

tr!ckstuff

DIRETTISSIMA

Bleeding Instructions



ATTENTION: Working on a hydraulic brake system should be executed by an experienced bike technician only. If you are not sure please ask your local dealer or address directly to Trickstuff.

Trickstuff DIRETTISSIMA brakes work on the basis of **Mineral Oil (e.g. Kryptonol by Trickstuff)** or **Trickstuff BIONOL brake fluid only**. The use of DOT or any other fluids will destroy the brake.

This bleeding tutorial explains two methods:

Method 1: Quick and Clean

Method 2: Slow and Dirty

We emphasize that method 1 (Quick and Clean) should be executed in emergency cases only. A reliable and long lasting function needs a perfect bleed. There should not remain any residual air at any place in the system, which can be realized by method 2 only.

A perfect bleed made by method 2 (Slow and Dirty) makes further bleedings unnecessary, probably for the rest of the life of your DIRETTISSIMA brake system.

Both methods should be executed with the brake system lying on your workbench, dismounted from the bike!

1 Quick and Clean

Required tools for the „quick bleed procedure“:

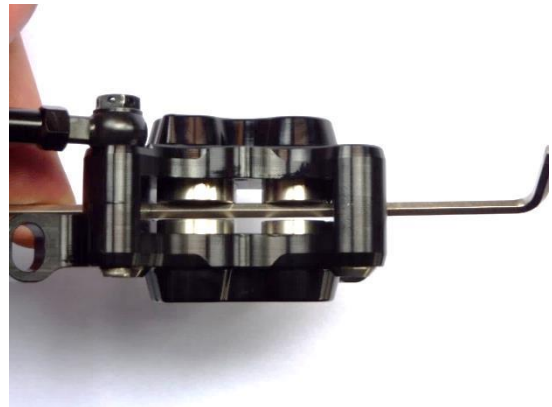
- 3mm Allen key
- 6-8mm wrench

This procedure pushes small air bubbles into the reservoir which are in the high pressure system close to the master cylinder.

This Quick Bleed Procedure does not replace method 2 (Slow and Dirty). Be prepared to experience air in the system after a while when executing the quick bleed procedure only.

STEP 1:

The master cylinder is fixed in a horizontal position. Take off the brake pads and insert a 3mm Allen key or a 6-8mm wrench into the caliper disc slot. Pump out the pistons until they touch the key or wrench.



STEP 2:

Hold caliper upright. Now press back the small (lower) pistons first, then the big (upper) pistons into the caliper.



Insert a steel block. Test the pressure point.
Do not test with mounted brake pads!

2 Slow and Dirty

Required Tools:

1. Syringe with M4 nipple
2. Syringe with M5 nipple
3. Brake oil (e.g. Kryptonol or Bionol)
4. Torx T10 key
5. Tool for pushing back the caliper pistons
6. Bleedblock



Please prepare also the tools you might usually need for mounting and dismounting the brake and a clean rag. The final cleaning is best performed with dish liquid and water or with Isopropyl alcohol.

For your safety use glasses and gloves!

For best results please take off the brake from your bike and position the master cylinder higher than the caliper. Please follow exactly the described procedure to make sure you'll get the best bleed of your life.

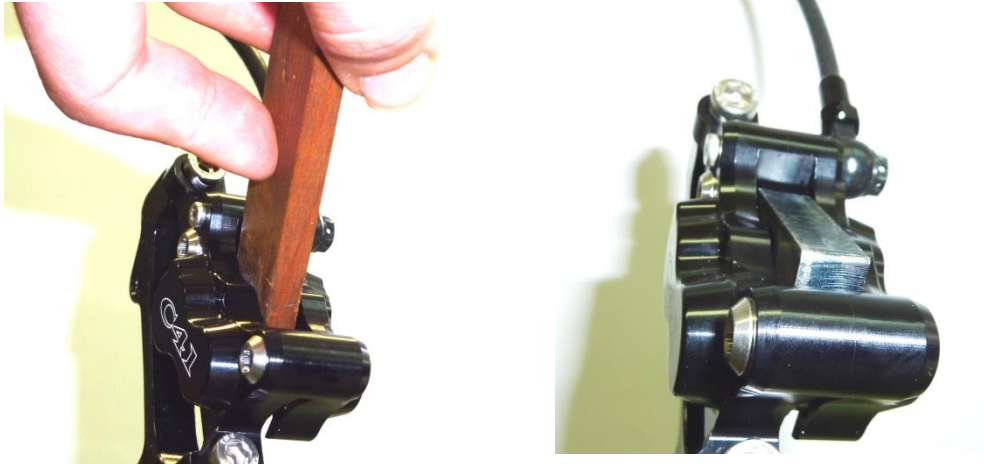
This bleed touches all cavities of the brake system: The space around the caliper pistons, hose, space close to master cylinder piston, space between primary seal and secondary seal, and reservoir. After a successful bleed you can activate the lever even in upside down position without sucking air.

The caliper should be positioned as shown (left pic). The master cylinder should be positioned in a slightly upright position, as shown (right pic). We recommend to fix the master cylinder on an old handle bar and to clamp it in a vise.



