

TOYOTA
TOYOTA MOTOR NORTH AMERICA, INC.

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Handwritten signature
7/15/05

July 15, 2005

Mr. Thomas Z. Cooper
Chief - Vehicle Integrity Division
Office of Defects Investigation
National Highway Traffic Safety Administration
400 Seventh St., SW
Washington, DC 20590

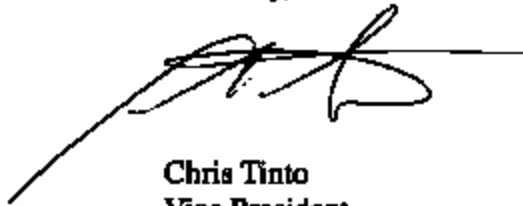
Re: NVS-212lhs; PE05-021

Dear Mr. Cooper:

This letter is being sent in response to your May 12, 2005 letter regarding PE05-021. Per our agreement, Toyota is completing the response to your inquiry with the attached documents. Please note that the information included in Attachments 10 and 11 is confidential and a request for confidential treatment of these documents has been submitted to the Office of Chief Counsel.

Enclosed you will find two copies of this response with all confidential materials removed. Should you have any questions about this response, please contact Mr. Chris Santucci or Mr. Tsuyoshi Yokoi of my staff at (202) 775-1707.

Sincerely,



Chris Tinto
Vice President
TOYOTA MOTOR NORTH AMERICA, INC.

CT:ca
Attachment

Vertical stamp: RECEIVED JUL 15 2005

05MY Scion tC Front Wind Deflector Investigation (PE05-021)

1. State, by model year, the number of subject vehicles manufactured by Toyota 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. Model Year;
 - e. Date of manufacture;
 - f. Date warranty coverage commenced; and
 - g. 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."

Response 1

The number of MY 2005 (until April 28, 2005) Scion tC vehicles Toyota has manufactured for sale or lease in the United States by model year and production facility is as follows:

Model	Model Year	Production Facility	Number of Vehicles
Scion tC	2005	Tsutsumi Plant, Toyota Motor Corporation (Japan)	60,365

In addition, detailed information for each vehicle is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled "Attachment 1-PRODUCTION DATA (PE05-021)".

2. State the number of each of the following, received by Toyota, or of which Toyota is otherwise aware, that 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 an injury or death, notices received by Toyota alleging or proving that an injury or death was related to or resulted from the alleged defect in a subject vehicles;
 - d. Property damage claims, including claims of a loss of vehicle control and/or accident in which catastrophic breakage of the wind deflector are alleged to have contributed to the occurrence;
 - 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 "c," 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" 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 item "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

Using the method for tabulation detailed in your question, there is one (1) complaint report that may relate to the alleged defect. Please note that Toyota did not include any consumer complaints where the customer did not actually experience the alleged defect, but had called to complain because they had heard about the issue from other sources.

There are no field reports that may relate to the alleged defect.

In the consumer complaints, no incident has been reported where a vehicle crash was alleged. In addition, Toyota has received no legal related claims (i.e., PL claim) involving a crash that may relate to the alleged defect. There are no reports alleging that an injury and/or a fatality had occurred as well.

Toyota has received no property damage claim that may relate to the alleged defect.

There are no buy-back arbitration claims that may relate to the alleged defect.

There are no lawsuits in which Toyota is or was a defendant or codefendant.

3. For each item (complaint, report, claim, notice, or matter) within the scope of Toyota's 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. Whether a crash is alleged;
- j. Whether property damage is alleged;
- k. Number, type, and severity of alleged injuries, if any; and,
- l. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

Response 3

The information for the one complaint is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled "Attachment 3-REQUEST NUMBER TWO DATA (PE05-021)."

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 organizing the documents.

Response 4

There is only one consumer complaint, please see Response 3 and Attachment 3.

5. State a total count for all of the following categories of claims, collectively, that have been paid by Toyota to date that relate, 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.

Response 5

The total count of the warranty claims paid by Toyota that may relate to the alleged defect on the MY 2005 Scion tC is as follows. All of the affected vehicles are within the original warranty coverage period; there were no extended warranty claims.

Model	Model Year	Produced Plant	Number of Claims	
			Regular Warranty	Goodwill Warranty
Scion tC	2005	Tsutsumi Plant, Toyota Motor Corporation (Japan)	34	3
Total			37	

The information for each claim is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled "Attachment 5-WARRANTY DATA (PE05-021)".

6. Describe in detail the search criteria used by Toyota to identify the claims identified 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 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) related to the alleged defect that Toyota offered for the subject vehicles and state the number of vehicles that are covered under each such extended warranty.

Response 6

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

Toyota searched the warranty database for those claims that replaced part numbers of 63201-21080, 63201-22090 (sliding roof glass sub-assembly) and 63203-21030, 63203-21040 (sliding roof housing sub-assembly) on the all MY 2005 Scion tC's. Toyota reviewed the comments in the claims to determine if it may be related to the alleged defect.

In the data, the following labor operation codes were found:

53099 (Hood, others)

- 55099 (Instrument panel, others)
- 61411 (Remove and replace sliding roof or removable roof panel assembly)
- 61499 (Roof panel, others)
- 64299 (Back door, others)
- 67199 (Door glass weather-strip, others)
- 74320 (Remove and replace roof headlining assembly)
- 74399 (Interior trim, others)
- 554999 (Windshield glass, others)
- 614991 (Roof panel, others)

The terms that Toyota offers for new vehicle warranty coverage on MY 2005 Scion tC vehicles is 36 month or 36,000 miles from the vehicle's date-of-first-use (DFU or DOFU) whichever occurs first.

