



GIVING YOU THE POWER TO EXPLORE



How to Fix a **PUNCTURE**

Please take time to read this simple '**HOW TO FIX**' Guide to ensure that you enjoy your cycling experience even when faced with a punctured tyre.

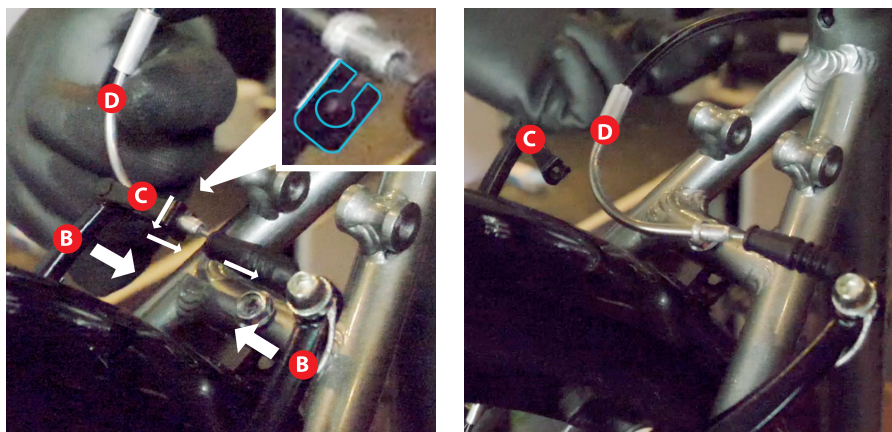
Placing your bike on a bike stand makes it much easier to work on your bike, however, as most of us do not have a bike stand place your bike upside down and rest it on the handlebars and saddle making sure to protect them from damage.

Follow these simple steps

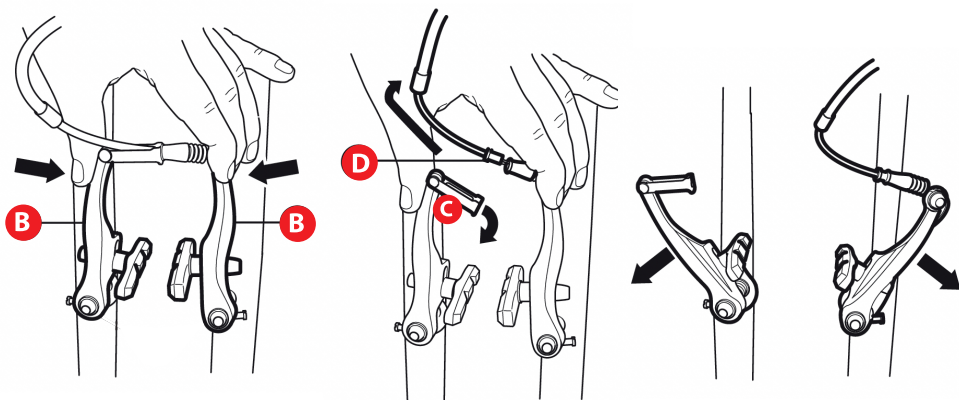
If you're bike has disc brakes this first stage will not effect you but if you're bike has V-type brakes then you must follow this first step.

Step.1 Releasing the Brake

In order to remove the wheel you need to release the V-Brake to be able to remove either of the two wheels from the bike. By releasing the brake it makes it far easier when replacing the wheel when the tyre is fully inflated. It also prevents the tyre from rubbing against the brake blocks and knocking them out of alignment.



Slide back the dust cover **A** which reveals the brake cable. Using your hand pull the brake levers **B** together until you can pull the cable bridge **C** down releasing the cable guide (also called a noodle) **D** taking care not to bend it or the cable will not slide through it.

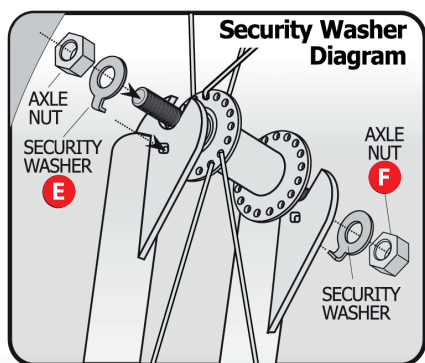


This simple procedure is the same for both front and back wheels.

At this point if you do not have a bike stand turn your bike upside down resting it on the Handlebars and saddle, making sure to protect both from any damage.

