Audi B6 B7
Coilover Suspension
Installation Instructions

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.

INTRODUCTION

Audi B6 B7 Coilover Suspension Systems

Coilover suspension systems for the Audi B6 and B7 Chassis offer the following features:

- Progressive rate springs
- High quality, lightweight and durable components
- Adjustable ride height
- Improved handling
- Aggressive looks

ECS Difficulty Gauge

1 - Easy

2 - Moderate

Pro - 4

Advanced - 3

Installing a coilover suspension system is a rewarding project that can be successfully completed in a weekend. Plan accordingly based on your experience level. These instructions will help you with a smooth, trouble free installation, but there are a few difficult steps, so be sure to read and familiarize yourself with these instructions before you begin and read any information that comes with your kit as well. Make sure you have all the required tools on hand and in addition, don't forget to plan ahead and schedule a four wheel alignment with a qualified repair facility. Thank you for purchasing a coilover suspension kit from ECS Tuning. We appreciate your business!

Before you begin this installation, thoroughly read these instructions, particularly steps 8, 9, and 10 on pages 14 and 15. This can be a difficult job. Be sure you have the proper equipment and experience to safely and correctly install this suspension.

TABLE OF CONTENTS

We carry some of the finest coilover suspension kits from some of the best names in the business. These instructions are intended as a guide to help you install a coilover kit on any B6 or B7 Audi Chassis. We have used an H&R coilover kit in creating these instructions. There may be some minor differences in kits from different manufacturers, but the overall installation procedures will be the same.

Symbols:

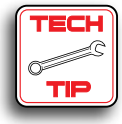
The following symbols may be used throughout these instructions indicating special attention:

FORK IN THE ROAD: When there are different options within any given kit, we will direct you to the proper page and step to continue.

YIELD: Pause for a moment to double check component installation before you continue. Ignoring this can cost you time later during the installation.

CAUTION: Pay close attention to these warnings and instructions. Difficult installation, personal injury or component damage may occur if ignored.

STOP: The upcoming steps require specific preparation and/or assistance in the interest of safety. Please read ahead in the instructions and prepare before continuing.



TECH TIP: Tips and tricks to make the job go much easier.

NOTE: Additional information that may be useful to the installation depending on your application.

COILOVER KIT CONTENTS

Rear Shocks

Front Shocks with Adjustable Spring Perches

Rear Coil Springs

Front Coil Springs

Rear Spring Perches

Coilover Suspension Adjustment Wrenches

NOTE

Actual Kit contents may vary slightly depending on manufacturer.

INSTALLATION KITS

For a trouble free installation and to obtain the maximum benefit from your new coilover suspension, we recommend the use of a coilover installation kit. Using an installation kit has the following advantages:

- New bushings and strut bearings allow your suspension to operate smoothly and increase reliability.
- Many of the fasteners are torque to yield fasteners that require replacement, and in many cases they will be very rusty and can be damaged during removal. These are included with an installation kit.
- Specialty tools are included with some installation kits.

ES#2581959 Includes the following:

- Upper Front Strut Mounts
- Rear Upper Spring Pads
- Rear Lower Spring Pads
- Rear Upper Shock Mounts
- Rear Upper Shock Mount Bolts
- Rear Lower Shock Mount Bolts and Nuts
- Front Lower Wishbone Bolts and Nuts

REQUIRED TOOLS

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

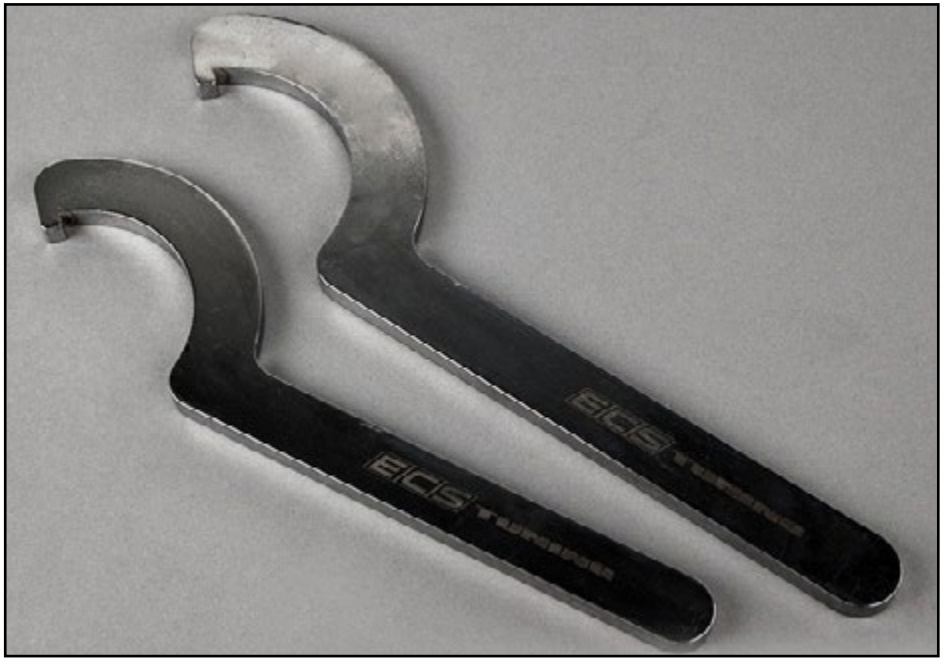
We recommend that you have a complete selection of tools and equipment necessary for automotive repair. Below is a list of the tools we used to install this Coilover Suspension Kit. Additional tools may be required for any issues that arise during installation such as rust, corrosion, or broken and stripped fasteners.

- 17mm Protecta-Socket (for lug nuts) ..... Available at ecstuning.com ..... ES#2221243
- 3/8" Drive Torque Wrench ..... Available at ecstuning.com ..... ES#2221245
- 1/2" Drive Torque Wrench ..... Available at ecstuning.com ..... ES#2221244
- Flat Blade and Phillips Screwdriver(s) ..... Available at ecstuning.com ..... ES#2225921
- Wheel Hanger ..... Available at ecstuning.com ..... ES#2678092
- Lug Cap Puller ..... Available at ecstuning.com ..... ES#4328
- 1/2" Breaker Bar ..... Available at ecstuning.com ..... ES#2776653
- Coil Spring Compressor ..... Available at ecstuning.com ..... ES#1306817
- Strut Nut Sockets ..... Available at ecstuning.com ..... ES#2703013
- Coilover Wrenches ..... Available at ecstuning.com ..... ES#2465
- 3/8 Drive Ratchet ..... Available at ecstuning.com ..... ES#2765902
- 3/8 Drive Sockets: 13mm ..... Available at ecstuning.com ..... ES#2763772
- Tape Measure
- 1/2" Drive Sockets: 16mm, 18mm, 21mm
- 1/2" Drive Ratchet, Extensions
- Open/Boxed End Wrenches: 13mm, 15mm, 16mm, 18mm, 21mm
- Angled Pick Tool
- Pry Bar(s)
- Oxy-Acetylene Torch
- Punch
- Side Cutters
- Ball Pein Hammer
- Hex Bit (Allen) Wrenches: 3mm, 5mm, 6mm
- Caliper Hangers

Although you can used different styles of coil spring compressors on the front, the rear will require a specific style of compressor. Review the procedure on page 31, step 2 to make sure you will have this style of coil spring compressor available before beginning.

