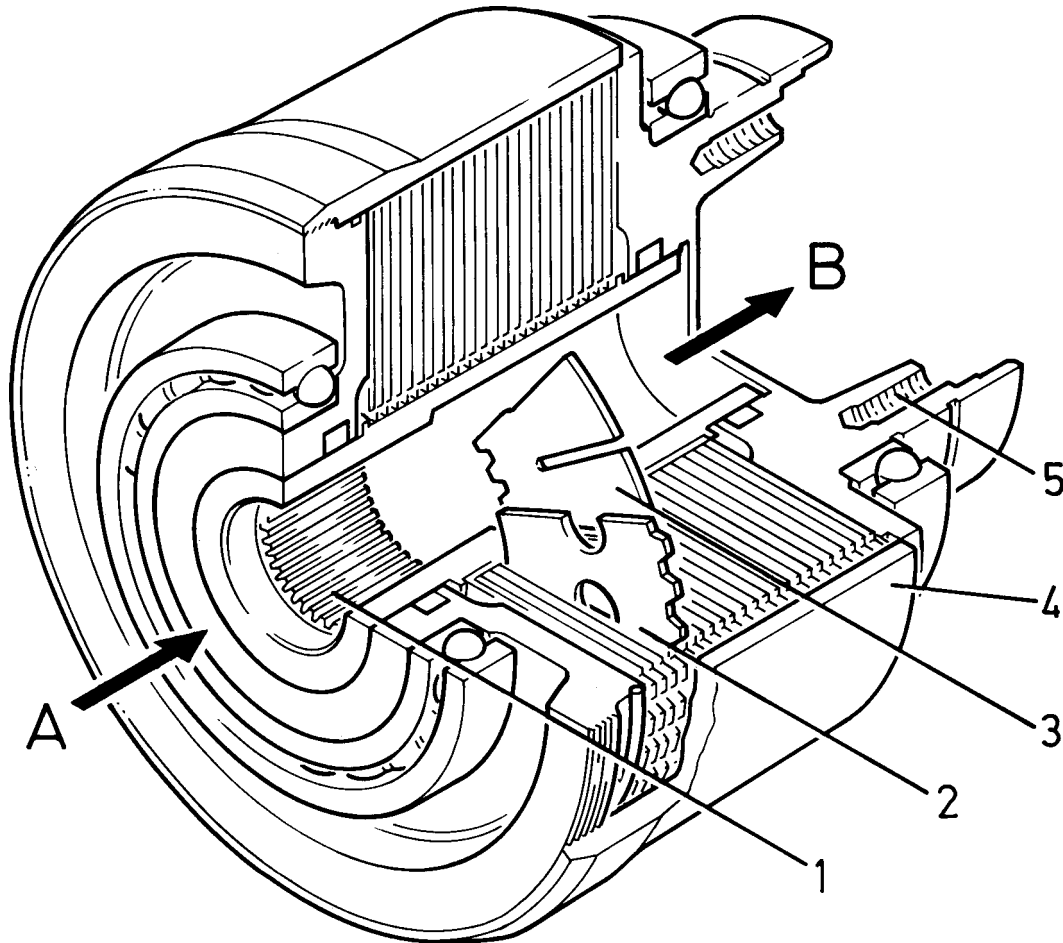


Visco Clutch

The visco clutch is a liquid shearing clutch, which is used for direct torque transfer in the drive train. The automatically slip-regulated ramification of performance can be co-ordinated with the special requirements of the vehicle.



The most important components of the Visco clutch are:

- | | |
|---------------------------|-------------------------------------------------------------|
| 1 hub/stator | 5 link for drive shaft |
| 2 external lamella | A torque flow of the sun wheel of the planetary gear |
| 3 interior lamella | B torque flow to the rear axle |
| 4 housing | |

The external lamellas on the driving side reach into the teeth of the housing, the interior lamellas on the driven side into the hub/stator of the sun wheel.

The special characteristic of the silicone liquid enables the clutch to transfer larger driving power.

● Service/Maintenance

The visco clutch is filled with a silicone liquid and from the outside completely sealed. Repairs are not possible, except by us.

