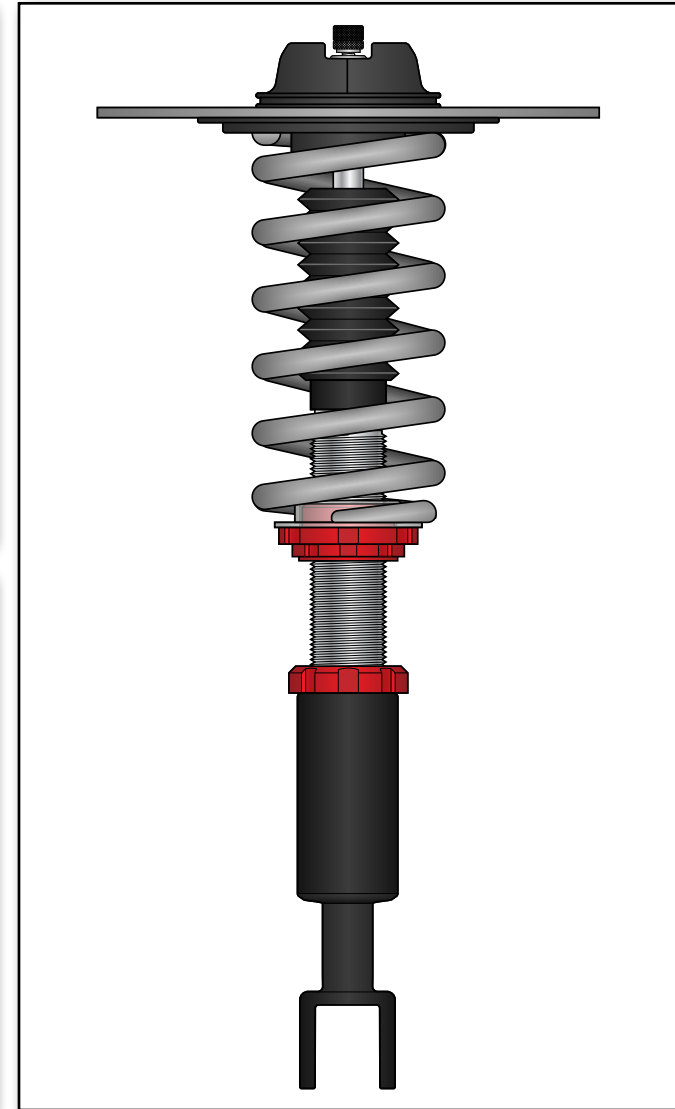




Audi B6/B7 Adjustable Coilover Kit
Installation Instructions - [ES3624746](#)



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

Required For This Install

- $\frac{1}{4}$ " Drive Ratchet..... [ES#2823235](#)
- $\frac{1}{4}$ " Drive Deep and Shallow Sockets [ES#2823235](#)
- $\frac{1}{4}$ " 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

Specialty Tools

- **Spring Compressor** [ES#2918793](#)

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

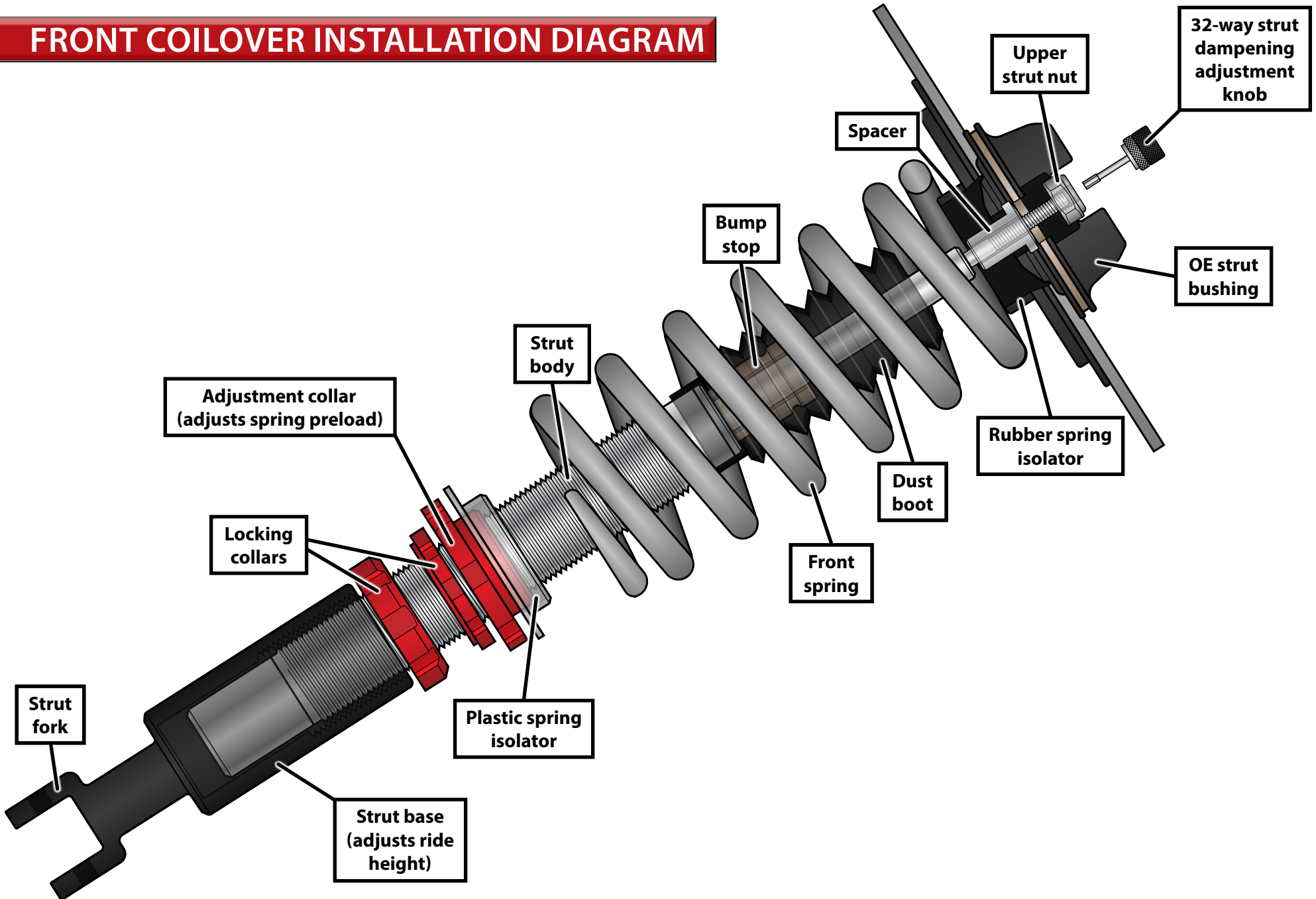
ECS Tuning cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- 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 the front 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: Flat Head Screwdriver

