

**Summary of Safety Improvements & Additional Edits
(as Reflected in the 12/3/2018 Staff Draft)
S. 1885: The American Vision for Safer Transportation Through
Advancement of Revolutionary Technologies (AV START) Act**

Safety Improvements & Related Edits Made Post-Markup:

ENSHRINES STATE AND LOCAL AUTHORITY OVER SAFETY

- *State and Local Authorities:* Further clarifies that states and localities remain empowered to use their traditional authority over motor vehicle operation, including enforcement of traffic laws and laws governing the operation of motor vehicles (Section 3).
- *Federal authorization:* Further clarifies that states and localities can also continue to act if otherwise authorized by Federal law (Section 3).

FURTHER CLARIFIES MANUFACTURERS & RELATED ENTITIES SUBJECT TO LIABILITY

- *Liability:* Provides greater certainty that state common law and statutory liability will be unaffected by federal preemption (Section 3).
- *Arbitration:* Limits the use of pre-dispute arbitration clauses related to death or bodily injury until particular safety standards relevant to the specific claim being brought are in effect (Section 3).

REQUIRES CLEAR AND TRANSPARENT PATH TO RULEMAKINGS ON FUTURE STANDARDS

- *DOT Leadership:* Ensures that the Secretary is firmly in the driver's seat to set federal motor vehicle safety standards (FMVSS). Provides additional time for updating existing standards to work with new technology (Section 4). Strengthens the Secretary's role in directing the work of the Highly Automated Vehicles Technical Subcommittee (Section 11).
- *Rulemaking Plan:* Directs the Secretary to develop a Rulemaking and Safety Priority Plan to address each of the safety evaluation report categories to guide standards development (Section 10).
- *Rules for Each Subject Area:* Requires the Secretary to begin rulemakings on new FMVSS to address the safety evaluation report categories (Section 10).
- *HAV Advisory Council:* Creates a Highly Automated Vehicle (HAV) Advisory Council by consolidating four separate committees to review a number of issues, from safety to labor and environmental impacts. Directs specific reports from Subcommittees on technical standards, disability access, consumer education, and data access (Section 11).
- *Safety Agency Input:* Makes NTSB an advisory member of the Technical Subcommittee to assist on safety standards development (Section 11).

MAINTAINS CRASH-AVOIDANCE AND OCCUPANT PROTECTION LEVELS

- *Safety of Exempted Vehicles:* Further ensures that vehicles that receive an exemption from FMVSS must maintain the same overall safety level, occupant protection level, and crash avoidance level as a traditional FMVSS-compliant vehicle (Section 6).

- *DOT Oversight of Exemptions:* Would, in addition to aggressive DOT oversight over exemptions directed in the reported bill, require DOT to review any granted exemption's overall impact on motor vehicle safety and any conditions set by the Secretary on an annual basis (Section 6). Affirms an overall cap for exemptions and caps the maximum length of an exemption at 5 years. Provides the Secretary with additional time to review exemption applications (Section 6).

REQUIRES VISION TEST

- *Road User Safety:* Clarifies that the manufacturer must test and validate that the automated driving systems will identify, detect, and respond to all road users, including pedestrians, bicyclists, and motorcyclists (Section 9).
- *Focus on HAV Vision:* Ensures that the Technical Subcommittee's work will provide technical expertise specific to highly automated vehicle vision (Section 11).
- *Operational design domain requirements:* Clarifies that a manufacturer must test and validate the vehicle's operational design domain, which now includes the type of roadway and environmental and temporal conditions (Section 9).

ADDRESSES SAFETY OF LEVEL 2 VEHICLES

- *Safety:* Mandates that manufacturers of Level 2 vehicles submit public safety reports to ensure consumer education and consumer engagement are addressed. (Section 22).
- *Consumer Education:* Directs a rulemaking to require manufacturers to educate consumers on the capabilities and limitations of Level 2 vehicles (Section 12). Clarifies that the Consumer Education Subcommittee's effort to develop responsible education and marketing strategies also applies to Level 2 vehicles (Section 11).
- *Crash Reporting:* While the reported bill would already collect crash information on highly automated vehicles, the update would also provide for crash information on Level 2 vehicles (Section 13).

PROMOTES GREATER SAFETY DATA SHARING AND TRANSPARENCY

- *Data reporting:* While the reported bill required safety evaluation reports and exemptions to be publicly available, the update would more broadly require DOT to make information on HAVs easily publicly accessible. Requires the Secretary to report on HAV adoption and safety impacts, including through existing reports (Section 23).
- *DOT authorities:* Makes clear that DOT can promulgate regulations to require data collection (Section 11).
- *Civil Penalty Enforcement:* Provides for civil penalties for manufacturers that fail to submit safety evaluation reports (Section 9).

