GlobalAutomakers

August 29, 2019

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 No. FMCSA–2018–0037
Advance Notice of Proposed Rulemaking
Safe Integration of Automated Driving Systems-Equipped Commercial Motor Vehicles

Enclosed are the comments of the Association of Global Automakers, Inc. ("Global Automakers") on FMCSA's May 28, 2019, ANPRM on Safe Integration of Automated Driving Systems-Equipped Commercial Motor Vehicles.

Sincerely,

Paul Scullion
Senior Manager, Vehicle Safety and Connected Automation

Enclosure

GlobalAutomakers

COMMENTS OF THE ASSOCIATION OF GLOBAL AUTOMAKERS, INC., IN RESPONSE TO FMCSA'S May 28, 2019, ADVANCE NOTICE OF PROPOSED RULEMAKING (ANPRM) ON SAFE INTEGRATION OF AUTOMATED DRIVING SYSTEMS-EQUIPED COMMERCIAL MOTOR VEHICLES

August 28, 2019

The Association of Global Automakers, Inc. ("Global Automakers")[1] appreciates the opportunity to provide our comments on FMCSA's ANPRM on the safe integration of automated driving systems into the commercial motor vehicle standards. We fully support DOT's continued engagement on automated vehicles, an issue of critical importance. Driving automation has the potential to address the largest single area of highway safety concern (driver errors) while providing greatly enhanced transportation opportunities and efficiencies. We look forward to continuing to work with DOT to develop a policy structure to facilitate the development and implementation of automated vehicles.

The development of automated driving systems (ADS) creates the opportunity for major new approaches in the commercial motor vehicle sector. However, to ensure an effective integration of ADS, it is critical that FMCSA avoids inconsistency of its policies and requirements with those of the National Highway Traffic Safety Administration (NHTSA). Unnecessary inconsistencies would complicate the development of automated vehicles, increase costs, and delay the implementation of important new technologies. The need for consistency in DOT programs regarding automated vehicles was a common theme of discussion at the March 1, 2018, DOT Listening Session on the AV 3.0 Guidance. See https://www.transportation.gov/sites/dot.gov/files/docs/policy-initiatives/automated-vehicles/314091/usdot-public-listening-summit-automated-vehicle-policy-summary-report.pdf .

Our comments focus primarily on vehicle performance and technology issues that are raised in the ANPRM. However, we also note that regulations that require the presence of a human operators in the case of Level 4 or 5 AVs could adversely impact the potential market for automated commercial vehicles and limit certain deployments.

Performance requirements for automated vehicles

We agree with FMCSA that it should, where possible, rely on consensus standards in adopting guidance and requirements for the commercial motor vehicle sector. The development of new AV-specific criteria can be accomplished most effectively and expeditiously as part of joint industry-government initiatives. FMCSA should actively engage in commercial AV standards development activities within SAE International (SAE) Committees.

---

[1] *The Association of Global Automakers represents the U.S. operations of international motor vehicle manufacturers, original equipment suppliers, and other automotive-related trade associations. Global Automakers' mission is to educate and advocate for policies that help foster a vibrant, growing, free and open U.S. auto industry for all stakeholders. The Association collaborates with industry leaders, legislators, regulators, and other stakeholders in Washington, DC and 50 state capitals to create the kind of public policy that promotes innovation, vehicle safety and environmental responsibility. Our members' account for 40 percent of all U.S. production. International automakers account for 47 percent of all U.S. sales of passenger vehicles and light trucks. For more information, visit www.globalautomakers.org.*

GlobalAutomakers

We address the following questions raised in the FMCSA ANPRM:

1. **Q: 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?**

   A: Commercial automated vehicles whose operating design domain includes rail crossings should have these capabilities. If FMCSA plans to adopt a test procedure to assess this capability, the test procedure should be developed through the consensus standard process, as discussed in the ANPRM.

