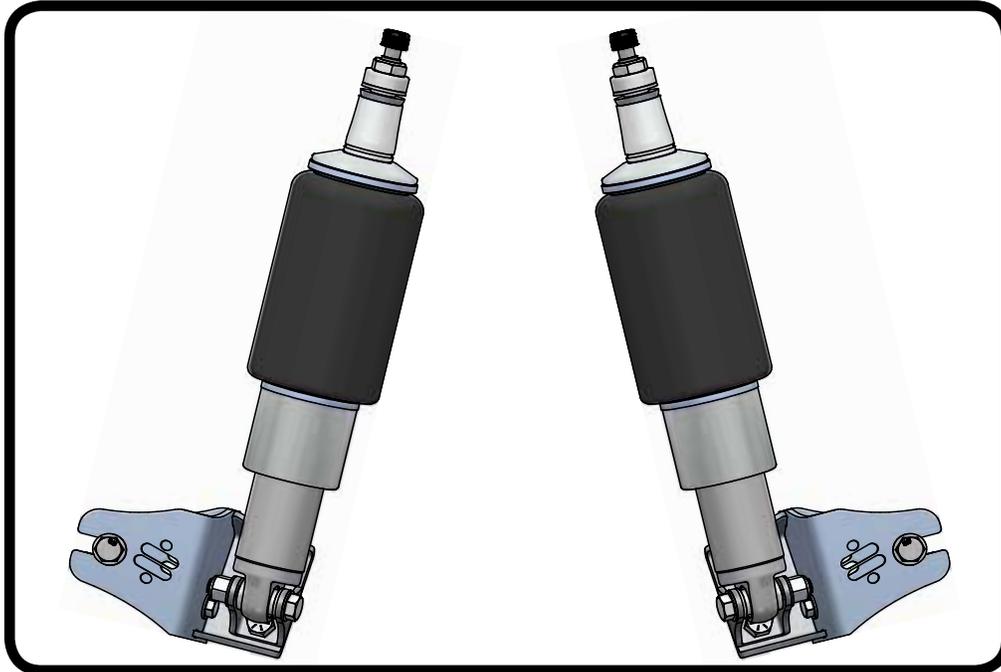




### Part # 12135401 - 1990-1993 Mustang HQ ShockWaves



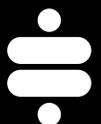
#### Recommended Tools



## 1990-1993 Mustang HQ Series Rear ShockWaves Installation Instructions

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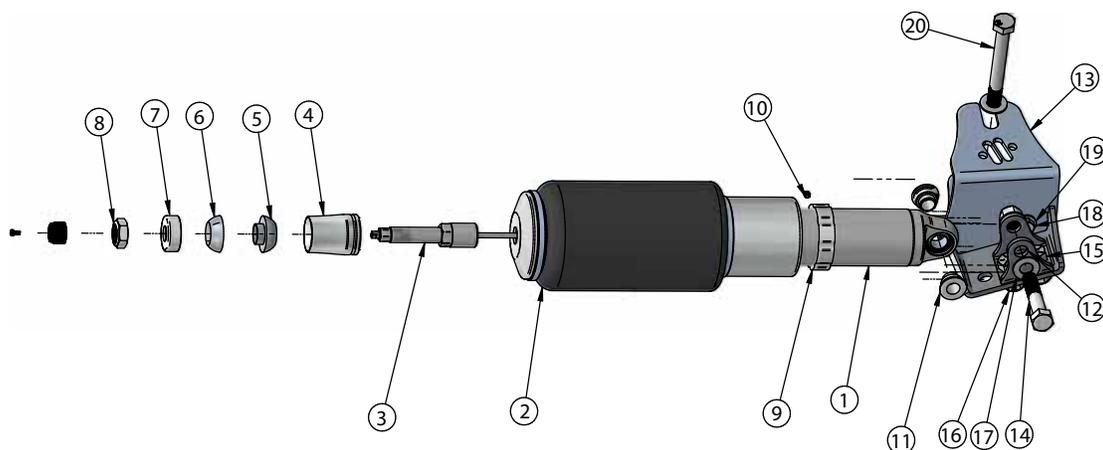
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### Major Components .....In the box

