

WMMTC

AFE CONTROL



Description: FeatherLight Single Adjustable Corvette Coilovers

Part Number: 430-401004-N

Application: 2014-2017 Chevrolet Corvette (C7)

Note: Some models might be equipped with "Magnetic Ride" electric adjustable shocks. A delete kit is required for installation on these vehicles. We offer this kit as part # 436-401002-N and is available separately.

Tools Needed:

3/8" drive ratchet 24" long
3/8" extension torque
wrench
13mm deep socket
15mm socket
18mm deep socket 22mm
socket
lug nut socket (stock 19mm)

15mm flex head ratchet wrench
13mm combination wrench
22mm combination wrench
1/2" drive breaker bar 1/2"
drive torque wrench
floor jack
jack stands

This procedure is best performed on a vehicle lift, however it is possible to install these coilovers using a floor jack and jack stands.

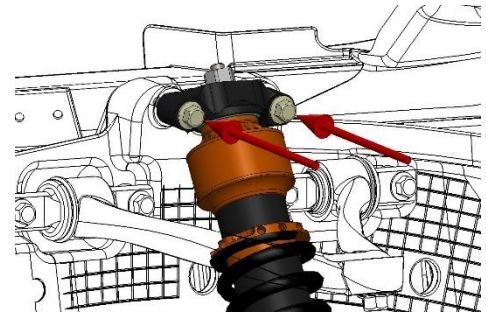
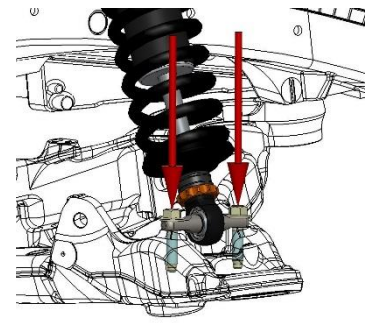
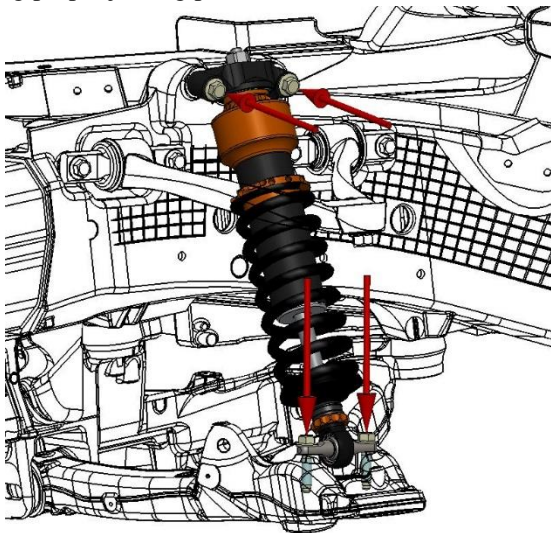
If you have any questions, please see the SUPPORT area on our website aFecontrol.com or email info@afecontrol.com.

Front Leaf Spring Removal

1. Using proper jacking points, lift and support the front of the car on jack stands.
2. Remove the front wheels.
3. Using a 18 mm socket, remove the 2 bolts attaching the aluminum upper shock mount to the frame.
4. Unbolt the sway bar end links from the control arm. If the vehicle is equipped with ride height sensors, disconnect the sensor from the control arm.
5. Leaf Spring Removal: Remove the 4 bolts that hold the leaf spring to the front subframe.
6. Remove the two bolts holding the lower shock mount to the lower control arm.
7. Support the lower ball joint with a floor jack.
8. Remove the 4 bolts that hold the upper control arm to the frame. **Note the position of any washers between the upper control arm mounts and the frame for use in re-assembly.**
9. Pivot upper control arm out of the way, lower the floor jack and remove the shock
10. Repeat the above process on the other side.
11. Pivot the upright and lower control arm assembly down to free the leaf spring. The spring will move toward the lowered upright until the opposite end slips free from the opposite control arm. The spring can then be removed.

Front Coil Over Installation

1. Position the coil over by installing the front coil over assembly to the lower control arm by attaching the lower T-bar mount to the control arm using the factory shock bolts, and torque to torque to 21 lb-ft.
2. With the floor jack, raise the lower control arm until the aluminum upper mount seats against the frame.
3. Attach the upper mount to the frame using the factory bolts. Torque to 48 lb-ft.
4. Pivot the upper control arm back in place and replace the washers and bolts. Torque the upper control arm mounting bolts to 48 lb-ft. **Note: Be sure to reinstall any washers between the upper control arm mounts and the frame in the same position as removed.**
5. Re-attach the sway bar end links and torque to 53 lb-ft.
6. Re-attach ride height sensors (if equipped).
7. Repeat the above process on the other side.
8. Reinstall the front wheels, and properly torque lug nuts.
9. Using proper jacking points, lift and remove vehicle from jack stands.



