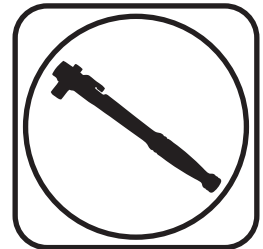
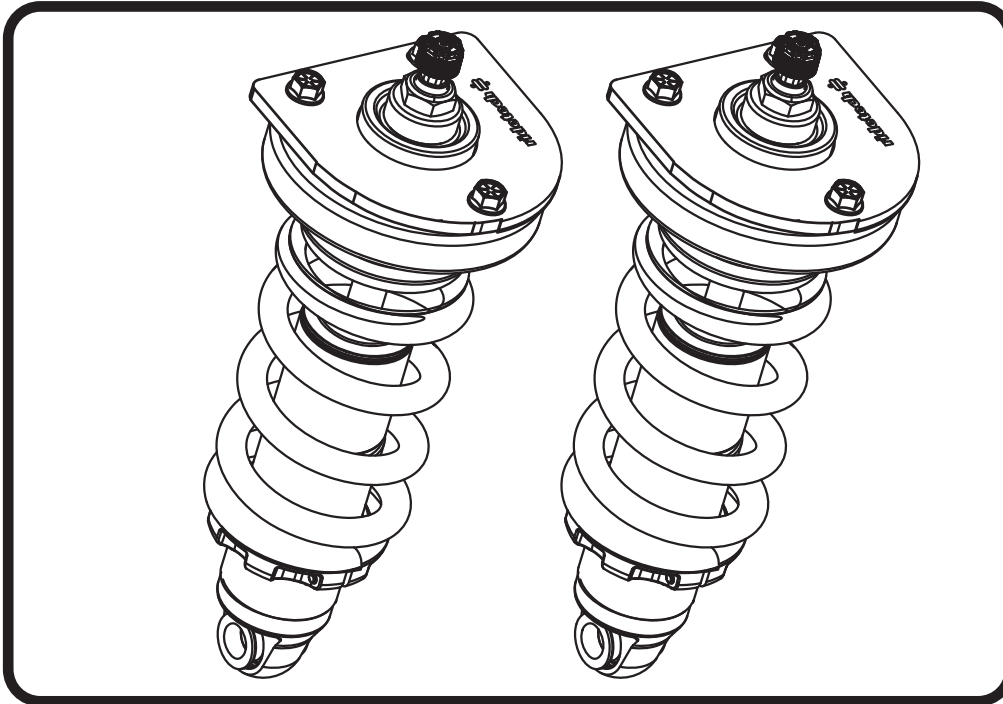




Part # 12103110 - 67-70 Mustang/Cougar Front HQ CoilOver - For OEM Arms

Recommended Tools



1967-1970 Mustang/Cougar HQ Series Front CoilOvers

Installation Instructions

THESE COILOVERS ARE DESIGNED TO BE USED WITH OEM CONTROL ARMS

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CoilOver Dimensions:

Mount to Mount:

Compressed:	9.40"
Ride Height:	11.00"
Extended:	11.90"

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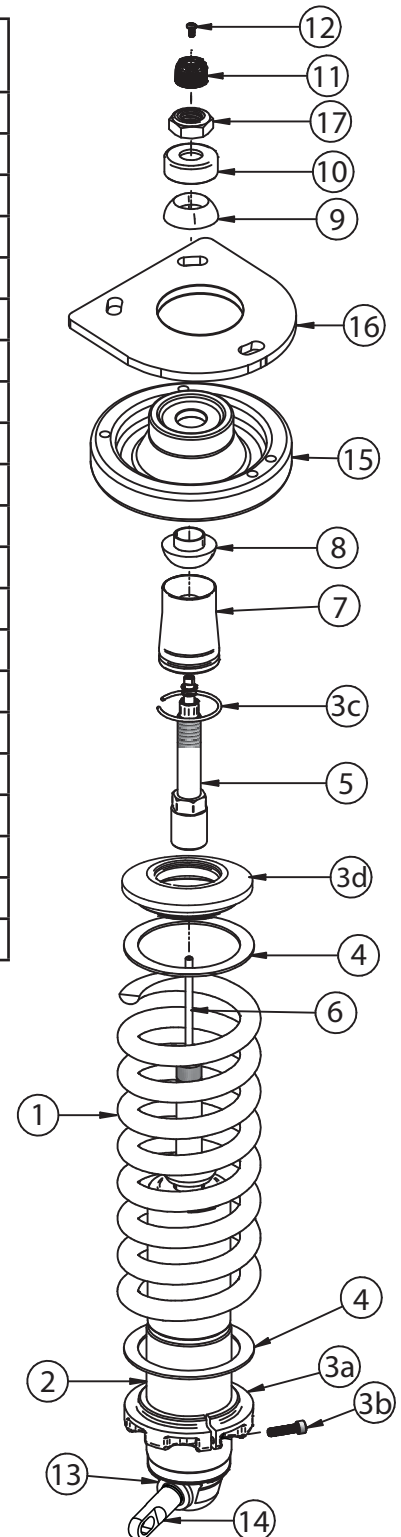


