



ADVOCATES
FOR HIGHWAY
& AUTO SAFETY

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New Poll Finds Overwhelming Public Concern About Sharing the Road with Driverless Cars

Safety, Consumer, Law Enforcement & Bicyclist Leaders, and Tech & Automation Experts Call on Senators to Fix Flawed Driverless Car Legislation and Not Attach it to FAA Bill

Today, leading safety, consumer and bicycling advocates, law enforcement, and tech and automation experts urged the U.S. Senate to add critical safeguards to the AV START Act (S. 1885), a bill that will set policy on autonomous vehicles (AVs), also known as driverless cars, for decades to come. As early as this week, sponsors of the bill could attempt to “give it a ride” on the Federal Aviation Administration (FAA) Reauthorization Act (S. 1405). This brazen attempt to rush the AV START Act and enable mass deregulation of AVs comes as a new ORC International [public opinion poll released today](#) finds that 69 percent of Americans are concerned about their safety when sharing the road with driverless vehicles as motorists, bicyclists and pedestrians.

Additionally, the National Transportation Safety Board (NTSB) has several open investigations into crashes and failures of vehicles equipped with automated technology including the fatal Uber crash in Tempe, AZ. The new poll found that 80 percent of Americans believe these crash investigations will be helpful in identifying problems and recommending improvements for this new technology. Further, 84 percent of Americans want Congress to wait for the NTSB to complete its crash investigations before acting on driverless car legislation.

Today’s speakers provided a variety of viewpoints and expertise all concluding that the AV START Act should not be attached to the FAA bill and that common-sense improvements, which will help address the public’s concerns and ensure that driverless cars are developed and deployed safely, are urgently needed in the AV START Act. The following are quotes from the speakers:

Cathy Chase, President of Advocates for Highway and Auto Safety: “Right now, the United States Senate is preparing to consider the Nation’s first driverless car legislation known as the AV START Act (S. 1885). While Advocates has always been on the forefront of supporting technologies to reduce the unacceptable motor vehicle death and injury toll, I am disappointed that we must oppose this bill unless critically-needed – and basic - safeguards are added. Numerous public opinion polls show people are fearful of AVs, and 70 organizations representing public health, consumers, safety, bicyclists, pedestrians, people with disabilities, engineers, researchers, environmentalists, law enforcement and first responders are all urging the Senate to prioritize safety and make improvements to this bill.”

Linda Bailey, Executive Director, National Association of City Transportation Officials: “Automated vehicles have the potential to make our streets safer, and cities welcome the many positive impacts that this new technology may have. However, the AV START Act keeps cities in the dark – weakening cities’ ability to engage with private partners on safe operations, share data, and ensure that this new technology benefits everyone on our streets.”

Joan Claybrook, Former Administrator of the National Highway Traffic Safety Administration and President Emeritus of Public Citizen: “Speeding through the AV START Act without essential safeguards will put all road users in danger and weaken public trust. One of the most glaring deficiencies in the AV START Act is the failure to give the National Highway Traffic Safety Administration (NHTSA) adequate funding and authority to serve as an effective cop on the beat. Industry complains vehicle safety exemptions are needed because NHTSA cannot adapt to new technology quickly, but without funding, how can it?”

Dr. Mica R. Endsley, President of SA Technologies and Former Chief Scientist of the U.S. Air Force: “As currently written the AV Start Act will lead to the introduction of large fleets of autonomous vehicles on public roads that introduce unnecessary risks to road users. While it is easy to point to accidents in which human drivers play a significant role, this neglects the strong safety component that experienced and knowledgeable drivers bring to the avoidance of accidents on a daily basis. Human drivers currently average over 495,000 miles between accidents and over 95 million miles between fatal accidents. No automated vehicles have come remotely close to matching this record.”

Jack Gillis, Executive Director of the Consumer Federation of America: “One of the best ways to educate consumers about this new technology is to make safety information about driverless cars easily available online. It’s no surprise that the vast majority of consumers want this information. And it is especially important with AVs because there are currently no standards set by the U.S. Department of Transportation (U.S. DOT) that make it clear what AV features can, and cannot, do. This database must also let consumer know which AVs are exempt from federal safety standards.”

Dr. Shaun Kildare, Director of Research of Advocates for Highway and Auto Safety: “One of the most specious arguments in the debate on the AV START Act is that the U.S. is losing ground, compared to other countries, in the race to develop the car of the future. This

falsity is being used to push for mass deregulation of this experimental technology so that our country keeps pace. However, this claim is misleading at best and totally baseless at worst.”

Jason Levine, Executive Director of the Center for Auto Safety: “The fact is there is no urgent need for a federal law to allow for testing of autonomous vehicles because one already exists. If AV START did not pass until next Congress, or never passed at all, driverless car testing could continue across the United States indefinitely. Waymo has just passed the 8 million-mile mark in its testing of level 3 AVs on public roads, and their competitors are racing to catch up – all despite the absence of the AV START Act. Alternatively, what AV START does is allow manufacturers not only to test but sell AVs to consumers in states where no testing has been done, where local authorities have not approved such activity, and local residents do not need to even be notified it is happening.”

J. Thomas Manger, Chief of Police of the Montgomery County, MD and President of the Major Cities Chiefs Association: “Autonomous vehicle technology has the potential to save lives and bring about sweeping changes on our roads. But right now, the technology is still in the testing phase and there are far more concerns and questions than there are data-driven conclusions. And this is why it is essential that our country’s first driverless car law prioritize safety. Unfortunately, the AV START Act in its current form falls short in protecting all road users.”

Dr. Jeanna Matthews, Associate Professor of Computer Science at Clarkson University: “Attaching the AV START Act to a must-pass FAA bill is an egregious maneuver to avoid common sense investments in public safety, government oversight and industry accountability. It would be a blank check to an industry that is not prepared to police itself. Computer security researchers, like me, know how easy it is to overestimate your company’s engineering abilities and underestimate both software flaws and the ability of attackers in a rush to market.”

Ken McLeod, Policy Director of the League of American Bicyclists: “By attaching AV START to another bill, Congress is not debating the merits of the bill or waiting for the National Transportation Safety Board to complete its investigation of Elaine Herzberg’s death, which might provide insight on necessary safety provisions. Automated Vehicles are too important to start off on the wrong foot. Congress should wait for the NTSB to complete its investigation and Congress should ensure safety by requiring AVs to pass a ‘vision test’ so that the public knows they can detect, identify, and safely interact with all road users.”

William Wallace, Senior Policy Analyst for Consumers Union: “Instead of setting reasonable, responsible standards for self-driving cars, the AV START Act takes a hands-off approach and puts consumers at risk. Sponsors of this highly controversial bill are trying to jam it through the Senate at a time when NHTSA, the federal auto safety agency, has become a less aggressive safety watchdog. The agency has failed to move forward any new auto safety rules or to modernize its 5-Star Safety Ratings system, and instead has been focused on rolling back consumer protections.”

Here are some additional links providing more information:

Dr. Missy Cummings's [chapter excerpt](#) on the technical reasons for a “vision test” that can determine whether driverless cars can detect road obstacles like other vehicles, signs, pedestrians and bicyclists.

[A letter](#) from 70 safety, public health, bicyclists, pedestrians, smart growth, consumer and environmental groups, law enforcement and first responders, disability communities and families affected by motor vehicle crashes asking Senators not to attach the AV START Act to the FAA bill and to wait until the NTSB has finished its investigations on crashes involving vehicles with autonomous capabilities before moving the bill.

[A letter](#) from the National Association of City Transportation Officials opposing the AV START Act and outlining flaws with the bill.

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SPEAKER BIOS
Press Conference Call on AV START Act
Monday, July 23, 2018

Catherine Chase: Cathy Chase is President of Advocates for Highway and Auto Safety. Her career has included advocacy and policy in the areas of transportation safety, teenage violence prevention and support for at-risk youth. She also has experience with political fundraising, campaigning, and state and federal government relations. She has worked and volunteered for numerous nonprofit organizations in the Washington, DC area related to education, at-risk populations, families coping with grief, and legislative advocacy. Ms. Chase frequently speaks at national conferences, meetings of organizations, Congressional briefings and to media outlets.

Joan Claybrook: Joan Claybrook is President Emeritus of Public Citizen, former Administrator of the National Highway Traffic Safety Administration (NHTSA), and was a founding board member of Advocates for Highway and Auto Safety. Ms. Claybrook has testified numerous times before Congressional committees, and has been recognized by national organizations and educational institutions for her numerous contributions to public health and safety. She speaks to the media, private groups and educational institutions on behalf of public interest policies. Major issues Ms. Claybrook works on include auto, truck and highway safety, government ethics, lobbying and campaign finance reform, and public interest advocacy.

