

S. 1885: The American Vision for Safer Transportation Through Advancement of Revolutionary Technologies (AV START) Act

Senator Thune (R-SD) and Senator Peters (D-MI)

Section-by-Section Analysis

Section 1. Short title; table of contents.

This section would provide the short title of this bill as the “American Vision for Safer Transportation Through Advancement of Revolutionary Technologies (AV START) Act.” This section would also provide a table of contents for the bill.

Section 2. Definitions.

This section would provide definitions for new terms relating to automated vehicles, including “automated driving system (ADS),” “highly automated vehicle (HAV),” and “dedicated highly automated vehicle (DHAV).” A highly automated vehicle would be defined as a motor vehicle with a gross vehicle weight of 10,000 pounds or less (which excludes most heavy trucks and buses), equipped with a Level 3, 4, or 5 automated driving system. A dedicated highly automated vehicle would be defined as a highly automated vehicle equipped with a Level 4 or 5 system that is operated at those levels for all trips (a truly driverless vehicle).

Note: The AV START Act uses the levels of automation as defined by SAE International standard J3016. A Level 3 vehicle can drive itself in some circumstances (e.g., on highways, or in specified geographic areas), but requires that a human driver be present to take over if needed. A Level 4 vehicle can drive itself in some circumstances, and does not need a human driver to take over (e.g., it can pull itself over safely if needed). A Level 5 vehicle can drive itself in all circumstances, and does not need a human driver to take over.

Section 3. Relationship to other laws.

This section, using identical language to that in section 3 of the SELF DRIVE Act (H.R. 3388), which passed the House without objection, would clarify federal, state, and local roles for regulating HAVs to encourage interstate testing and development. It would do so by prohibiting a state from enacting or enforcing a law or regulation regarding the design, construction, or performance of HAV, ADS, or component of an ADS. This section would allow states to enforce identical standards to those promulgated by NHTSA.

This section would make clear state laws regarding traditional state roles are not preempted. These include licensing, registration, insurance, law enforcement, or traffic management unless such a law is an unreasonable restriction on HAV or automated driving system design, construction, or performance. This section would also make clear the bill does not affect a state or locality acting in accordance with other federal laws. It would also make clear motor vehicle franchise laws or common law claims are not preempted.

This section would also prohibit a state from issuing licenses for DHAV in a way that discriminates against those with disabilities. Unlike the other provisions in this section, this provision is not contained in the SELF DRIVE Act.

Section 4. Expedited resolution of highly automated vehicles conflicts with standards.

This section would direct an accelerated process for the Secretary of Transportation to remove and update references to human drivers and occupants in the federal motor vehicle safety standards. These references could prevent DHAVs from complying with such standards and associated test procedures. The section would direct the Volpe National Transportation Systems Center within the Department of Transportation, or other entity designated by the Secretary of Transportation, to issue a report at the direction of the Secretary that identifies each provision in the standards that references a human driver and provides an alternative reference to an automated system. The entity would be prohibited from changing the purpose of any standard. The section would further direct the Secretary to commence a rulemaking proceeding to incorporate the report by reference into the standards.

Section 5. Highly automated vehicles testing.

This section would level the playing field so that all manufacturers can test HAVs or ADS that do not yet comply with relevant standards under certain conditions, as traditional vehicle manufacturers are able to do under current law.

Section 6. Highly automated vehicles exemptions.

This section would expand the Secretary's existing discretionary authority to allow an alternative pre-market review process for federal motor vehicle safety standards. Under current law, the Secretary has the discretion to exempt manufacturers from one or more standards temporarily if the exemption is consistent with the public interest and a safety equivalence determination has been made. This section would raise the maximum number of HAVs for which a manufacturer is eligible for an exemption from the current conventional vehicle cap of 2,500 vehicles per manufacturer sold in the United States in any 12-month period to 50,000 highly automated vehicles per manufacturer in the first year after enactment, 75,000 vehicles in the second year, and up to 100,000 vehicles thereafter. In the fifth year of an exemption, a manufacturer would be eligible to request a higher number of vehicles. This section would lift the current cap of two years for each exemption. The expanded exemption authority under this section would sunset with regard to a particular standard as new standards governing that aspect of performance of an HAV go into effect. Any exemption applications would be under existing exemption categories currently in law.

Section 7. Inoperative controls.

This section would address a barrier in current law to the introduction of dual-use vehicles that can be used in automated or manual modes by amending the existing prohibition against making vehicle controls inoperative in order to allow an HAV to have certain devices or elements of design disabled when in automated mode.

Section 8. Levels of driving automation.

This section would direct the Secretary to adopt the definitions of the levels of driving automation issued by standards-setting body SAE International and would provide a process by which the Secretary could review and determine whether to adopt any updates.

Section 9. Safety evaluation report.

This section would require each manufacturer of an HAV or ADS to submit a safety evaluation report to the Secretary. Safety evaluation reports would be required to include descriptions of how the manufacturer is addressing nine subject areas, through documented testing, validation and assessment, relating to the development of the HAV or ADS that is the subject of the report. These subject areas would include 1) system safety, 2) data recording, 3) cybersecurity, 4) human-machine interface, 5) crashworthiness, 6) documentation of capabilities, 7) post-crash behavior, 8) account for applicable laws, and 9) automation function. The Secretary has the authority to sunset a subject area as new standards applicable to the same aspect are promulgated. All safety evaluation reports would be made publicly available, with any confidential business information redacted. The Secretary would be able to use the information in reports for enforcement purposes, but would not be able to condition the introduction into interstate commerce based on a review of the report or additional information.

Section 10. Highly automated vehicles technical committee.

This section would establish a technical committee of outside experts appointed by the Department of Transportation to generate technical recommendations for standards and rulemaking with respect to HAV, including system safety, automated steering and braking, crashworthiness for vehicles with unconventional seating positions, event data recording and data access and sharing, accessibility, and potential conflicts between national and international standards. With guidance from the Secretary, the committee would provide recommendations on voluntary standards on a periodic basis and recommendations for rulemaking within 5 years of enactment. The committee would be authorized to create working groups to address specific issues, and would be required to create a working group to address HAV accessibility to those with physical, sensory, or other disabilities.

Section 11. Highly automated vehicles rulemaking.

This section would establish the process by which the Secretary reviews the recommendations of the safety committee and begin rulemaking proceedings to implement those recommendations, consistent with existing authority.

Section 12. Consumer education.

This section would develop guidelines on responsible consumer education efforts to improve the public's understanding of advanced driver assistance systems and automated vehicle technologies, their capabilities, and their limitations.

Section 13. Traffic safety and law enforcement.

This section would direct the Secretary to work with state and local governments and law enforcement agencies to research how HAVs will impact law enforcement and traffic safety. This section would also direct the Secretary to improve crash data regarding HAVs.

Section 14. Cybersecurity.

This section would require manufacturers of HAVs and ADS to develop and execute a written plan for identifying and reducing cybersecurity risks to the motor vehicle safety of such vehicles and systems. This section would also authorize the Secretary to work cooperatively with manufacturers to develop a policy for coordinated disclosure of cybersecurity vulnerabilities

(such as bug bounty programs), and it would direct other federal agencies researching cybersecurity risks associated with HAVs to coordinate with the Secretary on their findings.

Section 15. Savings Clause.

This section would affirm that nothing in this bill should be construed to alter any existing authority under subtitle VI of title 49, United States Code, relating to motor vehicles with a gross vehicle weight of 10,001 pounds or more.