ADDITIONAL RECOMMENDATIONS FOR COILOVER INSTALLATION

Many coilover kits come with only one wrench for adjustment. It is extremely helpful to have two wrenches for adjusting and tightening the spring perches. Our ES#2465 wrench set contains two different sizes compatible with JOM, ECS, and H&R coilover kits.



SHOP SUPPLIES AND MATERIALS

- Hand Cleaner/Degreaser..... Available at ecstuning.com..... ES#2167336
- Shop Rags ..... Available at your local auto parts store
- Aerosol Spray Lubricant/Penetrating Oil..... Available at your local auto parts store

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.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always 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. Always make sure that the vehicle is securely supported on jack stands.

Tape Measure

With the vehicle parked on level ground, measure the ride height at all four corners by measuring from the center line of each wheel to the lip of the fender or quarter panel as shown in the picture. This is an important measurement that will give you a reference point for adjusting the ride height of the vehicle. Record the measurements below.

Left Front	Right Front	Left Rear	Right Rear

Lug Cap Puller

Remove the lug caps on each wheel.

INITIAL PROCEDURES

Step 3: 17mm Protecta Socket, Breaker Bar

Loosen the lug nuts slightly with the weight of the vehicle still on the wheels.

NOTE

If you are using an impact wrench, you can skip this step.

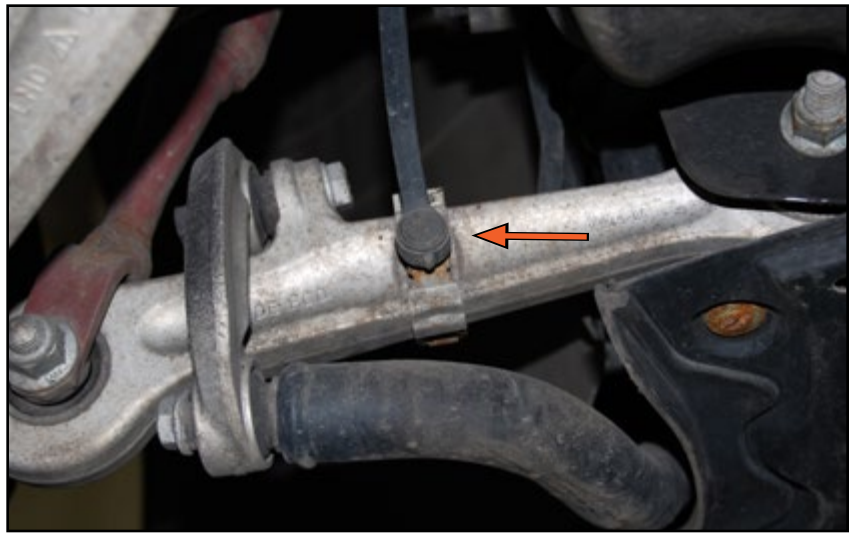
Step 4: 17mm Protecta Socket, 1/2" Ratchet, Wheel Hanger

Safely raise and support the vehicle and remove all four wheels. Once you begin to remove the lug bolts, we recommend installing a wheel hanger to support the wheels.

REMOVING THE ORIGINAL FRONT STRUTS

Step 1:

On the LH (Drivers) side only, locate the coupling rod for the vehicle headlight level sensor, attached to a clip on the lower front suspension link.



Step 2: Flat Blade Screwdriver

Pry up on the top of the clip from the back side of the suspension link. Once the clip releases, pivot it downward and remove it.

TECH TIP

Check to see that the ball and socket connection between the coupling rod and the clip is rotating freely. If not, spray penetrating lubricant in the connection and work it back and forth until the lubricant seeps in and frees it up.

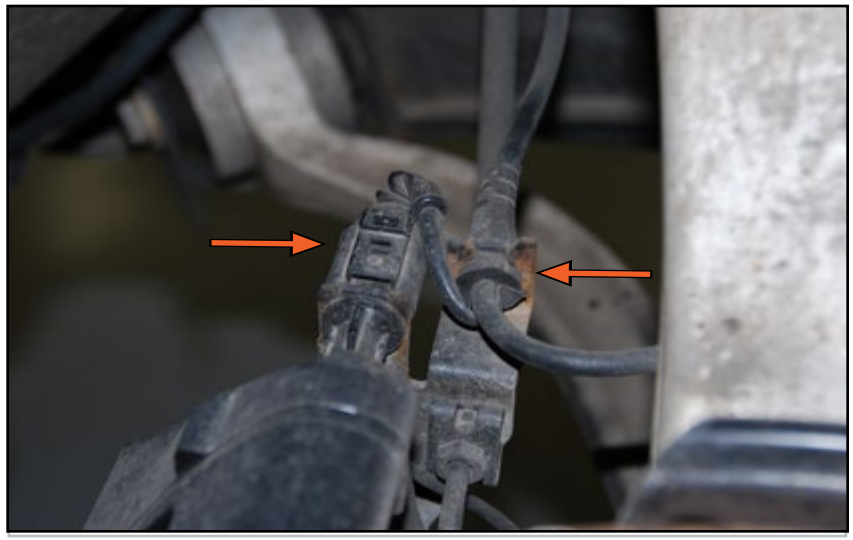
REMOVING THE ORIGINAL FRONT STRUTS

Step 3:

Pull the ABS sensor wire out of the bracket on the back side of each steering knuckle.

Step 4:

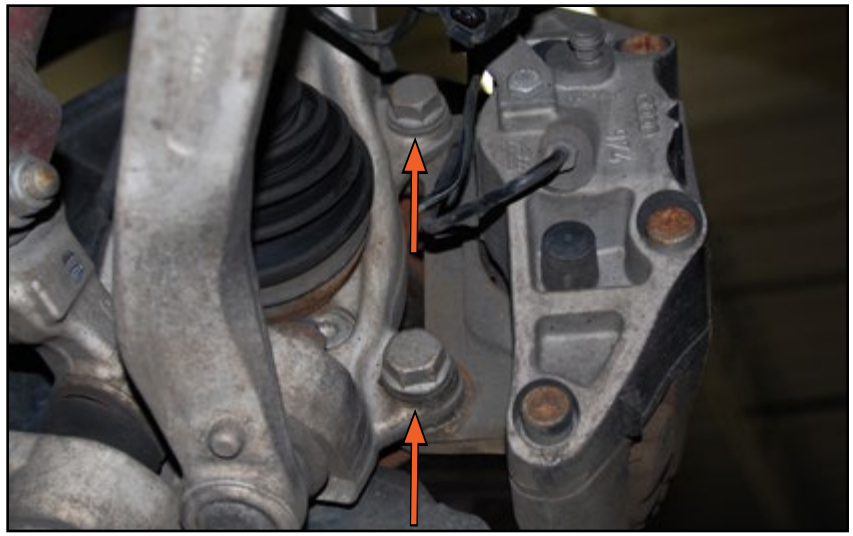
Pull the ABS sensor wire out of the bracket just behind each caliper and disconnect the brake pad sensor wire connectors.



REMOVING THE ORIGINAL FRONT STRUTS

Step 5: 21mm Socket, 1/2" Ratchet

Remove both front brake caliper bracket bolts on each side.



