

ConsumersUnion®

THE ADVOCACY DIVISION OF CONSUMER REPORTS

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Docket Management Facility
U.S. Department of Transportation
1200 New Jersey Avenue S.E.
West Building Ground Floor, Room W12-140
Washington, D.C. 20590

Submitted via www.regulations.gov

**Comments of Consumers Union to the
National Highway Traffic Safety Administration on
“Removing Regulatory Barriers for Vehicles With Automated Driving Systems”
Docket No. NHTSA-2018-0009**

Consumers Union, the advocacy division of Consumer Reports,¹ welcomes the opportunity to submit written comments to the National Highway Traffic Safety Administration (NHTSA) regarding the development of vehicles with automated driving systems (ADSs), following up on our oral comments delivered to the agency on March 6, 2018. We appreciate NHTSA’s attention to these vehicles, and support an open dialogue between the agency and stakeholders. At the same time, we urge the agency to remain focused on its statutory mission. Instead of an expansive focus addressing supposed “regulatory barriers,” NHTSA should accelerate its critical role in reducing traffic deaths and injuries by prescribing new motor vehicle safety standards and carrying out needed safety research and development to ensure that both self-driving cars and human-driven cars are safe.² Recent events—including fatal crashes within the last month of a self-driving Uber test vehicle in Arizona and the crash of a Tesla in California with the Autopilot driver-assist suite engaged—provide tragic examples of the importance, and urgency, of this work.

NHTSA should focus on strengthening safety standards

Before addressing any of NHTSA’s specific areas of inquiry, we comment more generally on the topic of the March 6 meeting and request for public comment. In short, there are

¹ Consumer Reports is an independent, nonprofit that works side by side with consumers for truth, transparency, and fairness in the marketplace. Founded in 1936, Consumer Reports has the largest nonprofit educational and consumer product testing center in the world, and uses its dozens of labs, auto test center, and survey research center to rate thousands of products and services annually. CR’s premier magazine Consumer Reports has more than 3.6 million subscribers, and the award-winning CR.org has 2.9 million paying members and more than 15 million unique visitors monthly, on average.

² 49 U.S.C. 30101.

more important subjects that NHTSA should be addressing right now to save lives and prevent injuries.

Primarily, we urge NHTSA to consider the valuable role that safety standards have played in reducing vehicle-related injuries and deaths. Researching, crafting, and finalizing federal motor vehicle safety standards is an approach that has proven to save lives. According to NHTSA's most recent report on the subject, from 1960 through 2012, more than 600,000 lives were saved by vehicle safety technologies like seat belts, airbags, child safety seats, electronic stability control, and their associated federal standards.³ With history as our guide, it would be reasonable to presume that safety standards could save at least another 600,000 lives going forward 50 years.

In light of the significant benefits of smart safety standards, it is unclear why the Department of Transportation has deemed “regulatory barriers” to be such a priority, and we raise significant concerns about deregulation, or eliminating consumer protections, being the result.

Although auto safety has significantly improved over the last several decades, there is still much more progress to be made. In 2016, 37,461 people died in motor vehicle crashes, representing a 14% increase from just two years earlier—and yet life-saving technologies, such as vehicle-to-vehicle (V2V) communications technology, rear seat-belt reminders, and heavy-duty vehicle speed limiters, to name a few, are not required today. Nor are up-to-date and stronger tests in place to ensure that child seats are effective in frontal and side-impact crashes and that cars sufficiently protect occupants from oblique impacts. Furthermore, recent events—including fatal crashes just within the last month of a self-driving Uber test vehicle in Arizona and the crash of a Tesla with the Autopilot driver-assist suite engaged—demonstrate the importance of closely overseeing driving automation systems as they are developed and tested, and establishing mandatory protections to ensure the entire industry gets the technology right. A failure to do so could set the technology back years or even decades.

NHTSA should do everything in its power to keep people safe on our roads. If the agency is seeking to make changes related to federal motor vehicle safety standards (FMVSS), its efforts would be best spent by bolstering its research on new standards and on improvements to strengthen existing standards that could prevent crashes and save lives.

Any revisions to federal safety standards must put safety first

When NHTSA chooses to strengthen or revise federal safety rules, it should ensure that safety itself is always the primary consideration—for the sake of both the well-being of consumers and the success of companies' technologies. We know that there is a great deal of excitement in the current and potential market for vehicles with ADSs, and competition is fierce. But the competitive push must not overwhelm the importance of safety. If NHTSA were to lower

³ NHTSA, “Lives Saved by Vehicle Safety Technologies and Associated Federal Motor Vehicle Safety Standards, 1960 to 2012” (Jan. 2015) (online at: crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812069).

the bar for safety, it could all too easily increase the chance of a backlash to automated driving technologies that would slow down the pace of progress for everyone.

