

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 DP06-003) submitted on August 24, 2006 by Mr. William B. Jeffers III of Garner, North Carolina to NHTSA's Office of Defects Investigation (ODI), requesting that the agency commence a proceeding to determine the existence of a defect related to motor vehicle safety in model year (MY) 2002 to 2006 Toyota Camry and Camry Solara vehicles (the "subject vehicles") for incidents relating to vehicle engine surging.

After reviewing the concerns raised by the Petitioner and other information, NHTSA has concluded that further expenditure of the agency's investigative resources on 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, 400 7th Street, SW, Washington, DC 20590. Telephone 202-366-0139.

SUPPLEMENTARY INFORMATION:

The Petitioner owns a MY 2006 Toyota Camry with a 4-cylinder engine that was purchased new in January 2006. The Petitioner also previously owned a MY 2005¹ Camry. He alleges that both vehicles exhibited vehicle engine surging, which he described as a short duration (1 to 2 second) increase in engine speed occurring while the accelerator pedal is not depressed. In an initial interview, the Petitioner estimated that 6 to 8 surge incidents, of varying severity, occurred in the MY 2006 vehicle over the course of 10,000 miles and 7 months of ownership. The Petitioner reports that the brake system is effective at overcoming the surge. However, he is concerned about reports filed with NHTSA alleging uncontrolled surging in MY 2002 to 2006 Camry vehicles bringing those vehicles to a high rate of speed (in some cases, purportedly, with the brakes applied).

In September 2006, the Petitioner's MY 2006 vehicle was serviced by a Toyota dealership. The dealership determined that two diagnostic trouble codes (P-codes) related to the operation of the throttle actuator,² P2103 and P2111, were stored in the engine control unit's memory.³ The dealership ordered a new replacement throttle actuator, which was installed on the vehicle in October 2006. Thereafter, in November 2006, the Petitioner reported that another surge event occurred, more severe than his prior occurrences. The Petitioner stated that after startup, the vehicle moved forward rapidly when the throttle pedal was touched lightly. The Petitioner reports that the tires screeched from over-acceleration and the vehicle moved 3 or 4 car lengths before he was able to stop the vehicle with the brake. The Petitioner noted that the

¹ The open resume for DP06-003 incorrectly identified the Petitioner's previous vehicle as a MY 2003.

² The throttle actuator is the device that controls air flow into the engine and hence power production. On the subject vehicles the actuator is controlled electronically, as opposed to mechanically (via a cable).

³ The Petitioner does not recall seeing any warning indications on the instrument panel nor does he report any operational malfunctions, either of which would be expected when the stored P-codes were detected.

malfunction indication lamp (MIL) was illuminated during and after this incident. The vehicle was returned to the Toyota dealership, which discovered that P-codes P2111, P2112, and P2119 were stored in memory.⁴ These diagnostic codes also relate to throttle actuator operation. The invoice for this service visit indicates that an electrical connector for the newly installed throttle actuator was "adjusted" and the ground circuits were checked. No crash, injury or property damage incidents are alleged to have occurred with regard to either of the Petitioner's vehicles.

On October 3, 2006 ODI personnel met with the Petitioner in Raleigh, NC to assess his current vehicle.⁵ The assessment involved a visual inspection, as well as photographing the exterior, interior, and under hood areas of the vehicle. ODI test drove the vehicle to make an operational assessment of the braking, throttle control, cruise control and shift interlock systems. A brake override test was performed⁶ confirming that the brake system would stop and restrain the vehicle under full engine power.⁷ No anomalies were noted with the vehicle or its operation during ODI's test drive. ODI confirmed its understanding of the Petitioner's concerns and, through discussion and demonstration, attempted to evaluate the magnitude and duration of the surge events he had experienced.

During the October 2006 meeting, ODI and the Petitioner discussed the Toyota dealership's determination that his throttle actuator should be replaced. An agreement was made to schedule the next service visit so that the removed (suspect) throttle actuator could be retained for further analysis. After the repair, ODI arranged with Toyota to have the suspect throttle

⁴ ODI notes that 'Freeze Frame' data, which is stored information recording vehicle parameters such as vehicle speed, gear status, air mass flow, and other conditions present when P-codes are detected, were also collected at this time.

⁵ This meeting took place before the original equipment throttle actuator had been replaced.

⁶ The vehicle could be maintained at rest during wide open throttle with 25 to 30 lbs. brake force. The maximum engine speed under these conditions was approximately 2,200 RPMs.

⁷ This situation was demonstrated to the Petitioner since he raised concerns regarding reports submitted to NHTSA alleging that vehicles accelerated to high speed even when the brakes were fully applied.

actuator sent to a facility owned by the component supplier, Aisan Industry Co., Ltd. An analysis was conducted which included a physical inspection (including X-ray), mechanical testing, electrical testing, environmental testing, and destructive tear down. Aisan's final investigation report,⁸ submitted to NHTSA under request for confidentiality by Toyota, concluded that there was no problem associated with the component.

