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GTS Winter Update

Well, it's started. The Great Lakes Winter Break, our five (or so) months of recovery from racing. Or is that withdrawal? I've had a lot of correspondence over the last month with many of you about your winter projects and it seems that there are a lot of cars out there that will be coming back to the track in April a little faster than they were in October. As far as I'm concerned, that's a good thing.

The ability to work on your car--to develop it in whatever way you want--is a part of what I really love about the GTS formula. You can take what you know, or what you think you know, and apply it to your car without a whole lot of concern that you'll be running afoul of the rules. For those of us who love to tinker, that's a racing formula from heaven. But maybe you're not a tinkerer, or maybe you don't know what to tinker *with*. What can you do to get faster over the winter?

As it turns out, quite a lot.

Getting faster

I've had a lot of conversations with GTS drivers over the past couple of years about how to go faster. Some want to move from the back of the field to mid-pack, some want to move from the middle to the front, and others want to go from consistently running at the front to consistently winning. No one that I can think of has ever asked me how to go a little slower, so I'm going to assume the objective here is to be better than you are, whatever that is. For the sake of simplicity in the writing, I'm going to refer to that here as "winning" but you can decide what winning means to you in the context of your own racing.

So, what does it take to win?

Well, obviously, you have to finish in front of everybody else, which means going faster. In terms of pure lap times--that is, ignoring traffic and the like--there are really only three things you can do to be faster: (1) go faster down the straights, (2) brake less (or later), and (3) go faster through the turns. And, in my particular view of the world, there are also only three real components to racing: (1) your driving skills, (2) your car, and (3) your racing skills (which are not the same as driving skills). Happily, these two sets of threes are inextricably entwined. Let me explain:



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First, there's you the driver and your ability to drive a car consistently fast. If you can only work on one thing, work on this as it will pay the biggest dividends. Unless you are already Scott Berkowitz fast, or your car is incredibly far from a reasonable GTS spec, I can pretty much guarantee that you will pick up more time on the track by making yourself a better driver than you'll ever get in killer car tweaks.

Second, there's your car. To win, it has to be pretty close to right, whatever "right" is, but it doesn't have to be perfect. In GTS, "right" means being reasonably close to your minimum weight, having the suspension set up properly, having enough braking capacity to last an entire race, and running competitive tires. Really, that's about it. Oh, and enough gas to make it to the checkered flag.

Finally, there's racecraft. That is, your skills in navigating not just a race track but a race track filled with people who don't want to let you by and/or who are trying to get past. There are a lot of drivers who can put down consistently fast laps on a clear track but who haven't yet figured out how to keep from being held up by a slightly-slower car or being passed by a slightly faster one. You may win an occasional race without having particularly good racecraft skills but you'll find that the guys who are winning consistently have it down pat, which puts them at an advantage.

These three components--your basic skills, your car, and your racecraft--are, in my opinion, listed in their order of importance. If you can't drive fast, it doesn't matter how fast your car is or what you know about working your way through traffic...you're still going to be slow. If you can drive fast but your car is grossly out of spec, you're screwed there, too. And, if you have the skills and the car but don't know how to think your way through a race, well, you're more likely to be on the sides of the podium than on the top.

Note that two of these three components are related to driver skills and not to equipment. With few exceptions, equipment is the least of our problems. There aren't many cars in GTS that aren't capable of winning--or at least threatening for the win--in the right hands. That's good news because it means that at least two-thirds of what you need to be more competitive is more or less free. It just takes some (fun) work on your part to improve.

Also, if you go back to my first list of threes--faster down the straights, better braking, and faster through the turns--you'll see that for the most part what you need there is skills-related, too. For instance, take going faster down the straights. What can you do to improve your speed on the straights? Obviously, you can improve your power-to-weight ratio by adding more power or taking out



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some weight, but, if we can assume you're already at your GTS class minimum weight (give or take), any power you add will require more weight, and that's a losing proposition. Although there are guys in the forums who will argue about it until the cows come home, the physics of racing is pretty simple and more weight is always bad.

Always.

More weight is harder to stop and harder to turn. Therefore:

Weight = Slow

Period.

If you are under-powered for your weight, you can add power but you'll be faster (and it will probably be cheaper) if you take out enough weight to make your horsepower work for your class's power-to-weight ratio. Regardless, more power is not the answer unless your car is not where it ought to be to start with. But let's assume it is. What else can you do?

You can improve aerodynamics. On the fastest straights, that can make some difference. So, lowering your car, adding an air dam, shaving the mirrors, smoothing out the edges, closing off openings you don't need, removing the windshield wipers...all that will get you a little bit more speed at the end of the straight. Not a lot, but some.

The biggest change you can make to improve your speed down the straight (within the GTS rules) is to improve your speed ONTO the straight. Every extra mile per hour you carry out of the turn is extra speed you carry for the length of the straight. And, while there is a whole list of things you can do to make your car corner better, if we assume for a minute that your car is set up about right, the only way to carry more speed out of the turn is to improve the driving *through* the turn.

So, we're back to working on the nut behind the wheel.

The same goes for braking. If your car has enough brakes to lock them up (or get into the ABS), you have enough brake. If you're consistently getting out-braked by guys with similar setups to yours--and I'm talking mostly about weight and tire patch here--the chances are the problem with your car is a driver problem, not a brake problem.



