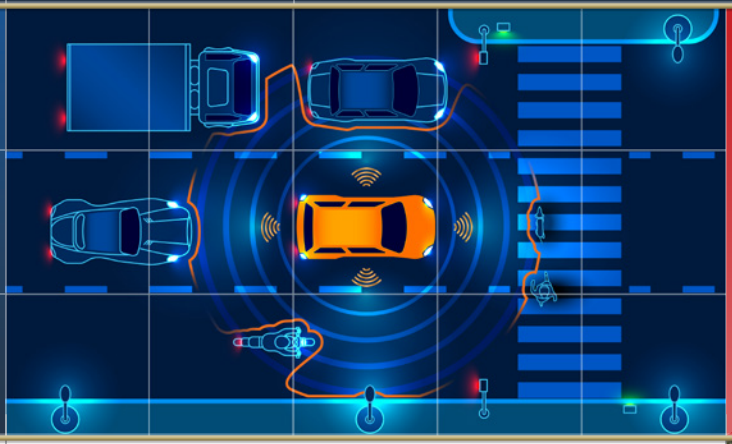
2019–2020 NTSB

MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS

HIGHWAY



Increase Implementation of Collision Avoidance Systems in All New Highway Vehicles

What is the problem?

Motor vehicle crashes are a leading cause of death and injuries in the United States, yet many of these crashes might have been prevented if collision avoidance systems—readily available and proven to work—were installed.

Drivers—not vehicles—are the cause of most crashes. Humans make mistakes and bad decisions, such as driving when they're impaired, distracted, or fatigued. That's where collision avoidance systems can help. They can stop a crash before it happens or mitigate its severity. They can also warn drivers of an impending crash so they can take the appropriate action.

37,133
Lives lost in motor vehicle crashes in 2017
Source: NHTSA

Collision avoidance system components:

- **A collision warning system (CWS)**
- **Automatic emergency braking (AEB)**

(Other helpful technologies include lane departure warning, blind spot detection, and adaptive cruise control)

Although CWSs were first introduced on commercial vehicles, today, the rate of installation in passenger vehicles is much higher than in commercial vehicles. This is concerning, considering that the number of combination trucks involved in fatal crashes in 2017 increased by nearly 6 percent from 2016.

Of new passenger cars manufactured in 2018/2019:

32% offer CWS or CWS + AEB as **standard** equipment; and an additional…

63% offer CWS or CWS + AEB as **optional** equipment. Source: Consumer Reports

Meanwhile, 15% of new Class 8 truck-tractors in the U.S. were equipped with some form of a collision avoidance system. Source: Bendix

On November 1, 2016, a school bus traveling on a Baltimore, Maryland, roadway collided with a transit bus, killing six people. The school bus driver initially struck a car, entered oncoming lanes, and struck the transit bus. Had the school bus been equipped with a forward collision avoidance system with AEB, the initial impact with the car would likely have been avoided.
Photo by Maryland Transportation Authority Police

More and more passenger vehicles and light trucks are coming to dealerships equipped with collision avoidance systems, yet many consumers don't know how they work. According to a 2018 study from the AAA Foundation for Traffic Safety, many drivers don't understand the capabilities and limitations of the safety technologies and rely too heavily on them, which may actually increase the risk of crashes.

Related reports:

SIR-18/02: Selective Issues in School Bus Transportation Safety: Crashes in Baltimore, Maryland, and Chattanooga, Tennessee; November 1, 2016; Accident ID HWY17MH007, HWY17MH009

HAR-16/01: Multivehicle Work Zone Crash on Interstate 75; Chattanooga, Tennessee; June 25, 2015; Accident ID HWY15MH009

SIR-15/01: The Use of Forward Collision Avoidance Systems to Prevent and Mitigate Rear-End Crashes; adopted May 19, 2015

HAR-15/02: Multivehicle Work Zone Crash on Interstate 95; Cranbury, New Jersey; June 7, 2014; Accident ID HWY14MH012

For detailed investigation reports, visit www.ntsb.gov

Continued on next page

Increase Implementation of Collision Avoidance Systems in All New Highway Vehicles

2019–2020 NTSB
MOST WANTED LIST OF
TRANSPORTATION SAFETY IMPROVEMENTS

HIGHWAY

What can be done?

We have encouraged technological countermeasures to prevent or mitigate crashes since 1995. In 2015, we released a study (SIR-15/01) on the benefits of forward collision avoidance systems and their ability to prevent thousands of crashes. The report analyzed nine catastrophic commercial vehicle crashes that would have been prevented or mitigated with these systems. The report included recommendations to passenger and commercial vehicle manufacturers to include forward collision avoidance systems as standard equipment in all new vehicles. Several months after our report, in an agreement with National Highway Traffic Safety Administration (NHTSA) and the Insurance Institute for Highway Safety, passenger vehicle manufacturers promised to do exactly what our recommendations asked for: to make AEB standard equipment in all newly manufactured vehicles by 2022.

This is a step in the right direction, but more can be done to ensure these technologies are implemented more quickly—especially in commercial vehicles (heavy-duty trucks and buses)—and to increase consumer awareness of their benefits and capabilities.

To increase implementation of collision avoidance systems, the following actions should be taken:

Regulators (NHTSA)

› Complete standards for collision warning and AEB systems in commercial vehicles and require this technology in all highway vehicles.

› Improve consumer awareness about collision avoidance systems available in passenger vehicles by rating them in the New Car Assessment Program's 5-Star rating system, and include the ratings on vehicle Monroney labels.

On June 25, 2015, a Peterbilt truck-tractor in combination with a 2005 Great Dane semitrailer was traveling northbound on Interstate 75, near Chattanooga, Tennessee, when it struck the rear of a 2010 Toyota Prius at an estimated speed of 78–82 mph. Traffic had slowed because of road construction and a work zone lane closure. The truck-tractor continued forward and collided with seven additional vehicles. Of the 18 vehicle occupants, 6 died and 4 were injured.

Vehicle Manufacturers

› Install and make standard in all vehicles forward collision avoidance systems that, at a minimum, include a collision warning component. They should not just be options sold as part of expensive add-on packages.

Drivers

› Buy vehicles with collision warning and AEB systems. Learn how these systems work and understand their limitations. They help you drive safely; **they do not drive the vehicle for you.**

Dealers

› Educate consumers on the capabilities and limitations of forward collision avoidance systems.

MWL MOST WANTED LIST

Critical changes needed to reduce transportation accidents, injuries, and fatalities

twitter.com/**ntsb** **#NTSBmwl**
facebook.com/**ntsbgov**
youtube.com/**user/ntsbgov**
instagram.com/**ntsbgov**
flickr.com/**photos/ntsb**

NTSB National Transportation Safety Board

The NTSB **MOST WANTED LIST** highlights safety issues identified from the NTSB's accident investigations to increase awareness about the issues and promote recommended safety solutions.

For more information visit **www.ntsb.gov/mostwanted** or contact **SafetyAdvocacy@ntsb.gov**

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in 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 | 490 L'Enfant Plaza, SW | Washington, DC 20594 | (202) 314-6000