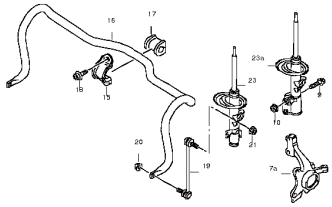
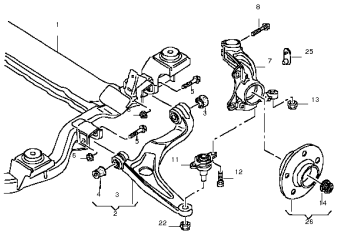
How I Fitted Lowering Springs to a T5 SWB 04 – T28 130.



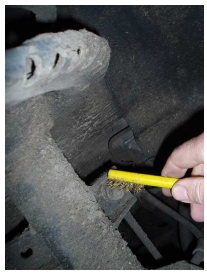


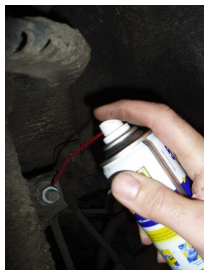
Tools needed
19 – 22 Sockets
18 - 22mm spanners (ring ones are best)
T30 (access hatch), T40 (suspension link) and T45 (shock top) torx
Axle stands
Two jacks, one trolley and the van one will do.
Home made jacking rig and some strong rope.
6lb lump hammer
Spring compressors in good condition
Disclaimer*. This is my own experience of changing the springs and not an official guide. I take no responsibility for any one trying to repeat these steps. Exploded views courtesy of vagcat.com*

Front shocks

Lift bonnet and pull back the top seal just below the wipers from each end as well as the foam stopper to reveal the two access hatches to the top of the strut. Remove the 4 no. T30 torx screws, three from inside the engine bay and on the passenger side, the inside screw is accessed from the top. I just wedged a block of wood between the steel bulkead and the plastic cover and I have allen key type torx to give tight access. Pull out the steel plates and inside you will see a rubber cup that covers the strut top mount nut which pops off.

Jack, remove wheel and drop in an axle stand onto the tubular sub frame where the welded stiffeners are, you'll see a good pic later.
In the pics you can see the top link to the anti roll bar. I used a copper wire brush to remove all the crud and gave a good dose of WD40. leave it to soak in.





Place a jack below the suspension arm and jack up about 3 inches. Then undo the top link bolt. The first one I did I didn't jack up the arm and the nut twists because the other side wasn't jacked up, so the anti roll bar was being lifted from the other side so jacking the arm levels things out. Inside the end of the bolt is the torx hole and hopefully if you've cleaned and lubed you won't need it. If you do, make sure you have a torx with a tight fit and do all the work with the spanner keeping the torx still and pressed firmly into place. Take your time, if the nut gets tight, just go back a few turns and do a bit more cleaning/lubing. These picks have 6 years and 60k of crud and they looked like new once I cleaned them before removing. Note the axle stand position.

Clean and lube the two bottom hub bolts that pinch the hub onto the bottom of the strut. Then remove.

Now for the scary part.

After one big bang I came up with this little device.>>>>

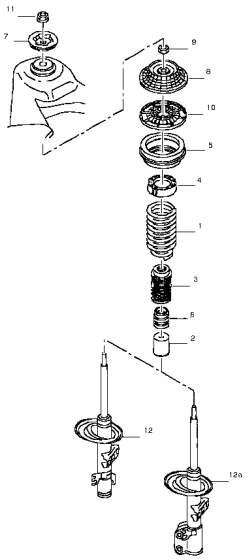
The steel tube will do the work and the timber is to lash the whole thing to the strut. So as you can see I strapped the whole lot together and the steel tube is rested directly under the welded top link bracket.

I was told that a lot of peeps use a bit of 3x2 timber here and run it up to the underside of the spring cup but I found that the cup is a bit angled and early attempts saw the timber sliding around the cup.

You may think that looks like string but it's 300lb breaking strain dynema. I'm a kite surfer and it's strong shit and doesn't stretch. I made sure it was wound tight, VERY TIGHT. Make sure this jacking strut is as long as you can get away with, the trolley jack gives plenty of clearance but as you need to jack up a good 5-6 inches you end up catching on track rod arms and other bits before you get high enough.

