Technical Report #69

The importance of using supports in the assembly of oil feed pipe

Technical Report

Reason

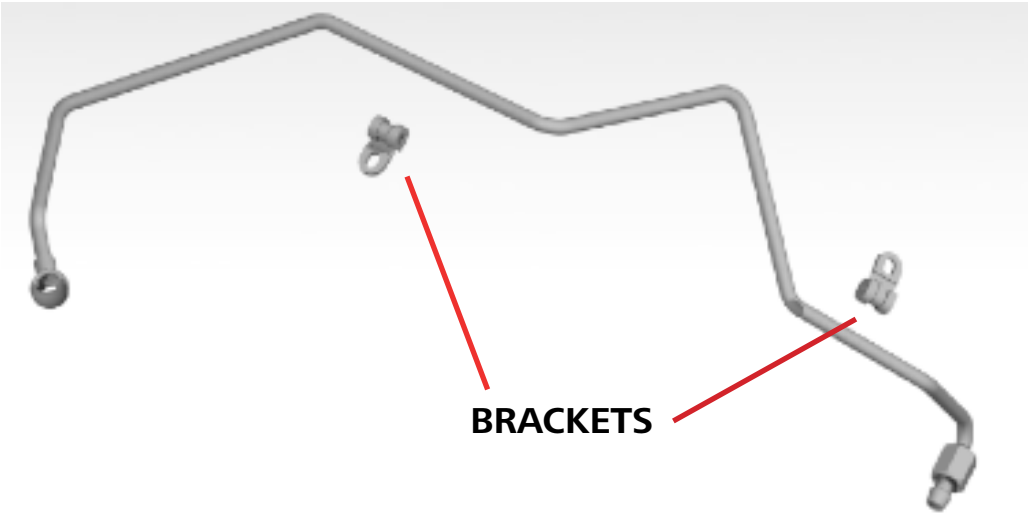
Inform the customer about the importance of using supports in the assembly of oil feed pipe, to avoid the fatigue failure.

Description

Due to the work cycle in internal combustion engines, where there are strong explosions inside the cylinders, a high level of vibrations also occurs.

These vibrations are partially absorbed in the engine supports over the vehicle chassis by the elastomer support insulators, so that transmission to the rest of the vehicle is avoided, increasing occupant comfort.

In addition, all the components connected to the engine suffer these vibrations, as is the case of the component referred to in this TIP, the oil pipe that lubricates the turbocharger.



These tubes have a length of 40-100 cm between the connectors that fix them to the turbocharger and the cylinder head / block, so it is essential to have intermediate supports to absorb the vibrations produced by the engine, to avoid fatigue failures in their rigid ends.

Example of fatigue rupture in the banjo-pipe junction area

Most oil pipes have non-welded brackets and fixed fasteners welded to the tube.

Example of welded fixed fasteners

Example of non-welded brackets

Sometimes the brackets should be reused, so it is important to pay attention to the disassembled pipe to ensure that all fixings provided by the old pipe or supplied with the new AJUSA pipe are properly installed.