



Audi B8 Adjustable Coilover Kit
Installation Instructions - [Click HERE to Shop](#)



Skill Level
2 - Moderate
Some Experience
Recommended



Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

- **Protecta-Sockets (for lug nuts)** [ES#2221243](#)
- **3/8" Drive Ratchet** [ES#2765902](#)
- **3/8" Drive Torque Wrench** [ES#2221245](#)
- **3/8" Drive Deep and Shallow Sockets** [ES#2763772](#)
- **3/8" Drive Extensions** [ES#2804822](#)
- **Hydraulic Floor Jack** [ES#2834951](#)
- **Torx Drivers and Sockets** [ES#11417/8](#)
- **1/2" Drive Deep and Shallow Sockets** [ES#2839106](#)
- **1/2" Drive Ratchet**
- **1/2" Drive Extensions**
- **1/2" Drive Torque Wrench** [ES#2221244](#)
- **1/2" Drive Breaker Bar** [ES#2776653](#)
- **Bench Mounted Vice**
- Crows Foot Wrenches
- Hook and Pick Tool Set [ES#2778980](#)

Required For This Install

- **1/4" Drive Ratchet** [ES#2823235](#)
- **1/4" Drive Deep and Shallow Sockets** [ES#2823235](#)
- **1/4" Drive Extensions** [ES#2823235](#)
- **Plier and Cutter Set** [ES#2804496](#)
- **Flat and Phillips Screwdrivers** [ES#2225921](#)
- **Jack Stands** [ES#2763355](#)
- **Ball Pein Hammers**
- **Pry Bar Set** [ES#1899378](#)
- Electric/Cordless Drill
- Wire Strippers/Crimpers
- Drill Bits
- **Punch and Chisel Set**
- **Hex Bit (Allen) Wrenches and Sockets** [ES#11420](#)
- **Thread Repair Tools** [ES#1306824](#)
- **Open/Boxed End Wrench Set** [ES#2765907](#)

Available On Our Website

INSTALLATION NOTES

- **RH** refers to the *passenger side* of the vehicle.
- **LH** refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

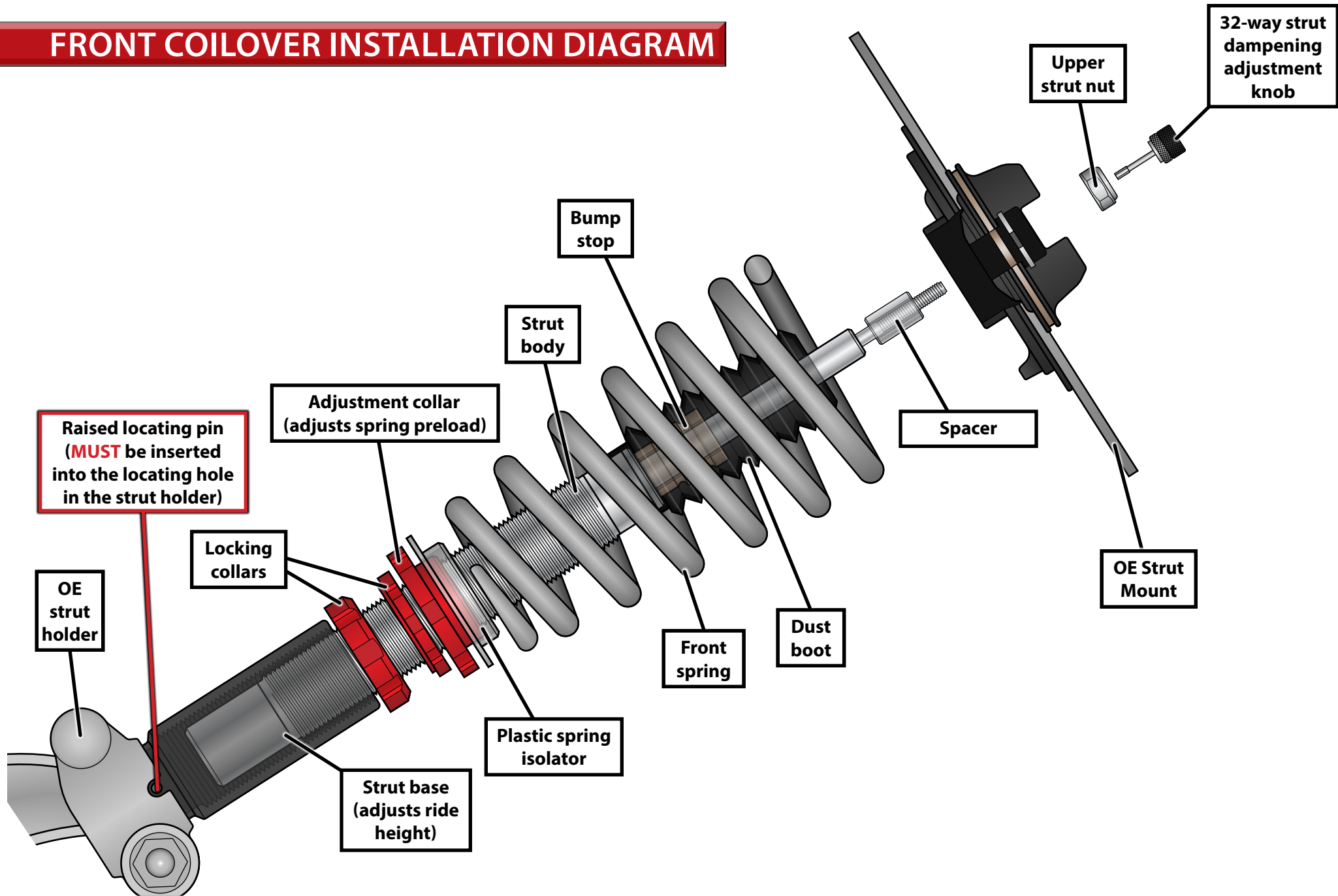
ECS Tuning cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.



NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

FRONT COILOVER INSTALLATION DIAGRAM



REMOVING THE ORIGINAL FRONT STRUTS

Step 1: Protecta-Sockets & Breaker Bar

Safely lift and support the vehicle and remove all four wheels.

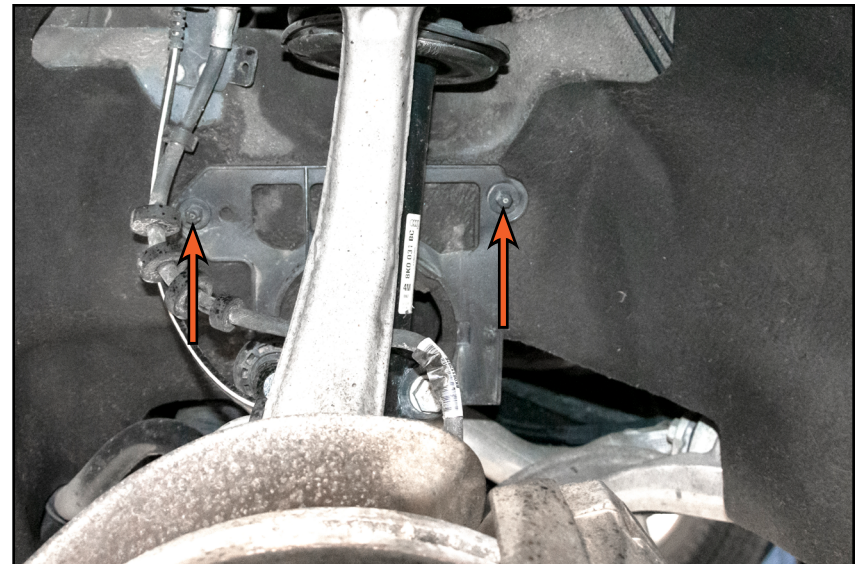


Before you begin your install take a moment to take some baseline measurements. Measure your fender to ground clearance at all four wheels and write it down. This will come in handy later on once you go to adjust the ride height.



Step 2: 10mm Socket & Ratchet

Remove the two nuts (arrows) then remove the splash guard.