<i>Front Torque Specification</i>	<i>Torque</i>
Coilover Upper Mount Nut (Cirthead to Upper Mount)	62 lb-ft
Coilover Upper Mount Bolts	48 lb-ft
Lower Shock Mounting Nuts	21 lb-ft
Swaybar Endlink Hardware (GM)	53 lb-ft
Front Upper Control Arm Bolts	48 lb-ft

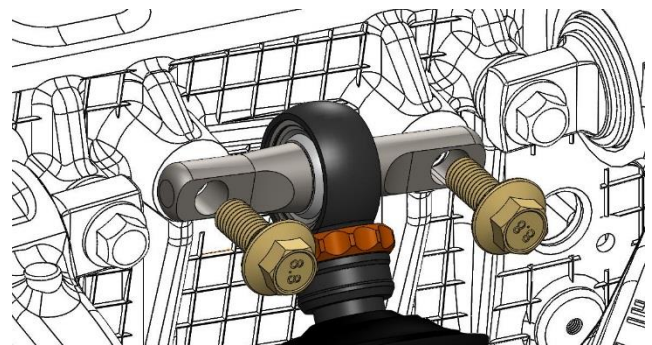
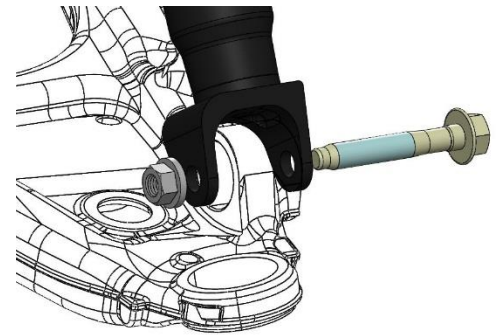
Rear Leaf Spring Removal

1. Using proper jacking points, lift and support the rear of the car on jack stands.
2. Remove the rear wheels.
3. Supporting the lower ball joint with a floor jack, Using a 18 mm socket, remove the 2 bolts attaching the aluminum upper shock mount to the frame.
4. Remove the large bolt that holds the lower shock mount to the control arm.
5. Remove the 4 bolts that hold the upper control arm to the frame. Note the position of any washers between the upper control arm mounts and the frame for use in re-assembly.
6. Pivot upper control arm out of the way. Lower the floor jack and remove the shock.
7. Repeat this process and remove the shock from the other side.
8. Leaf Spring Removal: Remove the 4 bolts that hold the leaf spring to the rear subframe.
9. Remove the swaybar endlink from one end of the swaybar, freeing the lower control arm to pivot down. If the vehicle is equipped with ride height sensors, disconnect the sensor from the control arm.
10. Pivot the upright and lower control arm assembly down to free the leaf spring. The spring will move toward the lowered upright until the opposite end slips free from the opposite control arm. The spring can then be removed.

Rear Coil Over Installation

1. Position the coil over by installing the rear coil over assembly to the lower control arm by attaching the lower fork to the control arm using the factory shock bolt, and torque to torque to 81 lb-ft. **Position mount to allow maximum clearance to the drive shaft.**
2. With the floor jack, raise the lower control arm until the upper t-bar seats against the frame.
3. Attach the upper t-bar to the frame using the supplied bolts. Torque to 48 lb-ft. **Position t-bar to allow maximum clearance to drive shaft.**
4. Pivot the upper control arm back in place and replace the washers and bolts. Torque the upper control arm mounting bolts to 48 lb-ft. **Note: Be sure to reinstall any washers between the upper control arm mounts and the frame in the same position as removed.**
5. Re-attach the sway bar end links and torque to 53 lb-ft.
6. Re-attach ride height sensors (if equipped).
7. Repeat the above process on the other side.
8. Reinstall the rear wheels, and properly torque lug nuts.

Using proper jacking points, lift and remove vehicle from jack stands



Rear Torque Specification	Torque
Upper T-Bar Bolts	48 lb-ft
Lower Shock Mounting Bolt	81 lb-ft
Swaybar Endlink Hardware (GM)	53 lb-ft
Upper Control Arm Bolts (aluminum frame)	48 lb-ft

Setup Guide

Ride Height

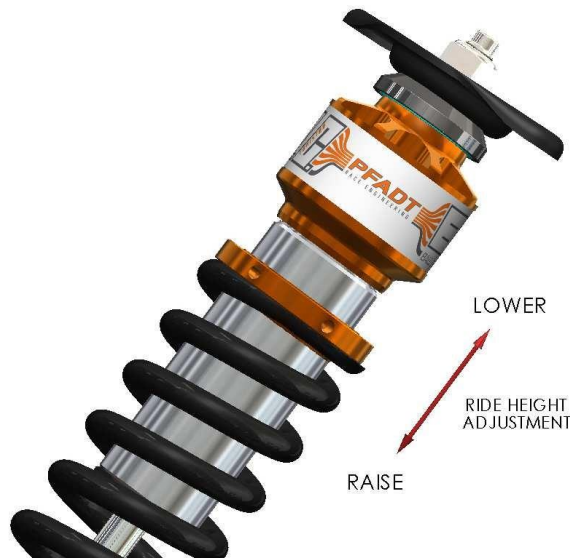
The Pfadt Series FeatherLight SA Coilovers have a simple ride height adjustment system. The initial setup is intended as a starting point only. Each vehicle is different and must be adjusted.

