STATEMENT OF
THE HONORABLE RAY LAHOOD
SECRETARY OF TRANSPORTATION
BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION
U.S. SENATE

HEARING ON

"Toyota's Recalls and the Government's Response"
March 2, 2010

Chairman Rockefeller, Ranking Minority Member Hutchison, and Members of the Committee:

Thank you for the opportunity to appear before you today to discuss the important issue of Toyota's recent safety recalls and the broader issue of sudden unintended acceleration. With me today is David Strickland, Administrator of the National Highway Traffic Safety Administration (NHTSA).

Transportation safety is the Department's highest priority. We understand the level of concern about the safety of Toyota vehicles, particularly with regard to unintended acceleration. I would like to explain the recent recalls, the role that NHTSA played in ensuring the recalls occurred, and the actions NHTSA is taking to identify any additional safety defects that might cause unintended acceleration.

The recent Toyota recalls related to unintended acceleration involve two issues: first, accelerator pedal entrapment by floor mats, which can lead to uncontrolled acceleration at very high speeds; and second, accelerator pedals sticking or returning slowly after being depressed, which occurs at a variety of throttle positions but, to the best of our knowledge, is more likely to occur at low throttle positions more readily controlled by the vehicle's brakes.

Before I discuss the details of these two recalls and NHTSA's investigations, I want to clarify what owners of vehicles affected by these recalls should do. To avoid pedal entrapment, remove all floor mats from the driver's side of your vehicle until you receive the repair for this problem from a Toyota dealer. If you do not remove the mat, make sure that it is always securely anchored in place on the retaining hooks and that no other mats are ever stacked on top of it. If your vehicle is covered by the "sticky pedal" recall, pay special attention to your gas pedal. If the pedal is harder to depress or slower to return after releasing it, this could be a precursor to a sticky pedal. If your pedal shows those symptoms you should contact a Toyota dealer immediately. If your accelerator becomes stuck for any reason, steadily apply the brake, put the car in neutral, bring it to a stop in a safe place, and call your dealer.

Pedal Entrapment

Of the two big recalls, the far more serious problem, in our view, is pedal entrapment by floor mats. We are aware of five deaths that have occurred due to this problem, including a tragedy near San Diego last August that claimed four lives. We have the greatest sympathy for the loved ones of those members of the Saylor and Lastrella families who died in that crash.

Pedal entrapment involves a situation in which the driver intends to accelerate quickly (such as when passing another car or entering a freeway) and depresses the accelerator pedal toward the floor of the vehicle. When pushed far enough the pedal becomes entrapped by the floor mat in full open throttle position. Once the pedal is entrapped, the vehicle will continue to accelerate well in excess of the driver's intent unless the driver can overcome that situation. Given the very high speeds involved and the firmness with which the mat is holding the pedal at full throttle, these are the most dangerous situations we are aware of that come under the broad heading of unintended acceleration. It is very important to note that, even on the recalled vehicles, entrapment by the mat can occur only if the floor mat is out of position because it is not secured, one floor mat is stacked on top of another floor mat, or a floor mat is used that is not intended for use on the vehicle and is inappropriate due to its shape or dimensions.

NHTSA first became aware of this phenomenon in Toyota's Lexus ES350 in 2007 and quickly opened an investigation in March of that year. NHTSA acted based on five complaints from vehicle owners. No related fatalities had been reported at the time the investigation began, but there had been three crashes allegedly related to pedal entrapment by the floor mat. At the time, the problem seemed most likely to occur in Lexus ES350 vehicles where a thick, all-weather floor mat offered as an option by Toyota was used. The shape of these floor mats and a raised portion forming a ridge made them particularly likely to entrap the pedal if not properly secured. So far as NHTSA knew at that time, the accelerator pedals themselves were functioning as designed and the problem centered on the way the pedal could be entrapped by these floor mats under certain conditions.