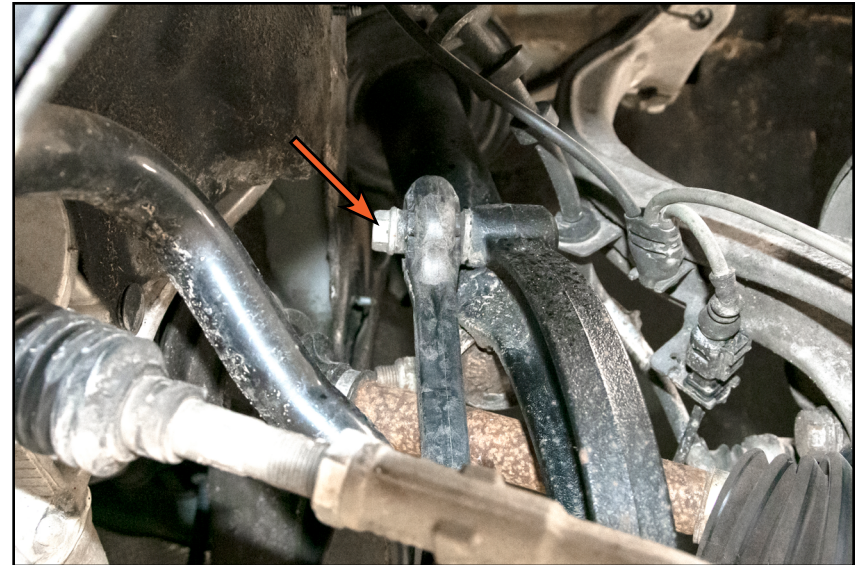
REMOVING THE ORIGINAL FRONT STRUTS

Step 3: 16mm Socket & Ratchet

Remove the bolt (arrow) which secures the sway bar end link to the strut holder.



If equipped, disconnect the ride height level sensor arm on the lower control arm.



Step 4: 18mm Wrench, 18mm Socket & Ratchet

Counter-hold the nut while you remove the strut pinch bolt (arrow).



REMOVING THE ORIGINAL FRONT STRUTS

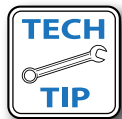
Step 5: Spindle Housing Spreader Tool, Ratchet

Insert the spindle housing spreader tool (available [HERE](#)) into the slot in the side of the strut holder and rotate the tool to spread it apart, freeing the strut body.

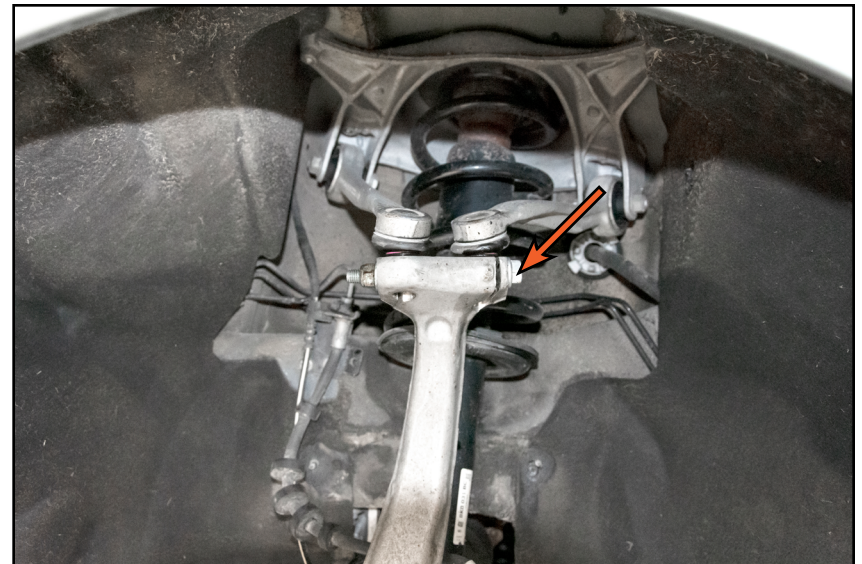


Step 6: 16mm Wrench, 16mm Socket & Ratchet

Remove the nut, then remove the upper control arm pinch bolt (arrow).



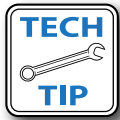
These pinch bolts are notoriously difficult to remove as they can become fused in the knuckle and often the head will shear off if you attempt to back it out. To give yourself the best chance at removing it first try, remove the nut and spray the bolt with penetrating oil and allow the oil to soak in before attempting to remove it. A torch can also be used for particularly stubborn bolts. If the bolt **still** does not budge, we offer several options of tools [HERE](#) which will help get the job done.



REMOVING THE ORIGINAL FRONT STRUTS

Step 7: Punch, Hammer

Once you have removed the pinch bolt, drive the upper control arms out of the steering knuckle from the bottom.

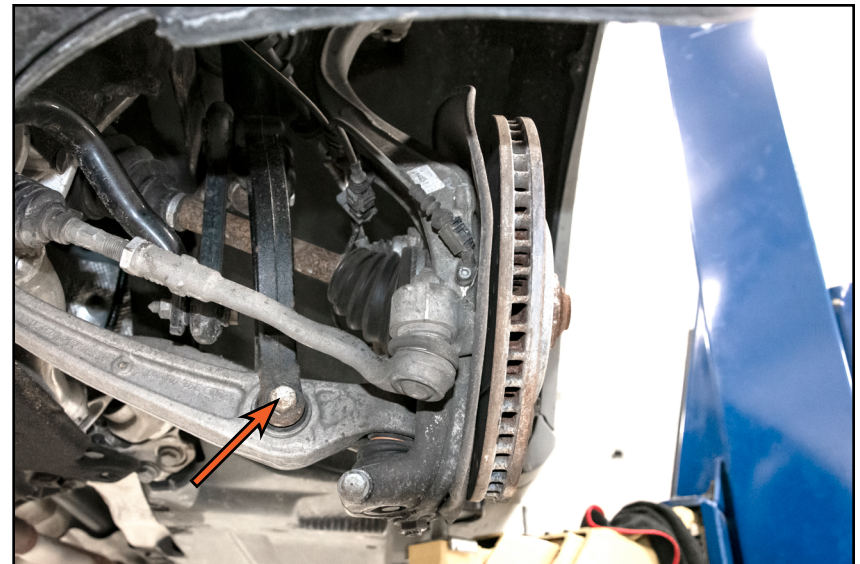


Our Schwaben ball joint separator tool (available [HERE](#)) can be used with a short 1/4" socket to help drive the control arms out of the steering knuckle without damaging them.



Step 8: 18mm Wrench, 18mm Socket & Ratchet

Remove the nut, then remove the lower strut holder bolt (arrow).



REMOVING THE ORIGINAL FRONT STRUTS

Step 9:

Maneuver the strut holder downward until the strut slides free as shown.



Step 10:

Pivot the strut holder to the side and remove it from the vehicle as shown.



REMOVING THE ORIGINAL FRONT STRUTS

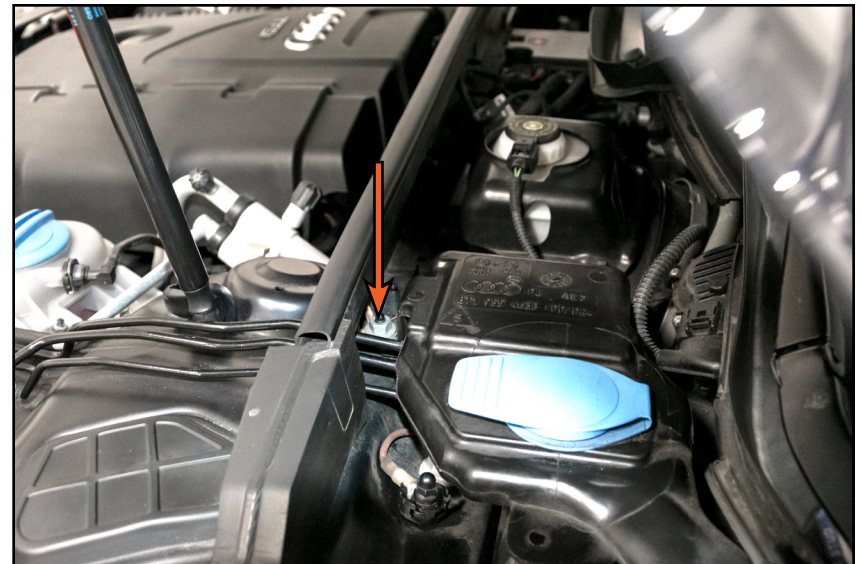
Step 11:

Pull the rubber bulb seal (highlighted in **RED**) free from the rain tray, then remove the rain tray.



