Public Affairs

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The Honorable James Owens, Acting Administrator
National Highway Traffic Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: Notice of Proposed Rulemaking: Occupant Protection for Automated Driving Systems [Docket No. NHTSA–2020–0014]

Dear Acting Administrator Owens:

With more than 60 million members, AAA is a not-for-profit member services organization dedicated to advancing safe mobility. Similar to other stakeholders in this space, we are excited about the future of automation and the potential safety benefits and mobility options that it represents. AAA applauds NHTSA for undertaking the important first step of proposing a rulemaking that addresses occupant safety for automated driving systems (ADS) by modernizing the 200 Series Federal Motor Vehicle Safety Standards (FMVSSs). For over 50 years, these standards have ensured that new vehicles throughout the U.S. meet high safety standards before they are deployed. While NHTSA works to overcome regulatory barriers for the safe deployment of ADS, it must maintain its role in safeguarding consumers by creating appropriate regulatory guardrails that protect motorists from known hazards and mitigate challenges from unknown hazards.

When a new vehicle enters the market, consumers expect that it will meet minimum federal safety requirements. Occupant protection is one of those requirements, making the 200 Series FMVSSs a critical and necessary pillar of any safety assessment of new ADS vehicle designs. To meet national concerns over safety, AAA encourages NHTSA to use its FMVSS modernization efforts to optimize safety in ADS development and deployment. As ADS developers experiment with new interior designs, AAA believes manufacturers (that produce or equip vehicles with ADS) are responsible for the safety performance of these vehicles and are in the best position to ensure any alterations made to ADS vehicle interiors do not cause or increase risk of harm to occupants or any road user. New FMVSSs for ADS must be flexible enough to accommodate innovation, but AAA believes that safety should never be compromised to hasten ADS deployment. Occupants and others who share the road with ADS-equipped vehicles have a right to expect that the new vehicles will operate safely. As such, AAA supports thorough testing of new ADS FMVSSs using objective, performance-based measures as the technologies continue to evolve – including testing in simulation and on closed courses to demonstrate a high level of safe performance prior to deployment.

For ADS occupants, knowing that a vehicle's interior has been designed and tested to maximize safety benefits will help in cultivating consumer confidence in ADS operations. In particular, AAA believes NHTSA should take special consideration when revising the following standards, since they highlight the direct impact of ADS operations on safety protections for human occupants:

- FMVSS No. 201 (Occupant protection in interior impact);
- FMVSS No. 203 (Impact protection for the driver from the steering wheel);

- FMVSS No. 207 (Seating systems);
- FMVSS No. 208 (Occupant crash protection);
- FMVSS No. 213 (Child restraint systems);
- FMVSS No. 214 (Side impact protection); and
- FMVSS No. 225 (Child restraint anchorage systems).

NHTSA must ensure that any alterations to vehicle standards for ADS deliver at least the same level of protection that occupants are currently afforded in new vehicles that exist today, recognizing that the standards offer a base for safety that consumers will expect to be built upon to offer enhanced protections to support widespread ADS deployment.

Further, if NHTSA wants to encourage greater adoption of ADS-equipped vehicles, the agency will need to assure the public that safety standards are in place for one of the most vulnerable occupants: children. Since NHTSA has taken care to establish special protections for children under current standards, consumers will expect ADS safety standards to address unique requirements for infants, toddlers, and children above the age of two in light of their varying heights and weights. Considerations involving safely transporting children should be taken into account as ADS-equipped vehicles are being designed, not afterwards. Safety design questions that need to be thought through to ensure that children are adequately protected include:

- How will the interior of the cabin be designed to ensure that it does not negatively impact a child restraint?
- What about ADS interaction with airbags and the LATCH system? Are new protections needed given these existing safety technologies?
- Will the ADS detect if a child is left unattended in a vehicle? If so, will the ADS take actions to intervene to prevent the child from experiencing hyperthermia?
- Acknowledging that the majority of car seats are not installed properly, the need for education will remain, including whether an ADS design impacts installation procedures in any way.
- Will the ADS detect and react appropriately (e.g., pull over) if an occupant, and particularly a child, unbuckles him or herself?
- Is the ADS designed to operate safely in the event that an occupant, and particularly a child, accidentally or deliberately attempts to influence the vehicle's safety or operations (e.g., by unlocking and/or opening doors, pressing on/off buttons)?