NHTSA escalated the investigation to an engineering analysis five months later, in August 2007. Shortly before that, a fatal crash involving a Camry occurred that was apparently caused by entrapment. In September 2007, Toyota announced a recall of the all-weather mats in Lexus and Camry vehicles. The remedy was to have the dealers remove the mats and provide a re-designed mat that was shaped in a way that addressed the entrapment risk even if the re-designed mat was improperly anchored.

At the time of the 2007 recall, NHTSA also issued a safety advisory, directed especially to owners of the recalled vehicles but also to all drivers, warning of the serious dangers of not properly anchoring mats or stacking mats on top of each other. At that time NHTSA believed that the recall and removal of the most problematic mats, the improved design of the replacement

mats, and education of the public and dealers about the proper use of mats would substantially eliminate the known risk related to pedal entrapment.

NHTSA continued to monitor the situation and became aware of a post-recall crash involving one of the recalled mats that the owner had not removed. Fortunately, that was not a fatal crash but did result in serious injury. In light of that crash and indications that consumer response to this recall was too low, NHTSA urged Toyota to re-notify vehicle owners, which Toyota did in January 2009.

Eight months later, when the San Diego fatal crash occurred on August 28, 2009, NHTSA immediately began to investigate the circumstances of the crash. NHTSA investigators and the San Diego County Sheriff's Department examined the wreckage of the vehicle and concluded that the likely cause was excessive speed due to entrapment of the accelerator pedal by the floor mat. The vehicle was a Toyota Lexus ES350 on loan from a Toyota dealer for the day. The floor mat in the vehicle was designed for a Toyota Lexus RX SUV and was much longer than the mat that would have been proper for the Lexus ES350. At the time NHTSA investigators viewed the wreckage, the accelerator pedal was still fused to the floor mat, apparently melted in that position by the heat of the fire that followed the crash. Combining that observation with the circumstances known to have occurred immediately prior to the crash, including extremely high speeds and the driver's inability to control the speed, NHTSA concluded that the excessive speed was caused by pedal entrapment. Supporting this conclusion was the fact that another customer of the dealership had used the same vehicle just three days earlier and complained of unintended, high-speed acceleration caused by the pedal having been trapped by the mat until he was able to stop the vehicle and free the pedal.

The San Diego tragedy made clear that the entrapment problem could occur in unexpected ways and that recalling the worst performing mats and educating drivers and dealers about not using unsecured, improper, or stacked mats was not going to adequately address the risk. Apparently not even all Toyota dealers were mindful of the need to ensure proper mats and mat anchorage to avoid entrapment.

As a consequence, NHTSA began to explore additional remedial options. The agency continued to review all relevant data to identify any reports that might be linked to similar entrapment in other Toyota vehicles. NHTSA became focused on the pedal design of a number of Toyota vehicles, not because of any known malfunction in their operation but because their shape tended to make entrapment more likely when floor mats are out of position or stacked. NHTSA prepared to open an investigation on the pedal design. At the same time, the agency informed Toyota that the company needed to address this risk promptly as a vehicle defect issue, and requested that Toyota conduct a recall. Toyota responded to NHTSA by announcing a recall to replace or re-shape the pedals in 3.8 million vehicles and sent its official notice of the recall to NHTSA on October 5, 2009.

NHTSA pressed the company to include as part of its recall the addition of a feature called brake override (which some call "smart pedal") technology on models that have keyless ignition systems. With brake override, the vehicle control system gives priority to the signal from the brake pedal and returns the engine to idle when it detects the brake being applied while the accelerator is applied. NHTSA discovered in its investigation of pedal entrapment incidents that in some situations drivers of vehicles with keyless ignition systems did not know that, in Toyota vehicles, they could shut off their engines when in motion only by depressing the dashboard ignition button and holding it for three seconds. The owners were familiar with shutting off the vehicle when it was stopped, which requires holding the button for just one second or less. NHTSA thought it was especially important to ensure that in those vehicles with keyless ignition the driver had the benefit of brake override. Many other manufacturers use this technology and Toyota uses it in newly produced vehicles. The recall Toyota announced in October adhered to NHTSA's request.

