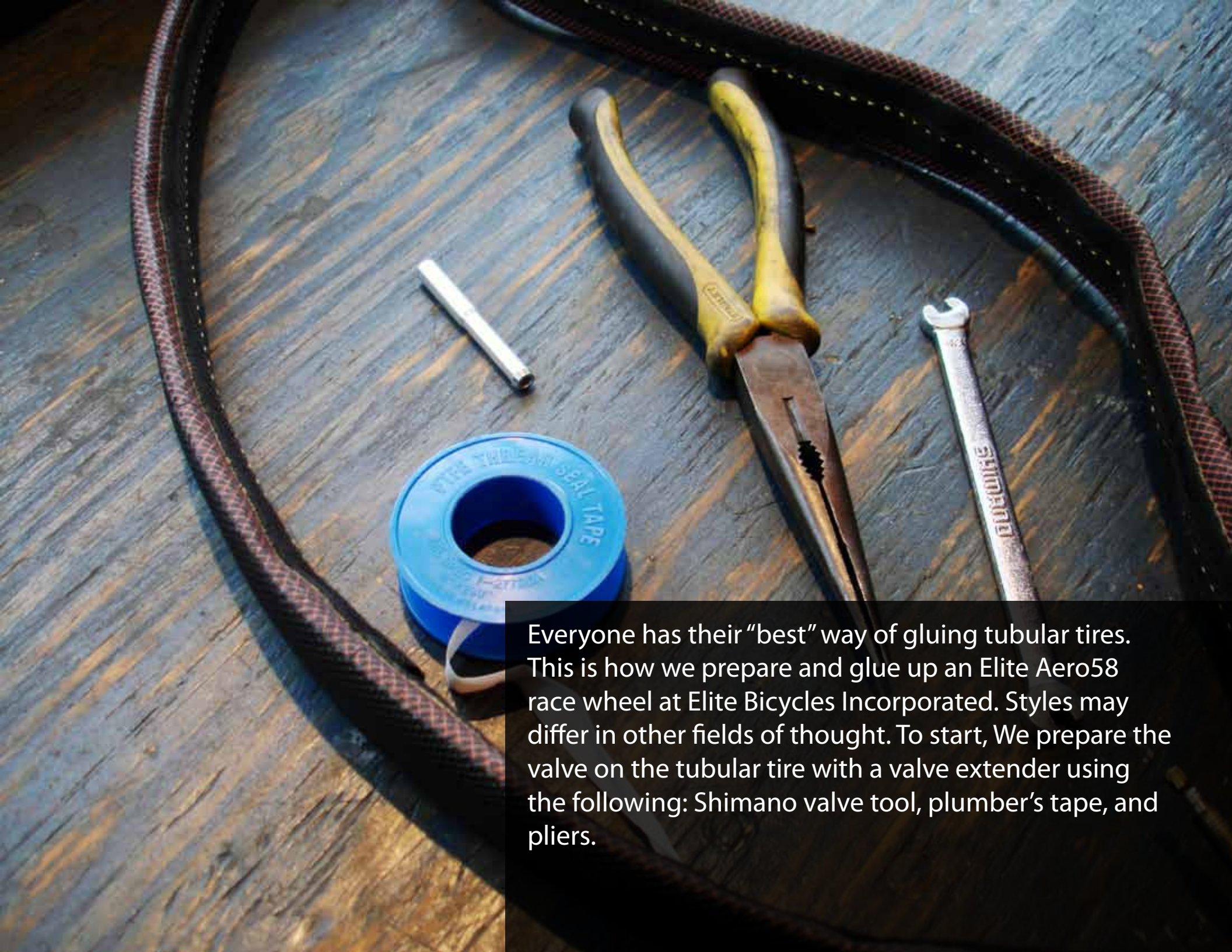
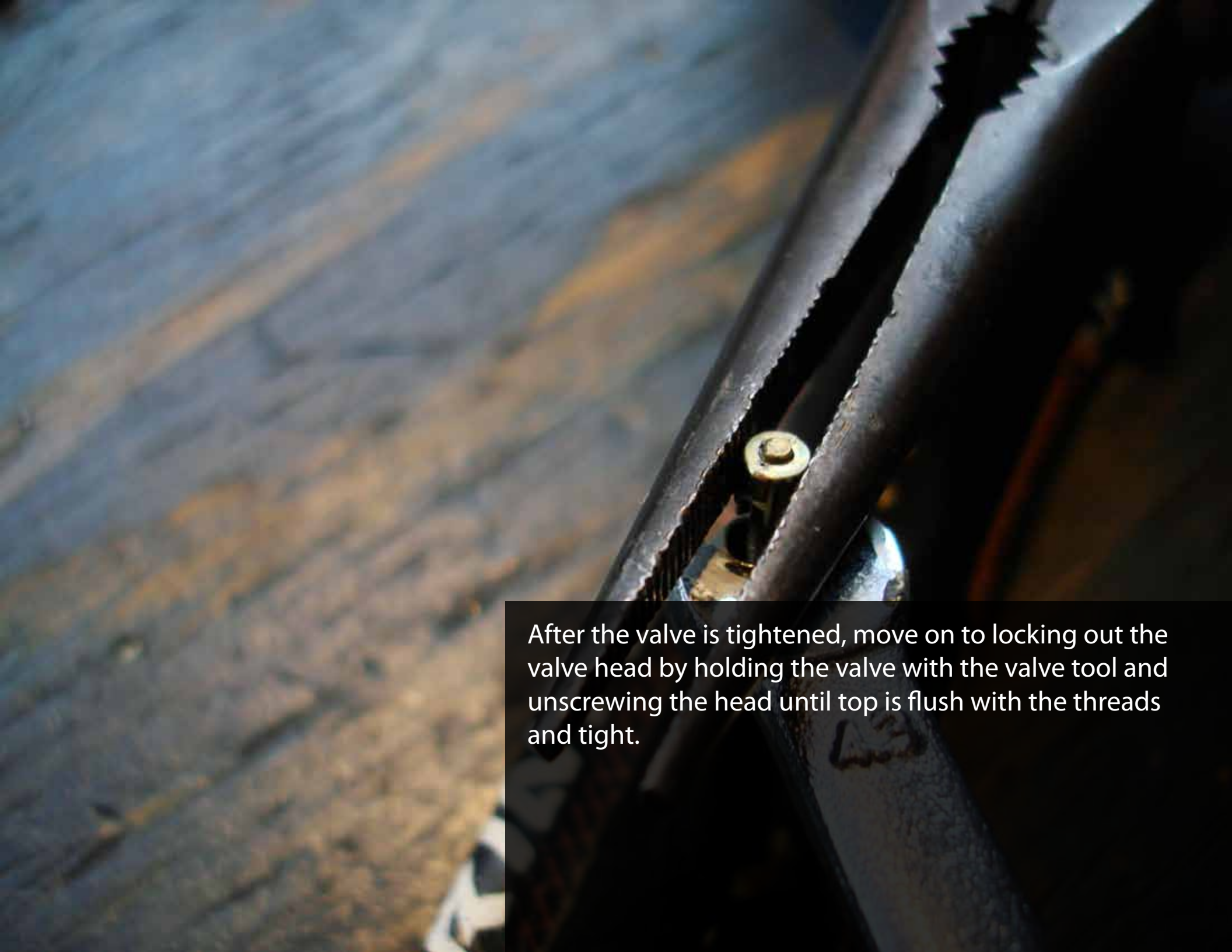
Tech Help:

How to glue a tubular tire...

