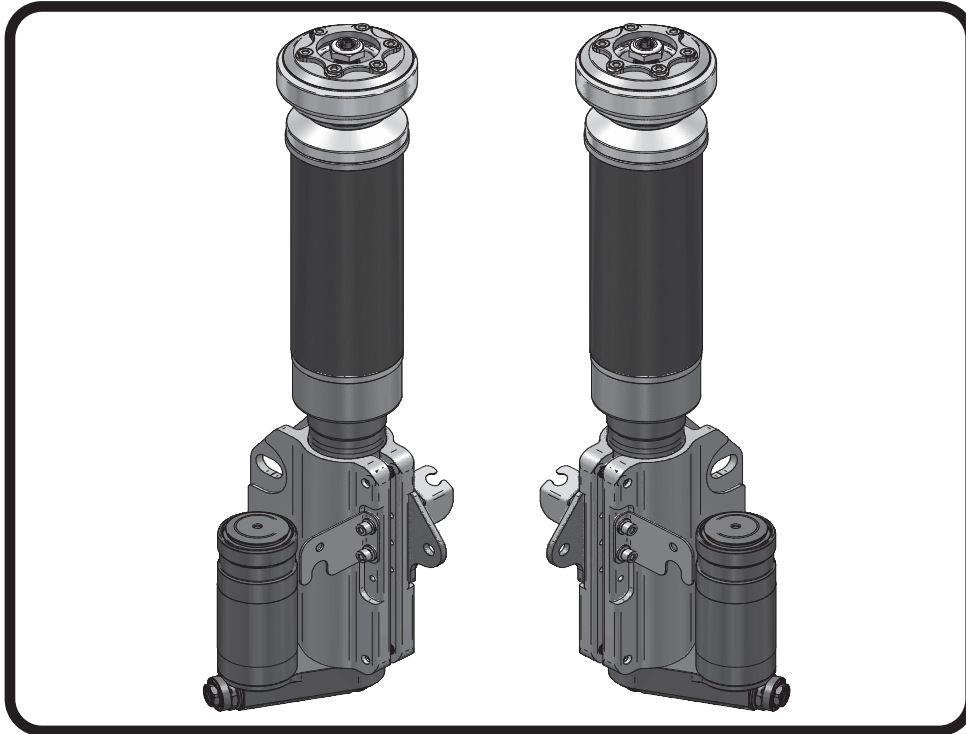
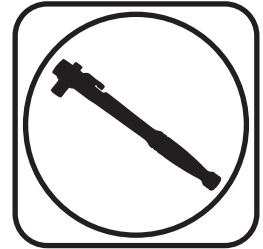




