



ADVOCATES
FOR HIGHWAY
& AUTO SAFETY

June 8, 2026

The Honorable Todd Young, Chair
The Honorable Gary Peters, Ranking Member
Committee on Commerce, Science, and Transportation
Subcommittee on Surface Transportation, Freight, Pipelines, and Safety
United States Senate
Washington, D.C. 20510

Dear Chair Young and Ranking Member Peters:

Thank you for convening tomorrow's hearing, "The Need for Speed: How Technological Advances Are Driving Transportation Innovation." Advocates for Highway and Auto Safety (Advocates) urges this Subcommittee to advance proven solutions to improve safety on our Nation's roads and establish sensible safeguards to ensure self-driving vehicles are developed and deployed safely. Advocates respectfully requests this letter be included in the hearing record.

Motor Vehicle Deaths Remain Historically High Resulting in a Tremendous Personal and Economic Cost to all Americans

America's roads are moving an ever-increasing number of people and goods.¹ This activity comes with a significant yet preventable human toll as well as infrastructure challenges and a robust price tag. On average, 108 people were killed every day on roads in the U.S., totaling over 39,000 fatalities in 2024.² This is a 20 percent increase in deaths in just a decade.³ An additional 2.742 million people were injured.⁴ Early projections for 2025 traffic fatalities remain at a high level; over 36,640 people are estimated to have been killed that year.⁵

The annual economic cost of motor vehicle crashes is approximately \$340 billion (2019 dollars).⁶ This figure equates to every person living in the U.S. essentially paying an annual "crash tax" of over \$1,000. Moreover, the total value of societal harm from motor vehicle crashes in 2019, which includes loss of life, pain and decreased quality of life, was nearly \$1.4 trillion.⁷ When adjusted solely for inflation, this figure amounts to \$1.81 trillion.⁸ Research from the Network of Employers for Traffic Safety (NETS) finds motor vehicle crashes cost employers \$72.2 billion in direct crash-related expenses in 2019.⁹

In 2024, 5,340 people were killed and over 161,000 people were injured in crashes involving large trucks.¹⁰ Since 2009, the number of fatalities in large truck crashes has increased by 58 percent.¹¹ In that same timespan, the number of people injured in crashes involving large trucks rose by 118 percent.¹² In fatal two-vehicle crashes between a large truck and a passenger motor vehicle, 97 percent of the fatalities were occupants of the passenger vehicle.¹³ Truck driving is identified as one of the most dangerous occupations

in the U.S. by the Bureau of Labor Statistics.¹⁴ In 2024, 920 occupants of large trucks were killed in crashes.¹⁵

According to the Federal Highway Administration (FHWA), traffic incidents, which include crashes, are one of the seven main causes of traffic congestion which erodes the reliability of travel time.¹⁶ The report notes that for truck operators, “[t]he cost of unexpected delay can add another 20 percent to 250 percent” to their hourly costs.¹⁷ The cost to society from crashes involving large trucks and buses was estimated to be \$152 billion in 2022, the latest year for which data is available.¹⁸ When adjusted solely for inflation, this figure amounts to nearly \$176 billion.¹⁹

These devastating crashes impact millions of Americans each year including the families of U.S. Department of Transportation (U.S. DOT) Secretary Duffy and Members of Congress. These tragedies result in long-lasting effects which often are not accounted for in statistics alone. For every single death and serious injury, there is a horrific ripple effect forever changing the lives of children, parents, friends and communities.

Major Contributors of Crashes Must be Addressed

We urge this Subcommittee to continue to address the leading contributing factors to motor vehicle crashes. In 2024, alcohol impaired driving resulted in 11,904 people killed;²⁰ speeding resulted in 11,288 people killed;²¹ 9,758 vehicle occupants killed in crashes were unrestrained;²² and, crashes in which at least one driver was distracted resulted in 3,208 fatalities.²³ In 2024, 7,080 pedestrians and 1,103 pedalcyclists were killed in traffic crashes.²⁴ Motorcycles continue to be the most hazardous form of motor vehicle transportation;²⁵ 6,228 riders were killed in 2024.²⁶ From 2014-2024, fatalities of pedestrians increased 44 percent, pedalcyclists increased 51 percent and motorcyclists increased 36 percent.²⁷ Additionally, in 2021, the most recent year for which data is available according to the Non-Traffic Surveillance (NTS) system, an estimated 3,990 people were killed in non-traffic motor vehicle crashes, an increase of 26 percent from 2020.²⁸ These issues are persistent, and the solutions are known and available, yet remain underused, underfunded or are not required as standard equipment in vehicles.

