

TOYOTA MOTOR NORTH AMERICA, INC.

WASHINGTON OFFICE
601 THIRTEENTH STREET, NW, SUITE 910 SOUTH, WASHINGTON, DC 20005

TEL: (202) 775-1700
FAX: (202) 463-8513

April 6, 2007

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

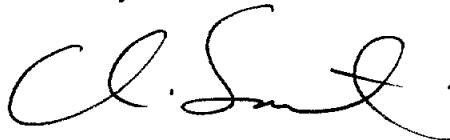
Re: NVS-212mjl; EA06-020

Dear Mr. Cooper:

This letter is being sent in response to your January 22, 2007 letter regarding EA06-020. Per our agreement, this completes our response to your inquiry.

Enclosed you will find two copies of this response. Toyota considers certain information within the attachments to be confidential, and has requested confidential treatment for this material from the Office of Chief Counsel. We are including hard copies of this material in redacted format. Should you have any questions about this response, please contact Mr. Chris Santucci of my staff at (202) 775-1707.

Sincerely,



For

Chris Tinto
Vice President
TOYOTA MOTOR NORTH AMERICA, INC.

CT:cs
Enclosure

1. State, by model and model year, the number of the 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. 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 2004-2006 Toyota Sienna vehicles equipped with power liftgates Toyota has manufactured for sale or lease in the United States by model year is as follows:

Model	Model Year	Total
Sienna	2004	82,870
	2005	59,548
	2006	53,662
Total		196,080

In addition, detailed information for each vehicle is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled "PRODUCTION DATA(EA06-020).mdb" stored in the folder "Attachment-Response 1".

2. State the number of each of the following, received by Toyota, or of which Toyota is 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 "f," 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 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. Using the counting methodology described in your question, there are 134 consumer complaint reports that may relate to the alleged defect in the subject vehicles. Since some customers complained about multiple incidents or same incidents, the total number of unique vehicles in the consumer complaints is 109. This includes 12 vehicles which are duplicated with the NHTSA VOQs attached to the inquiry letter.
- b. There are five field reports that may relate to the alleged defect in the subject vehicles.
- c. There are no reports involving a crash and/or fatality. However in the consumer complaints, 12 incidents have been reported where a minor injury had occurred. In addition, Toyota has received four legal related claims involving a minor injury. Two of those four complaints are duplicated with our consumer complaints and one of those two complaints is also duplicated with the NHTSA VOQ.
- d. There are no property damage claims which may relate to the alleged defect.
- e. There are no third party arbitration proceedings where Toyota is or was a party to the arbitration.
- f. There are two lawsuits that may relate to alleged defect, in which Toyota is or was a defendant or codefendant.

The total count of the unique incidents for each item by model year, which may relate to the alleged defect in the subject vehicles, is provided electronically on CD-ROM in Microsoft Excel 2000 format entitled "Total Number.xls" stored in the folder "Attachment- Response 2".

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. Whether a crash is alleged;
 - j. Whether property damage is alleged;
 - k. Number 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 each item (complaint, report, claim, notice, or matter) is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled "REQUEST NUMBER TWO DATA(EA06-020).mdb" stored in the folder "Attachment-Response 3".

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

A list of the consumer complaints, copies of the field reports, and documents related to the legal related claims and lawsuits are all provided electronically on CD-ROM in Microsoft Excel 2000 and PDF format stored in the folder "Attachment-Response 4."

(The list of the consumer complaints is stored in sub-folder "a. consumer complaint." Copies of the field reports are stored in sub-folder "b. Field Report", the documents for the legal related claims are stored in the sub-folder "c. Legal related claims" and the documents for the lawsuits are stored in the sub-folder "f. Lawsuit".)

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."

Response 5

The total counts of warranty claims, extended warranty claims and claims for good will services paid by Toyota for the subject vehicles that may relate to the alleged defect by model year are provided electronically on CD-ROM, in Microsoft Excel 2000 format entitled "Total Count for Claims.xls" stored in the folder "Attachment- Response 5".

The detailed information for each claim is provided electronically on CD-ROM, in Microsoft Access 2000 format entitled "WARRANTY DATA(EA06-020).mdb" stored in the folder "Attachment- Response 5".

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, 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 is the following:

Toyota searched the warranty database for those claims that replaced any of the parts identified in Microsoft Excel file entitled "Search Criteria, Operation & Problem Codes.xls" stored in the folder "Attachment-Response 6" on CD-ROM. Toyota then reviewed the claim comments to determine if the claims may be related to the alleged defect. 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 is 36 months or 36,000 miles on MY 2004-2006 Sienna vehicles 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 6".

