

Spohn Performance, Inc.

Part# FT-205 – Adjustable Rear Lower Control Arms 1972-1976 Ford Torino & Ranchero

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 rear of vehicle and support with jack stands on the frame rails. **DO NOT SUPPORT BY REAREND!**
2. Place the jack underneath the rear axle to support, but do not lift.
3. Remove both bolts and nuts and remove the stock rear lower control arm. The axle will shift slightly rearward (**Remove and replace one LCA at a time**).
4. Install the Spohn control arm using the jack to help position the rear axle properly. Use the supplied spacers on either side of the Del-Sphere ends (The LCAs ship with the bushing and spacers wire tied in place so you know how they are to be installed). Tighten all bolts to 110 ft/lbs.
5. Safely lower the vehicle to regular ride height.
6. One end of the LCA is left hand threaded and the other end is right hand threaded. To adjust the length of your LCAs to adjust your pinion angle simply put a wrench on the hex at the end of the LCA and turn the LCA clockwise or counter-clockwise to lengthen or shorten the LCA. This will allow you to adjust your pinion angle (see the pinion angle adjustment instructions below).
7. 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 Del-Sphere threads and then tighten up the jam nuts on each end of the lower control arm. **Note:** LCAs are shipped to you jig set at stock length.

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 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 flat surface of the pinion yoke (this surface is parallel with the pinion shaft) 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 pre-load you need negative TRUE pinion angle. Adjust 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 degrees. There is no reason to run more negative than that, it will actually hurt your performance because it will induce driveline bind.

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 adjusting hex, 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 arm at the track or before a race will take almost no time, and no angle finder will be needed.

Adjusting your Spohn Arms: You adjust the pinion angle by turning the control arms either clockwise or counter-clockwise. As you turn the arms you will see the pinion nose of the rear housing moving up/down. Moving the rear housing's pinion nose down will give you more of a negative pinion angle degree, and up will give you more of a positive pinion angle degree.

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. You'll also note we have a second tapped grease fitting hole with a threaded plug installed so you can change the position of the grease fitting on the pivot end for better access if need be depending on your mounting set-up on the vehicle.

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 a lot of 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 retainer you can take up any slack and make the joint as tight as it was when new, it's that simple. This also allows you to vary the torque load applied to the pivot ball. If you want a very low friction joint you can loosen the threaded end retainer, etc. When making adjustments to the threaded end retainer you will need to loosen the set screw with an allen wrench. When making your adjustment align one of the threaded retainer end's slots with the set screw and re-tighten the set screw, this locks the threaded end retainer's position in to place and keeps it locked to your setting. Use our Part# **DS34-W** adjusting tool for easy adjustments.

What is a Del-Sphere pivot joint? Think of the Del-Sphere pivot joint as a Delrin bushed spherical rod end. Designed and manufactured exclusively by Spohn Performance, we have taken street suspension performance to the next level. Our Del-Sphere pivot joint features a CNC machined 1020 steel housing, a heat treated and chrome plated chrome moly spherical ball, Delrin bushing races, heat treated retainer washer and snap ring, heat treated and chrome plated chrome moly threaded adjuster ring and an external grease fitting. The Delrin bushing races absorb shock and road noise so you get the quiet and smooth ride of a bushing as well as **28 degrees of rotation!**

What is Delrin, and why did you choose to use it? Delrin is an acetal homopolymer made by DuPont. It is characterized as having an excellent combination of physical properties that make it suitable for numerous applications. With extremely low moisture absorption and a low coefficient of friction (self-lubricating), Delrin is uniquely tailored for wear applications in high humidity or moisture environments. Delrin will maintain constant physical properties under high moisture conditions and out-perform nylon or polyurethane under these conditions. Delrin has a 10,000 psi tensile strength and a 120 Rockwell Hardness rating making it ideal for our Del-Sphere pivot joint application.

Replacement Parts:

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