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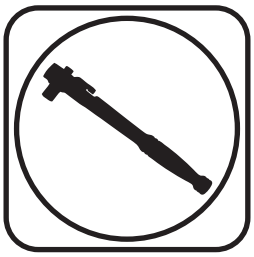
Installation Instructions

Part # 12150298 - 2005 Up Mustang Air Suspension System

Front Components:
12152401 Front ShockWave Strut Instructions

Rear Components:
12155401 Rear ShockWave Instructions

Recommended Tools



2005 up Mustang Air Suspension System
Installation Instructions

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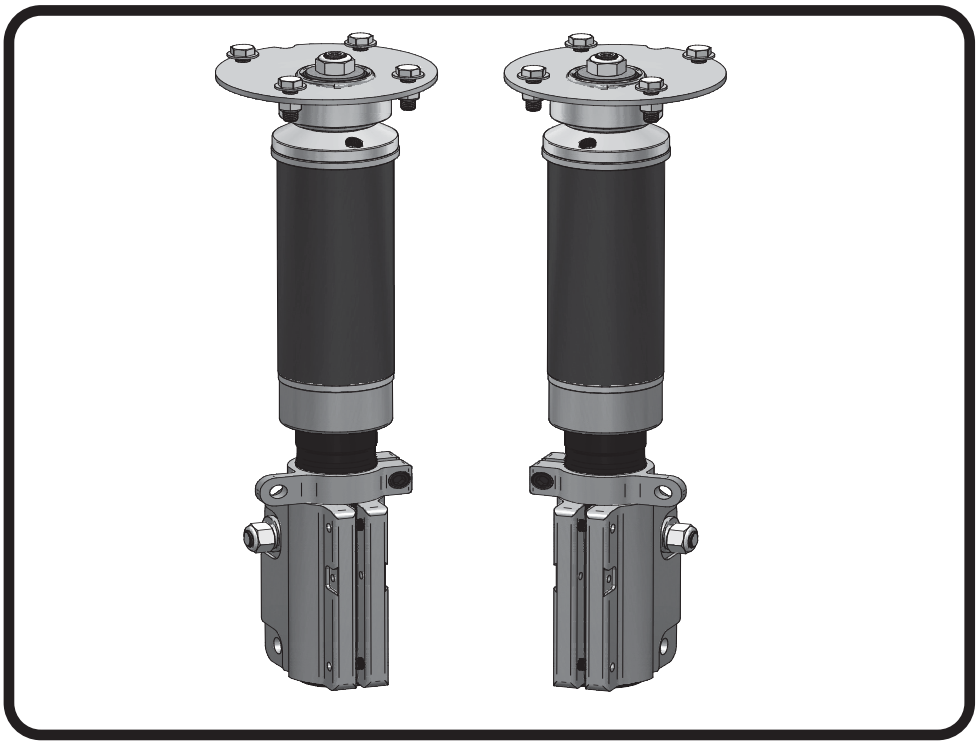
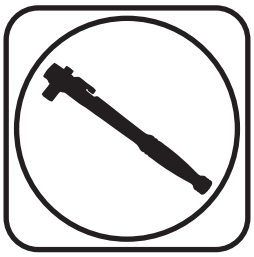
Installation Instructions

Part # 12152401 -2005 up Mustang



Recommended Tools



2005-up Mustang Front AirStrut

Installation Instructions

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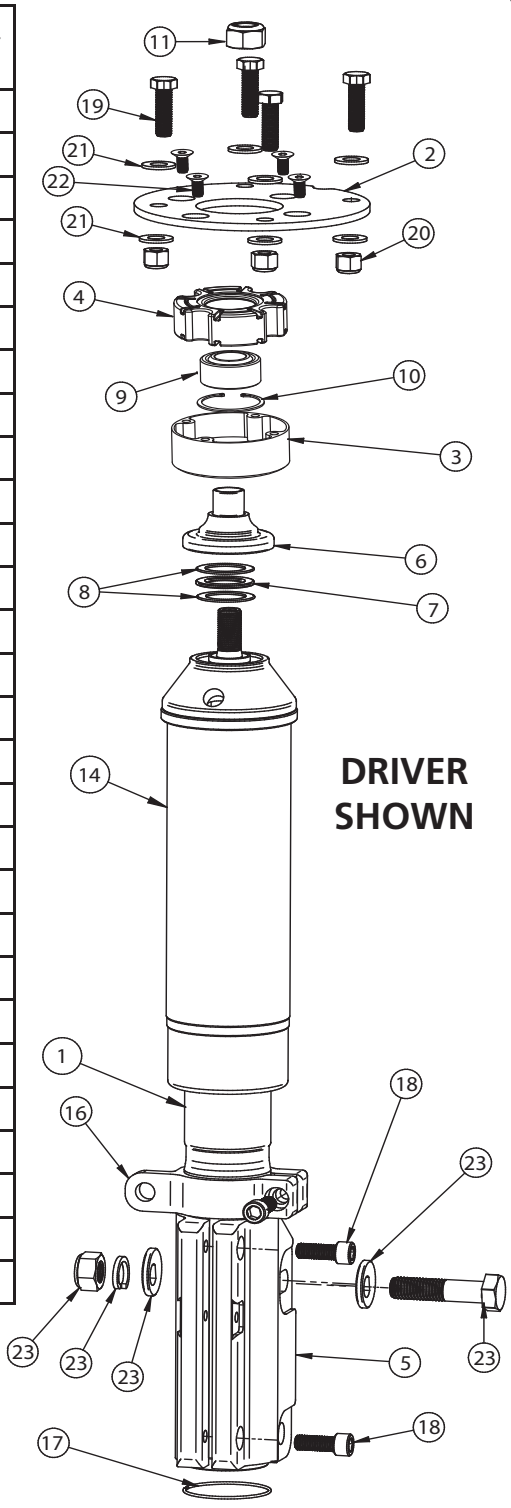
Included Components .....In the box

