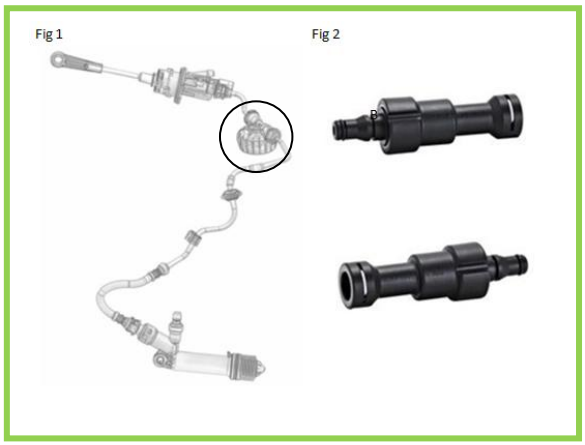
Vibration dampening technology within the hydraulic clutch line

The reduction of oscillations in the clutch actuation system is a top priority for automotive manufacturers with the end users driving experience at the forefront of this prioritisation. The clutch line frequency modulator and the 'oscillation absorber' are two components placed on many vehicles within a hydraulic clutch line that are specifically calibrated to different vehicles and engines to dampen vibrations felt through the clutch line.



These oscillations/vibrations are experienced by the end user when the clutch pedal is actuated. These symptoms are sometimes incorrectly attributed to a faulty clutch or flywheel but these vibrations can be a result of a faulty/worn or missing frequency modulator (Fig 1 circled) or oscillation absorber (Fig 2).

In fact the vibrations/pulsing felt through the clutch pedal are a result of axial torque deviations in the crankshaft conveyed right through to the clutch pedal via the clutch hydraulic line. To suppress these vibrations some engines are fitted with a frequency modulator that is situated within the hydraulic clutch actuation system. The frequency modulator absorbs these disruptive vibrations that occur within the clutch line and prevents vibrations/pulsations more specifically when using the clutch pedal. The oscillation absorber works in the static range as opposed to the frequency modulator which works in the dynamic range. Different dampening levels appropriated to the oscillation absorber are defined by the vehicle and engine set up. These oscillation absorbers are made from plastic and are situated in many clutch hydraulic lines the part is subject to wear and faults over a vehicle lifetime. This should be tested when the vehicle is stationary to check for vibration that may be felt through the clutch line.

valeo tech centre

www.valeoservice.co.uk
Valeo Service (UK) Ltd,
Heming Road, Washford, Redditch, Worcestershire, B98 0DZ
Tel: 01527 838300 Fax: 01527 523732

Valeo Service