NOTE

There are different brake options for the Audi B6/B7 Chassis and your brakes may differ slightly in appearance, but the overall removal will be the same.

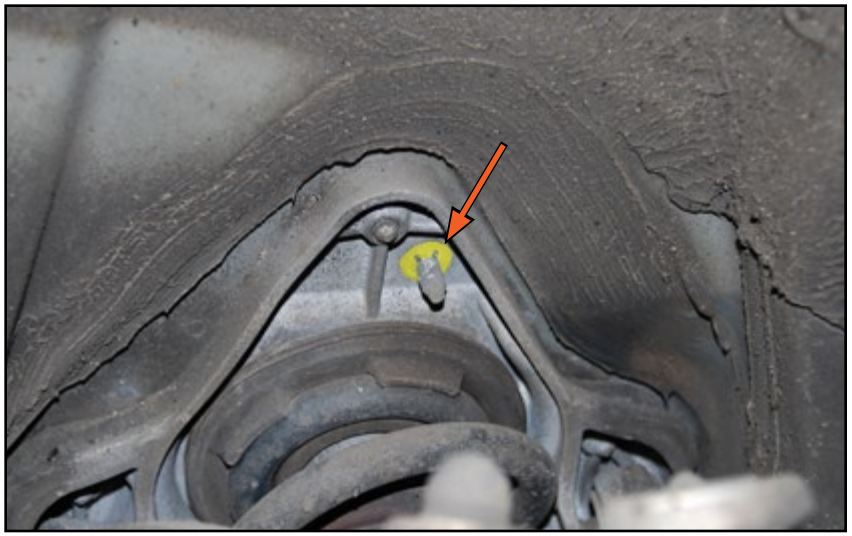
Step 6: Caliper Hanger

Slide the front brake calipers off the rotors and hang each one so there is no weight on the brake hose.

REMOVING THE ORIGINAL FRONT STRUTS

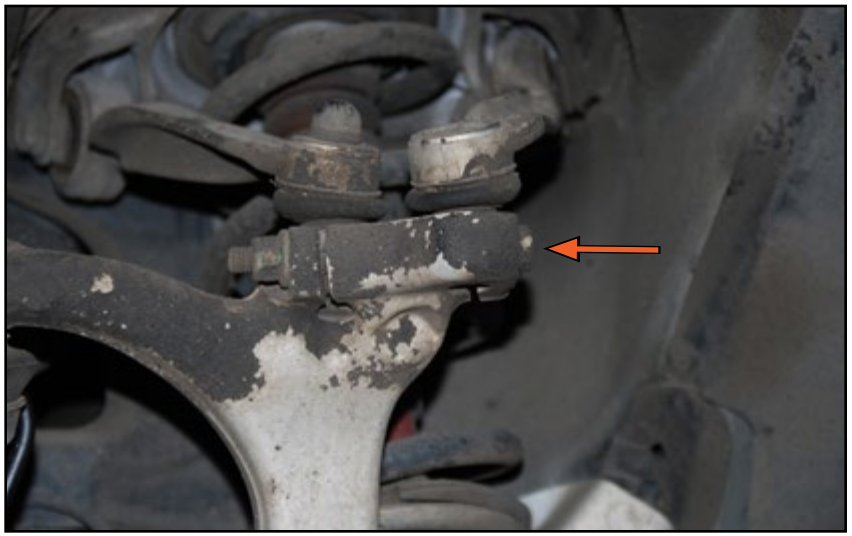
Step 7: Angled Pick Tool

Pry the clip off of the upper strut mounting plate installation pin. This clip may be discarded, you will not need to re use it.



Step 8:

Locate the upper link pinch bolt. This bolt will need to be removed, and it may be difficult. Because of the aluminum steering knuckle, these bolts have a tendency to become extremely corroded and stuck in place.



REMOVING THE ORIGINAL FRONT STRUTS

Step 9: 16mm Socket, 16mm Wrench, Ratchet

Loosen and remove the nut (arrow) on the end of the pinch bolt and spray the bolt liberally with penetrating oil/lubricant. Attempt to turn the head of the bolt, working it back and forth to help the lubricant seep in.

Step 10: 16mm Socket, 16mm Wrench, Ratchet, Pry Bar

If you are able to rotate the bolt, you may be able to back it out and get a prybar underneath the head to help pull it out.

In most cases, as it was with this car, you will need to heat the steering knuckle with an oxy-acetylene torch in order to remove the bolt. On this car, we could not get the bolt any farther out than shown in the picture before we had to heat the steering knuckle. You must use extreme caution, because too much heat will damage the upper links. In some cases, the bolt may even break and it will need to be driven or drilled out.

REMOVING THE ORIGINAL FRONT STRUTS

Step 11: Punch, Ball Pein Hammer

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

Do not spread the slots in the steering knuckle in any manner.

Step 12:

With both links driven out, swing the steering knuckle toward the rear of the wheel well to leave room for removing the original strut assembly.

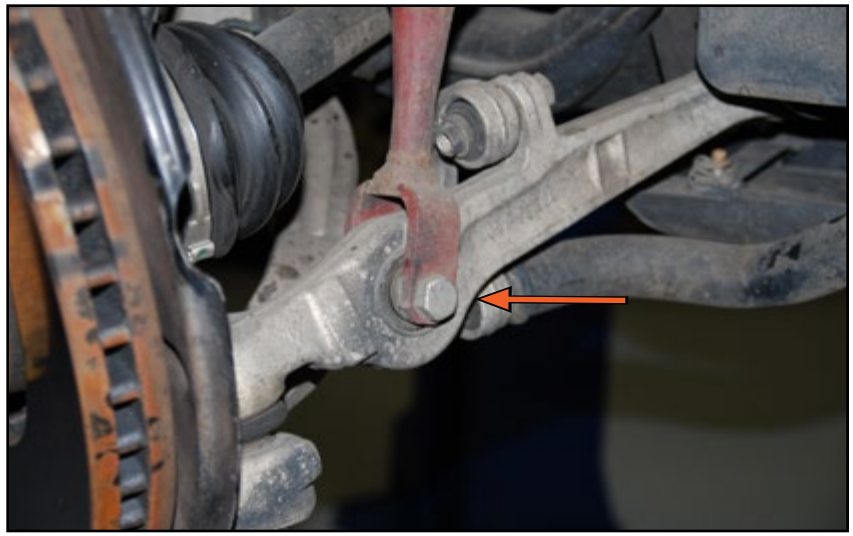
NOTE

Using a wire brush or emery cloth, thoroughly clean the corrosion from the upper links and the steering knuckle.

REMOVING THE ORIGINAL FRONT STRUTS

Step 13: 18mm Socket, Ratchet, 18mm Wrench

Remove the lower strut wishbone bolt on each side.



Step 14:

Pull down slightly on the front suspension and lift the strut wishbone over the lower forward link.