Item #	Part #	Description	QTY
1	986-10-055	Strut Cartridge	2
2	90003614	Upper Mounting Plate	2
3	90003590	Isolator Retaing Ring	2
4	70016907	Strut Mount Rubber Isolator	2
5	70010943	Lower Strut Mount	2
6	90002368	Thrust Bearing Adapter	2
7	70010987	Thrust Bearing	2
8	70010988	Thrust Bearing Washer	4
9	90001042	Upper Mount Bearing	2
10	90000805	Upper Bearing Snap Ring	2
11	99562003	9/16"-18 Nylok Nut	2
12	99055000	M5 x.8 x 5mm Set Screw (Not Shown)	2
13	234-00-153	Locking Ring (Not Shown)	2
14	21090798	Strut Air Spring	2
15	31954201	1/4" 90 Degree Fitting (Not Shown)	2
16	90002372	Sway Bar Link Mount	2
17	038-01-035	Strut Retaining Ring	2
18	99371042	3/8"-16 x 1" SHCS	6
19	99371004	3/8"-16 x 1 1/4" Hex Bolt	8
20	99372002	3/8'-16 Nylok Nut	8
21	99373003	3/8" Flatwasher	16
22	72000008	1/4"-20 x 3/4" FHSC	8
23	90000803	Eccentric Bolt	2
24	90000695	Posilink Spacer (Not Shown)	2
25	90002573	12mm 90 Degree PosiLink (Not Shown)	4
26	90009969	Adjuster know retaining screw (Not Shown)	2
27	210-35-120-0	Rebound Adjustment Knob (Not Shown)	2
28	99433002	7/16" SAE Flat Washer (Not Shown)	8



DRIVER SHOWN

Disassembly

1. Remove the front struts by first disconnecting the ABS wire and brake line(retain hardware) from the factory strut.

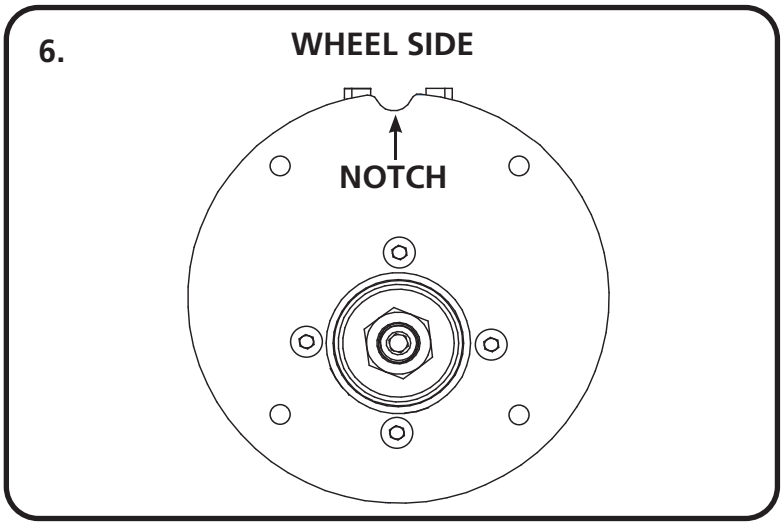
2. Disconnect the swaybar linkage from the strut and swaybar this will be replaced with new linkage.

3. Support the front hub and control arm assembly and remove the (2) struts bolts(retain hardware) that attach the strut to the spindle.

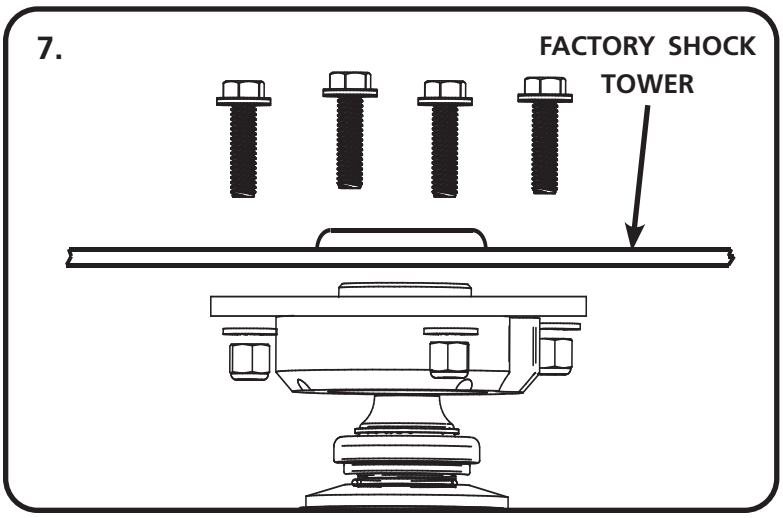
4. Remove the (4) nuts holding the upper strut mount to the car body. **DO NOT REMOVE THE CENTER NUT**.