Step 12: 13mm Socket, Extensions & Ratchet

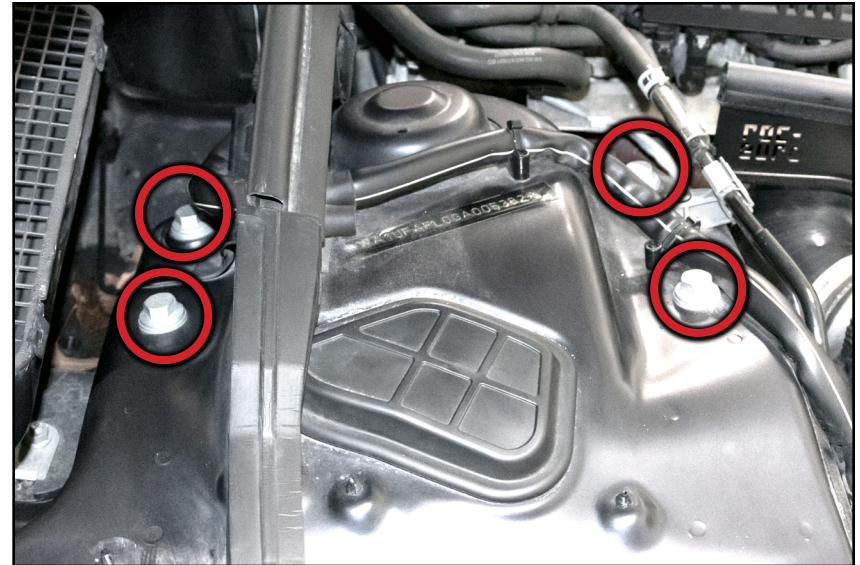
For ease of access to the LH upper strut bolts, we removed the nut (arrow) to move the upper washer fluid reservoir aside.



REMOVING THE ORIGINAL FRONT STRUTS

Step 11: 16mm Socket, Extensions & Ratchet

Support the strut from below and remove the four bolts (highlighted in **RED**) to free it from the vehicle. Carefully guide the strut assembly out of the fender well.



Step 12: 6mm Allen (hex), 19mm Socket & Ratchet

Using a spring compressor tool, compress the spring enough until there is a small gap between the spring and the OE strut mount. Counterhold the strut rod, remove the nut (arrow), then remove the OE strut mount and set it aside. Release the spring compressor tool.



INSTALLING THE FRONT COILOVERS

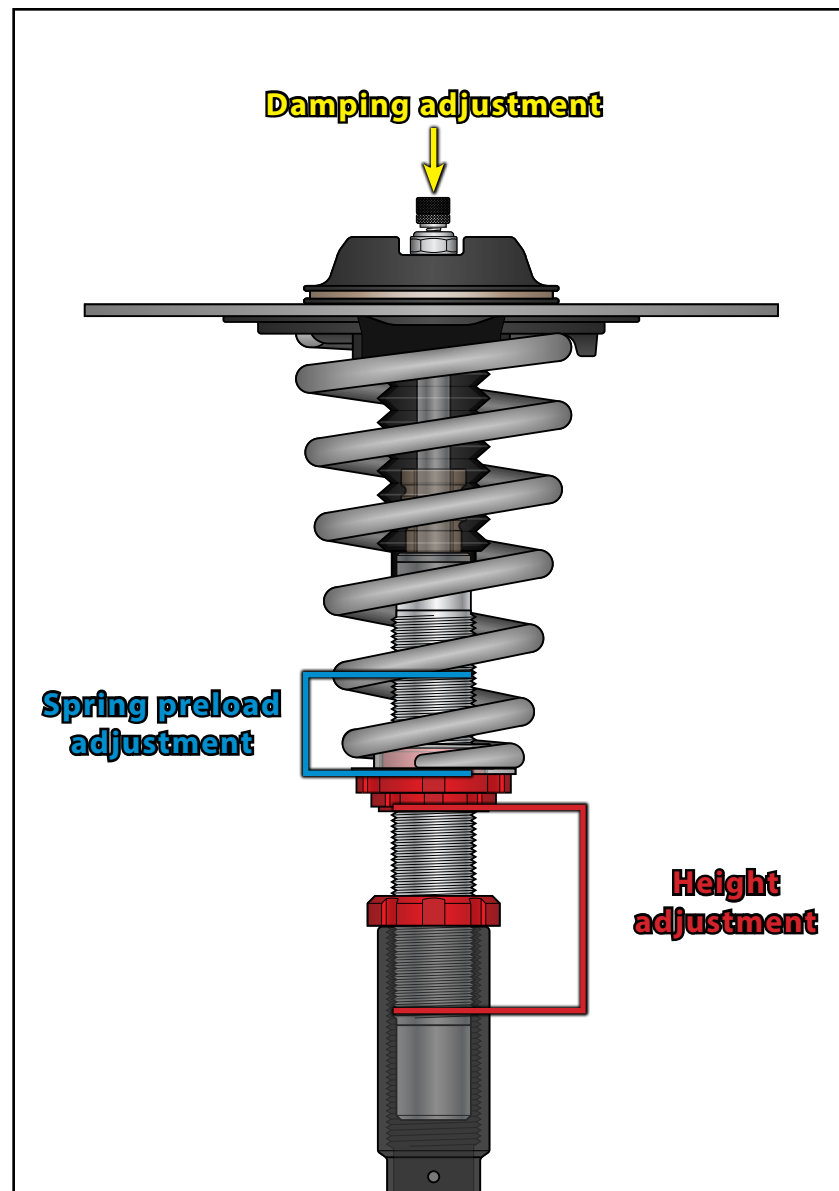
Step 1: Coilover Adjustment Wrenches

Before we install the front coilovers into the vehicle, it's time to set our baseline adjustment. Once the coilovers are all installed onto the vehicle we will come back and fine-tune them. Our front coilovers are three way adjustable, meaning you can adjust the damping, height, and spring preload all independently.

To adjust the damping, insert and rotate the adjustment knob until your desired setting is achieved, then remove the knob. It is important to note that the damping can only be adjusted with the strut out of the vehicle, so it is important to set this number correctly. We settled on a damping setting of 16 on our vehicle, however this number may need adjusted on your vehicle depending on your suspension setup.

The spring preload can be adjusted by rotating the adjustment collar up until it compresses the spring the desired amount, then tightening the locking collar up against the adjustment collar to lock it in place. We found that a minimal amount of preload was ideal for our vehicle, so we spun the adjustment collar up until it was tight against the bottom of the spring then rotated it up one additional full turn before locking it in place.

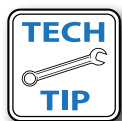
The strut itself can be rotated up or down inside the body to raise or lower the vehicle without affecting the spring preload or damping. We recommend setting the height higher than you want the vehicle to sit, this will leave some room for the suspension to settle, or for you to fine-tune once the coilovers are installed. Once you are happy with the overall height, tighten the locking collar against the strut body to lock it in. We settled on a final ride height that was 1 inch lower than stock at all four wheels.



INSTALLING THE FRONT COILOVERS

Step 2: 5mm Hex (Allen), 18mm Strut Nut Socket & Torque Wrench

Transfer the OE strut mount to the new coilover, then counterhold the strut rod and torque the upper strut nut (arrow) to 50 Nm (37 Ft-lbs).



We recommend applying a good quality wax-based lube to **ALL** the adjustment threads in this kit to protect them from the elements and help the adjustment collars easily spin up or down without resistance.

