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041

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Technical Bulletin

DriveAlign® Tensioner T38192

GATES REFERENCE:

T38192/K046PK1660

MAKE:

AUDI, SEAT, SKODA, VOLKSWAGEN

MODEL:

A3, Cordoba, Leon, Toledo, Octavia, Bora, Caddy, Golf, New Beetle, Polo

ENGINE:

1.9 Tdi 8V

ENGINE CODES:

Various



Modern engines have to deal with a lot of vibrations. That's why new engines are equipped with new technology such as OAP's (Overrunning Alternator Pulleys) and TVD's (Torsional Vibration Dampers) (See also our TB039 and 040).

These parts are handling the severe vibrations in the accessory belt drive system, and are wear parts.

Because of that, it makes sense that OAP's and TVD's are inspected regularly and we recommend replacing them together with the Micro-V® XF belt in order to avoid premature failures. If the TVD or OAP does not function anymore, this will lead to other problems in the drive system.

Different failures of this tensioner have led to garage visits where the reason of the early failures of this tensioner were investigated. During the examinations, the malfunction of the OAP was proven. The OAP not working properly anymore leads to abnormal belt vibrations, causing the tensioner bracket to be affected by material fatigue; leading to rupture (Fig. 1 and 2).



Fig 1



Fig. 2

The bracket will always shear at the same point (just above the connection of the bracket with the hydraulic damper).

The broken tensioner bracket is the result of excessive vibrations, not the cause!

These are root causes of the failure:

- Worn Overrunning Alternator Pulley
- Solid pulley installed instead of an OAP
- Using an OWC (One Way Clutch) instead of an OAD (Overrunning Alternator Decoupler)





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In all these cases, as the OAP did not work anymore, the hydraulic tensioner element had to cope with abnormal vibrations in the drive; leading to bracket material fatigue.

Also in other cases worn/blocked OAP's have led to the failure of the tensioner (Fig. 3).



Fig. 3

Conclusion: the modern accessory drive is an engineered system in which all components are dependent on one another. The broken T38192 is the result of another failure/malfunction.

On vehicle testing:

- With the engine running at idle: look for abnormal tensioner movement. If present, the OAP/TVD might need replacement.
- With the engine running at high revolutions, switch it off and listen for abnormal alternator rotor noise. If present, the OAP might have a worn bearing.

Recommendations:

The OAP is a wear item, which has to be regularly checked for proper function.

Replace the alternator pulley with the prescribed Gates part.

Follow OE recommended installation procedure.

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