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Heidi King
Deputy Administrator
National Highway Traffic Safety Administration
U.S. Department of Transportation
Docket Operations, M-30, Room W12-140
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

**Re: National Highway Traffic Safety Administration [Docket No. NHTSA-2019-0016] General Motors, LLC – Receipt of Petition for Temporary Exemption from Various Requirements of the Safety Standards for an All-Electric Vehicle with an Automated Driving System: Notice of receipt of petition for temporary exemption; request for public comment (the "Notice").**

Deputy Administrator King:

In the Notice published in the Federal Register on March 19, 2019, NHTSA asked for comment on the merits of and most appropriate statutory basis for General Motors exemption petition and whether the petition satisfies the substantive requirements for an exemption. The National Association of Mutual Insurance Companies ("NAMIC") appreciates the opportunity to provide comments regarding the Notice and request for comment set forth above.

NAMIC is the largest property/casualty insurance trade association in the country, with more than 1,400-member companies representing 40 percent of the total market. NAMIC supports regional and local mutual insurance companies on main streets across America and many of the country's largest national insurers. NAMIC member companies serve more than 170 million policyholders and write more than $253 billion in annual premiums. Our members account for 54 percent of homeowners, 43 percent of automobile, and 35 percent of the business insurance markets. Through our advocacy programs we promote public policy solutions that benefit NAMIC member companies and the policyholders they serve and foster greater understanding and recognition of the unique alignment of interests between management and policyholders of mutual companies.

NHTSA's acknowledges that their analysis of exemption petitions must be based on comparing the relative safety of exempted vehicles and nonexempted vehicle; in this case a comparison of (1) a vehicle in which all driving decisions as to when and how it is appropriate to use crash avoidance technologies and take actions to implement those decisions would be made by an Automated Driving System ("ADS") to (2) a vehicle in which almost all of those decisions are made and implemented by a human driver.

In this case, however, there is no vehicle that will make all driving decisions as to when and how it is appropriate to use crash avoidance technologies and take actions to implement those decisions by an ADS. Rather, GM requests the Secretary to grant the exemption to make easier the development or field evaluation of "a new motor vehicle safety feature providing a safety level at least equal to the safety level of the standard." Instead of providing a safe ADS and requesting exemptions from the FMVSS, this case is asking for an exemption to make easier the development of a safe ADS. Rather than assuring the safety of an ADS for which FMVSS exemptions may be warranted, NHTSA states that the key task is getting ready for ADS vehicles by ensuring that the federal safety standards do not impose unnecessary obstacles to those vehicles.

The ADS for which the exemptions are sought "*would be* (emphasis added) a combination of various hardware and software components that function as a system to perform functions traditionally performed by human drivers, i.e., perceive and interpret the driving environment, the objects in that environment, and their likely future movement, make decisions about accelerating, braking and steering so as to select and navigate safe paths through that environment and around those objects, and implement those decisions." A GM automated driving system that will safely do all these things does not now exist but is the system that GM plans to develop and evaluate.

The Notice states that the basis for the exemptions being sought under 49 U.S.C. 30113(b)(3)(B)(ii) and (iii) are that removing the FMVSS will make development and evaluation of a low-emission ADS easier. There is little doubt that this is accurate. However, those sections also require NHTSA to make a focused finding that the exemptions provide a safety level at least equal to the safety level of the standard for which the exemption is sought. NHTSA cannot make a focused finding that a planned ADS provides a safety level at least equal to the safety level of the standard of existing cars complying with the FMVSS.

The premise of this request for exemptions requires acceptance of two separate principles. The first is that safety advances from replacing human drivers may have the potential to save lives and reduce motor vehicle crashes and injuries. But while an ADS that can effectively eliminate common and pernicious human driver error could reduce crashes, a less than perfectly designed, programmed or functioning ADS may not.

The second premise is that the elimination of certain FMVSS are necessary for the development and evaluation of this effective and reliable ADS. The FMVSS proposed for exemption in this request are of two natures – driving controls and "telltales and indicators". Exemptions from driver controls are requested by GM because ''By removing human input from the formula, these changes provide the safety advantages of autonomous transportation while ensuring that passengers cannot interfere, purposefully or inadvertently, with the safe operation of the vehicle.'' The GM automated driving system that will operate safely does not now exist, yet its development and evaluate is purportedly dependent on ensuring passengers do not interfere. Exemption from "telltales and indicators" then

would be similarly necessary to ensure that the passengers are denied relevant information on which they may be tempted to interfere with the driving operation and impede ADS development and evaluation. While admittedly of a level of engineering and efficiency appeal, there is a serious lack of safety focus and development of consumer confidence.

Which leads to perhaps the most important point of the Notice. NHTSA asks for public comment in the Notice and it disturbingly, NHTSA asks if NHTSA should "assess whether an ADS steers, brakes, and accelerates at least as effectively and safely (e.g., as quickly) as the average human driver? If so, what methodology should it use? What studies, data, assumptions, validation test results, scientific reasoning, methodologies, and analyses should a petitioner submit to the agency to validate that its ADS provides safety at least equal to the level of the standards for which an exemption is sought?"

