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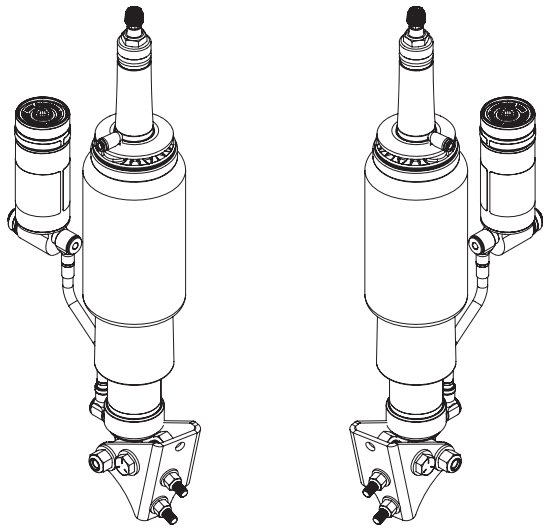
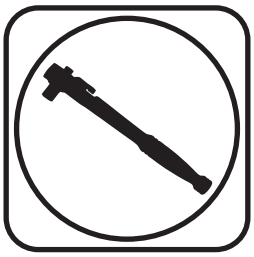
Installation Instructions

Part # 12155411 - 2005 up Mustang TQ ShockWaves



Recommended Tools



2005 up Mustang TQ Series Rear ShockWaves

Installation Instructions

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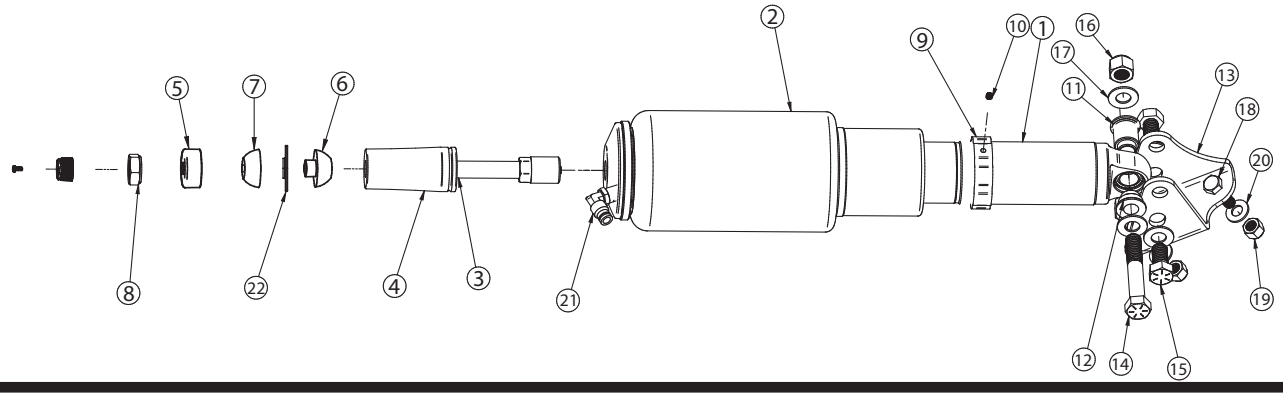
www.ridetech.com
812-482-2932
REV1 8/28/25

Major Components .....In the box

Item	Part #	Description	QTY
1	24259999	5.2" Stroke TQ Series Shock	2
2	24090799	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	4
6	90001903	Lower Delrin Ball Half	2
7	90001904	Upper Delrin Ball Half	2
8	99562003	9/16-18" Nylok Nut	2
9	70008913	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