If equipped, unclip the headlight leveling sensor arm from the LH lower control arm as shown.



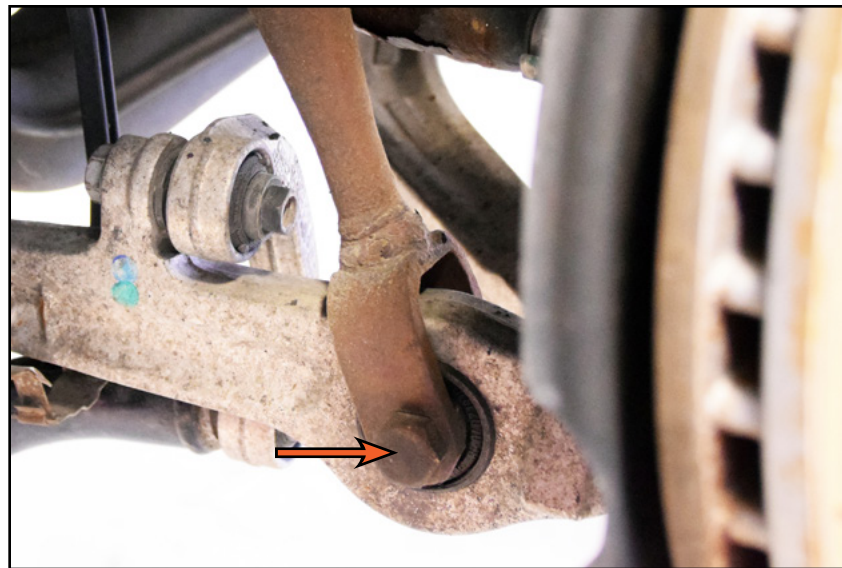
You can also unbolt the sway bar end links from the lower control for some additional clearance, just be sure to reinstall the bolts and torque them at ride height after you're done.



REMOVING THE ORIGINAL FRONT STRUTS

Step 3: 18mm Wrench, 18mm Socket & Ratchet

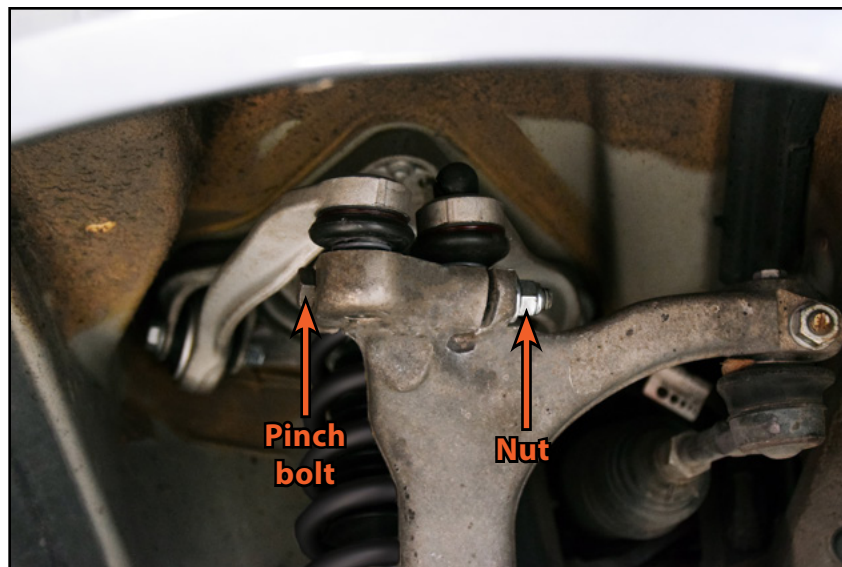
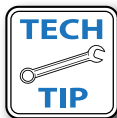
Counter-hold the nut while you remove the strut fork bolt (arrow).