The number of subject vehicles that are covered under each such extended warranty option, by option, model, and model year is provided as "Attachment-Response 6-1" in hard copy only. Please note that this "Attachment-Response 6-1" 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.

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 issued two service bulletins that may relate to the alleged defect. One of the two service bulletins has been provided in our response to PE06-024 information request). Copies of the service bulletins are provided electronically on CD-ROM in PDF format stored in the folder "Attachment-Response 7".

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:
- 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. If an action is not complete, provide a detailed schedule for the work to be done, tentative findings and/or conclusions, and provide an update within 10 days of completion of the action.

Response 8

Toyota has summarized in a table the actions performed by Toyota and the supplier of the liftgate strut. We are providing this information as "Attachment- Response 8". All of the documents related to these actions are being provided as Attachment-Response 8-1 through 8-5. Please note that the documents provided in this portion of the response contain design and technical specifications, trade secrets, and commercial information, therefore, Toyota believes that these documents must be afforded confidential treatment. A request for confidential treatment of these materials has been sent to the Office of Chief Counsel.

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 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 numbers (service and engineering) of the original component;
 - The part number (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 9

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 components" are provided as "Attachment-Response 9". Please note that some of the information included in "Attachment-Response 9" is confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel. A public version of "Attachment-Response 9" is included with our response to your office; please see the Office of Chief Counsel for the confidential version of this document.

10. Furnish copies of all engineering specifications and drawings for each item within the scope of your response to Request No. 9. Include any engineering drawings that show the subject components attached to the liftgate and vehicle structure. Also, provide the weight of the liftgate.

Response 10

Toyota provides engineering drawings for each strut and bracket within the scope of our Response 9 in this response as Attachment-Response 10-1 through 10-7. In addition, an engineering drawing that shows the strut and bracket attached to the liftgate and vehicle structure is provided as Attachment-Response 10-8. Please note that those engineering drawings submitted in this response are confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel.

11. Produce copies of all documents related to all design and performance specifications, requirements and guidelines for the liftgate struts in the subject vehicles, including but not limited to, strut lifting capacity, design/expected usage cycles and vehicle service years.

Response 11

Toyota provides documents related to design and performance specifications, requirements and guidelines for the liftgate struts in the subject vehicles as Attachments-Response 11-1 through 11-7. Please note that those attachments submitted in this response contain confidential information related to the design and specifications of the liftgate struts, and a request for confidential treatment has been submitted to the Office of Chief Counsel.

12. Produce copies of all documents related to all durability and environmental testing of the liftgate struts in the subject vehicles conducted by Toyota or on its behalf.

Response 12

Toyota provides documents related to test results of the liftgate struts in the subject vehicles conducted by the supplier. The results of single strut testing are provided as Attachment-Response 12-1 through 12-5, and the results of testing on an actual vehicle equipped with the power liftgate is provided as Attachment-Response 12-7. Please note that those documents submitted in this response contain confidential information, and a request for confidential treatment has been submitted to the Office of Chief Counsel.

13. In the "Attachment-Response 9" (document identified as confidential) of its letter to ODI, dated October 19, 2006, Toyota stated that the reasons for several of the design changes were to "improve operating effort." Please elaborate on the reasons for those changes and describe how each change (e.g., rod diameter change, bracket shape change, etc.) affect the durability of the liftgate struts and the ability of the subject components to open, close and/or support the liftgate. Also, provide the specifications for the different types of seals mentioned in the above attachment.

Response 13

As pertaining to operating effort, modifications to the strut housing and geometry can affect closing effort and opening speed. Some of the changes made to the Sienna liftgate were made to decrease the opening speed in cold weather. For example, when the rod diameter and the strut housing diameter were decreased, this was done to improve the internal sealing of the O-ring in cold temperatures. In conjunction with the design of the housing, the O-ring controls the flow of gas in the strut to provide the extension force and at a specific speed (the housing has a groove that allows the gas to flow past in a controlled manner). In cold weather, the O-ring may not seal sufficiently to the strut body, causing a small amount of gas to flow past the O-ring in addition to the gas that normally flows through the groove. This can cause the strut to open more quickly than in normal temperatures. In order to improve cold weather performance, the rod and housing diameters were reduced for better O-ring sealing control.