Step.2 Removing the wheel

Front wheel

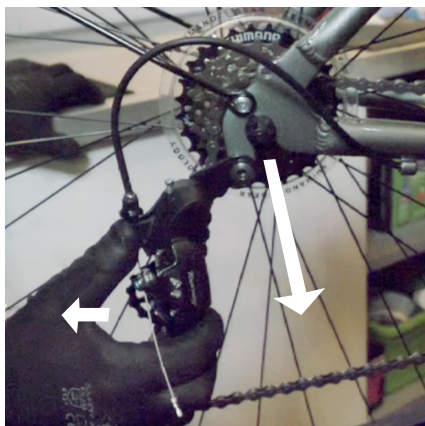


Removing the front wheel is quite straightforward, all you need do is untighten the wheels nuts **F** till slack enough to release the safety locking washers **E** to you to lift the wheel out of the drop-outs in the fork. You do not need to remove the nuts completely.

Lift the wheel out of the fork drop-outs

Rear wheel

Removing the rear wheel again is quite simple but does involve a little more to the procedure including the chain and gears. As with the front wheel release the V-Brakes as in Step.1

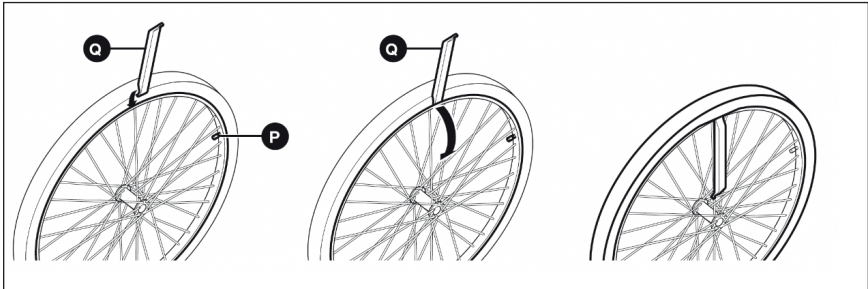


Push the mechanism back and the wheel can be easily removed.

Firstly make sure before you start you have the chain on the smallest cog on the rear, this you are unlikely to have to reset your gear selection after re-fitting the wheel and the chain is at its slackest when on the smallest cog making it a little easier. Release the tension on the quick release lever or undo the wheel nuts (NOTE: there are no safety location washers on the rear wheel)

Pull the gear mechanism back (as shown above) and the wheel will simply drop out (if in a stand) or you can lift the wheel, up and out of the drop-outs if you bike is in the upside down position.

Step.3 Removing tyre and innertube



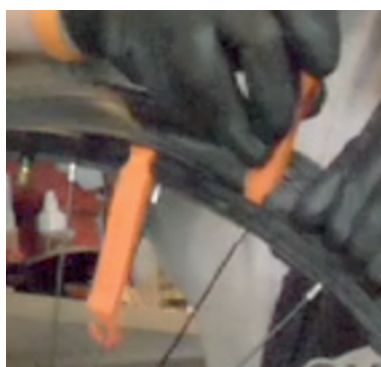
NOTE: To remove the innertube you will need a set of tyre levers

Unscrew the dust cap from the tyre valve and using the pointed end on one of the tyre levers, press the lever up inside the valve to release any air still in the innertube, pinching the tyre over the valve to stop the valve pushing up inside the tyre.

Then squeeze the tyre all around the rim to break the seal as if the tyre has been on for some time or been wet the tyre can adhere itself to the rim. It also makes it must easier to remove.



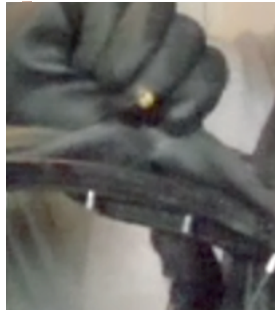
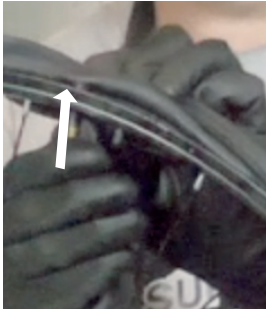
NOTE: If the tyre is particularly tight, lock the second lever as the first under the spoke, and use the third lever to complete the process.



With the second lever repeat the process but at this point you should not need to hook under the spoke, move to the other side of the hooked lever and repeat, as the tyre should now feel quite loose enabling you to unhook the levers using one lever to slide around the rim releasing one side of the tyre.