NHTSA should ensure that if equipment meant to protect children, such as car seats, is required to enhance safety in ADS-equipped vehicles, new standards will be developed along with guidelines to educate consumers on how to properly install and adjust any equipment in the new vehicles.

Indeed, consumer education on a variety of issues related to ADS deployment will be critical to helping consumers understand potential safety benefits. Currently, only 12% of U.S. drivers would feel comfortable riding in a self-driving car, according to a 2020 AAA survey results on AV consumer attitudes, while 51% are interested about laws to make sure self-driving cars are safe.[1] Moreover, half of consumers (49%) want to know how vulnerable the vehicles will be to hackers. This last point makes it especially important for NHTSA to strongly consider whether new cybersecurity FMVSSs are needed to protect occupants in an ADS-equipped vehicles. AAA recognizes that NHTSA may not have cybersecurity expertise, but other parts of the Government are actively studying cybersecurity safeguards and NHTSA should incorporate or reference the work of sister agencies in formulating a new FMVSS on this important topic. In addition, NHTSA should consider that with limited or no internal vehicle controls, what protections or

[1] https://newsroom.aaa.com/2020/03/self-driving-cars-stuck-in-neutral-on-the-road-to-acceptance/

interventions are necessary to ensure human occupants of an ADS-equipped vehicle are safe in the event of a cyberattack? This inquiry is in line with AAA's recommendation to NHTSA on telltales in March 2018, which urged NHTSA to maintain the telltale requirement because it enhances confidence and safety for occupants.[2] AAA believes that occupants will want and expect information regarding the critical safety systems of ADS, so that they can make an informed choice regarding their use of the vehicle. A telltale may be needed to notify human occupants when an ADS-equipped vehicle malfunctions or detects that one of its systems has been compromised by a hacker, enabling an occupant to make decisions to protect his or her safety and privacy. None of the proposed FMVSS 200 Series alterations account for cybersecurity protections for occupants; however, NHTSA's proposed rulemaking notes that the agency intends to issue a separate notice for telltales, alerts, and other in-vehicle warning systems. In light of these upcoming efforts, AAA recommends that NHTSA determine how to incorporate cybersecurity protections into all applicable FMVSSs, including federal standards outside the 200 Series, or if a new FMVSS series dedicated to cybersecurity is needed.

Additionally, as NHTSA alters federal standards to accommodate ADS, AAA believes that NHTSA must continue to be diligent in its oversight and enforcement of FMVSS authority, which gives it the ability to grant exemptions. Until NHTSA issues final rules for ADS, the FMVSS exemption process will continue to be the primary mechanism for NHTSA to ensure ADS deployment on public roads will be safe for all road users. As the industry submits exemption petitions, NHTSA should put the burden on ADS developers to justify why a particular FMVSS is no longer applicable. If the petitioner does not meet this burden, NHTSA should maintain the current rule. To remove or revise an FMVSS without this convincing evidence would be arbitrary and potentially dangerous. In the event that a petitioner does meet this burden, AAA expects that NHTSA would clearly explain the justification for changing or eliminating a FMVSS in its response to a petitioner.

In conclusion, AAA believes future ADS deployment will depend on how well the technology provides safety benefits to all road users, including occupants who must trust the crashworthiness of a vehicle and its software to keep them safe. Federal safety standards are meant to give consumers certain safety assurances when they interact with vehicles. NHTSA must take care to ensure those same assurances are provided to consumers in the context of ADS deployment. Also, in light of ever-increasing public health concerns, ADS deployment for long and short-distance goods delivery may occur sooner than expected in some communities around the country, and human drivers will expect ADS to share roads and highways safely. NHTSA has stated that it will engage in separate regulatory efforts related to occupant-less ADS-equipped vehicles. AAA looks forward to participating in those and other ADS-related efforts to continue enhancing safety for all road users.

Sincerely,

Jill Ingrassia
Executive Director
AAA Advocacy & Communications

[2] https://www.regulations.gov/document?D=NHTSA-2018-0009-0068