THE MANCUNIA

Even though the technician was blameless when a timing belt failed prematurely, the garage was advised to standardise its inspection procedures. Gates explains why.

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CASE STUDY 1
Vehicle: Nissan
Model: Primera, 2.0 litre diesel
Year: 1995

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This was an unusual case from the start. The timing belt on a 2.0L Nissan Primera diesel had failed not long after a scheduled replacement according to the vehicle manufacturer's recommendations. A complete timing belt kit was installed.

It is a vehicle with no known fitting/timing belt installation issues with respect to either the engine or the model. Such cases make diagnosis of the problem and tracing the cause of the fault a real challenge, and certainly more intriguing from a belt manufacturer's point of view. The Gates inspection engineer, therefore, arrived at the garage in Manchester with an open mind.

POTENTIAL REASONS FOR FAILURE

When a recently installed timing belt fails prematurely, there are several prime suspects:
- A contaminated drive system (oil, water, dirt).
- Worn pulleys that ought to have been changed along with the belt.
- Incorrect belt tension installation setting.
- Irregular installation procedure.

The prime candidate as a source for the contamination is often the cover of the drive system itself. Drive system covers are occasionally re-fitted incorrectly, which can allow water, dirt or oil ingress. Alternatively, checks for cracks or other damage to the cover are sometimes overlooked and these can also prove an entry point for 'foreign bodies'. Fragments from a broken timing belt cover, or indeed, the timing belt cover itself can also become the 'foreign body' in the drive system. Once contamination has occurred, it inevitably leads to problems in the future that will cause premature failure of the timing belt sooner or later.

IDENTIFYING THE SOURCE

It was not so this time. The timing belt cover was in near perfect condition, which seemed to rule out contamination from any external