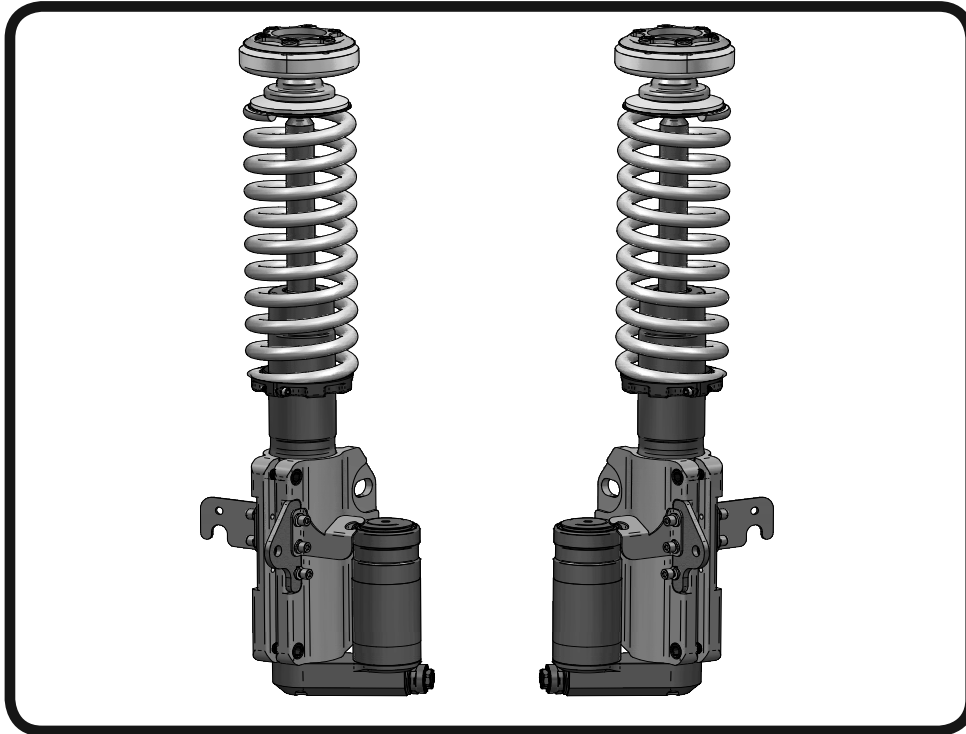
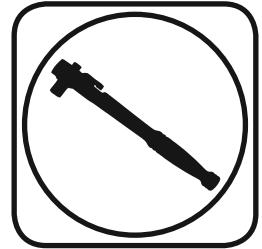




**Part # 11503111 -2010-2015 Camaro**



Recommended Tools



## 2010-2015 Camaro TQ Front CoilOver Strut Installation Instructions

### Table of contents

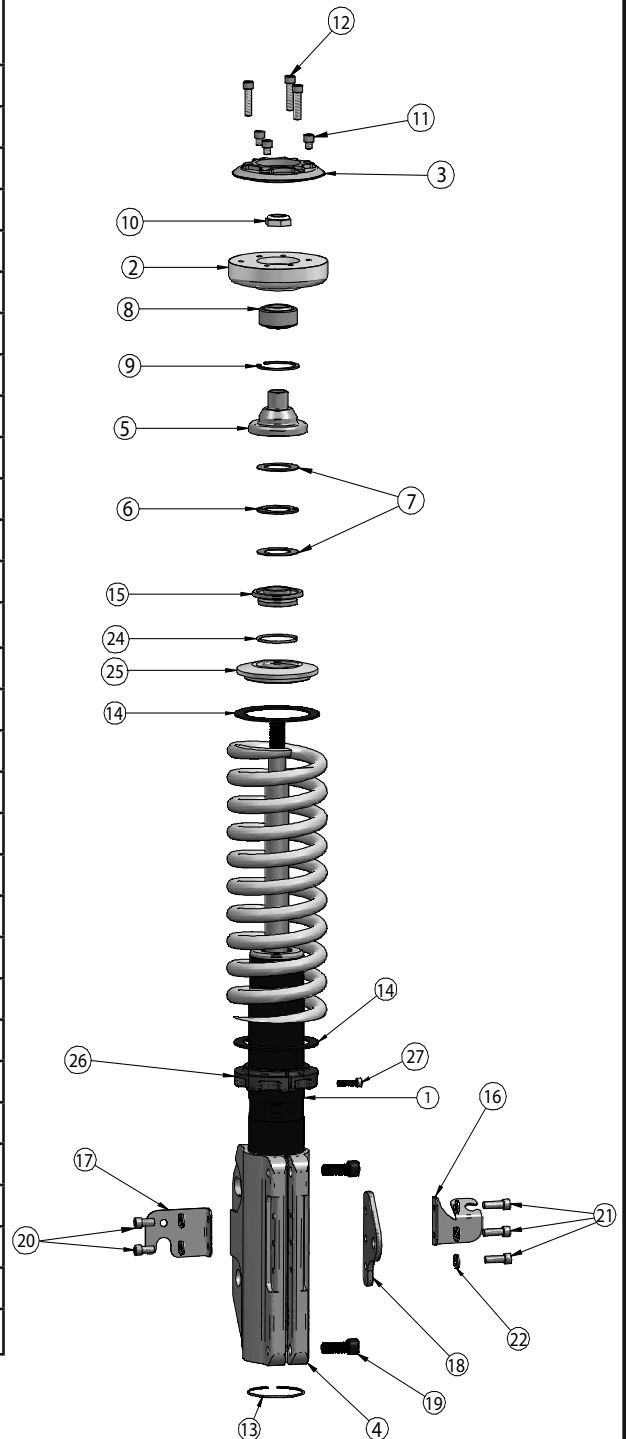
Page 2.....	Included Components
Page 3.....	Disassembly and Getting Started
Page 4.....	Upper Mount Installation
Page 5.....	Assembly
Page 6.....	Final Assembly
Page 7-8.....	Strut Adjustment
Page 9.....	Spring Preload and Adjustment





