July 29, 2019

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

RE: Docket Number: FMCSA-2018-0037
Safe Integration of Automated Driving Systems-Equipped Commercial Motor Vehicles

The Commercial Vehicle Safety Alliance (CVSA) respectfully submits the following comments regarding docket number FMCSA-2018-0037, related to the implementation of automated driving systems (ADS) in commercial motor vehicles.

CVSA is a nonprofit association comprised of local, state, provincial, territorial and federal commercial motor vehicle safety officials and industry representatives. The Alliance aims to achieve uniformity, compatibility and reciprocity of commercial motor vehicle inspections and enforcement by certified inspectors dedicated to driver and vehicle safety. Our mission is to improve uniformity in commercial motor vehicle safety and enforcement throughout the United States, Canada and Mexico by providing guidance and education to enforcement, industry and policy makers.

CVSA commends the Federal Motor Carrier Safety Administration (FMCSA) for conducting this rigorous, open process of gathering stakeholder input as the agency considers implementation of ADS. As regulators evaluate the impacts of ADS on interstate transportation, they should consider the effects of this technology on the enforcement community and provide clear, uniform and enforceable standards. Automation will have an impact on how the roadside commercial motor vehicle inspection program is conducted, and a dialog with the law enforcement community on the requirements and capabilities of ADS to self-monitor vehicle systems' safety status and interact with law enforcement is needed. There are many questions regarding how ADS-equipped vehicles will interact with commercial motor vehicle inspectors and meet current safety regulations that need to be considered. These considerations range from how a vehicle will recognize that it is being signaled by law enforcement to pull over for an inspection to how required documentation will be made available for an inspector to examine. Currently, the driver of a commercial motor vehicle plays a crucial role in the inspection process, by performing tasks like activating required lights, applying the brakes, disconnecting/reconnecting glad hands, listening for instructions from the inspector while under the vehicle to inspect the braking system and opening locked/sealed trailers for inspection of proper securement of cargo. If a vehicle is operating without a

licensed commercial driver, either through a remote operator or Level 5 automation, how will these important aspects of the roadside inspection process be carried out?

General Comments

As the agency continues its work with ADS, CVSA supports FMCSA's adoption of the SAE recommended practices outlined in "J3016 Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles" to define terminology and its five levels of automation. To create a clearer standard and align with SAE recommendations, CVSA suggests that in the future FMCSA replace the word "autonomous" with the phrase "automated driving systems-equipped" which more clearly describes and defines the technology being used. As an example, in this notice FMCSA references "fully autonomous mode," a phrase that does not have a clear technical definition.

In the advance notice of proposed rulemaking (ANRPM), FMCSA notes that its approach is to focus on SAE Levels 4 and 5 because it is only at those levels that ADS can control all aspects of the driving task, without any intervention from a human driver. This approach will leave many regulatory and enforcement-centered questions relating to Levels 1-3 automation unresolved. These questions need to be addressed in the near term as automation Levels 1, 2 (and possibly 3) are already sold in production vehicles today.

CVSA acknowledges the potential for ADS to enhance human driver safety performance or, at a crossroads in the future, to replace the human driver altogether while also exceeding the best level of safety performance of the human driver. We have not yet reached that point and CVSA urges FMCSA to proceed with caution and not to remove or relax *necessary* safety regulations to enable the testing of unproven ADS on public roads. Motor vehicle regulations were established to address safety needs. Empirical evaluation of durability, reliability and performance of ADS and their components, as well as the required communications networks on which some functionality may rely cannot be assumed. CVSA members, including law enforcement agencies responsible for commercial motor vehicle safety, are being asked basic safety questions regarding ADS about which they have limited operational information. As these technologies advance, it is critical that safety protocols be established and shared with ADS technology providers, vehicle manufacturers, commercial motor vehicle operators, safety regulators and law enforcement agencies.

Responses to Specific Questions

While some of the questions asked in the notice are outside the Alliance's scope, the comments below address those that are applicable to CVSA.

