

Campagnolo®



BRAKES





WARNING!

Carefully read, follow and understand the instructions given in this manual. It is an essential part of the product, and you should keep it in a safe place for future reference.

MECHANIC QUALIFICATION - Please be advised that many bicycle service and repair tasks require specialized knowledge, tools and experience. General mechanical aptitude may not be sufficient to properly service or repair your bicycle. If you have any doubt whatsoever regarding your service/repair ability, please take your bicycle to a qualified repair shop.

"AN ACCIDENT" - Please note that throughout this manual, reference is made that "an accident" could occur. Any accident could result in damage to your bicycle, its components and, more importantly, could cause you or a bystander to sustain severe personal injury or even death.

INTENDED USE - This product by Campagnolo® has been designed and manufactured to be fitted and used exclusively on "cyclo-cross" bicycles, with any other use explicitly excluded. Any different use of this product (like, for instance, but without any limitation, cross-country, all mountain/enduro, off-road acrobatic, downhill, four-cross, freeride, free-style, or any other type of extreme off-road cycling as defined by UCI) might cause accidents, physical injuries or even death and must therefore be considered totally inappropriate, unsuitable and not recommended.

LIFESPAN - WEAR - INSPECTION REQUIREMENT - The lifespan of Campagnolo® components depends on many factors, such as rider size and riding conditions. Impacts, falls, improper use or harsh use in general may compromise the structural integrity of the components and significantly reduce their lifespan. Some components are also subject to wear over time. Please have your bicycle regularly inspected by a qualified mechanic for any cracks, deformation, signs of fatigue or wear (use of penetrating fluid or other visual enhancers to locate cracks on parts is recommended). If the inspection reveals any deformation, cracks, impact marks or stress marks, no matter how slight, **immediately** replace the component; components that have experienced excessive wear also need **immediate** replacement. The frequency of inspection depends on many factors; check with your authorized Campagnolo® representative to select a schedule that is best for you. If you weigh 82 kg/180 lbs or more, you must be especially vigilant and have your bicycle inspected more frequently (than someone weighing less than 82 kg/180 lbs) for any evidence of cracks, deformation, or other signs of fatigue or stress.



Check with your mechanic to discuss whether the components you selected are suitable for your use, and to determine the frequency of inspections.

Note

Tools supplied by other manufacturers for components similar to Campagnolo® components, may not be compatible with Campagnolo® components. Likewise, tools supplied by Campagnolo s.r.l. may not be compatible with components supplied by other manufacturers. Always check with your mechanic or the tool manufacturer to insure compatibility before using tools supplied by one manufacturer on components supplied by another.

Important PERFORMANCE, SAFETY and WARRANTY Notice - The parts and components of Campagnolo® 9s, 10s, 11s drivetrains, braking systems, rims, pedals and all other Campagnolo® products, are designed as a single integrated system. To avoid compromises in terms of SAFETY, PERFORMANCE, DURABILITY, FUNCTION, and to prevent voiding the WARRANTY, use only the parts and components supplied or specified by Campagnolo S.r.l., without interfacing them with or substituting them with products, parts or components manufactured by other companies.

The user of this Campagnolo® product expressly recognizes that there are risks inherent in bicycle riding, including but not limited to the risk that a component of the bicycle can fail, resulting in an accident, personal injury or death. By his purchase and use of this Campagnolo® product, the user expressly, voluntarily and knowingly accepts and/or assumes these risks, including but not limited to the risk of passive or active negligence of Campagnolo s.r.l. or hidden, latent or obvious defects in the product, and agrees to hold Campagnolo s.r.l. harmless to the fullest extent permitted by law against any resulting damages.

If you ever have any questions, please contact your mechanic or your nearest Campagnolo® dealer for additional information.

