

Press release

Unique gearbox for heavy vehicles on the Volvo FH

I-Shift Dual Clutch is the first transmission on the market with a dual clutch system for heavy vehicles. Thanks to power-shift gear changes without any interruption in power delivery, torque is maintained and the truck does not lose any speed during gear changes. For the driver, the result is more comfortable and efficient progress on the road.

I-Shift Dual Clutch is a transmission consisting of two input shafts and a dual clutch. This means that two gears can be selected at the same time. It is the clutch that determines which of the gears is currently active.

“When driving it feels like you have access to two gearboxes. When one gear is selected in one gearbox, the next gear is already prepared in the other. With dual clutches, gear changes take place without any interruption in power delivery. As a result, engine torque is maintained and driving comfort is significantly improved,” says Astrid Drewsen, product manager for drivelines.

Available from autumn 2014

I-Shift Dual Clutch will be available from autumn 2014 on the Volvo FH.

Transmissions with dual clutches are already used in cars, but the Volvo Group is the first manufacturer in the world to offer a similar solution for series-produced heavy vehicles.

“For trucks, this gearbox will truly make a major difference to driveability. The heavier the transport and the tougher the operating conditions, the more you will gain with I-Shift Dual Clutch. Power-shift gear changes, where there is no interruption in power delivery, means it is easier to keep up with traffic, especially on tricky stretches of roads. The result is more relaxed and safe driving,” says Astrid Drewsen.

More efficient driving and increased driver comfort

I-Shift Dual Clutch is particularly effective in long haul operations and conditions that require a lot of gear changing, for instance on hills or on roads with lots of twists and turns, or when driving through cities with plenty of roundabouts and traffic lights. I-Shift Dual Clutch also makes a big difference when transporting moving or liquid cargoes, such as animal transports and tanker operations, since the seamless gear changes prompt less movement in the cargo itself. Thanks to I-Shift Dual Clutch power-shifting, there is less risk of getting stuck on slippery or uneven roads, for instance when hauling timber in the forest.

Another major advantage with the new transmission is that it improves driver comfort.



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“In addition to efficient driving, the smooth gear changes also mean that the in-cab environment feels quieter,” says Astrid Drewsen.

I-Shift Dual Clutch will be available on the Volvo FH with Euro 6 D13 engines and with 460, 500 and 540 horsepower.

Facts, I-Shift Dual Clutch

- I-Shift Dual Clutch can basically be described as two gearboxes linked together. When one gearbox is active, the next gear is preselected in the other gearbox. During gear changing, the first gearbox is disconnected at the same instant as the second gearbox is connected, so gear changes take place without any interruption in power delivery.
- I-Shift Dual Clutch is based on the I-Shift transmission. Despite its many new components the new gearbox is just 12 cm longer than a regular I-Shift unit.
- I-Shift Dual Clutch changes gear without any disruption to power delivery. When driving in conditions where it is more optimal for the transmission to skip a few gears, the transmission changes gear just like a regular I-Shift unit.
- I-Shift Dual Clutch can change gears without any interruption in power delivery, with the exception of the range-change, which takes place when shifting from 6th to 7th gear.
- Smooth, gentle gear changes cut wear on the driveline and the rest of the vehicle.
- Fuel consumption with I-Shift Dual Clutch is the same as with regular I-Shift.
- I-Shift Dual Clutch will be available on the new Volvo FH as an alternative to I-Shift and manual transmission.
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[See the film on Volvo Trucks' YouTube channel](#)

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For further information, please contact:

*Agneta Malmcrons, tel. +46 31 322 07 07,
e-mail: agneta.malmcrons@volvo.com*

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