

TOYOTA

TOYOTA MOTOR NORTH AMERICA, INC.

WASHINGTON OFFICE

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March 2, 2010

Mr. Jeffrey Quandt, Chief
Vehicle Control Division (NVS-213, Rm W48-312)
NHTSA, Office of Defects Investigation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: NVS-213cnl; PE09-054

Dear Mr. Quandt:

This letter is being sent in response to your January 6, 2010 letter regarding PE09-054.
Enclosed you will find two copies of this response.

Should you have any questions about this response, please contact me at (202) 775-1707.

Sincerely,

A handwritten signature in dark ink, appearing to read 'CS' followed by a stylized flourish.

Chris Santucci
Manager
Technical and Regulatory Affairs
TOYOTA MOTOR NORTH AMERICA, INC.

1. State, by model and model year and engine, the number of subject and peer 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. Make
 - c. Model;
 - d. Engine
 - e. Model Year;
 - f. Date of manufacture;
 - g. Date warranty coverage commenced;
 - h. 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 2003, or a compatible format, entitled "PRODUCTION DATA."

Response 1

The number of MY 2005-2007 Toyota Corolla and Corolla Matrix vehicles manufactured for sale or lease in the United States by model, model year and engine is as follows:

Model	Engine	2005MY	2006 MY	2007MY	Total
Corolla	1ZZ-FE	362,343	335,233	309,553	1,007,129
	2ZZ-GE	6,469	1,870	-	8,339
Corolla Matrix	1ZZ-FE	70,893	55,728	41,864	168,485
	2ZZ-GE	1,857	638	-	2,495
Total		441,511	393,469	351,417	1,186,448

In addition, the detailed information responsive to "a" through "h" is provided electronically on CD-ROM in Microsoft Access 2003 format entitled "PE09-054 PRODUCTION DATA.mdb" stored in the folder "Attachment-Response 1."

2. State, by model, model year and engine, the number of subject and peer vehicles Toyota has manufactured for sale or lease in the United States for which Toyota sold and extended service plan. Separately, for each vehicle, state the following:
 - a. Vehicle identification number (VIN);
 - b. Make
 - c. Model;
 - d. Engine
 - e. Model Year;
 - f. Name of extended service plan;
 - g. Mileage at which the extended service plan expires; and
 - h. Number of months from warranty start date at which the extended service plan expires.

Response 2

The number of the subject and peer vehicles for which Toyota sold an extended service plan is provided, by model, model year and engine, is provided as "Attachment-Response 2". Please note that this "Attachment- Response 2" contains trade secret and commercial information, therefore, Toyota believes that this document must be afforded confidential treatment. A request for confidential treatment of this document has been sent to the Office of Chief Counsel. A public version of this document is included with this response.

In addition, the detailed information responsive to "a" through "h" is provided electronically on CD-ROM in Microsoft Access 2003 format entitled "PE09-054 EXTENDED SERVICE DATA.mdb" stored in the folder "Attachment-Response 2."

3. State, by model, model year, engine and alleged causal system/component, the number of each of the following, received by Toyota, or of which Toyota is otherwise aware, which relate to incidents of engine stall in the subject and peer 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; and
 - 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 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" and "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 3

Using the methodology described in your question above, the number of reports which may relate to incidents of engine stall in the subject and peer vehicles is provided electronically on CD-ROM in Microsoft Excel 2000 format entitled "Total Count for Reports.xls" stored in the folder "Attachment-Response 3". Included in these reports are incidents that do not exactly mention engine stall, such as the "Engine No Start" condition.

4. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 3, state the following information:
- Toyota's file number or other identifier used;
 - The category of the item, as identified in Request No. 3 (i.e., consumer complaint, field report, etc.);
 - Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
 - Vehicle's VIN;
 - Vehicle's make;
 - Vehicle's model;
 - Vehicle's model year;
 - Vehicle's mileage at time of incident;
 - Incident date;
 - Report or claim date;
 - Causal system alleged (e.g, engine control module, fuel delivery, etc.);
 - Causal component alleged (use "unknown" if no component is specified);
 - Whether a crash is alleged;
 - Whether property damage is alleged;
 - Number of alleged injuries, if any; and
 - Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2003, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

Response 4

The information "a" through "p" for each item (complaint, report, claim, notice, or matter) is provided electronically on CD-ROM in Microsoft Access 2003 format entitled "PE09-054 REQUEST NUMBER TWO DATA.mdb" stored in the folder "Attachment-Response 4".