Step 4: 16mm Wrench, 16mm Socket & Ratchet

Counter-hold the nut while you 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.



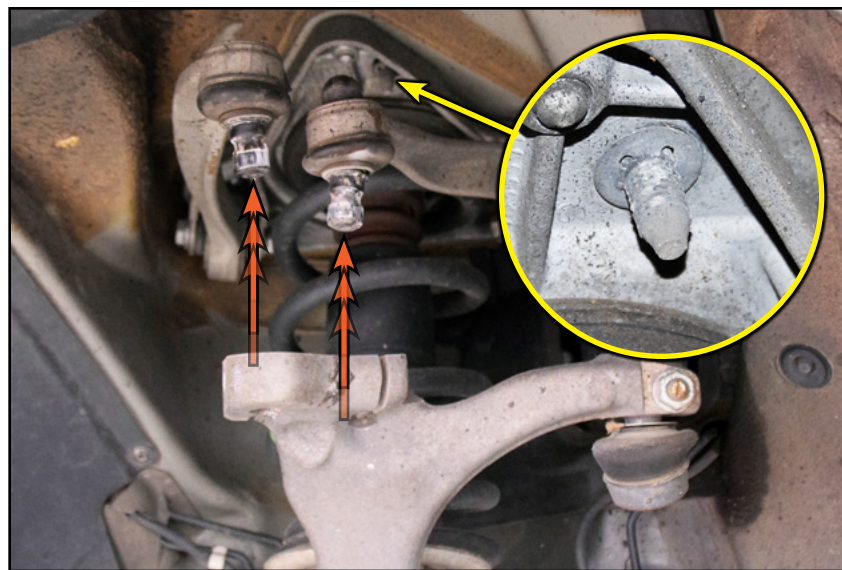
REMOVING THE ORIGINAL FRONT STRUTS

Step 5: Punch, Hammer

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



There is a small retaining clip (**YELLOW** inset photo) on the underside of the upper strut mount which must be pried off and discarded prior to removal of the strut assembly.



Step 6: Phillips Screwdriver

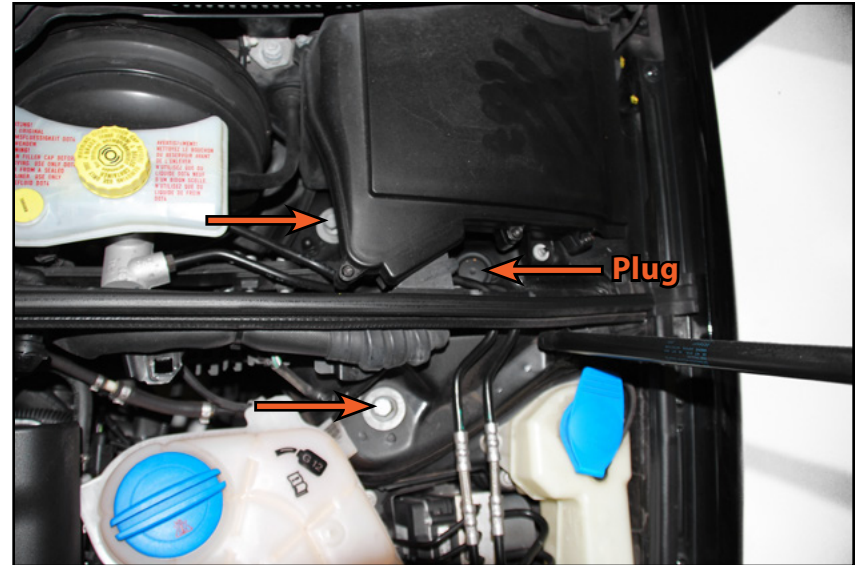
In order to access the three bolts which secure the upper strut mount to the body, we must first remove the upper cowl, then remove the screw (arrow) and move the expansion tank out of the way.



REMOVING THE ORIGINAL FRONT STRUTS

Step 7: 16mm Socket, Extensions & Ratchet

Remove the plug which covers the outermost bolt, then remove the three bolts (arrows) which secure the upper strut mount to the body. Carefully guide the strut assembly out of the fender.



Step 8: 18mm Strut Nut Socket & Ratchet, 6mm Allen

Install a spring compressor tool and compress the spring, then counter-hold the strut shaft and remove the upper strut nut.



