



Part # 12270297 - 2015 Up Mustang HQ Air Suspension Kit

Front Components 12272501	Front ShockWave Kit
Rear Components 12274010	Rear CoolRide Kit

Recommended Tools

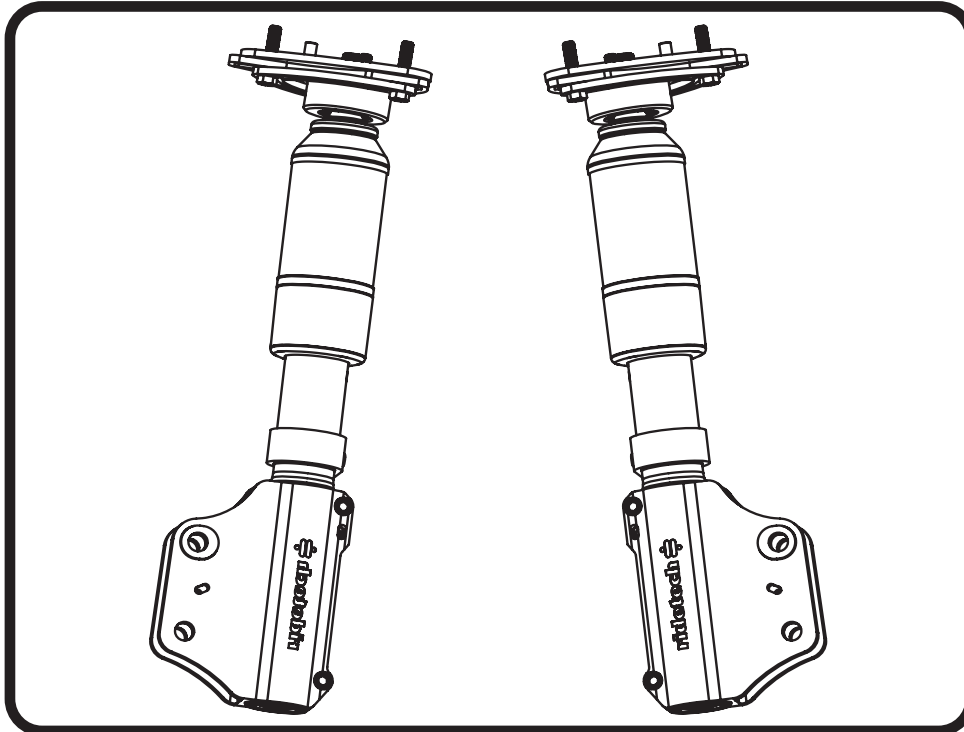


**2015 Up Mustang HQ Series Air Suspension
Installation Instructions**

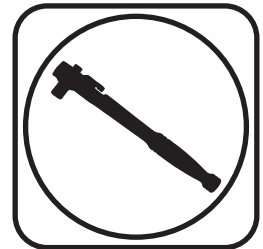
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Part # 12272501 - 2015 Up Mustang HQ ShockWave



Recommended Tools



2015 Up Mustang Front HQ ShockWave Strut Installation Instructions

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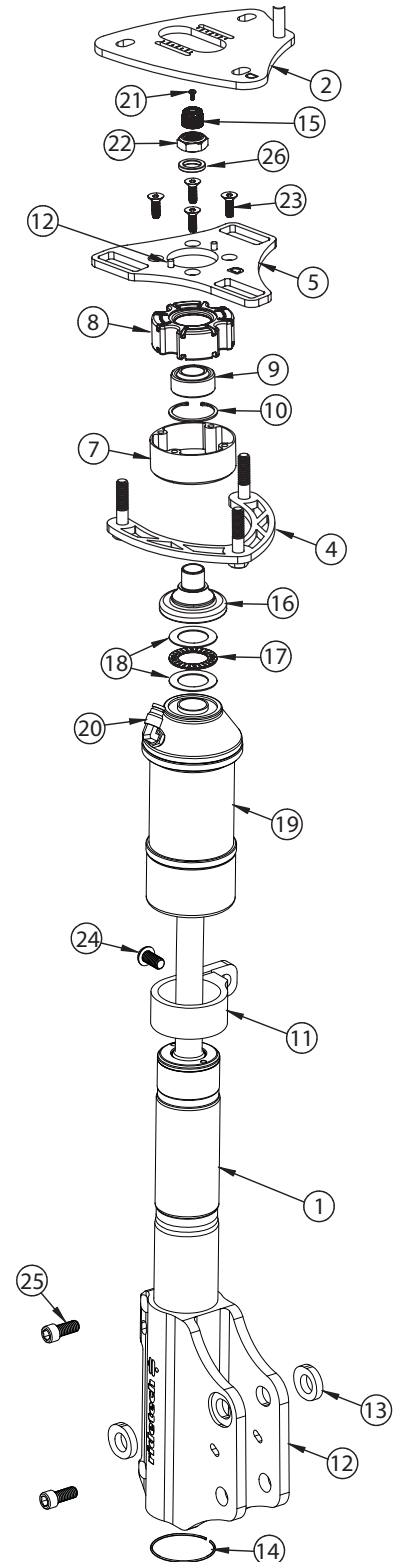
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Included ComponentsIn the box

