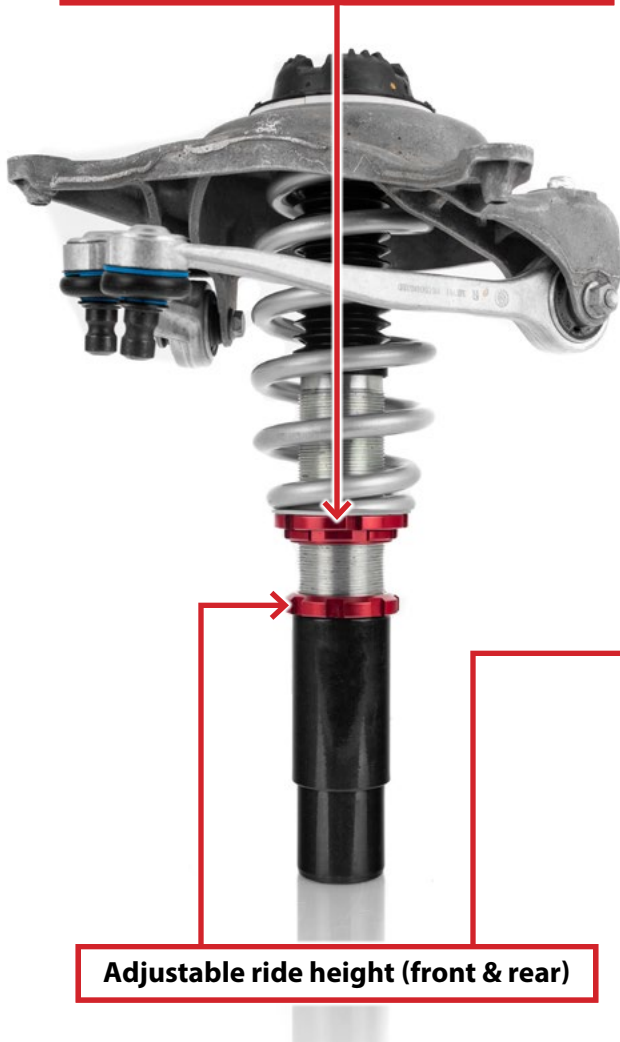




Thank you for purchasing your new ECS Tuning Audi B8 Adjustable Coilover Kit, we appreciate your business!

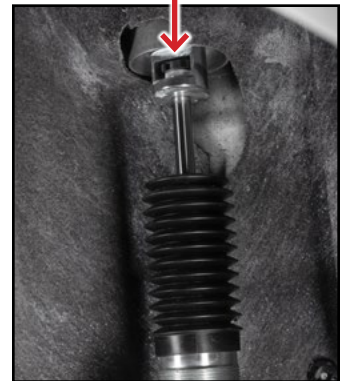


Spring preload adjustment (front only)



Adjustable ride height (front & rear)

32-way dampening adjustment (front & rear)



**Adjustable shock travel length
(rear only, not shown)**

These installation instructions have been broken up into several sections:

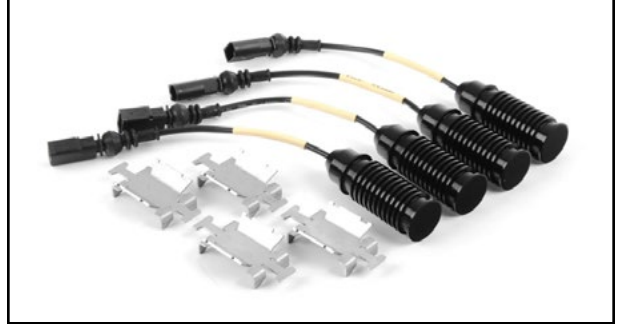
- 1) Introduction**
- 2) Front Coilover Installation**
- 3) Rear Coilover Installation**
- 4) Coilover Adjustment Guidelines**
- 5) Final Installation Notes & Results**

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Section 1: Introduction

- In these instructions we be focusing on installation and adjustment of our B8 adjustable coilover kit.
- If you need help with the removal steps, please reference the PDF which is uploaded to [ES#2795514](#).
- We've included a page from that PDF down below which includes component names and **torque specs***.
- You'll want to have a full set of tools on hand, but here are a few specific tools you'll definitely want:
 - Hydraulic floor jack & jack stands
 - ½" breaker bar ([ES#2776653](#))
 - ½" torque wrench ([ES#3199775](#))
 - Shallow triple square sockets ([ES#1910125](#))
 - Spindle housing spreader ([ES#3894](#))
 - Coil spring compressor ([ES#2918793](#))
 - Ball joint separator
- If your vehicle is equipped with electronic dampening control (EDC) you will need to purchase [ES#2608438](#) to eliminate the "suspension fault" message & fault code.
- Click [HERE](#) to learn more about spring preload and coilover adjustment.

Electronic dampening cancellation kit: [ES#2608438](#)



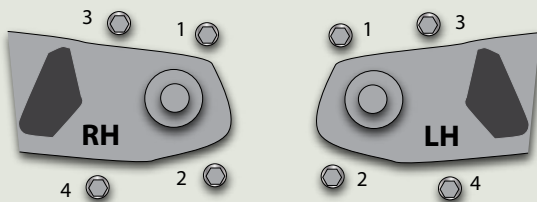
***NOTE:** Any bolt which goes through a bushing needs to be tightened down with the suspension at ride height. This will avoid bushing twist & premature failure.

Component Locations & Torque Specs:

KW Coilover Installation Audi B8 A4/5, S4/S5, and RS5



strut cage bolt tightening sequence:



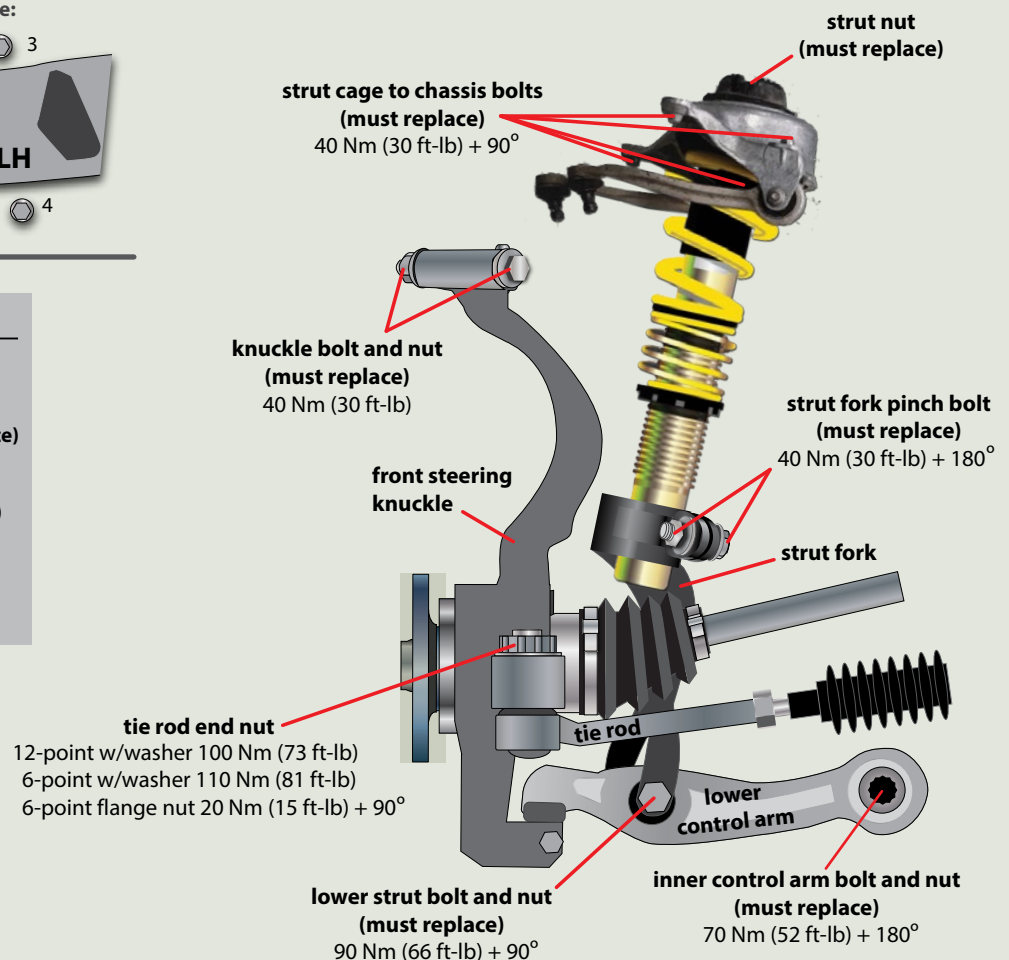
rear torque specifications:

strut nut (must replace)
35 Nm (25 ft-lb)

shock mount-to-chassis (must replace)
50 Nm (37 ft-lb) + 45°

shock-to-rear knuckle (must replace)
150 Nm (111 ft-lb)

subframe-to-chassis (must replace)
115 Nm (85 ft-lb) + 90°



Section 2: Front Coilover Installation

- For reference on where we set initial measurements during our install, [see pages 10 & 12 BEFORE](#) installing your coilovers. You are welcome to refer to those measurements as you set up your coilovers, **but know that results will vary** based on many factors including vehicle model, trim level, equipment, etc.
- Take a moment to familiarize yourself with all of the components on the front coilover assembly.
- When installing the strut assembly into the vehicle you may want to reference this illustration to ensure proper orientation of all spacers, isolators, and collars.
- Our coilover set utilizes the OE front rubber spring isolator and strut bushing. If either of these parts show signs of wear they should be replaced.
- Observe the three possible adjustable features on the strut assembly:

1) Dampening adjustment knob

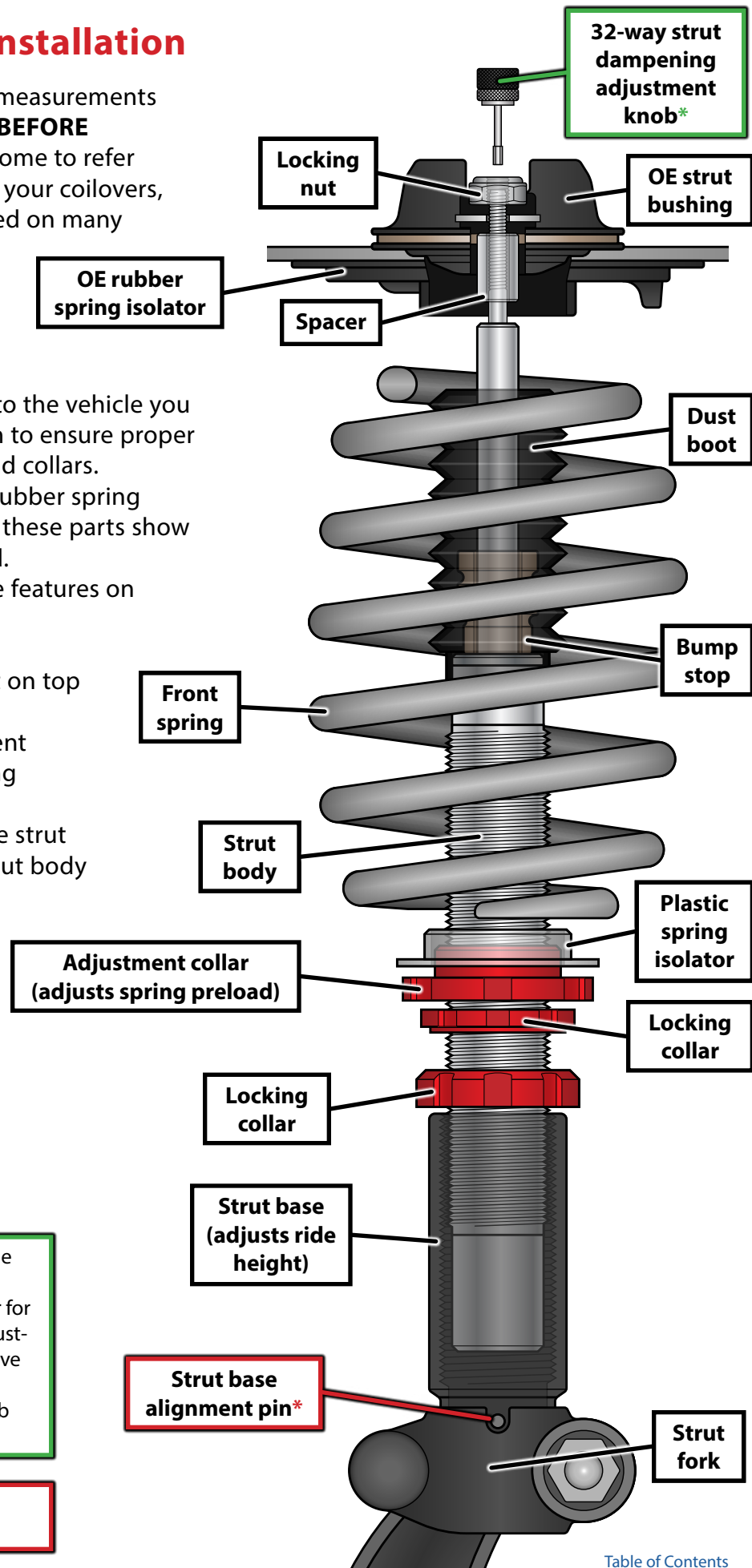
- Threads into the strut shaft on top

2) Spring preload adjustment

- Controlled by the adjustment collar underneath the spring

3) Ride height adjustment

- Controlled by threading the strut base up or down on the strut body

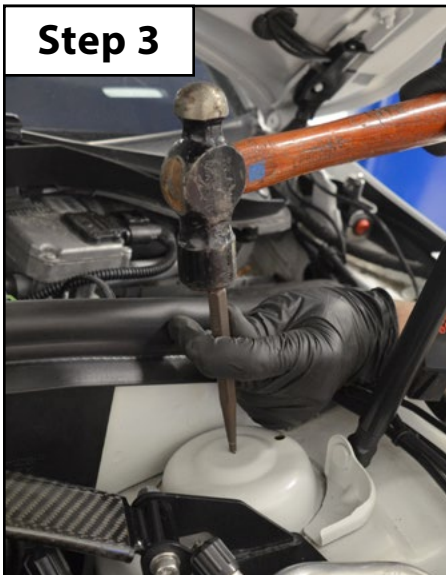
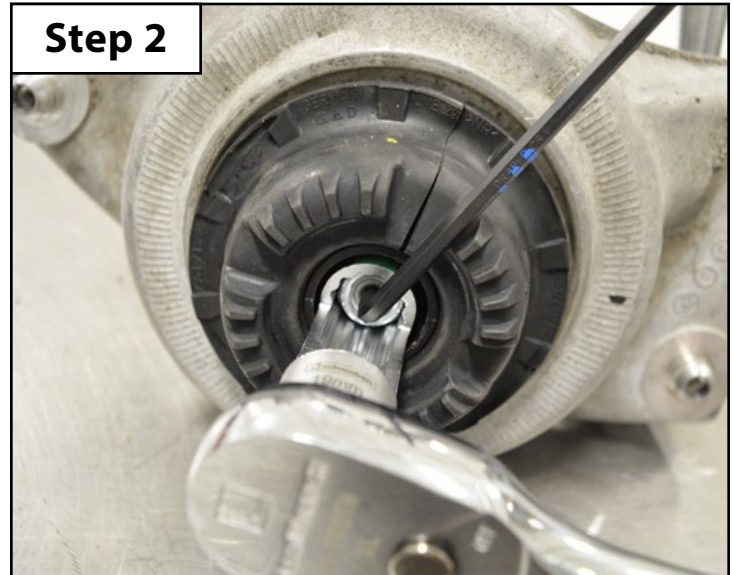
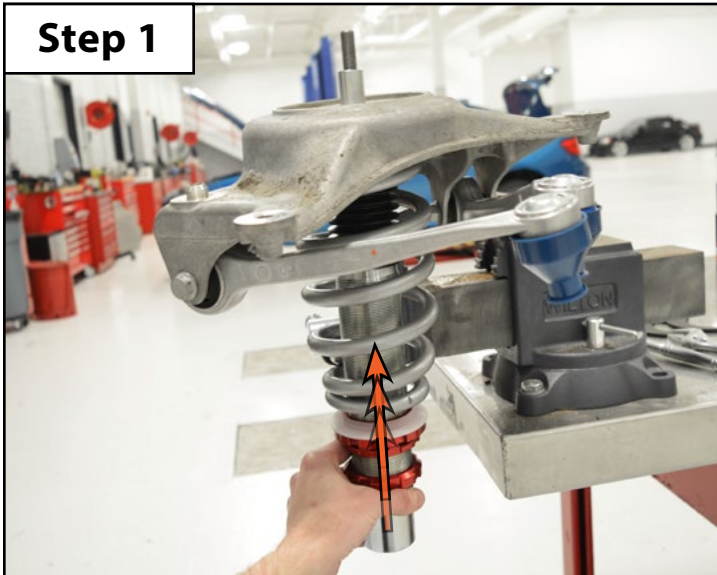