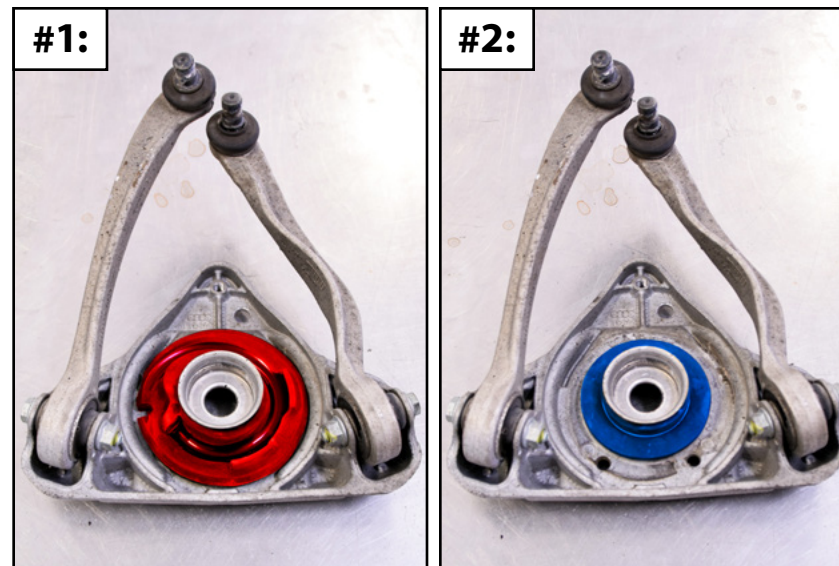
CAUTION: Do not over-compress the spring. Only compress the spring until there is a gap between the top of the spring and the bottom of the upper strut mount.



INSTALLING THE FRONT COILOVERS

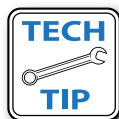
Step 1:

Pull the OE bump stop and dust boot off of the upper strut mount then remove the OE spring isolator (highlighted in **RED** in **Photo #1**) and replace it with the provided rubber isolator (highlighted in **BLUE** in **Photo #2**) as shown.



Step 2: 19mm Strut Nut Socket & Torque Wrench, 5mm Hex (Allen)

Place the upper strut mount onto the assembled coilover, referencing the diagram on [Page 5](#), then install the provided upper strut nut and tighten it 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.



INSTALLING THE FRONT COILOVERS

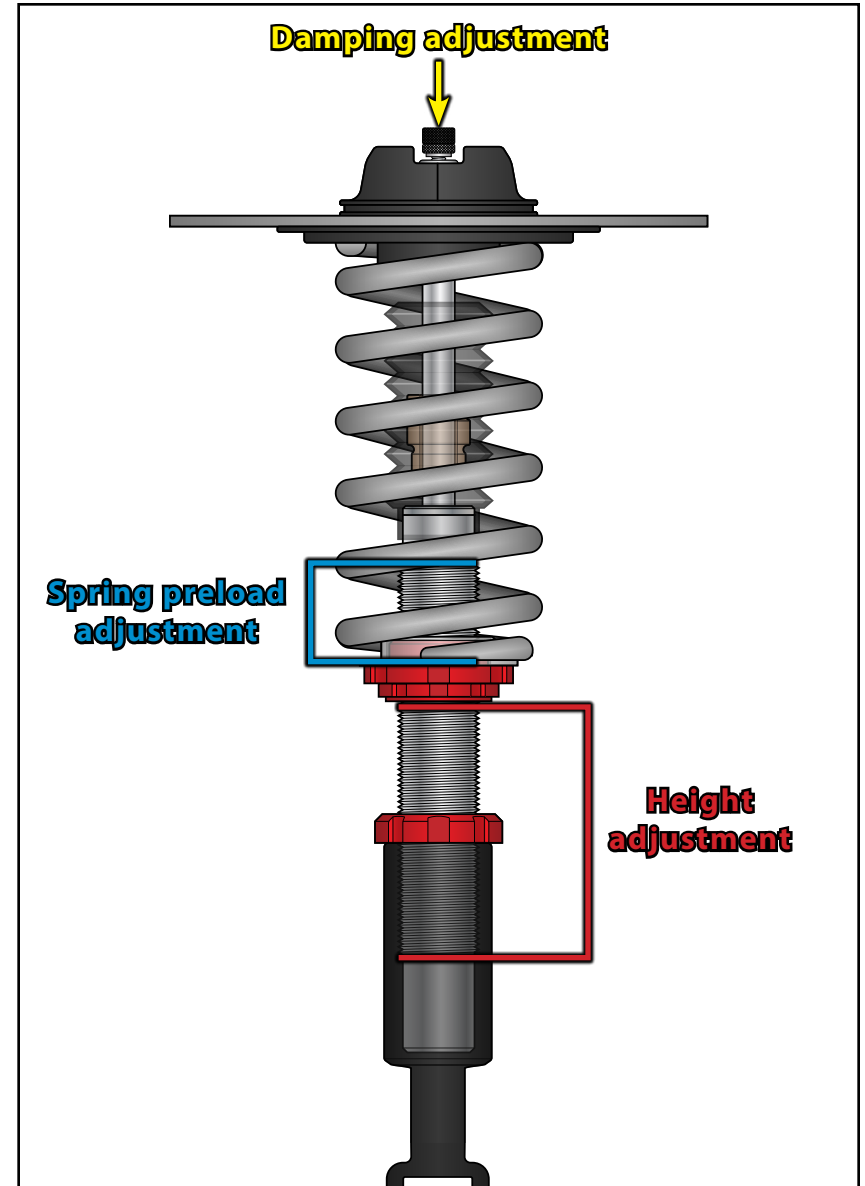
Step 3: Coilover Adjustment Wrenches

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. 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 20 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 an additional 10mm before locking it in place.