5. Produce copies of all documents related to each item within the scope of Request No. 3. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method Toyota used for organizing the documents.

Response 5

Lists of the consumer complaints, the copies of the field reports, and the documents related to the legal related claims are all provided electronically on CD-ROM in Microsoft Excel 2000, or PDF format stored in the folder "Attachment-Response 5." (The list of consumer complaints is stored in the sub-folder "Consumer Complaint." The copies of the field reports are stored in sub-folder "Field Report." The copies of the documents for the legal related claims are stored in the sub-folder "Legal Related Claims." The copies of the documents for the property damage are stored in the sub-folder "Property Damage." The copies of the documents for the lawsuit are stored in the sub-folder "Lawsuit." The copies of the documents for Third-Party Arbitration Proceedings are stored in the sub-folder "Third-Party.")

6. State, by model, model year and engine, total count for all of the following categories of claims, collectively, that have been paid by Toyota to date that relate to (1) the alleged defect: or (2) the conditions described in the subject bulletin (include all claims related to the symptoms and components identified in the bulletin, regardless of whether the bulletin labor operation was performed) in subject and peer 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;
- k. Comment, if any, by dealer/technician relating to claim and/or repair; and
- l. Whether the customer or dealer/technician concerns/comments indicate that the repairs were performed after a stall/disablement incident.

Provide this information in Microsoft Access 2003, or a compatible format, entitled "WARRANTY DATA."

Response 6

The total count of warranty claims, extended warranty claims and claims for good will services paid by Toyota for the subject vehicles that relate to the alleged defect or the conditions described in the subject bulletin are provided electronically on CD-ROM in Microsoft Excel 2000 format entitled "Total Count for Claims.xls" stored in the folder "Attachment-Response 6".

The detailed information for each claim is also provided electronically on CD-ROM in Microsoft Access 2003 format entitled "PE09-054 Warranty Data.mdb" stored in the folder "Attachment-Response 6".

7. Describe in detail the search criteria used by Toyota to identify the claims identified in response to Request No. 6, 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, model, 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. Also, provide a method for identifying under which category, as stated in Request No. 6, each claim was paid.

Response 7

The search criteria used by Toyota to identify the claims is the following:

Toyota searched the warranty database for those claims that replaced the subject component identified in Microsoft Excel file entitled "Search Criteria, Operation & Problem Codes.xls" stored in the folder "Attachment- Response 7" on CD-ROM. Toyota then selected those claims including claim comments and problem codes which relate to the alleged defect or the conditions described in the subject bulletin. In addition, a list of all labor operations, labor operation descriptions, problem codes and problem code descriptions identified in these warranty claims are also provided in the same Microsoft Excel file described above.

The terms that Toyota offers for new vehicle warranty coverage on the subject vehicles is as follows;

For the subject components (i.e. ECM)

96 months or 80,000 miles from the vehicle's date-of-first-use, whichever occurs first.

There are some extended warranty coverage options that Toyota offered for purchase with the subject vehicles. Detailed information about these options is provided electronically on CD-ROM, in PDF format, entitled "Extended Warranty Option.pdf" stored in the folder "Attachment-Response 7."

The number of vehicles that are covered under each such extended warranty option, by option, model, and model year is provided as "Attachment-Response 2". Please note that this "Attachment-Response 2" contains trade secret and commercial information, therefore, Toyota believes that this document must be afforded confidential treatment. A request for confidential treatment of this document has been sent to the Office of Chief Counsel. A public version of this document is included with this response.

8. 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. Provide a chronology of events related to Toyota's issuance of TC015-07.

Response 8

Toyota has issued four technical service bulletins regarding to the "Engine No Start" condition in the subject and peer vehicles. However, three of the four bulletins are now obsolete. These bulletins are proved as "Attachment-Response 8."

A chronology of issuance of TC015-07 is the following:

Toyota received first Field Technical Report regarding harsh shift on a Corolla Matrix vehicle in November 2005, and it obtained a recovered part for another FTR in March 2006. Toyota started an investigation of the recovered part and, after further investigation, we improved an element (varistor) in the ECM in June 2007 for this problem. Toyota provided the distributor in the U.S. with the information about the problem, the countermeasure, and the first vehicle into which the countermeasure was incorporated. In September 2007, the TSB was issued to dealers from the distributor. A copy of TC015-07 is included in Attachment-Response 8.