Experimental Autonomous Driving Technology Remains Unproven

Vehicles equipped with various levels of automated driving systems (ADS) have been involved in numerous serious and deadly crashes, many of which have been subject to investigation by the National Transportation Safety Board (NTSB) and the National Highway Traffic Safety Administration (NHTSA).²⁹ As NHTSA noted in the 2025 Notice of Proposed Rulemaking (NPRM) on the ADS-Equipped Vehicle Safety, Transparency, and Evaluation Program (AV STEP), vehicles equipped with ADS “...often struggle with driving tasks that humans consider relatively simple.”³⁰ Furthermore, according to data collected by NHTSA’s Standing General Order (SGO) 2021-1 requiring manufacturers to report certain crashes involving vehicles equipped with ADS or SAE Level 2 advanced driver assistance systems (ADAS), there have been approximately 2,357 crashes involving ADS and 3,682 with ADAS. These include 58 crashes resulting in a fatality.³¹

According to media reports, numerous dangerous incidents involving autonomous vehicles (AVs) continue to occur including failing to stop for school buses,³² ceasing operating in the middle of city streets during a power outage,³³ traveling on light rail tracks causing the robotaxi's passenger to flee,³⁴ swarming a residential cul-de-sac³⁵ and navigating flooded streets.³⁶ NHTSA and the NTSB have opened investigations into the incidents involving school buses. Earlier this year, a child was reportedly hit by an autonomous vehicle during school drop off.³⁷ Aptly put, an individual who has witnessed AV operations remarked that the vehicles “are driving like teenagers.”³⁸ It should be noted that teenagers are the most dangerous age group of drivers.³⁹ Not surprisingly, according to a recent public opinion poll commissioned by Advocates, 81 percent of respondents are concerned about sharing the road with driverless cars.⁴⁰ Trepidation is even higher for driverless tractor-trailer and delivery trucks, with 85 percent expressing concern, including a majority (54 percent) who are “very” concerned.⁴¹

If incidents such as the aforementioned had involved autonomous commercial motor vehicles (ACMVs), which are significantly larger and heavier with more stopping distance needed, the results could have been catastrophic, and the death and injury toll could have been much worse. Some of the most pressing safety shortcomings associated with AV technology, which include the ADS properly detecting and reacting to all other road users, driver engagement and cybersecurity, are exponentially amplified by the greater crash force of an ACMV.

“We Must Not Promise What We Ought Not, Lest We Be Called on to Perform What We Cannot”⁴²

Many promises have been touted about AVs bringing reductions in motor vehicle crashes and resultant deaths and injuries, lowering traffic congestion and vehicle emissions, expanding mobility and accessibility, improving efficiency, and creating more equitable transportation options and opportunities.⁴³ However, as auto industry leaders have acknowledged, these outcomes are far from certain.⁴⁴

AV manufacturers and proponents of the technology often claim that AVs are safer because they don't get tired, distracted or drive impaired. While some AVs may be readily able to avoid crashes caused by those human drivers who operate impaired, fatigued or distracted, they also may cause crashes that sober, alert and engaged drivers would routinely avoid. AVs, which are essentially billion-dollar pieces of equipment with years of research, should not drive better than only the worst drivers on the road.

Additionally, supporters of AVs often assert that these vehicles will improve roadway safety by inaccurately stating that 94 percent of crashes are due to human error pointing to a report from NHTSA as support for this misleading claim. However, the agency stated in the same document with this statistic that “[a]lthough the critical reason is an important part of the description of events leading up to the crash, **it is not intended to be interpreted as the cause of the crash nor as the assignment of the fault to the driver, vehicle, or environment.**”⁴⁵ [*Emphasis added.*] In addition, NTSB Chair Jennifer Homendy

has declared that using the statistic in such a manner is “dangerous” and “[a]t the same time it relieves everybody else of responsibility they have for improving safety, including DOT.”⁴⁶ Proponents of AVs also have made the claim that these vehicles will prevent 90 percent of crash fatalities.⁴⁷ Yet, as NHTSA states in the AV STEP NPRM, “[t]his proposal recognizes that the potential of ADS is still largely unproven.”⁴⁸

