



REPAIR INFO FOR Transmission Systems

**For Vehicle: Chevrolet, Opel, Suzuki and Vauxhall Models
with an F17 Gearbox**

COMMON F17 GEARBOX ISSUES NOT ATTRIBUTED TO THE CLUTCH

The Valeo Technical team often receive calls from customers stating they are experiencing clutch issues with vehicles fitted with an F17 gearbox. Although mainly found on Vauxhall vehicles, the F17 gearbox can also be found on other vehicle manufacturers, such as Chevrolet and Suzuki. Unfortunately, the F17 gearbox, like many other gearboxes, suffer with issues which are not attributed to the clutch itself and can cause serious damage to the gearbox, some of which become unrepairable if left unchecked. This bulletin has been produced to highlight the most common and well known issues found with the F17 gearbox and what symptoms the gearbox/clutch produces when components start to fail.

Gearbox Bearing Whine/Whirring Sound

One of the most common issues with the F17 gearbox is bearing wear which can eventually cause complete failure of the gearbox. This issue starts off as a slight whine and can be heard constantly as the vehicle picks up speed regardless of whether the clutch is depressed or not.

This fault is due to the lower output shaft bearing, which when worn, also damages the output shaft itself. Unlike most gearbox designs the bearing runs on the output shaft itself rather than a corresponding outer shell. Unfortunately, this means when wear does occur the output shaft needs repairing or replacing if the damage is too severe. This can drastically increase the price of repair so is often overlooked or not regarded a priority. If the output shaft or bearings are not repaired or replaced, it will eventually result in major failure, including the collapsed bearing breaking through the inner bell housing. This means that a complete gearbox replacement is then required rather than just a bearing rebuild.



Gear Crunching/Grinding

The F17 gearbox, like all gearboxes at some point, will wear down its synchromesh rings, (particularly lower gears) and results in hard selection and eventually a crunching/grinding sound. This normally shows more in lower gears and is more prominent on cold starts before the gearbox oil is warm. This should not be confused with the grinding sound that is produced when bearings are failing/failed and results in gear tooth damage. The difference between the two can be



More information on:
www.valeoservice.co.uk



Technical Hotline:
01527 838300 EXT 2

Smart care for you
valeoservice.com



distinguished by when the grinding sound is produced. Synchromesh issues will produce an audible noise only as the gear is being selected, either on upshift or downshift. Bearing failure noises maybe constant in all gears or constant in certain gears when driving. Once the synchromesh is worn, it fails to stop the gear from spinning and allows the hub ring to come down on a moving part. This results in the grinding noise as two metal parts come together. This contact between moving parts results in the edge of the selection teeth on the gear and hub ring to wear down slightly each time. This can be seen in the image below.



If the gear wheel is not replaced, eventually there will be not enough tolerance left on the gear teeth to hold the hub ring on the gear and the torsional force results in the ring popping out and de-selecting of the gear. The vehicle driver will then experience sudden loss of power and over-revving of the engine as if the clutch has been engaged.

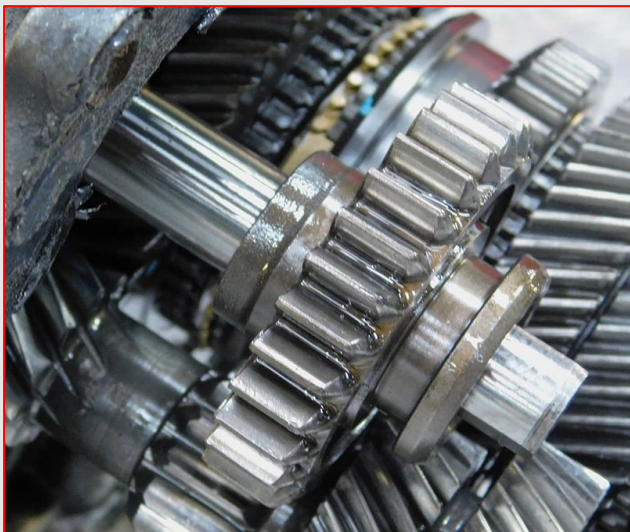
It should also be noted, metal particles from the gear and hub can also prematurely wear other components, especially bearings. This may result in more damage as the particles float around in the gearbox.

Reverse gear on the F17 gearbox has no synchromesh on earlier models. This is known as a hard selection gear as it requires the driver to have had the clutch depressed for more than a few seconds before trying to select the gear. This is simply the design of the vehicles system. If reverse is attempted to be select as soon as the clutch is depressed, then an audible grinding sound will be heard. This a result of the two metal components coming into contact with each other which wears down the components.

If this continues to happen, it becomes necessary to replace the reverse idler and corresponding hub ring because the teeth are so badly worn.

Later F17 gearboxes now come with a synchromesh system to eliminate this crunching issue.

Valeo are aware of a recall relating to Vauxhall models that are being rectified under the Vauxhall's main dealer warranty system. To see if a vehicle is affected, Valeo advise contacting the Vauxhall dealer.



If a grinding or crunching is experienced when upshifting and/or downshifting through the gears, Valeo advise checking the the aforementioned components for wear and replacing them where necessary. Often, Valeo technicians have been informed that only the clutch kit has been replaced and that the grinding or crunching symptoms are still being experienced.

Continue...



More information on:
www.valeoservice.co.uk



Technical Hotline:
01527 838300 EXT 2

Smart care for you
valeoservice.com



Clutch Disengagement Failure and/or Difficult Gear Engagement

Another common failure on the F17 gearbox is the lack of lubrication to the gearbox input shaft. The clutch friction plate must be able to sufficiently slide back and forth along the input shaft in order to ensure a smooth gear change.

If the gearbox input shaft splines are not sufficiently lubricated they will eventually dry out and/or tribocorrosion will occur. This will result in shifting between gear getting progressively worse, particularly downshifting as it increases the friction between the friction plate and input shaft.

Vauxhall have released their own communication regarding the importance of ensuring that the gearbox input shaft has been sufficiently lubricated.



Valeo advise checking all components in the transmission system before attempting to refit another clutch kit. Root cause diagnosis should be performed to identify the cause of the failure or the symptoms being experienced.



More information on:
www.valeoservice.co.uk



Technical Hotline:
01527 838300 EXT 2

Smart care for you
valeoservice.com

