

# LAP 14 — RAIN DRIVING

**S**pring brings new driving opportunities and the increased probability of encountering rain. Improvements like radial tires, anti-lock brakes, and excellent highways have made driving in the rain routine. Today, most drivers feel rain driving is only an inconvenience that slows traffic and ruins a freshly washed car. We rarely give it a second thought. But imagine this scenario; for weeks on end you've been preparing the Mustang for an upcoming track event. You even paid the entry fee early to assure yourself a spot, then installed new brakes and even bought new track tires in an attempt to better your lap times. Suddenly, the big weekend is here and you arrive the night before at the destination filled with excitement and anticipation of the upcoming day. After checking into the hotel you flip on the evening news to catch the local weather and to your dismay the forecast is for rain all weekend. Early Saturday morning while driving to the track you know the weatherman was right because it's already raining. What are you going to do?

I say drive.

Driving a road course in the rain is possibly the best learning experience available. If you can learn car control in the wet you will be a much better (and faster) driver when it's dry. History indicates the best wet drivers are usually the best in the dry. Being fast in the dry does not necessarily mean you'll be fast in the wet but does mean you'll be better when it's dry. There are many variables to road racing and the wet amplifies most of them which makes for an excellent learning environment. Yes, you're odds of sliding off the track are much higher in the wet but you're also more likely not to hit the wall because you'll be traveling much slower speeds. You'll need to be cautious under braking because brakes don't work as well when wet but it doesn't matter because tire grip is reduced at the same time so better brakes would be useless. Cornering speeds are reduced due to lower tire grip while road surface irregularities increase the effect of reduced grip.

Driving technique in the wet is quite simple, just forget about driving "the line." The "fast line" is really only the dry line and not at all a good place to be in the wet. Most tracks are worn smooth in areas of high traffic. This works well when dry because the rubber laid down by other cars helps increase the grip available for your Mustang when you pass through. It is a totally different situation in the wet and for several good reasons. The dry line is polished smooth from continuous use which makes it highly slippery when coated with water. This smooth surface provides no place to displace the water to as the tire rolls past. In addition, the dry line usually collects water because it's been worn slightly lower than the adjoining area and this contributes to the problem. In the wet, look for the non-shiny and unworn areas and keep your tires on them. It sounds easy, but the reality is it's hard to do because your instincts are screaming at you to get back on the "fast line." Remember to keep telling yourself there are two lines, the "dry line" and the "wet line" and you're in the wet.

On lap #11 driving at the limit was described as being similar to dancing where you shift your weight from one

foot to another and the car does the same as it shifts weight from one tire to another as it pitches and rolls under braking, cornering, and acceleration. When driving in the wet, try to imagine you're dancing on ice where the same techniques apply but you have far less available grip. The effects of weight transfer are amplified in the wet and it becomes much more difficult to create grip in this manner.

Remember to reduce your tire pressures in the wet and expect less temperature rise on the track. Reduced grip means less friction and less heat generated within the tire. Since cornering speeds are reduced, sideward deflection is less of a concern and you'll appreciate the extra grip from the increased contact patch. If you can, keep your good tires on the front where they can be used to help stop and turn the car. Keep the gas tank full to increase weight in the rear to improve grip under acceleration. Try to spend as much time as possible experimenting with braking and acceleration limits. Threshold braking is more achievable since grip limits are low and mistakes can be easily corrected due to slower speeds.

Keep highly alert when on the track. Use each lap to build a mental picture of where the heavy water is and where it is not. Compare water levels as you drive each lap to build a mental picture of how it's changing. Rain and drainage levels can change between laps creating different conditions from lap to lap. Hydroplaning can occur when you exceed the speed at which the tires can channel water out from under them. Beware of running water in braking zones, hydroplaning is a very bad thing when encountered in a braking zone. Try running in the tracks of the car in front of you to reduce hydroplaning.

If you're lucky enough to be driving at your home track the effects of a wet surface can be used to learn where subtle differences in the track surface occur. Surface changes that are hardly noticeable in the dry become much more pronounced in the wet and this provides you the opportunity to differentiate them. Later, when driving a dry track, you can use this information to precisely pick the best locations for application of weight transfer, which will permit driving much closer to the limit.

Even though it rains in the spring, get your Mustang out there and have some fun!

Charlie Jones, a.k.a.

*Roadracer*