1.1. Should FMCSA establish a rule that would prohibit an ADS-equipped CMV from operating outside its designated ODD?

The regulatory framework that is developed for ADS must be enforceable. Based on discussions with several ADS developers generally focused on long haul trucking automation, initial implementation of ADS-equipped long-

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haul combination vehicles will travel within limited operational design domains (ODDs) such as specific highway routes, during specific times of day and under favorable weather conditions. In these scenarios, a permitting system in which a motor carrier reports which routes their ADS-equipped vehicles are valid on could be used. For route based ODD limitations, ELDs or their requisite telematics could contain a mapping of the ODD and provide information to assist enforcement in determining when an ADS, human or remote operator was operating the vehicle.

1.3. Should FMCSA consider amending or augmenting the definition of ''driver'' and/or ''operator'' provided in 49 CFR 390.5 or define a term such as ''ADS driver'' to reduce the potential for misinterpretation of the requirements?

FMCSA should not change the definition of "driver" to include operation by an ADS. Nearly every rule and policy written for the driver before the advent of ADS was intended and is widely understood to apply to the human operator of a vehicle. FMCSA should instead define a new term to refer to non-human ADS that may be operating the vehicle, and then amend relevant regulations to specify which type of operator they apply to.

2.1. Should a CDL endorsement be required of individuals operating an ADS-equipped CMV?

More research is needed to fully answer this question. Trucks with a gross vehicle weight rating above 26,000 pounds are sold today with Level 2 automation capabilities, and these vehicles require an operator to have a commercial driver's license (CDL) but not an ADS specific endorsement. To the extent that drivers today often do not understand technologies that assist with the driving task, an endorsement would assist in ensuring drivers of ADS-equipped vehicles receive a minimum of standardized training on these systems. CVSA is not opposed to such an endorsement if it improves the human driver's performance while driving ADS-equipped vehicles.

2.2. If so, what should be covered in the knowledge and/or skills test associated with an ADS endorsement?

Broadly, the training should include the knowledge needed to engage and dis-engage the ADS and otherwise safely operate a commercial motor vehicle equipped with ADS. Given the current lack of standards, the changing technology approaches and limited training programs, it is important to begin identifying the knowledge and skills needed, while understanding the need to continually update the requirements as the technology evolves. Such training will need to be developed with input from motor carriers, ADS suppliers, truck manufacturers, researchers, regulators and law enforcement.

2.4. Should a driver be required to have specialized training for ADS equipped CMVs?

Similar to the needed knowledge and skills for a CDL endorsement, training should be required and include, at minimum, the knowledge needed to safely operate a commercial motor vehicle equipped with ADS.

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2.5. In an operational model that has an individual remotely monitoring multiple CMVs, should the Agency impose limitations on the number of vehicles a remote driver monitors?

CVSA is not aware of a source of data that indicates the number of remotely monitored vehicles one individual can safely monitor. As more research is being conducted, remote monitoring needs to be clearly defined. Until more information about the technical limitations of deploying and remotely monitoring ADS technology is available and adequate testing can be conducted, human monitoring should be done with a one-to-one remote monitor-to-vehicle ratio for Level 4 and 5 vehicles. After a thorough piloting of remote monitoring with a one-to-one ratio, collected data should be examined and inform if it is safe to increase the number of ADS-equipped commercial motor vehicles an individual can monitor.

2.6. Should a dedicated or stand-by remote operator be subject to existing driver qualifications?

Remote operators should be subject to existing CDL qualifications, at a minimum. As more detailed information about the remote operator's driving and monitoring tasks become evident, more rigorous remote driver qualifications may be needed. FMCSA should require that dedicated or stand-by operators have licensed CDL experience and FMCSA should research what additional knowledge and skills are needed to safely remotely operate an ADS-equipped commercial motor vehicle. Additionally, FMCSA should evaluate whether a special license endorsement should be established, with special attention given to the qualifications that may be required when considering the implications of remote operation on operator visibility and telematic/communication system's connectivity, security and reliability.

It is important to note that remote operation could be achieved without ADS technology. CVSA strongly discourages allowing this approach for widespread implementation by commercial motor vehicle operators and instead limit it to emergency or otherwise limited situations or ODDs.

