



## INSTRUCTIONS 4 FITTING SPRING SPACERS

The following pictures and instructions show how to fit a set of Bits4Vits Spring Spacers to a Vitara (Sidekick / Tracker / Escudo in other parts of the world) or a Grand Vitara – the pictures actually show a Grand Vitara, but the vehicles are very similar under the skin...

Please read through the instructions in full before starting so you get an idea of the process involved – rather than following each step. If you have any doubts of your skills, tools or competency to perform these steps please seek the assistance of a qualified friend or garage...

You will need the following tools to perform this lift –

- **A pair of Axle Stands**
- **A Trolley Jack**
- **An assortment of sockets and spanners –**
  - 10mm,12mm,14mm,17mm & 19mm
- **A pair of mole grip pliers (or similar)**
- **A pair of circlip pliers** (to take the offside front driveshaft retaining circlip off - if doing a 3" lift)
- **A friend to help makes it much easier! ;)**

Right, so we start with a set of 1.25" Spring Spacers –



These will actually give your vehicle more like 1.5" of lift due to the geometry of the suspension.

So, to start, put the vehicle in four wheel drive and lock the front hubs if fitted, and chock the wheels if you are working on an un-level surface. Jack the chassis up and fit an axle stand either side of the chassis, and remove both the rear wheels and tyres. You need to remove both sides, as to fit the second spring and spacer back you'll need to jack up the opposite side of the axle to get the side you are working on to drop sufficiently to get them in.



To start put the trolley jack under the nearside (left when viewed from the back) shock absorber, and raise it enough to take the weight off it, so it just lifts up a little.



Then using “mole grip” or similar pliers, grasp the top body of the shock to stop it turning, and take the top nut off the shock with a suitably sized spanner. You'll see in the picture below that I use ratchet spanners that makes the job a lot easier.



With the top nut removed, slip the shaped washer and bush off as well, and keep somewhere safe.



Then **slowly** lower the trolley jack to allow the axle to fall (more than it did before as it doesn't have the shock absorber to limit its movement now) and then you'll be able to remove the spring with just your hand. If it's still retained by the bumpstop get your assistant to carefully push down on the axle whilst you remove the spring.



Then with the spring removed, lever the black rubber spring seat out from the chassis ring where the top of the spring used to sit. Then pop the new spring spacer into the ring where the spring seat was. Then pop the spring back in! Easy, isn't it? LOL, that's why we always do the back first, to build your confidence up for the front! ;)

Now jack the axle back up a bit, under the bottom of the shock, enough to get the shock mounting pin back through the chassis hole, then replace the bush, then the shaped washer and then put the nut back on the top...



So there we have the spring and the spring spacer back in position. (Note on this installation that that is a new lift spring that has been used to give the full 3" of lift, hence also the fitment of a 2" shock extension on the rear shock. [Vitaras owners can get more lift using Grand Vitaras springs](#), as they give the Vitaras an additional 1.5" of lift, so you'd get the 3" lift using spring spacers and GV springs. The following picture illustrates this –



The springs in the middle are a set of GV springs with a Vitaras spring either side to illustrate the difference in height. They are a nice comfy ride and give great articulation too!

Anyway, back to the installation instructions –

With the spring spacer and spring re-installed on the near side (left side when viewed from the back) we then need to turn our attention to the other side... so repeat the instructions as above BUT when you lower the axle back down (with the trolley jack under the shock absorber's base), then take the trolley jack out and go back round to the nearside of the vehicle and put the trolley jack under the nearside shock absorber again and pump it up to the point where the spring compresses and the chassis does not lift off the axle stand, if it does lift off, just release the trolley jack back a bit... you want it just so that the spring (and spacer) gets compressed enough to let the other side drop enough for you to get the spring out of the other side... then go back to removing the spring, the spring seat, fit the spring spacer and the spring, and then lower the jack on the other side and bring it back round to the side you are working on, to lift the axle, under the shock again, so that the shock can be re-attached again.

Right, that's the back done, that wasn't too bad was it? Right, now for the front then, that's a bit more awkward ;)

Again, remember this is a Grand Vitara installation, but the Vitara is just the same...