Often, claims made about the safety of their operations do not provide a complete picture. For example, as of December 2025, “Waymo has driven 170.7 million rider-only miles without a human driver.”⁴⁹ Human beings drove 3.29 trillion miles on U.S. roads in 2024 alone. Thus, in its entire history from approximately 2019 to December 2025, Waymo vehicles have operated without a human driver for less than 0.005% of the mileage driven on U.S. roads by human drivers in a single year.⁵⁰

Waymo claims reductions in “serious injury or worse crashes,” “airbag deployment in any vehicle crashes,” and “injury-causing crashes.”⁵¹ However, over 45 percent of the crashes reported by Waymo pursuant to the SGO had no human occupants in the vehicle. The absence of passengers in a Waymo vehicle in a crash by default lowers the injury rate and could be unrelated to the safety performance of the vehicle given that there was no occupant available to be injured. Moreover, if the goal of AV operations is to transport people, claiming a safety benefit from crashes where no occupant is present is incongruous. Additionally, the majority of the incidents reported by Waymo pursuant to the SGO involved the Waymo vehicle being struck in the rear on roads with speed limits of 25 mph or less, conditions not generally associated with airbag deployments. In sum, Waymo vehicles are operating on roads with lower speed limits and are over involved in rear end crashes, with a large number of incidents not involving passengers in the vehicle.

Additionally, a recent Reuters Special Report revealed that while Tesla plans its “Full Self Driving” (FSD) systems will soon make all Teslas fully autonomous, “interviews with nine former labelers and a former Tesla self-driving engineer show that the technology continued to struggle in recent months to execute basic maneuvers – such as avoiding emergency vehicles or stopping for school buses loading or unloading students.” It also reported that Tesla executives have increasingly touted FSD’s safety as they pushed Tesla to stage public displays of the fully autonomous capability. The article continued:

The displays include a robotaxi pilot in Austin, Texas launched last June with some human safety monitors in the cars and others working remotely. Inside Tesla, as these events approached, staffers worked long hours mapping routes and training the software on specific hazards to make the company’s self-driving technology appear more capable than it really is, four of the former Tesla employees told Reuters. The staffers said these labor intensive safeguards are impossible to deploy on a broad scale.⁵²

Lastly, the SGO does not provide the data needed to fully analyze the operational difficulties and incidents that are occurring. To properly assess the safety of these

operations, additional performance data beyond crashes is needed considering events such as Waymo vehicles traveling on light rail tracks and passing school buses.⁵³

The U.S. is Not Lagging Behind Other Countries in Deployment

In sharp contrast to what is happening in the U.S., other countries are taking a more calculated, careful and cautious approach to the development of AVs.⁵⁴ Often-repeated claims about the U.S. “falling behind” other countries in the “race” for AVs are simply not true nor supported by research. For example:

- China continues to require permits or restricts operations of AVs on its roads to only those areas approved by the authorities.⁵⁵ In fact, the nation recently delayed plans for production of AVs after a deadly crash.⁵⁶
- Germany continues to require permits, approvals, and limits areas of operation for AVs.⁵⁷
- In Japan, the introduction of Level 4 vehicles will be controlled and limited to specific, lightly populated areas.⁵⁸
- The latest United Nations Economic Commission for Europe (UNECE) regulations will limit operations to restrict risks and oversee approval through testing and other requirements.⁵⁹

In sum, no country is selling fully automated vehicles for unfettered use to the public and by many accounts, none will be for a significant amount of time.⁶⁰ According to the most recent KPMG analysis, the U.S. ranks fourth in the world for AV readiness, while China stands at number twenty.⁶¹ The U.S. is not lagging behind other countries in allowing AVs to go to market, but we are behind in establishing comprehensive regulations to ensure public safety will not be jeopardized or diminished.

Federal Safety Standards Prevent Motor Vehicle Crashes, Save Lives, Avert Injuries and Reduce Associated Costs

Advocates always has enthusiastically championed proven vehicle safety technology and for good reason -- it is one of the most effective strategies for preventing deaths and injuries. According to NHTSA, “[t]he FMVSS [Federal Motor Vehicle Safety Standards] remain NHTSA’s core way of ensuring that all motor vehicles provide the requisite level of safety performance and provide it within a technical timeframe.”⁶² In fact, the agency has estimated that from 1968 through 2019, NHTSA’s safety standards have prevented more than 865,000 deaths, 49 million nonfatal injuries and damage to 65 million vehicles.⁶³ In addition, during that time frame the comprehensive societal benefits amounted to \$17.3 trillion, using 2019 dollars.⁶⁴

