FEDERAL MOGUL ENGINE SOLUTIONS

Service Engineering Bulletin

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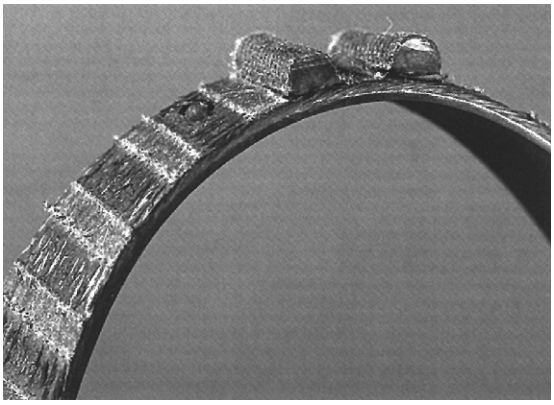
Timing Belts - Tooth Shear

To prevent tooth shear, a common failure of timing belts, it is essential to adhere to the vehicle manufacturer's tensioning recommendation.

Tooth shear, where six or more teeth are missing and cracking seen at the roots of other teeth is due to low tensioning of the belt during installation. Low belt tension allows the belt to ride high on the gear producing excessive bending. This causes the belt teeth to deflect abnormally resulting in cracking and eventually tooth shear.



Tooth Shear

Installation

Ensure the pulleys are clean, undamaged and unworn - always change the pulleys if in doubt. Align the timing marks on the pulleys with those on the engine block and place the belt over the pulleys. In some engines it is necessary to use special tools to avoid damaging the belt - hammers or screwdrivers should never be used to lever the belt onto the pulleys.

The belt should now be tensioned in accordance with the vehicle manufacturer's recommendations. Rotate the crankshaft two complete revolutions checking the timing marks are still in line and replace the timing belt cover.

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