Dr. Missy Cummings: Dr. Cummings is the Director of Duke University's Humans and Autonomy Lab. She is also an associate professor in the University's Department of Mechanical Engineering and Materials Science, the Duke Institute of Brain Sciences and the Duke Electrical and Computer Engineering Department. She has also served as a naval officer and military pilot from 1988-1999 and was one of the U.S. Navy's first female fighter pilots. She has a Ph.D. in Systems Engineering, a M.S. in Space Systems Engineering and a B.S. in Mathematics.

Dr. Mica R. Endsley: Dr. Endsley is President of SA Technologies, a cognitive engineering firm. She has previously served as Chief Scientist of the U.S. Air Force. In this role, she acted as chief scientific adviser to the Chief of Staff and Secretary of the Air Force and was the principal science and technology representative of the Air Force to the civilian scientific and engineering community and to the public at large. Dr. Endsley has a Ph.D. in Industrial & Systems Engineering and a M.S. and B.S. in Industrial Engineering.

Jack Gillis: Jack Gillis is Executive Director of the Consumer Federation of America. He previously served as the group's Director of Public Affairs since 1983. In addition to being CFA's CEO, Gillis serves as an advocate on issues relating to auto safety, auto buying, fuel efficiency and consumer protection and is the author of *The Car Book*. He is also the Executive Director of the Certified Automotive Parts Association.

Dr. Shaun Kildare: Dr. Kildare is the Director of Research at Advocates for Highway and Auto Safety. His previous experience includes research and work with the systems optimization group at Autoliv NA, the Pacific Institute for Research and Evaluation, and BMW in Munich, Germany. Dr. Kildare also operated his own business as an independent contractor and consultant performing accident reconstruction of motor vehicle crashes. Dr. Kildare has a M.Sc and Ph.D. in Civil Engineering and a B.S. in biomedical engineering.

Jason Levine: Jason Levine is Executive Director of the Center for Auto Safety. He previously served as the Director of the Office of Congressional, Legislative, and Intergovernmental Affairs at the U.S. Office of Personnel Management. He has also served in a variety of management and policy roles at the U.S. Consumer Product Safety Commission, including Chief of Staff, Director of the Office of Legislative and Intergovernmental Affairs, and Chief Counsel to Vice Chairman Robert Adler.

Chief J. Thomas Manger: Chief J. Thomas Manger has been the Chief of Police in Montgomery County, Maryland, since February 2004. He also serves as the President of the Major Cities Chiefs Association. Chief Manger began his law enforcement career in 1977 with the Fairfax County Police Department in Virginia, where he later became Chief of Police. His commitment to the highest ethical standards for policing and his enactment of new policies to increase departmental accountability has earned significant recognition and praise. He is the recipient of the Fairfax County Human Rights Commission Award for outstanding contributions, and the N.A.A.C.P.'s Community Service Leadership Award. In 2012, Chief Manger was inducted into the Montgomery County Human Rights Hall of Fame.

Dr. Jeanna Matthews: Dr. Matthews is an Associate Professor of Computer Science at Clarkson University. She is an expert in computer security and has experience identifying vulnerabilities in complex systems in a wide range of software. She has also spent over a decade working with the Association for Computing Machinery technology policy effort. Dr. Matthews has a Ph.D. in computer science.

Ken McLeod: Ken McLeod is the Policy Director of the League of American Bicyclists. At the League, he manages the Bicycle Friendly State program, provides technical assistance to advocates working on state and local legislation, and conducts research on a variety of topics, with an emphasis on how technology will affect the future of bicycling. He also works as part of the Active Transportation Leadership Institute to connect League programming with bicycle and pedestrian advocacy organizations throughout the United States.

William Wallace: Will Wallace is a senior policy analyst in Consumers Union's Washington office, where he works on product safety, motor vehicle, and food policy issues. Prior to joining Consumers Union, he spent five years working for the U.S. House of Representatives, primarily at the Committee on Energy and Commerce as legislative staff for safety, consumer protection, general commerce, and international trade-related matters.

**STATEMENT OF
Cathy Chase, President
Advocates for Highway and Auto Safety
July 23, 2018**

Good afternoon. I am Cathy Chase, President of Advocates for Highway and Auto Safety. Advocates is a coalition of consumer, health, and safety groups and property-casualty insurance companies working together to advance safer cars, safer drivers and safer roads. Thank you for joining us on this call.

Right now, the United States Senate is preparing to consider the Nation's first legislation on driverless cars, also called autonomous vehicles (AVs), which is known as the AV START Act (S. 1885). While Advocates has always been on the forefront of supporting technologies to reduce the unacceptable motor vehicle death and injury toll, I am disappointed that we must oppose this bill unless critically-needed – and basic – safeguards are added.

I would like to share with you five reasons why the Senate must put the brakes on this bill:

1. At least three people have already been killed in the U.S. in crashes involving vehicles with autonomous capabilities, even though vehicle miles traveled by cars equipped with self-driving features is insignificant compared to traditional vehicles.
2. The National Transportation Safety Board (known as the NTSB) is currently investigating a number of these crashes and their recommendations will undoubtedly have direct bearing on our Nation's AV policy.
3. Auto manufacturers can already *test* an unlimited number of AVs on our roads; they just cannot sell them on a large scale if they don't comply with federal safety standards.
4. Other than giving AV manufacturers the green light to sell potentially millions of untested and unproven AVs to the public, there is no good reason for the Senate to move forward with this bill as currently written. In fact, Advocates has a list of common-sense improvements, included in today's media kit, which would ensure safer development and deployment of AVs. You will hear more about these issues, including exemptions from safety standards, the need for data sharing and regulations, and documentation of AV performance, among others, from our speakers.
5. Numerous public opinion polls show people are fearful of AVs, and 70 organizations representing public health, consumers, safety, bicyclists, pedestrians, people with disabilities, engineers, researchers, environmentalists, law enforcement and first responders are all urging the Senate to prioritize safety and make improvements to this bill.

In fact, Advocates commissioned an independent public opinion poll conducted just this past weekend which found that 69 percent of people feel concerned about safety when sharing the road with driverless cars. This is up from 64 percent when a similar question was posed in January.

The poll also found that 80 percent believe the NTSB's crash investigations will be helpful in identifying problems and recommending improvements for this new technology. And, 84

percent of Americans want the NTSB to complete their current crash investigations before Congress acts on driverless cars.

We have an outstanding lineup of experts who will offer their insights and perspectives on the state of driverless cars and the AV START Act. A media kit is available on our website, SafeRoads.org.

After all of the speakers have given their remarks, we will take questions from the press. Thank you.

STATEMENT OF
Joan Claybrook, Former Administrator
National Highway Traffic Safety Administration
July 23, 2018

Senator John Thune (R-SD) is trying to ram the AV START Act (S. 1885) through the United States Senate with an artificial urgency whipped up by auto manufacturers and tech companies seeking to discard safety standards. Without an immediate and major course correction, this bill will allow for the widespread sale of experimental robot cars to the American public with many of them exempt from federal vehicle safety standards.

Supporters of the bill are peddling and perpetuating yet another false narrative – that driverless cars will be a silver bullet to eliminate traffic deaths and ensure mobility. However, they have offered no evidence for these lofty claims.

Industry lobbyists also are painting a picture of impending doom if the AV START Act isn't passed now. To push the bill forward, they have created a fake frenzy in Washington that does not match what industry executives are saying about the readiness of the technology. For example, Bill Ford, Jr., CEO of Ford Motor Co., [recently stated](#), "There's been a lot of over-promising and I think a lot of misinformation that's been out there. It's really important that we get it right, rather than get it quickly."

Gill Pratt, CEO of Toyota Research Institute, [said earlier this year](#) that, "It's a mistake to say that the finish line is coming up very soon. Things are changing rapidly, but this will be a long journey." He added, "We know we will get to true Level 5 autonomy. But we don't know when."

Likewise, Morgan Stanley Analyst Adam Jonas [said](#), "In fact, the more we study and experience this topic, the more convinced we are that the inflection point of the adoption curve will be far later than the market may anticipate ... At the same time, we urge investors to consider the many gating factors to mass autonomous car adoption – not the least of which are the moral, legal, regulatory, and ethical factors which are impossible to model like the framework behind life-and-death decision-making on public roads interacting with human life."