3.1. Should HOS rule changes be considered if ADS technology performs all the driving tasks while a human is off-duty or in the sleeper berth, or physically remote from the CMV?

If an ADS-equipped commercial motor vehicle is able to perform all driving tasks and a driver does not need to be engaged at all times, more research would need to be conducted in order to determine the impacts of this type of operation on fatigue. In order to maintain the current level of safety that the hours-of-service (HOS) rules ensure, during initial deployment of ADS technology, the HOS rules should not be changed until relevant research can be completed. Limitations on how time can be spent when a Level 4 or 5 ADS is engaged may also need to be considered to ensure that a driver doesn't participate in other activities that could increase exposure to fatigue or distraction.

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3.2. Should the HOS requirements apply to both onboard and remote operators?

Both onboard and remote operators should be subject to maximum operating hours to help mitigate fatigue, however these requirements may not necessarily need to be the same given the differences in their operating parameters. With remote operators, control of a commercial motor vehicle could be shared by multiple remote operators in shifts. Onboard operators may be able to take required rest breaks from driving while the commercial motor vehicle is in motion. The type of work and level of engagement would likely differ between these two operating structures, which could require different HOS requirements to manage fatigue. Given the possibility that an ADS could operate a commercial motor vehicle for a large portion of the driving time, it is possible that less allowed driving time for the human operator would be appropriate to reduce fatigue exposure, while not significantly impacting freight movement.

3.3. If so, how should HOS be recorded when an individual is not physically in control of the vehicle?

Until more information is available about the demands on an operator of an ADS-equipped commercial motor vehicle while it is in motion, the duty time where an operator is not physically in control, but the vehicle is moving should be recorded as on-duty not driving time. This should be reevaluated once Level 4 and 5 trucking operations are near deployment.

4.1. Should some of the physical qualification rules be eliminated or made less stringent for humans remotely monitoring or potentially controlling ADS-equipped CMVs?

Individuals that are remotely monitoring ADS-equipped commercial motor vehicles must have the same ability to operate a commercial motor vehicle, if needed, as a traditional driver does. As such, they should be required to meet the same physical qualification rules to ensure they can safely take over and operate a commercial motor vehicle when needed.

4.3. Should the Agency consider less restrictive rules for humans who have the benefit of ADS technology to assist them in controlling the vehicle (e.g., technologies that would enable individuals with limb impairments to operate at a level comparable to individuals without such impairments)?

Once technology reaches a level of development that allows for an equivalent level of safety, the agency should validate the technology and then consider changes to the Federal Motor Carrier Safety Regulations (FMCSRs) as appropriate.

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5.1. How should the prohibition against distracted driving apply to onboard operators responsible for taking control of the CMV under certain situations, and to remote operators with similar responsibilities?

The same distracted driving regulations that apply to drivers today should apply to remote operators in control of a commercial motor vehicles. For ADS-equipped commercial motor vehicles that require operators to be able to take control under certain circumstances, FMCSA should consider requiring technology that detects distraction, such as camera-based monitoring systems.

6.1. Should FMCSA consider revising its rules to ensure that (1) any human exercising control of an ADS-equipped vehicle must continue to comply with all the rules under Part 392, and (2) a CMV under the control of a Level 4 or Level 5 ADS must satisfy the operational rules?

Yes, FMCSA should revise its rules to ensure these requirements are applicable.

6.2. For example, should FMCSA require that the ADS be capable of identifying highway-rail grade crossings and stopping the CMV prior to crossing railroad tracks to avoid collisions with trains, or going onto a highway-rail grade crossing without having sufficient space to travel completely through the crossing without stopping?

Yes, FMCSA should require the ADS be capable of navigating any scenario that may occur within its ODD. It is important that law enforcement be able to determine what the ODD is for a vehicle under Level 4 or 5 ADS operation.

6.3. For scenarios in which the control of the ADS-equipped CMV alternates, or may alternate, between a human and the technology, should FMCSA require that both the human operator and ADS comply with the applicable operational rules?

