



TALKIN' IN CIRCLES – PART 2

QUALIFYING 101: LEARNING TO BE FAST WHEN YOU NEED TO BE

Have you realized what it takes to win main events yet? I know it sounds like a stupid question but it is really something you really need to ask yourself... 'Have I realized what it takes to win main events?' Before you read on, answer this question honestly.

Many of you probably answered; "Put on the right four tires!" The rest of you most likely completed the equation with, "be the fastest kart on the track." I don't mean to sound sarcastic, but I have seen quite a few main events where the winner didn't seem to be on 'the right four tires' and was definitely not 'the fastest kart on the track'.

So, what am I driving at here? I guess I should begin by giving my answer to the question I presented to you. This may sound elementary on the surface but it's much more complicated than it seems. And besides, it's the best way I could come up with to start off this edition of 'Talkin' in Circles'. I realized long ago what it takes to win main events... *you have to be fast all day*. Duhhh! Now before you start casting stones, let's have a deeper look at what I just said.

To be fast all day means to be fast in practice, qualifying and the races. I realize that the main event is the only one that pays money or points but if you are not around to see the "rag drop" (an old Earnhardt phrase there) or if you're so far back you can't see the front, you don't have much of a chance at cashing-in anyway. So that brings us to the topic of this month's Talkin' in Circles... Qualifying!

SOME HAVE TO WORK AT IT...

I don't actually keep track of it but I would say that one of the top three questions I get asked on a regular basis is; "What's the secret to qualifying?"

You know I lost a customer over that question one time. It was about three or four years ago and this guy walked up to me and asked me this question. I guess I did get a little sarcastic when I jokingly replied; "I wish I knew, because I would tell Dale Earnhardt what it is because he sure needs it."



I did attempt to honestly answer his question after the joke but I guess he didn't like the comment too much because he did change his chassis brand shortly after that. The comment wasn't totally a joke even though Dale was struggling with qualifying at the time. The point I was trying to make was that qualifying doesn't come naturally to everyone... even the great ones have to work at it.

I was as big an Earnhardt fan as the next guy, but he definitely raced better than he qualified. He had one major advantage over us in karting, however... he had 500 miles to get to the front and we don't. When it comes to a short 15 or 20 lap shootout, track position is everything. Let's say you spot the leader a straightaway and put ten or so karts between his kart and yours. Even if you give yourself a two-tenth advantage per lap; more times than not you will still not be able to catch him.

Like I stated earlier, qualifying doesn't come naturally to everyone... some have to work at it. Working on a good qualifying setup is priority #1 on my list when we unload for any major event. I spend the majority of my practice time testing for qualifying. Does this mean that I'm one of those people that qualifying doesn't come naturally to? If the shoe fits, right?

I jokingly stated the importance of qualifying a few sentences ago but I cannot begin to tell you how important a solid qualifying effort is to your racing success. I see racers everyday that consistently run out of the top ten even though they are more than capable of running in the top two or three come race time. For these drivers, their race speeds are quick enough to run with the leaders but they always seem to start the race from 15th back. These drivers are always the ones that come over after the race with the time sheets and say, "Look! I was a tenth and a half faster than the winner!"

You know, I'm glad to see that they're happy but it kind of reminds me of something Lewis Dowell said to one of his drivers after a similar situation. The CKI team was riding home in the truck after a National event. They had qualified poorly and had managed to salvage a decent finish out of it but had in fact turned the faster lap in the race by two tenths. A few miles into the trip home, Lewis' driver was looking over the scoring sheet and he chimed in, "Hey bossman, you know I turned the fastest lap of the race... by almost two-tenths?"

Ole' Lewis paused a minute and replied, "Yep, there's nothing I like better than to have the fastest kart on the track and still finish tenth." They say the rest of the ride home was pretty quiet after that. I'm not laughing; I've been there oh so many times myself. Even though it was a rather sarcastic comment, it was true. Had they qualified better that day, they would have definitely been in contention for the win.



WHAT TO LOOK FOR...

I know what many of you are saying right now; *"I know what you're talking about but how do we fix it? How do we qualify better?"*

Well, like always, there is no definite and easy fix. Let's start with the basics. Now don't make fun of this because this is where 75% of the racers get off track, even before they begin to start making adjustments. I can't tell you the number of times that a racer has come up to me after qualifying and said, *"I don't know what happened! I was right there with'm in the last round of practice and now I'm two tenths off! They were turning .20's and I was turning .20's but I dropped to .40's in qualifying."*

I say, "What did you change?"

