Evidence of Floor Mat Interference	ODI File Number	Description
Yes	10199857*	Unsecured floor mat discovered and corrected during dealer inspection.
	10203221*	All-weather accessory floor mat improperly "stacked" on top of carpet mat.
	10218118	Unsecured floor mat slid forward and interfered with accelerator pedal return.
	10223792	Passenger side floor mats improperly placed on driver side, resulting in accelerator pedal interference.
	10230560*	Floor mats were not returned to proper position after oil change, resulting in accelerator pedal interference.
	10230929*	All-weather accessory floor mat improperly "stacked" on top of carpet mat.
No	10192384	Single incident of alleged engine surge while parking in garage. No trouble found by dealer.
	10218961	Driver concerned that vehicle accelerated more quickly than expected when the accelerator pedal was depressed.
	10219328	Single incident of alleged engine surge while parking vehicle. No trouble found by dealer.
	10226564*	Alleged idle flare when idling. Dealer reprogrammed transmission control unit.

Table 1. Ten VOQs Identified in the Petition as Evidence of Unintended Acceleration Experience Not Related to Floor Mats.

In addition to the analyses of the complaint and survey data, ODI and VRTC also conducted design reviews and testing to evaluate the possibility of other potential causes of unintended acceleration in the subject vehicles. Some of this work is summarized in the following excerpt from the VRTC test report:[4]

> *The Vehicle Research and Test Center obtained a Lexus ES350 for testing. The vehicle was fully instrumented to monitor and acquire data relating to yaw rate, speed, acceleration, deceleration, brake pedal effort, brake line hydraulic pressure, brake pad temperature, engine vacuum, brake booster vacuum, throttle plate position, and accelerator pedal position. Multiple electrical signals were introduced into the electrical system to test the robustness of the electronics against single point failures due to electrical interference. The system proved to have multiple redundancies and showed no vulnerabilities to electrical signal activities. Magnetic fields were introduced in proximity to the throttle body and*

[4] VRTC Memorandum Report EA07-010, VRTC-DCD-7113, 2007 Lexus ES-350 Unintended Acceleration, Section 3.1 Dynamic Vehicle Testing, April 30, 2008.

accelerator pedal potentiometers and did result in an increase in engine revolutions per minute (RPM) of up to approximately 1,000 RPM, similar to a cold-idle engine RPM level. Mechanical interferences at the throttle body caused the engine to shut down.

Petitioner's assertion that the Agency failed to investigate other causes of unintended acceleration and, as a result, may have failed to identify other causes of unintended acceleration is unsupported. Several complaints identified by the petitioner as unrelated to interference between the floor mat and accelerator pedal, in fact, involved this problem. We note that Toyota has initiated a safety recall program to address the potential for unwanted acceleration due to accelerator pedal entrapment by floor mats in approximately 3.8 million vehicles, including the subject vehicles. Analysis of the remaining complaints identified by the petitioner failed to identify a defect trend unrelated to this issue.

Issue #4: The subject vehicles do not comply with FMVSS No. 124.

The petitioner contends that the subject vehicles do not satisfy requirements of Federal Motor Vehicle Safety Standard (FMVSS) 124, Accelerator control systems. Specifically, the petitioner contends that the subject vehicles do not comply with paragraph S5.3, which requires the throttle to return to the idle position within one second, and paragraph S5.1, which requires at least two independent sources of energy capable of returning the throttle to the idle position within the time requirements of paragraph S5.3. The petitioner's concerns with the subject vehicles' compliance with FMVSS 124 are apparently based upon his belief that the rule requires a vehicle equipped with a throttle position or accelerator pedal position sensor that measures "any force/pressure to the driver-operated control or any release of the actuating force to the driver-operated control (i.e., accelerator pedal)."

As an initial matter, FMVSS 124 does not require a particular design to meet its requirements; it is a performance standard. It is the responsibility of a manufacturer of vehicles

and/or items of motor vehicle equipment to manufacture and sell vehicles that comply with applicable motor vehicle safety standards and to certify that each motor vehicle and/or equipment item is in complies with applicable FMVSSs. This is a self-certification process. This usually means testing by the manufacturer in accordance with the FMVSS to ensure that its vehicles and equipment comply with the FMVSS.

Petitioner's basis for this issue is unsupported as there is no indication that the subject vehicles are not fully compliant with FMVSS 124.[5] Paragraph S5.3 does not mandate compliance with any specific design feature, including a throttle position or accelerator pedal position sensor. In its May 14, 2009, letter responding to Mr. Pepski's petition, Toyota states, "the throttle control system in the subject vehicles fully complies with the requirements of FMVSS No. 124, as demonstrated by tests conducted in the manner specified in the laboratory test procedure issued by NHTSA's Office of Vehicle Safety Compliance, TP-124-06 (April 20, 2000)." Regarding paragraph S5.1, the pedal assembly on the subject vehicles is biased to the "up," or idle, position by two independent springs.[6] .

[5] The petitioner maintains that, because of the alleged non-compliance with FMVSS 124 and Toyota's knowledge thereof, the Vehicle Certification label on all MY 2007 Lexus ES350 vehicles does not comply with §§ 30112(a)(1) and 30115(a) of Title 49 of the U.S. Code. As Toyota states in its May 14, 2009, letter, "[b]ecause the vehicles fully comply with the standard, ...there is no merit to Mr. [redacted] allegations that Toyota violated 49 U.S.C. § 30112(a) when it sold those vehicles, or that it violated 49 U.S.C. § 30115(a) when it certified them as complying with all applicable FMVSSs."

[6] ODI notes that the petitioner's description of his attempts to "dislodge the throttle by alternatively pumping the accelerator pedal and pulling up on it from the underside" strongly suggest an accelerator pedal that is being physically "trapped" by some foreign object, such as the floor mat (in his case the original equipment carpet).

When ODI and VRTC investigators met with the petitioner and inspected his vehicle the accelerator pedal assembly was functioning properly and there were no anomalies noted in the return springs. Wear marks were noted at the leading edge of the front right edge of the carpet mat, which may have been an indication of contact between the mat and the bottom edge of the accelerator pedal. ODI confirmed that the pedal is such that it can be held down by the mat. Once trapped, the pedal can remain trapped after repeated efforts to "pump" the pedal.

Issue #5: The subject vehicles do not comply with FMVSS No. 135.

The petitioner questions whether the service brakes of the subject vehicles are capable of meeting the performance requirements of FMVSS 135, Light-vehicle brake systems, with a throttle that has been stuck in an open position. The petitioner interprets complaints received by ODI of instances where a subject vehicle operator was unable to prevent a vehicle with a stuck accelerator pedal from traveling a "significant distance" as a functional failure as defined in paragraph S4 of FMVSS 135. Petitioner contends that, due to the significant distances travelled by subject vehicles with stuck accelerator pedals, compliance with the stopping distance requirement under paragraph S7.11.4 of FMVSS 135 is "unlikely".

Petitioner's contentions regarding compliance with FMVSS 135 are without merit and there is no indication that the subject vehicles are not fully compliant with FMVSS 135. The stopping distance of a subject vehicle with a throttle stuck in an open position is irrelevant with respect to whether the vehicle is compliant with paragraph S7.11.4 of FMVSS 135. Pursuant to paragraph S7.11.2(b), the stopping distances required under paragraph S7.11.4 must be met by a vehicle with its transmission position in Neutral. The complaints referenced by the petitioner stem from incidences occurring on subject vehicles with a transmission position in drive.

Testing conducted by VRTC determined that the brake pedal force required to stop a subject vehicle with a wide open throttle was significantly greater than when the vehicle is operating with a closed throttle.

> *Significant brake pedal force in excess of 150 pounds was required to stop the vehicle, compared to 30 pounds required when the vehicle is operating normally. Stopping distances increased from less than 200 feet to more than 1,000 feet.*[7]

[7] VRTC Memorandum Report EA07-010, VRTC-DCD-7113, 2007 Lexus ES-350 Unintended Acceleration, Section 3.3.1 Application of the brake, April 30, 2008.

Many of the incident drivers interviewed by ODI have stated that application of the brakes reduced acceleration but did not stop the vehicle. In assessing these complaints ODI notes that brake effectiveness in controlling a stuck open throttle event is significantly reduced once the vacuum reserve of the vacuum boosted power assist system is depleted.[8] The friction generated from brake application with the wheels driven by full engine power results in significant heating of the brake components. Continued operation in this mode causes degradation of the brake friction materials, further reducing brake effectiveness and the ability of the driver to control vehicle speed.

ODI notes that the petitioner confuses the Brake Assist system referenced in the Owner's Manual with the brake power assist system. Brake Assist is a computer controlled automobile braking technology that increases braking pressure in an emergency situation (e.g., crash avoidance braking). The Brake Assist technology used by Toyota in the subject vehicles detects an emergency situation by monitoring the rate of change of brake hydraulic pressure from the master cylinder. Based on the information gathered by ODI in interviews of incident drivers, there is no reason to believe that Brake Assist was activated during the unwanted acceleration events.[9] While virtually all of the drivers indicated that they applied a great deal of force to the brake pedal in an effort to slow and stop the vehicle, it is possible that the manner (i.e., rate) in which the force was applied, or the absence of the amplifying vacuum boost, did not produce a brake system pressure pulse that is necessary to activate the Brake Assist system.

---

[8] The petitioner also incorrectly interprets the loss of vacuum during operation at wide-open throttle as a "Functional Failure" of the brake power assist unit as defined in S4 of FMVSS 135. VRTC's testing demonstrates that the braking performance described by drivers of incident vehicles is consistent with open throttle braking with depleted vacuum in the vacuum boosted power assist system. Consequently, the petitioner's concerns with the adequacy of the service braking in the subject vehicles do not provide any basis for further investigation.

[9] It is not possible to determine whether Brake Assist was activated for any length of time during any of the unwanted acceleration incidents ODI investigated in the subject vehicle population.

Issue #6: Operation of the subject vehicles' Ignition/Engine Switch poses a safety issue.

Petitioner contends that, according to the description of operation in the subject vehicle Owner's Manual, the engine cannot be switched off during an unintended acceleration event as the vehicle is not in Park.[10] Petitioner contends further that if the engine *can* be switched off during an unintended acceleration event, doing so would lock the steering wheel and move it up and away from the driver.[11] The petitioner concludes that "the inability to turn off the engine in a safe manner is a significant safety issue with this 'push button' ignition issue."

The petitioner is incorrect in his description of the function of the ignition switch and steering column safety features. The engine can be turned off while in motion by pressing and holding the ignition push-button start/stop switch for at least three seconds. The press and hold function is meant to avoid inadvertent engine shut-off while in motion. Turning of the engine in this manner puts the vehicle electrical system in Accessory ("ACC") mode, in which the steering wheel does not lock or retract (as opposed to putting the vehicle in "OFF" mode, which can only occur when the vehicle is in Park).[12]

Issue #7: Contradictory sensor data logic should resolve on the side of safety.

The petitioner posits that "contradictory sensor data (e.g., open throttle and sustained extreme brake pressure) should error on the side of caution and safety." The petitioner correctly

---

[10] Petitioner cites the following language to support this claim: "The engine cannot be switched to OFF unless the shift lever is in P." Toyota has indicated that this should be changed to the vehicle cannot be switched OFF until the shift lever is in Park."

[11] Petitioner references the following language: "When the engine switch is turned OFF, the steering wheel returns to its stowed position by moving up and away to enable easier driver entry and exit. Switching to ACC or IG-ON mode will return the steering wheel to the original position."

[12] It its May 14, 2009, letter, Toyota admits that in its description of the function of these features, even though "technically correct," is confusing. Toyota states that it plans to revise this portion of the manual to address any confusion.

notes that the subject vehicles throttle control logic does not change with brake application. However, while in certain circumstances it may be desirable for the vehicle throttle control system to respond to simultaneous applications of brake and accelerator pedals by prioritizing the braking command and limiting throttle opening, the absence of this function in the Toyota designs does not render the vehicles noncompliant with any applicable FMVSS and further investigation at this time is not likely to result in identification of a defect trend.

Current VOQ Status. The petitioner states that at the time the petition was sent there were "at least 45 VOQs on record with respect to vehicle speed control involving unwanted acceleration in MY 2007 Lexus ES350." Table 2 provides a breakdown of complaints to ODI relating to unintended acceleration in MY 2007 Lexus ES350 vehicles by category and date of receipt relative to completion of the prior investigation.

Analysis of the VOQs cited by the petitioner do not indicate a defect trend other than that involving the accelerator pedal as held down by a floor mat. The complaints ODI deemed related to floor mat interference outnumbered all other reports of alleged sudden and uncontrollable surge in acceleration reported during and subsequent to the ODI investigation. As previously noted, Toyota has initiated a safety recall to address the potential for unwanted acceleration due to accelerator pedal entrapment by floor mats in approximately 3.8 million vehicles, including the subject vehicles.

Unintended acceleration category	Prior to EA07-010 closing	Since EA07-010 closing	Total
Floor mat interference:			
- Recalled accessory all-weather mats	22	11	33
- Other floor mats	3	9	12
- Consistent with mat interference (mat unknown)	1	4	5
Subtotal, floor mat interference	**26**	**24**	**50**
Other:			
- Transmission shift quality	-	3	3
- Parking lot type maneuvers	2	6	8
- Throttle response	-	1	1
- Cruise control sensitivity	1	-	1
- Other	-	1	1
Subtotal, other	**3**	**11**	**14**
Total	**29**	**35**	**64**

Table 2. Vehicle Owner Questionnaires to ODI Related to Unintended Acceleration Incidents in MY 2007 Lexus ES350 Vehicles.