And, the leading industry trade publication, Automotive News, [has echoed the sentiment](#) that the companies should slow down, and that huge amounts of money are being spent by industry for vehicles they don't even know will sell--or what they will cost.

This all leads us to one question – what's the rush? Speeding through the AV START Act without essential safeguards will put all road users in danger and weaken public trust.

One of the most glaring deficiencies in the AV START Act is the failure to give the National Highway Traffic Safety Administration (NHTSA) adequate funding and authority to serve as an effective cop on the beat. Industry complains vehicle safety exemptions are needed because NHTSA cannot adapt to new technology quickly, but without funding, how can it?

Further, industry and Senate supporters of S. 1885 argue that if a vehicle exempted by the bill from meeting safety standards is defective, it can always be recalled. BUT-- Just last week, the DOT's Office of Inspector General released a report criticizing the agency's inadequate handling of recent vehicle safety recalls. And it's a fool's errand to think that the same industry that gave us exploding Takata airbags and GM faulty ignition switches can be entrusted to self-regulate their driverless cars.

As cars become even more complex, NHTSA's need for more resources and authorities to oversee these new experimental vehicles will be more pronounced, or the public will be at the mercy of industry cutting of corners.

Make no mistake. Unleashing unproven technology while the regulators are sidelined is a recipe for disaster. It is regulatory malpractice that will cost consumers their lives and treasure. And if this bill is enacted, the auto industry will fight to the death to stop any subsequent regulatory requirements no matter what is happening on the highway.

**STATEMENT OF
Dr. Mica R. Endsley, President,
SA Technologies and Former Chief Scientist,
U.S. Air Force
July 23, 2018**

As currently written the AV Start Act will lead to the introduction of large fleets of autonomous vehicles on public roads that introduce unnecessary risks to road users.

While it is easy to point to accidents in which human drivers play a significant role, this neglects the strong safety component that experienced and knowledgeable drivers bring to the avoidance of accidents on a daily basis. Human drivers currently average over 495,000 miles between accidents and over 95 million miles between fatal accidents. No automated vehicles have come remotely close to matching this record.

Automation does not necessarily improve human performance. Over 40 years of research on automation shows that many new types of driver errors and safety hazards may be introduced (Endsley, 2017; Onnasch, Wickens, Li, & Manzey, 2014). Automation actually causes drivers to lose the situation awareness that is required for safe driving and taking over control when needed.

For example, the NTSB found that the cause of the fatal Tesla crash in Florida in 2016 was over-reliance on automation, lack of engagement by the driver, and inattention to the roadway. Unfortunately, incidents of distracted driving will only increase as automation improves, and no methods have yet been developed that overcome this fundamental challenge. At the higher levels of automation being allowed by the AV Start Act, we can expect far more such accidents. It is not just a matter of keeping your hands on the wheel or your eyes forward, it is a problem with keeping your mind on the road.

The AV Start Act should require at a minimum that the design of automated vehicle interfaces support drivers by providing accurate information on state of the vehicle and the driving environment, as well as transparency into what the automation is doing. In situations that the automation cannot handle, highly salient warnings are necessary, with enough lee time to allow for safe take-over by the driver. The AV Start Act should not include its current provisions that allow manufacturers to remove the steering wheels, brakes and controls that would allow people to take-over if needed.

Highly automated vehicle systems should also be required to demonstrate testing that shows safety equal to or better than today's drivers before being approved for the roadways, including in automation failure conditions that involve take-over by human drivers.

Further, automobile manufacturers should be required to provide detailed training on the capabilities, limitations and behaviors of automated driving systems so that drivers obtain the accurate understanding that is critical for effective oversight and interaction with them.

These are very basic requirements that should be included in the AV START Act in order to protect the safety of America's drivers, passengers and pedestrians. I urge Congress to address these needs in its bill before passage.

References

Endsley, M. R. (2017). From here to autonomy: Lessons learned from human-automation research. Human Factors, *59*(1), 5-27.

Onnasch, L., Wickens, C. D., Li, H., & Manzey, D. (2014). Human performance consequences of stages and levels of automation: An integrated meta-analysis. Human Factors, *56*(3), 476-488.

**STATEMENT OF
Jack Gillis, Executive Director,
Consumer Federation of America
July 23, 2018**

Autonomous vehicles have the potential to be a technological vaccine that could dramatically reduce the tragic toll that autos take on our society. However, like any successful vaccine, they need to be thoroughly tested to specific standards before they are made available to the public. The current version of the AV Start Act (S. 1885) falls woefully short on the protections needed to insure the safe introduction of the autonomous vehicle.

In addition to the various concerns already raised at this press conference, privacy, data availability, government oversight, and transparency must be a top priority to insure safe and efficient autonomous vehicles.

Because autonomous vehicles (AVs) will be tracked and monitored, regulations are needed to ensure that this information remains the privy and property of the consumer. Furthermore, because of the bandwidth being allocated to AV communications, we are concerned that much of it will be used for commercialization, which will seriously annoy consumers, and increase the already growing problem of distracted driving.

As they operate, AVs will be collecting tremendous amounts of technical and performance data--information vital to the independent analysis of the efficacy of the various AV operations. This information needs to be made publicly available. Independent experts need to assess AV capabilities. Consumers need it to make informed purchase decisions regarding AVs, all of which will have various features and performance levels.

One of the best ways to educate consumers about this new technology is to make safety information about driverless cars easily available online. It's no surprise that the vast majority of consumers want this information. And it is especially important with AVs because there are currently no standards set by the U.S. Department of Transportation (U.S. DOT) that make it clear what AV features can, and cannot, do. This database must also let consumer know which AVs are exempt from federal safety standards.

The good news is that the U.S. DOT has a system in place. Safercar.gov provides vehicle safety information and the ability to look up recall information by VIN. Manufacturers must submit AV feature information to U.S. DOT by VIN number so it can reside in this already created system. This will enable the over 50 million Americans who buy new and used cars to precisely determine the features of a particular AV, and the public exposure will serve to stimulate competition in developing the very best AV features. As the government and industry attempts to roll out AVs without any type of standards or consistent nomenclature—basic, comparative information about AV features is an absolute minimum.

Finally, for there to be proper government oversight of these extraordinarily complex and highly technical products, Congress must mandate, and provide funding for, the National Highway Traffic Safety Administration to establish an AV oversight division within the agency staffed

with the technical know-how needed to both understand and monitor this new technology. Right now, the Agency is incapable of overseeing AV technology even if it wanted to. Without such an effort, the car and tech companies pushing AVs onto American roadways will set their own standards. Given the serious recalls by the car companies and the data breaches by the tech companies, this is a recipe for disaster. For AVs to reach their full potential as a lifesaving addition to America's highways—there must be thoughtful and effective regulatory oversight—as currently written, the AV Start Act fails to do that on a number of fronts.

STATEMENT OF
Dr. Shaun Kildare, Director of Research
Advocates for Highway and Auto Safety
July 23, 2018

I am Shaun Kildare, Director of Research at Advocates. One of the most specious arguments in the debate on the AV START Act is that the U.S. is losing ground, compared to other countries, in the race to develop the car of the future. This falsity is being used to push for mass deregulation of this experimental technology so that our country keeps pace. However, this claim is misleading at best and totally baseless at worst.

In reality, California is already the world's largest open testing ground for driverless cars. And, 11 states and Washington, DC have taken the next step beyond testing and opened their doors for driverless cars, which comply with federal safety standards, to be operated on public roads.

Other countries are taking a more deliberate and cautious approach. Let me provide some examples. In April, the Chinese government established guidelines for on road *testing*, not sale, of autonomous vehicles. These guidelines require prior closed road testing, an experienced driver behind the wheel, data retention requirements, and limits on testing periods, among other requirements. While China has espoused plans to have AVs in their vehicle fleet within the next decade, plans are different from execution. Elsewhere in Asia, the Japanese government is reviewing regulations that could affect driverless cars and has allowed on-road *testing* with a driver behind the wheel. Japan is currently working on regulatory and legal schemes for controlling the commercial introduction of AVs, but even so has not begun to address the highest levels of automation. Similarly, South Korea has plans to *test* these vehicles but has generally limited testing to 200 miles of public roads or to test tracks.

European countries have also generally taken a stricter approach by limiting *testing* of these cars to certain routes and areas. Germany, like many other countries I have just mentioned, requires a human to be behind the wheel of a driverless car in order to take back control and has other important elements including requirements for vehicle data recording. In the United Kingdom, *testing* has largely been limited to a handful of cities, and the government has published a detailed code of practice for *testing* AVs, not sale. The UK government is also undertaking a three-year review to establish the regulations and legal requirements for allowing fully driverless cars on their roads.

