



## INSTALLATION INSTRUCTIONS



**Part # 11636110**

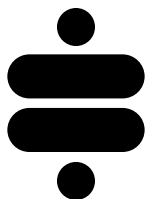


## HQ Series Rear Coilovers 2016-2024 Chevrolet Camaro



[www.ridetech.com](http://www.ridetech.com)  
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**Please Read And Understand All Instructions  
And Warnings Prior To The Installation Of  
This Product.**

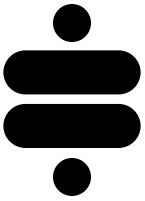


**THANK YOU**

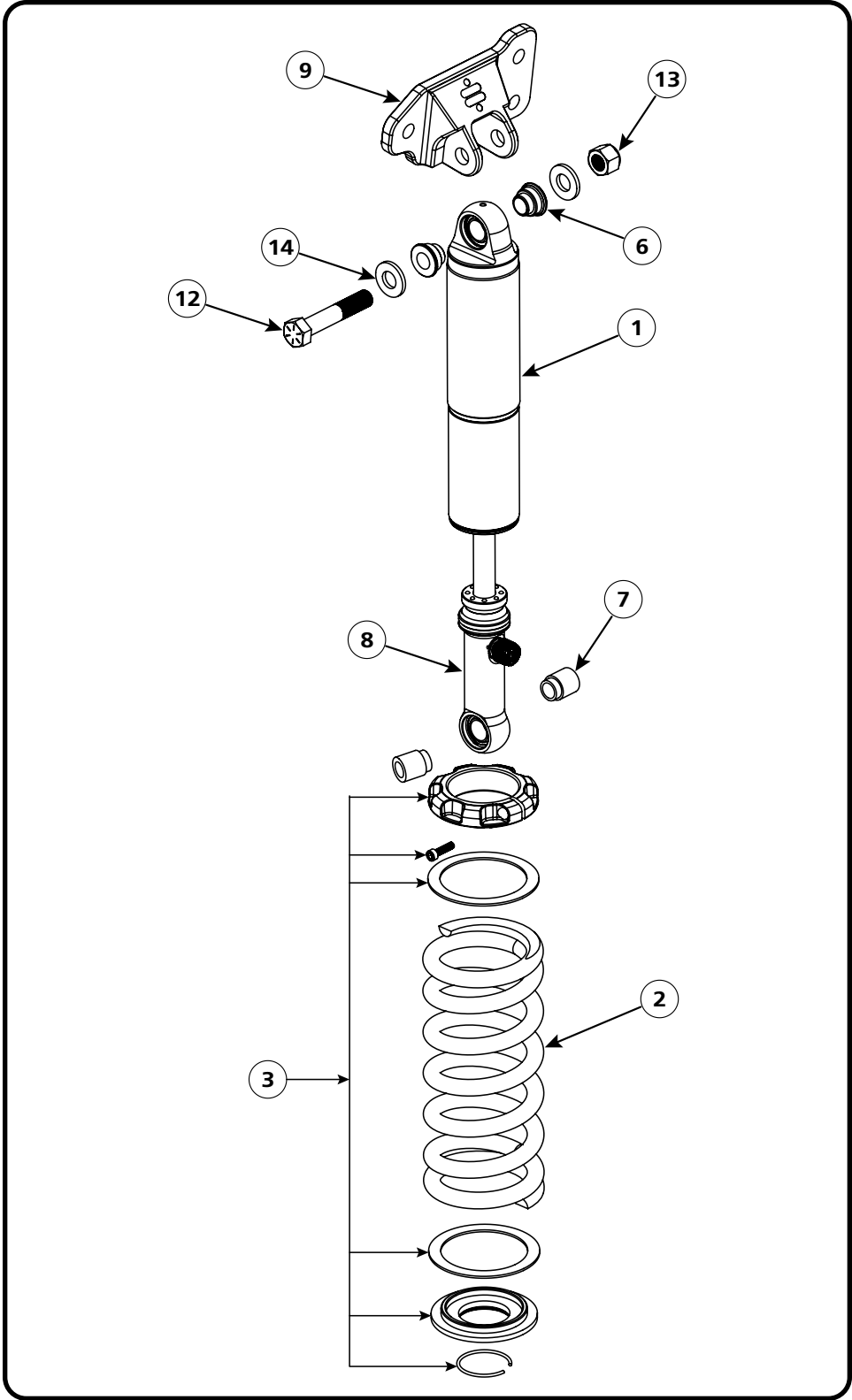
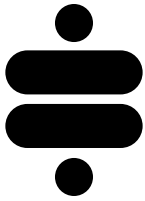
Congratulations on your new ridetech product! It's an honor that you've selected the ridetech brand to upgrade your ride. Our products are developed around quality and performance without compromise. We're confident you'll have many years (and miles) of pure driving enjoyment.  
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### **Road Map**