In 1991, Advocates led the coalition that supported enactment of the bipartisan Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991⁶⁵ which included a mandate for front seat airbags as standard equipment. As a result, by 1997, every new car sold in the United States was equipped with this technology and the lives saved have been

significant. Frontal airbags have saved an estimated 70,059 lives from 1968 to 2019, according to NHTSA.⁶⁶

Advocates built on this success by supporting additional proven lifesaving technologies as standard equipment in all vehicles in other federal legislation and regulatory proposals. These efforts include: tire pressure monitoring systems;⁶⁷ rear outboard 3-point safety belts;⁶⁸ electronic stability control;⁶⁹ rear safety belt reminder systems;⁷⁰ brake transmission interlocks;⁷¹ safety belts on motorcoaches;⁷² rear-view cameras;⁷³ safer power window switches;⁷⁴ ADAS;⁷⁵ advanced impaired driving prevention technology;⁷⁶ rear designated seating position alert (hot cars);⁷⁷ enhanced vehicle hood and bumpers to better protect vulnerable road users;⁷⁸ and, advanced head lamps.⁷⁹

The regulatory action undertaken by NHTSA to require pedestrian automatic emergency braking (PAEB) on light passenger vehicles is an excellent recent example of the benefits of requiring effective safety systems as standard equipment. The agency predicts that PAEB will save 362 lives, mitigate over 24,000 injuries annually and result in a yearly cost benefit of between \$5.8-\$7.2 billion. The Final Rule for PAEB issued in 2024 also noted that the end user price for the safety technology for a popular make and model vehicle, a Toyota Camry, is \$240.24.⁸⁰ This cost is modest, particularly given the returns on the investment. Moreover, research performed by the Insurance Institute for Highway Safety (IIHS) has found that AEB can reduce front-to-rear crashes with injuries by 56 percent. Any delay in implementing the Final Rule is an unnecessary safety setback.

Research also demonstrates that lifesaving vehicle safety technologies are not the chief contributor to increased prices for new cars. IIHS /Highway Loss Data Institute (HLDI) President David Harkey has stated, “Sacrificing safety is not the way to make cars affordable,” “...safety features aren’t the main thing pushing up prices.⁸¹ Buyers are paying more for convenience features such as hands-free power liftgates, puddle lights and automatically retracting mirrors. Size is also a major factor: Americans continue to gravitate toward larger vehicles.”⁸² Additionally, a 2023 study by Consumer Reports (CR) found that “[c]ommonly reported changes in average transaction prices appear to be primarily driven by shifts toward larger, more expensive SUVs and away from smaller and cheaper cars, rather than from the cost of technology improvements in individual models.”⁸³ As a result, CR concluded that “[t]hese findings prove that regulators can and should be aggressive in ensuring that automakers continue to deliver cost-effective technology improvements that save dollars and lives.”⁸⁴

Crashes, including those that involve some of the leading contributors to fatalities, can be prevented or mitigated by AEB and other ADAS systems. Research by IIHS has demonstrated significant crash reductions associated with these safety systems:⁸⁵

Automatic emergency braking

- ↓ 50% Front-to-rear crashes
- ↓ 56% Front-to-rear crashes with injuries
- ↓ 14% Claim rates for damage to other vehicles
- ↓ 24% Claim rates for injuries to people in other vehicles
- ↓ 41% Large truck front-to-rear crashes

Automatic emergency braking with pedestrian detection

- ↓ 27% Pedestrian crashes
- ↓ 30% Pedestrian injury crashes

Lane departure warning

- ↓ 11% Single-vehicle, sideswipe and head-on crashes
- ↓ 21% Injury crashes of the same types

Blind spot detection

- ↓ 14% Lane-change crashes
- ↓ 23% Lane-change crashes with injuries
- ↓ 7% Claim rates for damage to other vehicles
- ↓ 8% Claim rates for injuries to people in other vehicles

Rear automatic braking

- ↓ 78% Backing crashes (when combined with rearview camera and parking sensors)
- ↓ 9% Claim rates for damage to the insured vehicle
- ↓ 29% Claim rates for damage to other vehicles

Rearview cameras

- ↓ 17% Backing crashes

Rear cross-traffic alert

- ↓ 22% Backing crashes

We urge this Subcommittee to conduct oversight to ensure the U.S. DOT issues the Final Rule for AEB in heavy vehicles and lane departure warning (LDW) and lane keeping assist (LKA) in passenger vehicles, as Congressionally mandated.⁸⁶ Additionally, we urge Congress to direct NHTSA to enhance the AEB rule by including bicycle and motorcycle rider detection and response in all lighting conditions.⁸⁷ According to a recent poll commissioned by Advocates, 73 percent of respondents support requiring AEB to respond to bicyclists and motorcyclists in addition to pedestrians.⁸⁸ Research conducted by IIHS found that clothing which makes pedestrians stand out to human drivers may make them invisible to automated crash prevention systems, so ensuring AEB operates properly in all lighting conditions is essential.⁸⁹ The Final Rule for AEB in passenger vehicles must be swiftly complied with, absent added delay.