The AV START Act should not be propelled forward, fed by a false narrative that if we don't move forward with it, we will fall behind. It is simply not true. Now is the time for the Senate to be deliberative and establish regulations for AVs which will protect all road users.

Thank you.

STATEMENT OF
Jason Levine, Executive Director
Center for Auto Safety
July 23, 2018

In recent weeks, certain U.S. Senators and elements of the auto industry, have insisted the entire future driverless cars is dependent upon swift approval of the AV START Act (S. 1885). The need they claim for speed is so great there's no time to debate the merits or details of the bill in public, instead the bill must be attached to a must pass piece of legislation such as the FAA reauthorization bill. Failing such measures, these interests say, the entire future of autonomous vehicle technology will pass America by. This is a tall tale made up by DC lobbyists to justify high fees and exaggerated promises made at the beginning of this Congress.

The manufactured urgency to rush passage of AV START by attaching it to the FAA reauthorization bill is built on a series of myths and fear mongering. The fact is public testing of driverless cars is already ongoing in the U.S., subject to local oversight. The fact is the AV START Act removes city and state controls and does nothing to mandate federal safety rules. And, the fact is, this bill paves the way for the sale of unregulated driverless cars to the public while removing liability from manufacturers. Policy questions involving potentially revolutionary transportation technology deserve their own debate – not to be treated as carry-on luggage.

Some specific examples of these myths include:

MYTH: AV-START must be passed immediately because, without it or a similar law, manufacturers cannot test driverless cars and get the data needed to improve driverless cars.

FACT: A federal law was passed in 2015 to allow the testing of an unlimited number autonomous vehicles in public. Section 24404 of the FAST Act (Pub. L. No. 114-94) allows manufacturers to evaluate and test vehicles that do not comply with Federal Motor Vehicle Safety Standards, so long as those test vehicles are not sold or made available for sale after testing.

This provision in the FAST Act is what is allowing AV testing to take place right now in 12 states - Arizona, California, Colorado, Florida, Massachusetts, Michigan, Nebraska, Nevada, Pennsylvania, South Carolina, Tennessee, Texas - and the District of Columbia. Georgia, Maine, Ohio, Oregon, Washington are in the process of preparing for AV testing.

The fact is there is no urgent need for a federal law to allow for testing of autonomous vehicles because one already exists. If AV START did not pass until next Congress, or never passed at all, driverless car testing could continue across the United States indefinitely. Waymo has just passed the 8 million-mile mark in its testing of level 3 AVs on public roads, and their competitors are racing to catch up – all despite the absence of the AV START Act. Alternatively, what AV START does is allow manufacturers not only to test but sell AVs to consumers in

states where no testing has been done, where local authorities have not approved such activity, and local residents do not need to even be notified it is happening. To top it off, the bill contains no requirement for federal rules governing the safety of these vehicles before sale.

MYTH: Current Congressional proposals (like the AV START Act) do nothing to inhibit states and localities from engaging in their traditional role of oversight regarding who can operate vehicles in their jurisdiction and how those vehicles may operate.

FACT: AV START would preempt states and localities from writing or enforcing laws and regulations relating to the performance of the driverless vehicles that would be sold and operated in local neighborhoods.

AV START prohibits states from “regulating the design, construction, or performance” of AVs. While this may seem to maintain the status quos of the federal government setting safety and performance standards via Federal Motor Vehicle Safety Standards, in the context of autonomous vehicles, it is not that simple. When a driverless vehicle takes over the role of the traditional driver, state traffic laws still apply to that vehicle, and how that driverless vehicle performs can directly affect its ability to comply with local law. Instead of preserving the role of states, AV START exacerbates this conflict between state and federal law, and effectively allows AV manufacturers to decide the future of state and local traffic laws in the absence of federal regulation.

The United States Conference of Mayors, the National Governors Association, the National Conference of State Legislators, the National League of Cities, the American Association of Motor Vehicle Administrators, the American Association of State and Highway Transportation Officials, the Governors Highway Safety Administration, and the National Association of City Transportation Officials have all called on Congress to amend AV START so that it is clear that States retain authority over traffic safety regulations.

MYTH: AV START must be passed immediately because it creates a pathway to federal regulations of AVs.

FACT: No, it doesn't.

The AV START Act contains a number of provisions that require NHTSA or other working groups and advisory committees to conduct studies about Autonomous Vehicles. These include Sections 10, 12, 14, 15 and 18 of AV START which direct the DOT Secretary to direct studies or evaluate recommendations based on studies. Yet, the only required rulemaking in the entire bill pertains to point-of-sale information available to potential AV purchasers. The bill does not require rulemaking of any kind to address critical AV issues such as performance and safety, cybersecurity, data recording and access, and infrastructure. For a product that is being marketed to radically enhance safety this seems rather dangerous.

Not only will such a hands-off approach enable a race to the bottom in terms of non-traditional automakers getting driverless cars on the road, it provides exactly zero benefit to the driving, bicycling, and walking public when these vehicles arrive in our neighborhoods. Given AV START's preemption of state action in these areas, the absence of requirements for federal rulemakings means that AV manufacturers are in complete control when it comes to consumer safety in AVs. As history has proven time and time over, automakers and technology companies are incapable of voluntarily prioritizing safety over profit, and NHTSA is an unwilling regulator. Whether the danger is from Jeeps' gas tanks catching on fire; GM's ignition switches failing while the car is in motion; Uber's turning off sensors; or Tesla selling advanced cruise control as driverless technology the problem remains: Any bill that does not require NHTSA to regulate

ensures that the safety of the American public will take a back seat to shareholders as technology advances.

STATEMENT OF
J. Thomas Manger, Chief of Police
Montgomery County, MD and President,
Major Cities Chiefs Association
July 23, 2018

I am the Chief of Police of Montgomery County, Maryland, and President of the Major Cities Chiefs. I am speaking today to urge the U.S. Senate to make vital improvements to the AV START Act.

Let me start out by saying that Montgomery County has been a leader in embracing proven traffic safety technology. For example, we employ automated enforcement programs to help curb speed and red light running. This technology is helping our officers to reduce crashes, save lives and improve driver behavior.

Similarly, autonomous vehicle technology has the potential to save lives and bring about sweeping changes on our roads. But right now, the technology is still in the testing phase and there are far more concerns and questions than there are data-driven conclusions. And this is why it is essential that our country's first driverless car law prioritize safety. Unfortunately the AV START Act in its current form falls short in protecting all road users.

Law enforcement officers have a special interest in this legislation because we are on the roads every day. It definitely caught our attention when just a couple months ago, two serious crashes occurred in which self-driving vehicles drove into parked or stopped first responder vehicles. Fortunately, no one was seriously injured. However, these crashes were entirely preventable and would not have occurred if the technology was performing correctly.

Others on today's call will highlight a number of improvements needed to be made to the AV START Act. I will briefly share our top three concerns.

1. **Preemption before Regulation:** The bill prohibits state regulatory action on AVs *even though* the federal government has not taken regulatory action. *States must retain their traditional legal authority to protect public safety.*
2. **Data Insufficiency:** Even though some states are requiring data on self-driving vehicle crashes now, the bill gives the U.S. DOT three years to act and revise data collection to include AVs. *All crashes involving an AV should be reported to NHTSA immediately, and that information should be made available to the public.*
3. **Criminal Use:** Criminals hacking into systems is a serious concern that is not adequately addressed in the bill. *A cybersecurity standard to protect against potentially catastrophic vehicle hacks should be required.*

Now is the time to make these changes. We know precautionary actions prevent future problems. The famous magistrate John Fiedling, who is known for forming the first professional police force said, "It is much better to prevent even one man from being a rogue than apprehending and bringing forty to justice." We urge Congress to apply the concept of prevention to improving the AV START Act.

STATEMENT OF
Dr. Jeanna Matthews, Associate Professor of Computer Science,
Clarkson University
July 23, 2018

My name is Jeanna Matthews. I am a computer science professor and computer security researcher. I have experience identifying vulnerabilities in complex systems from the virtualization software underpinning cloud computing to software used in the criminal justice system to compare DNA in evidence samples to a suspect's DNA. For over 10 years, I have been part of the Association for Computing Machinery (ACM) technology policy effort.