Item #	Part #	Description	QTY
1	986-10-055	Strut Cartridge	2
2	90003585	Caster/Camber Guide Plate - Driver	1
3	90003586	Caster/Camber Guide Plate - Passenger	1
4	90003587	Caster/Camber Bolt Plate	2
5	90003588	Caster/Camber Bearing Plate - Driver	1
6	90003589	Caster/Camber Bearing Plate - Passenger	1
7	90003590	Strut Isolator Retaining Cup	2
8	70016907	Strut Isolator	2
9	90001042	Upper Mount Bearing	2
10	90000805	Upper Bearing Snap Ring	2
11	90003591	Front Sway Bar Mount	2
12	90003592	Lower Strut Mount	2
13	90003593	Lower Strut Slug	4
14	038-01-035	Strut Mount Retaining Ring	2
15	210-35-120-0	Rebound Dampening Adjustment Knob	2
16	90002368	Upper Bearing to Thrust Bearing Adapter	2
17	70010987	Thrust Bearing	2
18	70010988	Thrust Bearing Washer	4
19	21090798	4" Diameter Rolling Sleeve Air Spring	2
20	31954201	Air Fitting, 90° 14" NPT x 1/4" Tube	2
21	90009969	Adjustment Knob Screw - 4-40 x 1/4"	2
22	99562003	9/16"-18 Nylok Nut	2
23	72000008	1/4"-20 x 3/4" Flat SHCS	8
24	99371029	3/8"-16 x 3/4" Button HCS	2
25	99371054	3/8"-16 x 7/8" SHCS	4
26	70015872	Spacer	2
	99373002	3/8" SAE Flat Washer	8
	99372001	3/8"-16 Nylok Nut	8





NOTE

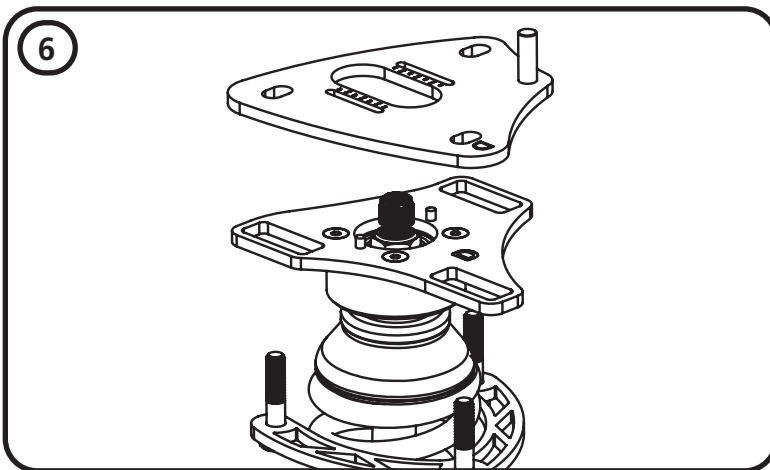


DUE TO VARIATIONS IN WIDTH OF THE OEM SWAY BAR, IT MAY BE NECESSARY TO CHANGE THE FRONT SWAY BAR TO RIDETECH SWAY BAR (12279120) WHEN TRYING TO ACHIEVE ALIGNMENT SETTINGS FOR TRACK PURPOSES. REGARDLESS OF YOUR ALIGNMENT SETTING, WE RECOMMEND CHECKING THE CLEARANCE BETWEEN THE STRUT AND THE OEM SWAY BAR LINKAGE

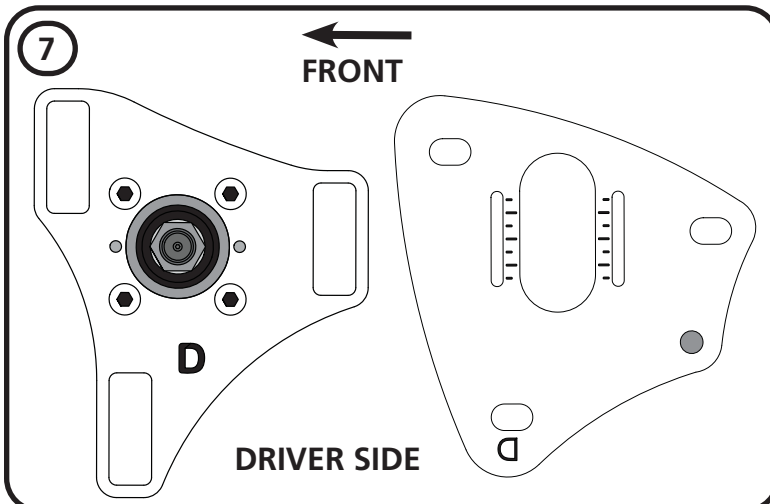
Disassembly

1. Remove the front struts by first disconnecting the ABS wire from the factory strut.
2. Disconnect the swaybar linkage from the strut.
3. Support the front hub and control arm assembly and remove the (2) struts bolts(retain hardware) that attach the strut to the spindle. Retain the lower strut bolts for reassembly.
4. Remove the (3) 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



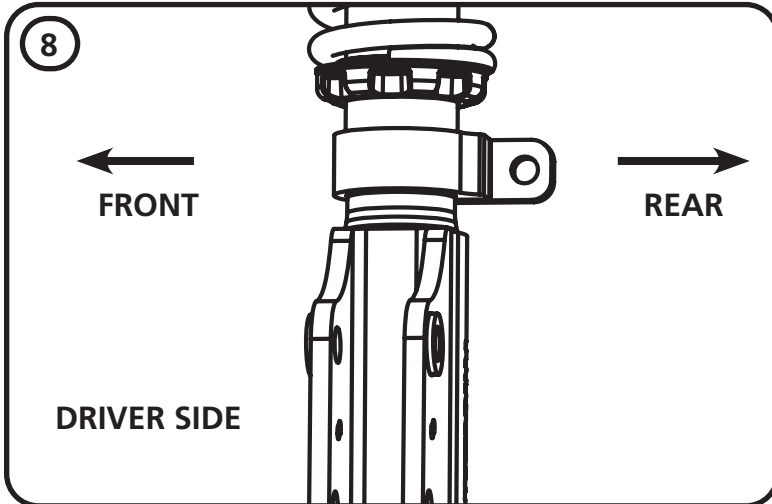
6. The upper strut mount is a 3 piece setup. All 3 pieces will be installed from the bottom side of the strut tower.