***NOTE:** Installing this knob will allow you to adjust the dampening easily whenever you want, but it requires you to drill a hole in each strut tower for clearance. If you choose not to install the adjustment knob you will need to completely remove the strut assembly in order to make changes. There is **NOT** enough room to install this knob without making a hole in the shock tower.

***NOTE:** Be sure to line up the alignment pin on the strut base with the slot on the strut fork.

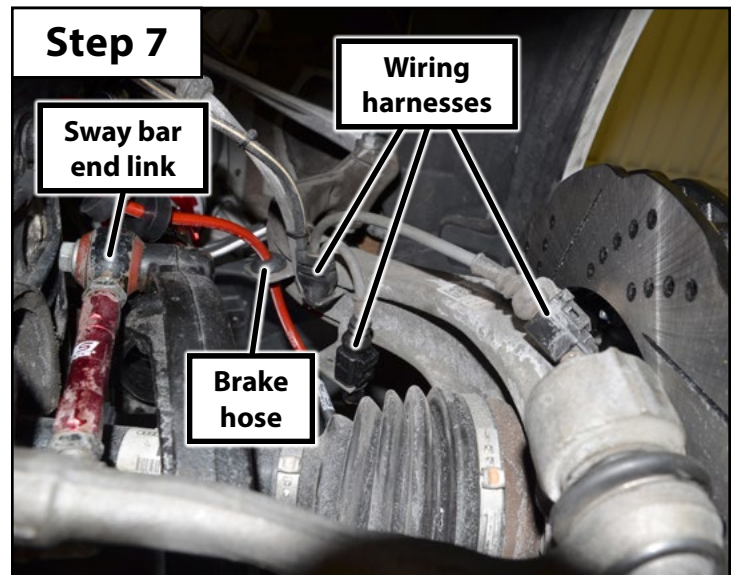
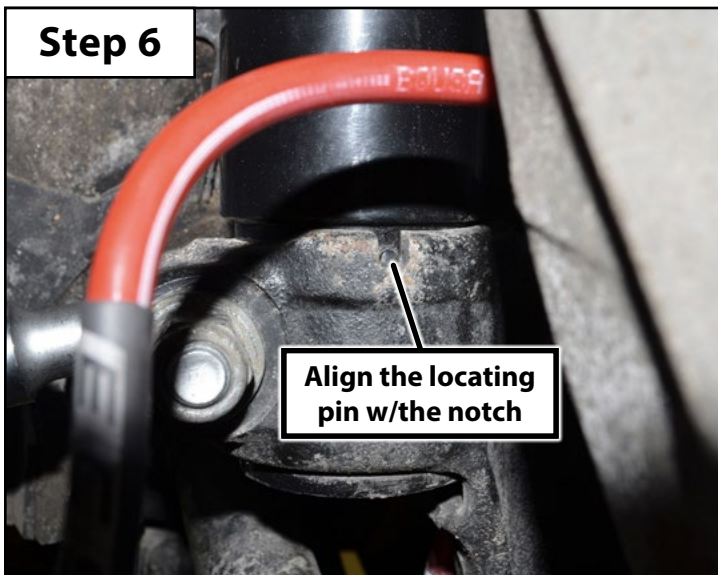
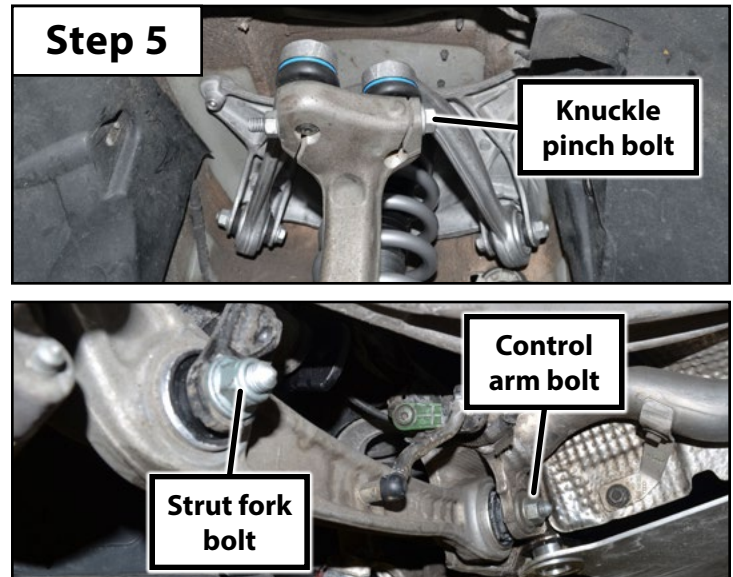
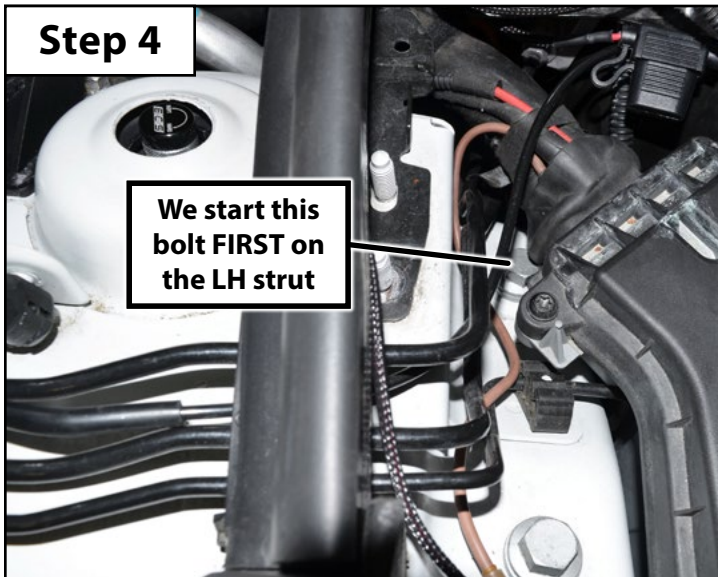
Section 2: Front Coilover Installation

- Step 1**
- Install the new front coilover assembly into the strut cage using the illustration on Page 3 for reference.
- Step 2**
- Install the strut bushing onto the threads on top of the strut shaft.
 - Tighten the nut to 20 Nm (15 ft-lbs). Please **DO NOT** use an impact for this.
STOP: Jump up to [Page 10](#) and set spring preload before proceeding to step 3 below.
- Step 3**
- Thread the strut base onto the strut body, but leave the locking collar loose for now (not shown).
 - You must now decide whether you want to drill holes in your strut towers so you can install the dampening adjustment knob.
 - If you are **NOT** going to install the knob you must set your dampening setting **NOW**, then remove the knob from the strut. Further dampening adjustments would not be possible without removing the entire coilover assembly. There is **NOT** room for this knob to be installed into the strut without drilling a hole in the strut tower, and you **CANNOT** install the knob and drill the hole later. This would destroy the knob in the process.
 - If you **ARE** going to install the knob you will need to use a centering punch to make a mark in the center of each shock tower, then use a 1 1/4" hole saw to make the hole as shown.
 - Cover all intake pipes and passages so metal shavings can't end up somewhere they don't belong!
 - Apply a coat of paint to the hole in each strut tower to prevent any corrosion from forming there.

