

SPOTLIGHT: Davis Technologies Gaining Traction Among Drag Racers

By Gordon Columbine

IN DRAG RACING IT'S ALL ABOUT TRACTION. Lose traction, lose the race; it's as simple as that. What's not so simple, however, is effectively managing the power and putting it to the ground, but as the company slogan goes, that's where Davis Technologies "can hook you up."

Davis Technologies is the brainchild of Shannon Davis, a former IMSA sports car crewman who developed a highly effective method of electronic traction control (ETC) that now can be found in just about any discipline of motorsports. And while not permitted for use in competition by certain sanctioning bodies, including NHRA, in drag racing at least there are enough outlaw and non-sanctioned applications out there to keep the phones ringing at Davis Technologies headquarters near Asheville, North Carolina.

The ADRL, recognizing it had neither the means nor the inclination to police the use of traction control, decided early in 2009 to open up the series to the devices, which have found favor with many top-level tuners, including doorslammer legends like Jim Oddy and Camp Stanley, as well as Brandon Pesz, crew chief for Gaylen Smith's championship-contending Pro Extreme '57 Chevy, who uses his Davis unit as an analytical tool.

"The main thing it does is tell you where your problem areas are," Pesz explains. "You send it down track with your baseline set-up and some runs it may not come on at all, which is good because what you do at that point is get more aggressive, but if you go out there that first run and it does activate somewhere in the run, say at 1.4 seconds, well then you know the track's a little weak there or you have too much power and you can back it down a little bit accordingly. If you're way off it isn't going to save your run, but if you're close it just helps you know where you may need to back it off or get it a little more aggressive."

Essentially, the Davis Technologies ETC system measures the rate of acceleration of the driveshaft and if a sudden change in that speed is detected, signifying slippage at the car's drive tires, the traction control unit intervenes, typically with a correction that briefly retards the engine's timing, but also could involve reducing nitrous injection or lowering boost.

"They all work, but there may be some

lag in reducing nitrous or boost, but it's pretty easy to argue that timing is instant, you retard timing and the next cylinder that fires will make less power," Davis says. "And the user has control over sensitivity, how much change is too much, and then when it makes a correction, how big the correction will be, how much timing does it take out."

Through the use of eight, precision-machined sensors attached to the driveshaft the Davis system works in real time, determining within an eighth of a turn of the driveshaft if that fraction of rotation occurred too quickly based on the average of previous readings.

"We're measuring in what's called microseconds, which is millionths of a second, so it's very, very fast to react, much faster than other systems that have just two or four magnets to trigger sensors," Davis says. He also points out there are two basic types of Davis Technologies ETC units: non-self-learning and self-learning, and two levels of self-learning units, with the only difference between the two being their extent of tunability.

"The non-self-learning is basically our Sportsman box and what it's doing is just watching for a spike in acceleration that exceeds a certain value. The self-learning monitors the rate of change and if it detects a sudden deviation within that rate of change it makes a correction. The advantage is that you don't need to predict the future with it; you don't need a crystal ball like you do with your dots and some of the other systems out there.

"But they both work on the same basic principle," Davis stresses. "Some people seem to think the Sportsman box isn't as good because it's cheaper, but it's just not the self-learning type. For the 275 drag radial guy who might be having trouble on the gear changes, it works great and it's all someone like that probably needs."

He also emphasizes if a racer purchases a Davis Technologies Drag Sportsman box (\$1995), the option usually exists to upgrade to intermediate Drag Lite (\$2995) or even Drag Pro units (\$4495) by paying only the price difference.

Regardless of the Davis Technologies ETC type chosen, it's an easy install, too, one that usually takes Davis only a few minutes to complete. "Typically, we replace the ring you already have that triggers your data system or engine control unit with our ring and sensor and our



sensor has multiple outputs, one for us and one for your Racepak or FAST or Big Stuff or whatever control unit your using."

Steve Petty, co-owner and crew chief for the wicked-fast 2010 Corvette piloted by Outlaw 10.5 star Tim Lynch, also says it's "a piece of cake" to operate. "Shannon (Davis) can throw that thing on and have you running with it in five minutes and you never have to touch it again," he says. "You just go into your MSD box and tell it how much (timing) you want to pull out. It's got a little knob for sensitivity and the worse the track is the more the sensitivity is; it couldn't be much easier."

And to anyone who questions the need or validity of using traction control

to get down a race track, Petty has an answer.

"Traction control will not make you go faster, but it can make a mediocre run into a better run and it cuts down on aborted passes," he states. "What it is, it's like a shock or a wheelie bar; it's another tuning aid to make the car more consistent. You wouldn't run one of these Outlaw 10.5 cars without your wheelie bars, so why would you run one without this?" Among Davis Technologies' authorized dealers are Tim McAmis Race Cars in Missouri, Pro Line Racing in Georgia and LenMar Motorsports in Texas, among others that can be found online through Davis Technologies at www.moretraction.com, or Davis can be reached by calling (828) 645-1505.