STEP 1:

Press the caliper pistons all the way back into the caliper, install a bleed block and fix it with the brake pad retainer bolt:

**STEP 2:**

Fill the syringe with the M5 nipple to three quarters with brake oil and install on the caliper.

**STEP 3:**

Fill the syringe with the M4 nipple with very few brake oil and install on the master cylinder.



STEP 4:

Start pushing the oil from the caliper to the master cylinder. Back and forth, back and forth. The last step should be to push the oil from the caliper to the master cylinder.

**STEP 5:**

Turn the caliper into a horizontal position, so that the bleed port is looking vertically upwards. Push a little oil from the master cylinder into the caliper, take off the syringe and screw in the bleed port screw, without trapping an air bubble under the screw.



STEP 6:

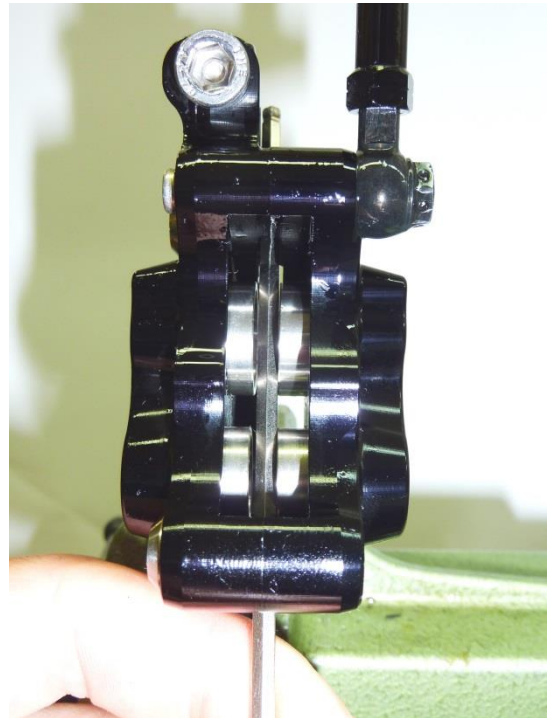
Now we want to make sure that the space around the caliper pistons is free of air. For doing so the caliper should be vertical and turned slightly forward.

Insert your 3mm Allen or your 6-8mm wrench in the disc rotor slot. Pump the caliper pistons outwards until they touch the wrench.

Now push back the small (lower), and then push back the big (upper) pistons all the way until they are flush to the caliper housing. Insert the bleed block.

Check the pressure point now (with bleed block inserted). It may take three to four pumping strokes until the pistons have come out far enough to touch the bleed block. The pressure point must now be hard and definite – it feels like a “DONG”.

Please repeat procedure if there's no DONG.

**STEP 7:**

Now the entire high pressure area should be free of air and we start bleeding the low pressure area.

Press the lever to the pressure point and hold it there. This separates the low pressure area (reservoir and space between primary and secondary seal) from the high pressure area. Turn the master cylinder into shown position and push the syringe slightly four to six times. Do not press excessively because this might cause some oil spilling out the reservoir (but does not cause severe damages).



STEP 8:

Repeat step 7, but turn the master cylinder slightly into a downwards direction. Do not forget this step! It is important for a perfect bleed with no air bubbles remaining in the reservoir!

**STEP 9:**

Bring back the master cylinder into the initial upwards position, release the lever and push/pull the syringe several times. Now the very last bubbles should come out. Give a little over-pressure to the syringe.

**STEP 10:**

Take off the syringe. Important: For a correct oil quantity in the system it is important to have the caliper pistons pushed back all the way into the caliper before closing the system with the M4 screw. This makes sure the system is not over filled. For pushing back the pistons our „wooden piston push back tool“ is best suited. Close the system now with the M4 screw and appropriate O-ring.



Now your brake should be perfectly bled. This is the procedure we execute with every brake which is assembled in our workshop in order to supply a hydraulic system absolutely free of air, for a very long time.

Trouble Shooting:

- **The system won't feature a definite pressure point even after several bleeding trials – what can I do?**

Repeat step 6. Make sure the caliper is positioned as shown on page 2.

Make sure the hose fittings are screwed in correctly. In some rare cases we experienced plastic particles plugging the hose. In this case shorten the hose by 20 millimeters and screw in the fittings carefully again. See manual http://www.trickstuff.de/de/manuals/PDFs/160216_MontageBETA-Kevlarleitung_D_KL_CK.pdf

- **Air bubbles do not stop coming out the system – what can I do?**

Maybe the brass nipples of your bleed kit are defective. Replace the O-rings or screw in the nipples harder.

- **The pressure point is perfect on the work bench, but after installing the brake on the bike it is soft and indefinite.**

This may have several reasons:

- Brake bosses on the frame are not parallel to the rotor plane,
 - a deformed rotor due to an unplane rotor flange on the hub,
 - unparallelly worn brake pads
 - or a poorly adjusted brake caliper on the frame/fork.
- Please check reasons step by step and improve parts and installation.

Your Trickstuff-Team wishes good luck, successful work and a happy ride!

Do not hesitate to ask us by telephone or by email.

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