The Vitara / Grand Vitara's suspension is IFS ("Independent Front Suspension" – i.e. wishbones with driveshafts in the middle) so we don't need to jack up both sides of the vehicle up on the front at the same time, so, jack one side up (again it's easier to work on the nearside first) and place an axle stand under the chassis, and remove the front wheel and tyre. Then place the trolley jack under the wishbone, just under the hub, you'll see a castellated nut, which sits nicely in the cup of the trolley jack. Lift the jack up just enough so that the weight gets taken off the spring, again, not enough so that the chassis lifts off the axle stand, but just enough to release the weight on the spring and front suspension strut.



Then, remove the anti-roll bar joint from the wishbone as in the picture below -



Now, there's some discussion about this, and depending on your local vehicle inspection procedures (for the UK MOT it's rarely noticed that it's missing, but I tend to keep mine safely in my garage just in case!) but I recommend removing the anti-rollbar completely whilst installing a suspension lift (*any lift, not just mine*) as all the anti-rollbar is, is a bar, **a solid bar**, who's whole purpose in life is to stop the car body rolling under cornering... ok, that's fine on the road, but off the road it limits the articulation of the front suspension, and that's what you want offroad! You need to make your own mind up though by researching your local vehicle inspection rules, and your insurance companies' opinion too\*

\*It's best to declare all your modifications to your insurance company, as in the event of a claim they need to know what's been done to your vehicle, and if they don't know everything they'll try and wheedle their way out of it, and your insurance may well be void as a result of it!

Then, remove the three bolts that hold the driveshaft to the front axle's half shaft -



Remove the two strut bolts -



Then lower the jack carefully to let the wishbone drop down -



Enough to get the spring out –

Note in the photo below a crowbar is being used to persuade the spring to pop out, this seems peculiar to just the Grand Vitara, the Vitara one's just pop out by hand.



Then, as per the back, remove the black rubber spring seat -



And replace with the spring spacer -



Then pop the spring back in –



Now, pump the jack back up again and replace the strut bolts –



And reattach the driveshaft to the halfshaft with the three nuts and bolts.



And there it is all done up again... note the way the spring perfectly sits in the coiled underside of the spacer.



In the picture below you can see that the hub now sits on a slight angle, this happens as the wishbone droops down with the spring spacers (and on this installation lift springs as well as the spring spacers) and especially with addition strut spacing... to the point that your front tyres may look like this \--o--/ this is easily rectified with camber bolts available in the Bits4Vits shop, but try driving it around first, as they will settle in slightly, and will droop with the addition of the added weight of a winch and associated bumper if fitted.



And so, onto the other side...

Start by jacking up the chassis again, inserting an axle stand, remove the wheel and tyre... temporarily, or permanently remove the anti roll bar –



Then remove the hub cap, or free wheel hub if fitted, and remove the circlip off the drive shaft with a pair of circlip pliers -



Then repeat the process the same as the other side, but note that it's a little more awkward with the driveshaft in the way (as it fits into the axle on the offside, rather than the three bolts you removed on the nearside). You should be able to get the wishbone to droop far enough to get the spring in and out though, maybe with the assistant's (if available!) foot pushing down on the wishbone whilst you remove the spring.



And that's it! Repeat the reassembly process on this side, remembering to put the circlip back on the end of the driveshaft... and then refit the wheel and tyre.

Remember to double check everything's nice and tight, and then check again after driving it around for a bit.

As mentioned above, you may need camber bolts to correct the angle of the front wheels, if it doesn't settle after the initial drive around.

You also need to consider, if you haven't done already, that you'll need some front strut spacers and longer rear shocks or shock spacers on the back too. These are needed as the struts and shocks are pulled out as the suspension lift is applied, i.e. your Vitara / Grand Vitara is now 1.5" higher, so your struts and shocks were pulled out / "pre-extended" by the same amount, 1.5", during the lifting process.

Any problems please email me – [dave@Bits4Vits.com](mailto:dave@Bits4Vits.com) or come and have a chat on the Support / Chat forum @ [www.Bits4Vits.co.uk/forum](http://www.Bits4Vits.co.uk/forum)

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