313 Massachusetts Ave. NE, Washington, DC 20002 – (202) 543-7464

Friday, July 14, 2023

The Honorable Chou-Lin Chen
Associate Administrator, National Center for Statistics and Analysis
National Highway Traffic Safety Administration
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

RE: Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST) Initiative

[Docket No. NHTSA-2023-015]
OMB Control Number: 2127-0748

Dear Associate Administrator Chen,

The Autonomous Vehicle Association for Inspection Leadership (AVAIL) is an industry trade association working to address the need for post-deployment vehicle safety inspections for autonomous vehicle (AV) and advanced driver assistance system (ADAS)-equipped vehicles. We are comprised of vehicle inspection companies and aftermarket stakeholders. Based on our extensive experience enhancing roadway safety in the United States, we thank you for this opportunity to provide comments on how the proposed extension of the AV TEST Initiative's information collection could be improved to maximize the initiative's utility to the public.

The AV TEST Initiative serves a critical underlying purpose: providing the public and policymakers the information they need to understand the nature of the ADS (autonomous driving systems) testing taking place in their communities, affirm that proper regulation exists to ensure public safety, and identify potential regulatory shortcomings requiring remedy. AVs should only be deployed on public roads, even in testing phases, if they have earned the public's confidence as it relates to safety. After an AV is deployed, there should be a process whereby AV's have some form of periodic inspection to assure they are safe to be on U.S. highways.

NHTSA's National Roadway Safety Strategy states, "The role of vehicle safety performance in avoiding or mitigating the harm of crashes cannot be overstated."[1] Studies consistently and emphatically support that assertion. A 2018 Texas study from the University of Texas at Austin found that the most common type of car defect related to fatal crashes is slick or defective tires,

[1] United States, National Highway Traffic Safety Administration. *National Roadway Safety Strategy*, U.S. Department of Transportation, Jan. 2022. https://www.transportation.gov/sites/dot.gov/files/2022-02/USDOT-National-Roadway-Safety-Strategy.pdf.

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and roughly 23.5 percent of the drivers surveyed reported having been instructed by an inspector to fix a tire concern at some point.[2] A national study published this year by Carnegie Mellon University found that states that run inspection programs experience between 2.8 and 5.5 percent fewer roadway fatalities than those that don't, and that relationship is causal.[3] We can estimate that between 1,200 – 2,360 fewer Americans would have died from traffic fatalities in 2021 if these inspections were required nationally.

AVs and ADAS-equipped vehicles pose a heightened need for regularly conducted vehicle safety inspections. The cameras and sensors that allow these cars to navigate the environment around them are prone to misalignment throughout their road life. These sensors are often mounted on very thin metal brackets and are sometimes exposed, rather than behind a bumper. A light collision that causes no visual damage to the vehicle, like a bump from a shopping cart, can easily cause misalignment. AVs or ADAS-equipped vehicles are especially susceptible to misalignment post repair. Vehicles with misaligned sensors won't detect and respond to hazards or other environmental cues as intended. For this reason, auto manufacturers counsel that vehicles should undergo post-repair calibration scans to identify any unknown diagnostic trouble codes (DTCs) that would prevent systems from operating properly.[4]

Furthermore, passenger-less cars can't rely on a human to detect many signs of a defect, such as screeching brakes, that a car owner would ordinarily notice. In fact, AV owners often reside thousands of miles away and are occupied with managing large fleets. While cars do have sensors that alert drivers and passengers when tire pressure or engine oil is low, the scope of issues and sensitivity to severity these sensors can detect is limited. Some ADAS elements are not "self-checkable."

As vehicles become more sophisticated, and drivers (as well as the National Roadway Safety Strategy) come to rely more heavily on these systems, the risk of failure grows even greater. AVs cannot earn the public's confidence without knowing the frequency with which they are inspected by a human post-deployment on public roads, if at all. As it currently exists, the AV TEST Initiative does not provide a section for participants to provide this information. The need for this knowledge is heightened given that there are no regulations requiring periodic ADAS

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[2] Murphy, Mike, et al. "Economic and Safety Considerations: Motor Vehicle Safety Inspections for Passenger Vehicles in Texas." *The University of Texas at Austin Center for Transportation Research / Texas Department of Public Safety*, Oct. 2018, https://doi.org/https://citainsp.org/wp-content/uploads/2019/07/safteyInspectFullStudy-TX.pdf.

[3] Acharya, Prithvi S., et al. "The Impact of Periodic Passenger Vehicle Safety Inspection Programs on Roadway Fatalities: Evidence from US States Using Panel Data." *Journal of Transportation Engineering, Part A: Systems*, vol. 149, no. 7, 2023, https://doi.org/10.1061/jtepbs.teeng-7320.

[4] Co., Ebbeka Design. "ADAS Calibration: Why, When, and How?" *Eustis Body Shop*, 31 Aug. 2022, eustisbodyshop.com/adas-calibration/#:~:text=It%27s%20important%20to%20know%20that,by%2050%20feet%20or%20more.

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functionality inspections. AVAIL respectfully asks that the Initiative provide a process for AV operators and testers to submit that information. State and local jurisdictions should also have the ability to detail what, if any, regulations they have enacted or recommend pertaining to regular post-deployment safety inspections. In that vein, we agree with the Alliance for Automotive Innovation's comment, in response to NHTSA's request for comment that it published on April 6, 2023, that the AV TEST initiative display and distinguish AVs in a testing phase from those in real-world deployment.

The Owner-Operator Independent Drivers Association, in response to NHTSA's request for comment that it published on April 6, 2023, commented that the voluntary nature of AV TEST has not been effective in producing the necessary safety data to implement informed regulatory policies for autonomous vehicles. They recommended requiring mandatory data transparency from manufacturers in order to better inform stakeholders on the actual reliability and performance of autonomous technologies. NHTSA responded that the AV TEST Initiative's objective is to provide members of the public with a centralized database of high-level information about ADS testing activities and State and local laws, recommendations, and initiatives. Therefore, NHTSA argued, it is beyond the scope of the project to make any reporting mandatory. AVAIL disagrees with this assessment. The public cannot rely on the AV TEST website as a central database for high-level information about ADS testing activities and laws unless all AV testing and deployment programs are accounted, and the data fields are required uniformly across all participants.

AVAIL offers itself as a resource to NHTSA to help it integrate vehicle safety inspection programs with its initiatives, regulatory activities, and overall approach to improving roadway safety. We look forward to such a collaborative partnership.

Sincerely,

Andy McIntosh
Chair, AVAIL