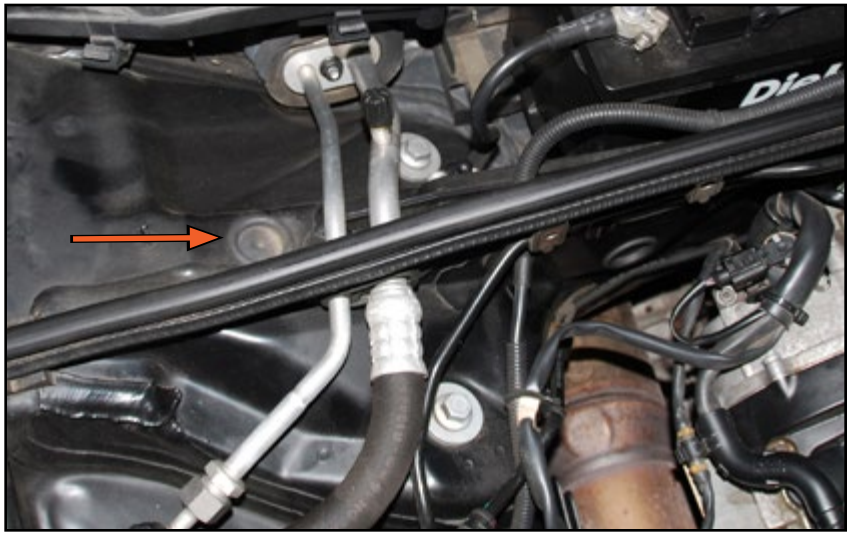
REMOVING THE ORIGINAL FRONT STRUTS

Step 15:

Open the hood, and lift the cowl panel off the RH (Passenger) side.

Step 16: Flat Blade Screwdriver

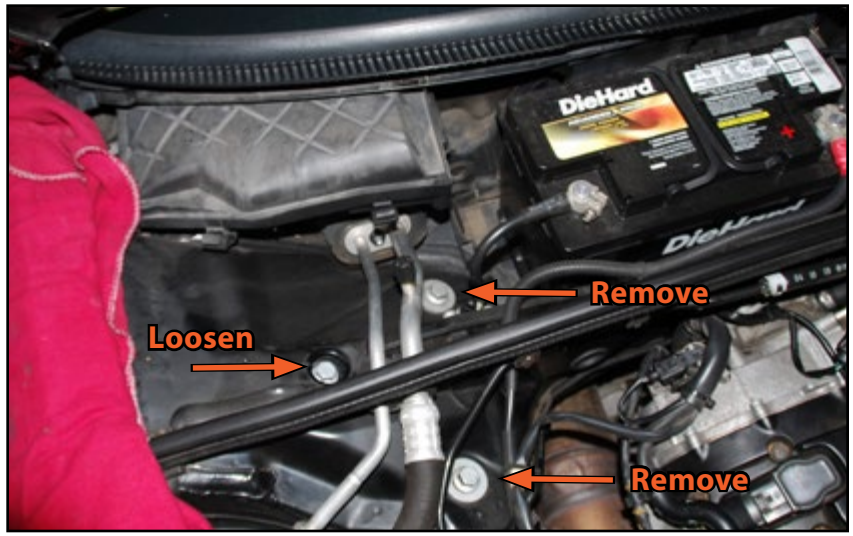
Remove the plug covering the outward upper strut mounting bolt.



REMOVING THE ORIGINAL FRONT STRUTS

Step 17: 16mm Socket, Ratchet, Extension

Remove the two inner upper strut mounting bolts, then loosen but do not remove the outer mounting bolt.



Step 18: 16mm Socket, Extension

While holding the strut with one hand, remove the outer mounting bolt, then carefully lower the strut assembly out of the car.

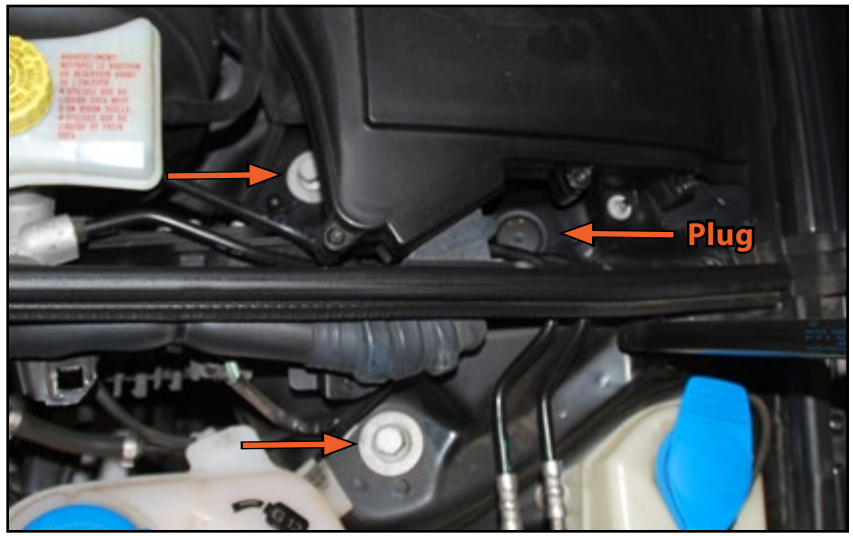
REMOVING THE ORIGINAL FRONT STRUTS

Step 19: Phillips Screwdriver

On the LH (Drivers) side, remove the securing screw, then lift the coolant reservoir off to the side to access the upper strut mounting bolt underneath.

Step 20: Flat Blade Screwdriver, 16mm Socket, Ratchet, Extension

Remove the plug covering the outward upper strut mounting bolt, then remove the two inner bolts, loosen the outer bolt, hold the strut, remove the outer bolt, and remove the strut assembly from the car.



DISASSEMBLING THE ORIGINAL FRONT STRUTS

Step 1:

Securely clamp one of the front strut assemblies into a vise.

Step 2: Coil Spring Compressor

Install a coil spring compressor and compress the spring until the upper strut mount and bracket becomes noticeably loose, indicating that spring is compressed enough to remove the upper strut mount.

DISASSEMBLING THE ORIGINAL FRONT STRUTS

Step 3: 18mm Strut Nut Socket, Ratchet, 6mm Allen

While holding the shock rod stationary, loosen and remove the upper strut nut.

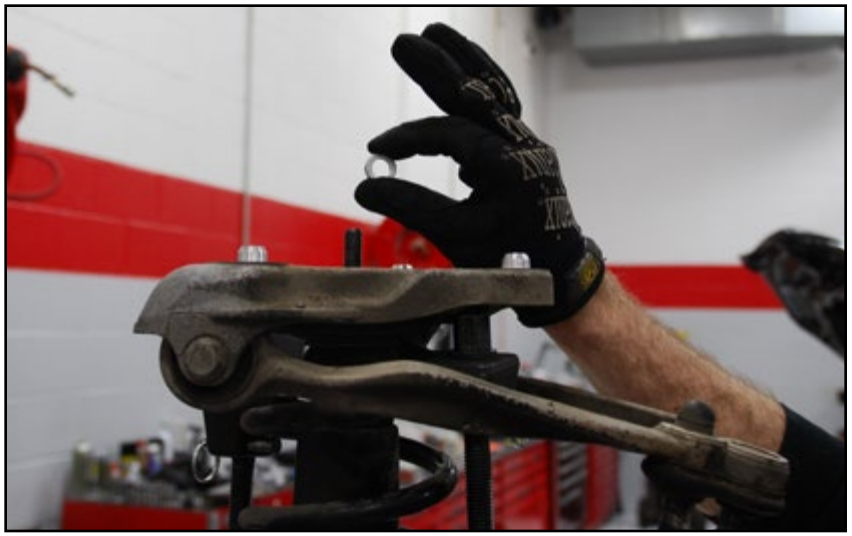
Step 4:

Lift off the upper strut mount.