Modern automobiles are extremely complex, Internet connected, software-controlled systems. Just like it is difficult to keep bugs and malicious actors out of our laptops, it is difficult to keep them out of modern cars. However, unlike a laptop, the computer system in a car is attached to 4000 pounds of metal that can travel at 75 miles per hour or more.

Security vulnerabilities in autonomous vehicles represent a huge risk to human safety. Successful attacks on automobiles have already been demonstrated including gaining control of steering and braking over the Internet. The AV START Act would only require manufacturers to have a written plan for identifying and reducing cybersecurity risks. That is simply not enough. More substantive cybersecurity standards are only common sense before we the public - drivers, passengers, bicyclists, pedestrians - are asked to share the road with autonomous vehicles.

As a computer security researcher, I know well that security through obscurity is not enough. We need requirements for transparency and iterative improvement. We should be requiring that manufacturers conduct and document thorough threat analysis and risk assessments. There should be requirements for sharing of information and data on cybersecurity vulnerabilities, attacks and patches. Manufacturers should also be required to separate critical safety systems from other systems (e.g. infotainment) whether through a firewall or a completely separate architecture in the vehicle to reduce the exposure of critical safety systems to additional attack surfaces.

Attaching the AV START Act to a must-pass FAA bill is an egregious maneuver to avoid common sense investments in public safety, government oversight and industry accountability. It would be a blank check to an industry that is not prepared to police itself. Computer security researchers, like me, know how easy it is to overestimate your company's engineering abilities and underestimate both software flaws and the ability of attackers in a rush to market.

Simply put, rushed legislation plus 4000-pound vehicles plus no human driver plus software vulnerabilities equals a recipe for disaster and human tragedy.

**STATEMENT OF
Ken McLeod, Policy Director
League of American Bicyclists
July 23, 2018**

Five years ago I was an AV evangelist – I saw automated vehicles as a way to create a safer, more reliable, and more courteous transportation system that works for all people – people in cars, people walking, and people biking. As a bicyclist, I was excited that I would never have to worry that an AV approaching me was distracted, drunk, or looking to teach me a lesson.

Unfortunately, as the technology has gotten more real, the promised benefits seem to remain distant. Earlier this year, the death of Elaine Herzberg raised questions that are still unanswered about how we can ensure AVs work for all people – and particularly people who bike, walk, and are otherwise outside these vehicles. Will an AV stop when I cross the road? Will an AV see me if I wear dark clothes?

To realize the promised benefits of AVs, the AV START Act should assure that AVs are safe for all people. By attaching AV START to another bill, Congress is not debating the merits of the bill or waiting for the National Transportation Safety Board to complete its investigation of Elaine Herzberg’s death, which might provide insight on necessary safety provisions.

Automated Vehicles are too important to start off on the wrong foot. Congress should wait for the NTSB to complete its investigation and Congress should ensure safety by requiring AVs to pass a “vision test” so that the public knows they can detect, identify, and safely interact with all road users. If you support that message, please visit bikeleague.org/AV to send a message to your Senators.

I am still tremendously excited by the potential of Automated Vehicles. At the League of American Bicyclists we look forward to engaging with the auto industry and representing bicyclists and pedestrians as these technologies are deployed. Right now, that means pushing for stronger safety provisions in AV START - visit Bikeleague.org/AV to say you support AV safety.

**Dr. Missy Cummings, Director
Duke University's Humans and Autonomy Lab
July 23, 2018**

[Click here to read a chapter](#) from Dr. Cummings's book entitled "Adaptation of Human Licensing Examinations to the Certification of Autonomous Systems," where she outlines the technical reasons for a "vision test" that can determine whether driverless cars can detect road obstacles like other vehicles, signs, pedestrians and bicyclists.

Public to U.S. Senate: Pump the Brakes on Driverless Car Bill

ORC International CARAVAN Public Opinion Poll

July 2018



ADVOCATES
FOR HIGHWAY
& AUTO SAFETY

Commissioned by Advocates for Highway and Auto Safety

Founded in 1989, Advocates for Highway and Auto Safety (Advocates) is an alliance of public health, safety, and consumer organizations, insurers and insurance agents that promotes highway and auto safety through the adoption of safety laws, policies and regulations. Advocates is a unique coalition dedicated to advancing safer vehicles, safer drivers, and safer roads.

Introduction

According to the federal government, each year motor vehicle crashes kill tens of thousands of people and injure millions more at a cost to society of over \$800 billion. According to the latest statistics from the National Highway Traffic Safety Administration (NHTSA), 37,461 people were killed on our nation's roads in 2016. This is an increase of over six percent from 2015.

Advocates has always enthusiastically championed vehicle safety technology and for good reason -- it is one of the most effective strategies for preventing deaths and injuries. NHTSA has estimated that since 1960, over 600,000 lives have been saved by motor vehicle safety technologies. So too are we encouraged that autonomous vehicle (AV) technologies hold tremendous promise to achieve additional safety advances and to decrease the number of motor vehicle crashes, fatalities and injuries. However, selling AVs to the public before they can be safely operated on public roads and without commonsense government oversight and industry accountability is not only reckless and ill-advised, but it will also substantially reduce public confidence in this new technology.

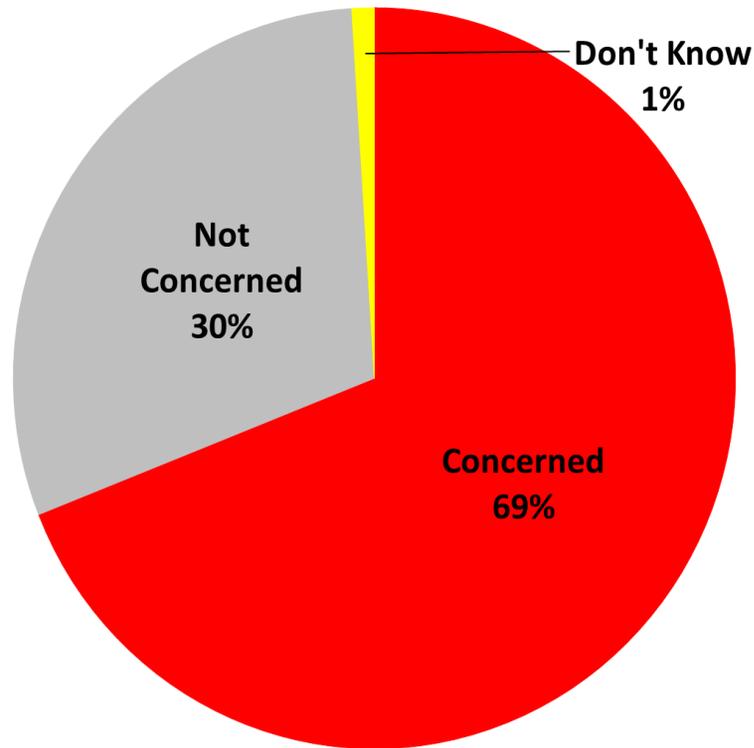
Moreover, there have been a number of crashes involving vehicles equipped with automated driving technology. Those being investigated by the National Transportation Safety Board (NTSB) have file numbers included.

- May 29, 2018, Laguna Beach, CA, Tesla Model S: A Tesla reportedly in "Autopilot" crashed into a parked Laguna Beach Police Department Vehicle. The Tesla driver suffered minor injuries.
- May 8, 2018, Fort Lauderdale, FL, Tesla Model S: The vehicle reportedly was traveling at a high rate of speed when it crashed into a wall. The resulting post-crash fire killed two teenagers and injured another. The NTSB is examining the electric vehicle battery fire and emergency response. (NTSB Investigation HWY18FH013)
- March 23, 2018, Mountain View, CA, Tesla Model X: While on "Autopilot", the vehicle struck a safety barrier, causing the death of the driver. (NTSB Investigation HWY18FH011)
- March 18, 2018, Tempe, AZ, Uber Self-Driving Test Vehicle: The Uber vehicle, which was operating on "self-driving mode," struck and killed a pedestrian walking a bicycle. (NTSB Investigation HWY18MH010)
- January 22, 2018, Culver City, CA, Tesla Model S: The Tesla, reportedly on "Autopilot," was traveling at 65 mph when it crashed into the back of a parked fire truck that was responding to the scene of a separate crash. Remarkably, neither the driver nor the first responders were injured. (NTSB Investigation HWY18FH004)
- November 8, 2017, Las Vegas, NV, Driverless Shuttle Bus: A driverless shuttle was involved in a crash during its first day of service. Fortunately, there were no deaths or injuries. (NTSB Investigation HWY18FH001)
- May 7, 2016, Williston, FL, Tesla Model S: Driver killed when his vehicle, operating on "Autopilot," crashed into the side of a truck tractor combination, traveling underneath the trailer. (NTSB Investigation HWY16FH018)

The U.S. Senate is considering a bill, the American Vision for Safer Transportation through Revolutionary Technologies (AV START) Act, S. 1885, which will set policy on AVs for decades to come. The bill is awaiting action and could come up at any time. The U.S. House of Representatives passed the Safely Ensuring Lives Future Deployment and Research In Vehicle Evolution (SELF DRIVE) Act, H.R. 3388, on September 6, 2017.

