13.15 CET.

You will find a recorded version of the press conference if you click "Related Videos" in the top bar of the press release. You will also find a video illustrating the new strategies (both available in broadcast quality).

### Keywords:

Press Releases,Environment,Motor Shows,Technology,Concepts,Model Year 2012,Corporate

Descriptions and facts in this press material relate to Volvo Cars' international car range. Described features might be optional. Vehicle specifications may vary from one country to another and may be altered without prior notification.

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