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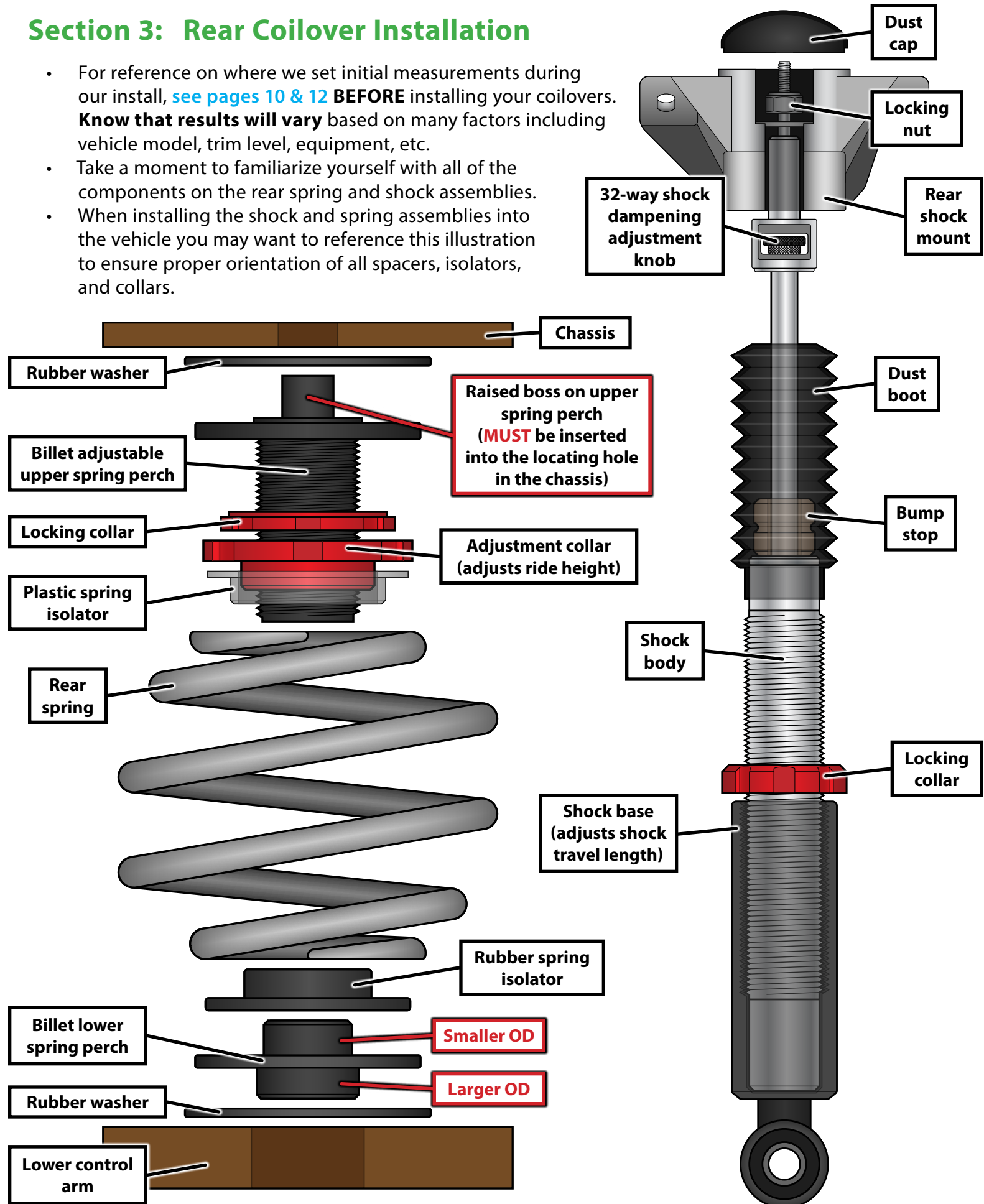
Section 2: Front Coilover Installation

- Step 4**
- Install the strut assembly into the vehicle.
TECH TIP: When installing the LH strut assembly into the vehicle we've found that the inside rear bolt can be tough to line up, there is very little space to work around it. We always start this inside rear bolt by hand **first**, then we'll thread in the remaining bolts and tighten them all to spec.
- Step 5**
- Reconnect the steering knuckle to the upper control arms, then loosely reinstall the lower control arm and strut fork. We'll torque these bolts down later on.
TECH TIP: Thread in the sway bar end link bolt into the strut fork before you connect it to the coilover body. Once the fork is in position this bolt is very difficult to get started.
- Step 6**
- Align the locating pin on the strut base with the slot in the strut fork as shown, then tighten the pinch bolt in the fork until snug. We will need to loosen this bolt later on when we fine-tune the adjustment, then we'll torque it once that is done.
- Step 7**
- If your vehicle is equipped w/electronic dampening control (EDC) now is the time to install the resistor kit ([ES#2608438](#)) into place.
 - Reinstall all remaining components in the reverse order of removal.



Section 3: Rear Coilover Installation

- For reference on where we set initial measurements during our install, [see pages 10 & 12 BEFORE](#) installing your coilovers. **Know that results will vary** based on many factors including vehicle model, trim level, equipment, etc.
- Take a moment to familiarize yourself with all of the components on the rear spring and shock assemblies.
- When installing the shock and spring assemblies into the vehicle you may want to reference this illustration to ensure proper orientation of all spacers, isolators, and collars.

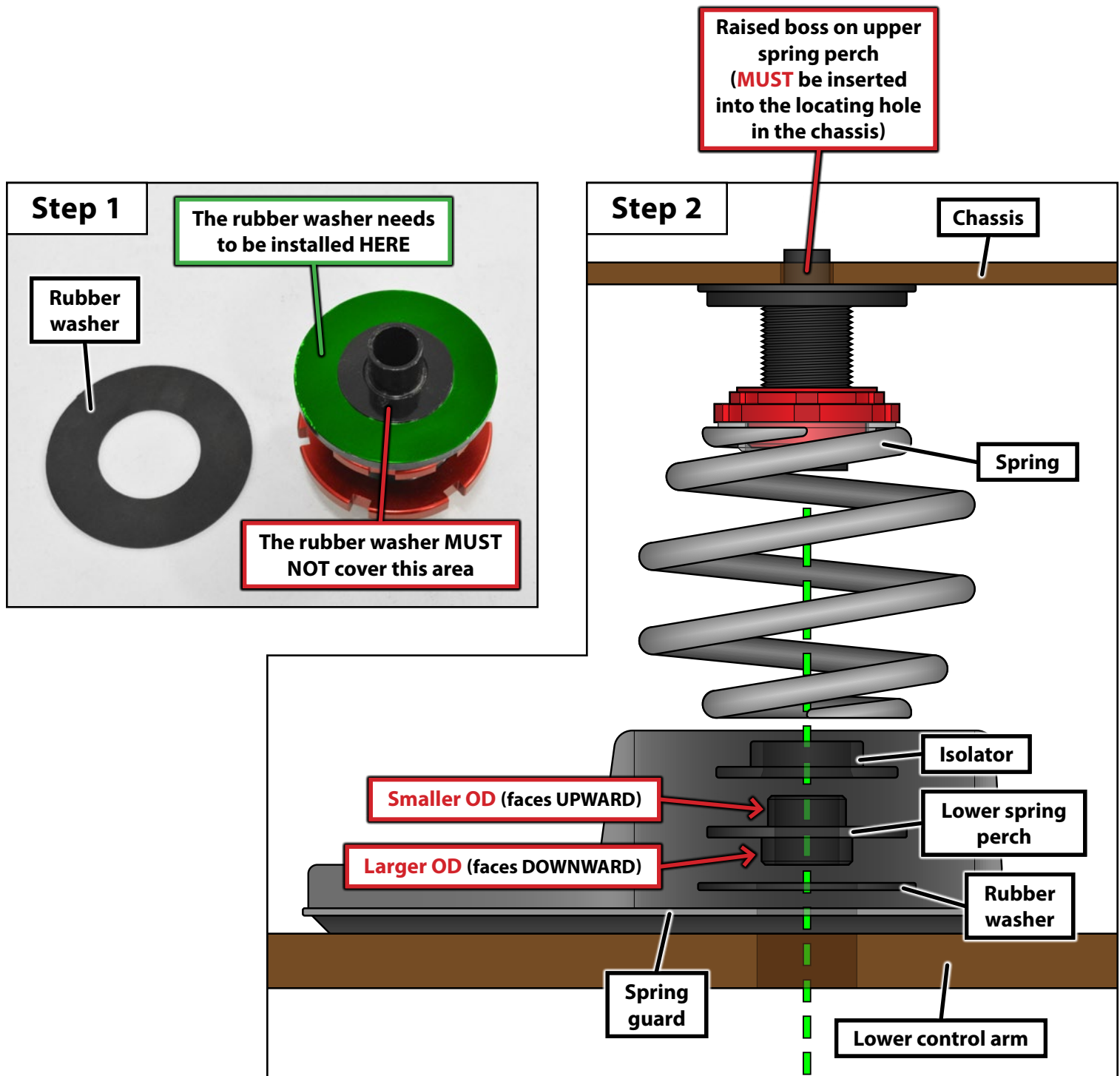
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Section 3: Rear Coilover Installation

