

HOW TO FIT SHOCKS (AUSSIE VERSION)

Alrighty, here's a guide on replacing shocks and springs - this guide can also be used if you are fitting lowered springs.

Special tools required: A pair of spring compressors (for suspension springs not valve spring compressors.)

I will use 1 front and 1 rear as examples as obviously both fronts and rears are the same.

Note: This job is MUCH more easily done on a hoist, but seing as I have no such luxury, this is aimed at the backyard hack who has a jack!

When replacing shocks - this is what you get. Not just inserts but complete struts:



Front:

First up, jack the car up & remove the wheel, you will be presented with this:

HOW TO FIT SHOCKS (AUSSIE VERSION)



There are 2 x 17mm bolts that join the strut to the wheel hub assembly remove them.

Also remove the clip that holds the brake line into the small bracket on the side of the strut.

Now remove the 17mm nut holding the droplink to the strut side. If you find the entire ball joint of the droplink moving, then use a 17mm ring spanner to grip the flat section on the back of the ball joint - see pic:

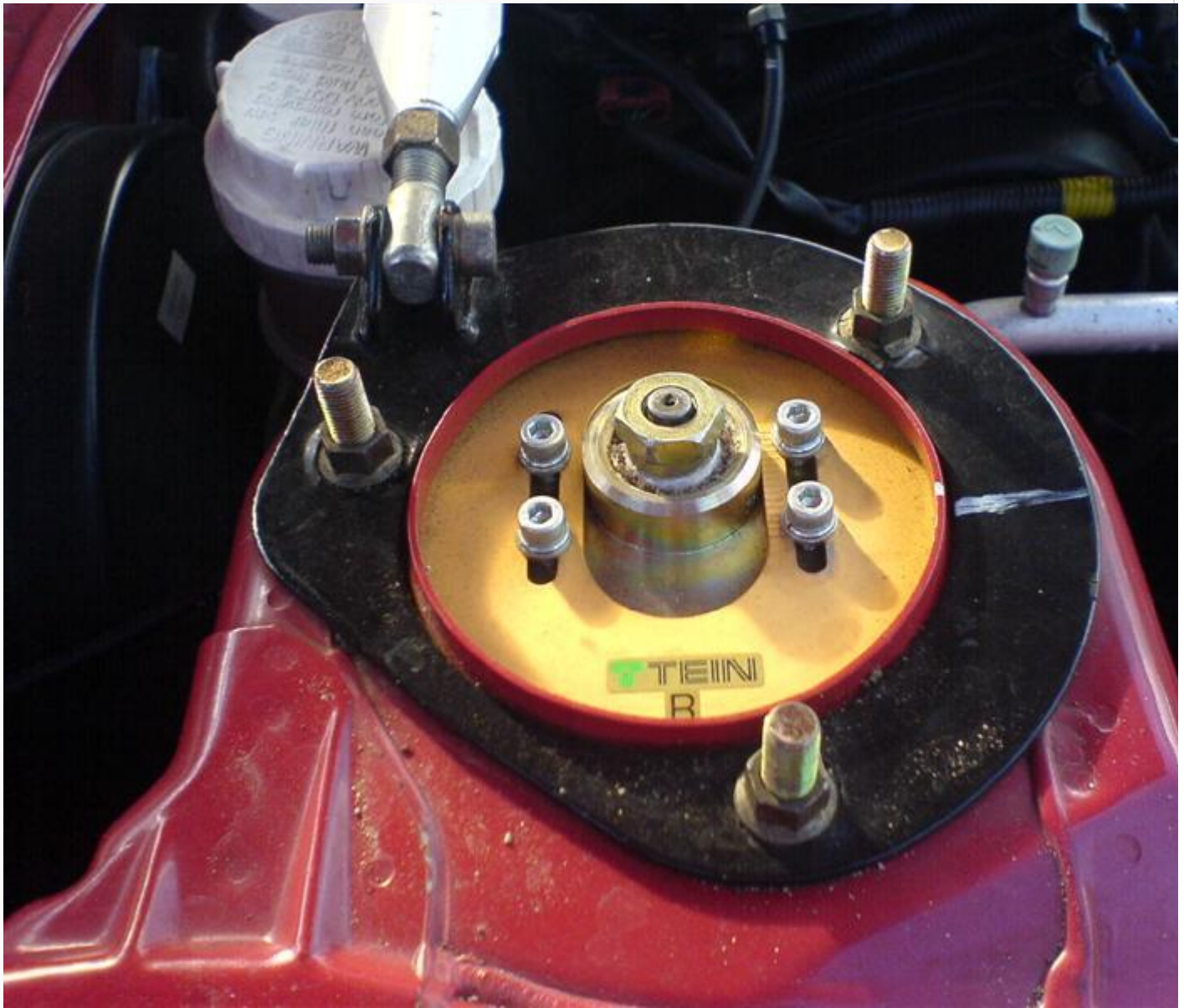
HOW TO FIT SHOCKS (AUSSIE VERSION)



Then remove the 3 x 14mm nuts that hold the strut into the engine bay (see pic) - note: your strut tops may look a little different to mine. Standard ones are black circular rubber units rather than the adjustable ones pictured. On standard strut tops there will be a black plastic caps that hides the central nut - now is a good time to loosen that nut - BUT DO NOT REMOVE IT COMPLETELY. It will unspring the whole assembly.