IV. ODI ANALYSIS OF THE PETITION REQUEST FOR AN INVESTIGATION OF MY 2002 THROUGH 2003 LEXUS ES300 VEHICLES

Petitioner requests that ODI investigate MY 2002 through 2003 Lexus ES300 vehicles for complaints related to the petition for MY 2007 Lexus ES350 vehicles. Petitioner cites an earlier ODI investigation, PE04-021, during which 26 complaints initially considered by the Agency as part of that investigation later were determined to be outside the scope of that investigation. Petitioner states, "Reviewing all pertinent data across model years will better indicate the existence of any pattern."

On March 3, 2004, ODI opened Preliminary Evaluation PE04-021 to investigate allegations of vehicle surge during low speed driving maneuvers (such as parking) in MY 2002 through 2003 Toyota Camry, Camry Solara, and Lexus ES300 vehicles (approximately 980,000

vehicles). ODI opened PE04-021 based on owner reports alleging either an engine speed increase occurring without pressing on the accelerator pedal or the engine speed failing to decrease when the accelerator pedal was released. When PE04-021 was opened, ODI counted 37 complaints, including 30 reported crashes and 5 alleged injuries, potentially related to the alleged defect.

Upon further investigation, ODI determined that 26 of the 37 complaints fell outside the scope of PE04-021. ODI determined that these complaints related to longer duration incidents involving uncontrollable acceleration where brake pedal application allegedly had no effect and thus were not within the scope of the investigation. The investigation focused on incidents where the subject vehicle throttle control system opened the throttle valve without driver intent. ODI believed that the resultant vehicle surge could result in a momentary loss of vehicle control, often resulting in crashes of varying severity as the drivers were unable to react in time to apply the brakes effectively.

None of the complaints identified by the petitioner and received by ODI would fall within the scope of the investigation requested by the petitioner, nor do they indicate a defect trend unrelated to the accelerator pedal. In consideration of Mr. [redacted] petition, ODI conducted a review of the 26 VOQs it determined outside the scope of PE04-021 as well as any other MY 2002-2003 Lexus ES300 VOQ received by ODI from the time of the opening of PE04-021 to the receipt of Mr. [redacted] petition. Of the 26 VOQs outside the scope of PE04-021, only 2 involved MY 2002-2003 ES300 vehicles (VOQ 10032815 and 8017143).[13] Neither of these VOQs involved longer duration incidents of unintended acceleration where brake pedal

[13] VOQ 10032815 states that a MY 2002 ES300 was pulling into a parking space at less than 10 miles per hour when the car suddenly accelerated. VOQ 8017143 states that a MY 2002 ES300 was pulling into a parking space with the driver's foot on the brake when it suddenly accelerated and hit a tree. It also noted that while driving with the cruise control on the driver tapped the brakes to disengage the cruise control and the vehicle suddenly accelerated.

application allegedly was ineffective in MY 2002 and 2003 Lexus ES300 vehicles. Likewise, none of the remaining VOQs reviewed by ODI in response to Mr. [redacted] petition fit into that classification.

V. CONCLUSION

Toyota has initiated a safety recall (Recall 09V-388) to address concerns with potential accelerator pedal entrapment by floor mats in approximately 3.8 million vehicles, including the subject vehicles. Except insofar as the petitioner's contentions relate to that recall, the factual bases of the petitioner's contentions that any further investigation is necessary are unsupported. In our view, additional investigation is unlikely to result in a finding that a defect related to motor vehicle safety exists or a NHTSA order for the notification and remedy of a safety-related defect as alleged by the petitioner at the conclusion of the requested investigation. Therefore, in view of the need to allocate and prioritize NHTSA's limited resources to best accomplish the agency's safety mission, the petition is denied. This action does not constitute a finding by NHTSA that a safety-related defect does not exist. The agency will take further action if warranted by future circumstances.

Authority: 49 U.S.C. 30162(d); delegations of authority at CFR 1.50 and 501.8.

Issued on: OCT 26 2009

Kathleen C. DeMeter
Director
Office of Defects Investigation

Billing Code 4910-59-P

U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

1200 New Jersey Avenue SE.
Washington, DC 20590

Mr. Raymond A. Mosley
Director
Office of the Federal Register
National Archives and Records
Administration
Washington, DC 20408

Dear Mr. Mosley:

This certifies that the diskette furnished with document Defects Petition denial, DP09-001, is a true copy, and should be used by GPO in preparing the document for publication.

Please contact me at (202) 366-2992 if you have any questions. Thank you.

Sincerely yours,

J. Edward Glancy
Senior Attorney

DP09-001

Opening

U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: DP09-001
Date Opened: 04/08/2009
Principal Investigator: Stephen McHenry
Subject: Unwanted and Unintended Acceleration

Manufacturer: Toyota Motor North America, Inc. Toyota Motor Corporation
Products: 2007 Lexus ES350 and 2002 – 2003 Lexus ES300
Population: 230,517 (estimated)

Problem Description: Petition request for unwanted and unintended acceleration.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	1	0	0
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	10	0	0

*Description of Other: Petition identified VOQs he believes are not related to a floor mat entrapping the throttle pedal.

Action: The petition will be evaluated for a grant or deny decision.

Engineer: *Stephen McHenry* SMcH 4/9/09 Date: *04/08/2009*
Div. Chief: *Jeffrey Quandt* Date: *04/08/2009*
Office Dir.: *Kathleen C. DeMeter* Date: *04/08/2009*

Summary:

A defect petition was received by the Office of Defects Investigation (ODI) requesting "an additional investigation into the unwanted and unintended acceleration of model year [MY] 2007 Lexus ES350 as the initial investigation (PE07-016) was too narrow in scope and did not adequately address all complaints made to the NHTSA with respect to vehicle speed control concerns."

Additionally the petitioner requested an "investigation of MY 2002-2003 Lexus ES300 for those 'longer duration incidents involving uncontrollable acceleration where brake pedal application allegedly had no effect' that were determined not to be within the scope of Investigation PE04-021."

The petitioner owns a MY 2007 Lexus ES350 which allegedly experienced an unwanted and uncontrolled acceleration event as described in the petitioner's complaint filed with ODI, complaint number 10261660. The petitioner does not own a MY 2002 or 2003 ES300.

ODI will evaluate the petition for a grant or deny decision.

DP09-001

floor mat advisory from TC

Vehicle Floor Mats - Interference with Accelerator (Gas) and Brake Pedals

Road Safety and Motor Vehicle Regulation Directorate

Information: 1-800-333-0371

TP14665E
Vehicle Safety Advisory
V 2007-01 E
March 2007

Vehicle Floor Mats
Interference with Accelerator (Gas) and Brake Pedals

During Transport Canada's investigations of alleged sudden vehicle accelerations and stuck throttles, we frequently discover that the problem relates to some interference between the vehicle floor mats and the pedals. Typically, the interference occurs when non-original equipment floor mats are used without properly being retained to the vehicle floor. The floor mat can then move under the driver's feet and become lodged either between the pedals, on top of the pedals or under the pedals. Another common problem occurs when consumers install multiple floor mats on top of each other, reducing the clearance between the vehicle floor and the pedals.

If you have installed aftermarket floor mats in your vehicle, make certain they cannot move while driving. If you are going to install rubber mats in the winter months, when doing so, be sure that you remove the originally equipped factory floor mats. Use only one set of mats and make certain that the mats do not interfere with the gas or brake pedal before driving the vehicle.

After installing floor mats, make certain they cannot move and that they do not interfere with the gas or brake pedals. Use only one set of mats.

If the vehicle is equipped with a floor mat retaining pin or clip, make certain that the mat is installed as per the vehicle manufacturer's instructions.

Date Modified: 2009-01-07

DP09-001

floor mat quick reference Sept 2009

Toyota Carpet Floor Mat Quick Reference Chart

(Sorted By Model)