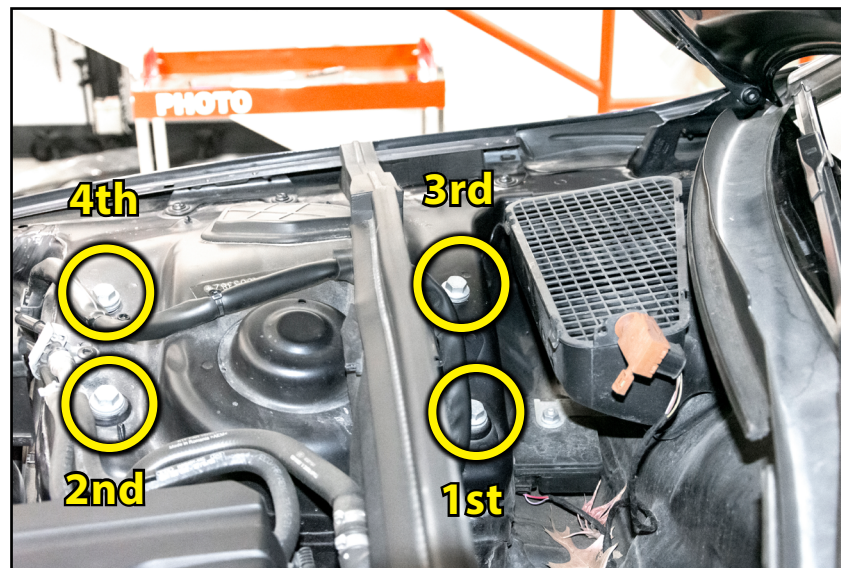


Step 3: 16mm Socket & Torque Wrench

Lift the coilover assembly into the strut tower and install the four bolts (circled in **YELLOW**), torquing them in the sequence as shown to 40 Nm (30 Ft-lbs) + 90 degrees.



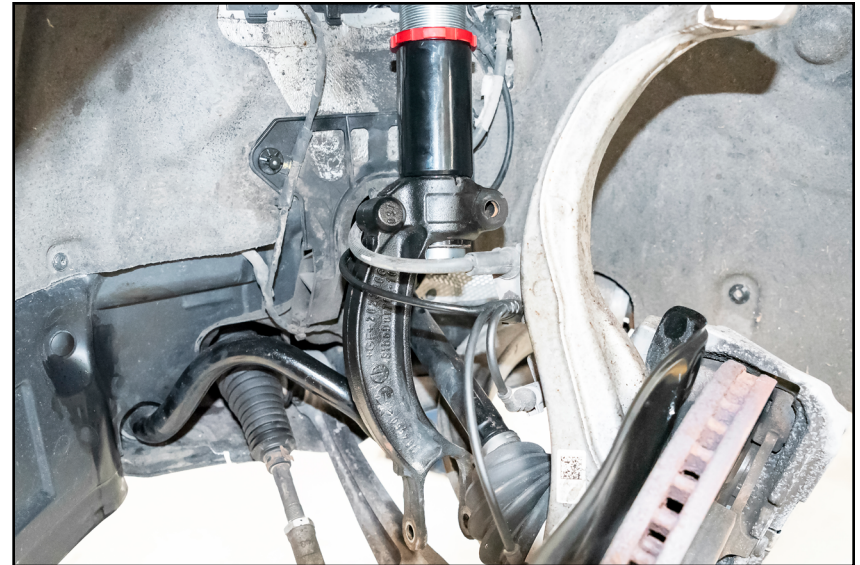
The damping adjustment knob must be removed from the coilover before it can be installed.



INSTALLING THE FRONT COILOVERS

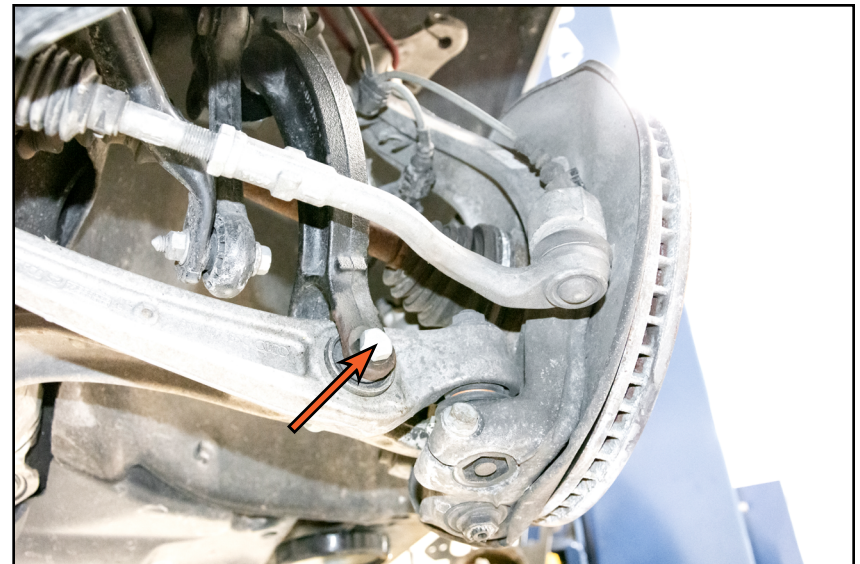
Step 4:

Guide the strut back into the strut holder as shown, then remove the spindle housing spreader tool.



Step 5: 18mm Wrench, 18mm Socket & Ratchet

Reinstall the lower strut holder bolt (arrow), then loosely replace the nut (we will come back to torque this nut later).



INSTALLING THE FRONT COILOVERS

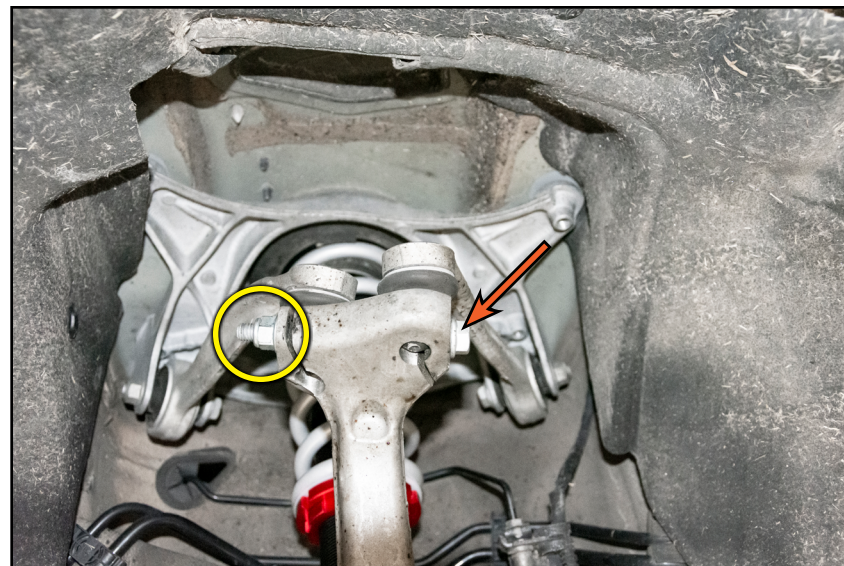
Step 6: 18mm Wrench, 18mm Socket & Ratchet

Reinstall the strut pinch bolt (arrow), then replace the nut and torque it to 40 Nm (30 Ft-lbs) + 180 degrees.



Step 7: 16mm Wrench, 16mm Socket & Torque Wrench

Guide the upper control arms back into the spindle housing, then reinstall the bolt (arrow) and torque the nut (circled in **YELLOW**) to 40 Nm (30 Ft-lbs).



INSTALLING THE FRONT COILOVERS

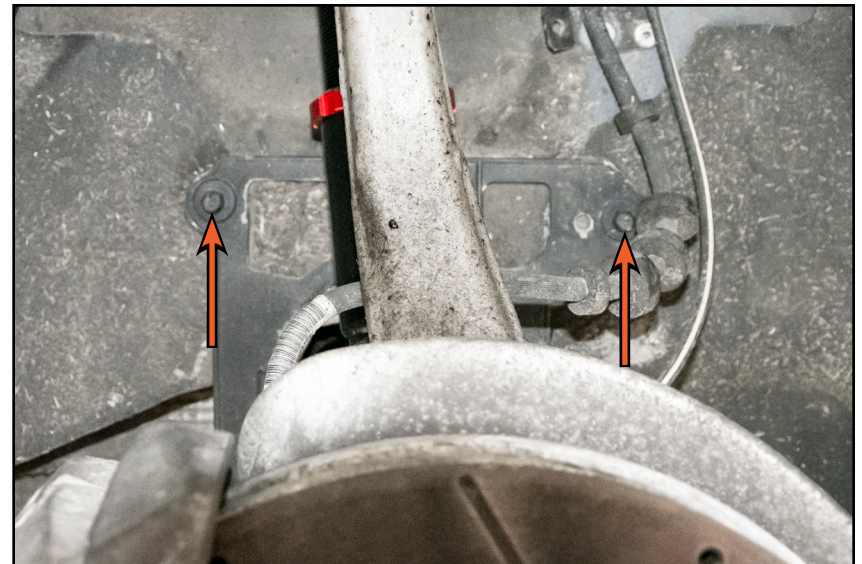
Step 8: 16mm Socket & torque wrench

Reconnect the end link to the strut holder, then torque the bolt (arrow) to 40 Nm (30 Ft-lbs) + 90 degrees.