Agencies should ensure that federal rules developed in the past achieve their statutory purposes in an appropriately effective and cost-effective manner, and are strengthened or revised as warranted with that goal in mind. However, NHTSA's request for comment indicates that the agency, in this notice, may be overly focusing on reducing the cost to industry of complying with critical protections. We note this possible misplaced focus as follows:

- NHTSA asks for comments on different categories of “barriers” to the testing, certification, and compliance verification of vehicles with ADSs. Specifically, the agency requests stakeholder input on “performance requirements that may serve a reduced safety purpose or even no safety purpose at all for vehicles with ADSs and thus potentially impose more cost and more restrictions on design than are warranted.” While federal requirements should serve a safety purpose—and be strengthened or revised as necessary to ensure that is the case—we are concerned by the breadth of this suggestion. NHTSA does not indicate how regulatory activity arising from this suggestion would ensure that consumer safety does not suffer. It is not apparent to us how NHTSA would determine that a required safety measure imposes more costs or design restrictions than “warranted,” or what calculation or procedure would determine whether the costs or restrictions are warranted. Furthermore, it is unclear under which circumstances the reduced safety benefits from a federal safety rule could lead the rule to be considered no longer useful to protecting consumers from injury and death, in light of its costs or impact on design.
- NHTSA also asks whether any problems posed by FMVSS provisions can be resolved without conducting additional research or rulemaking. If the agency determines that there are issues created by federal safety standards that undermine safety in the automated driving environment, it should conduct, oversee, or otherwise obtain well-founded research into how alternative provisions in a standard would better protect consumers on our roads. One of NHTSA's hallmarks is as a data-driven agency, and all regulatory revisions to FMVSS must be data-driven, demonstrating that a change is reasonably likely to improve safety. Without such research, the changes risk being arbitrary and capricious. Legal interpretations and other mechanisms that involve a lesser degree of transparency and public input should be used only in rare circumstances, in which the change is non-controversial and unlikely to attract adverse public comment. If NHTSA determines that a standard is problematic to vehicles with ADS, it should conduct an official rulemaking process, or provide a notice-and-comment opportunity about its rationale for not doing so. Stakeholder feedback provides invaluable insight into decisions related to motor vehicle safety, and must be considered when making any changes to FMVSS. Specifically, public notice-and-comment is necessary to ensure that all relevant voices are heard.
- NHTSA asks if there are items that would be better addressed through research by outside stakeholders, such as industry or research organizations, instead of by NHTSA itself. We understand that NHTSA's resources are limited, and support additional funding

and staffing for vehicle safety research. We stress, however, that any changes to FMVSS should be supported by the body of evidence, including vehicle safety research. To that end, if research related to a rule change is not conducted by NHTSA, the research should ideally be conducted by an entity independent from any financial interest in the outcome of a regulatory change. If, however, the research is conducted by an entity with a financial interest in the change, it should be subject to substantially greater vetting by the public to help maximize safety benefits and minimize conflicts of interest.

To best promote the safety of vehicles with automated driving systems, NHTSA should shift the time, energy, and resources spent on deregulation to several key priorities

In developing and rolling out vehicles that include driving automation features, safety truly must be the number one priority, as the Transportation Department and NHTSA have indicated it is. All other considerations must be secondary. To that end, we provide several examples of areas to which NHTSA should devote its focus rather than on supposed barriers.

First, NHTSA should promptly implement the National Transportation Safety Board's (NTSB) recommendations related to vehicles with Level 2 and 3 driving automation. These include standardizing data parameters and crash reporting so that investigators can better understand driver and vehicle performance before and during a crash, and developing a method to verify that manufacturers of these vehicles incorporate system safeguards that limit use of driving automation to those conditions for which they were designed.

There are demonstrated safety hazards associated with foreseeable use and foreseeable misuse of these systems, which contain automated steering, braking, and or acceleration functions but require the driver to remain engaged and monitor the environment at all times. These hazards recently were documented by the NTSB in its findings that Tesla's "Autopilot" driver-assist system played a major role in the May 2016 fatal crash of a Model S in Florida.⁴ Incidents like that one—as well as, perhaps, others currently under investigation—indicate consumer confusion about the capabilities and limitations of these systems.

