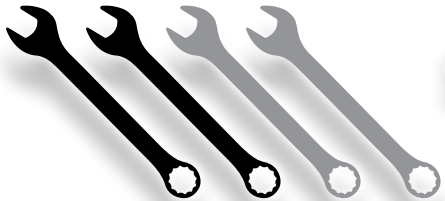
Tesla Model 3 Lowering Springs kit Installation Instructions - Click HERE to Shop



Skill Level 2: Moderate

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REQUIRED TOOLS

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

- 1/4", 3/8" & 1/2" Socket Sets & Ratchets
- Non-Marring Trim Removal Tools
- Protecta-Sockets (For wheel nuts)
- Breaker Bar
- Combination Wrench Set
- Torx Socket Set
- Hex (Allen) Socket Set
- Torque Wrenches

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

EVANNEX 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.

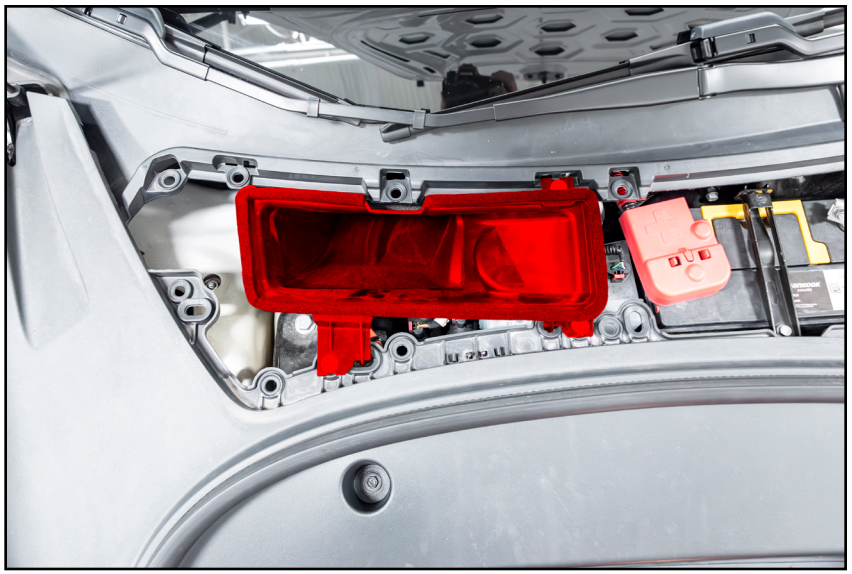
REMOVING THE STOCK FRONT SPRINGS

Step 1:

Lift up on the rain tray cover (highlighted in **RED**) to pop the clips free, then remove it.

Step 2:

Lift up on the cabin air duct (highlighted in **RED**) to pop the clips free, then remove it.



REMOVING THE STOCK FRONT SPRINGS

Step 3:

Lift up on the hood latch cover (highlighted in **RED**) to pop the clips free, but do not remove it yet.

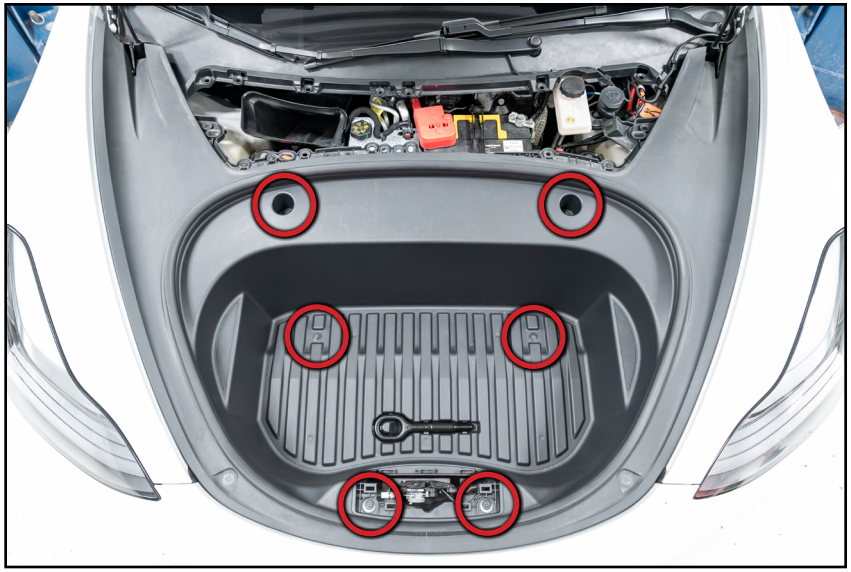
Step 4:

Disconnect the connector (highlighted in **RED**), then remove the hood latch cover.

REMOVING THE STOCK FRONT SPRINGS

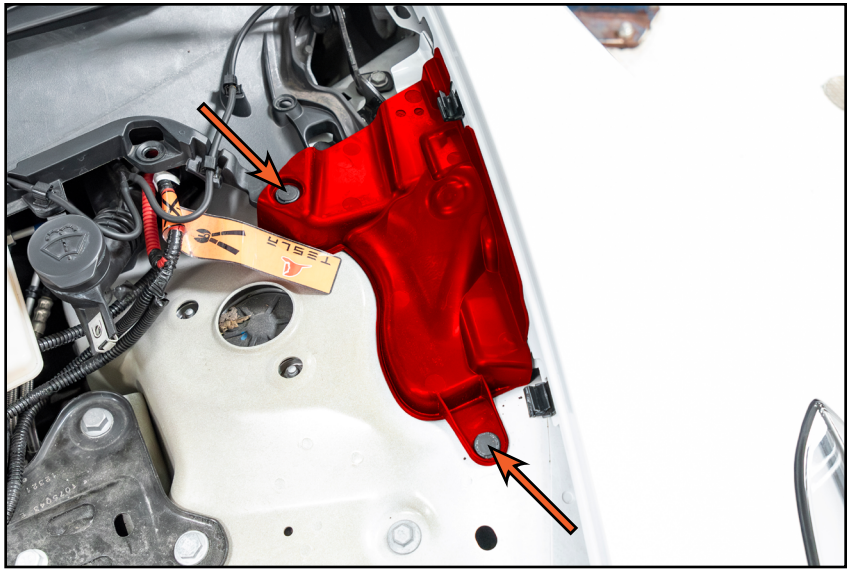
Step 5: 10mm Socket & Ratchet

Remove the six bolts (circled in **RED**), lift up on the storage tray to pop the clips free, then remove it.