Yes, in these scenarios both the human driver and the ADS should be required to comply with applicable operational rules. One challenge that may arise is determining if the ADS or human driver was in control of a vehicle when a traffic violation or crash occurs. Studying these instances will be important for improving both ADS technology and traffic safety laws.

7.1. If so, what qualifications should be required of the individual performing the inspection?

A pre-trip inspection that includes the ADS should be required before dispatching an ADS-equipped commercial motor vehicle. While the specific technology may vary based on each ADS, the pre-trip inspection should include a self-diagnostic of all ADS-related sensors and controllers. Additionally, the individual conducting the pre-trip inspection should have the technical expertise needed to reasonably ensure that the commercial motor vehicle and the ADS is ready to operate safely.

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7.2. What kind of routine or scheduled inspections should be performed and what types of ADS related maintenance records should be required?

This requirement for routine inspections should be developed in consultation with suppliers of ADS, as they have the technical expertise to determine what is needed to ensure safe operation. Maintenance records should include detailed records on any software updates that occur.

7.3. Should the inspection period be more frequent than annual for an ADS-equipped CMV?

Given the need for multiple safety features and technologies to be functioning properly and simultaneously for the safe operation of ADS-equipped commercial motor vehicles, periodic inspections will likely need to occur more frequently than annually. Currently, the only diagnostic code checked by law enforcement is the antilock braking system (ABS). ABS has been checked by roadside inspectors over several inspection events. During these events the data collected found that 9% of power units and 13.9% of trailers that required ABS had a violation. The number of violations found with ABS, a foundational technology of ADS, suggests that more regular periodic inspections are needed to prevent violations like this.

7.4. Should inspections be mileage-based or time-based (e.g., 1,000 miles, 3 months or 1,000 hours of operation)?

Whichever approach is selected needs to be verifiable during roadside inspections and safety audits.

7.5. Should FMCSA impose general requirements for motor carrier personnel responsible for ADS-related inspection, repair, and maintenance tasks similar to the Agency's brake inspector qualification requirements?

Given the highly specialized equipment used in ADS technology, qualification requirements should be in place. The specific technical requirements will need to be developed after industry standards or Federal Motor Vehicle Safety Standard (FMVSS) are established.

7.6. How could FMCSA ensure that motor carriers apply available aftermarket software updates?

Assuming safety critical updates need to be in place before a vehicle is permitted to be dispatched, software updates should be included in the pre-trip inspection requirements. Additionally, a new data system with ADS system information may need to be created and the necessary system scanning tools may be needed for roadside inspectors to determine if a system meets the minimum software requirements. Motor carriers should be required to maintain records with the date and time of updates, which could be checked during a compliance review.

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8.1. Should motor carriers be required to notify FMCSA that they are operating Level 4 or 5 ADS-equipped CMVs?

Motor carriers should be required to report ADS deployment in their fleets to FMCSA. At a minimum, FMCSA should be aware of ADS deployment in order to better collect data on the safety impacts of the technology. FMCSA notes prior public responses did not state that ADS-equipped vehicles should be subject to a greater level of scrutiny. This is likely due to a misunderstanding of the question or a public assumption that ADS-equipped commercial motor vehicles will automatically receive a greater level of scrutiny. It is widely accepted that a greater level of scrutiny should occur, the more pertinent question is where the additional scrutiny should be placed.

8.2. If so, how should the carrier notify FMCSA?

Initially, it would be sufficient for motor carriers to notify FMCSA by written communication so that FMCSA can begin to collect data on the vehicles. It is likely that as the technology becomes more widespread, ADS capabilities will need to be indicated when a vehicle is registered at the state level.

8.3. Should FMCSA require markings identifying the ADS Level of a vehicle?

There needs to be a universal indication that a vehicle is equipped with ADS technology and ideally if that technology is in use. This would best be accomplished by the creation of a universal electronic vehicle identifier for commercial motor vehicles that would broadcast basic vehicle identification information to enforcement personnel, which could be used to determine a vehicle's ADS status. CVSA has petitioned the National Highway Traffic Safety Administration (NHTSA) to publish an ANPRM on the creation of an FMVSS requiring a universal electronic vehicle identifier on all new commercial motor vehicles. FMCSA should work with NHTSA to establish this requirement. Immediate electronic identification of a commercial motor vehicle will not only inform enforcement of a vehicle's ADS status, but could also aid in establishing the vehicle-to-enforcement (V2E) connectivity necessary for the electronic inspection of an ADS-equipped commercial motor vehicle. This technology would allow for inspections without impeding commerce by stopping and delaying automated or connected commercial motor vehicles.

