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1st Session

SENATE

{ REPORT
115-187

AMERICAN VISION FOR SAFER TRANSPORTATION THROUGH ADVANCEMENT OF REVOLUTIONARY TECHNOLOGIES ACT

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION

ON

S. 1885



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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

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FIRST SESSION

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Mr. THUNE, from the Committee on Commerce, Science, and
Transportation, submitted the following

R E P O R T

[To accompany S. 1885]

[Including cost estimate of the Congressional Budget Office]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 1885) to support the development of highly automated vehicle safety technologies, and for other purposes, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and recommends that the bill (as amended) do pass.

PURPOSE OF THE BILL

S. 1885, the American Vision for Safer Transportation through Advancement of Revolutionary Technologies (AV START) Act, is intended to advance the development and deployment of highly automated vehicles (HAVs) in a safe and responsible manner. The AV START Act is intended to encourage a gradual introduction of HAV technology in a way that would promote public safety and build public confidence and trust in the technology, while at the same time, avoiding unreasonable restrictions on the introduction of the technology into interstate commerce.

BACKGROUND AND NEEDS

HAVs, also known as self-driving vehicles, are poised to bring transformative benefits to the Nation's transportation system. According to the National Highway Traffic Safety Administration (NHTSA), an agency within the Department of Transportation

(DOT), approximately 37,000 people died in motor vehicle crashes in 2016.¹ NHTSA has estimated that as many as 94 percent of crashes are attributed to human driver error.² If HAVs are safely and widely deployed, the number of lives saved and injuries avoided could be enormous. In addition, HAVs could provide the elderly and individuals with disabilities with increased access to independent mobility, and further reduce congestion and improve fuel economy.³

Despite these potential benefits, HAVs face near-term regulatory conflicts that can present barriers to their testing and deployment. That is, NHTSA has promulgated more than 30 Federal Motor Vehicle Safety Standards (FMVSS) over the past several decades that contain references to a driver. In March 2016, the DOT's John A. Volpe National Transportation Systems Center found that once an HAV design begins to diverge from a conventional vehicle design, such as by removing the steering wheel and pedals or by rearranging the cabin seating layout, it would be constrained by the current FMVSS or may not fully meet the objectives of the FMVSS.⁴

Furthermore, certain State and local laws may pose challenges to the development of HAVs. Under existing law, a State cannot prescribe a standard that differs from an existing FMVSS.⁵ However, the Secretary of Transportation (Secretary) could take several years to promulgate relevant FMVSS specific to HAVs given the need for research, real-world experience, and data to develop standards for a complex new technology. In the interim, States and localities are able to establish potentially conflicting regulatory regimes that could inhibit nationwide deployment of HAVs or their ability to move in interstate commerce. In fact, 15 States have enacted laws governing self-driving vehicles this year, and dozens of bills are currently under consideration in State legislatures.⁶ Some of these bills would impose physical requirements on HAVs, such as mandating driver controls, certain data recording equipment, or all-electric power. More subtle issues, such as discrepancies between the definitions of levels of automation, could also complicate the introduction of HAVs into interstate commerce.

In September 2016, the DOT issued the "Federal Automated Vehicles Policy," a non-binding document intended to provide a greater degree of certainty to the industry about the Federal Government's role in regulating HAVs. The DOT released an updated version of the policy titled, "Automated Driving Systems 2.0: A Vision for Safety," on September 12, 2017. This policy, which applies to the design aspects of "low-speed vehicles, motorcycles, passenger vehicles, medium-duty vehicles, and heavy-duty CMVs [commercial motor vehicles] such as large trucks and buses," consists of a guid-

¹The National Highway Traffic Safety Administration (NHTSA), USDOT Releases 2016 Fatal Traffic Crash Data (2017), accessed October 18, 2017, at <https://www.nhtsa.gov/press-releases/usdot-releases-2016-fatal-traffic-crash-data>.

²NHTSA, Traffic Safety Facts: A Brief Stat. Summary (2015), accessed October 18, 2017, at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812115>.

³RAND Corporation, Autonomous Vehicle Technology: A Guide for Policymakers (2016), accessed October 18, 2017, at https://www.rand.org/pubs/research_reports/RR443-2.html.

⁴USDOT, John A. Volpe Nat'l Transp. Sys. Center, Review of Federal Motor Vehicle Safety Standards (FMVSS) for Automated Vehicles (2016), accessed October 18, 2017, at https://ntl.bts.gov/lib/57000/57000/57076/Review_FMVSS_AV_Scan.pdf.

⁵49 U.S.C. §30103(b)(2) (1966).

⁶Nat'l Conf. of St. Legis., Autonomous Vehicles Legis. Database, accessed October 18, 2017, at <http://www.ncsl.org/research/transportation/autonomous-vehicles-legislative-database.aspx>.

ance section outlining best practices for safely testing and deploying HAVs on public roads, including a voluntary safety self assessment, and technical assistance to States and State highway safety officials.

SUMMARY OF PROVISIONS

The AV START Act would do the following:

- *Provide enhanced safety oversight.* The bill would require manufacturers to submit safety evaluation reports to the DOT containing information about how they address important factors such as system safety, crashworthiness, and cybersecurity through documented testing, validation, and assessment. This new requirement, based on the voluntary safety assessment proposed by the DOT, would enhance the DOT's defect enforcement authority, while providing assurances to consumers and State and local governments.
- *Reinforce Federal, State and local roles.* The bill would ensure the DOT's traditional responsibility for regulating HAVs and automated driving systems (ADS) with respect to the safety evaluation report subject areas. Additional research and coordination with State and local governments on traffic safety and law enforcement challenges is also included in the measure.
- *Reduce barriers to deployment.* S. 1885 would expand the Secretary's existing discretionary authority to implement an enhanced review and approval process for FMVSS exemptions for up to 80,000 vehicles per manufacturer in the third year after enactment.
- *Maintain status quo for trucks and buses.* The bill would clarify that the new authorities for self-driving technologies in the AV START Act apply to vehicles weighing 10,000 pounds or less and maintain the DOT's existing authority for advancing automated truck and bus technology in the future.
- *Prescribe the path for long-term safety regulation.* The bill would provide the DOT with the technical expertise needed to set new and updated safety regulations by creating a committee of experts to identify and develop recommended standards. It would further direct the DOT to do the following: consider these recommendations for potential rulemaking governing HAV safety; and update the crash data collection database to include new HAV-specific information.
- *Bring existing rules up to speed.* S. 1885 would direct the DOT to act quickly to modernize existing FMVSS, which were written before HAVs were envisioned.
- *Strengthen cybersecurity protections.* The bill would direct each HAV manufacturer to minimize cybersecurity risks to HAVs and to increase consumer cybersecurity awareness. It would authorize the DOT to work with manufacturers to incentivize coordinated vulnerability disclosure policies.
- *Improve vehicle safety and data sharing.* S. 1885 would establish a committee to make policy recommendations to Congress regarding HAV data ownership, control, and access.
- *Promote consumer education.* The DOT would be required to work with industry and other government agencies to ad-

vance responsible consumer education and marketing, including consumer awareness of the capabilities and limitations of advanced driver assistance systems and HAV systems.

- *Increase mobility.* The bill would preclude the States from issuing licenses for dedicated HAVs that discriminate on the basis of disability. The DOT would be required to develop best practices regarding HAV accessibility.