5. Remove strut assembly from the car.

Getting Started



6. The upper strut mount provided in this kit has is designed to aid in tire clearance. The notch on the upper mount is positioned towards the wheel of the car.

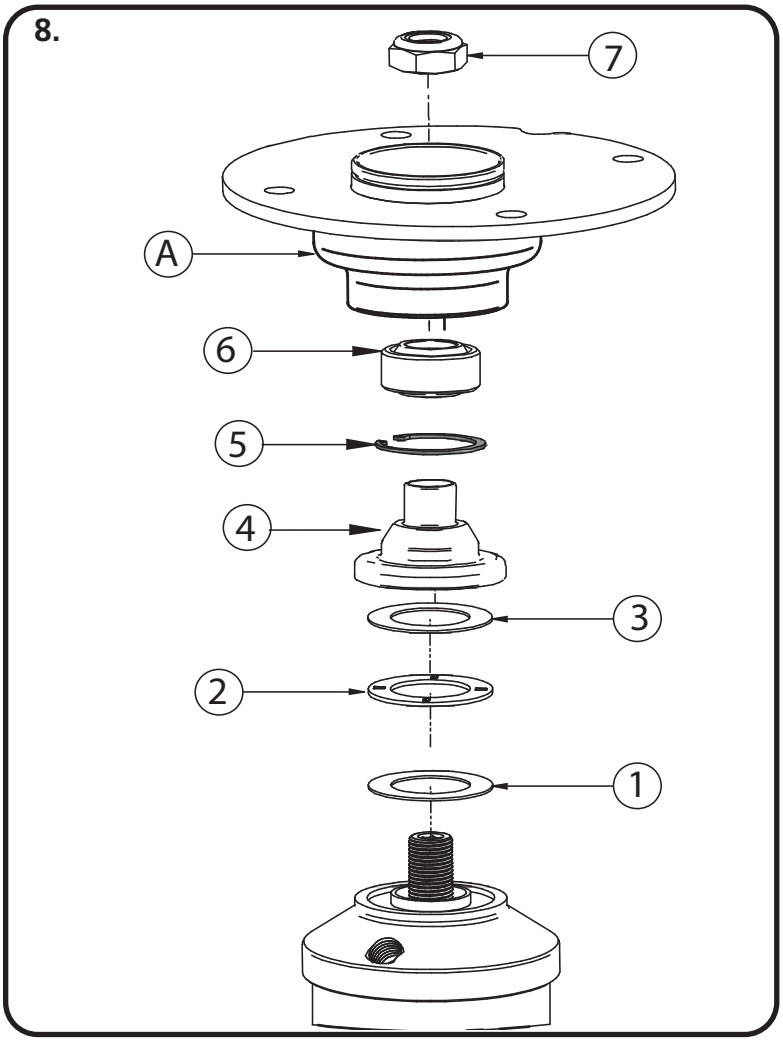


7. Bolt the upper mount into the car positioning it to the inside of the car. The camber adjustment will be done on the bottom of the strut using the supplied camber bolt. The plate gets bolted in from the bottom side of the strut tower using (4) 3/8"-16 x 1 1/4" bolts. Install a 3/8" washer on the top and bottom and secure it with (4) 3/8"16 Nylok Nuts. Tighten all (4) down.

NOTE: The Struts are Driver and Passenger, the sway bar mount points to the rear of the car.

Upper Mount Assembly

8.

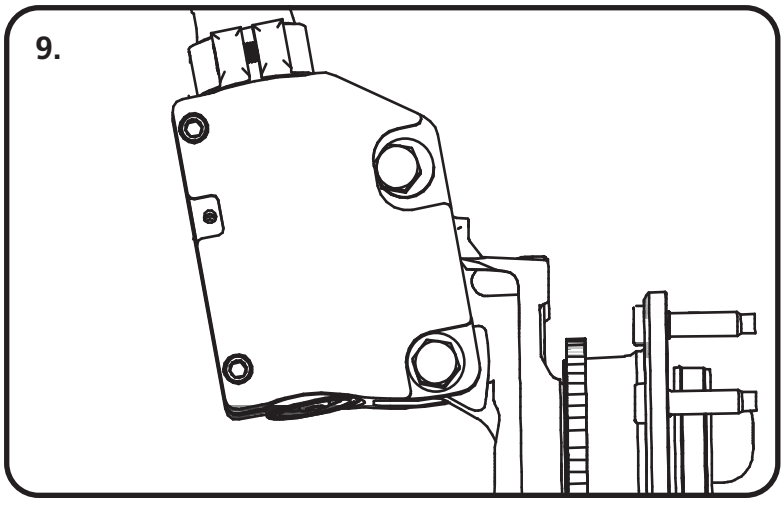


8. Install the Air fitting into the Airspring using thread tape. The Strut comes preassembled, but if for some reason you need to disassemble the strut, Figure 8 shows the assemble order. Remove the Adjuster Knob from the Strut shaft for assembly. Bolt the strut assembly into the upper mount (A), see diagram 11 for assembly order.

