



CLUTCH FITTING TECHNICAL NOTE

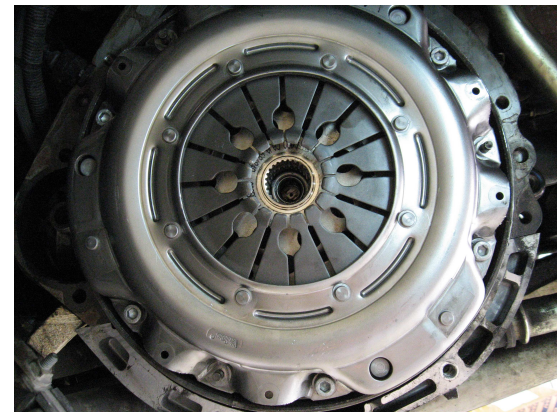
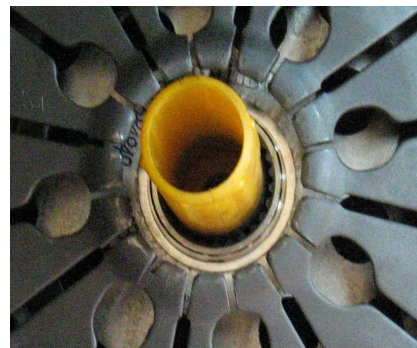
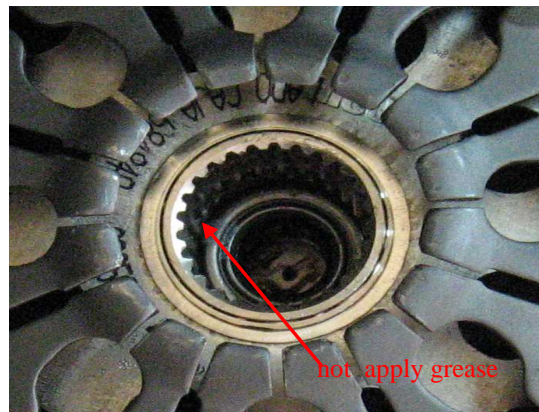
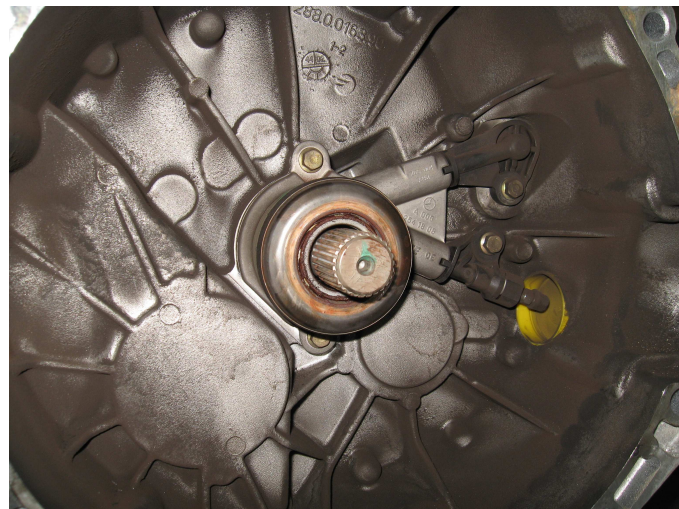
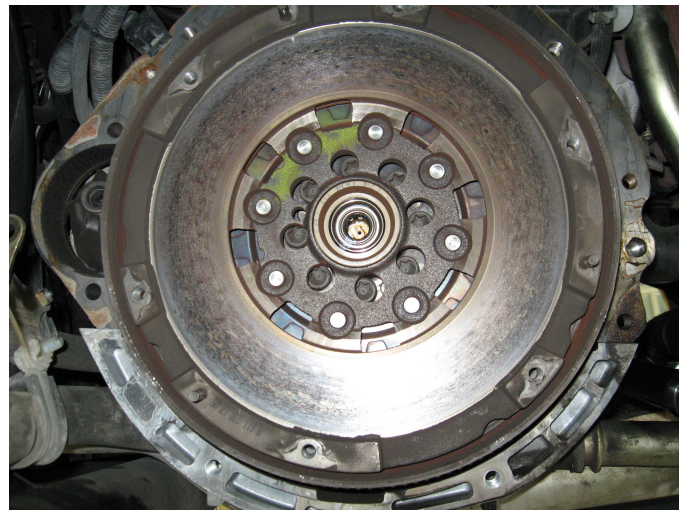
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Part/For:
MERCEDES V Class (638/2)
Vito (96 > 200)

