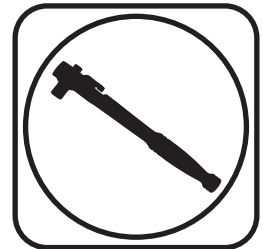




Part # 12135401 - 1979-2004 Mustang HQ ShockWaves

Recommended Tools



1979-2004 Mustang

Rear HQ Series ShockWaves

Installation Instructions

Table of contents

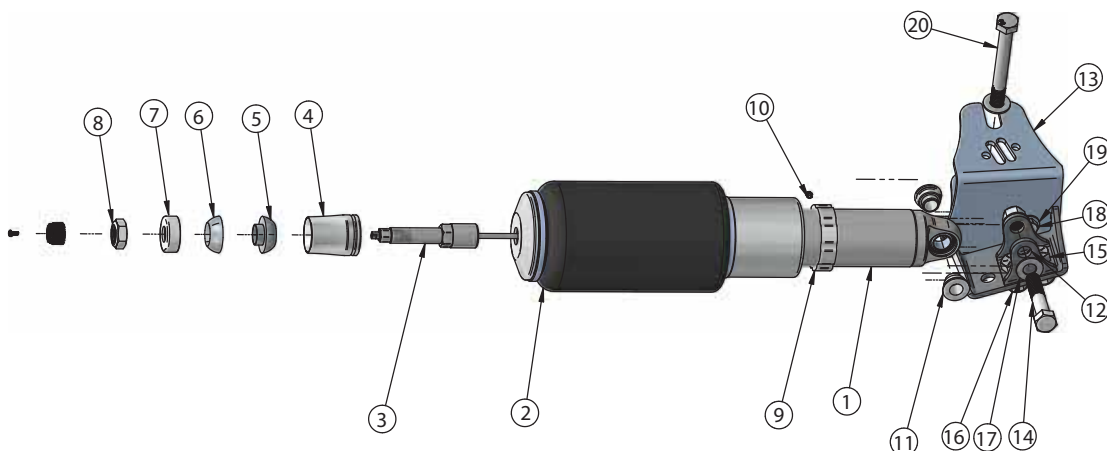
Page 2.....	Included components
Page 3.....	Getting Started and Disassembly
Page 4.....	Body Prep and Lower Mount Installation
Page 5.....	Shockwave Installation
Page 6-7.....	Shock Tuning Guide
Page 8.....	ShockWave Care Guide





Major ComponentsIn the box

Item	Part #	Description	QTY
1	982-10-805	5.2" Stroke HQ Series Shock	2
2	24190799	7000 Series 4" Dia. Bellow	2
3	90009989	2.75" Stud Top	2
4	90002313	2.75" Stud Top Base	2
5	90001904	Lower Delrin Half	2
6	90001903	Upper Delrin Ball Half	2
7	90001902	Upper Delrin Ball Cap	2
8	99562003	9/16-18" Nylok Nut	2
9	234-00-153	Air Spring Locking Ring	2
10	99055000	Locking Ring Set Screw	2
11	90002043	Shock Bearing Spacer - 1/2" ID	4
12	90002158	2 Hole Lower Shock Mount	2
13	90002467	Driver Lower Shock Mount-Axle Mount	1
13	90002468	Passenger Lower Shock Mount-Axle Mount (Not Shown)	1
14	99501010	1/2"-20 x 2 1/4" Hex Bolt (Lower Shock to Mount)	2
15	99501001	1/2"-13 x 1" Hex Bolt (2 Hole Mount to Axle Mount)	4
16	99502001	1/2"-13 Nylok Nut (Lower Shock & Mount Bolts)	4
	99502003	1/2"-20 THIN Nylok Nut (Lower Shock to Mount)	2
	90001372	14mm to 12mm T-Bushing - NOT SHOWN	4
	99371004 & 99372002	3/8"-16 x 1 1/4" Hex Bolt & Nylok Nut(Lower Mount to Axle)	2
	99373003	3/8" SAE Flatwasher	6
20	99121013 & 99122001	(2)M12-1.75 x 120mm & (2)Nylok Nut (Axle Mount to Axle)	
20	99141005, 99142002, 99143001	(2) M14-2.0 x 120mm, (2) Nylok Nut, & (4) Flat Washers	
	90001995	Bearing Snap Ring (Installed in Shock Body)	4
	90001994	5/8" ID Bearing (Installed in Shock Body)	2