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# EXPLODED VIEWS

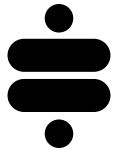


# PARTS LISTING AND TORQUE SPECS

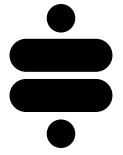
Item	Part #	Description	QTY
1	11639998	5.2 Travel SA Threaded Shock	2
2	59120300	Coil Spring, 12" 300 lbs/in	2
3	803-00-199	Upper Locking & Lower Spring Kit	2
4	90001994	Shock Bearing .625" ID x 1.0" (Installed in shock)	4
5	90001995	Internal Snap Ring for 1" O.D. (Installed in shock)	8
6	90002043	Aluminum Spacer, .500" ID x .365"	4
7	90002443	Aluminum Spacer, .475" I.D. x .680"	4
8	90003615	3.7" HQ Eyelet Assembly	2
9	90003864	2016+ Camaro Billet Rear Shock - Driver (Shown)	1
10	90003865	2016+ Camaro Billet Rear Shock - Passenger	1
11	99010259	Hardware Kit: 2016-24 Camaro Rear Coilovers	1

Hardware Kit: 99010259			
Item	Part #	Description	Qty
<b>SHOCK TO UPPER MOUNT</b>			
12	99501021	1/2-20 X 2.75" HEX BOLT GR 8	2
13	99502002	1/2-20 NYLOK NUT	2
14	99503014	1/2" SAE FLAT WASHER	4

LOCATION	TORQUE SPEC
Upper Shock Bolts	81 ft-lbs
Lower Shock Bolts	74 ft-lbs + 105°
Upper Shock Mount Nuts	43 ft-lbs



# COILOVER ASSEMBLY INSTRUCTIONS



**1.** Thread the preload adjustment nut onto the shock from the bottom (Figure 1). A few threads of engagement is ok for now.



Figure 1

**2.** The rebound adjustment knob must be removed prior to installing the upper spring mount in step 4. Turn the adjustment knob clockwise until it stops, then remove the torx screw and the knob (Figure 2).



Figure 2

**3.** Slide a Delrin washer over the shock and onto the adjustment nut, followed by the coil spring (Figure 3).

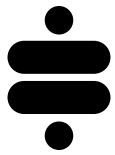


Figure 3

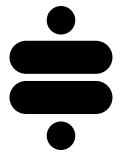
**4.** With the adjustment knob removed, slide a Delrin washer over the eyelet and place on top of the coil spring, followed by the upper spring mount (Figure 4).



Figure 4



# COILOVER ASSEMBLY INSTRUCTIONS



**5.** Slide the retainer clip over the upper eyelet and into the groove at the base of the eyelet. Make sure it snaps into place and is fully seated in the groove (Figure 5).



Figure 5

**6.** Reinstall the adjustment knob (Figure 6).

Once you have reinstalled the knob, you may want to turn the knob about 12 clicks counterclockwise since the rebound is currently set at "full stiff".



