



Tech

TIRE STAGGER 101

The definition of tire stagger: It is the difference in circumference between the right side tires and left side tires on the same end of the car. For example, if your right rear tire is 86-1/2" in circumference and your left rear tire is 84", then you have 2-1/2" of stagger.

Why do you need stagger? Think of it this way: If you lay a Red Solo cup on its side, with the smaller end to the left and try to roll it, the cup will turn to the left. (In circle track racing, automatically turning to the left is a good thing!)

The correct amount of stagger is the big question and most would agree that it depends on the radius of the corners and the amount of banking. The tighter the corners or flatter the track, more stagger is required. The wider the turns or the more banked the surface, less stagger is required.

When checking stagger, make certain that the air pressure is set to the desired level for racing. Always use a flexible 1/4" tape or Stagger Gauge to measure each tire's circumference, measuring at the center point of the tire.

When you have too much stagger you will find a loose (rear has less traction than the front) condition. The loose condition, will probably only get worse as the main event rolls on. As the right rear is losing traction and sliding around, causing it to heat up and build up the air pressure, the right rear tire will continue to grow in size, making the car even looser!

Too much stagger can also affect straightaway speed as the car will be trying to turn left down the straightaway. The driver will be forced to constantly be turning to the right which can scrub off speed.

Without enough stagger, your car will push toward the outside wall and will start to scare the hell out of you. The push will cause the right front tire to heat up, causing excess wear, build air pressure and intensify the tight condition.

Always, Always, Always.... use nitrogen in race tires in place of regular air. With nitrogen you will see less buildup of tire pressure as they heat up as nitrogen has less moisture than regular air.



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The best way to find the proper amount of stagger is when at the track; check your tires every time you return to the pit area. Keep good notes of the pressure and size gain. The key to finding the correct amount of stagger is knowing the affect of your set up and driving style on the four round pieces of rubber that are your contact points to the racing surface.