

ONE HUNDRED ELEVENTH CONGRESS
Congress of the United States
House of Representatives
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February 22, 2010

The Honorable Ray LaHood
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE, 9th Floor
Washington, DC 20590

Dear Secretary LaHood:

In response to the Committee's requests, the National Highway Traffic Safety Administration (NHTSA) has provided thousands of pages of internal agency documents. Committee staff also met with NHTSA officials on January 27 and February 18, 2010. We thank you for this cooperation.

Our preliminary review of the documents and the information learned from the meetings with NHTSA officials raises two significant concerns. First, NHTSA appears to lack the expertise needed to evaluate defects in vehicle electronic controls. In recent years, vehicles have made increasing use of sophisticated electronic controls. According to some accounts, autos now contain more computer code than some fighter jets, nearing 100 million lines of code. Yet, NHTSA officials told the Committee staff that the agency does not employ any electrical engineers or software engineers. As a result, NHTSA appears to lack the technical expertise necessary to analyze whether incidents of sudden unintended acceleration are caused by defects in the cars' electronic systems.

Second, NHTSA's response to complaints of sudden unintended acceleration in Toyota vehicles appears to have been seriously deficient. Since 2000, NHTSA has received 2,600 complaints of sudden unintended acceleration, as well as six defect petitions requesting investigations. Despite these warnings, NHTSA conducted only one cursory investigation in 2004 into the possibility that defects in electronic controls could be responsible for these incidents. This investigation was led by Scott Yon, who informed Toyota in an e-mail that he was "not very knowledgeable" about the electronic throttle control system used in Toyota vehicles. This investigation was marred by highly

questionable assumptions and was closed after the agency failed to identify a defect trend.

These concerns are explained in more detail below. We expect that members of the Subcommittee will ask you about these concerns during your testimony tomorrow, and we ask that you come prepared to address them.

I. NHTSA's Lack of Expertise

Computers have become central to the operation of cars in recent years. According to one report, modern vehicles contain between 30 and 100 microprocessor-controlled devices, known as electronic control units, and now have more lines of code than some military fighter jets.¹ These computers control the most essential operations of the vehicle, including acceleration, braking, and cruise control. As the agency responsible for ensuring that the vehicles on the road are safe, it is essential that the National Highway Traffic Safety Administration have ample expertise to test and analyze these electronic systems and to evaluate the sufficiency of tests and analyses the automakers perform.

It appears, however, that NHTSA lacks this expertise, hampering the ability of its Office of Defects Investigation (ODI) to examine possible electronic defects in vehicles. In the briefing on February 18, NHTSA officials told the Committee staff that the agency has no electrical engineers or software engineers on staff.

NHTSA officials maintained during this briefing that they have the authority to contract for such services as needed. But it appears that NHTSA has not done so. NHTSA has conducted only one investigation that examined whether electronic throttle controls could cause or contribute to sudden unintended acceleration in Toyota vehicles. This was a preliminary investigation that occurred in 2004. NHTSA staff told Committee staff that the agency did not seek contract assistance during this investigation.

The documents provided to the Committee indicate that this lack of expertise may have undermined the thoroughness of the 2004 investigation. During the investigation, Toyota held a technical meeting with NHTSA to provide information and demonstrations of the electronic throttle control system. In preparation for this meeting, Mr. Yon, NHTSA's principal investigator, wrote in an e-mail to Chris Santucci, a senior Toyota official and a former NHTSA employee, that Toyota could "supplement or disregard" some of the suggested agenda items proposed by NHTSA because "I'm not very knowledgeable on this system."²

¹ *The Dozens of Computers That Make Modern Cars Go (and Stop)*, The New York Times (Feb. 5, 2010).

² Email from Scott Yon to Chris Santucci (May 12, 2004).

According to press accounts, NHTSA is now planning to “meet for the first time with outside safety experts, as well as manufacturers and suppliers, to review the potential that electronic defects are part of the problem.”³

II. NHTSA’s Response to Reports of Sudden Unintended Acceleration

NHTSA has been aware of reports of sudden unintended acceleration in Toyota vehicles for many years. Between January 2000 and January 2010, the agency received approximately 2,600 complaints that allege a form of sudden unintended acceleration of Toyota vehicles.⁴ These complaints increased after the introduction of electronic throttle controls. In June 2004, NHTSA sent Toyota a chart that showed a 400% increase in the rate of complaints regarding “vehicle speed” upon introduction of electronic throttle control in Toyota Camrys.⁵

The documents provided to the Committee by NHTSA raise questions about whether NHTSA gave these reports the attention and thorough investigation they deserved.

A. The 2003 Defect Petition

In April 2003, NHTSA received the first of six defect petitions from consumers urging the agency to investigate sudden unintended acceleration in Toyota and Lexus vehicles. The petition was filed by Peter Boddaert, a Lexus owner, who asked NHTSA to conduct an analysis of 1997 through 2000 Model Year Lexus vehicles for a defect relating to “sudden, unexpected excessive acceleration.”⁶ He claimed to have experienced three such events and found 271 similar reports in the Office of Defects Investigation database of consumer complaints.

Relying on a restrictive definition of “Sudden Acceleration Incident” developed by the agency in 1989, NHTSA denied Mr. Boddaert’s petition. The agency concluded:

The information gathered does not indicate the Lexus vehicles are over-represented in the NHTSA database for consumer complaints concerning sudden acceleration and/or problems with vehicle speed control. Based on the foregoing analysis, there is no reasonable possibility that an order concerning the

³ *Toyota inquiries take a new turn; lawmakers, regulators want answers on electronic throttles*, Los Angeles Times (Feb. 3, 2010).

⁴ Letter from David Strickland to Rep. Henry A. Waxman (Feb. 15, 2009). See Attachment 3.

⁵ Email from Scott Yon to Chris Santucci (June 3, 2004).

⁶ Letter from Peter Boddaert to National Highway Traffic Safety Administration (Apr. 25, 2003).

notification and remedy of a safety related defect would be issued as a result of granting Mr. Boddaert's petition. Therefore, in view of the need to allocate and prioritize NHTSA's limited resources to best accomplish the agency's safety mission, the petition is denied.⁷

B. The 2004 Preliminary Evaluation

In 2004, NHTSA conducted its only investigation to date that examined "allegations that the electronic throttle control system fails to properly control engine speed" in Toyota vehicles. This Preliminary Evaluation examined the model year 2002 and 2003 Lexus ES300, Toyota Camry, and Toyota Camry Solara. A Defect Petition urging NHTSA to investigate sudden acceleration in 2002 and 2003 Lexus ES300 vehicles was deemed to be within the scope of the investigation and was folded into it.⁸ The Preliminary Evaluation, known as PE04-021, was opened on March 3, 2004, citing 37 consumer complaints as the basis for the investigation.⁹

On March 23, 2004, in a memorandum to the file, NHTSA investigator Scott Yon limited the definition of the possible defect in a way that eliminated 27 of the original consumer complaints from the scope of the investigation. Mr. Yon's memo states:

ODI has opened this investigation based on owner reports alleging that: A) an engine speed increase occurred without pressing on the accelerator pedal or, B) the engine speed failed to decrease when the accelerator pedal was no longer being depressed. In either event, ODI's position is that if such a failure were to occur the driver would be able to control or stop vehicle movement by pressing on the brake pedal.... Longer duration events involving uncontrollable acceleration where brake pedal application allegedly had no affect are not within the scope of this investigation.¹⁰

In a briefing with Committee staff on February 18, 2009, NHTSA staff explained that ODI limited the investigation to eliminate instances of pedal misapplication. NHTSA staff asserted that a combination of a throttle opening and a brake failure is consistent with pedal misapplication and that no single defect would lead to both of these failures occurring simultaneously. NHTSA staff further stated that in 2004, NHTSA had not seen the long duration highway events, like the Lexus crash in San Diego in August

⁷ Department of Transportation, National Highway Traffic Safety Administration, *Denial of Motor Vehicle Defect Petition, DP-03-003*, 68 Fed. Reg. 55076 (Sept. 22, 2003).

⁸ NHTSA, *ODI Resume, DP04-003* (Mar. 5, 2004).

⁹ NHTSA, *ODI Resume, PE04-021* (Mar. 3, 2004).

¹⁰ Memorandum to File from Scott Yon, National Highway Traffic Safety Administration, *File for PE04-021, Toyota Throttle Control* (Mar. 3, 2004).

2009, and was focused only on shorter duration events in which the driver did not have time to apply the brake.¹¹

The Committee's investigation raises questions about the validity of NHTSA's approach. Contrary to the contention of NHTSA staff, it appears that NHTSA was aware in 2004 of reports of incidents of sudden unintended acceleration of long duration. One of the complaints referenced in the March 3, 2004, document initiating the Preliminary Evaluation but removed from the scope of the investigation following the March 23, 2004, memorandum was from the owner of a 2003 Camry who wrote that he was driving on an interstate highway at about 60 mph when another car began to enter his lane just ahead of him:

As I braked and swerved to the right, *the Camry suddenly and unexpectedly accelerated*. As a consequence, my swerve to the right was far more severe than anticipated or expected. The car continued to accelerate as I steered to the left and attempted to brake to correct the initial swerve to the right. I then steered back to the right, then left, then right, in an attempt to control the vehicle. All of that time I was also applying the brakes. In wrestling to gain control of the car, I crossed three lanes of traffic before the car finally slammed sideways into the concrete median. The engine was still running fast and the car was lurching forward. I looked down to make sure I was applying the brake. My foot was squarely on the brake pedal. I was only able to stop the car from moving forward by turning off the ignition.¹²

During the time that NHTSA performed this review, the agency received additional complaints regarding sudden unintended acceleration. One complaint in particular, number 10065362, involving a fatal crash in Evansville, Indiana, appears to contradict NHTSA's assumption that an unintended acceleration event could be controlled or stopped by "pressing on the brake pedal" because the decedent apparently attempted unsuccessfully to use the brakes. According to a complaint submitted to NHTSA on March 31, 2004: "when coming out of a parking lot, the accelerator [on the subject vehicle] stuck, causing the vehicle to accelerate out of control. Vehicle grazed another vehicle, went across a street, grazed a building, and drove straight into another building.... At the scene [the driver of the car] was conscious and claimed the car surged out of control. EMTs at the scene stated both feet were 'jammed' on the brake."¹³

¹¹ Briefing by NHTSA staff to House Energy and Commerce Committee Staff (Feb. 18, 2010).

¹² National Highway Traffic Safety Administration, Office of Defects Investigation, *Consumer Complaint 10059571* (Apr. 15, 2003) (italics in original).

¹³ National Highway Traffic Safety Administration, Office of Defects Investigation, *Consumer Complaint 10065362* (Mar. 31, 2003).

Documents provided to the Committee reveal that the investigators looking into Toyota sudden acceleration were aware of this crash. On April 5, 2004, Mr. Yon memorialized a conversation he had with another NHTSA employee in which the other employee “stopped by to give me a copy of 10065362, State Farm complaint that reports a fatality in a 2003 Camry. I explained investigation to him, what it was looking at.”¹⁴ Two weeks later, Mr. Yon memorialized a phone conversation with Chris Santucci at Toyota in which they “briefly discussed ... case 10065362.”¹⁵ The official files for the investigation do not mention this complaint. Moreover, the reported circumstances surrounding this fatal crash apparently did not impact NHTSA’s position that the brakes can always stop or control sudden unintended acceleration.

Despite the fact that this investigation was focused on the possibility of a defect in the electronic throttle control system, Toyota’s internal documents reflect the impression of Toyota officials that the NHTSA investigators – Scott Yon, Bob Young, and Jeff Quandt – were more interested in mechanical and human explanations for the incidents than electronic ones. In an internal Toyota memorandum describing a June 24, 2004, briefing and demonstration Toyota provided for NHTSA, Toyota officials noted the NHTSA investigators’ belief that the failsafe modes for the electronic throttle system worked as intended. The Toyota officials wrote:

Mr. Young also drove the vehicle in such a way that he was able to apply both the accelerator and the brake pedal at the same time. He referred to this as “Dual Pedal Application.” He expressed his opinion that the complaints that the agency has received were most likely dual pedal applications. He also stated that it was very difficult to achieve this dual pedal application condition because the Camry ... utilizes a wide spacing between the accelerator pedal and the brake pedal.

After Mr. Yon completed his demonstration, Mr. Young took him and Mr. Quandt into the V6 Camry and, without TMA or TMC personnel present, demonstrated the dual pedal application while pulling into a parking spot. Later, Mr. Yon was noted as saying that this type of condition was more closely related to what consumers had told him had occurred to them.¹⁶

In another internal document that Toyota provided to the Committee, Chris Tinto, Toyota’s Vice President for Regulatory Affairs and a former NHTSA staffer, described this same briefing, and suggested that NHTSA staffers seemed interested in gathering

¹⁴ Scott Yon, Discussion with Al Jiminez, PE04021-Toyota Throttle Control (Apr. 5, 2004).

¹⁵ Scott Yon, Phone Call with Chris Santucci, PE04-021-Toyota Throttle Control (Apr. 22, 2004).

¹⁶ Toyota Motor North America, Technical and Regulatory Affairs, *TMA-Report, Camry Defect Investigation(PE04-021): Meeting with NHTSA (June 24, 2004)* (undated document) (TOYEC_00041374).

information they could use to close the investigation. Following the technical briefing, Mr. Tinto e-mailed his colleagues with a summary of the day's events:

NHTSA explained to the group that their database of complaints shows that 2002 and 2003 Camry vehicles have more complaints of surge and/or sudden acceleration than the 2000 and 2001 Camry's, and they need to understand why this is so, as it will help in their investigation (i.e it will help them close).¹⁷

In that same e-mail, Mr. Tinto noted that Toyota's goal was "ultimately closing this investigation within the next 4-6 weeks."¹⁸ Toyota's goal proved to be attainable, as NHTSA closed the investigation on July 22, 2004, less than four weeks later.

NHTSA explained its decision to close the Preliminary Evaluation as follows: "A defect trend has not been identified at this time and further use of agency resources does not appear to be warranted."¹⁹ The summary of the investigation cites the technical meeting with Toyota and the demonstration of the failsafe modes as evidence that the system will work and that any fault would be revealed in a diagnostic trouble code. The NHTSA records offer no indication that any NHTSA staff consulted with experts in electronic systems during this investigation or critically evaluated Toyota's claims about the operations of its electronic throttle controls.²⁰

C. Actions Since the 2004 Preliminary Investigation

NHTSA has opened two Preliminary Evaluations of sudden unintended acceleration since 2004. Both focused on accelerator pedal interference and did not consider electronics or any other nonmechanical defects unrelated to the interference. The first, PE07-014, examined floor mat interference in model year 2007 Lexus vehicles. It led to the first voluntary recall of Lexus floor mats in March 2007. The second, PE08-014, involved a small number of model year 2004 Sienna vehicles in which the trim panel to the right of the accelerator pedal could become loose and trap the pedal. This investigation also led to a voluntary recall.

Since it completed its 2004 investigation, NHTSA has rejected four more defect petitions calling for investigations into sudden unintended acceleration in Toyota vehicles. In 2005, Jordan Ziprin, the owner of a 2002 Camry, filed a petition urging NHTSA to reopen its 2004 investigation. In its denial of his petition, NHTSA noted that while 168 of the complaints Mr. Ziprin compiled in his petition fit within the scope of the

¹⁷ E-mail from Christopher Tinto to Irv Miller et al. (June 28, 2004).

¹⁸ *Id.*

¹⁹ National Highway Traffic Safety Administration, *ODI Resume, PE04-021* (July 22, 2004).

²⁰ NHTSA, *ODI Resume, PE04-021* (July 22, 2004).

2004 inquiry, the agency found no evidence suggesting “that a vehicle based cause may exist.”²¹ In 2006, William B. Jeffers, the owner of a 2006 Camry, filed a defect petition urging NHTSA to examine “engine surging” in Camry vehicles.²² That petition was denied because “ODI has not identified a vehicle-based defect that would have produced the alleged engine surge in the Petitioner’s vehicle, nor was it able to witness such an event when road testing the Petitioner’s vehicle.”²³ ODI similarly rejected petitions in 2008 from William Kronholm, the owner of a 2006 Tacoma, and in 2009 from Jeffrey Pepski, the owner of a 2007 Lexus ES320.²⁴

In August 2007, Chris Santucci, the Toyota official who had previously worked at NHTSA, e-mailed his colleagues updating them on a visit he made to NHTSA to discuss potential floormat interference. Mr. Santucci wrote that while he walked around the building during his visit:

I ran into a lot of different investigators and ODI staff and when asked why I was there, when I told them for the ES350 floormats, they either laughed or rolled their eyes in disbelief.²⁵

IV. Conclusion

Sudden unintended acceleration in vehicles is a serious and highly dangerous event. Our preliminary assessment is that NHTSA has lacked the expertise needed to address this serious defect and has conducted only cursory and ineffective investigations. We hope that tomorrow’s hearing gives you the opportunity to address these concerns and provides the Committee with additional information about NHTSA’s response to incidents of sudden unintended acceleration over the past decade.

²¹ Department of Transportation, National Highway Traffic Safety Administration, *Denial of Motor Vehicle Defect Petition, DP-05-002*, 71 Fed. Reg. 164 (Jan. 3, 2006).

²² Letter from William B. Jeffers to NHTSA (July 3, 2006).

²³ Department of Transportation, National Highway Traffic Safety Administration, *Denial of Motor Vehicle Defect Petition, DP-06-003*, 72 Fed. Reg. 10815 (Mar. 9, 2007).

²⁴ Department of Transportation, National Highway Traffic Safety Administration, *Denial of Motor Vehicle Defect Petition, DP-08-001*, 73 Fed. Reg. 51551 (Sept. 3, 2008); Department of Transportation, National Highway Traffic Safety Administration, *Denial of Motor Vehicle Defect Petition, DP-09-001*, 74 Fed. Reg. 56686 (Nov. 2, 2009).

²⁵ E-mail from Chris Santucci to Christopher Tinto et al. (Aug. 23, 2007) (TOYEC62783 to 62787).

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February 22, 2010
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Sincerely,



Henry A. Waxman
Chairman



Bart Stupak
Chairman
Subcommittee on Oversight and
Investigations

cc: The Honorable Joe Barton
Ranking Member
Committee on Energy and Commerce

cc: The Honorable Greg Walden
Ranking Member
Subcommittee on Oversight
and Investigations