Step 6: Trim Removal Tool

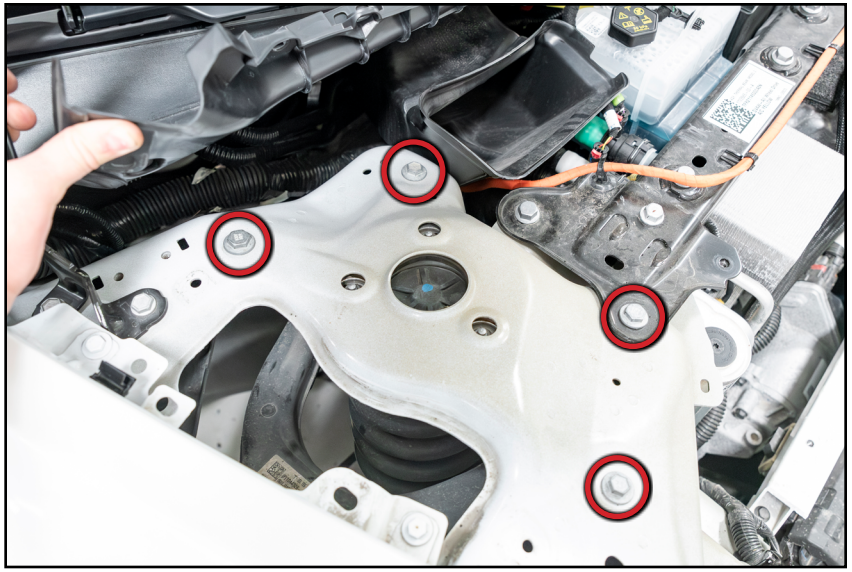
Release the push-rivets (arrows), then remove the strut tower cover (highlighted in **RED**) from either side.



REMOVING THE STOCK FRONT SPRINGS

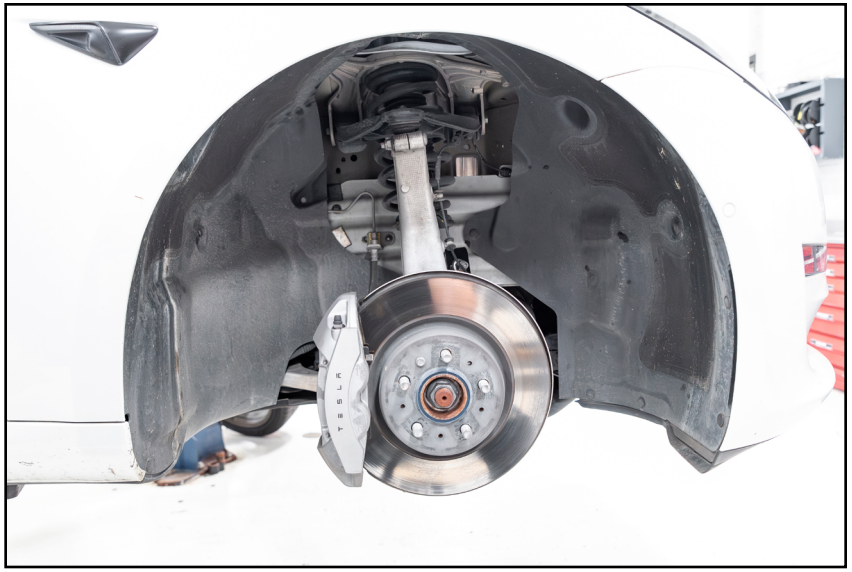
Step 7: 13mm, 15mm Socket & Ratchet

Remove the bolts (circled in **RED**) that secure the front upper control arm bracket to the strut tower.



Step 8: Protecta-Sockets & Breaker Bar

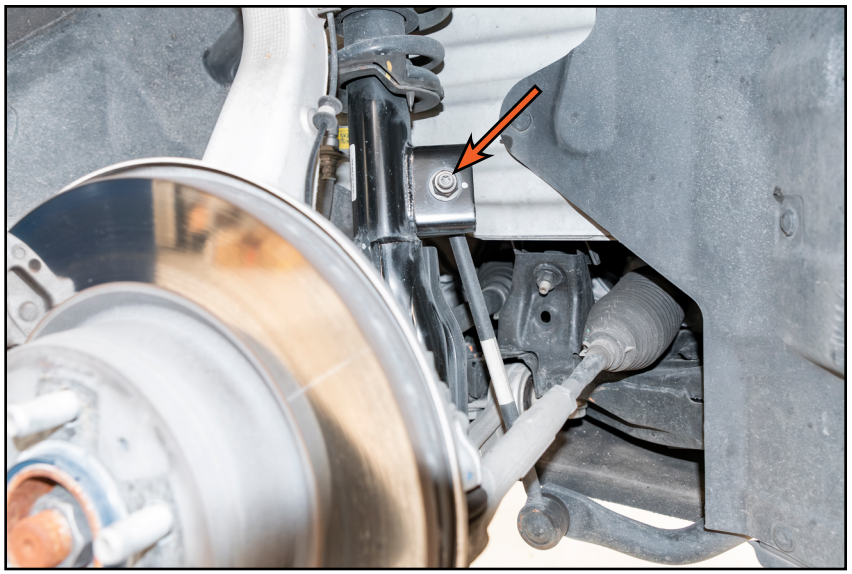
Safely lift and support the vehicle and remove all four wheels.