Another way to affect operating effort is by changing the strut mounting position to the body, which results in a change of the angle of the strut relative to the body and liftgate. Depending on the magnitude and direction of the change, operating effort to pull close the liftgate can decrease, but can change the loading on the strut, sometimes increasing bending loads. All of these factors need to be balanced in order to improve operating effort of the system.

In support of this information, Toyota provides a document which indicates the reasons for the design changes and a detailed explanation of the changes which were to improve operation effort, including a chart which shows the ability of the struts to support the liftgate, as Attachment-Response 13-1. In addition, the specifications for the different types of seals are provided as Attachment-Response 13-2.

Please note that some of the information included in "Attachment-Response 13-1 and 13-2" is confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel.

14. Describe and furnish the specifications of the controlled (automatic) closing design feature which activates when the struts cannot support the liftgate. Include nominal speed threshold (including tolerances) required to activate automatic closing. Explain whether the controlled (automatic) closing design feature will activate when the struts cannot support the liftgate and the operator manually opens the liftgate to the fully-open position, as well as when the operator manually opens the liftgate to a position less than fully-open. Please provide copies of all documents related to the information requested in this paragraph.

Response 14

Toyota provides a document which explains the automatic closing design feature, including the threshold required to activate automatic closing, as Attachment-Response 14-1. In addition, Toyota provides the design specifications of the whole power liftgate opening and closing system and specific automatic closing system as Attachment-Response 14-2 and 14-3.

If the struts are degraded to the point that the open liftgate closes slowly below the threshold which activates the automatic closing feature, the liftgate will close completely on its own when the operator manually opens the liftgate to the fully-open position. If the struts are degraded to the point where the liftgate closes at a rate which is within the threshold for the activation of the automatic closing feature, the automatic closing feature will activate when the power-actuated liftgate switch is turned on and the operator manually opens the liftgate to the fully-open position. However, whether the automatic closing feature can be activated when the operator manually opens the liftgate depends on the liftgate opening angle (how high the liftgate is opened). As shown in Attachment-Response 14-1, there is an opening area in which the automatic closing feature can be activated by sensing the motor speed. Therefore, when the operator manually opens the liftgate within the automatic closing activation area and the liftgate closes at a rate which is within the threshold, the automatic closing feature will be activated. If the liftgate is only opened manually, and below the automatic closing activation area, the automatic closing feature will not be activated and the liftgate closes on its own to the fully-close position.

15. Describe and furnish the specifications of the jam protection sensor that senses the speed of the power liftgate motor and reverses the motor operation when it senses a change in motor speed. Describe the motor mechanism and how it detects a change in motor speed and what change of speed is required to activate the sensor. Also, furnish the nominal force (including its tolerances) required to reverse the motor operation by the pinch protection sensor. Please provide copies of all documents related to the information requested in this paragraph.

Response 15

Toyota provides a document which explains the jam protection system and specifications, including the threshold of change of motor speed for the activation of the jam protection feature as Attachment-Response 15-1.

The liftgate control motor consists of a control motor, magnetic clutch and Hall IC. The Hall IC detects the position of a magnet that is provided outside of the magnetic clutch in the form of pulse signals. The power liftgate ECU detects the speed of the liftgate and the rate of change of the speed of the liftgate by detecting changes in the speed of the liftgate control motor by way of the pulse intervals that are output by the Hall IC. For the details of the motor mechanism, please refer to the New Car Features previously provided as Attachment-Response 10 in our response to the PE06-029 information request.

In addition, Toyota provides an engineering drawing of the pinch protection sensor as Attachment-Response 15-2, which includes the force required to reverse the motor operation by the pinch protection sensor.

16. Produce two of each of the following:

- a. Exemplar samples of each design version of the subject components;
- b. Field-returned samples of the subject components exhibiting the subject failure mode; and
- c. Any kits that have been released, or developed, by Toyota for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

Response 16

- a. Toyota provides samples of two design versions of the liftgate struts. (Toyota has provided samples of three previous design version of the liftgate struts in our response to PE06-024 information request)
- b. Toyota has provided field-returned samples of the liftgate struts exhibiting the subject failure mode (Toyota has identified two failure modes) in our response to PE06-024 information request.
- c. Toyota has not released or developed any kits for use in service repairs to the subject component /assembly which relate, or may relate, to the alleged defect in the subject vehicles.