LEGISLATIVE HISTORY

The Committee held the following three hearings on self-driving vehicles that examined key issues addressed by this legislation:

- Automated Trucks and Our Nation’s Highways.⁷
- Paving the Way for Self-Driving Vehicles.⁸ and
- Hands Off: The Future of Self-Driving Cars.⁹

Senators Thune and Peters introduced S. 1885 on September 28, 2017, with Senators Blunt and Stabenow as cosponsors. On June 13, 2017, Senators Thune, Peters, and Nelson publicly released bipartisan principles for legislation. The principles include prioritizing safety, promoting continued innovation, reducing existing regulatory roadblocks, adhering to technology and business model neutrality, reinforcing separate Federal and State roles, strengthening cybersecurity, and educating the public to encourage adoption of self-driving vehicles.

On October 4, 2017, in an open Executive Session, the Committee, by voice vote, ordered the bill to be reported with an amendment (in the nature of a substitute). The Committee accepted 26 amendments *en bloc* by voice vote. The accepted amendments are as follows:

- An amendment from Senators Nelson, Thune, and Peters to improve the preemption section of the bill.
- An amendment from Senators Blumenthal and Wicker to direct the Secretary to issue a rule requiring all new passenger motor vehicles to be equipped with a child safety alert system.
- An amendment from Senators Blumenthal and Udall to reduce discretionary exemption caps and to require the Secretary to review the safety effects of previously granted exemptions.
- Amendments from Senator Blumenthal to sunset expanded exemption authority after 10 years if no applicable standard is promulgated; to provide consumer education information comparing HAVs with non-HAVs; to include information in safety evaluation reports comparing HAVs with non-HAVs; to modify the timing of public availability of safety evaluation reports; and to modify the provision relating to inoperative controls.
- An amendment from Senator Booker to require safety evaluation reports to state the expected SAE level of the HAV

⁷U.S. Congress, Senate Committee on Commerce, Science, & Transportation, *Transportation Innovation: Automated Trucks and Our Nation’s Highways*, 115th Congress, 1st session, September 13, 2017.

⁸U.S. Congress, Senate Committee on Commerce, Science, & Transportation, *Paving the Way for Self-Driving Vehicles*, 115th Congress, 1st session, June 14, 2017.

⁹U.S. Congress, Senate Committee on Commerce, Science, & Transportation, *Hands Off: The Future of Self-Driving Cars*, 114th Congress, 2nd session, March 15, 2016.

or ADS and to establish civil penalties for the submission of false or misleading reports.

- An amendment from Senators Duckworth and Schatz to require the Secretary to conduct a study on the transportation, mobility, environmental, energy security, and fuel economy impacts of HAVs on public roads.

- An amendment from Senator Duckworth to clarify the duties of the consumer education working group, to expand the membership of the consumer education working group to include safety organizations and organizations with experience in drivers' education, and to require the HAV safety study to include safeguards against the misuse of such vehicles.

- An amendment from Senator Gardner to require safety evaluation reports to address the mitigation of unreasonable risk from the malfunction of ADS component parts.

- An amendment from Senators Gardner and Cortez-Masto to require the inclusion of employee training in manufacturers' cybersecurity plans.

- An amendment from Senator Hassan to improve supply chain cybersecurity.

- An amendment from Senators Inhofe, Blunt, Moran, Heller, and Baldwin to establish the HAV data access advisory committee and to direct the Government Accountability Office (GAO) to study the deletion of personal data.

- An amendment from Senators Klobuchar, Duckworth, and Hassan to specify that vehicle communication with roadway and infrastructure assets be studied by the HAV technical committee.

- An amendment from Senator Klobuchar to specify that safety evaluation reports include mechanisms for alerting the human driver or operator of an HAV about cyber vulnerabilities.

- Amendments from Senator Markey to require the establishment of a motor vehicle privacy database and to require the Secretary to promulgate a rule on information consumers would receive at point of sale on the capabilities and limitations of HAVs and ADSs.

- Amendments from Senator Schatz to do the following: require manufacturers of HAVs or ADSs to publish summaries of their cybersecurity plans; require an education working group to consider topics pertaining to consumer data collection, privacy, and data ownership; include organizations representing those with disabilities and older adults in the working group membership; clarify that each of the stakeholder categories should be represented on the HAV technical committee; and require the HAV accessibility working group to include representatives from national organizations representing older adults.

- An amendment from Senator Udall to require the Secretary to conduct a study on encouraging domestic manufacturing of automated driving equipment and intelligent transportation solutions.

- An amendment from Senators Wicker and Markey to require the Secretary to develop educational cybersecurity re-

sources to assist consumers in minimizing motor vehicle cybersecurity risks.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

S. 1885—AV START Act

Summary: S. 1885 would clarify the federal role in regulating motor vehicles that can drive without a person controlling the vehicle. Those vehicles are defined in the bill as Highly Automated Vehicles (HAVs). The bill would require the National Highway Traffic Safety Administration (NHTSA) to complete several rulemakings and establish two advisory councils on HAV technology and consumer education. The bill also would require NHTSA and the Volpe National Transportation Systems Center (Volpe Center) within the Department of Transportation (DOT) to complete several studies on the issues surrounding the use of HAVs.

CBO estimates that implementing the legislation would cost \$22 million over the 2018–2022 period, assuming appropriation of the necessary amounts.

Enacting S. 1885 would increase revenues from civil penalties; therefore, pay-as-you-go procedures apply. However, CBO estimates that those increases would total less than \$500,000 over the 2018–2027 period. Enacting the bill would not affect direct spending.

CBO estimates that enacting S. 1885 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2028.

S. 1885 would impose an intergovernmental mandate, as defined in the Unfunded Mandates Reform Act (UMRA), by preempting the authority of state and local governments to regulate the design, construction, and performance aspects of HAVs, unless such regulations are identical to federal regulations. The bill also would preempt any state regulation governing operator’s licenses for HAVs that discriminates on the basis of disability. Although it would limit the application of state and local laws and regulations, the bill would impose no duty on state or local governments that would result in additional spending or a loss of revenues.

S. 1885 would impose private-sector mandates as defined in UMRA on manufacturers of automobiles. Based on information about motor vehicle sales in the United States and information about current business practices from industry sources, CBO estimates that the cost of complying with those mandates would exceed the annual threshold established in UMRA (\$156 million in 2017, adjusted annually for inflation).

Estimated Cost to the Federal Government: The estimated budgetary effect of S. 1885 is shown in the following table. The costs of this legislation fall within budget function 400 (transportation).

	By fiscal year, in millions of dollars—					
	2018	2019	2020	2021	2022	2018–2022
INCREASES IN SPENDING SUBJECT TO APPROPRIATION						
NHTSA:						
Estimated Authorization Level	1	4	4	4	4	17
Estimated Outlays	1	3	4	4	4	16
Volpe Center:						
Estimated Authorization Level	0	6	0	0	0	6
Estimated Outlays	0	4	1	1	0	6
Total Changes:						
Estimated Authorization Level	1	10	4	4	4	23
Estimated Outlays	1	7	5	5	4	22

Note: NHTSA = National Highway Transportation Safety Administration.

Basis of estimate: For this estimate, CBO assumes that the legislation will be enacted before the end of 2017 and that the necessary amounts will be appropriated each year. Estimated outlays are based on historical spending patterns for similar activities.