Part # 11502411 - 2010-2015 Camaro



Recommended Tools



2010-2015 Camaro TQ Series Front AirStrut Installation Instructions

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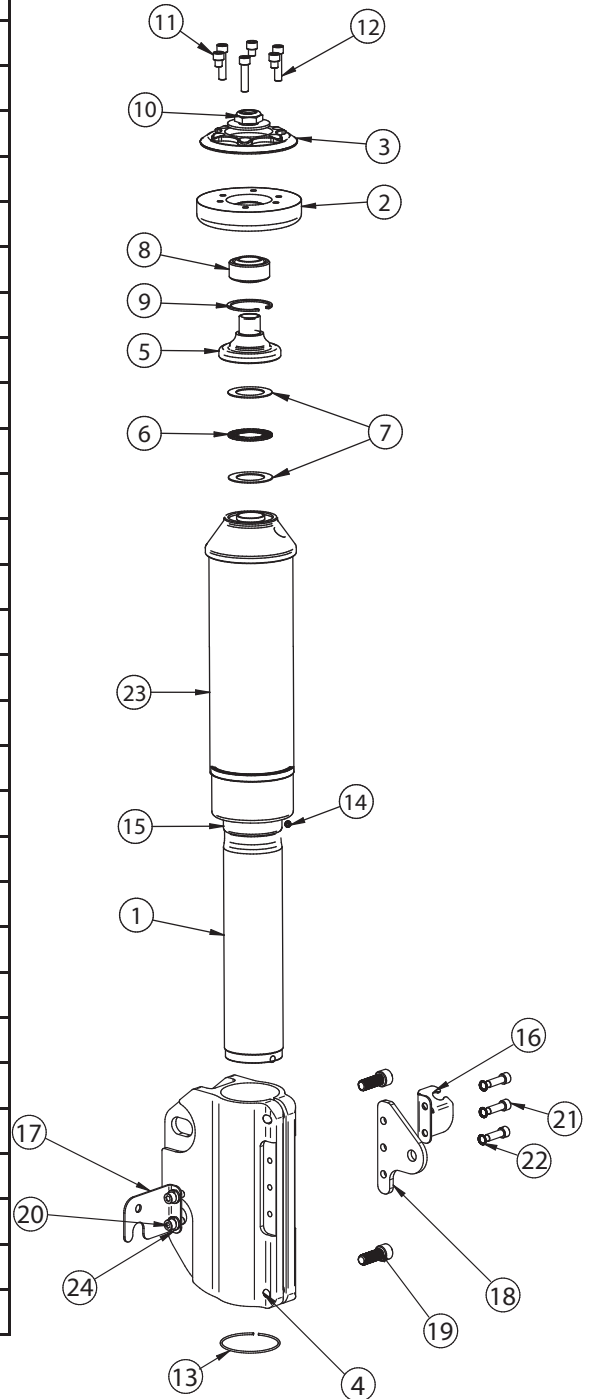
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Included ComponentsIn the box

Item #	Part #	Description	QTY
1	986-10-075	Strut Cartridge	2
2	90002367	Bearing Retaining Plate	2
3	90002363	Upper Retention Plate	2
4	90001157	Strut Mount	2
5	90002368	Thrust Bearing Adapter	2
6	70010987	Thrust Bearing	2
7	70010988	Thrust Bearing Washer	4
8	90001042	COM Bearing	2
9	90000805	COM Bearing Snap Ring	2
10	99562003	9/16"-18 Nylok Jam Nut	2
11	99251007	1/4"-20 x 1/4" SHCS	6
12	99251010	1/4"-20 x 1" SHCS	6
13	038-01-035	Strut Retaining Ring	2
14	99055000	M5 x.8 x 5mm Set Screw	2
15	234-00-153	Locking Ring	2
16	70010991	ABS Line Tab	2
17	70010990	Driver Brake Line Tab	1
17	70011386	Pass Brake Line Tab	1
18	70010975	Sway Bar Link Mount	2
19	99371042	3/8"-16 x 1" SHCS	4
20	99251008	1/4"-20 x 1/2" SHCS	4
21	99251009	1/4"-20 x 3/4" SHCS	6
22	99253011	1/4" Belleville Locking Washer	6
23	21090798	Strut Air Spring	2
24	99253007	1/4" Split Lock Washer	4
	90002376	Posilink Spacer (Not Shown)	2
	90002571	10mm 90 Degree PosiLink	4
	90002157	T-bushing-Posilink to sway bar	4
	31954201	1/4" 90 Degree Fitting	2



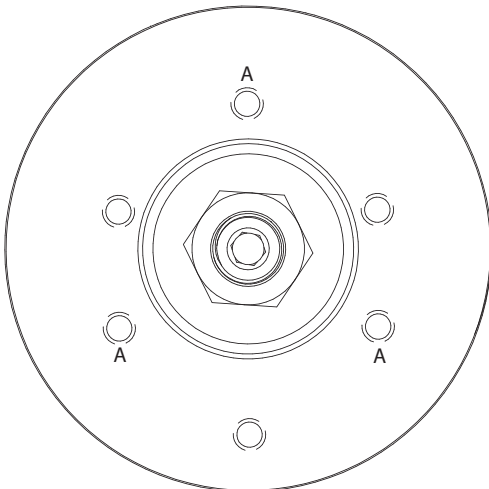


Disassembly

1. Remove the front struts by first disconnecting the ABS wire and brake line(retain hardware) from the factory strut.
2. Disconnect the swaybar linkage from the strut.
3. Support the front hub and control arm assembly and remove the (2) struts bolts(retain hardware) that attach the strut to the spindle.
4. Remove the cap from the top strut nut in the engine compartment, then remove the nut and strut retainer. **DO NOT REMOVE THE SECOND NUT.**
5. Remove strut assembly from the car.