NHTSA continued to monitor incoming reports involving relevant incidents. In January, NHTSA told Toyota that its review of other Toyota vehicles indicated that they needed to be included in the pedal entrapment recall. Toyota responded by adding 1.1 million vehicles to the pedal entrapment recall on January 27, 2010.

Under the law, manufacturers have an obligation to notify NHTSA within five days of determining that a defect or noncompliance exists. When manufacturers voluntarily initiate recalls without waiting for NHTSA to order a recall, the process protects the public most quickly. NHTSA can order manufacturers to do recalls but only after initiating a formal investigation, completing its investigation, and following administrative procedures that include a public hearing and opportunities for the manufacturer to file detailed responses. Even after the NHTSA Administrator issues an order directing a recall, the manufacturer can avoid doing the recall until NHTSA proves its case in court. In such a case, the agency has the burden of proving by a preponderance of the evidence that a vehicle defect exists and that it creates an unreasonable risk to safety. As a result, recalls occur most quickly when a manufacturer announces the recall without waiting for NHTSA to open and complete an investigation. That is what happened here—because of the pressure NHTSA applied.

On February 16, NHTSA sent Toyota a Timeliness Query, which is a detailed request for information about when Toyota learned about the defect addressed by this recall. The information Toyota will provide in response to this request will help NHTSA determine whether Toyota's initiation of the recall met its obligation to notify NHTSA quickly. If NHTSA determines that Toyota did not meet that obligation, NHTSA may seek civil penalties from Toyota for that failure. Those penalties could be as high as $16,375,000 for a related series of violations.

CTS Pedals Sticking

I want to turn now to the "sticky pedal" recall that was initiated in January of this year. NHTSA is not currently aware of any injuries or deaths definitively linked to this problem. Unlike the pedal entrapment recall, which concerns the shape of the pedal that makes it more susceptible to entrapment by an external object (the floor mat), this recall involves the internal working of the pedal assembly. Another distinguishing factor is that the pedal entrapment situations involve instances of full acceleration that are initially intended by the driver, while this problem, to the best of our knowledge, generally involves occurrences at lower power levels where the car continues to accelerate because the pedal does not return upward, or returns slowly, when the driver lessens pressure on the pedal.

The affected pedals are manufactured by CTS Corporation, which is based in Elkhart, Indiana. Some Toyota vehicle owners have complained of certain symptoms in vehicles equipped with those pedals. Those symptoms include a feeling that it is harder than normal to depress the pedal or that, when depressed, it is slower to return. In some circumstances, the situation can involve the pedal not returning at all from the position to which it was depressed. At this time, we understand that this problem is mechanical in nature and does not involve a flaw in the electronic signal being sent from the pedal sensor to the throttle.

In November 2009, NHTSA received several Toyota field reports concerning incidents in which pedals were slow to return or sticking in a number of different Toyota models from various model years. The reports did not indicate a root cause of the symptoms drivers were experiencing. NHTSA reviewed those reports as part of its screening for possible defect trends. Before NHTSA had decided whether or not to open an investigation, Toyota contacted the agency on January 16 about the specific problem it had identified with the CTS pedal. NHTSA told the company it needed a full explanation immediately. Toyota met with NHTSA on January 19 and demonstrated what it thought to be the mechanical problem with the CTS pedals. Based on the information presented by Toyota about the nature of the problem and Toyota's experience with it, NHTSA told the company it expected very prompt action. Two days later, on January 21, Toyota announced the recall, covering some 2.3 million vehicles (many of which are also covered by the pedal entrapment recall and will receive both remedies). Toyota has had the supplier produce a new pedal with a different design that the company believes addresses the issue of excessive friction. The company has also devised an interim remedy to eliminate the safety risk by altering the pedal while new ones are being manufactured. Toyota informed NHTSA that it ceased production of new vehicles in the models affected by this recall so that it could begin to supply the new pedals being produced for the assembly line to dealers for installation in existing vehicles.