Figure 6

**7.** Thread the adjustment nut up the shock body to remove the slack and secure the spring and upper mount against the eyelet. Install the locking screw in the adjustment nut, but do not tighten yet (Figure 7). This screw will be tightened after your preload has been set.



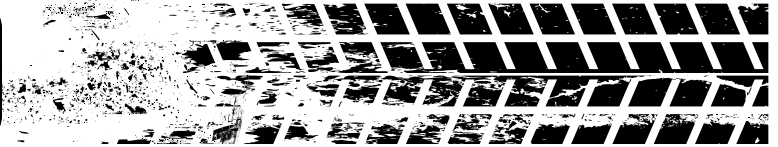
Figure 7

**8.** Your assembled coilover is ready to be installed on the vehicle.



Figure 8

# Coilover Installation



1. Raise the vehicle to a safe and comfortable working height.
2. Remove the existing rear shocks and springs. Refer to the factory service manual for proper disassembly and removal instructions.

**NOTE:** Retain the factory hardware for reassembly.

3. If you have not already assembled your coilover shocks, refer to the guide on pages 5-6 and assemble them now.

4. Insert a 90002043 spacer into each side of the bearing on the threaded end of the assembled coilover shock. Slide the coilover into the upper shock mount, aligning the holes in the mount with the bearing spacers.

Slide a 1/2" flat washer onto a 1/2"-20 x 2.75" hex bolt. Install the bolt in the upper mount/shock. Install another 1/2" washer followed by 1/2"-20 nylok nut.

(See Figures 1 & 2)

5. Repeat for the other coilover.

Torque the upper shock bolts to **81 ft-lbs**.

**NOTE:** You may find it easier to wait and torque the upper shock bolts once the upper mounts are installed on the vehicle.

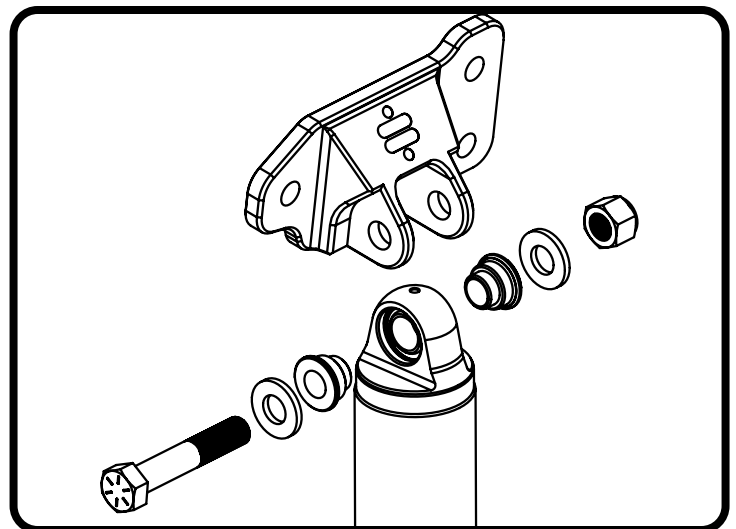


Figure 1



Figure 2

## Coilover Installation

**6.** Insert a 90002443 spacer into each side of the bearing on the coilover eyelet (Figure 3).

**7.** Position the coilover assembly in the original shock location, and line up the eyelet bearing spacers with the factory shock-mount hole in the lower control arm (Figure 4).

**8.** Install the OEM lower shock mount bolt and thread it into the control arm, but do not tighten yet (Figure 5).



Figure 3



Figure 4



Figure 5

## Coilover Installation

**9.** Position the upper shock mount of the coilover assembly onto the factory upper shock mount studs.

You shouldn't have to cut or remove the wheel-well liner. Peeling it back at the seam should be sufficient (Figure 6).

