

As per our discussion with NHTSA Office of Defect Investigation Ms. Scot Yon, please note that data provided in this submission (“i.e. subject vehicles”) is limited to vehicles with the electronic throttle control system. Therefore since the 2002 and 2003MY Toyota Solara vehicles with a V6 engine have been equipped with the mechanical throttle system (i.e. cable type), these vehicles were excluded from this submission.

1. State, by model and model year, the number of subject vehicles Toyota has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by Toyota, state the following:
 - a. Vehicle identification number (VIN);
 - b. Type of pedal system vehicle was manufactured with (fixed or adjustable);
 - c. Type of transmission vehicle was manufactured with (auto or manual);
 - d. Date of manufacture;
 - e. Date warranty coverage commenced; and
 - f. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2000, or a compatible format, entitled “PRODUCTION DATA.” See Enclosure 1, PE04-021 Attachments, for a pre-formatted table which provides further details regarding this submission. Please adhere to the format defined in this file.

Response 1

The numbers of subject vehicles Toyota has manufactured for sale or lease in the United States by model and model year are provided as Attachment 1.

In addition, detailed information for each subject vehicle is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled “PRODUCTION DATA.mdb”.

2. State the number of each of the following, received by Toyota, or of which Toyota are otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:
 - a. Consumer complaints, including those from fleet operators;
 - b. Field reports, including dealer field reports;
 - c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
 - d. Property damage claims;
 - e. Third-party arbitration proceedings where Toyota is or was a party to the arbitration; and
 - f. Lawsuits, both pending and closed, in which Toyota is or was a defendant or codefendant.

For subparts “a” through “d,” state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a

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consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items “c” through “f,” provide a summary description of the alleged problem and causal and contributing factors and Toyota’s assessment of the problem, with a summary of the significant underlying facts and evidence. For items “e” and “f”, identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Response 2

- a. There are 126 consumer complaints (7 written, 2 e-mail, and 116 verbal complaints) that may relate to the alleged defect. Since some customers contacted Toyota twice or three times complaining about the same incident, total number of the incidents in the consumer complaints are 111, including 6 incidents which are duplicated with VOQs.

Based on the available information, such as the content of the allegation or a result of vehicle inspection at a dealer, Toyota did not include consumer complaints alleging one of the followings that clearly do not relate to the alleged defect. However, please note that complaints in which the vehicle condition and circumstance is not specified clearly and that may not relate to the alleged defect are included in this response.

- (1) a long duration incident of uncontrollable acceleration
- (2) a customer could not control a vehicle by applying the brake
- (3) an unintended acceleration when moving the shift lever to the reverse or the drive position
- (4) dissatisfaction with drivability, such as shift shock or engine response etc.
- (5) no explanation of circumstances (merely complained their experience for an unintended acceleration)

- b. There is no field report that may relate to the alleged defect.
- c. In the consumer complaints, 48 incidents where a vehicle crash was alleged have been reported and 6 incidents involved injury. In addition, Toyota has received 3 legal related claims (i.e.PL claims), including 2 incidents which are duplicated with consumer complaints, that may relate to the alleged defect, and all of these incidents involved a vehicle crash and one incident also involved injury.
There are no reports alleging fatality.
- d. There are 3 property damage claims in the legal related claims which are duplicated with the claims involving a vehicle crash, that are mentioned above.
- e. There are no third party arbitration proceedings.
- f. There are no lawsuits in which Toyota is or was a defendant or codefendant.

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
- a. Toyota’s file number or other identifier used;
 - b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
 - c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
 - d. Vehicle’s VIN;

- e. Vehicle's make, model and model year;
- f. Vehicle's mileage at time of incident;
- g. Incident date;
- h. Report or claim date;
- i. The incident type (alleged defect statement, type A, B, or both) alleged in the report;
- j. Any retrieved diagnostic trouble code(s) related to the subject component (P codes);
- k. Whether a subject component was determined to be the cause of the alleged incident;
- l. Whether a subject component(s) was replaced during a service visit which was related to the report;
- m. Whether Toyota inspected the vehicle in relation to the report;
- n. Whether a crash is alleged;
- o. Whether property damage is alleged;
- p. Number of alleged injuries, if any;
- q. Number of alleged fatalities, if any; and
- r. Summary description (request No. 2 items 'c' through 'f' only).

Provide this information in Microsoft Access 2000, or a compatible format, entitled "COMPLAINT DATA." See Enclosure 1, PE04-021 Attachments, for a pre-formatted table which provides further details regarding this submission. Please adhere to the format defined in this file.

Response 3

This information for each item (complaint, report, claim, notice, or matter) is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled "COMPLAINT DATA.mdb".

- 4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method Toyota used for further organizing the documents within each category.

Response 4

Copies of all consumer complaints stored in the database are provided electronically on CD-ROM, in Microsoft Excel 2000 format, and submitted as Attachment 2. In addition, copies of the written/ e-mail consumer complaint, that is listed in Attachment 2 with the following ID#, and the legal related claims are submitted as Attachment 3. These documents are organized by category and within each category by order of reported date.