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Major ComponentsIn the box

Item #	Part #	Description	QTY
1	59080700	Coilspring 8" 700lb	2
2	982-10-802	2.9" Stroke HQ Series Shock	2
3a	803-00-199(kit)	Lower Spring Adjuster Nut	2
3b	803-00-199(kit)	Adjuster Nut Locking Screw	2
3c	803-00-199(kit)	CoilSpring Plate Retaining Ring	2
3d	803-00-199(kit)	Upper CoilSpring Retainer	2
4	70010828	Delrin Spring Washer	4
5	90009988(kit)	2.00" Stud Adjuster Assembly	2
6	70012160	2.00" Metering Rod	2
7	90002312	2.00" Stud Top Base	2
8	90001903	Delrin Ball Lower Half	2
9	90001904	Delrin Ball Top Half	2
10	90001902	Delrin Ball Upper Cap	2
11	210-35-120-0	Shock Adjuster Knob	2
12	90009969	Adjuster Knob Retaining Screw	2
13	70009554	3/4" ID Bushing	4
14	90001639	Trunnion	2
15	90002356	Upper Shock Mount	2
16	90003357	Upper Shock Mount Top Plate	2
17	99562003	9/16-18" Nylok Nut	2
	90001634	Trunnion Retaining Rings - Not Shown	4



Hardware Kit..... #99010195

QTY	Part Number	Description
UPPER PLATE MOUNTING		
6	99371027	3/8"-16" x 1" Carriage Bolt
6	99373003	3/8" SAE Flat Washer
6	99372002	3/8"-16 Nylok Nut
SHOCK MOUNT TO BODY		
6	99311044	5/16"-18 x 1" Button Head
6	99313002	3/8" SAE Flat Washer
6	99313003	5/16" Split Lock Washer
1	90002263	Red Loctite



Upper Mount Installation



1. Remove the existing shocks. NOTE: It is easier to install a ShockWave with the coil spring shield removed.

2. We recommend drilling the holes in the large area of the key hole openings to 3/8". Do this for each key hole in the driver and passenger shock towers.



3. Slip the 3/8"-16 x 1" carriage bolts into the slots of the shock tower before bolting in the aluminum mount. **You can NOT slip the carriage bolts in with the upper mount bolted in place.**



4. Hold the aluminum upper mount against the bottom of the shock tower lining up the threaded holes with the holes drilled out in the shock tower.



Upper Mount Installation



5. Install a 5/16" split lock washer & 5/16" SAE flat washer on each of (3) 5/16"-18 x 1" button head cap screws. Apply red loctite to the threads of each of the bolts. Hold the lower mount in position and thread the mounting bolts into the (3) mounting holes. Torque the bolts to 13 ft-lbs.



