

5.4 Disc brakes

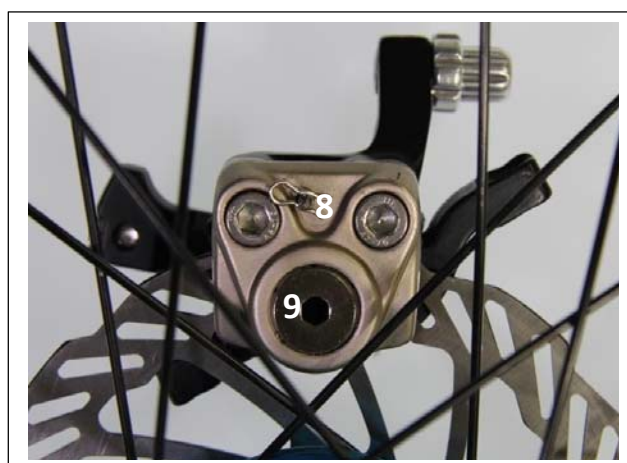
Mechanical single-cam disc brakes with synchronous double termination

We are delighted to present the very latest development in the field of mechanical disc brakes. Our mechanical disc brakes generate braking action by pressing just one pad against the brake disc, and then the brake disc is pressed against the other pad. Winzip series brakes have been developed to mimic a hydraulic dual-piston brake; the two pads clamp the brake disc synchronously. The Winzip braking action is on a par with that of hydraulic systems and prevents discs from being distorted as a result of heavy, hard braking. The design features of the “Winzip” disc brake have been patented worldwide, and reproductions are prohibited.

1.0 Warning:

- Read and make sure you understand the technical information thoroughly. Be aware that incorrect assembly can cause accidents and/or serious injury. Consult a qualified mechanic or an authorised local dealer if you are unsure about a procedure or adjustment.
- Do not let any oil or grease come into contact with the brake disc or the brake pads, since this can cause the system to lose some of its braking action.
This includes natural grease from your fingers. If your brake is contaminated with a lubricant, clean the brake disc and pads thoroughly using a suitable solvent to restore the braking action.

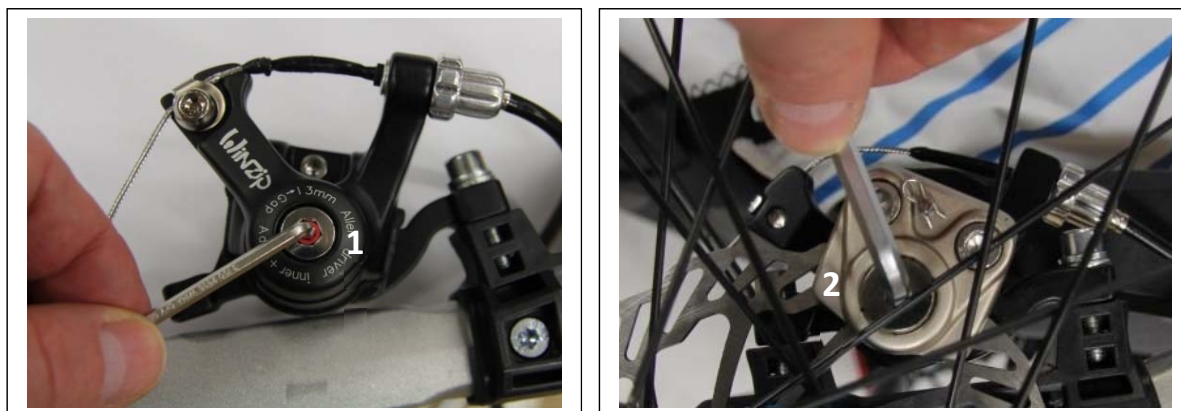
1.1 Get to know the brake:



1. Adjustment screw
2. Brake pad guide screw
3. Outer adjusting device (3 mm Allen key)
4. Actuating lever
5. Cable clamping screw
6. Cable clamp (hook disc)
7. Brake disc
8. Safety splint
9. Inner adjustment screw (5 mm Allen key)

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2.0 Adjusting the play between pads and disc after brake pad wear:



Two Allen keys (3 mm and 5 mm) are required.

