

## Mercedes Single Mass Flywheel Vibration

Ref: TN060

Issue date: 27 July 2013

Issue number: 1

It has been reported in some cases, a vibration concern can be experienced after fitment of solid mass conversion clutches to these vehicles. Investigations have found there is evidence to suggest motor or transmission issues and / or incorrect fitment procedures can be the cause of these concerns. Possible causes of vibration are as follows.

- The engine needs to be checked for elevated NVH concerns caused by unequal engine torque characteristics during the combustion cycle. Use of a DMF (Dual Mass Flywheel) system may mask this concern but it will result in premature DMF failure due to unbalanced combustion cycle.
- The transmission needs to be checked for excess play within the gearbox bearings and wear to the first motion shaft (see picture below). Vibration concerns can be created due to the amplification of harmonic frequencies caused by this wear.

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- As with any clutch being installed it is crucial that the transmission is supported correctly during this installation. Failure to do so can & has resulted in damage to the spigot bearing and therefore eccentric rotation of the first motion shaft. This eccentric rotation of the first motion shaft will then produce vibrations through the driveline & increase the wear rate of components within the transmission.