DISASSEMBLING THE ORIGINAL FRONT STRUTS

Step 5:

Lift off the shock rod washer.

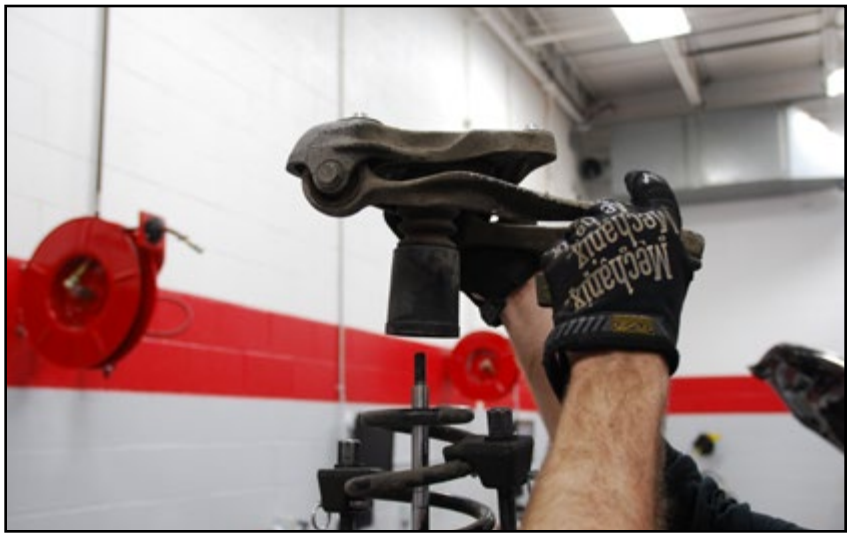


Step 6:

Lift off the upper strut bracket/upper link assembly. The dust boot and bump stop should lift off at the same time.

Lift off the coil spring, carefully release the tension and remove the spring compressor.

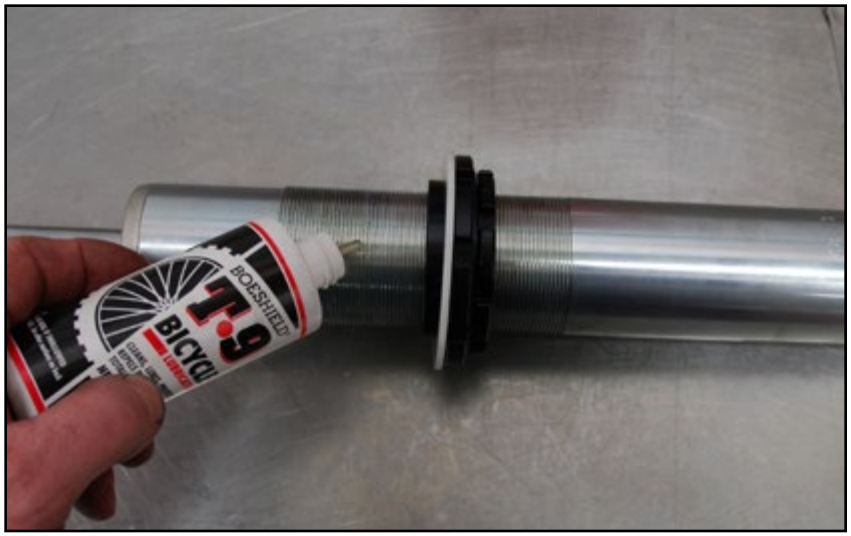
Repeat this procedure for the other remaining front strut.



ASSEMBLING AND INSTALLING THE NEW FRONT COILOVERS

Step 1:

Liberally apply a lubricant such as Boeshield T-9 to the threads on the main body of each front shock. Make sure to coat all of the threads.



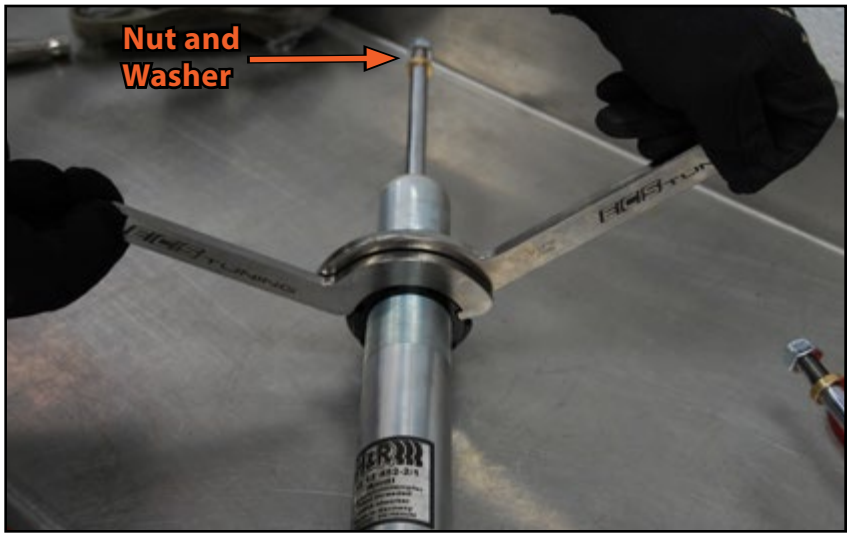
Step 2: Coilover Wrenches

Check the locking ring to see if it is tight against the adjustment collar. If so, loosen it using one coilover wrench to hold the collar and one to turn the locking ring.

Also remove the new nut and washer on the end of the shock absorber.

NOTE

Many coilover suspension kits will come with wrenches. If your kit does not come with any, these coilover wrenches from ECS Tuning will fit most suspension systems.



ASSEMBLING AND INSTALLING THE NEW FRONT COILOVERS

Step 3:

Clamp the wishbone of one of the new struts in a vise. Place the nylon seat washer onto the adjustment collar.

Step 4:

Place the lower spring seat onto the nylon seat washer.

ASSEMBLING AND INSTALLING THE NEW FRONT COILOVERS

Step 5:

Place one of the new front coil springs over the shock and onto the lower spring seat.

NOTE

The top and bottom diameter of the front coil springs is different and will match the size of the upper and lower spring seats. There is no left or right, either one can be used on either side.

