



Ross Bentley's High Performance Driving Tips - #23

## GOING FASTER – PART #2

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In my last article, I revealed some of my ideas on how to shave time off your best lap or slalom run. As promised, here's Part 2 of "how to go faster".

When trying to drive "the limit", you are actually dealing with three different limits: yourself, the car and the track. You must recognise and maximise each if you are to go faster. Although there isn't anything you can do about changing the track's limit, and raising the car's limits are for mechanics and engineers, maximising your limits is something to strive for.

Corner entry speed is critical. If it is not correct, you spend time and much of your concentration trying to make up for the incorrect speed. But, you need as much of your concentration as possible to sense traction, balance and the line at this point. So, make sure your corner entry speed is correct.

Following the advice, "enter the corner slow and come out fast" may just be the problem. Now, I know I have said this many times before - and still believe it to be true. However, you can take it too far. It's possible that you may be entering the corners too slowly. Then, as you accelerate to get up to the correct speed, you exceed the traction limit of the driving tires and get wheelspin. The overall result is you're slow. Plus, once you've realised you are entering the turn too slow, it takes time to react and correct your speed.

Instead you should aim to enter the turn slightly faster than the traction limit dictates (as long as you can still make the car turn-in to the corner properly), so the car slides (scrubs) while you are transitioning off the brakes over to the throttle to begin acceleration. This accomplishes two things: (1) while the car is scrubbing a little speed, it allows you time to transition to the throttle without wasting speed (instead of having the car lose speed while you sense you are going too slow, and then having to react and try to correct your speed); and (2) it mentally prepares you for the slide, so that it doesn't take you by surprise.

I believe this second point is the most valuable lesson I've ever learned from racing in the rain. I found that if I purposely put the car into a slight slide from the second I entered the turn I was automatically smoother and more relaxed, and therefore faster. This is because I had no fear of the car suddenly taking me by surprise by starting to slide. The moment I learned this, I started winning races.

A driver should enter every corner at such a speed that he feels as though the car will not turn-in - but actually it just barely does. In other words, if you feel real comfortable on the entry to the turn, you're probably going to slow. But... remember, you can very easily overdrive the car as well. Be prepared to recognise, and deal with that situation, too.

A correctly-executed Transition from braking to acceleration is paramount. It must be done perfectly smooth. That's one reason why one driver can make a car turn into the corner at a slightly higher speed than another driver. Just because you cannot make your car turn into the corner at a specific speed, does not mean a Schumacher or Zanardi couldn't. Maybe, you are not using the correct technique - not being smooth enough, turning the steering too quickly, unbalancing the car, etc.

In fact, how you lift your foot off the brakes is absolutely critical. It has to be eased off the pedal so as not to upset the balance of the car. Then, you have to Transition over onto the throttle so smoothly that you never actually feel the exact point where you have come off the brakes and where you start to apply acceleration.

Now, what if you enter a turn slightly **too** fast - to the point where it is impossible with your technique to make the car turn in properly. Most drivers' reaction is to continue braking. But, you'll actually have a much better chance of making the corner if you ease off the brakes. Why? For two reasons: (1) the car is better balanced (not too much forward weight transfer), which allows all four tires to work on getting the car around the corner, instead of having the

fronts overloaded; and (2) your concentration and attention is on controlling the car at the traction limit as opposed to "getting the car slowed down", or "surviving". Believe it or not, knowing and using this plan will do more for making you go faster than many other "tricks". This is what car control is all about.

Car control - the ability to control the car at the very limit - is the most important skill a driver can ever learn. The ability to make a car do what you want, when you want - brake, steer, accelerate, oversteer, understeer, neutral steer, etc. - comes from co-ordinating all the basic control skills together with the correct timing, precision and application.

Great car control skills allow you to drive beyond the "theoretical traction limit". This is where the car is in a slide all the way through the corner balanced on the very edge of control. However, it's very easy to slide the car too much which actually slows you down by scrubbing off speed. Gilles Villeneuve was the master of taking a car beyond the limit, and still keeping it under control - because of his extraordinary car control skills.

I believe a driver who has great car control skills, but is not driving the ideal line through a corner will be much faster than a driver with the opposite abilities. Therefore, if you want to go faster, develop your car control skills.

That should give you more food for thought. More tidbits to come in Part 3!

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