



## SERVICE INFO



LUK 0560

## Common Dual Mass Flywheel issues

A large quantity of Dual Mass Flywheels returned under warranty for "Noise" are subsequently found to be serviceable. This is often due to a secondary fault with the vehicle giving similar symptoms to that of a failed DMF these could include;

- Excessive vibration from auxiliary drive system. (removing the belt can help diagnose this)
- Worn or failed crankshaft TVD, OAP or OAD if fitted.
- Excessive crankshaft end float.
- Input shaft or gearbox bearing wear.
- Drive shaft wear.
- Worn engine or gearbox mounts.
- Engine running problems.

**Excessive play.** LuK DMF's usually use one of two types of bearing between the primary and secondary mass. The type of bearing dictates the amount of rock and end float found. If a bearing is used (fig 1) the tolerance will be 1.6mm maximum. If a bush is used (fig 2) the tolerance will be 2.9mm maximum, due to the vast difference between these figures if the technician is accustomed to seeing DMF's with a bearing, the greater tolerance of the bush style will appear excessive.

N.B Play can be deceptive and should be measured accurately.

DMF Testing tool 400 0080 10 can be used to ascertain the DMF serviceability if the part is to remain fitted.



Figure 1



Figure 2

- For accurate model information please see LuK catalogue
- Die genaue Fahrzeugzuordnung entnehmen Sie bitte dem LuK-Katalog
- Pour plus d'information sur les applications veuillez vous référer au catalogue LuK
- Para obtener información sobre el modelo, rogamos consulte el catálogo de LuK
- Per informazioni sul modello consultare il catalogo LuK

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**Premature failure;** Those that do show signs of wear are often found to have failed due to external forces. When replacing the clutch assembly or DMF careful examination of the related parts should also take place as clues to the possible cause of failure can often be found. (For further information see "Failure Diagnosis" LuK part number 999 6001 540) If the DMF has failed yet the clutch is still operational further diagnosis should be carried out. The DMF is only designed to eliminate a specific level of vibration from the drive chain, if the vehicle already has a pre-existing vibration issue it will shorten the service life of the DMF.

**Recurrent failures;** To eliminate recurrent failures some checks should be carried out on the vehicle;

- Check the vehicle has not had any software upgrades for power increases or other "modifications"
- Check for engine sensor fault codes.
- Check for starting issues, correct glow plug operation, slow cranking etc.
- Check idle speed.
- Examine crankshaft front damper and alternator pulley for faults.
- Test for excessive vibration from auxiliary drive system (removing the belt can help diagnose this)
- Check crankshaft end float.
- Check for incorrect camshaft or pump timing.
- Ensure injector calibration and leak-off values are within range.
- Test for faulty EGR system, vacuum pipe leaks, manifold gasket leaks, boost valve faults, low vacuum pressure, throttle valve sticking or carboned up or throttle valve fault.
- Check for uneven or low cylinder compression or incorrect valve clearance.
- Examine gearbox dowels.
- Check input shaft spigot bearing (if fitted) and gearbox bearings for wear.



**Other causes;** The vehicle itself may not be the sole cause of a premature failure. Also investigate;

- Driving techniques i.e. Labouring the vehicle in too low a gear.
- Towing or overloading.
- Running the air conditioning or heating at idle for prolonged periods. (Taxis, Ambulances etc.)
- Check the previous repair history.

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