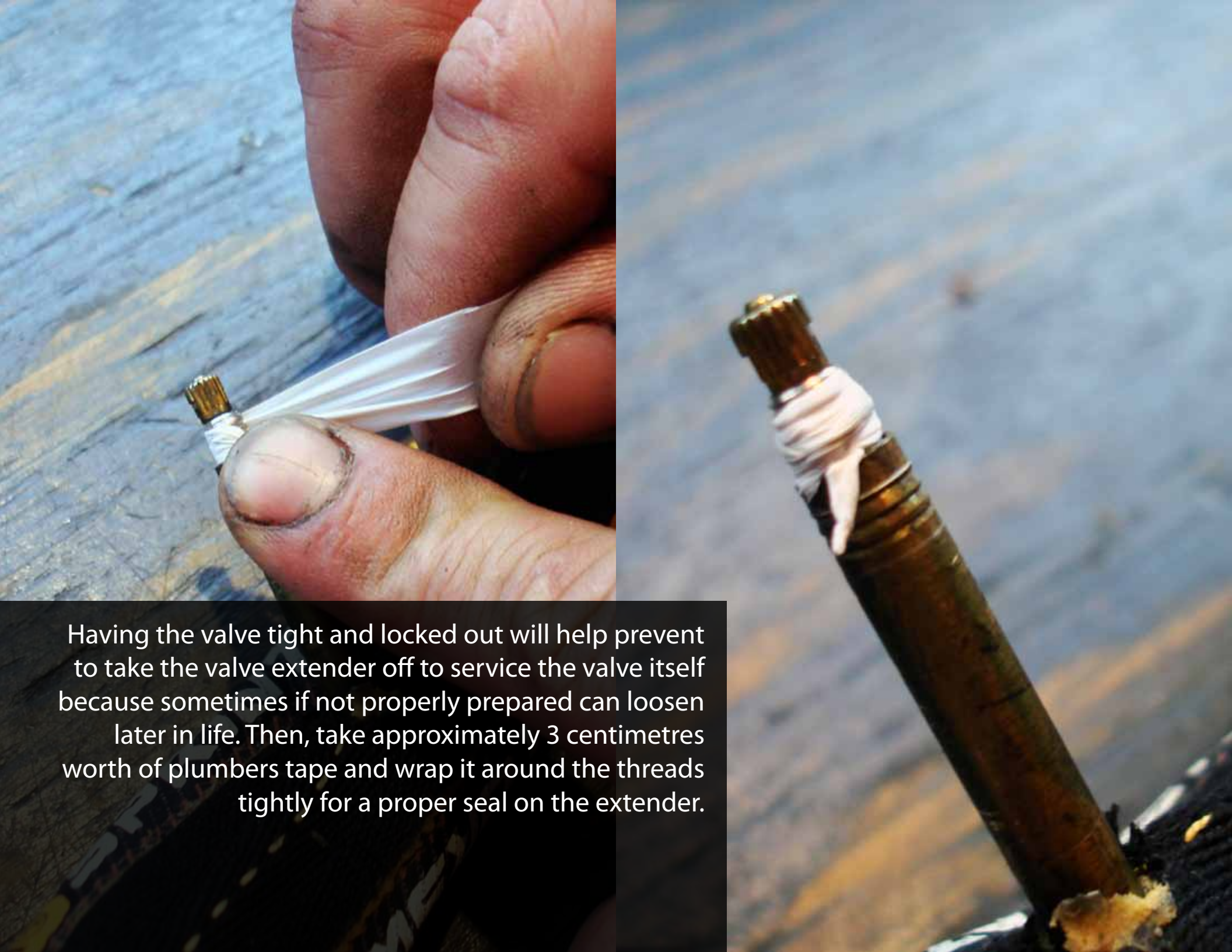


Everyone has their "best" way of gluing tubular tires. This is how we prepare and glue up an Elite Aero58 race wheel at Elite Bicycles Incorporated. Styles may differ in other fields of thought. To start, We prepare the valve on the tubular tire with a valve extender using the following: Shimano valve tool, plumber's tape, and pliers.

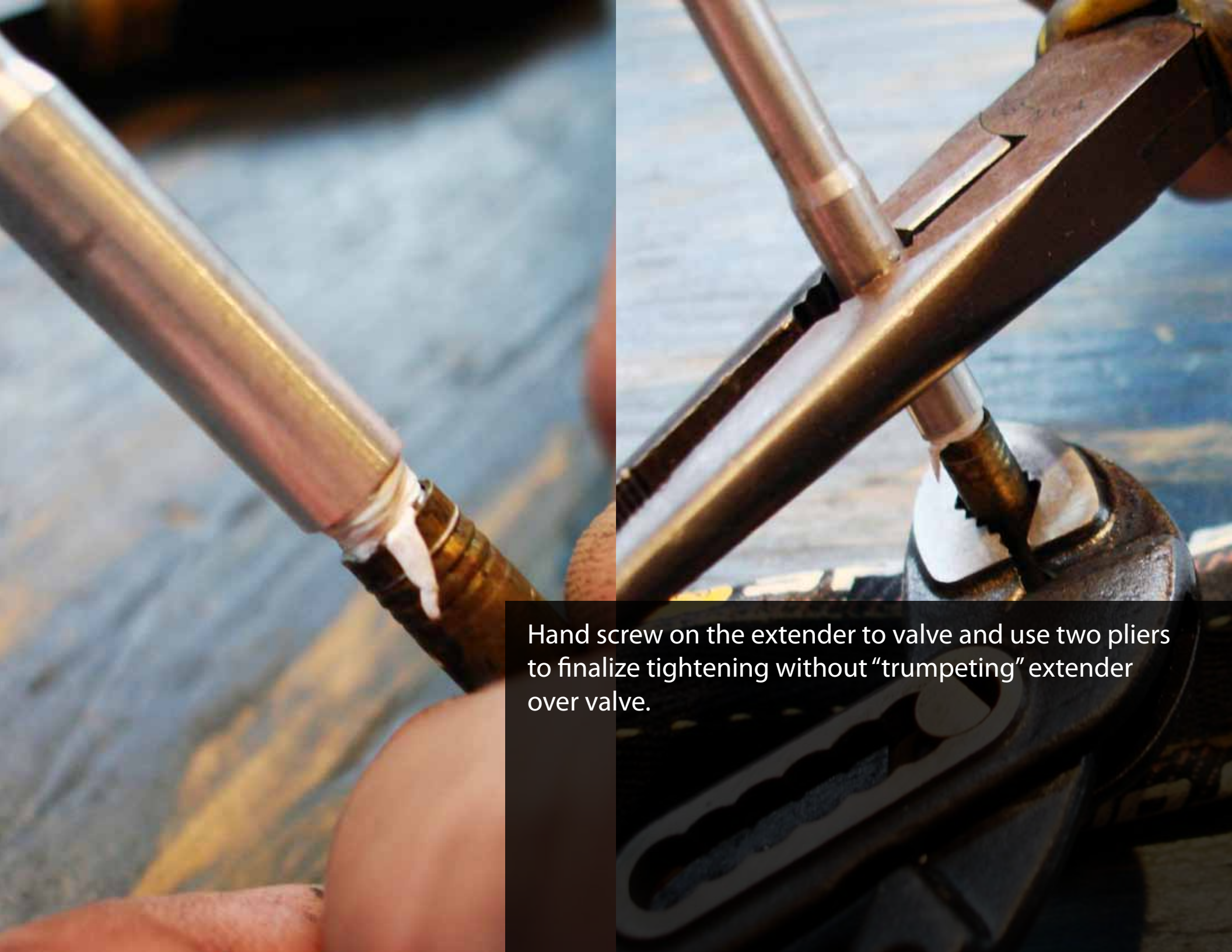
Holding the stem of the valve with the pliers we begin with tightening the valve into itself to ensure that it is tight using the shimano valve tool. You may be able to substitute this with a small adjustable wrench, be sure not to over torque the valve and blow out the threads.