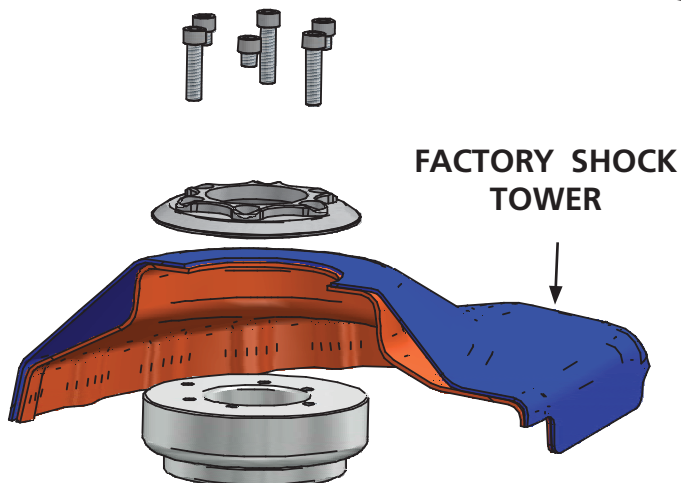
Getting Started

6.



6. The upper strut mount provided in this kit has 2 mounting positions. Centered and offset. Looking at the illustration you will notice "A" bolt holes are centered and "B" bolt holes are offset. Position "A" is used for a street driving alignment. Position "B" is used when a more aggressive alignment is desired. This adjustable upper mount along with the adjustment on the lower Strut mount provide more adjustment than the stock setup. Position "B" will offset the top of the Strut towards the engine.

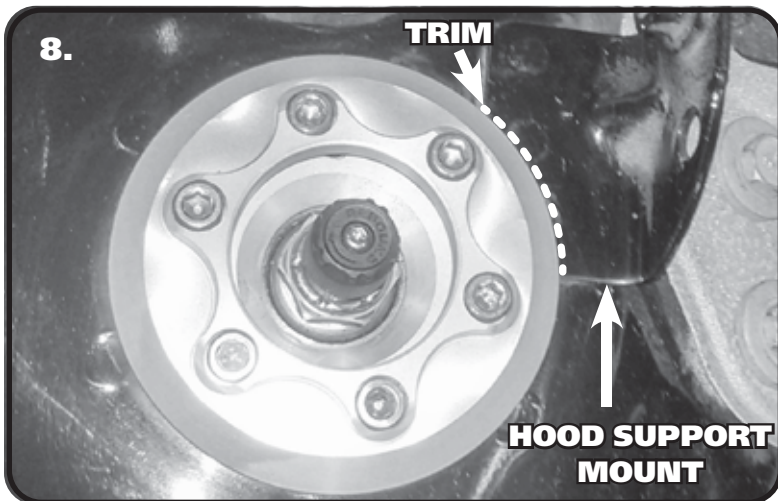
7.



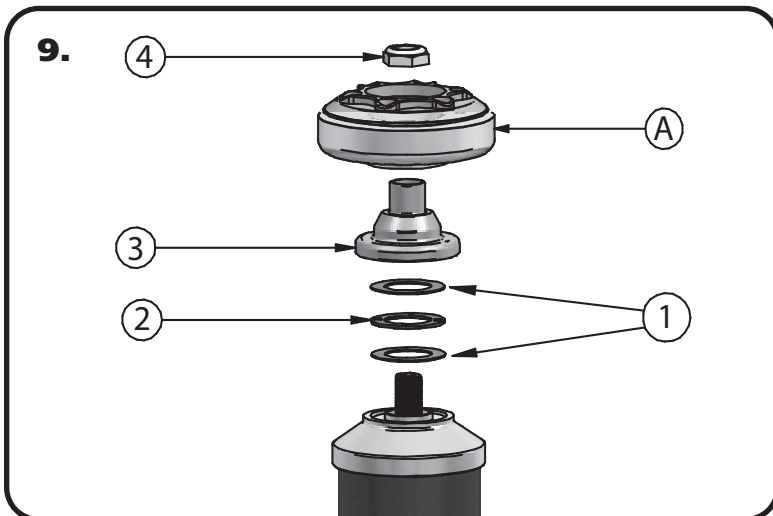
7. Bolt the upper mount into the car positioning it for the alignment desired using the description in the previous step. The mount will be either centered or the center strut mount offset towards the engine. The upper plate has (6) holes. (3) are threaded and (3) are thru drilled. The long bolts go thru the upper mount to attach it to the lower mount. The short bolts thread into the threaded holes. Tighten all (6) down.