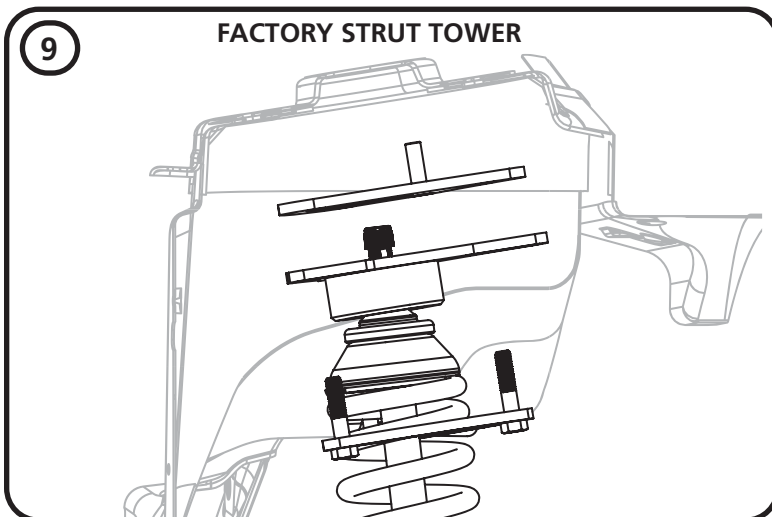
7. The upper mounts are marked with a D and P for Driver and Passenger.



Strut Installation



8. There is a driver and passenger strut assembly. The sway bar linkage mounting tab is to the **REAR** of the car. **Image 8** illustrates the Driver Assembly.



9. **Image 9** illustrates the orientation of the strut mounting components. Installation of these components is covered in **Steps 10-15**.



10. The upper plate has a stud pressed into the plate. The stud will go in the slotted hole that is to the rear of the strut tower. This stud locks down the caster adjustment.

NOTE: If you are only adjusting camber, this nut doesn't need to be loosened.



Strut Installation



11a & 11b. The caster/camber guide plate will sit on top of the bearing plate. The (2) guide pins will get inserted into the slots of the caster/camber guide.



11b. Image 11b illustrates the (2) pins in the slots.



12. The bolt plate will be inserted in from the bottom, with the studs sticking through the slots of the bearing plate & caster/camber plate.



Strut Installation



13. Image 13 shows the bolt plate inserted with the studs sticking through the bearing plate & caster/camber plate.



14. Insert the strut assembly into the car. You will have to hold the bolt plate in place until you can get nuts started on the top. The open end of the bolt plate will be facing the engine.



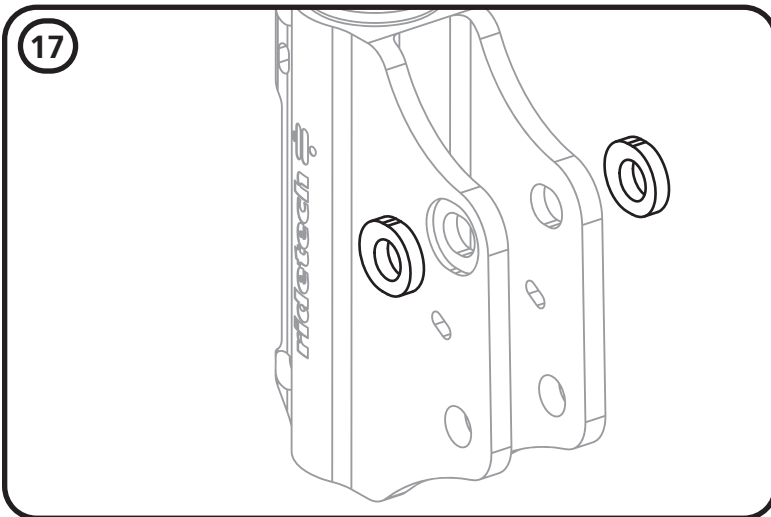
15. Install a 3/8" flat washer and 3/8"-16 nylok nut on each of the (4) studs. We recommend centering everything in the slots until you can get the front end aligned. Torque the 3/8"-16 nuts to 20 ft-lbs.