2. **Q: FMCSA preliminarily believes it would be appropriate to require that the ADS-equipped vehicle, like a human driver, have a means of detecting emergency vehicles such as police, fire, and rescue, and moving out of the path of first responders, as well as taking appropriate action while driving through work-zones.**

   A: Commercial AVs should possess these capabilities as well. Any test procedure that FMCSA relies on to assess these capabilities should be developed through a consensus standards process.

3. **Q: FMCSA is considering pre-trip and post-trip inspection requirements, which may vary depending on the sensors and detectors, to identify mechanical/electrical problems that may or may not be related to the ADS technology. Should FMCSA allow for diagnostic devices to perform some "inspection" functions?**

   A: Automated diagnostic systems should be permitted to perform and support some current inspection requirements. The performance of such systems should be demonstrated by system developers to describe their operation and reliability. The operation of the diagnostic systems should be subject to verification by Federal and State officials.

4. **Q: Malfunction indicators are a routine requirement under both the FMVSSs and FMCSRs (e.g., the antilock brake system malfunction indicator required under FMVSS Nos. 105 and 121 and section 393.55 of the FMCSRs). FMCSA believes requirements for such indicators should be considered to alert motor carrier maintenance personnel as well as Federal and State enforcement officials whether the ADS is fully operational or in need of repair.**

   A: Performance specifications for requirements for diagnostic systems and malfunction indicators should be developed through a consensus standards process. Malfunctions involving brake and other vehicle control systems are expected to be communicated to a vehicle's ADS. Any requirements based on such specifications should be implemented through normal rulemaking procedures.

Marking/certification of performance capability of AVs

1. **Q: Should ADS-equipped CMVs be visibly marked to indicate the level of automated operation they are designed to achieve? FMCSA preliminarily anticipates that Level 4 and 5 ADS-equipped vehicles would be marked to enable identification by Federal and State officials.**

   A: We would not oppose a marking system of this type, as developed through a process allowing for advance notice and opportunity for comment. Further research is needed to understand how best to externally communicate automated vehicle capabilities to road users.

2. **Q: FMCSA expects vehicle manufacturers or ADS technology companies to provide motor carriers with a form of self-certification of the capabilities of the ADS technology, based on completion of the voluntary safety assessment. The certification would enable the motor carrier to understand the ODD limitations of the ADS technology.**

   A: It is reasonable to expect that manufacturers and developers of commercial vehicle ADS technology will provide information of the capabilities of their systems, and DOT has established a framework through the Voluntary Safety Self-Assessment process where information can be shared with the regulator. For vehicles being deployed outside of testing, it is likely that relevant materials will be available in the public domain to ensure that those operating or using the vehicle understand its capabilities and limitations.

Enforcement

1. **Q: In addition to basic safety requirements for ADS technology, the Agency is considering enforcement tolerances that could be used by Federal and State enforcement personnel to identify the levels of non-compliance that would warrant placing an ADS-equipped CMV out of service until the problem is corrected.**

   A: Any such enforcement tolerances should be developed through a collaborative process involving vehicle manufacturers and ADS technology developers and should focus on safety needs and technology capability. The Agency's current CMV out of service criteria should serve as a useful reference for ADS equipped CMVs.

Restrictions on use of highly automated vehicles

With regard to driver restrictions, we agree with FMCSA that those requirements should continue to apply to Level 1-3 ADS, since the human operator can be expected to assume control of such vehicles at various times. As FMCSA notes, some current restrictions may be inapplicable for higher levels systems, particularly for dedicated automated vehicles that lack manual driving controls. As a general matter, the current types of operator restrictions should continue to apply to operators who may be called upon to assume control of the vehicle on short notice. Somewhat less stringent requirements should apply when operators are not required to be in control of the vehicle but may be required to assume control after a reasonable alert period (e.g., regarding the use of hand-held devices). For vehicles lacking manual controls, human occupants who have no vehicle operational responsibilities should be considered to be passengers rather than operators.