8.4. Should the Agency require motor carriers to utilize ADS-equipped CMVs that have a malfunction indicator?

Yes, a malfunction indicator provides both the driver and roadside inspectors with an indication that the system isn't functioning properly. Ideally, this indicator would be in both the cab and on the exterior of the commercial motor vehicle where it could be seen when moving down the road, like ABS malfunction indicators currently operate on trailers and converter dollies.

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8.5. Should the Agency require that motor carriers deploying ADS-equipped CMVs ensure the vehicle can pull over in response to Federal and State officials or move out of the way of first-responders?

Yes, regardless of how the vehicle is operated, this requirement helps ensure the safety of first-responders. ADS-equipped commercial motor vehicles must be able to recognize and communicate with emergency responders, including emergency response vehicles approaching from the rear of the ADS-equipped commercial motor vehicle. State laws will require ADS-equipped vehicles to yield to emergency vehicles and comply with other laws like "move over" laws.

8.7. How would roadside enforcement personnel know that a vehicle can no longer operate safely?

CVSA is currently working with the enforcement community to determine how to best inspect ADS systems once deployed. While much is still to be determined, preliminarily, we know that inspectors do not have sufficient tools at their disposal to check the function of sensors, actuators and ADS software. It's likely that an ADS self-calibration and malfunction or status indicator lamp regulatory requirement will be needed to assist the law enforcement community in identifying ADS that are not operating safely. CVSA member enforcement personnel will continue to apply the CVSA North American Standard Out-of-Service Criteria on vehicles they inspect, regardless of whether the vehicle is under control of a human driver or ADS.

8.8. Absent an FMVSS, how could standard indications be provided to enforcement personnel?

Establishing an FMVSS would be the preferred method of creating ADS safety requirements. However, recognizing that ADS operators are rapidly moving towards limited deployments, one option is to achieve consensus with ADS technology companies about a common method of ADS status communication. Individual ADS technology companies have discussed with law enforcement agencies in the states in which they are testing how they want to communicate the system status, such as with an indicator lamp on the driver side. CVSA supports uniformity and reciprocity in regulations, so absent an FMVSS, CVSA would encourage ADS technology companies to seek consensus on a common, uniform marking and status indicator, to be included in their voluntary safety self-assessment documents. Currently, law enforcement does not have a reliable means of determining whether a human driver or an ADS is in control of a vehicle at any given time. Being able to identify whether a vehicle is ADS enabled at any given time is essential for effective safety enforcement.

9.1. What types of safety and cargo security risks may be introduced with the integration of ADS-equipped CMVs?

Many CVSA member agencies work closely with motor carriers and federal law enforcement to help address cargo safety and security issues. Integration of ADS-equipped commercial motor vehicles may create new kinds of safety and security risks, but may also potentially reduce some risks. Without a human onboard there are fewer reasons that the commercial motor vehicle would need to stop, reducing exposure to unwanted interaction with the cargo. A partial solution may be to add cameras to monitor cargo as part of the ADS

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technology. CVSA will continue to follow its operational policies related to the opening and re-sealing of cargo in van trailers, regardless of whether or not it is an ADS-equipped vehicle.

9.2. What types of rules should FMCSA consider to ensure that motor carriers safety management practices adequately address cybersecurity?

FMCSA should consider enhancing the requirements for cybersecurity of electronic logging devices and any future wireless, vehicle-to-infrastructure (V2I), vehicle-to-vehicle (V2V) or V2E communications approaches to further guard against cyber intrusions.

