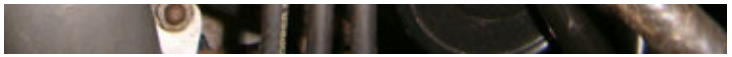
Clutch Slave Cylinder Replacement

Today we will demonstrate yet another project for our 33. The clutch slave cylinder decided to give up the ghost by warning the owner with a pool of brake fluid in the driveway. Actually problems with this part had began about 4 years ago when again fluid leaks were observed; back then I had found the solution to buy a repair kit and renew the internal rubber rings of the original cylinder. Today it seems that I should replace the old cylinder with a new one. After all what more should I expect from a 15 years old clutch cylinder which has been operating the clutch countless times ?

What you need:

- Clutch slave cylinder (part number 71738466 common part with the boxer engined Alfa 145-146)
- a can of DOT 4 brake fluid
- some basic tools like screwdrivers, 13 mm wrench etc.
- expanding pliers
- a small piece of wood



Here is the brand new clutch cylinder

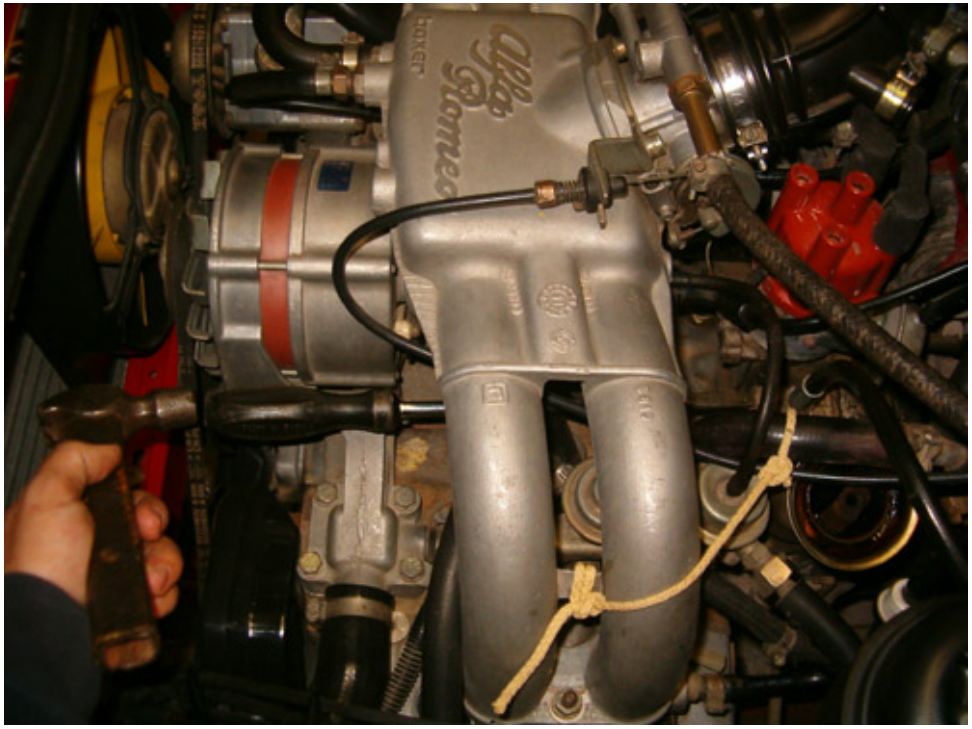
The cylinder can be found hidden right below the ignition distributor for a L-Jetronic Alfa 33. I bet that distributor-less 33s have more space to work on.

You will need to remove the leads of cylinder 2-4 plus the HT lead from the coil, the oil filler neck/vapor separator in order to have enough clearance to reach the cylinder. Also pull the cooling tubes out of the way using a piece of cord like demonstrated above.

Seems that now we have enough clearance to start disassembly.

The rubber boot of the cylinder seems to be shot from the presence of brake fluid. By the way, brake fluid is highly corrosive and it will ruin everything found on its way, so be careful with it.

This photo is taken from the under of the car. Notice the small piece of wood. This is essential so as to keep the clutch disengaged as much as possible. It is a nice trick to avoid trouble installing the new cylinder. Also notice the brake fluid traces leaking on the bellhousing.



Get hold of a long screwdriver and place its tip on the cylinder in the area around the bleeding nipple. Punch the cylinder repeatedly so as to unstuck it. Dirt and oil in the area surely have made the cylinder solid as rock.

Now that the cylinder is somehow freed up, find the lock ring and try to take it out of the groove. You may also apply WD40 to help the ring brake free. You may then try to free one edge of the ring at a time using a fine screwdriver. Notice the broken rubber boot which was actually holding brake fluid seen dripping on the gearbox.

Lock ring is off its groove ...

... and clutch cylinder is out at last!

Cylinder, lock ring and rubber boot along with the pin demonstrated. Actually this pin is pushed by the hydraulic pressure which in turn operates the clutch lever. Note here that during assembly of the new cylinder this pin will give you trouble if there wouldn't have been the wood piece holding the clutch disengaged.

New and old parts

Attach the brake hose to the new cylinder and install it on its housing.

Using expanding pliers will help you very much installing the lock ring. It is still possible to install it without such tool but it will surely drive you nuts since the space is very limited to work effieciently.

Lock ring is on its position

Lets now finish installation by attaching the pin along with the rubber boot.

parts installed with great ease (wooden piece takes all credit)

Now top up the brake fluid in the container ...

and proceed bleeding the clutch circuit only. In case you have an assistant with you ask from him to press enough times the clutch pedal to build up pressure. Then with the clutch pedal fully pressed open the bleeding nipple to let all air out of the circuit. repeat this process till all air has been expelled from the circuit. Otherwise you have to use the bleeding kit which uses compressed air and is attached to the spare wheel.

Finally restore oil filler neck, oil vapor hose and ignition leads.

You are now done! The clutch pedal will now feel somehow heavier but much more firm than before.

Congratulations for once again for you work (till next problem arises!)

1991 Alfa 33 1.4 IE

Athens - Greece

Comments so far :

Henning : I found it very useful to remove the intake manifold in order to have more space, though it is not necessary to do so. Referring to "Thermostat Replacement (including coolant draining and Intake Manifold removal)" is helpful! Here are some pictures with it like this :