REMOVING THE STOCK FRONT SPRINGS

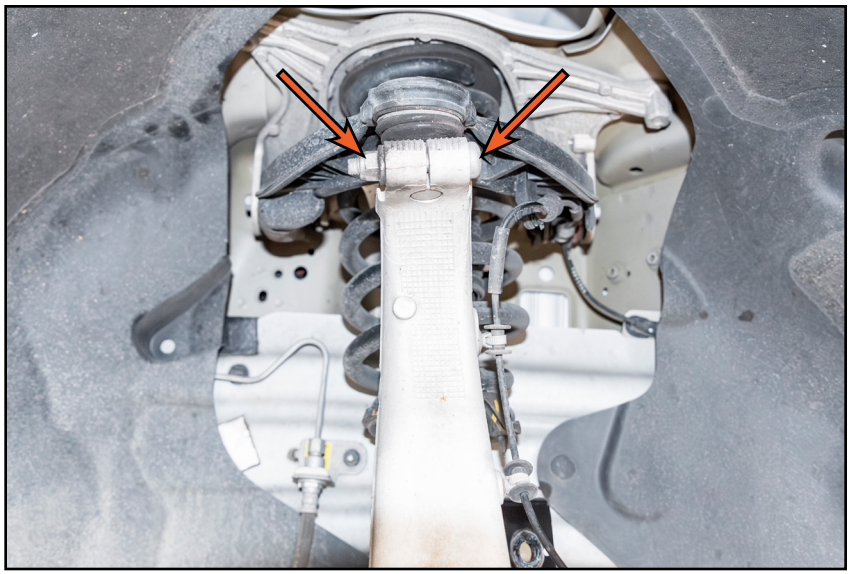
Step 9: 18mm Wrench, T40 Torx Socket & Ratchet

Remove the nut (arrow) that secures the end link to the strut, then pull the end link free.



Step 10: 15mm Wrench, T50 Torx Socket & Ratchet

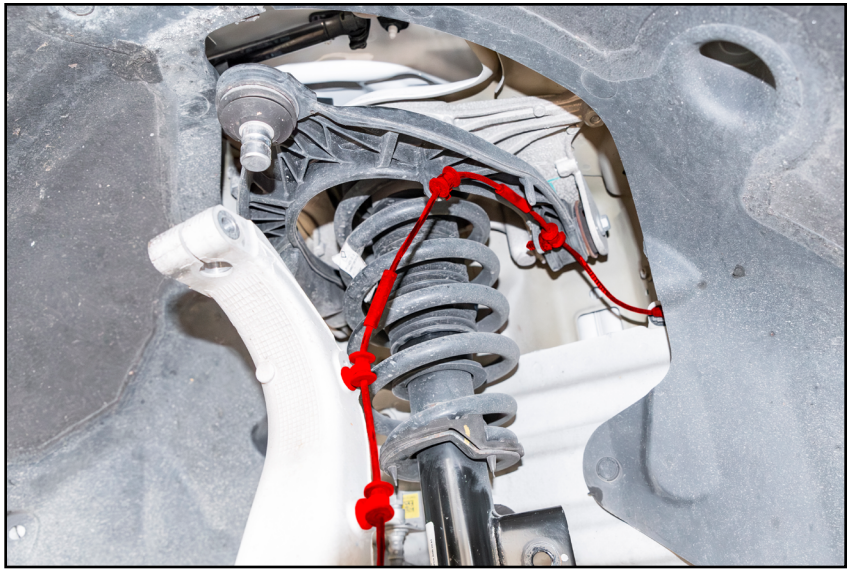
Remove the bolt and nut (arrows) that secure the upper control arm to the knuckle, then pull the upper control arm free.



REMOVING THE STOCK FRONT SPRINGS

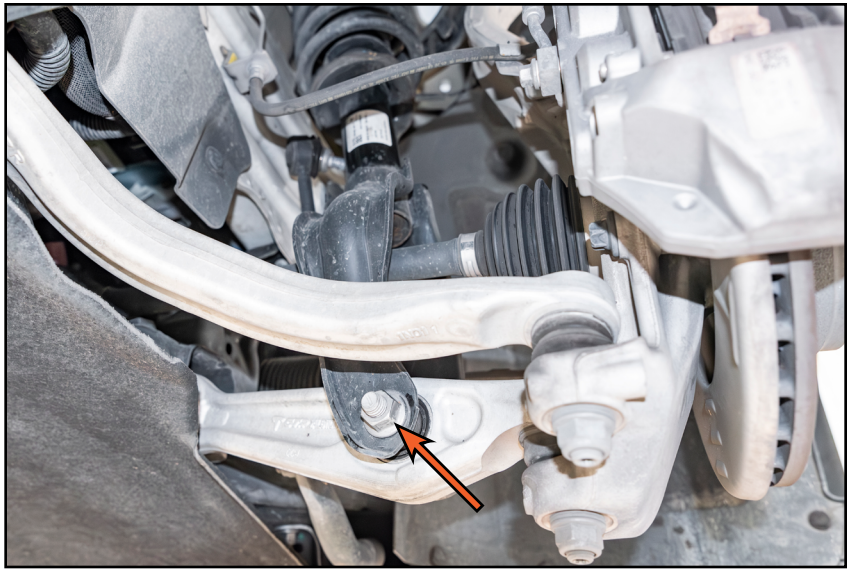
Step 11:

If equipped, disconnect the ride height sensor, then free up the ABS wiring harness (highlighted in **RED**) from the upper control arm.



