



BLEED INSTRUCTIONS

SHIMANO BRAKES

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KIT CONTENTS

- 1X 30ML INJECTION SYRINGE WITH TUBING
- 1X 20ML SYRINGE WITH LEVER BLEED PORT ADAPTER
- 1X TRANSPARENT VENT TUBE
- 1X TUBE HOLDER
- 2X CABLE TIES
- 1X BLEED BLOCK
- 1X PAIR OF NITRILE (LATEX FREE) GLOVES
- 50ML GENUINE MINERAL OIL BRAKE FLUID

ADDITIONAL EQUIPMENT REQUIRED

- PAPER TOWEL / LINT FREE CLOTH
- 2.5MM, 4MM, 5MM, ALLEN KEYS
- 7MM RING SPANNER

BEFORE YOU START

- During the bleed process you may notice discolouration of the old fluid. If the old fluid is particularly dark we recommend bleeding the system twice to ensure all old fluid is removed and replaced with new.
- The brakes should be clean and free from debris, paying particular attention to the area around the bleed port screws.
- The bike should be orientated with the brake lever higher than the brake calliper.

1 To protect your brake rotor and pads from mineral oil start by removing the wheel from the bike. Then remove the brake pads from the caliper by firstly removing the brake pad retaining pin. Set the pads and pin aside in a safe place.

2 Insert the bleed block between the caliper pistons, covering them fully to stop them moving during the bleed process. You may need to push back the pistons fully using a plastic tyre lever or similar tool in order to insert the block.

3 Set the brake lever so that it is in the riding position at roughly 45 degrees to the ground. Remove the lever bleed port screw and o-ring and set aside in a safe place. Then remove the plunger from the 20ml syringe and thread the syringe shell with adapter into the lever bleed port. **Fig. a**

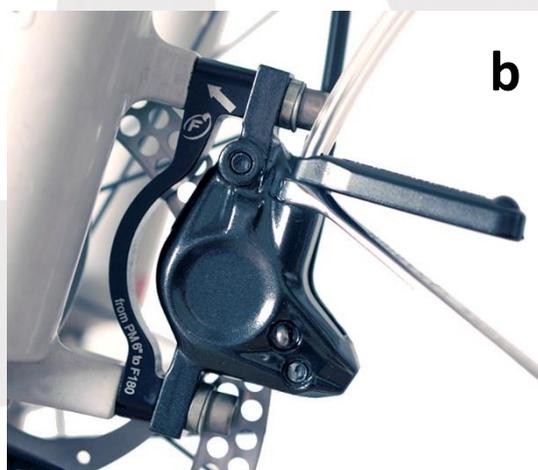
4 Draw 20ml of mineral oil from the bottle into the 30ml. Remove all air from the syringe and tubing by inverting the syringe and carefully pushing on the syringe plunger. Attach the tube holder to the tip of the bleed tube and slide it back by around 2cm.

5 Remove the rubber cover from the calliper bleed nipple and set in place a 7mm ring spanner. Push the syringe tubing over the bleed nipple and secure in place with the tube holder by pressing down firmly and rocking back and forth until secure. **Fig. b**

6 Open the bleed nipple by turning the spanner 1/4 turn. Push the syringe plunger to inject oil. The oil will start to come out from the lever bleed port and enter the lever syringe with any air bubbles which were present in the brake system.

7 Continue to inject oil until no more air bubbles are mixed with the fluid entering the lever syringe. Once there are no more air bubbles, temporarily close the bleed nipple and carefully disconnect the syringe and tubing.

NOTE: Do not operate the brake lever at this time as this may trap air within the calliper and may take longer to bleed.



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. Then, with the spanner still in place, connect the free end of the tube to the calliper bleed nipple using the tube holder as before.

