

LAP 33—SLOW DOWN AND GO FASTER

Way back on lap number 5, we discussed brakes and how important they are to building confidence and creating competitive advantage. If you have any concerns about your brakes you'll be slower than you should be. Confidence is the key to going fast so making the investment in creating a reliable and effective braking system is time well spent. Staying on the throttle longer than the other guy requires great brakes and the confidence to use them effectively. Great brakes are a joy to use, the pedal is high and firm, the modulation range is wide, and they don't fade when hot. If you are dealing with a low or soft pedal, a narrow range of modulation, or the need to ease up after a few laps to let them cool then don't settle for less because you can have all three, it just takes perseverance.

A common solution is to throw money at the problem, adding complexity and new variables to the equation through aftermarket parts that may not result in a system that works well on your Mustang. Good braking requires a good tuning; just being able to easily lock up your wheels won't make it in road racing. This means bigger brakes are not necessarily better. Let me give you an example. My old 1966 Shelby race car used the popular four-piston, big Kelsey-Hayes Lincoln caliper conversion employed on the later Trans Am Mustangs. My thinking was that bigger brakes would improve performance providing increased stopping power and heat resistance. The truth is they did not and actually added significant and unnecessary weight to the lighter 1965-1966 Mustang chassis. Today, many racers run stock (small) four-piston Kelsey-Hayes calipers with stock diameter rotors and have a better, lighter braking system with a high, firm pedal with good modulation and no brake fade. You can, too.

Lengthening every straightaway is the best way to go faster and reduce lap times. The term "slow in, fast out" is commonly used to describe this technique; but what does it really mean? It means don't be afraid to place your Mustang in the best possible position to apply power as soon as possible on corner exit. This includes slowing to a speed that appears slower than necessary at the time. The sooner power is applied and acceleration begins the faster you'll be traveling at the end of the straight before entering the braking zone. String a few of these together through consistency and lap times will fall quickly. This is where great brakes really pay off. Delaying brake application as late as possible allows full throttle to be on for a longer time thus increasing terminal velocity. This is very hard to do when concerned about braking effectiveness.

Most soft pedal issues can be traced to one of two things:

- (1) entrained air
- (2) deflection

It's common knowledge that bleeding the system can remove trapped air and improve a soft pedal but the effects

of deflection are often misunderstood. Any motion created by pedal application other than piston movement is consuming precious pedal movement and contributing to a soft pedal. This problem is common in race cars because they tend to use aftermarket components that may not be specifically designed for the application. Retrofitting aftermarket four-wheel disc brake conversions designed for street use into a racing application commonly results in deflection problems. Stick to the stock setup and avoid these issues, you can't use the added stopping power in the rear anyway because weight transfer is unloading the tires.

When using the right foot for both brake and throttle it's practically impossible to delicately modulate either in an appropriate way. The heel-toe technique used to blip the

throttle when downshifting is hardly the delicate throttle application required when driving at the limit. How about using the other foot? You know, the left one? Think of the advantages. The small amount of time required to lift the right foot from the full throttle position over on the accelerator into position on the brake pedal creates

a period of time that is actually a coasting period that can consume considerable distance at high speeds. This means to apply the brake at the last possible moment requires lifting the throttle earlier which results in lower terminal velocity! The real advantage to left-foot braking is in the stability afforded your Mustang when driving at the limit while making instantaneous and minute transitions from throttle, to brake, and then back to throttle. It takes confidence and practice to become proficient at left-foot braking but the effort is certainly worth it.

Give yourself great brakes, slow down, and use that left foot. You'll go faster.

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Charlie Jones, a.k.a.

Roadracer