Step 12: 21mm Wrench, 21mm Socket & Ratchet

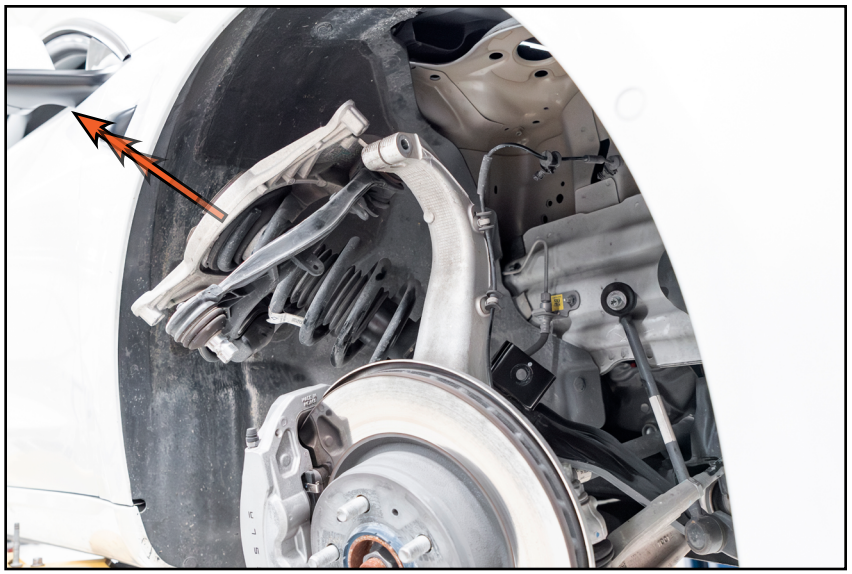
Remove the bolt and nut (arrow) that secure the strut to the lower control arm.



REMOVING THE STOCK FRONT SPRINGS

Step 13:

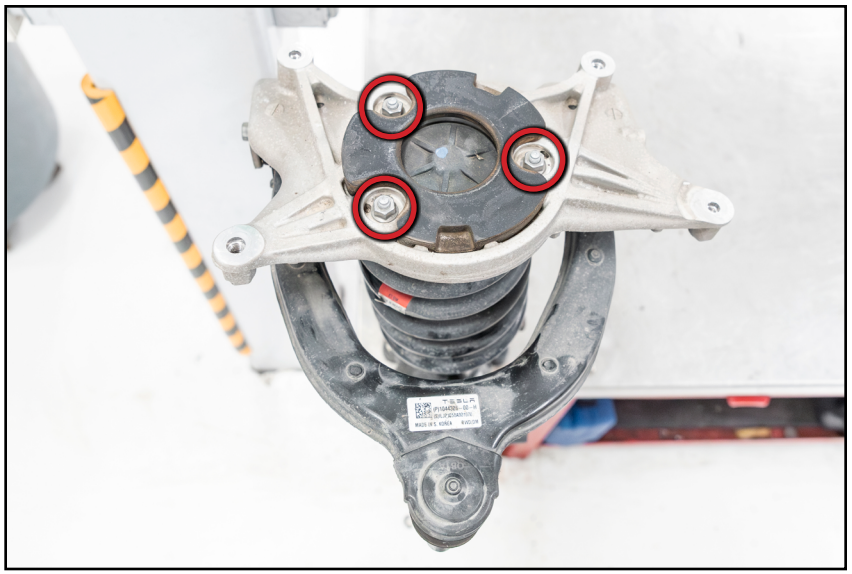
Carefully guide the strut assembly out of the fender well.



Step 14: 13mm Socket & Ratchet

Place the strut assembly into a bench vice, then take note of the orientation of the upper control arm; when installed, the ball joint should face outward and be perfectly perpendicular to the strut fork.

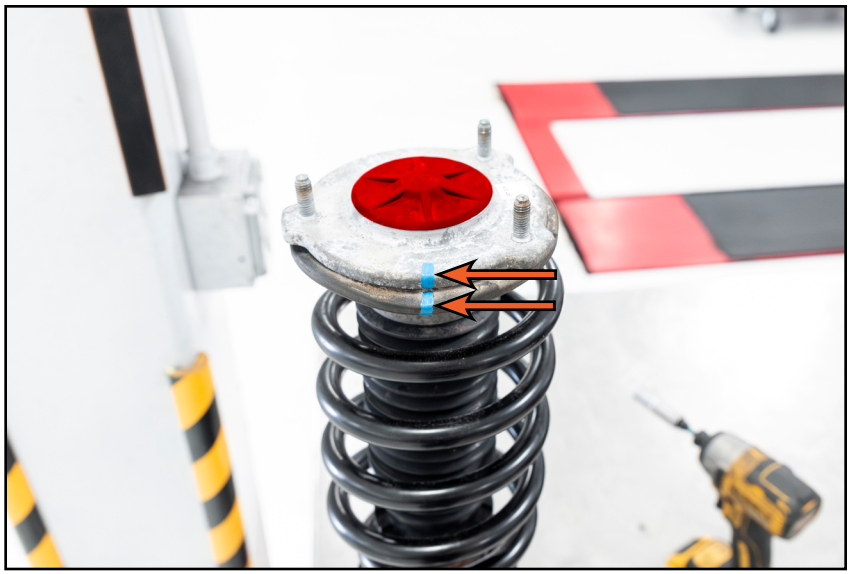
Remove the three nuts (circled in **RED**) and pull the upper control arm bracket off of the strut.



