

# How to De-restrict Your Baotian BT50-QT9

Firstly I must remind you that while it's not illegal to de-restrict a scooter/moped, it is illegal to ride one without the correct licence and insurance. Also this information is intended as a guide only, I am not responsible for any damage caused to your bike while using this guide. The responsibility for this lies with you!

Now on with the good bit!!

First you need to make sure you have the right tools, a medium size Philips (Cross head) screwdriver, a pair of pliers, and some electrical tape. You may need an impact wrench.

There are two parts to this de-restriction. First the CDI unit electronically restricts the engine. This restriction is easy to overcome. You need to disconnect the **thin PINK** wire under the body panel on the right side of the scooter (Left Photo). It may be easier to disconnect the **PINK** wire at the Cdi plug in the battery compartment. (Right Photo)



When you have disconnected this wire you will need to cover the ends with the electrical tape. **DO NOT DISCONNECT ANY OTHER WIRE.** The pink wire sends information about the speed of the back wheel to the CDI unit. If the CDI unit doesn't receive this info (because we disconnected it!) it thinks you are not moving and will allow the engine to go to full throttle.

The second thing we need to do is a little more complicated, but still quite easy. We need to allow more petrol and air into the engine. Firstly petrol. Open the seat and you should see a cover in the bottom of the storage compartment.



Opening this cover by removing the silver screw will give you access to the Carburettor.

Remove the black circular cover (2 screws) VERY CAREFULLY. There is a spring under this cap and it will pop out if you are not careful. When you have removed the cover you should see this..



Now Carefully remove the rubber seal and the yellow disc will come with it. Inside this part there is a white plastic 'Plug' and a metal needle two small washers on it. One is loose and will fall off never to be seen again, if your not careful, and the other is fixed to the pin in a groove at the top. There should also be a small rubber washer, but this may still be in the bottom of the plastic tube.

**DON'T LOOSE THIS RUBBER WASHER.**



Now you need to remove the fixed washer. You can do this by using the pliers to pop the washer off. Be sure not to bend the needle, it is easy done and would make it unusable! The washer now needs replacing onto the needle, but now, place it onto the middle groove. See photo



Now you need to put everything back together. Replace the black rubber seal and tube into the carb first. When you do you will need to ensure that the small lug is lined up with the recess in the carb top, and that the seal is seated correctly. (See Photo Below)

Make sure the rubber washer is in the bottom! Now place the loose washer onto the needle under the fixed washer and place the needle into the hole at the bottom of the tube. Now place the white plastic plug into the tube, with the hole down.



On the under side of the black cap there may be a brass screw in the centre, if there is remove it. Now place the big spring in and replace the cap.

That's the fuel side of thing sorted. What you have done is to raise the needle a little, this allows more fuel into the carb.

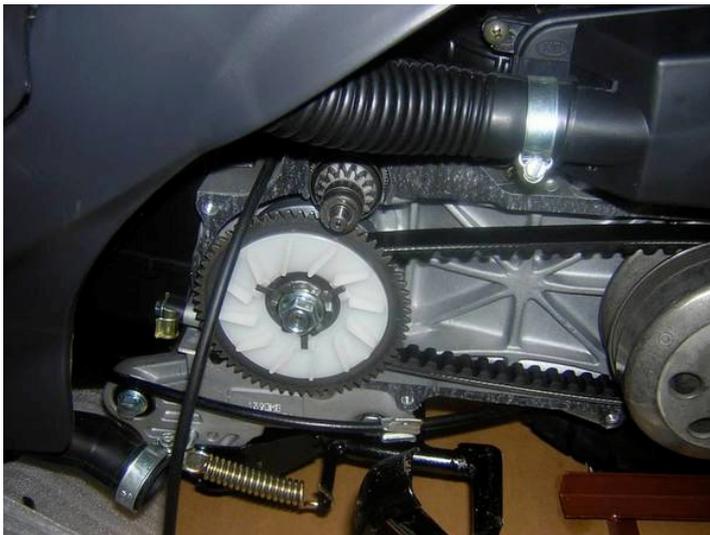
Now we need to sort the air intake out. This is very easy, all you have to do is ensure that the intake hose is not kinked. This is a very common problem.



You can do this a couple of ways. You could place a plastic tube inside the hose to stop it collapsing or you could 'zip tie' the smaller tube to the frame, again stopping it from collapsing. I tied the small tube to the frame, see photo.

There may be a third step depending on the importer of your scooter. If you find that you are still not getting more than 35 mph then this may be you problem.

Importers have implemented this restriction in various ways. Currently and applicable to 50QT-7 scooters (and others) the restriction is implemented by the addition of a speed restriction ring in the drive pulley. This stops the 2 halves coming close together and increasing the final drive. Removal of this ring is quick and easy and will increase the top speed to around 45 to 50 MPH.



First you need to remove the drive belt cover. Once done you will see this

You now need to remove the 17mm nut in the centre of the left hand (white) pulley. It is quite hard to remove, I recommend using an impact wrench. Then remove the front half of the pulley.



You will then be left with this...

Next just remove the slip ring from the drive shaft.

They look like this,(there will be only one)





Once removed you should be left with the front drive pulley looking like this...

Put everything back together in the reverse order. Tighten the 17mm centre nut using the impact wrench set to 28 ft lbs torque.

### **You have now de-restricted your Baotian!**

A couple of things that would make the bike faster are

Changing the roller weights for lighter ones will increase the acceleration of the scooter. The roller weights that come with the scooter are 16 x 13mm 6.5 grams, I recommend using 4 gram rollers

And changing the engine and gear oil for a good quality synthetic oil will make things run faster. Changing the oil should be done after the first 300 Km and then again after a further 300 Km. Doing these oil changes are cheap, but VERY essential.

If you need to, you can re-restrict the bike by putting everything back to how it was! However I would leave the air intake tube as it is.

Many thanks and Happy Scootering!!