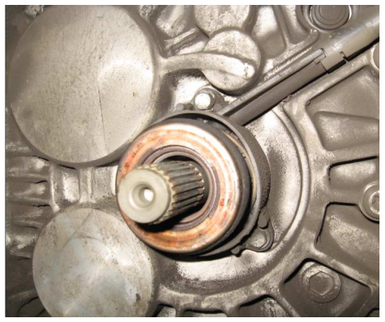
CLUTCH FITTING TECHNICAL NOTE

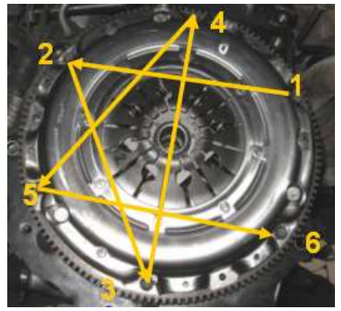
Valeo Transmissions

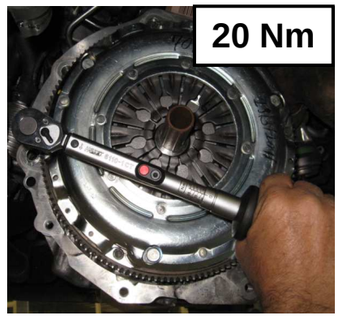


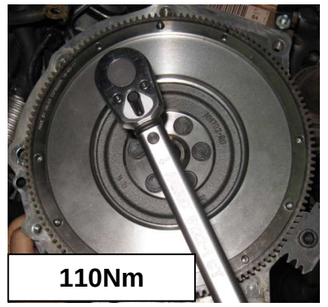
1

After disassembling the gearbox from the engine :

1. Check engine crankshaft seal: Verify that there is not oil contaminating the flywheel. In case of presence of oil leack, after remove the flywheel, change the crankshaft seal.
2. Check gearbox input shaft splines checking that there is not damage or show excessive wear along the spline length.
3. Block the flywheel in rotation and remove the flywheel fixing bolts.
4. Check the gear box input shaft seal: verify that there is not oil comming from the gearbox. In case of presence of oil repair the gearbox changing the input shaft seal.
5. 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 contact marks have to be not excessive (less than 0,5mm)
   c. Check that there is not oil comming from the interior of the hydraulic bearing
6. Check that the push road at receiver cylinder can move sliding smooth when is pushed and it doesn't leak oil.







Use the appropriate device to assembly and disassembly the gearbox. The operator never must support the weight of gearbox.

3

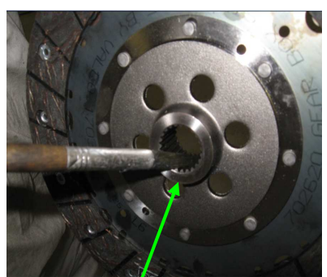
Fasten the flywheel:

1. Position carfully the new flywheel Valeo on the crankshaft center and tightenning the bolts **M10x1 mm** with a progessive torque following a star sequence. Avoiding to apply excessive torque on this one. Tigtenning torque**: 110Nm**

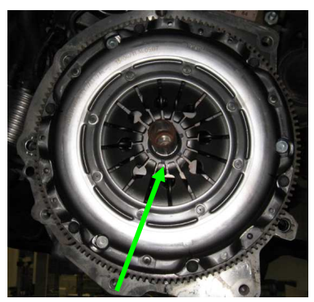
4

Fasten the cluth:

2. Position the driven plate in the flywheel thanks to the centering tool (to see photo)
3. Fasten the cover assy centering it with the pins and hand thightening 3 screws at 120º and checking that the driven plate remains stable and well centered with the centering tool.
4. Tighten smoothly each screw respecting a star-like sequence as for the thightening of the flywheel. The diaphragm fingers have to move as uniform as possible. Repeat the complete sequence approximately 3 times. Use screws **M7x1 mm.**
5. Complete the fastening applying a torque of **20Nm** thanks to a torque wrench respecting the previous sequence.



Apply a small quantity of grease



Centering tool

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 thightening 3 screws at 120º and checking that the driven plate remains stable and well centered with the centering tool.
4. Use clutchl bolts **(M7X1) P/N 699311Q0**

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 is 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 well working:

- Disengage and reengage the clutch shifting each gear ratio (including reverse)
- Check that there is not abnormal noise when engaging and disengaging operation
- In neutral speed up to **4.000 rpm** and check that there's not abnormal vibration or noises.
- Check there is not abnormal clutch sliding in driving conditions.

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