REMOVING THE STOCK FRONT SPRINGS

Step 15:

Pull the rubber dust cap (highlighted in **RED**) free and set it aside. Make two marks (arrows) on the strut mount and rubber upper spring isolator to indicate outside of vehicle (perpendicular to the strut fork) and to ensure proper reinstallation of the upper control arm.



Step 16: 13mm Socket & Ratchet

Install a spring compressor tool and compress the spring, then remove the upper strut nut (arrow) and pull the mount free.

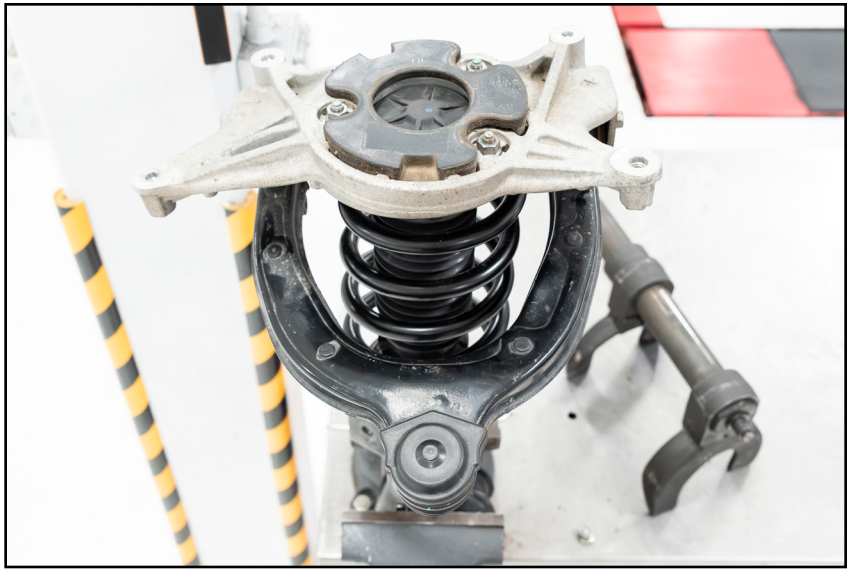
INSTALLING THE FRONT LOWERING SPRINGS

Step 1:

Compress the new spring and slide it onto the strut, then reinstall the upper spring isolator and strut mount ensuring the paint marks align with each other and face perpendicular to the strut mounting fork. Replace the upper strut nut and torque it to 60 Nm (44 Ft-lbs) before reinstalling the dust cap. Release the spring compressor tool.

Step 2: 13mm Socket & Ratchet

Reinstall the upper control arm bracket, ensuring the ball joint is perfectly perpendicular to the strut fork, then reinstall the nuts (circled in **YELLOW**) and torque them to 23 Nm (17 Ft-lbs).



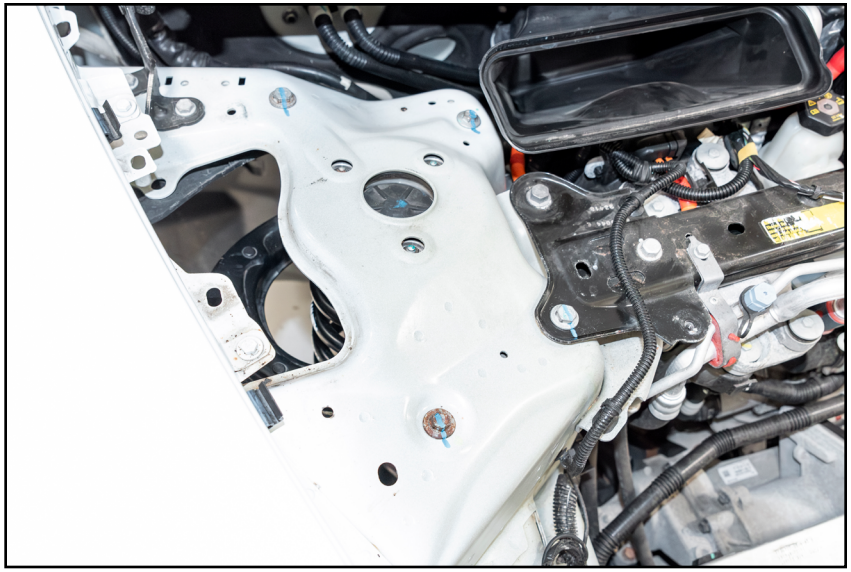
INSTALLING THE FRONT LOWERING SPRINGS

Step 3: 13mm, 15mm Socket & Torque Wrench

Lift the strut assembly up into the strut tower, install the bolts, and torque them to:

M10 bolts: 62 Nm (46 Ft-lbs)

M8 bolts: 35 Nm (26 Ft-lbs)



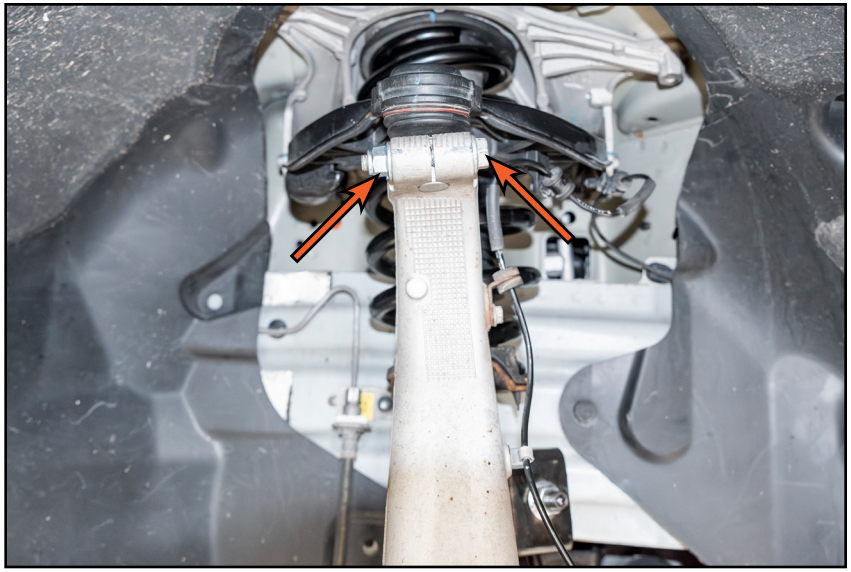
Step 4: 21mm Wrench, 21mm Socket & Ratchet

