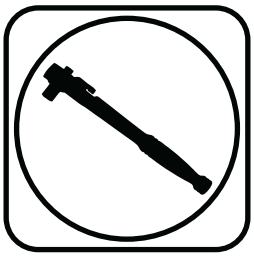
ridetech

Installation Instructions

Part # 13042501 - Mopar LX Platform HQ Front ShockWaves

Recommended Tools



Mopar LX Platform HQ Series Front ShockWaves

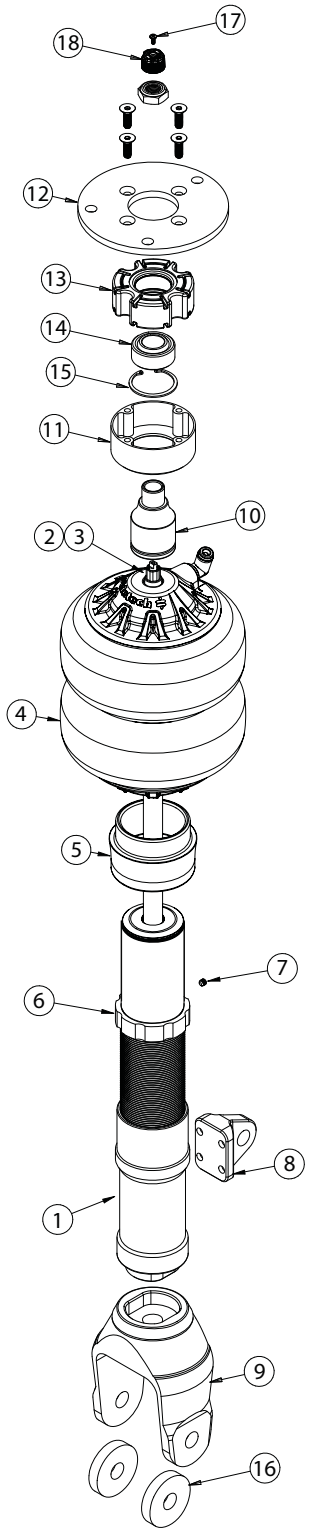
05-08 Magnum / 05-Up 300C / 06-Up Charger / 08-Up Challenger

Installation Instructions

Table of Contents

Major Components .....In the box

Item #	Part #	Description	QTY
1	24159997	5.2" Stroke HQ Series Shock	2
2	70012160	2.0" Stud Top Metering Rod (Installed in stud top)	2
3	90009988	2.0" Stud Top Assembly	2
4	24090199	6.5" Diameter Double Convoluted Air Spring	2
5	90003649	Air Spring Spacer	2
6	234-00-153	Air Spring Locking Ring	2
7	99055000	-.8 x 5mm set screw - installed in locking ring	2
8	90003603	Shock Sway Bar Tab	2
9	90003604	Lower Shock Mount Clevis	2
10	90003605	Air Spring Cap To Upper Bearing	2
11	90003590	Strut Isolator Retaining Cup	2
12	90003606	Upper Shock Mounting Plate	2
13	70016907	Upper Strut Isolator	2
14	90001042	Upper Strut Bearing	2
15	90000805	Upper Strut Bearing Retaining Ring	2
16	90003607	Lower Shock Mount Spacer - 2005-2010 LX's	2
17	90009969	4-40 x 1/4" Pan Head Torx Cap - Adjuster Knob	2
18	210-35-120-0	Adjuster Knob	2



HARDWARE LIST - Kit # 99010249

Part #	Description	QTY
TOP PLATE TO CAR TOWER		
99371007	3/8"-16 X 1 1/2" Hex Bolt	6
99372001	3/8"-16 Nylok Nut	6
99373002	3/8" SAE Flat Washer	12
SHOCK TO LOWER CONTROL ARM		
99561012	9/16"-18 x 4 1/2" Hex Bolt	2
99562001	9/16"-18 Nylok Nut	2
99566003	9/16" Flat Washer	4

Disassembly

1. Raise the vehicle to a safe and comfortable working height with the suspension hanging freely. You will need a jack under the lower control arm to help support it during the installation.

