Remarks prepared for
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Administrator
National Highway Traffic Safety Administration

For the:
National Academy of Sciences Committee on
Electronic Vehicle Controls and Unintended Acceleration
First Meeting
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Washington, DC

Members of the National Academy of Sciences, esteemed panelists of the Committee on Electronic Vehicle Controls and Unintended Acceleration, thank you for accepting the charge of the National Highway Traffic Safety Administration.

The work that you will undertake for NHTSA and the Department of Transportation as a whole will inform regulatory decisions and influence the safety culture of the automobile industry for years to come.

Unintended acceleration has dominated the headlines of every major media outlet for the past several months. Complaints of runaway Toyota vehicles, in particular, have eclipsed all other vehicle-related news. But complaints of unintended acceleration are not exclusive to Toyotas. We have received complaints of unintended acceleration for every major vehicle manufacturer.

Unintended acceleration is not a new issue – these events have been occurring for decades and NHTSA has been active at addressing all known causes. What is new is the question of whether vehicle electronics may play a role in explaining some of the incidents consumers have experienced.

Within the last decade, vehicle manufacturers have incorporated a variety of electronic vehicle control technologies into the fleet. Electronic Throttle Control systems are just one example.

To date, our review and investigations of Toyota vehicles have revealed two causes related to unintended acceleration: first, accelerator pedal entrapment by floor mats, and second, accelerator pedals sticking.

But to get to the bottom of whether electronic faults are causing unintended acceleration, we've enlisted NASA engineers with expertise in areas such as computer controlled electronic systems, electromagnetic interference, and software integrity. They are examining Toyota vehicles to determine if failure or malfunction of any of the systems could be the cause of unintended acceleration. You will hear in more detail about the Toyota investigations later in the day.

Because the complaints of unintended acceleration occur across all manufacturers, and because of the rapid growth of electronic control systems in vehicles, we must do everything possible to fully understand if there are vulnerabilities in these systems that could cause unintended acceleration. That is why we requested the National Academy of Sciences – the Nation's most respected independent body of top scientific experts, to conduct an independent evaluation.

Committee members, the work you begin today is of the utmost importance to the Department of Transportation and to Secretary LaHood. Safety is our number one priority.

We are asking you to undertake a broader study to examine the subject of unintended acceleration and electronic vehicle controls across the entire automotive industry. The result of your work is important to us, not only because we need to get to the bottom of unintended acceleration, but for your advice on a range of proliferating electronics systems and issues that might affect motor vehicle safety.

Let me be specific.

First: We want you to conduct a broad review of electronic systems and unintended acceleration across the industry as well as the safeguards used by manufacturers and suppliers to ensure safety. This should not be limited to electronic throttles, but should include all electronic vehicle controls systems such as braking and steering, as well as others.

Second: We are asking you to review possible sources of unintended acceleration other than electronic vehicle controls such as, human error, mechanical failure, and mechanical interference with accelerator mechanisms.

Third: Examine best practices for assuring safety in other sectors, for example, avionics; and consider what lessons might apply to vehicle safety design and assurance.

Fourth: Discuss the limitations of traditional failure analysis testing and evaluation in establishing the causes of rare events, such as those that occur in unintended acceleration incidents. We also expect recommendations for the adoption of any improved methodologies for analyzing electronic systems where faults may be transient and therefore hard to pinpoint.

Fifth: Describe improvements in design, development, testing, and manufacturing that could be used to increase confidence and reliability in Electronic Throttle Control and other electronic vehicle control systems.

Sixth: Finally, we want these findings to be published in a high quality scientific and technical report on the current state of industry efforts to ensure safety of electronic control systems including throttle control and on causes of, and possible remedies for, unintended acceleration.

In sum, NHTSA is asking you to make recommendations on our research, rulemaking, and defects investigation activities, as well as on the human, infrastructure, and financial resources required for the agency to assure the safety of Electronic Throttle Controls (ETC) and other electronic vehicle control functions.

Your analysis will help us to ensure the safety of the modern automobile – and every American who drives one.

Committee members, you have the full confidence and support of the Department of Transportation. We know we must keep pace with the emerging electronic and technological advancements necessary to ensure the safety of automobiles in the United States.

Your expertise will be invaluable to our mission and to improving the safety of the driving public. The leadership and the staff of NHTSA and the Department of Transportation thank you in advance for your efforts. I am happy to take questions at this time.