

cam belt clinic

in association with



NO REASON I

First impressions can be deceiving. It's at times like these that a predetermined plan can save time, money and preserve reputations. Gates explains...

CASE STUDY

Vehicle: VW
Model: Transporter
Year: 1996
Engine: 1.9 Turbo Diesel ABL

The vehicle wasn't running particularly well. The driver who presented the VW Transporter had complained that the engine was running 'rough' and that there was excessive smoke. Checking the injection pump timing, it was clearly 'out', as was the valve timing. Whatever the problem was, a judgement was made that the timing belt was the root cause.

INITIAL DIAGNOSIS

The conclusion was that the belt had 'jumped' several teeth, but a reason was never established. A common assumption is that this arises as a result of some sort of problem with the belt itself. Certainly, had the belt jumped several teeth, it would have led to the problems with the engine that the driver had described. The timing belt was

therefore removed and a new Gates belt was fitted.

FURTHER PROBLEMS

Within a very short period of time, the engine was back once more and the same faults were reported. Once again, the injection pump and valve timings were 'out'. Further investigation of the drive system on the engine revealed that the automatic tensioner had failed. A closer inspection showed that it had, in fact, been operating outside of its intended parameters. In other words, the

required amount of movement necessary to automatically tension and slacken the belt was being exceeded. The stops had completely broken off. However, for a second time, the reason why was never established.

SECOND DIAGNOSIS

Replacing the belt alone had failed to resolve the problem. Changing the belt in isolation is only part of the solution. As a major manufacturer of timing belts for OE and the aftermarket, Gates always recommends the use of a timing belt kit and the replacement of the associated metal parts whenever a timing belt is removed.

It says that replacing the metal parts is good workshop practice because it addresses several unknown qualities present within any given drive system. These are:

- Integrity of the existing tensioner(s).
- Potential for completing another full duty cycle.

A LESSON LEARNED

This time, a timing belt kit was used. The tensioner was replaced and a second new belt was installed even though the existing belt had run for only a very short distance and a very short period of time.

With rectification