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So, while there are a number of things you can do to change and/or improve the way your car works, the chances are very good there's more you can do to pick up time on the track by working on your driving skills.

"But," you may be saying, "racing season is over. I can't start working on my driving skills until next year now." Actually, and fortunately, that's not exactly true.

Over-the-winter skills development

I know you've heard a hundred times that to go fast you have to be smooth. You've probably heard it enough you're tired of hearing it, but the truth is, that's the truth. I don't care how fast you are or how incredible your car-control skills, the smoother your control movements are, and the less you jerk the car around, the faster you have the POTENTIAL to drive.

I encourage you to go out to YouTube or Vimeo and search for GTS videos of people you know. From our group I know for sure you can find videos from Sean Tillinghast, Jim Child, Enzo Campagnolo, Scott Berkowitz, Carl Picelle, Eric Wong, Eric Cyranski, Sasha Clark and me, and probably others. I encourage you to pick a few drivers you are familiar with and compare their driving. Watch the steering inputs and listen to both how and where they put on the gas.

What you will see is that the faster the driver is, the smoother his line, the smaller his steering inputs, the more of the track he uses, and the earlier and smoother he applies power. The slower the driver, the more he does less of all those things. Slower drivers tend to jerk the wheel, jerk the throttle, and yank it around the turns. In some cases the differences are more subtle than in others but at the end of the day, smoother is faster and with these videos you can see it for yourself with your own two eyes.

Okay, in truth, there's one exception I've found to the you-have-to-be-smooth-to-be-fast rule and that's Scott Berkowitz. However, he has the advantage of otherworldly car control and balls the size of grapefruit so he may be the exception that makes the rule. Also, and this is a little scary to think about, he would probably be even faster than he already is if he was a little smoother. But, whatever. Mr. Berkowitz does not need my advice on driving.

Going fast isn't only about being smooth, of course. You can be really smooth and slow as heck but when you get out there--all the way out there--to the edge of the car's capabilities and you are *right there*, skittering along at the limits of physics, being smoother means you can be faster because it means you can just that little bit closer to the limit. It's just about that simple.



The thing is, smooth is not something you can just turn on when you get to the track and then forget about the other 355 days in the year. Smooth is a habit. When you're racing, when you're running as hard as you can and evaluating the cars all around you and thinking about how to get past the next guy or keep back the guy behind you and catching lapped traffic and all the time trying to run laps at your or the car's limits, well, when all that is happening you don't have time to also think, "I should drive really smooth."

The only way to be smooth--really smooth--is to practice it all the time. You have to practice, to make it a habit, so that's just How You Drive. And, that's practice you can do all the time, anytime you're driving. ALL the time you're driving.

I won't tell you I never drive along on the street with the wheel in one hand and taking it easy, but I will tell you that I spend a lot of my time on the road with my hands at 9 and 3, with my seat in an appropriate driving position, and with my head paying particular attention to my steering inputs.

A lot of time.

I think about a lot of things. First, that I have a loose grip on the wheel so my fingers can feel what's going on there. Next, that I'm actually pushing slightly toward the wheel with my arms. I can feel more pressure in my palms than my fingers and I can feel a slight tension in the back of my upper arms--in my Triceps. It's not a lot of tension or pressure, but it's a bit. It almost feels like I'm pulling down with my elbows slightly.

I try to concentrate on pulling down as I turn rather than pushing up. In other words, when I turn right, I consciously pull down with my right hand more than I push up with my left. It takes a while to be able to feel the difference if you don't have pretty heavy steering but I've found I have much better control of the wheel motions when I pull than I do when I push.

I try to make as few movements of the steering wheel as possible. That is both when I'm travelling in a straight line and when I'm cornering. In a straight line, my goal is to make such small and subtle motions to keep the car on track that somebody riding with me may not be able to see the wheel moving at all. Part of that is just a mind-set which says you don't have to immediately correct every little movement of the car but part of it is making the corrections you do make slowly, smoothly, and as minutely as possible.

In turns, my goal is to make the turn with just one (smooth) movement of the wheel. I want to turn in, hold it, and turn out, with no extra corrections and



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absolutely no jerking of the car. Regardless of the speed of the turn, I only want to feel the weight transfer once, smoothly. I never want to feel the car take its set in more than one motion.

I practice rolling on and off the gas, and into and out of the brakes. My goal is that, if you're riding with me, you won't be quite able to tell when I first started accelerating or putting on the brake. When you have passengers riding with you, pay attention to their heads. If they are bobbing around as you accelerate or brake, you're not being smooth enough.

Ugh. How boring.

I know this sounds boring, or like a waste of time but I can assure you it is not. What I've just described here takes a long time to make into a habit--to build the necessary skills and muscle-memory to really do it well--but it's not hard. It just takes practice. If you start now and practice being smoother consistently throughout the winter, you will find yourself going a little faster in the Spring. Honest.

I've got more that I want to share with you over the course of this winter--some of it is more fun than this--but if you were paying me for advice on how to get quicker for next year, this is where I would have you start.

Give it a try, start smoothing out your road driving, and I'll be back in a few weeks with a bit more to think about and work on in the off-season.

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