SAFETY RECOMMENDATIONS

- Never make any modifications whatsoever to any component of any Campagnolo® product.
- Parts which have been bent or otherwise damaged in an accident or as a result of any other impact must not be re-straightened. They must be replaced immediately with original Campagnolo® parts.
- Wear clothes which are snug-fitting and which make you visible to traffic, such as neon fluorescent or other bright colors.
- Avoid biking at night because it is more difficult for you to be seen by traffic, and it is more difficult for you to see obstructions on the ground. If you do ride at night, you should equip your bicycle with and use a headlight and a tail light.
- Never use a bicycle or bicycle component unless you are thoroughly familiar with its use and maintenance history. "Used" equipment may have been misused and abused, and can unexpectedly fail resulting in an accident.
- Always wear a properly fitted and fastened bicycle helmet that has been approved by ANSI or SNELL.

BEFORE EVERY RIDE

DO NOT RIDE YOUR BICYCLE IF IT DOES NOT PASS THIS PRE-RIDE TEST CORRECT ANY CONDITION BEFORE YOUR RIDE.

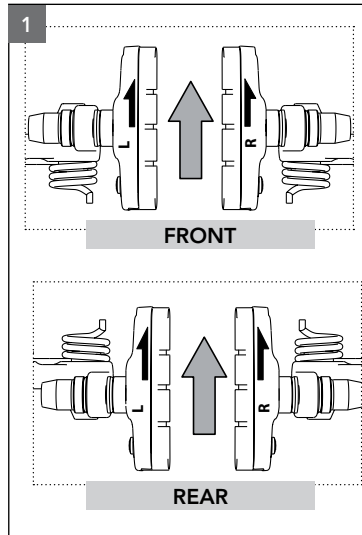
- Be sure that all of the components of your bicycle, including but not limited to your brakes, pedals, handgrips, handlebars, frame and seating system, are in optimum condition and suitable for use.
- Be sure that none of the components of bicycle are bent, damaged or out of alignment.
- Check your brake pads and cables to be sure they are in good condition.
- Test your brakes in the beginning of your ride to make sure that they are operating properly.
- Learn and follow the local bicycle laws and regulations, and obey all traffic signals, signs and laws while you ride.

1. TOOLS

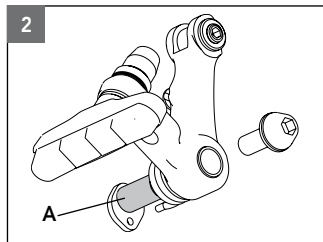
5mm hexagonal Allen key with spherical head	3 mm Allen key
2.5 mm Allen key	Torque wrench

2. ASSEMBLY

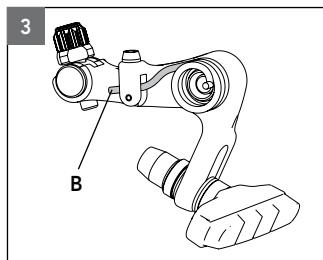
- Check the correct position of the pad holders in relation to the direction of the wheel rotation. (Fig. 1).



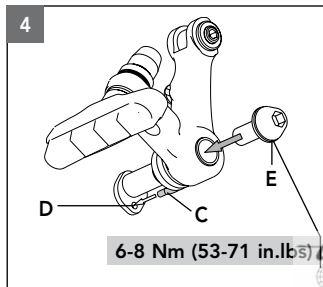
- Clean and grease the frame brake supports (A – Fig. 2).



- Check that the springs (B – Fig. 3) are positioned correctly on the lever supports.



- Place the levers on the supports, inserting the spring end (C – Fig. 4) into the relative hole (D – Fig. 4).

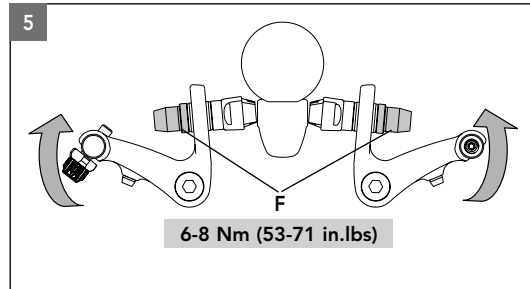


- Tighten the levers at **6-8 Nm (53-71 in. lbs)**, using a 5 mm hexagonal key and the appropriate screws (E – Fig. 4).