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 such communication that Toyota planning to issue within the next 120 days.

Response 7

Toyota has issued no service, warranty, and other documents that relate to, or may relate to, the alleged defect in the Scion tC to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. Also, Toyota does not plan to issue any communication within the next 120 days.

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

Please see "Attachment 10 Investigation Summaries."

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 components, from the start of production to date, which relate, 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

Please see "Attachment 11 Modification Summary"

10. Provide a complete engineering description and appropriate engineering specifications of the subject component installed in the subject vehicles. Describe the process for relieving stress in the glass product and any changes to the process for improving resistance to breakage. 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, equipped with identical sun/moon roof and wind deflector assemblies as the subject vehicles, whether installed in production or in service, and state the applicable dates of production or service usage.

Response 10

As described in Response 8, the deflector glass has been manufactured properly and the residual compressive stresses on the surface were controlled within specification. There have been no production irregularities and we have made no production process changes. The information for the supplier of the deflector glass is as follows:

Company Name: Asahi Glass Co., Ltd

Address: 9-30-1, Umetsubo-cho, Toyota-city, Aichi 470-0064, Japan

Phone: +81-565-7336

The Lexus RX330 (2004-2005MY) vehicles have a similar type wind deflector when equipped with the optional panoramic roof (not the moonroof).

11. Provide 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 11

Overview

After receiving the opening resume from NHTSA, Toyota began an investigation into the allegations of wind deflector breakage on the 2005 MY Scion tC vehicles. The opening resume noted that there were three consumer complaints alleging that the wind deflector shattered while driving in the NHTSA database. Toyota searched for similar complaints and found only one record, made by the same owner that registered ODI# 10113595. All three of these complaints allege that the wind deflector shattered while driving, and that the broken pieces of the wind deflector entered the passenger compartment via the opening of the moonroof.

Toyota began an evaluation of the factors that could lead to wind deflector breakage on the subject vehicles. While this evaluation is incomplete at the time of the writing of this letter, the following will summarize the analysis made by Toyota, and offer a preliminary assessment of the issue at hand. While Toyota is still monitoring and evaluating the issue, no defect determination has been made at this time. It is important to note that while Toyota takes these and all other allegations of defect very seriously, at this time we are still processing the results of our evaluation.

In order to assess the causal and contributory factors associated with the alleged defect, Toyota looked at the manufacturing process and quality control of the deflector and the environment in which the deflector is subject. Based on the preliminary results of the evaluation, Toyota believes that the only reasonable explanation for wind deflector breakage is impact with objects while driving.

Manufacturing Process and Quality Control

As submitted in Attachment 10, the manufacturing process and quality control measures were investigated. Asahi Glass, the supplier responsible for the wind deflector glass, runs regular quality assurance tests and, Toyota is therefore confident that the glass of the deflector has no inherent defect due to quality control. The investigation results indicate that residual stress in the glass is not a problem, and that the glass is being produced as designed.

Environmental Factors

Several different evaluations were conducted on the environment in which the deflector operates. As submitted in Attachment 10, Toyota analyzed the stresses on the deflector after installation, during high speed driving, on rough roads, under extreme body flex, and under extreme temperature variations. Toyota also analyzed the speed at which a specified projectile can shatter the deflector.

Preliminary results indicate that environmental stresses on the deflector cannot cause it to break without impact. Installation stresses and the resulting installed stresses are insignificant to the deflector. High speed steady-state operation and rough road conditions also have little to no effect. Body flex did not raise the stress levels to anywhere near fracture. Finally, temperature extremes did not indicate a tendency for deflector glass breakage.

Therefore, Toyota believes that the root cause of deflector glass breakage is wholly from impacts with objects while driving. Toyota conducted an analysis of projectile impacts on both the Scion tC and the Lexus RX330. The Lexus RX330 was available with a panoramic roof option that utilized a similar glass wind deflector. In this test, an 8mm diameter, 15 mm length steel bolt was launched at horizontally at the deflector at various speeds. While the results of this test are preliminary, the Scion tC's wind deflector can be shattered by this large projectile at highway speeds. Toyota is still evaluating the risk to safety, because projectile impact is an uncontrollable factor.

Risk to Motor Vehicle Safety

While Toyota understands that it is possible that the wind deflector may be broken by a projectile impact, an assessment of the risk to motor vehicle safety is still underway. Toyota has developed the wind deflector glass to conform to other U.S. regulations on shattered piece size to mitigate injury. One of the quality control measurements that the supplier performs on a regular basis is a measurement of the shattered glass piece size

and weight per ANSI Z26.1, as stipulated in FMVSS 205. While Toyota does not necessarily believe that compliance to a specific regulation precludes the existence of a safety defect, it is one of the factors in our analysis. There is no dispute whether or not shattered glass can or cannot enter the occupant compartment after an impact strong enough to cause breakage, and this effect is being included in our evaluation.

Another factor in our assessment is the rate of occurrence. Based on the three complaints received by NHTSA, which includes the one received by Toyota, the failure rate is extremely low at 0.5 per 10,000 vehicles. However, Toyota does acknowledge that further analysis will be required when studying the warranty claims, and this information will ultimately be included in our final determination.

Conclusion

Toyota has been evaluating all of the factors and resulting effects of wind deflector breakage and at this time has not made the determination of the existence of a safety defect. We have conducted extensive testing and believe that projectile impact is the most probable cause of wind deflector breakage while driving. We do believe that this type of failure event is uncontrollable, and we have developed the deflector to regulations that are in place to mitigate injury. However, all of these factors need careful consideration, and we are still monitoring and evaluating the issue. We will share with your office our ultimate conclusion in regards to this matter after all of the details have been carefully considered.