17. State the number of each component/assembly of the subject components 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). Include any kits that have been released, or developed, by Toyota for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

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 17

The number of subject components that Toyota has sold that may be used in 2004 through 2006 model year Toyota Sienna vehicles equipped with power liftgates by component name, part number, and month/year of sale is provided electronically on CD-ROM, in Microsoft Excel 2000 format entitled "Number of components sold in the US.xls", stored in the folder "Attachment- Response 17". Please note that, as mentioned in the Excel file below, some parts have been used in other models (including 2004 through 2006 model year Toyota Sienna vehicles not equipped with power liftgates) and Toyota's part sales database does not include data on the model and model year of the vehicle in which the sold component is used. Therefore, the sales data includes the number of components sold for use not only in 2004 through 2006 model year Toyota Sienna vehicles equipped with power liftgates but also in the vehicles that contain the identical components installed in production or in service. The lists of other vehicles that contain the identical components are also provided electronically on CD-ROM, in Microsoft Excel 2000 format entitled "Other vehicles using identical parts.xls", stored in the folder "Attachment- Response 17".

The information on the supplier for each component parts number is provided electronically on CD-ROM, in Microsoft Excel 2000 format entitled "Supplier Information.xls", stored in the folder "Attachment-Response 17".

18. Furnish Toyota's assessment of the alleged defect in the subject vehicles, 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 18

Overview

As mentioned in our response to the inquiry of PE06-029, Toyota has been evaluating the scope of the issue. At this time, we strongly believe that our power liftgate design meets our commitment to safety. In reviewing the opening resume for EA06-020, we believe there may be some misunderstanding regarding the failsafe functionality of the system in the event of liftgate strut degradation. The problem description listed in the resume is "Failure of the gas-filled liftgate struts can result in unexpected automatic closing of the liftgate." Toyota has stated that automatic closing of the liftgate, in the event the struts can no longer adequately support it, is the most appropriate failsafe function. We also believe that is an accepted industry practice, in use not only by Toyota, but in other manufacturers' vehicles. Furthermore, it was also used as remedy to a power liftgate which did not initiate automatic closing in the event of liftgate strut degradation, resulting in a sudden and forceful closure of the liftgate (see 06V-069).

An automatic system which can power open and close a liftgate is a wonderful convenience feature for our customers. A liftgate, especially one of the large size used in the Sienna, can be heavy and awkward to open or close for some customers. In addition, people often approach the liftgate carrying items, such as groceries, packages, etc., with the intent of placing them in the cargo area. Giving the customer the ability to open the liftgate via push-button and load (or unload) their cargo is a very popular feature. However, Toyota has recognized that taking the direct, manual control of raising a large and heavy liftgate "out of the hands" of the customer generates some risk in the event that the support struts degrade or if snow or ice increases the weight of the liftgate. Raising a liftgate automatically to the fully open position, and then letting it freefall closed could be dangerous. For this reason, in such an instance, the subject vehicles will automatically close the liftgate, safely lowering it at a slow speed. In fact, Toyota would be more concerned if the problem description in the opening resume was listed as "Failure of the gas-filled liftgate struts ~~can~~ **does not** result in ~~unexpected~~ automatic closing of the liftgate."

As mentioned before, the liftgate is supported by high-pressure, gas-filled support cylinders, referred to in this response as struts. The internal high pressure gas is what allows the strut to support the weight of the liftgate. Over time, seal damage may occur where the strut rod enters the strut body, resulting in leakage of the high pressure gas. The seal may be damaged by scratches on the strut rod, which may occur as a result of elastic deformation of the strut rod during operation (the strut rod may deform and contact the strut guide in the strut body), or some type of contamination (dirt, dust, etc.) which may enter the seal.

Toyota acknowledges that, over time, we have introduced several design changes into production and into our service parts. As with all our products, Toyota practices continuous improvement, and the liftgate support struts are no exception. Such improvements are helping to prevent seal damage and gas leakage. However, Toyota also recognizes that the liftgate support struts will eventually wear out for these and many other reasons. Therefore, we consider them a normal wear item and do recognize that customers may need to replace them over the life of the vehicle

It is important to note that strut degradation is a gradual process, and one that is noticeable to the operator. Toyota is not aware of any reports of instantaneous gas leakage resulting in a sudden and forceful closure of the liftgate. Over time, owners will notice a change in the operability of the liftgate. The speed at which automatic opening of the liftgate normally operates will begin to decrease. Eventually, the struts will no longer be able to support the weight of the liftgate. When this occurs, initially, the liftgate will slowly lower on its own to the closed position after the power motor releases. This phenomenon is the same as the one that occurs on vehicles not equipped with the power liftgate. Owners can easily notice that the struts need to be replaced. Upon further use and degradation, the closing speed will gradually increase. Eventually, the closing speed will reach the threshold in which automatic closure initiates. In this condition, when the operator powers open the liftgate, the liftgate motor can still raise the liftgate to the fully open position, although the opening speed will be noticeably slower than normal. When the liftgate reaches the fully open position, the motor disengages and the liftgate will begin to descend a small amount on its own. The system detects the speed and initiates power closure. The hazard lamps flash and a warning tone sounds, alerting persons nearby that the liftgate is closing.

