

Volkswagen Cabriolet DIY Guide

Replacing the Rear Shock Absorbers

This how-to was originally hosted at VWvortex.com's [ZeroForum](#) and was posted by "tolusina". The original link no longer exists, but is [cached](#); the new URL should be <http://forums.vwvortex.com/showthread.php?1769448> .

Starting with a **MAJOR SAFETY DISCLAIMER:**

The procedures following regarding spring removal are only KNOWN to work safely on VW A1 chassis REAR shocks/struts. They may work on other vehicles, do so at your own risk unless you know for certain they are safe.

These spring removal procedures ARE NOT SAFE FOR FRONT SPRING REMOVAL, severe personal/personnel injury and/or property damage including but not limited to DEATH or WORSE are possible using these techniques on other than REAR Shocks/Struts on VW A1 chassis!!!!!!!!!!

Having said all that, just making sure there is no misunderstanding; author has performed this procedure many times during his career as a professional VW tech and has never had a safety issue, not even a close call. Most recent personal application of this procedure was this past Wednesday, 05 January, 2005; again, no sweat at all.

This procedure also assumes factory stock springs, hardware and configuration. Boge shocks are exact fit, excepting the Allen wrench needed for the fronts; stock is 7mm, Boge is 6mm. KYB's are very close to factory configuration, or were when I last did them several years ago. IMO, KYB's are too stiff for street driven Cabbies; Boge Turbo Gas really are a GAS!

Tools needed:

- Jack and jack stands
- Chocks for front wheels
- Lug wrench
- Minimum wrenches would be a pair of 17mm open ends, combination wrenches preferred; 17mm deep well socket and driver is deluxe
- You may need a hammer and a long drift punch capable of driving a 10mm bolt through a bushing
- Gloves
- Safety glasses
- Best with a helper; no beer additives, please
- Notice no spring compressor is listed, A1 REARS ONLY!
- A creeper is nice
- Bentley Service Manual might help

Break loose the lugs in preparation for wheel removal.

Jack the rear of the car, set the jack stands under the main body pinch welds on the side of the car, wooden blocks are good, wood grain at 90 degrees to the pinch. If you put the slot of the stands under the vertical plate of the axle beam, the slots will prevent the axle from moving down when we need it to. Same for putting the stands anywhere under the axle beam, we will need the suspension hanging free. Give the car a GOOD SHAKE after it is on the stands, making certain it is stable and cannot fall on you as you work underneath.

To make sure we won't get stuck later on and have to put it all back together in frustration, we'll jump ahead a little in preparation for later. Get under the car with a pair of 17's, loosen the lower shock mounting nut, then make sure you can turn the bolt. This is the part that hung me up when I tried to change mine at home with hand tools, the bolt had rusted/frozen to the inside of the steel sleeve inside the rubber bushing. If the bolt won't turn, try gentle "persuasion" with a drift and hammer on the threaded end of the bolt, leave the nut in place while doing so. If you mushroom the

head of the bolt, you'll have big trouble getting the nut back on, also it may not pass through the steel sleeve. If you can't get the bolt to turn with gentle "persuasion", stop, button it up and take the car to a shop where they can loosen it with air tools, then come back and pick up from here.

If you really force turning these bolts and manage to break the sleeve loose from the rubber, the lower shock eye will have to be cut for removal and new bolts acquired, we hate when THAT happens. Hopefully your bolts have turned easily, let's continue, the rest is CAKE!!

Cabby top down, rear windows down, back seat forward; that was easy. On both sides, behind the rear seat, find the black artichoke (but smooth) shaped rubber cones and remove them. They have a groove inside the bottom that fits over a lip on the body. Bare or gloved hands, maybe a little screwdriver help, that was easy #2.

Under the artichokes you'll see the top of the shock shafts. Any rust, clean it now, a little WD40 love would be good. Loosen the nuts you see on the top of the shafts and unscrew them to the top of the shaft leaving the full thickness of the nut still engaged, no worries, we are nowhere near releasing spring pressure yet. If the nuts don't turn freely on the threaded shafts, there are flats on the top of the shaft for holding with an open end. Easy #3.

Rear wheels off by now, ONE SHOCK AT A TIME, off and back on before you proceed to the other side, okay? Time to take out the bottom bolt we loosened above. Shove the axle down to free the bottom of the shock, wrestle the bottom end clear of it's lower mount, might be helper time. Easy #4.

Stand up, reach in the wheel well, grab the strut by the spring with one hand, reach over the rear window with the other hand and take the top nut all the way off, the whole strut is now is your hand, big grin time, say "Easy #5".

Here is the A1 rear shock specific part and explanation. With stock springs (aftermarket springs maybe), the front's have so much energy stored under compression they cannot be compressed and/or controlled by hand, you can literally die trying. Our rear shocks are very easily controlled by hand and you should be convinced by the time it matters. THIS IS THE TIME FOR A HELPER if you have never done this before; three hands are good, four may be needed.

Time to loosen the top nut that holds the top spring seat, I SAID LOOSEN!! One of the two of you holds down the top spring seat, compressing the spring and releasing tension from the nut, you may need a fourth hand and wrench to keep the shaft from turning. Get the nut to the top but not off and both of you relax a minute and look at what is happening, it really is safe. If it was dangerous, removal of this last nut would be the moment of hazard. Recognize that one person can easily compress and control the spring; it goes back together just as safely and easily. Once YOU BOTH ARE CONVINCED it is safe to proceed, one pushes down on the top spring seat compressing the spring, the other takes the nut OFF, the spring holder now relaxes slowly and lifts the spring and seat off of the strut housing, noting or marking which way is up before setting it down. Note the arrangement of spacers and washers; Bentley has a good blow up diagram. Big Grins #2, High Fives, Easy #6.

Also make note of how the ends of the spring spiral nest into the spring seats so you can put it all back the same way.

Assuming a stock hardware configuration as my Boge Turbo Gas shocks are (EXACT FIT!!), there is a washer with a groove, the groove sits on a snap ring on the shaft, the dust sleeve/snubber is below that. Switch this stuff over to the new shock, set the spring in place, compress the spring with seat, put the top nut on and put it all together. Easy #7.

Repeat on the other side, drive. Easy #8.

It took longer to write this up than it takes to do the job.

*** * Remember, **you** are responsible for working on **your** car; Cabby-Info.com, "tolusina", VAG, VWoA, or anyone else are not responsible if **anything** goes wrong while **you** are working on, in and under **your** car!
Use this information at your own risk!* ***