This poll was commissioned to take the pulse of the public regarding if they are concerned about AVs and if they think the findings of the NTSB are relevant to the policy discourse.

The public is overwhelmingly concerned about sharing the road with driverless vehicles as motorists, bicyclists and pedestrians.



The public has said loud and clear – they are concerned about sharing the road with driverless cars. This apprehension is widespread across demographics including gender, generations, region, education and political affiliation.

Not only will driverless car safety affect those who ride in them, but they will also pose serious risks to other road users including bicyclists and pedestrians.

In order to allay this public skepticism, the U.S. Senate must put in place proper protections to ensure the safe development and deployment of driverless cars.

Give the Nation's preeminent transportation investigatory board time to do its job.

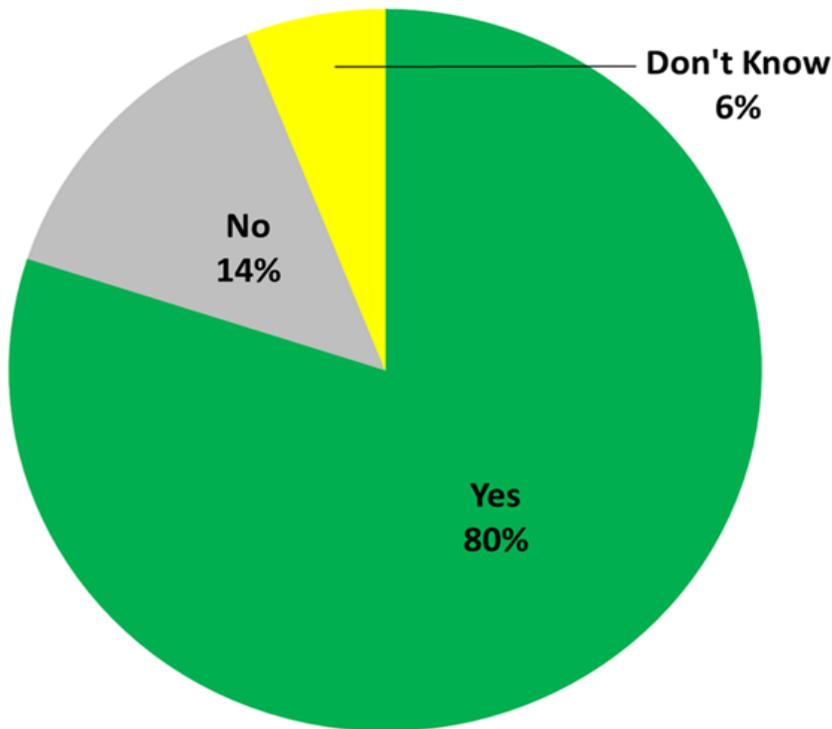
The National Transportation Safety Board (NTSB) is currently investigating several crashes involving cars equipped with self-driving technology. As these investigations are taking place, Congress is considering legislation that would allow the widespread sale of experimental driverless cars. The NTSB is undertaking these investigations to determine how self-driving vehicles interact with the driving environment, other vehicles and vulnerable road users such as pedestrians and bicyclists.



Furthermore, a thorough and independent analysis of these crashes is needed to identify safety deficiencies, determine any contributing causes, and recommend government and industry actions to prevent future deadly incidents. For more than 50 years, NTSB investigations, findings and recommendations have been essential to ensuring the highest safety standards in all modes of transportation in this country.

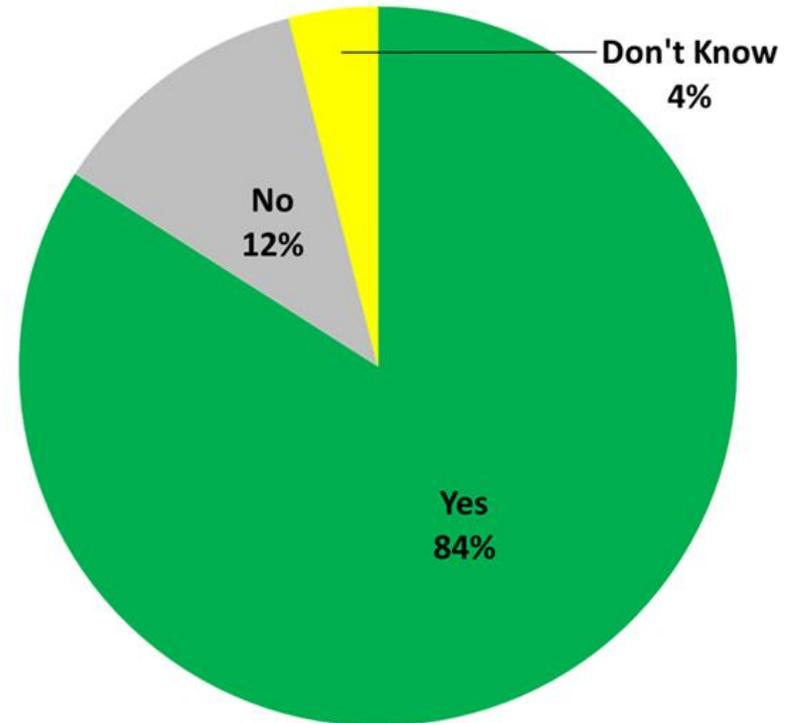
Do you believe the NTSB investigations will be helpful in identifying problems and recommending improvements?

80% say YES



Do you believe the NTSB should complete their current investigations of crashes involving driverless cars before Congress acts on legislation?

84% say YES



There should be no legislative action on driverless car legislation until the NTSB finishes its ongoing investigations into AV crashes and failures.



ADVOCATES
FOR HIGHWAY
& AUTO SAFETY

Crashes and Failures Involving Vehicles Equipped with Autonomous Driving Systems: Public Roads Serving as Proving Grounds and Endangering All Road Users

*Problems Continue to be on Tragic Display and Uncertainty is Still Abound as the
National Transportation Safety Board (NTSB) has Several Open Investigations*

May 29, 2018, Laguna Beach, CA, Tesla Model S: A Tesla reportedly in “Autopilot” crashed into a parked Laguna Beach Police Department Vehicle. The Tesla driver suffered minor injuries.



Photo Source: LA Times

May 8, 2018, Fort Lauderdale, FL, Tesla Model S: The vehicle reportedly was traveling at a high rate of speed when it crashed into a wall. The resulting post-crash fire killed two teenagers and injured another. The NTSB is examining the electric vehicle battery fire and emergency response. (NTSB Investigation HWY18FH013)



Photo Source: CBS Miami

March 23, 2018, Mountain View, CA, Tesla Model X: While on “Autopilot”, the vehicle struck a safety barrier, causing the death of the driver. (NTSB Investigation HWY18FH011)



Photo Source: Forbes

March 18, 2018, Tempe, AZ, Uber Self-Driving Test Vehicle: The Uber vehicle, which was operating on “self-driving mode,” struck and killed a pedestrian walking a bicycle. (NTSB Investigation HWY18MH010)



Photo Source: NBC News

January 22, 2018, Culver City, CA, Tesla Model S: The Tesla, reportedly on “Autopilot,” was traveling at 65mph when it crashed into the back of a parked fire truck that was responding to the scene of a separate crash. Remarkably, neither the driver nor the first responders were injured. (NTSB Investigation HWY18FH004)



Photo Source: Culver City Firefighters

November 8, 2017, Las Vegas, NV, Driverless Shuttle Bus: A driverless shuttle was involved in a crash during its first day of service. Fortunately, there were no deaths or injuries. (NTSB Investigation HWY18FH001)



Photo Source: Fox5 Vegas

May 7, 2016, Williston, FL, Tesla Model S: Driver killed when his vehicle, operating on “Autopilot,” crashed into the side of a truck tractor combination, traveling underneath the trailer. (NTSB Investigation HWY16FH018)



