

## BROMPTON BRAKE CALIPER

### WARNING

Read this document thoroughly before fitting the caliper. It is vital that brakes function correctly in order for your Brompton bicycle to be safe to use. We recommend having the brakes fitted, serviced and adjusted by a qualified bicycle mechanic to ensure they function correctly. Stop using the bike immediately if the brakes are not functioning correctly and take the bike to your local Brompton dealer for service. If you are unsure of the correct fitting process consult your Brompton dealer.

Do not modify, disassemble or tamper with any of the braking components, other than as stated in this document.

We recommend that you use only genuine Brompton components; other components may not be compatible or may cause the braking system to not function correctly.

In wet weather the braking distance will increase, reduce speed and apply brakes earlier in a controlled manner in wet conditions.

Do not allow oil, grease or other lubricants to come into contact with the braking surface of the rim or brake pads. This could severely reduce the braking performance and the bike should not be ridden in this circumstance.

### IMPORTANT INFORMATION

When fitting the new brake caliper you should also replace the brake cable and housing. Make sure the brake cable is marked as compatible with the 2018 brake caliper (fig. 1), your handlebar type (M, P, S or H) and braking orientation (standard RH front, or reverse LH front etc.). If you do not use the correct cable and housing you may have problems with the function of the brakes, or the folding function of the bike.

If you are fitting the caliper to a bike/fork manufactured before 2018 model year, you will need to enlarge the hole on the rear of the fork crown (fig. 2) to accept the 8mm diameter barrel nut. Use an 8mm drill bit to enlarge the 6mm hole on the back of the fork crown. **DO NOT DRILL THROUGH THE HOLE IN THE FRONT OF THE CROWN.** Use a file to remove any sharp edges and then grease the unpainted surface in the hole. This hole should then be large enough to allow the barrel nut to pass through it. We recommend removing the fork from the bike to do this.

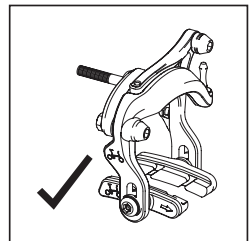


Fig. 1

If the bike is fitted with a front mudguard, you will need to replace this with a new version which has an 8mm hole in the bracket (fig. 6).

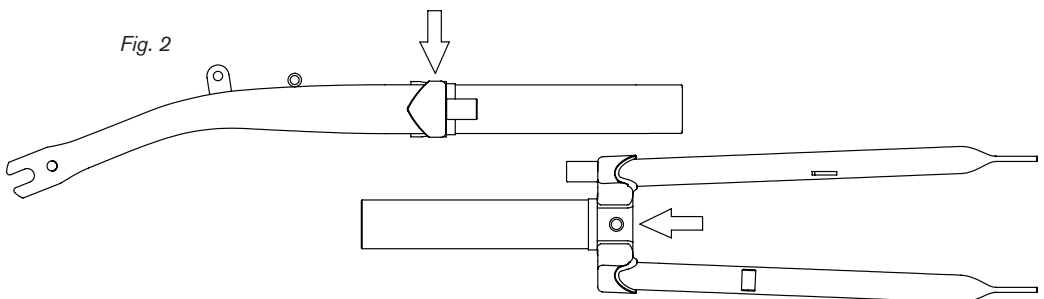


Fig. 2

## FITTING THE PADS TO THE CALIPER

The brake caliper is supplied with all the necessary parts to fit it to either the front or rear of the bike. The brake pads will need fixing to the caliper, with the washer and concave washer in the correct position (fig. 3) and the pads in the correct orientation for front (fig. 4) or rear (fig. 5) use. Ensure that the flat side of the concave washer is contacting the brake arm and the concave side is contacting the brake pad.

Gently tighten the pads once fitted; they will need re-positioning to be properly aligned with the braking surface, once the caliper is fitted, then tightened to 4-6Nm. See the section BRAKE PAD SETUP for further information.