Written complaint : 200301071160, 200312170492, 200401290690, 200306131246
 200301101020, 200308130329, 200402040570

E-mail complaint : 200301311231, 200403181118

- 5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Toyota to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty

claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following information:

- a. Toyota's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- g. Labor operation number;
- h. Problem code;
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer; and
- k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "WARRANTY DATA." See Enclosure 1, PE04-021 Attachments, for a pre-formatted table which provides further details regarding this submission. Please adhere to the format defined in this file.

Response 5

Total counts for warranty claims, extended warranty claims, claims for good will services paid by Toyota for the subject vehicles that may relate to the alleged defect are provided as Attachment 4.

The information for each claim is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled "WARRANTY DATA.mdb".

6. Describe in detail the search criteria used by Toyota to identify the claims submitted in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by Toyota on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that Toyota offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

Response 6

The search criteria used by Toyota to identify the claims are provided electronically on CD-ROM, in Microsoft Excel 2000 format, and submitted as Attachment 5. In addition, a list of all labor operations, labor operation descriptions, problem codes and problem code descriptions are provided in Attachment 5.

The terms that Toyota offers for new vehicle warranty coverage on the subject vehicles is 60 months or 60,000 miles for the Toyota vehicles and 72 months or 70,000 miles for the Lexus vehicles from the vehicle's date-of-first-use (DFU), whichever occurs first. (to be confirmed)

There are some extended warranty coverage options that Toyota offered for the subject vehicles. Detailed information about options is provided electronically on CD-ROM, in PDF format, and submitted as Attachment 6. The number of vehicles that are covered under each such extended warranty is provided as Attachment 7.

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that Toyota has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that Toyota is planning to issue within the next 120 days.

Response 7

Toyota has not issued any service or technical bulletins, advisories, or other communications to dealers, contractors, consultants, zone offices, vehicle owners, technicians, or field offices that relate to, or may relate to, the alleged defect in the subject vehicles.

However, Toyota has issued 9 service bulletins pertaining to the "subject components". Although Toyota believes that these bulletins do not relate to the alleged defect defined by NHTSA, Toyota provides these bulletins for you information as Attachment 8. 2 out of 9 bulletins relate to the service campaign concerning the throttle position sensor failure that Toyota conducted in the past, and one bulletin has been issued to reduce the possibility of the throttle stick at the closed position in the cold weather. Others have been issued to improve the shift quality feelings.

8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, Toyota. For each such action, provide the following information:
 - a. Action title or identifier;
 - b. The actual or planned start date;
 - c. The actual or expected end date;
 - d. Brief summary of the subject and objective of the action;
 - e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
 - f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

Response 8

Toyota conducted investigations on two vehicles brought back from the customer who was alleging the unintended acceleration. Copies of each investigation report are submitted as Attachment 9.

9. Describe all modifications or changes made by, or on behalf of, Toyota in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:
 - a. The date or approximate date on which the modification or change was incorporated into vehicle production;
 - b. A detailed description of the modification or change;
 - c. The reason(s) for the modification or change;
 - d. The part numbers (service and engineering) of the original component;
 - e. The part number (service and engineering) of the modified component;
 - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
 - g. When the modified component was made available as a service component; and
 - h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that Toyota is aware of which may be incorporated into vehicle production within the next 120 days.

Response 9

Toyota provides all modifications or changes made by Toyota, or on behalf of Toyota in the design, material composition, manufacture, quality control or installation, which relate to the subject component as Attachment 10. However Toyota believes that all these modifications or changes described in Attachment 10 do not relate to the alleged defect.

10. Produce samples of one of each of the following:
 - a. An exemplar accelerator pedal assembly (with sensors); and
 - b. An exemplar throttle body assembly (with sensors and throttle valve control motor).

Response 10

Exemplar accelerator pedal assembly (with sensors) and throttle body assembly (with sensors and motor) have been sent to NHTSA on May 10th.

11. State the number of each of the following that Toyota has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (*including the cut-off date for sales, if applicable*):
 - a. Accelerator pedal assembly (or sensor if serviced separately from assembly);

- b. Throttle body assembly;
- c. Throttle valve position sensor (if serviced separately from the throttle body assembly); and
- d. Throttle valve control motor (if serviced separately from the throttle body assembly).

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number) Also identify by make, model and model year, any other vehicles of which Toyota is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

Response 11

The number of each the requested component that Toyota has sold that may be used in the subject vehicles by component name, part number, and month/year of sale is provided as Attachment 11. Please note that Toyota's part sales database does not have the data on the model and model year of the vehicle in which the sold component is used, therefore, the sales data in Attachment 11 includes the number of the component sold for use not only in the subject vehicles but also in the vehicles that contain the identical components installed in production or in service. The lists of any other vehicles that contain the identical components are also provided in Attachment 11.

The information on the supplier for each components parts number is provided in Attachment 11.

