

Press information

New Volvo engine for Euro 6

Volvo Trucks is now presenting an engine tailored for the tough Euro 6 environmental standards. Nitrogen oxide emissions have dropped by 77 percent and particulate emissions have been halved. First off the mark is Volvo's D13 460 hp engine, which today powers more than one-third of all Volvo trucks.

"The Volvo FH gets a new 460 hp Euro 6 engine optimised for fast, fuel-efficient transportation on good roads. The first trucks with the new engine will be delivered in spring 2013," says Mats Franzén, Manager of Engine Strategy and Planning at Volvo Trucks.

Customer demand for Euro 6 trucks is still at a modest level. Since February 2012, it is possible to certify vehicles according to the new regulations, but there will be another two years before the requirements become compulsory for all new trucks. The tough emission standards involve advanced engine solutions, including many new components, which in turn mean higher cost for customers. However, this increased cost can be partially offset by various financial inducements and incentive packages, above all in regional traffic and long-haul operations in Europe.

"It is currently difficult to determine how much demand there will be. By offering our most popular engine in Euro 6 configuration, we meet the needs of a large proportion of our customers. The rest of the Euro 6 engine range will be launched well before the requirements become obligatory on January 1, 2014," relates Mats Franzén.

Tried and tested technology

The Volvo D13 for Euro 6 is based on Volvo's tried and tested Euro 5 engine. Just like this unit, the new engine is an in-line six cylinder engine with unit injectors and catalytic exhaust treatment (SCR). In order to meet the new emission requirements, exhaust gas recirculation (EGR) is also used, as well as a diesel particulate filter (DPF) – systems that Volvo Trucks has already been using for several years in the US and Japan. Compared with Euro 5, nitrogen oxide emissions have been cut by 77 percent and particulate emissions have been halved.

Focus on fuel economy and reliability

The SCR system, which converts the nitrogen oxide in the exhaust gases into harmless nitrogen and water vapour, is integrated with the particulate filter in a compact unit that



takes up the minimum possible space. The particulate filter, which captures and incinerates the microscopic particles found in the exhaust gases, is automatically regenerated during operation. EGR is used primarily to raise the exhaust gas temperature when the engine is not sufficiently hot to heat up the exhaust gases, which must reach at least 250° C for the SCR system to operate optimally. Unlike conventional EGR systems that cool down the recirculated exhaust gases in order to lower engine temperature and thus reduce nitrogen oxide emissions, the Euro 6 engine's EGR system is virtually inactive during highway cruising, so it does not impact fuel consumption during such operations.

"We have developed a reliable solution that not only meets the emission requirements but also gives customers added benefits in the form of good fuel economy and troublefree ownership," says Mats Franzén.

See a film about Euro 6 on http://youtu.be/UbBsYbNj2GA.

Facts, Volvo D13 460 for Euro 6

- In-line six-cylinder 13-litre engine producing 460 hp.
- Max power output at 1400 to 1900 r/min: 338 kW.
- Max torque at 1000 to 1400 r/min: 2300 Nm.
- Automated transmission, Volvo I-Shift.
- Engine brake VEB+ at 2300 rpm: 375 kW.
- Available for the Volvo FH, 4x2/6x2, tractor and rigid, including vehicles for transport of dangerous goods (ADR).
- Available for trucks with right-hand drive as well as left-hand drive

Facts, Euro 6

- One-fifth the nitrogen oxide emissions of a Euro 5 engine.
- Half the particulate emissions of a Euro 5 engine.
- It will be compulsory to meet emissions legislation down to an ambient temperature of at least -7° C.
- Emissions legislation encompasses nitrogen oxides (NOx), particulates (mass), particulates (quantity), ammonia (NH3), carbon monoxide (CO) and hydrocarbons (HC).

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For further information, please contact:



Lennart Pilskog, Media Relations, phone +46 70 3183422 e-mail Lennart.Pilskog@volvo.com

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