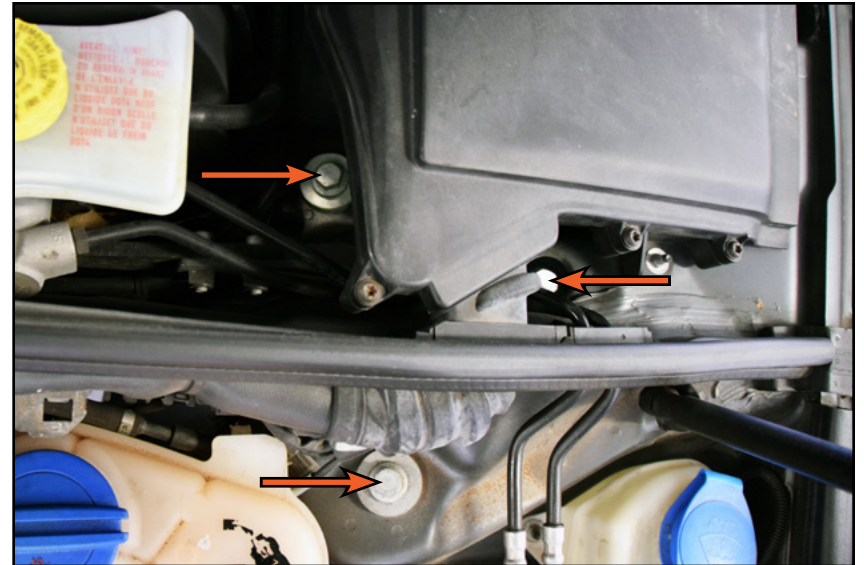
The strut itself can be rotated up or down inside the body to raise or lower the vehicle without affecting the spring preload or damping. We recommend setting the height higher than you want the vehicle to sit, this will leave some room for the springs to settle, or for you to fine-tune once the coilovers 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 1.5 inches lower than stock at all four wheels.



INSTALLING THE FRONT COILOVERS

Step 4: 16mm Socket, Extensions & Torque Wrench

Lift the coilover assembly up into the strut tower and install the three bolts (arrows), torquing them to 75 Nm (55 Ft-lbs).



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

Slide the bolt through the strut fork and loosely install the nut (we will come back to torque it later). Then:

Install the upper control arms into the spindle housing.

Install the upper control arms pinch bolt and torque it to 40 Nm (29 Ft-lbs).