- 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 adjustable upper spring perch, the rubber washer needs to be installed in this recessed area (reference the area highlighted in **GREEN** in the photo below).

TECH TIP: We applied a light coating of spray adhesive to the rubber washer to hold it in place while installing and adjusting the spring perch.

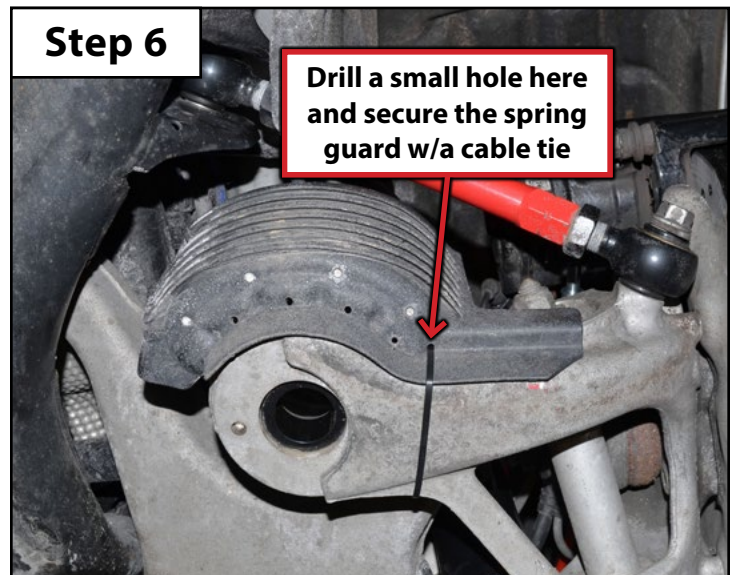
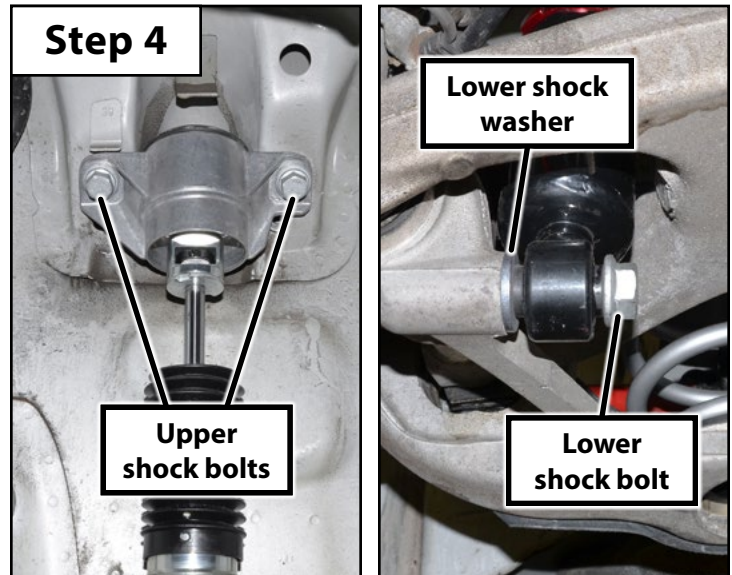
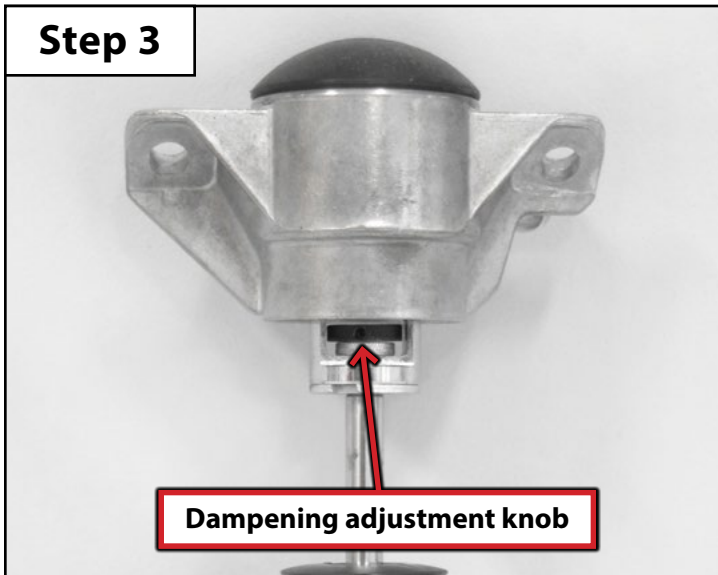
- Step 2**
- Install the spring assembly into the vehicle in the orientation shown below and on the previous page. Leave the locking collar loose for now.
 - You can utilize the OE spring guard as shown below, but it's important to make sure that you install all of the components in the proper order.



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Section 3: Rear Coilover Installation

- Step 3**
- Install a new shock mount or transfer the OE shock mount onto the new adjustable shock.
 - Be sure to orient the dampening adjustment knob so that it faces outward as shown in the photo below.
- Step 4**
- Thread the shock base onto the shock body, but leave the locking collar loose for now (not shown).
 - Install the new adjustable shock into the vehicle.
 - Loosely install the upper and lower shock bolts, we need to wait to torque these bolts until after we've fine-tuned the adjustment.
- Step 5**
- If your vehicle is equipped w/electronic dampening control (EDC) now is the time to install the resistor kit ([ES#2608438](#)) into place.
- Step 6**
- If you are utilizing the OE spring guard you will need to drill a small hole and route a cable tie through it as shown in the photo below.
 - This is required due to the absence of a locating feature in the lower spring perch.