Printed September 29, 2009

Model	Part Number	'03	'04	'05	'06	'07	'08	'09	'10	Mat Description	
										Color	Piece Set No.
4 Runner	PT208-89030-04	x	x	x	x	x	x	x		Taupe	4 pc set
4 Runner	PT208-89031-04	x	x	x	x	x				Oak	
4 Runner	PT208-89030-21	x	x	x	x	x	x	x		Stone	4 pc set
4 Runner	PT208-89031-21	x	x	x	x	x				Stone	
4 Runner	PT208-89004-20								x	Black	4 pc set
Avalon	PT208-07000-08	x	x	x						Ivory	4 pc set
Avalon	PT208-07040-10	x	x	x						Ivory	4 pc set
Avalon	PT208-07000-08	x	x	x						Ivory	4 pc set
Avalon	PT208-07000-15	x	x	x						Taupe	4 pc set
Avalon	PT208-07040-04	x	x	x						Taupe	4 pc set
Avalon	PT208-07000-15	x	x	x						Taupe	4 pc set
Avalon	PT208-07000-23	x	x	x						Stone	4 pc set
Avalon	PT208-07040-21	x	x	x						Stone	4 pc set
Avalon	PT208-07000-23	x	x	x						Stone	4 pc set
Avalon	PT548-07050-10			x	x	x	x	x	x	Ivory	4 pc set
Avalon	PT548-07050-22			x	x	x	x	x	x	Graphite	4 pc set
Avalon	PT548-07050-11			x	x	x	x	x	x	Light Gray	4 pc set
Avalon	PT548-07050-12			x	x	x	x	x	x	Dark Charcoal	4 pc set
Avalon	PT548-07070-10					x	x	x	x	Ivory	4 pc set
Avalon	PT548-07070-22					x	x	x	x	Graphite	4 pc set
Avalon	PT548-07070-11					x	x	x	x	Light Gray	4 pc set
Avalon	PT548-07070-12					x	x	x	x	Dark Charcoal	4 pc set
Avalon	PT206-07090-02							x	x	Ivory	4 pc set
Avalon	PT206-07090-17							x	x	Light Gray	4 pc set
Avalon	PT206-07090-18							x	x	Dark Charcoal	4 pc set
Avalon	PT206-07090-16							x	x	Graphite	4 pc set
Camry	PT208-32020-01	x	x	x	x					Gray	4 pc set
Camry	PT208-32020-21	x	x	x	x					Stone	4 pc set
Camry	PT208-32020-04	x	x	x	x					Taupe	4 pc set
Camry - SE	PT208-32041-01		x	x						Gray	4 pc set
Camry - SE	PT208-32041-04		x	x						Taupe	4 pc set
Camry / Camry Hybrid	PT206-32060-11					x	x	x	x	Ash	4 pc set
Camry / Camry Hybrid	PT206-32060-12					x	x	x	x	Dark Charcoal	4 pc set
Camry / Camry Hybrid	PT206-32060-14					x	x	x	x	Bisque	4 pc set
Camry Hybrid	PT206-32078-40					x				Bisque	4 pc set
Camry / Camry Hybrid	PT206-32100-45								x	Brown	4 pc set
Camry / Camry Hybrid	PT206-32100-12								x	Gray	4 pc set
Celica	PT206-20030-11	x	x	x						Charcoal	4 pc set
Corolla - Sport Edition (w/ Rear Heater)	PT206-02030-03	x								Gray	4 pc set
Corolla (w/ Rear Heater)	PT206-02030-11	x								Light Gray	4 pc set
Corolla (w/ Rear Heater)	PT206-02030-16	x								Oak	4 pc set
Corolla - Sport Edition (w/o Rear Heater)	PT206-02031-03	x								Gray	4 pc set
Corolla (w/o Rear Heater)	PT206-02031-11	x								Light Gray	4 pc set
Corolla (w/o Rear Heater)	PT206-02031-16	x								Oak	4 pc set
Corolla - Sport Edition (w/ Rear Heater)	PT206-02040-03	x	x	x	x	x	x			Gray	4 pc set
Corolla (w/ Rear Heater)	PT206-02040-11	x	x	x	x	x	x			Light Gray	4 pc set
Corolla (w/ Rear Heater)	PT206-02040-16	x	x	x	x	x	x			Oak	4 pc set
Corolla - Sport Edition (w/o Rear Heater)	PT206-02041-03	x	x	x	x	x	x			Gray	4 pc set
Corolla (w/o Rear Heater)	PT206-02041-11	x	x	x	x	x	x			Light Gray	4 pc set
Corolla (w/o Rear Heater)	PT206-02041-16	x	x	x	x	x	x			Oak	4 pc set
Corolla (w/ Rear Heater)	PT206-02050-01	x	x	x	x	x	x			Gray	4 pc set
Corolla (w/o Rear Heater)	PT206-02051-01	x	x	x	x	x	x			Gray	4 pc set
Corolla	PT206-02090-12							x		Dark Charcoal	4 pc set
Corolla	PT206-02091-12							x		Dark Charcoal	4 pc set
Corolla	PT206-02090-41							x		Bisque	4 pc set
Corolla	PT206-02091-41							x		Bisque	4 pc set
Corolla	PT206-02093-41							x		Bisque	4 pc set
Corolla	PT206-02092-12							x	x	Dark Charcoal	4 pc set
Corolla	PT206-02093-12							x	x	Dark Charcoal	4 pc set
Corolla	PT206-02092-41							x	x	Bisque	4 pc set
Corolla	PT206-02093-41							x	x	Bisque	4 pc set
Corolla	PT206-02102-45								x	Brown	4 pc set
Corolla	PT206-02103-45								x	Brown	4 pc set
Echo (2 door w/ rear heater)	PT208-52030-11	x	x							Dark Gray	4 pc set
Echo (2 door w/o rear heater)	PT208-52033-11	x	x	x						Dark Gray	4 pc set
Echo (2 door w/ rear heater)	PT208-52030-44	x	x	x						Beige	4 pc set
Echo (2 door w/o rear heater)	PT208-52033-44	x	x	x						Beige	4 pc set
Echo (4 door w/ rear heater)	PT208-52031-11	x	x	x						Dark Gray	4 pc set
Echo (4 door w/o rear heater)	PT208-52034-11	x	x	x						Dark Gray	4 pc set
Echo (4 door w/ rear heater)	PT208-52031-44	x	x	x						Beige	4 pc set
Echo (4 door w/o rear heater)	PT208-52034-44	x	x	x						Beige	4 pc set
FJ Cruiser	PT548-60070-11					x	x	x	x	Charcoal	4 PC Set
FJ Cruiser	PT206-35090-11							x		Charcoal	4 pc. set
Highlander	PT208-48010-01	x								Gray	4 pc set
Highlander	PT208-48010-10	x								Ivory	4 pc set
Highlander (w/o 3rd row)	PT208-48042-31		x	x	x					Ash	4 pc set
Highlander (w/ 3rd row)	PT208-48041-31		x	x	x					Ash	5 pc set
Highlander (w/o 3rd row)	PT208-48042-10		x	x	x					Ivory	4 pc set
Highlander (w/ 3rd row)	PT208-48041-10		x	x	x					Ivory	5 pc set
Highlander - Hybrid (w/ 3rd row)	PT208-48061-10			x	x					Ivory	4 pc set
Highlander - Hybrid (w/ 3rd row)	PT208-48061-31			x	x					Ash	4 pc set
Highlander (w/o 3rd row)	PT548-48060-10				x	x				Ivory	4 pc set
Highlander (w/o 3rd row)	PT548-48060-31				x	x				Ash	4 pc set
Highlander (w/ 3rd row)	PT548-48063-10				x	x				Ivory	5 pc set
Highlander (w/ 3rd row)	PT548-48063-31				x	x				Ash	5 pc set
Highlander - Hybrid (w/ 3rd row)	PT548-48062-10				x	x				Ivory	5 pc set
Highlander - Hybrid (w/ 3rd row)	PT548-48062-31				x	x				Ash	5 pc set
Highlander - Hybrid (w/o 3rd row)	PT548-48074-10				x	x				Ivory	4 pc set
Highlander - Hybrid (w/o 3rd row)	PT548-48074-31				x	x				Ash	4 pc set
Highlander - Gas	PT919-48080-11						x	x	x	Black	3 pc set
Highlander - Gas	PT919-48080-22						x	x	x	Ash	3 pc set
Highlander - Gas	PT919-48080-41						x	x	x	Sand Beige	3 pc set
Highlander - Hybrid	PT919-48081-22						x	x	x	Ash	3 pc set
Highlander - Hybrid	PT919-48081-41						x	x	x	Sand Beige	3 pc set
Highlander - Gas & Hybrid	PT919-48082-11						x	x	x	Black	1 pc
Highlander - Gas & Hybrid	PT919-48082-22						x	x	x	Ash	1 pc
Highlander - Gas & Hybrid	PT919-48082-41						x	x	x	Sand Beige	1 pc
Land Cruiser	PT206-60032-10	x	x	x	x	x				Ivory	3 pc set
Land Cruiser	PT206-60032-11	x	x	x	x	x				Dark Stone	3 pc set
Land Cruiser	PT206-60080-01						x	x	x	Gray	3 pc set
Land Cruiser	PT206-60080-10						x	x	x	Ivory	3 pc set
Land Cruiser	PT206-60100-45								x	Brown	3 pc set
Matrix - AWD (w/ heater)	PT206-12030-03	x								Gray	4 pc set
Matrix - 2WD (w/ heater)	PT206-12031-03	x								Gray	4 pc set
Matrix - 2WD (w/o heater)	PT206-12032-03	x								Gray	4 pc set
Matrix - AWD (w/ Rear Heater)	PT206-12040-03	x	x	x	x					Gray	4 pc set
Matrix - 2WD (w/ Rear Heater)	PT206-12041-03	x	x	x	x	x	x			Gray	4 pc set
Matrix - 2WD (w/o Rear Heater)	PT206-12042-03	x	x	x	x	x	x			Gray	4 pc set
Matrix (w/o heater)	PT206-12070-03					x				Gray	4 pc set
Matrix (w/ heater)	PT206-12071-03					x				Gray	4 pc set
Matrix - 2WD	PT206-12090-14							x	x	Dark Charcoal	4 pc set
Matrix - AWD	PT206-12091-14							x	x	Dark Charcoal	4 pc set
Matrix - 2WD	PT206-12092-14							x	x	Dark Charcoal	4 pc set
Matrix - AWD	PT206-12093-14							x	x	Dark Charcoal	4 pc set
MR2 Spyder	PT548-17030-02	x								Black w/ Red Logo	2 pc set
MR2 Spyder	PT548-17030-09	x								Black w/ Yellow Logo	2 pc set
MR2 Spyder	PT548-17030-13	x								Black w/ Silver Logo	2 pc set
MR2 Spyder	PT548-17030-24	x								Black w/ Tan Logo	2 pc set
MR2 Spyder	PT548-17031-13	x	x	x						Black w/ Silver Logo	2 pc set
MR2 Spyder	PT548-17031-24	x	x	x						Black w/ Tan Logo	2 pc set
Prius	PT208-47010-03	x								Gray	4 pc set
Prius	PT208-47030-02	x								Gray	4 pc set
Prius	PT208-47045-10		x	x						Ivory	4 pc set
Prius	PT208-47045-11		x	x	x	x	x	x		Dark Gray	4 pc set
Prius	PT208-47060-14				x	x	x	x		Dark Bisque	4 pc set
Prius	PT926-47100-10								x	Misty Gray	4 pc set
Prius	PT926-47100-11								x	Dark Gray	4 pc set
Prius	PT926-47100-40								x	Black	4 pc set
Rav 4	PT208-42021-03	x								Gray	4 pc set
Rav 4	PT208-42021-15	x								Taupe	4 pc set
Rav 4 - EV	PT208-42020-11	x								Gray	4 pc set
Rav 4	PT208-42044-15	x								Taupe	4 pc set
Rav 4	PT208-42041-03	x								Gray	4 pc set
Rav 4	PT208-42041-01		x	x						Dark Gray	4 pc set
Rav 4	PT208-42041-04		x	x						Taupe	4 pc set
Rav 4 (w/o 3rd row)	PT208-42051-04				x	x	x			Taupe	4 pc set
Rav 4 (w/o 3rd row)	PT208-42051-11				x	x	x	x	x	Dark Charcoal	4 pc set
Rav 4 (w/o 3rd row)	PT208-42051-31				x	x	x	x	x	Ash	4 pc set
Rav 4 (w/ 3rd row)	PT208-42061-04				x	x	x			Taupe	4 pc set
Rav 4 (w/ 3rd row)	PT208-42061-31				x	x	x	x	x	Ash	4 pc set

Model	Part Number	'03	'04	'05	'06	'07	'08	'09	'10	Mat Description	
										Color	Piece Set No.
Rav 4 - Sport (w/o 3rd row)	PT208-42091-11							x	x	Dark Charcoal	4 pc set
Rav 4 (w/o 3rd row)	PT208-42081-40							x	x	Sand Beige	4 pc set
Rav 4 (w/ 3rd row)	PT208-42083-40							x	x	Sand Beige	4 pc set
Sequoia	PT206-0C030-11	x	x							Light Charcoal	4 pc set
Sequoia	PT206-0C030-14	x	x							Oak	4 pc set
Sequoia	PT206-0C050-09			x	x	x				Taupe	4 pc. set
Sequoia	PT206-0C050-11			x	x	x				Light Charcoal	4 pc. set
Sequoia	PT926-0C084-11						x	x	x	Gray	4 pc set
Sequoia	PT926-0C084-41						x	x	x	Sand Beige	4 pc set
Sequoia	PT926-0C084-20						x	x	x	Black	4 pc set
Sequoia - 7 Passenger	PT926-0C081-11						x	x	x	Gray	1 pc
Sequoia - 7 Passenger	PT926-0C081-20						x	x	x	Black	1 pc
Sequoia - 7 Passenger	PT926-0C081-41						x	x	x	Sand Beige	1 pc
Sequoia - 7 Passenger	PT926-0C087-11						x	x	x	Gray	1 pc
Sequoia - 7 Passenger	PT926-0C087-41						x	x	x	Sand Beige	1 pc
Sequoia - 7 Passenger	PT926-0C087-20						x	x	x	Black	1 pc
Sequoia - 8 Passenger	PT926-0C088-11						x	x	x	Gray	1 pc
Sequoia - 8 Passenger	PT926-0C088-41						x	x	x	Sand Beige	1pc
Sequoia	PT926-0C104-01								x	Dark Brown	4 pc set
Sequoia - 7 Passenger	PT926-0C101-01								x	Dark Brown	1 pc
Sequoia - 7 Passenger	PT926-0C107-01								x	Dark Brown	1 pc
Sequoia - 8 Passenger	PT9260C108-01								x	Dark Brown	1 pc
Sienna	PT208-08010-01	x								Gray	6 pc (bench seat)
Sienna	PT208-08010-04	x								Oak	6 pc (bench seat)
Sienna	PT208-08011-01	x								Gray	5 pc (captains seat)
Sienna	PT208-08011-04	x								Oak	5 pc (captains seat)
Sienna	PT208-08030-01	x								Gray	6 pc (bench seat)
Sienna	PT208-08030-04	x								Oak	6 pc (bench seat)
Sienna	PT208-08031-01	x								Gray	5 pc (captains seat)
Sienna	PT208-08031-04	x								Oak	5 pc (captains seat)
Sienna	PT208-08021-01	x								Gray	5 pc set
Sienna	PT208-08021-04	x								Oak	5 pc set
Sienna	PT208-08036-01	x								Gray	5 pc set
Sienna	PT208-08036-04	x								Oak	5 pc set
Sienna - 7 pass	PT208-08040-04		x	x						Taupe	4 pc set
Sienna - 7 pass	PT208-08040-21		x	x						Stone	4 pc set
Sienna - 7 pass	PT208-08041-04		x	x						Taupe	5 pc set
Sienna - 7 pass	PT208-08041-21		x	x						Stone	5 pc set
Sienna - 7 pass	PT208-08048-04		x	x	x	x				Taupe	6 pc set
Sienna - 7 pass	PT208-08048-21		x	x	x	x				Stone	6 pc set
Sienna - 8 pass	PT208-08042-04		x							Taupe	4 pc set
Sienna - 8 pass	PT208-08042-21		x							Stone	4 pc set
Sienna - 8 pass	PT208-08043-04		x	x	x	x				Taupe	5 pc set
Sienna - 8 pass	PT208-08043-21		x	x	x	x				Stone	5 pc set
Sienna - 8 pass	PT208-08043-04		x	x	x	x				Taupe	5 pc set
Sienna - 8 pass	PT208-08043-21		x	x	x	x				Stone	5 pc set
Sienna - 7 pass	PT206-08067-04		x	x	x	x				Taupe	5 pc set
Sienna - 7 pass	PT206-08067-21		x	x	x	x				Stone	5 pc set
Sienna - 8 pass	PT206-08068-04		x	x	x	x				Taupe	4 pc set
Sienna - 8 pass	PT206-08068-21		x	x	x	x				Stone	4 pc set
Sienna - 7 pass	PT206-08087-41						x	x	x	Taupe	6 pc set
Sienna - 7 pass	PT206-08087-12						x	x	x	Stone	6 pc set
Sienna - 8 pass	PT206-08088-41						x	x	x	Taupe	6 pc set
Sienna - 8 pass	PT206-08088-12						x	x	x	Stone	6 pc set
Solara - Hard Top	PT206-06030-10	x								Ivory	4 pc set
Solara - Hard Top	PT206-06030-11	x								Gray	4 pc set
Solara - Convertible	PT206-06031-10	x								Ivory	4 pc set
Solara - Convertible	PT206-06031-11	x								Gray	4 pc set
Solara - Convertible	PT208-06048-21		x	x	x	x				Dark Stone	4 pc set
Solara - Convertible	PT208-06048-11		x	x	x	x				Dark Charcoal	4 pc set
Solara - Convertible	PT208-06048-10		x	x	x	x				Ivory	4 pc set
Solara - Hard Top	PT208-06040-21		x	x	x	x				Dark Stone	4 pc set
Solara - Hard Top	PT208-06040-11		X	x	x	x				Dark Charcoal	4 pc set
Solara - Hard Top	PT208-06040-10		x	x	x	x				Ivory	4 pc set
Solara - Convertible	PT206-06068-21				x	x	x			Dark Stone	4 pc set
Solara - Convertible	PT206-06068-11				x	x	x			Dark Charcoal	4 pc set
Solara - Convertible	PT206-06068-10				x	x	x			Ivory	4 pc set
Solara - Coupe	PT206-06060-21				x	x	x			Dark Stone	4 pc set
Solara - Coupe	PT206-06060-11				x	x	x			Dark Charcoal	4 pc set
Solara - Coupe	PT206-06060-10				x	x	x			Ivory	4 pc set
Solara - Coupe	PT206-06080-21				x	x	x			Dark Stone	4 pc set
Solara - Coupe	PT206-06080-11				x	x	x			Dark Charcoal	4 pc set
Solara - Coupe	PT206-06080-10				x	x	x			Ivory	4 pc set
Solara - Convertible	PT206-06088-21				x	x	x	x	x	Dark Stone	4 pc set
Solara - Convertible	PT206-06088-11				x	x	x	x	x	Dark Charcoal	4 pc set
Solara - Convertible	PT206-06088-10				x	x	x	x	x	Ivory	4 pc set
Tacoma - Reg Cab	PT206-35010-11	x	x							Light Charcoal	2 pc set
Tacoma - Reg Cab	PT206-35962-16	x	x							Oak	2 pc set
Tacoma - Access Cab	PT206-35011-11	x	x							Light Charcoal	4 pc set
Tacoma -Access Cab	00200-35964-16	x	x							Oak	4 pc set
Tacoma - Double Cab	PT206-35012-11	x	x							Light Charcoal	4 pc set
Tacoma - Double Cab	PT206-35012-16	x	x							Oak	4 pc set
Tacoma - Reg Cab	PT206-35050-11			x	x	x				Light Charcoal	2 pc set
Tacoma - Reg Cab	PT206-35050-14			x	x	x				Oak	2 pc set
Tacoma - Access Cab	PT206-35051-11			x	x	x				Light Charcoal	4 pc set
Tacoma - Access Cab	PT206-35051-14			x	x	x				Oak	4 pc set
Tacoma - Double Cab	PT206-35052-11			x	x	x				Light Charcoal	4 pc set
Tacoma - Double Cab	PT206-35052-14			x	x	x				Oak	4 pc set
Tacoma - Acc Cab TRD	PT206-35055-11			x	x	x				Charcoal	4 pc set
Tacoma - Dbl Cab TRD	PT206-35056-11			x	x	x				Charcoal	4 pc set
Tacoma - Reg Cab	PT206-35080-11						x	x	x	Light Charcoal	2 pc set
Tacoma - Reg Cab	PT206-35080-14						x	x		Oak	2 pc set
Tacoma - Access Cab	PT206-35081-11						x	x	x	Light Charcoal	4 pc set
Tacoma - Access Cab	PT206-35081-14						x	x		Oak	4 pc set
Tacoma - Double Cab	PT206-35082-11						x	x	x	Light Charcoal	4 pc set
Tacoma - Double Cab	PT206-35082-14						x	x		Oak	4 pc set
Tacoma - Acc Cab TRD	PT206-35085-11						x	x	x	Charcoal	4 pc set
Tacoma - Dbl Cab TRD	PT206-35086-11						x	x	x	Charcoal	4 pc set
Tacoma - Reg Cab	PT206-35090-43							x	x	Sand Beige	2 pc set
Tacoma - Access Cab	PT206-35091-43							x	x	Sand Beige	4 pc set
Tacoma - Double Cab	PT206-35092-43							x	x	Sand Beige	4 pc set
Tacoma - Reg Cab	PT206-35100-13								x	Light Charcoal	2 pc set
Tacoma - Reg Cab	PT206-35100-15								x	Dark Charcoal	2 pc set
Tacoma - Access Cab	PT206-35101-13								x	Light Charcoal	4 pc set
Tacoma - Access Cab	PT206-35101-15								x	Dark Charcoal	4 pc set
Tacoma - Double Cab	PT206-35102-13								x	Light Charcoal	4 pc set
Tacoma - Double Cab	PT206-35102-15								x	Dark Charcoal	4 pc set
Tacoma - Acc Cab TRD	PT206-35105-13								x	Light Charcoal	4 pc set
Tacoma - Dbl Cab TRD	PT206-35106-13								x	Light Charcoal	4 pc set
Tundra - Reg Cab	PT548-34030-11	x	x							Light Charcoal	2 pc set
Tundra - Reg Cab	PT548-34030-12	x	x							Dark Charcoal	2 pc set
Tundra - Reg Cab	PT548-34030-14	x	x	x						Oak	2 pc set
Tundra - Access Cab	PT548-34031-11	x	x	x						Light Charcoal	4 pc set
Tundra - Access Cab	PT548-34031-12	x	x	x						Dark Charcoal	4 pc set
Tundra - Access Cab	PT548-34031-14	x								Oak	4 pc set
Tundra - Access Cab	PT548-34032-11	x	x	x						Light Charcoal	4 pc set
Tundra - Access Cab	PT548-34032-12	x	x	x						Dark Charcoal	4 pc set
Tundra - Access Cab	PT548-34032-14	x	x	x						Oak	4 pc set
Tundra - D Cab	PT548-34040-11		x	x						Light Charcoal	4 pc set
Tundra - D Cab	PT548-34040-12		x	x						Dark Charcoal	4 pc set
Tundra - D Cab	PT548-34040-14		x	x						Oak	4 pc set
Tundra - Reg Cab	PT548-34051-09			x	x					Taupe	2 pc set
Tundra - Reg Cab	PT548-34051-11			x	x					Light Charcoal	2 pc set
Tundra - Reg Cab	PT548-34051-12			x	x					Dark Charcoal	2 pc set
Tundra - Access Cab	PT548-34052-09			x	x					Taupe	4 pc set
Tundra - Access Cab	PT548-34052-11			x	x					Light Charcoal	4 pc set
Tundra - Access Cab	PT548-34052-12			x	x					Dark Charcoal	4 pc set
Tundra - D Cab	PT548-34050-09			x	x					Taupe	4 pc set
Tundra - D Cab	PT548-34050-11			x	x					Light Charcoal	4 pc set
Tundra - D Cab	PT548-34050-12			x	x					Dark Charcoal	4 pc set
Tundra - D Cab	PT548-34062-11				x					Light Charcoal	4 pc set
Tundra - Reg Cab	PT206-34071-11					x	x	x	x	Graphite	2 pc set
Tundra - Reg Cab	PT206-34071-12					x				Black	2 pc set
Tundra - Reg Cab	PT206-34071-43					x	x	x	x	Sand Beige	2 pc set
Tundra - D Cab & Crew Max	PT206-34072-11					x	x	x	x	Graphite	4 pc set
Tundra - D Cab & Crew Max	PT206-34072-12					x	x	x	x	Black	4 pc set
Tundra - D Cab & Crew Max	PT206-34072-43					x	x	x	x	Sand Beige	4 pc set
Venza	PT206-0T090-20							x	x	Black	4 pc set
Yaris - Lift Back	PT206-52060-11				x	x	x	X	X	Dark Charcoal	4 pc set
Yaris- Sedan	PT206-52061-11				x	x	x			Dark Charcoal	4 pc set
Yaris- Sedan	PT206-52090-40							X	X	Bisque	4 pc set
Yaris- Sedan	PT206-52091-11							X	X	Dark Charcoal	4 pc set
Yaris - Lift Back	PT206-52100-18								X	Dark Charcoal	4 pc set
Yaris- Sedan	PT206-52100-45								X	Bisque	4 pc set
Yaris- Sedan	PT206-52101-10								X	Dark Charcoal	4 pc set