**10.** Install the three OEM upper shock mount nuts on the studs (Figure 7).

**11.** Torque the upper shock mount nuts to **43 ft-lbs** and reposition the liner (Figure 8).

**NOTE:** If you did not torque the upper shock bolts in step 5, torque them now to **81 ft-lbs**.



Figure 6



Figure 7



Figure 8

## Coilover Installation

**12.** Torque the lower shock bolt to **74 ft-lbs** (Figure 9).



Figure 9

**13.** Make a reference mark on the lower shock bolt and control arm (Figure 10).



Figure 10

**14.** Using the reference mark as dial, tighten the lower shock bolt an additional **105 degrees** (Figure 11).

**15.** Repeat steps 6-14 on the opposite side.

**NOTE:** If your vehicle had plastic covers on the lower control arms, you may reinstall them now.

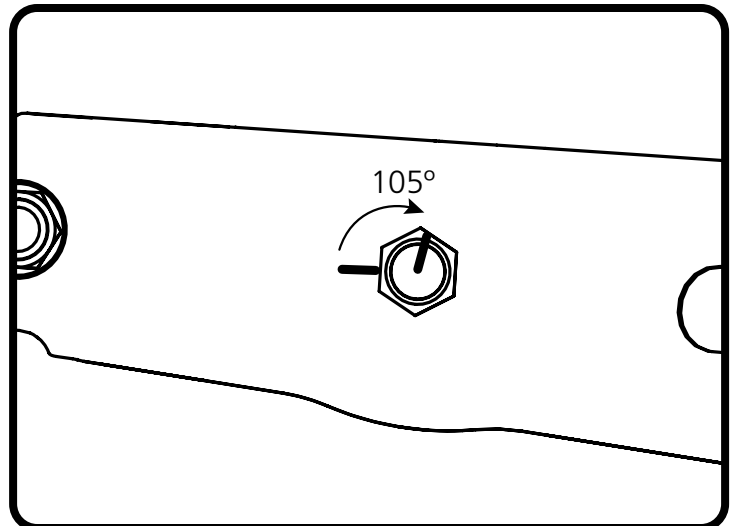


Figure 11

# SETTING PRELOAD

**1.** Before adding any preload to your coilover, ensure that you are starting with zero preload on the spring. The adjustment nut should be snug against the coil spring, but not compressing it. The locking screw should be installed, but not yet tightened.



**2.** With zero preload on the spring, measure the distance from the bottom of the adjustment nut to the flat of the shock body. This is your starting point of reference.



**3.** Using a spanner wrench (Figure 3), apply preload by threading the adjustment nut up the shock an additional 1/8" from the measurement you took in Step 2. This is your initial preload setting.



**4.** Tighten the locking screw to secure the adjustment nut in its preloaded position. Torque to **18 in-lbs.**



# ADJUSTING RIDE HEIGHT

**NOTE:** Optimal ride quality and handling typically occurs when the shock absorber is sitting between 40-60% of its full travel at ride height. However, measuring the shock can be difficult on some applications. If you do not wish to measure your shocks, an easier method that is still quite effective is to measure wheel travel. See Steps 1-4 below for this alternate method. If you've determined that your shock travel is good, you may skip to Step 5 to jump straight to making any necessary ride-height adjustments.

1. With coilovers installed and the preload set, lower the vehicle to the ground. With the entire weight of the vehicle on the wheels, jounce the suspension and roll the vehicle forward and backward to release any suspension bind.