Item	Part #	Description	QTY
1	24159999	5.2" Stroke HQ Series Shock	2
2	24190799	7000 Series 4" Dia. Bellow	2
3	90009988	2.00" Stud Top	2
4	90002312	2.00" 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	70008913	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	99501003	1/2"-13 x 2 1/2" 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)	6
17	99503001	1/2" SAE Flat Washer	8
	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	99121002 & 99122001	M12-1.75 x 110mm & Nylok Nut (Axle Mount to Axle)	2
	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 CoilSprings.

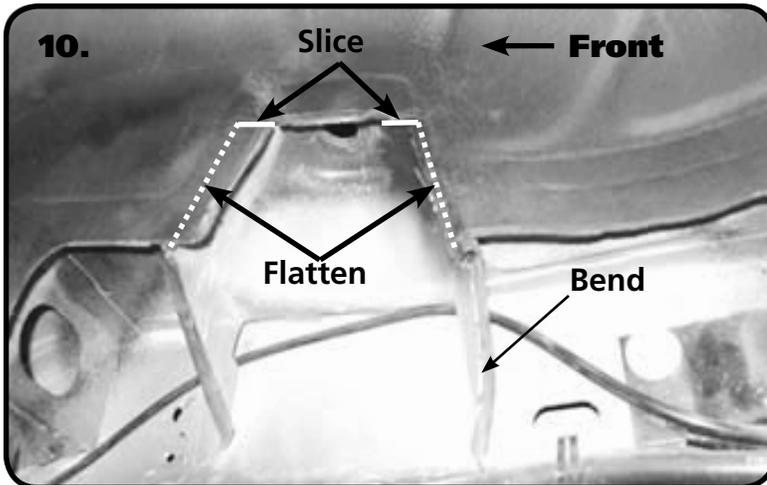
#### **This ShockWave System is Designed to replace the factory Shock and CoilSprings.**

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 Coilspring. Pay attention to the brake line and ABS(if equipped) wire that you don't damage them when lowering the differential
7. With the springs loose, remove the from the car.
8. Remove the OEM Pinion Snubber and mount from the rear body.

To get Started refer to the page 4 on how to assemble the top of the ShockWave

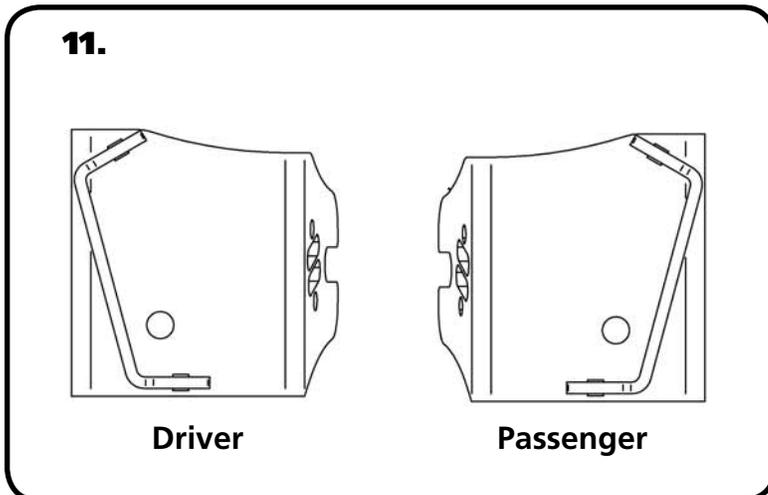


### Body Prep and Lower Mount Installation



**10.** Illustration 10 shows the modifications that need to be done to the Shock opening for Shock-Wave clearance. The rear has been done in the picture to show what the end result should look like. Slice the sheetmetal at the top of the opening forward and backward even with the top of the opening. With the sheetmetal 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 Lowers. Remove the rear Lower Control Arm bolt and replace it with the 12mm Bolt and Nut supplied in the kit. DO NOT tighten, just start the Nut on the Bolt and leave it loose for now.