In late October 2006, ODI issued an Information Request (IR) letter⁹ to Toyota requesting subject vehicle production data, and warranty claim/parts sales data for the throttle actuator. ODI's review found that the overall warranty claim rate for throttle actuators is unremarkable.¹⁰ The primary reasons for warranty replacement of this component were: (1) hesitation/poor acceleration; (2) MIL illumination; (3) stalling; and (4) poor/no starting. These reasons do not appear to be related to engine surging. No trends are observed when warranty claim rates are analyzed on production date, MY or time-in-service basis. Parts sales, a possible indication of the scope or a component problem, are also unremarkable.¹¹

Toyota's IR response¹² included technical information for the P-codes stored on the Petitioner's vehicle. The documents describe the condition(s) under which the stored P-codes would be set¹³ and the resultant effects on vehicle operation. For the codes stored, fault detection occurs when parameter thresholds are exceeded for a maximum of one second. Where an event lasts more than one second, the codes also result in a "fail safe" mode of operation during which the throttle actuator is de-powered and the throttle blade is mechanically fixed to a near-closed

⁸ The report was submitted in response to NHTSA's Information Request letter of October 30, 2006.

⁹ A copy of the letter is available at <http://www-odi.nhtsa.dot.gov> under Defect Investigation DP06-003.

¹⁰ The warranty claim rate for subject vehicle throttle actuator replacement was less than 0.18%.

¹¹ Parts sales were approximately 5,300 units on a population of some 1.9M vehicles, ~ 0.3%.

¹² Non-confidential portions of the response are available at <http://www-odi.nhtsa.dot.gov> under DP06-003

¹³ These documents describe the parameters that are monitored and the range and time thresholds that when exceeded result in the detection of a fault and the setting of a P-code.

position.¹⁴ With this functionality, any engine surge occurring due to a throttle actuator failure should not last longer than one second, after which the MIL would be illuminated and engine power would be significantly reduced.

ODI attempted but was unable to conduct an interview with the current owner of the Petitioner's MY 2005 Camry to determine if the surging happened again. However, that vehicle (which we know by its vehicle identification number) does not appear in Toyota's warranty claim data or in NHTSA's Vehicle Owner Questionnaire complaint database.

The electronic throttle control (ETC) system of Toyota vehicles in model years immediately prior to that of the Petitioner's current vehicle has been the subject of earlier agency investigations and petitions. Preliminary Evaluation PE04-021 (prompted by DP04-003), which ODI closed without identification of a defect trend, involved allegations that the ETC system failed to properly control engine speed resulting in vehicle surge.¹⁵ Unlike DP06-002, no allegations of MIL or component replacement in connection with a surge incident were received during PE04-021. Defect Petition DP05-003, which the agency denied, involved allegations of interrelated brake and acceleration problems that allegedly resulted in inappropriate and uncontrollable vehicle accelerations in ETC-equipped MY 2002 to 2005 Toyota and Lexus vehicles. During DP05-002, ODI reviewed a comprehensive listing of reports submitted to the agency by vehicle owners alleging uncontrollable engine surging. This review included examination of the types of reports about which the Petitioner has expressed concern. ODI's assessment of the reports, as well as a discussion of the report rates and their relative comparison

¹⁴ The vehicle is incapable of making significant power in this state since air flow to the engine is reduced; however, the vehicle can still be driven at low speed to a safe location for parking and occupant departure.

¹⁵ The closing report for PE04-021 discusses technical and operational aspects of ETC including the specific countermeasures the system can implement when a fault is detected. The report, and non-confidential portions of Toyota's response, are available at <http://www-odi.nhtsa.dot.gov> under PE04-021.

to other throttle investigations, can be found in NHTSA's petition denial notice published in the Federal Register on January 3, 2006. Therefore, in addition to its recent careful examination of Petitioner's allegations concerning his vehicle, ODI has also thoroughly studied all related reports that have been submitted to it alleging similar problems in the subject vehicles.

In summary, after review and analysis of the available information, 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.¹⁶ Evaluation of a suspect throttle actuator removed from the Petitioner's vehicle did not reveal a component problem. Warranty and parts sales of the actuator are unremarkable. These data do not support the existence of a wide-spread defect or ongoing concern. The fault detection and reaction strategy described in Toyota's technical documents indicates that a loss of throttle control due to a component or system failure would be detected within a one second period after which engine power would be limited. The Petitioner's MY 2006 vehicle brake system overcomes full engine power at easily achievable brake pedal forces. This in no way implies that we doubt the Petitioner's reported experiences with his vehicle. Rather, the agency simply lacks evidence of a safety related defect in his vehicle or a trend of such defects in the subject vehicles.

In view of the foregoing, it is unlikely that NHTSA would issue an order for the notification and remedy of a safety-related defect as alleged by the Petitioner in the subject vehicles 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

¹⁶ ODI notes that a surge event may not represent a significant safety risk if it is of small magnitude and short duration.

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 CFR 1.50 and 501.8.

Issued on:

MAR 5 2007

Original Signed By

Daniel C. Smith
Associate Administrator
for Enforcement

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