

20.1 Operation of Viscofan Clutch

M 116.982, 117.981

M 117.982, 117.984

Note

The values in brackets () refer to engines in US version 117.981, 117.982 and 117.984.

Operation

On this viscofan clutch the fan speed depends on the engine speed.

Up to an engine speed of approx. 3,900 (3,200) rpm the fan is running along proportionally to engine speed, not exceeding a fan speed of approx. 1,800 rpm due to the ratio of the belt drive and the slip in the visco clutch.

When the engine speed increases, the fan speed drops to approx. 1,000 rpm and attains approx. 1,200 rpm at max. speed of engine.

This control operation is effected by the spring loaded valve lever (14) which closes the bore (a) under the influence of centrifugal forces and interrupts the circulation of the transmitting fluid.

Checking the Fan Cutout

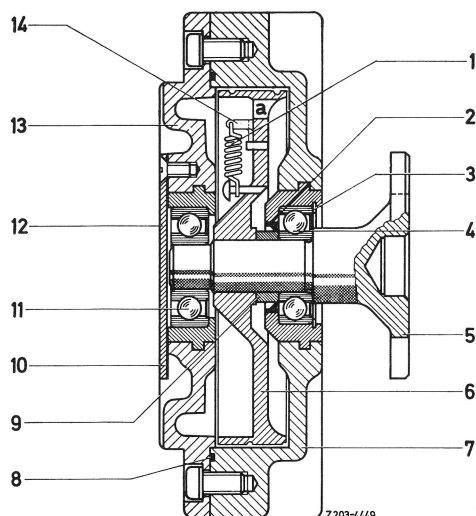
Increase engine speed slowly. At approx. 3,900 (3,200) rpm the dropping of the fan speed can be clearly heard.

Checking the Fan Connection

When the engine speed drops, the fan clutch should connect again at approx. 3,300 (2,700) rpm which is also clearly heard.

Reconditioning

A defective viscofan clutch cannot be reconditioned with shop means and should be replaced.



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|------------------------|-------------------------|
| 1 Draw spring | 9 Spacer ring |
| 2 Sealing ring | 10 Seal |
| 3 Locking ring | 11 Grooved ball bearing |
| 4 Grooved ball bearing | 12 Cover plate |
| 5 Flange shaft | 13 Cover |
| 6 Primary disc | 14 Valve lever |
| 7 Basic body | a Oil bore |
| 8 O-ring | |
| 9 Spacer ring | |