

Tire Sizing

Tires are a vital part of any successful racing program. The karts up front have all taken the time to make sure their tires are properly prepared. One of the most important parts of that is the sizing of the tires. The goal here is to make sure that we have the correct stagger for our kart as well as the track we race at. For the beginning racer, stagger is the difference in circumference between the tires on the same axle. Tire stagger is an important part of your setup and must be maintained. Changes in tire stagger can affect many different areas of your setup. If you are unsure of what you should have for stagger, JRPW will be happy to assist you.

FIRST and FOREMOST... JRPW does not endorse or recommend the use of torches or open flames under any circumstance. Fire and chemicals do not mix and the result can be fatal. Most all tire preps are highly flammable as well along with the fuel. Heating the tires should be done in a safe manner in a well ventilated and open environment. Extreme care must be given with any source of heat, as homemade heat boxes and heat guns can also produce fires. Be very careful, and use good judgment before injuring yourself or someone else.

The first thing we want to do is to see where we stand. Air up your tires to the racing pressures, and measure each tire. For the sake of argument, let's say our target stagger is 1 1/2" front, and 1" rear. Let's also say that upon measuring, we currently have 1 3/4" front and 1/2" rear. To get where we want to be, we need to grow the left front 1/4" and reduce the size of the left rear 1/2". Time to do some shrinking and stretching.

Beginning with the left front, inflate the tire to about 1/4" bigger than you want it to end up and allow to sit for a couple hours. Heat speeds this process up, and can also put you over your target if not careful. Usually a couple hours outside in the hot summer sun will be sufficient to stretch the tire. If the weather isn't cooperative, a heat gun, heat box, or tire warmers will do the trick. The higher the heat, the less time required. Cooling the tire rapidly will sometimes "shock" the tire and help it to maintain the new size. Deflate the tire to your racing pressure, allow to sit for about 30 minutes or so, and check the size. If necessary, repeat until the size is met. Some tires are harder to stretch and may take a couple attempts to get right.

Now, time to shrink the left rear. To begin, we know we want to reduce the size of the tire 1/2", so remove the valve core from the valve stem, and place the tire into your heat box, or wrap with a couple tire blankets. Allow the tire to get hot and stay hot for about 15 – 20 minutes, depending the amount of heat used. Remove the tire, replace the valve core, and like above, cool with cold water. After the tire has cooled to room temperature, inflate back to your racing pressure and check the size. Repeat as needed. Keep in mind, the more you are wanting to shrink the tire, the more time required, and smaller changes need less time.

It is imperative to keep a check on your tires to insure they remain at the intended size. Tires that have been resized are more prone to change, so constant checks are needed. Cold weather also has the tendency to draw a tire up to a smaller size, just as hot weather can make it grow. I personally recommend weekly checks as part of your overall maintenance program. Keep in mind, just because it is a certain size now, there is no guarantee it will remain there. It is a lot simpler to size tires at the shop, rather than have to do it in a rush at the track.