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

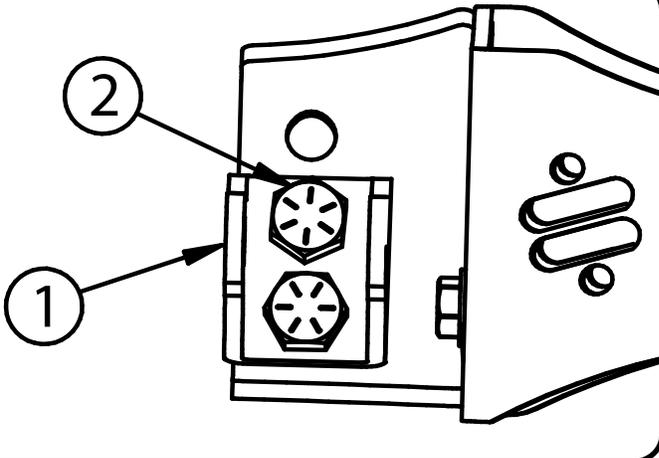


**12.** Slide the Lower Shock mount on to the Axle Mount. The Shock Mount wraps around the OEM Control Arm mount. The Slots on the side of the Mount slide on the Lower Control Arm Mounting Bolt. Install (1) 3/8-16 x 1 1/4" bolt (Threads pointing forward) through the hole in the Shock Mount and Lower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



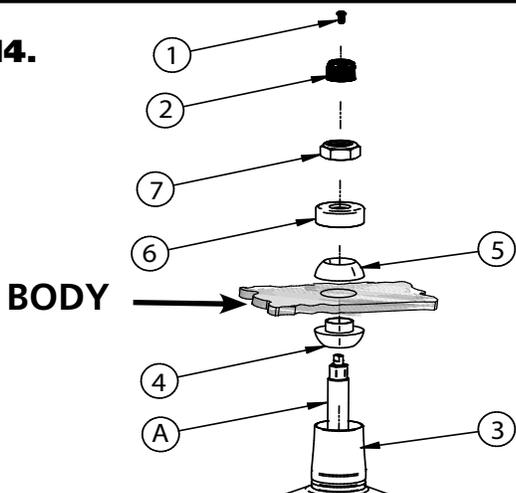
### Shockwave Installation

13.



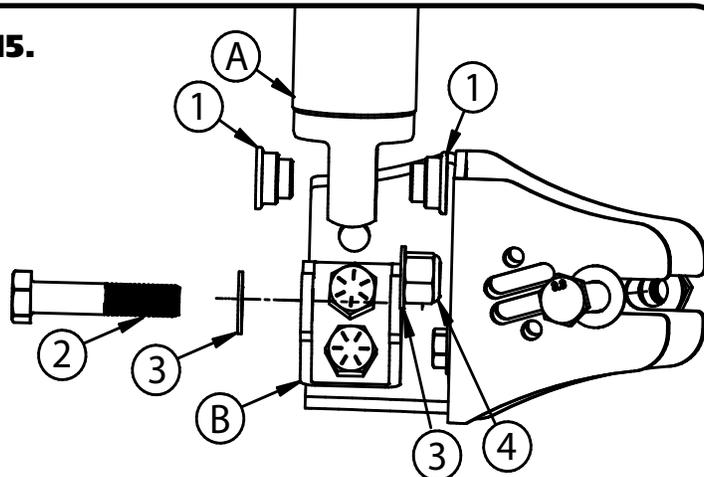
13. Attach the 2 Hole Lower Shock Mount(1) to the Main Mount using  $\frac{1}{2}$ " x 1" bolts (2) with a Flat Washer and Nylok nut on the back side. The Mount bolts to the 2 lower holes. If a higher ride height is desired, the top 2 holes can be used.