Inserting the second tyre lever.

With one side of the tyre off the rim, lift the tyre off above the valve pushing the valve upwards out of the rim



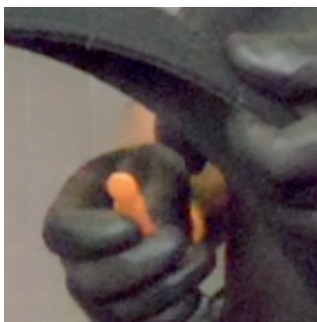
IMPORTANT!

Holding the valve section pull the innertube from the rim, hold the innertube in the same position that it came out of the tyre, if you do this, when you find the puncture on the innertube it will help you to locate the rough position of where the hole is on the tyre or whatever has given you the puncture.

Keeping hold of the innertube in the same position you took it off the wheel and using a pump inflate the innertube until it is a little bigger in diameter than it was inside the tyre. This will make any holes in the innertube a little bit bigger so it should be a little easier to feel or hear the air escapes from the whole as we go round the innertube.

Still keeping the innertube in the same way round, move the outside edge of the innertube past your ear. Then when you find the puncture mark it with a pen/chalk or similar. Then offer your innertube up to the wheel positioning the valve where it should be on the rim. Follow the innertube around the tyre to roughly locate the position of the puncture on the tyre.

For now put the innertube down and remove the tyre holding the tyre where the puncture point is situated. slowly move your fingers along the inside of the tyre until you find the cause of the puncture, be careful as this could be a sharp stone or thorn, with is a common culprit.



Again taking a tyre lever, you press from the inside so you can see the object on the outside of the tyre. This allows you to remove it using a screwdriver or pair of pliers. Whilst you have the tyre off it makes sense to run your fingers along the whole of the inside of the tyre just incase there is a second puncture. Be careful not to damage the tyre.

When you have cleared the tyre replace it on the rim.

Step.4 Direction of rotation when refitting the Tyre



When replacing the tyre on the rim make sure it is rotating in the correct direction. You may see the word "Rotation" or "Direction" and a small arrow which indicates the tyre's forward direction (rolling direction). Generally the tyre has an arrowed directional designed tread if no directional markings are shown.

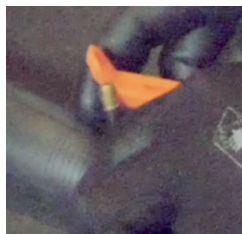


Fitting the tyre the wrong way round will effect the wet grip, breaking distance and cornering grip of the tyre.

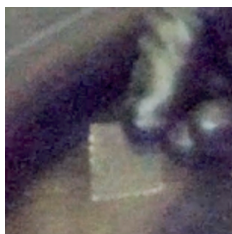
Place the tyre in position inserting one side of the tyre into the centre of the rim and put to one side.

Step.5 Mending the innertube puncture

Locate the mark you have placed on the innertube where the puncture occurred. Remembering that we inflated the innertube so it was a little bigger, we now need to deflate it until it is about the size it will be when inside the tyre. This is to ensure that the patch seals properly and isn't stretched or creased and won't stick properly.



Deflate the innertube using the tyre lever.



Scuff the innertube with the emery paper.



Apply the patch making sure there are no creases.

Now we have the innertube to the correct size using the repair kit find the small piece of emery paper and scuff the innertube where the repair is to be made.

Peel of the self adhesive patches (like plasters) which are pre-glued, and place over the hole on the innertube. Put some pressure on the patch to make sure it sticks ok, and check for creases.

IMPORTANT!

Once your happy with the patch it's best to get the innertube back into the tyre as soon as possible so that you can inflate it and the pressure from the tube and tyre together will help the patch from coming unstuck whilst the glue goes off.

Step.6 Replacing the innertube after repair.

NOTE: When replacing the tyre you must first find the hole for the valve which is normally directly across from the wheel reflector.



Reduce some of the air from the innertube using the tyre lever.



Pull the tyre back to reveal the hole in the rim for the valve

Firstly you need to release some of the air from the innertube using the tyre lever, but not making the innertube flat. Pulling the tyre back place the valve of the innertube back through the hole in the rim. Unlike the tyre it does not matter which way round you replace the innertube. **Fig.1** With the valve in place feed the innertube into the tyre, once you have got the innertube tucked into the tyre you then need to gently lift the innertube over the rim, **NOT THE TYRE**, just the innertube.

