



Ross Bentley's High Performance Driving Tips - #5

THE SKID AND HOW TO CONTROL IT

Most skids, spins or out of control situations are a result of loss of concentration, driving beyond the limit (too fast), or a simple mistake (which usually upsets the balance and traction of the car). Getting into this kind of trouble is quite easy, especially in adverse weather conditions. And getting out of it can be easy with a little knowledge, some thought and experience.

Unfortunately, skid control practice is difficult to come by - you certainly don't want to have to do it in everyday driving! Practice and experience it only in a safe environment.

One of the most common types of skids you may face is when the rear end slides out on you - the oversteer skid. What do you do? **FIRST, STAY OFF THE BRAKES!** If you touch them you will make matters worse. By braking, you transfer weight forward (the car nose-dives under braking) reducing rear tire traction and most likely causing the car to spin out completely. Instead, **JUST LOOK AND STEER WHERE YOU WANT TO GO** - this will automatically make you steer in the direction of the skid. In other words, in the direction the rear end is sliding (this is called "opposite lock"). And sometimes, very gently increase the throttle to cause a slight weight transfer to the rear, which increases the rear tire traction. I say sometimes because giving it more throttle may make things even worse. Think about it. What got you into the problem in the first place? Usually, too much speed. The last thing in the world you need now is *more* speed.

Once you catch the first slide or skid, be ready for one in the opposite direction caused by over-correcting. If it happens, gently correct for it by looking where you want to go and smoothly try to ease the speed down until you get the car under control again.

If you experience an understeer skid, with the front end sliding or plowing towards the outside of the turn, the correction is simple. Just ease off the throttle, which transfers more weight onto the front tires giving them more traction, **AND STRAIGHTEN THE STEERING OUT SLIGHTLY**. Most peoples' first reaction when faced with this type of skid is to turn the steering wheel more and more. But, this increases the problem because the tires were never

designed to attack the road at an extreme angle. Tires were meant to face the road with their full profile, not with the sidewall, so their traction limit has actually been decreased. So, decrease the steering input slightly and ease off the throttle gently to allow the front tires to regain their grip, and then begin to steer again.

Certain car designs lead to certain handling, and therefore skidding, characteristics. Most cars with a large percentage of the weight over the front wheels (front-wheel-drive cars or rear-wheel-drive cars with heavy engines mounted up front) tend to understeer at the limit. Cars with a large percentage of weight biased towards the rear (mostly mid- and rear-engine cars) tend to oversteer naturally. This is mostly caused by a pendulum effect the weight has on the heavy end of the car. If you quickly try to change direction (as in turning into a corner) in a naturally understeering car, the weight of the front end wants to keep going in a straight line causing the car to plow. In a mid- or rear-engine car, if you lift off the throttle in the middle of a corner (causing weight to transfer off the rear tires, reducing traction and making the car oversteer), the weight of the engine works like a pendulum swinging out and trying to spin the car ("trailing throttle oversteer").

As you can see, weight transfer has a great influence on how your car behaves in a skid or slide. Smoothly controlling that weight transfer is the real key to skid control.

If the car begins to oversteer skid and you can't control it as described above, you are going to spin-out. Nothing wrong with that, if you keep your cool, watch where you are going, de-clutch and lock up the brakes - and hopefully don't hit anything. Remember these words, "spin - both feet in", meaning left foot on the clutch and right foot on the brakes. That is all you can do - besides avoiding the spin in the first place.

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