National Highway Transportation Safety Administration

Based on an analysis of information from NHTSA, CBO estimates that the agency would need to hire about 20 new people to prepare the rules and reports required by the bill. CBO expects that about one-quarter of those people would be hired in 2018 and the rest in 2019. Based on average wages and compensation for NHTSA employees and accounting for inflation, CBO estimates that each additional person would cost about \$180,000 a year, on average. As a result, CBO estimates that those provisions would cost \$14 million over the 2018–2022 period.

Under the bill, NHTSA also would need to create two new databases to make safety evaluations conducted by HAV manufacturers and the privacy policies of vehicle manufacturers available to the public. Based on information from the agency, CBO estimates that implementing those provisions would cost about \$2 million over the 2018–2022 period.

Volpe Center

Section 4 would require the Volpe Center to complete a report to the Congress that identifies necessary safety standards for HAVs. Subsequently, NHTSA would be required to complete a rulemaking based on that report. Based on information from DOT, CBO estimates that enacting the provisions in section 4 would cost \$6 million over the 2018–2022 period, mostly for equipment and staff to complete the necessary tests and research.

Other agencies

The bill also would require NHTSA to coordinate with the Federal Trade Commission and other agencies currently doing research on HAVs. CBO expects those agencies would include the Department of Commerce, the Department of Energy, the Department of Justice, the Federal Communications Commission, the National Science Foundation, the Department of Homeland Security and the Defense Advanced Research Projects Agency. CBO estimates that none of those agencies would have significant costs associated with the coordination requirement in S. 1885.

Pay-As-You-Go considerations: The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. Under S. 1885 CBO estimates that any increase in penalty collections—which are recorded in the budget as revenues—would be insignificant. Enacting the bill would not affect direct spending.

Increase in long-term direct spending and deficits: CBO estimates that enacting S. 1885 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2028.

Estimated impact on state, local, and tribal governments: S. 1885 would impose an intergovernmental mandate, as defined in UMRA, by preempting the authority of state and local governments to regulate the design, construction, and performance of HAVs, unless such regulations are identical to federal regulations. State and local governments are not currently regulating these aspects of HAVs. The bill also would preempt any state regulation governing operator's licenses for HAVs that discriminates on the basis of disability. Although the bill would limit the application of state and local regulations, it would impose no duty on state or local governments that would result in additional spending or a loss of revenues.

Estimated impact on the private sector: S. 1885 would impose private-sector mandates as defined in UMRA on manufacturers of automobiles. Specifically, the bill would require manufacturers to:

- Install an alarm system in all passenger vehicles that would alert drivers to check the rear seat of their vehicles after turning off the engine;
- Submit safety evaluation reports to NHTSA that describe how safety issues are being addressed in HAVs; and
- Prepare cybersecurity plans for HAVs and include information in owners' manuals or on manufacturers' websites directing consumers to cybersecurity resources.

The bill also would require NHTSA to update or issue new safety standards for motor vehicles to address automated systems. Those standards may benefit manufacturers by facilitating the development of HAVs, but also may require manufacturers of those vehicles to incur additional costs.

Based on data on vehicle sales from the Bureau of Economic Analysis, CBO estimates that manufacturers would need to install alarm systems in more than 10 million motor vehicles annually. The cost of installing a system would depend on the rule to be issued by DOT. Some vehicles currently contain systems that may comply with the rule. However, because of the large number of vehicles that would be affected by the mandate, CBO estimates that the cost of the mandate would exceed \$100 million annually. On the basis of information from industry experts, CBO estimates that the cost of complying with the mandates to submit safety evaluation reports and prepare cybersecurity plans would total tens of millions of dollars over the next five year period.

The net cost of the mandates would equal the additional costs incurred, offset by any savings associated with complying with the bill's requirements. For example, some of the costs of the mandates may be mitigated if the motor vehicle safety standards for automated systems lower the cost of producing such vehicles relative to

regulations issued by DOT under current law. However, CBO expects that most of those savings would be realized a few years after manufacturers have begun to incur costs to install the rear-seat alarm systems. In aggregate, CBO estimates that the annual net cost of complying with all of the mandates in the bill would exceed the threshold established in UMRA for private-sector mandates (\$156 million in 2017, adjusted annually for inflation) in at least some of the first five years the mandates are in effect.

Previous CEO estimate: On September 1, 2017, CBO provided an estimate for H.R. 3388, the SELF DRIVE Act, as ordered reported by the House Committee on Energy and Commerce on July 27, 2017. That bill included several work requirements for NHTSA that are included in S. 1885 and would subject vehicle manufacturers that fail to comply with reporting requirements to civil penalties. The CBO cost estimates reflect other differences between the two pieces of legislation.

Estimate prepared by: Federal costs: Sarah Puro; intergovernmental and private-sector mandates: Jon Sperl.

Estimate approved by: H. Samuel Papenfuss, Deputy Assistant Director for Budget Analysis.

REGULATORY IMPACT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

S. 1885, as reported, affects manufacturers of motor vehicles and motor vehicle equipment currently subject to the DOT's oversight and therefore the number of persons covered would be consistent with existing law.

ECONOMIC IMPACT

S. 1885 is expected to have a significant positive impact on the Nation's economy. The bill would direct a series of rulemakings affecting manufacturers. The deployment of HAVs is expected, among other things, to reduce the number of deaths and injuries due to motor vehicle crashes and increase mobility.

PRIVACY

S. 1885 is not expected to have an adverse impact on the personal privacy of individuals. The bill would create a database containing certain types of privacy-related information collected during the operation of vehicles and would create a committee to make recommendations on data ownership and access with appropriate consideration of customer privacy.

PAPERWORK

S. 1885 would require manufacturers of HAVs and ADSs to submit safety evaluation reports. As manufacturers are anticipated to submit these reports voluntarily in the absence of this bill, the Committee does not anticipate a large increase in paperwork burdens resulting from the passage of this legislation. The bill also

would require the development of a motor vehicle privacy database as well as reports to Congress on several matters addressed by other provisions.

CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill, as reported, meet the definition of congressionally directed spending items under the rule.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title; table of contents.

This section would provide that the bill may be cited as the “American Vision for Safer Transportation through Advancement of Revolutionary Technologies Act” or “The AV START Act.” This section also would 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 HAV would be defined as a motor vehicle with a gross vehicle weight of 10,000 pounds or less, equipped with a Level 3, 4, or 5 automated driving system. A DHAV would be defined as a HAV equipped with a level 4 or 5 system that is operated exclusively by automation consistent with the SAE international standard J3016 definition of an ADS-dedicated vehicle. This may include temporary operation by a conventional or remote driver to manage transient deviations from the operational design domain, to address a system failure, or while in a marshalling yard before being dispatched.

Section 3. Relationship to other laws.

This section would clarify Federal, State, and local roles for regulating HAVs and ADS to encourage interstate testing and deployment. It would do so by prohibiting a State or locality from enacting or enforcing a law or regulation regulating the design, construction, or performance of HAV or ADS with respect to any of the safety evaluation report subject areas described in section 9 of the AV START Act. This provision would cease to have effect with respect to any particular subject matter area when an FMVSS applicable to the same aspect of vehicle performance goes into effect. This provision would not impact State laws regarding the sale or repair of HAVs or ADSs by a dealer, manufacturer, or distributor, retaining important consumer protections while not adversely impacting the intent of the section with regard to vehicle design, construction, and performance. Further, subject to the preemption provision contained in this section, this provision also would not exempt a person from liability at common law or under a State statute authorizing a civil remedy for monetary relief. This provision would not alter current law with respect to FMVSS and common law liability.