2. Remove the front wheels to allow access to the front suspension.

3. The front OEM struts will need to be removed from the front of the car.

4. Due to 2 possible lower mount options on this platform, included in the kit are spacers for the narrower width. The lower shock mount is setup for the wide width. If your car is a 2010 or older, it will require a spacer to be used on each side of the OEM lower shock mount. See ***Page 5*** for more details.

5. Remove the OEM upper strut cap from the top of the strut tower.

6. Remove the 3 upper strut mounting nuts.

7. Disconnect the sway bar linkage from the strut. Retain the OEM hardware for reassembly later.

Disassembly and ShockWave Installation

8. Remove the lower strut mounting bolt.

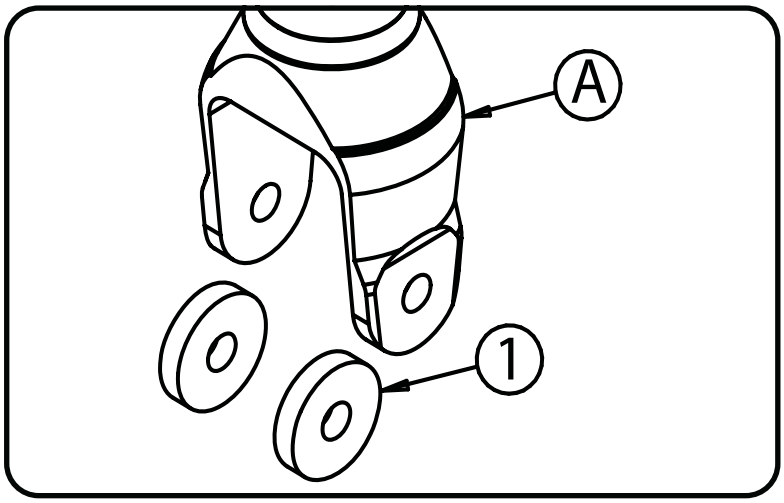
9. The upper ball joint will need to be disconnected from the spindle so the strut can be removed from the car. ***You need to put a jack under the lower control arm to help support it. You do NOT want to put any stress on the brake line or ABS wires.*** Remove the ball joint nut and disconnect the ball joint from the spindle. You can use a ball joint separator or tap the spindle with a hammer.

10. Remove the OEM strut from the car.

11. Insert the Ridetech assembly into the car. The sway bar tab should point to the engine. Align the upper mounting holes with the OEM holes of the strut tower. Install a 3/8" flat washer on each of (3) 3/8"-16 x 1 1/2" hex bolts. Insert the bolt in from the bottom with the threads pointing up. You will have to hold each bolt in place while putting a flat washer and nut on them.

ShockWave Installation

12. Install a 1/2" flat washer and 3/8"-16 nylok nut on the threads of each bolt. Torque to 35 ft-lbs.



The LX platform had 2 different width lower shock mounts depending on the year of the car. 2005-2010 have a narrow mount. The 2011 and newer have a wide lower shock mount. The lower mount on the Ridetech shock is the width of the wide lower mount. If your car has the narrow lower mount, spacers are supplied for it. A spacer will need to be used on each side of the OEM lower mount.

13. Align the lower shock mount with the OEM mount in the lower control arm. If your car has a narrow lower mount, insert a spacer in each side. Install a 9/16" flat washer on a 9/16"-18 x 4 1/2" hex bolt. Insert the bolt in the aligned mounting holes.

ShockWave Installation

14. Install a 9/16" flat washer and 9/16"-18 nylok nut on the threads of the bolt. Torque to 128 ft-lbs.

15. Reattach the upper ball joint to the spindle. Torque the nut to 35 ft-lbs + 90 degrees.

16. Attach the sway bar linkage to the new shock mount. Torque the nut to 45 ft-lbs.

17. The strut cover can be reinstalled on the new shock setup. Keep in mind, the cap will need to be removed to adjust the shock.