There's only one side of the hub that felt right for me, you have the linkage bracket and brake line/ABS brackets to contend with. This is the near side wheel. Without the strapping, the eccentric position of the jacking will have the strut twist to one side and go with a bang when it comes out of the hub and I was lucky on the first attempt not to brake anything or me. So jack up a few inches and then use a decent lump hammer on the top of the hub arm. Make sure you release the brake line and ABS lead from the welded bracket on the shock and keep them clear. Jack up a few inches and then hammer down. I preferred to go a few inches at a time rather than jacking way up and hammering away because I really didn't know how strong my lashing would be and had been spooked by the first attempt. It was when I put the strut back in I realised the effectiveness of the lashing, it just needs to

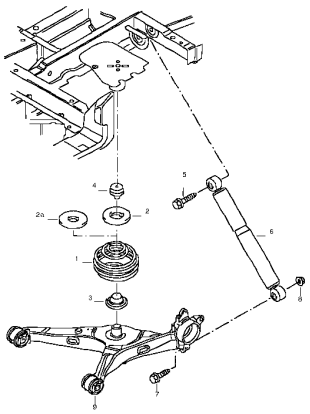
be very tight and then the strut is restrained right down to the jack. Eventually the strut will come clear and you can rotate the hub towards you as shown and lower the jack. Undo the top bolt before you release the jack and then the whole strut will come free.



Using two spring compressors you compress the spring about 2-3 inches and then using a torx and spanner loosen the second top nut and it should come free easily if it's stiff then there's still too much tension in the spring. Take off the bolt and note the order that the top bushes come off in. Remove spring and release compressors. Position the new spring making sure the end of the spring fits into the guides and stopper on the steel shoe. As it's much shorter the top bushes will go back on with no need for a compressor. Tighten the top nut (9) and make sure the gaitor (3) is locked back into the collar (4). I found it easier to release the bottom of the gator, push it up and rotate it into the slot, once it's home you can push the bottom back into position easier it's pretty stretched when off the van but will stay in position.

To re-fit I put the strut back into position and put the top mounting bolt and bushing back on finger tight. This held the shock for me while I put the home made jacking arm in place and lashed it. Make sure you have all the brake lines/ABS wires on the correct side before jacking and there's about a 5mm gap between the jacking rig and the bottom of the strut so the hub can fit back into place. Jack up the strut, rotate the hub back in place and slowly release the jack until it engages. Then release slowly and make sure at least an inch or so is set into the hub before removing the jack. Wet your finger and make a mark on the strut and you can then gauge how far it's going in at any time. Now remove the make shift jacking rig and make sure the strut is rotated bang in line. There's a metal plate welded to the back and it fit's in a slot where the bottom bolts go, line it up before the next bit. Jack up the bottom arm and give the hub some knocks with a hammer to encourage it to slide back in the hub. Eventually it will pop back with some jacking and hammering. Make sure it's all the way home as the plate I mentioned has a hole which won't let you put the higher of the two bottom bolts in unless you're all the way home. There will be a distinct line of dirt on the strut from where it was previously. Now tighten your top bolt in the engine bay, anti roll linkage and two bottom bolts. I copper grease all bolts when putting things back together. I'll admit that the forces involved in jacking up that strut are immense. Even though I've done it now, it still scares me a little, if I did it for a living I'd have a proper rig that clamped to the strut to keep everything solid. With something like that in place it is an easy job. Don't forget to put the access plates back in the engine bay and the seal back in place.

Rear springs.



Put my van in gear and chocked the front wheels. Jacked up the rear with the jack that came with the van. Wheel off and jack up the suspension arm with trolley to remove the bottom shock bolt. Let the arm down and then jack the other side until the rear wheel comes off the floor. Again the anti roll bar is trying to push the suspension arm up if you don't. I placed a bar inside the hub spindle and lent on it to push the arm down far enough to remove the old spring. Be careful the brake line is a steel line clipped to the arm and on the side the spring wants to come out on. It comes with a little persuasion, rotate it to almost screw it off. I also placed a trolley jack where the inside of the swing arm meets the sub frame with a block of wood on top of the axle stand so as to miss the anti roll bar. All for extra safety. Fit new springs with top and bottom bush off the old spring and then let down other side. Jack up arm and re fit the bottom shock bolt and you're done. You can put the wheel back on if you like.

The front springs had an obvious top and bottom, the rear ones were much tighter wound than the originals and one end had a slightly bigger inside diameter than the other, the larger diameter went at the top as it has to fit over a long lug and it just so happened that the printed information on the spring was the right way up. There's a groove cut in the trailing arm on the rear and I aligned the end of the spring with it. Pretty sure that's how it was meant to be.

I hope this helps people to understand the process. It's not the easiest thing I've ever done and the forces involved in any spring, let alone for a van, should not be taken lightly!