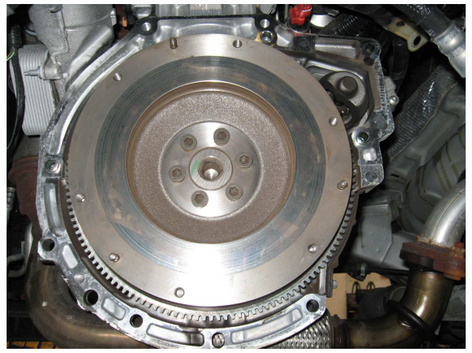
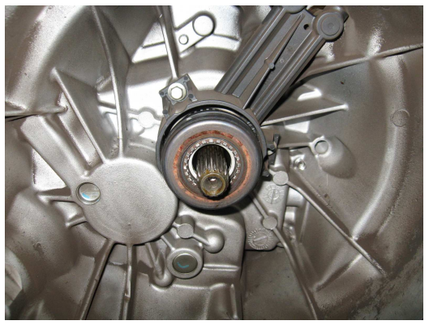
CLUTCH FITTING TECHNICAL NOTE

Valeo Service



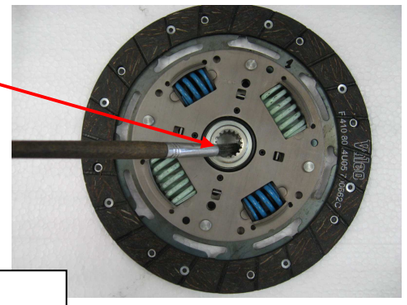


1

After disassembling the gearbox from the engine :

1. Check engine crank shaft seal : Verify that there is no 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 no damaged or show excessive wear along the spline length.
3. Check Flywheel Fixing Bolts.
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 no 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 rotating well 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 no oil coming from the interior of the hydraulic bearing
7. Check that the push road at receiver cylinder can slide smoothly when it is pushed and that it does not leak oil.

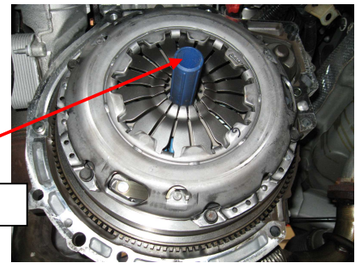
Apply a small quantity of grease



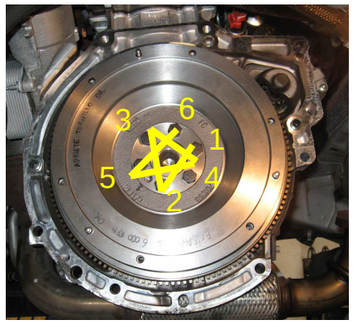
2

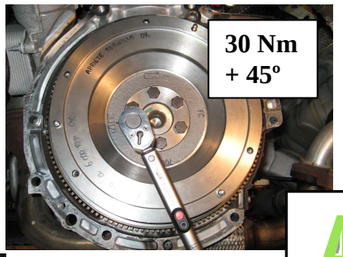
Prepare the clutch for assembly :

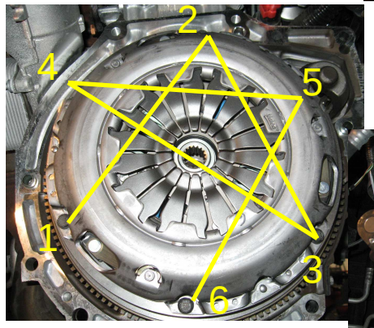
1. Apply a small quantity of grease in the hub splines at approximatly 5 mm of the hub extremity
2. Position the driven plate in the flywheel thanks to the centering tool.
3. Fasten the cover assy centering it with the pins and hand tightening 3 screws at 120º and checking that the driven plate remains stable and well centered with the centering tool.
4. Use Valeo bolts (M7X1X26).

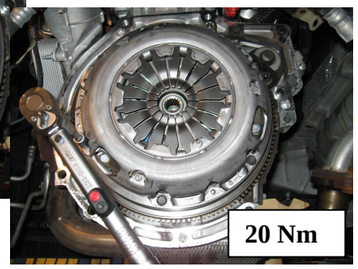


Centering tool









3

Fasten the flywheel and the clutch :

1. Position carefully the new Valeo flywheel on the crankshaft centre and tighten the bolts (M9x1,25x24, hexagonal head) with a progessive torque following a star sequence. Avoiding to apply excessive torque on this one. Tightening torque: 30 Nm + 45º

4

Fasten the clutch :

1. Position the driven plate in the flywheel thanks to the centering tool (see photo)
2. Fasten the cover assy centering it with the pins and hand tightening 3 screws at 120º and checking that the driven plate remains stable and well centered with the centering tool.
3. Tighten smoothly each screw respecting a star-like sequence as per the tightening of the flywheel. The diaphragm fingers have to move as uniformly as possible. Repeat the complete sequence approximately 3 times. Use screws M7x1x26 with a internal hexagonal head.
4. Complete the fastening applying a torque of 20Nm thanks to a torque wrench respecting the previous sequence.

5

Re-assemble the gearbox

1. Check that the block 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. Finally fasten the gearbox to the engine block tightening the screws with the appropriate torque.

6

After the assembly

Verify that the clutch is working well:

- Disengage and re-engage the clutch shifting each gear ratio (including reverse)
- Check that there is no abnormal noise when engaging and disengaging operation
- In neutral, speed up to 4.000 rpm and check that there is no abnormal vibration or noises.
- Check there is no abnormal clutch slipping in driving conditions.

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