9. 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:
- Action title or identifier;
 - The actual or planned start date;
 - The actual or expected end date;
 - Brief summary of the subject and objective of the action;
 - Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
 - 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 9

Toyota has summarized in a table the actions that relate to the alleged defect in the subject vehicles. We are providing this information as "Attachment-Response 9" stored in the folder on CD-ROM. All of the documents related to these actions are being provided within "Attachment-Response 9." Please note that the documents provided in this portion of the response are confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel. A public version of these documents is included with this response to your office, provided on CD-ROM, in the folder "Attachment-Response 9." Please see the Office of Chief Counsel for the confidential version of these documents.

10. 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 components, 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:
- The date or approximate date on which the modification or change was incorporated into vehicle production;
 - A detailed description of the modification or change;
 - The reason(s) for the modification or change;
 - The part number(s) (service and engineering) of the original component;
 - The part number(s) (service and engineering) of the modified component;
 - Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
 - When the modified component was made available as a service component; and
 - 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 10

Toyota has summarized in a table 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 alleged defect in the subject vehicles. We are providing this information as "Attachment- Response 10." Please note that some of the information included in "Attachment-Response 10" is confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel. A public version of "Attachment-Response 10" is included with this response to your office, provided on CD-ROM stored in the folder "Attachment-Response 10." Please see the Office of Chief Counsel for the confidential version of this document.

11. 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 condition(s) under which the alleged defect can occur;
- e. The 12- and 24-month warranty rates associated with the alleged defect;
- f. The 5- and 10-year projected subject system failure rates;
- g. The percent of subject system failure that will result in a engine stalling incident;
- h. The percent of subject system failure that will result in a vehicle stalling incident;
- i. The percent of stalling incidents that will result in a delayed restart (grater than 5 minutes) condition;
- j. The risk to motor vehicle safety that it poses;
- k. 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
- l. The reports included with this inquiry.

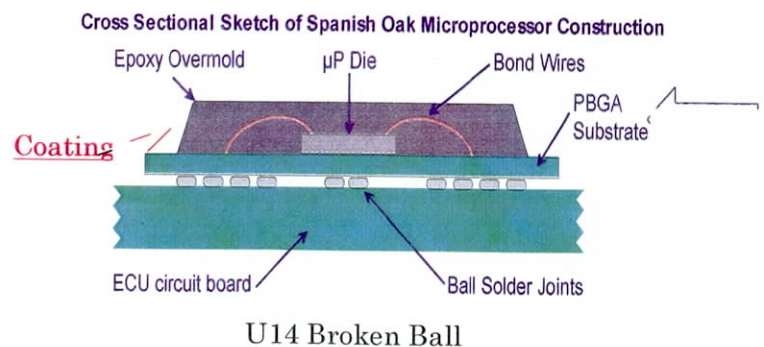
Response 11

a. Toyota has identified two potential issues with the Engine ECU that could relate to the alleged defect:

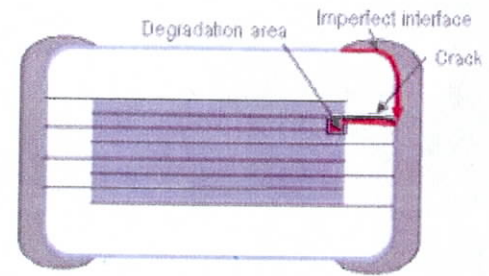
- A-1: Crack in Solder
A-2: Short in Varistor:

b. With respect to A-1, the surface of the circuit board is covered by a uniform coating layer, called a "Conformal Coating." The Conformal Coating was cured at 105°C and annealed at room temperature at the Delphi Plant, which was not sufficient to allow the coating to dry completely. A sufficient drying condition is 125°C. The temperature of the ECU under operating conditions can be higher than the temperature at which the Conformal

Coating was cured. This can allow cracks to develop at the solder joints. There are two components within the ECU that can be affected by this phenomenon (U14 and Q28).



With respect to A-2, a glass coating is created on the surface of the Varistor during its production process. In case of an insufficient coating, a crack can occur in the surface of the glass coating. When ions are charged in the plating electrolytes after the glass coating process, the plating electrolytes can penetrate into the Varistor through the glass crack then a short occurs between the anode and the cathode. Toyota has discovered that the supplier of the Varistor changed the material and the production process, which made such cracks more likely.