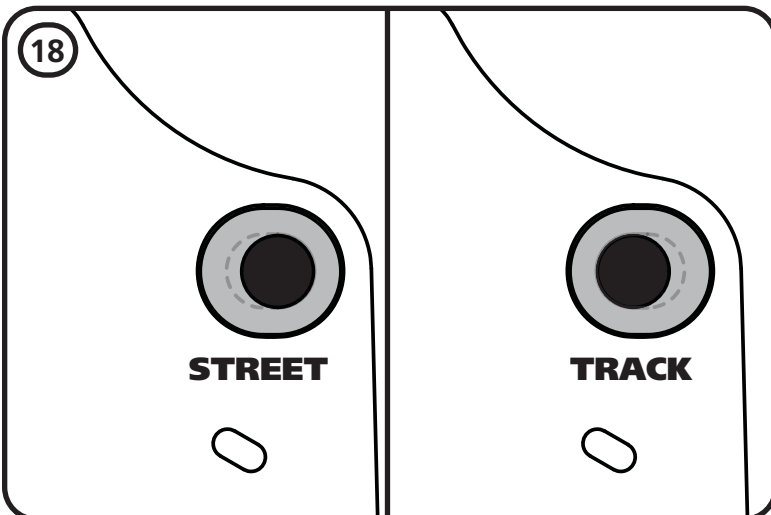
Strut Installation



16. Slip the strut mount onto the mounting area of the spindle. Insert the OEM lower strut hardware into the lower hole of the strut mount/knuckle. Install the OEM nut on the bolt.



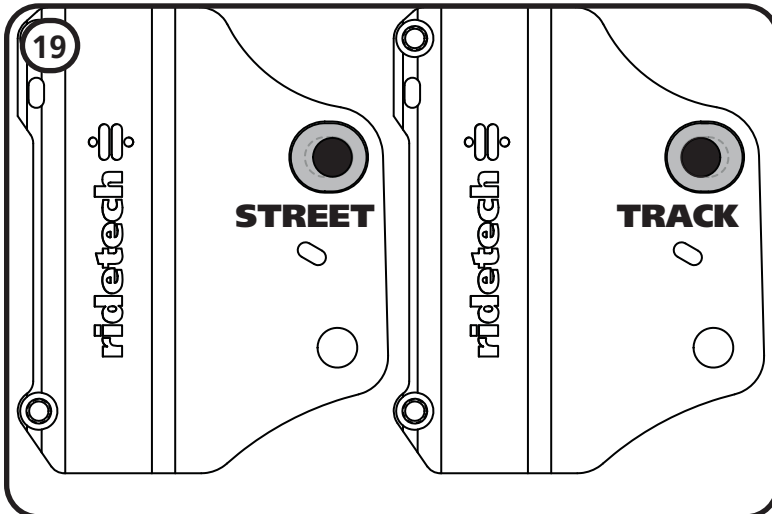
17. The upper strut bolt has a slug setup that allows for a more aggressive alignment settings if you are going to track or auto cross your car. The guide below will help you determine the orientation of the slug for your application.



18. The slug can be mounted in 2 different directions. The STREET position has the upper bolt moved outward on the strut mount. The TRACK position has the upper bolt moved inward on the strut mount. **Image 18** illustrates the 2 positions. It is zoomed in to show greater detail. **Image 19** shows the complete lower strut mount with the slugs mounted in the 2 positions.



Strut Installation



19. Below shows the camber range for each setting.

STREET : +.25° to -2.5°
TRACK : -1.0° to -4.25°

The upper strut mount has a caster range of +7.5° to +8.5°.



20. Insert the slugs into the strut mount using **Steps 18 & 19** as a guide. Make sure the front and rear slugs are orientated in the same direction. Also, make sure the slugs are installed in the same orientation drivers side and passenger side.



21. Insert the OEM lower strut hardware into the upper hole of the strut mount/knuckle.



Strut Installation

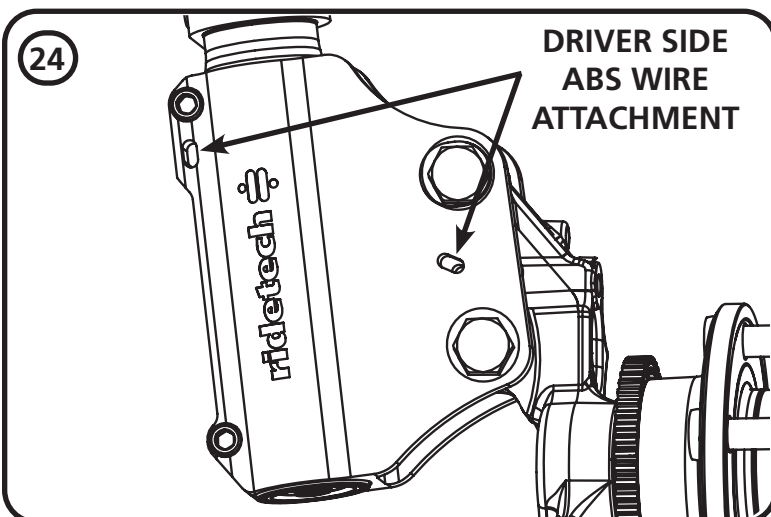


22. Install the OEM nut on the bolt.

Torque the strut to steering knuckle hardware to 184 ft-lbs.



23. Attach the sway bar linkage to the strut using the OEM hardware. Torque to 85 ft-lbs.



24. The ABS wire attaches to the strut in the locations shown in **Image 24**. The OEM mounting clips are used to attach the ABS wire.



Strut Installation



25. Attach the outer ABS wire mount to the provision in the tab of the strut.



26. Attach the inner ABS wire mount to the provision in the rear flange of the strut.

Final Assembly

27. Repeat steps 11-26 on the Passenger side.

28. With Both sides installed, slowly lower the car to the ground to check ride height. It may be necessary to tighten the Adjusting nut (Also known as preloading the Coil Spring) to achieve proper ride height. To do this you will need to loosen the Adjuster Nut Locking Screw and tighten the Adjuster Nut to put preload into the Coil Spring. Once the correct ride height is achieved tighten the Locking Screw in the lower Adjuster nut. **It may be helpful to read the section pertaining to spring preload and adjustment below.**

IT IS NECESSARY TO HAVE THE CAR ALIGNED AFTER INSTALLATION. TORQUE THE STRUT TO SPINDLE ATTACHING BOLTS TO 184 FT-LBS.