Getting Started and Disassembly

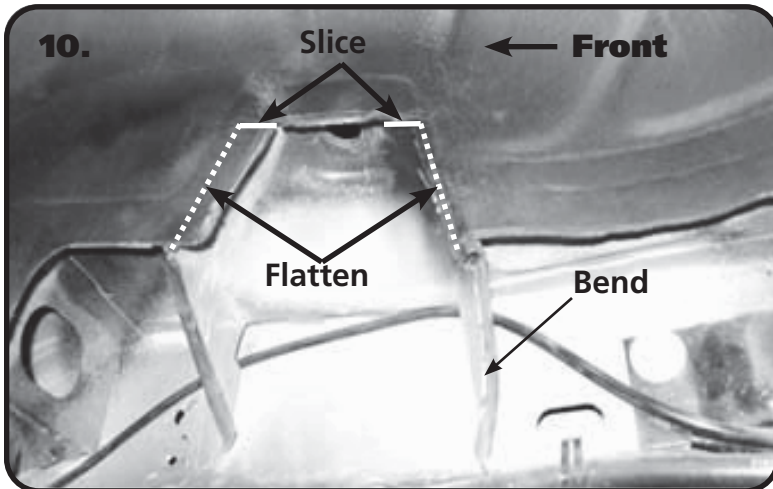
Congratulations on your purchase of the Ridetech Mustang ShockWave System. This system has been designed to give your Mustang excellent handling along with a lifetime of enjoyment. The ShockWave system provides flexibility that can not be achieved with conventional coil springs.

This ShockWave system is designed to replace the factory shock and coil springs.

1. The rear OEM Shocks, Pinion Snubber and Mount, CoilSpring, and Horizontal Kicker Shock will need to be removed from the Rear of the car.
2. Raise the vehicle and support it by the frame allowing the suspension to hang freely. Be sure the rear differential will be able to swing down to get the rear springs out.
3. Place a jack under the center of the rear differential and raise it up to the point the jack is touching the rear differential. Be sure that the car is high enough that you will be able to lower the jack supporting the rear differential to remove the Coilsprings.
4. The nut will need to be removed from the top of the shock. The top of the shock is either locked in the trunk behind the side covers, or in the hatch under a plastic cover located by the wheel tub.
5. Unbolt the lower shock from the shock mounting bracket and unbolt the shock bracket from the differential.
6. Lower the jack slowly to remove the tension of the coil spring. Pay attention to the brake line and ABS wire (if equipped) that you don't damage them when lowering the differential
7. With the springs loose, remove them from the car.
8. Remove the OEM Pinion Snubber and mount from the rear body.

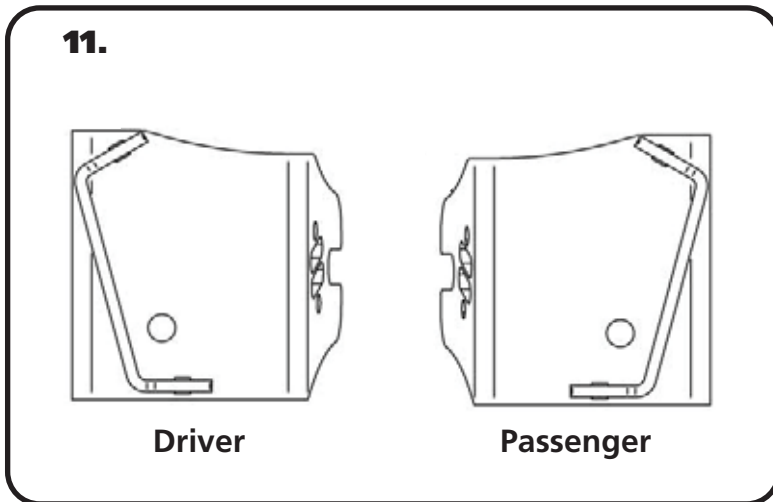


Body Prep and Lower Mount Installation



10. Illustration 10 shows the modifications that need to be done to the Shock opening for CoilOver clearance. The rear has been done in the picture to show what the end result should look like. Slice the sheet metal at the top of the opening forward and backward even with the top of the opening. With the sheet metal sliced, bend the pinch weld inward until it is flat against the front and back of the opening. Bend the rear brace back to clear the Air Spring on the Shockwave.