In addition, NHTSA should require manufacturers to include a system to verify driver engagement and responsiveness that meets minimum performance standards enforced by the agency. Vehicles with Level 2 and 3 driving automation particularly rely significantly on human drivers to prevent a potential crash. Yet, these two levels are the ones in which human drivers are the most likely to place undue faith in the capabilities of an automated system, and to therefore be foreseeably inattentive or nonresponsive in a scenario that leads to a crash. Such systems should also be required for the testing of Level 4 and 5 vehicles with a backup driver, as well as new cars, light trucks, and heavy duty vehicles for which the highest level of automation is Level 0 or Level 1.

⁴ National Transportation Safety Board, Collision Between a Car Operating with Automated Vehicle Control Systems and a Tractor-Semitrailer Truck Near Williston, Florida May 7, 2016 (Sept. 12, 2017) (online at www.nts.gov/investigations/AccidentReports/Pages/HAR1702.aspx).

Further, NHTSA should set binding minimum electronics system and cybersecurity standards for manufacturers, since there are potentially life-or-death consequences if safety-critical systems are compromised. Cars and motor vehicle equipment have increasingly complex electronics systems and are increasingly networked, and can have major performance or cybersecurity vulnerabilities just as a computer or a mobile device can—but with potentially life-or-death consequences if safety-critical systems are compromised.

If NHTSA moves forward with efforts to amend current standards or test procedures to remove or alter references to a steering wheel, brake, accelerator, emergency brake, rearview mirrors, or other critical safety systems associated with a human driver—which could be appropriate for self-driving cars if limited and undertaken with care—the agency should also develop new standards to ensure such vehicles can still pass all existing FMVSS associated with those functions. Furthermore, NHTSA should ensure that any accommodations made for removing the steering wheel or altering seating positions include airbags and other occupant protection measures that deliver performance at least equal to whichever is the most protective among driver or front passenger requirements. NHTSA also should quickly move forward with research and development related to process standards, or other equivalently protective standards, for automation software, sensor, actuator, and electronics system design; performance standards for automation sensors and actuators; and the development of software simulation test standards.

Finally, NHTSA should develop clear expectations and procedures related to over-the-air (OTA) vehicle software updates. The recent incident involving Fiat Chrysler vehicles—in which an over-the-air update caused many cars’ user interfaces, including backup cameras and emergency response systems, to endlessly restart and lose functionality—shows the need for NHTSA to fully account for these updates in order to keep consumers safe.⁵ OTA updates may be effective tools to implement certain recalls or improve the function of a vehicle, but they can also be vectors for new, life-threatening defects, which could be especially dangerous in vehicles that are operated exclusively by software and artificial intelligence.

Conclusion

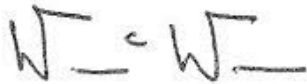
Creating and revising safety standards is a very resource-intensive process, and NHTSA has significant resource constraints. At every possible opportunity, we at Consumers Union share our view that the agency’s capabilities should be strengthened significantly through both increased funding and authority. NHTSA should be empowered to protect consumers against new hazards that may emerge, and to ensure ADSs work as they are supposed to without placing consumers at risk. The agency should be able to do this without being forced to divert resources from critical efforts it already undertakes to prevent crashes and save lives. For NHTSA to be the kind of watchdog consumers deserve, Congress should give the agency more funding and personnel, as well as a greater practical ability to get unsafe cars off the road quickly.

⁵ “Fiat Chrysler sent an over-the-air update that is causing Uconnect to endlessly reboot,” The Verge (Feb. 13, 2018) (online at: www.theverge.com/2018/2/13/17007332/fiat-chrysler-uconnect-update-reboot-problem-broken).

In the meantime, we encourage NHTSA to focus its energies on how to best protect all road users as well as the safety of occupants of all vehicles both with and without ADSs. For vehicles with ADSs, there is a portion of this work that may involve adjusting current federal requirements in order to yield even greater safety benefits, while of course maintaining the original safety purpose and effect of those requirements. This work could be appropriate, where well-considered, well-documented, and meaningfully justified by safety. NHTSA should not, however, prioritize work on deregulation or supposed regulatory barriers over important new ways that the agency should protect consumer safety in new types of vehicles.

Thank you for considering our comments. We look forward to continuing to work with NHTSA as it seeks to reduce traffic deaths and injuries as directed by statute: by prescribing motor vehicle safety standards and carrying out needed safety research and development.

Respectfully submitted,

Handwritten signature of William Wallace, consisting of stylized initials 'W' and 'W' with a small 'c' between them.

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Handwritten signature of Jack Barnett in cursive script.

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