

THAT'LL BE TI

As automatic tensioners become increasingly common in belt drive systems, mechanics need to be aware of the need for accuracy and the use of correct and up-to-date installation data, as a recent and rather unusual investigation by Gates suggests.

Engine: 1.9SDi 8-valve
VW models: Golf, Passat

When a report comes in about a timing belt that has failed prematurely, previous cases relating to the particular belt on similar engines are consulted to identify the common causes. Checks are also made to determine whether there have been any subsequent amendments to the drive layout, or updates with respect to the removal or replacement of the belt and tensioners. This helps an experienced

technical examiner at the scene to quickly identify any known issues.

When the timing belts on two similar engines using the same layout but on different vehicle models failed in different parts of the UK, the Gates technical team was compelled to investigate. The technical team noted that the cases concerned a VW Golf (Mark IV) and a VW Passat (both circa 2000). Each was fitted with a 1.9SDi engine.

Background

The technical team turned first to the Original Equipment Service (OES) case history and the reason for this is simple:

any problems are more likely to have emerged during the warranty period and resolved. Common installation errors will have been identified and flagged up.

There was no previous history involving either model so the typical layout was examined under lab conditions. Both drives feature an automatic tensioner. This has been upgraded since 2004, although no specific OES issues were identified.

Automatic tensioners

An automatic tensioner can only deliver the precise tension to the timing belt if it has been set up correctly in the first place. It is not just a case of putting the belt on, winding it around the system and forgetting about it.

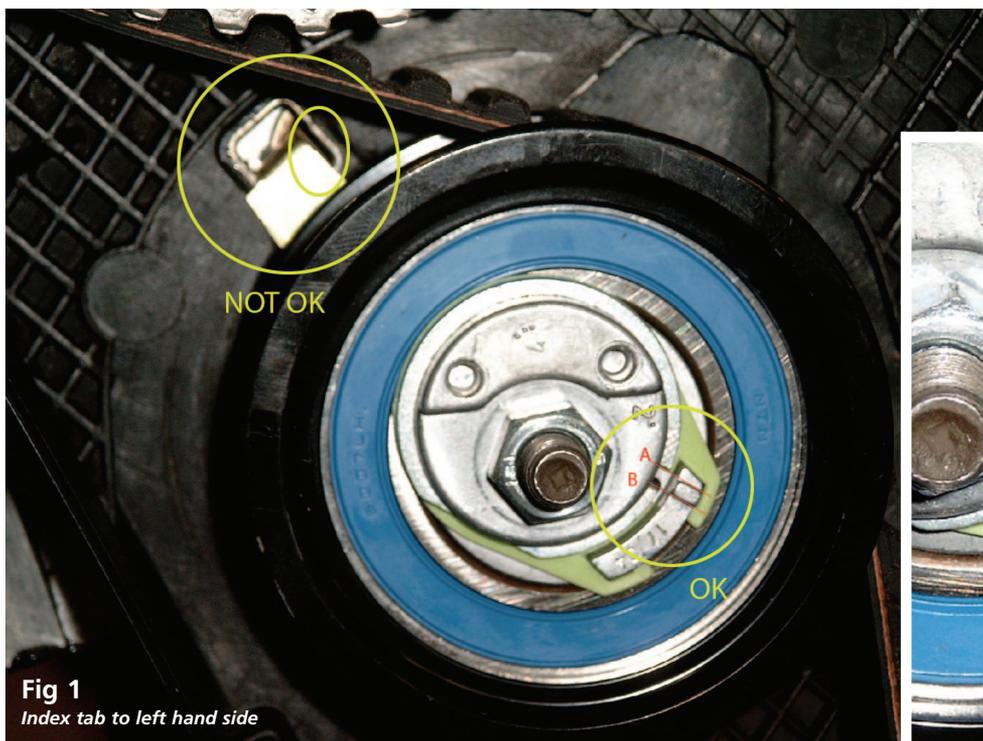


Fig 1
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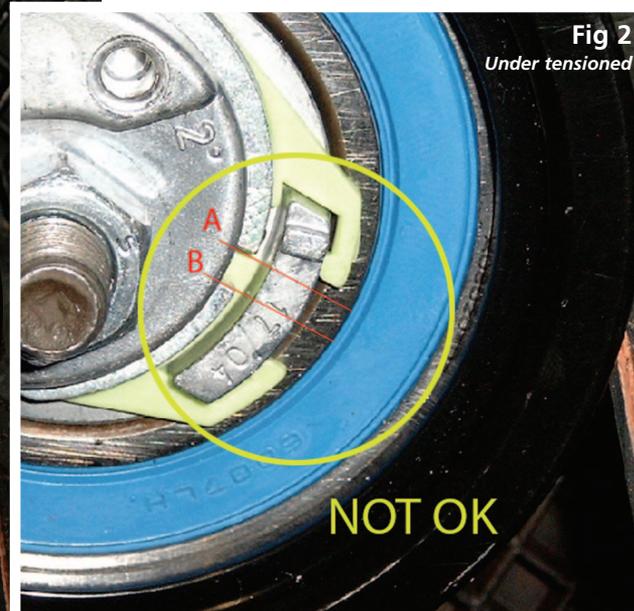


Fig 2
 Under tensioned