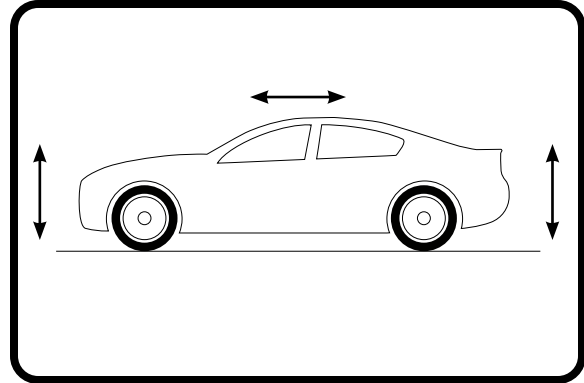


Figure 1

2. At the centerline of the wheel, take a measurement from the fender lip to the ground (Figure 2).

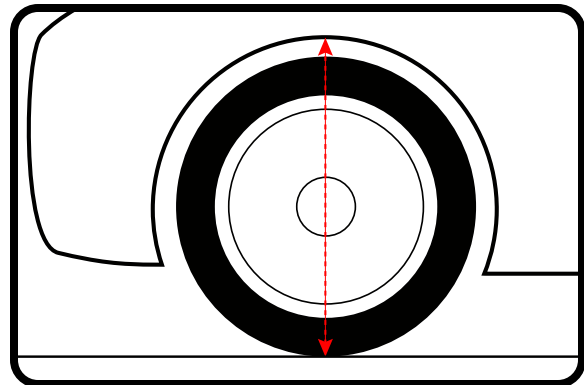


Figure 2

3. Lift the vehicle by the frame until the wheel is barely touching the ground. Take another measurement from the fender lip to the ground (Figure 3).

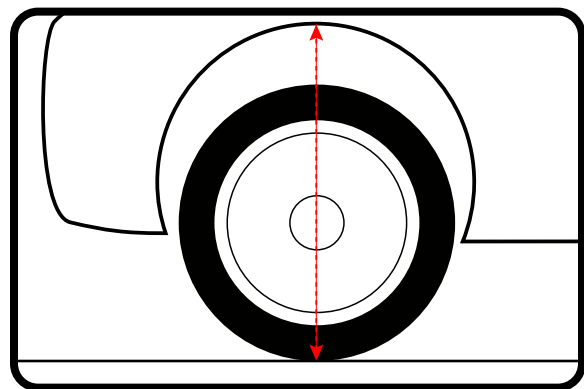


Figure 3

4. The difference between the measurements taken in Steps 2 and 3 is your **extension travel** at the wheel. A minimum of 1.5" of extension travel (at the wheel) is typically needed to prevent the shock from topping out. If you have more than 3" of extension travel, you may be at risk of bottoming out the shock and need to increase the ride height.

# ADJUSTING RIDE HEIGHT

5. With coilovers installed and the preload set, lower the vehicle to the ground. With the entire weight of the vehicle on the wheels, jounce the suspension and roll the vehicle forward and backward to release any suspension bind. Evaluate your ride height.

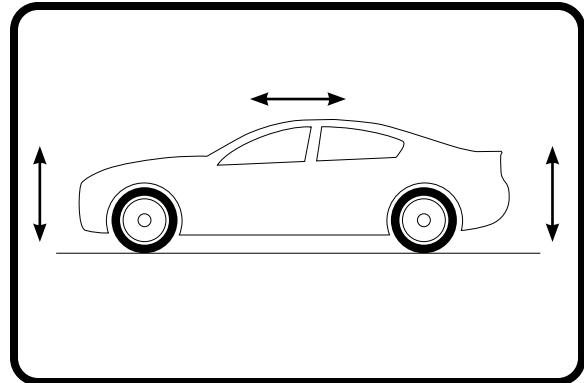


Figure 4

6. If you determine you need to adjust the ride height, raise the vehicle by the frame and allow the suspension to hang freely.

7. Loosen the locking screw on the coilover adjustment nut just enough to be able to turn the nut. **Do not remove the locking screw.** (Figure 5).



Figure 5

8. Measure the distance from the bottom of the adjustment nut to the flat of the shock body. We recommend recording this measurement for reference (Figure 6).



Figure 6

9. Using a spanner wrench, thread the nut up or down the shock body to achieve the desired ride height (Figure 7). One full revolution of the adjustment nut results in approximately 1/2" at the wheel. Tighten the locking screw to secure the adjustment nut in place. Torque to **18 in-lbs.**

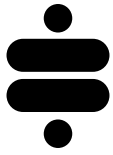
10. Lower the vehicle to the ground, jounce the suspension and roll the vehicle forward and backward to release any suspension bind.

