

How to Bleed New Shimano Brakes



It is important not to allow brake fluid to come into contact with the brake pads or brake rotor. Brake fluid will ruin your brake pads. Brake rotors will need to be cleaned thoroughly with isopropyl alcohol to remove contaminants.

Cover all important parts with paper towel or a clean cloth and catch any brake fluid drips when installing/removing syringes and bleed port screws

It is advisable to remove the calliper and pads to prevent them from coming into contact with brake fluid, rendering your pads useless. If you choose to remove the calliper and pads from the frame you will need to reset the position of the pistons by placing your flat blade screwdriver between the pads and twisting to force them apart.

Then remove the brake pads and insert your bleed block/piston spacer to keep the pistons from moving outwards during the bleed procedure. You may use any non-compressible object of the correct width as a bleed block if you do not have the one supplied with your brakes or bike when new.

Step 1

Set the brake lever so that it is in the riding position at roughly 45 degrees to the ground, and then remove the lever bleed port screw and o-ring. Place them in a safe place. If the o-ring does not come out with the screw, carefully remove it using the tip of your Allen key or similar tool. **(1)**

Step 2

Open your Shimano bleed kit and remove the plunger from the master cylinder syringe. Screw the master cylinder syringe with white threaded adaptor into the bleed port. Do not over-tighten. **(2)**

Step 3

Draw 20ml of mineral oil from the bottle with the 60ml syringe by inserting the tubing into the bottle and pulling back on the syringe plunger. Then invert the syringe so that the tubing is pointing up and cover the tip with paper towel. Push on the plunger slowly to remove all air from within the syringe and tubing.

Step 4

Remove the rubber cap covering the calliper bleed nipple and set in place a 7mm ring spanner. Then attach the syringe tubing to the bleed nipple forming a seal. **(3)**

Step 5

Open the bleed nipple by turning the spanner 1/4 turn. Push the plunger to inject oil. The oil will start to come out of the lever bleed port and into the lever syringe, taking with it any air which was present inside the brake system. **(4)**

Use two hands for this step to stop the tubing from becoming disconnected from the bleed nipple under the weight of the 60ml syringe.

Note: If the fluid entering the lever syringe is particularly discoloured this indicates that the fluid is very old. If so, we recommend flushing the system twice to replace all of the old fluid with new.

Step 6

Continue to inject oil until no more air bubbles are mixed with the fluid entering the lever syringe. Don't allow the fluid to overflow the lever syringe. Once there are no more air bubbles, temporarily close the bleed nipple and disconnect the syringe and tubing.

Note: Do not operate the brake lever at this time. Air may become trapped within the calliper and will take longer to remove.

YOU WILL NEED

- Our 2012 Shimano Bleed kit
- 2.5, 4 & 5mm Allen keys
- 7mm Ring spanner
- Bleed block or pad spacer
- Flat blade screwdriver
- Paper towel and clean water
- Safety Glasses



Step 8

Take the transparent vent tube, a cable tie and a plastic bag. Insert the tube into the bag and secure the bag to the tube with the cable tie (or an elastic band). Then, with the spanner still in place, connect the free end of the tube to the calliper bleed nipple. (5)

**Step 9**

Open the bleed nipple 1/4 turn once again. After a short while fluid level in the lever syringe will drop as fluid and any remaining air from within the brake calliper will enter the plastic bag. Close the bleed nipple before all of the fluid drains from the lever syringe.

Note: Do not allow all of the mineral oil to drain from the lever syringe as this will introduce air into the brake and you will need to repeat the entire process. Ensure that a minimum 5ml of mineral oil remains inside the lever syringe at all times.

Step 10

Once there is no more air bubbles mixed with the oil leaving the calliper vent tube, temporarily tighten the bleed nipple. (6)

**Step 11**

With the brake lever depressed, open and close the bleed nipple in rapid succession (for approximately 0.5 seconds each time) to release any air bubbles which may still remain in the calliper.

Repeat this process 2-3 times. Then tighten the bleed nipple to 4-6Nm (35-53 in.lbs), remove the tubing from the bleed nipple and replace the rubber bleed nipple cap.

**Step 12**

Operate the brake lever 4-5 times allowing it to snap back into its resting position. This will encourage any air bubbles within the master cylinder to rise up into the lever syringe. The normal condition is for the brake lever to be stiff at this point.

Step 13

Loosen the lever unit fixing bolts so that you can rotate the lever unit freely on the handlebar. Set the brake lever unit on the handlebar so that it is horizontal (parallel to the ground) and repeat Step 12 to check that there is no remaining air.

Tilt 30 degrees above and 30 degrees below and repeat Step 12 again to rid the system of all remaining air. (7)

Repeat the process of rotating the lever unit whilst operating the lever until there are no more air bubbles exiting the bleed port. Temporarily tighten the lever unit fixing bolts with the lever in the horizontal position.

**Step 14**

Remove all of the fluid from the lever syringe with your 60ml syringe and tubing by immersing the tip of the tube into the mineral oil and pulling back on the syringe plunger. (8)

Next unthread the master cylinder syringe and adaptor together. Allow a small bead of mineral oil to remain inside the bleed port but be sure to catch any other drips of mineral oil with your paper towel. (9)

**Step 15**

Reinstall the master cylinder bleed port screw and o-ring and wipe away any excess mineral oil with your paper towel. (10)

Step 16

If you removed the brake calliper and brake pads during the bleed process, now is the time to reinstall them. Confirm that all bolts are tight and that the brake functions correctly. Visually check the lever and calliper for any leaks whilst operating the brake. If all is well you're ready to ride!