We are able to adapt the visco clutch (characteristic) to the power transmission (torque = Nm/Newton meter) to the customer's request!

Example:

With a normal visco clutch (in hot status) only 68Nm to 90Nm are transferred. It's not correct that during increase of power of the engine that power will transfer to the rear axle. Because the visco clutch still only transfers the 68Nm to 90Nm. Therefore, also the visco clutch should be adapted to the new performance (torque = Nm).

Reason:

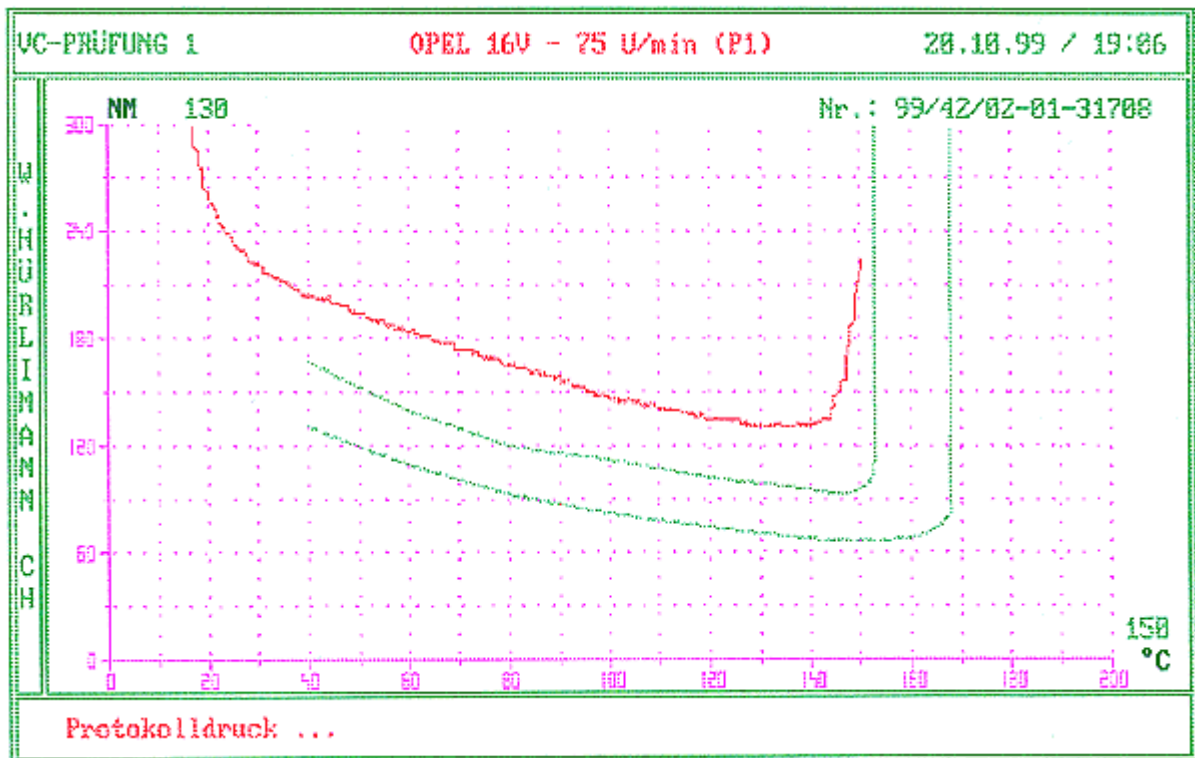
Optimal power distribution front axle 2/3, rear axle 1/3 is in series vehicles adjusted. When desired we can modify the power distribution up to front to rear 1/2 to 1/2.