In the event that the operator is in the way during power closure, the liftgate is equipped with both jam and pinch protection. Jam protection senses a change in the speed of the power liftgate motor and will automatically reverse the motor operation. Pinch protection is promoted via touch sensors along the edges of the liftgate. These sensors, which are a type of pressure or contact sensor, will also reverse the power liftgate motor when they detect an object caught in the door jam. Both are highly effective in their operation.

Summary

Toyota has not determined the existence of a safety related defect at this time. The power liftgate system promotes operator safety by safely lowering liftgate in the event the support struts fail. In summary, Toyota recognizes the following points:

- The failure mode of the liftgate struts is a gradual degradation of opening and closing performance of the system.
- This gradual degradation of performance provides appropriate warning of the malfunction and is easily noticeable to the operator
- Liftgate support struts are a wear item, and some of them may not last the life of the vehicle
- In the event a power liftgate is commanded to open and the struts cannot support its weight, initiating power closure is the most appropriate failsafe function in order to prevent a dangerous freefall condition
- Power closure is accompanied by both visual (hazard lamp flash) and auditory warnings
- Jam and pinch protection promote safety in the event an operator is surprised by a closing liftgate
- Similar functionality is used by other manufacturers to promote safety as well

* * *

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 1 : Production Data - March 1, 2007
Response 2 - 4 : Consumer Complaint - February 2, 2007
Field Report - February 15, 2007
Lawsuit - February 14, 2007
Response 5 : Warranty Claims - March 1, 2007
Goodwill - February 15, 2007
Extended warranty claims - February 6, 2007

Response 7 : Dealer communications - March 20, 2007
Response 8 : Actions - Mid March, 2007
Response 9 : Modifications/changes - Mid March, 2007
Response 17 : Parts sales - February 23, 2007
Others : End of March, 2007

CONFIDENTIAL

Attachment-Response 6-1

Number of subject vehicles covered under extended warranty

The Number of vehicles covered under extended warranty

Model	MY	Gold	Platinum	Powertrain	Total
Sienna	2004				
	2005				
	2006				
Total					

CONFIDENTIAL

Attachment-Response 8

List of Investigation

Summary of Actions

a. Action title	b. Start date	c. End date	d. Brief summary of the objective	e. Engineering group	f. Summary of findings	g. Title of Attachment
Measurement result of the bending load that back door strut receives during operation	2006/10/26	2006/10/26	CONFIDENTIAL	Toyota Engineering	CONFIDENTIAL	Attachment-Response 8-1
Durability test using a part of the field return part	2006/9/25	2006/12/11		Lifgate strut supplier		Attachment-Response 8-2
Guide validation	Unknown	2006/12/11		Lifgate strut supplier		Attachment-Response 8-3
Side-load durability 8mm rod with 20N side-load	Unknown	2006/12/11		Lifgate strut supplier		Attachment-Response 8-4
Side-load durability 10mm rod with 20N side-load & muddy water	Unknown	2006/12/12		Lifgate strut supplier		Attachment-Response 8-5

CONFIDENTIAL (Entire Pages)

Attachment-Response 8-1 through 8-5

Investigation Reports

CONFIDENTIAL (Entire Pages)

Attachment-Response 10-1 through 10-8

Engineering Drawings
(Strut, Bracket, Assembly)

CONFIDENTIAL (Entire Pages)

Attachment-Response 11-1 through 11-7

Design, Performance Specifications, Requirements
and Guidelines for Strut

CONFIDENTIAL (Entire pages)

Attachment-Response 12-1 through 12-6

Durability and Environmental Test Results of Strut

CONFIDENTIAL (Entire pages)

Attachment-Response 13-1 and 13-2

Design Change of Strut, Bracket and Seal

CONFIDENTIAL (Entire pages)

Attachment-Response 14-1 through 14-3

Power Liftgate Function Specifications
(including power close function specifications)

CONFIDENTIAL (Entire pages)

Attachment-Response 15-1

Jam Protection Specifications

CONFIDENTIAL (Entire pages)

Attachment-Response 15-2

Engineering Drawing
(Touch Sensor)