This section also would prohibit a State from issuing licenses for DHAVs in a way that would discriminate against individuals with

disabilities. The intent of the Committee is not to endorse or encourage the requirement of licenses for operation of DHAVs; rather, it is only to establish that, if a State were to choose to require a license for operation of DHAVs, it must do so in a manner that does not discriminate against individuals with disabilities.

The Committee understands that since it was first enacted in 1966, the National Traffic and Motor Vehicle Safety Act (Safety Act) has always contained a provision preempting States and political subdivisions of States from adopting or enforcing a standard “applicable to the same aspect of performance of a motor vehicle” as a FMVSS. The term “performance” in this section is intended to be consistent with NHTSA’s authority under the Safety Act as it relates to vehicle or equipment performance and is not intended to be broadened beyond NHTSA’s traditional interpretation, which excludes vehicle compliance with or the enforcement of State and local traffic laws. Further, for purposes of this Act, it is the Committee’s understanding that the DOT has a long-standing interpretation that introduction into interstate commerce occurs if a vehicle is introduced into a means of interstate traffic, such as being driven on a public road, whether or not a vehicle crosses State lines.

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

This section would direct an accelerated process for the Secretary to remove and update references to human drivers and occupants in FMVSS. Many of these existing references would prevent DHAVs or HAVs in automated mode from complying with such standards and associated test procedures. This section would direct the DOT’s Volpe National Transportation Systems Center, or another entity the Secretary designates, to issue a report (at the direction of the Secretary) that identifies each provision in the standards referencing a human driver and provides an alternative reference to an automated system. The section would prohibit changing the purpose of any standard. This section would further direct the Secretary to incorporate the report into the standards.

Section 5. Highly automated vehicles testing.

This section would level the playing field so that all manufacturers can test a vehicle that does not comply with relevant standards under specified conditions, as certain vehicle manufacturers are able to test noncompliant vehicles under current law. This section is intended to apply to all manufacturers, including those conducting research, not just manufacturers of motor vehicle equipment to which an FMVSS applies.

Section 6. Highly automated vehicles exemptions.

This section would increase the number of vehicles the Secretary may exempt from one or more FMVSS under her existing discretionary authority. Under current law, the Secretary has the discretion to exempt manufacturers temporarily if the exemption is consistent with the public interest and a finding of comparable safety has been determined. 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

15,000 highly automated vehicles per manufacturer in the first year after enactment, 40,000 vehicles in the second year, and up to 80,000 vehicles in each year thereafter. After an exemption has been in place for 4 years, a manufacturer would be eligible to request the exemption of a higher number of vehicles beyond the cap. Before granting a renewal of an exemption or otherwise increasing the number of vehicles exempted, this section would require the Secretary to evaluate the previous exemption and make the safety comparison finding required under paragraph (3) of section 30113(b) of title 49, United States Code. This section would lift the current cap of 2 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, or after 10 years after the date of enactment of the AV START Act, whichever occurs first. It is the Committee's intent that the opportunity to receive an exemption would be available to all manufacturers and not just to traditional manufacturers with a manufacturer identification number issued prior to date of enactment.

Section 7. Inoperative controls.

This section would address a barrier in current law to the introduction of vehicles that can be used in automated mode. Specifically, it would amend the existing prohibition against making vehicle controls inoperative by accommodating an HAV when its steering wheel, brake or accelerator pedals, gear shift, or other feature or element of design related to the performance of the dynamic driving task by a human operator is 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 those definitions 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 the following: system safety; data recording; cybersecurity; human-machine interface; crashworthiness; documentation of capabilities; post-crash behavior; account for applicable laws; and automation function. The Secretary would have 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 not later than 60 days after receipt, except the Secretary would not release any confidential business information. The section also would establish civil penalties for false or misleading reports. Nothing in this section would alter NHTSA's enforcement authority. However, as the reports are not

subject to approval, NHTSA would not be able to condition the introduction of HAVs or ADSs 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 DOT to generate technical recommendations for rulemakings and standards with respect to HAVs, including system safety, automated steering and braking, crashworthiness for vehicles with unconventional seating positions, event data recording, accessibility, safeguards against misuse, 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 technical committee would be authorized to create working groups to address specific issues, and would be required to create a working group to address disability and limited mobility access.

Section 11. Highly automated vehicles rulemaking.

This section would establish the process by which the Secretary reviews the recommendations of the safety committee and begins 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. This section also would direct the Secretary to promulgate a rule to require information about the capabilities and limitations of HAVs or ADS at the point of sale and in the owner's manual.

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 would impact law enforcement and traffic safety. This section also would direct the Secretary to improve crash data collection system regarding HAVs.

Section 14. Cybersecurity.

This section would require each manufacturer of a HAV or ADS to develop and execute a written plan for identifying and reducing cybersecurity risks to the safety of such vehicles and systems. This section also would 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. HAV data access advisory committee.

This section would create an HAV data access advisory committee to make policy recommendations to Congress regarding the

ownership of, control of, and access to information or data that HAVs collect or generate. It is the Committee's intent that the committee membership, including voting or non-voting members, would include a representative from academia. The committee would be directed to report its recommendations to congressional committees of jurisdiction not later than 2 years after it is established. This section also would prohibit departments and administrative agencies from promulgating rules on these issues until the committee has issued its report. This section would direct the GAO to study technologies that can remove personal data from HAVs when they are sold to new owners or at the conclusion of rentals or leases.

Section 16. Cybersecurity consumer education information.

This section would direct the Secretary to develop educational cybersecurity resources to maintain awareness of cybersecurity risks, and to make such resources available on the NHTSA website.

Section 17. Provision of cybersecurity resource information.

This section would direct manufacturers to include information in their vehicles' owners' manuals or on the manufacturers' website directing consumers to the resources developed in section 16 of the AV START Act.

Section 18. Highly automated vehicle study.

This section would direct the Secretary to initiate a study on the existing and future impacts of HAVs on transportation infrastructure, mobility, the environment, and fuel consumption.

Section 19. Study on encouraging manufacturing in the United States of automated driving equipment and intelligent transportation solutions.

This section would direct the Secretary to conduct a study on recommendations to incentivize domestic manufacturing of automated driving equipment, including by the use of grant programs and other funding sources.

Section 20. Privacy protections for users of motor vehicles.

This section would direct the Administrator of NHTSA to create a public online database containing a description of the information about individuals collected during motor vehicle operation, an explanation of how such information would be used or disclosed, steps manufacturers are taking to protect against unauthorized disclosure of such information, and manufacturers' privacy policies.

Section 21. Child safety.

In order to reduce the unintended deaths of children left in the backseats of vehicles in high temperatures, this section would direct the Secretary to issue a rule requiring each new passenger motor vehicle weighing less than 10,000 pounds to be equipped with a system to alert the operator to check rear seats after the operator deactivates the engine. This section also would direct the Secretary to consider technologies that work with add-on child restraint systems that achieve the same purpose. This section also would direct the Secretary to contract with a third party to conduct a study on after-market systems.

Section 22. Savings provision.