TOYOTA

Toyota Carpet Floor Mat Quick Reference Chart

(Sorted By Part Number)

Printed September 29, 2009

Part Number	Model	'03	'04	'05	'06	'07	'08	'09	'10	Mat Description	
										Color	Piece Set No.
PT206-12092-14	Matrix - 2WD							x	x	Dark Charcoal	4 pc set
PT208-89031-04	4 Runner	x	x	x	x	x				Oak	
00200-35964-16	Tacoma -Access Cab	x	x							Oak	4 pc set
PT208-89031-21	4 Runner	x	x	x	x	x				Stone	
PT206-02030-03	Corolla - Sport Edition (w/ Rear Heater)	x								Gray	4 pc set
PT206-02030-11	Corolla (w/ Rear Heater)	x								Light Gray	4 pc set
PT206-02030-16	Corolla (w/ Rear Heater)	x								Oak	4 pc set
PT206-02031-03	Corolla - Sport Edition (w/o Rear Heater)	x								Gray	4 pc set
PT206-02031-11	Corolla (w/o Rear Heater)	x								Light Gray	4 pc set
PT206-02031-16	Corolla (w/o Rear Heater)	x								Oak	4 pc set
PT206-02040-03	Corolla - Sport Edition (w/ Rear Heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-02040-11	Corolla (w/ Rear Heater)	x	x	x	x	x	x			Light Gray	4 pc set
PT206-02040-16	Corolla (w/ Rear Heater)	x	x	x	x	x	x			Oak	4 pc set
PT206-02041-03	Corolla - Sport Edition (w/o Rear Heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-02041-11	Corolla (w/o Rear Heater)	x	x	x	x	x	x			Light Gray	4 pc set
PT206-02041-16	Corolla (w/o Rear Heater)	x	x	x	x	x	x			Oak	4 pc set
PT206-02050-01	Corolla (w/ Rear Heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-02051-01	Corolla (w/o Rear Heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-02090-12	Corolla							x		Dark Charcoal	4 pc set
PT206-02090-41	Corolla							x		Bisque	4 pc set
PT206-02091-12	Corolla							x		Dark Charcoal	4 pc set
PT206-02091-41	Corolla							x		Bisque	4 pc set
PT206-02092-12	Corolla							x	x	Dark Charcoal	4 pc set
PT206-02092-41	Corolla							x	x	Bisque	4 pc set
PT206-02093-12	Corolla							x	x	Dark Charcoal	4 pc set
PT206-02093-41	Corolla							x		Bisque	4 pc set
PT206-02093-41	Corolla							x	x	Bisque	4 pc set
PT206-02102-45	Corolla								x	Brown	4 pc set
PT206-02103-45	Corolla								x	Brown	4 pc set
PT206-06030-10	Solara - Hard Top	x								Ivory	4 pc set
PT206-06030-11	Solara - Hard Top	x								Gray	4 pc set
PT206-06031-10	Solara - Convertible	x								Ivory	4 pc set
PT206-06031-11	Solara - Convertible	x								Gray	4 pc set
PT206-06060-10	Solara - Coupe				x	x	x			Ivory	4 pc set
PT206-06060-11	Solara - Coupe				x	x	x			Dark Charcoal	4 pc set
PT206-06060-21	Solara - Coupe				x	x	x			Dark Stone	4 pc set
PT206-06068-10	Solara - Convertible				x	x	x			Ivory	4 pc set
PT206-06068-11	Solara - Convertible				x	x	x			Dark Charcoal	4 pc set
PT206-06068-21	Solara - Convertible				x	x	x			Dark Stone	4 pc set
PT206-06080-10	Solara - Coupe				x	x	x			Ivory	4 pc set
PT206-06080-11	Solara - Coupe				x	x	x			Dark Charcoal	4 pc set
PT206-06080-21	Solara - Coupe				x	x	x			Dark Stone	4 pc set
PT206-06088-10	Solara - Convertible				x	x	x	x	x	Ivory	4 pc set
PT206-06088-11	Solara - Convertible				x	x	x	x	x	Dark Charcoal	4 pc set
PT206-06088-21	Solara - Convertible				x	x	x	x	x	Dark Stone	4 pc set
PT206-07090-02	Avalon							x	x	Ivory	4 pc set
PT206-07090-16	Avalon							x	x	Graphite	4 pc set
PT206-07090-17	Avalon							x	x	Light Gray	4 pc set
PT206-07090-18	Avalon							x	x	Dark Charcoal	4 pc set
PT206-08067-04	Sienna - 7 pass		x	x	x	x				Taupe	5 pc set
PT206-08067-21	Sienna - 7 pass		x	x	x	x				Stone	5 pc set
PT206-08068-04	Sienna - 8 pass		x	x	x	x				Taupe	4 pc set
PT206-08068-21	Sienna - 8 pass		x	x	x	x				Stone	4 pc set
PT206-08087-12	Sienna - 7 pass						x	x	x	Stone	6 pc set
PT206-08087-41	Sienna - 7 pass						x	x	x	Taupe	6 pc set
PT206-08088-12	Sienna - 8 pass						x	x	x	Stone	6 pc set
PT206-08088-41	Sienna - 8 pass						x	x	x	Taupe	6 pc set
PT206-0C030-11	Sequoia	x	x							Light Charcoal	4 pc set
PT206-0C030-14	Sequoia	x	x							Oak	4 pc set
PT206-0C050-09	Sequoia			x	x	x				Taupe	4 pc. set
PT206-0C050-11	Sequoia			x	x	x				Light Charcoal	4 pc. set
PT206-0T090-20	Venza							x	x	Black	4 pc set
PT206-12030-03	Matrix - AWD (w/ heater)	x								Gray	4 pc set
PT206-12031-03	Matrix - 2WD (w/ heater)	x								Gray	4 pc set
PT206-12032-03	Matrix - 2WD (w/o heater)	x								Gray	4 pc set
PT206-12040-03	Matrix - AWD (w/ Rear Heater)	x	x	x	x					Gray	4 pc set
PT206-12041-03	Matrix - 2WD (w/ Rear Heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-12042-03	Matrix - 2WD (w/o Rear Heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-12070-03	Matrix (w/o heater)					x				Gray	4 pc set
PT206-12071-03	Matrix (w/ heater)					x				Gray	4 pc set
PT206-12090-14	Matrix - 2WD							x	x	Dark Charcoal	4 pc set
PT206-12091-14	Matrix - AWD							x	x	Dark Charcoal	4 pc set
PT206-12093-14	Matrix - AWD							x	x	Dark Charcoal	4 pc set
PT206-20030-11	Celica	x	x	x						Charcoal	4 pc set
PT206-32060-11	Camry / Camry Hybrid					x	x	x	x	Ash	4 pc set
PT206-32060-12	Camry / Camry Hybrid					x	x	x	x	Dark Charcoal	4 pc set
PT206-32060-14	Camry / Camry Hybrid					x	x	x	x	Bisque	4 pc set
PT206-32078-40	Camry Hybrid					x				Bisque	4 pc set
PT206-32100-12	Camry / Camry Hybrid								x	Gray	4 pc set
PT206-32100-45	Camry / Camry Hybrid								x	Brown	4 pc set
PT206-34071-11	Tundra - Reg Cab					x	x	x	x	Graphite	2 pc set
PT206-34071-12	Tundra - Reg Cab					x				Black	2 pc set
PT206-34071-43	Tundra - Reg Cab					x	x	x	x	Sand Beige	2 pc set
PT206-34072-11	Tundra - D Cab & Crew Max					x	x	x	x	Graphite	4 pc set
PT206-34072-12	Tundra - D Cab & Crew Max					x	x	x	x	Black	4 pc set
PT206-34072-43	Tundra - D Cab & Crew Max					x	x	x	x	Sand Beige	4 pc set
PT206-35010-11	Tacoma - Reg Cab	x	x							Light Charcoal	2 pc set
PT206-35011-11	Tacoma - Access Cab	x	x							Light Charcoal	4 pc set
PT206-35012-11	Tacoma - Double Cab	x	x							Light Charcoal	4 pc set
PT206-35012-16	Tacoma - Double Cab	x	x							Oak	4 pc set
PT206-35050-11	Tacoma - Reg Cab			x	x	x				Light Charcoal	2 pc set
PT206-35050-14	Tacoma - Reg Cab			x	x	x				Oak	2 pc set
PT206-35051-11	Tacoma - Access Cab			x	x	x				Light Charcoal	4 pc set
PT206-35051-14	Tacoma - Access Cab			x	x	x				Oak	4 pc set
PT206-35052-11	Tacoma - Double Cab			x	x	x				Light Charcoal	4 pc set
PT206-35052-14	Tacoma - Double Cab			x	x	x				Oak	4 pc set
PT206-35055-11	Tacoma - Acc Cab TRD			x	x	x				Charcoal	4 pc set
PT206-35056-11	Tacoma - Dbl Cab TRD			x	x	x				Charcoal	4 pc set
PT206-35080-11	Tacoma - Reg Cab						x	x	x	Light Charcoal	2 pc set
PT206-35080-14	Tacoma - Reg Cab						x	x		Oak	2 pc set
PT206-35081-11	Tacoma - Access Cab						x	x	x	Light Charcoal	4 pc set
PT206-35081-14	Tacoma - Access Cab						x	x		Oak	4 pc set
PT206-35082-11	Tacoma - Double Cab						x	x	x	Light Charcoal	4 pc set
PT206-35082-14	Tacoma - Double Cab						x	x		Oak	4 pc set
PT206-35085-11	Tacoma - Acc Cab TRD						x	x	x	Charcoal	4 pc set
PT206-35086-11	Tacoma - Dbl Cab TRD						x	x	x	Charcoal	4 pc set
PT206-35090-11	FJ Cruiser							x		Charcoal	4 pc. set
PT206-35090-43	Tacoma - Reg Cab							x	x	Sand Beige	2 pc set
PT206-35091-43	Tacoma - Access Cab							x	x	Sand Beige	4 pc set
PT206-35092-43	Tacoma - Double Cab							x	x	Sand Beige	4 pc set
PT206-35100-13	Tacoma - Reg Cab								x	Light Charcoal	2 pc set
PT206-35100-15	Tacoma - Reg Cab								x	Dark Charcoal	2 pc set
PT206-35101-13	Tacoma - Access Cab								x	Light Charcoal	4 pc set
PT206-35101-15	Tacoma - Access Cab								x	Dark Charcoal	4 pc set
PT206-35102-13	Tacoma - Double Cab								x	Light Charcoal	4 pc set
PT206-35102-15	Tacoma - Double Cab								x	Dark Charcoal	4 pc set
PT206-35105-13	Tacoma - Acc Cab TRD								x	Light Charcoal	4 pc set
PT206-35106-13	Tacoma - Dbl Cab TRD								x	Light Charcoal	4 pc set
PT206-35962-16	Tacoma - Reg Cab	x	x							Oak	2 pc set
PT206-52060-11	Yaris - Lift Back				x	x	x	X	X	Dark Charcoal	4 pc set
PT206-52061-11	Yaris- Sedan				x	x	x			Dark Charcoal	4 pc set
PT206-52090-40	Yaris- Sedan							X	X	Bisque	4 pc set
PT206-52091-11	Yaris- Sedan							X	X	Dark Charcoal	4 pc set
PT206-52100-18	Yaris - Lift Back								X	Dark Charcoal	4 pc set
PT206-52100-45	Yaris- Sedan								X	Bisque	4 pc set
PT206-52101-10	Yaris- Sedan								X	Dark Charcoal	4 pc set
PT206-60032-10	Land Cruiser	x	x	x	x	x				Ivory	3 pc set
PT206-60032-11	Land Cruiser	x	x	x	x	x				Dark Stone	3 pc set
PT206-60080-01	Land Cruiser						x	x	x	Gray	3 pc set
PT206-60080-10	Land Cruiser						x	x	x	Ivory	3 pc set
PT206-60100-45	Land Cruiser								x	Brown	3 pc set
PT208-06040-10	Solara - Hard Top		x	x	x	x				Ivory	4 pc set
PT208-06040-11	Solara - Hard Top		X	x	x	x				Dark Charcoal	4 pc set
PT208-06040-21	Solara - Hard Top		x	x	x	x				Dark Stone	4 pc set
PT208-06048-10	Solara - Convertible		x	x	x	x				Ivory	4 pc set
PT208-06048-11	Solara - Convertible		x	x	x	x				Dark Charcoal	4 pc set
PT208-06048-21	Solara - Convertible		x	x	x	x				Dark Stone	4 pc set
PT208-07000-08	Avalon	x	x	x						Ivory	4 pc set
PT208-07000-15	Avalon	x	x	x						Taupe	4 pc set
PT208-07000-23	Avalon	x	x	x						Stone	4 pc set

