

# CENTRALISING, BEDDING IN AND CLEANING

## A. What is centralising?

The process of centralising the pistons is an often overlooked one. If pistons work unevenly (especially on 4 or more piston brakes) a soft, spongy lever will be felt, with excessive travel (meaning that the lever will travel further towards the bars than is necessary and often means that the brake cannot be used to its full potential)

Most importantly, the caliper needs to be set up square-ly and be true before starting this procedure. This is essential to then having the pistons working evenly. See your set up guide for more information on setting the caliper up correctly, or on line at [www.hopetech.com](http://www.hopetech.com)

You will need a small flat blade screwdriver, plenty of light to see small gaps between pads and rotor and patience!

**TIP!** Be careful with your fingers when spinning the wheel!

## B. The idea

To explain this process lets assume we are working on a 2 piston brake. Same procedure applies to a 4 or 6 piston brake - it's just a little bit more fun!

You are trying to make both pistons work evenly. That is that they both move the same amount before the pads make contact with the rotor and they do not cause the rotor to bend or warp when pressure is applied.

This will only work if pads are both the same thickness (i.e new or not at all worn) and the caliper is set up correctly.

Begin the process by making sure that the pistons are both pushed back fully into the bores (see previous page - Step G)

If pistons are sticking due to being dry or damaged or worn, then they will need making good before starting.

**TIP!** Be patient - a little bit of adjustment goes a long way!

## C. The procedure

Begin by pumping the lever repeatedly until the pads make contact and a 'feel' is achieved at the bars.

Look in the shown positions whilst squeezing the lever



repeatedly. See which piston is working the most/least. It should be fairly obvious and you may see the rotor being 'pushed' over whilst operating the brake

**TIP!** Make sure you have plenty of light around you. The things you are looking for are only small!

## D. The procedure

If you determine that the left hand piston (outboard behind the bore cap, as looking from the back to the front of the bike on the front brake shown) is working more than the right hand side:

\* use the small flat blade screwdriver and place it behind the pad, in front of the piston and apply a little pressure in order to push the piston back into its bore.

\* this should be done whilst pumping the lever repeatedly.

You should find that the piston will retract, and the right hand piston has now moved towards the rotor a little.

\* remove the screwdriver and pump the lever again.

Repeat the checking process. Hopefully the pistons are now a little more even in their action.

**TIP!** It can be easier to do this on a workstand or off the ground if possible!

## E. The procedure

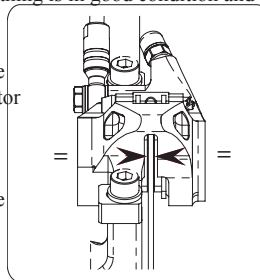
This process can now be repeated as many times as you need, using both pistons to equalize them.

You should feel a noticeable difference in the feel at the lever as you are doing this.

After each process, spin the wheel and listen for any dragging from the pads on the rotor. A well set up brake shouldn't drag if everything is in good condition and well set up.

Look for the gap where shown, between the rotor and pads.

You are looking for an equal gap and drag free running.



**TIP!** If you are finding that the brake rubs in just one or two spots - then you may need to true the rotor!

## F. Patience!

Be patient when doing this!

It can take several attempts to get it right, particularly on 4 or 6 piston brakes - but this is where the benefit is most noticeable.

You may find that you go too far with one piston and then need to make the opposite one work less to compensate.

It is a bit of a 'game'! Once you understand how it is working and what you are trying to achieve though it should be relatively straight forward.

When you are happy the brake is working well - bed the new pads in as shown below

**TIP!** Take it easy on new pads. They need a little time to achieve full potential.

## G. Bedding in

Bedding the pads in is very important. It helps to wear the surfaces of the pad in without getting too high a temperature and 'glazing' the surfaces, which means they will bite on the rotor more effectively.

Make sure everything is clean before starting the bed in, use methylated spirits on the rotor surface and caliper if needed. Pads with even a small amount of contamination or a rotor that has picked some overspray up from lubing a chain WILL NOT WORK as they should, and the brake may be dangerous to use.

Always cover the rotors up with clean tissue when lubing the chain or other parts of the bike.

Pads are best bedded in without the aid of water or other fluids. Sometimes a little 'wet mud' can be used successfully as a 'paste' on the rotor to help - making sure that the mud is not contaminated with oil or fuel if near a roadside.

**TIP!** Allow a little time to bed in before going out on a ride, you may need your brake as soon as you set off!

## H. Bedding in

To bed the pads in - simply ride the bike, very gently scuffing the pads on the rotor with a little pressure on the lever.

**DO NOT ATTEMPT TO STOP IMMEDIATELY!** allow the pad to have a minute or two simply rubbing the rotor gently.

Increase the resistance and also begin to pulse the lever, making the brake work a little harder.

You should start to feel the power of the brake increasing as you are doing this.

Continue this process for as long as you feel it takes until the brake begins to work to its full potential.

The brake WILL get better once it used off road and has some dirt and higher temperatures on it.

**TIP!** If pads are contaminated, **DO NOT REUSE** or attempt to file the surfaces down. Discard and refit new!

## I. Cleaning

All parts of the brake can be safely cleaned using methylated spirits. This will remove spilt hydraulic fluid and safely evaporate after wiping away.

When washing the bike - we strongly discourage the use of car shampoos and other non specific cleaning agents. These often contain oils and waxes which may leave paintwork nice and shiny, but that also means pads and rotors are nice and shiny too! Not good news for a disc brake!

We produce a specific disc brake friendly cleaner (Sh1t Shifter) which has been specifically developed to be effective at dirt removal and safe on disc brakes and anodised surfaces.

Try it and see what a difference it makes to the whole of the bike and be safe in the knowledge that you'll also be able to stop after cleaning it!

**TIP!** Jet washes at garages will have wax residue in the hoses, even if you are only using the rinse function!