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.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

TITLE 23. HIGHWAYS

CHAPTER 4. HIGHWAY SAFETY

§ 402. Highway safety programs

(a) * * *

(l) *UNATTENDED PASSENGERS.*—

(1) *IN GENERAL.*—*Each State may use a portion of the amounts it receives under this section to carry out a program to educate the public on the risks of leaving a child or unattended passenger in a vehicle after the vehicle motor is deactivated by the operator.*

(2) *PROGRAM PLACEMENT.*—*A State does not need to carry out the program described in paragraph (1) through the State transportation or highway safety office.*

(m) * * *

TITLE 49. TRANSPORTATION

SUBTITLE VI. MOTOR VEHICLE AND DRIVER PROGRAMS

PART A. GENERAL

CHAPTER 301. MOTOR VEHICLE SAFETY

SUBCHAPTER I. GENERAL

§ 30103. Relationship to other laws

(a) *UNIFORMITY OF REGULATIONS.*—The Secretary of Transportation may not prescribe a safety regulation related to a motor vehicle subject to subchapter I of chapter 135 of this title that differs from a motor vehicle safety standard prescribed under this chapter. However, the Secretary may prescribe, for a motor vehicle operated by a carrier subject to subchapter I of chapter 135, a safety regulation that imposes a higher standard of performance after manufacture than that required by an applicable standard in effect at the time of manufacture.

(b) *PREEMPTION.*—

(1) When a motor vehicle safety standard is in effect under this chapter, a State or a political subdivision of a State may prescribe or continue in effect a standard applicable to the same aspect of performance of a motor vehicle or motor vehicle equipment only if the standard is identical to the standard prescribed under this chapter. However, the United States Gov-

ernment, a State, or a political subdivision of a State may prescribe a standard for a motor vehicle or motor vehicle equipment obtained for its own use that imposes a higher performance requirement than that required by the otherwise applicable standard under this chapter.

(2) A State may enforce a standard that is identical to a standard prescribed under this chapter.

(3) *HIGHLY AUTOMATED VEHICLES.*—

(A) *No State or political subdivision of a State may adopt, maintain, or enforce any law, rule, or standard regulating the design, construction, or performance of a highly automated vehicle or automated driving system with respect to any of the safety evaluation report subject areas described in section 30107(b).*

(B) *This paragraph shall cease to have effect with respect to any particular subject matter area on the effective date of a standard applicable to the same aspect of vehicle performance as identified in section 30107(f).*

(C) *Nothing in this paragraph may be construed to prohibit a State or political subdivision of a State from maintaining, enforcing, prescribing, or continuing in effect any law or regulation regarding the sale, distribution, repair, or service of highly automated vehicles, automated driving systems, or components of automated driving systems by a dealer, manufacturer, or distributor.*

(c) *ANTITRUST LAWS.*—This chapter does not—

(1) exempt from the antitrust laws conduct that is unlawful under those laws; or

(2) prohibit under the antitrust laws conduct that is lawful under those laws.

(d) *WARRANTY OBLIGATIONS AND ADDITIONAL LEGAL RIGHTS AND REMEDIES.*—Sections 30117(b), 30118-30121, 30166(f), and 30167(a) and (b) of this title do not establish or affect a warranty obligation under a law of the United States or a State. A remedy under those sections and sections 30161 and 30162 of this title is in addition to other rights and remedies under other laws of the United States or a State.

[(e) *COMMON LAW LIABILITY.*—Compliance with a motor vehicle safety standard prescribed under this chapter does not exempt a person from liability at common law.]

(e) *STATE LAW LIABILITY.*—

(1) *Compliance with a motor vehicle safety standard prescribed under this chapter does not exempt a person from liability at common law.*

(2) *Subject to subsection (b)(3)(A), nothing in subsection (b)(3) shall exempt a person from liability at common law or under a State statute authorizing a civil remedy for damages or other monetary relief.*

§ 30107. Highly automated vehicles safety evaluation report

(a) *IN GENERAL.*—

(1) *REQUIREMENT.*—Each manufacturer introducing a new highly automated vehicle or automated driving system into interstate commerce shall provide a safety evaluation report, in

accordance with this section, that describes how the manufacturer is addressing the safety of such vehicle or system.

(2) *SUBMISSION.*—Each manufacturer described in paragraph (1) shall—

(A) submit a report to the Secretary—

(i) upon testing a highly automated vehicle or automated driving system; and

(ii) not later than 90 days before selling, offering for sale, or otherwise commercializing a highly automated vehicle or automated driving system; and

(B) annually submit, until the vehicle or system is no longer being sold, offered for sale, or otherwise introduced into interstate commerce by the manufacturer or until the system is no longer being incorporated into new motor vehicles by the manufacturer, an updated report to the Secretary that—

(i) may disclose that no significant changes were made to the vehicle or system; and

(ii) shall provide aggregate results of any significant safety deviation from expected performance disclosed in the previous report and aggregate results comparing the safety level of the vehicle or system with a vehicle that is not highly automated and is driven by a human driver.

(3) *REVIEW.*—The Secretary—

(A) shall review each report submitted under paragraph (2); and

(B) may require that the manufacturer submit additional or clarifying information.

(4) *LIMITATION.*—The Secretary may not condition the manufacture, testing, sale, offer for sale, or introduction into interstate commerce of a highly automated vehicle or automated driving system based on a review of a safety evaluation report or additional information submitted under this section.

(b) *SAFETY EVALUATION REPORT SUBJECT AREAS.*—Each report submitted by a manufacturer under subsection (a) shall describe how the manufacturer is addressing, through a documented assessment, testing, and validation process, each of the subject areas described in paragraphs (1) through (9).

(1) *SYSTEM SAFETY.*—The avoidance of unreasonable risks to safety, including—

(A) assurance that systems, including hardware and software, perform intended functions;

(B) the mitigation of unreasonable risks to safety caused by a malfunction of the automated driving system, including any component therein; and

(C) sense of objects, motorcyclists, bicyclists, pedestrians, and animals in or crossing the path of travel through the automated driving system.

(2) *DATA RECORDING.*—The collection by the vehicle of automated driving system performance information and incident and crash data—

(A) to record the occurrence of malfunctions, disengagements, degradations, or failures;

(B) to aid in the analysis of the cause of any issues described in subparagraph (A);

(C) to enable efforts to work with other entities to address data recording and sharing; and

(D) with respect to event data recorder information, that complies with the collection and sharing requirements under the FAST Act (Public Law 114–94).

(3) *CYBERSECURITY.*—The minimization of cybersecurity risks to safety, including evaluation of elements of the supply chain to identify and address cybersecurity vulnerabilities, and the exchange of information about any vulnerabilities discovered from field incidents, internal testing, or external security research, and mechanisms for alerting the human driver or operator about cyber vulnerabilities.

(4) *HUMAN-MACHINE INTERFACE.*—

(A) The methods of informing the human driver or operator about whether the automated driving system is functioning properly.

(B) For a Level 3 vehicle, the methods to address driver reengagement.

(C) The use of a human-machine interface by people with disabilities through visual, auditory, or haptic displays, or other methods.

(5) *CRASHWORTHINESS.*—Practicable protection for all occupants given any planned seating positions or interior configurations.

(6) *CAPABILITIES.*—The capabilities and limitations of the highly automated vehicle or automated driving system, including its expected SAE level.

(7) *POST-CRASH BEHAVIOR.*—The post-crash behavior of the highly automated vehicle or automated driving system if sensors or critical systems are damaged in a crash.

(8) *ACCOUNT FOR APPLICABLE LAWS.*—The account of applicable traffic laws and rules of the road, based on operational design domain, in the development of a highly automated vehicle or automated driving system.

