

## Camaro Coilover Installation



**Part Name:** Camaro Coilovers

**Part Number:** 1410104

**Application:** 2010 + Chevrolet Camaro V8 and V6

**Level of Difficulty:** Moderate

**Expected Installation Time:** 2.5 Hours

**Packing List:**

- 2 Front coilover assemblies
- 2 Rear coilover assemblies
- 1 bag installation hardware
- 1 set spanner wrenches

**Recommended Tools:**

- 1/2 drive breaker-bar
- 1/2 drive torque wrench
- 1/4, 3/8, and 1/2 drive ratchets
- 7mm, 10mm, 15mm shallow sockets
- 18mm, 21mm, 24mm deep sockets
- 7mm, 21mm, 24mm wrenches
- 15mm, 18mm ratchet wrenches
- T40, T50 Torx bit sockets
- 3mm and 5mm Allen wrenches
- Coil spring compressor (can be rented from most auto parts stores)
- Floor jack & jackstands, or lift

## Front Coilover Installation

Lift the car and support it properly. This installation can either be done on jack stands or on a lift.

Open the hood and remove the plastic cover from the upper strut nuts and the upper nut and plate on each side - See Figure 1 and Figure 2. This nut is 24 mm. This may allow the strut to lower from the tower, but most likely it will be stuck in place still.

**!Caution! the second nut holds the spring tension, do not remove that yet. See Figure 1**

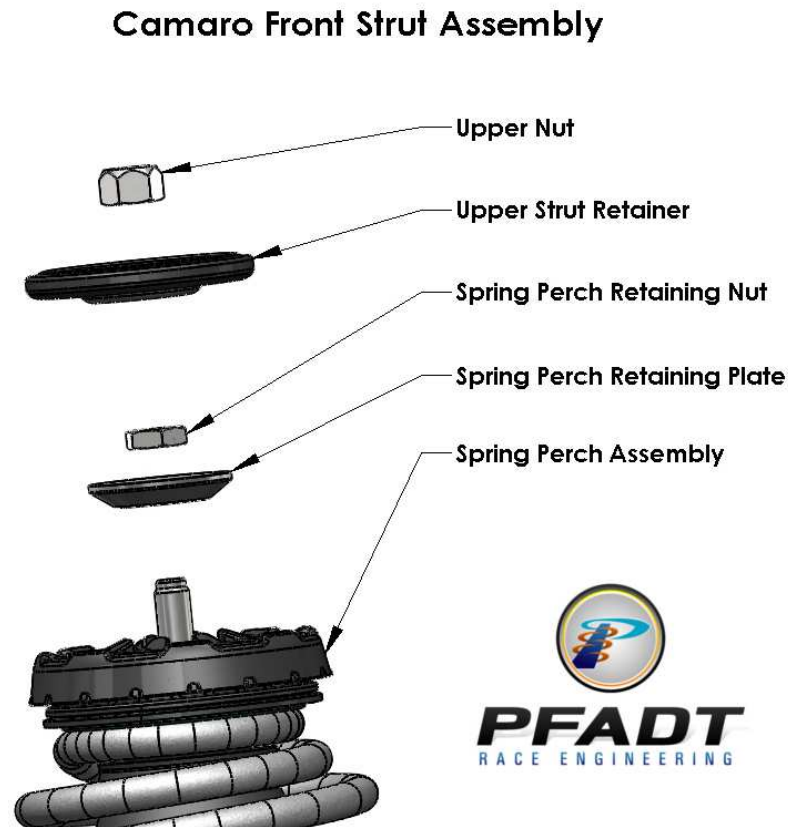


Figure 1

Lift the vehicle and remove both front tires.

Remove the bolt (10mm hex) that holds the brake line to the strut housing and remove the wheel speed sensor wire from its bracket on the strut housing

Remove the 15mm nut that holds the swaybar endlink to the strut and move the endlink out of the way. You may have to use a 7mm box wrench to keep the stud from turning.

Remove the two nuts on the spindle to strut bolts (24mm hex).



**Figure 2**

Support the strut by hand and remove the two bolts. The strut should be able to be removed from the vehicle now. The upper mount may stick in the tower, some amount of force and twisting might be required to remove the unit.

With the unit out of the car, use a spring compressor to compress the spring and remove the spring perch retaining nut (refer to Figure 1). The OE Upper Mount - which you will reuse - can now be removed from your strut.