14.



14. Insert the Air Firtting into ShockWave using Thread Sealant on the Threads. 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.



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  $\frac{1}{2}$ "-13 x 2  $\frac{1}{2}$ " Bolt (3) and  $\frac{1}{2}$ " Washer (4) through the Mount and Shock. Install a  $\frac{1}{2}$ " Flat Washer (4) and  $\frac{1}{2}$ "-13 Nylok Nut (5) on the Bolt and Tighten.

Repeat the steps for the other side of the car.



### Notes and Care of your Shockwaves

#### NOTES:

You can clock the air fitting location on the ShockWave by turning the AirSpring assembly of the shock.

The threads on the fittings need to have thread sealant applied to seal properly.

When cutting the airline, use a razor blade. The cut needs to be a clean cut and square for the airline to seal properly.

The Locking ring on the shock is **NOT** adjustable. These rings are set at the factory to optimize the Air-Spring stroke with the shock stroke.

### The care and feeding of your new ShockWaves

1. Although the ShockWave has an internal bumpstop, **DO NOT DRIVE THE VEHICLE DEFLATED RESTING ON THIS BUMPSTOP. DAMAGE WILL RESULT.** The internal bumpstop will be damaged, the shock bushings will be damaged, and the vehicle shock mounting points may be damaged to the point of failure. This is a non warrantable situation.
2. Do not drive the vehicle overinflated or “topped out”. Over a period of time the shock valving will be damaged, possibly to the point of failure. This is a non warrantable situation! If you need to raise your vehicle higher that the ShockWave allows, you will need a longer unit.
3. The ShockWave is designed to give a great ride quality and to raise and lower the vehicle. **IT IS NOT MADE TO HOP OR JUMP!** If you want to hop or jump, hydraulics are a better choice. This abuse will result in bent piston rods, broken shock mounts, and destroyed bushings. This is a non warrantable situation.
4. Do not let the ShockWave bellows rub on anything. Failure will result. This is a non warrantable situation.
5. The ShockWave product has been field tested on numerous vehicles as well as subjected to many different stress tests to ensure that there are no leakage or durability problems. Failures have been nearly nonexistent unless abused as described above. If the Shockwave units are installed properly and are not abused, they will last many, many years. ShockWave units that are returned with broken mounts, bent piston rods, destroyed bumpstops or bushings, or abrasions on the bellows will not be warrantied.



### Shock Adjustment

#### Shock adjustment 101- Single Adjustable

##### Rebound Adjustment:

How to adjust your new shocks.

The rebound adjustment knob is located on the top of the shock absorber protruding from the eyelet.

You must first begin at the ZERO rebound setting, then set the shock to a soft setting of 20.



-Begin with the shocks adjusted to the ZERO rebound position (full stiff). Do this by rotating the rebound adjuster knob clockwise until it stops.



-Now turn the rebound adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use).

##### Take the vehicle for a test drive.



-if you are satisfied with the ride quality, do not do anything, you are set!

-if the ride quality is too soft increase the damping effect by rotating the rebound knob clock wise 3 clicks. **CONTINUE ON NEXT PAGE.**

##### Take the vehicle for another test drive.



-if the vehicle is too soft increase the damping effect by rotating the rebound knob clock wise 3 additional clicks.



-If the vehicle is too stiff rotate the rebound adjustment knob counter clock wise 2 clicks and you are set!

Take the vehicle for another test drive and repeat the above steps until the ride quality is satisfactory.

##### Note:

**One end of the vehicle will likely reach the desired setting before the other end. If this happens stop adjusting the satisfied end and keep adjusting the unsatisfied end until the overall ride quality is satisfactory.**

### STILL HAVE QUESTIONS?

#### Tech line hours

Monday - Friday

8AM - 6PM (EST) ..... 812-482-2932