

USER MANUAL

SYNC-4²

▼ General Warning & Cautions

- Disc brake calipers, rotors and pads get extremely hot when used. Serious injury could result from contact with a hot brake. Care should be taken not to touch the caliper, rotor or disc brake while it is hot. Be sure to allow the brake to cool before attempting to service it in any way.
- Stop riding the bike immediately if the oil is leaking. Please carry on the proper repair, if you continue to ride with the oil spilling, the brake system may suddenly lose braking power.
- Be sure to confirm before riding the pads thickness must be more than 0.8 mm. Pads also must be kept clean and free from oil or hydraulic fluid.
- If the pads become contaminated you must discard them and replace them with a new set

▼ Precautions

Methods for using mineral oil

1. Always use safety glasses when handling and be careful to avoid contact with eyes. Contact with eyes may result in irritation.
2. Use gloves when handling. Contact with skin may cause skin irritation, rash and discomfort.
3. Make sure you are working in a well ventilated area and cover nose and mouth with a respirator type mask. Inhalation of oil mist or vapors may cause nausea
4. Do not drink. May cause vomiting or diarrhea.
5. Always keep out of reach of children.
6. Do not cut, heat, weld, or pressurize the oil container as this may cause explosion or fire.

Emergency care

1. In the event of eye contact, flush with fresh water and seek medical assistance immediately.
2. In the event of skin contact, wash well with soap and water.
3. If you inhale mist or vapor, go immediately to an area with fresh air, stay warm and stable and seek professional medical advice.

Disposal of used oil

1. Always follow local county and/or state codes for disposal.
2. Use care when preparing oil for disposal.

Directions for storage

After use, keep the container closed. Store in a cool, dark area, away from direct heat or sunlight.

▼ Installation

A). Tools And Equipment Required

The following tools are necessary to install the hydraulic disc brake:

- 5mm Allen wrench
- 4mm Allen wrench

B). Mounting The Rotor

- (1) Remove the wheel from the bike. Attach the rotor to the hub with the supplied 4mm bolts and tighten it with a 4mm Allen wrench. Final tightening torque: 4-6Nm. [see photo b-1]
- (2) Replace the wheel on the bike according to the manufacturer's instructions.

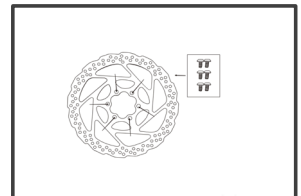
NOTE: The rotor must be installed with the "rotation" arrows pointing in the same direction as the forward rotation of the wheel

C). Mounting The Brake Levers

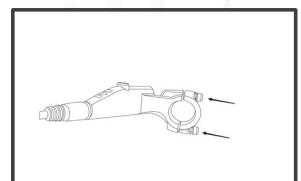
Tighten the brake lever clamp in the desired position by tightening it with the 4mm Allen bolt. Final tightening torque should be 6-8 Nm. [see photo c-1]

D). Mounting The Adapter

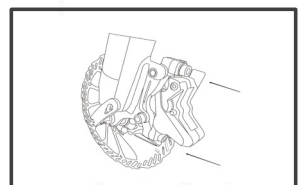
- (1) Before installing the calipers, ensure each wheel axle is correctly seated in the dropouts (the brake rotor should be on the caliper mounting side.)
- (2) Select the correct adapter (front or rear) for the disc brake position on the bike.
- (3) Holding the correct adapter, with the engraved 'F' or 'R' facing toward you (away from the rotor and wheel), position it behind the frame/fork mounting holes. Bolt the adapter in this position to the frame/fork mounts. Now the engraved 'F' or 'R' should not be visible behind the mounts. Tighten the bolts to a final tightening torque of 6-8 Nm [see photo d-1]
- (4) Make sure the pads are correctly positioned in the caliper (see section on installing & removing pads), then place the caliper over the rotor with the bleed screw facing away from the wheel. Attach the caliper to the adapter using the supplied Allen bolts. Do not tighten the bolts at this stage. [see photo d-2]
- (5) With the caliper mounting bolts still loose, depress the brake lever. The caliper will correctly center itself to the rotor. Keeping the brake lever depressed, tighten the caliper mounting bolts. Final tightening torque should be 6-8 Nm



b-1 Rotor torquing sequence



c-1. Tighten the brake lever clamp



d-1. Mount the adapter to the frame/fork
d-2. Attach the caliper to the adapter

▼ Installing and Removing Brake Pads

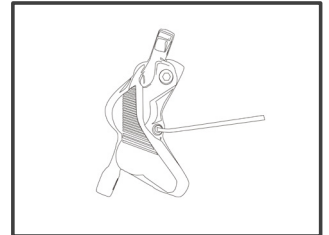
CAUTION - The pads and rotor must be kept clean and free from oil or hydraulic fluid. If the pads become contaminated you must discard them and replace them with a new set.

Removing the brake pads

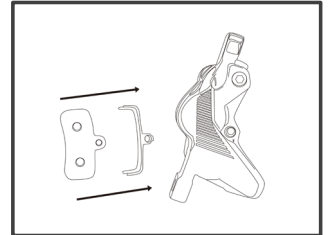
1. The hydraulic disc brake pads and pad connecting spring are held in place by a 2.5mm pad retainer bolt on the caliper. To remove the pads and pad connecting spring, unscrew the retainer bolt. Then gently push out the pads and holder - this may be easiest to achieve by using the Allen wrench.
2. Once free of the caliper, the pads may be easily removed from the pad connecting spring.

Installing the brake pads

1. Position each pad on an opposite side of the holder so that the two braking surfaces are facing each other.
 2. Taking care not to touch the braking surfaces, push the pads in the holder together and insert into the caliper so that the protruding lip with the retainer bolt hole is aligned with the bolt hole on the caliper.
 3. Insert the retainer bolt and tighten it with a 2.5mm Allen wrench. Final tightening torque should be 3-5 Nm.
- NOTE - New pads require about 30-40 full stops to achieve their optimum braking power. This process is called bedding-in. After bedding in is complete you may need to readjust the pads.



e-1. Unscrew pad retainer bolt

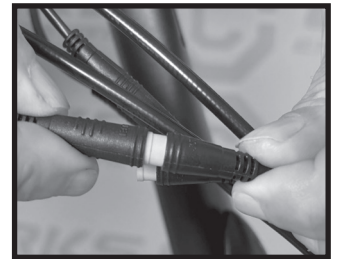


e-2 Replace pads and holder

▼ Connecting the Motor Shut Off Cable and Sensor

Connecting the shut off sensor

Plug the motor shut off cable (located on lever assembly) into the receiver sensor. Ensure the connection pins are correctly aligned with motor shut off sensor & receiver sensor, then firmly push the sensors together, until you feel it click securely into place.



Connect Shut off Sensor

▼ General Maintenance

Pad replacement

Pads should be replaced if they become contaminated or have less than 0.8mm thickness. [see "Installing and Removing Brake Pads"]

Before riding

- Check the pads for wear or contamination.
- Check the hose for cracking, wear or deformation. Replace if necessary.
- Check if the brake system is operating correctly.

After riding

- Remove any mud or contamination from the rotor slot on the caliper.
- Clean the caliper body with a cloth.

At regular intervals

- Check the oil level in the reservoir.
- Lubricate the brake lever pivot with grease.
- Check to make sure that all the bolts are tightened to the correct torque specifications.



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Brakes are a safety critical product. Clarks recommend that they are fitted and maintained by a qualified cycle mechanic. Always test your brakes before riding.

Fitting and maintenance demonstration videos available at www.clarks.bike/how-to-videos.html