After the valve is tightened, move on to locking out the valve head by holding the valve with the valve tool and unscrewing the head until top is flush with the threads and tight.

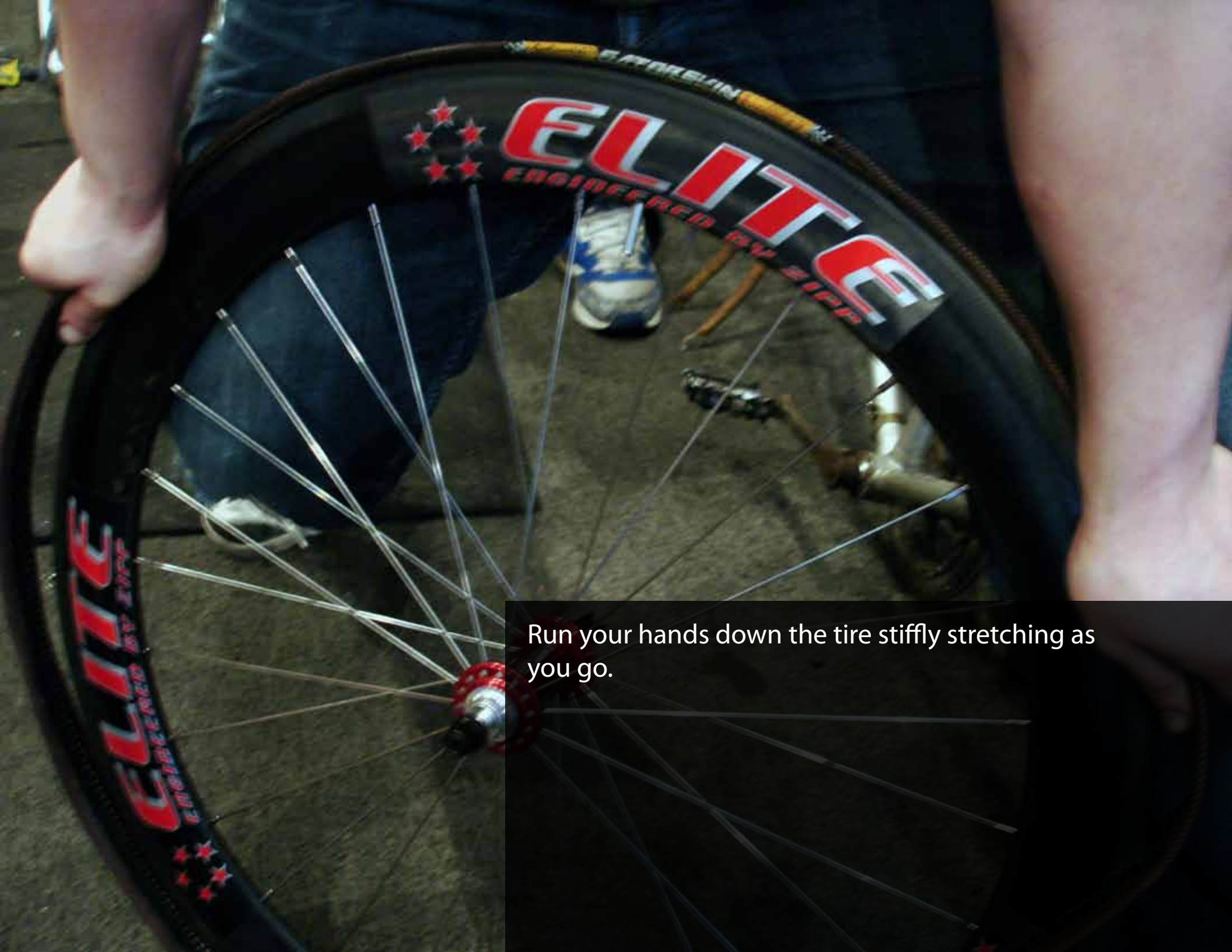


Having the valve tight and locked out will help prevent to take the valve extender off to service the valve itself because sometimes if not properly prepared can loosen later in life. Then, take approximately 3 centimetres worth of plumbers tape and wrap it around the threads tightly for a proper seal on the extender.



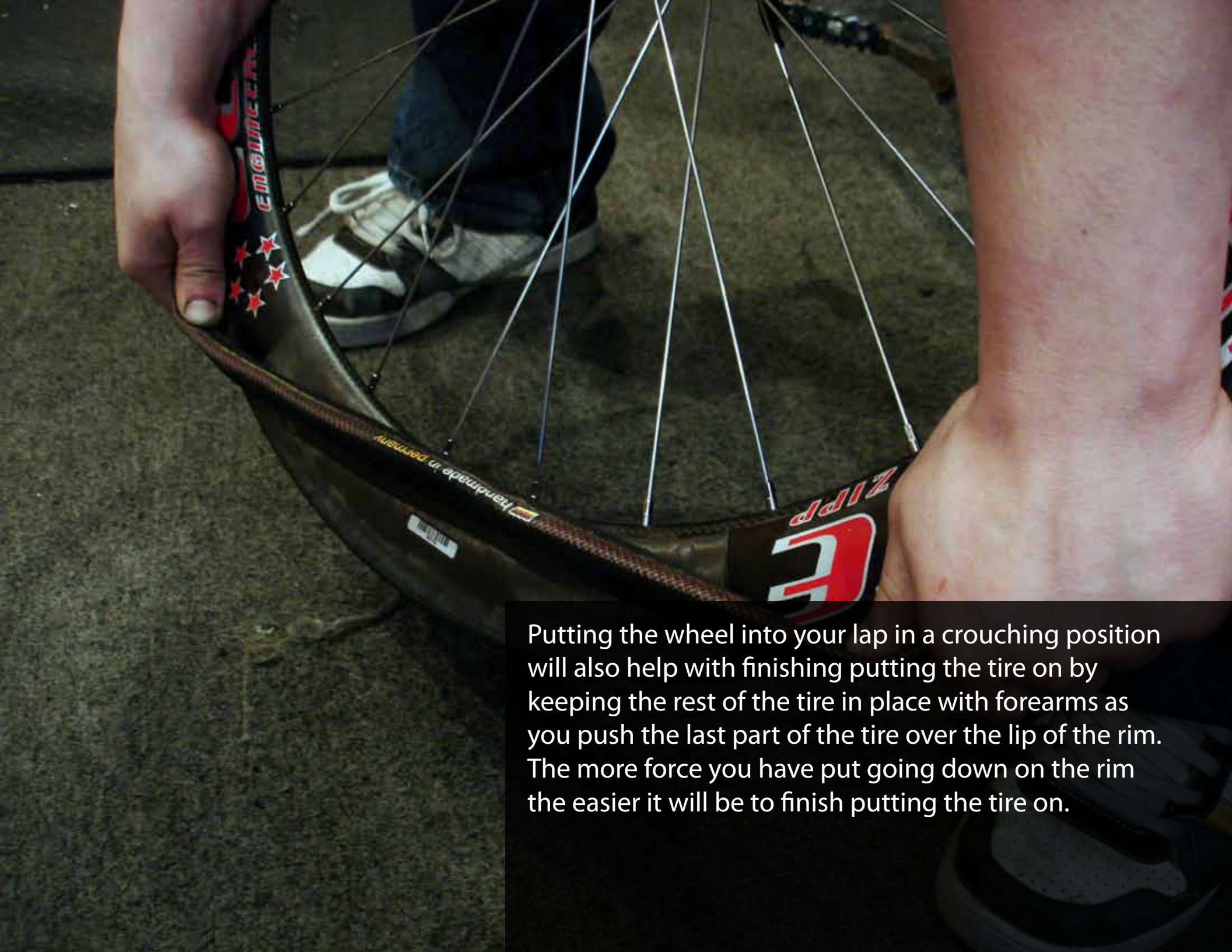
Hand screw on the extender to valve and use two pliers to finalize tightening without “trumpeting” extender over valve.