1. Lower Torrington Bearing Race
2. Torrington Bearing
3. Upper Torrington Bearing Race
4. Bearing Adapter (Small Diameter Up)
5. Upper Mount Bearing Snap Ring
6. Upper Mount Bearing
7. 9/16" Locknut

Assemble components and install into upper mount tightening upper nut. Reinstall upper adjustment knob

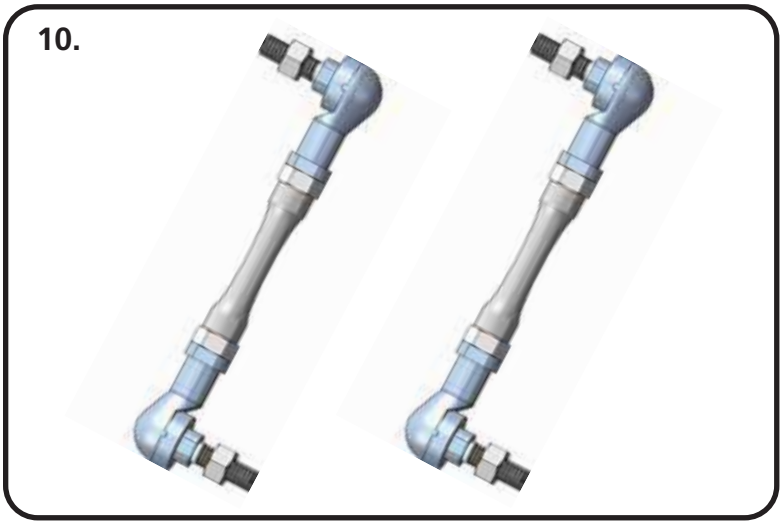
9.



9. Slide the lower strut mount onto the spindle reusing the Factory hardware in the lower mounting hole. Insert the supplied Camber bolt into the top hole.

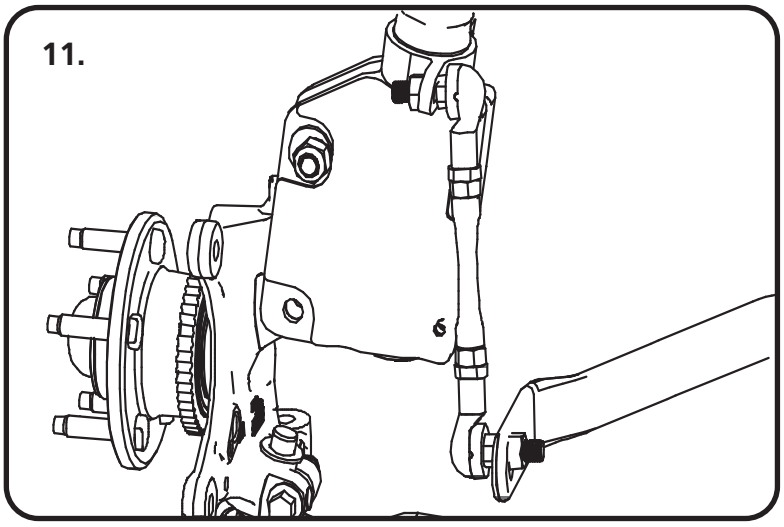
Assembly

10.



10. Attach the PosiLinks between the strut and Sway bar using the 12mm Nylok Nut. .

11.



11. The Posilink mounts with the stud on the Strut pointing outward, and the stud on the Sway bar pointing in.

Note: Image is viewing the strut from rear of the vehicle.

12. Attach the brake line to the Strut using the Factory hardware.

13. Route the Airline to the Air Spring. When hooking up the Airline be sure that you can turn the steering from lock to lock with out tugging on the Airline. This situation will eventually cause the line to leak.

14. Repeat previous steps on Passenger side.

Strut Adjustment

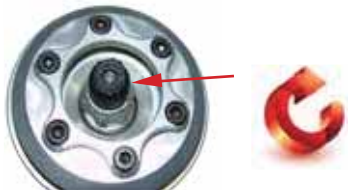
Strut Adjustment 101- Single Adjustable

Rebound Adjustment:
How to adjust your new struts.
The rebound adjustment knob is located on the top of the Strut protruding through the upper mount.
You must first begin at the ZERO setting, then set the shock to a soft setting of 20.

-Begin with the Strut 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.

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.

