

To: DOCUMENTATION CENTER OF TMC TECHNICAL ADMINISTRATION DIV.

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| | | TMC Report No. | |
| | | TMA Report No. | UK0809WQ - / |
| | | TMC Request No. | 46, 47 |
| Dist. in affiliates | <u>TMS:</u> CS Mr. Yamaguchi PQSS Mr. Zellers, Mr. Aoki, Mr. Morino, Mr. Sakakibara <u>TEMA:</u> QD Mr. Ono, Mr. Miyamoto, Mr. Triantafyllos, Mr. Ross CQE-LA Mr. Fukushima <u>TCI:</u> Mr. Stremmer, Ms. Ferry | Report Date | September 9, 2008 |
| | | | |
| TITLE | NHTSA Denies Petition for Toyota Tacoma Investigation (Sudden Acceleration) | Originated: C. Santucci Approved: C. Tinto | |

Summary:

On September 3, 2008, NHTSA published the denial of petition DP08-001 in the Federal Register. The petition was brought by William Kronholm after allegedly experiencing two incidents of sudden acceleration, and in it, he requested that the agency open a defect investigation. The federal register notice (attached) outlines the reasons for the denial:

- Some complaints did not involve a failure of the electronic throttle control (ETC) system;
- Others involved failure of the ETC, but did not constitute a safety risk;
- For the remaining reports, NHTSA was unable to determine a cause, and information suggesting a possible defect related to motor vehicle safety was quite limited;
- Additional investigation would be unlikely to find that a defect related to motor vehicle safety exists.

Petition Details:

In the Federal Register notice, NHTSA outline’s their reasoning for the denial of the petition. According to the notice, NHTSA reviewed the material provided by Toyota and the petitioner, interviewed complainants, and attended a technical demonstration given by Toyota. They tabulate and assess the NHTSA VOQ reports and the complaint reports provided by Toyota. In summary, they note distribution of complaint types to be consistent between the Toyota and NHTSA reports.

Most of the notice details the data analysis and the complainant interviews, and in conclusion, they note that about three quarters of the reports involve a failure of the ETC system that do not pose a risk to motor vehicle safety or did not involve a failure of the ETC system at all (i.e., aspects of normal operation). In the end, they note that further investigation is not likely to find a safety related defect with the Tacoma ETC system. Therefore, they decide not to dedicate resources to a formal investigation, and they deny the petition.

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| <i>Attachment: Federal Register Notice</i> |
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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

Denial of Motor Vehicle Defect Petition

AGENCY: National Highway Traffic Safety Administration, (NHTSA), Department of Transportation.

ACTION: Denial of a petition for a defect investigation.

SUMMARY: This notice sets forth the reasons for the denial of a petition (Defect Petition DP08-001) submitted by Mr. William Kronholm to NHTSA's Office of Defects Investigation (ODI) by letter dated January 10, 2008, under 49 U.S.C. § 30162. The Petition requests that the agency commence a proceeding to determine the existence of a defect related to motor vehicle safety within the electronically actuated throttle control system that is allegedly causing sudden and uncontrolled acceleration in model year (MY) 2006 to 2007 Toyota Tacoma pickup trucks (vehicles).

After conducting a technical review of the material cited and provided by the petitioner and other information, and taking into account several considerations, including, among others, allocation of agency resources, agency priorities, and the likelihood that additional investigation would result in a finding that a defect related to motor vehicle safety exists, NHTSA has concluded that further investigation of the issues raised by the petition is not warranted. The agency accordingly has denied the petition.

FOR FURTHER INFORMATION CONTACT:

Mr. Scott Yon, Vehicle Control Division, Office of Defects Investigation, NHTSA, 1200 New Jersey Avenue, SE, Washington, DC 20590. Telephone 202-366-0139.