10.1. As the development of ADS technology continues, the Agency believes there is a need to learn about the performance limitations of these systems. FMCSA draws a distinction between information about performance limitations (e.g., how well does the ADS keep the vehicle in its lane and under what environmental conditions, etc.) and details about the system design (e.g., the specific types of sensors, or the arrays of sensors and cameras used for input to the central processing unit for the ADS). To what extent do ADS developers believe performance data should be considered proprietary and withheld from the public?

Law enforcement agencies will need access to performance data in the event of a crash and will likely need the assistance of ADS technology companies with interpreting the data. The ability for personnel responsible for post-crash inspections and investigations to accurately characterize the actions of a vehicle during a crash, including any performance limitations of the ADS, is important to the continued improvement of the reliability, safety and public acceptability of ADS.

Other Considerations

In the ANPRM, FMCSA asks if passenger and hazardous material carriers should have different requirements surrounding ADS. In order to ensure the safe integration of this technology, ADS should be first designed, developed and established to be safer than human drivers of commercial motor vehicles with one human on board and limited hazardous materials, before expanding the technology to certain passenger carrying vehicle operations or hazardous materials shipments, especially in high speed (therefore high potential energy crash) operational environments.

While not specifically identified in the ANPRM, another important issue that will require FMCSA's consideration is how to account for vehicle and driver violations within the agency's Compliance, Safety, Accountability (CSA), Safety Measurement System (SMS). For example, an ADS that fails to operate the commercial motor vehicle as intended will need to be characterized and documented differently from issuing a traffic enforcement violation to a driver. Further, consideration should be given to how these ADS-related violations will impact a motor carrier's safety rating. CVSA encourages the agency to address these issues before moving ahead with regulatory action.

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The Alliance 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.

If you have further questions or comments, please do not hesitate to contact me by phone at 301-830-6149 or by email at collinm@cvsa.org.

Respectfully,

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

Commercial Vehicle Safety Alliance
Improving uniformity in commercial motor vehicle safety and enforcement

December 17, 2018

The Honorable Heidi King
Deputy Administrator
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE
Washington, DC 20590-9898

RE: Petition for Rulemaking – Require Commercial Motor Vehicles to be Manufactured to Wirelessly Broadcast a Universal Electronic Vehicle Identifier

Dear Deputy Administrator King,

The Commercial Vehicle Safety Alliance (CVSA) petitions the National Highway Traffic Safety Administration (NHTSA) to publish an advance notice of proposed rulemaking (ANPRM) in regards to amending the Federal Motor Vehicle Safety Standards (FMVSS) found in Title 49 Code of Federal Regulations (C.F.R.) Part 571 to explore the benefits and feasibility of establishing a new FMVSS requirement for the remote electronic identification of heavy-duty vehicles, truck tractors, buses and semi-trailers being operated in the United States and to inform the original equipment manufacturers (OEMs) and facilitate the early voluntary adoption of such technology.

CVSA is a nonprofit association comprised of local, state, provincial, territorial and federal commercial motor vehicle safety officials and industry representatives. The Alliance aims to achieve uniformity, compatibility and reciprocity of commercial motor vehicle inspections and enforcement by certified inspectors dedicated to driver and vehicle safety. Our mission is to improve commercial motor vehicle safety and uniformity throughout Canada, Mexico and the United States, by providing guidance and education to enforcement, industry and policy makers.

Request

CVSA petitions NHTSA to initiate an ANPRM in order to facilitate a discussion among stakeholders regarding the advantages and associated benefits of amending the FMVSS to require all heavy-duty vehicles, truck tractors, buses and semi-trailers to be manufactured with the capability for quick remote identification of a commercial motor vehicle for inspection and enforcement purposes. There are a number of technology options through which this could be achieved. For example, the electronic identifier could be communicated through the proposed dedicated 5.9 GHz spectrum, or other related communication platforms, surrounding the advancement of automated driving systems (ADS) in conjunction with automated and connected commercial motor vehicles as part of the basic safety message. This immediate electronic identification of a commercial motor vehicle will aid in establishing the vehicle to enforcement (V2E) connectivity necessary for the wireless inspection of an

automated or connected commercial motor vehicle without impeding commerce by stopping and delaying automated or connected commercial motor vehicles and advance the vision and guiding principles outlined in Preparing for the Future of Transportation: Automated Vehicles 3.0 (AV 3.0). Publishing an ANPRM would initiate much needed discussion on this crucial step forward in commercial motor vehicle safety technology.