### Included Components .....In the box

Item #	Part #	Description	QTY
1	27669999	Strut Cartridge	2
2	90002367	Bearing Retaining Plate	2
3	90002363	Upper Retention Plate	2
4	70010941	Strut Extrusion	2
5	90002366	Thrust Bearing Adapter	2
6	70010987	Thrust Bearing	2
7	70010988	Thrust Bearing Washer	4
8	90001042	Upper Bearing	2
9	90000805	Bearing Snap Ring	2
10	99562003	9/16" Nylok Jam Nut	2
11	99251007	1/4"-20 x 1/4" SHCS	6
12	99251010	1/4"-20 x 1" SHCS	6
13	70010992	Strut Retaining Ring	2
14	70010828	Delrin CoilSpring Washer	4
15	90002365	CoilSpring to Bearing Adapter	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	99253007	1/4" Split Lock Washer	10
23	59100275	10" 275lb CoilSpring	2
24	90002222kit	CoilSpring Cap Retaining Ring	2
25	90002222kit	CoilSpring Cap	2
26	90002222kit	CoilSpring Adjuster Nut	2
27	90002222kit	Adjuster Nut Locking Screw	2
	90002376	Posilink Spacer (Not Shown)	2
	90002571	10mm 90 Degree PosiLink	4
	90002157	T-bushing-Posilink to sway bar	4



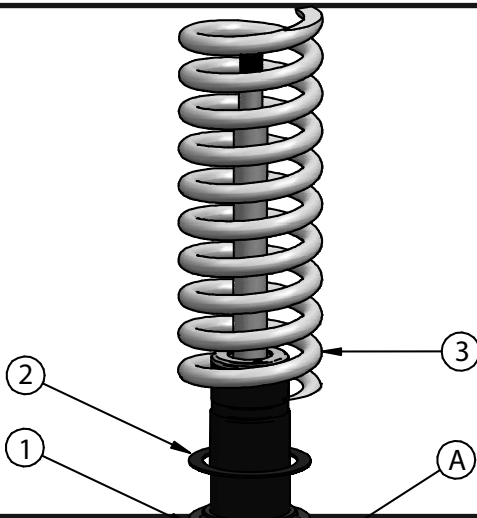


### Disassembly

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

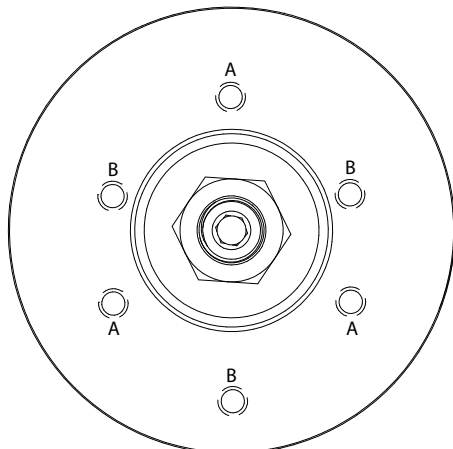
6.