Place a pole jack under the lower control arm, then raise it until you can slide the new strut fork bolt into place, then loosely install the nut (arrow).

INSTALLING THE FRONT LOWERING SPRINGS

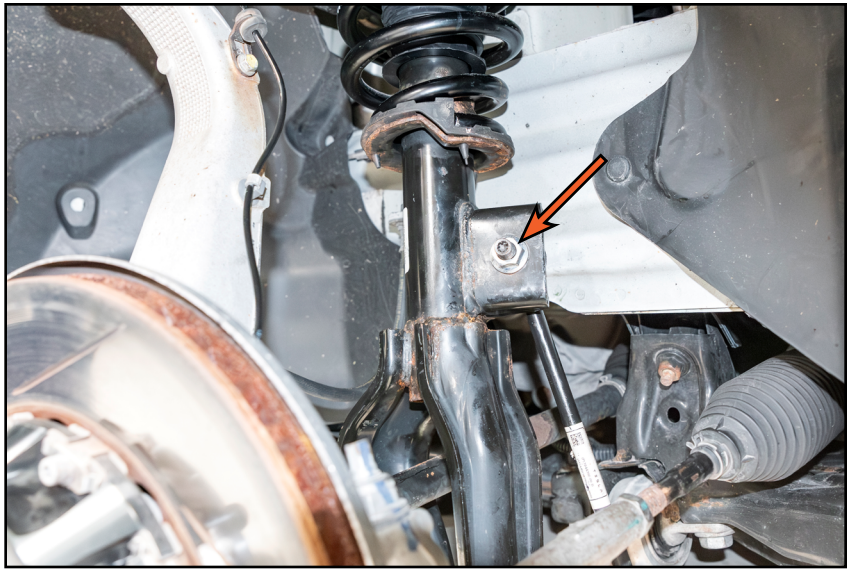
Step 5: 15mm Wrench, T50 Torx Socket & Ratchet

Slide the upper control arm into the knuckle, then reinstall the bolt and nut (arrows) and torque them to 56 Nm (41 Ft-lbs). Reinstall the ABS wiring harness on the upper control arm.



Step 6: 18mm Wrench, T40 Torx Socket & Torque Wrench

Slide the sway bar end link into the mounting bracket on the strut then replace the nut (arrow) and torque it to 98 Nm (72 Ft-lbs).

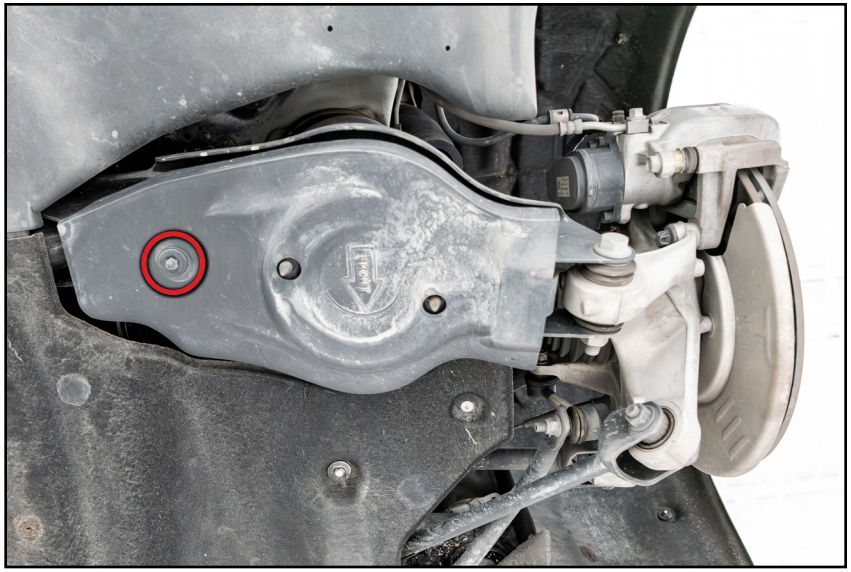


- [ ] With the vehicle at ride height, tighten the strut fork nut to 106 Nm (78 Ft-lbs).
- [ ] If equipped, reconnect the ride height sensor.