Part Number	Model	'03	'04	'05	'06	'07	'08	'09	'10	Mat Description	
										Color	Piece Set No.
PT208-07040-04	Avalon	x	x	x						Taupe	4 pc set
PT208-07040-10	Avalon	x	x	x						Ivory	4 pc set
PT208-07040-21	Avalon	x	x	x						Stone	4 pc set
PT208-08010-01	Sienna	x								Gray	6 pc (bench seat)
PT208-08010-04	Sienna	x								Oak	6 pc (bench seat)
PT208-08011-01	Sienna	x								Gray	5 pc (captains seat)
PT208-08011-04	Sienna	x								Oak	5 pc (captains seat)
PT208-08021-01	Sienna	x								Gray	5 pc set
PT208-08021-04	Sienna	x								Oak	5 pc set
PT208-08030-01	Sienna	x								Gray	6 pc (bench seat)
PT208-08030-04	Sienna	x								Oak	6 pc (bench seat)
PT208-08031-01	Sienna	x								Gray	5 pc (captains seat)
PT208-08031-04	Sienna	x								Oak	5 pc (captains seat)
PT208-08036-01	Sienna	x								Gray	5 pc set
PT208-08036-04	Sienna	x								Oak	5 pc set
PT208-08040-04	Sienna - 7 pass		x	x						Taupe	4 pc set
PT208-08040-21	Sienna - 7 pass		x	x						Stone	4 pc set
PT208-08041-04	Sienna - 7 pass		x	x						Taupe	5 pc set
PT208-08041-21	Sienna - 7 pass		x	x						Stone	5 pc set
PT208-08042-04	Sienna - 8 pass		x							Taupe	4 pc set
PT208-08042-21	Sienna - 8 pass		x							Stone	4 pc set
PT208-08043-04	Sienna - 8 pass		x	x	x	x				Taupe	5 pc set
PT208-08043-21	Sienna - 8 pass		x	x	x	x				Stone	5 pc set
PT208-08048-04	Sienna - 7 pass		x	x	x	x				Taupe	6 pc set
PT208-08048-21	Sienna - 7 pass		x	x	x	x				Stone	6 pc set
PT208-32020-01	Camry	x	x	x	x					Gray	4 pc set
PT208-32020-04	Camry	x	x	x	x					Taupe	4 pc set
PT208-32020-21	Camry	x	x	x	x					Stone	4 pc set
PT208-32041-01	Camry - SE		x	x						Gray	4 pc set
PT208-32041-04	Camry - SE		x	x						Taupe	4 pc set
PT208-42020-11	Rav 4 - EV	x								Gray	4 pc set
PT208-42021-03	Rav 4	x								Gray	4 pc set
PT208-42021-15	Rav 4	x								Taupe	4 pc set
PT208-42041-01	Rav 4		x	x						Dark Gray	4 pc set
PT208-42041-03	Rav 4	x								Gray	4 pc set
PT208-42041-04	Rav 4		x	x						Taupe	4 pc set
PT208-42044-15	Rav 4	x								Taupe	4 pc set
PT208-42051-04	Rav 4 (w/o 3rd row)				x	x	x			Taupe	4 pc set
PT208-42051-11	Rav 4 (w/o 3rd row)				x	x	x	x	x	Dark Charcoal	4 pc set
PT208-42051-31	Rav 4 (w/o 3rd row)				x	x	x	x	x	Ash	4 pc set
PT208-42061-04	Rav 4 (w/ 3rd row)				x	x	x			Taupe	4 pc set
PT208-42061-31	Rav 4 (w/ 3rd row)				x	x	x	x	x	Ash	4 pc set
PT208-42081-40	Rav 4 (w/o 3rd row)							x	x	Sand Beige	4 pc set
PT208-42083-40	Rav 4 (w/ 3rd row)							x	x	Sand Beige	4 pc set
PT208-42091-11	Rav 4 - Sport (w/o 3rd row)							x	x	Dark Charcoal	4 pc set
PT208-47010-03	Prius	x								Gray	4 pc set
PT208-47030-02	Prius	x								Gray	4 pc set
PT208-47045-10	Prius		x	x						Ivory	4 pc set
PT208-47045-11	Prius		x	x	x	x	x	x		Dark Gray	4 pc set
PT208-47060-14	Prius				x	x	x	x		Dark Bisque	4 pc set
PT208-48010-01	Highlander	x								Gray	4 pc set
PT208-48010-10	Highlander	x								Ivory	4 pc set
PT208-48041-10	Highlander (w/ 3rd row)		x	x	x					Ivory	5 pc set
PT208-48041-31	Highlander (w/ 3rd row)		x	x	x					Ash	5 pc set
PT208-48042-10	Highlander (w/o 3rd row)		x	x	x					Ivory	4 pc set
PT208-48042-31	Highlander (w/o 3rd row)		x	x	x					Ash	4 pc set
PT208-48061-10	Highlander - Hybrid (w/ 3rd row)			x	x					Ivory	4 pc set
PT208-48061-31	Highlander - Hybrid (w/ 3rd row)			x	x					Ash	4 pc set
PT208-52030-11	Echo (2 door w/ rear heater)	x	x							Dark Gray	4 pc set
PT208-52030-44	Echo (2 door w/ rear heater)	x	x	x						Beige	4 pc set
PT208-52031-11	Echo (4 door w/ rear heater)	x	x	x						Dark Gray	4 pc set
PT208-52031-44	Echo (4 door w/ rear heater)	x	x	x						Beige	4 pc set
PT208-52033-11	Echo (2 door w/o rear heater)	x	x	x						Dark Gray	4 pc set
PT208-52033-44	Echo (2 door w/o rear heater)	x	x	x						Beige	4 pc set
PT208-52034-11	Echo (4 door w/o rear heater)	x	x	x						Dark Gray	4 pc set
PT208-52034-44	Echo (4 door w/o rear heater)	x	x	x						Beige	4 pc set
PT208-89004-20	4 Runner								x	Black	4 pc set
PT208-89030-04	4 Runner	x	x	x	x	x	x	x		Taupe	4 pc set
PT208-89030-21	4 Runner	x	x	x	x	x	x	x		Stone	4 pc set
PT548-07050-10	Avalon			x	x	x	x	x	x	Ivory	4 pc set
PT548-07050-11	Avalon			x	x	x	x	x	x	Light Gray	4 pc set
PT548-07050-12	Avalon			x	x	x	x	x	x	Dark Charcoal	4 pc set
PT548-07050-22	Avalon			x	x	x	x	x	x	Graphite	4 pc set
PT548-07070-10	Avalon					x	x	x	x	Ivory	4 pc set
PT548-07070-11	Avalon					x	x	x	x	Light Gray	4 pc set
PT548-07070-12	Avalon					x	x	x	x	Dark Charcoal	4 pc set
PT548-07070-22	Avalon					x	x	x	x	Graphite	4 pc set
PT548-17030-02	MR2 Spyder	x								Black w/ Red Logo	2 pc set
PT548-17030-09	MR2 Spyder	x								Black w/ Yellow Logo	2 pc set
PT548-17030-13	MR2 Spyder	x								Black w/ Silver Logo	2 pc set
PT548-17030-24	MR2 Spyder	x								Black w/ Tan Logo	2 pc set
PT548-17031-13	MR2 Spyder	x	x	x						Black w/ Silver Logo	2 pc set
PT548-17031-24	MR2 Spyder	x	x	x						Black w/ Tan Logo	2 pc set
PT548-34030-11	Tundra - Reg Cab	x	x							Light Charcoal	2 pc set
PT548-34030-12	Tundra - Reg Cab	x	x							Dark Charcoal	2 pc set
PT548-34030-14	Tundra - Reg Cab	x	x	x						Oak	2 pc set
PT548-34031-11	Tundra - Access Cab	x	x	x						Light Charcoal	4 pc set
PT548-34031-12	Tundra - Access Cab	x	x	x						Dark Charcoal	4 pc set
PT548-34031-14	Tundra - Access Cab	x								Oak	4 pc set
PT548-34032-11	Tundra - Access Cab	x	x	x						Light Charcoal	4 pc set
PT548-34032-12	Tundra - Access Cab	x	x	x						Dark Charcoal	4 pc set
PT548-34032-14	Tundra - Access Cab	x	x	x						Oak	4 pc set
PT548-34040-11	Tundra - D Cab		x	x						Light Charcoal	4 pc set
PT548-34040-12	Tundra - D Cab		x	x						Dark Charcoal	4 pc set
PT548-34040-14	Tundra - D Cab		x	x						Oak	4 pc set
PT548-34050-09	Tundra - D Cab			x	x					Taupe	4 pc set
PT548-34050-11	Tundra - D Cab			x	x					Light Charcoal	4 pc set
PT548-34050-12	Tundra - D Cab			x	x					Dark Charcoal	4 pc set
PT548-34051-09	Tundra - Reg Cab			x	x					Taupe	2 pc set
PT548-34051-11	Tundra - Reg Cab			x	x					Light Charcoal	2 pc set
PT548-34051-12	Tundra - Reg Cab			x	x					Dark Charcoal	2 pc set
PT548-34052-09	Tundra - Access Cab			x	x					Taupe	4 pc set
PT548-34052-11	Tundra - Access Cab			x	x					Light Charcoal	4 pc set
PT548-34052-12	Tundra - Access Cab			x	x					Dark Charcoal	4 pc set
PT548-34062-11	Tundra - D Cab				x					Light Charcoal	4 pc set
PT548-48060-10	Highlander (w/o 3rd row)				x	x				Ivory	4 pc set
PT548-48060-31	Highlander (w/o 3rd row)				x	x				Ash	4 pc set
PT548-48062-10	Highlander - Hybrid (w/ 3rd row)				x	x				Ivory	5 pc set
PT548-48062-31	Highlander - Hybrid (w/ 3rd row)				x	x				Ash	5 pc set
PT548-48063-10	Highlander (w/ 3rd row)				x	x				Ivory	5 pc set
PT548-48063-31	Highlander (w/ 3rd row)				x	x				Ash	5 pc set
PT548-48074-10	Highlander - Hybrid (w/o 3rd row)				x	x				Ivory	4 pc set
PT548-48074-31	Highlander - Hybrid (w/o 3rd row)				x	x				Ash	4 pc set
PT548-60070-11	FJ Cruiser					x	x	x	x	Charcoal	4 PC Set
PT919-48080-11	Highlander - Gas						x	x	x	Black	3 pc set
PT919-48080-22	Highlander - Gas						x	x	x	Ash	3 pc set
PT919-48080-41	Highlander - Gas						x	x	x	Sand Beige	3 pc set
PT919-48081-22	Highlander - Hybrid						x	x	x	Ash	3 pc set
PT919-48081-41	Highlander - Hybrid						x	x	x	Sand Beige	3 pc set
PT919-48082-11	Highlander - Gas & Hybrid						x	x	x	Black	1 pc
PT919-48082-22	Highlander - Gas & Hybrid						x	x	x	Ash	1 pc
PT919-48082-41	Highlander - Gas & Hybrid						x	x	x	Sand Beige	1 pc
PT926-0C081-11	Sequoia - 7 Passenger						x	x	x	Gray	1 pc
PT926-0C081-20	Sequoia - 7 Passenger						x	x	x	Black	1 pc
PT926-0C081-41	Sequoia - 7 Passenger						x	x	x	Sand Beige	1 pc
PT926-0C084-11	Sequoia						x	x	x	Gray	4 pc set
PT926-0C084-20	Sequoia						x	x	x	Black	4 pc set
PT926-0C084-41	Sequoia						x	x	x	Sand Beige	4 pc set
PT926-0C087-11	Sequoia - 7 Passenger						x	x	x	Gray	1 pc
PT926-0C087-20	Sequoia - 7 Passenger						x	x	x	Black	1 pc
PT926-0C087-41	Sequoia - 7 Passenger						x	x	x	Sand Beige	1 pc
PT926-0C088-11	Sequoia - 8 Passenger						x	x	x	Gray	1 pc
PT926-0C088-41	Sequoia - 8 Passenger						x	x	x	Sand Beige	1pc
PT926-0C101-01	Sequoia - 7 Passenger								x	Dark Brown	1 pc
PT926-0C104-01	Sequoia								x	Dark Brown	4 pc set
PT926-0C107-01	Sequoia - 7 Passenger								x	Dark Brown	1 pc
PT9260C108-01	Sequoia - 8 Passenger								x	Dark Brown	1 pc
PT926-47100-10	Prius								x	Misty Gray	4 pc set
PT926-47100-11	Prius								x	Dark Gray	4 pc set
PT926-47100-40	Prius								x	Black	4 pc set

