

## Lime Rock Park's "Esses"- (Turns Three and Four)

*By Bruce MacInnes\**

Lime Rock's "Lefthander" and Turn Four represent difficult challenges at one of the most demanding racetracks in North America. Mastering these Esses will in great measure determine good lap times at one of the most challenging tracks you will ever drive.

In Racing there are three types of corners: Most turns are "Type 1" Exit Speed corners, some are "Type 2" Entry Speed turns, and then we have "Type 3" "Compromise" or "Set-Up" corners like Lime Rock's Lefthander. This turn is critically important since it proceeds the Type One turn leading onto Lime Rock's second longest straightaway.

Exiting Big Bend (a turn that eats racecars) we have three choices on how to approach the Lefthander: Some drivers elect to drive up the inside while brake-turning (after a gentle S-turn), go high in the middle, and use trail-brake rotation to point the car towards a late apex. This is a difficult option and one that challenges consistency; Some make a big effort to get parallel to the right side of the road on the approach (scrubbing speed in the process) and generally end up early-apexing; Most use the conventional diagonal approach (using a longer, gentle S-turn), and braking toward the outside. Believe-it-or-not, a useful reference point is to brake toward the Ladies Room Door out in the Paddock. On big weekends this high line is difficult to use unless you buy the corner marshals beer to entice them to sweep the marbles put down by all the early-apexers.

The proper line in The Lefthander will let your entire car cross the leading edge of the long, white concrete patch (a good reference, that will hopefully be paved over soon) that starts before the apex. Add power before the apex the curbing, let the car flow away from the left side of the road, and then rhythm back to the outside turning point for turn four. Turn in using the weight-transfer to help point the car on the correct line. Speed adjustments can be safely made @ the turning point to turn four. If an early apex at turn three carries you too wide, bail out and don't try to save it. You never need to spin with all the pavement available on driver's right between these two turns.

Early-apexing is the single biggest line mistake we see at Turn Three. It is really important to brake-and-turn deep enough so you can't turn too soon or too much entering this corner. Regardless of the approach, it is critical to apex the last third of the inside curbing in turns two, three, and four. This is the "Rhythm Section" at LRP and we use the weight-transfer of the chassis to transition through The Esses. If you find yourself early-apexing simply brake later on the next lap (with soft trail-braking) so you are going too fast to get in early. Watch your brake release - the release of the brakes creates rotation. With correct control inputs, a properly set up car will never spin with the brakes on. It will, however, instantly spin if you're a peddle-snapper. That's why Mark Donohue, writer of The Unfair Advantage and a man that we revere here at Skip Barber, coined the phrase "Trail Braking".

Remember: Racing is simply problem solving. It is far more than talented Instinct-Driving. The best drivers today use an analytical, and methodical approach to finding their limits at every track. It is tremendously rewarding when you get in The Zone, have a Sense of Calm, and know what's coming next. Have Fun...

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