Once the valve is prepared, it is time to stretch the tire onto the rim. You want to stretch the tire on the rim for a few hours before gluing the tire to the rim, along with the same as preparing a spare. Start at putting the valve through the rim and begin stretching down the wheel.

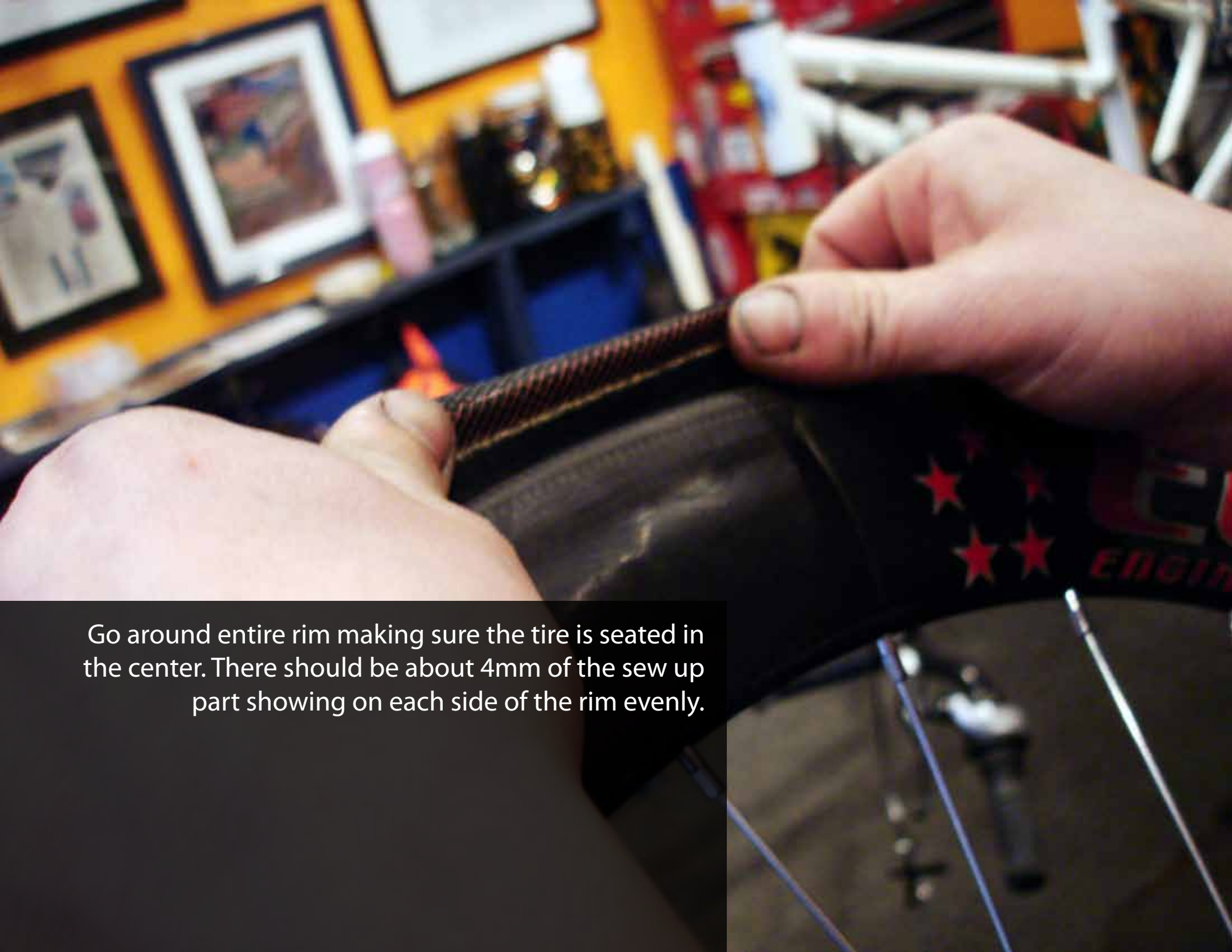


Run your hands down the tire stiffly stretching as you go.

Continue with pushing tire tightly down rim . It helps to use your weight and in a crouching position in order to put proper pressure down.



Putting the wheel into your lap in a crouching position will also help with finishing putting the tire on by keeping the rest of the tire in place with forearms as you push the last part of the tire over the lip of the rim. The more force you have put going down on the rim the easier it will be to finish putting the tire on.



Go around entire rim making sure the tire is seated in the center. There should be about 4mm of the sew up part showing on each side of the rim evenly.

To take the tire off of the rim from stretching after a few hours you can use something skinny such as a spoke or an allen key that is a 2.5mm. Then you should be able to simply rip the tire off the rim.

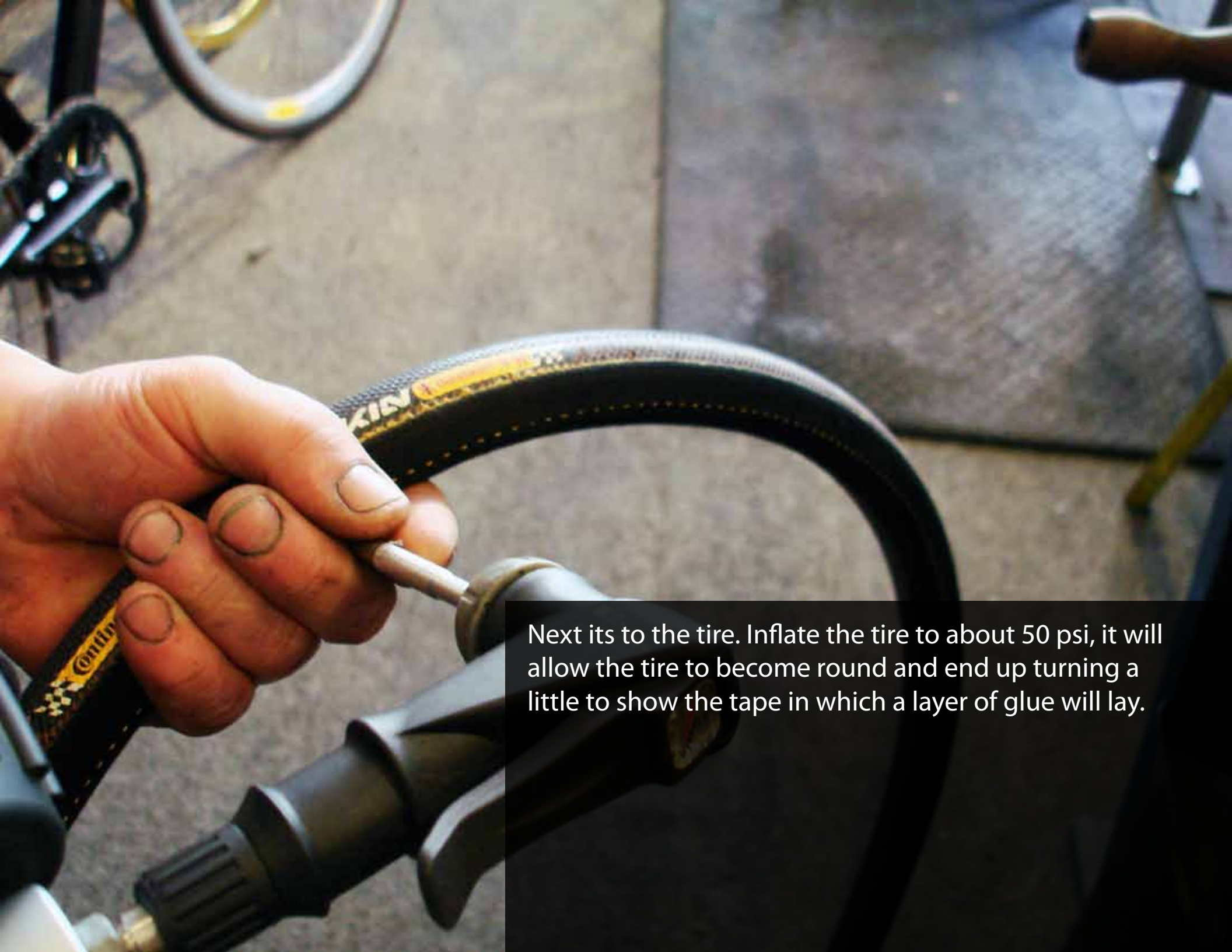
Next in this scenario we will be using a truing stand for the wheel and reinflating the tire to glue them accordingly.