Fig. 3

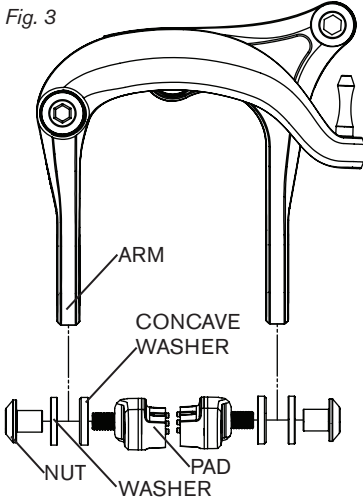


Fig. 4

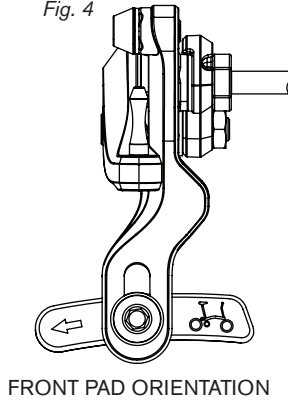
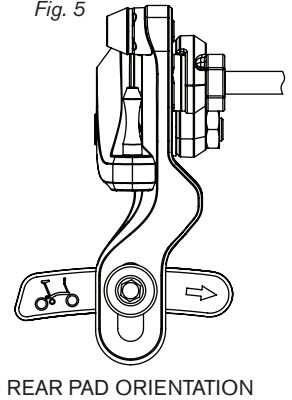


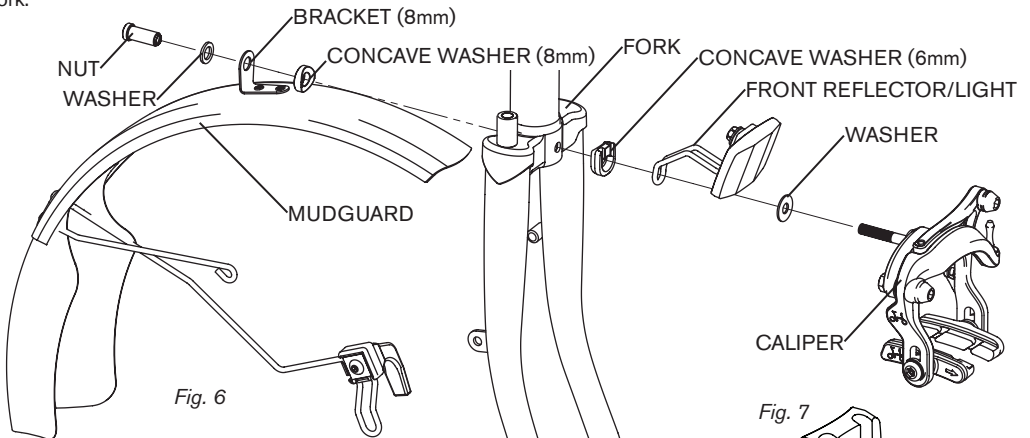
Fig. 5



## FITTING THE FRONT BRAKE

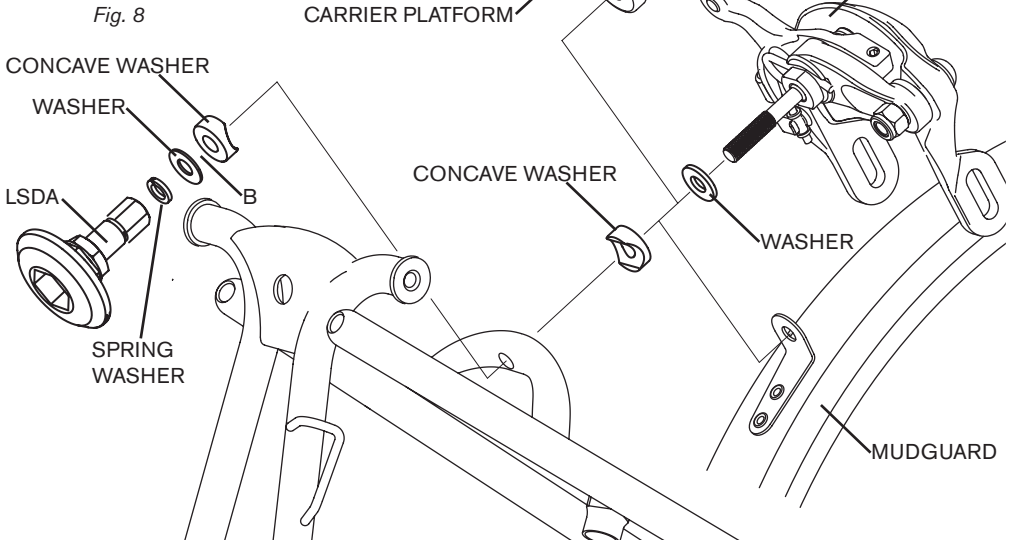
Remove the existing front brake and fit the new caliper as shown (fig. 6) with the parts fitted in the order shown. If the bike is not fitted with mudguards the washer will sit directly against the concave washer. The nut holding the caliper in place should be tightened to 8Nm.