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Installation Instructions

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

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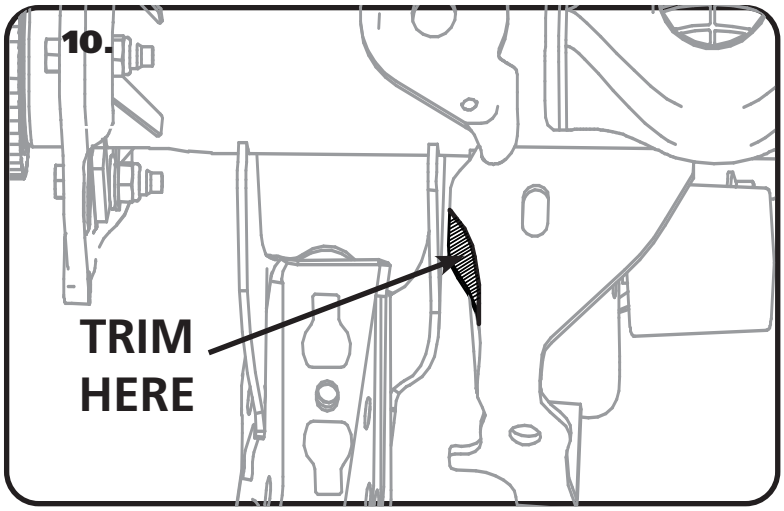
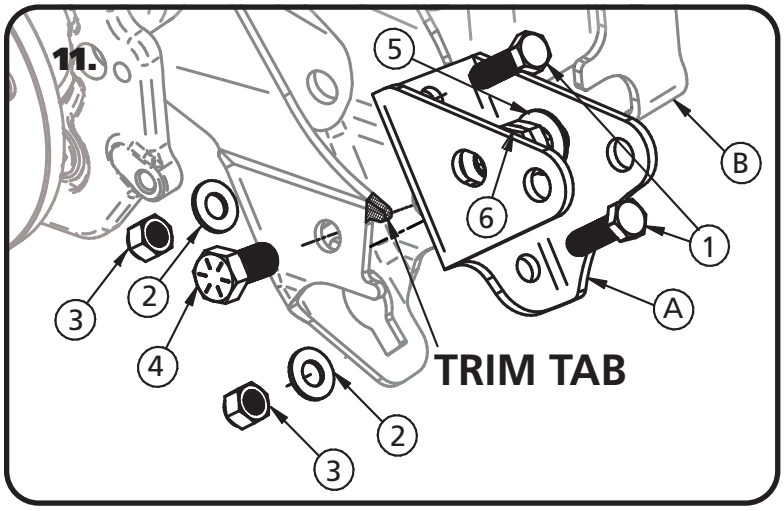
Installation Instructions

ShockWave Assembly and installation

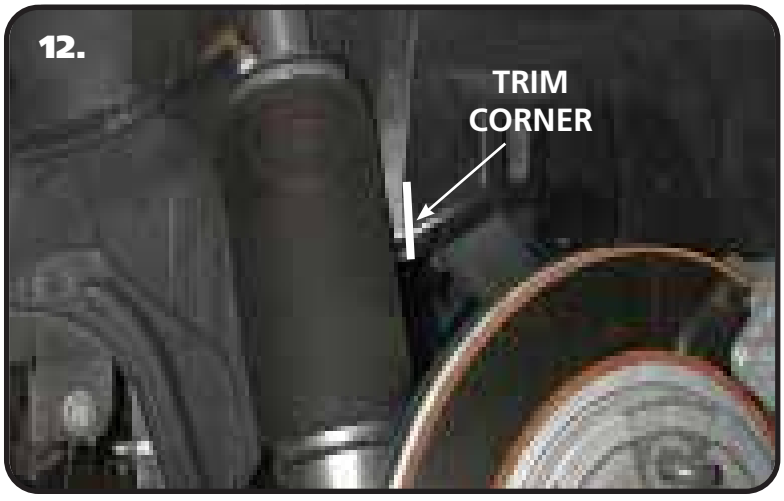


10. Before installing the ShockWaves it is necessary to do some trimming on the rear differential brackets for clearance. The corner of the panhard mount on the drivers side needs to be clearanced like seen in Figure #10.



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.

