



Press information

THE NEW VOLVO FH – DRIVELINE

I-Torque delivers superb driveability and reduces fuel consumption

Volvo Trucks is taking the lead in the development of drivelines for commercial trucks. The new Volvo I-Torque meets the Euro 6 requirements and offers exceptional driveability.

Together with I-See, I-Torque also cuts fuel consumption by up to 10 percent.

The tough Euro 6 regulations are placing high demands on the engine developers to meet the new standards without negatively impacting fuel consumption. However, the new Volvo I-Torque driveline, which will begin production for Europe in autumn 2013, meets the Euro 6 requirements and offers a significant reduction in fuel consumption. As the name suggests, the explanation behind I-Torque's excellent properties lies in high torque combined with a new automated powershift gearbox. I-Torque delivers no less than 2800 Nm of torque and works at low engine revs, resulting in quiet operation. "Lower revs means fewer fuel injection pulses and combustions - and less friction. I-Torque operates in the rev range where this D13 engine is at its most efficient, between 900 and 1200 revs per minute," says Mats Franzén, head of engine strategy at Volvo Trucks. See the film on www.youtube.com/volvotrucks.

Two components for power and driveability

The I-Torque system's high power output is developed thanks to two key components – the new D13 Euro 6 engine producing 460 hp/2800 Nm, and a new dual-clutch version of the automated I-Shift transmission.

A highly efficient Turbocompound system, new software, Common Rail technology and exhaust gas recirculation (EGR) are some of the new features that make the engine more efficient and reduce its environmental impact.



Dual-clutch gearbox

The new gearbox is called I-Shift 2. With this unit, Volvo Trucks is the first manufacturer to install a dual-clutch automated transmission in a heavy duty truck. "With the dual-clutch system there is no torque interruption, not even during gearchanges. As a result, the engine can operate within its narrow optimized band, delivering faster acceleration and exceptional driveability. What is more, both noise and fuel consumption drop," says Astrid Drewsen, product manager for I-Torque. "It feels as though you have two gearboxes. When you're driving in one gear in one gearbox, the next gear is already engaged in the other one. The actual gearchange is lightning-quick and takes place without any interruption in power delivery," says Astrid Drewsen.

10 percent less fuel with I-See

I-Torque reduces fuel consumption by up to 4 percent. When combined with I-See, Volvo Trucks' technology for optimising progress in undulating terrain together with other smaller improvements, it cuts fuel consumption by up to 10 percent. "This means a saving of 4100 litres of fuel annually for the average truck. We work continuously to cut consumption, drop by drop. But reducing it by 10 percent like this in one single move – that's nothing short of a revolution," says Mats Franzén.

Efficient drivelines available today

Production of Volvo I-Torque will get under way in autumn 2013 in Europe and will be available for Euro 6.

Before that the first D13 Euro 6 engine for the Volvo FH will be launched. The technology used in this first Euro 6 engine differs somewhat from the I-Torque unit, but the emission levels are the same, with a 77 percent reduction in nitrogen oxide and a 50 percent drop in particulate emissions compared with Euro 5.

The first Euro 6 engine is based on Volvo's tried and tested Euro 5 unit, which is also available in the new Volvo FH series. Just like this engine, the newcomer is an in-line six with unit injectors and selective catalytic reduction (SCR) for the exhaust system. In order to meet the new emissions requirements, it also comes with an exhaust gas recirculation (EGR) system and a diesel particulate filter (DPF), solutions that Volvo Trucks has already been using for several years in the USA and Japan.

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