

Brief description - general

The ZF 6HP26 automatic transmission has been developed for vehicles with an engine torque of up to 600 Newton-metres (Nm).

To match the installed position of the engine, the automatic transmission is also arranged longitudinally. It uses the planetary gear train principle, with hydraulic-electronic control; the hydraulic and electronic control units form a composite element that is installed as a single unit inside the automatic transmission and referred to as "Mechatronik".

A new feature is decoupling of the transmission when the vehicle is at a standstill, that is to say instead of the engine remaining connected to the converter and the vehicle being prevented from moving by applying the brake, the converter is disconnected and only a minimum rotating load remains. This has the effect of further reducing fuel consumption. The electronic transmission control uses a newly developed shift strategy known as "A S I S" (Adaptive Shift Strategy).

For this, please refer to the separate functional description.

The 6HP26 automatic transmission is about 13 % lighter than the previous 5-speed unit, accelerates 5 % faster and uses about 7 % less fuel.

It also contains fewer components:

- o 5-speed transmission app. 660 parts
- o 6-speed transmission app. 470 parts

The 6-speed automatic transmission is 5 centimetres shorter than the 5-speed transmission.

Engine power reaches the transmission via a hydrodynamic torque converter with integral converter lock-up clutch.

The input torque limits are:

6HP19	max. torque:	420 Nm
6HP26	max. torque:	600 Nm
6HP32	max. torque:	750 Nm

The 6 forward gears and 1 reverse gear are obtained from a single-web planetary gear set followed by a double planetary gear set.

Using these Lepelletier-type gear sets, it was possible to obtain 6 forward speeds.

The single-web planetary gear set consists of:

- 1 sunwheel
- 4 planetary gears meshing with it
- 1 planetary gear carrier
- 1 ring gear or annulus

The following double planetary gear set consists of:

- 2 sunwheels of different sizes
- 3 short planetary gears meshing with them
- 3 long planetary gears meshing with them
- 1 planetary gear carrier
- 1 ring gear or annulus