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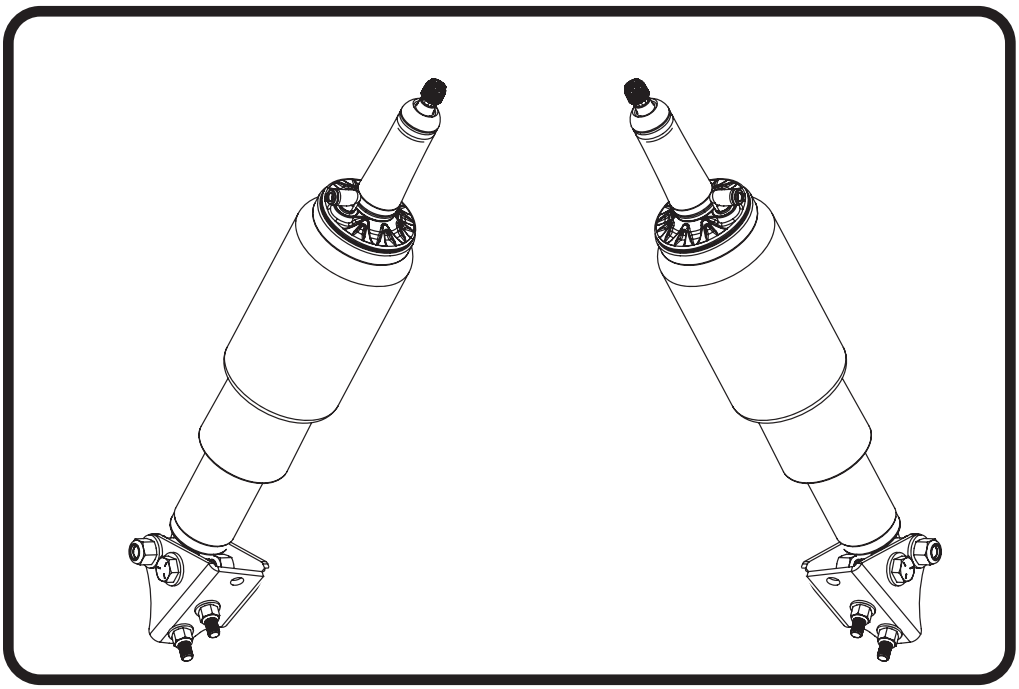
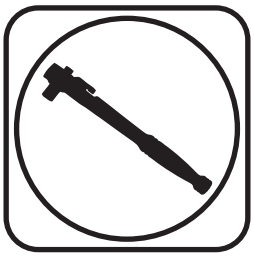
Installation Instructions

Part # 12155401 - 2005-2014 Mustang HQ ShockWaves



Recommended Tools



2005-2014 Mustang HQ Series Rear ShockWaves

Installation Instructions

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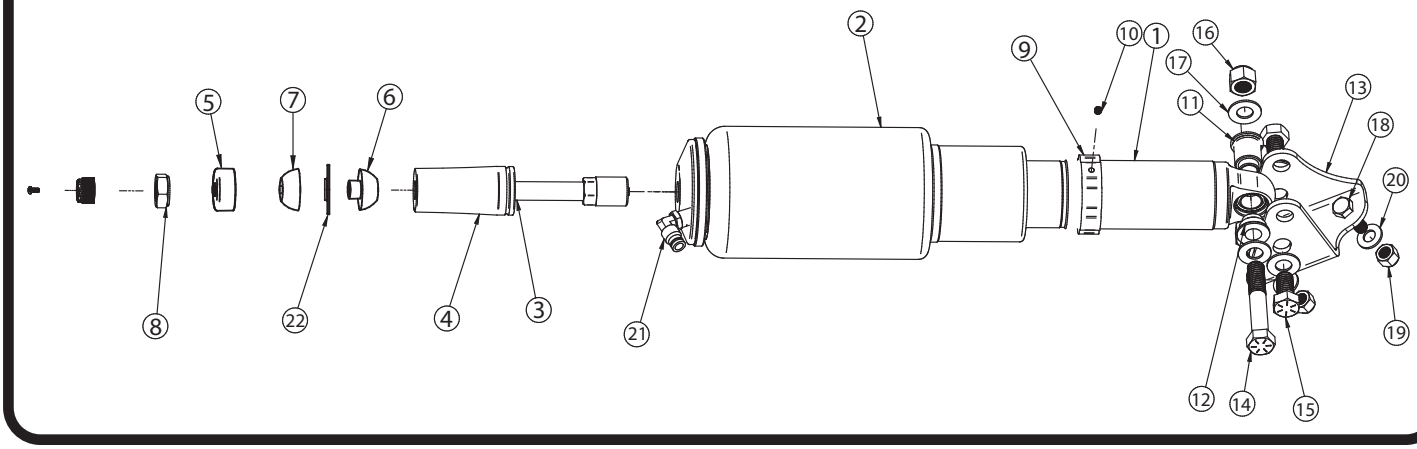
Major Components .....In the box

