

| **Climate control** | Compressor 699357 | Modification pulley | VAG models

Compressor safe guard modified

The breakaway device of the pulley has been improved

Reason

Repeated observation of a torn-off pulley assembly, where the center is detached from the drive wheel. This breaks the drive of the air conditioning compressor and stops the system from working.

Purpose of the breakaway device

The purpose of the breakaway device is to protect the belt drive of the motor in the event of an abrupt stoppage of the air conditioning compressor.

If a compressor should come to an abrupt halt due to circumstances while the engine is running - possibly at high(er) speeds - this will cause a huge peak load on the drive belt. This will damage or even break. The other aggregates and functions driven by the multi-belt are also out of order. Think of the alternator and / or water pump. Also the timing belt or chain would have a peak load due to the shock, which could also lead to damage.

The cause of breakage

It has been found after extensive research that the break-out device as intended was insufficiently strong. At the moment the compressor is switched on when the engine is running, the compressor must immediately reach speed. Especially at higher engine speeds, this causes a peak in the load on the pulley and belt. This peak was repeatedly found to be so high that the threshold at which the break device breaks during normal system use has already been achieved.



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The modification

The solution has been found in using a different pulley / damper assembly; formerly this was a "clutchless" type, where it is now a "driver" type.

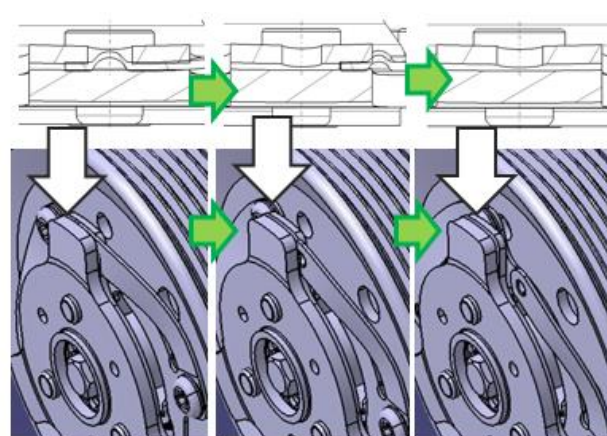
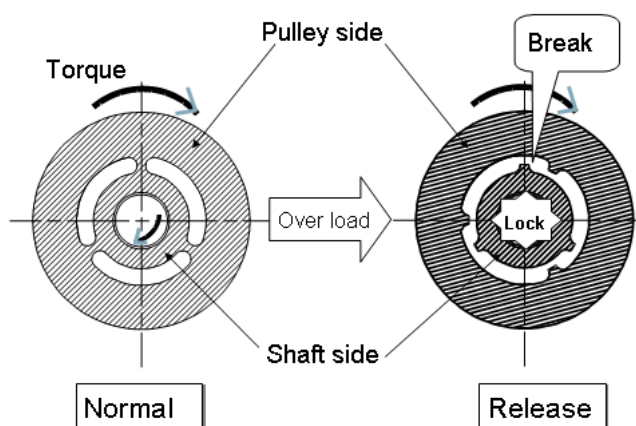
The differences are as follows:

Old configuration:

- Plastic pulley assembly
- Rubber damper assembly
- Robustness with regard to negative torque about 1,000,000 cycles (20 Hz, 25 ± 35 Nm)

New configuration:

- Metal pulley assembly
 - Steel "driver" composition
 - Robustness with regard to negative torque about 10,000,000 cycles (20 Hz, 25 ± 35 Nm)
- 10x more!**



- Decoupling through breakage

- Mechanical decoupling



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