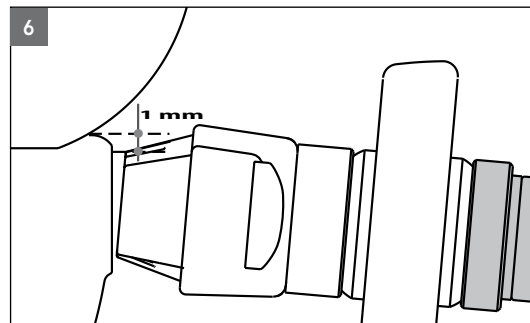
3. BRAKE PAD POSITIONING

- Rotate the brake levers so that the pads are in contact with the rim face (Fig. 5).

The pad faces must be parallel to the rim surface.



- The pads must be central to the braking surface, so that there is at least 1mm from the edge of the rim (Fig. 6).

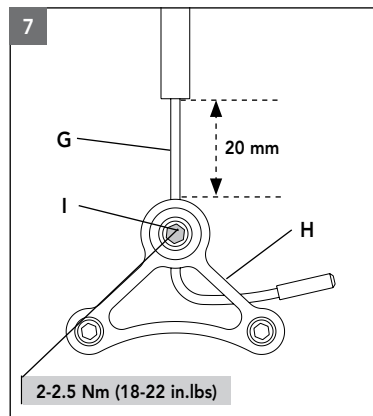


- Secure the pad holders by screwing the two nuts (F – Fig. 5) in at **6-8 Nm (53-71 in. lbs)**, using a 5 mm hexagonal key with spherical head.

4. TRIANGLE ASSEMBLY AND CABLE FASTENING

• Insert the brake cable (G – Fig. 7) into the triangular support (H – Fig. 7), adjust the distance from the tyre leaving a minimum of 20mm from the sheath (Fig. 7).

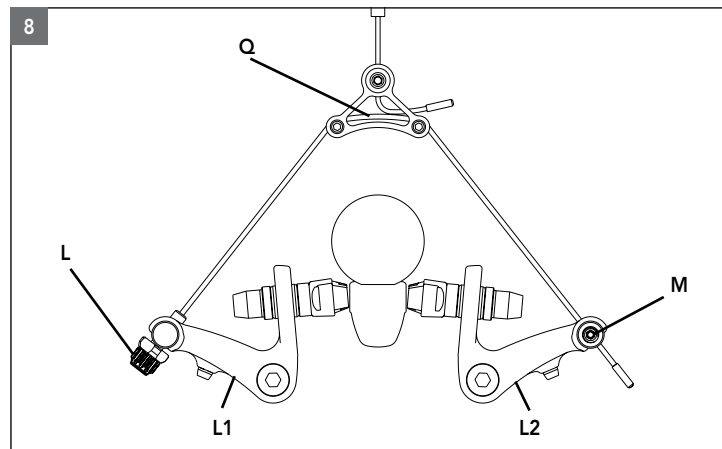
• Fix the cable (G – Fig. 7) tightening the two dowels alternatively (I – Fig. 7) to **2-2.5 Nm (18-22 in. lbs)**, using a 3 mm hexagonal key.



! WARNING!

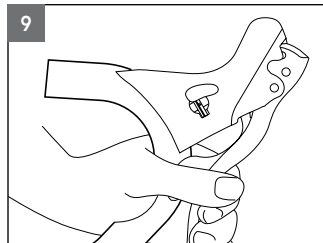
Please be sure that you tighten the cable sufficiently, without crushing the cable, so that it does not slip when brakes are applied. A loose or damaged cable can cause the brake system to malfunction resulting in an accident, personal injury or death.

