

TODAYS LESSON
A NIGHT AND DAY
DIFFERENCE
PROF JIMMY RIVERS

SPEED SHOP SCHOLAR

Welcome to another installment of the "Speed Shop Scholar," The burning of the midnight oil has put us behind for a while, but we are glad to finally be back on track. I'm

one of my local tracks has had two high caliber daytime races. Many of the winners on a normal Saturday night were left scratching their heads throughout the day as the track got



going to spend our time together this time to discuss some of the differences encountered between a racetrack ran at night, and the same one raced during the day.

Over the past several months,

further and further away from the one they knew. This track usually has good grip on any given night, but the game is about to change dramatically during the daytime.

High temperatures, bright sun-



shine, and a full house of karts, are the primers for a whole new track in comparison to any Saturday night.

“I always run a 16-64 gear here, these numbers always work, I win all the time.” These are commonly heard statements from racers once the track has made the transition. The reason those things aren’t working is quite simple; it’s not the same track anymore. The heat, sunshine, and kart count we spoke of earlier has made it a completely different track. Although it may look the same and carry the same dimensions, it is a whole new track.

One way to know the track is radically different is the lap times. It’s common for a track to speed up anywhere from one to one and a half seconds during the day. When the track speeds up like this, the gear, the tires, and the setup, all have to change if you’re gonna hold pace.

How do you keep up with the track and have the information needed to make your adjustments? Simple, use a stopwatch, religiously. Keeping up with the

times of multiple classes will let you know as the track changes. Many tracks will hit a sweet spot and lap times will make a huge drop all at once, the only way you will know is to be keeping up with the times and recording them.

Let’s start with the gear. For each half second the track speeds up, drop one tooth on the rear. It may also put you into the range where you need to add a tooth to the driver. Running a gear because it normally works will likely put you in a position where the engine goes flat and is no longer pulling.

Tires. Anyone that has been around karting for any length of time has heard the expression, “tires, tires, tires.” It’s true, no doubt about it, and tires from Saturday night to Saturday afternoon, are almost always as different as day and night. The lower grip level, cooler temps, and lower kart counts tend to require higher amounts of prep, whereas the daytime, dry track conditions require much less. This is also a time where your durometer is of less importance and knowing your

tires and the amount of prep in and on them is more important. Tires, even those heavily doped in the past will harden and cure, giving a higher reading on the durometer. But remember, the prep never leaves the tire, it just lies dormant. The action and the heat of the track will reactivate the prep and the tire will respond by either locking the kart to the track, or by refusing to grip at all. Fresh tires, often scuffs, with low amounts of less aggressive preps are more often than not, the hot ticket.

Setups also need to be tweaked to keep pace as well. Lower lap times and higher grip levels often need higher left side percentages to keep the kart free for the duration of the race, and to keep the right side tires from overheating and giving up. A kart that starts off fast, and loses speed into a run is usually an indicator that the left side is too low. Cross weight

may also need to be increased to keep the kart turning off the corner. Be prepared with several tweaks you can make to keep the chassis free as the track gains grip.

The main thing to remember is to be prepared and open minded. Don't get hung up on what normally works, as this isn't normal anymore, it's all different now. There is just as good equipment in the pits on Saturday night as Saturday afternoon, but with a different mindset and experience level. Treat it as a learning experience and make the most of it. Keep notes and be observant. Remember, if its not working, going back out with the same setups and ideas isn't going to make it any better. Be safe, be smart. See you soon!

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