

Spohn Performance, Inc.

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Part# DS34-W – 1/2" Drive Adjustment Tool for 3/4" Del-Sphere™ Pivot Joints

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

To disassemble and/or adjust your 3/4" Del-Sphere™ pivot joint (SKUs DS34LH, DS34RH & DS34B-250) you will first need to remove the end adjustment ring's set screw (See **Image 1** below) using a 2.5mm Allen wrench.

Then line up the 4 pins on the adjustment tool with the four holes in the end adjustment ring's face and using a 1/2" socket or wrench turn the ring clockwise or counter-clockwise to tighten or loosen the end adjustment ring.

Upon re-assembly, tighten the end adjustment ring until it is firmly snug. Do NOT over-tighten the end adjustment ring or you will crack the Delrin® bushings inside. You need to line up one of the half moon indents along the outside of the end adjuster ring with the set screw (See **Image 2** below). Then tighten the set screw using a 2.5mm Allen wrench to lock the end adjuster ring's position in place and ensure that it does not loosen up and back off.

If the end adjuster ring is completely tight (bottomed out on the housing threads) and the spherical ball tension is still loose, that means that your bushings are wore to the point of needing to be replaced. See the itemized internal parts list below for ordering information.

Image 1



Image 2



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 that 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 suspension performance to the next level. Our Del-Sphere™ pivot joint features either a one piece forged and heat treated chrome moly housing or a CNC machined 1020 DOM housing (weldable version), a heat treated and hard chrome plated chrome moly spherical ball, Delrin bushing races, heat treated retainer washer and snap ring, heat treated and zinc plated chrome moly threaded adjuster ring, an external grease fitting and a beautiful silver zinc plated housing finish. 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
DS34RH	Forged Del-Sphere™ Assembly - 3/4"-16 RH x 3/4" Bore
DS34LH	Forged Del-Sphere™ Assembly - 3/4"-16 LH x 3/4" Bore
DS34B-250	2.50" O.D. x 0.325" Wall 1020 DOM Weldable Del-Sphere™ Assembly
DS34-W	Del-Sphere™ Adjustment Tool
DS34-Wash	Del-Sphere™ End Washer
DS34-TE	Del-Sphere™ Threaded Adjuster End Ring
DS34-SR	Del-Sphere™ Snap Ring
DS34-Bush	Del-Sphere™ Delrin® Bushing (2 per assembly)
DS34-Ball	Del-Sphere™ Hard Chrome Plated Spherical Ball