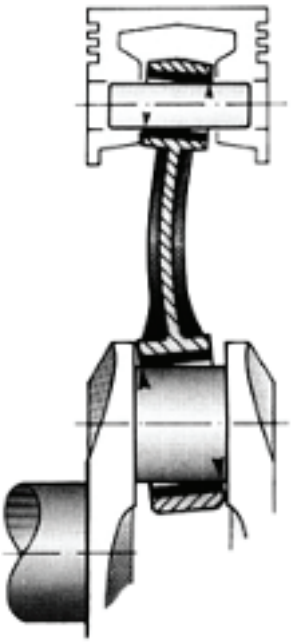
FAILURE INFORMATION

MELTING NEXT TO THE PISTON PIN BORES (BROKEN PISTON PIN CIRCLIP AND DISLOCATION)

Description of the Failure

The image of the damage caused by the failure is usually observed as melting around the piston pin circlip grooves. The image of the damage caries depending on whether the failure is a new one or the vehicle is driven for a long time with this failure.

The melting reaches up to the ring area in advanced failures. The melted piston material progress towards the piston crown. The piston ring lands are also subject to the failure.(Figure 1)



Causes of the Failure

- The connecting rod is distorted and the circlip is dislocated due to the overloads in the engine.
- The circlip is dislocated due to the vibration that occurs at excessively high speeds.
- The circlip is assembled on the inaccurate direction.
- The circlips are assembled inaccurately.

Recommendations

- New circlips should be used after the engine overhauling operation.
- While the circlip is being assembled, the direction of the circlip gap should face towards the piston crown or the bottom skirt.
- The grooves of the connecting rod should be checked for being parallel.
- The connecting rod should be checked for distortion.
- If the pin is long, no force should be applied to assemble the circlip, the pin should be replaced.