11. Recheck your ride height. If you need to adjust, repeat Steps 6-10.

12. Once your desired ride height has been achieved, refer to the Shock Tuning Guide to dial in your shocks.

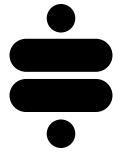


Figure 7

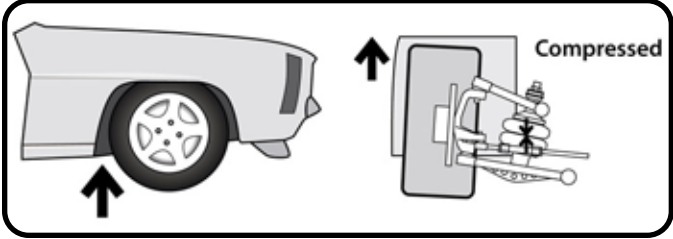


# TUNING GUIDE

## SINGLE-ADJUSTABLE SHOCKS

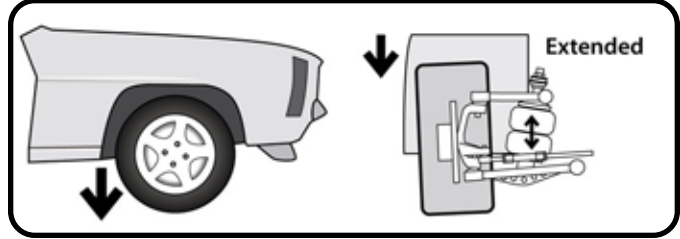


### The Basics...



#### 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.



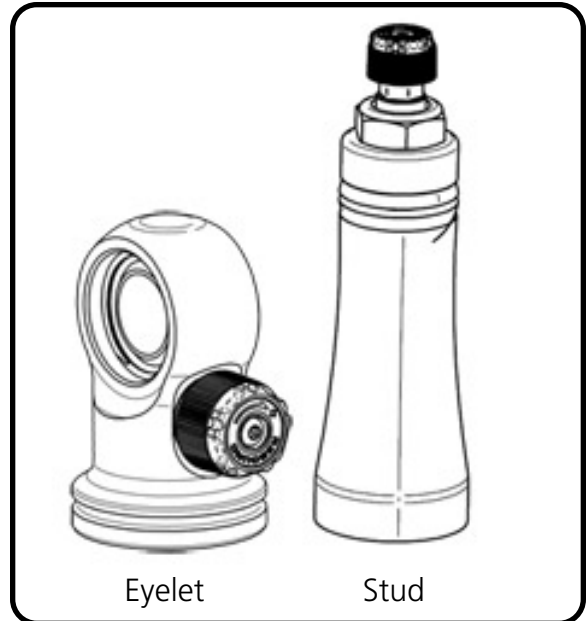
#### REBOUND

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?

#### HQ Series Shocks

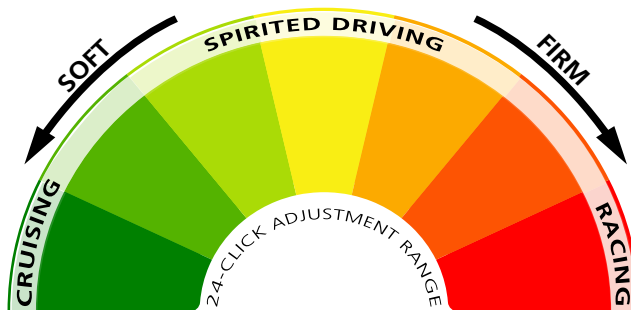
- The adjustment knob is located on the top of the shock, either protruding from the side of the eyelet, or atop the stud.
- This knob provides rebound adjustment only.



### Knob Function

Counterclockwise

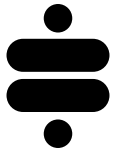
=  
Softer



Clockwise

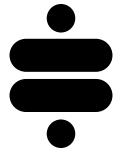
=  
Firmer





# TUNING GUIDE

## SINGLE-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.