Strut Installation



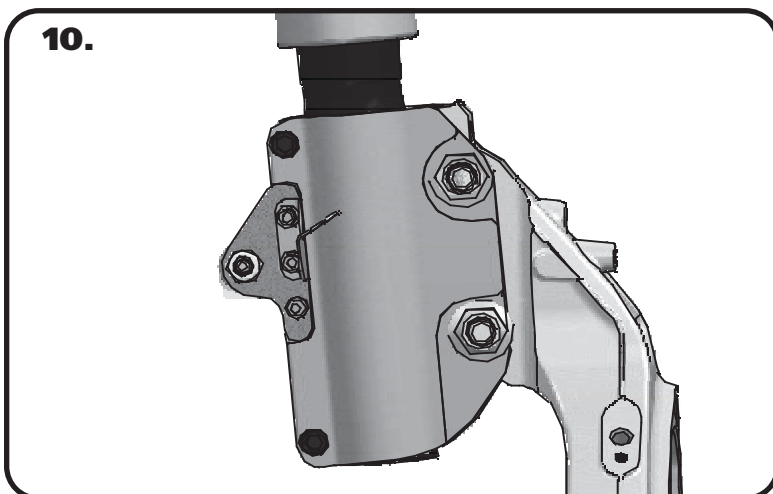
8. The hood support mount on the passenger strut tower is shaped differently through the years. If your mount interferes with the upper strut mount, it will need to be trimmed. You can use the upper strut mount as a template to mark the mount. We use a die-grinder with a cut off wheel to trim it back. Be sure to protect the car from flying debris when trimming the mount.



9. Install the Air fitting into the Airspring using thread tape. Remove the Adjuster Knob from the Strut shaft for assembly. Bolt the strut assembly into the upper mount (A), see diagram 10 for assembly order.

- 1. Torrington Bearing Race
- 2. Torrington Bearing
- 3. Torrington to Bearing Adapter
- 4. 9/16" Locknut

Assemble components and install into upper mount tightening upper nut. Reinstall upper adjustment knob. Skip to Step 12.



10. Slide the lower strut mount onto the spindle.

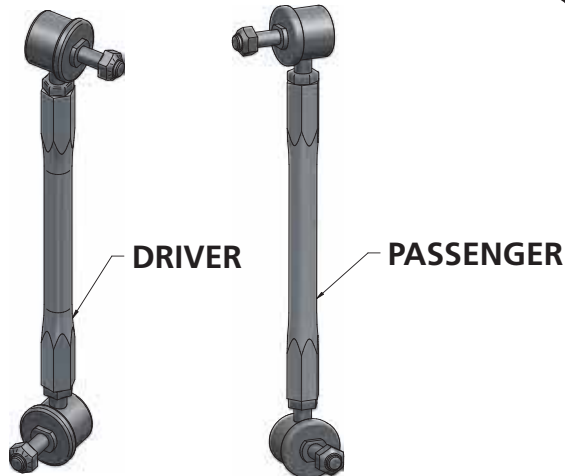
11. Align the all of the bolt holes, insert the Factory hardware to attach.

NOTE: These bolts are torque-to-yield bolts. They only have a few adjustments in them before they should be replaced. Tighten the bolt to 60 ft/lbs and turn the nut 180°.



Assembly

12.