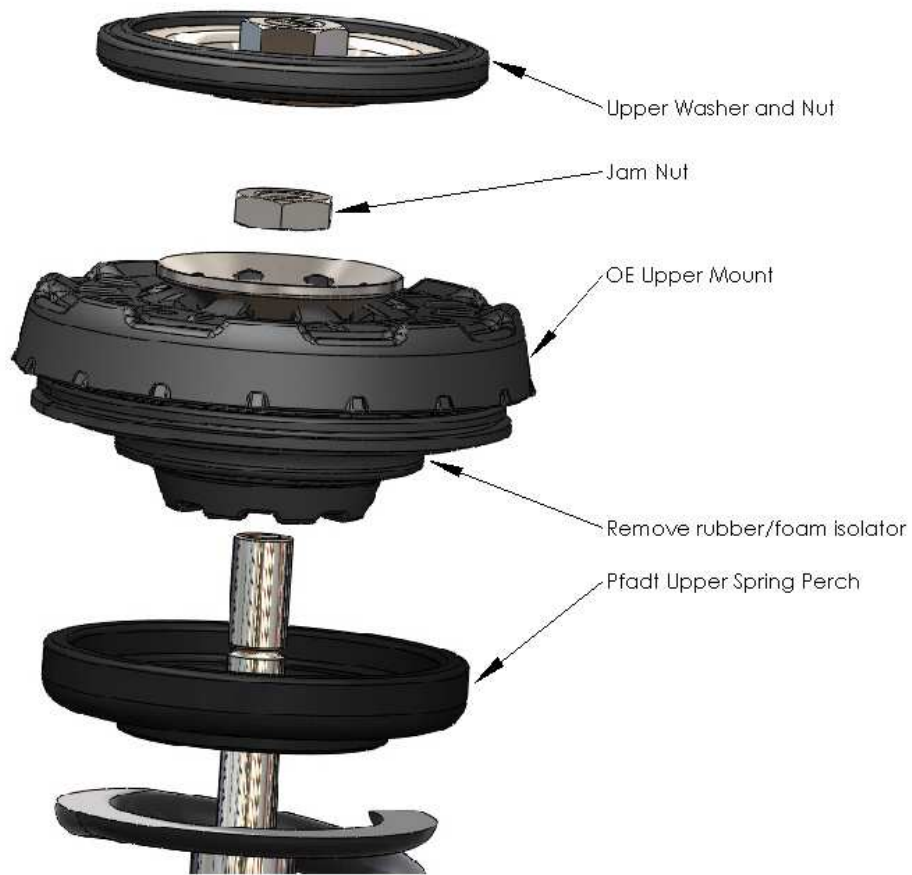
Remove the OE spring isolator from the factory upper mount. That isolator will be either black rubber or yellow foam. Install the Pfadt upper spring perch on the factory upper mount. The part will press on by hand and stay in place (refer to Figure 3).

Assemble the upper mount onto the Pfadt coilovers and torque the jam nut to 45 lb-ft. Leave the upper washer and nut off until the units is placed back into the vehicle.

Return strut to vehicle and place upper end back up into the strut tower. Put on upper retaining washer and start upper nut by hand to hold strut in place (refer to Figure 3). Re-install two spindle to strut bolts. Torque The strut bolts to 95 lb-ft.

Re-attach brake line, wheel speed sensor wire and sway bar endlink to the strut. Torque the endlink nut to 33 lb-ft

Repeat procedure for the other front strut.



**Figure 3**

Install front wheels and lower the vehicle to the ground. Torque upper strut nuts on both sides to 65 lb-ft.

## Rear Coilover Installation

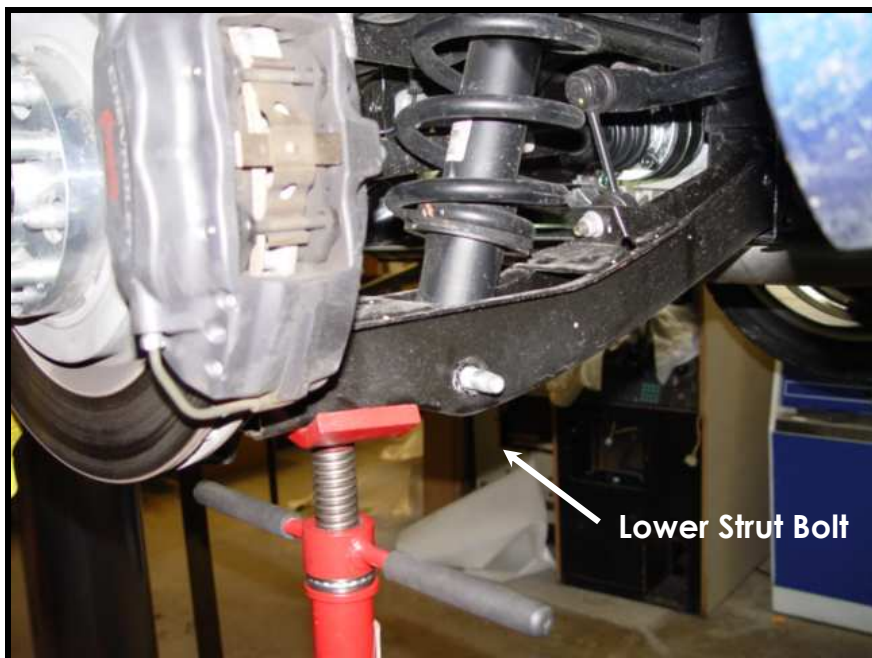
Remove rear wheels.

Remove 4 bolts (15mm head) that hold the upper strut mount to the chassis.