There is universal support for 100% safe ADS, and these perfectly safe ADS could potentially prevent about 40,000 U.S. traffic fatalities annually. But no one projects that ADS will be 100% safe in all situations. Accepting that ADS will be fallible and subject to problems and external corruption, unsafe ADS representing ½ of one percent of the existing personal autos in the U.S. could result in 250,000 crashes, injuries, and fatalities.

There should be no question whatsoever then that the federal agency with the self-described mission to "Save lives, prevent injuries, reduce vehicle-related crashes" must assess whether an ADS steers, brakes, and accelerates at least as effectively and safely as a human driver. If NHTSA is not sure that an ADS is at least as safe as existing human operated vehicles, NHTSA has no business enabling ADS to operate on the roads, and surely has no business removing federally mandated vehicle safety standards to a vehicle that they do not know if its as safe as existing vehicles.

NHTSA also asks:

> "If the ADS is responsible for decision-making aspects of driving that a human driver otherwise would control, is it appropriate for the agency to evaluate the responsiveness and driving skills of the ADS in relation to the component, system, test procedure, or performance requirement from which an FMVSS exemption is sought? If so, how should the agency evaluate the safety of the ADS in different scenarios, e.g., negotiating a path through oncoming traffic when making a left turn, stopping when a pedestrian crosses the vehicle's path, and yielding to emergency vehicles? What kind of data would be needed for the agency to evaluate the performance of the ADS in these and other scenarios? How should the performance of the ADS be compared to that of a human driver in a nonexempt vehicle?"
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> "Should NHTSA consider how the [ADS] would respond if it needed to deal with an unusual situation, e.g., cross the yellow line to pass a stopped vehicle blocking the way forward for a

prolonged period of time or obey a policeman giving instructions instead of obeying a traffic light?"

The Notice states that since the vehicle that has not yet been produced, it therefore, cannot be tested in order to compare its performance to that of existing vehicles, and – as noted earlier - a key task of NHTSA, the agency responsible for issuing and enforcing the existing FMVSS, in getting ready for ADS vehicles is to ensure that those standards do not impose unnecessary obstacles to those vehicles.

NAMIC fully supports the development and deployment of safe ADS, but public confidence in ADS has been should in numerous studies to be low and sometimes dropping. The voluntary safety reports filed by some ADS companies provide little factual basis on which to assess safety to date. The race to autonomy has unfortunately resulted in several well publicized ADS mishaps and the 2018 ADS fatality. The general public is enthusiastic about developments in artificial intelligence and machine learning, but also understands that programs are coded and machines are designed and built by human beings. Every technological leap includes a myriad of points of failure and ADS are an amalgamation of innumerable technological and mechanical leaps. The greatest danger to public acceptance and trust in ADS is rushing untested versions into the public domain.

In this case, the focus of the Notice seems more on NHTSA getting ready for ADS than validating that ADS will save lives, prevent injuries, and reduce vehicle-related crashes. The job of GM and other ADS proponents should be to develop an ADS permitted on public roads that will – not might - save lives, prevent injuries, and reduce vehicle-related crashes. Only these developers fully understand the new ADS they are developing and only these developers can properly test their ADS to validate safety. Only when these companies can provide clear and convincing data of that safety, should NHTSA review the specific data that the specific developers provide on specific ADS models to then ensure that ADS permitted on public roads will – not might - save lives, prevent injuries, and reduce vehicle-related crashes.

The Notice states that GM argues ''(e)very day of delay in getting autonomous vehicles safely on American Roads is a day in which we are losing lives that could be saved.'' However the report[1] GM cites, concludes that it is unclear at this time whether ADS today are better or worse than the average human driver, many industry leaders believe that the industry is a long way from reaching significant improvements, and even if ADS are judged safer than the average human driver – which they have not been - ADS would still cause many crashes, injuries, and fatalities.

[1] The Enemy of Good, Estimating the Cost of Waiting for Nearly Perfect Automated Vehicles, Rand Corp. (2017), available at https://www.rand.org/pubs/research_reports/RR2150.html.

Conclusion

Safe ADS should be permitted on public roads only after it has been determined that ADS are safer than human drivers. NHTSA and interested parties – ADS developers, academics, insurance companies, safety advocates – should work together to develop standard data, assumptions, scientific reasoning, and methodologies to validate that an ADS steers, brakes, and accelerates at least as effectively and safely as the average human driver. Only when a vehicle producer can attest and the NHTSA to validate that an ADS steers, brakes, and accelerates at least as effectively and safely as the average human driver should NHTSA consider FMVSS exemptions.

Thank you for your time and consideration. If you have questions or comments, please feel free to contact me at 202-580-6741, tkarol@namic.org.

Respectfully submitted,

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