



Press information

Volvo Dynamic Steering – a breakthrough for effortless steering without strain or pain

Just a couple of months after the launch of the new FH series, Volvo Trucks is presenting yet another world-class technical innovation. Volvo Dynamic Steering combines conventional hydraulic power steering with an electronically regulated electric motor fitted to the steering gear. The result is precise steering that gives the truck driver a safer, more comfortable and more enjoyable working environment.

“This patented technology benefits the truck driver in all operating conditions. On the highway the dynamic steering system offers unbeatable directional stability. At low speeds even a heavily loaded truck is so easy to steer that you can do so with one finger,” says Claes Nilsson, President Volvo Trucks.

An electronically controlled electric motor attached to the steering shaft is the big new technological innovation in Volvo Dynamic Steering. The electric motor, which works together with the truck’s hydraulic power steering, has a maximum of 25 Nm of torque and is regulated thousands of times per second by the electronic control unit.

“The task of the electric motor is to deliver perfect steering feel for every single moment of operation. For instance, the system’s sensors note that the driver wants to drive straight ahead and automatically ensures that no interference from the road surface is allowed to filter up through the steering wheel,” explains Gustav Neander, project manager for Volvo Dynamic Steering. He adds:

“At low speeds the electric motor’s assistance makes the truck exceptionally easy to steer. Even a heavily loaded construction truck operating off-road on a rough surface can be steered without the slightest effort. Truck drivers who’ve tested the system during the development process have all been highly impressed.”

Superior in all operating conditions

The system’s benefits can be summarised in four points:



- At low speeds, the electric motor takes over the work from the driver's muscles. Instead, the driver can relax and steer without having to strain his or her shoulders and arms. Another benefit is that Volvo Dynamic Steering centres automatically also when reversing
- Irregularities in the road surface, such as cracks and holes, are dampened by the system. This means that the steering feels more stable since the driver does not have to compensate with constant minor adjustments of the steering wheel.
- On the highway this precise control leads to increased directional stability, which in turn gives the driver a more relaxed driving experience with full control at all speeds. The dynamic steering system eliminates virtually all those small steering wheel movements that are unavoidable on today's roads.
- A steeply cambered road surface or a side wind is quickly detected by the self-learning system, which automatically compensates so the driver can steer straight ahead without having to tug the steering wheel to counteract any sideways movement. A significant improvement of road safety and driver comfort.

Steering is elevated to a new dimension

Volvo Dynamic Steering addresses the most frequent occupational injuries suffered by heavy goods vehicle drivers. Official figures from the Swedish Work Environment Authority reveal that truck drivers are over-represented in occupational injury statistics.

"Almost four out of ten truck drivers complain every week of pain in the back, neck, shoulders or arms. Our improved steering system offers a more relaxed driving experience that should counteract this kind of problem in the working environment," relates Gustav Neander. He adds:

"Volvo Dynamic Steering elevates the steering of heavy vehicles to an entirely new dimension. The technology makes the driver's working conditions more relaxed and controlled."

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