Mandate Motor Vehicle Collision Avoidance Technologies

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating every civil aviation accident the United States and significant accidents in other modes of transportation – railroad, highway, marine and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the Federal Government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.
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What is the issue?

Regardless of a driver’s skills, sudden changes by other drivers and changes in vehicle controllability pose significant safety risks. For unaware drivers, the consequences can be deadly. Some of the most deadly accident circumstances involve rear-end collisions, run-off-the-road, loss of control, speeding, and out-of-adjustment breaks, which are often not under the control of a single person. In June 2009, a truck driver did not react to the queue of slowing and stopped vehicles ahead and collided with 6 passenger vehicles in Miami, Oklahoma, because of fatigue. If a driver receives warnings of an imminent collision, he or she may be able to bring the vehicle to a safe and controlled stop.

What can be done . . .

There are technologies that can work with the driver to improve driver reaction time. Lane departure warning, forward collision warning, adaptive cruise control, automatic braking, and electronic stability control have all been proven to aid drivers when they are faced with unexpected conditions, particularly when traveling at highway speeds or when operating larger commercial vehicles that require greater stopping distances. Other systems, such as tire pressure monitoring, onboard monitoring (for commercial drivers), and speed-limiting technology, can warn drivers of imminent threats or diminish the possibility of encountering dangerous conditions.

These technologies are available today in many vehicles. However, they are options that a vehicle owner can add, and some technologies are not even required to meet performance standards. The National Highway Traffic Safety Administration should establish performance standards where still needed and mandate that these technologies be included as standard equipment in cars and commercial motor vehicles alike. Their full life-saving and crash-avoidance potential will not be realized until supported by federal rulemaking and related standards.

Statistics

The National Highway Traffic Safety Administration indicates that run-off-road, rear-end, and lane change maneuvers account for 23, 28, and 9 percent of highway accidents, respectively. Vehicle collision avoidance technologies can prevent these types of accidents. In fact, the Insurance Institute for Highway Safety estimates that forward collision warning can prevent 879 fatal crashes annually for passenger vehicles and 115 fatal crashes annually for large trucks. The Insurance Institute estimates that lane departure warning can prevent 247 fatal crashes annually, and electronic stability control, 439 fatal crashes annually. With such promising potential to improve highway safety, this technology should be robustly deployed throughout the passenger and commercial fleets.

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