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Highly Automated Vehicles in Pennsylvania:

2021 Update

By Christopher Marzzacco

The automotive industry continues to change from traditional to “highly-automated” vehicles (HAVs). As the transformation continues – hopefully to the point where all crashes are eliminated – personal injury lawyers in Pennsylvania must continue to play a role in the process.

What is a Highly-Automated Vehicle?

An HAV is a vehicle that performs dynamic driving tasks through the use of a combination of hardware, software, cameras, lasers, sensors and actuators. Partially autonomous vehicles, those that require input and intervention from a human driver, exist on our roadways today, and fully autonomous or driverless vehicles are developing rapidly.

SAE International, a worldwide association of engineers and experts in various commercial vehicle industries, has organized automated vehicles into six categories that each have a number from zero to five:

- Level 0 vehicles must be driven by a human and do not offer any automation.
- Level 1 through Level 3 vehicles offer some autonomous capabilities, such as increased collision-avoidance technology (CAT) features and more automation at each level. CAT features include blind-spot detection, lane departure warning and control, automatic braking with collision warning, and some form of auto-pilot; however, each still requires input and intervention from a human driver.
- Level 4 vehicles can operate with human intervention but do not need us to perform dynamic driving tasks.
- Level 5 vehicles are fully autonomous and driverless. Some manufactures will not even include steering wheels or other controls in their models.

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How Will Fully Automated Vehicles Work on the Road?

Once implemented and integrated into our transportation system, a fully automated or self-driving vehicle will be “connected” to communicate with other vehicles on the road and with the infrastructure in place to support full automation. Once connected, the vehicle’s highly-automated driving system will create and maintain an internal map of its surroundings—which will include traffic signals, other vehicles, pedestrians and other

markers that the vehicle’s system will detect to keep it operating safely on the roadway.

The car’s system will plot its path and basically send instructions to the actuators to accelerate, turn and brake the car, so a human becomes nothing more than a mere passenger. If the vehicle is not fully connected, the vehicle will presumably still rely on some level of communication, such as with other vehicles on the road perhaps, to allow its safe operation.

Will HAVs Eliminate Automobile Crashes (and Related Lawsuits)?

The ultimate goals of HAVs and driverless cars include the reduction – or outright elimination – of vehicular crashes, thus reducing or eliminating serious injuries and deaths on our roadways. If the infrastructure and vehicle technologies function properly some day, we will have a transportation system that operates without the primary cause of motor vehicle crashes: human error.

In a perfect world, HAV technology will continue to develop, and the federal, state and local governments responsible for implementing appropriate infrastructure will do so at the same pace. Until then, however, the ever-evolving state of autonomous vehicle technology will present unique and complex issues that researchers, planners, government officials, lawmakers and personal injury lawyers will have to address sooner rather

than later. In short, crashes will continue to occur and people will get hurt or killed in many of them.

As long as human error causes car crashes and injuries, determining the at-fault person for liability purposes is necessary, as is determining the proper cause of action to hold the at-fault driver responsible for the damages he or she causes. Until our auto industry and transportation system becomes dominated by fully-automated, connected vehicles, the defendant in any personal injury action for damages remains a “person” and the typical cause of action is “negligence.” Also until that point, unfortunately, as we have seen throughout the history of automotive technological advances, we will continue to experience crashes and those crashes will hurt and kill people on our roadways. Personal injury lawyers will continue to play a major role in this process.