Item	Part #	Description	QTY
1	982-10-805	5.2" Stroke HQ Series Shock	2
2	24190799	7000 Series 4" Dia. Bellow	2
3	90009993	3.75" Stud Top	2
4	90002447	3.75" Stud Top Base	2
5	90001902	Aluminum Cap for Delrin Ball	2
6	90001903	Lower Delrin Ball Half	2
7	90001904	Upper Delrin Ball Half	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	90002462	Inner (WIDE) Lower Shock Spacer	2
12	90002043	Outer NARROW) Lower Shock Spacer	2
13	90002458	Driver Lower Shock Mount	1
13	90002459	Passenger Lower Shock Mount (Not Shown)	1
14	99501004	1/2"-13 x 3" Hex Bolt (Lower Shock Bolt to Mount)	2
15	99501001	1/2"-13 x 1" Hex Bolt (Lower Mount to Axle)	4
16	99502001	1/2"-13 Nylok Nut (Lower Shock & Mount Bolts)	6
17	99503001	1/2" SAE Flat Washer	8
18	99371004	3/8"-16 x 1 1/4" Hex Bolt (Lower Mount to Axle)	4
19	99372002	3/8"-16 Nylok Nut	4
20	99373003	3/8" SAE Flatwasher	4
	90001995	Bearing Snap Ring (Installed in Shock Body)	4
	90001994	5/8" ID Bearing (Installed in Shock Body	2
21	31954201	90 Degree 1/4" Fitting	2
22	90000582	T-Bushing	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, Bumpstops and CoilSpring 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. Pull the carpet on the sides of the trunk to expose the upper shock attaching nut and remove the nut.

5. Unbolt the lower shock from the shock mounting bracket.

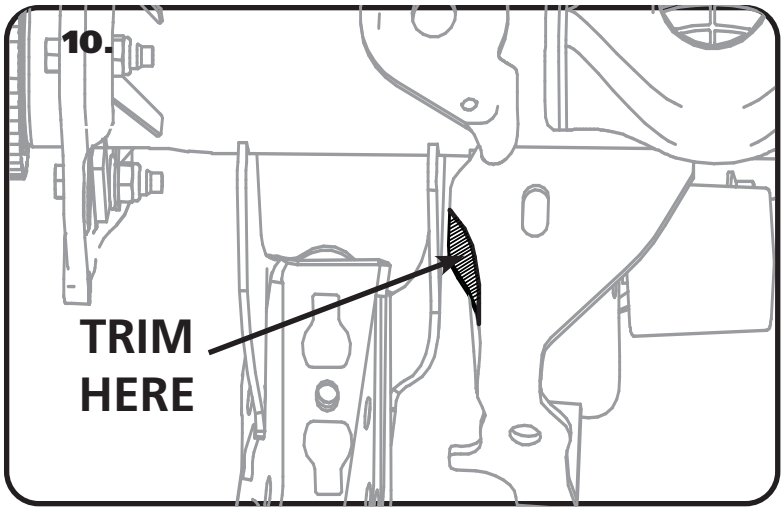
6. Lower the jack slowly to remove the tension of the Coilspring. Pay attention to the brake line and ABS wire that you don't damage them when lowering the differential

7. With the springs loose, remove the from the car.

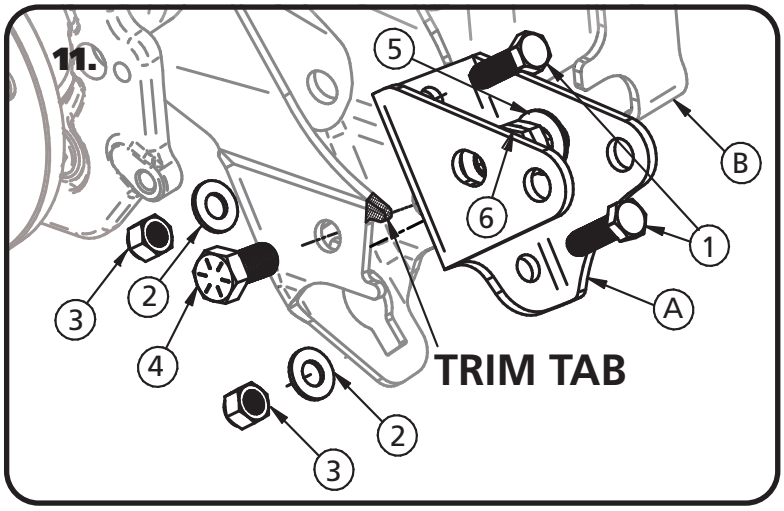
8. Remove the OEM bumpstop from the rear differential.