6. Install the Coilspring on to the Strut (A) according to Diagram #8.

1. CoilSpring Adjuster Nut: thread to bottom of threads for ease of installation of the Strut Assemble.
2. Delrin Washer
3. CoilSpring
4. CoilSpring Adjuster Nut Locking Screw: leave screw loose until final adjustment is completed.

7.

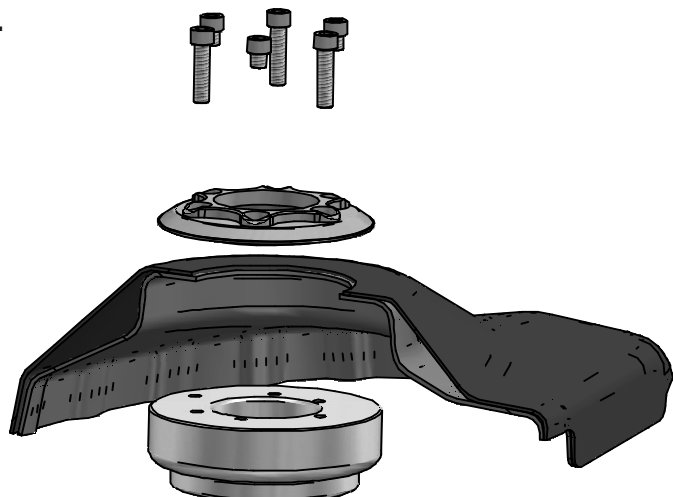


7. The upper strut mount provided in this kit has 2 mounting positions. Centered and offset. Looking at the illustration you will notice "A" bolt holes are centered and "B" bolt holes are offset. Position "A" is used for a street driving alignment. Position "B" is used when a more aggressive alignment 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.



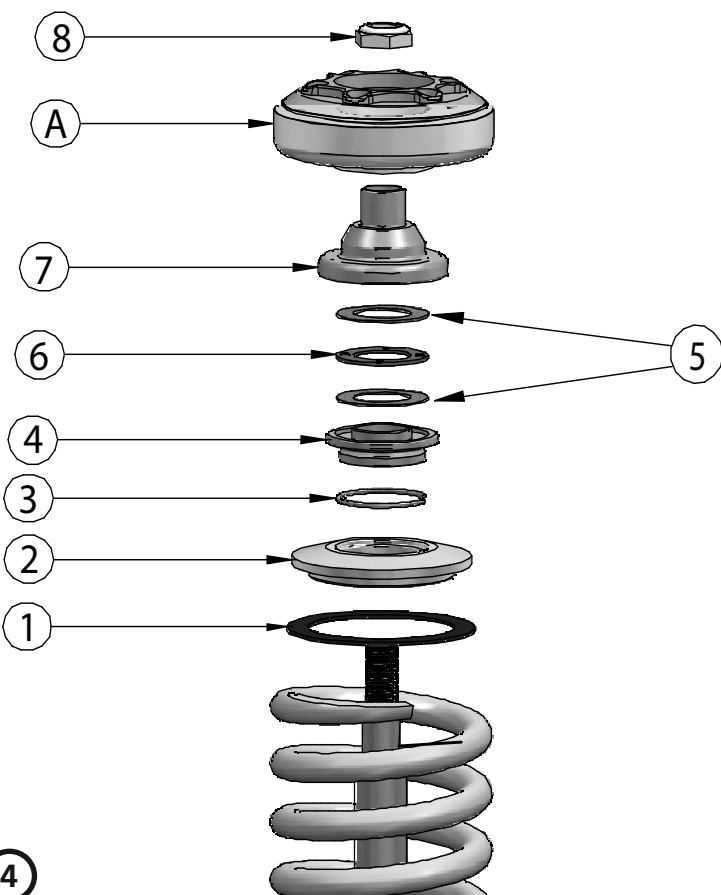
### Upper Mount Installation

8.



8. 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.

9.



9. Remove the Adjuster Knob from the Strut shaft for assembly. With the CoilSpring installed on the Strut, bolt the strut assembly into the upper mount (A), see diagram 11 for assembly order.