5. ASSEMBLING AND FITTING THE TRIANGLE CABLE

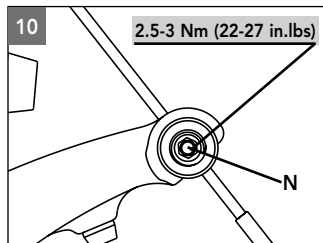


- Take the cable to adjusting screw L (Fig. 8) and position the stay on the first brake lever L1 (Fig. 8).
- Pass cable Q (Fig. 8) through the triangle.
- Insert the cable into anchoring stay M (Fig. 8) on the second brake lever L2 (Fig. 8) and fix the dowel moderately.

- Adjust the cable length operating the brake levers of the Ergopower control (Fig. 9).

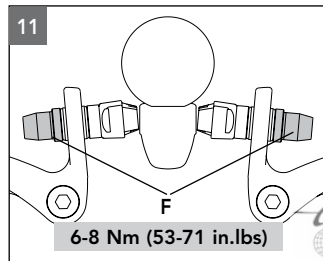


- Fix the cable tightening alternatively the two dowels N (Fig. 10) of the stay at **2.5-3 Nm (22-27 in. lbs)**, using a 2.5 mm hexagonal key.



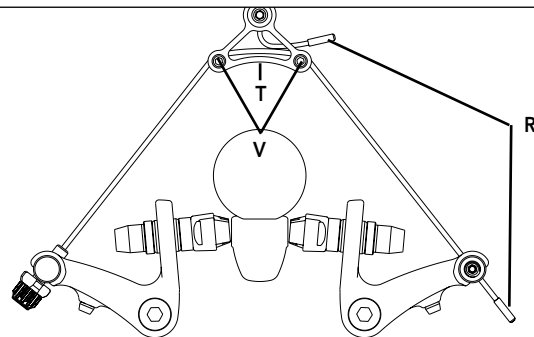
6. FIXING THE PAD HOLDERS

- Check once more that the alignment of the pads with the rim is correct.
- Secure both pad holders by tightening the two nuts at **6-8 Nm (53-71 in. lbs)**, using a 5 mm hexagonal key (F – Fig. 11).
- Try and brake a few times (Fig. 9).



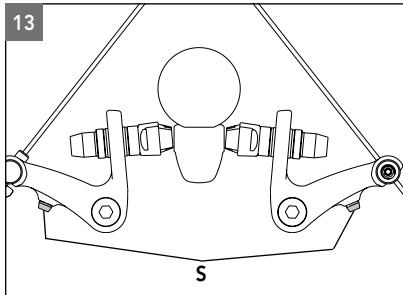
7. FINAL OPERATIONS

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- Cut the cables for the central brake and for the triangle to the desired length.
- Insert and fix cables R at the ends (Fig. 12).

- Balance the levers by adjusting the springs with screws S (Fig. 13) (using a 3 mm hexagonal key).
- Place the triangle centrally (T – Fig. 12) in relation to the central cable.
- Fix the two dowels (V – Fig. 12) onto the triangle using a 3 mm hexagonal key and tightening it at **1-1.5 Nm (9-13 in. lbs)**.



8. REPLACING THE BR-CX500 PADS



CAUTION!

Always wear protective gloves before replacing the brake pads.

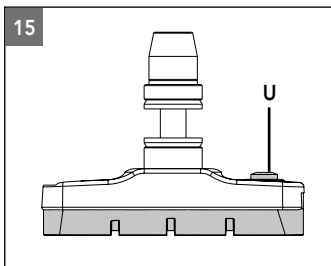
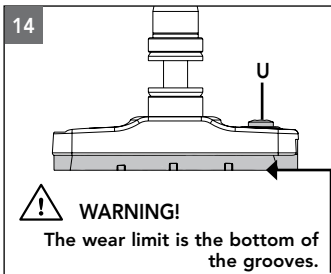
- Check regularly the wear of the BR-CX500 pads and replace them when the braking surface is reaching the end of the groove so that their braking power is not affected (Fig. 14).

- To replace the pads and pad holders, unscrew the fixing screws (U – Fig. 14) and take the worn pad out of its holder.