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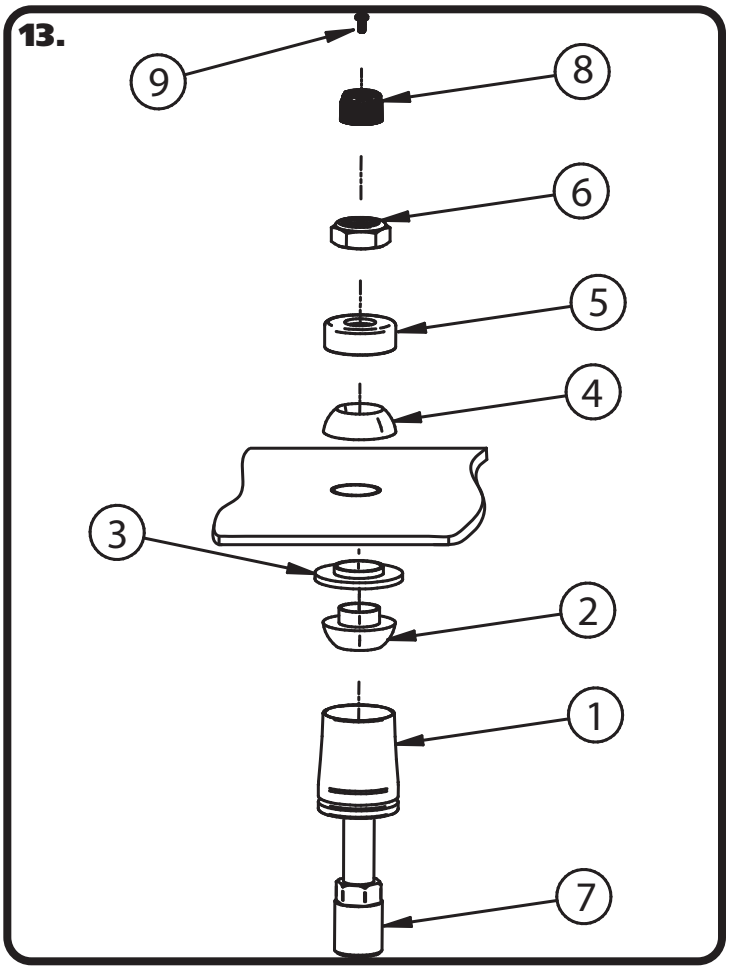
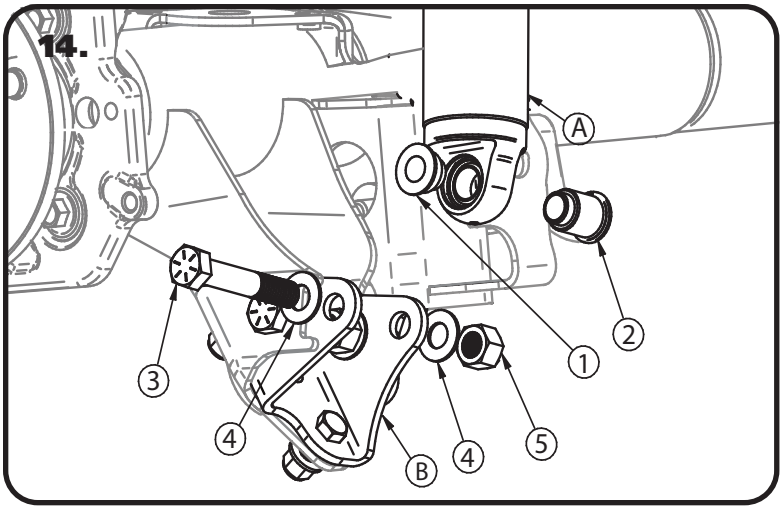
Installation Instructions

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 (#5). 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

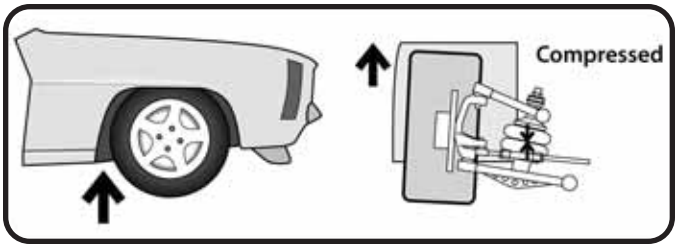


14. Install the ShockWave(A) in the OEM lower shock mount(B) using a Narrow Spacer(1) on the wheel side of the shock, and a Wide Spacer(2) on the inner side of the shock. Slide the shock into the stock mounting location. It may be necessary to use the jack and raise the differential to align the mounting 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.