"Nothing," they reply.

"You didn't adjust anything for qualifying from practice?", I ask.

"Nope! It just slowed down. Just like that!" with a snap of their fingers.

"Do you have your practice times and your setup written down?", I ask. They return with the wife's clipboard and a notebook of setups. Sure enough, the guy ran .20's in the last round. Starting on lap six he ran a .25, .28, .21, etc. But on laps two and three, he ran a .51, and a .48. So I ask, "What did you say you qualified at again?"

"A 15.44... I start 21st" he snorts.

That's when I try ever so nicely to explain to him that qualifying is two laps with one lap to get up to speed... a total of three laps. Therefore, the 15.20's he started turning on lap six don't count.

The point I'm trying to make here is look at your data and put it into relative form. Notice whether your times are coming in quick enough. See if your times fall off after a few laps. When I stated earlier that I spend most of my practice times testing for qualifying, that's what I mean. If the track is capable of producing 13.50's then try to make your kart run that on the second lap. If it falls to a 13.90 on lap four, so what! Now remember, I'm relating all this to a 'two-lap' qualifying session here. If you have 'six-lap' group qualifying sessions then you can alter those lap numbers accordingly.



HOW DO WE ACCOMPLISH THIS?

I could write a novel here and not cover everything there is to know about qualifying, and besides we may need to sell a video or two on this subject in the future. However, we can go over some of the details to work on. Every situation is a little different and when you're talking about setting the top ten within four or five one-hundredths of a second, every minor detail counts.

We've already established that the objective of qualifying is to get your kart up to speed as fast as possible. So what factors affect this? Many things play into the scenario... tires, percentages, air pressure, stagger, camber and driver, just to name a few.

Let's start with the easy one... the driver. How can a driver play into qualifying, you ask? The driver is quite possibly the most important factor during time trials. I don't know just how to say this so I'll just come right out and say it... some drivers just can't seem to get their act together within just a few laps. I'm not trying to be funny here, but I am saying this to help. Driving is all about timing and hand-eye coordination, and many drivers, including myself, have a hard time getting it all in rhythm within a few laps. It's the truth so let's face it. I never was what I considered to be a good qualifier. It was something I struggled with every time I went to the track but I definitely worked on it and you can too.

No one can teach you this, it's something you have to learn on your own and the key is concentration and determination. You can take it from there.

In most cases when your qualifying effort is not up to par, the thing that your chassis is lacking is bite. Now keep in mind that I said most cases... There are exceptions to what I'm about to say. Granted, if you kart builds more bite the longer you run there will come a point when it will most likely build too much bite and start to get tight. Again, the objective is to obtain this bite within the number of allowed qualifying laps, (I sound like a broken record, don't I?)

Let's look at weight percentages. The percentages that you weigh your kart to will obviously affect the amount of bite your kart has during the first few laps. This is a very hard topic to explain in detail because there are various factors that affect the outcome of changing your percentages. These various factors also prevent most racers from using weigh-out percentages to improve their qualifying efforts. What I mean is that I very rarely change my entire weigh-out just for qualifying. Before I get ahead of myself, let me explain what affects what and then I can tell you some of the things I do adjust.



When you weigh you kart out, you set your left side weight, cross weight and nose weight (well, some racers prefer rear weight over nose weight, but it's the same result). Read the following carefully: increasing left side weight, increasing cross weight or decreasing nose weight (or increasing rear) will **reduce** the amount of bite that the kart will make.

Now I'm not saying that you need to do all of these things in conjunction with each other or that you have to do all three at one time. What you are doing be altering these percentages is controlling the amount of weight that the kart will transfer in the corner. As you add cross, left side or rear weight, you are simply decreasing the amount of weight transfer which in turn will often decrease the amount of bite that the kart will make.

I think I will leave that one there because I'm starting to get on to another subject. I really don't want to put too much emphasis on drastically changing your percentages for qualifying because you can, and will, get yourself into trouble. However, if you understand what I just covered you can use it to get a hundredth or two on occasion.