- Insert the new **BR-CX500** brake pad and screw fixing screws U in (Fig. 15).

- Make sure to insert the left pad into the left holder and the right pad into the right holder.

- Check once more that the alignment of the pads with the rim is correct.



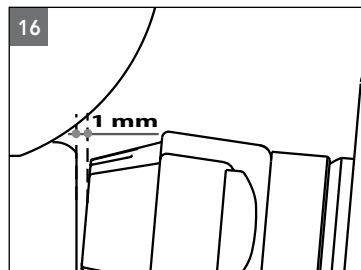
WARNING!

The BR-CX500 brake pads supplied are compatible only with the aluminium rims. Do not use these pads with rims in a composite material. Please check the pad-rim compatibility on the pad packet.

9. USING THE CABLE TENSION ADJUSTER

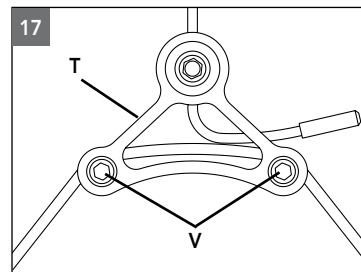
- Check at regular intervals that the pads are 1 mm from the surface of the rim (Fig. 16).

- If they are not, adjust the distance using the cable tension adjuster (L – Fig. 8 pag. 25).



- Place the triangle centrally (T – Fig. 17) in relation to the central cable.

- Fix the two dowels (V – Fig. 17) onto the triangle using a 3 mm hexagonal key and tightening it at **1-1.5 Nm (9-13 in.lbs)**.

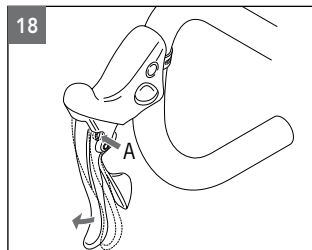


**ATTENTION!**

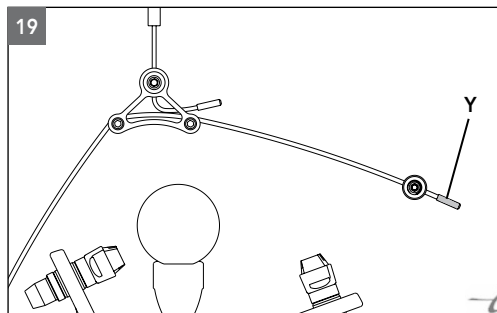
After fitting the brakes, learn to use them in a safe and quiet area. It is important to understand how the brakes work and react before using the bicycle in public.

10. DISMANTLING THE WHEEL

- Unlock the quick release of the Ergopower control. (Fig. 18).



- Release the anchoring stay (Fig. 19).

**11. BRAKE MAINTENANCE**

- Check torque setting(s) of the brake, brake pad and cable locking screws at regular intervals.
- Using the bicycle in the rain can lead to a greater accumulation of sand/dirt on the brake pads, with consequent damage to the rims, even in the course of a single outing.
To keep the pads in optimum condition and to avoid wear on the sides of the rims, check your brake pads constantly. Use a file to immediately remove any foreign bodies which could be deposited on the pads themselves.
- When riding in wet conditions, remember that the stopping power of your brakes is greatly reduced and that the adherence of the tires on the ground is considerably reduced. This makes it harder to control and stop your bicycle. Extra care is required when riding your bicycle in wet conditions to avoid an accident.

NOTE

Never spray your bicycle with water under pressure. Pressurized water, even from the nozzle of a small garden hose, can pass seals and enter into your Campagnolo® components, damaging them beyond repair. Wash your bicycle and Campagnolo® components by wiping them down with water and neutral soap.

**WARNING!**

Salt water environments (as found on winter roads and near the seaside) can cause galvanic corrosion on most bike parts. Carefully rinse, clean, dry and re-lubricate all exposed parts to avoid damage, malfunctions and accidents.