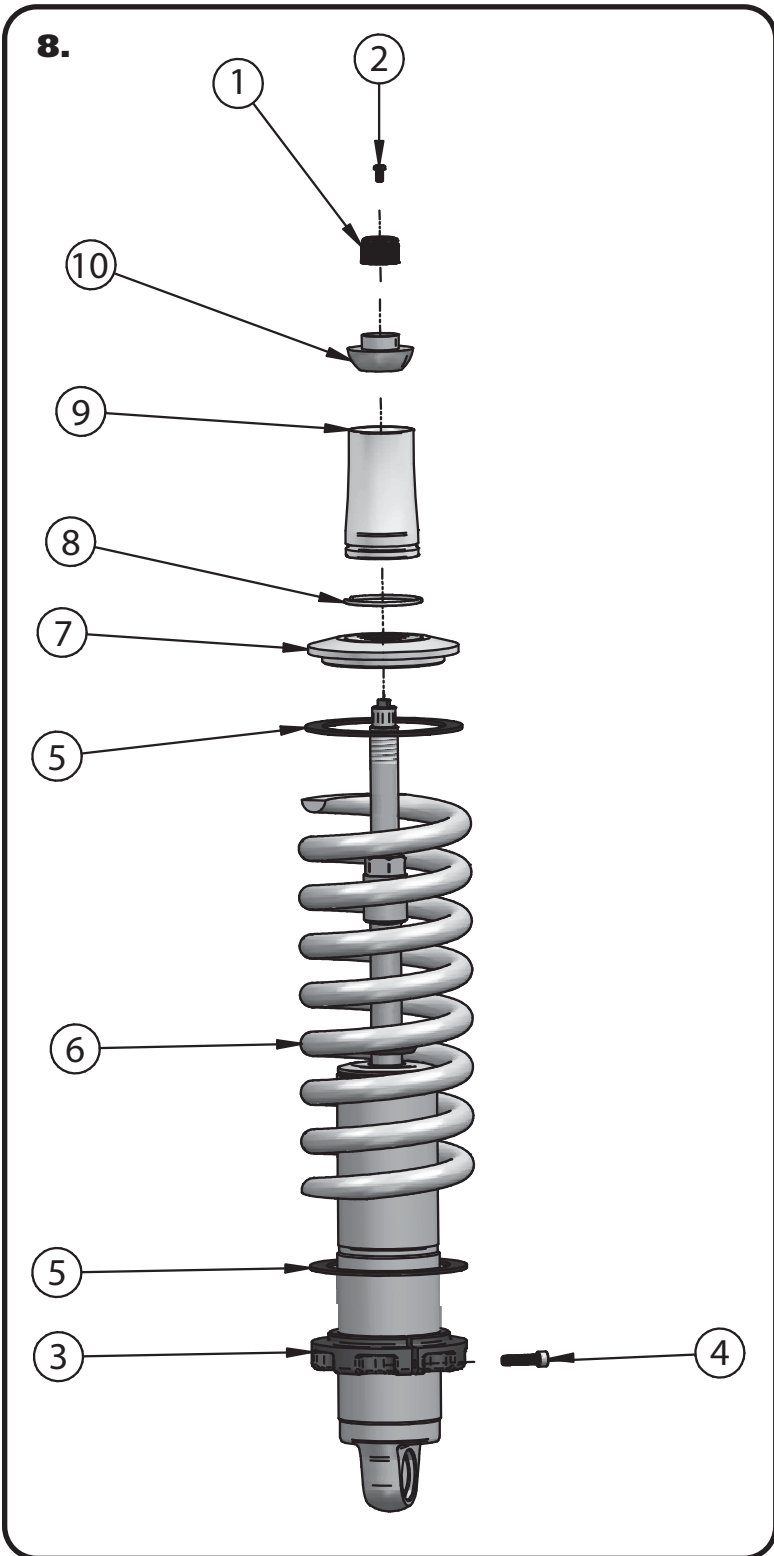
6. Lay the upper plate on top of the shock tower with the ShockWave mount protruding through the large center hole.



7. Install the export brace on the bolts sticking through the top plate. Install a 3/8" SAE flat washer & 3/8"-16 nylok nut on the threads of each of the bolts. Torque the nylok nuts to 15 ft-lbs.



