

TSCG

Technical Support Group



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Gates way to success

There's no room for error when installing a new timing belt. It must be handled with care and installed correctly, but only after a thorough inspection of the existing belt and pulley system. Not every technician knows exactly what to look for...

No big expense required

A series of technical training sessions about timing belt maintenance is stirring great interest among local garage technicians and proprietors. "The technicians have been coming along to learn why the tension of the belt is so important. The proprietors have been leaving with the ability to avoid expensive bills as a result of rejected warranty claims," says Iain Mitchell, Technical Training Manager UK and Scandinavia, for Gates. As a manufacturer of OE timing belts and a supplier of OE-quality belts for the aftermarket, Gates is providing technical expertise and fitting tips at sessions that have been organised in association with



Mechanics learn importance of tension

local factors. "The cost of rectifying a timing belt failure can be very expensive, so when a belt fails prematurely, it's not surprising that a warranty claim is made. More often than not,

the cause is related to incorrect tensioning, or one of several common installation errors that still occur too often," he adds. Gates technical training sessions provide the basis for a better understanding of the correct procedures - and the tools required - to eliminate warranty claims.

Hot tip:

If one component of the drive needs to be replaced, they all do. It is highly probable that all parts of the system will have been adversely affected in some way.

Prevention rather than cure

Inspection procedures, fault diagnosis and good maintenance practices are key elements of Gates' timing belt training and education clinics.

Known issues with particular vehicle marques are highlighted. Technicians are given tips about faultfinding, diagnostic techniques and where to look for evidence of a defect. There is also a strong focus on the procedural "Do's and Don'ts".

Delegates are told that care when handling the belt is much more important than many technicians realise. For example, twisting or crimping it in the hand can easily cause damage to the tensile cords and lead to a broken belt later on.

Common procedural errors are outlined so that they can be more easily managed out of the workshop - and technicians also learn that if the belt is ever at fault, the Gates warranty scheme will always provide the necessary support.

Top 5 causes

The five most common causes of early timing belt failure are shown here. All can be prevented - if the technician knows what to look for:

1. Incorrect tension
2. Failure of a drive component (for example a bearing)
3. Foreign object in the drive system (such as oil, water or stone chips)
4. Misalignment of the drive
5. Seizure of a component (such as the water pump)

Hot tip:

Twisting and crimping the belt also causes a significant number of premature failures.

Professional tools

Today's sophisticated engine configurations rely on timing belts to help them to deliver peak performance. So, on replacement, the new belt must match the tension and performance of the OE belt as it was installed on the assembly line. The tension must be precise. There is no room for errors or estimates. The only way to achieve this is to use a replacement belt and a tension-testing tool that's just as good as the original. Gates OE-quality PowerGrip® belts ensure long and trouble free performance, just like the original belt, if installed correctly. The Gates STT-1 sonic belt tension tester reproduces the kind of tests performed at

the car plant when the engine is installed. It analyses the sound waves produced by the replacement Gates belt under tension, compares this to the Gates belt data stored in its memory and displays a result that's easy to read and understand. It saves time and provides technicians with peace of mind. It's the only way to relax.



STT-1 is the first of a range of specialist tools from Gates

Inspection and detection

Gates is warning garage proprietors to look for causes before replacing damaged belts, otherwise the problem will recur. The kind of evidence to look for includes:

Noisy drive

- defective or misaligned bearings
- tension too high / too low

Shining belt

- misalignment
- tension too high / too low

Cracks

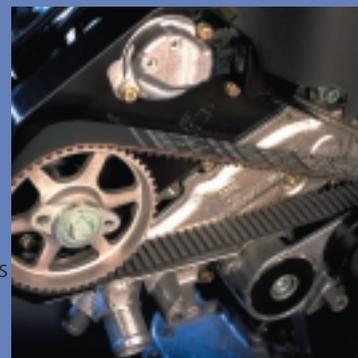
- temperature / cooling problem
- debris or misalignment

Contamination

- defective cover: oil, water or dust intrusion

Oscillating belt

- defective or misaligned bearings



Correct tension at installation is essential

Hot tip:

Watch out for the launch of the Dr Gates tool kit for timing belts later in the year. It includes a range of tools to help with diagnostic, faultfinding and installation procedures.