On February 16, NHTSA sent Toyota a Timeliness Query about this recall. NHTSA has also begun an investigation to determine whether these particular CTS pedals have been installed in

vehicles other than those recalled by Toyota, including those made by other manufacturers. NHTSA will soon receive relevant information from CTS and evaluate it.

Other Instances of Unintended or Excessive Acceleration

NHTSA receives more than 30,000 complaints from consumers every year concerning perceived safety problems with their vehicles. NHTSA reviews every complaint promptly and, if it appears to contain any evidence related to a safety defect trend, the reviewers begin to track that trend for possible investigation. Among those complaints in recent years have been many allegations of unintended or excessive acceleration on vehicles made by Toyota. Of course, during that same period NHTSA has received thousands of complaints containing such allegations concerning the vehicles made by most major vehicle manufacturers.

The agency has also received several petitions requesting that NHTSA investigate unintended acceleration in various Toyota vehicles. When a member of the public petitions NHTSA to investigate a possible defect, NHTSA examines all information submitted by the petitioner as well as all other information relevant to the particular problem cited by the petitioner. Even where NHTSA denies a defect petition, it does so only after conducting so thorough an examination of the issue that it has effectively done a preliminary investigation. Generally, NHTSA will visit the petitioners, interview them about their experiences, examine their vehicles and vehicle history, drive the vehicles, and search the NHTSA data bases for complaints similar to the experiences petitioners had. In some situations NHTSA will conduct more extensive testing of a vehicle of the same make and model as that of the petitioner.

The information NHTSA has received from consumers concerning unintended or excessive acceleration in vehicles can be divided into general categories that include: engine surging that lasts only a second or two; unintended acceleration from a stopped position or very low speed that results in quick movement over a short distance and sometimes results in crashing into an object; and events that begin at high speeds because the driver intended to accelerate quickly and continue for a sustained period of many seconds or minutes beyond what the driver intended. The possible causes of these events that NHTSA has been able to identify include mechanical problems with the accelerator; obstruction of the accelerator by another object; or human error (pressing the wrong pedal).

NHTSA has carefully reviewed all of the information provided by Toyota consumers in complaints filed with the agency to try to find causes for what they were experiencing. NHTSA also reviews Early Warning Reporting information submitted by the manufacturer and other sources of information, including insurance company submissions. For the high-speed events that last for many seconds or minutes, the only cause NHTSA has been able to establish thus far is entrapment of the pedal by a floor mat. The only exception to this has may have been a recent event in New Jersey that apparently did not involve floor mat entrapment but apparently did

involve a stuck CTS pedal. Fortunately, the driver was able to bring the vehicle under control and drive it to a dealership. As discussed, the pedal entrapment issue in the recalled vehicles will presumably be resolved by the recall announced in October. The problem experienced in New Jersey will presumably be addressed by the recall of the CTS pedals announced in January.

NHTSA does not contend that the two recalls will fully resolve all concerns about unintended acceleration in Toyota vehicles. However, with one exception, NHTSA has not been able to establish a vehicle-based cause for unintended acceleration events in Toyota vehicles not covered by those two recalls. The exception was a recall of the model year 2004 Sienna vans in 2009 due to a defective trim panel that could, if loosened during servicing, entrap the accelerator at full throttle. That recall also arose from a NHTSA investigation.

NHTSA initiated a Recall Query on February 16 to ascertain whether Toyota has been completely forthcoming with the agency concerning all possible defects in its vehicles that may be causing unintended acceleration. NHTSA will closely review the documents Toyota submits to determine whether the company has additional information not yet shared with the agency that may cast light on possible defects that cause the problem.