Once the wheel is in the stand we clean the rim to get rid of any dirt or grime that may be on the rim to get in the way of creating a proper seal between the rim and tire.

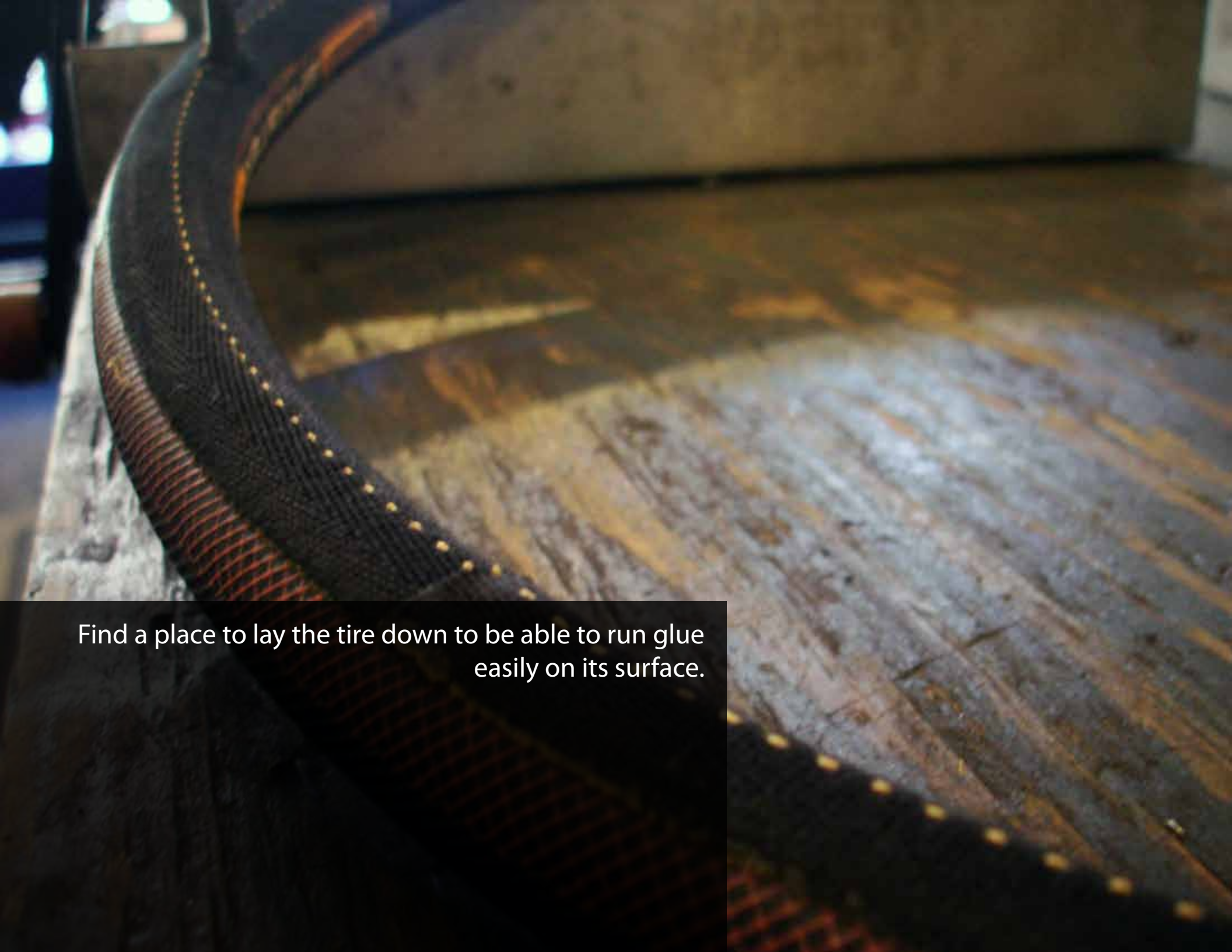
There are many types of glues used in putting tubulars together. In our situation we use Panaracer Pana Cement. We do not recommend using tape on wheels to start off. For spares it can be used but also, not recommended by us, we believe in properly preparing a spare tire the same way we prepare the tire here.

After the rim is cleaned, we move on to put our first layer of glue onto the rim. This comes down to feeling. Squeeze a substantial amount out of the tube but not to overload the wheel. The aim is to create thin yet entire covering layers. The Bead should be about 3 or 4 mm in width. Be sure to skip the holes on the rim as to not have glue fall into the rim, you only want glue on the rim itself in order to grab the tire properly.

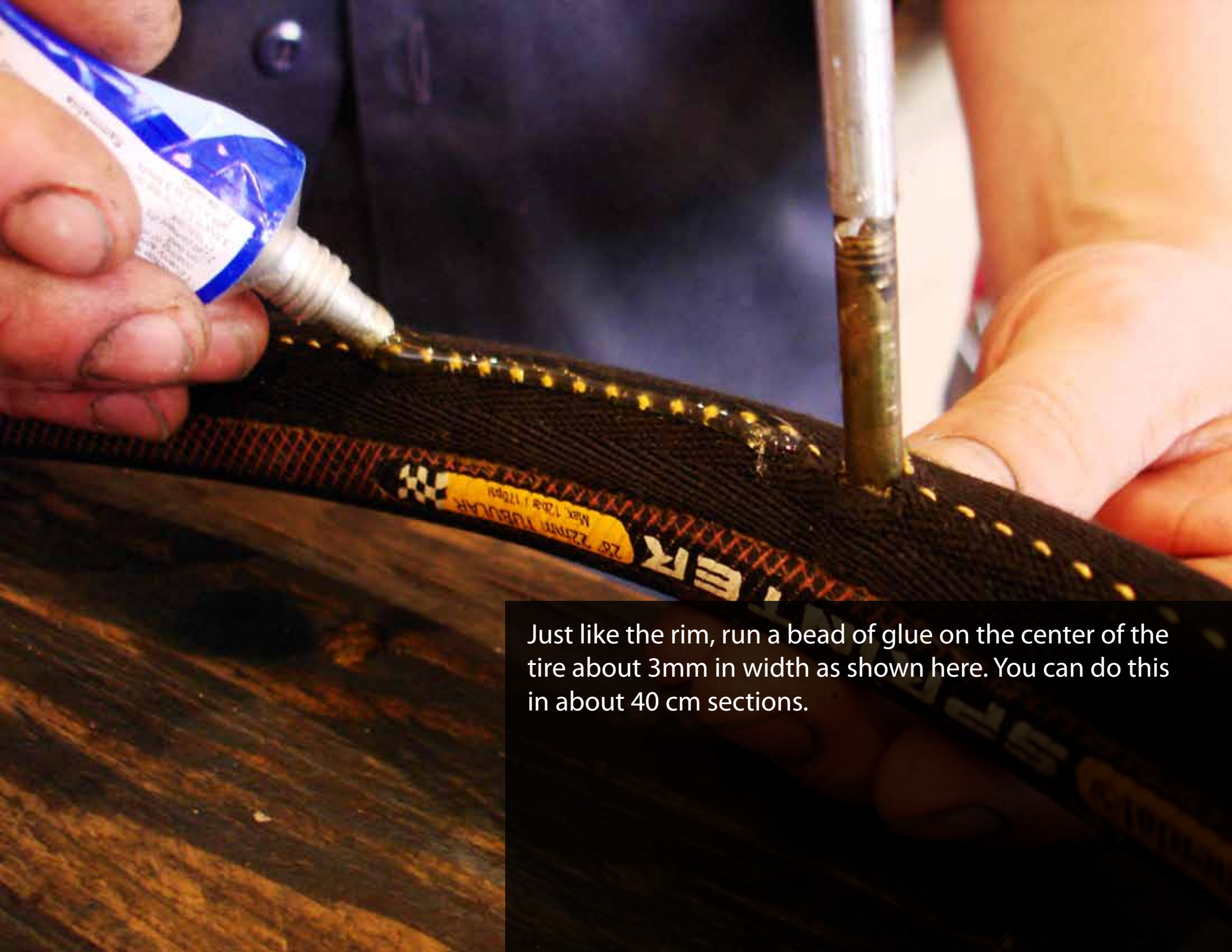
After there are runs of glue applied between all the holes in the rim, take a piece of plastic bag of some sort that will be thrown out after this process. Wrap it around your finger as to not get glue on your finger. Then, take your finger and run it in between the holes on the rim to spread the glue evenly to create a thin layer. Repeat this process 2 to 3 times depending on what kind of rider it is for, bigger the rider, the 3rd layer will help more. In order to check if glue is ready for a new layer you can lightly touch surface and if your fingerprint is left with no strings coming off on your finger.