(9) *AUTOMATION FUNCTION.*—

(A) The expected operational design domain in which the highly automated vehicle or automated driving system is designed to operate, including any roadway and infrastructure assets required for the operation of the highly automated vehicle or automated driving system, such as roadside equipment, pavement markings, signage, and traffic signals, and how it will respond if that operational design domain unexpectedly changes.

(B) The automated driving system’s expected object and event detection and response capabilities, including behavioral competencies and crash avoidance capability.

(C) The ability of the highly automated vehicle or automated driving system to transition to a minimal risk condition when a malfunction is encountered.

(D) The performance of the vehicle through the manufacturer’s development and implementation of tests, including simulation, test track, and on-road testing.

(c) *CERTIFICATION OF INAPPLICABLE CATEGORIES.*—A manufacturer that is solely testing a vehicle or system may certify that one or more of the categories set forth in subsection (b) do not apply.

(d) *PUBLICLY AVAILABLE.*—The Secretary shall make any report submitted by a manufacturer under this section publicly available not later than 60 days after receipt, except the Secretary may not make publicly available any information relating to a trade secret or confidential business information, or which is privileged. The manufacturer may submit information related to a trade secret or confidential business information separately from the report.

(e) *OFFICIAL SIGNATURE.*—Each report submitted by an entity under this section shall be reviewed by a senior official of the entity who—

(1) is knowledgeable about the information contained in the report; and

(2) shall certify that, based on the official's knowledge, the report does not contain any untrue statement of a material fact.

(f) *TERMINATION OF OBLIGATION TO DISCLOSE INFORMATION.*—

(1) *IN GENERAL.*—A manufacturer's obligation to provide information on a specific category under subsection (b) shall end on the effective date of a motor vehicle safety standard applicable to the same aspect of vehicle or system performance as is covered by the category, with due consideration for any lead time specified for compliance.

(2) *EFFECT OF NEW STANDARD.*—In adopting any standard applicable to highly automated vehicle performance, the Secretary shall—

(A) identify the category under subsection (b) to which the standard relates, if any; and

(B) specify what information is no longer required to be included in the report as a result of the new standard.

(g) *RULE OF CONSTRUCTION.*—

(1) *SUBMISSIONS.*—A manufacturer may submit a safety evaluation report for vehicles introduced into interstate commerce before the date of the enactment of the AV START Act.

(2) *SAVINGS PROVISIONS.*—Nothing in this section may be construed to amend, limit the authority, or prohibit the use of the information included in the report under this chapter.

(3) Nothing in this section may be construed to affect discovery, subpoena, other court order, or any other judicial process otherwise allowed under applicable Federal or State law.

§ 30108. Cybersecurity risks to the safety of highly automated vehicles

(a) *DEFINITIONS.*—In this section:

(1) *CYBERSECURITY INCIDENT.*—The term “cybersecurity incident” has the meaning given the term “incident” in section 227(a) of the Homeland Security Act of 2002 (6 U.S.C. 148(a)).

(2) *CYBERSECURITY RISK.*—The term “cybersecurity risk” has the meaning given the term in section 227(a) of the Homeland Security Act of 2002 (6 U.S.C. 148(a)).

(3) *CYBERSECURITY VULNERABILITY.*—The term “cybersecurity vulnerability” has the meaning given the term “security vulnerability” in section 102 of the Cybersecurity Information Sharing Act of 2015 (6 U.S.C. 1501).

(b) CYBERSECURITY PLAN.—

(1) *IN GENERAL.*—Each manufacturer of a highly automated vehicle or automated driving system shall develop, maintain, and execute a written plan for identifying and reducing cybersecurity risks to the motor vehicle safety of such vehicles and systems.

(2) *REQUIREMENTS.*—The plan required under paragraph (1) shall include a process for—

(A) the risk-based prioritized identification and protection of safety-critical vehicle control systems and the broader transportation ecosystem, as applicable;

(B) the efficient detection and response to potential vehicle cybersecurity incidents in the field;

(C) facilitating expeditious recovery from incidents as they occur;

(D) the institutionalization of methods for the accelerated adoption of lessons learned across industry through voluntary exchange of information pertaining to cybersecurity incidents, threats, and vulnerabilities, including the consideration of a coordinated cybersecurity vulnerability disclosure policy or other related practices for collaboration with third-party cybersecurity researchers;

(E) the identification of the point of contact of the manufacturer with responsibility for the management of cybersecurity;

(F) the evaluation of elements of the supply chain to identify and address cybersecurity vulnerabilities;

(G) the use of segmentation and isolation techniques in vehicle architecture design, as appropriate;

(H) employee training on the implementation of and compliance with the requirements under this paragraph; and

(I) supporting voluntary efforts by industry and standards-setting organizations to develop and identify consistent standards and guidelines relating to vehicle cybersecurity, consistent, and to the extent appropriate, with the cybersecurity risk management activities described in section 2(e) of the National Institute of Standards and Technology Act (15 U.S.C. 272(e)).

(3) *INSPECTION.*—The Secretary may inspect any cybersecurity plan developed by a manufacturer under this subsection to enable the Secretary to decide whether the manufacturer has complied, or is complying, with this chapter or a regulation prescribed or order issued pursuant to this chapter.

(4) *PROTECTIONS FOR DISCLOSURE.*—Each manufacturer required to develop, maintain, and execute a plan under paragraph (1) shall develop a summary of the plan that is suitable for public disclosure and disclose such summary to the public.

(c) *COORDINATED CYBERSECURITY VULNERABILITY DISCLOSURE.*—The Secretary may work cooperatively with manufacturers of highly automated vehicles and automated driving systems to incentivize manufacturers to voluntarily adopt a coordinated vulnerability disclosure policy and practice in which a security researcher privately discloses information related to a discovered vulnerability to a manufacturer and allows the manufacturer time to confirm and remediate the vulnerability—

(1) so that manufacturers build relationships with security researchers to mitigate cybersecurity risks; and

(2) to discover and mitigate cybersecurity vulnerabilities in highly automated vehicles or automated driving systems that present a risk to motor vehicle safety (as defined in section 30102 of title 49, United States Code).

(d) *COORDINATION.*—All Federal agencies undertaking research on cybersecurity risks associated with highly automated vehicles shall coordinate with the Secretary on their findings.

SUBCHAPTER II. STANDARDS AND COMPLIANCE

§ 30112. Prohibitions on manufacturing, selling, and importing noncomplying motor vehicles and equipment

(a) *GENERAL.*—

(1) Except as provided in this section, sections 30113 and 30114 of this title, and subchapter III of this chapter, a person may not manufacture for sale, sell, offer for sale, introduce or deliver for introduction in interstate commerce, or import into the United States, any motor vehicle or motor vehicle equipment manufactured on or after the date an applicable motor vehicle safety standard prescribed under this chapter takes effect unless the vehicle or equipment complies with the standard and is covered by a certification issued under section 30115 of this title.

(2) Except as provided in this section, sections 30113 and 30114 of this title, and subchapter III of this chapter, a school or school system may not purchase or lease a new 15-passenger van if it will be used significantly by, or on behalf of, the school or school system to transport preprimary, primary, or secondary school students to or from school or an event related to school, unless the 15-passenger van complies with the motor vehicle standards prescribed for school buses and multi-function school activity buses under this title. This paragraph does not apply to the purchase or lease of a 15-passenger van under a contract executed before the date of enactment of this paragraph.