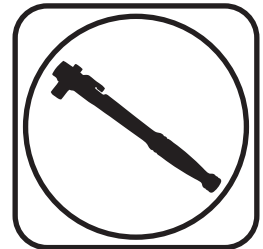


Part # 12274010- 2015-up Mustang Rear CoolRide Kit

Recommended Tools

Rear Components:

- 12274099 Rear CoolRide Instructions
- 12270701 Rear HQ Series Shocks



2015-up Mustang Rear CoolRide Kit Installation Instructions

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- Pages 17-19..... Rear HQ Series Shocks

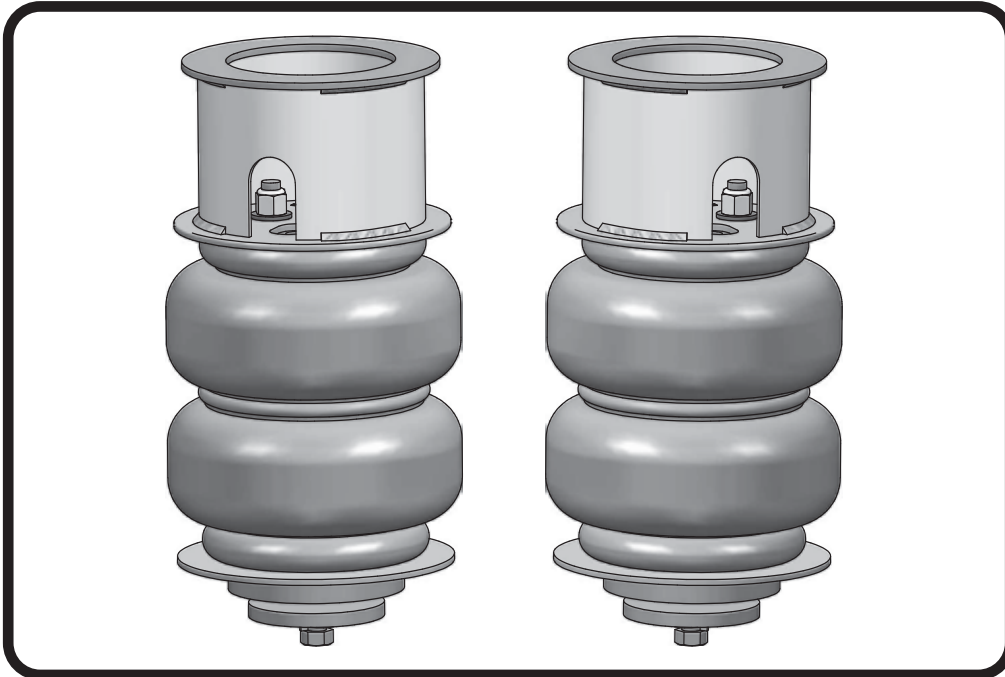
THE SHOCKS IN THIS KIT WILL NOT FIT THE GT350!!





Part # 12274099 - 2015 up Mustang Rear CoolRide

Recommended Tools



2015 up Mustang Rear CoolRide

Installation Instructions

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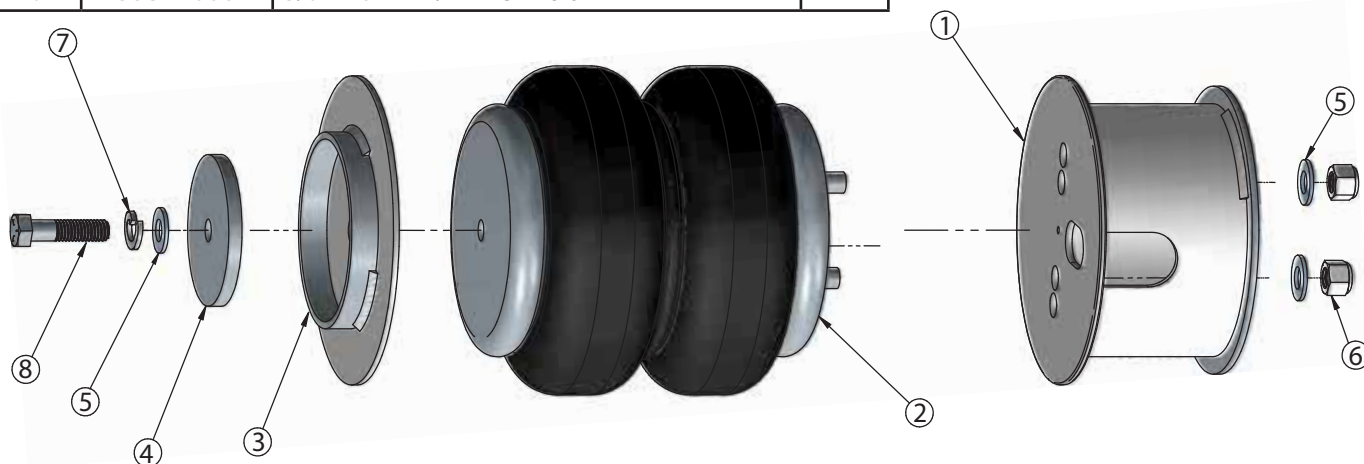
Page 15-16.. CoolRide Installation