We also urge Congress to direct U.S. DOT to issue standards and requirements for other vehicle safety technologies shown by research to reduce crashes and impacts, including as noted by IIHS research, blind spot detection, rear AEB and rear cross traffic alert. Many of these systems are already mandated in Europe.⁹⁰ (Please see attached chart.) Additionally, two bipartisan bills referred to the Committee on Commerce, Science, and Transportation, the She Develops Regulations in Vehicle Equality (She DRIVES Act, S. 161) and the Preventing Roadside and Work Zone Deaths Act (S. 3871), as well as the Stop Underrides Act 2.0 (S. 3775) should be advanced.

The Infrastructure Investment and Jobs Act (IIJA) also directed NHTSA to issue a FMVSS requiring passenger motor vehicles to be equipped with impaired driving prevention technology by 2024.⁹¹ IIHS research estimates that passive impaired driving prevention technology will save more than 10,000 lives each year, once widely deployed.⁹² The agency issued an Advanced Notice of Proposed Rulemaking (ANPRM) in January 2024 but has taken no further regulatory action.⁹³ Until NHTSA completes this overdue rulemaking, lives will continue to be needlessly lost, injuries suffered and associated costs expended. As

such, we urge this Subcommittee to employ its oversight authority to ensure NHTSA swiftly issues a Final Rule.

Since 1990, over 1,100 unattended children have been killed in “hot cars,” and 7,500 more have been injured.⁹⁴ Cost effective technology exists to prevent these tragedies now. The IIJA directed U.S. DOT to issue a Final Rule within two years requiring all new passenger motor vehicles weighing less than 10,000 pounds to be equipped with a system to alert the operator to check rear-designated seating positions after the vehicle engine or motor is deactivated by the operator. The U.S. DOT has not taken regulatory action and should issue a Final Rule which requires the system to detect occupants in the entire passenger compartment rather than rely on reminder systems which are less effective. Of note, Euro New Car Assessment Program (NCAP) added testing of child detection systems in 2023 (protocol), and from 2025 onwards will only be assigning points for direct sensing systems.⁹⁵

ADS-Equipped Vehicles and Commercial Motor Vehicles (CMVs) Must be Subject to Federal Regulations to Ensure Public Safety

Autonomous driving technology has made advances yet remains unable to consistently operate safely with all road users, conditions and scenarios, as evidenced by fatal and serious crashes involving passenger motor vehicles equipped with ADS of varying levels.⁹⁶ Transparency and robustness in crash and incident data reporting involving vehicles equipped with ADS are critical to the safety of public roads, the management of cities in which they are operating, and for researchers and related industries as well as the U.S. DOT as it considers regulatory proposals.

To identify a people-and-safety-first path forward on AVs, Advocates and numerous stakeholders developed the “AV Tenets.”⁹⁷ These sound and sensible policy positions should be a foundational part of any national AV policy. The AV Tenets are based on expert analysis, real-world experience, and public opinion. They have four main categories including: 1) prioritizing safety of all road users; 2) guaranteeing accessibility and equity; 3) preserving consumer and worker rights; and, 4) ensuring local control and sustainable transportation. They are supported by a coalition of more than 65 organizations representing consumers, public health and safety experts, pedestrians, bicyclists, disability rights activists, emergency responders, law enforcement, labor and others.

While the AV Tenets were first established in 2020, the approach remains relevant today as progress in advancing key safeguards to ensure safety and the purported societal benefits of AVs has not been met. For example, requiring that AVs meet minimum performance standards, including a “vision test” to ensure the vehicle can respond to all people, vehicles and objects in the roadway environment, is essential. According to the recent opinion poll commissioned by Advocates, the public strongly backs specific federal safeguards. The poll found 61 percent believe their concerns about AVs and ACMVs would be addressed if companies had to meet minimum government safety requirements, and 76 percent support a “vision test.”⁹⁸

In addition, AV operations must be subject to adequate oversight, including a comprehensive database accessible by vehicle identification number (VIN) with basic safety information. The AV Safety Data Act (S. 3742), which has been referred to the Committee on Commerce, Science, and Transportation, would improve incident reporting for vehicles equipped with an ADS and should be advanced. Advocates' recent poll found that nearly 80 percent want to require AV manufacturers to report details of crashes that cause injury or property damage to the U.S. DOT.