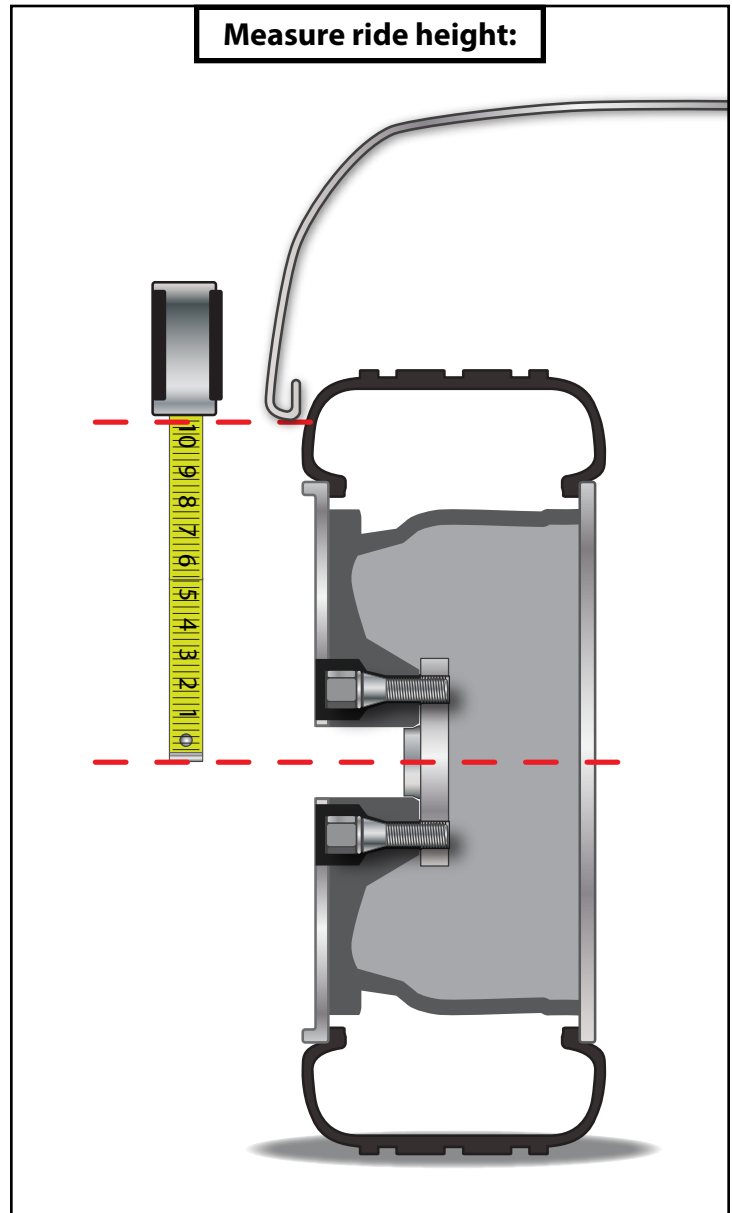
Section 4: Coilover Adjustment Guidelines

- If you haven't already done so, apply a good quality lube to the adjustment threads. A wax-based lube is a good choice (shown in LH photo below).
 - We would strongly recommend against applying something like Never-Seize to the adjustment threads. This could cause dirt and debris to stick to the threads and make adjustments very difficult later on.
- After your coilovers are installed, install the wheels and torque the wheel bolts to specs. **CAREFULLY** lower the vehicle down onto its wheels again, checking for clearance between the tires and the body of the vehicle.
- Make sure you have adequate clearance between the tires and fender lips with the wheels straight ahead, as well as when they are turned. Leave a little extra room for normal suspension travel and body roll so you don't experience tire-to-body interference.
- For consistency and accuracy we recommend measuring ride height from the lower edge of the wheel arch to the wheel center (shown in the RH illustration below).
- Once the ride height is where you want it, and level from side to side, you can tighten the locking collars on all four corners of the vehicle. Next, take the vehicle in for a 4-wheel alignment.

TECH TIP: When making your initial height adjustments, leave the car slightly higher than where you want it. Next, drive the car for several days to give the new suspension a chance to settle. Then you can make your final ride height adjustments.



Lubricate the adjustment threads:



Measure ride height:

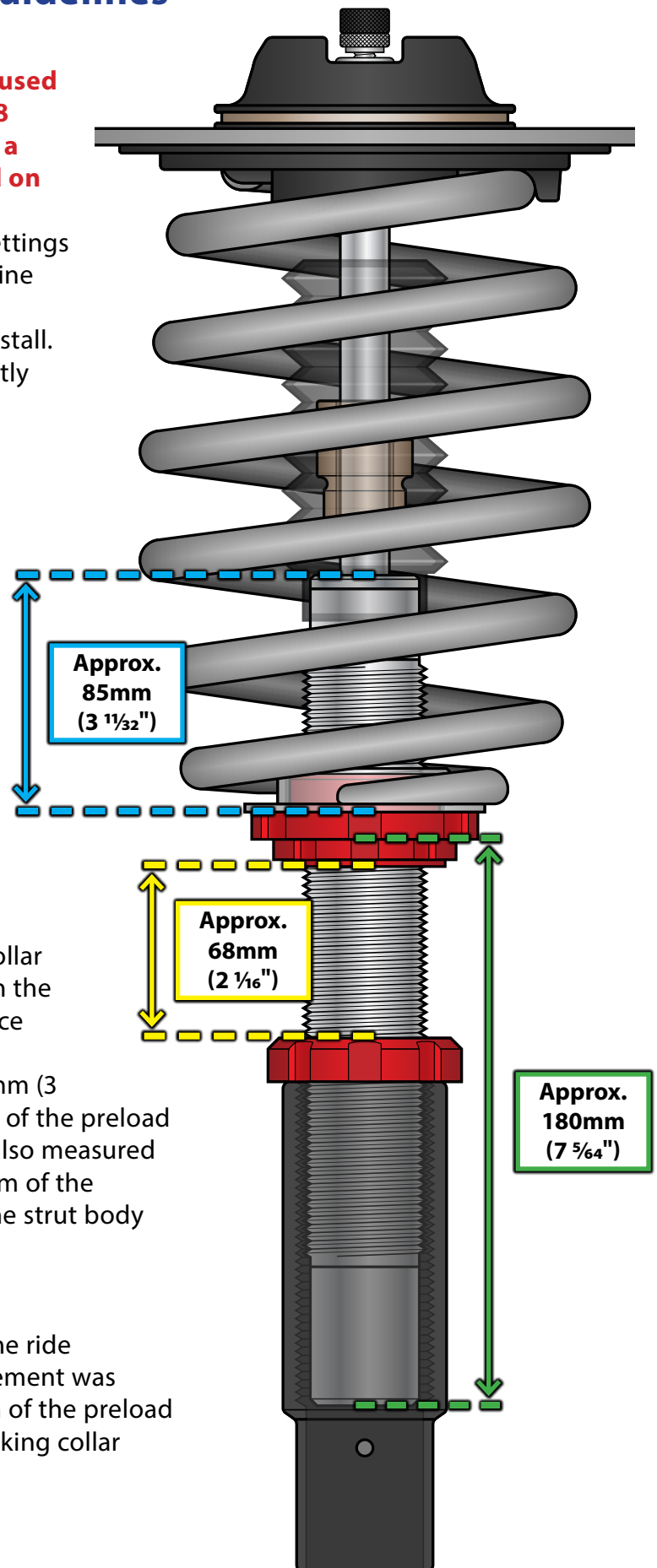
Section 4: Coilover Adjustment Guidelines

Introduction:

- **The following measurements are what we used when we installed the coilovers into our B8 S4. These measurements are to be used as a general guide, your results will vary based on vehicle model, trim level, equipment, etc.**
 - **Example:** An A4 may require different settings due to the lighter weight of the 2.0T engine compared to the 3.0T in an S4.
 - See [Page 14](#) for a photo of our S4 post-install.
- For reference/comparison, our B8 S4 is currently riding on:
 - 19" x 8.5" Alzor Style 628 wheels (ET 35) with 235/35/ZR19 Nitto Motivo tires.
 - 12.5mm spacers on all four corners.
 - All four fenders have been rolled for additional clearance.
 - We have camber on all four wheels set to approx. -2.0° (minus two degrees).

Spring Preload:

- When we assembled the front coilovers we torqued the strut nut to spec, then spun the preload adjustment collar up against the spring by hand. Once they made contact we tightened the preload adjustment collar approximately 25mm (one inch), then tightened up the locking collar.
- Remember to counter-hold the adjustment collar with the large collar wrench while you tighten the locking collar with the small collar wrench once you are happy with your preload adjustment.
- At this point we measured approximately 85mm ($3\frac{1}{32}$ ") from the top of the strut body to the top of the preload adjustment collar (highlighted in **BLUE**). We also measured approximately 180mm ($7\frac{5}{64}$ ") from the bottom of the preload adjustment collar to the bottom of the strut body (highlighted in **GREEN**).