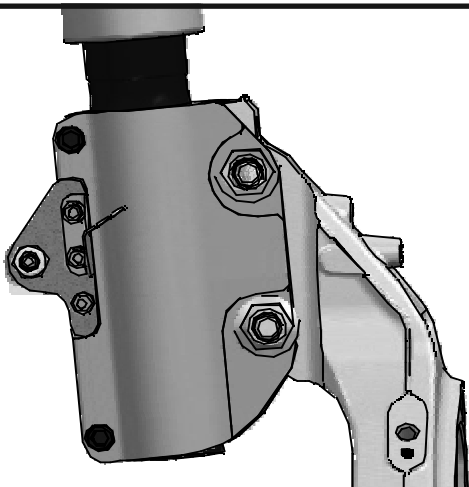
1. Delrin CoilSpring Washer
2. Upper CoilSpring Cap
3. CoilSpring Cap Retaining Ring (Installed On #4 CoilSpring to Bearing Adapter)
4. CoilSpring to Bearing Adapter
5. Torrington Bearing Races
6. Torrington Bearing
7. Torrington to Upper Mount Adapter
8. 9/16" Locknut

Assemble components and install into upper mount tightening upper nut. Reinstall upper adjustment knob.



### Assembly

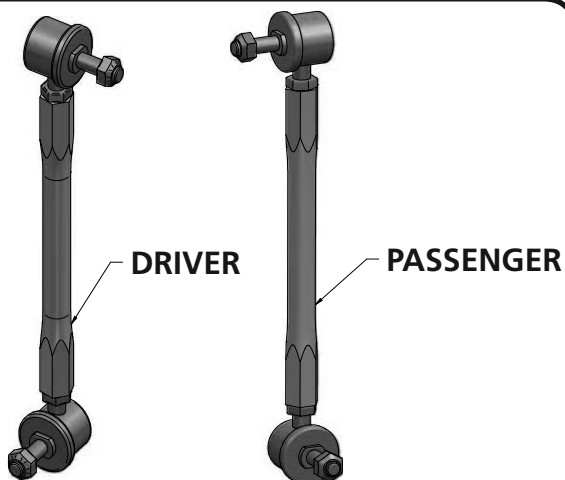
10.



**10.** Attach the PosiLinks between the strut and Sway bar using the 10mm Nylok Nut. Refer to diagram 13 for orientation.

**NOTE:** There is a Drivers and Passenger Posilink assembly, refer to diagrams (13 and 14) for proper installation

11.

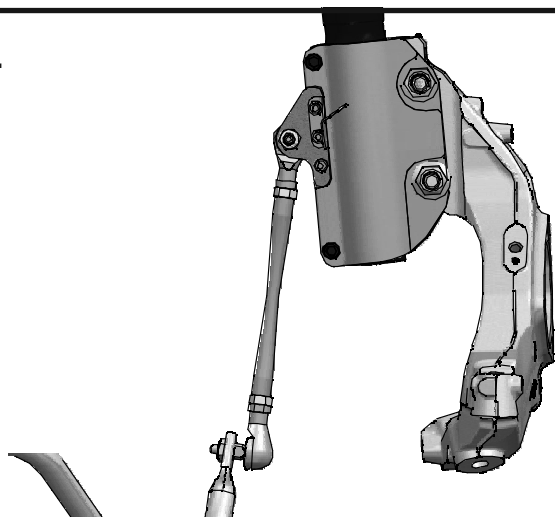


**11.** The Posilink mounts with the stud on the Strut pointing forward, and the stud on the Sway bar pointing in.

**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.

**Note:** Image is viewing from front of vehicle.

12.



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

**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

13.



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

14.



**14.** Slide the ABS wire into its mount on the Strut.

**15.** Thread the Adjuster nut up until it is snug against the bottom of the CoilSpring. This is Zero Preload. After nut is snug lightly tighten the locking screw.

**16.** Repeat previous steps on Passenger side.

**17.** With Both sides installed, slowly lower the car to the ground to check ride height. It may be necessary to tighten the Adjusting nut (Also known as preloading the CoilSpring) to achieve proper ride height. To do this you will need to loosen the Adjuster Nut Locking Screw and tighten the Adjuster Nut to put PreLoad into the CoilSpring. Once the correct ride height is achieved tighten the Locking Screw in the lower Adjuster nut. **It may be helpful to read the section pertaining to spring preload and adjustment on Page 9.**



### Strut Adjustment

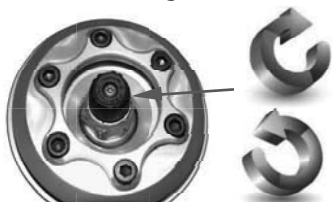
#### Strut Adjustment 101- Rebound Adjustment

##### Rebound Adjustment:

How to adjust your new struts.