SUPPLEMENTARY INFORMATION:**I. INTRODUCTION**

Interested persons may petition NHTSA requesting that the agency initiate an investigation to determine whether a motor vehicle or item of replacement equipment does not comply with an applicable Federal motor vehicle safety standard or contains a defect that relates to motor vehicle safety. 49 CFR § 552.1. Upon receipt of a properly filed petition, the agency conducts a technical review of the petition, material submitted with the petition, and any additional information. § 552.6. After considering the technical review and taking into account appropriate factors, which may include, among others, allocation of agency resources, agency priorities, and the likelihood of success in litigation that might arise from a determination of a noncompliance or a defect related to motor vehicle safety, the agency will grant or deny the petition. § 552.8.

II. DEFECT PETITION BACKGROUND INFORMATION

The Petitioner, Mr. William Kronholm of Helena, Montana, purchased a new model year (MY) 2006 Toyota Tacoma pickup (VIN 5TEUU42N26Z258969, Petitioner's vehicle) on May 10, 2006. The vehicle is equipped with a V6 engine (4.0 L, 1GR-FE), five speed automatic transmission, air conditioning (A/C), cruise control, antilock brakes (ABS), limited slip rear differential, and four-wheel drivetrain (4WD), and was manufactured in April 2006. The Petitioner's vehicle is also equipped with an electronically actuated throttle control system¹. The Petitioner is the primary driver of the Petitioner's vehicle and he drove the vehicle for approximately 24,500 miles without experiencing a problem with the throttle control system.

On the morning of January 5, 2008, the Petitioner and his wife drove the vehicle to a cross-country skiing area about 100 miles from their home. After skiing several hours, they returned home

¹ The design of the Tacoma throttle control system is similar to that reviewed in PE04-021. Interested persons can refer to this investigation for more information on the basic design and operation of the system.

on Rt. 141. During the return trip, the Petitioner pulled off the road and stopped briefly at the intersection with Rt. 271. The transmission was placed in Park and the engine was left running.

When the Petitioner was ready to resume the trip south on Rt. 141, he engaged Drive and allowed the vehicle to move forward under its own power (without accelerator pedal application). As he approached the intersection, and while braking and checking for oncoming traffic, he sensed that the vehicle was not slowing as expected from the brake application.² He struggled with the vehicle for about 10 seconds, continuing to press on the brake, before regaining control of the vehicle. By this time the vehicle had moved about 7 to 10 meters beyond where the Petitioner had intended to stop, coming to rest in the southbound lane of Rt. 141. He was alarmed by the event and wasn't quite sure what had happened. However, he could not identify a specific problem with his vehicle, so he continued driving.

When the Petitioner arrived at his home, he began to back the vehicle into his short driveway.³ While steering the vehicle into the driveway and using the brake to regulate the vehicle speed, the Petitioner reports that the vehicle began to accelerate suddenly in the rearward direction. He applied the brakes forcefully, which slowed the vehicle,⁴ but he was concerned that he was nearing the garage door. He concluded that his vehicle was out of control and, fearing a crash, he turned the ignition switch off. He estimates the duration of this event was approximately 10 seconds. He subsequently restarted the vehicle and it operated normally.

Due to the similarity with his earlier incident, and since both incidents had occurred within a two hour period, he suspected that a defect with his vehicle was the likely cause. He conducted some research, including finding some related news articles and news broadcasts via web research that

² His wife also recognized that the vehicle was not stopping as she had expected, or that something was wrong, and she asked her husband what was going on.

³ There is a slight grade that would allow the vehicle to reverse without accelerator application.

⁴ The Petitioner states his vehicle's rear wheels were spinning freely as he recalls hearing the sound of gravel hitting the inside of the rear wheel wells.

reported similar occurrences on other MY 2006 and 2007 Tacoma vehicles. He also found the NHTSA website, where he filed his Vehicle Owner Questionnaire (VOQ) report (ODI 10214130) and conducted a VOQ search for other Tacoma reports similar to his. His search identified a number of reports for MY 2006 and 2007 Tacoma vehicles that he considered similar to the incidents he had experienced, as well as a small number of reports for peer vehicles (non-Toyota) of similar age, usage, and design type.

The Petitioner took his Tacoma to a local Toyota dealer on January 7, 2008, advised it of the two incidents he had experienced, and requested that they inspect the vehicle for a potential problem or defect that caused the unintended accelerations. The dealership tested the vehicle, inspected the air intake, throttle and accelerator pedal wiring, and checked for any stored diagnostic codes or service messages in the engine control unit. The dealer also checked for any pertinent bulletins or "health" updates. The dealer could not duplicate the unintended acceleration, no codes were stored and no bulletins or updates were available. No repairs were made and the vehicle was returned to the Petitioner.

The Petitioner filed a Defect Petition (DP) with NHTSA that was received in NHTSA on January 18, 2008. The petition identified his previous VOQ and discussed his research on Tacoma and peer vehicle VOQs with throttle control complaints. He requested that NHTSA open an investigation into sudden and uncontrolled acceleration on the MY 2006 and 2007 Toyota Tacoma vehicles. In a letter to Toyota dated January 25, 2008, the Petitioner described the two "spontaneous and uncommanded sudden acceleration incidents in the span of less than two hours" and the results of his search for related complaints on the NHTSA website. The letter takes issue with Toyota's response to his and other complaints of sudden acceleration and requests that Toyota conduct a "full and complete investigation of the defect" in his Tacoma.⁵

⁵ See www.safercar.gov under VOQ report ODI 10214130 to view the 1/25/2008 letter.

ODI contacted the Petitioner on January 24, 2008, to advise that we received his petition. During this call, ODI staff briefly reviewed the specifics of the two incidents the Petitioner reported and requested that he provide the ODI numbers of the reports he identified in his petition for both the Toyota and non-Toyota vehicles. During this conversation, the Petitioner confirmed his assessment that during both incidents, his vehicle's brake system had functioned properly and that the cause of the incidents was a failure of the throttle control system, specifically that the throttle control system opened the throttle without accelerator pedal application. In other words, the vehicle self-accelerated. In his opinion, this acceleration made the vehicle difficult to control and unsafe to operate.

The Petitioner provided a list of 37 VOQ reports via email, 33 for Toyota Tacoma, including the Petitioner's report ODI 10214130, and four for non-Toyota pickups⁶. The Toyota Tacoma reports included 16 reports on MY 2006 and 17 reports on MY 2007 Tacoma. ODI notes that two reports (10180652 and 10181486) were submitted by the same complainant, and one (10184332) was submitted by a Canadian consumer.

In response to the petition, ODI opened Defect Petition (DP) 08-001 on January 31, 2008. ODI sent an Information Request (IR) letter to Toyota on February 8, 2008, with a response due date of March 28, 2008. The IR letter sought information relating to a range of potential consumer complaints and defined the MY 2004⁷ to 2008 Tacoma models as the subject vehicles.⁸ Toyota requested and was granted extensions to the original response date, with partial submissions made on

⁶ ODI numbers for MY 2006 Tacoma: 10152011, 10172030, 10183012, 10184332 (Canadian vehicle), 10184375, 10184416, 10184759, 10185253, 10186996, 10191371, 10201595, 10202727, 10211100, 10212718, 10214130, 10215598. For MY 2007 Tacoma: 10180652, 10181411, 10181486 (same complainant as 10180652), 10182045, 10187789, 10197535, 10198196, 10199820, 10201655, 10202283, 10207528, 10208120, 10208868, 10208890, 10212294, 10212602, 10212656. For non-Toyota products: 10166548, 10183144, 10199048, 10203722.

⁷ The MY 2004 vehicles are an earlier design version that used different engines and body style.

⁸ This was done to ensure a comprehensive sample of the types of complaints Toyota received.

the agreed upon dates, and the submission was completed on April 25, 2008.⁹ Toyota also conducted a technical meeting with ODI on May 21, 2008.

III. NHTSA REVIEW – VOQ DATA

ODI began its assessment of the petition by attempting to contact each of the persons who had submitted a VOQ report on a Tacoma, as identified by the Petitioner. We interviewed 26 of the 31 consumers.¹⁰ In the interviews, consumers described events that could be attributed to a throttle control system issue. Their concerns stemmed from a variety of vehicle operating conditions and driving circumstances. Some owners described events similar to the Petitioner's allegations, in that unintended acceleration occurred on vehicles equipped with an automatic transmission while slowing or stopped. Other complainants described unintended acceleration that was minor in comparison to the events that the Petitioner described. Other owners described events that varied significantly from what the Petitioner reported. For example, some consumers described events that occurred on manual transmission vehicles at highway speeds when the clutch was depressed, while others reported that a condition only occurred after the accelerator pedal had been depressed significantly (intentionally) or only when the cruise control or A/C system was engaged. Some consumers reported events occurring when more than one of these conditions was present.

After the initial interviews, ODI elected to expand its analysis to include a broader representation of Tacoma reports in the VOQ complaint database. Noting that the DP subject vehicles were of a consistent design type (generation) from MY 2005 through MY 2008,¹¹ we searched the complaint database to identify all reports potentially involving the throttle control system for MY 2005 and later Tacoma vehicles. Table 1 shows the number of Tacoma VOQ reports, by MY, that include an allegation possibly related to the throttle control system. We attempted to

⁹ Some portions of the response were submitted with a request for confidentiality

¹⁰ The five remaining consumers failed to respond to requests for an interview, or could not be contacted.

¹¹ At MY 2005, the Tacoma vehicle line underwent a major design revision from the MY 2004 vehicle, with a new body style and powertrain being introduced.

interview each person who submitted a report. We have interviewed 64 of these 97 consumers (about 66%).

| <i>MY:</i> | <i>2005</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>Totals</i> |
|-------------------|-------------|-------------|-------------|-------------|---------------|
| <i>Complaints</i> | <i>18</i> | <i>36</i> | <i>38</i> | <i>5</i> | <i>97</i> |

Table 1: Unique Tacoma Throttle Control System Complaints, through 5/31/2008

As shown in Table 1, there were fewer reports for MY 2005 Tacoma reports than for MY 2006 and 2007. When vehicles share a common design configuration over more than one model year, there typically tends to be higher rates of reports on the older vehicles than the newer ones. The trend found here may reflect an abnormal variability or another factor such as more recent publicity.

Based on the report descriptions and the interviews conducted, ODI separated the consumer complaints into (1) those that may involve the throttle control system, (2) those that did not relate to the throttle control system (or that relate to a different system or component), and (3) those that we could not categorize, often because of limited information. The analysis revealed that some VOQs implicate more than one of the above issues, resulting in a total of 104 discrete complaints in these three categories.

Of the 104 complaints, 59 relate or may relate to the throttle control system. These complaints include allegations of high idle speed on cold start; short duration (less than one second), small magnitude vehicle surges while the vehicle is at rest and in gear (possibly related to A/C system operation); excessive engine speed and transmission downshifts when the cruise control is engaged and the vehicle encounters an uphill grade; and failure of the engine to return to “idle” in a normal manner while at highway speeds when the clutch is depressed for shifting (termed by Toyota as “catalyst protection”).

Regarding the vehicle's throttle control system, we note that NHTSA's Office of Vehicle Safety Compliance (OVSC) conducted testing on a MY 2007 Tacoma for compliance with Federal Motor Vehicle Safety Standard (FMVSS) No. 124, **Accelerator Controls** in September 2007. In a November 23, 2007, report, OVSC indicated that the Tacoma throttle control system is compliant with the requirements set forth in FMVSS No. 124.¹² OVSC completed this testing prior to the opening of DP08-001.

Of the 59 complaints that may be related to the vehicle's throttle control system, two of the complaints (about three percent) related to high idle speed on cold start. None of these reports allege a crash or injury. NHTSA's Vehicle Research and Test Center (VRTC) conducted testing to compare two MY 2008 Tacoma (four- and six-cylinder engines with automatic transmissions) to 15 other non-Tacoma vehicles. The objective was to determine the engine RPM and the sustaining brake pedal force (effort required to maintain a stationary position) during cold start.¹³ For the vehicles tested, the Tacoma idle speeds and pedal forces were both above the average of the 17 vehicles tested but within the range of values measured.

Thirty-seven of the 59 complaints (about 63 percent) related to a short duration, small magnitude vehicle surge increase while the vehicle is at rest and in gear. None of these reports allege a crash or injury. In assessing the safety consequence of these at-rest surge complaints, we note first that these events occur only on vehicles equipped with automatic transmissions. Like many other vehicles, the Tacoma idle speed varies depending on whether the A/C compressor is engaged. We note also that the A/C compressor operates when the front windshield defroster is enabled, regardless of the state of the A/C compressor switch.

¹² See <http://nhthqnwws111.odi.nhtsa.dot.gov/acms/docservlet/Artemis/Public/OVSC/2007/Test%20Reports/TRTR-639126-2007.PDF> for vehicle specification, test results, and details on obtaining more information.

¹³ This work was completed prior to the opening of DP08-001 also.

In our IR to Toyota, we asked the company to explain the functionality of the Tacoma A/C system and how it affects the idle speed. According to Toyota's response, there is a modest increase in idle speed when the AC compressor engages. With this functionality, it is possible for the vehicle to inch forward if, after it is stopped and in gear, the driver applies only enough braking to prevent the vehicle from rolling forward under normal conditions without the A/C engaged and the A/C compressor subsequently engages. However, a small additional brake force suppresses this forward movement.

Some of these 37 consumers, typically those with 4WD, reported that within about five seconds after stopping the vehicle, they experienced a surge that felt like a sharp jolt in the vehicle as though a following driver had tapped the rear bumper (some consumers reported looking in the rearview mirror to see if this was the case). The duration of the jolt was very short (< 1 second), would occur only once per stop, and occurred randomly—perhaps on a weekly basis or less frequently. Consumers did not report a simultaneous change in engine speed, so it is unclear if this issue involves the vehicle's throttle control system¹⁴. We were not able to simulate this event on a vehicle. However, to the extent that these events could be related to the throttle control system, we note that consumers reported they easily controlled vehicle movement with normal brake force.

Eleven of the 59 complaints (about nineteen percent) involve excessive engine speed and transmission downshifts when the cruise control is engaged and the vehicle encounters an uphill grade. None of these reports allege a crash or injury. We note that this occurs only on vehicles equipped with automatic transmissions and cruise control, and that it appears to be more prevalent on the four cylinder models. We identified VOQ report ODI 10183271 that provided detailed information regarding this issue. The report states that while on the interstate with the cruise control engaged and set within a speed range of about 65 to 75 miles per hour, if the vehicle encounters an

¹⁴ Some consumer's have alleged that the vehicle's drivetrain or suspension causes the condition.

uphill grade, the vehicle will first downshift to a lower gear, then apply additional throttle, resulting in the engine revving to a high RPM.¹⁵ The VOQ alleges that the combined effect of downshifting then opening the throttle can cause a yaw or loss of control condition and that a crash could result, and that a near crash incident occurred on one occasion.¹⁶

We interviewed this consumer¹⁷ and discussed the results of testing conducted on his vehicle by a local Toyota dealer. He provided a description of what he learned from Toyota's testing, and agreed to allow us to inspect his vehicle. We met with him on March 12, 2008, and test drove the vehicle on local interstates where he had previously experienced the alleged event. We connected a commercially available test device to the vehicle's diagnostic connector to monitor throttle and transmission data. We confirmed that when the vehicle cruise control is set to a specific speed range and it encounters an incline, the transmission will downshift to second gear and the engine will rev to a high RPM. However, we could not confirm that the transmission downshift preceded the throttle application. To the contrary, the data showed that the transmission downshift was in response to throttle opening, similar to what would occur if the operator were to manually apply the accelerator pedal under similar circumstances (same speed range, on an incline). We do not perceive a significant safety risk related to this phenomenon.

Nine of the 59 complaints (about 15 percent) relate to an alleged failure of the engine to return to "idle" in a normal manner while at highway speeds when the clutch is depressed for shifting (what Toyota describes as catalyst protection). One of these reports alleges a crash with no injury, as discussed below. We note first that this event only occurs on vehicles equipped with four cylinder engines and manual transmission. The condition is typically described in reports as a failure of the

¹⁵ He states that he met with a Toyota technical representative and observed the results of test work they conducted. The consumer claims that the test results verified the system operated in the manner described in his report, though he did not obtain copies of the test results.

¹⁶ See the VOQ report ODI 10183271 for details of the near loss of control incident that was alleged.

¹⁷ The complainant is an engineer who owns a four cylinder Tacoma with automatic transmission.

engine to return to normal idle speed and an increase in engine speed that occurs when the clutch is depressed while shifting from 4th to 5th gear (see ODI 10150731, 10157923, 10175527, and 10208505).

In its IR response, Toyota described the system used on four cylinder vehicles to protect the long-term durability of the catalytic converter, a component of the emissions control system. Toyota reported that under certain operating conditions and when the accelerator pedal is not being depressed (i.e., an overrun condition), the vehicle's catalytic converter can be damaged if there is inadequate air flow through the engine. In simplified terms, the throttle control system opens the throttle without driver input to provide a minimal airflow through the engine. This can produce a temporary elevated idle speed if the clutch is depressed. However, according to Toyota's IR response, the air flow increase by the throttle control system is limited so that it does not result in a net power output to the vehicle. Toyota advised that while increased air flow diminishes engine braking (deceleration caused by engine drag in an overrun condition), it cannot produce vehicle acceleration.

VRTC testing of a MY 2006 Tacoma equipped with a four cylinder engine and manual transmission verified that the catalyst protection feature operated as Toyota described.¹⁸ We confirmed that the strategy is only implemented when the transmission is in 4th or 5th gear and note that when the clutch was depressed we observed free-wheel engine speeds as high as 3,000 RPMs. However, at the road speeds where this occurred (60 to 75 MPH), and with the limited amount of airflow involved, the effect on vehicle control, though perhaps annoying to consumers, did not appear to be consequential.

One VOQ report (ODI 10152011) alleged that this operation caused the operator to lose control of his vehicle and crash on a rural/semi-urban Colorado roadway. However, the road was

¹⁸ Also, Toyota demonstrated this system to ODI during the May 21, 2008, technical meeting.

snow-covered at the time of the crash. Based on the information in the report, the vehicle was travelling at a high speed when the crash occurred (70 MPH on a snow-covered rural/semi-urban road). Since speed and road conditions may have been a factor, the incident described in this report is of little probative value with regard to the alleged defect described in the petition.

Beyond the 59 reports, ODI identified 19 reports that did not relate to the throttle control system, or that relate to a different system or component. Fourteen of these appear to have been caused by floor mat interference with the accelerator pedal, including 4 crashes and 3 injuries. The other five reports were related to dual pedal application, where the operator inadvertently depresses both the accelerator pedal and the brake pedal when intending to apply the brake only. One of these reports alleges a minor crash with no injury (ODI 10221144). These five complaints involve vehicles equipped with automatic transmissions. When dual pedal application occurs, the vehicle moves forward further than the driver intends. During ODI interviews, complainants reported that they had inadvertently applied both the brake and gas pedals at the same time. Three complainants determined this prior to filing VOQs (ODI 10210488, 10221144, and 10223599), one concluded it after filing and disclosed it during the interview (ODI 10208868), and one mentioned that this may have been a factor during our interview (ODI 10198196). To the extent that causes are identified that are not related to the electronic throttle control system but which may raise possible safety defect issues, such as floor mat interference or pedal placement, ODI will continue to examine them as part of our regular screening process and will open investigations if warranted.

In a few reports, consumers questioned the design of the pedal configuration, suggesting that the pedals were too close to one another (lateral separation) or that there was insufficient step-over¹⁹ clearance. We note that, dimensionally speaking, the pedal configuration of the MY 2005 to 2008 Tacoma is typical of other light trucks and passenger vehicles. Some complainants noted that they

¹⁹ This is the difference in the height (distance) of the pedals from the floor board.

had been wearing larger or stiffer than usual shoes, such as work boots, when the dual pedal application occurred, and they reported that this was a factor in the occurrence.

Related to this topic, ODI interviewed the Petitioner and inspected his Tacoma at his home on March 26, 2008. In an earlier interview, the Petitioner advised that he was wearing his cross-country ski boots (shoes) when his two incidents occurred, so we took this opportunity to look at them. The cross country ski shoes (Merrell brand, men's size 9½), unlike down-hill ski boots, are similar in size and width to a work boot with the exception of an extension at the toe of the boot that acts as a binding for the ski. The binding is of the same thickness as the sole of the shoe and it extends forward (outward) from the shoe about 5/8 of an inch. During a test drive, we noted that the Petitioner used his right foot to operate the brake and gas pedal, and that he lifts and relocates his foot when he transitions from one pedal to another²⁰.

Considering that the shoes may have played a role in his incidents, we discussed the issue of dual pedal application with the Petitioner. He noted that he skied two to three times per year, that he typically drove with his ski shoes on to save time at the ski facility, and that he had never had a problem before. Additionally, he noted that he had made this same trip using the Tacoma a few times the prior ski season without incident. We asked the Petitioner to assess the vehicle with his ski shoes on to see if he could apply both pedals at the same time and to advise us of his findings. He subsequently reported that it was possible for him to inadvertently hit both pedals while wearing the ski shoes but that his foot had to be in an abnormal orientation for this to occur, one that would be plainly obvious to him. In his estimation this was not the cause of his two incidents.

Finally, for the remaining 26 complaints, these are reports where we have assessed the available information from the complainants, yet we are unable to identify a cause that may be related to the vehicle's throttle control system or, in many cases, *any* specific cause or explanation.

²⁰ The toe of the Petitioner's foot is oriented to the right of his heel when he applies either the brake or gas pedal.

These reports allege 13 crashes with four injury allegations (one minor, two moderate, one severe). In some cases, the VOQ was inconclusive and the consumer filing the VOQ could not be contacted for an interview. However, in no instances did the complainants report or allege a specific component failure or replacement, the illumination of a warning indicator, the detection of a stored trouble or fault code, or the identification of any other physical evidence supporting a vehicle-based problem. The incidents occur randomly and are therefore unable to be reproduced for testing or further analysis²¹.

IV. NHTSA REVIEW - TOYOTA IR RESPONSE DATA

ODI reviewed the information Toyota provided in its IR response for the MY 2005 to 2008 vehicles.²² We reviewed the population data and provide the number of vehicles by MY and transmission type in Table 2.

| | 2005 | 2006 | 2007 | 2008* | Totals |
|---------------|----------------|----------------|----------------|----------------|----------------|
| Auto | 111,625 | 152,727 | 134,665 | 83,828 | 482,845 |
| Manual | 40,013 | 42,441 | 31,156 | 19,105 | 132,715 |
| Totals | 151,638 | 195,168 | 165,821 | 102,933 | 615,560 |

* - partial MY

Table 2: Vehicle Population by MY and Transmission Type.

We reviewed Toyota's responses to several other questions to ensure we fully understood any product or design changes, the studies of issues relevant to the alleged defect conducted by Toyota, the design and operation of the systems that interact with the throttle control system, and Toyota's assessment of the possible problem with the Tacoma throttle control system. We did not identify any

²¹ As an example of the type of analysis possible, for the Petitioner's vehicle, we have interviewed the Petitioner (multiple times), interviewed his wife (she was a passenger for one of the incidents), conducted a physical inspection of the Petitioner's vehicle, reviewed the Petitioner's vehicle service and warranty history, test driven the Petitioner's vehicle, and monitored the Petitioner's vehicle diagnostic/control system using a commercially available diagnostic tool; the Petitioner's vehicle has not exhibited another incident as of this date.

²² We reviewed the MY2004 IR information on a limited basis only so it will not be discussed.

information indicating a product- or component-based issue that could explain or cause a throttle control system failure.

We conducted a limited review of the responses to questions regarding the complaint and warranty data. Our review of the field report, legal claim,²³ and warranty claim data did not identify any concern or trend. We also conducted an analysis of the consumer complaints as described below. Table 3 shows the count of consumer complaints by MY.

| | 2005 | 2006 | 2007 | 2008 | Total |
|----------------------------|-------------|-------------|-------------|-------------|--------------|
| Consumer Complaints | 176 | 167 | 90 | 13 | 446 |

Table 3: Consumer Complaint Counts by MY from Toyota's IR Response

We based our review of the Toyota consumer complaints on the information provided in the IR response. We first note that the trend we saw in the VOQ data—that the MY 2006 and 2007 vehicles were over-represented (or MY 2005 was under represented)—does not appear in the consumer complaint data submitted by Toyota. In fact, Toyota's consumer complaint data do not suggest any identifiable reporting trend for any MY(s).

In reading the consumer complaint reports, we noted most were similar to the complaints identified in the VOQ reports. Accordingly, we followed the same approach used for VOQ reports and conducted an analysis of a random sample of consumer complaints. We reviewed 133 reports²⁴ from MYs 2005 to 2008 and identified 142 separate complaint types. ODI categorized 96 (about 68%) of the complaints as potentially related to the vehicle's throttle control system, 23 (about 16%) as not related to the throttle control system (or related to a different system or component), and 23

²³ The legal claims were duplicative of the consumer reports, which were also reviewed.

²⁴ We actually reviewed 143 reports but deemed 10 reports fell outside the scope of the alleged defect.

(about 16%) as not permitting us to identify a cause that relates to the vehicle's throttle control system.²⁵ These proportions are similar to the VOQ analysis.

For the crashes and injuries reported in the Toyota IR response, we reviewed the reports for the MY 2006 and 2007 Tacoma (since these were the subject of the DP request) where a crash or injury was alleged. From these reports, we identified 33 unique incidents. Eight of these incidents, with three injuries, were duplicates of reports to ODI that we had reviewed. For the remaining 25 reports unique to the Toyota response, we determined that four reports, with no injuries, fell outside the scope of the alleged defect (these involved brake system or other unrelated issues), two involved dual pedal application errors, and six involved other issues not related to the throttle control system. For the remaining 13 crash allegations, with one injury allegation, we were unable to make an assessment of the underlying cause of the crash²⁶.

CONCLUSION

ODI's review of the petition, assessment of VOQs, interviews of persons who filed VOQs, testing, and review of Toyota's IR response reveals that about three-quarters of the complaints involved various explained aspects of the Tacoma's throttle control system that do not seem to present a significant safety risk under most circumstances, or did not involve a failure of the throttle control system. For the remaining quarter, although there may have been an issue with the throttle control system as one possible explanation, we have been unable to determine a throttle control related or any underlying cause that gave rise to the complaint. For those vehicles where the throttle control system did not perform as the owner believes it should have, the information suggesting a possible defect related to motor vehicle safety is quite limited. In our view, additional investigation

²⁵ As with the VOQ reports, these consumer complaints did not contain evidence of a vehicle causation but were simply allegations that the vehicle had suffered a throttle control system-related incident. Based on this analysis, we estimate that of the 257 MY 2006 and 2007 Toyota consumer complaints, about 40 would be in this category. This number will be reflected as the manufacturer failure counts in the closing resume for DP08-001.

²⁶ None of the 25 reports contained any specific evidence of a failure of the throttle control system.

is unlikely to result in a finding that a defect related to motor vehicle safety exists with regard to the Tacoma's throttle control system or a NHTSA order for the notification and remedy of a safety-related defect as alleged by the petitioner at the conclusion of the requested investigation. 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. This action does not constitute a finding by NHTSA that a safety-related defect does not exist. The agency will take further action if warranted by future circumstances.

Authority: 49 U.S.C. 30162(d); delegations of authority at 49 CFR 1.50 and 501.8.

Issued on:

Daniel C. Smith
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