NOTE: Deep in the head of the larger, outer 5 mm Allen screw is an adjusting device with a 3 mm hexagon socket, which is visible in the centre of the actuating lever.

Do NOT turn the larger 5 mm screw in the outer side of the actuating lever.

1. Outer pad: Insert the 3 mm Allen key down into the outer 5 mm hexagon socket. Turn the 3 mm adjusting device clockwise, to move the outer pad closer to the brake disc. Turn the 3 mm adjusting device anti-clockwise, to move the outer pad further away from the brake disc.

2. Inner pad: Insert the 5 mm Allen key into the outer 5 mm hexagon socket in the rearward (inner) cover. Turn the 5 mm adjusting device clockwise, to move the inner pad closer to the brake disc. Turn the 5 mm adjusting device anti-clockwise, to move the inner pad further away from the brake disc.

2.1 Maintaining the brake calliper:

Tip

Keep all surfaces clean and ensure that no dirt, grease or oil (including natural grease from your fingers) comes into contact with the friction surfaces on brake disc or pads. Contamination of this kind impairs the braking action considerably.

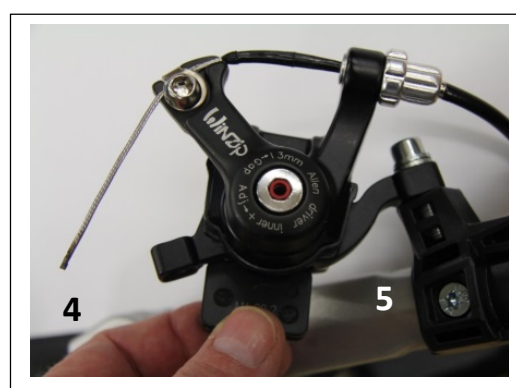
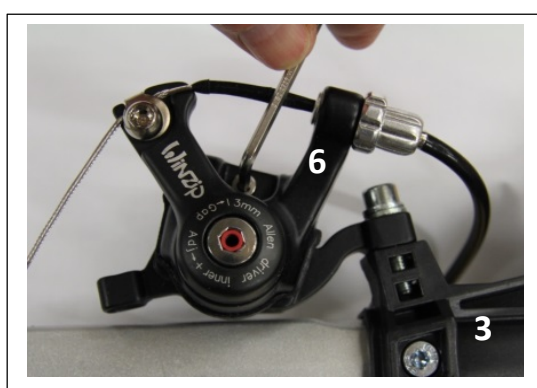
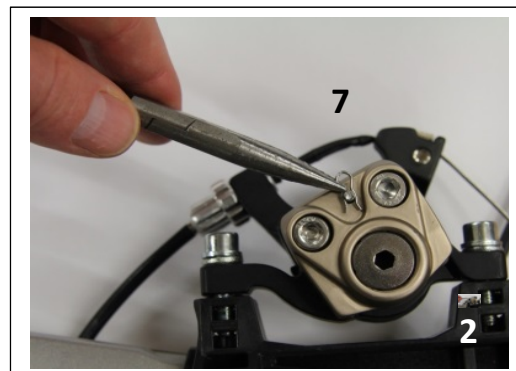
Should you deem it necessary to lubricate part of this brake, proceed with extreme caution. The heat generated by braking can cause lubricant to run onto the brake pads and brake disc and the brake to lose its effect.

Clean and inspect the brake callipers before storing the bicycle for any length of time.

If you are applying a lubricant spray or oiling the chain sprockets on the bike, cover up the brake discs or remove the brake discs from the bicycle trailer. The spray could pass through the spokes and reach the brake calliper or brake disc on the other side, which would cause the loss of braking effect.