(3) Except as provided in this section, section 30114, subsections (i) and (j) of section 30120, and subchapter III, a person may not sell, offer for sale, introduce or deliver for introduction in interstate commerce, or import into the United States any motor vehicle or motor vehicle equipment if the vehicle or equipment contains a defect related to motor vehicle safety about which notice was given under section 30118(c) or an order was issued under section 30118(b). Nothing in this paragraph may be construed to prohibit the importation of a new motor vehicle that receives a required recall remedy before being sold to a consumer in the United States.

(b) *NONAPPLICATION.*—This section does not apply to—

(1) the sale, offer for sale, or introduction or delivery for introduction in interstate commerce of a motor vehicle or motor vehicle equipment after the first purchase of the vehicle or equipment in good faith other than for resale;

(2) a person—

- (A) establishing that the person had no reason to know, despite exercising reasonable care, that a motor vehicle or motor vehicle equipment does not comply with applicable motor vehicle safety standards prescribed under this chapter;
- (B) holding, without knowing about the noncompliance and before the vehicle or equipment is first purchased in good faith other than for resale, a certificate issued by a manufacturer or importer stating the vehicle or equipment complies with applicable standards prescribed under this chapter; or
- (C) having no reason to know, despite exercising reasonable care, that a motor vehicle or motor vehicle equipment contains a defect related to motor vehicle safety about which notice was given under section 30118(c) or an order was issued under section 30118(b);
- (3) a motor vehicle or motor vehicle equipment intended only for export, labeled for export on the vehicle or equipment and on the outside of any container of the vehicle or equipment, and exported;
- (4) a motor vehicle the Secretary of Transportation decides under section 30141 of this title is capable of complying with applicable standards prescribed under this chapter;
- (5) a motor vehicle imported for personal use by an individual who receives an exemption under section 30142 of this title;
- (6) a motor vehicle under section 30143 of this title imported by an individual employed outside the United States;
- (7) a motor vehicle under section 30144 of this title imported on a temporary basis;
- (8) a motor vehicle or item of motor vehicle equipment under section 30145 of this title requiring further manufacturing;
- (9) a motor vehicle that is at least 25 years old; **[or]**
- (10) the introduction of a motor vehicle (*except for a highly automated vehicle*) in interstate commerce solely for purposes of testing or evaluation by a manufacturer that agrees not to sell or offer for sale the motor vehicle at the conclusion of the testing or evaluation and that prior to the date of enactment of this paragraph—
 - (A) has manufactured and distributed motor vehicles into the United States that are certified to comply with all applicable Federal motor vehicle safety standards;
 - (B) has submitted to the Secretary appropriate manufacturer identification information under part 566 of title 49, Code of Federal Regulations; and
 - (C) if applicable, has identified an agent for service of process in accordance with part 551 of such title~~...~~; and
- (11) *the introduction of a motor vehicle into interstate commerce solely for the purposes of testing, evaluation, or demonstration of a highly automated vehicle or automated driving system if—*
 - (A) *the testing, evaluation, or demonstration of the vehicle is only conducted by employees, agents, or fleet management contractors of the manufacturer of the highly auto-*

mated vehicle, the automated driving system, or any component thereof;

(B) such manufacturer agrees not to sell, lease, or offer for sale or lease, the vehicle or system at the conclusion of the testing, evaluation, or demonstration; and

(C) such manufacturer has submitted appropriate manufacturer identification information that is similar to information submitted by manufacturers subject to a Federal motor vehicle safety standard under part 566 of title 49, Code of Federal Regulations, before the commencement of such testing or evaluation.

§ 30113. General exemptions

(a) DEFINITION.—In **[this section,]** *this section—*

(1) the term “low-emission motor vehicle” means a motor vehicle meeting the standards for new motor vehicles applicable to the vehicle under section 202 of the Clean Air Act (42 U.S.C. 7521) when the vehicle is manufactured and emitting an air pollutant in an amount significantly below one of those standards[.]; and

(2) the term “new motor vehicle safety feature” includes any feature that enables a highly automated vehicle or an automated driving system, regardless of whether an exemption has already been granted for a similar feature on another model or models.

(b) AUTHORITY TO EXEMPT AND PROCEDURES.—

(1) The Secretary of Transportation may exempt, on a temporary basis, motor vehicles from a motor vehicle safety standard prescribed under this chapter or passenger motor vehicles from a bumper standard prescribed under chapter 325 of this title, on terms the Secretary considers appropriate. An exemption may be renewed. A renewal may be granted only on reapplication and must conform to the requirements of this subsection.

[(2) The Secretary may begin a proceeding under this subsection when a manufacturer applies for an exemption or a renewal of an exemption. The Secretary shall publish notice of the application and provide an opportunity to comment. An application for an exemption or for a renewal of an exemption shall be filed at a time and in the way, and contain information, this section and the Secretary require.**]**

(2) The Secretary may begin a proceeding under this subsection when a manufacturer applies for an exemption or a renewal of an exemption. The Secretary shall publish notice of the application and provide an opportunity to comment. An application for an exemption or for a renewal of an exemption shall be filed at a time and in the way, and contain such information, this section and the Secretary require. The Secretary shall grant or deny an exemption for a highly automated vehicle not later than 180 days after receiving an application for such exemption from a manufacturer. Before granting a renewal of an exemption or otherwise increasing the number of highly automated vehicles of a manufacturer that may be sold or introduced under a previously granted exemption, the Secretary

shall evaluate the previous exemption and make a safety equivalence finding consistent with paragraph (3).

(3) The Secretary may act under this subsection on finding that—

(A) an exemption is consistent with the public interest and this chapter or chapter 325 of this title (as applicable); and

(B)

(i) compliance with the standard would cause substantial economic hardship to a manufacturer that has tried to comply with the standard in good faith;

(ii) the exemption would make easier the development or field evaluation of a new motor vehicle safety feature providing a safety level at least equal to the safety level of the standard;

(iii) the exemption would make the development or field evaluation of a low-emission motor vehicle easier and would not unreasonably lower the safety level of that vehicle; or

(iv) compliance with the standard would prevent the manufacturer from selling *or introducing or delivering into interstate commerce* a motor vehicle with an overall safety level at least equal to the overall safety level of nonexempt vehicles.

(c) CONTENTS OF APPLICATIONS.—A manufacturer applying for an exemption under subsection (b) of this section shall include the following information in the application:

(1) if the application is made under subsection (b)(3)(B)(i) of this section, a complete financial statement describing the economic hardship and a complete description of the manufacturer's good faith effort to comply with each motor vehicle safety standard prescribed under this chapter, or a bumper standard prescribed under chapter 325 of this title, from which the manufacturer is requesting an exemption.

(2) if the application is made under subsection (b)(3)(B)(ii) of this section, a record of the research, development, and testing establishing the innovative nature of the safety feature and a detailed analysis establishing that the safety level of the feature at least equals the safety level of the standard.

(3) if the application is made under subsection (b)(3)(B)(iii) of this section, a record of the research, development, and testing establishing that the motor vehicle is a low-emission motor vehicle and that the safety level of the vehicle is not lowered unreasonably by exemption from the standard.

(4) if the application is made under subsection (b)(3)(B)(iv) of this section, a detailed analysis showing how the vehicle provides an overall safety level at least equal to the overall safety level of nonexempt vehicles.

