

## Issue No.: 4/2009 – Special Sealings at OX-type Filters

Which ever MAHLE Original or Knecht filter you look at you can find several patented features, some which improve the filter performance and others which make the fitting easier, more effective and eco-friendly. On the OX 171/2 D, which is fitted to Citroën, Ford and Peugeot vehicles, there are several MAHLE patents used.



Figure 1: Plastic end disc with patented pin

The first patent: the bore of the material end plate. At first sight, it appears to be too small – but when fitting the counter piece it reveals its clever construction: The material end plate is also designed as an integrated seal. The material of the filter is placed between the pick up pipe (housing) and inner tube (filter) when assembled, so the material will be the seal. Indeed the assembling needs a little more force, but it creates a perfect seal.



Figure 2: Material end plate

The material end plate has also a second patent: The eco-friendly joint, uses glue less and solvent less ultrasonic welding.

At the other side of the OX 171/2 D you can find another patent: The pin at the plastic end disc. This pin arranges for a controlled oil drain when the filter is removed from the housing, so the used oil can be easily caught and disposed of in an eco-friendly manner.



Figure 3: OX 171/2 D

Another MAHLE patent is hidden away: The groove-like inner filter. With this design the dreaded formation of blocs in the paper will be avoided. This can only be seen when the filter insert is cutaway.