Next its to the tire. Inflate the tire to about 50 psi, it will allow the tire to become round and end up turning a little to show the tape in which a layer of glue will lay.



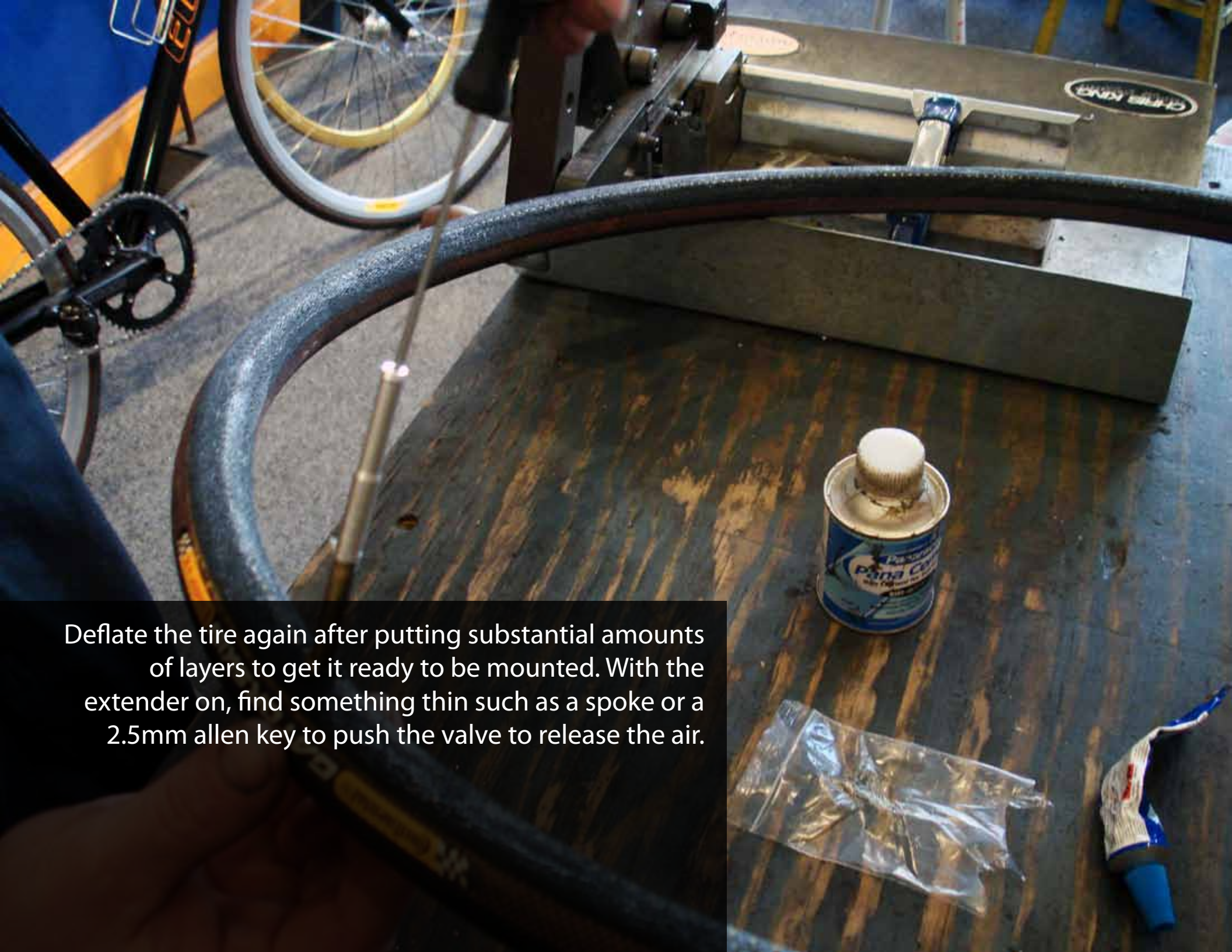
Find a place to lay the tire down to be able to run glue easily on its surface.



Just like the rim, run a bead of glue on the center of the tire about 3mm in width as shown here. You can do this in about 40 cm sections.

After you apply a bead of glue its easiest to use a brush to spread the glue evenly to create a thin layer over the section of tire done at a time.

A thin layer should make the tape look as though it is moist but not globby. Repeat this process 1 to 2 times every 15 minutes letting the glue dry before adding a new layer. In order to check if glue is ready for a new layer you can lightly touch surface and if your fingerprint is left with no strings coming off on your finger.