Photo Source: NTSB



Critical Safety Provisions Needed in AV START Act, S. 1885

- **Reduce the size and scope of exemptions from federal safety standards:**
 - Prohibit any occupant protection exemptions
 - Extend time between exemption tiers to 24 months for sufficient review and analysis
 - Cap total number of exemptions after tiered system has expired
- **Require that Safety Evaluation Reports (SERs) contain sufficiently detailed information to provide the National Highway Traffic Safety Administration (NHTSA) with all necessary data and information about testing protocols, on-road performance, crashworthiness, data recording and cybersecurity protections**
- **Provide essential consumer information**
 - Require immediate transmission of basic safety information at the point of sale and in the owner's manual
 - Require NHTSA to establish publicly available website with safety information about AVs (i.e., exemptions, AV Level, capabilities and limitations)
 - Require manufacturers to report to NHTSA all crashes involving an AV
- **Require event data recorders (EDRs) on all AVs that capture comprehensive crash data in a format that will aid investigators such as the National Transportation Safety Board (NTSB) and NHTSA**
- **Require DOT AV rulemakings for:**
 - Vision test standard
 - Driver distraction and engagement for Levels 2 & 3 vehicles
 - Minimum requirements for cybersecurity protection
 - Vehicle electronics standard similar to FAA standard
- **Remove dangerous provision allowing manufacturers to disconnect steering wheels, brakes and other safety systems in autonomous mode without any government review and approval**
- **Ensure access for all disability communities, including wheelchair users**
- **Level 2 vehicles should be subject to all safety critical provisions**
- **Create AV Office at NHTSA and provide sufficient resources and enhanced enforcement authorities (i.e., imminent hazard, stronger civil penalties, criminal penalties)**
- **Until NHTSA issues standards and regulations, states should not be preempted from protecting citizens**
- **All advisory/technical committees must be subject to the Federal Advisory Committee Act (FACA) to ensure transparency**

WE URGE THE U.S. SENATE TO:

- 1. Oppose the AV START Act unless critically-needed changes are made.**
- 2. Oppose efforts to attach AV START Act to unrelated legislation such as the reauthorization of the Federal Aviation Administration (FAA).**
- 3. Insist that no legislative action occur until the National Transportation Safety Board has finished its ongoing investigations into AV crashes and failures.**



The Senate AV START Act – What it Does and What is Needed

The AV START Act (American Vision for Safer Transportation through Advancement of Revolutionary Technologies Act (S. 1885)) will set autonomous vehicle (AV) policy for decades to come. The legislation must be stopped unless substantial safety problems have been corrected. The sponsors are pushing for Senate floor consideration with artificial urgency. The bill must be improved before it advances and should not be attached to unrelated legislation.

What it Does

Millions of AVs to be Exempt from Federal Safety Standards (Sec. 6)

The bill allows for potentially millions of vehicles to be sold, not just tested, that are exempt from current Federal Motor Vehicle Safety Standards (FMVSS), including those that provide occupant protection. The numbers of exempt vehicles per manufacturer are 15,000 in year one, 40,000 in year two, and 80,000 in year three. Manufacturers may apply for exemptions beyond 80,000 vehicles after year four. Moreover, there is a 10 year sunset for exemptions.

The number of exempt vehicles must be significantly lowered and capped, and exemptions to occupant protection standards must be prohibited. Further, even though the National Highway Traffic Safety Administration (NHTSA) is directed to review the performance of exempted vehicles, the 12-month time period is inadequate for thorough and comprehensive analysis. As such, the time period before exemption numbers are increased must be extended.

SER Only Requires Manufacturers to “Describe” AV Systems (Sec. 9)

The bill requires that each manufacturer “describe” information as part of its Safety Evaluation Report (SER). Allowing for the “description” of AV systems does not require any more than a slick marketing brochure, as has been submitted voluntarily by two companies to NHTSA. The bill requires the SER to be submitted to NHTSA and be made public, and subjects manufacturers to civil penalties for false or misleading submissions.

Detailed information as well as comprehensive testing and on-road data must be documented to ensure that NHTSA and the public are informed.

Inadequate Consumer Information Required (Sec. 12)

The bill creates a government advisory group to issue voluntary recommendations within two years. It directs a final rule within three years to require consumers be provided with vehicle information at the point of sale and in the owner’s manual.

Consumers should immediately have appropriate vehicle information at the point of sale and in the owner’s manual. Further, it is essential that NHTSA be required to establish a publicly-available AV database with basic safety information for consumers and for safety research.

Essential Safety Systems can be “Turned Off” (Sec. 7)

Manufacturers are currently prohibited by law from rendering safety systems inoperable without getting a government exemption. The bill would allow manufacturers to unilaterally “turn off” safety systems related to the driving task, such as steering and braking, during autonomous operation.

This provision must be removed from the bill.

State Laws and Regulations are Pre-Empted even though there are No Federal Regulations Issued (Sec. 3)

The bill prohibits state regulatory action on AVs *even though* the federal government has not taken regulatory action. Specifically, it prohibits states from adopting any law, rule or standard regulating the design, construction or performance of an AV or AV system that is related to a subject covered in the SER, such as cybersecurity, system safety, human-machine interface and post-crash behavior of the vehicle system.

Prior to NHTSA issuing safety standards, states must retain their traditional legal authority to protect public safety.

Manufacturers Need Only Submit an Inadequate Cybersecurity Plan (Sec. 14)

The bill only requires that manufacturers have a cybersecurity plan but there are no requirements for implementing any protections.

The bill should establish a cybersecurity standard to protect against potentially catastrophic vehicle hacks.

Requires Only a Revision of Data Collection that May Not Capture Critical Crash Information (Sec. 13)

The legislation requires that the U.S. Department of Transportation (DOT) Secretary revise the crash data collection systems to identify crashes involving an AV or AV system no later than three years after enactment.

There should be an immediate affirmative obligation placed on manufacturers to report all known crashes involving an AV to NHTSA and make that information made available to the public.

What is Needed

The U.S. DOT Should Immediately Issue Rules to Address Known and Foreseeable Safety Problems

The bill does not direct issuance of critical rulemakings for known and foreseeable problems with AV systems. Rather, it delegates this duty to an advisory committee (Sec. 10) with industry and other representatives to make recommendations to the U.S. DOT Secretary. This likely will take years and could be skewed by special interests.

In lieu of an advisory committee, legislation must direct NHTSA to immediately set minimum performance standards for:

- *Ensuring AVs can properly detect and respond to its surroundings and vulnerable road users (“vision test”);*
- *Cybersecurity and vehicle electronics; and,*
- *Driver engagement in Level 2 and Level 3 vehicles which require a human operator to take control.*

Safeguards are Vital for Partially-Automated Vehicles (Level 2)

The bill explicitly excludes Level 2s which will likely comprise the majority of the passenger vehicle AV fleet in the early years of deployment. The Tesla “Autopilot” system, which is generally agreed to be a Level 2 system, has been involved in a number of crashes resulting in at least two deaths.

Level 2 AVs should be subject to all safety critical provisions.

Comprehensive AV Crash Data Must be Collected

There is no requirement in the bill that vehicles capture comprehensive crash data. The National Transportation Safety Board (NTSB) has highlighted the need for robust data during its investigatory process. This information is essential for analysis when AV systems are involved in a crash.

The AV START Act should require crash analysis data recording in a format that will aid investigators such as the NTSB and NHTSA.

NHTSA Needs Adequate Funding and Enforcement Authorities

Today, 94 percent of transportation-related fatalities and 99 percent of transportation injuries involve motor vehicles on our streets and highways. Yet, NHTSA receives only one percent of the overall U.S. DOT budget. The NHTSA’s current budget is insufficient given the multitude of new responsibilities and duties the agency will have as more AVs are deployed. Additionally, NHTSA lacks important legal tools to regulate AVs.

Congress should provide NHTSA the funding and expertise necessary to effectively carry out its safety mission. An office dedicated to AVs should be created within NHTSA. Further, the agency should have imminent hazard authority to immediately intervene against highly-dangerous safety defects, and enhanced penalty authority to deter manufacturers from willfully putting defective AVs into the marketplace.

Access and Safety for Disability Communities is Critical

While autonomous technology has the potential to increase access to mobility, the AV START Act does not adequately address the varying needs of diverse disability communities, such as wheelchair users, or ensure their safety.

The bill should ensure access and safety for all disability communities, including people using wheelchairs.