ShockWave Installation

18. Apply thread sealant to an elbow air fitting and screw it into the top of the Shockwave.

19. Route the airline. Allow slack for suspension movement.

20. Check air spring clearance through full suspension travel. Allowing the Shockwave to rub on anything will result in air spring failure and in not a warrantable situation.

21. Reinstall the front wheels and tires and set the front of the vehicle back on the ground.

22. Ride height on this car is approximately 2" lower than factory. On most vehicle this will occur around 100psi, but will vary per vehicle.

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.

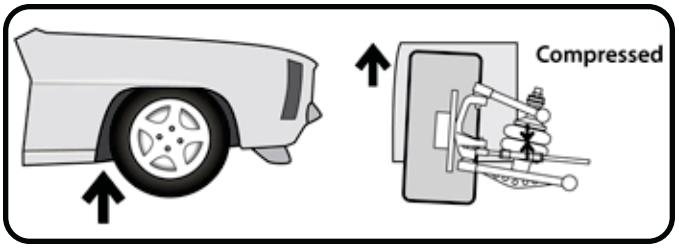
DO NOT attempt to remove the press-in air fitting. It may result in damage to the composite cap and void your warranty.

DO NOT drive the vehicle with the air springs fully deflated. Severe damage to the internal 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.**

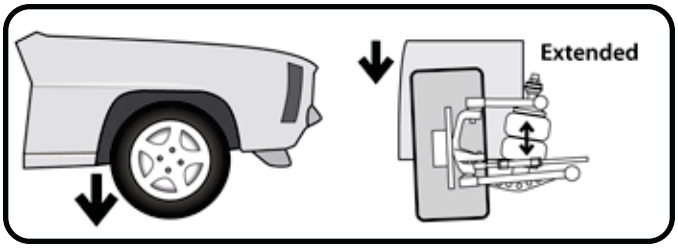
TUNING GUIDE
SINGLE-ADJUSTABLE SHOCKS

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.



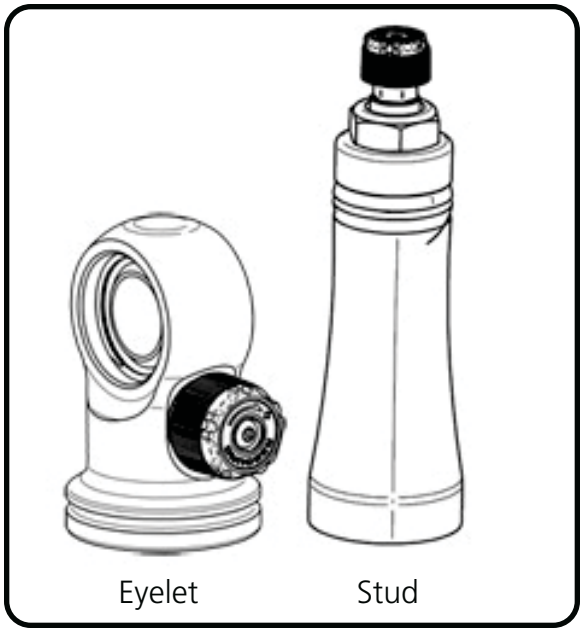
REBOUND

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?

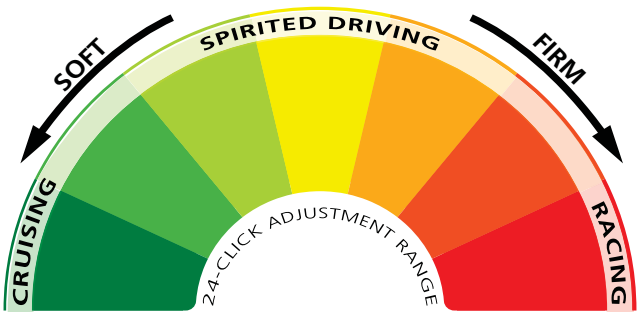
HQ Series Shocks

- **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 acheived.

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 noticable, 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.