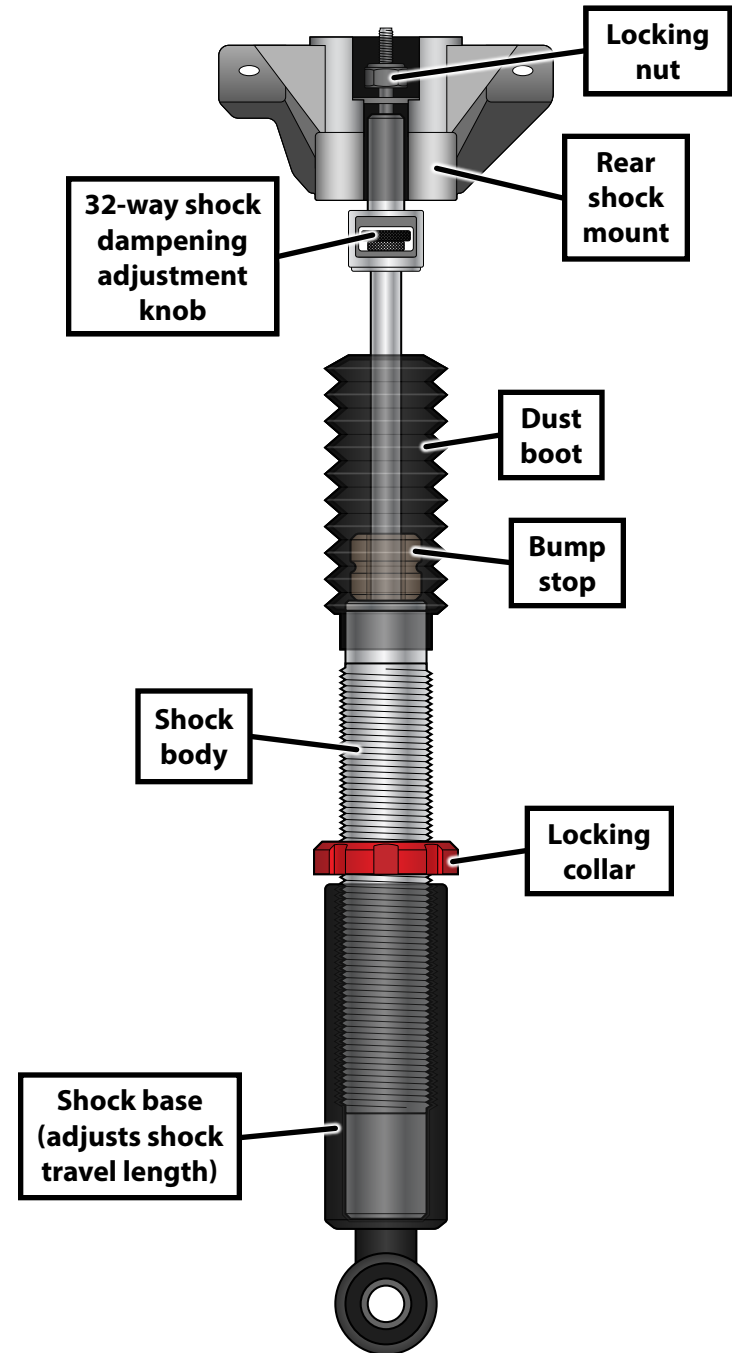
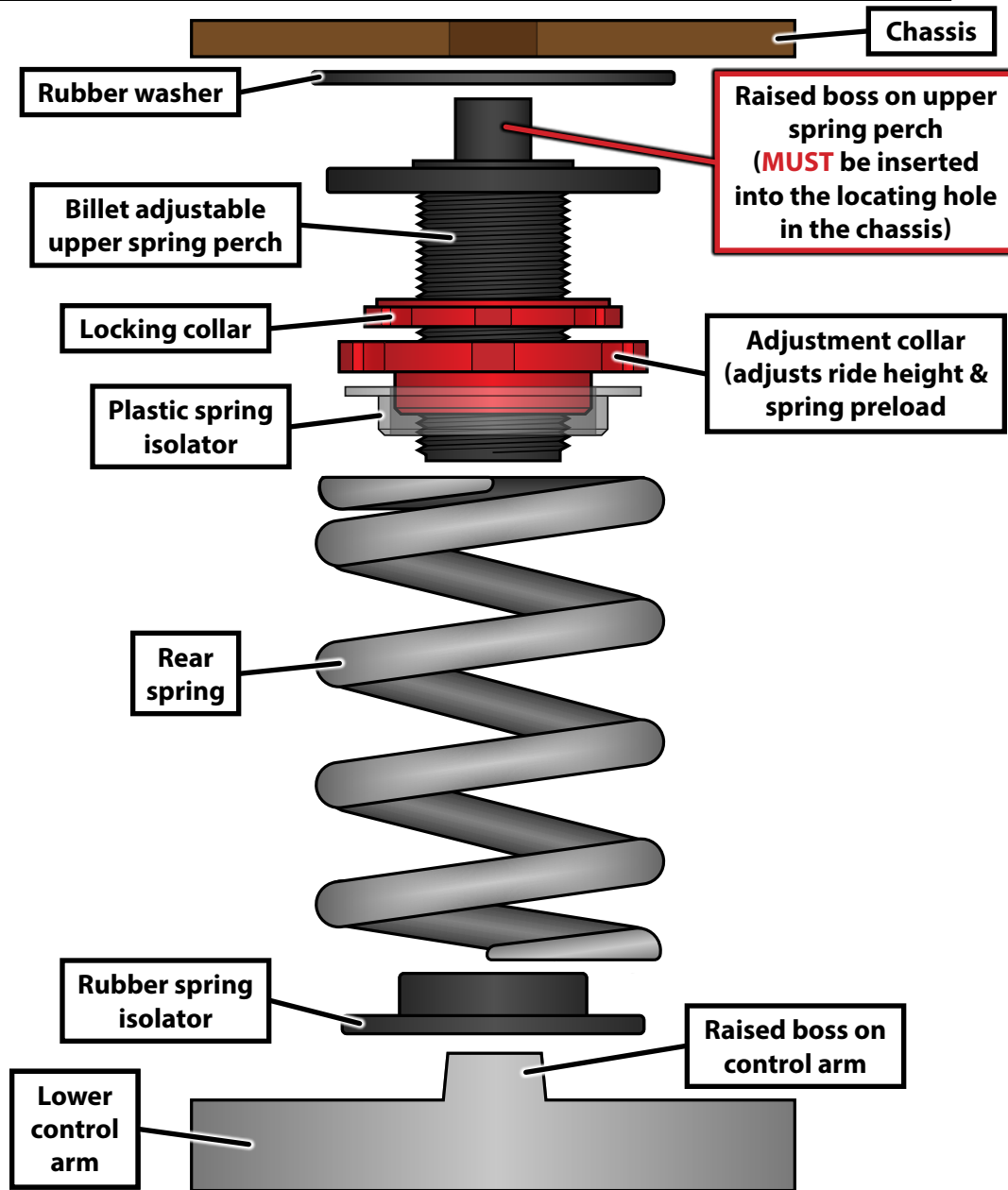
Clip the headlight leveling sensor arm to the lower control arm.

