



Commercial Vehicle Safety Alliance

Improving commercial motor vehicle safety and enforcement

February 13, 2026

Docket Management Facility
U.S. Department of Transportation
1200 New Jersey Avenue SE
West Building Ground Floor
Room W12-140
Washington, DC 20590-0001

RE: Docket Number: NHTSA-2025-0886
Technical Translation Research; Request for Comment

The Commercial Vehicle Safety Alliance (CVSA), on behalf of the Commercial Vehicle Brake Manufacturers Council (CVBMC), respectfully submits the following comments in response to the agency's request for stakeholder feedback on its research project evaluating the Federal Motor Vehicle Safety Standards (FMVSS) to determine how they apply to innovative vehicle designs, particularly those incorporating Automated Driving Systems (ADS), as well as potential challenges these vehicles may face in demonstrating conformance.

CVSA is a nonprofit organization comprised of local, state, provincial, territorial and federal commercial motor vehicle (CMV) safety officials and industry representatives. The Alliance aims to prevent commercial motor vehicle crashes, injuries and fatalities and believes that collaboration between government and industry improves road safety and saves lives. Our mission is to improve commercial motor vehicle safety and enforcement by providing guidance, education and advocacy for enforcement and industry across North America.

CVBMC is a council of original equipment manufacturer company representatives under CVSA. The primary objective of CVBMC is to provide expertise, leadership, data and direction regarding commercial motor vehicle brake systems and components. CVBMC is currently comprised of members from the following brake manufacturers: Bendix Commercial Vehicle Systems, Consolidated Metco, Hendrickson International, Meritor, Walther Engineering & Manufacturing Co. and Webb Wheel Products, Inc.

General Comments

CVSA and CVBMC appreciate the opportunity to comment on the research conducted on behalf of the agency. CVSA and CVBMC applaud NHTSA for taking this important step towards evaluating and updating the FMVSS to account for the operation of ADS-equipped motor vehicles. We strongly support policies that encourage development of ADS-related technology that can prevent or mitigate the severity of crashes. Recognizing the

potential safety benefits of ADS-equipped motor vehicles, it is critical that stakeholders have the opportunity to provide the agency with feedback and recommendations on how best to update the FMVSS to ensure their safe integration into roadways. Given that CVBMC's membership is comprised of original equipment manufacturer companies for braking systems and components, our comments are specific to the discussion and recommendations contained in "FMVSS Considerations for Vehicles With Automated Driving Systems: Volume 3 (Vol. 3)," which, according to the notice, "focuses on 28 FMVSS, including 11 crash avoidance standards (FMVSS Nos. 105, 106, 109, 116, 117, 119, 121, 129, 135, 136, and 139), 15 crashworthiness standards for conventional seating designs (FMVSS Nos. 209, 212, 213, 217, 218, 219, 220, 221, 222, 301, 302, 303, 304, 305, and 401), 1 low-speed standard (FMVSS No. 500), and 1 crashworthiness standard for unconventional seating designs (FMVSS No. 208)."

Appendix B: FMVSS Technical Translation Worksheets Options

The materials presented in "FMVSS Considerations for Vehicles With Automated Driving Systems" include a series of documents titled "Appendix B: FMVSS Technical Translation Worksheets." These documents set forth a series of options for technical language changes to the FMVSS that would better accommodate emerging technologies, specifically ADS-equipped technologies and scenarios that do not involve a human driver. As noted in the appendix, each option is based on a unique set of assumptions, applies a standard definition of the term 'driver' and utilizes a consistent approach to how existing language could be adjusted throughout. For example, in "FMVSS Considerations for Vehicles With Automated Driving Systems: Volume 3, Appendix B: FMVSS Technical Translation Worksheets," NHTSA notes "that Option 1 uses driver definition 1 and Option 2 uses driver definition 2 unless the section could be generalized and the reference to the "driver" can be removed."

