

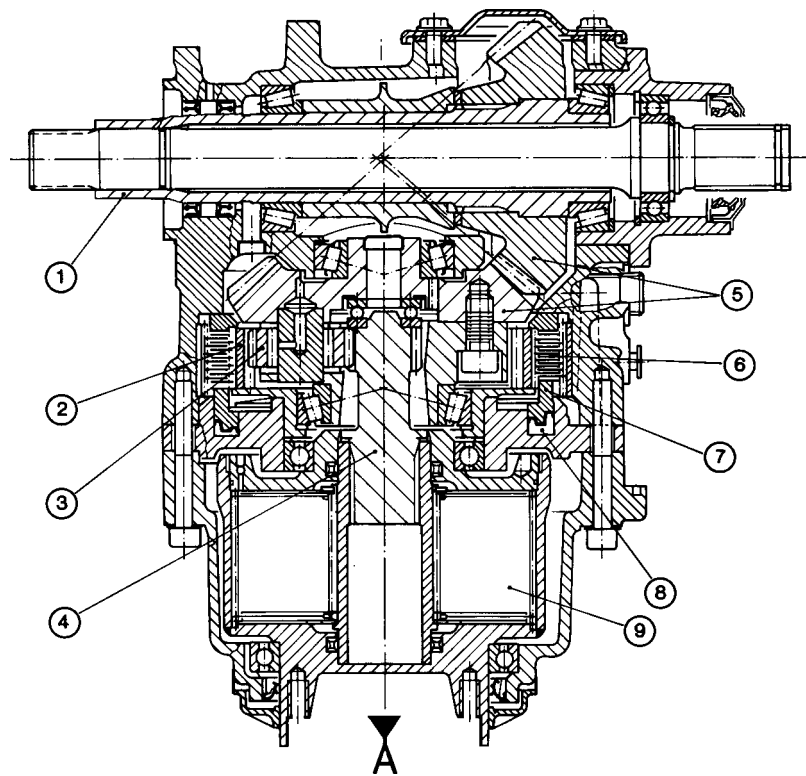
## Components of the all-wheel drive

The components of the AWD are divided into two main groups:

- mechanically, hydraulically
- electronically, electrically

### Mechanical, hydraulic components

#### Transferbox



The transferbox is flanged on the in driving direction right side of the gear box and consists of the following parts:

- |   |                        |
|---|------------------------|
| 1 drive over hollow shaft   | 6 multiple disk clutch |
| 2 internal gear (planetary gears)                                   | 7 hydraulic pistons    |
| 3 planetary gears   | 8 cylinder space       |
| 4 sun wheel (planetary gear)  | 9 visco clutch         |
| 5 hypoid gears (consists of gear A to the rear axle and bevel gear) |                        |

The torque to the rear axle is passed to the hypoid gear by a hollow shaft connected with the differential of the transmission. The hypoid gear turns the torque flow around by 90°.

Over a planetary gear downstream with internal gear, planetary gears and sun wheel the torque moment flows to the visco clutch, whose external housing is coupled with the three-part drive shaft.

Around the internal gear a multiple disk clutch is arranged whose interior lamellas are connected with the internal gear. The external lamellas are connected by external teeth with the housing and stand still. A hydraulically subjected ram presses together the lamella package with 53Bar +/- 5 Bar and holds the internal gear:

- AWD switched on.

With decreasing pressure behind the ram a feather pushes the ram back within fractions of a second, the multiple disk clutch releases the internal gear again and it can freely turn:

- AWD switched off.

### System picture power flow

