



ZF-AS Tronic's Success Story Continues in Light Buses

- **The successful ZF-AS Tronic lite transmission is also available for light city and suburban buses.**
- **The transmission aims at emerging markets based on its good economy and comparatively low costs.**

The automatic transmission series AS Tronic has been applied very successfully in commercial vehicles for years. The large 12-speed version for heavy coaches has served as a benchmark in this segment since its market launch in 2002. Meanwhile ZF extended the transmission family's range of application and offers the new AS Tronic lite for light city and suburban buses and coaches.

The automatic 6-speed transmission AS Tronic lite has been designed particularly for applications in light city and suburban buses or shuttle buses or those with low horsepower engines. Just like the rest of the AS Tronic family, the new family member stands out due to its particular economy and simple handling. "Our aim is to implement cost-efficient and resource-conserving automation of city buses worldwide", explains Wolfgang Schilha, Senior Vice President of the Bus Driveline Technology business unit. With the exception of metropolises where the Bus Rapid Transit System (BRT) has already been implemented, manual transmissions are still dominating in Eastern Europe, Asia, Latin America, and Africa. Even though these emerging markets are on their way to higher technological standards, they are not yet financially capable of achieving the standard of Western industrial nations. "With the new AS Tronic lite, ZF wants to give these countries the possibility of going ahead with the automation of city buses with their means at hand", Mr. Schilha continues.



Range of application and technology

ZF offers even two different versions of the new development: The smaller version of the new AS Tronic lite is suited for buses with a gross weight rating of six to twelve tons, a total length of six to nine meters, and a torque range of up to 700 newton meters. In the case of his "big brother", a gross vehicle weight rating of nine to 18 tons is allowed, nine to twelve meters total length, and up to 1,000 newton meters torque range. In practice, this means that the AS Tronic lite can be applied in midi, mini and microbuses which are mainly used as 'feeders' or shuttle buses. This includes BRT line shuttle buses in large cities in Asia or Latin America.

The new automatic transmission system by ZF controls shift and clutch processes electronically and performs them hydraulically. Thus, impermissible and inefficient gear selections are avoided while changing over to the manual mode is possible quickly and at any time. The new 6-speed transmission's electrohydraulic shift module is compact, therefore easier to integrate than pneumatic units and does not need compressed air supply. Furthermore, state-of-the-art, high-performance helical gears allow for minimum noise generation.

Advantages of the AS Tronic lite for buses

Just like all members of the AS Tronic transmission family, the new AS Tronic lite excels by offering safety and high efficiency which, in turn, benefits the environment: Compared with manual transmissions, a fleet consumption reduction of up to five percent is possible. Besides, thanks to automatic shifting, peak loads are avoided which protects the entire driveline and doubles the clutch service life. The electronic diagnosis, which simplifies maintenance and repair, contributes to a further reduction of operating costs. This means that the bus is optimally available for practical operation.

As all the shifting work becomes obsolete, the driver can fully concentrate on the traffic. Furthermore, operating the AS Tronic lite is very easy. Driver changes are therefore possible at any time,



driver training becomes unnecessary. A special maneuvering mode brings additional relief in the driver's everyday life.

"The new AS Tronic lite has already proven itself in practice", states Mr. Schilha. "Since 2007, 10 buses of the VW Proteus and Beta models have been used with these transmissions on a trial basis in Brazil and support the existing BRT lines". The present conclusion regarding the AS Tronic lite in the buses is positive throughout; in particular fuel consumption reductions of up to five percent compared with the average consumption experienced with manual transmissions are convincing.

Caption:

Favorable: The new ZF-AS Tronic lite for light buses excels thanks to its increased ride and driving comfort, low fuel consumption, and thus, a higher level of efficiency.

Photo: ZF

Press contact:

Thomas Wenzel, Manager Technical Press,
Phone: +49 7541 77-2543, Fax: +49 7541 77-90 2543 ;
E-Mail: thomas.wenzel@zf.com

ZF is a leading worldwide automotive supplier for Driveline and Chassis Technology with approximately 60,000 employees at 125 production companies in 26 countries. In order to continue to be successful with innovative products, ZF annually invests five percent of its sales (2008: 697 million of EUR 12.5 billion) in Research and Development.

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