Here's how I will use it to my advantage. Let's say that we have just finished the last round of practice and the kart is not quite in good qualifying trim. The kart ain't that bad but it's just not getting that good bite on the first two laps. Tire temperatures show that the left side weight is a little high for a two-lap run and the kart has just a tick of a push on the first lap but it goes away. What would you do?

I have five pounds of weight on the left side of the seat that is mounted more to the rear of the seat. Let's move it to the right front of the seat. This will reduce our left side by about 3/4 percent and will increase our nose by about 1/2 percent.

Now, this is not going to fix a major problem but it will allow the kart to turn a little better for the first few laps and it will give it a little more side bite. If you do this along with a little tire preparation you will see an improvement.

TIME FOR THE BIG LICK...

What??? Tire preparation! Without a doubt, tire preparation is the most important part of qualifying. If you read the last edition of Talkin' in Circles, you should have noticed that I put a lot of emphasis on using a tire compound that would "bite-up" on the first few laps. This is multiplied for qualifying.



It's simply a must that you work a set of tires to qualify with. I know that this is bad to say but when it comes to your bigger races you really have to have two completely different tire programs... one for qualifying and one for racing.

If you don't mind, I'm going to get on my proverbial political soapbox for a minute. These two different tire programs could be prevented if we were required to qualify and race the same tires. However, nothing prevents us from qualifying on four tires and racing on four different ones, and quite honestly I can prepare a set of tires that will run fast for a few laps and then fall on its face. If I had to race on these tires I would not be able to qualify with them because after about five laps I would be in major trouble. I'll get down off my box now...

I said that not only to let off some steam but also to show you that tires make a major difference. Every once in a while you will run across a track condition where the track has enough bite that you can qualify and race the same tires but more times than not you will need something different.

Let's talk a little about what to do to your tires for qualifying. Typically, you always want a softer or fresher tire to qualify than you would to race. This could be a softer compound or just a newer tire of the same compound.

You want the tire clean. On asphalt, this means scraping off all the old rubber and debris. On dirt, this means washing the tire. This allows the tire to get a better grip to the track because there is nothing on the outer surface to get between the tire and the track surface.

Now that you have a fresh clean surface on the tire, many racers will apply some sort of prep to the tire just before you leave for the qualifying grid. [Boy, those sanctioning bodies didn't want to hear that.] Now, I'm not going to get into all the different tire prep theories that are floating around but I will caution you about using hazardous materials... read the warnings!

Most racers are using, in one form or another, just some type of mild or medium strength solvent. These solvents are applied with a brush or rag, depending upon the amount applied, to the outer surface of the tire. Once applied, the solvents attack the surface of the rubber, which makes the tire sticky or tacky. This will cause the tire to bite better on the first few laps and will normally decrease your lap times.

Now that you have a nice fresh clean tire with a little surface prep, what next? Air pressure. Air pressure can also help the kart come in sooner, more so on asphalt than on dirt, but it's still important. Increasing the air pressure will cause the tire to bite better but it can cause it to get tight on long runs. For that reason, it makes it easy to add a little air for qualifying.



Tech

Clean fresh tire... surface prep... air's set... now what? Heat. Not all sanctioning bodies will let you use tire warmers, but in most cases, tire heat is your friend. Tire blankets are the most common way to heat your tires for qualifying but some racers use heat boxes, heat guns, torches (not recommended) and sunlight. If you are not allowed to use tire warmers or to preheat your tires in any way, you can at least put your tires in the sun. In summer-like conditions, simply putting your tires out in the sun can get them up to 120+ degrees.

I do want to caution you asphalt racers that too much heat can cause the tires to become greasy. Whether you're talking about tire heat, air pressure, prep or etc., there is a point that you can pass and it will become counter-productive.

SUMMARY...

All off the suggestions I have offered here should be used in moderation and are not totally foolproof. There are no rules in racing and what works during one weekend will not work each and every time you go to the track. Understanding that qualifying is very important to winning races and knowing a few qualifying tricks will definitely better your win/loss ratio. So if you're not a natural at qualifying (like myself), start to work on it. Nobody ever said racing was easy...

'Til next time... keep'm turnin' left!!!

Column written by Harrill Wiggins of Phantom Racing Chassis and appeared in the Spring 2001 volume of Speedway USA Magazine. Article reproduced with permission.

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