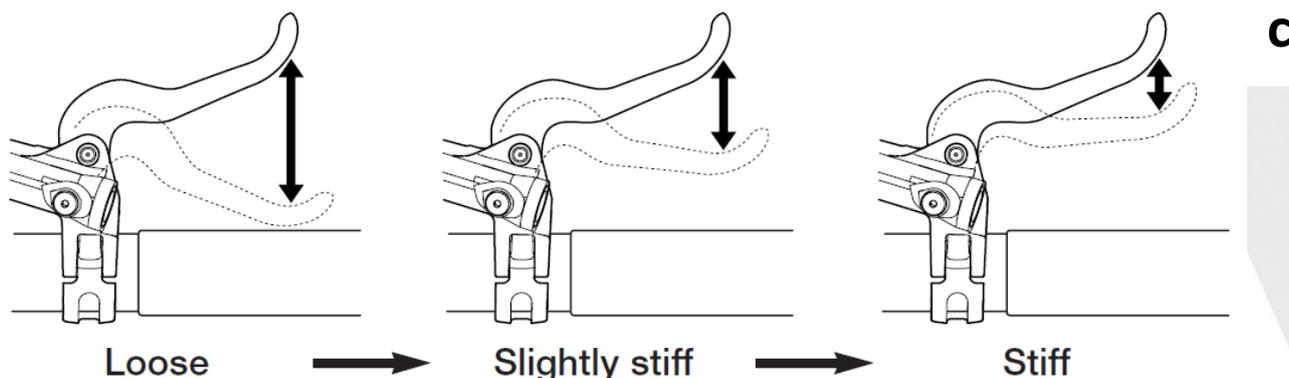
9 Open the bleed nipple 1/4 turn once again. After a short while fluid level in the lever syringe will drop as fluid and any remaining air from within the brake calliper will enter the plastic bag. Close the bleed nipple before all of the fluid drains from the lever syringe.

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 bleed process. Ensure that a minimum 5ml of mineral oil remains inside the lever syringe at all times.

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

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) and remove the tubing and spanner from the bleed nipple and reinstall the rubber cap.

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. **Fig. c**

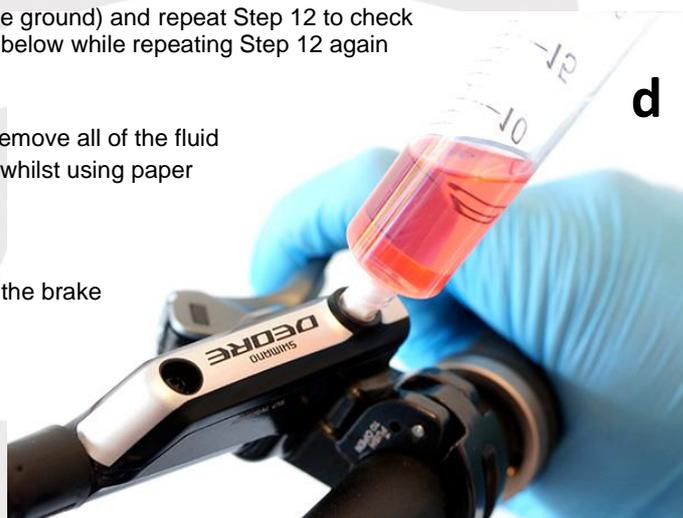


13 Loosen the lever unit fixing bolts so that you can rotate the lever unit freely on the handlebar. Set the brake lever unit on the handlebar so that it is horizontal (parallel to the ground) and repeat Step 12 to check that there is no remaining air. Tilt 30 degrees above and 30 degrees below while repeating Step 12 again to rid the system of all remaining air bubbles. **Fig. d**

14 Tighten the lever fixing bolt. Using the 30ml syringe and tube, remove all of the fluid from the inside the lever syringe. Remove the syringe from the lever whilst using paper towel to catch any remaining oil and reinstall the bleed port screw.

15 Remove the bleed block from between the caliper pistons, refit the brake pads and retaining pin and then refit the wheel.

Confirm that the brake functions correctly. Visually check the lever and calliper for any leaks whilst operating the brake. If all looks good, you're ready to ride!



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