Divided visco clutch with burned silicone liquid

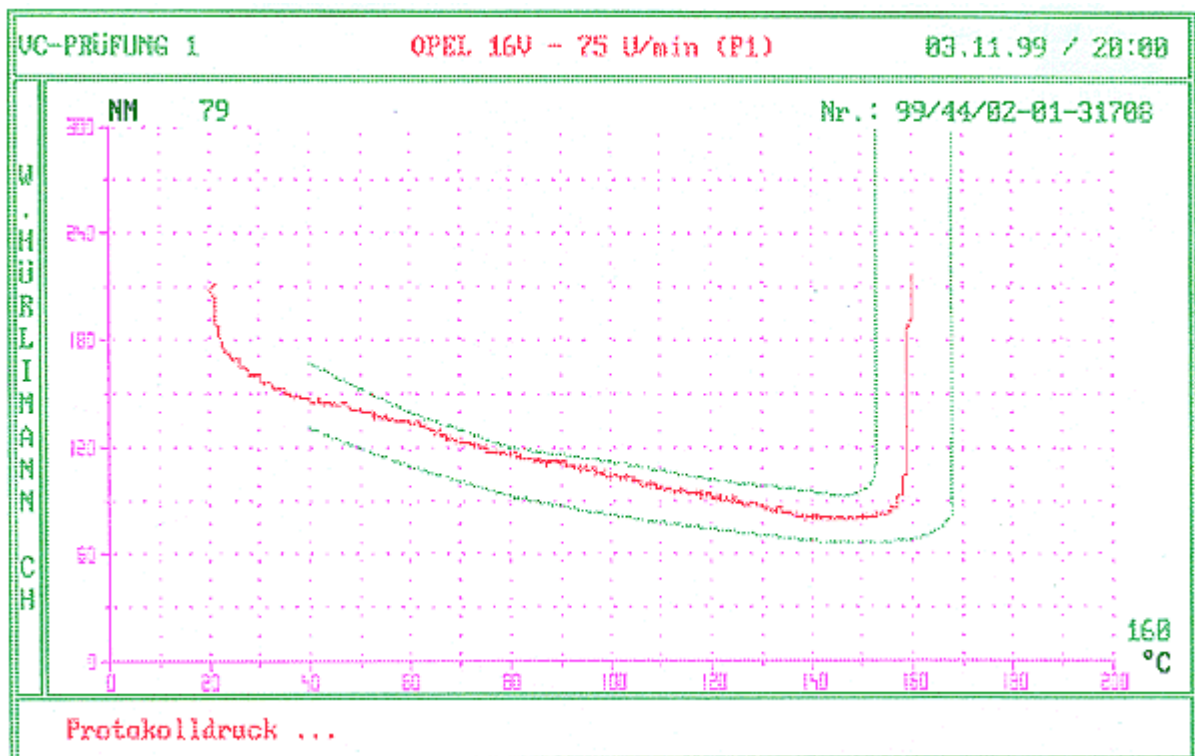
Cause of damage: To large rpm-differences between front and rear axle.



Visco clutch before revision: log printout test stand
(Outside the desired values = green lines)



Visco clutch after revision: log printout test stand
(Inside the desired values = green lines)

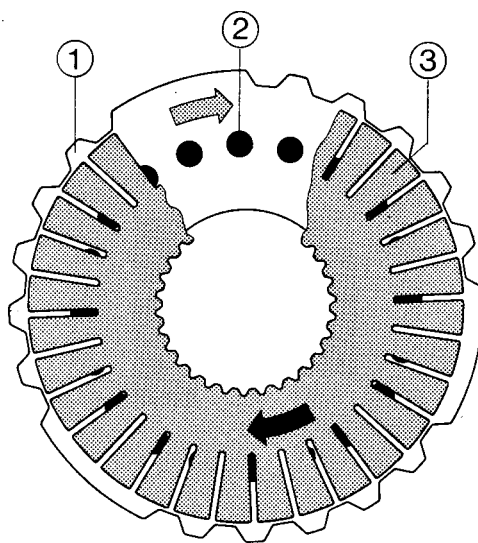


With small differences in rpm between input rpm at the sun wheel and drift to the drive shaft the back resistance is overcome by the small viscosity of the silicone liquid in the form of light slip.

With larger differences in rpm the silicone liquid between the lamellas is cut. Thus warmth develops and the pressure in the housing of the visco clutch rises.

By the increase of pressure the viscosity of the silicone liquid increases rapidly, that means, the silicone liquid can be cut by the lamellas with more difficulty.

- The visco clutch begins to lock.



- 1 external Lamella
- 2 silicone liquid
- 3 interior lamella

A power transmission takes place at the lamellas without touching themselves directly.

Complete lamella-pack stand-alone:

