



Bosch presents steering systems that provide smart support and save fuel Busworld 2017 in Kortrijk

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- ▶ Servotwin steering system enables a wide range of assistance functions.
- ▶ Rear-axle steering makes buses more maneuverable and even more efficient in city traffic.

Kortrijk, Belgium / Schwäbisch Gmünd, Germany – Electric steering is gaining popularity. As an indispensable building block for driver assistance systems such as lane-keeping support or park assist, it is a standard feature in more and more of today's cars. Bosch is taking its comprehensive expertise in steering systems for cars and transferring it to commercial vehicles and buses, working to create technological solutions for a new era in mobility: free of accidents, stress, and emissions.

Electronic assistants make driving buses safer and easier

The Bosch Servotwin steering system is the world's first integrated electro-hydraulic steering system for production commercial vehicles; specifically, heavy trucks and buses. Servotwin is more efficient than previous steering systems thanks to its torque overlay. It also enables driver assistance functions that make driving a bus safer and easier. One of these functions is the lane-keeping assistant, which warns the driver as soon as they unintentionally start leaving their lane. If the driver doesn't react, the system intervenes to steer the bus back into the lane. Electric steering assists the driver in traffic jams and slow-moving traffic, too, and automatically maintains the proper distance to the vehicle ahead. The driver monitors the system and can retake control at any time. Another situation where Servotwin electric steering supports the driver is in sudden crosswinds, which can be dangerous to buses because of their large surface area. The system determines how much to correct the steering to compensate for the gusts of wind and actuates an electric motor to help with the maneuver. All in all, driving a bus has never been so safe or so easy.

A rear-axle steering system increases bus maneuverability

Bosch has redesigned electro-hydraulic rear-axle steering to make it even easier to maneuver heavy commercial vehicles. Buses with large wheelbases in particular stand to benefit, as this redesigned system makes the turning radius smaller. The resulting increase in agility is especially useful in city driving. In addition, the steering solution improves vehicle stability at high speeds, thus making it even safer and easier to change lanes on the freeway. Here is how it works: the electrohydraulic steering system is an independent power-on-demand system for the leading or trailing axles of heavy trucks and buses. What makes it special is its innovative combination of a hydraulic cylinder unit and an electronic power unit. This means the steering is controlled electronically, driven electrically, and requires neither a mechanical nor a hydraulic connection between the front and rear axles. Thanks to the power-on-demand function, energy is required only when active steering is in progress. The electric motor powers a pump, which uses a work cylinder to build up hydraulic pressure and transfer it to the rear axle. Compared to conventional steering systems, the power-on-demand solution saves up to 0.6 liters of fuel for every 100 kilometers. Bosch electrohydraulic rear-axle steering is equally suitable for integration into production vehicles as for retrofits. All geometric vehicle parameters, like the wheelbase and steering angle, are programmed individually in the steering ECU.

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Bosch is synonymous with important automotive innovations, such as electronic engine management, the ESP® anti-skid system, and common-rail diesel technology.

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