CVSA and CVBMC are not in a position to recommend which option set to use. However, it is critical that NHTSA select one approach/option set and apply it uniformly across the FMVSS, rather than mixing instances of Option 1 and Option 2, etc. Using language from multiple options would result in inconsistent verbiage in the FMVSS, which will cause confusion in future application of the standards. Uniformity and consistency through the regulations is vital to effective industry adoption and compliance. The necessity of this exercise by NHTSA itself demonstrates and reaffirms the importance of technically accurate and consistent terminology when crafting FMVSS language.

Volume 3: Additional Analysis Needed

CVSA and CVBMC commend NHTSA and the researchers and support team involved in conducting this rigorous analysis. Reviewing the full FMVSS is a significant task and the work that was completed is comprehensive. However, as NHTSA noted in the December 15, 2025, notice and request for comments, the motor vehicle industry is constantly evolving and it's vital that the parties involved with regulating the industry keep pace with recent changes and new developments. To that end, CVSA and CVBMC noted in their review of the literature produced that several critical areas related to electronic controlled brake systems (ECBS) do not appear to be addressed. We recommend that NHTSA conduct additional research and analysis before completing their work under this task.

While the research and analysis address identified terms such as ‘driver’ and ‘treadle,’ other critical terminology and considerations are not addressed in the documents. For example:

- The materials do not include technical translation options for the term ‘initial pedal movement,’ which is applicable for addressing stopping distance standards and response times, or ‘initial park brake control,’ which is applicable for addressing movement timing for the park brake system.
- For electronic controlled brake systems, a definition of a single failure in the control system or a single failure in the actuation system to determine vehicle compliance for service brake stopping distances or for emergency stopping distances.
- As appropriate based on the level of automation, a warning indicator to the driver/signal to the operating system to communicate the severity of any single failure.
- The materials do not fully address communication between an ADS-equipped vehicle and a trailer or dolly being towed. While the document does discuss communication from the trailer to the ADS in the section addressing FMVSS No. 121, S5.1.6.2, there is typically a communication that goes to the towing vehicle’s brake control system and that system then provides that signal for translation to the vehicle network.
- Further, the materials do not include any additional communication suggestions for any other signals to the trailer braking system.

Vehicles equipped with SAE Level 4 and Level 5 (automated/autonomous) systems will have electronic controlled brake systems, where air will continue to be the medium employed to apply the brake. In recognition of this, FMVSS 121 needs to be updated to address this shift to electronic control of the service brakes, whether Level 4 (with or without a pedal) or Level 5 (autonomous) is used. Specifically, CVSA and CVBMC recommend that NHTSA review and publish additional recommendations addressing:

- necessary definitions
- service brake versus emergency brake stopping distance conditions
- electrical malfunctions in service brake controls
- loss of electrical energy source/battery size and state of charge (battery power vs. battery energy)
- initial brake pedal movement stopping distance and response time
- initial park control movement parking brake response time
- energy management (brake by wire/steer by wire)

Conclusion

CVSA and CVBMC recognize and applaud the work conducted by NHTSA and their research team to conduct this necessary review of the FMVSS, in order to address areas that will need to be modified to accommodate the deployment of all levels of ADS technology on vehicles. However, additional work is necessary throughout the FMVSS to address systems that employ ECBS. In addition, it is important that whatever approach the agency chooses to implement in terms of the technical terminology revisions, it is imperative that the changes be uniform across all FMVSS, to ensure that the resulting regulations are consistent for industry compliance.

CVSA works to closely monitor, evaluate and identify potentially unsafe transportation processes and procedures as well as to help facilitate and implement best practices for enhancing safety on our highways.

Commercial motor vehicle safety continues to be a challenge and we need the involvement of all affected parties to help us better understand these issues and put into place practical solutions. We appreciate the opportunity to comment on this proposal and the agencies' commitment to safety and stakeholder involvement.

If you have further questions or comments, please do not hesitate to contact me at 202-998-1008 or collin.mooney@cvsa.org.

Respectfully,

A handwritten signature in black ink, appearing to read 'Collin B. Mooney'.

Collin B. Mooney, MPA, CAE
Executive Director
Commercial Vehicle Safety Alliance