STRENGTHENS REQUIRED SAFETY EVALUATION REPORTS

- *Fallback strategies:* Adds that the manufacturer must address potential safety risks with particular fallback strategies (Section 9).
- *Driver engagement:* Requires new reporting on additional safety issues, such as driver engagement and driver monitoring for Level 3 vehicles that require both computer and human operations (Section 9).

CIVIL LIBERTIES

- *Law Enforcement Impacts:* Requires consultation with civil liberties and cybersecurity experts on HAV law enforcement impacts (Section 13).

ADDRESSES INOPERATIVE CONTROLS SAFETY

- *FMVSS Compliance:* Clarifies that “inoperative controls” section is a technical amendment that does not allow manufacturers to bypass the exemption process by requiring that dual-use vehicles must remain FMVSS-compliant in automated and non-automated modes. Allows DOT to change the provision only through rulemaking (Section 7).

ENHANCES CYBERSECURITY AND PRIVACY SAFEGUARDS

- *NIST Framework:* Requires manufacturers to consider the cybersecurity practices from the NIST Framework for Critical Infrastructure or international standards (Section 14).
- *Consumer Information Collaboration:* Directs the Secretary to work with the National Institute of Standards and Technology (NIST), manufacturers, safety organizations, security researchers, and state and local governments to review methods for enhancing cybersecurity and information for consumers (Section 24).
- *Privacy Policies:* Requires privacy policies governing information collected by all passenger motor vehicles, with enforcement by the Federal Trade Commission (*Section 25*).
- *Transparency:* Ensures the required privacy database governing all motor vehicles makes the new privacy policies easily accessible (Section 20).

UPDATED DEFINITIONS

- *New Standard:* Updates definitions given new SAE International definitions (Section 2).
- *Future Flexibility:* Grants the Secretary authority to update key definitions as SAE International makes future revisions, if necessary to keep pace with changing technology (Section 8).

Safety & related improvements adopted at markup: In addition to the foregoing changes made in the new staff draft, the Committee accepted 26 amendments by voice vote, including:

- *Clarifying preemption:* An amendment from Senators Nelson, Thune, and Peters to improve the preemption section of the bill.
- *Protecting children from hot cars:* 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.
- *Reduction in number of exemptions and additional oversight:* 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.
- *Sunset exemption authority:* An amendment from Senator Blumenthal to sunset expanded exemption authority after 10 years if no applicable standard is promulgated
- *Comparison of HAVs with non-HAVs:* Amendments from Senator Blumenthal to provide consumer education information comparing HAVs with non-HAVs and to include information in safety evaluation reports comparing HAVs with non-HAVs.
- *Public availability of safety evaluation reports:* An amendment from Senator Blumenthal to modify the timing of public availability of safety evaluation reports.
- *Inoperative Controls:* An amendment from Senator Blumenthal to modify the provision relating to inoperative controls.
- *Civil Penalties:* An amendment from Senator Booker to require safety evaluation reports to state the expected SAE level of the HAV or Automated Driving System (ADS) and to establish civil penalties for the submission of false or misleading reports.
- *Energy and environmental review:* 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.
- *Consumer education duties:* An amendment from Senator Duckworth to clarify the duties of the consumer education working group.
- *Consumer education members:* An amendment from Senator Duckworth to expand the membership of the consumer education working group to include safety organizations and organizations with experience in drivers' education
- *HAV misuse:* An amendment from Senator Duckworth to require the HAV safety study to include safeguards against the misuse of such vehicles.
- *Address ADS components:* An amendment from Senator Gardner to require safety evaluation reports to address the mitigation of unreasonable risk from the malfunction of ADS component parts.
- *Cybersecurity employee training:* An amendment from Senators Gardner and Cortez-Masto to require the inclusion of employee training in manufacturers' cybersecurity plans.
- *Supply chain cybersecurity:* An amendment from Senator Hassan to improve supply chain cybersecurity.
- *Data sharing:* 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.

- *Vehicle to infrastructure communication:* 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.
- *Cybersecurity awareness:* 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.
- *Privacy database:* An amendment from Senator Markey to require the establishment of a motor vehicle privacy database.
- *Consumer Awareness Rulemaking:* An amendment from Senator Markey to require the Secretary to promulgate a rule on information consumers would receive on the capabilities and limitations of HAVs and ADSs.
- *Cybersecurity disclosure:* An amendment from Senator Schatz to require manufacturers of HAVs or ADSs to publish summaries of their cybersecurity plans.
- *Consumer education privacy:* An amendment from Senator Schatz to require an education working group to consider topics pertaining to consumer data collection, privacy, and data ownership.
- *Technical Committee membership:* An amendment from Senator Schatz to 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.
- *HAV accessibility:* An amendment from Senator Schatz to require the HAV accessibility working group to include representatives from national organizations representing older adults.
- *Domestic manufacturing:* 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.
- *Consumer cybersecurity risks:* An amendment from Senators Wicker and Markey to require the Secretary to develop educational cybersecurity resources to assist consumers in minimizing motor vehicle cybersecurity risks.