Replacing the front brakes pads and rebuilding the calipers on a Bora

Ivan Ruiz
June 2020

Replacing the front brake pads and rebuilding the calipers is not a difficult task but there are a few tips that will make your job easier.

You will need at least 1 liter of LHM to bleed the brakes, therefore it is best to have at least 2 liters available.

The first thing you will notice is that the front caliper needs to be removed in order to access the brake pads.

1. Disconnect the brake pad electric wear sensor wire (if there is one on your car)
2. There are two hydraulic lines feeding the caliper. I used green masking tape to mark the top hose so I could remember to reconnect it in the same place.
3. Using a 17mm socket, remove the two banjo bolts securing the hydraulic hoses. Note that there is a thin washer on the head of the bolt and a thicker washer, that also serves as a spacer, on the base. You will notice that very little fluid is expelled, compared to a car with traditional brake fluid.

4. Use two screwdrivers to hold the anti-rattle plate in place. This is an important step as it will make removal and insertion of the pads possible. I did not make up this step as the same calipers are used on the Detomaso Pantera and the factory service manual for that car specifies this step. I tried to insert the pads without the screwdrivers and failed.

5. Use a 19mm socket to remove the two bolts holding the caliper. Remove the caliper from the car.

6. If you also plan on rebuilding the calipers themselves the next step is to remove the pistons. The two halves of the calipers allow LHM to flow via internal passages and seals. Although the MIE kit came with new internal seals I prefer not to disturb the calipers halves as they seldom fail and removing the pistons while the two halves are still connected is not difficult.

7. I use air and the help off a U clamp to remove the pistons. LHM is very slippery and since it does not attract water chances are that your pistons will move freely. There are four pistons, two large and two small. One hydraulic line feeds both small pistons while the other feeds the two large pistons. Blow compressed air into one of the feed holes until one of the pistons starts to move. Be careful not to have too much air pressure or the piston will pop out. Use the U clamp to limit the travel of the first piston that is moving. As you apply additional air the second piston will now start to move. Adjust the U clamp as you go and both pistons will soon be out. Repeat for the other two pistons.

8. Remove the old piston seals from inside the bore.
9. Inspect the pistons. Mine were in perfect condition after 42 years! If this car was using normal brake fluid, I would probably be looking at having to replace all four pistons. Mineral oil does an amazing job of preserving brake components.

10. If you have been using gloves, remove them now as the next step requires your fingertip's sensitive nerves to feel the seal and make sure it has seated properly. Wet the new seals in LHM and insert them into the groove inside the bore. Run your fingers around the circumference of the bore to make sure everything feels right.

11. Insert the pistons only using your hands. Once you are certain the piston will slide in straight then use the U clamp to push it in. If there is any significant resistance, stop and make sure the piston is going straight. I push in the piston about 80% of its travel to allow some room to insert the dust seals
12. Install the dust seal and metal snap rings. Push the pistons all the way in
13. Insert brake pads; the two screwdrivers holding the anti-rattle plate should still be inserted.

14. Reconnect the caliper, hydraulic lines and wear sensor wire
15. Bleed the brakes. Bleeding Citroens brakes is a bit different from a traditional system where fluid is expelled only while the pedal is pumped. With Citroen brakes fluid will continue to flow anytime the brake pedal is depressed. Expect a lot of fluid to flow out every time the bleeder screw is opened with the pedal depressed.