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3.0 Replacing worn pads:

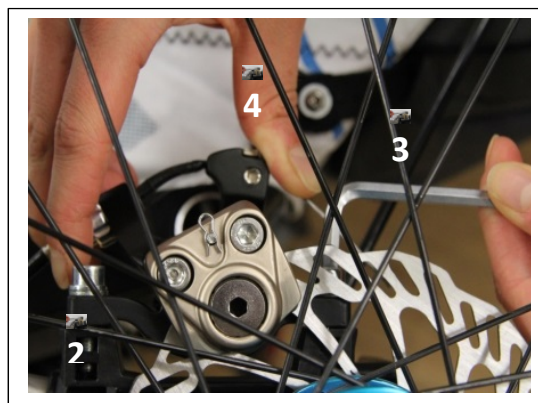
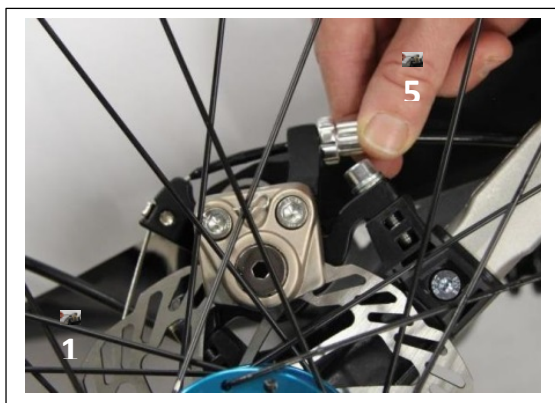


Note: WINZIP series brake pads are the same size and shape as the pads for mechanical disc brakes of the Shimano Deore. This enables replacement pads to be sourced worldwide, should none be directly available from Winzip.

1. Using a 5 mm Allen key, remove the brake calliper from the swing arm or the frame on the hub side. The cable pull may remain fastened to the brake calliper, but the adjustment screws, both on the brake lever and on the brake calliper, have to be turned clockwise as far as the stop to produce cable sag.
2. On the rear of the brake calliper, pull the safety splint out of the brake pad guide screw using long-nose pliers or a small screwdriver.
3. Unscrew the guide screw using a 3 mm Allen key on the front side of the brake calliper.
4. Remove both brake pads, together with the internal disc spring. Exercise caution when removing the internal disc spring, because it can become wedged in the brake calliper shaft. Do not bend or twist the internal disc spring.
5. After removing the worn pads, install new pads on the internal disc spring.
6. Insert the combination of pads and spring into the pad shaft. Position this combination in such a way that the guide screw can be screwed back in place.
7. Tighten the pad guide screw using the 3 mm Allen key. Push the safety splint back onto the guide screw and ensure that the safety splint locks into place with a “click”.
8. When reattaching the brake calliper to the swing arm or frame, observe the following installation instructions. (See 4.0)

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4.0 Fitting the brake calliper:



1. Turn the cable pull adjustment screw, including the locknut, clockwise as far as the stop until it lies firmly against the brake calliper arm. This makes it easier to adjust the cable sag later on.
2. After positioning the brake calliper so that the brake disc can rotate between the two brake pads in the shaft of the brake calliper, loosely attach the brake calliper to the swing arm or to the frame by screwing two metric screws M6x16L through the holes in the frame and into the threaded plates inside the slot in the brake calliper. Do not tighten the screws fully.
3. Swivel the actuating lever to clamp both brake pads against the brake disc. Keeping the pads clamped against the brake disc, now tighten the two metric screws M6x16L alternately with a torque of 3.4 Nm to fix the brake calliper housing to the swing arm or to the frame.
4. Once the brake calliper is firmly screwed onto the frame or the swing arm, let go of the actuating lever and turn the wheel. Check that the brake disc is centred between the brake pads (1), the plane of the brake disc runs parallel to the pads (2) and the brake disc does not touch the pads (3). If the brake disc is not properly aligned, repeat steps four and five.
5. You can adjust the cable sag and readjust the actuating lever by turning the cable pull adjustment screw anti-clockwise. There is usually also an adjustment screw on the brake lever, which you can use to adjust the cable tension and the actuating lever. If everything is configured correctly, tighten the locknut of the adjustment screw.