Audi / Seat / VW
All models
With air-conditioning system and compressor without magnetic clutch

Compressor does not work

In the case of the above-mentioned vehicles, compressors without an electric magnetic clutch are sometimes fitted (Fig. 1). Control of the compressor is carried out by an electric control valve (Fig. 2) which is fitted to the compressor and is externally triggered.
If the air-conditioning system is not working, or the compressor is not building-up any pressure, the rubber element of the pulley should be checked initially.
The rubber element triggers if the torque is too high, and protects the drive belt and the driven units from overload. This means that if the compressor is mechanically damaged and jammed, the frictional connection between the pulley and the rubber element is interrupted. This can also be caused by uneven engine running. The pulley then runs only in an “idle” state. In the case of some compressors, the overload protection triggered too early (no damage was evident). As a result of this, the compressor drive was modified. Depending on the type of compressor, there are many ways of establishing whether the overload protection or the rubber element have triggered:

1. Rubber-abrasion parts are visible on the inside of the pulley (Fig. 3). The compressor shaft is no longer driven. The pulley and the rubber element can be replaced, provided that the compressor can be turned easily.

2. The overload protection has interrupted the frictional connection to the drive plate (Fig. 4). The drive plate and the rubber element can be replaced individually. Prerequisite: The compressor can be turned easily.
3. A triggered torque limiter cannot necessarily be detected visually. In order to check if the limiter has triggered, the compressor shaft must be held still using a suitable tool (Fig. 5), and the pulley simultaneously turned to the left. If the pulley can be turned to the left, the limiter has triggered, and the compressor must be replaced. In the case of the compressor types Sanden PXE 13 and PXE 16, replacement of the torque limiter is not possible.

The repair of a compressor should take place only with the aid of suitable repair information. As the use of compressors without magnetic clutches is becoming more widespread, this information may also be applicable to other vehicle makes and models.

Fig. 1

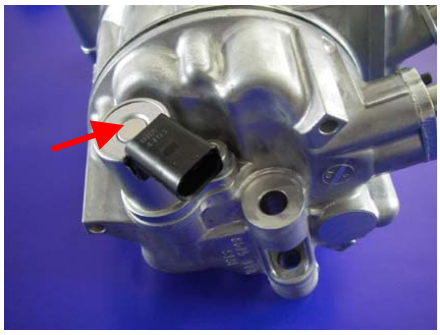

Fig. 2

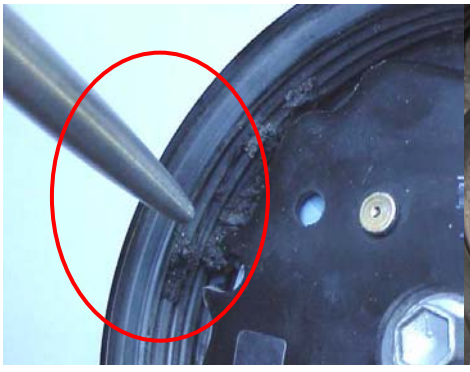

Fig. 3

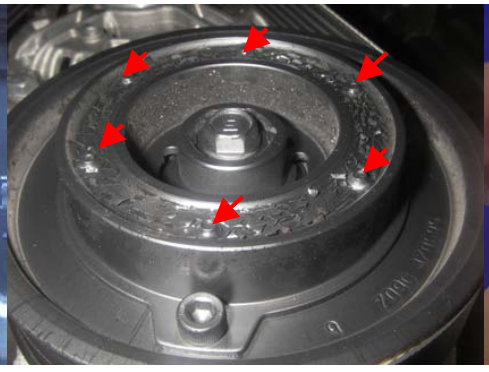

Fig. 4

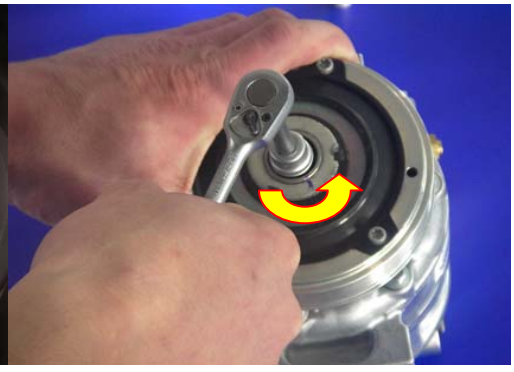

Fig. 5