- c. With respect to A-1, if the condition arises, it can potentially lead to one or more of the following:
 Crack at U14: MIL on, Engine Stall or Engine No Start
 Crack at Q28: MIL on, Harsh Shift

With respect to A-2, if the condition arises, it can potentially lead to one or more of the following:
 Short in Varistor: MIL on, Engine Stall, or Engine No Start.

- d. With respect to A-1, Toyota believes that a crack in the solder is most likely to occur when there is a big difference in ambient and operating temperature, such as at engine start up. This is because the engine ECU is cold and then the temperature of the ECU increases due to electric power supplied to the circuit. When that occurs, the stress and strain on the components is assumed to increase and the issue is more likely to occur.

With respect to A-2, there is no specific condition under which it is likely for the alleged defect to occur.

- e. The 12- and 24-month warranty rates associated with the alleged defect are set out below;

For ECU production dates Apr/2004-Jan/2006

 The 12 month warranty rate – approx. 0.04%

 The 24 month warranty rate – approx. 0.11%

For ECU production dates Jan/2006-Apr/2007

 The 12 month warranty rate – approx. 0.04%

 The 12 month warranty rate – approx. 0.20%

- f. The 5- and 10-year projected malfunction rates are ;

For ECU production dates Apr/2004-Jan/2006

 The 5-year projected rate – approx. 0.20%

 The 10-year projected rate – approx. 0.30%

For ECU production dates Jan/2006-Apr/2007

 The 5-year projected rate – approx. 0.50%

 The 10-year projected rate – approx. 0.80%

- g. and h. Toyota does not know what percentage of system malfunctions will lead to a stalling incident.

- i. Toyota does not have data at the present time with respect to the likelihood of delayed restart .

- j. Toyota has been investigating this issue and is now considering how to address our customer concerns. Based upon its analysis, Toyota does not believe that the alleged defect creates an unreasonable risk to motor vehicle safety. We understand that some customers have been inconvenienced by engine ECU failure, and some have reported engine stalling. It is our philosophy that when certain types of Engine ECU failures occur, engine stall or shutdown is preferable as opposed to allowing the engine to become damaged or dangerous (i.e. catastrophic failure, fire, etc.). Toyota would like to meet with the agency to discuss this issue.
- k. Toyota does not believe that anyone would have prior warning that the alleged defect was occurring or that the subject component was malfunctioning. However, a malfunction indicator would illuminate if a malfunction did occur.
- l. Toyota is in the process of analyzing the reports provide by ODI with this information request. When that analysis is completed, we will provide it to the agency.

* * *

Regarding privileged documents that may be responsive to this information request, Toyota understands that it is acceptable to the Agency at this stage for Toyota to identify categories of privileged documents rather than any specific document within those categories. These categories include (a) communications between outside counsel and employees of Toyota's Law Department, other Toyota employees, or employees of parties represented by Toyota in litigation or claims; (b) communications between employees of Toyota's Law Department and other Toyota employees or employees of parties represented by Toyota in litigation or claims; (c) notes and other work product of outside counsel or employees of Toyota's Law Department, including work product of employees or consultants done for or at the request of outside counsel or Toyota's Law Department. For any privileged documents that are not covered by these categories, if any, Toyota will provide a privilege log identifying any such documents under separate cover. Toyota is not claiming a legal privilege for any documents provided with this response; however, Toyota does not waive the legal privilege or work product protection with respect to other documents that may have been prepared in connection with a specific litigation or claim. In addition, Toyota may assert the attorney client privilege or claim protection under the work-product doctrine for analyses or other documents that may be prepared in connection with litigation or claims in the future.

Toyota understands that NHTSA will protect any private information about persons that is contained in the Attachments to this response, based on privacy policy considerations. Such private information includes data such as names, addresses, phone or fax numbers, email addresses, license plate numbers, driver's license numbers and last 4 digits of the vehicle's VIN.

Data provided in this document is current as of the following dates:

Response		Dates
Response 1	Production Data	2/18/2010
Response 2	Extended service plan	2/3/2010
Response 3 - 5	Consumer Complaint	12/17/2009
	Field Report	2/18/2010
	Legal related claims	1/27/2010
	Lawsuit	1/27/2010
Response 6	Warranty claims	2/18/2010
	Goodwill	12/22/2009
	Extended warranty claims	12/23/2009
Response 8	Dealer communications	2/18/2010
Response 9	Actions	2/18/2010
Response 10	Changes & Modifications	2/18/2010