

DID YOU KNOW???

AUTOMATION CAN BE CONFUSING TO DRIVERS

If you're a regular reader of these weekly articles I have tried to keep you abreast of the automation involved in today's cars, like lane departure and adaptive cruise control to name a couple. Vehicles are getting increasingly sophisticated, with more and more of them able to stay in a lane and maintain a set speed and following distance with minimal driver input. Now, information from the Insurance Institute for Highway Safety (IIHS) in their June 20 edition of "Status Report" finds that this automation has limitations that can be tricky for drivers to grasp, and two new IIHS studies highlight misperceptions or gaps in drivers' understanding.

One study revealed how the names manufacturers use for these systems can send the wrong messages to drivers regarding how attentive they should be. Another found that drivers don't always understand important information communicated by system displays.

"Current levels of automation could potentially improve safety," IIHS President David Harkey says. "However, unless drivers have a certain amount of knowledge and comprehension, these new features also have the potential to create new risks."

The automation available in today's vehicles is considered Level 1 or 2, which applies to systems that can perform one or more parts of the driving task under supervision of the driver. An example of a Level 1 system is lane centering, in which lateral control of the vehicle is automated, or adaptive cruise control, in which longitudinal control — i.e. speed and following distance — is automated. Systems that can perform both of those functions simultaneously are Level 2 systems. These systems are a far cry from Level 5 automation, in which the entire driving task can be performed without input from a human under all conditions.

Despite the limitations of today's systems, some of their names seem to overpromise when it comes to the degree to which the driver can shift their attention away from the road. One name in particular — Autopilot — signals to drivers that they can turn their thoughts and their eyes elsewhere, an IIHS survey found.

For the survey, more than 2,000 drivers were asked about five Level 2 system names currently on the market. The names were Autopilot (used by Tesla), Traffic Jam Assist (Audi and Acura), Super Cruise (Cadillac), Driving Assistant Plus (BMW) and ProPilot Assist (Nissan). Participants were told the names of the systems but not the vehicle brands associated with them and weren't given any other information about the systems.

None of these systems reliably manage lane-keeping and speed control in all situations. All of them require drivers to remain attentive, and all but Super Cruise warn the driver if hands aren't detected on the wheel. Super Cruise instead uses a camera to monitor the driver's gaze and will issue a warning if the driver isn't looking forward.

In next week's article, we will explore how the names of the safety features promoted by the car manufacturers actually misled drivers into doing things they thought were safe given the level of automation their vehicle had, but actually contributed to crashes. We'll also discuss the instrument cluster of information and what role that plays.