The Stay in Your Lane Act (S.3536), currently pending before the Committee on Commerce, Science, and Transportation, requires each manufacturer of an ADS to submit a declaration to NHTSA that details the conditions or the operational design domain (ODD) under which the ADS is designed to function safely.⁹⁹ According to Advocates' opinion poll, 74 percent of respondents support requiring AV manufacturers to disclose the conditions in which their driverless vehicles can safely operate and ensure the vehicles do not operate outside those limits.¹⁰⁰ We urge that this vital legislation be advanced.

Similarly, it is imperative that ACMVs be subject to comprehensive safety regulations, including having a driver with a commercial driver license (CDL) and any relevant current or new accreditations behind the wheel for the foreseeable future. The interest in expanding the use of this technology must not be used as a pretext to eviscerate essential safety regulations administered by the Federal Motor Carrier Safety Administration (FMCSA), and particularly in the absence of new standards to ensure the technology performs safely and as needed. The public safety protections provided by the Federal Motor Carrier Safety Regulations (FMCSRs) have become no less important or applicable simply because a CMV has been equipped with an ADS. In fact, there are additional substantial public safety concerns presented by ACMVs.

Lastly, remote drivers and remote assistants for AVs and ACMVs will undoubtedly face unique challenges in giving instruction or operating a vehicle compared to a driver located in the vehicle. For instance, a human driver behind the wheel may have access to a broader range of details regarding the driving environment than someone located in a sterile office far from the actual location of the AV or ACMV. In fact, during the Committee's February 4, 2026 hearing, Waymo revealed it had remote personnel in the Philippines.¹⁰¹ Individuals in these roles must be given specific training for remote operations or assistance. In addition, these individuals should have significant experience operating both a motor vehicle or CMV on public roads and remote operation of AVs or ACMVs in realistic training scenarios. Moreover, remote operators or assistants must never be in a situation where they would even potentially have to oversee the "real time" operation of more than one AV or ACMV. According to Advocates' recent opinion poll, 79 percent of respondents agree there should be safety standards for remote personnel who provide guidance to driverless vehicles.¹⁰² It is essential that Congress address these remote personnel issues and require minimum standards in any AV or ACMV legislation.

Conclusion

Our Nation can and must do more to address the deadly and dangerous public health crisis on our roadways. Numerous pieces of legislation and additional proven solutions to advance safety, which have been mentioned in this letter, should be included in the next surface transportation reauthorization bill. Additionally, it is essential that proper protections, minimum safety standards, comprehensive data collection and thorough oversight of AVs and ACMVs be advanced to ensure the myriad of promises offered by their proponents are realized.

Thank you for your consideration of these issues. We look forward to working with you to decrease motor vehicle and CMV crashes, save lives, reduce injuries and lessen associated costs.

Sincerely,



Catherine Chase
President

cc: Members of the Subcommittee on Surface Transportation, Freight, Pipelines, and Safety

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- ¹ 2025 Report Card for America's Infrastructure, American Society of Civil Engineers, <https://infrastructurereportcard.org/cat-item/roads-infrastructure/>
 - ² Traffic Safety Facts Research Note: Overview of Motor Vehicle Traffic Crashes In 2024, NHTSA, Apr. 2026, DOT HS 813 791, (Overview 2024).
 - ³ Overview 2024; and Traffic Safety Facts 2023: A Compilation of Motor Vehicle Traffic Crash Data, NHTSA, Aug. 2025, DOT HS 813 738 (Annual Report 2023).; [comparing 2014 to 2024].
 - ⁴ Overview 2024.
 - ⁵ Traffic Safety Facts: Crash Stats, Early Estimate of Motor Vehicle Traffic Fatalities in 2025, NHTSA, Apr. 2026, DOT HS 813 800 (Early Estimates 2025).
 - ⁶ The Economic and Societal Impact of Motor Vehicle Crashes, 2019, NHTSA, Dec. 2022, DOT HS 813 403. (Economic and Societal Impact 2019).
 - ⁷ Economic and Societal Impact 2019.
 - ⁸ CPI Inflation Calculator, BLS, available at https://www.bls.gov/data/inflation_calculator.htm, calculated from Jan. 2019 – Jan. 2026.
 - ⁹ Cost of Motor Vehicle Crashes to Employers – 2019, Network of Employers for Traffic Safety, March 2021.
 - ¹⁰ Overview 2024
 - ¹¹ Annual Report 2024, Note, the 58 percent figure represents the overall change in the number of fatalities in large truck involved crashes from 2009 to 2024. However, between 2015 and 2016 there was a change in data collection at U.S. DOT that could affect this calculation. From 2009 to 2015 the number of