CoilOver Assembly

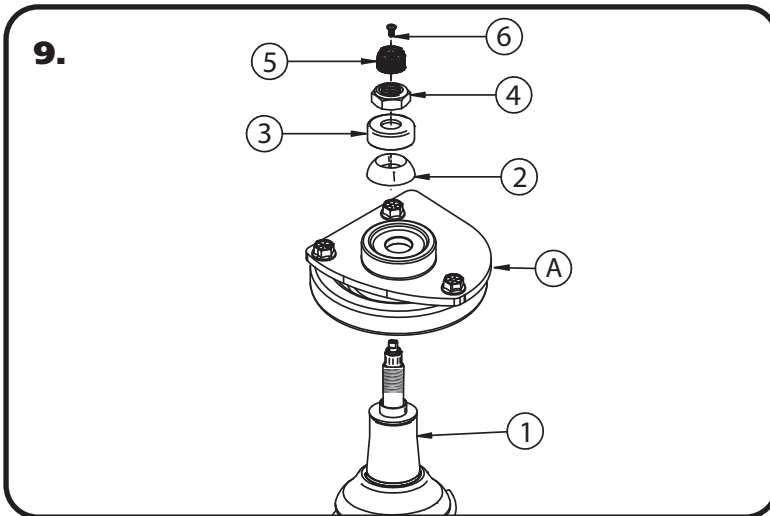


- 8.** To Assemble the CoilOver you need to:
 - a.** Remove Screw (2) from center of Adjustment Knob (1) and remove Adjustment Knob.
 - b.** Remove Nylok Nut, Delrin Upper Cap, Delrin Upper and Lower Balls, along with the base from the Coliover stud.
 - c.** Thread Adjuster Nut (3) onto the CoilOver body. Once it is threaded on the shock body, lightly thread in the locking screw (4) into the Adjuster Nut.
 - d.** Install a Delrin Spring Washer (5) onto the Adjuster Nut.
 - e.** Slide the CoilSpring (6) onto the CoilOver.
 - f.** Install another Delrin Spring Washer (5) on top of the CoilSpring.
 - g.** Install the Upper CoilSpring Plate (7) onto the CoilSpring.
 - h.** Install the CoilSpring Retaining Ring (8) onto the Stud Top Base (9). It fits into the groove in the base.
 - i.** Slide the Stud Top Base onto the shock until it bottoms out on the stud. It may be necessary to thread the Adjuster Nut down the shock body (to lower the spring) if the base will not slide all the way down onto the stud.
 - k.** Slide the Lower Delrin Ball (10) (it has the collar sticking up around the center hole) on to the Stud Top.

Repeat on second CoilOver.



CoilOver Installation



9. Place the CoilOver into the coil spring pocket with the stud sticking through the Aluminum upper mount (A). See assembly **Diagram 9**.

- 1. CoilOver Assembly
- A. Upper Shock Mount
- 2. Delrin ball upper half
- 3. Aluminum cap
- 4. 9/16" SAE Nylok jam nut
- 5. Rebound adjusting knob
- 6. Screw

TIGHTENING THE TOP 9/16"-18 NUT: SNUG THE NUT DOWN AGAINST THE TOP CAP. YOU NEED TO BE ABLE TO ARTICULATE THE SHOCK BY HAND. WE TORQUE THE NUT TO 80 INLBS USING A 7/8" CROWS FOOT WRENCH ON A TORQUE WRENCH.



10. Bolt the trunnion to the top of the upper arm using two 3/8" x 1 1/4" bolts, nyloc, and flat washers. Torque to 30 ftlbs

11. Reattach the outer coil spring shield.



CoilSpring Adjustment

12. Preload the springs of the CoilOver 1" to start. **Steps 12a - 12e** will assist you with preloading the coil spring. You may need to adjust the amount of preload in the spring, but this will be determined after the vehicle has been sat on the ground.

12a. Verify the adjuster nut locking screw is installed in the adjuster nut, but not tight.

12b. Thread the spring adjuster nut up the shock body until it is snug against the spring. You should NOT be able to move the spring up and down on the shock (0 preload). Verify the dropped upper coil spring cap is seated correctly on the upper shock stud.

12c. Measure from the bottom of the adjuster nut to the flat of the shock. You may want to write the measurement down.

12d. Using a spanner wrench, thread the adjuster up the shock an additional 1" (from the measurement you took in step 2) to preload the spring.

