NTSB Most Wanted List

Critical changes needed to reduce transportation accidents and save lives.

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.

National Transportation Safety Board

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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 brakes-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.

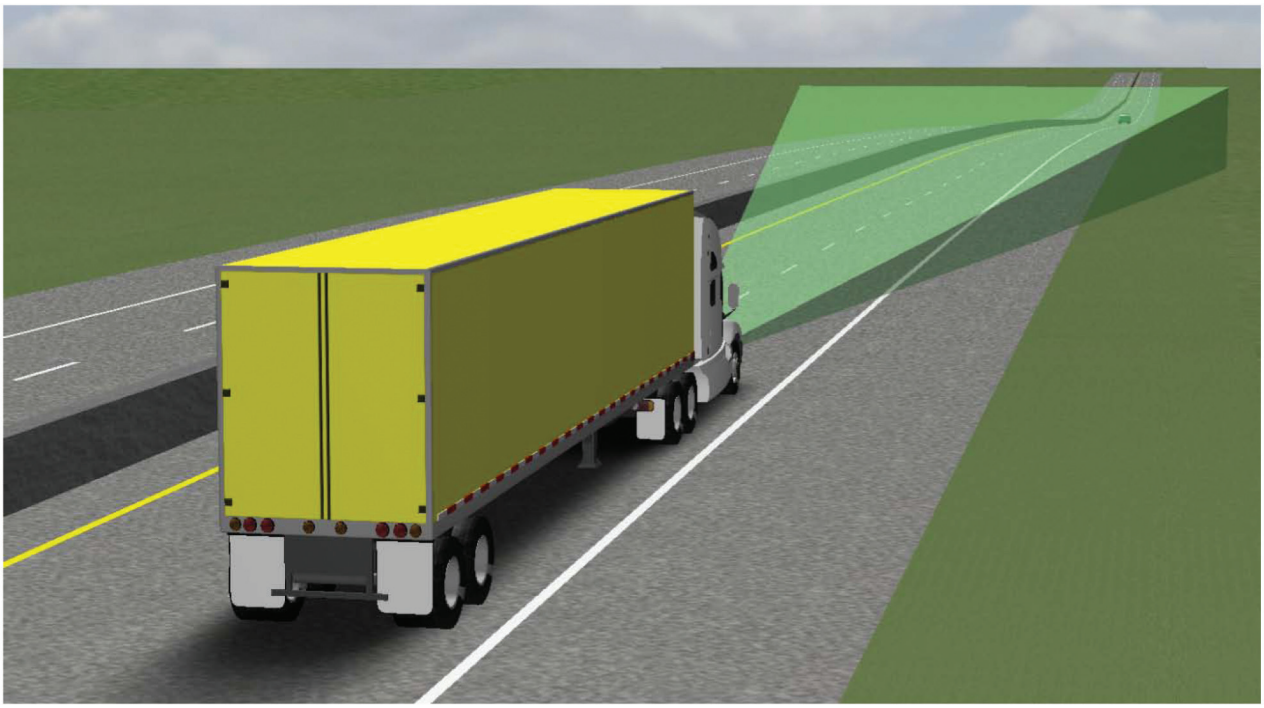
What can be done…

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 (NHTSA) 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

NHTSA 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, NHTSA found that electronic stability control systems could reduce loss-of-control accidents by 40 percent for cars and 70 percent for sport utility vehicles. If installed on the U.S. fleet of commercial tractor trailer combination units, these systems could prevent an estimated 4,659 crashes each year. The Federal Motor Carrier Safety Administration published a cost-benefit analysis of forward collision warning systems for the trucking industry in February 2009, estimating that between 8,597 and 18,013 rear-end crashes could have been prevented from 2001 to 2005 had these systems been on trucks. With such promising potential to improve highway safety, this technology should be robustly deployed throughout the passenger and commercial fleets.



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