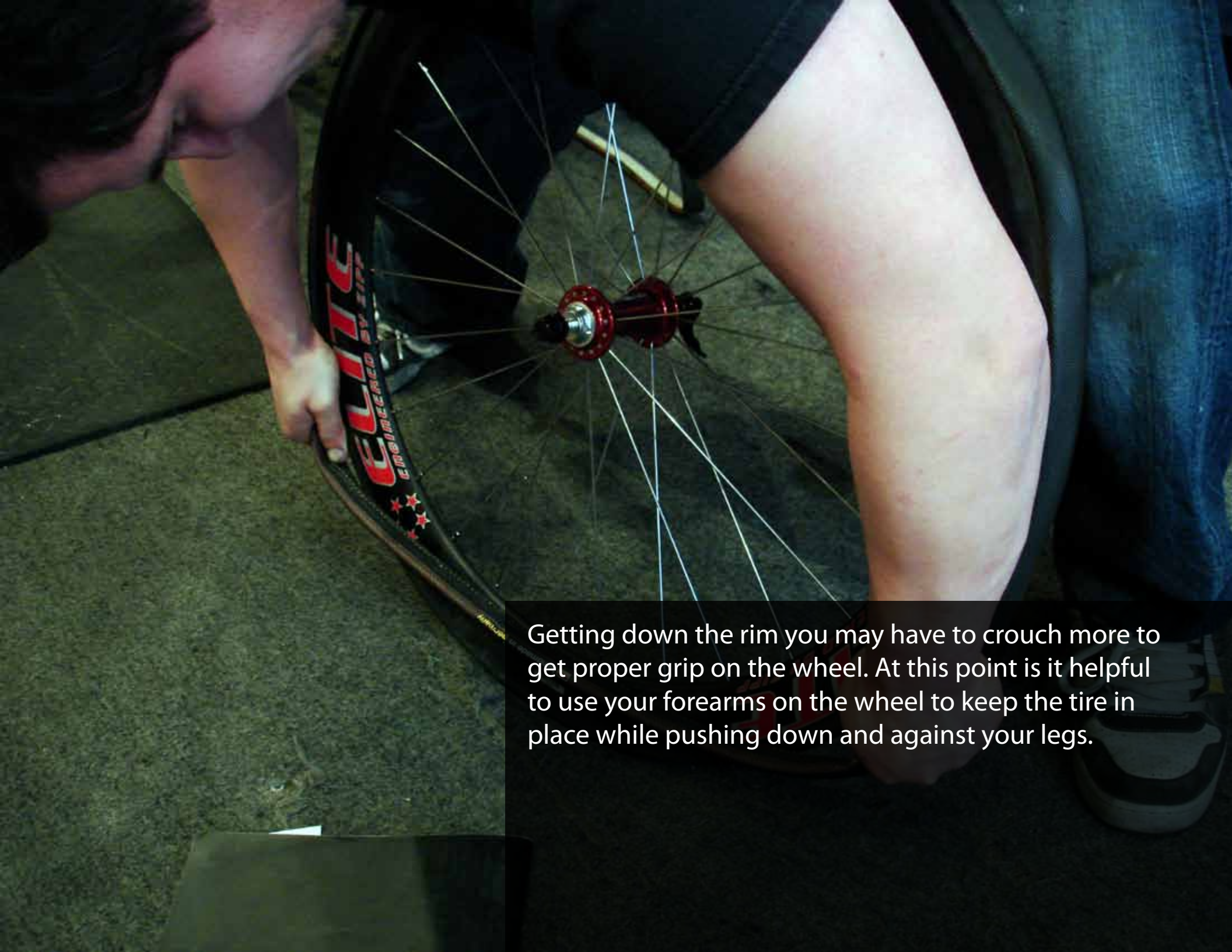
Deflate the tire again after putting substantial amounts of layers to get it ready to be mounted. With the extender on, find something thin such as a spoke or a 2.5mm allen key to push the valve to release the air.

After checking both the tire and rim that the glue is dried properly to both sides you can begin by starting at the valve through the rim.

Once the valve is visible and the tire is on the rim in that area, start pushing intensely downwards to stretch the tire down the rim as much as you can. The more you stretch the beginning, the less you have to at the end.

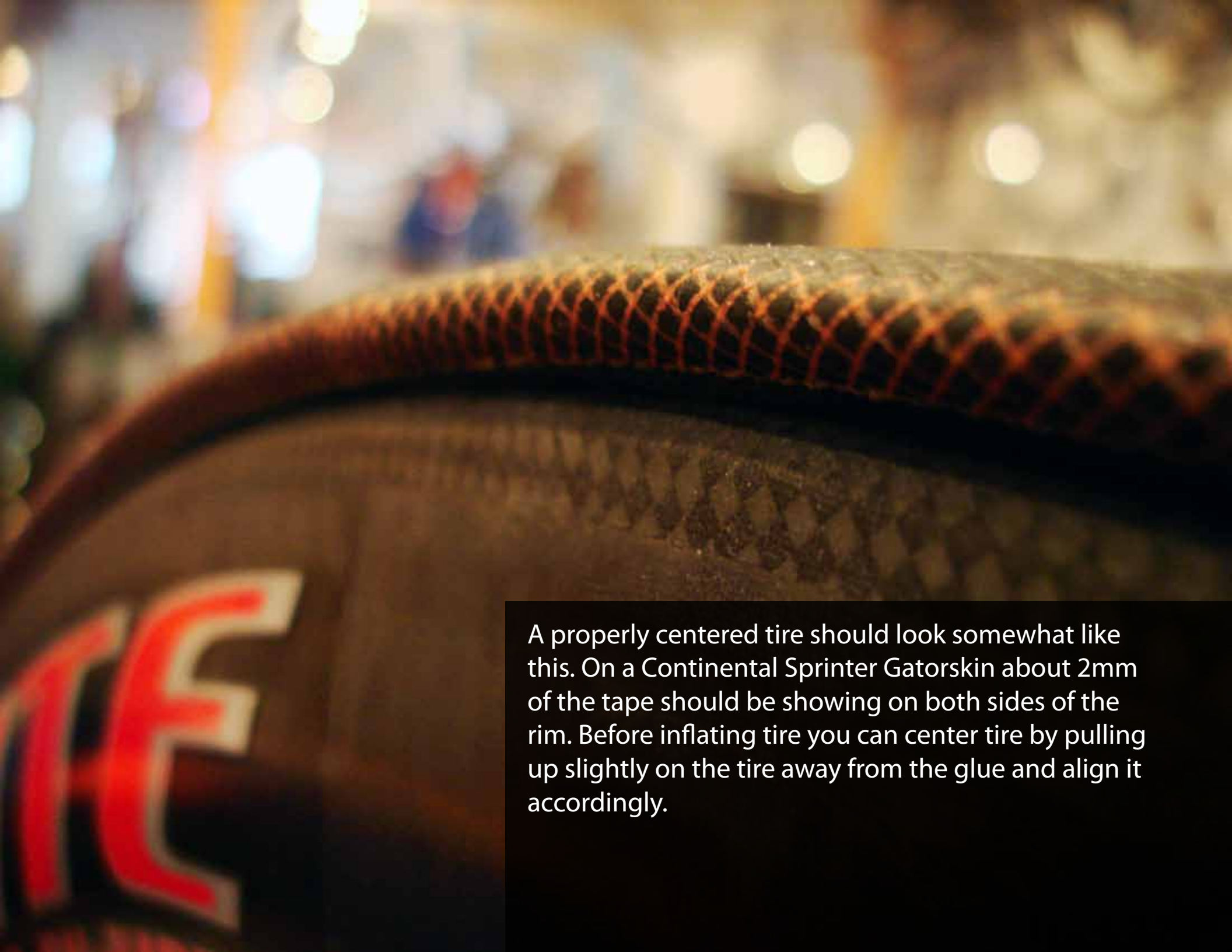
Continue pushing down the rim equally on both sides. It can help to have the wheel leaned against your knees as you crouch slightly to have a better stronger grip on the tire.

As you push down the rim be sure to try to align the tire on the rim as best you can so you have less work to do once the tire is around the rim.