12e. Lock the adjusting nut in place by tightening the adjuster nut locking screw.

13. Reinstall the front wheels and tires and set the front of the vehicle back on the ground.

14. After entire weight of vehicle is on the wheels, jounce the suspension and roll the car forward and backward to alleviate suspension bind. **THIS IS NECESSARY BEFORE MEASURING RIDE HEIGHT.**

15. If you determine you need to adjust the ride height of the front suspension after getting the vehicle on the ground, **Steps 15a - 15e** will assist you in adjusting the ride height.

15a. Raise the vehicle and support it by the frame, allowing the suspension to hang freely. You do NOT need to remove the front wheels, but you may want to turn the steering wheel to gain better access to the CoilOver.

15b. Loosen the locking screw in the adjuster nut, but do not remove the locking screw.

15c. Measure from the bottom of the adjuster nut to the flat of the shock. You may want to write the measurement down.

15d. Using a spanner wrench, thread the adjuster up or down the shock to obtain the correct ride height. One complete revolution of the adjuster nut is approximately 1/8" at the wheel. Threading the adjuster nut up the shock will raise the ride height, threading it down will lower the ride height.

15e. Lock the adjusting nut in place by tightening the adjuster nut locking screw.

16. Turn the steering wheel until the front wheels are straight and set the front of the vehicle back on the ground.

17. After entire weight of vehicle is on the wheels, jounce the suspension and roll the vehicle forward and backward to alleviate suspension bind. **THIS IS NECESSARY BEFORE MEASURING RIDE HEIGHT.**

18. Recheck your ride height. If you need to readjust, repeat **Steps 15-17.**

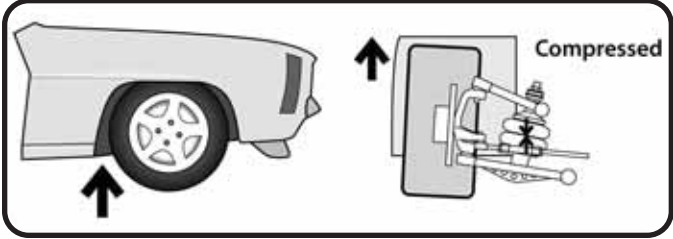


TUNING GUIDE

SINGLE-ADJUSTABLE SHOCKS

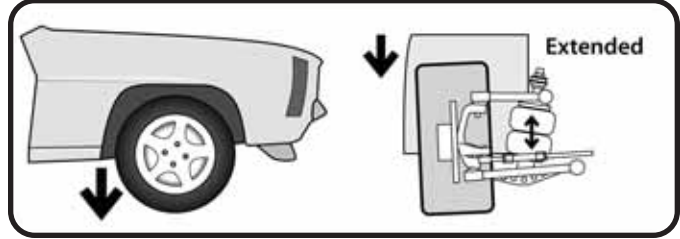


The Basics...



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.



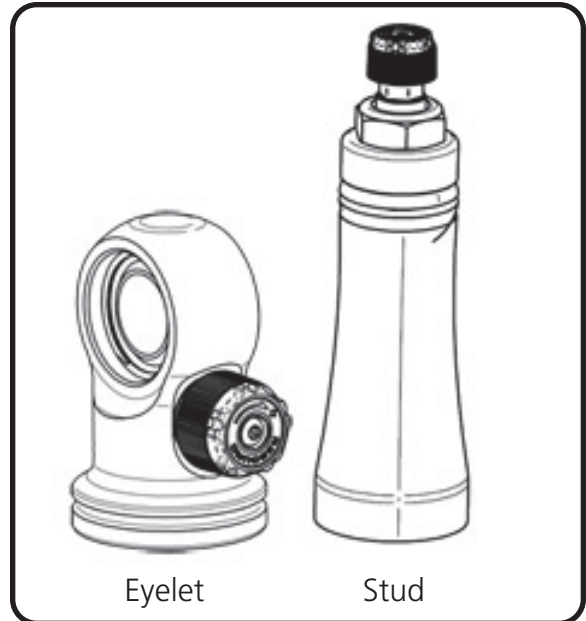
REBOUND

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 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.