Some consumers and others believe that Toyota's electronic throttle control (ETC) systems, and perhaps such systems in other manufacturers' vehicles, are susceptible to inherent design flaws or electro-magnetic interference (EMI) that can theoretically cause unintended acceleration by resulting in incorrect signals to the engine. These types of electronic systems are commonly used by all major vehicle manufacturers. To date, we have not identified any particular crash or unsafe occurrence that can clearly be attributed to such a flaw or the EMI phenomenon in Toyota's vehicles. NHTSA opened an investigation on Toyota's ETC system in 2004, focused on short duration events, and could not find any safety defects in that system at the time. NHTSA looked at short duration events where no brake application was alleged in this investigation so as to screen out events that could have been caused by driver error, to ensure the agency could find a vehicle-based defect if it existed. In 2008, in wrapping up the floor mat investigation, NHTSA went on to look for additional possible causes of unintended acceleration in the Lexus ES350. That work included some limited electronic and magnetic testing but did not reveal a flaw in the ETC system. Since 1980, NHTSA has conducted 141 investigations on throttle control issues in vehicles made by various manufacturers, some of which involved electronic throttles and some the more traditional mechanical throttle systems.

However, to be absolutely sure that the agency is aware of all potential defects, NHTSA is conducting a review of the general subject of possible design flaws in ETC systems and the possible effects of EMI effects on those systems. We have begun by talking to Toyota and other major manufacturers about the design of their systems and how, through failure modes and effects analysis and other standard techniques, they have taken the possible effects of EMI into account in designing those systems. We have just recently received information about another

theory concerning a possible design flaw in the Toyota ETC system. We will explore all relevant information in this examination. To be clear, this is a review of the technological issues, not a defect investigation. However, if any of this activity gives us any reason to believe that a defect may exist in Toyota or other vehicles related to design flaws in or EMI effects on ETC systems, we will open a defect investigation. When we have completed these discussions we will decide whether to conduct any additional research projects that might shed further light on the effectiveness of manufacturers' safety control strategies concerning their ETC systems, including the possible role of EMI effects on various electronic.

Other Pending Toyota Investigations

NHTSA has a total of 44 pending defect investigations concerning various manufacturers and a wide range of issues. Of those, five concern Toyota. One of the Toyota investigations is the Recall Query on sudden acceleration discussed above. Two others have gained wide attention and are summarized here.

NHTSA opened an investigation on February 4, 2010, concerning a braking problem on the model year 2010 Prius. The problem involves a momentary loss of braking when the vehicle hits a pothole, bump, or other uneven surface. NHTSA had received more than 100 complaints about the problem, including four alleged crashes involving two injuries. Five days after NHTSA opened its investigation, on February 9, Toyota announced a recall designed to address this problem. NHTSA will closely monitor its implementation. The recall involves over 148,000 vehicles sold in this country, including the model year 2010 Prius and the 2010 Lexus HS250H. While awaiting an appointment to have their vehicles remedied, owners who experience any braking problems should immediately contact their dealers, and all drivers of these cars should allow extra stopping distance until the problem is fixed.

On February 18, NHTSA opened an investigation concerning approximately 487,000 model year 2009 and 2010 Toyota Corolla and Matrix vehicles. The issue concerns the steering becoming unresponsive or loose at highway speeds. NHTSA had received 168 complaints alleging eight crashes (none fatal) at the time this investigation was opened.

As a final note, I would like to make clear that NHTSA has a very aggressive enforcement program that searches constantly for safety defects and noncompliance with the Federal Motor Vehicle Safety Standards. In just the last three years, NHTSA investigations have resulted in 524 recalls in which 23.5 million vehicles were recalled so that safety problems could be fixed. In addition, several million items of motor vehicle equipment (including imported tires, child seats, and motorcycle helmets) were recalled to correct safety problems.

In summary, NHTSA has acted to ensure Toyota recalls on the issues related to unintended acceleration on which we have had evidence indicating the presence of a vehicle defect, i.e.,

pedal entrapment and sticky accelerators. We stand ready to ensure prompt action on any additional defects that we have reason to believe are present.

Thank you and I look forward to answering your questions.