The rebound adjustment knob is located on the top of the Strut protruding through the upper mount.

You must first begin at the ZERO setting, then set the shock to a soft setting of 20.



-Begin with the Strut adjusted to the ZERO rebound position (full stiff). Do this by rotating the rebound adjuster knob clockwise until it stops.

-Now turn the rebound adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use).

##### Take the vehicle for a test drive.



-If you are satisfied with the ride quality, do not do anything, you are set!

-If the ride quality is too soft increase the damping effect by rotating the rebound knob clock wise 3 clicks.

##### Take the vehicle for another test drive.



-If the vehicle is too soft increase the damping effect by rotating the rebound knob clock wise 3 additional clicks.

-If the vehicle is too stiff rotate the rebound adjustment knob counter clock wise 2 clicks and you are set!

Take the vehicle for another test drive and repeat the above steps until the ride quality is satisfactory.

##### Note:

**One end of the vehicle will likely reach the desired setting before the other end. If this happens stop adjusting the satisfied end and keep adjusting the unsatisfied end until the overall ride quality is satisfactory.**



### Strut Adjustment

#### Shock adjustment 101- Triple Adjustable

##### Triple Adjustable:

##### Step One: High Speed Compression



- High speed compression adjustments are used in both street driving and track tuning.
- Begin with the shocks adjusted to the ZERO high speed compression position (full stiff). Do this by rotating the high speed compression adjuster (large knob) clockwise until it stops.
- Now turn the high speed compression adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use. For typical street driving the high speed compression adjuster will remain at setting 20.

##### Step Two: Low Speed Compression

Low speed compression adjustment is what is typically felt during street driving.



- Begin with the shocks adjusted to the ZERO low speed compression position (full stiff). Do this by rotating the low speed compression adjuster (small knob) clockwise until it stops.
- Now turn the low speed compression adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use). Take the vehicle for a test drive.
- if you are satisfied with the ride quality, do not do anything, you are set!
- if the ride quality is too soft increase the damping effect by rotating the low speed compression knob clock wise 3 clicks.

##### Take the vehicle for another test drive.



- if the vehicle is too soft increase the damping effect by rotating the low speed compression knob clock wise 3 additional clicks.
- If the vehicle is too stiff rotate the low speed compression adjustment knob counter clock wise 2 clicks and you are set!

Take the vehicle for another test drive and repeat the above steps until the ride quality is satisfactory.

##### Step 3:

Adjust rebound according to Single Adjustable instructions.

##### **Note:**

One end of the vehicle will likely reach the desired setting before the other end. If this happens stop adjusting the satisfied end and keep adjusting the unsatisfied end until the overall ride quality is satisfactory.





## Installation Instructions



### Spring Adjustment and Preload

#### Ride Height

We have designed most cars to have a ride height of about 2" lower than factory. To achieve the best ride quality & handling, the shock absorber needs to be at 40-60% overall travel when the car is at ride height. This will ensure that the shock will not bottom out or top out over even the largest bumps. Measuring the shock can be difficult, especially on some front suspensions. Measuring overall wheel travel is just as effective and can be much easier. Most cars will have 4-6" of overall wheel travel. One easy way to determine where you are at in wheel travel is to take a measurement from the fender lip (center of the wheel) to the ground. Then lift the car by the frame until the wheel is just touching the ground, re-measure. This will indicate how far you are from full extension of the shock. A minimum of 1.5" of extension travel (at the wheel) is needed to ensure that the shock does not top out. If you are more than 3" from full extension of the shock then you are in danger of bottoming out the shock absorber.

#### Adjusting Spring Height

When assembling the CoilOver, screw the spring retainer tight up to the spring (0 preload). After entire weight of car is on the wheels, jounce the suspension and roll the car forward and backward to alleviate suspension bind.

- If the car is too high w/ 0 preload then a smaller rate spring is required. Although threading the spring retainer down would lower the car, this could allow the spring to fall out of its seat when lifting the car by the frame.
- If the car is too low w/ 0 preload, then preload can then be added by threading the spring retainer up to achieve ride height. On 2.6" - 4" stroke shocks, up to 1.5" of preload is acceptable. On 5-7" stroke shocks, up to 2.5" of preload is acceptable. If more preload is needed to achieve ride height a stiffer spring rate is required. Too much preload may lead to coil bind, causing ride quality to suffer.

### STILL HAVE QUESTIONS?

#### Tech line hours

Monday - Friday

8AM - 6PM (EST) ..... 812-482-2932