Reinstall the front wheels.

With the vehicle at ride height, tighten the strut fork bolt to 90 Nm (66 Ft-lbs).



REAR COILOVER INSTALLATION DIAGRAM



REMOVING THE ORIGINAL SHOCKS AND SPRINGS

Step 1: Protecta-Sockets, Breaker Bar, T25 Torx

Remove the rear wheels and fender liners.



Step 2: 13mm Socket & Ratchet

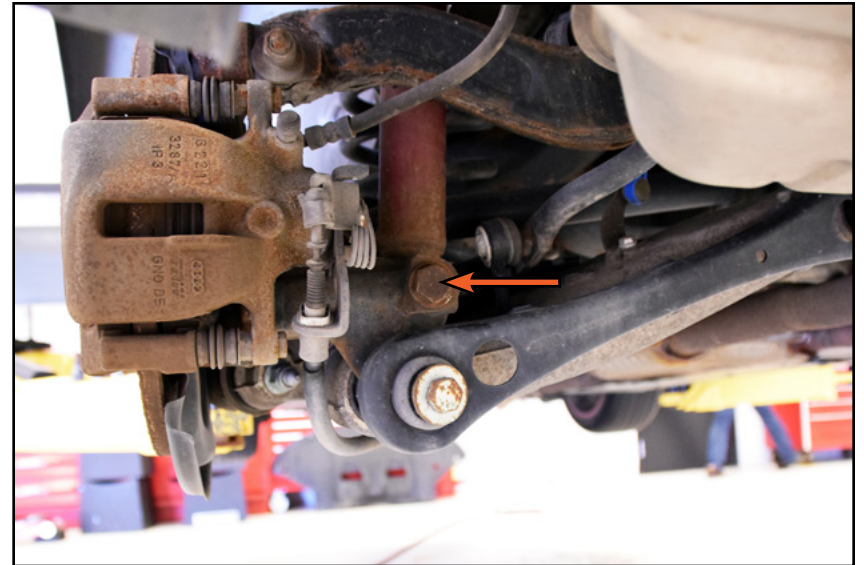
Loosen and remove the two bolts (arrows) which secure the rear shock to the body.



REMOVING THE ORIGINAL SHOCKS AND SPRINGS

Step 3: 21mm Wrench, 21mm Socket & Ratchet

Counter-hold the nut while you remove the lower shock bolt (arrow), then carefully guide the shock out from the fenderwell.



Step 4: 18mm Socket & Ratchet, Spring Compressor Tool

Loosen the two subframe bolts slightly to gain some additional clearance, then compress and remove the rear springs as shown, be sure to remove the upper and lower rubber isolators as well.



INSTALLING THE REAR COILOVERS

Step 1: 18mm Socket & Ratchet

It may be necessary to lower the subframe even more to allow for our springs to slide into place properly. Loosen the two bolts (arrows) a small amount at a time until there is adequate clearance to slide the assembled springs into place.



Step 2: 18mm Socket & Torque Wrench

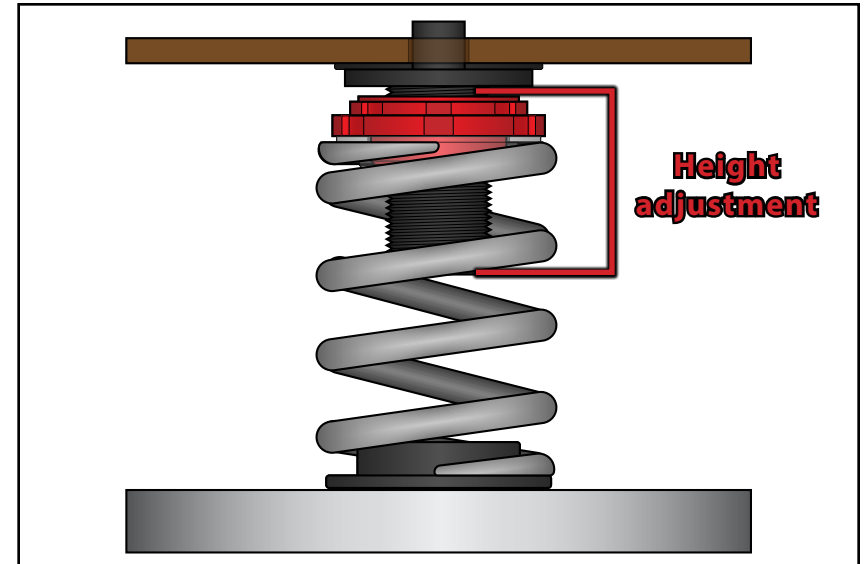
Using the diagram on [Page 13](#) for reference, slide the spring assembly into place. Start by sliding the bottom of the spring into the lower control arm, then angle the top into place until the raised locating boss slides into the hole in the chassis. Torque the subframe bolts to 110 Nm (81 Ft-lbs) + 90°.