Repeat on both sides of the car.



11. If you haven't done so already, remove the OEM Lower Shock Mount from the axle. If you are installing StrongArms, now is a great time to do the Lower. The size of your control arm bolts will determine the proper steps for mounting the lower shock mount. If your car has a 14mm lower control arm bolt, remove it and replace it with the M14-2.0 x 120mm bolt supplied in the kit. You will need to install a M14 flat washer on the bolt before installing it. Install the 14mm bolt/washer and install a M14 flat washer & M14-2.0 nylok nut on the bolt. Leave the bolt loose for now. If your car has a 12mm bolt, install one of the T-Bushings on the M12-1.75 x 120mm bolt with the large OD against the bolt head. Insert the 12mm bolt/t-bushing. Install a 2nd T-Bushing, with the Large OD to the nut, on the threads sticking through the axle mount, followed by a M12-1.75 nylok nut. Leave the nut loose for now.

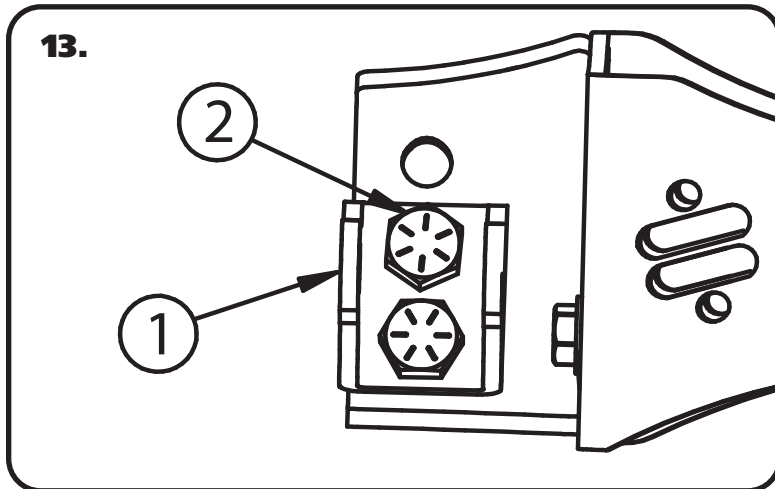


Illustration 11 shows the New Lower Shock Mount viewed from the rear.

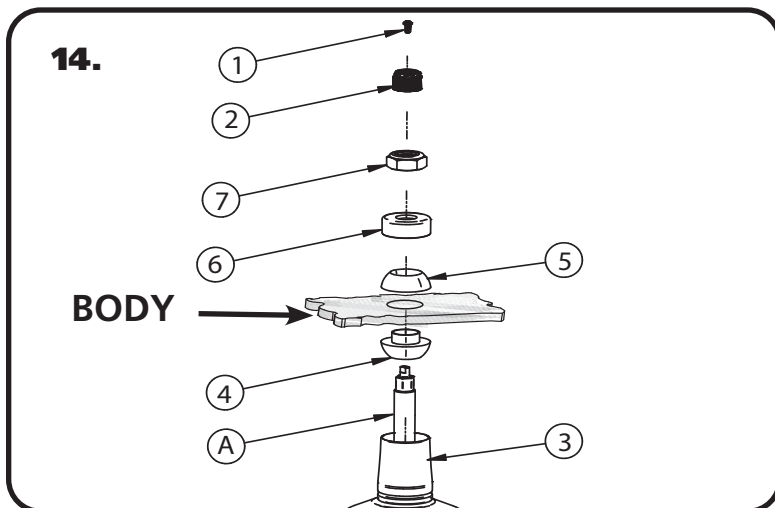
12. Slide the Lower Shock mount on to the Axle Mount. The Shock Mount wraps around the OEM Control Arm mount. The Slots on the side of the Mount slide on the Lower Control Arm Mounting Bolt. Install (1) 3/8-16 x 1 1/4" bolt (Threads pointing forward) through the hole in the Shock Mount and Lower Control Arm Mount. Install a 3/8" Flat Washer and 3/8" Nylok Nut on the Bolt and tighten. Tighten the Lower Control Arm Bolt.