12. Furnish Toyota's assessment of the alleged defect in the subject vehicle, including:

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses;
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
- f. The reports included with this inquiry.

Response 12

For those incidents provided by NHTSA (12 cases), Toyota provides related information of those cases from Toyota's database as Attachment 12.

When we reviewed those cases, we recognized that one case (ODI number 8004502) does not relate to this investigation because this vehicle, 2002 Camry Solara with the V6 engine, is equipped with mechanical throttle system but not the electronic throttle control (ETC) system.

In remaining 11 cases, although Toyota carefully analyzed available data, there are no specific trend of occasion and facts which can estimate possible causes because no specific component failure nor malfunction is specified, but only vehicle behavior caused from uncertain mechanism were alleged. There are two cases (8013908, 10008367) which mention about throttle sticking, but no actual component failure is specified. (Throttle valve failure or throttle pedal failure? what kind of failure??)

Toyota also reviewed field information in its own possession including consumer complaint, dealer examination results, police/insurance report, but there are no cases that show specific vehicle and/or component failure, such as breakage/malfunction of mechanical component and malfunction/short circuit of electronic component. As explained later, if ETC system had some problem such as electrical short circuit or mismatch of any signal from components, it would record such problem code and engine warning lamp would be illuminated. However, most of the dealer checks results showed no problem code found from the vehicle check.

Among these cases, Toyota brought back two owners' vehicles which reported unintended acceleration incidents and has been investigating these vehicles. As a result, there has been no abnormal condition detected up to now. Toyota continues its investigation on these two vehicles through monitoring drive under daily usage. (See Attachment 9 for investigation details)

For design and manufacturing change, there are no changes to improve or measure throttle control performance related to unintended acceleration.

On V6 engine model, there are ECU program changes based on the customer's voice alleging un-smooth acceleration and shift timing which does not meet customers expectation, or shift shock is noticeable. Another ECU program change was done to prevent mis-illumination of engine warning lamp. In these ECU program changes, there are no changes on the detection of irregular condition and fail safe function.

It is also noted that these changes were only for V6 version and no program change was made on 4-cylinder engine models.

For throttle mechanism, material, production process and supplier changes were made on several components, such as motor shaft and gears. Although Toyota provides those changes for possible factor that may relate to the mechanical sticking, these changes were made to improve or increase productivity/production capacity and no failure case was reported from the field.

The outline of electronic throttle control (ECT) system and its function including fail safe function is described in the new car feature booklet. For more detail, Toyota is planning to explain them to NHTSA by using actual vehicle and failure mode sample.

In case of alleged defect A and B, ETC system works as summarized below and prevents further unintended acceleration incident.

As a basic control, ECU is monitoring/comparing accelerator pedal position and throttle position and if throttle position is greater than pedal position, ECU detects this inconsistency within a XX millisecond and ECU goes to the fail safe mode (limp mode control which throttle opening angle is limited to one-fourth of normal operation or fuel supply will be cut to stall the engine completely)

In addition, each accelerator pedal position and throttle position is monitored with two sensors, and if there is mismatch between outputs of each sensor, ECU also judge as problem and it goes to fail safe mode.

In case ECU itself becomes in trouble and the abnormal throttle opening signal is send to the throttle motor, above detection will work. In addition, ECU has two CPUs and these CPUs are comparing each signal every XX millisecond to monitor ECU function itself.

After Toyota received the query from NHTSA, Toyota conducts actual vehicle trial to confirm vehicle movement in case of each component malfunction which can make tentative engine speed increase by making such malfunction condition intentionally. As a result, Toyota confirmed that vehicle movement was quite limited (both engine speed and duration) and driver could easily control the vehicle by applying brake or even no braking was necessary in some cases. Toyota submits the summary of the trial as Attachment 13. As it is rather difficult to express the influence to the driver by numerical value, Toyota also will exhibit these condition to NHTSA through actual vehicle demonstration.

In addition, if these trial cases can happen in the actual usage, DTC will be stored and engine warning lamp will be illuminated except very light engine speed change case (similar to idle up for air conditioner and power steering assist), but no such DTC was stored in the field incident. (In many cases dealer checked DTC and it confirmed that no related code was stored, and in other cases it is not clear if dealer confirmed DTC or not but customer/dealer can easily recognized from warning lamp in the instrument panel.)

In addition to the above, Toyota believes that ETC system component malfunction/failure is quite rare in the field because the number of reports alleging the throttle control component failure is quite small in other field information than unintended acceleration, i.e. warranty claim of the related component.

For alleged defect B, accelerator pedal sticking (mechanical failure) is another possible case, but this is not unique to electronic throttle control system. In such case, if pedal sticking occurred, some vestige like un-smooth pedal movement or interference with some object may be detected through vehicle check, but no such case was reported.

Based on findings mentioned above, Toyota believes that no possible factor or trend of vehicle/component defect is existing.

For any factor other than vehicle such as drivers age, driving circumstance, Toyota also cannot specify any special trend because of indistinct and limited information.