After installing the coilovers and applying proper torque to all fasteners, lower the car to the ground and roll the vehicle back and forth to settle the suspension. If the ride height is close to the desired ride height, it is recommended to drive the car a short distance prior to doing a final ride height setting. Use caution, the alignment settings may have changed during installation.

With the vehicle on a perfectly flat plane, measure the ride height of the vehicle. Calculate how much the ride height must change to meet your desired ride height. Using the guide below calculate how many turns on the spring perches are required. Raise the vehicle, support it safely and remove the wheels. Loosen the set screws on the spring perch with the supplied 3mm allen/spanner wrench. With supplied allen/spanner wrench, adjust the spring an appropriate number of turns. Re-tighten the set screws to lock the perch in place. After the adjustments have been made, repeat the measurement process to confirm the changes. **NOTE: DO NOT OVERTIGHTEN SET SCREWS! The set screws only needs to be snug to keep the perch from moving. Excess tightening may cause damage to the nylon ball which will make it difficult to adjust the perch**

Front: 5 turns = 1/2" ride height

Rear: 4.5 turns = 1/2" ride height



Ride Height	Front	Rear
all heights to be used only as a guide	(in)	(in)*
Pfadt Recommended Height C7	26.0	27.5

* with stock tires, measured to fender arch

Please note:

When the correct ride height is achieved, take the vehicle for a short drive and then double check the ride height. After the ride height is set, *the vehicle must be aligned*. Ride height changes alter alignment specification. Get a proper alignment.

Holding Shock Body

If for any reason the perch is difficult to adjust, use a **rubber strap wrench** around the threaded area and **NOT THE CIRC HEAD**, to hold the body in place while you apply extra force to move the perch. It is important that you use a strap wrench made of rubber or any other material that will not damage the threads. Failure to follow this procedure may result in a shock failure and will not be covered under warranty.



Important Note:

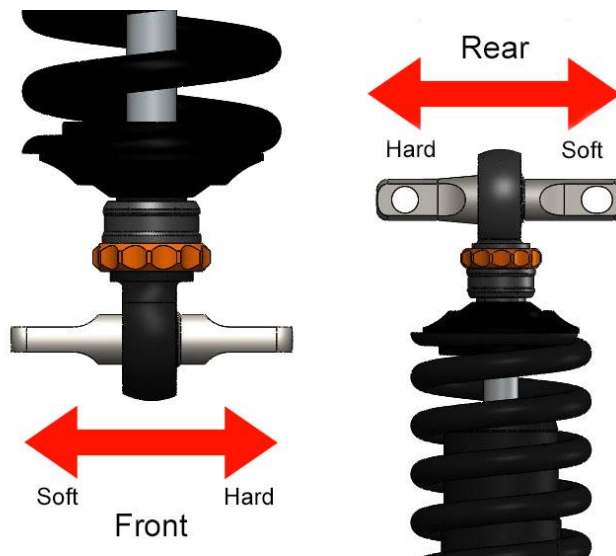
When adjusting the ride height, **Do Not** use the CIRC Head as a point of leverage. Any movement that will unscrew the CIRC head from the body tube will result in a sudden loss of gas pressure and ultimately shock failure, voiding the warranty. The CIRC head is under high pressure, unscrewing the CIRC head can result in serious injury.



Damping

Pfadt FeatherLight SA dampers have compression and rebound adjustment combined into one simple adjustment. Damping adjustment can be accomplished on the vehicle without special tools and without removing any damper components.

The damping adjustment knob is located on the end of each main damper shaft. The front shocks have 24 clicks of damping adjustment. It is best to start with the knob at full stiff and count down to your desired setting. The adjustment is more accurate and there may be a couple of extra clicks on the soft end of the adjustment range that are not affecting damping.



On the rear, there are 24 clicks of adjustment. It is best to start with the knob at full stiff and count down to your desired setting. The adjustment is more accurate and there may be a couple of extra clicks on the soft end of the adjustment range that are not affecting damping. Do not adjust beyond the total number of clicks stated in this manual.

Recommended Starting Points

Damper settings are listed in number of clicks down from full stiff.

Street: -8 Front, -10 Rear

Track: -5 Front, -8 Rear

Drag: -20 Front, -16 Rear



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