DP09-001

Floor Mat reference chart, Sept 2009

TOYOTA

Toyota All Weather Floor Mat Quick Reference Chart
(Sorted By Model)

Printed September 29, 2009

Model	Part Number	Model Year								Mat Description	
		2003	2004	2005	2006	2007	2008	2009	2010	Color	Piece Set No.
4 Runner	PT206-89036-03	x	x							Gray	4 pc set
4 Runner	PT206-89036-16	x	x							Oak	4 pc set
4 Runner	PT908-89060-02			x	x	x	x	x		Black	4 pc set
4 Runner	PT908-89100-02								x	Black	4 pc set
Avalon	PT206-07026-03	x	x							Gray	4 pc set
Avalon	PT206-07026-16	x	x							Oak	4 pc set
Avalon	PT908-07050-02			x	x	x	x	x	x	Black	4 pc set
Avalon	PT908-07050-14			x	x	x	x	x	x	Brown	4 pc set
Camry	PT206-03026-03	x								Gray	4 pc set
Camry	PT206-03026-16	x								Oak	4 pc set
Camry	PT206-03036-03	x	x	x	x					Gray	4 pc set
Camry	PT206-03036-16	x	x	x	x					Oak	4 pc set
Camry (Front Mats)	PT908-0307F-02					x	x			Black	1 pc
Camry (Front Mats)	PT908-0307F-14					x	x			Brown	1 pc
Do not use these floor mats.*	PT908-32070-02*					x				Black	4 pc set
	PT908-32070-14*					x				Brown	4 pc set
Camry	PT908-03071-02					x	x	x	x	Black	4 pc set
Camry	PT908-03071-14					x	x	x	x	Brown	4 pc set
Corolla (w/o heater)	PT206-02035-03	x								Gray	4 pc set
Corolla (w/o heater)	PT206-02035-16	x								Oak	4 pc set
Corolla (w/ heater)	PT206-02036-03	x								Gray	4 pc set
Corolla (w/ heater)	PT206-02036-16	x								Oak	4 pc set
Corolla (w/o heater)	PT206-02038-03	x	x	x	x	x	x			Gray	4 pc set
Corolla (w/o heater)	PT206-02038-16	x	x	x	x	x	x			Oak	4 pc set
Corolla (w/ heater)	PT206-02039-03	x	x	x	x	x	x			Gray	4 pc set
Corolla (w/ heater)	PT206-02039-16	x	x	x	x	x	x			Oak	4 pc set
Corolla	PT908-02090-02							x	x	Black	4 pc set
Echo	PT206-52026-03	x								Gray	4 pc set
Echo	PT206-52036-03	x	x	x						Gray	4 pc set
FJ Cruiser	PT548-60070-01					x				Black	4 pc set
FJ Cruiser	PT548-60072-01					x				Black	4 pc set
FJ Cruiser - TRD	PT548-60074-01					x				Black	4 pc set
FJ Cruiser	PT548-60075-01					x				Black	4 pc set
FJ Cruiser	PT548-60076-01						x	x	x	Black	4 pc set
FJ Cruiser - Trail Team	PT548-60080-01						x	x	x	Black	4 pc set
Highlander	PT206-48026-03	x								Gray	4 pc set
Highlander	PT206-48035-03	x								Gray	4 pc set
Highlander	PT206-48026-16	x								Oak	4 pc set
Highlander	PT206-48035-16	x								Oak	4 pc set
Highlander	PT206-48045-03		x	x	x					Gray	4 pc set
Highlander	PT206-48045-16		x	x	x					Oak	4 pc set
Highlander - Hybrid	PT908-48055-02			x	x	x				Black	3 pc kit
Highlander - Hybrid	PT908-48055-14			x	x	x				Brown	3 pc kit
Highlander	PT908-48065-02				x	x				Black	4 pc set
Highlander	PT908-48065-14				x	x				Brown	4 pc set
Highlander	PT908-48087-22						x			Black	4 pc set
Highlander	PT908-4808G-02						x	x	x	Black	4 pc set
Highlander – 3rd Row	PT908-48083-02						x	x	x	Black	1 pc
Highlander - Hybrid	PT908-48088-22						x	x	x	Black	4 pc set
Land Cruiser	PT206-60026-03	x								Gray	4 pc set
Land Cruiser	PT206-60036-03	x	x	x						Gray	4 pc set
Land Cruiser	PT206-60026-16	x								Oak	4 pc set
Land Cruiser	PT206-60036-16	x	x	x						Oak	4 pc set
Land Cruiser	PT908-60065-02				x	x				Black	4 pc set
Land Cruiser	PT908-60065-14				x	x				Brown	4 pc set
Land Cruiser	PT908-60083-02						x	x	x	Black	4 pc set
Land Cruiser – 3rd Row	PT908-60085-02						x	x	x	Black	1 pc
Matrix - 2WD (w/ heater)	PT206-12035-03	x								Gray	4 pc set
Matrix - AWD (w/ heater)	PT206-12036-03	x								Gray	4 pc set
Matrix - 2WD (w/o heater)	PT206-12037-03	x								Gray	4 pc set
Matrix - 2WD (w/ heater)	PT206-12038-03	x	x	x	x	x	x			Gray	4 pc set
Matrix - AWD (w/ heater)	PT206-1203A-03	x	x	x	x					Gray	4 pc set
Matrix - 2WD (w/o heater)	PT206-12039-03	x	x	x	x	x	x			Gray	4 pc set
Matrix - AWD	PT908-12090-02							x	x	Black	4 pc set
Matrix - 2WD	PT908-12290-02							x	x	Black	4 pc set
Prius	PT908-21050-02			x	x					Black	4 pc set
Prius	PT908-21051-02				x	x	x	x		Black	4 pc set
Prius	PT908-47100-02								x	Black	4 pc set
Rav 4	PT206-42026-03	x								Gray	4 pc set
Rav 4	PT206-42026-16	x								Oak	4 pc set
Rav 4	PT206-42036-03	x								Gray	4 pc set
Rav 4	PT206-42036-16	x								Oak	4 pc set
Rav 4	PT206-42046-03		x	x						Gray	4 pc set
Rav 4	PT206-42046-16		x	x						Oak	4 pc set
Rav 4 (w/o 3rd row)	PT908-42060-02				x	x	x	x	x	Black	4 pc set
Rav 4 (w/ 3rd row)	PT908-42061-02				x	x	x	x	x	Black	4 pc set
Sequoia	PT206-0C026-03	x								Gray	4 pc set
Sequoia	PT206-0C026-16	x								Oak	4 pc set
Sequoia	PT206-0C036-03	x	x	x						Gray	4 pc set
Sequoia	PT206-0C036-16	x	x	x						Oak	4 pc set
Sequoia	PT908-0C050-02				x	x	x			Gary	4 pc set
Sequoia	PT908-0C050-14				x	x	x			Oak	4 pc set
Sequoia	PT908-0C084-02							x	x	Black	4 pc set
Sequoia – 3rd Row	PT908-0C083-02							x	x	Black	1 pc
Sienna	PT206-08036-03		x	x	x	x				Gray	4 pc set
Sienna	PT206-08036-16		x	x	x	x				Oak	4 pc set
Sienna – 3rd Row	PT206-08037-03		x	x	x	x				Gray	2 pc set
Sienna – 3rd Row	PT206-08037-16		x	x	x	x				Oak	2 pc set
Sienna - 7 & 8 pass	PT908-08060-11					x	x	x	x	Gray	5 pc set
Sienna - 7 & 8 pass	PT908-08060-44					x	x	x	x	Brown	5 pc set
Sienna - 7 & 8 pass	PT908-08063-11					x	x	x	x	Gray	3 pc set
Sienna - 7 & 8 pass	PT908-08063-44					x	x	x	x	Brown	3 pc set
Tacoma - Front	PT206-3503F-03	x								Gray	2 pc set
Tacoma - Front	PT206-3503F-16	x								Oak	2 pc set
Tacoma - Rear	PT206-3503B-03	x								Gray	2 pc set
Tacoma - Rear	PT206-3503B-16	x								Oak	2 pc set
Tacoma - Front	PT206-3504F-03	x	x							Gray	2 pc set
Tacoma - Front	PT206-3504F-16	x	x							Oak	2 pc set
Tacoma - Rear	PT206-3504B-03	x	x							Gray	2 pc set
Tacoma - Rear	PT206-3504B-16	x	x							Oak	2 pc set
Tacoma - Reg Cab	PT908-3505B-02			x	x	x	x			Black	2 pc set
Tacoma - Access Cab	PT908-3505C-02			x	x	x	x			Black	4 pc set
Tacoma - Double Cab	PT908-3505D-02			x	x	x	x			Black	4 pc set
Tacoma - SE Acc Cab	PT908-35S8C-02						x			Black	4 pc set
Tacoma - SE Dbl Cab	PT908-35S8D-02						x			Black	4 pc set
Tacoma - Reg Cab	PT908-3507B-02						x	x	x	Black	2 pc set
Tacoma - Access Cab	PT908-3507C-02						x	x	x	Black	4 pc set
Tacoma - Double Cab	PT908-3507D-02						x	x	x	Black	4 pc set
Tundra - Reg / Access Cab (Front)	PT206-3403F-03	x	x	x	x					Gray	2 pc set
Tundra - Reg / Access Cab (Front)	PT206-3403F-16	x	x	x	x					Oak	2 pc set
Tundra - Access Cab (Rear)	PT206-3403B-03	x	x	x	x					Gray	2 pc set
Tundra - Access Cab (Rear)	PT206-3403B-16	x	x	x	x					Oak	2 pc set
Tundra - Double Cab	PT206-34046-03		x	x	x					Gray	4 pc set
Tundra - Double Cab	PT206-34046-16		x	x	x					Oak	4 pc set
Tundra - Reg Cab	PT908-3405B-02			x	x					Black	2 pc set
Tundra - Reg Cab	PT908-3405B-14			x	x					Oak	2 pc set
Tundra - Access Cab	PT908-3405C-02			x	x					Black	4 pc set
Tundra - Access Cab	PT908-3405C-14			x	x					Oak	4 pc set
Tundra - Double Cab	PT908-3405D-02			x	x					Black	4 pc set
Tundra - Double Cab	PT908-3505D-14			x	x					Oak	4 pc set
Tundra - Reg Cab	PT908-3407B-22					x	x	x		Black	2 pc set
Tundra - D Cab & Crew Max	PT908-3407C-22					x	x	x		Black	4 pc set
Tundra - Reg Cab	PT908-3410B-02								x	Black	2 pc set
Tundra - D Cab & Crew Max	PT908-3410C-02								x	Black	4 pc set
Venza	PT908-0T090-02							x	x	Black	4 pc set