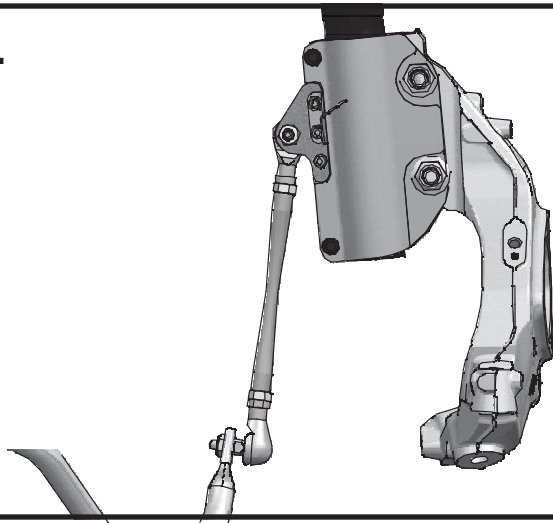


12. Attach the PosiLinks between the strut and Sway bar using the 10mm Nylok Nut. Refer to **Images 11 & 12** for orientation.

NOTE: There is a Drivers and Passenger Posilink assembly, refer to diagrams (11 and 12) for proper installation

NOTE: Some vehicles have a 10mm sway bar linkage, some have 12mm linkage. The Posilink linkage provided in the kit has 10mm studs, T-bushings are provided in the kit for 12mm linkage setups. Install a T-bushing in each side of the swaybar hole, then install the Posilink in it and tighten.

13.



13. The PosiLink mounts with the stud on the Strut pointing forward, and the stud on the Sway bar pointing in.

Note: Image is viewing from front of vehicle.

Note: Depending on the manufacture of the swaybar on your car, you may have to flip the PosiLink assembly to get the best fit. The PosiLink needs to be as straight as possible with the steering wheel straight.



Final Assembly

14.



14. Attach the brake line to the mount on the Strut using the Factory hardware.

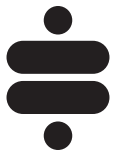
15.



15. Slide the ABS wire into its mount on the Strut.

16. Route the Airline to the Air Spring. When hooking up the Airline be sure that you can turn the steering from lock to lock with out tugging on the Airline. This situation will eventually cause the line to leak.

17. Repeat previous steps on Passenger side.

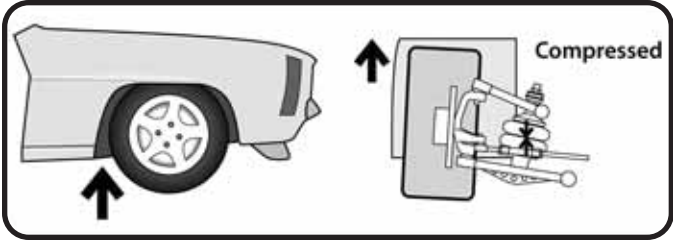


TUNING GUIDE

TRIPLE-ADJUSTABLE SHOCKS

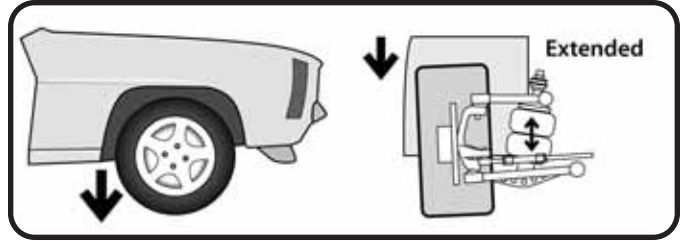


The Basics...



COMPRESSION

This typically occurs when you hit a bump in the road. The bump forces the wheel/tire/suspension assembly to "compress" or move upwards into the car.



REBOUND

Rebound is the opposite of compression. This occurs when the wheel/tire/suspension assembly falls into a pothole, or simply "rebounds" from being compressed.

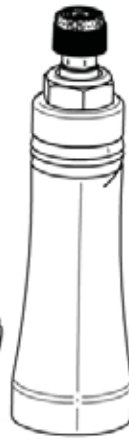
Where Are The Knobs?

