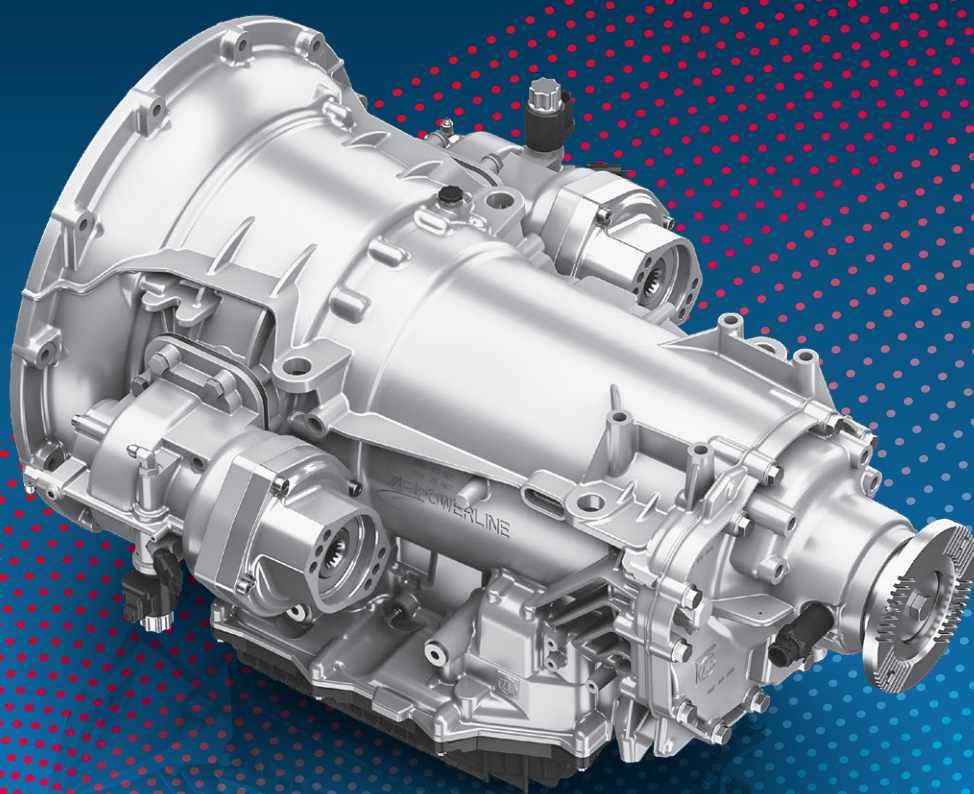
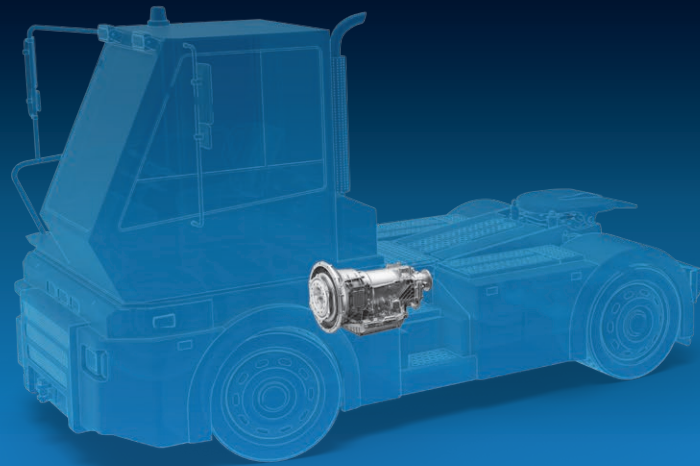




The New Driving Experience

8-speed automatic transmission
ZF-PowerLine





Lightweight, Powerful and Economical

Acceleration. Deceleration. Acceleration. Every bit of assistance helps in these situations. Speed, punctuality and accuracy are vital in the transport industry.