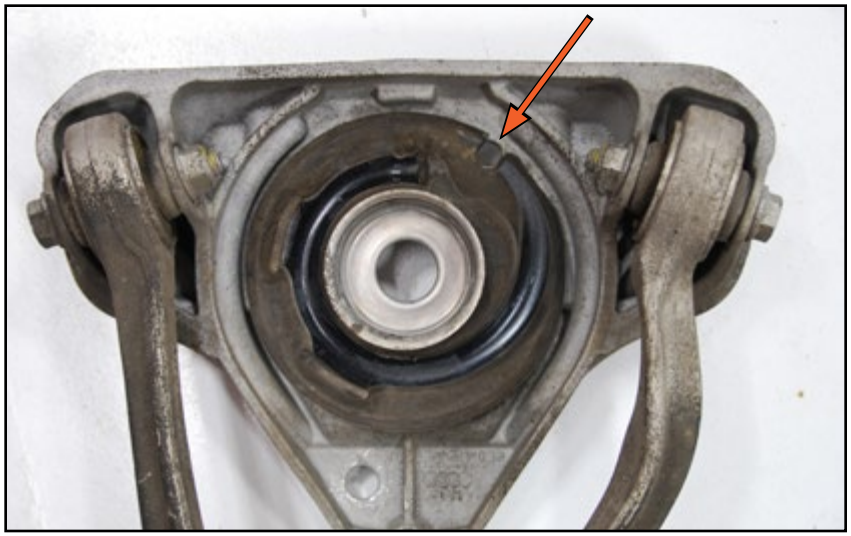
Step 6:

If you are installing new dust boots and bump stops, push them into place in the upper strut bracket. (If the originals have fallen out, pull them off of the original shock rod then push them back in place into the upper strut bracket).

ASSEMBLING AND INSTALLING THE NEW FRONT COILOVERS

Step 7:

Inspect the photo on the right. The original spring insulator on the underside of the upper strut bracket will have an indentation of the original coil spring (shown here with the bump stop removed). Also note the alignment notch (arrow). Make sure the alignment notch in the insulator is lined up with the hole in the upper bracket. If you are installing new insulators, install them at this time.



Step 8:

Place the new upper bracket/upper link assembly over the shock rod and onto the top of the coil spring, making sure the spring insulator is properly aligned between the spring and bracket.

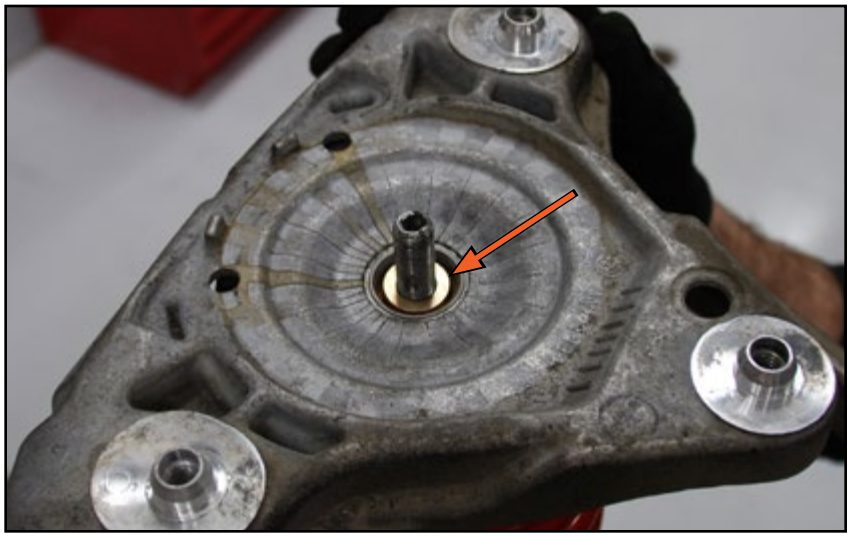
ASSEMBLING AND INSTALLING THE NEW FRONT COILOVERS

Step 9:

Lower the adjusting collar on the body of the shock until the shock rod is protruding through the upper bracket.

Step 10:

Place the new washer onto the shock rod.



ASSEMBLING AND INSTALLING THE NEW FRONT COILOVERS

Step 11: 19mm Strut Nut Socket, Torque Wrench, 6mm Allen

Place the upper strut mount over the shock rod and onto the upper bracket. Install the new upper strut nut and torque it to 50 Nm (37 Ft-lbs).

Step 12: Coilover Wrench

Adjust the height of the lower spring seat upward until it is firmly tensioned against the coil spring. Reference the kit manufacturers information for an adjustment range, and set the height of the lower spring seat to the center of the specified range.

Repeat these steps for the other new front coilover, then proceed with step 13.

- [ ] Install both strut assemblies into place.
- [ ] Torque the upper strut mount bolts to 75 Nm (55 Ft-lbs).
- [ ] Install the plugs on both outward upper strut mount bolts.
- [ ] Install the coolant reservoir.
- [ ] Install the cowl cover on the RH side.
- [ ] Install the lower wishbone bolt. Do not tighten it at this time. When assembly is complete and the vehicle is at ride height, torque this bolt to 90 Nm (66 Ft-lbs).
- [ ] Install both upper links into the steering knuckle. Install the pinch bolt and torque it to 40 Nm (29 Ft-lbs).
- [ ] Install the brake caliper and torque the caliper bracket bolts to 190 Nm (140 Ft-lbs). *Note: If your car is equipped with Brembo calipers, torque the bracket bolts to 200 Nm (147 Ft-lbs).*
- [ ] Connect the brake pad wear sensors.
- [ ] Reconnect the ABS brake harnesses.
- [ ] Install the Headlight level sensor on the LH side lower link.
- [ ] Install and torque both front wheels to 120 Nm (89 Ft-lbs).

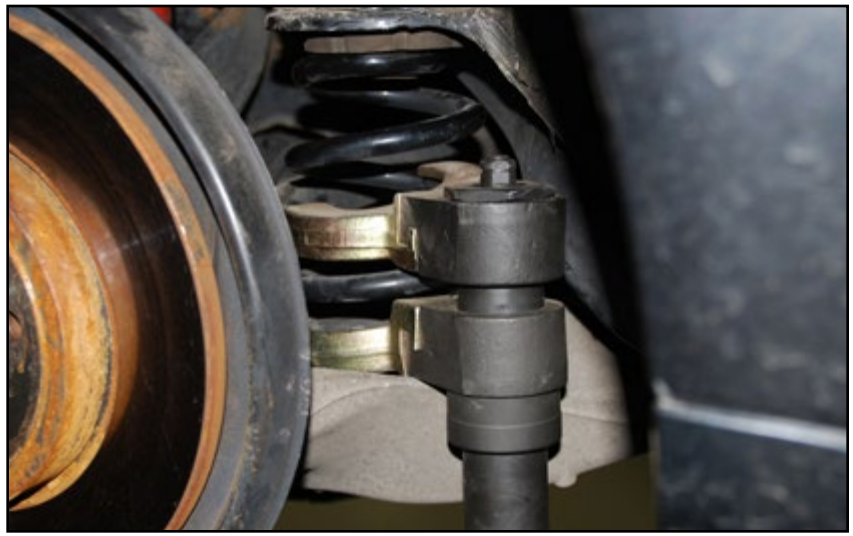
REMOVING THE ORIGINAL REAR SHOCKS AND SPRINGS

Step 1: T25 Torx, 13mm Socket, Ratchet

Remove the rear wheels (if you have not already), then remove both rear inner fender liners. Each fender liner is secured on by 10 Torx screws and the RH fender liner also has an additional securing bolt that must be removed.

Step 2: Coil Spring Compressor

Using a professional clamshell style of coil spring compressor, compress one of the rear coil springs.