TQ Series Shocks

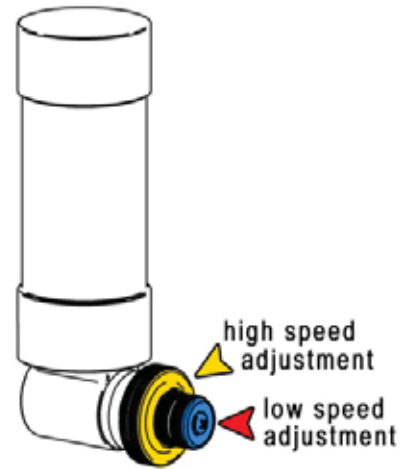
- The rebound adjustment knob is located on the top of the shock, either protruding from the side of the eyelet, or atop the stud.
- This high/low speed adjustment knobs are located on the external reservoir.



Eyelet



Stud



External Reservoir

Knob Function

Counterclockwise

=
Softer



Clockwise

=
Firmer





TUNING GUIDE

TRIPLE-ADJUSTABLE SHOCKS



Initial Rebound Setting

NOTE: Before jumping straight to a middle-of-the-road shock setting, we recommend you experience the full range of adjustment potential of your new shocks by first driving your vehicle at both the “full stiff” and “full soft” settings. Understanding how your shocks behave at these extremes will provide recognizable reference points as you attempt to dial in your settings.

1. Begin by setting your shocks to the “full stiff”, or minimal rebound position. You do this by turning the adjustment knob clockwise until it stops.

2. Now turn the adjustment knob counterclockwise 12 clicks. This is the approximate center of the adjustment range.

3. Take the vehicle for a test drive. Try to determine if you are experiencing any of the unwanted behaviors found at the extremes of the adjustment range. If you are satisfied with the ride quality and handling, you’re all set. Enjoy the ride!

4. If the vehicle feels too “floaty” or soft, turn the knob a few clicks clockwise to increase the damping effect.

If the ride quality is still too harsh or stiff, turn the knob a few more clicks counterclockwise to decrease the damping effect.

5. Take the vehicle for another test drive. If necessary, repeat the steps above until your desired optimal ride quality has been achieved.



General Guidelines

- The rear shocks typically have the most influence on ride quality. This is due to your seating position being closer to the rear than the front.
- Adjustments to the front shocks will generally require 3-4 clicks in any direction to be noticeable, while adjustments to the rear shocks may only require 1-2 clicks to be felt.
- Don’t be afraid to turn the knobs and experience the full adjustment range. You are not going to hurt anything and you can always go back if you adjust too far one way or the other.



TUNING GUIDE

TRIPLE-ADJUSTABLE SHOCKS



Initial Compression Setting

1. Begin by setting both the low speed and high speed compression adjustments to “full soft”. You do this by turning the high-speed (outer) adjustment knob on the external reservoir counterclockwise until it stops. The low-speed (inner) knob will rotate with it.



NOTE: For most people operating their vehicle under normal driving conditions, the minimum compression setting is going to provide ideal ride quality and handling characteristics.

2. Take the vehicle for a test drive. If you are satisfied with the ride quality and handling, you’re all set. Enjoy the ride!



3. If you like to race or engage in more “spirited” driving, you might find that a soft low-speed setting results in some undesirable behaviors. If you experience any of the following symptoms, you may wish to increase the low-speed damping by turning the inner knob clockwise a few clicks.



- Handling feels soft and unresponsive
- Front end dives excessively when braking
- Rear end squats excessively when accelerating
- Excessive body roll when cornering

4. If general handling is dialed in, but you feel the suspension bottoming out when encountering speed bumps, potholes or large dips, you may need to increase the high-speed damping by turning the outer ring clockwise a few clicks.



5. Take the vehicle for another test drive. If necessary, repeat the steps above until your optimal balance of ride quality and handling has been achieved.



NOTE:

It may help to think of your compression adjustments as a means of creating additional spring rate and controlling the timing at which your suspension reacts to events that compress your vehicle’s springs.

The low-speed knob may be adjusted independently of the high-speed knob, but any adjustments to the high-speed knob will also move the low-speed knob.