REMOVING THE STOCK REAR SPRINGS

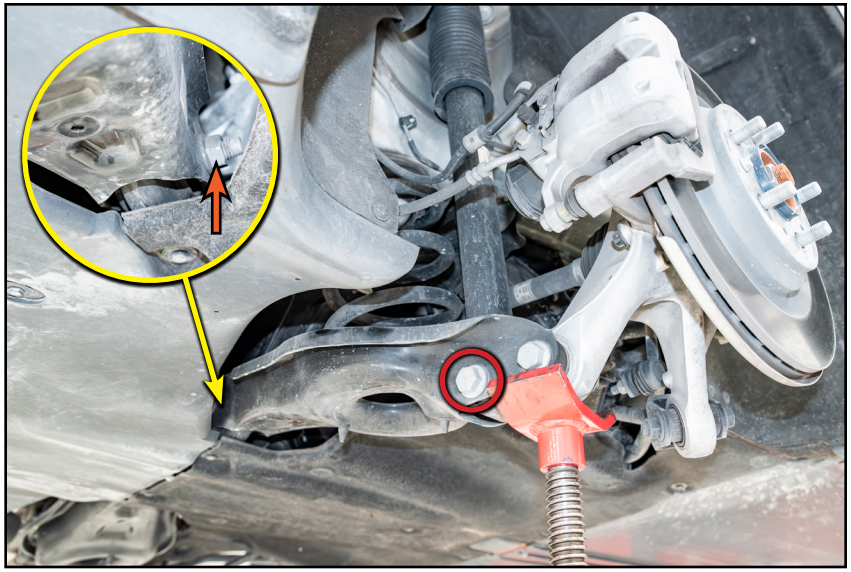
Step 1: 10mm Socket & Ratchet

Remove the screw (circled in **RED**) then remove the plastic lower control arm cover.



Step 2: 21mm Wrench, 21mm Socket & Ratchet

Loosen the inner lower control arm nut (arrow in inset photo) slightly, then support the arm from below while you remove the nut and bolt (circled in **RED**) that secure the shock to the arm.



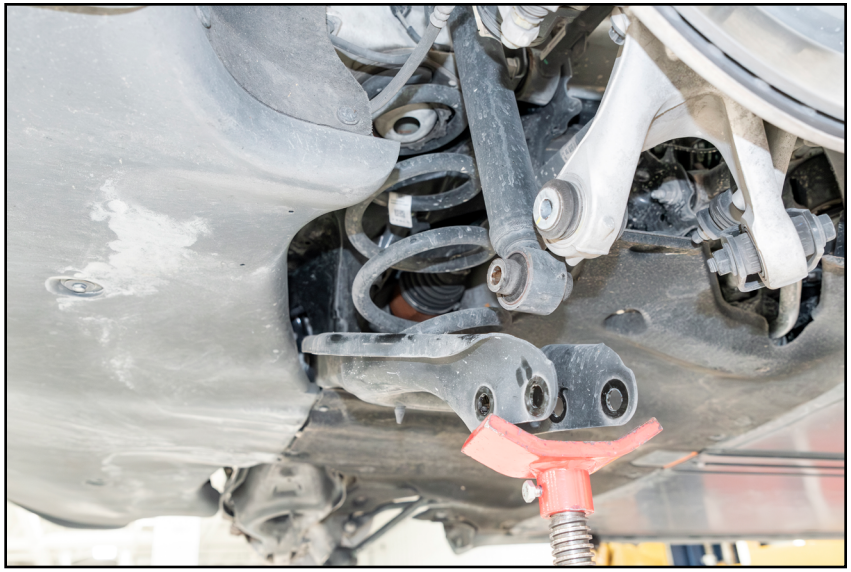
REMOVING THE STOCK REAR SPRINGS

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

Support the lower control arm from below while you remove the nut and bolt (circled in **RED**) that secure the spindle housing to the arm.

Step 4:

Carefully lower the control arm until the rear spring is no longer under tension, then remove it along with the rubber upper spring isolator.



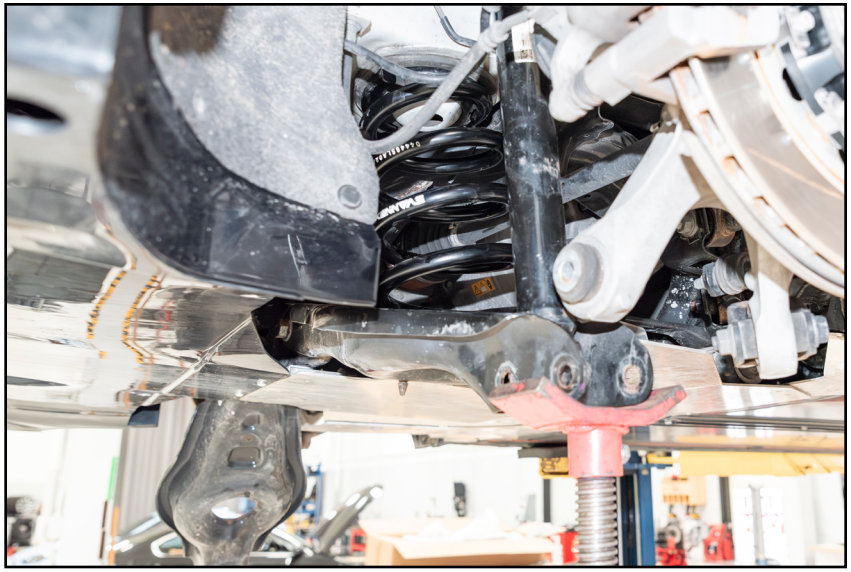
INSTALLING THE REAR LOWERING SPRINGS

Step 1:

Transfer the upper spring isolator to the new spring as shown.

Step 2: 21mm Wrench, 21mm Socket & Ratchet

Slide the spring into the lower control arm, then jack up the control arm until the upper isolator slides over the raised location boss on the chassis.



