




VAG 1.9 D / Accessory Drive / Tensioner info.

GATES REFERENCE:	T38192 & Kits.	
MAKE:	AUDI / SEAT / SKODA / VOLKSWAGEN.	
MODEL:	A3, Bora, Caddy, Cordoba, Golf, Ibiza, Inca, Leon, New Beetle, Octavia, Polo, Toledo.	
MOTOR:	1.9 TDI 8V, 1.9 SDI 8V.	
MOTOR CODE:	1Y, 1Z, AEY, AFN, AGR, AHF, AHU, ALE, ALH, ASV, AYQ.	

New engines (since 1995) 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 and speed fluctuations in the accessory belt drive system. These are wear parts, which require periodic replacement (together with the Micro-V[®] belt and tensioner) in order to avoid premature failures. If the TVD or OAP does not function well anymore, this will cause more problems in the drive system.

In most cases where the tensioner seemed to be failing, or even broke down the malfunction of the OAP was proven. The OAP not working properly leads to abnormal belt vibrations, causing the tensioner bracket to be affected by material fatigue; leading to rupture (Fig. 1 and Fig. 2).

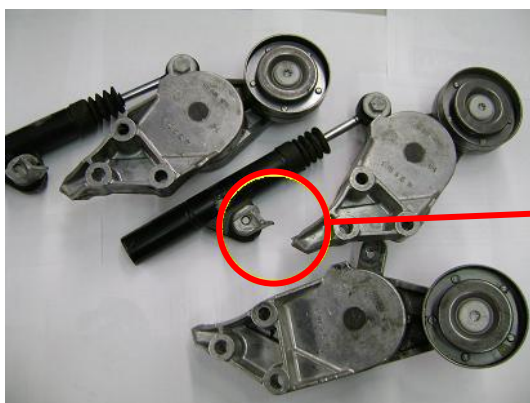


Fig. 1

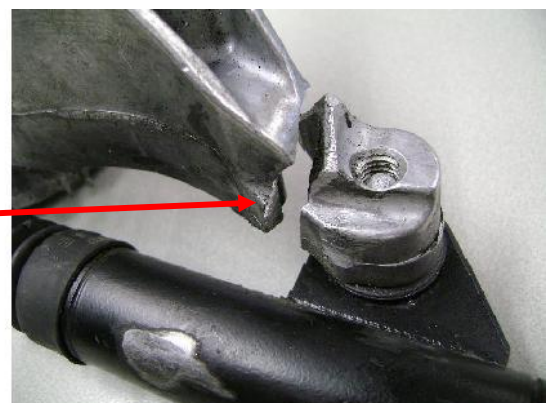


Fig. 2

The bracket will always shear off 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!



The most common root causes for this failure are:

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

In all these cases where the OAP did not perform as it should, the hydraulic tensioner element had to cope with abnormal vibrations in the drive; leading to earlier prescribed bracket material fatigue. (Fig. 3)



Fig. 3

Conclusion: the modern accessory drive is an engineered system in which all components are dependent on one another. A broken tensioner in this drive 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 checked regularly for proper functioning.
- Replace the alternator pulley only with the prescribed Gates part.
- Follow OE recommended installation procedure.
- Replace all service parts in the drive, use the complete kit.

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