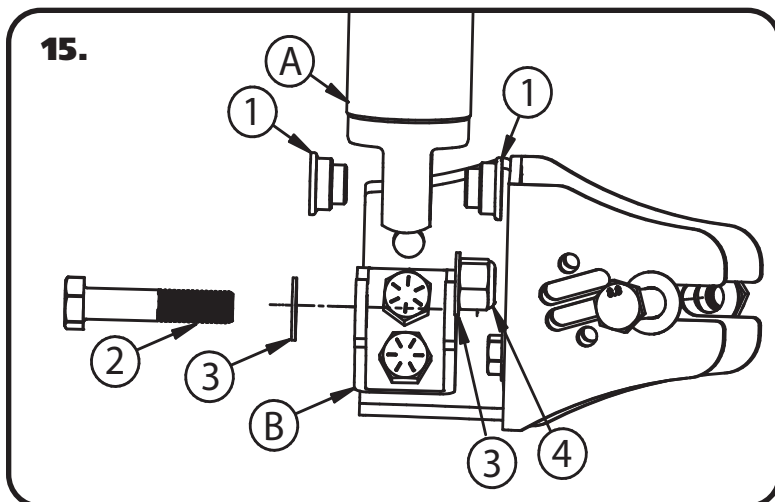
Shockwave Installation



13. Attach the 2 Hole Lower Shock Mount(1) to the Main Mount using $\frac{1}{2}'' \times 1 \frac{1}{4}''$ bolts (2) with a Nylok nut on the back side. The Mount bolts to the 2 lower holes. If a higher ride height is desired, the top 2 holes can be used.



14. Remove the Screw(1) from the Adjuster Knob(2) and remove the Knob from the Stud Top(A). Install the Stud Top Base(3) onto the Stud Top(A) followed by the Lower Delrin Ball(4). Install the Lower Ball with the Collar pointing up. Insert the Stud Top through the factory hole shock hole. Install the Upper Delrin Ball(5) onto the shock stud with the flat side facing the frame. Next, Install the Delrin Ball cap (6) onto the shock stud with the Concave side facing the Upper Delrin ball. Install the Nylok Nut(7) onto the shock stud and lightly tighten. The needs to be some resistance on the ball but not tight enough that it will not rotate freely. Reinstall the adjuster knob(2) using the screw(1).



15. 16. Install the ShockWave(A) in the Lower Shock Mount(B) using a 90002043 Spacer(2) inserted into each side of the Shock bearing. Slide the shock into the stock mounting location. It may be necessary to use the jack and raise the differential to align the mounting holes. With the mounting holes aligned, insert a $\frac{1}{2}''-20 \times 2 \frac{1}{4}''$ Bolt through the Mount and Shock. Install a $\frac{1}{2}''-20$ **THIN** Nylok Nut (3) on the Bolt and Tighten.

Repeat on the opposite side.

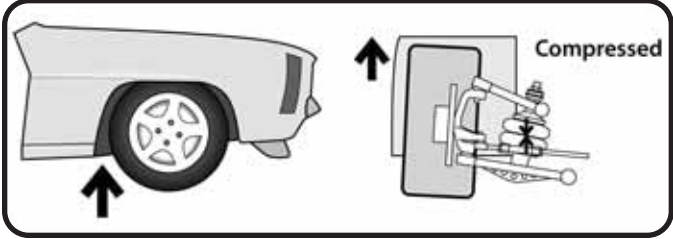


TUNING GUIDE

SINGLE-ADJUSTABLE SHOCKS

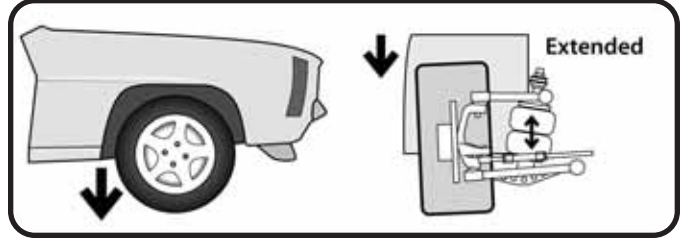


The Basics...