9. Remove the plastic cap from the differential in the factory coilspring location

ShockWave Assembly and installation

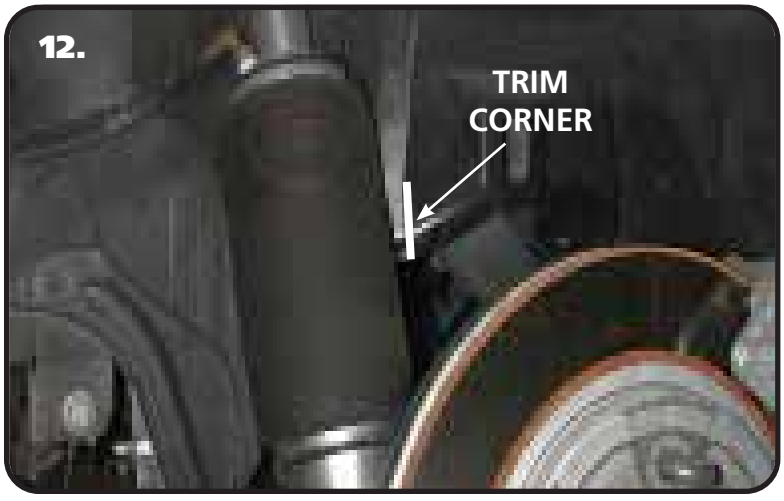


10. Before installing the ShockWaves it is necessary to do some trimming on the rear differential brackets for clearance. The corner of the panhard mount on the drivers side needs to be clearanced like seen in Figure #10.



11. Trim the tab shown in the illustration. Insert the new Lower Shock Mount (A) into the OEM Shock Mount (B). Attached the Mount using 3/8"x 1 1/4"(1) Bolts in the front face of the bracket. Install a 3/8" Flat Washer (2) and 3/8" Nylok Nut (3) onto the bolts. Insert a 1/2" x 1" Hex Bolt (4) through the OEM shock mounting hole. Install a 1/2" Flat Washer (5) and 1/2" Nylok Nut (6) onto the Bolt. Tighten all Hardware.

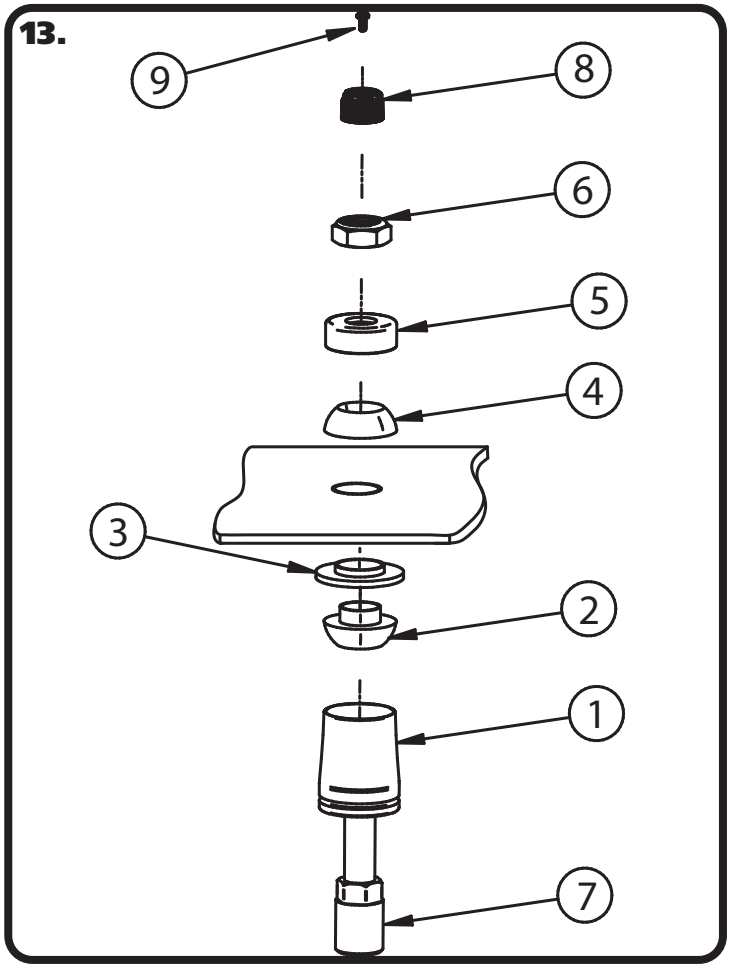
Note: The 1/2" Bolts must be install with the Nylok Nuts in the inside of the bracket.



12. The corner off the bracket that protrudes into the front side of the shock area needs to be trimmed off. It is necessary to trim this area for Airspring clearance. In Figure 12 the Shockwave is installed to give you reference of the area.

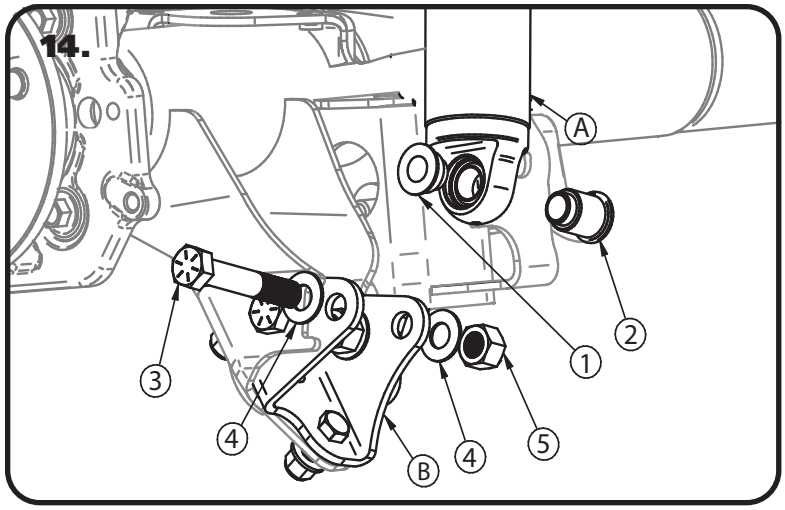
Failure to trim this area will cause Airspring failure.