REMOVING THE ORIGINAL REAR SHOCKS AND SPRINGS

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

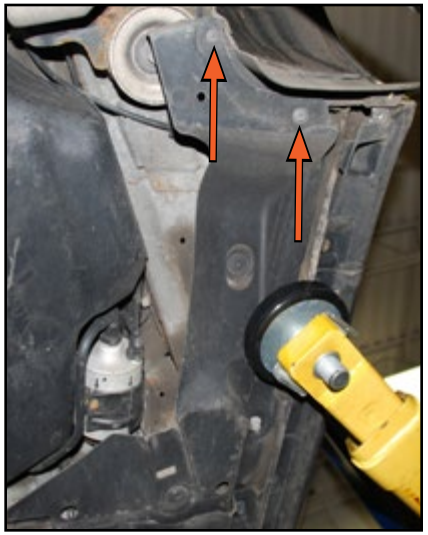
Remove the lower shock absorber bolt and separate the shock absorber from the rear knuckle assembly.

TECH TIP

The lower rear shock absorber spacer will commonly get stuck into the rear knuckle. You may have to pry it out with a small angled pry bar or similar tool.

Step 4: T25 Torx

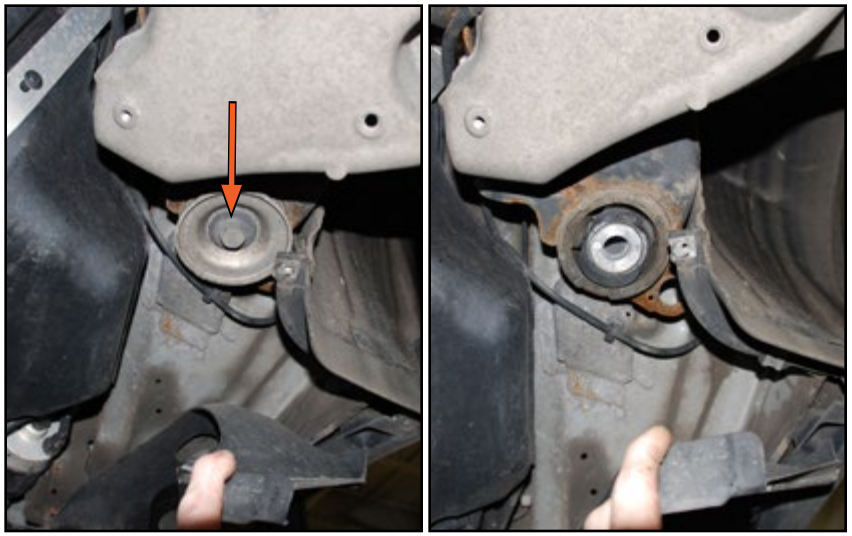
Remove the two torx screws that secure the lower shield near the front of the fender liner, so the shield can be pulled downward to access the forward subframe bolt underneath.



REMOVING THE ORIGINAL REAR SHOCKS AND SPRINGS

Step 5: 18mm Socket, Ratchet

Remove the lower subframe bolt.



Only remove one rear subframe bolt at a time once the coil spring is compressed. Do not remove the subframe bolt if the coil spring on the same side is not compressed.

Step 6:

Pull down on the rear suspension, then pivot the coil spring outward at the top until it clears the body and remove it.

NOTE

It is helpful to request the assistance of a friend to remove and install the rear coil springs. You can also use a pry bar to lever the suspension downward for coil spring removal.

REMOVING THE ORIGINAL REAR SHOCKS AND SPRINGS

Step 7:

Carefully release the tension on the coil spring and remove it from the compressor. If you are reusing it, pull the upper spring insulator off. (Most of the time it comes off with the spring. If it is stuck to the body, remove it at this time).

Step 8: 13mm Socket, Ratchet

Remove the two upper shock mount bolts and remove the shock absorber.

Repeat steps 2 through 8 to remove the other spring and shock absorber.

INSTALLING THE NEW REAR SHOCKS AND SPRINGS

Step 1: 16mm Socket, Ratchet

Remove the top shock nut from each original rear shock absorber, then lift off the upper shock mount, washer (if equipped), and bump stop.

NOTE

You will have to keep the shock rod from turning while removing the nut. If you are going to keep the original shock for future use, only grip the shock rod at the very top above the nut.

Step 2:

Refer to the information that comes with your kit to identify the style of rear shock mount you are using and determine if you will need to install the rear washer.

INSTALLING THE NEW REAR SHOCKS AND SPRINGS

Step 3:

Slide the bump stop(s) onto the new rear shock absorber(s).

Step 4:

If required, slide the new washer onto the shock rod(s).

INSTALLING THE NEW REAR SHOCKS AND SPRINGS

Step 5: 17mm Socket, 5mm Hex Bit, Torque Wrench

Install the upper shock mount and nut. Torque the upper nut to 25 Nm (18.5 Ft-lbs).

NOTE

Depending on the kit, the fastener sizes may vary from what we have used in this step.

Step 6: 13mm Socket, Torque Wrench

Install the shock absorber into place on the body and tighten the upper mounting bolts to 36 Nm (26.5 Ft-lbs).

INSTALLING THE NEW REAR SHOCKS AND SPRINGS

Step 7:

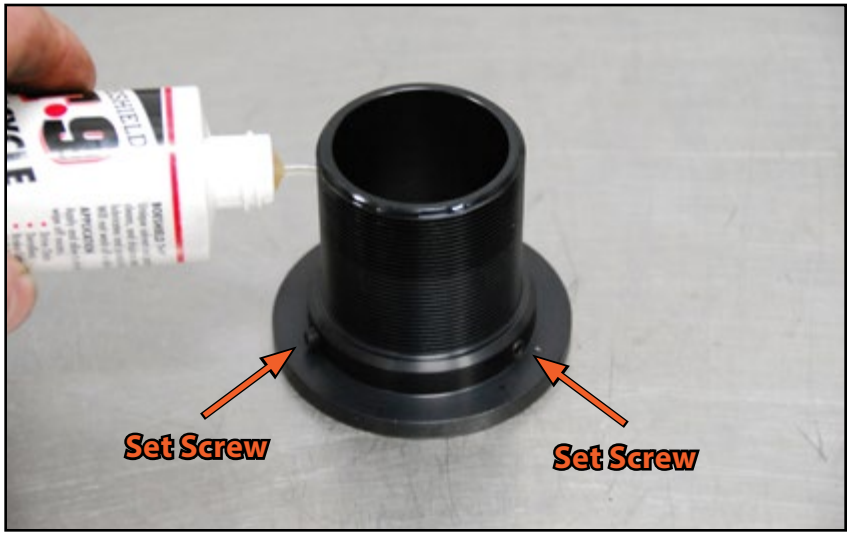
Install the upper spring insulator onto the top of the new rear coil spring.

NOTE

The top and bottom diameter of the rear coil springs is different and will match the size of the upper and lower spring seats, however there is no left or right, either one can be used on either side.

Step 8:

Remove the adjusting ring, then liberally apply a lubricant such as Boeshield T-9 to the threads on the rear coil spring perches. Make sure to coat all of the threads. Note the locations of the three hex bit set screws around the perimeter of the spring perch.



INSTALLING THE NEW REAR SHOCKS AND SPRINGS

Step 9:

Remove the original lower spring insulator from the control arm.

Step 10: 3mm Hex Bit (Allen) Socket

Clean any dirt or debris from the control arm, then install the lower spring perch and tighten the hex bit set screws.