Step 9: 10mm Socket & Ratchet

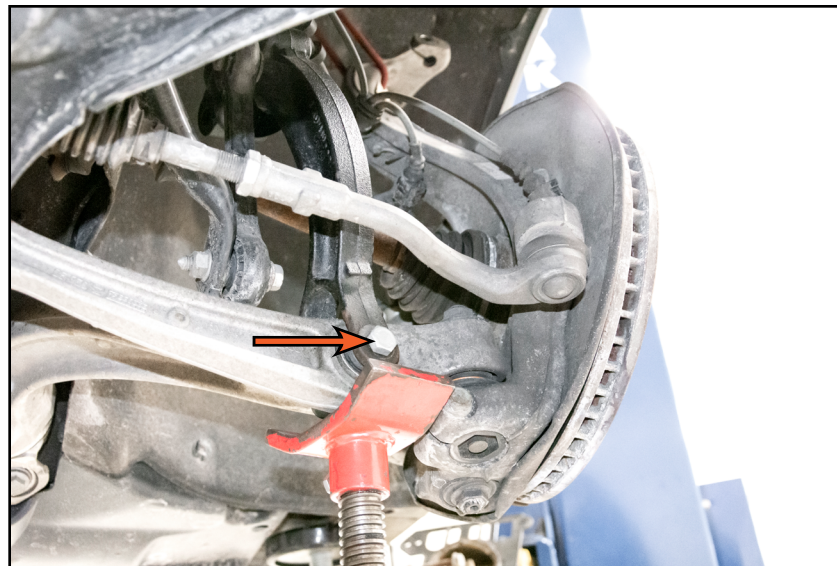
Reinstall the nuts (arrows) for the splash guard and tighten until snug.



INSTALLING THE FRONT COILOVERS

Step 10: 18mm Wrench, 18mm Socket & Torque Wrench

With the suspension at final ride height, torque the strut holder bolt (arrow) to 90 Nm (66 Ft-lbs) + 90 degrees.



Step 11:

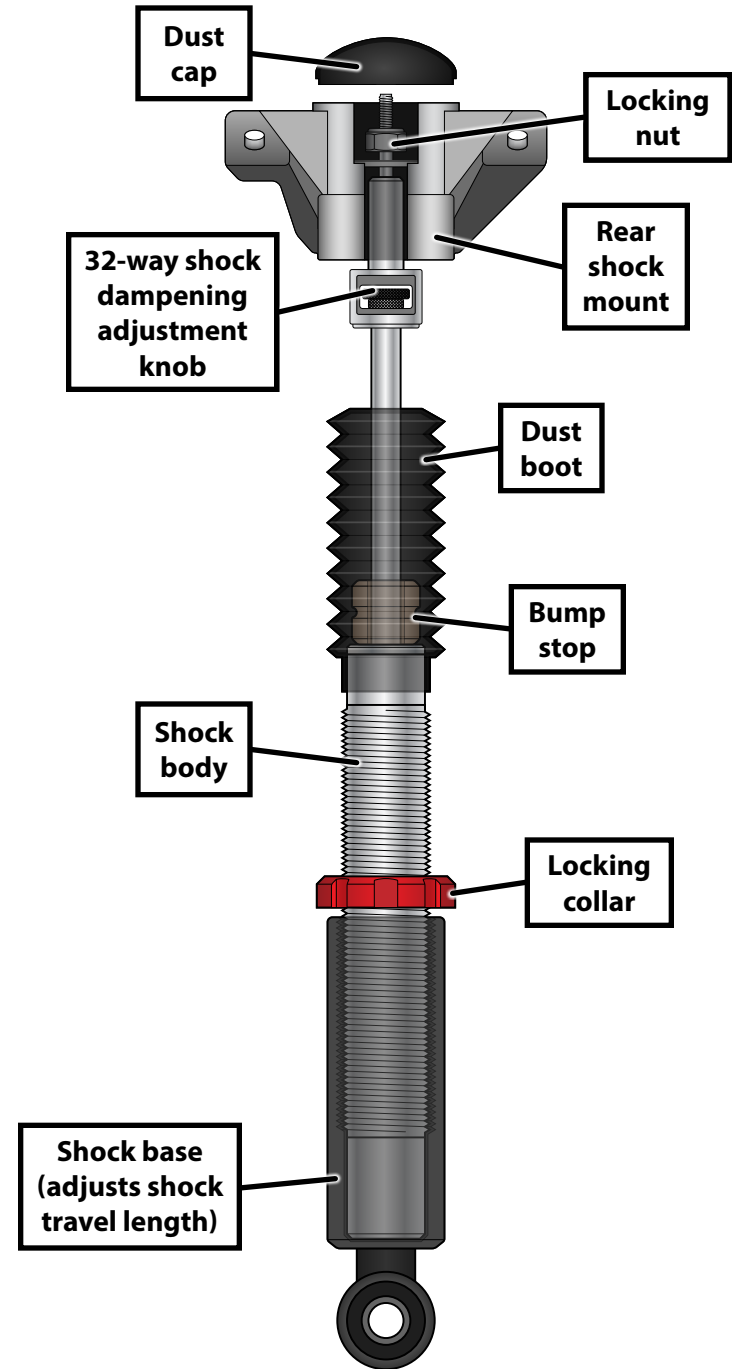
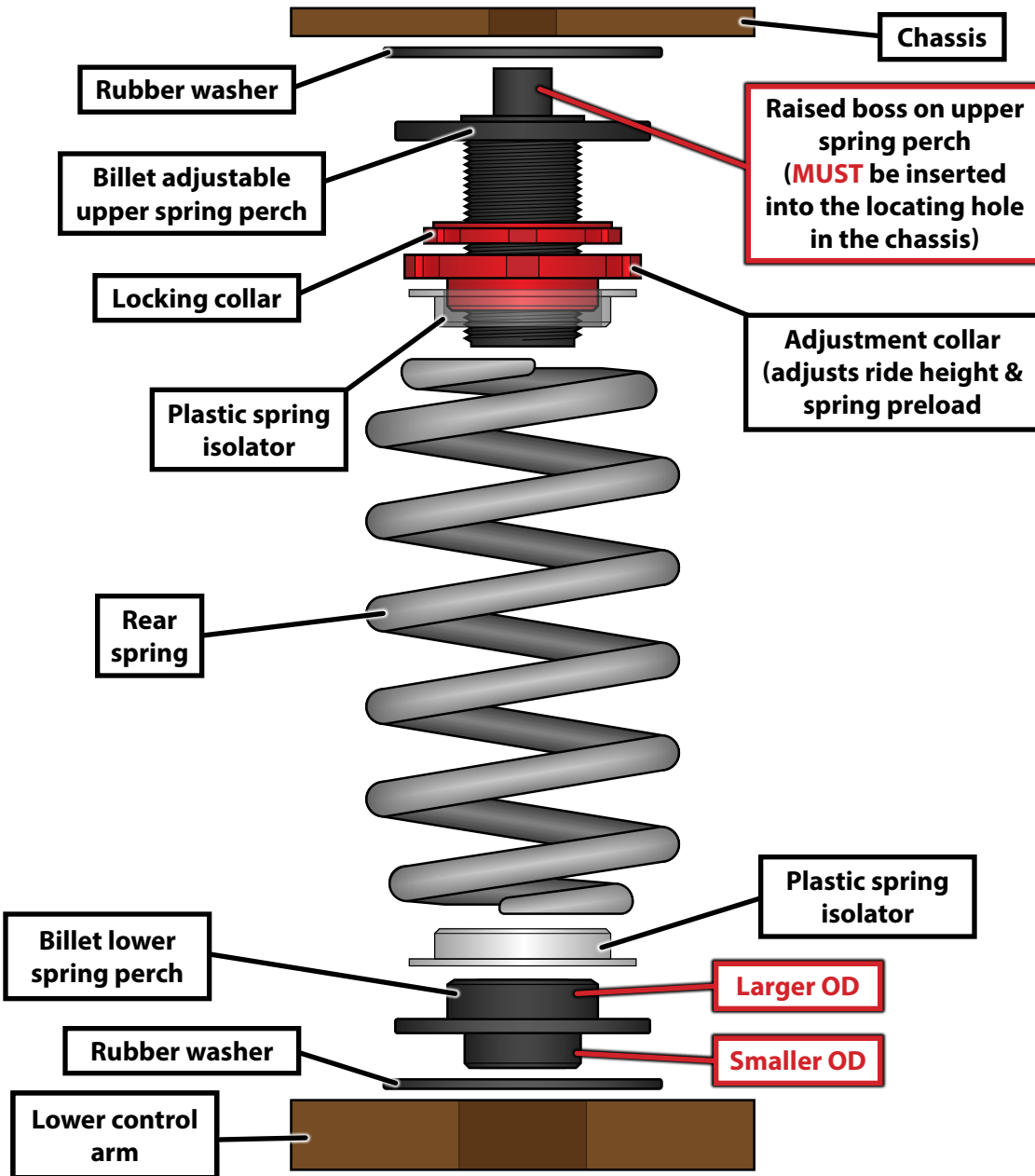
Reinstall the washer fluid reservoir back into place and tighten the nut until snug (not shown), then reinstall the rain tray and bulb seal (highlighted in **GREEN**).