(d) ELIGIBILITY.—

(1) A manufacturer is eligible for an exemption under subsection (b)(3)(B)(i) of this section (including an exemption under subsection (b)(3)(B)(i) relating to a bumper standard referred to in subsection (b)(1)) only if the Secretary determines that the manufacturer's total motor vehicle production in the most recent year of production is not more than 10,000. [A

manufacturer is eligible for an exemption under subsection (b)(3)(B)(ii), (iii), or (iv) of this section only if the Secretary determines the exemption is for not more than 2,500 vehicles to be sold in the United States in any 12-month period¹.

(2) *A manufacturer is eligible for an exemption under clause (ii), (iii), or (iv) of subsection (b)(3)(B) only if the Secretary determines that—*

(A) the exemption is for not more than 2,500 vehicles to be sold in the United States in any 12-month period; or

(B) the vehicle is a highly automated vehicle; and

(i) during the 12-month period beginning on the date of the enactment of the AV START Act, the exemption is for not more than 15,000 vehicles to be sold or introduced into interstate commerce in the United States;

(ii) during the 12-month period immediately following the period described in clause (i), the exemption is for not more than 40,000 vehicles to be sold or introduced into interstate commerce in the United States; and

(iii) during any 12-month period following the period described in clause (ii), the exemption is for not more than 80,000 vehicles to be sold or introduced into interstate commerce in the United States.

(C) A manufacturer of a highly automated vehicle may petition the Secretary to expand the exemption under paragraph (2)(B) to more than 80,000 vehicles in any 12-month period after the exemption has been in place for 4 years.

(e) **MAXIMUM PERIOD.**—An exemption or renewal under subsection (b)(3)(B)(i) of this section may be granted for not more than 3 years. An exemption or renewal under subsection (b)(3)(B)(ii), (iii), or (iv) of this section may be granted for not more than 2 years, *unless the vehicle is a highly automated vehicle.*

(f) **DISCLOSURE.**—The Secretary may make public, by the 10th day after an application is filed, information contained in the application or relevant to the application unless the information concerns or is related to a trade secret or other confidential information not relevant to the application.

(g) **NOTICE OF DECISION.**—The Secretary shall publish in the Federal Register a notice of each decision granting an exemption under this section and the reasons for granting it.

(h) **PERMANENT LABEL REQUIREMENT.**—The Secretary shall require a permanent label to be fixed to a motor vehicle granted an exemption under this section. The label shall either name or describe each motor vehicle safety standard prescribed under this chapter or bumper standard prescribed under chapter 325 of this title from which the vehicle is exempt. The Secretary may require that written notice of an exemption be delivered by appropriate means to the dealer and the first purchaser of the vehicle other than for resale.

§ 30122. Making safety devices and elements inoperative

(a) **DEFINITION.**—In this section, “motor vehicle repair business” means a person holding itself out to the public to repair for compensation a motor vehicle or motor vehicle equipment.

(b) **PROHIBITION.**—

(1) A manufacturer, distributor, dealer, rental company, or motor vehicle repair business may not knowingly make inoperative any part of a device or element of design installed on or in a motor vehicle or motor vehicle equipment in compliance with an applicable motor vehicle safety standard prescribed under this chapter unless the manufacturer, distributor, dealer, rental company, or repair business reasonably believes the vehicle or equipment will not be used (except for testing or a similar purpose during maintenance or repair) when the device or element is inoperative.

(2) *The prohibition under paragraph (1) shall not apply to a manufacturer that intentionally causes a steering wheel, brake or accelerator pedals, a gear shift, or other feature or element of design related to the performance of the dynamic driving task by a human operator in compliance with an applicable motor vehicle safety standard to be temporarily disabled during the time that an automated driving system is performing the entire dynamic driving task.*

(c) REGULATIONS.—The Secretary of Transportation may prescribe regulations—

(1) to exempt a person from this section if the Secretary decides the exemption is consistent with motor vehicle safety and section 30101 of this title; and

(2) to define “make inoperative”.

SUBCHAPTER IV. ENFORCEMENT AND ADMINISTRATIVE

§ 30165. Civil penalty

(a) CIVIL PENALTIES.—

(1) IN GENERAL.—A person that violates any of section 30112, 30115, 30117 through 30122, 30123(a), 30125(c), 30127, 30141 through 30147, or 31137, or a regulation prescribed thereunder, is liable to the United States Government for a civil penalty of not more than \$5,000 for each violation. A separate violation occurs for each motor vehicle or item of motor vehicle equipment and for each failure or refusal to allow or perform an act required by any of those sections. The maximum penalty under this subsection for a related series of violations is \$35,000,000.

(2) SCHOOL BUSES.—

(A) IN GENERAL.—Notwithstanding paragraph (1), the maximum amount of a civil penalty under this paragraph shall be \$10,000 in the case of—

- (i) the manufacture, sale, offer for sale, introduction or delivery for introduction into interstate commerce, or importation of a school bus or school bus equipment (as those terms are defined in section 30125(a) of this title) in violation of section 30112(a)(1) of this title; or
- (ii) a violation of section 30112(a)(2) of this title.

(B) RELATED SERIES OF VIOLATIONS.—A separate violation occurs for each motor vehicle or item of motor vehicle equipment and for each failure or refusal to allow or perform an act required by that section. The maximum penalty under this paragraph for a related series of violations is \$15,000,000.

(3) SECTION 30166.—Except as provided in paragraph (4), a person who violates section 30166 or a regulation prescribed under that section is liable to the United States Government for a civil penalty for failing or refusing to allow or perform an act required under that section or regulation. The maximum penalty under this paragraph is \$5,000 per violation per day. The maximum penalty under this paragraph for a related series of daily violations is \$35,000,000.

(4) FALSE OR MISLEADING REPORTS.—A person who knowingly and willfully submits materially false or misleading information to the Secretary, after certifying the same information as accurate under the certification process established pursuant to section 30166(o) or under the certification process established pursuant to section 30107(e), shall be subject to a civil penalty of not more than \$5,000 per day. The maximum penalty under this paragraph for a related series of daily violations is \$1,000,000.

(b) * * *

PART C. INFORMATION, STANDARDS, AND REQUIREMENTS

CHAPTER 323. CONSUMER INFORMATION

§ 32304B. Child safety

(a) DEFINITIONS.—*In this section:*

(1) PASSENGER MOTOR VEHICLE.—*The term “passenger motor vehicle” has the meaning given that term in section 32101.*

(2) REAR DESIGNATED SEATING POSITION.—*The term “rear designated seating position” means designated seating positions that are rearward of the front seat.*

(3) SECRETARY.—*The term “Secretary” means the Secretary of Transportation.*

(b) RULEMAKING.—*Not later than 2 years after the date of the enactment of the American Vision for Safer Transportation through Advancement of Revolutionary Technologies Act, the Secretary shall issue a final rule requiring all new passenger motor vehicles weighing less than 10,000 pounds gross vehicle weight 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.*

(c) MEANS.—*The alert required under subsection (b)—*

(1) *shall include a distinct auditory and visual alert, which may be combined with a haptic alert; and*

(2) *shall be activated when the vehicle motor is deactivated by the operator.*

(d) ADD-ON CHILD RESTRAINT SYSTEMS.—*In issuing the final rule required by subsection (b), the Secretary shall consider additional technologies that work with add-on child restraint systems that achieve the same purpose of alerting the driver in addition to the vehicle-based system.*

(e) PHASE-IN.—*The rule issued pursuant to subsection (b) shall require full compliance with the rule beginning on September 1st of*

the first calendar year that begins more than 30 months after the date on which the final rule is issued.

