



Ross Bentley's High Performance Driving Tips - #22

GOING FASTER – PART #1

"How can I go faster?". In the course of your motorsport career, you may have asked yourself or others this question. If you could only get a satisfactory answer, all would be right with the world. Well, the following is Part 1 of "Thoughts and ideas on how to go faster". Hopefully after reading and absorbing this information you'll shave more than a few fractions of a second off your best time!

First of all, when trying to go faster, never ask yourself "why - why can't I take that corner faster?". Instead, ask yourself "where", "when", "how much", "what", etc. These are positive, constructive questions, whereas "why" is negative.

A driver needs more of a plan than "I'm going to take Turn 4 faster". You have to have a plan of HOW you are going to go faster. After each run or session, sit down and develop a plan of how to go faster. Take a map of the course and visualise yourself driving it as you just did, making notes on areas where you may be able to improve.

To do that, break each corner down to 3 Segments: the entry, middle, and exit; as well as having 7 different Control Phases: braking, turn-in, transition, balancing/throttle, maximum cornering, acceleration, release steering. Then ask yourself how you can change what you are doing during each of these Segments and Phases to go faster.

There is a limit to how much a driver can concentrate on. You can very easily spend too much, or even all of your concentration on one particular area when you really need to overlap it over two or three areas. But, when trying to go faster, work on one concentration area at a time. That way, you will also be able to determine which change made the improvement.

Your speed is limited by three things: engine output, aerodynamics and traction. With more engine output you will be faster on the straights, and with more traction you will be able to brake harder on the approach to a turn, go faster through the corners, and accelerate harder coming out of corners, while aerodynamic drag slows you down. As a driver you can't do much about engine output or the car's aerodynamics, but you may be able to do something about traction.

How you use the controls will effect the overall traction limit. The more gradually you turn in to a corner, the more traction the tires will have since a tire's traction limit will be higher if you progressively build up to it. As well, balancing the car correctly will increase your useable traction.

The relationship between steering position and throttle position is interactive. Steering input must be reduced in order to apply acceleration. Since a tire has a limited amount of traction you cannot use all of it to turn the car and expect it to accelerate at the same time. You have to trade off steering input as you begin to accelerate. This is where you release, or unwind, the steering as you accelerate out of the corner.

All the skills and techniques in the world are not going to make you fast if you are not properly mentally prepared. Once you've decided you need to go faster, and how you are going to do it, consider everything that could happen (the car doesn't turn-in when entering 1/2 a MPH faster, the car begins to oversteer during the transition phase because of unbalance and too much speed, etc.). This enables you to be mentally prepared for the consequences. This also helps your confidence level because you have it under control - it doesn't take you by surprise.

Confidence is usually lost by allowing "wrong" thoughts or ideas to enter your mind ("if I go this much faster, I'm going to crash"), thereby taking some concentration and attention away from the "ideal" thought ("I can enter Turn Four 1/2 MPH faster").

To go faster, you must "want" to learn more: about how to improve your driving, about how to make the car go faster; and "want" to always go faster, to never be satisfied with how fast you are going. To me it's the most enjoyable challenge in the world.

Stay tuned for more "thoughts on going faster" in the next two articles.

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