TECH SHEET: POLYURETHANE SPRING BUSHINGS

www.rightfootperformance.net

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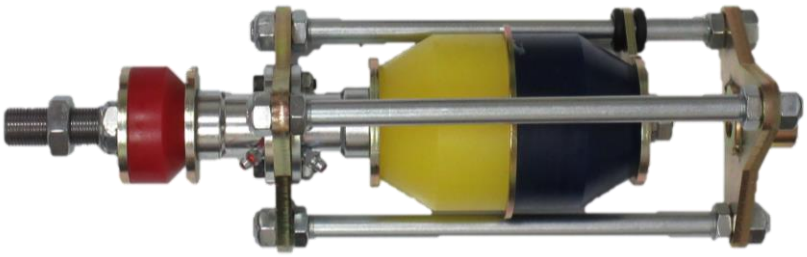

Right Foot Performance Products uses Polyurethane (poly) spring bushings in several models of torque links. The poly spring torque links have proven to provide excellent traction in all track conditions while being reliable and easy to use. We use only the highest quality polyurethane to achieve the best possible performance and exceptional durability. This tech sheet is written to answer some of the questions we receive from customers concerning our P/N 5500 series poly spring bushings.

Which Bushings Should I Use? - The spring bushings needed are based on a number of factors: driver experience, engine torque, mechanical advantage of the pull rod, car set-up, tires and track conditions. In general, the better the driver, tire and engine combination, the higher the durometer of bushings which may be used. However there is no hard and fast rule. Different drivers in identical cars may want different torque link spring bushings. The chart below is provided to give you a starting point for spring bushing selection.

For A mods running a “crate motor” a yellow/yellow or a yellow/blue bushing set has proven to be a race-winning and durable bushing combination. For A mods running a pull bar with mechanical stops an orange/yellow or an orange/blue bushing set has proven to be a good bushing combination. A blue/blue bushing set is always a good starting point for a “shop built motor”.

5500 Bushings	IMCA MOD	WISSOTA/ USMTS MOD	OPEN MOD
Extremely Dry Slick	☆ 5508O & 5508Y	5508Y & 5508B	5508Y & 5508B
Dry Slick	5508Y & 5508Y	5508Y & 5508B	5508Y & 5508B
Good Traction Conditions	5508Y & 5508B	5508B & 5508B	5508B & 5508B
Heavy Tractions	5508B & 5508B	5508B & 5508B	5508R & 5508B

☆ The 5508O Orange Spring Bushings are very soft and should only be used on extremely dry slick tracks or on torque links with mechanical stops. When used in other applications the orange bushings may provide very good traction but the bushings will wear out sooner.

How Long Do Bushings Last? - Bushing life is determined by the amount a bushing is compressed on a regular basis. Right Foot bushings are designed to be compressed to 25% to 30% of their static heights. If bushings are only compressed to that amount they are typically good for approximately 20 nights. For example; a pair of our 5500 series torque link bushings is 5.0" tall. Thirty percent of 5.0" is 1.5". If you maintain your torque link travel at 1.25" to 1.75" bushings typically last about 20 nights. If you take the same pair of bushings and regularly compress them to 2" or more the bushings may last fewer than 10 nights.

If you race a soft bushing with a very hard bushing such as a yellow/red combination the yellow (soft) bushing will be over compressed and the red (hard) bushing will be compressed a minimal amount. Consequently the soft bushing will wear out faster than the hard bushing.

As a general rule, unless stored in a cool dry place, bushings should be changed at least once a year as part of off-season maintenance. Our poly bushings are considered to have a shelf life of one year. Over time, especially if bushings are stored in hot humid conditions, the chemical make-up of the bushings can change reducing bushing performance.

How Much Torque Link Travel Or Bushing Compression Is Needed? - There are racers winning races with 1.25" of travel and others winning with 2.5" of travel. You need to have enough travel to "hook up" the car. Our opinion is it's best to maintain torque link travel in the 1.5" range. At 1.5" most cars have good traction, bushing and driveline life is good and cars are very controllable. When you are consistently racing with more then 2" of travel, bushing and driveline life is compromised plus 4-Link cars tend to "come off the bars" harder. To increase torque link travel use a softer bushing combination. To decrease travel use a harder bushing combination.

When Should Bushings Be Replaced? - There are a number of indicators for bushing replacement. 1. If a bushing has lost static height it should be replaced. 2. If the center hole of a bushing is "oblonged" the bushing should be replaced. 3. If there are heavy wear marks from the stand-off tubes on the outside of a bushing, the bushing should be replaced. Note; some wear marks are normal. 4. If a car seems to have lost traction coming out of the corner the bushings should be replaced, or the preload on the bushings increased.

Why Does a Bushing Come Apart? - Right Foot sells thousands of poly bushings every year. Our bushings have proven to be very durable and reliable. In a years time we are typically made aware of a "hand full" of bushing failures. When possible we send bushings back to the lab for failure analysis. We find very few bushings to be defective or made wrong. The most common cause of bushing failure is over compression. That is; the combination of engine torque, available traction and mechanical leverage over compressed the bushing and tore it up. If a car failed one bushing there's a chance the bushing was bad. If a car failed bushings more then once it's very likely the bushing was over-compressed and a bushing with a higher durometer and spring rate should be used.

Please feel free to call us at 920 832 2322 if you have questions regarding torque link bushings.