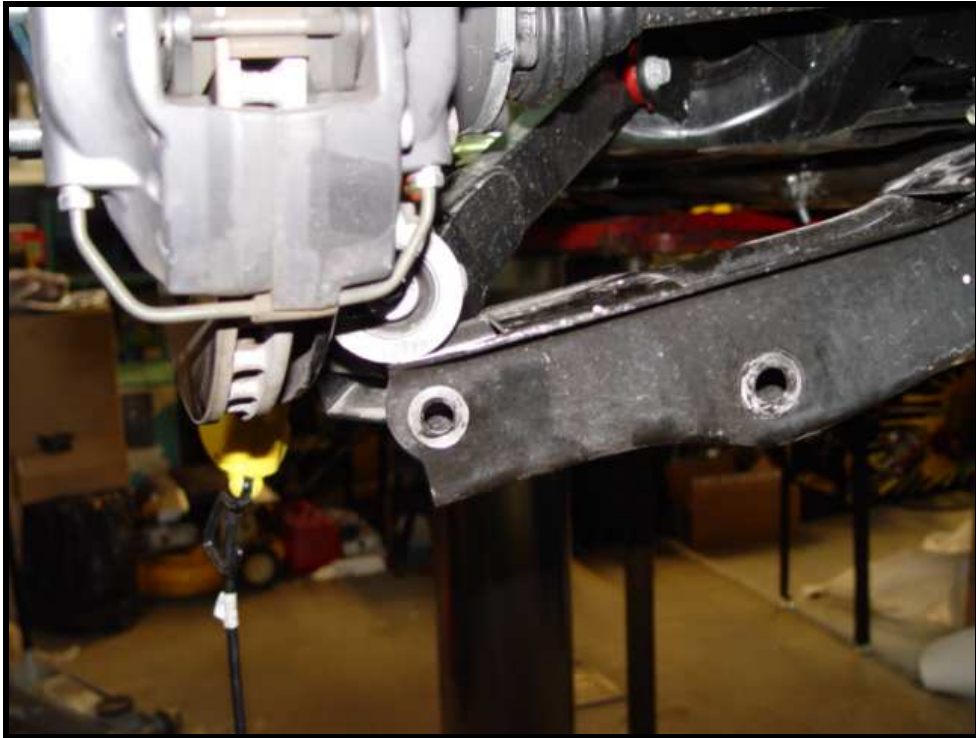
**Figure 4 - Four upper strut mount bolts**

Remove lower strut to control arm bolt (21mm socket and open end wrench). Also, remove the 15mm nut from the rear swaybar endlink where it attaches to the lower control arm. You may need to hold the stud with a 6mm allen wrench.



**Figure 5 - Lower Strut Bolt**

Remove the bolt (18mm hex) that holds the lower control arm to the spindle assembly.



**Figure 6 - Lower Control Arm to Spindle Bolt Location**

With those bolts removed, pull down on the lower control arm and remove the strut assembly from the vehicle.

Using spring compressor, compress the spring to remove tension and then remove upper mount retaining nut (18mm hex). You may need to hold the shaft with a T40 Torx driver.



Press the factory rubber bushing out of the upper mount.



Assemble the upper mount onto the coilover assembly

Torque the small socket head bolts with a 3mm allen wrench. Torque to 18 *in-lb* .

***! Note that is 18 inch-lb, that is a very low number, do not overtorque!***



Re-install strut into vehicle and start 4 upper bolts to hold it in place. Install lower strut to control arm bolt. Install lower control arm to spindle bolt. Insert swaybar endlink into lower control arm hole. Torque all bolts appropriately.

Lower control arm to spindle	35 ft-lb
Lower control arm to strut	65 ft-lb
Upper strut mount to chassis	35 ft-lb
Endlink nut	33 ft-lb

Repeat procedure for other side.

Re-install wheels and set the vehicle on the ground. Roll the vehicle around to settle the suspension and then take measurements to set ride height.

## Setup Information

### Ride Height:

Correct the ride height by adjusting the spring perches with the supplied spanner wrenches.

Front: 6 turns = 1/2" ride height

Rear: 4 turns = 1/2" ride height

When the ride height is set, take the vehicle to alignment shop for a proper alignment. There are alignment recommendations on the Pfadt website under the DOCS heading.

<http://www.pfadtracing.com>

### Damping Adjustment:

There are 20 clicks of damping adjustment on the Pfadt Coilover units. The adjustment knob is located at the bottom of both the front strut and rear damper, shown below. The damping knob controls both compression and rebound damping together.



Start with each of the dampers set in the middle of the range at 10 clicks. It is recommended to go to full stiff (clockwise) - a setting of 20 - and count down from there.

The damping adjustment on the Pfadt coilovers can be used to tune ride quality and performance. The higher the damping number, the stiffer the ride will be. The entire range is useful and you should tune the car to meet your specific comfort/performance level.

Damping tuning is generally a tradeoff between stability and grip. Stiffer increases stability - this makes the car more responsive - but also can reduce overall grip level. With tires that have higher grip levels, more stability can be put in with higher damping numbers. Below are some general guidelines for damping.

### Recommended Damping Settings

Use	Front	Rear
Comfortable Street	8	8
Sporty Street	10	10
Track Day	14	14
Drag Race	2	5