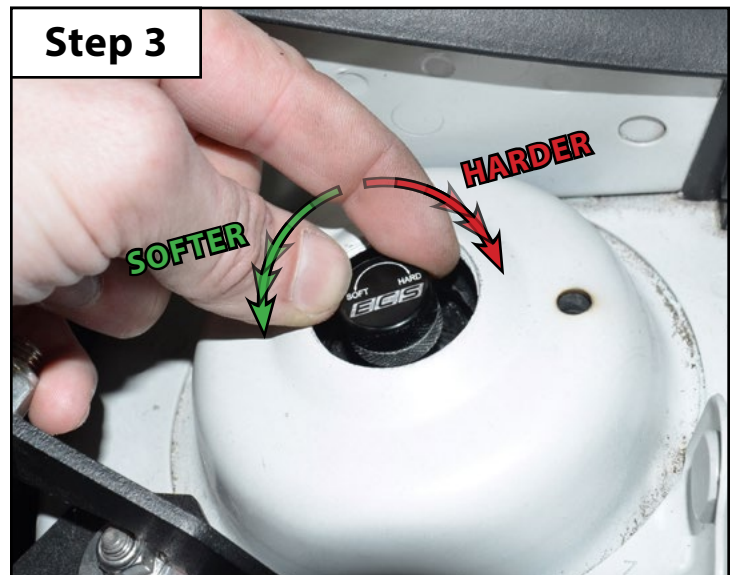
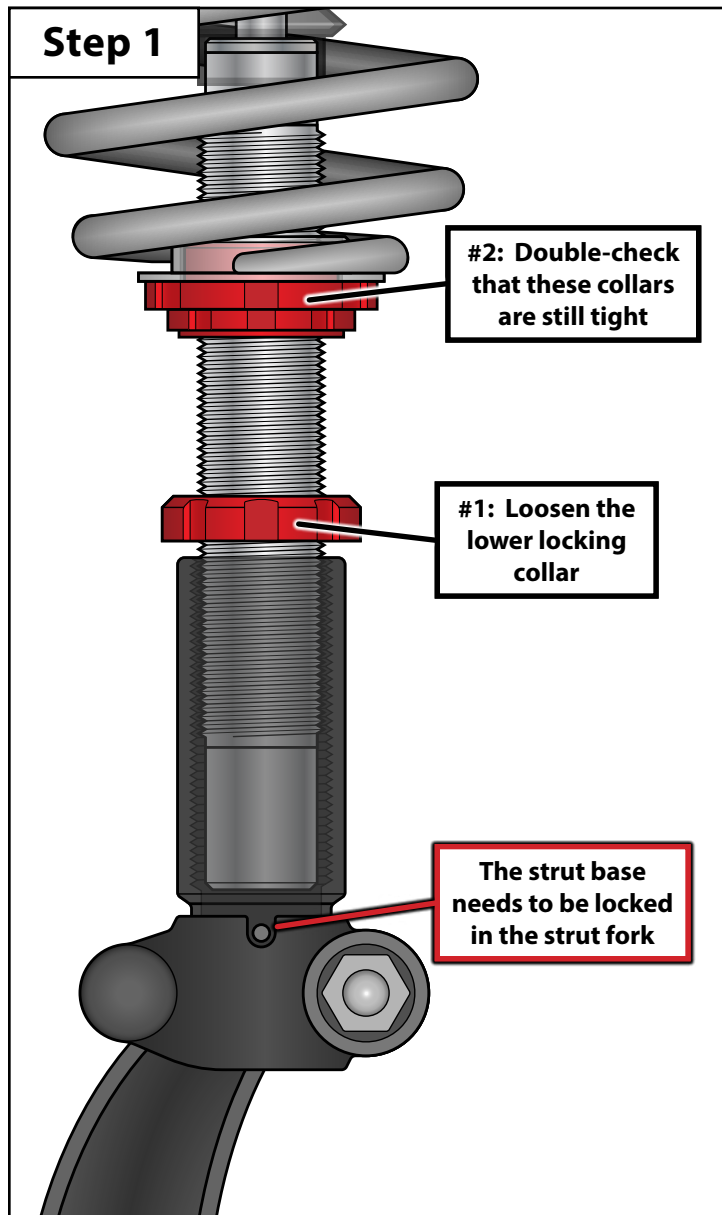


Ride Height:

- After we installed the front coilovers we set the ride height where we wanted it. Our final measurement was approximately 68mm ($2\frac{1}{16}$ ") from the bottom of the preload locking collar to the top of the ride height locking collar (highlighted in **YELLOW**).

Section 4: Coilover Adjustment Guidelines

- Step 1**
- At this point both front struts should be installed into the strut forks.
 - Loosen the lower locking collar, then double-check that the preload adjustment collar and locking collar are still tightened down.
- Step 2**
- Use the large included wrench to rotate adjustment collar on the strut, since this collar is still tightened down you will actually be rotating the entire strut body on the strut shaft.
 - Tighten the locking collar with the small collar wrench once you are happy with your adjustment.
 - Don't forget to torque the strut and control arm bolts to spec after finalizing your adjustments.
- Step 3**
- If you opted to install the front dampening adjustment knob then adjustment is a breeze! Simply thread the knob into the top of the strut shaft, then:
 - Turn the knob clockwise (as viewed from above) for a higher dampening setting and a firmer ride.
 - Turn the knob counter-clockwise for a lower dampening setting and a softer ride.
 - If you did not opt to install the knob into the strut, you will need to remove the entire front coilover assembly and thread in the adjustment knob off the vehicle to change the dampening setting.



Section 4: Coilover Adjustment Guidelines

Introduction:

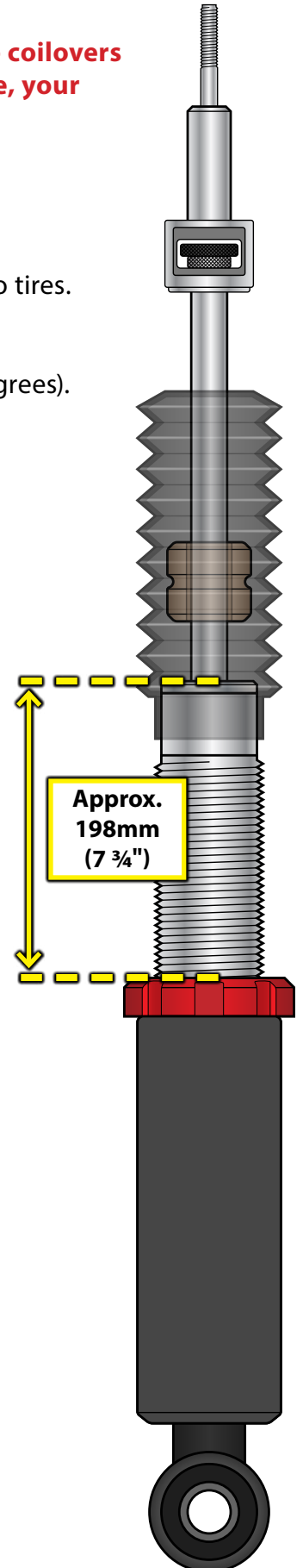
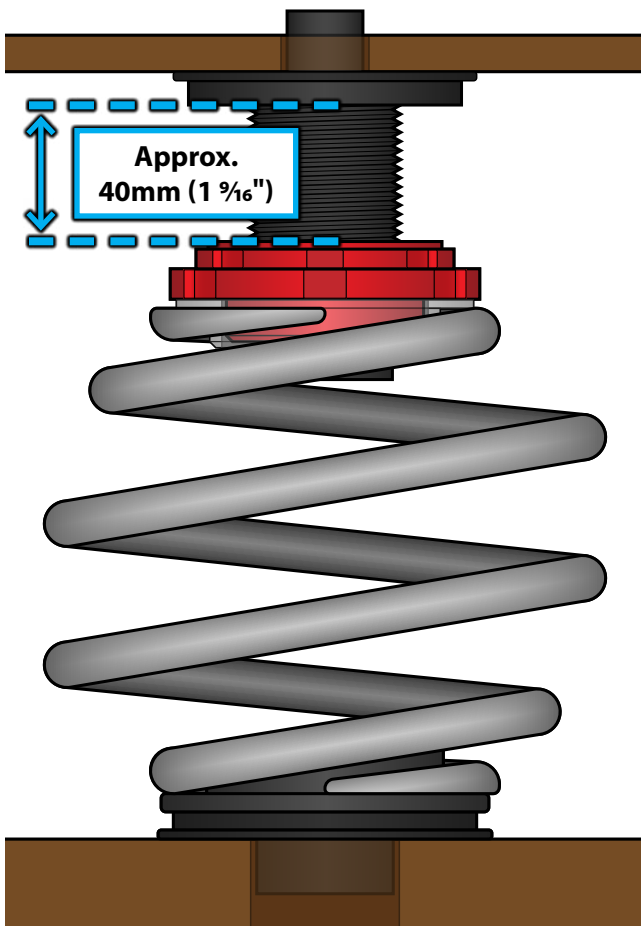
- **The following measurements are what we used when we installed the coilovers into our B8 S4. These measurements are to be used as a general guide, your results will vary based on vehicle model, trim level, equipment, etc.**
 - Example: An A4 may require different settings due to the lighter weight of the 2.0T engine compared to the 3.0T in an S4.
 - See [Page 14](#) for a photo of our S4 post-install.
- For reference/comparison, our B8 S4 is currently riding on:
 - 19" x 8.5" Alzor Style 628 wheels (ET 35) with 235/35/ZR19 Nitto Motivo tires.
 - 12.5mm spacers on all four corners.
 - All four fenders have been rolled for additional clearance.
 - We have camber on all four wheels set to approx. -2.0° (minus two degrees).