*****_These mats were recalled in SSC 70F. Regularly verify that all AWFM involved in SSC 70F have been purged from your parts inventory and deemed unusable. Please use part number PT908-0307F-02 (Black) or PT908-0307F-14 (Brown) in place of the recalled AWFM (refer to SSC 70F on TIS for further information)._

TOYOTA

Toyota All Weather Floor Mats
(Sorted By Part Number)

Printed September 29, 2009

Part Number	Model	Model Year								Mat Description	
		2003	2004	2005	2006	2007	2008	2009	2010	Color	Piece Set No.
PT206-02035-03	Corolla (w/o heater)	x								Gray	4 pc set
PT206-02035-16	Corolla (w/o heater)	x								Oak	4 pc set
PT206-02036-03	Corolla (w/ heater)	x								Gray	4 pc set
PT206-02036-16	Corolla (w/ heater)	x								Oak	4 pc set
PT206-02038-03	Corolla (w/o heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-02038-16	Corolla (w/o heater)	x	x	x	x	x	x			Oak	4 pc set
PT206-02039-03	Corolla (w/ heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-02039-16	Corolla (w/ heater)	x	x	x	x	x	x			Oak	4 pc set
PT206-03026-03	Camry	x								Gray	4 pc set
PT206-03026-16	Camry	x								Oak	4 pc set
PT206-03036-03	Camry	x	x	x	x					Gray	4 pc set
PT206-03036-16	Camry	x	x	x	x					Oak	4 pc set
PT206-07026-03	Avalon	x	x							Gray	4 pc set
PT206-07026-16	Avalon	x	x							Oak	4 pc set
PT206-08036-03	Sienna		x	x	x	x				Gray	4 pc set
PT206-08036-16	Sienna		x	x	x	x				Oak	4 pc set
PT206-08037-03	Sienna – 3rd Row		x	x	x	x				Gray	2 pc set
PT206-08037-16	Sienna – 3rd Row		x	x	x	x				Oak	2 pc set
PT206-0C026-03	Sequoia	x								Gray	4 pc set
PT206-0C026-16	Sequoia	x								Oak	4 pc set
PT206-0C036-03	Sequoia	x	x	x						Gray	4 pc set
PT206-0C036-16	Sequoia	x	x	x						Oak	4 pc set
PT206-12035-03	Matrix - 2WD (w/ heater)	x								Gray	4 pc set
PT206-12036-03	Matrix - AWD (w/ heater)	x								Gray	4 pc set
PT206-12037-03	Matrix - 2WD (w/o heater)	x								Gray	4 pc set
PT206-12038-03	Matrix - 2WD (w/ heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-12039-03	Matrix - 2WD (w/o heater)	x	x	x	x	x	x			Gray	4 pc set
PT206-1203A-03	Matrix - AWD (w/ heater)	x	x	x	x					Gray	4 pc set
PT206-3403B-03	Tundra - Access Cab (Rear)	x	x	x	x					Gray	2 pc set
PT206-3403B-16	Tundra - Access Cab (Rear)	x	x	x	x					Oak	2 pc set
PT206-3403F-03	Tundra - Reg / Access Cab (Front)	x	x	x	x					Gray	2 pc set
PT206-3403F-16	Tundra - Reg / Access Cab (Front)	x	x	x	x					Oak	2 pc set
PT206-34046-03	Tundra - Double Cab		x	x	x					Gray	4 pc set
PT206-34046-16	Tundra - Double Cab		x	x	x					Oak	4 pc set
PT206-3503B-03	Tacoma - Rear	x								Gray	2 pc set
PT206-3503B-16	Tacoma - Rear	x								Oak	2 pc set
PT206-3503F-03	Tacoma - Front	x								Gray	2 pc set
PT206-3503F-16	Tacoma - Front	x								Oak	2 pc set
PT206-3504B-03	Tacoma - Rear	x	x							Gray	2 pc set
PT206-3504B-16	Tacoma - Rear	x	x							Oak	2 pc set
PT206-3504F-03	Tacoma - Front	x	x							Gray	2 pc set
PT206-3504F-16	Tacoma - Front	x	x							Oak	2 pc set
PT206-42026-03	Rav 4	x								Gray	4 pc set
PT206-42026-16	Rav 4	x								Oak	4 pc set
PT206-42036-03	Rav 4	x								Gray	4 pc set
PT206-42036-16	Rav 4	x								Oak	4 pc set
PT206-42046-03	Rav 4		x	x						Gray	4 pc set
PT206-42046-16	Rav 4		x	x						Oak	4 pc set
PT206-48026-03	Highlander	x								Gray	4 pc set
PT206-48026-16	Highlander	x								Oak	4 pc set
PT206-48035-03	Highlander	x								Gray	4 pc set
PT206-48035-16	Highlander	x								Oak	4 pc set
PT206-48045-03	Highlander		x	x	x					Gray	4 pc set
PT206-48045-16	Highlander		x	x	x					Oak	4 pc set
PT206-52026-03	Echo	x								Gray	4 pc set
PT206-52036-03	Echo	x	x	x						Gray	4 pc set
PT206-60026-03	Land Cruiser	x								Gray	4 pc set
PT206-60026-16	Land Cruiser	x								Oak	4 pc set
PT206-60036-03	Land Cruiser	x	x	x						Gray	4 pc set
PT206-60036-16	Land Cruiser	x	x	x						Oak	4 pc set
PT206-89036-03	4 Runner	x	x							Gray	4 pc set
PT206-89036-16	4 Runner	x	x							Oak	4 pc set
PT548-60070-01	FJ Cruiser					x				Black	4 pc set
PT548-60072-01	FJ Cruiser					x				Black	4 pc set
PT548-60074-01	FJ Cruiser - TRD					x				Black	4 pc set
PT548-60075-01	FJ Cruiser					x				Black	4 pc set
PT548-60076-01	FJ Cruiser						x	x	x	Black	4 pc set
PT548-60080-01	FJ Cruiser - Trail Team						x	x	x	Black	4 pc set
PT908-02090-02	Corolla							x	x	Black	4 pc set
PT908-03071-02	Camry					x	x	x	x	Black	4 pc set
PT908-03071-14	Camry					x	x	x	x	Brown	4 pc set
PT908-0307F-02	Camry (Front Mat)					x	x			Black	1 pc
PT908-0307F-14	Camry (Front Mat)					x	x			Brown	1 pc
PT908-07050-02	Avalon			x	x	x	x	x	x	Black	4 pc set
PT908-07050-14	Avalon			x	x	x	x	x	x	Brown	4 pc set
PT908-08060-11	Sienna - 7 & 8 pass					x	x	x	x	Gray	5 pc set
PT908-08060-44	Sienna - 7 & 8 pass					x	x	x	x	Brown	5 pc set
PT908-08063-11	Sienna - 7 & 8 pass					x	x	x	x	Gray	3 pc set
PT908-08063-44	Sienna - 7 & 8 pass					x	x	x	x	Brown	3 pc set
PT908-0C050-02	Sequoia				x	x	x			Gary	4 pc set
PT908-0C050-14	Sequoia				x	x	x			Oak	4 pc set
PT908-0C083-02	Sequoia – 3rd Row							x	x	Black	1 pc
PT908-0C084-02	Sequoia							x	x	Black	4 pc set
PT908-0T090-02	Venza							x	x	Black	4 pc set
PT908-12090-02	Matrix - AWD							x	x	Black	4 pc set
PT908-12290-02	Matrix - 2WD							x	x	Black	4 pc set
PT908-21050-02	Prius			x	x					Black	4 pc set
PT908-21051-02	Prius				x	x	x	x		Black	4 pc set
PT908-32070-02*	Do not use these floor mats.*					x				Black	4 pc set
PT908-32070-14*						x				Brown	4 pc set
PT908-3405B-02	Tundra - Reg Cab			x	x					Black	2 pc set
PT908-3405B-14	Tundra - Reg Cab			x	x					Oak	2 pc set
PT908-3405C-02	Tundra - Access Cab			x	x					Black	4 pc set
PT908-3405C-14	Tundra - Access Cab			x	x					Oak	4 pc set
PT908-3405D-02	Tundra - Double Cab			x	x					Black	4 pc set
PT908-3407B-22	Tundra - Reg Cab					x	x	x		Black	2 pc set
PT908-3407C-22	Tundra - D Cab & Crew Max					x	x	x		Black	4 pc set
PT908-3410B-02	Tundra - Reg Cab								x	Black	2 pc set
PT908-3410C-02	Tundra - D Cab & Crew Max								x	Black	4 pc set
PT908-3505B-02	Tacoma - Reg Cab			x	x	x	x			Black	2 pc set
PT908-3505C-02	Tacoma - Access Cab			x	x	x	x			Black	4 pc set
PT908-3505D-02	Tacoma - Double Cab			x	x	x	x			Black	4 pc set
PT908-3505D-14	Tundra - Double Cab			x	x					Oak	4 pc set
PT908-3507B-02	Tacoma - Reg Cab						x	x	x	Black	2 pc set
PT908-3507C-02	Tacoma - Access Cab						x	x	x	Black	4 pc set
PT908-3507D-02	Tacoma - Double Cab						x	x	x	Black	4 pc set
PT908-35S8C-02	Tacoma - SE Acc Cab						x			Black	4 pc set
PT908-35S8D-02	Tacoma - SE Dbl Cab						x			Black	4 pc set
PT908-42060-02	Rav 4 (w/o 3rd row)				x	x	x	x	x	Black	4 pc set
PT908-42061-02	Rav 4 (w/ 3rd row)				x	x	x	x	x	Black	4 pc set
PT908-47100-02	Prius								x	Black	4 pc set
PT908-48055-02	Highlander - Hybrid			x	x	x				Black	3 pc kit
PT908-48055-14	Highlander - Hybrid			x	x	x				Brown	3 pc kit
PT908-48065-02	Highlander				x	x				Black	4 pc set
PT908-48065-14	Highlander				x	x				Brown	4 pc set
PT908-48083-02	Highlander – 3rd Row						x	x	x	Black	1 pc
PT908-48087-22	Highlander						x			Black	4 pc set
PT908-48088-22	Highlander - Hybrid						x	x	x	Black	4 pc set
PT908-4808G-02	Highlander						x	x	x	Black	4 pc set
PT908-60065-02	Land Cruiser				x	x				Black	4 pc set
PT908-60065-14	Land Cruiser				x	x				Brown	4 pc set
PT908-60083-02	Land Cruiser						x	x	x	Black	4 pc set
PT908-60085-02	Land Cruiser – 3rd Row						x	x	x	Black	1 pc
PT908-89060-02	4 Runner			x	x	x	x	x		Black	4 pc set
PT908-89100-02	4 Runner								x	Black	4 pc set

*****_These mats were recalled in SSC 70F. Regularly verify that all AWFM involved in SSC 70F have been purged from your parts inventory and deemed unusable. Please use part number PT908-0307F-02 (Black) or PT908-0307F-14 (Brown) in place of the recalled AWFM (refer to SSC 70F on TIS for further information)._

DP09-001

Floor matadvisoryp20070921

MOVING THE AMERICAN ECONOMY

U.S. Department of Transportation
Office of Public Affairs
Washington, D.C.
www.dot.gov/affairs/briefing.htm

News

xxx, September xxx, 2007 **Contact: Rae Tyson: (202) 366-9550**
NHTSA xxxx

NHTSA CONSUMER SAFETY ALERT: Secure Floor Mats in 2007 Lexus ES 350, Camry, Other Toyotas. Alert Also Extended to Other Vehicles.

Toyota to Conduct Floor Mat Recall

Owners of 2007 Lexus ES 350 models and certain other Toyota vehicles are being urged to make sure the driver-side, All Season floor mats are properly secured before driving the vehicles, according to the National Highway Traffic Safety Administration and Toyota Motor Company.

Toyota announced it will conduct a recall of all the affected floor mats, which are used in the 2007 Lexus ES 350 as well as the 2007 Camry.

NHTSA and Toyota noted that, if unsecured, the mats being recalled can slip forward and trap the accelerator pedal, causing the vehicle to accelerate uncontrollably.

Although not part of the recall, NHTSA urged drivers of other Toyota models, including Avalons and Prius hybrids, to check the driver-side floor mats to make sure they are properly installed.

While the recall is underway, drivers of these Toyota vehicles are strongly urged to make sure the driver-side floor mat is properly secured to the retention hooks on the floorboard. Also, never overlay two mats on top of each other because the retention hooks cannot secure the top-most mat which can then can slip and trap the accelerator pedal.

Of course, depending on vehicle design, it is possible for unsecured floor mats to interfere with accelerator or brake pedals in a wide range of vehicles. Therefore, NHTSA reminds all drivers of all makes and models to check the driver-side floor mats for secure installation and to follow manufacturer instructions for installing the mats.

For more information, consumers can contact the National Highway Traffic Safety Administration's Hotline at 888-327-4236 or their Toyota or Lexus dealer.

Example of an unsecured driver-side floor mat trapping the accelerator pedal in a 2007 Lexus ES350

Always make sure your driver-side floor mat is properly secured by the tabs. Never overlay two mats on top of each other because the top-most mat can not be secured properly by the retention hooks.

To view high resolution versions of the above images, click here and here.

# # #

DP09-001

GMA floor mat

BL-020-09

San Diego County Sheriff's Department

MAIT SUPPLEMENTAL

This investigation was conducted by the California Highway Patrol (CHP) Border Division Multidisciplinary Accident Investigation Team (MAIT).

