

NHTSA Heavy Vehicle Research/Rulemaking Report
TRB Annual Meeting - Truck and Bus Safety Committee
January 9, 2018

- **Truck Tractor and Large Bus Stability Control**
 - In October, NHTSA issued a final rule addressing a petition for reconsideration of the final rule for FMVSS No. 136. The petitioner, Truck and Engine Manufacturers Association (EMA), requested that NHTSA amend the test conditions for the agency's performance test by allowing a larger lane width for long wheelbase truck tractors.
 - Docket for this rule is NHTSA-2015-0056 at www.regulations.gov

- **Heavy Vehicle Speed Limiters**
 - Proposed rule issued in September 2016 - This rulemaking would consider a new Federal Motor Vehicle Safety Standard that would require the installation of speed limiting devices on heavy trucks.
 - Press release:
<http://www.nhtsa.gov/About+NHTSA/Press+Releases/nhtsa-large-vehicles-speed-limiters-08262016>
 - Docket for this rule is NHTSA-2016-0087 at www.regulations.gov
 - The status of this and other rulemakings can be found at www.reginfo.gov.

- **Automatic Emergency Braking (AEB) Systems and Advanced Crash Avoidance Technology**
 - NHTSA granted a petition from the Truck Safety Coalition, the Center for Auto Safety, Advocates for Highway and Auto Safety, and Road Safe America to require use of AEB on all heavy vehicles (GVWR over 10,000 pounds). NHTSA is conducting research to evaluate real-world performance of these systems through track testing and field operational testing.
 - AEB test track research report posted at docket: NHTSA-2015-0024 at www.regulations.gov
 - [Boday, C., Howe, G., Albrecht, H., Elsasser, D., & Barickman, F. \(2016, June\) Class 8 Truck-Tractor and Motorcoach Forward Collision Warning and Automatic Emergency Braking Test Track Research – Phase I. Washington, DC: National Highway Traffic Safety Administration. Docket No. NHTSA-2015-0024-0004.](#)

- AEB Field Operational Test (FOT) - 150 trucks instrumented, 7 fleets participated, over 3 million miles of data - Study Completed
 - Final Report is available on NHTSA website at: http://www.nhtsa.gov/DOT/NHTSA/NVS/CrashAvoidance/TechnicalPublications/2016/812280_FieldStudyHeavy-VehicleCAS.PDF
- Virginia Tech Transportation Institute (VTTI) Study on newer generation AEB systems is underway
 - Latest systems from Bendix, WABCO, and Detroit Assurance
 - 150 vehicles instrumented, approximately 1 year of FOT data collection to start in mid-2018
- Safety Benefits of Heavy Vehicle Crash Avoidance Systems
 - Study being conducted by Volpe National Transportation Systems Center starting September 2017
 - Establish target crash population and estimate safety benefits for AEB and other crash avoidance systems
 - Target Population Report now available: [Glassbrenner, D., Morgan, A., Kreeb, R., Svenson, A., Liddell, H., & Barickman, F. \(2017, July\). A Target Population for Automatic Emergency Braking in Heavy Vehicles \(Report No. DOT HS 812 390\). Washington, DC: National Highway Traffic Safety Administration.](#)
- **Heavy Vehicle V2V Research**
 - Heavy Truck Trailer Basic Safety Message Development Study
 - Demonstrated concepts in August 2017 for automatically determining trailer specifications for a tractor based V2V system
 - Next step - testing and documentation of a full tractor based V2V system for various trailer types
 - Heavy Vehicle V2V Retrofit Feasibility
 - Project awarded to University of Michigan Transportation Institute (UMTRI) in December 2016
 - Determining applicability of retrofit V2V systems on heavy vehicles and costs
 - Final Report available in mid-2018
- **Heavy Vehicle Cybersecurity Research**
 - UMTRI Project on determining cybersecurity risks specific to heavy vehicles has completed
 - Final Report available in spring 2018

- New Study Jointly funded with FMCSA - Cybersecurity Best Practices for Integration/Retrofit of Telematics and Aftermarket Electronic Systems into Heavy Vehicles
 - Project initiated in October 2017 with Carnegie Mellon University, Software Engineering Institute (SEI)
 - Investigate cybersecurity threats and vulnerabilities associated with use of aftermarket and telematics systems on HVs.
- Final Reports available on NHTSA website: ***New Web link:*** <https://www.nhtsa.gov/crash-avoidance/office-crash-avoidance-research-technical-publications>
 - NHTSA V2V Research Docket for related reports: NHTSA-2015-0060 at www.regulations.gov
- **Automated Vehicles**
 - NHTSA Automated Driving Systems 2.0
 - Released on September 12, 2017
 - https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf
 - Automated Vehicles for Safety - NHTSA Website
 - <https://www.nhtsa.gov/technology-innovation/automated-vehicles>

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