

Spohn Performance, Inc.

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Part# D13-1500-605-AR – Adjustable Rear Upper Control Arms 2013+ Dodge Ram 1500 4x2 & 4x4 with Air Ride Suspension

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 nor 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. 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 (pull off by hand) the air ride sensor arm from the factory rear upper control arm's mounting ball stud.
4. 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).
5. Install the Spohn control arms using the jack to help position the rear axle housing. The grease fittings face down. Torque the mounting bolts to 125 ft./lbs.
6. Push the air ride sensor arm onto the mounting ball stud on the Spohn control arm.
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 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. 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.

Del-Sphere™ Pivot Joint Instructions & Notes

The Del-Sphere™ pivot joints are slightly greased for assembly purposes. The bushings inside of the Del-Sphere™ pivot joints are made of Delrin®, which is self-lubricating. We do not recommend greasing the pivot joint any further than as it is supplied as further grease will only attract and retain dirt and grit. The pivot joints are equipped with grease fittings simply because we know certain customers would want/request them no matter what we say.

Our Del-Sphere™ pivot joints are 100% rebuildable. We doubt you will ever need to rebuild them, but they certainly can be. The Delrin® bushings should last the life of your vehicle. What you may find is after you have miles on the pivot joints the tolerances may slightly open. It is for this reason that we made the pivot joints adjustable. By tightening the threaded end adjuster ring you can take up any slack and make the joint as tight as it was when new, it's that simple.

When making adjustments to the threaded end adjuster ring you will need to loosen the set screw with an Allen wrench. When making your adjustment align one of the (8) threaded adjuster ring's slots with the set screw and then re-tighten the set screw, this locks the threaded end adjuster ring's position in to place and keeps it locked to your setting. Use our Part# **DS34-W** adjusting tool for easy adjustments.

Del-Sphere™ Pivot Joint Replacement Parts:

Part #	Description
DS34-Wash	Del-Sphere™ End Flat Washer
DS34-W	Del-Sphere™ Adjustment Tool
DS34-TE	Del-Sphere™ Threaded End Adjuster Ring
DS34-SR	Del-Sphere™ Snap Ring
DS34-Bush	Del-Sphere™ Delrin® Bushing Cup (2 per joint)
DS34-Ball	Del-Sphere™ Spherical Ball