INSTALLING THE NEW REAR SHOCKS AND SPRINGS

Step 11:

Install the nylon insulating washer onto the rear spring adjusting ring.

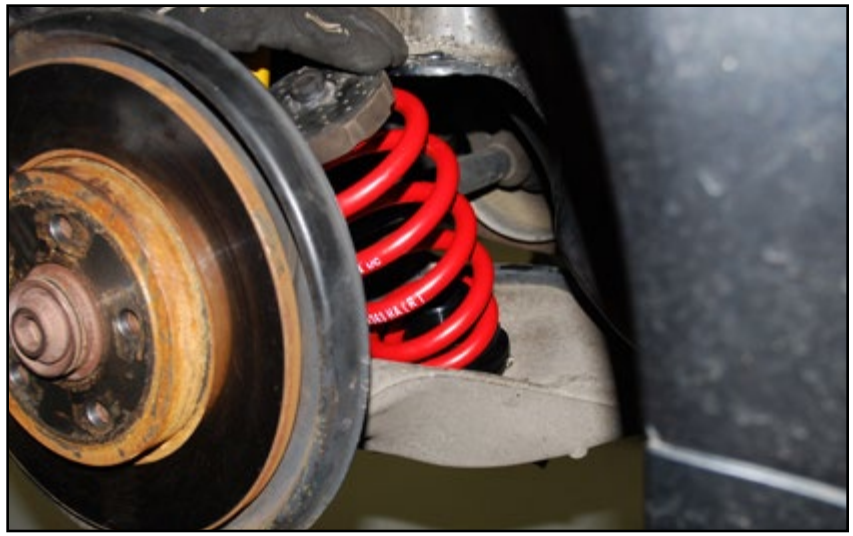
Step 12:

Thread the rear spring adjusting ring onto the lower spring perch.

INSTALLING THE NEW REAR SHOCKS AND SPRINGS

Step 13:

Place the new rear coil spring onto the lower spring perch.



Step 14:

Pull down on the rear suspension and push the coil spring into place so the upper spring insulator is properly positioned on the body.

- [ ] Install the rear subframe bolt and torque it to 110 Nm+90 Degrees (81 Ft-lbs+90 Degrees).
- [ ] Install the two screws on the lower shield.
- [ ] Install the lower shock absorber bolt. Do not tighten it at this time. When assembly is complete and the vehicle is at ride height, torque this bolt to 150 Nm+90 Degrees (110 Ft-lbs+90 degrees).
- [ ] Reinstall the rear fender liner.
- [ ] Repeat these procedures as necessary for the other side.
- [ ] Install and torque both rear wheels to 120 Nm (89 Ft-lbs).

ADJUSTING THE RIDE HEIGHT

Adjusting the ride height is a simple process of moving the spring perches up or down until the desired height is reached. Keep the following pointers in mind while adjusting your suspension:

- You must lift the vehicle so all weight is off the springs before adjusting the spring perches.

- Use the measurements you took on page nine for reference if you have a specific amount of drop in mind.

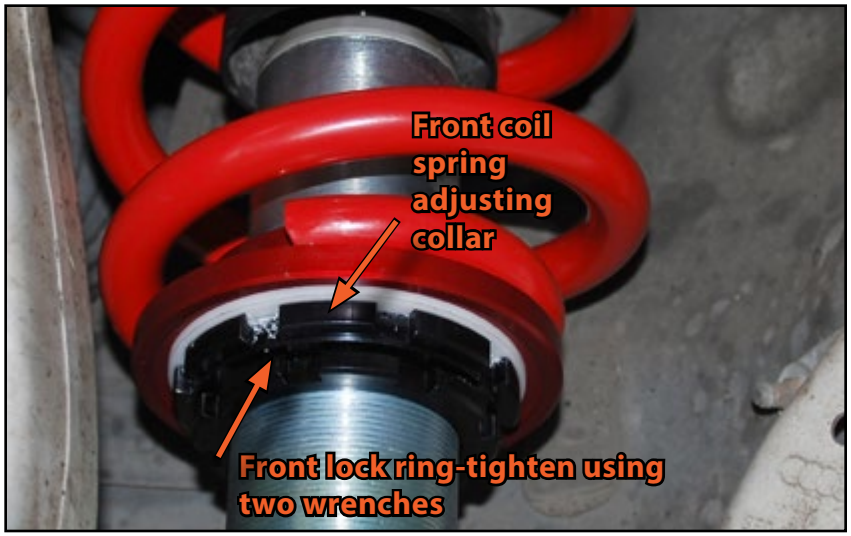
- You may have to make a number of adjustments to get everything set exactly right. Be patient and take your time.

- Securely tighten the front locking rings to the perches once ride height is set.

- Once you have the ride height adjusted to your liking, make sure there is no wheel/tire interference while turning the wheels lock to lock.

- After driving for the first time, the suspension may require readjustment.

- If you add any additional components in the future such as a sway bar or polyurethane bushings, the suspension may require minor adjustments.



Record the measurements of your new ride height:

Left Front	Right Front	Left Rear	Right Rear

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.

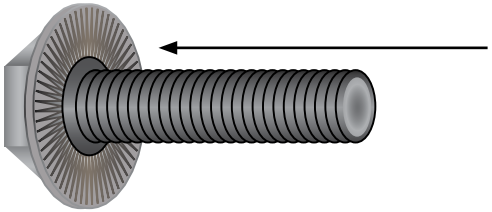
Some fasteners require lubrication on the threads -or- on the contact surface while torquing. These fasteners will be listed with the specific location and type of lubrication required. Always follow manufacturers recommendations exactly.

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.

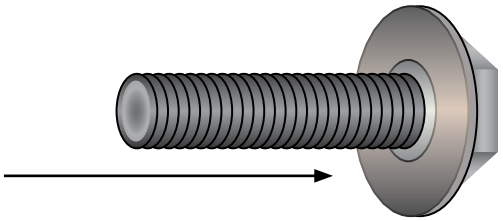
Ribbed vs. Non-Ribbed Bolts

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 Brake Caliper Bracket Bolts	190 Nm (140 Ft-lbs)	(Page 30)
Front Brake Caliper Bracket Bolts w/Brembo	200 Nm (147 Ft-lbs)	(Page 30)
Front Lower Strut Wishbone Bolt	90 Nm (66 Ft-lbs)	(Page 30)
Front Upper Link Pinch Bolt	40 Nm (29 Ft-lbs)	(Page 30)
Front Upper Strut Mount Bolts	75 Nm (55 Ft-lbs)	(Page 30)
Front Upper Strut Nut	50 Nm (37 Ft-lbs)	(Page 29)
Rear Lower Shock Absorber Bolt (Always Replace)	150 Nm+90 degrees (110 Ft-lbs+90 degrees)	(Page 42)
Rear Subframe Bolts (Always Replace)	110 Nm+90 degrees (81 Ft-lbs+90 degrees)	(Page 42)
Rear Upper Shock Mount Bolts	36 Nm (26.5 Ft-lbs)	(Page 37)
Rear Upper Shock Nut	25 Nm (18.5 Ft-lbs)	(Page 37)
Wheels	120 Nm (89 Ft-lbs)	(Page 42)

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