fatalities in truck-involved crashes increased by 21 percent, and between 2016 to 2024, it increased by 14 percent, and between 2015 and 2016, it increased by 14 percent.

12 Annual Report 2024, Note, the 117 percent figure represents the overall change in the number of people injured in large truck involved crashes from 2009 to 2024. However, between 2015 and 2016 there was a change in data collection at U.S. DOT that could affect this calculation. From 2009 to 2015 the number of people injured in truck-involved crashes increased by 59 percent, and between 2016 to 2024, it increased by 20 percent, and between 2015 and 2016, it increased by 14 percent.

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14 National Census of Fatal Occupational Injuries in 2024, Bureau of Labor Statistics, Feb. 2026, USDL-26-0230, available at: <https://www.bls.gov/news.release/pdf/cfoi.pdf> .

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19 CPI Inflation Calculator, BLS, available at https://www.bls.gov/data/inflation_calculator.htm, calculated from Jan. 2022 – Jan. 2026.

20 Overview 2024.

21 *Id.*

22 *Id.*

23 *Id.* These crashes are known to be underreported and undercounted.

24 *Id.*

25 The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (Revised), NHTSA, Feb. 2023, DOT HS 813 403.

26 Overview 2024.

27 Annual Report 2023 and Overview 2024.

28 Traffic Safety Facts Crash Stats: Non-Traffic Surveillance: Fatality and Injury Statistics in Non-Traffic Crashes in 2021, NHTSA, Apr. 2024, DOT HS 813 539.

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Comparative Overview EU-US Vehicle Standards

PUBLICATIONS

Automated Emergency Braking (AEB), Distraction, eCall, Heavy Goods Vehicles, Intelligent Speed Assistance (ISA), USA, Vehicle safety

November 20, 2025

The comparative table below sets out the EU's vehicle safety standards that are not, or not yet, required in the US. (It is therefore not an exhaustive list comparing all mandatory vehicle regulations on safety systems/measures that apply in the EU and USA. Moreover, it does not list regulations/systems/measures that are mandatory in both jurisdictions, but which are either incompatible with each other (e.g. lighting or certain crash requirements) or where there are differences in stringency (e.g. rear underrun protection).)

Information on the table's columns

The first column lists the vehicle safety system/measure. These have been divided into safety systems/measures that are mandatory for all M and N vehicle categories, for passenger cars and vans, and for trucks and buses. (Note: L category vehicles such as motorcycles are not covered). 'Passenger cars and vans' are usually referred to as light vehicles in the US, and 'trucks and buses' are referred to as heavy vehicles. Any difference in application to vehicle categories is mentioned in the EU or USA column.

The 'European Union' column lists the current legal basis that mandates the system/measure to be installed as well as the regulatory act setting out the respective technical requirements, followed by the first application date [WP.29's register of UN Regulations](#); although they may not be the latest version of that UN Regulation available at WP.29, they are the current version of that UN Regulation that is mandatory in the EU.

The 'United States of America' column contains references to a Federal Motor Vehicle Safety Standard (FMVSS), a Notice of Proposed Rule Making (NPRM), or an Advanced Notice of Proposed Rule Making (ANPRM), where available.

The EU and US apply two different regulatory models for allowing vehicles on the road. In the EU, the type approval system requires vehicles to be approved by authorities that verify compliance with the applicable standards, before they are allowed to be marketed. In the US, vehicle manufacturers self-certify that their vehicles comply with the applicable standards and can market them without approval from an authority.