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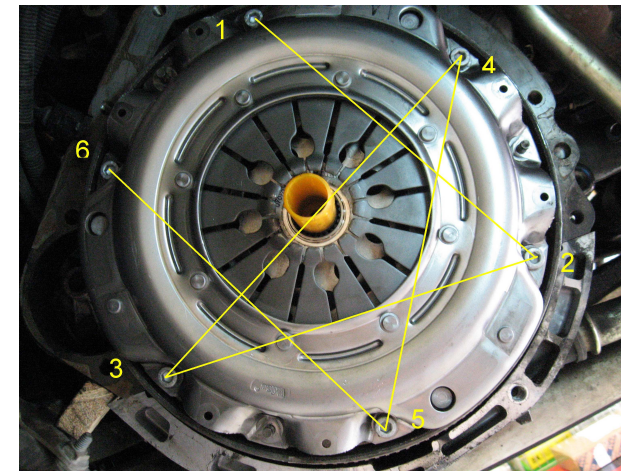
After disassembling the gearbox from the engine :

- 1- Check engine crank shaft seal : Verify that there is not oil contaminating the flywheel . In case of presence of oil leak , remove the flywheel and change the crankshaft seal and reassemble the flywheel.
- 2- Check gearbox input shaft splines checking that there is not damaged or show excessive wear along the spline length.
- 3- Check Flywheel Fixing Bolts and internal pilot bearing.
- 4- Check Flywheel Friction surface .If there are cracks and/or excessive wear of the friction surface, or blue color due to heating, change the flywheel.
- 5- Check the gear box input shaft seal : Verify that there is not oil coming from the gear box. In case of presence of oil repair the gear box changing the input shaft seal.
- 6- Check the hydraulic bearing:
 - a. Check that the bearing is well rotating under axial hand load: smooth rotation without hard points
 - b. check the wear on the bearing contact ring with the diaphragm . the marks of contact have to be not excessive (less than 0,5mm)
 - c. check that there is not oil coming from the interior of the hydraulic bearing
- 7- check that the spring for preload is not broken and given a correct preload (50 N as minimum at working position). If necessary replace the hydraulic bearing.


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Prepare the clutch for assembly :

1. Prepare the clutch and verify that the kit part number matches with the part number indicated in the catalog.
2. Check that the driven plate is well sliding and fitting over the input shaft
Not apply any grease in the hub splines .
3. Position the driven plate in the flywheel thanks to the appropriate centering tool (see the photo)
4. Position the cover assy centering it with the 3 pins and hand tightening 3 bolts at 120° and checking that the driven plate keep well centered position .Then hand tightening the remaining 3 bolts .
Recommended screws are M8x15mm with a "torq" head


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Fixing the clutch :

1. Tightening each bolt with progressive torque following a star sequence: a screw every 120°, avoiding to apply excessive torque on each one. The diaphragm fingers have to move as uniform as possible
Repeat the complete start sequence approximately 3 times .
2. Complete the Fixing applying a torque of **25Nm** allways following the start sequence.

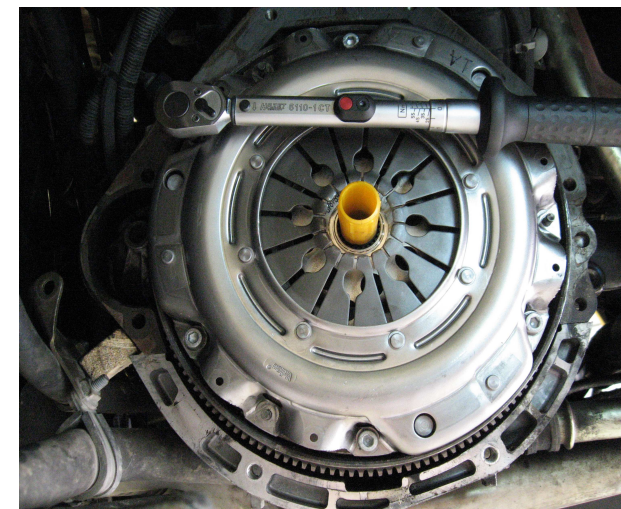
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Re-assemble the gearbox

1. Check that the dowel pins are existing and that they are not damaged.
2. Position the gearbox coaxially with the engine crankshaft, supporting the gearbox weight with the appropriate tools.
3. Introduce the gearbox input shaft into the driven plate hub spline.
4. Take care that the input shaft be introduced without shock. If necessary rotate the crankshaft to make easier the input shaft fitting.

Avoid that the weight of the gearbox be supported by the driven plate of the clutch during the assembly.

5. Check that the gearbox is in full contact with the engine block and that the centering pins are well fitted
6. Fixe the gearbox to the engine block tightening the all the bolts with the appropriate torque



After the assembly

Check that the clutch is well working:

1. Check that the clutch is well disengaging and reengaging allowing a smooth shifting of each gear box ratio (including reverse)
2. Check that there is not abnormal noise when engaging and disengaging operation
3. Check that there's not abnormal vibration or noises when increase engine speed in neutral up to 4000 rpm.
4. Check that there is not abnormal clutch sliding in driving conditions.

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