To meet these demands, ZF is launching a completely new transmission: PowerLine, the fully automatic powershift transmission, reduces the driver's workload by safely engaging the gear with the greatest traction, providing intelligent driving assistance, skipping gears, offering powerful sprinting and scoring points with fuel savings in the double-digit range.

PowerLine has been specially designed for the medium-duty vehicle category and delivers consistently excellent results in trucks and in modern special purpose vehicles alike. PowerLine is based on our tried-and-trusted transmission concept with millions of units sold, a benchmark in the passenger car sector. The torque converter is non-wearing, is bypassed early by a lock-up clutch and reduces consumption when the vehicle is at a standstill (neutral idle control). The integrated dual torsional damper allows the transmission to run at reduced speeds and significantly increases driving comfort.

The revolutionary, ZF-patented planetary gearset featuring eight gears offers a higher spread than any other transmission on the market for this vehicle segment. Gear steps over several gears at once are also possible. The intelligent on-board transmission control comes with a large number of driving functions. These range from the extremely sensitive maneuvering function to the hill start aid to automatic engine stop support. A shift control unit customized for off-road vehicles is also available. PowerLine is also designed for use in hybrid vehicle concepts. In addition, engine-dependent PTOs on both sides are available. A parking lock completes the outstanding service portfolio of this transmission. Servicing is also inexpensive thanks to extended oil change intervals. The oil filter is designed to last throughout the entire service life of the transmission.

Fuel saving up to

10 %

Maximum shift comfort

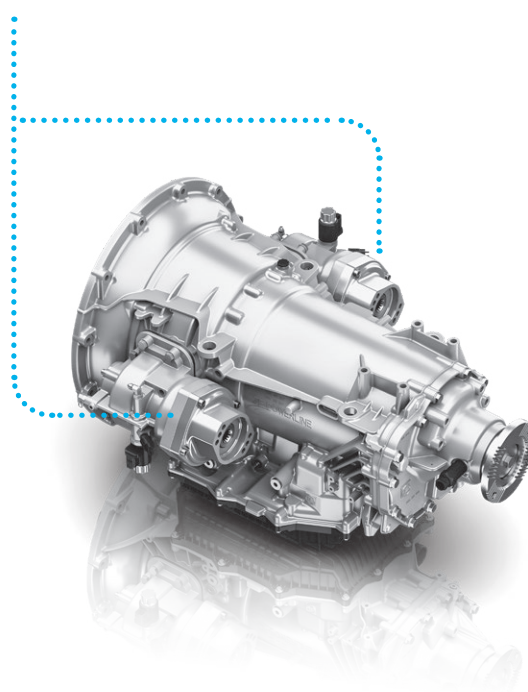
Shifting qualities at the premium automotive level: The ZF 8-speed PowerLine is now setting the automatic transmission standard for commercial and special vehicles.

| | ZF PowerLine | Advantages |
|-------------------------------|--|---|
| Speeds | 8 | |
| Ratios (with TC) | 4.89 (6.5) - 0.64 | Max. speed + Max. ratio spread = Max. efficiency |
| Ratio spread | 7.66 (10.2) | |
| Reverse | -3.76 | |
| Engine torque capacity | 1,200 Nm interface SAE 2 | Max. torquet + Min. weight = Max. payload |
| Weight (dry) | 149 kg | |
| Torque-weight ratio | 9.3 | |
| PTO | Dual side engine dependent PTO-option (at 3 and/or 9 o'clock position) Stationary usage max. PTO power 102 kW. Max. torque for 1 PTO = 700 Nm, for 2 PTOs = 1,000 Nm in sum. Mobile usage on request. | Max. PTO power in low speed operation |

Your advantages at a glance

- High torque capacity reduces portfolio complexity
- Benchmark power-to-weight ratio: 8
- Best in class fuel efficiency by using 8HP gear set concept. Fuel savings >10%
- On-board transmission control unit
- Converter lock-up clutch with integrated torsional damper
- High efficient gearset
- Excellent drivability and comfort
- For special vehicles up to GCW 90 t
- Optional interface for direct mounted transfer case

Engine dependent PTO
on 3 and/or 9 o'clock



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