Justification

The federal government entrusts the states with the responsibility of enforcing the Federal Motor Carrier Safety Regulations (FMCSRs) and the Hazardous Materials Regulations (HMRs) through the Motor Carrier Safety Assistance Program (MCSAP). The states use funds through the MCSAP to conduct enforcement activities, targeting vehicles, drivers and motor carriers that present a safety risk to the driving public. According to FMCSA, the agency regulates 524,058 motor carriers, 5.9 million commercial drivers and 12.1 million commercial motor vehicles. Given the size of the industry, the states do not have the resources to inspect every vehicle, driver and motor carrier operating on our roadways on a regular basis. In order to maximize resources, the states use a combination of methods to identify vehicles, drivers and motor carriers for intervention and enforcement.

Currently, inspectors use screening technology programs and tools, as well as inspection selection procedures and inspector observation to identify inspection targets to be examined during a roadside inspection. Third party screening technologies that are currently in use help to increase the number of vehicles, drivers and motor carriers that enforcement community comes into contact with; however, some of these technologies are used voluntarily and others are deployed with varying degrees of effectiveness. Since technologies exist today that would allow automated roadside identification of nearly all commercial motor vehicles, if this proposed concept were universally deployed, this would revolutionize the way commercial motor vehicle roadside monitoring, inspection and enforcement are conducted. It would improve the effectiveness of enforcement programs while reducing costs, for both enforcement and industry, all while improving safety. In order to move forward with full deployment, however, enforcement must have a universal mechanism for electronically identifying ***all*** commercial motor vehicles. We believe this can be accomplished with minimal cost and disruption, and we believe the safety and economic benefits will be substantial for the enforcement community, motor carrier industry and driving public.

While many questions still exist surrounding this concept, establishing a universal electronic vehicle identifier requirement for all commercial motor vehicles will have tremendous benefit. Jurisdictions will save time and see improved efficiencies as inspectors are able to more accurately target vehicles, drivers and motor carriers in need of an intervention while allowing safe, compliant vehicles to deliver their freight more quickly and efficiently.

Most importantly, establishing a universal electronic vehicle identifier requirement for all commercial motor vehicles would benefit the public by improving safety, taking unsafe vehicles, drivers and motor carriers off the roadways. As industry continues to grow and more and more people take to the roads, it is imperative that we leverage technology where possible to improve the efficacy of our enforcement programs.

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It is important to note that establishing a universal vehicle identifier requirement within the FMVSS creates no additional regulatory burden for the motor carrier. Further, for the regulated motor carrier industry, there are no credible privacy concerns. The universal vehicle identifier, potentially tied to the vehicle identification number (VIN), would transmit only information that is already required to be displayed or made available by regulation. All this requirement would do is change how that information is presented to the enforcement community.

Further, the need for a universal vehicle identifier becomes more critical as the industry moves forward to implement driver assistive truck platooning and increasingly advanced driver assistance systems and partially or fully automated driving systems, which will require new methods and levels of safety checks. NHTSA's vehicle to vehicle (V2V) and vehicle to infrastructure communications (V2I), which we understand is planned for medium and heavy vehicles, is an ideal platform upon which to achieve this electronic identification and for our vehicle to enforcement (V2E) initiative to become a reality. As driver assistive technologies evolve in commercial vehicle use, the proper identification and monitoring of these commercial motor vehicles becomes increasingly necessary. No matter the method, this proposed requirement would enable efficient identification and inspection/screening of vehicle systems to help ensure safe operation of commercial motor vehicles, including those being operated with or without a human operator on board.

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 agency's commitment to safety and stakeholder involvement.

If you have further questions or comments, please do not hesitate to contact me by phone at 301-830-6149 or by email at collinm@cvsa.org.

Respectfully,

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

CC: The Honorable Raymond P. Martinez, Administrator, Federal Motor Carrier Safety Administration

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