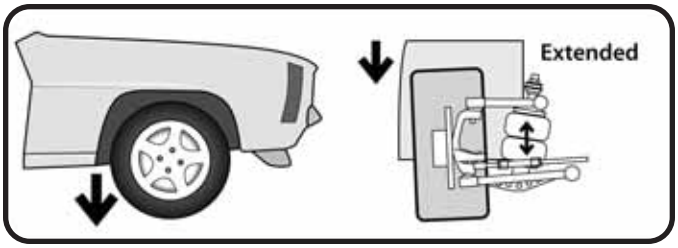
TUNING GUIDE
TRIPLE-ADJUSTABLE SHOCKS

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

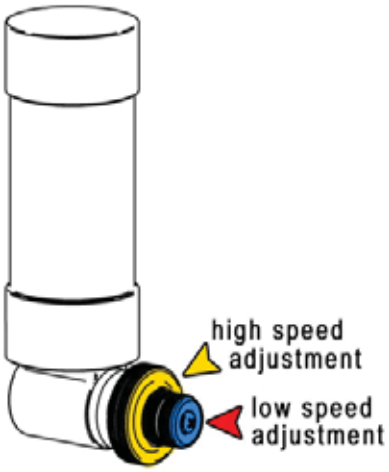
Rebound is the opposite of compression. This occurs when the wheel/tire/suspension assembly falls into a pothole, or simply "rebounds" from being compressed.

Where Are The Knobs?

TQ Series Shocks

- **The rebound adjustment knob is located on the top of the shock, either protruding from the side of the eyelet, or atop the stud.**
- **This high/low speed adjustment knobs are located on the external reservoir.**

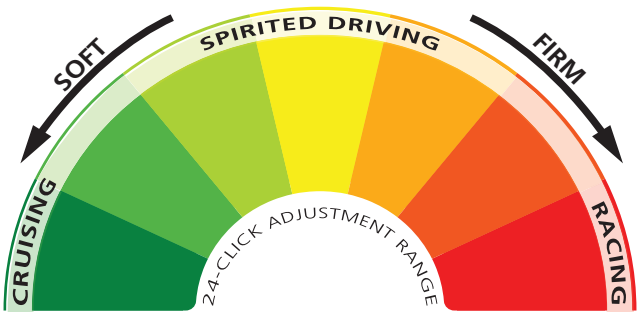
Eyelet Stud



External Reservoir

Knob Function

Counterclockwise = Softer



Clockwise = Firmer

TUNING GUIDE
TRIPLE-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
TRIPLE-ADJUSTABLE SHOCKS

Initial Compression Setting

1. Begin by setting both the low speed and high speed compression adjustments to "full soft". You do this by turning the high-speed (outer) adjustment knob on the external reservoir counterclockwise until it stops. The low-speed (inner) knob will rotate with it.

NOTE: For most people operating their vehicle under normal driving conditions, the minimum compression setting is going to provide ideal ride quality and handling characteristics.

2. Take the vehicle for a test drive. If you are satisfied with the ride quality and handling, you're all set. Enjoy the ride!

3. If you like to race or engage in more "spirited" driving, you might find that a soft low-speed setting results in some undesirable behaviors. If you experience any of the following symptoms, you may wish to increase the low-speed damping by turning the inner knob clockwise a few clicks.

- Handling feels soft and unresponsive
- Front end dives excessively when braking
- Rear end squats excessively when accelerating
- Excessive body roll when cornering

4. If general handling is dialed in, but you feel the suspension bottoming out when encountering speed bumps, potholes or large dips, you may need to increase the high-speed damping by turning the outer ring clockwise a few clicks.

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

NOTE:
It may help to think of your compression adjustments as a means of creating additional spring rate and controlling the timing at which your suspension reacts to events that compress your vehicle's springs.

The low-speed knob may be adjusted independently of the high-speed knob, but any adjustments to the high-speed knob will also move the low-speed knob.

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.**