INSTALLING THE REAR COILOVERS

Step 3: 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 rotated the adjustment collar down approximately 10mm which yielded a drop of 1.5 inches from stock ride height.



Step 4: Vise-Grips, 16mm Wrench

If you plan to re-use your rear shock mounts, you will need to counter-hold the shaft with a pair of vise-grips while you loosen the top shock nut.



INSTALLING THE REAR COILOVERS

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

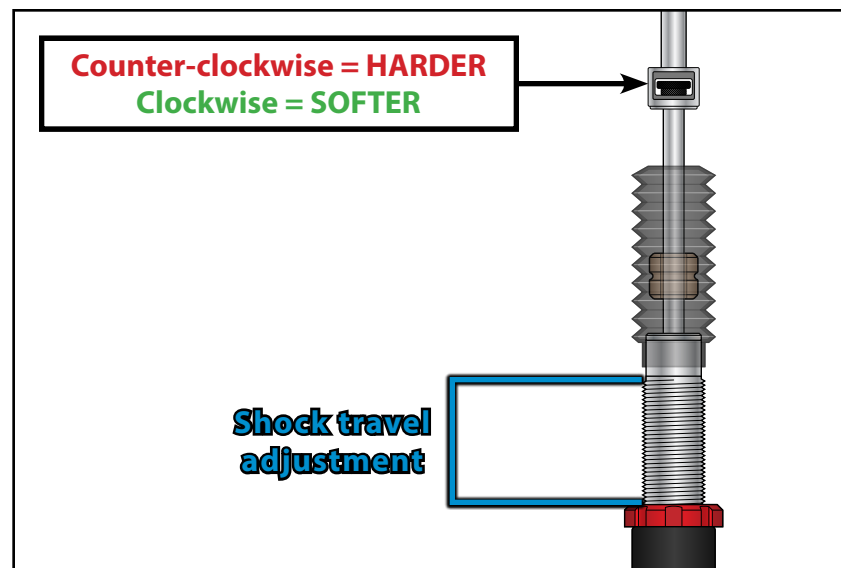
Install the rear shock mount into the shock shaft and torque the nut to 25 Nm (19 Ft-lbs).



Step 6: Coilover Adjustment Wrenches

The knurled knob on the shock shaft can be rotated to adjust the damping. We settled on a damping setting of 22 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 maximum shock travel. This can help adjust the shocks travel length on aggressively lowered cars, allowing them to maintain a smoother ride without sacrificing overall suspension travel. Once your desired travel has been achieved, tighten the locking collar against the strut body to lock it in. We set our travel so that the lower shock bolt could easily slide through the shock body at full droop, then once installed we lengthened the shock by 10mm for some added comfort and driveability.



INSTALLING THE REAR COILOVERS

Step 7: 13mm Socket & Torque Wrench

Carefully guide the new shock into the fenderwell, then install the bolts and torque them to 36 Nm (27 Ft-lbs).



Step 8: 21mm Wrench, 21mm Socket & Torque Wrench

Slide the lower shock bolt through the spindle and shock body then slide the washer into place and tighten the nut. Then, with the wheels on and the vehicle at ride height, torque the bolt to 150 Nm (110 Ft-lbs) + 90°.



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.

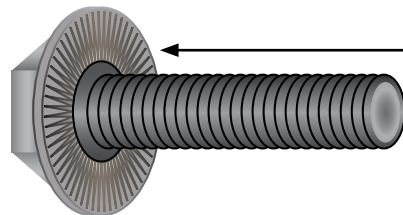
Some fasteners require lubrication on the threads -or- on the contact surface while torquing. These fasteners will be listed with the specific location and type of lubrication required. Always follow manufacturers recommendations exactly.

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.

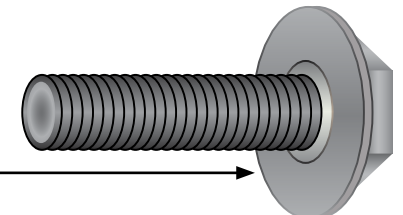
Ribbed vs. Non-Ribbed Bolts

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 11)
Front Upper Strut Mount Bolts	70 Nm (55 Ft-lbs)	(Page 13)
Front Upper Control Arms Pinch Bolt.....	40 Nm (29 Ft-lbs).....	(Page 13)
Front Strut Fork Bolt	90 Nm (66 Ft-lbs).....	(Page 13)
Rear Subframe Bolts	110 Nm (81 Ft-lbs) + 90°	(Page 17)
Rear Upper Shock Nut.....	25 Nm (18.5 Ft-lbs).....	(Page 19)
Rear Upper Shock Mount Bolt.....	36 Nm (26.5 Ft-lbs).....	(Page 20)
Rear Lower Shock Bolt.....	150 Nm (110 Ft-lbs) + 90°	(Page 20)

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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