WE URGE THE U.S. SENATE TO:

- 1. Oppose the AV START Act unless critically-needed changes are made.**
- 2. Oppose efforts to attach AV START Act to unrelated legislation such as the reauthorization of the Federal Aviation Administration (FAA).**
- 3. Insist that no legislative action occur until the National Transportation Safety Board has finished its ongoing investigations into AV crashes and failures.**

July 16, 2018

Dear Senator:

We are writing to strongly urge you to oppose efforts to attach the pending AV START Act (S. 1885) to the Federal Aviation Administration (FAA) Reauthorization Act (S. 1405), which is expected to be considered on the Senate Floor in the coming weeks. Giving the AV START Act a “ride” on the FAA bill would be ironic at best and lethal at worst.

The safety deregulation built into the AV START Act and the precise and thorough way aviation handles autonomous systems is a study in stark contrast. The FAA has rigorous protocols for ensuring the safety of automation in the air, and examples of the success of effective standards and oversight of automated systems fly over our heads every single day.

Conversely, the AV START Act, in its current form, would shockingly allow potentially millions of vehicles on the market to be exempt from meeting existing safety standards. The failures of unproven driving automation systems already have led, tragically, to crashes which have resulted in at least three deaths. The National Transportation Safety Board (NTSB) has several open investigations which will produce findings likely to have a direct bearing on the AV START Act. The bill should not be advanced, especially as a rider on the FAA bill, until those investigations are complete and critically-needed changes are made to ensure safety.

The AV START Act will likely set policy on driverless cars for decades to come. As such, comprehensive safeguards, sufficient government oversight, and industry accountability are essential. The bill, in its current form, fails to provide these minimal safety protections. The reasonable improvements outlined below will address known and foreseeable problems with driverless car technology. Moreover, they will help to bolster public trust in this nascent technology. We ask for your support for the following commonsense improvements:

- Limit the size and scope of exemptions from federal safety standards;
- Require minimum performance standards such as a “vision test” for driverless technologies, cybersecurity and electronics system protections, and distracted driving requirements when a human needs to take back control of a vehicle from a computer;
- Provide for adequate data collection and consumer information;
- Compel all AVs to capture detailed crash data in a format that will aid investigators such as the NTSB and the National Highway Traffic Safety Administration (NHTSA);
- Ensure access and safety for members of all disability communities which have differing needs;
- Subject Level 2 (partially-automated) vehicles to all safety critical provisions;
- Prohibit manufacturers from unilaterally “turning off” vehicle systems such as the steering wheel and gas pedal which is not allowed under current law;
- Maintain the right of states and localities to protect their citizens by regulating the AV system in absence of federal regulations; and,
- Provide NHTSA with sufficient resources and authorities.

These changes would protect innovation while providing essential protections for AV occupants as well as everyone sharing the roads with them for many years to come. Our diverse group of safety,

public health, bicyclists, pedestrians, smart growth, consumer and environmental groups, law enforcement and first responders, disability communities and families affected by motor vehicle crashes support these sensible improvements that must be made before the bill moves forward.

It would be egregious to push the AV START Act through by tacking it onto a must-pass bill. Doing so would circumvent the regular legislative process and cut it off from full debate, discussion, transparent consideration, and the offering of amendments. The artificial urgency to advance this bill is disconnected from the reality that AVs are still potentially decades away. In fact, on the June 20th edition of “CBS This Morning,” Bill Ford Jr., Executive Chairman of Ford Motor Company, said *“There’s been a lot of over-promising and I think a lot of misinformation that’s been out there. It’s really important that we get it right, rather than get it quickly.”*

Yet, industry interests seeking to sell - not just test - unproven systems continue to perpetuate this false premise. We strongly urge you to allow the NTSB to complete its expert recommendations, to oppose efforts to attach the AV START Act to the FAA bill or other “must-pass” legislation, and to insist on the adoption of the urgently-needed safety requirements in the bill.

Thank you for your consideration.

Sincerely,

J. Thomas Manger, Chief of Police
Montgomery County Police Department
President, Major Cities Chiefs Association

Ralf Hotchkiss, Co-Founder
Whirlwind Wheelchair International

Catherine Chase, President
Advocates for Highway and Auto Safety

Jeff Solheim, 2018 President
Emergency Nurses Association

Bill Nesper, Executive Director
The League of American Bicyclists

Tom C. Roberts, P.E., F.NSPE, President
National Society of Professional Engineers

Christopher Michetti, MD, President
American Trauma Society

Kate Kraft, Executive Director
America Walks

Joel D. Stitzel, PhD, President
Association for the Advancement of Automotive Medicine

Georges C. Benjamin, MD, Executive Director
American Public Health Association

Amy Colberg, Director of Government Affairs
Brain Injury Association of America

Joan Claybrook, President Emeritus
Public Citizen and Former NHTSA Administrator

William J. Johnson, Executive Director
National Association of Police Organizations

David Friedman, Director of Cars and Product
Policy and Analysis, Consumers Union
Former Deputy and Acting Administrator, NHTSA

Traycee Biancamano, CEO and President
United States First Responders Association

Paul Winkeller, Executive Director
New York Bicycling Coalition

Mark Plotz, Conference Director
National Center for Bicycling & Walking

Robert Weissman, President
Public Citizen

Dave Snyder, Executive Director
California Bicycle Coalition

Becky Afonso, Executive Director
Florida Bicycle Association

Jason Levine, Executive Director
Center for Auto Safety

John M. Simpson, Privacy and Technology
Project Director, Consumer Watchdog

Brent Hugh, Executive Director
Missouri Bicycle & Pedestrian Federation

Scott Bricker, Executive Director
Bike Pittsburgh

Steve Owings, Co-Founder
Road Safe America

Andrew McGuire, Executive Director
Trauma Foundation

Stephen W. Hargarten, M.D., MPH
Society for the Advancement of Violence and
Injury Research

Tom Francis, Interim Executive Director
MassBike

Champe Burnley, President
Virginia Bicycling Federation

Philip Sarnoff, Executive Director
Bike Utah

Dorian Grilley, Executive Director
Bicycle Alliance of Minnesota

Jack Gillis, Executive Director
Consumer Federation of America

Paul Steely White, Executive Director
Transportation Alternatives

Sally Greenberg, Executive Director
National Consumers League

Rebecca Wolfson, Executive Director
Boston Cyclists Union

Dan Becker, Director
Safe Climate Campaign

Cathy DeLuca, Policy & Program Director
Walk San Francisco

Rosemary Shahan, President
Consumers for Auto Reliability and Safety

Melissa Wandall, President
National Coalition for Safer Roads
Founder, The Mark Wandall Foundation

Elliott Caldwell, Executive Director
Georgia Bikes

Dennis Strawn, President
West Virginia Connecting Communities

Tim Young, Executive Director
Wyoming Pathways

Dawn King, President
Truck Safety Coalition

Taylor March, Advocacy and Education Manager
Trailnet (St. Louis, MO)

Allison Blanchette, Executive Director
Long Island Streets

Linda Sherry, Director of National Priorities
Consumer Action

Bill Newton, Deputy Director
Florida Consumer Action Network

Emily Yetman, Executive Director
Living Streets Alliance

Cara Spencer, Executive Director
Consumers Council of Missouri

Jennifer Cochran
Metro East Cycling

Sarah Clark Stuart, Executive Director
Bicycle Coalition of Greater Philadelphia

Robert Gardner, Advocacy Director
Washington Area Bicyclist Association

Alexey Davies, Membership Director
Community Cycles

Susan Smith, Executive Director
Bike Walk CT

A.J. Zelada, Ride Director
Gorge Pedal

Melinda Barnes, Executive Director
Bike Walk Montana

Patrick Conlon, President
BikeJC

Stan Schultz, Board Member
Cycle Folsom

Cyndi Steiner, Executive Director
New Jersey Bike & Walk Coalition

Terri Rivera, Executive Director
Ride Illinois

Nancy Tibbett, Executive Director
Bicycle Indiana, Inc.

Frank Sincaglia
Sun City Cyclers

Pat Krebs, Executive Director
Lebanon Valley Bicycle Coalition

Vincent Kelley
Arlington Heights Bicycle Club

Kristi Drake, Executive Director
Billings TrailNet

Dr. Rick Allen
Cascade Wellness Clinic

Amy Johnson Ely, Executive Director
Palmetto Cycling Coalition

Sheri Feld
Washington Bikes

Jacob VanSickle, Executive Director
Bike Cleveland

Kathryn Ponto, Patrice McDermott and Jacky Nelson
Members of Cascade Bicycle Club