

Problem – Diagnosis – Solution

Timing belts

Problem and cause

Solution

Timing belts

Running noises from belt

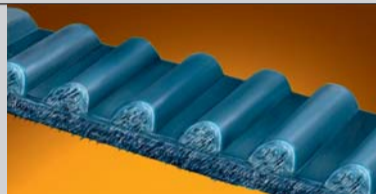
- ① Tension too high: Belt whines, whistles
- ② Tension too low: Belt knocks against covering



- ① ② Adjust tension properly

Edge wear

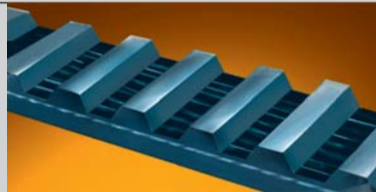
- ① Belt not parallel to axis: Belt runs against flanged pulley
- ② Wheels axially off-centre: Timing belt cannot be properly aligned
- ③ Flanged pulley has flaws
- ④ Bearing play in components



- ① ② Check drive, line up or, if necessary, replace any non-aligned pulleys, change the belt
- ③ ④ Replace idler/tensioning pulleys, change the belt

Fabric wear in the tooth root

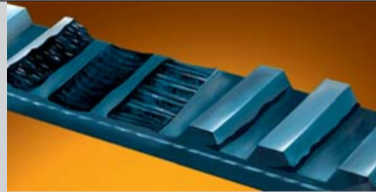
- ① Belt excessively tensioned
- ② Belt is overheating
- ③ Timing belt pulley is worn out



- ① Change the belt, adjust tension correctly
- ② Find out cause (e.g. check cold performance), take corrective action, change the belt
- ③ Replace timing belt pulley, change the belt

Unacceptable wear of tooth flanks/ base separating and tooth shearing

- ① Tension too high/too low
- ② Trapped foreign matter
- ③ Jammed timing belt pulley or tensioning pulley



- ① Change the belt, adjust tension properly
- ② Remove foreign matter, check covering is seated properly, change the belt
- ③ Find out cause (e.g. defective bearing), take corrective action, change the belt

Teeth and fabric separating from belt body

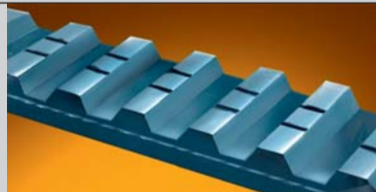
- ① Leaks in the engine or engine compartment (e.g. escape of oil, antifreeze etc.)



- ① Repair leak(s), change the belt

Running marks on teeth side

- ① Foreign matter in timing belt drive
- ② Flaws in teeth of timing belt pulley caused by foreign matter or tools during fitting
- ③ Timing belt damaged before/during fitting



- ① Remove foreign matter, change the belt, check the cover is seated properly
- ② Replace timing belt pulley, change the belt, ensuring it is properly fitted
- ③ Change the belt, ensuring it is properly fitted

Cracks on back of timing belt

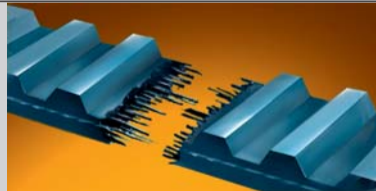
- ① Ambient temperature too high/low
- ② Contact with foreign media
- ③ Back idler pulley sluggish
- ④ Ageing



- ① Find out cause (e.g. check cold performance), take corrective action, change the belt
- ② Change the belt, check the covering is seated properly
- ③ Replace pulley, change the belt
- ④ Change the belt

Timing belt snaps

- ① Foreign matter in the drive
- ② Contact with foreign media
- ③ Excessive tensioning
- ④ Belt was crimped before/during fitting



- ① Remove foreign matter/media, change the belt
- ② Change the belt, check the covering is seated properly
- ③ Change the belt, adjust tension properly
- ④ Change the belt and fit it correctly

Defective system components

- ① Bearing play
- ② Damaged running surface



- ① ② Replace the idler, tensioning and/or guide pulley