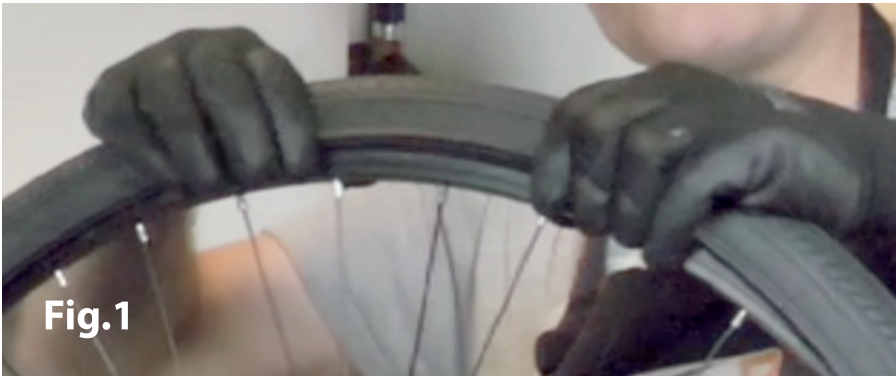


Fig.2 Starting opposite the valve, you will begin to pull the tyre over the rim working on each side. Initially you can expect some resistance from the inner tube but once you get enough of the tyre in it will sit down behind the rim.

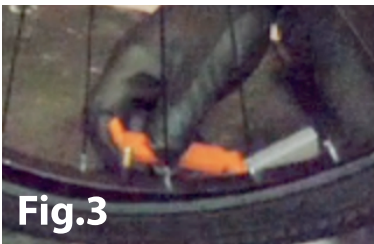


Fig.3 You may find, if it appears to be pushing the innertube out, that you have a little too much pressure in the the innertube so again using the tyre lever release some of the air by pressing the value.

Fig.4 The last section will become very tight and you will need to use one of the tyre levers to complete.

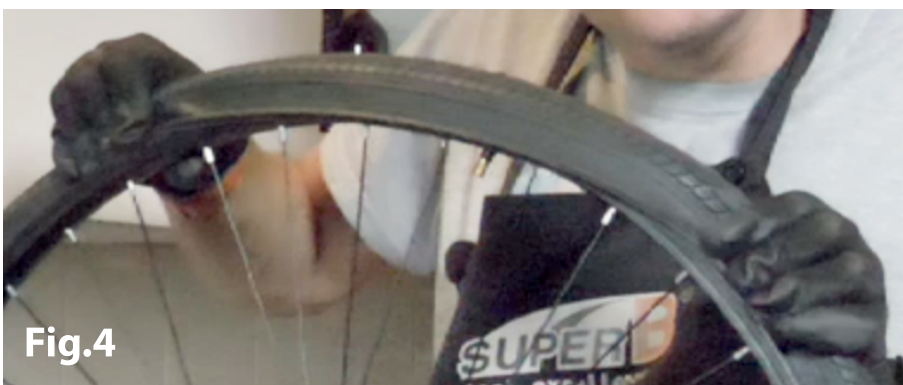


Fig.5 Whilst holding the tyre firmly in place with your left hand place the tyre lever as shown, only lifting approx. 90 degrees to the rim and slowly working toward the valve as the tyre pops inside the rim. If it feels difficult, reverse, by holding the tyre with your right hand and work toward the valve from the other direction until the whole tyre pops in place inside the rim.

NOTE: DO NOT LIFT THE TYRE LEVERS MUCH MORE THAN 90 DEGREES OR YOU STAND A CHANCE OF PINCHING THE INNERTUBE AND CREATING A PUNCTURE WHICH CANNOT BE REPAIRED.

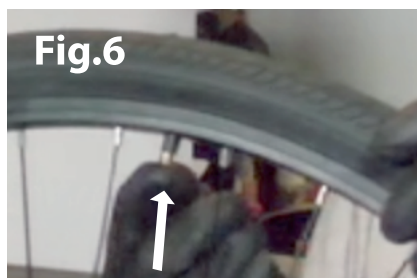


Fig.6 It is sometimes possible for the tyre to sit ontop of the inner-tube valve. To double check place your finger on the valve and press upwards. IF it moves into the tyre it is fine to continue to pump the tyre up again.