Major ComponentsIn the box

Item	Part #	Description	QTY
1	90002484	Upper Cup Bracket	2
2	90006781	6.5" Diameter Air Spring	2
3	90002485	Lower Cup Bracket	2
4	90002486	Lower Clamping Plate	2
5	99373003	3/8" Flat Washer	6
6	99372002	3/8"-16 Nylok Nut	4
7	99373005	3/8" Split Lock Washer	2
8	99371006	3/8"-16 x 1 1/2" Hex Bolt	2



Getting Started

Congratulations on your purchase of the Ridetech Mustang CoolRide System. This system has been designed to give your Mustang excellent handling along with a lifetime of enjoyment. The CoolRide System provides flexibility that can not be achieved with Conventional Coil Springs. The CoolRide System, used in conjunction with HQ Series rear shocks, will give you the flexibility of adjusting your ride height along with the ability to dial in your ride quality to your personal preference.

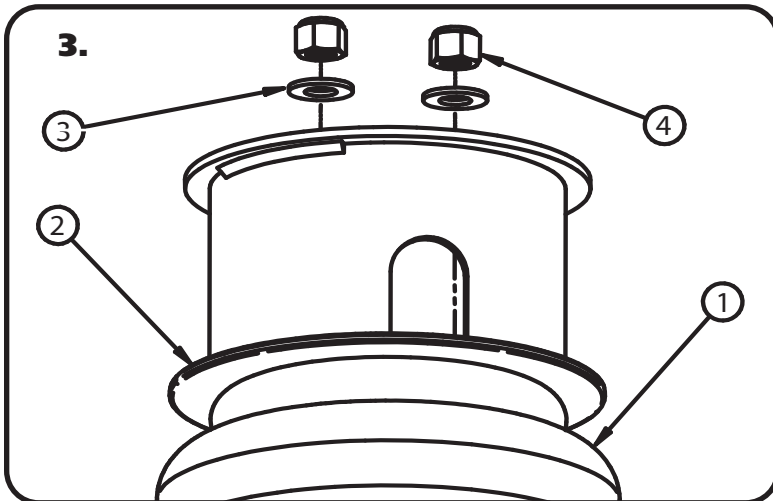
This CoolRide System is Designed to replace the factory Coil Springs. It should be installed at the same time as the rear shocks, kit # 12270701

Refer to the Factory Service Manual for disassembly and Coilspring removal instructions.

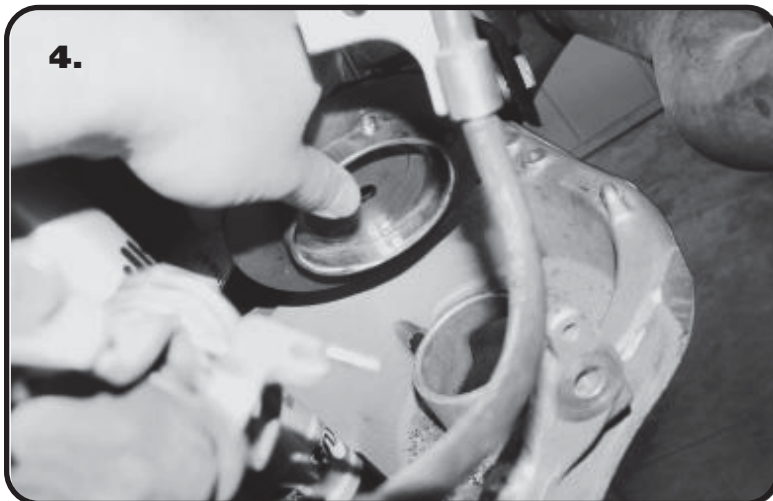
1. Remove the Shocks and the OEM Upper Shock Mount from the Car.
2. Disconnect the Sway Bar Linkage from the Control Arms. These will be reinstalled.



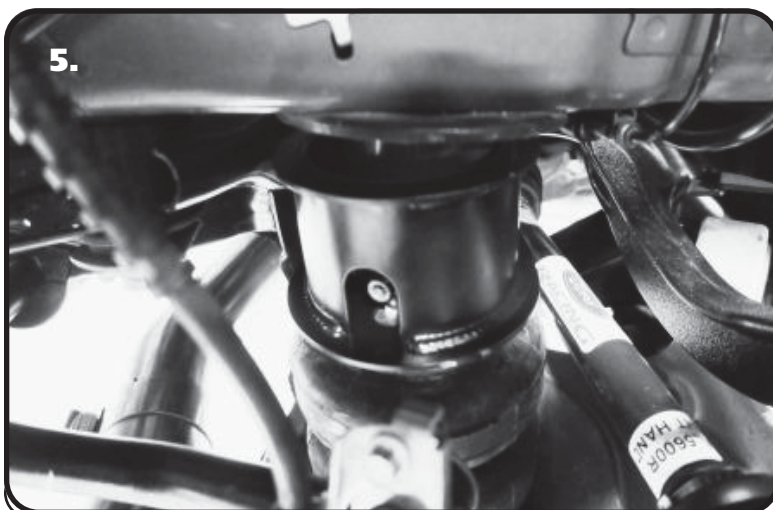
CoolRide Installation



3. Thread a 90 Degree Fitting into the Air Spring with Thread Sealant applied to the threads. Place the Upper Cup Bracket(2) on the top of the Air Spring(1). Next, install a 3/8" Flat Washer(3) on each threaded stud, followed by a 3/8"-16" Nylok Nut(4). Torque Nuts to 15-20ftlbs.



