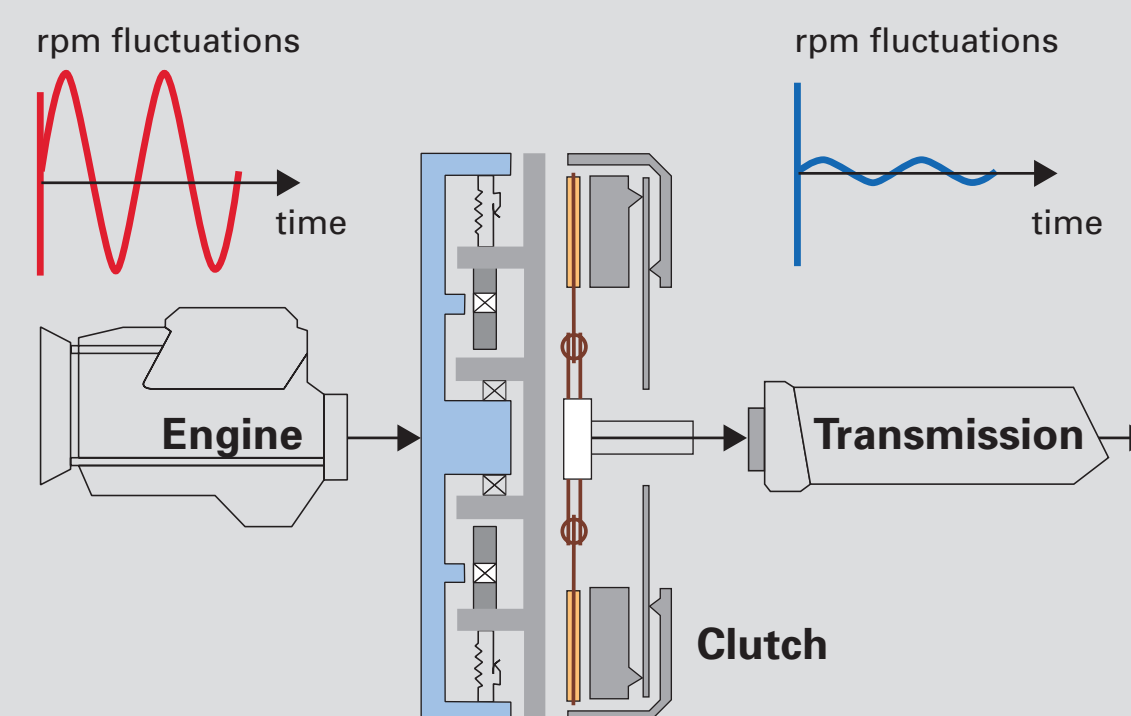
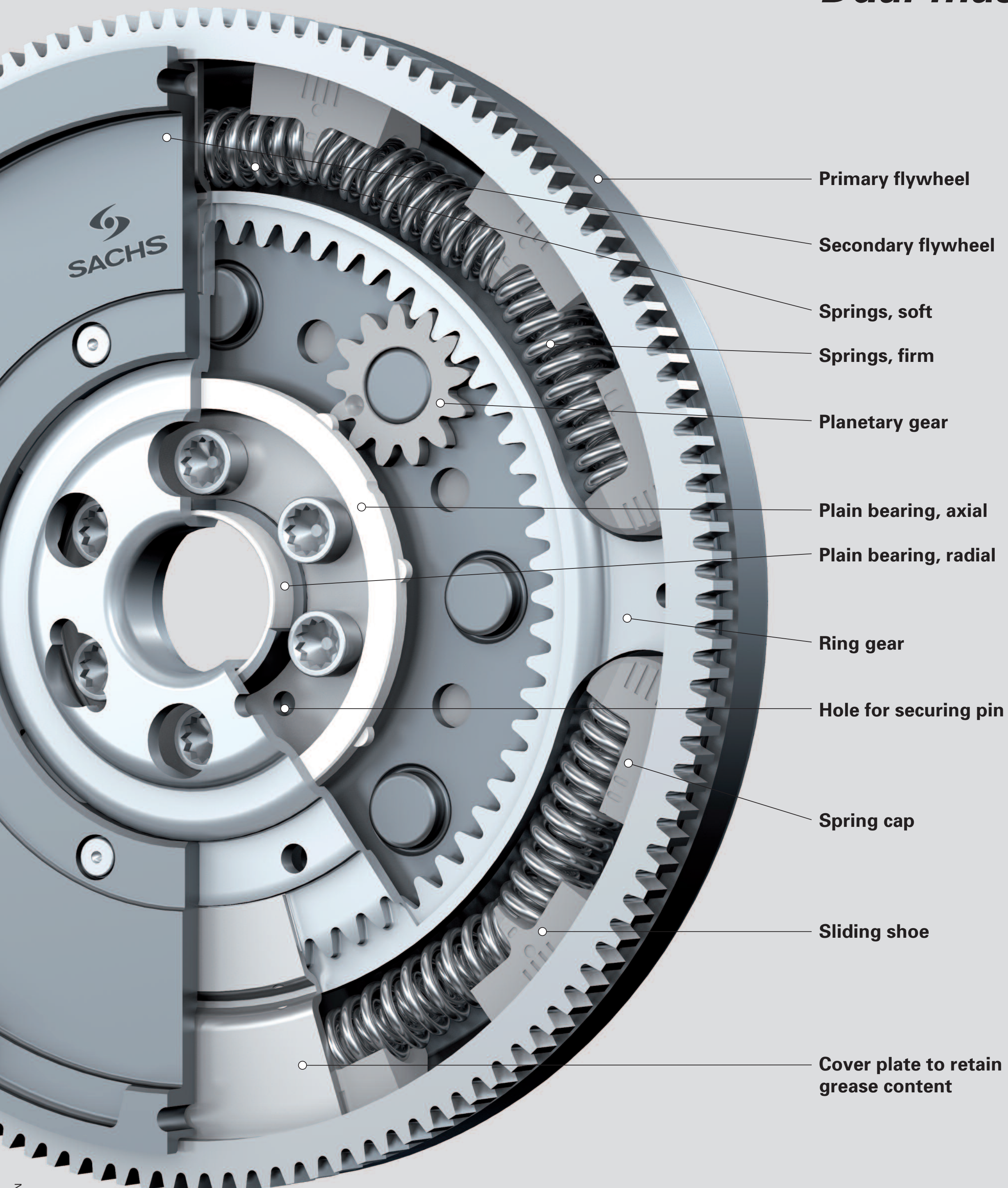