If the bike is fitted with a wireform front (reflector or front dynamo lamp) bracket, you will need to use the existing die-cast concave washer (fig. 7) which has a recess in the front for the wire bracket to fit into. If the bike has a flat-plate reflector bracket or lamp bracket, use the supplied concave washer (6mm hole, fig. 6) on the front side of the fork.



## FITTING THE REAR BRAKE

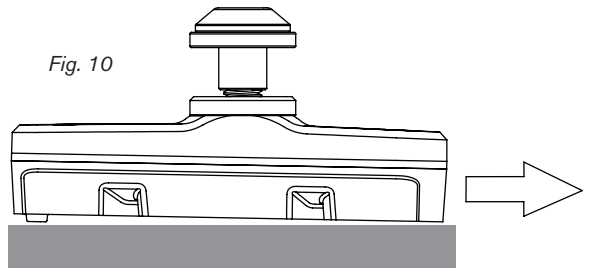
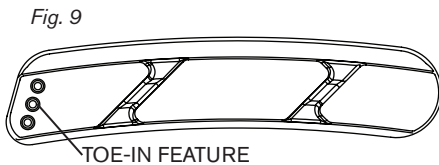
Remove the rear brake and fit the new caliper as shown (fig. 8). If the bike is not fitted with a rack there will be an additional lamp/reflector bracket which fits in position B. On E version bikes there will not be a mudguard. Tighten the LSDA to 10Nm.



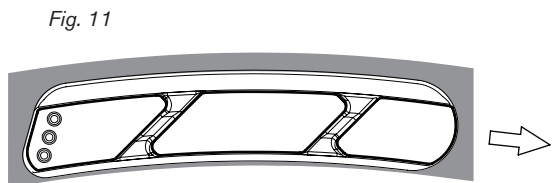
NOTE The concave washers used for the rear brake are a tighter radius (to match the shape of the mounting tube on the rear frame) than the front brake concave washers.

## BRAKE PAD SETUP

The brake pads have a toe-in feature (fig. 9) which consists of three raised points on the rear end of the braking surface. This helps angle the pad slightly when setting it up (fig. 10) to 'toe-in' the pad and reduce vibration and noise when braking.



When the brake caliper has been fitted and secured, you can set the position of the brake pads. Ensure that the surface of the brake pad is aligned with the curvature of the rim (fig. 11) and is just above the bottom edge of the braking surface on the rim. Once the pads are correctly positioned they should be tightened to 4-6Nm. Replacement pads can be ordered from your Brompton dealer, part QBRPADA.



For information on setting the brake lever position, angle, reach, bite-point etc. see datasheet **ds-brlevel**

## CABLE ROUTING

Once the caliper is fitted you can install the new brake cable. ensure that the cables are marked as compatible with the new caliper (fig. 1) and that they are the correct version for the handlebar and braking orientation.

Correct routing of the control cables is essential if these are not to be damaged during folding. All cables should be routed as shown (fig. 12) and **MUST** pass in front of the handlebar, to the left of the handlebar stem and to the right of the main frame tube.