Ride Height:

- We run a rather aggressive ride height, we like it low! Once we set our ride height where we wanted it we measured approximately 40mm ($1 \frac{9}{16}$ ") of threads exposed on the upper spring perch (highlighted in **BLUE** below).

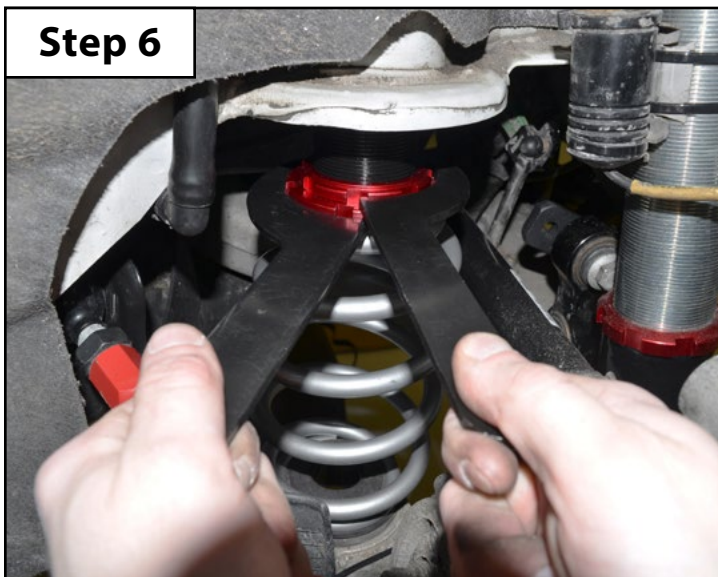
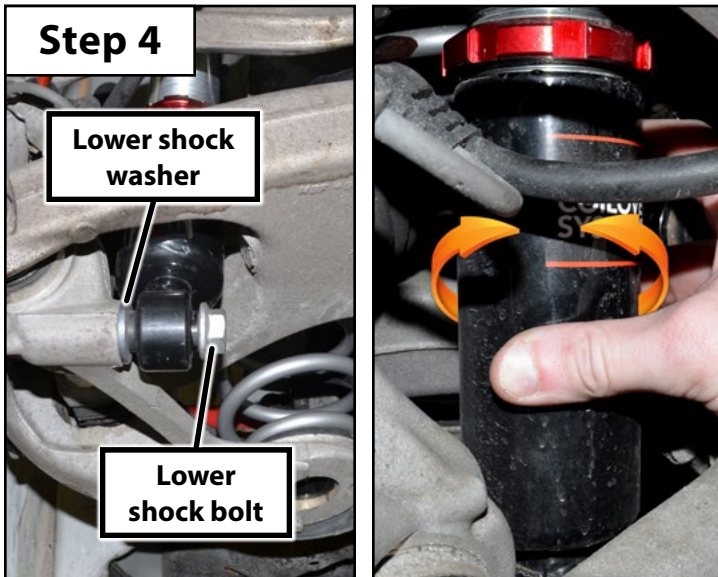
Shock Travel:

- We set our maximum shock travel to approximately 25mm (1") above full suspension droop (I.E.: We let the control arms droop all the way down, then we set the shock length to 25mm above that and lifted the suspension up to line up the lower shock bolt). We did this to give us a bit of added ride quality without cutting down too much on the overall suspension travel.
- This gave us a measurement of approx. 198mm ($7 \frac{3}{4}$ ") from the top of the shock body to the top of the locking collar (highlighted in **YELLOW** on the right).

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Section 4: Coilover Adjustment Guidelines

- Step 4**
- To adjust the rear shock length you'll need to loosen the locking collar, then do one of the following:
 - Firmly hold the threads on the shock body by hand and rotate the shock body on the shaft by hand.
 - Remove the lower shock bolt & washer, then thread the base up or down on the shock body by hand.
- Step 5**
- Tighten the locking collar with the small collar wrench once you are happy with your adjustment.
 - Don't forget to torque the shock bolts to spec after finalizing your adjustments.
- Step 6**
- Rear ride height is adjusted by threading the adjustment collar up or down on the upper spring perch.
 - Counter-hold the adjustment collar with the large collar wrench while you tighten the locking collar with the small collar wrench once you are happy with your adjustment.
- TECH TIP:** Space is pretty tight around the springs. Rear ride height and shock length adjustments are both easier to fine-tune w/the rotors and the calipers removed, but it can be done w/them in place.
- Step 7**
- Rear dampening adjustment is a breeze with the knob located just below the upper shock mount.
 - Turn the knob clockwise (as viewed from directly above) for a higher dampening setting and a firmer ride.
 - Turn the knob counter-clockwise for a lower dampening setting and a softer ride.



Section 5: Final Installation Notes & Results

- The photo below shows the final results of the install and adjustments on our B8 S4.
- As you can see we ended up with a front ride measurement of $12 \frac{5}{8}"$, and a rear ride height measurement of $12 \frac{3}{4}"$.
 - This measurement is taken from the lower edge of the wheel arch to the wheel center.
- This ride height gave us adequate tire-to-fender clearance for suspension movement and lock-to-lock steering, while also giving us an aggressive stance and appearance.
- We drove the vehicle and experimented with the dampening settings for quite a while. We settled on a front dampening setting of 18 and a rear dampening setting of 24. This gave us a nice balance between comfortable and sporty ride quality.
 - Remember that these settings are based on our preferences, you are free to find your own ideal settings.
- Make sure that you don't forget the following important steps:
 - Torque all fasteners to spec once you've finalized your adjustments.
 - Torque any fasteners which go through a bushing with the suspension set at ride height to avoid bushing twist.
 - If you haven't already done so, apply a good quality lube to the adjustment threads. A wax-based lube is a good choice.
 - Take the vehicle in for a 4-wheel alignment immediately after installing the coilovers.
 - Recheck all fasteners (including the locking collars on all of the coilovers) after 500 miles. If the locking collars have backed off, tighten them back up with the included collar wrenches.
 - If the locking collars continue to back off you can use a flat blade screwdriver and a hammer to tighten them up, but know that doing so will mar the finish on the collars.