# SACHS DMF

- controls vibrations from the engine
- protects the transmission
- reduces noise level in the transmission

## Dual-mass flywheel



### Design

The DMF is integrated between the engine and the clutch.

The flywheel is divided into a primary and a secondary mass. The primary side is bolted onto the crankshaft, and carries the starter ring gear.

The secondary mass is mounted on the primary mass via separate axial and radial slide mounts that allow it to rotate independently. Between these two masses, there is a highly efficient spring damping system filled with lubricating grease that consists of different spring units guided by spring seats and caps. These also prevent the springs from blocking.

### Operations

The DMF features a multi-stage characteristic curve. The first stage uses soft springs to ensure outstanding engine starting and stopping performance. The second stage has firmer springs to provide superb decoupling of torsional vibrations during normal driving operations.

## Indicators for mandatory replacement

### Overheating of secondary flywheel



#### Cause:

- Caused by incorrect clutch use, e.g. clutch slip.

#### Result:

- Heat counteracts the effect of the damping grease. Sliding shoes, spring caps and springs run dry.
- Vibration damping performance is reduced or fails.
- Heat spots can cause clutch grabbing.

#### Please note:

Clearly visible annealing discoloration and heat cracking.

### Primary flywheel worn through



#### Cause:

- Extreme mechanical strain on entire DMF. This may be due to a rough running engine, e.g. caused by faulty injectors.

#### Result:

- Destruction of interior components
- In extreme cases, internal components wear through the housing of the primary flywheel. This leads to total failure of the DMF.

#### Please note:

Lubricant leakage is another sign of this problem.

### Signs of overheating inside on the secondary flywheel



#### Cause:

- Thrust bearing wear between primary and secondary flywheel due to mechanical strain (excessive axial force from rough-running release system or constant light pressing of the clutch pedal).

#### Result:

- Heat counteracts the effect of the damping grease. Sliding shoes, spring caps and springs run dry.
- Vibration damping performance is reduced or fails.

#### Please note:

Clearly visible annealing discoloration.