

Spohn Performance, Inc.

494 E Lincoln Ave Myerstown, PA 17067

1-888-365-6064 www.spohn.net

Part #D09-1500-104 – Adjustable Rear Panhard Bar - Poly Bushings 2009+ Dodge Ram 1500 4x2 & 4x4

USE OF THIS PRODUCT IS ACCEPTANCE OF SELLER'S DISCLAIMER OF WARRANTY!

By their very nature, competition components are constantly pushed to their limits. While our components are designed to withstand intense race conditions, it is impossible to control the quality of installation or the varying conditions in which they are used. It is for this reason that absolutely no warranty or guarantee is either written or implied. Neither the seller or the manufacturer will be liable for any loss, damage, or injury – direct or indirect – arising from the use of or inability to determine the use of any product. Before using, the user should determine the suitability of the product for its intended use, and the user shall assume all responsibility in connection therewith. Spohn Performance, Inc. makes no guarantee as to the legality for any specific class. Spohn Performance, Inc. makes no claims, nor does it intend its products to be used in street driven vehicles. Spohn Performance, Inc. reserves the right to make changes in design or add to or improve on their product without incurring any obligation to install the same on product previously manufactured. The Buyer agrees to indemnify and hold Spohn Performance, Inc. harmless from any claim, action or demand arising out of or incident to the Buyer's installation or use of products purchased from Spohn Performance, Inc.

INSTRUCTIONS

1. With the front wheels securely blocked, raise the rear of the truck to an adequate working height, then support the chassis securely leaving the differential slightly supported with the jack. Place the jack under the rear axle to support but do not lift.
 2. Loosen and remove the bolts securing the stock rear panhard bar.
 3. Remove the stock rear panhard bar.
 4. The Spohn panhard bar is shipped jig set to OEM length. If your truck is lowered you will need to shorten the bar, if it is lifted you will need to lengthen the bar (See Step 7 below).
 5. Install the Spohn panhard bar onto the truck using the OEM bolts and make the nuts hand tight only at this time. Keep the adjuster on the passenger's side, the decal faces the rear of the truck. You'll note that the driver's side grease fitting should face up and the passenger's side grease fitting should face down.
 6. Lower the truck to the ground and bounce the suspension up and down and roll the truck front and back to settle the suspension. Then measure the distance from the outside of your fender to the edge of your rim. You should have the same distance on both sides of the vehicle.
- Note:** To check your rear for center drop a plumb bob off of the edge of your quarter panel and measure from the plumb string to the face of your rim edge. You want the same distance on both sides of the truck.
7. If your rear is not centered you must adjust your panhard bar. One end of the panhard bar adjuster is left hand threaded and the other end is right hand threaded. To adjust the length of your panhard bar loosen both jam nuts and put a wrench on the hex in the center of the adjuster and turn the adjuster clockwise or counter-clockwise to lengthen or shorten the panhard bar. This will move your rear to the left or to the right, depending on which way you turn the adjuster.
 8. When you have your rear centered, tighten the jam nuts and then tighten the mounting bolts to 60 ft/lbs. **Note:** Jam nuts are known to work loose over time. To prevent this we recommend that after you have the panhard bar set to your desired length you apply some REMOVABLE strength (Blue) Loctite to the threads and then tighten up the jam nuts on each end of the adjuster.
 9. The poly bushings come pre-lubed. DO NOT use petroleum-based grease on your poly bushings! Poly bushings must be lubricated with synthetic silicone based waterproof grease. These are the manufacturer's recommendations to prevent pre-mature bushing wear, and will keep things "squeak-free". You can order this grease from Spohn Performance using our Part #902. Do not over grease the bushings! You only need a couple pumps of grease. Over greasing will cause the bushings to balloon from the hydraulic pressure inside of the sleeve and they will fail.