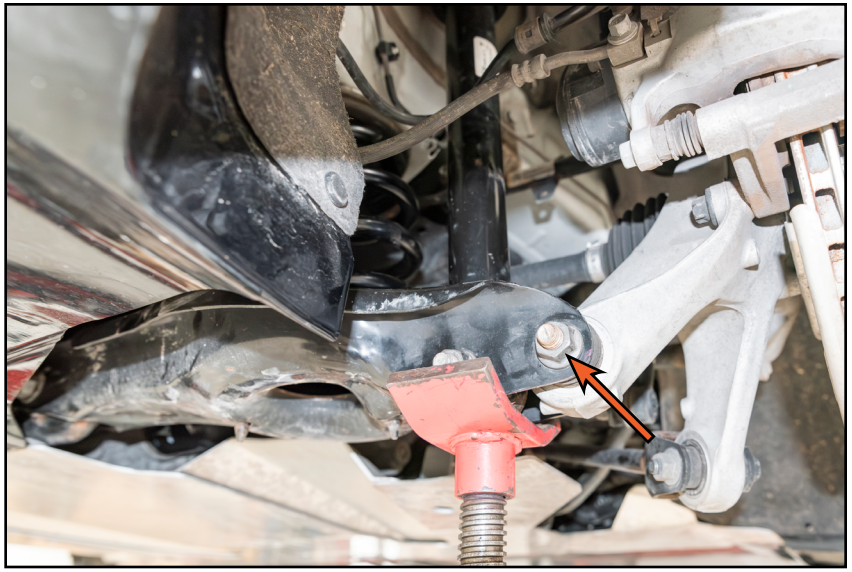
INSTALLING THE REAR LOWERING SPRINGS

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

Reinstall the bolt which secures the shock to the lower control arm, then loosely install the nut (arrow).

Step 4: 21mm Wrench, 21mm Socket & Ratchet

Reinstall the bolt which secures the spindle to the lower control arm, then loosely install the nut (arrow).



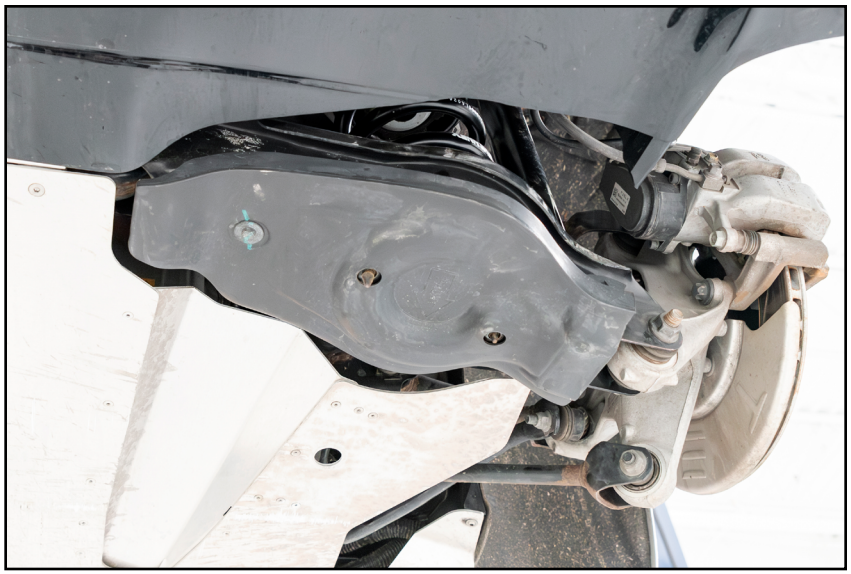
INSTALLING THE REAR LOWERING SPRINGS

Step 5: 21mm Wrench, 21mm Socket & Torque Wrench

With the suspension at ride height, counterhold the shock and both lower control arm bolts while you torque the nuts to 115 Nm (85 Ft-lbs).

Step 6: 10mm Socket & Ratchet, Protecta-Sockets & Torque Wrench

Reinstall the lower control arm cover and tighten the bolt until snug. Reinstall the wheels and torque the nuts to 175 Nm (129 Ft-lbs).



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.

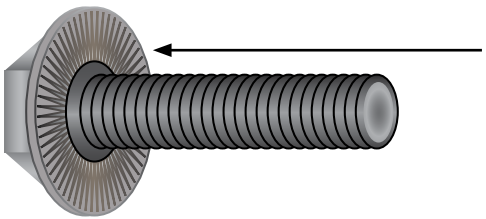
Some fasteners require lubrication on the threads -or- on the contact surface while torquing. These fasteners will be listed with the specific location and type of lubrication required. Always follow manufacturers recommendations exactly.

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.

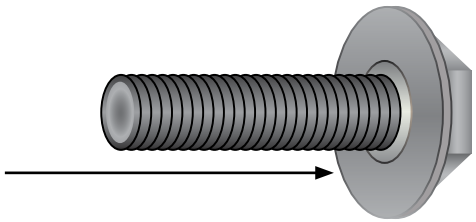
Ribbed vs. Non-Ribbed Bolts

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



TORQUING SPECIFICATIONS

Front Upper Strut Nut	60 Nm (44 Ft-lbs)	(Page 12)
Front Upper Control Arm Bracket to Coilover Nuts	23 Nm (17 Ft-lbs)	(Page 12)
Front Upper Control Arm Bracket to Strut Tower Bolts	***M8 Bolts:*** 35 Nm (26 Ft-lbs)	
	M10 Bolts: 62 Nm (46 Ft-lbs)	(Page 13)
Front Upper Control Arm to Knuckle Nut	56 Nm (41 Ft-lbs)	(Page 14)
Front Sway Bar End Link Nut	98 Nm (72 Ft-lbs)	(Page 14)
Front Strut Fork Nut	106 Nm (78 Ft-lbs)	(Page 14)
Rear Lower Shock Bolt	115 Nm (85 Ft-lbs)	(Page 19)
Rear Inner and Outer Lower Control Arm Bolts	115 Nm (85 Ft-lbs)	(Page 19)
Wheel Nuts	175 Nm (129 Ft-lbs).	(Page 19)

Your Lowering Springs installation is complete!

These instructions are provided as a courtesy by: EVANNEX