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TECHNICAL REPORT

Rocker cover gasket for
F8QT Renault engines part
number: 11002800



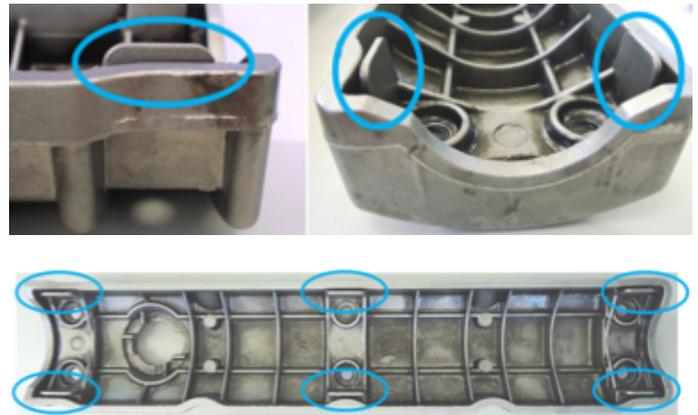
PURPOSE

To warn our customers about a problem of wear of the mechanical stops of the rocker cover in F8QT Renault engines, and the resulting problem of leakage.

DESCRIPTION

F8QT turbo diesel engines, manufactured by Renault, mount an **aluminum based rocker cover**. This cover has 6 mechanical stops that rest on the cylinder head, and they accomplish two main goals:

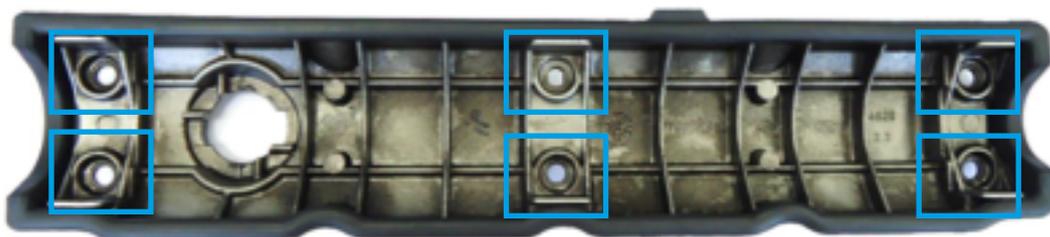
- To limit the closing pressure to avoid gasket damage.
- To homogenize the closing pressure against the cylinder head.



Ajusa rocker cover gasket, part number 11002800, has a “U” section that fits around the outline of the cover, providing a perfect seal along the time.

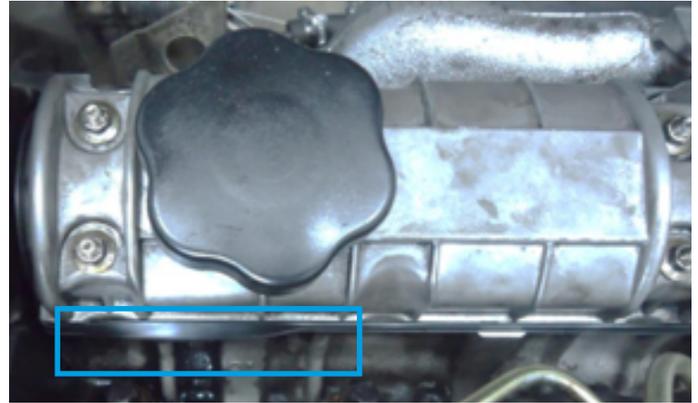


“U” section of the gasket



As we can see in the above photo, in the same places where the mechanical stops are, we find the holes for the bolts, which are tightened up to a **specific torque** in order to provide a correct seal against cylinder head.

Because of it, mechanical stops suffer the highest pressure against the cylinder head, and because of they are made from aluminum, a relatively weak material, and also due to the re-tighten procedures and vibrations caused by the engine along the years, mechanical stops wear away and reduce their height.



Gasket expelled of its housing

If the wear is not homogeneous in all the mechanical stops (as it usually occurs), we will have at the end different heights and the closing pressure will not be homogeneous any more. When this happens, the rocker cover “expels” the gasket and it occurs where the closing pressure is lower, with the resulting oil leak.

The region with the lowest closing pressure will be located on the opposite side of the mechanical stop with the larger wear (lower height).

CHECKING

To check if the rocker cover has suffered an irregular wear of its mechanical stops, it is enough **to measure distance** (H) between the surface where the gasket fits and the edge of the mechanical stop, as it is showed below:

In the vehicle we used in our test center, with 183.000 km, the height of the mechanical stops vary within 1.63mm and 1.90 mm, with a result of the gasket expelled from its correct position.



Height of the mechanical stops of a new cover:
H=1.99mm

RECOMMENDATION

In case of opening the rocker cover, **replace the gasket by a new one and check the state** of the mechanical stops.

If the height of the mechanical stops is not homogeneous and the gasket is expelled when installed, it will be necessary to replace the rocker cover by a new one.