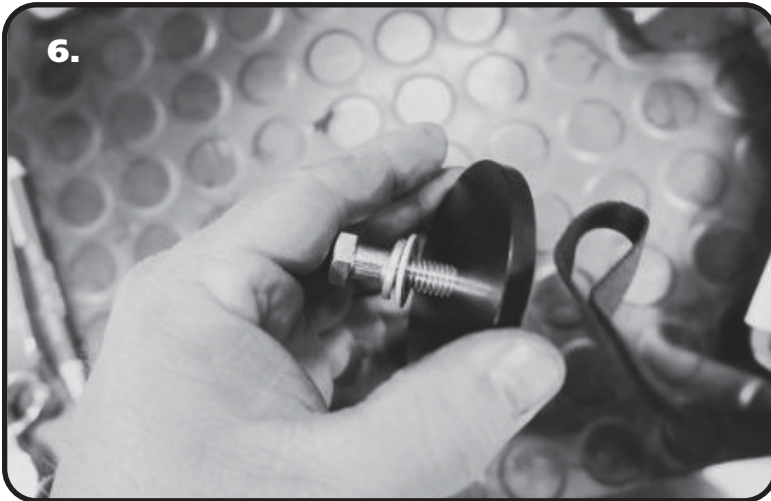
4. Install the Lower Cup Bracket into the OEM coil spring pocket of the control arm. The Cup Bracket is installed with the bottom ring located around the coil spring centering ring on the control arm.



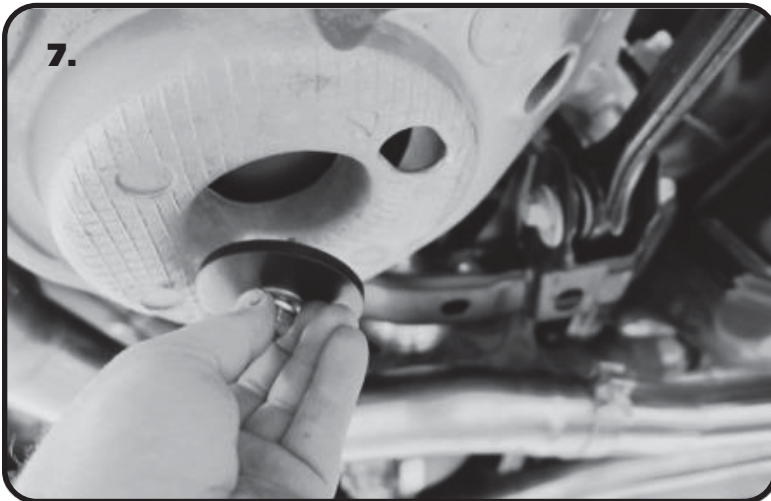
5. Install the Air Spring/Upper Cup Assembly into the OEM coil spring location. The top of the Upper Cup will sit in the OEM coil spring location. Clock the fitting to the front of the car, but be sure you have access to it to install the air line. The bottom of the Air Spring will sit on top of the Lower Cup Bracket.



CoolRide Installation



6. Install a 3/8" Split Lock Washer, followed by a 3/8" Flat Washer, on the 3/8"-16 x 1 1/2" Hex Bolt. Insert the Bolt into the hole in the Clamping Plate.



7. Move the Air Spring around until the threaded hole lines up with the holes in the Lower Cup Bracket. Insert the Clamping Plate into the coil spring centering ring hole in the bottom of the lower control arm, threading the 3/8"-16 Hex Bolt into the bottom of the Air Spring. Hold the Air Spring to keep the fitting hole in the correct location and Torque the 3/8" Hex Bolt to 15-20 ftlbs.

8. Install your HQ Series Shocks and Air Control System before putting the car back on the ground.

Ride Height

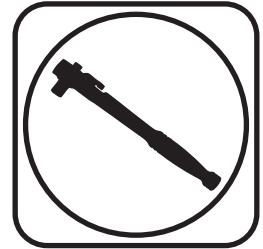
We have designed most cars to have a ride height of about 1 1/2" lower than factory. It will take approximately 80psi to achieve ride height. The air pressure will vary due to driver preference and accessories installed in the vehicle.



Part # 12270701 - 2015-up Mustang HQ Series Shocks



Recommended Tools



2015-up Mustang HQ Series Rear Shocks Installation Instructions

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THIS KIT IS DESIGNED TO BE USED WITH RIDETECH COOLRIDE AIR SPRING KIT # 12274099.