1. **Q: FMCSA asks whether highly automated vehicles should be prohibited for certain types of operations, such as carrying hazardous materials, motor coaches, or longer combination vehicles.**

   A: We see no basis for prohibiting particular uses of commercial AVs in the absence of evidence suggesting that a class of vehicles is incapable of safely performing the driving task.

2. **Q: Should FMCSA require that a trained commercial driver be "behind the wheel" at all times, regardless of automation level, unless a waiver petition has been approved?**

   A: A trained commercial driver should only be required if the ADS requires that a human operator assume driving control in certain circumstances. Imposing such a requirement without exception could limit the deployment of certain highly automated vehicle designs, including those without manual driving controls or that may utilize remote operation.

3. **Q: Should there be a requirement for a special endorsement on a CDL to authorize a driver to operate an AV? FMCSA states that it is inclined to maintain current rules.**

   A: Driver education is important, and it is anticipated that drivers will be provided with adequate training in cases where they may be required to operate any ADS with manual inputs or control. It is difficult to determine whether there should be a highly-specified training program as there may be initial differences in how vehicle systems are designed. Additional research is needed to determine whether an objective process is needed and/or what requirements or evaluation are necessary to earn such an endorsement. In the near term, we would argue that no special endorsement should be required unless the vehicle in question requires the operator to possess significant, unique skills that differ from the skills required to operate a conventional vehicle.

4. **Q: Should FMCSA ease its requirements regarding use of handheld devices in the case of Level 4 or 5 AVs during the time that the ADS is controlling the vehicle?**

   A: Any requirements should carefully consider the roles and responsibilities of the driver depending on the level of automation, with any exceptions to existing prohibitions being dependent on whether the driver (if any) needs to be available to resume control of the vehicle. For example, if the vehicle is capable of providing the human operator with sufficient alert time before requiring the operator to assume driving control, there may be fewer reasons why the operator should be prohibited from using handheld devices while the ADS is performing the driving task.

<u>Confidential information</u>

1. **Q: To what extent do ADS developers believe performance data should be considered proprietary and withheld from the public? Are the Agency's current processes under 49 CFR 389.9 for submission and protection of confidential business information in the context of a rulemaking sufficient to allow ADS developers and motor carriers to communicate essential information to the Agency regarding the operation of ADS? If not, how should those processes be modified?**

A: We recognize the need for DOT to have access to ADS performance information in order to oversee the safe implementation of this technology. However, information on ADS performance is of substantial commercial value and is therefore highly sensitive. In our view, current processes in place are adequate to protect this information from disclosure. However, DOT must recognize the sensitivity and competitive value of the information and provide careful protection to the information provided by manufacturers and technology developers.

Definitions of "driver" and "operator"

1. **Q: 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?**

   A: Based on our experience in considering this issue in the context of the Federal Motor Vehicle Safety Standards, it is premature to attempt to apply a "one-size-fits-all" approach to this issue. While we recognize that initial efforts by NHTSA interpreted the automated system as the "driver" in certain cases, we have questions on the extent to which such an approach could be applied wholesale, as this could have unintended consequences in terms of how certain FMVSSs are applied to conventional (and/or dual-use) vehicles. Moreover, this approach may send inappropriate policy signals to the states concerning a perceived need to establish licensing requirements for automated driving systems, deemed by the Department as being the "driver." A more complete approach would be to define the term "automated driving system" (consistent with SAE J3016) and to modify regulatory language in each FMVSS to specify the appropriate requirements applicable to these automated driving systems in the context of that standard. We therefore recommend separately defining "automated driving system" and incorporating this term for use in appropriate situations. Similar to the NHTSA review of existing FMVSSs, FMCSA should consider how existing standards intended to apply to human drivers or manual driving controls may need to be updated to accommodate ADS equipped vehicles.[2]

[2] 84 FR 24433