

Volvo Trucks first with automatic all-wheel drive—for improved driveability and economy

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**HOW IT WORKS:
AUTOMATIC TRACTION CONTROL FOR THE VOLVO FMX**

Volvo Trucks' new Automatic Traction Control activates the all-wheel drive only when needed, which saves fuel and improves driveability. If a rear wheel loses traction on a slippery or soft surface, the system instantly engages drive to the front axle.

1 If a wheel begins to slip, it is immediately detected by speed sensors on the wheel.

2 Within half a second, a dog clutch activates the all-wheel drive while the truck is still moving. As a result, the truck can continue driving without losing either torque or speed.

3 The truck's drive to the front axle remains engaged until the driver eases off the accelerator.

Volvo Trucks' new feature Automatic Traction Control activates the

drive on the front axle automatically when in motion, if the truck risks getting stuck. The driver enjoys improved manoeuvrability, and the owner benefits from lower fuel consumption and less wear and tear on the truck.

Volvo Trucks is the first truck manufacturer in the world to offer automatic engagement of all wheel drive on construction trucks. The Automatic Traction Control function activates the front wheel drive when the rear wheels lose traction on slippery or soft ground.

"Many drivers connect front-wheel drive or differential lock in good time before a difficult section of terrain, in order to avoid getting stuck. Volvo Automatic Traction Control engages the front wheel drive when in motion, and only for the short time that it is really needed," says Jonas Odermalm, Construction Segment Manager at Volvo Trucks.

Developed for tough industrial environments

Volvo Automatic Traction Control, which has now become standard in the Volvo FMX with driven front axle, is already used by Volvo Construction Equipment in their articulated haulers.

The solution consists of software connected to the wheel speed sensors which detect and control wheel drive. When a rear wheel starts to slip, the power moves automatically to the front wheels without the truck losing torque or speed. A dog clutch activates the front-wheel drive in just half a second. The clutch is lighter and has fewer moving parts than a traditional solution with permanent all-wheel drive. If the driver encounters particularly rough ground, then it is possible to manually lock the other differentials at both front and rear.



Better manoeuvrability and less fuel

The drive on the front axle prevents standstills on slippery surfaces. At the same time, the function is often only required for a very small part of the total driving time. With Automatic Traction Control, the front tires' grip is concentrated on the steering right up until any critical situation. Thus, the driver can take advantage of the better manoeuvrability for as long as possible.



The driver also avoids extra fuel consumption and wear on the driveline and tires, that the constant engagement of front-wheel drive normally results in. Automatic Traction Control ensures that the optimal drive combination is always enabled and removes the decision from the driver.

"Automatic Traction Control is yet another example of how innovative technology can make things easier and smarter than before. Just like the Volvo I-Shift revolutionised the gearbox, we are confident that this new development will do the same for the driven front axle," says Ricard Fritz, Vice President, Volvo Trucks Brand.



Standard on the Volvo FMX with driven front axle

Automatic Traction Control is standard on the Volvo FMX in versions 4x4, 6x6, as well as 8x6 and is offered with the complete engine program for Euro standards 3, 4, 5 and 6.

Provided by Volvo

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