Take care undoing the last 14mm nut - the strut will want to fall out. Hold it with one arm as you undo the last nut:

HOW TO FIT SHOCKS (AUSSIE VERSION)



Now the strut should come out (with some manouvering) and you should attach your spring compressors & begin compressing the spring:

HOW TO FIT SHOCKS (AUSSIE VERSION)



HOW TO FIT SHOCKS (AUSSIE VERSION)



Once the spring is compressed (ie no longer pushing hard up against either end of the spring seat) you can now undo the central nut you loosened earlier:

HOW TO FIT SHOCKS (AUSSIE VERSION)



Once that nut is removed, the whole strut assembly can be pulled apart. The strut top will come off first, then remove the spring (with spring compressors attached) then the bump stop and plastic casing will slide off the old shock:

HOW TO FIT SHOCKS (AUSSIE VERSION)



HOW TO FIT SHOCKS (AUSSIE VERSION)



HOW TO FIT SHOCKS (AUSSIE VERSION)



HOW TO FIT SHOCKS (AUSSIE VERSION)



And you'll be left with the above ^

Reassembly is the exact opposite to disassembly. Put the bump stop and case onto the new shock, then the spring (with spring compressors still attached), then the top cap, then the strut top. At this time you may wish to clean the joint between the top cap & the strut top & regrease - as it is the joint that swivels when you turn the steering wheel.

Also note: If you are fitting lowered springs, now is the time to change them. Remove the spring compressors from the old springs (whilst they are off the assembly) and attach the compressors to your new springs - put them on the assembly with the compressors attached. Then refit all the other parts in the same order you removed them.

Replace the central nut and tighten as much as you can by hand to complete the new assembly and remove the compressors:

HOW TO FIT SHOCKS (AUSSIE VERSION)



HOW TO FIT SHOCKS (AUSSIE VERSION)



Insert the assembly back into the car. First up hold it in & put on the 3 top nuts, then you can put in the 2 x 17mm bolts that hold the strut to the hub, then re-attach the droplink & the brake line. Once its all bolted back on solid, tighten up the top central nut & replace the centre cap (if you have standard strut tops.)

HOW TO FIT SHOCKS (AUSSIE VERSION)



Oh, and I touched up my caliper paint whilst I was in there..... 😊

Okay - now for the rears! Please excuse the photo quality, it was getting quite dark at this point in time.

First up, open the boot & move the padding on the rear arches. Underneath you will find this:

HOW TO FIT SHOCKS (AUSSIE VERSION)



Again - loosen up the centre nut. You'll find that the whole shock wants to rotate, so use a shifter to grab the small flat section on the very top of the shock & hold it whilst you loosen the centre nut. Once loose, undo the 2 x 14mm nuts that hold the shock to the car. Again DO NOT remove the nut altogether, that would release the whole assembly.... *Boing!*

Now remove the 17mm bolt that holds the assembly to the lower control arm:

HOW TO FIT SHOCKS (AUSSIE VERSION)



The whole strut assembly will now drop down as far as it can go to the lower control arm. If you had a hoist - at this time you could pry the lower control arm down far enough to remove the strut, but I had a jack & that was not possible. I had to disassemble the strut in-car & reassemble in-car.....

Compress the spring using your spring compressors with the strut loose (but still in the car) like so:

Once you have compressed the spring, you can now remove the already loosened centre nut. You can then remove the top mount, the top spring cup, and eventually remove the spring & bump stop. This is a bit of a juggle in car as you can see by the pics. You can see the lower part of the shock hanging down through the control arm. Its the only way you can get enough clearance to remove the spring & other bits from it:

HOW TO FIT SHOCKS (AUSSIE VERSION)



You can see here all the parts from the strut removed in order from left to right. Once the shock is on its own resting on the lower control arm in-car, you can then compress it by hand enough to remove it.

HOW TO FIT SHOCKS (AUSSIE VERSION)



You then need to do the same to the new shock to put it in. It needs to be placed through the rear arm to be resting as per the above pic as well.

Re-assembly is done in the reverse order as above. If changing springs, now is the time to remove the compressors from your old spring, apply them to the new spring and place it back on the new shock (in-car) and continue to re-assemble the strut as per the reverse of dis-assembly.

Pic of reassembled strut bolted back in:

HOW TO FIT SHOCKS (AUSSIE VERSION)



The best way to raise the shock back into its original position is to use a hydraulic trolley jack. This also makes it possible to line up the lower mount of the shock to the lower control arm well enough to feed the 17mm bolt back thru!

Now - before you get all excited and go for a test floggin' around the block, the first drive you should take it on is to the nearest place that can wheel align the car properly!!!

In a majority of cases your wheel alignment will be out to the sh*t house... even to a dangerous point. First thing you should do is get that sorted.

Bennoz ratings:

Time: 6 hours approx (hoist use would halve that)

Barked knuckles: 5 (not good)

Profanities used: 3 (rather loud ones)

Beer drunk: 14 (was a long day....)

Ciggies smoked 16 (see above)

bigpitty1 wrote:

Great DIY.

HOW TO FIT SHOCKS (AUSSIE VERSION)

I just want to add something, I done mine yeserday and when I got it all back together I got some rubbing noise on the drivers side when I did sharp right hand turns.

You got to make sure that the top spring saddle is aligned with the bottom one as the strut is off centre, you will see there is a little hole on the top and bottom saddle, just align those together.