Shockwave Installation



13. Place the Shockwave into the original shock location with the stud sticking through the OEM shock hole. See Figure 13. Tighten the 9/16" nut snuggly against the top cap (#4). Do not over tighten. You should still be able to articulate the shock by hand. We torque the nut to 80 in-lbs using a 7/8" crowfoot wrench.

1. Stud top aluminum base
2. Delrin ball lower half
3. T-Bushing Adapter
4. Delrin ball upper half
5. Aluminum cap
6. 9/16" SAE Nylok jam nut
7. Threaded stud (screwed onto shock shaft)
8. Rebound adjusting knob
9. Screw



14. Install the ShockWave(A) in the OEM lower shock mount(B) using a Narrow Spacer(1) on the wheel side of the shock, and a Wide Spacer(2) on the inner side of the shock. 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 1/2"-13 x 3" Bolt (3) and 1/2" Washer (4) through the Mount and Shock. Install a 1/2" Flat Washer (4) and 1/2"-13 Nylok Nut (5) on the Bolt and Tighten.

Repeat the steps for the other side of the car.

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.

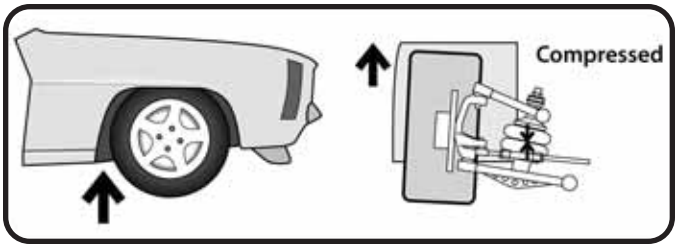
5. Take the vehicle for another test drive. If necessary, repeat the steps above until your desired optimal ride quality has been achieved.

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.

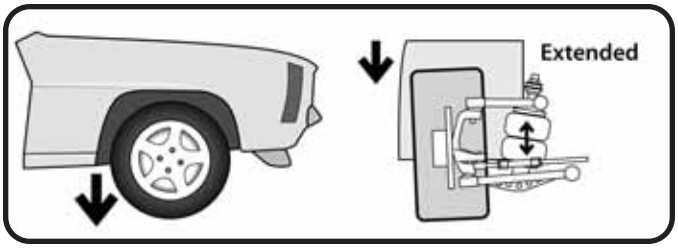
TUNING GUIDE
SINGLE-ADJUSTABLE SHOCKS

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.



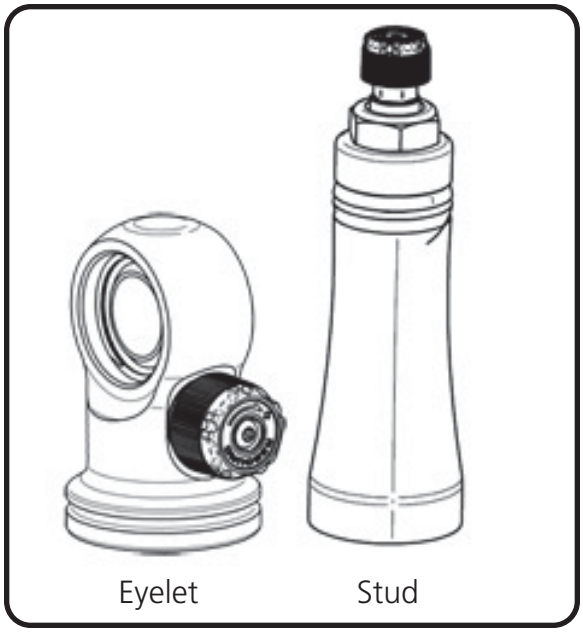
REBOUND

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?

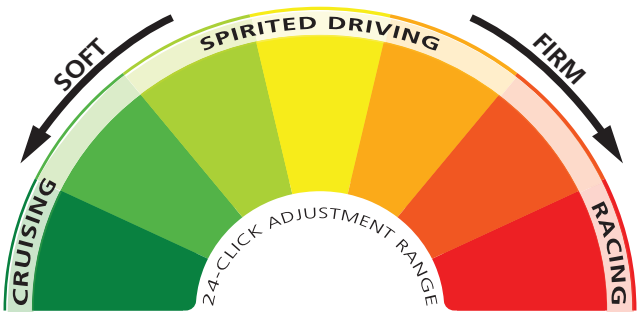
HQ Series Shocks

- **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

SHOCK*WAVE* 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.**