Clip the headlight leveling sensor arm to the lower control arm. We recommend running a headlight auto-leveling adaptation if equipped.

Reinstall the front wheels.



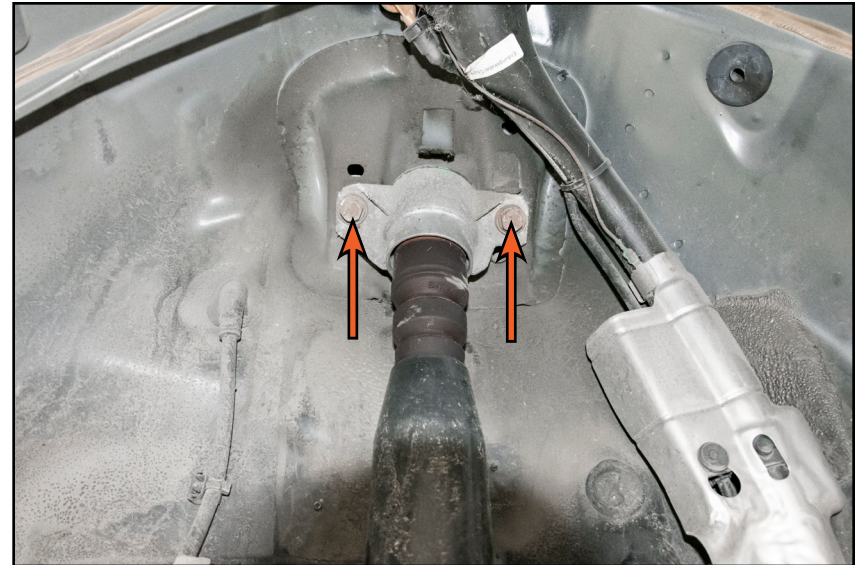
REAR COILOVER INSTALLATION DIAGRAM



REMOVING THE ORIGINAL SHOCKS AND SPRINGS

Step 1: 16mm Socket & Ratchet

Remove the fender liner, then loosen and remove the two bolts (arrows) which secure the rear shock to the body.



Step 2: 21mm Socket & Ratchet

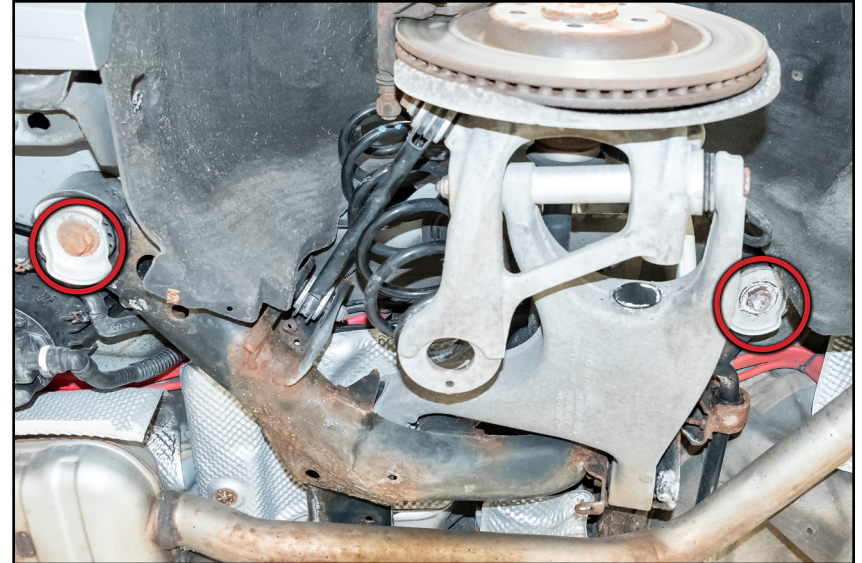
Remove the lower shock bolt (arrow), then carefully guide the shock out from the fenderwell.



REMOVING THE ORIGINAL SHOCKS AND SPRINGS

Step 3: 21mm Socket & Ratchet

In order to remove the rear springs it may be necessary to lower the rear subframe slightly. Working on one side at a time, support the subframe from below with a pole jack, then loosen or remove the two subframe bolts (circled in **RED**) from the side you're working on to gain some additional clearance.



Step 4:

Remove the rear springs, be sure to remove the upper and lower rubber isolators as well.

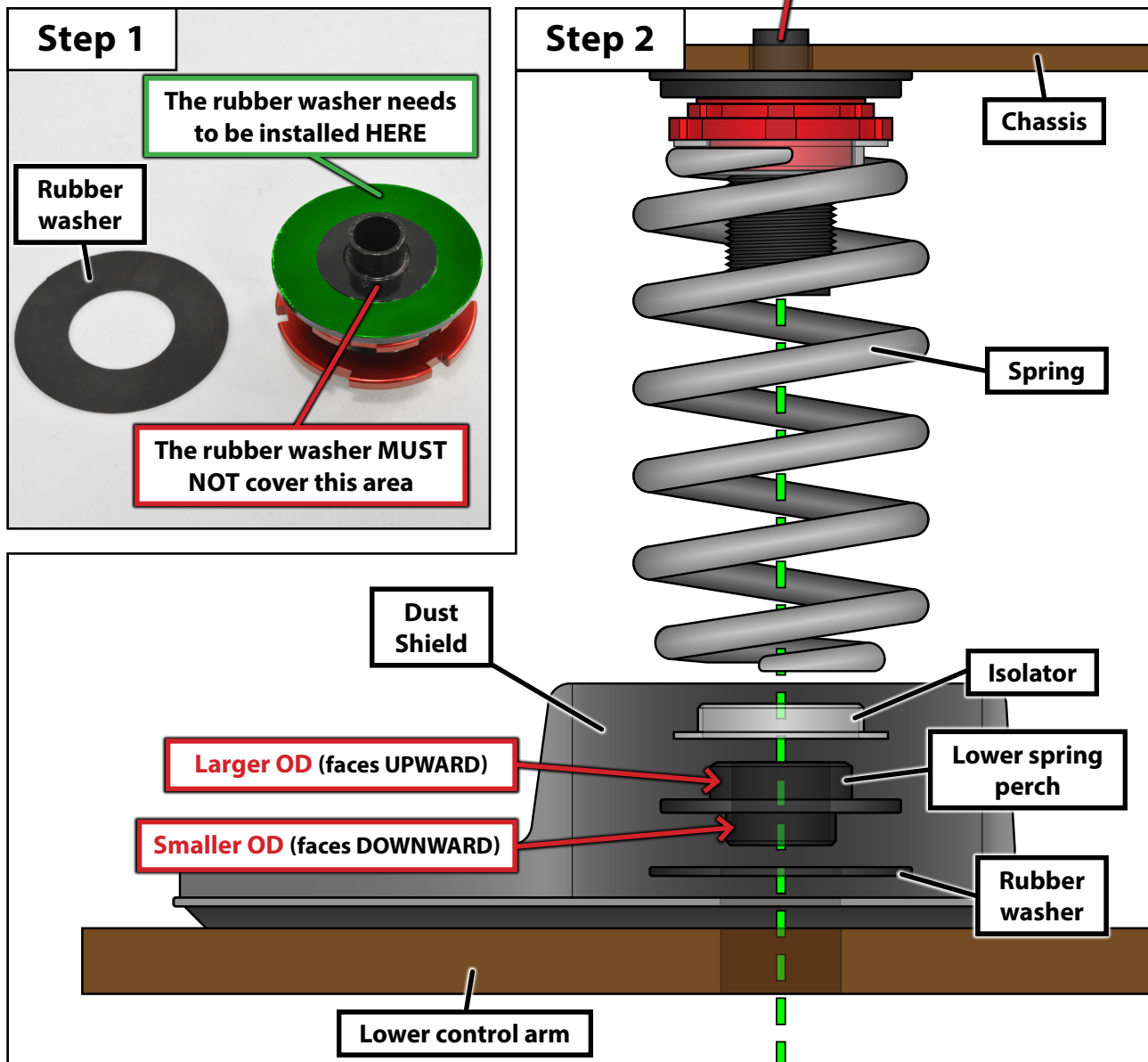


INSTALLING THE REAR COILOVERS

Step 1:

Installation of the rear spring is pretty straight forward, but there are a few things worth noting. There is a recessed area on the top of the center of the billet upper spring perch, the rubber washer needs to be installed in this recessed area (reference the area highlighted in **GREEN** in the photo on the right).

Install the spring assembly into the vehicle in the orientation shown on the right. The OE dust shield can be retained as shown, but it's important to make sure that you install all of the components in the proper order.



INSTALLING THE REAR COILOVERS

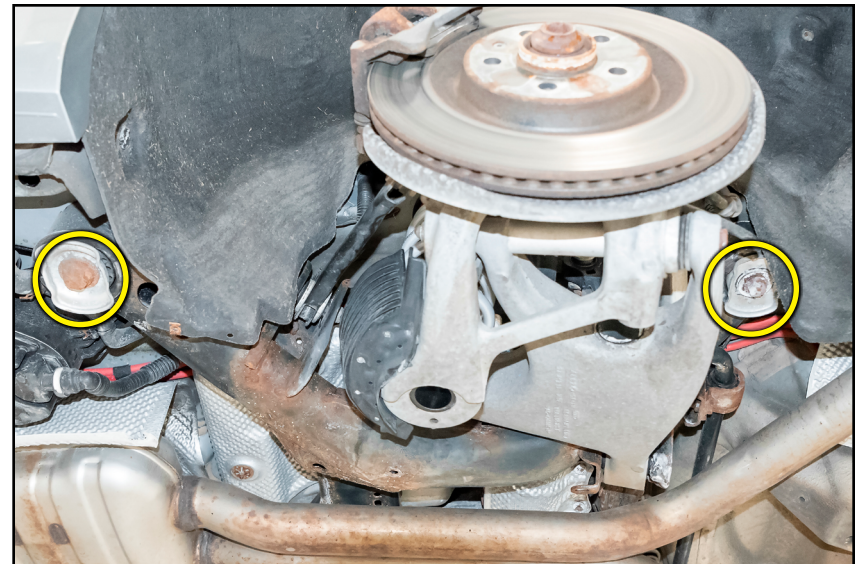
Step 2:

Using the diagram on the previous page for reference, slide the spring assembly into place. Start by sliding the bottom of the spring into the lower control arm, then angle the top into place until the raised locating boss slides into the hole in the chassis.



Step 3: 21mm Socket & Torque Wrench

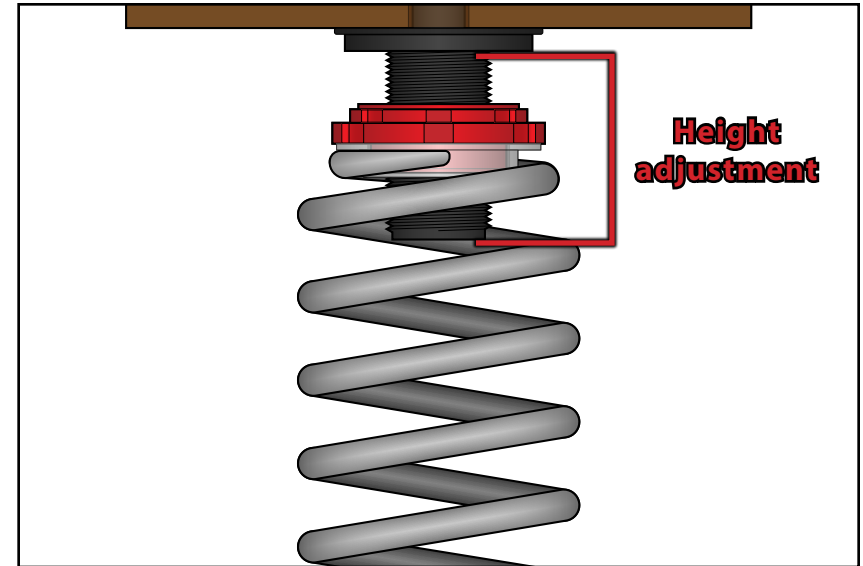
Raise the subframe back into place then replace the bolts and torque them to 115 Nm (85 Ft-lbs) + 90 degrees.



INSTALLING THE REAR COILOVERS

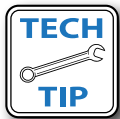
Step 4: Coilover Adjustment Wrenches

The adjustment collar on the rear spring perch can be used to adjust the height and spring preload simultaneously. Rotate the adjustment collar downward to preload the spring, raising the rear of the vehicle. Once your desired height has been achieved, tighten the locking collar down against the adjustment collar to lock it in place. We settled on a final ride height that was 1 inch lower than stock ride height.



Step 5: Vise-Grips, 16mm Wrench

If you plan to re-use your rear shock mounts, you will need to counter-hold the shaft while you loosen the top shock nut (arrow).



Our Schwaben shock and strut removal set (available [HERE](#)) helps make removal of these nuts a breeze.



INSTALLING THE REAR COILOVERS

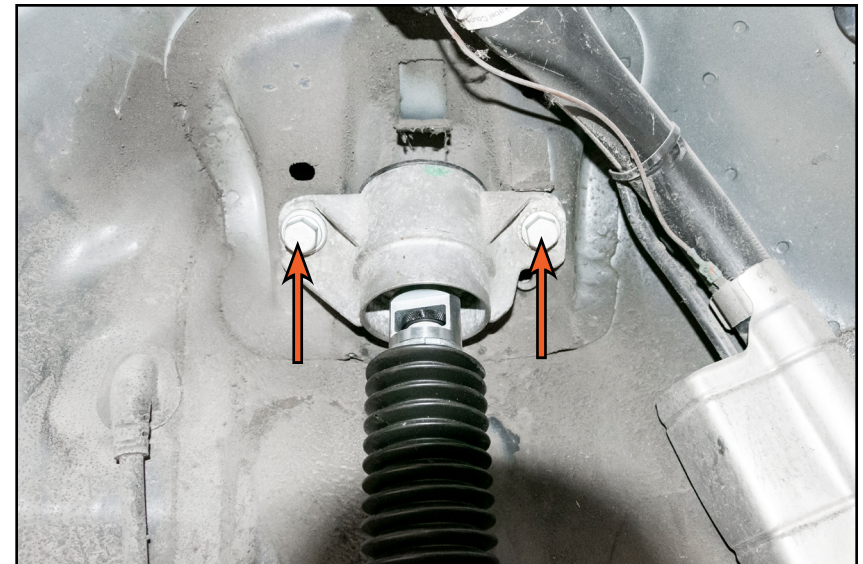
Step 6: 5mm Hex (Allen), 15mm Strut Nut Socket & Torque Wrench

Install the rear shock mount into the shock shaft and torque the nut to 35 Nm (26 Ft-lbs).



Step 7: 16mm Socket & Torque Wrench

Carefully guide the new shock into the fenderwell, then install the bolts (arrows) and torque them to 50 Nm (37 Ft-lbs) + 90 degrees.