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.



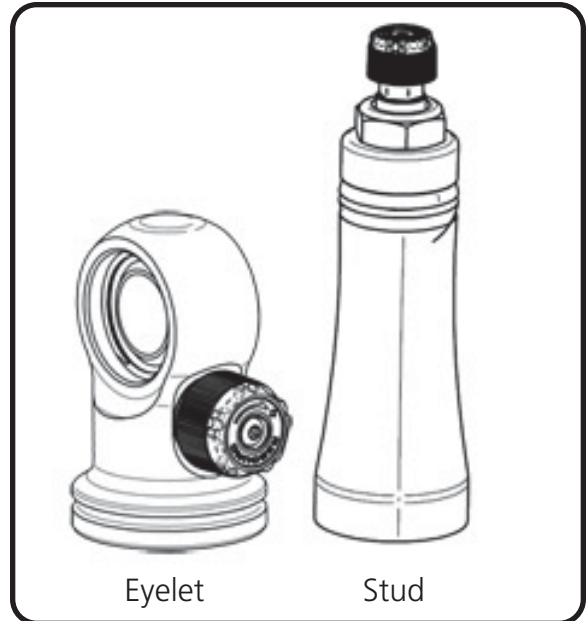
REBOUND

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

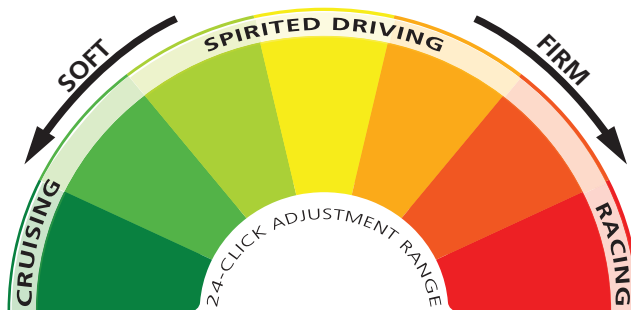
- The adjustment knob is located on the top of the shock, either protruding from the side of the eyelet, or atop the stud.
- This knob provides rebound adjustment only.



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.

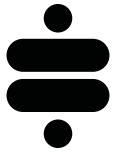
If the ride quality is still too harsh or stiff, turn the knob a few more clicks counterclockwise to decrease the damping effect.

5. Take the vehicle for another test drive. If necessary, repeat the steps above until your desired optimal ride quality has been achieved.

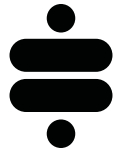


General Guidelines

- 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.



SHOCKWAVE CARE GUIDE



PLEASE READ



The air spring locking ring **IS NOT** adjustable. This ring is set to a specific position at the factory to optimize the air spring stroke with the shock stroke. Attempting to adjust this ring will void your warranty.



DO NOT attempt to remove the press-in air fitting. It may result in damage to the composite cap and void your warranty.



DO NOT drive the vehicle with the air springs fully deflated. Severe damage to the internal bump stop, shock bushings, and shock mounts may occur.

- Avoid driving the vehicle with the air springs overinflated or “topped out”. Over time the shock valving may suffer severe damage or total failure. Our recommended ride-height range is between 40-60% of total suspension travel.
- Do not allow the air spring bellows to rub on or interfere with any surrounding objects. Ensure the Shockwaves are adequately distanced from the exhaust system. Damage or total failure may occur.
- Do not use harsh or abrasive chemicals or solvents to clean your Shockwaves. A mild soap and water solution is sufficient.
- When working around or near your shocks, avoid allowing over spray of harsh chemicals or solvents to make contact with your Shockwaves.
- When attempting to clock the air fitting, you may rotate the air spring assembly on the shock. Ensure the fitting does not contact the vehicle frame or other surrounding objects.