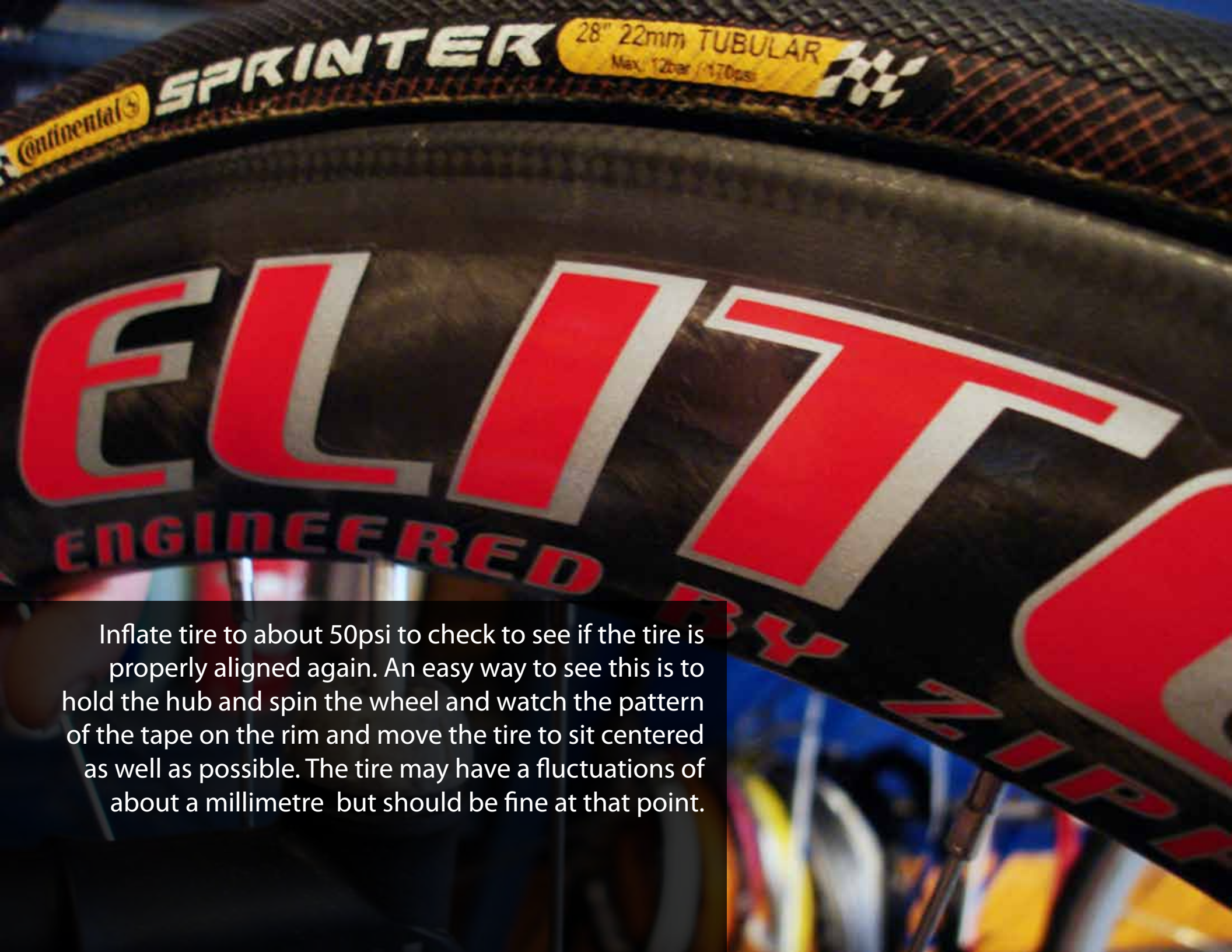


Getting down the rim you may have to crouch more to get proper grip on the wheel. At this point is it helpful to use your forearms on the wheel to keep the tire in place while pushing down and against your legs.

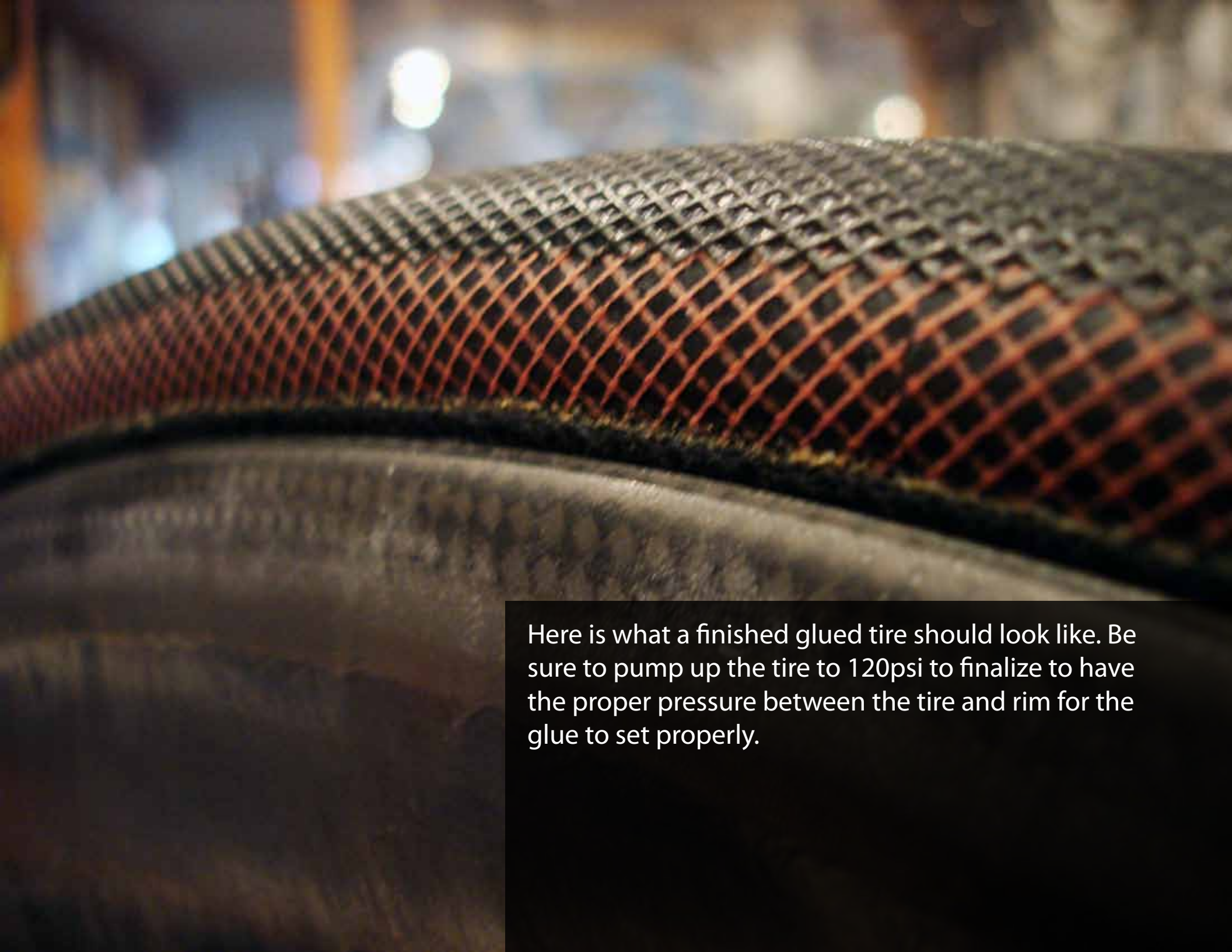
For the last part of getting the tire on the wheel, lift the wheel and hold on your legs and pop the tire over the rim and center is accordingly. There should be a center line bead to be able to follow that will fit into the rim properly.



A properly centered tire should look somewhat like this. On a Continental Sprinter Gatorskin about 2mm of the tape should be showing on both sides of the rim. Before inflating tire you can center tire by pulling up slightly on the tire away from the glue and align it accordingly.



Inflate tire to about 50psi to check to see if the tire is properly aligned again. An easy way to see this is to hold the hub and spin the wheel and watch the pattern of the tape on the rim and move the tire to sit centered as well as possible. The tire may have a fluctuations of about a millimetre but should be fine at that point.



Here is what a finished glued tire should look like. Be sure to pump up the tire to 120psi to finalize to have the proper pressure between the tire and rim for the glue to set properly.