Fig.7 As a last test you can lift the beading back on the side of the tyre and look down the side of the rim to see if you can see if the innertube has been trapped and the tyre is sat ontop of the valve. With air in the innertube this is unlikely to happen.

Using whatever bicycle pump you have inflate the tyre to the pressure which is normally indicated on the sidewall of the tyre. It is best to inflate your tyre in stages checking that the tyre is sitting properly into the rim.



What you need to do is check that the beading around the tyre looks like it is sitting equally, and you need to check both sides of the tyre. Sometimes the tyre can sit too deep in the rim and needs a little extra pressure to force it up onto the side of the rim. Adding a little washing up liquid will also help to get it to seat properly. Remeber, you will need to reduce tyre pressure back down to the correct level.

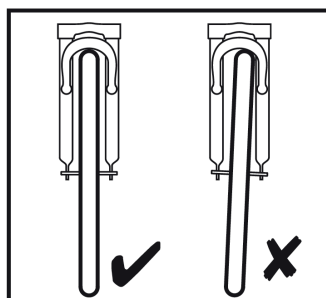
Step.7 Replacing the wheel

Front wheel

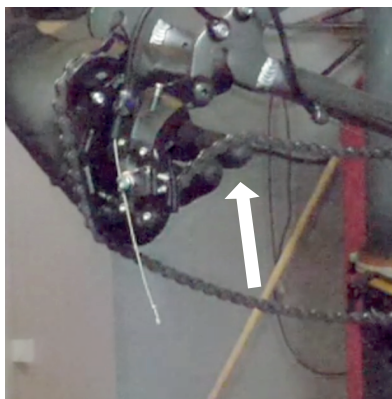
Replacing the front wheel is really simple you just follow steps **1** and **2** working in reverse order.

If the wheel has a disc brake you just need to make sure that the disc sits properly when you place the wheel into the drop-outs.

Which ever brakes you do need to make sure the wheel is centralized so there is no binding when the wheel spins whether V-Brake or Disc brakes.

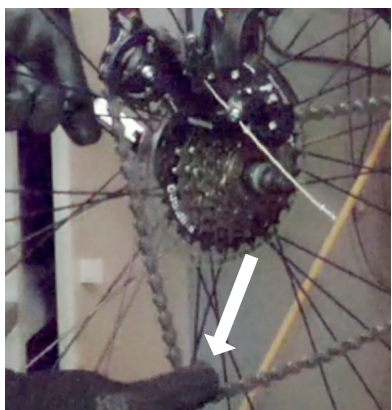


Centralizing the wheel correctly before tightening the wheel nuts

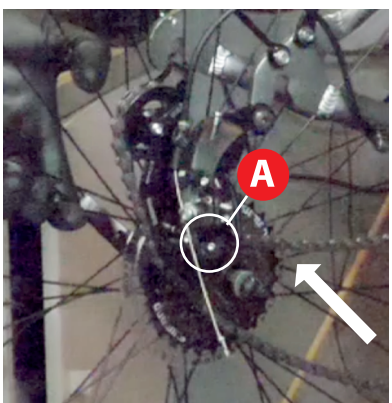


Rear wheel

Replacing the rear wheel is straight forward as the wheel came out quite easily. Your chain is a loop and as such the cogs needs to be sitting on top loop of chain.



Firstly pull the lower loop of chain down underneath the cogs on the wheel.



Bring your wheel up so that chain sits on top of the smallest cog of the wheel next to the upper jockey wheel **A** which is closest to the body of the mechanism



You then need to pull the mechanism back and lift the wheel until the cogs have cleared the mechanism. You can then lift the wheel placing the axles into the rear drop-outs on the frame. Once the wheel is seated properly in the drop-outs tighten the wheel nuts or the Quick Release mechanism if fitted, adjusting till you achieve the tighten required. Prior to fully tightening the wheel in place double check the wheel is totally central if the bike is in a bike stand by lifting the wheel and feeling if it's seated cleanly in the top of the drop-outs.

Note: badly seated wheel can effect your gear and brake operation.

Once your rear wheel has been replaced check to make sure the chain is in the correct position on the front chainring if not simply ease the bottom of chain loop in position gently with your finger onto the cog you want it onto by turning the chainwheel in reverse.

Step.8 Reconnecting the Brake

Please refer to **STEP.1** which is basically the same procedure in reverse making sure to check the brakes to ensure that everything is working properly.

Step.9 Checking the gears

Similarly to the brakes check that the gears by going through the range of gears making sure they are working properly.