All Vehicle Categories

System	European Union	United States of America	Notes
Advanced Driver Distraction Warning (ADDW) Systems	General Safety Regulation (GSR; 2019/2144), through Delegated Regulation (EU) 2023/2590 , as from July 2026.	None.	
Alcohol Interlock Installation Facilitation (AIIF)	GSR (2019/2144), through Delegated Regulation (EU) 2021/1243 , since July 2024.	None.	
Assisted Driving Systems If fitted	GSR (2019/2144), through either UN Regulation 79 (UN R79; 04 series) for lane keeping (since 2017) or lane change assistance systems (since 2018), or UN R171 (Original Version) if systems that assist the driver in performing vehicle dynamic control are fitted, the latter since 2025.	None.	
Automated Driving Systems (ADS) If fitted	GSR (2019/2144), through Implementing Regulation (EU) 2022/1426 for three specific use cases for fully automated vehicles, and UN R157 (Original Version) for automated lane keeping systems (ALKS).	None. (NHTSA submitted a NPRM for a voluntary framework for the evaluation and oversight of motor vehicles equipped with an ADS, in January 2025).	Both the EU and the US are involved in, and are co-chairs of, WP.29's informal working group on ADS . This is expected to result in a UN Regulation and a GTR that share the same performance requirements.
Driver Drowsiness and Attention Warning (DDAW) Systems	GSR (2019/2144), through Delegated Regulation (EU) 2021/1341 , since July 2024.	None.	
Emergency	GSR (2019/2144), through UN R48 (07	None.	

Stop Signal	series), since July 2024.		
Intelligent Speed Assistance (ISA)	GSR (2019/2144), through Delegated Regulation (EU) 2021/1958 , since July 2024.	None.	

Passenger Cars & Vans

System	European Union	United States of America	Notes
Automated Emergency Braking Systems (AEBS)	GSR (2019/2144), through UN R152 (02 series). Vehicle-to-Vehicle since July 2024, Vehicle-to-pedestrian and vehicle-to-cyclist as from July 2026.	Not yet. FMVSS No 127 will be applicable for new vehicles as from 1 September 2029, pending a court case.	FMVSS No 127 is more stringent.
eCall	eCall Regulation (2015/758), through Delegated Regulation (EU) 2017/79 , since March 2018.	None.	
Emergency Lane Keeping Systems (ELKS)	GSR (2019/2144), through Implementing Regulation (EU) 2021/646 , since July 2024.	None.	
Frontal Protection Systems (E.g. 'Bull Bars') If installed	GSR (2019/2144), through Implementing Regulation (EU) 2021/535 (Annex XII), since May 2007.	None.	
Pedestrian Safety (Leg and Head Protection)	GSR (2019/2144), through UN R127 (04 series), introduced in a phased approach with the first phase applying for new type approvals as from December 2005.	None. (NHTSA submitted a NPRM to incorporate Global Technical Regulation (GTR) No 9 in September 2024).	
Rear Seatbelt Reminders	GSR (2019/2144), through UN R16 (07 series), since September 2021.	Not yet. As from September 2027, through a final	Some relatively minor differences, see Table 10 of the final rule.

[rule](#) amending [FMVSS No 208](#).

Trucks & Buses

System	European Union	United States of America	Notes
Automated Emergency Braking Systems (AEBS)	GSR (2019/2144), through UN R131 (01 series). Vehicle-to-Vehicle has been mandatory since 2015/2018 (depending on specific truck/bus category).	None. (NHTSA submitted a NPRM on AEBS for trucks and buses in July 2023.)	The 02 series of amendments to UN R131 introduced vehicle-to-pedestrian AEBS, however this is not yet mandatory in the EU.
Blind Spot Information Systems (BSIS)	GSR (2019/2144), through UN R151 (Original Version), since July 2024.	None.	
Direct Vision	GSR (2019/2144), through UN R167 (Original Version), as from January 2029.	None.	
Front Underrun Protection	GSR (2019/2144), through UN R93 (Original Version), since August 2003.	None.	
Lane Departure Warning (LDW) Systems	GSR (2019/2144), through UN R130 (Original Version), since November 2015.	None.	
Lateral Underrun Protection	GSR (2019/2144), through UN R73 (01 series), since 1991.	None. (NHTSA submitted an ANPRM on side underride guards for trailers and semitrailers in April 2023).	
Moving Off Information Systems (MOIS)	GSR (2019/2144), through UN R159 (Original Version), since July 2024.	None.	
Speed Limiters	GSR (2019/2144), through UN R89	None.	

	<p><i>(Original Version), since the 1990s for heavier trucks (N3) and buses (M3), and since the 2000s for lighter trucks (N2) and buses (M2).</i></p>	<p><i>(A NPRM on speed limiting devices for heavy vehicles was withdrawn on 24 July 2025).</i></p>	
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