



Transmission Evolution for Commercial Vehicles: ZF PowerLine goes into production

- **8-speed automatic transmission sets benchmark for medium-heavy trucks, heavy pick-ups and buses**
- **With passenger car comfort, ZF PowerLine helps enable double-digit fuel savings**
- **Series production has begun in Friedrichshafen (Germany). Localized production will follow in 2023 at ZF's Gray Court facility in the US**

Friedrichshafen (Germany). ZF PowerLine marks the start of a small revolution in the medium-heavy trucks, pickups, and bus segments: With eight gears and a design principle adopted from world leading passenger car systems, the new automatic transmission surpasses the systems currently available. First and foremost, PowerLine raises the fuel-saving potential and shifting comfort to a higher level. Series production began in Friedrichshafen, and numerous international customers have already opted for the new transmission. From 2023 on, the new transmission will also be produced at the ZF plant Gray Court, USA.

“Having anticipated the trend, ZF's Powerline satisfies today's move towards the greater automation of commercial vehicles, worldwide. This new transmission was first introduced in 2016, and only four years later, series production has begun.” Andreas Moser, responsible for ZF's Commercial Vehicle Technology division, is pleased about the start of production and adds: “With PowerLine we have developed an innovative, robust, and efficient transmission for the world market. Customer reactions to it are extremely positive.” Production of the transmission recently started in Friedrichshafen, and from 2023, the transmission will also be manufactured in ZF's Gray Court facility.



PRESSE-INFORMATION
PRESS RELEASE

Page 2/4, December 11, 2020

Powerful. Efficient. Reliable.

ZF Powerline is suitable for engines with up to 1200 Nm and thus serves the commercial vehicle segments of medium-heavy trucks, pickups, and buses. In terms of segment-related weight, PowerLine sets few limits for manufacturers: Vehicles with a gross vehicle weight (gm) of up to 26 tons can be equipped with the transmission system. Compared to current, comparable systems, the transmission can help to reduce fuel consumption by up to 10 percent. A consumption-reducing overall ratio spread of 7.64 combined with early closing of the torque converter contribute significantly to this. Weighing only approx. 150 kg without heat exchanger the ZF innovation sets new standards in terms of power-to-weight ratio. PTOs can also be supported.

In the commercial vehicle segment, reliability and operating costs play a central role. The same is true for ZF, with Powerline using as many synergies with the proven benchmark 8HP passenger car transmission as possible. This begins with the basic, though differently dimensioned gerset concept, with ranges from mechatronics and electronics including control software - to production know-how.

Reduced operating costs are achieved through lower fuel consumption and extended oil change intervals. Thanks to the use of the modern ZF-Ecofluid Life Plus transmission oil - wear-free driving can be achieved. Furthermore, well-known ZF software functions such as the predictive shifting strategy PreVision GPS, rocking free function, stop-start assist, hill-start assistance and low-speed maneuvering increase the performance and efficiency of the transmission in daily use. In the future, it will also be possible to electrify the transmission as mild or plug-in hybrid. Thanks to its passenger car genes, PowerLine brings a new shifting quality to these commercial vehicle segments - gear changes are always smooth, fast and without traction interruption.

Important technical data overview:

Number of gears: 8

Ratios/ R-speed: 4.89-0.64/ 4.25



PRESSE-INFORMATION
PRESS RELEASE

Page 3/4, December 11, 2020

Mech. gear spread: 7,64
Input torque: up to 1200 Nm
Weight (without heat exchanger): 150 kg
Oil quantity: 16,6 l
GCWR: 26 t

Captions:

- 1) Volume production begins in Friedrichshafen: The new ZF PowerLine automatic transmission for commercial vehicles.
- 2) Significant reductions in commercial vehicle fuel consumption with premium level shifting qualities: The PowerLine, with its eight gears, redefines the automatic transmission standard for medium-heavy trucks, heavy pickups, buses and other commercial vehicle segments.
- 3) Powerline in test: The 8-speed automatic transmission is installed in ZF's own test vehicle.

Photos: ZF

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ZF Friedrichshafen AG

ZF is a global technology company and supplies systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies different kinds of vehicles. With its products, the company contributes to reducing emissions and protecting the climate.



PRESSE-INFORMATION
PRESS RELEASE

Page 4/4, December 11, 2020

ZF, which acquired WABCO Holdings Inc. on May 29, 2020, now has 160,000 employees worldwide with approximately 260 locations in 41 countries. In 2019, the two then-independent companies achieved sales of €36.5 billion (ZF) and \$3.4 billion (WABCO).

For further press information and photos please visit: www.zf.com