The front brake cable must pass:

- a) through the body of the cable gatherer, CABGATH (outer cable in two parts)
- b) through the forward cable guide, CGF, and
- c) to the left of the front mudguard

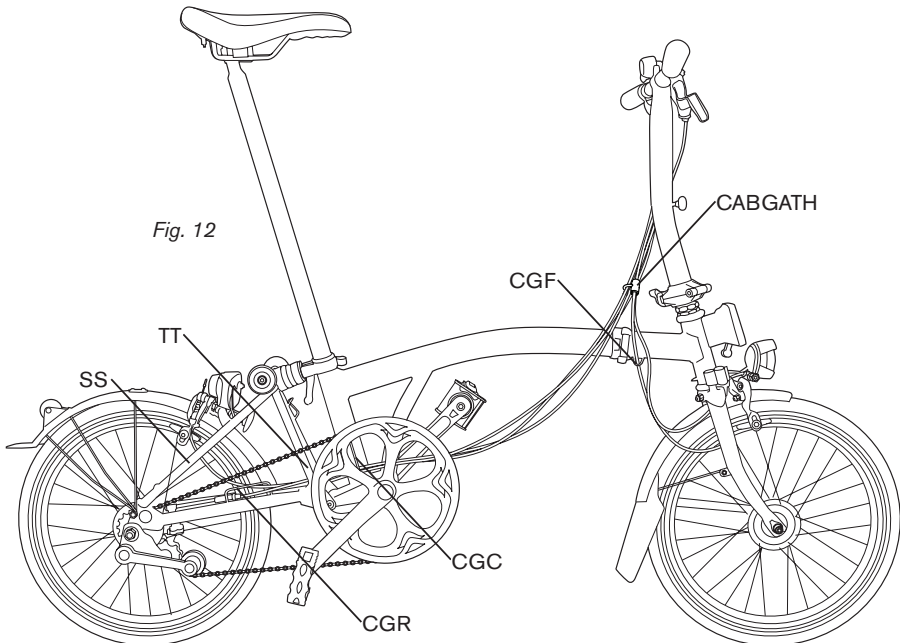
The rear cable(s) must pass:

- a) through the ring on the cable gatherer, CABGATH
- b) through the centre cable guide, CGC
- c) inside the tube TT
- d) through the rear cable guide, CGR, as shown, and
- e) for the brake cable, BRCABR, inside the tube SS

The gear cable(s) GCAB should lie below the brake cable. If there are two gear cables, then the derailleur cable should lie below the hub-gear cable.

When replacing a cable to which a dynamo wiring loom is attached, cut the tie wraps holding the loom to the old cable, and re-tie the loom (at the same positions as before) to the new cable.

Feed the inner cable through the brake lever and cable housing, into the brake caliper and gently push it through the rubber seal (fig. 13) taking care not to damage the seal.



## SECURING THE CABLE & SETTING THE CALIPER

Once you have fitted the new caliper and cable and have set the brake pads and caliper position, you should secure the cable into the caliper, trim the cable and carry out final adjustments of the brakes.

The clamp bolt should be tightened to 8Nm. trim excess inner cable from above the clamp bolt using some good quality cable cutters, leaving 10-15mm of cable. Cap with a cable end crimp.

Check that the pads do not contact the rim when the brake is not applied. Spin the wheel and check for contact on both sides.

You can use the centring screw on the top of the caliper to set the relative left-right offset of the pads. The barrel adjuster on the brake lever can be adjusted to change the pad clearance and contact point of the pads. Double check that the pads are correctly aligned with the braking surface, adjust as necessary.

If you are unsure about any part of the fitting process, consult your Brompton dealer.

It is vital that brakes function correctly in order for your Brompton bicycle to be safe to use. Do not use the bike if the brakes are not in good working order.

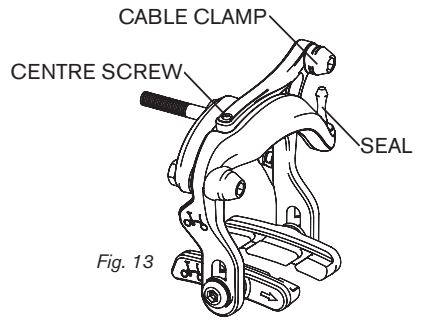


Fig. 13