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Part# D09-1500-209 – Adjustable Rear Lower Control Arms 2009+ Dodge Ram 1500 4x2 & 4x4

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INSTRUCTIONS

1. Lift the rear of the truck and support with jack stands by the frame rails. DO NOT SUPPORT BY REAR END!
2. Place a jack under the rear axle housing to support it, but do not lift.
3. Unbolt the E-Brake cable from the factory rear lower control arm.
4. Remove both rear lower control arm mounting bolts and nuts and remove the factory rear lower control arm. The rear axle housing will shift slightly rearward (swap one LCA at a time, do each side separately).
5. Install the Spohn control arms using the jack to help position the rear axle housing. Make the bolts hand tight only at this time.
6. Re-attach the E-Brake cable to the Spohn control arm re-using the factory hardware and tighten.
7. One end of the adjuster is left hand threaded and the other end is right hand threaded. To adjust the length of your control arms loosen both jam nuts and put a wrench on the adjuster's center hex and turn it clockwise or counter-clockwise to lengthen or shorten the control arm. Once set, tighten the jam nuts.
8. Jam nuts are known to work loose over time. To prevent this we recommend that after you have the LCAs set to your desired length you apply some REMOVABLE strength (Blue) Loctite® to the threads and then tighten up the jam nuts on each end of the adjuster.
9. Safely lower the truck to the ground.
10. With the suspension loaded, torque the control arm mounting bolts to 125 ft./lbs.
11. Installation is complete.

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Part# D09-1500-609 – Adjustable Rear Upper Control Arms 2009+ Dodge Ram 1500 4x2 & 4x4

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INSTRUCTIONS

1. Lift the rear of the truck and support with jack stands by the frame rails. DO NOT SUPPORT BY REAR END!
2. Place a jack under the rear axle housing to support it, but do not lift.
3. Remove both rear upper control arm mounting bolts and nuts and remove the factory rear upper control arm. The rear axle housing will shift slightly rearward (swap one UCA at a time, do each side separately).
4. Install the Spohn control arms using the jack to help position the rear axle housing. Make the mounting bolts hand tight only at this time.
5. One end of the adjuster is left hand threaded and the other end is right hand threaded. To adjust the length of your control arms loosen both jam nuts and put a wrench on the adjuster's center hex and turn it clockwise or counter-clockwise to lengthen or shorten the control arm. Once set, tighten the jam nuts.
6. Jam nuts are known to work loose over time. To prevent this we recommend that after you have the LCAs set to your desired length you apply some REMOVABLE strength (Blue) Loctite® to the threads and then tighten up the jam nuts on each end of the adjuster.
7. Safely lower the truck to the ground.
8. With the suspension loaded, torque the control arm mounting bolts to 125 ft./lbs.
9. Installation is complete.

Setting Pinion Angle

There are two angles to deal with:

- 1) Driveshaft angle
- 2) Pinion angle

You subtract pinion angle from driveshaft angle to get TRUE pinion angle

Here's how you do it:

First, had you measured your stock drive shaft angle and pinion angle before you removed your stock torque arm, you would have calculated a 0 deg. TRUE pinion angle. This is how all cars come from the factory.

Using an angle finder place it on the underside of the driveshaft and record the angle indicated.

Next, place the angle finder under the pinion yoke and record the angle indicated.

Record both angles from the driver's side of the car. On the driveshaft anything to the left of 0 is positive, on the rear end anything to the right of 0 is negative.

Subtract the pinion angle from the driveshaft angle. The result is "TRUE Pinion Angle".

In order to apply preload you need negative TRUE pinion angle. Adjust the upper control arms so that the front of the pinion goes down; continue to check each angle until the pinion angle is more degrees down than the driveshaft angle.

We recommend -1 degrees on a mildly modified daily driven car. For high horsepower applications we have gotten the best results with -2 to -3 degrees. There is no reason to run more negative than that, it will actually hurt your performance because it will induce driveline bind.

You don't want to drive around with your suspension preloaded all the time, it's a lot of unnecessary binding on the u-joints and suspension. It should only be used when racing.

Here's a tip. When adjusting for your TRUE pinion angle, count the number of flats (or the 1/6 of a turn) as you turn the adjuster, to know how many it takes to adjust 1 degree of negative TRUE pinion angle and in what direction (clockwise, or counter-clockwise). Once you know that, then adjusting the arms at the track or before a race will take almost no time, and no angle finder will be needed.

You will quickly learn that it does not take many turns to adjust the angle by several degrees, so go slowly and check your angles often.