HQ Series Smooth Body Shocks

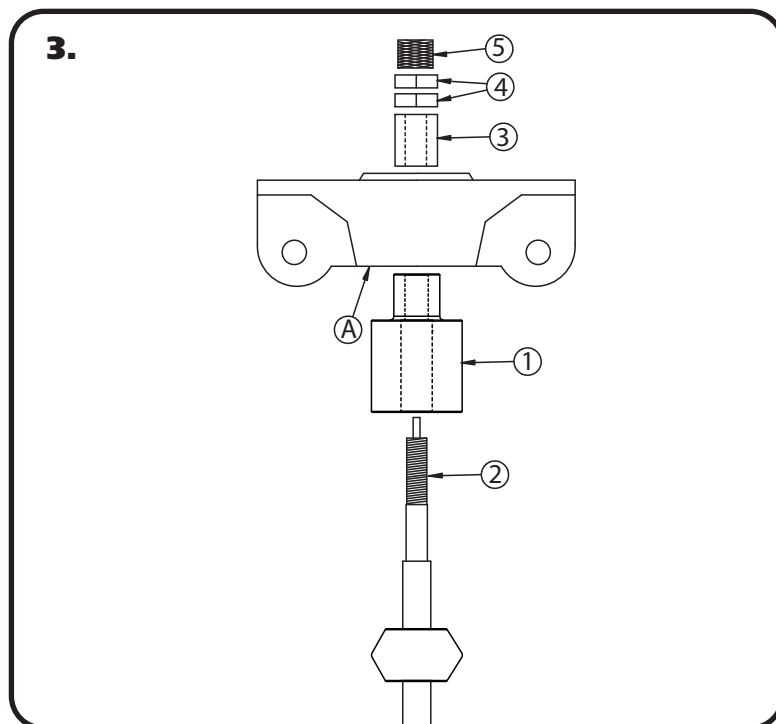
Major ComponentsIn the box

Part #	Description	QTY
986-10-081	6.65" Stroke Shock	2
70011139	5/8" ID Shock Bushing (Installed in Shock)	2
90002068	Wide Trunnion (Installed in Shock)	2
90003596	Upper Shock Mount Bottom Spacer	2
70012354	Upper Shock Mount Top Spacer	2
99372006	3/8"-24 Thin Jam Nut	4
99311022	5/16"-18 x 1 3/4" Hex Bolt	4
99313002	5/16" Flat Washer	8
99312002	5/16"-18 Nylok Nut	4

Shock Installation

This shock kit should be installed by the same time as the rear CoolRide Kit.

1. Remove the Shocks from the Car.

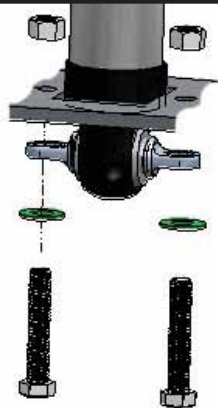


3. The HQ Series Shock bolts into the stock location using the OEM upper mount(A). Install an bottom shock mount spacer(1) on the shock shaft(2). Insert the shock shaft into the OEM shock mount. Install a top shock mount spacer(3) onto the shock shaft. Thread a 3/8"-24 Lock Nut(4) onto the Shock Shaft and tighten. Install a 2nd 3/8"-24 Lock Nut on the shock shaft and tighten against the 1st lock nut. Install the adjuster knob(5).



Shock Installation

2.



2. Attach the trunnion to the OEM control arm using the supplied hardware. It may be necessary to rotate the trunnion to get it in the correct position. This can be done by sticking a screwdriver in one of the slots and spinning the trunnion in the shock bushing. Torque the hardware to 17ftlbs. Do this for both sides. Reattached the sway bar linkage.

The CoolRide kit should already be installed, if not, do it at this time and lower the rear of the car to the ground.

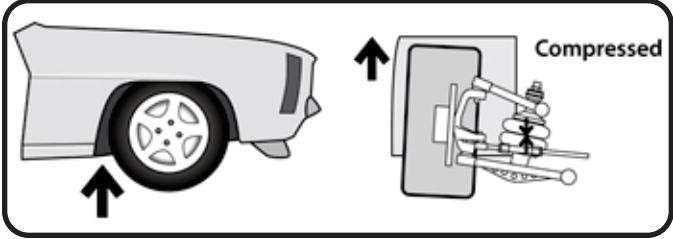


TUNING GUIDE

SINGLE-ADJUSTABLE SHOCKS

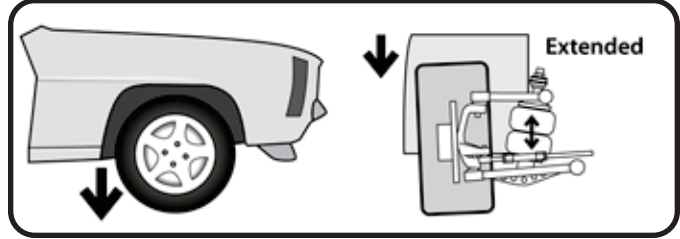


The Basics...



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.



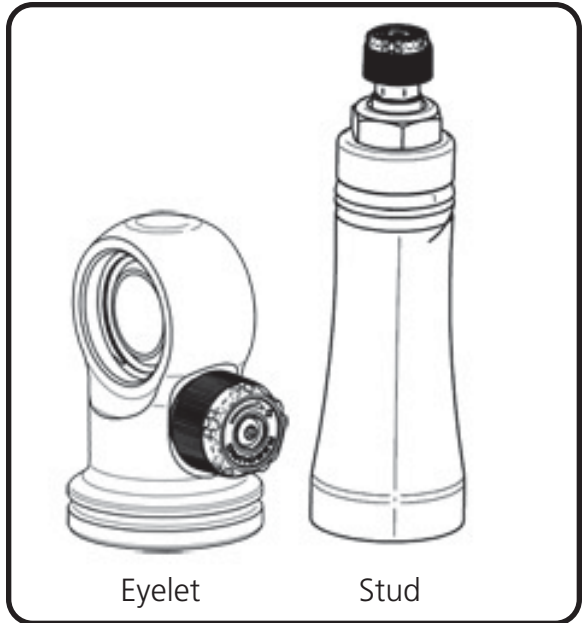
REBOUND

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.



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 bumpstop, 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 overspray 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.