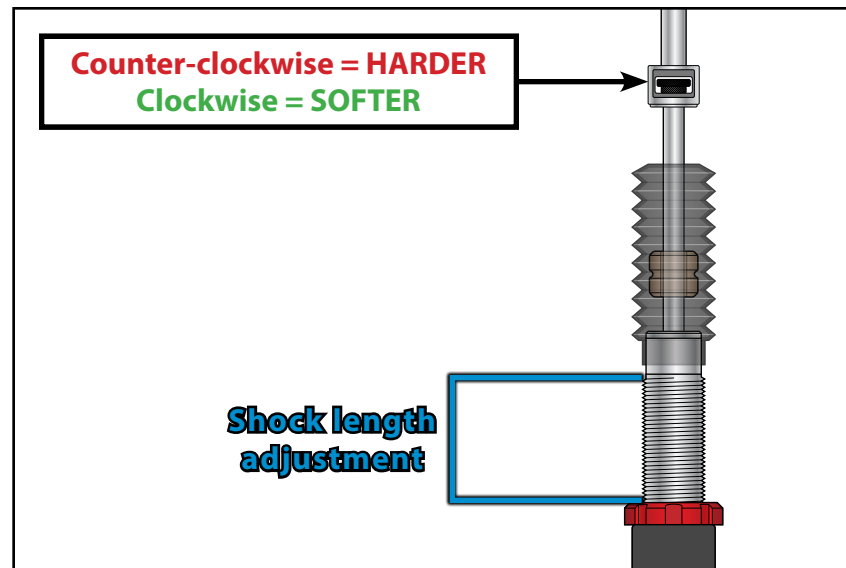


INSTALLING THE REAR COILOVERS

Step 8: Coilover Adjustment Wrenches

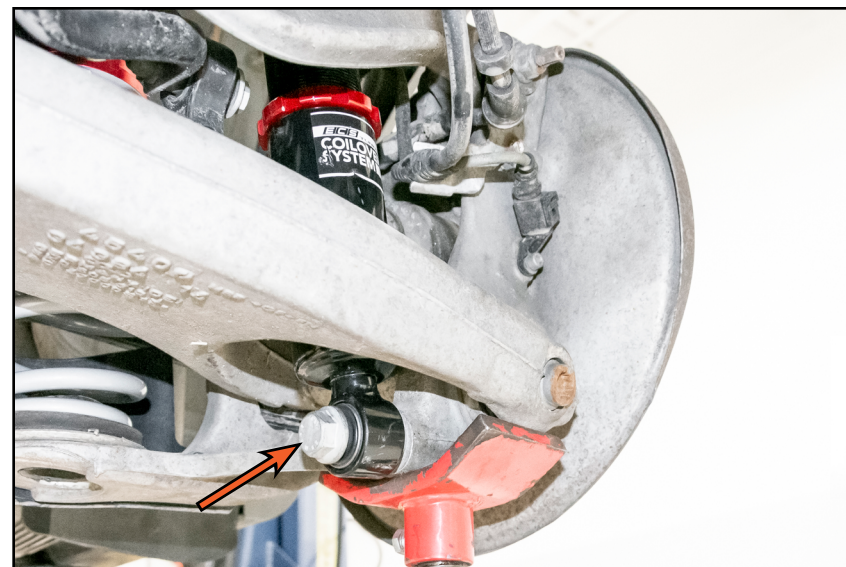
The knurled knob on the shock shaft can be rotated to adjust the damping. We settled on a damping setting of 16 on our vehicle, however this number may need adjusted on your vehicle depending on your suspension setup.

The shock itself can be rotated up or down inside the body to adjust the shock length. If your shock length is too short, you will sacrifice ride quality, too long and you will reduce shock travel and the spring may rattle when the suspension unloads. To adjust, grab the threads of the shock by hand and shorten or lengthen the shock length until the spring is fully seated and the rubber isolators begins to compress just slightly, then tighten the locking collar against the strut body to lock it in.



Step 9: 21mm Socket & Torque Wrench

Slide the lower shock bolt (arrow) through shock body then slide the washer onto the end before threading it into the spindle housing. Then, with the wheels on and the vehicle at ride height, torque the bolt (arrow) to 150 Nm (111 Ft-lbs) + 180 degrees.



FINAL INSTALLATION STEPS

Step 1: Coilover Adjustment Wrenches

Set the vehicle on the ground and allow the suspension to settle, give it a few jounces for good measure, then ensure clearance for surrounding suspension components and fenders. Remove the wheels and re-adjust the height as needed until you are happy with the final ride height then tighten the locking collars.



Step 2:

Immediately perform a four-wheel alignment on your vehicle and take the car for a spin! Keep an eye (and ear) out for any rubbing or otherwise unusual noises before giving your vehicle the green light. Remember, at any time you can remove the wheels and fine-tune your coilovers to match your vehicle equipment, driving environment and style of driving, so keep those adjustment wrenches handy!

Congratulations, your installation is complete!



TORQUING TIPS

Torque to Yield or “Stretch” Bolts

Many bolts will have a torque specification listed in the format - xx Nm (xx Ft-lbs) + xx degrees. These bolts are torque to yield bolts, commonly referred to as “stretch” bolts. The correct procedure for torquing these bolts is:

Stage One - Torque the bolt(s) to the initial Nm or Ft-lb specification. If there is more than one, be sure to torque them in the correct sequence.

Stage Two - Tighten or “stretch” the bolt(s) the additional specified number of degrees. If there is more than one, be sure to follow the correct sequence.

Note - Some bolts may have two or more stages of torquing before the final stage of “stretching” the bolts.

When tightening more than one bolt in a specified sequence, be sure to mark each fastener with paint *immediately* after performing the final stage or “stretching” of the bolts. This will ensure that you keep track of which bolts have already been “stretched”.

All Torque to Yield bolts should only be used once and should be replaced each time they are removed. If they are reused, they will not be able to achieve the proper clamping force with the specified torque.

Lubrication

Torque specifications are always listed for a dry fastener (*no* lubrication) unless specified otherwise.

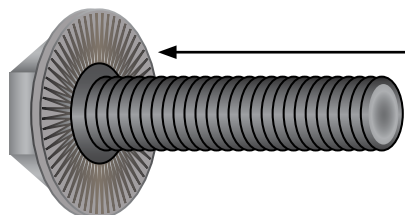
Some fasteners require lubrication on the threads -or- on the contact surface while torquing. These fasteners will be listed with the specific location and type of lubrication required. Always follow manufacturers recommendations exactly.

Lubricating a fastener that is intended to be installed dry and then torquing it to factory specifications will increase the clamping force and stress on the fastener and components, which can result in damage or failure.

Do not lubricate the threads of any fastener unless it is specifically recommended by the manufacturer.

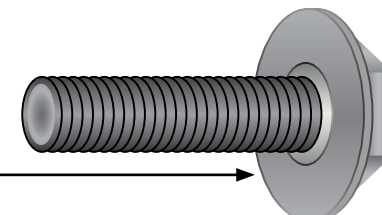
Ribbed vs. Non-Ribbed Bolts

Ribbed and Non-Ribbed bolts in the same location generally require a different torque specification.



A ribbed bolt is identified by the ribs on the contact surface

A non-ribbed bolt is identified by the smooth contact surface



TORQUE SPECIFICATIONS

Front Upper Strut Nut	50 Nm (37 Ft-lbs)	(Page 14)
Front Upper Strut Mount Bolts	40 Nm (30 Ft-lbs) + 90 degrees	(Page 14)
Front Strut Pinch Bolt	40 Nm (30 Ft-lbs) + 180 degrees	(Page 16)
Front Upper Control Arms Pinch Bolt.....	40 Nm (30 Ft-lbs).....	(Page 16)
Front Sway Bar End Link Bolt.....	40 Nm (30 Ft-lbs) + 90 degrees	(Page 17)
Front Strut Holder Pinch Bolt	90 Nm (66 Ft-lbs) + 90 degrees	(Page 18)
Rear Subframe Bolts	115 Nm (85 Ft-lbs) + 90 degrees	(Page 23)
Rear Upper Shock Nut.....	35 Nm (26 Ft-lbs).....	(Page 25)
Rear Upper Shock Mount Bolts.....	50 Nm (37 Ft-lbs) + 90 degrees	(Page 25)
Rear Lower Shock Bolt.....	150 Nm (111 Ft-lbs) + 180 degrees.....	(Page 26)

Your Adjustable Coilover Kit installation is complete!



These instructions are provided as a courtesy by ECS Tuning

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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