MAIT PERSONNEL

Officer J. Snider, ID 15406, Border Division MAIT Investigator
Officer S. Parent, ID 16159, Border Division MAIT Investigator*
Caltrans Senior Transportation Engineer D. Tran, Border Division MAIT
MCS-I K. Hearst, ID A08219, Border Division MAIT

*Primary investigator

SUBPOENAS FOR MAIT PERSONNEL SHOULD BE DIRECTED TO:

California Highway Patrol
Border Division Special Services Command/MAIT
9330 Farnham Street
San Diego, California 92123-1216

Attention: Lieutenant D. Goodbrand

TABLE OF CONTENTS

INTRODUCTION

MAIT Notification

On Friday, August 28, 2009, at approximately 2125 hours, Sergeant S. Hill of the San Diego County Sheriff's Department requested Border Division MAIT assistance with the investigation of a multiple-fatality collision. The collision occurred at approximately 1837 hours at the intersection of Mission Gorge Road and the State Route 125 northbound to Mission Gorge Road off ramp. MAIT personnel began arriving at the collision scene at approximately 2230 hours.

Issues

This Border Division MAIT investigation was limited to the following issues:

- What was the motion of the involved vehicles during the collision sequence?
- Did Driver [redacted] attempt to stop Vehicle #1 (2009 Lexus ES 350) by applying the brakes?
- What gear was Vehicle #1 in at the time of the collision?

In order to answer these questions, Border Division MAIT performed the following tasks:

- Physical evidence analyses
- Vehicle dynamics analysis
- A limited mechanical inspection of Vehicle #1

Throughout this report, unless otherwise indicated, all times and measurements are approximate. All vehicle component references were oriented from the driver's seat of the vehicle looking forward through the windshield.

PHYSICAL EVIDENCE DESCRIPTIONS

On Friday, August 28, and Saturday, August 29, 2009, the collision scene characteristics and physical evidence locations were documented using a Leica Global Positioning System 900 (GPS 900). Engineer Tran operated the GPS 900 while Investigator Parent completed the scene notes.

The scene was surveyed using the World Geodetic System of 1984 (WGS 84) coordinate system and later projected to a grid coordinate system using conversion software. The unit of measurement for this coordinate system was the foot, and all measurements were based upon an established reference point. The reference point was established upon the north dirt shoulder of Mission Gorge Road. Utilizing the center of the manhole cover, located west of the signal and lighting standard and north of the north curb of Mission Gorge Road, the reference point was located as follows: 86 feet west of the manhole cover (measured along the north curb of Mission Gorge Road) and 6.8 feet north of and perpendicular to the same curb. This location had an easting of 6330240.0 feet, a northing of 1885769.4 feet, and an elevation of 329.4 feet. Refer to the environment diagram for the placement of the GPS reference point. Refer to Annex A for the list of data points collected and their corresponding coordinates.

The following items of physical evidence and the vehicle positions of rest were documented by MAIT investigators and are depicted on the physical evidence diagram.

ITEM #	DATA POINT(S)	ITEM DESCRIPTION AND WIDTH AT SPECIFIC DATA POINTS
1	250-254	A tire friction mark, 36.9 feet in length
	250	Begin, 0.80 foot in width
	251	0.80 foot in width
	252	0.70 foot in width
	253	1.10 feet in width
	254	End, 1.20 feet in width
2	255-260	A tire friction mark, 31.7 feet in length
	255	Begin, 0.20 foot in width
	256	1.10 feet in width
	257	0.80 foot in width
	258	1.20 feet in width
	259	0.90 foot in width
	260	End, 1.10 feet in width

PHYSICAL EVIDENCE DESCRIPTIONS (continued)

ITEM #	DATA POINT(S)	ITEM DESCRIPTION AND WIDTH AT SPECIFIC DATA POINTS
3	261-267	A tire friction mark, 42.4 feet in length
	261	Begin, 1.10 foot in width
	262	0.40 foot in width
	263	0.60 foot in width
	264	0.90 foot in width
	265	0.60 foot in width
	266	0.50 foot in width
	267	End, 0.40 foot in width
4	268-269	A material transfer (gray in color), 0.5 foot in length
	268	Begin, 0.20 foot in width
	269	End, tapered point
5	270-285	A tire friction mark, 87.0 feet in length
	270	Begin, 0.80 foot in width
	271	0.90 foot in width
	272	1.20 feet in width
	273	0.90 foot in width
	274	0.80 foot in width
	275	0.80 foot in width
	276	0.90 foot in width
	277	0.80 foot in width
	278	0.80 foot in width
	279	0.70 foot in width
	280	0.60 foot in width
	281	0.50 foot in width
	282	0.60 foot in width
	283	0.30 foot in width
	284	0.30 foot in width
	285	End, 0.30 foot in width
6	286-290	A gouge, 3.3 feet in length
	286	Begin, 0.15 foot in width
	287	0.05 foot in width
	288	0.15 foot in width
	289	0.15 foot in width
	290	End, tapered point
7	291-294	A gouge, 1.7 feet in length
	291	Begin, tapered point
	292	0.20 foot in width
	293	0.20 foot in width
	294	End, tapered point

PHYSICAL EVIDENCE DESCRIPTIONS (continued)

ITEM #	DATA POINT(S)	ITEM DESCRIPTION AND WIDTH AT SPECIFIC DATA POINTS
8	295-298	A tire friction mark, 14.7 feet in length
	295	Begin, 0.90 foot in width
	296	0.80 foot in width
	297	0.80 foot in width
	298	End, 0.80 foot in width
9	299-303	A fluid trail, 46.3 feet in length
	299	Begin, 0.90 foot in width
	300	2.00 feet in width
	301	3.00 feet in width
	302	2.70 feet in width
	303	End, 1.90 feet in width
10	304-313	A scrape, 4.3 feet in length
	304	Point on perimeter
	305	Point on perimeter
	306	Point on perimeter
	307	Point on perimeter
	308	Point on perimeter
	309	Point on perimeter
	310	Point on perimeter
	311	Point on perimeter
	312	Point on perimeter
	313	Point on perimeter
11	314-316	A gouge, 0.38 foot in length
	314	Begin, tapered point
	315	0.10 foot in width
	316	End, tapered point
12	317-319	A scrape, 1.3 feet in length
	317	Begin, tapered point
	318	0.20 foot in width
	319	End, 0.30 foot in width
13	320-324	A scrape, 3.2 feet in length
	320	Begin, tapered point
	321	0.15 foot in width
	322	0.25 foot in width
	323	0.15 foot in width
	324	End, tapered point

PHYSICAL EVIDENCE DESCRIPTIONS (continued)

ITEM #	DATA POINT(S)	ITEM DESCRIPTION AND WIDTH AT SPECIFIC DATA POINTS
14	325-334	A detached section of window glass
	325	Point on perimeter
	326	Point on perimeter
	327	Point on perimeter
	328	Point on perimeter
	329	Point on perimeter
	330	Point on perimeter
	331	Point on perimeter
	332	Point on perimeter
	333	Point on perimeter
	334	Point on perimeter
15	335-336	A plastic vehicle component (white in color), 2.1 feet in length
	335	Endpoint
	336	Endpoint
16	337-340	A scrape, 4.0 feet in length
	337	Begin, tapered point
	338	0.20 foot in width
	339	0.35 foot in width
	340	End, 0.30 foot in width
17	341-343	A scrape, 2.7 feet in length
	341	Begin, tapered point
	342	0.20 foot in width
	343	End, tapered point
18	344-349	An area of missing portland cement concrete curb
	344	Point on perimeter
	345	Point on perimeter
	346	Point on perimeter
	347	Point on perimeter
	348	Point on perimeter
	349	Point on perimeter
19	350-353	A tire friction mark, 11.4 feet in length
	350	Begin, 0.50 foot in length
	351	0.50 foot in length
	352	0.50 foot in length
	353	End, 0.50 foot in length
20	354-356	A tire friction mark, 8.2 feet in length
	354	Begin, 0.50 foot in length
	355	0.50 foot in length
	356	End, 0.50 foot in length

PHYSICAL EVIDENCE DESCRIPTIONS (continued)

ITEM #	DATA POINT(S)	ITEM DESCRIPTION AND WIDTH AT SPECIFIC DATA POINTS
21	357-360	An area of missing portland cement concrete curb
	357	Point on perimeter
	358	Point on perimeter
	359	Point on perimeter
	360	Point on perimeter
22	361	A gouge in the portland cement concrete curb, 0.40 foot in diameter
	361	Point on center
23	362-382	An area of vehicle debris
	362	Point on perimeter
	363	Point on perimeter
	364	Point on perimeter
	365	Point on perimeter
	366	Point on perimeter
	367	Point on perimeter
	368	Point on perimeter
	369	Point on perimeter
	370	Point on perimeter
	371	Point on perimeter
	372	Point on perimeter
	373	Point on perimeter
	374	Point on perimeter
	375	Point on perimeter
	376	Point on perimeter
	377	Point on perimeter
	378	Point on perimeter
	379	Point on perimeter
	380	Point on perimeter
	381	Point on perimeter
	382	Point on perimeter
24	383	A gouge in the portland cement concrete curb, 0.20 foot in diameter
	383	Point on center
25	384-385	A tire friction mark, 0.44 foot in length
	384	Begin, 0.50 foot in width
	385	End, 0.50 foot in width
26A	386	A broken wooden fence post, 0.50 foot in diameter
	386	Center
26B	388-389	A displaced section of broken wooden post-and-rail fence
	388	Endpoint
	389	Endpoint

PHYSICAL EVIDENCE DESCRIPTIONS (continued)

ITEM #	DATA POINT(S)	ITEM DESCRIPTION AND WIDTH AT SPECIFIC DATA POINTS
26C	390-391	A detached and broken rail of wooden post-and-rail fence, 2.6 feet in length
	390	Endpoint
	391	Endpoint
26D	392-393	A detached and broken rail of wooden post-and-rail fence, 5.7 feet in length
	392	Endpoint
	393	Endpoint
26E	394-395	A detached and broken rail of wooden post-and-rail fence, 3.4 feet in length
	394	Endpoint
	395	Endpoint
27	396-398	A furrow, 8.5 feet in length
	396	Begin, 1.20 feet in width
	397	1.20 feet in width
	398	End, 1.20 feet in width
28	399-402	A furrow, 4.6 feet in length
	399	Point on perimeter
	400	Point on perimeter
	401	Point on perimeter
	402	Point on perimeter
29	403-409	A furrow, 7.2 feet in length
	403	Point on perimeter
	404	Point on perimeter
	405	Point on perimeter
	406	Point on perimeter
	407	Point on perimeter
	408	Point on perimeter
	409	Point on perimeter
30	410-413	A detached and damaged section of a vehicle wheel
	410	Point on perimeter
	411	Point on perimeter
	412	Point on perimeter
	413	Point on perimeter
31	414-422	An area of vehicle debris (white in color)
	414	Point on perimeter
	415	Point on perimeter
	416	Point on perimeter
	417	Point on perimeter
	418	Point on perimeter
	419	Point on perimeter
	420	Point on perimeter
	421	Point on perimeter
	422	Point on perimeter

PHYSICAL EVIDENCE DESCRIPTIONS (continued)

ITEM #	DATA POINT(S)	ITEM DESCRIPTION AND WIDTH AT SPECIFIC DATA POINTS
32	425-428	A detached bumper cover (white in color) with attached California license plate #6DRT323
	425	Point on perimeter
	426	Point on perimeter
	427	Point on perimeter
	428	Point on perimeter
33	423-424	A detached vehicle component (white in color), 5.5 feet in length
	423	Endpoint, 0.66 foot in width
	424	Endpoint, 0.66 foot in width
34	429-436	An area of disrupted dirt
	429	Point on perimeter
	430	Point on perimeter
	431	Point on perimeter
	432	Point on perimeter
	433	Point on perimeter
	434	Point on perimeter
	435	Point on perimeter
	436	Point on perimeter
35	437-440	A detached bumper cover (white in color)
	437	Point on perimeter
	438	Point on perimeter
	439	Point on perimeter
	440	Point on perimeter
36	441-447	A detached section of vehicle exhaust pipe and muffler, 9.2 feet in length
	441	Point on perimeter
	442	Point on perimeter
	443	Point on perimeter
	444	Point on perimeter
	445	Point on perimeter
	446	Point on perimeter
	447	Point on perimeter
37	463-464	A detached and damaged section of a vehicle wheel
	463	Endpoint, 0.67 foot in width
	464	Endpoint, 0.67 foot in width
38	465-466	A detached and broken rail of wooden post-and-rail fence, 5.6 feet in length
	465	Endpoint
	466	Endpoint
39	467	A detached vehicle tire with "Turanza EL 400" embossed on the sidewall
	467	Center

PHYSICAL EVIDENCE DESCRIPTIONS (continued)

ITEM #	DATA POINT(S)	ITEM DESCRIPTION AND WIDTH AT SPECIFIC DATA POINTS
N/A	33-36	Vehicle #1 (2009 Lexus ES 350) position of rest
	33	Left-front control arm (end)
	34	Left-rear wheel (outboard center)
	35	Right-rear axle (outboard center)
	36	Right-front wheel (outboard center)
N/A	246-249	Vehicle #2 (1993 Ford Explorer) position of rest
	246	Right-rear wheel (outboard center)
	247	Right-front wheel (outboard center)
	248	Left-front wheel (outboard center)
	249	Left-rear wheel (outboard center)

PHYSICAL EVIDENCE DESCRIPTIONS (continued)

On Thursday, September 3, 2009, Investigators Snider and Parent, along with MCS-I Hearst, responded to the scene of the collision to locate the detached left-front wheel assembly of Vehicle #1. In the process of locating the detached left-front wheel assembly, five items of physical evidence, including the detached wheel assembly, were located. Although these items were not measured, they were documented in digital images taken by Investigator Parent, and their general location is depicted on the physical evidence diagram. The items are identified as follows: Item A – throttle body (Image 1), Item B – oil filter housing (Image 2), Item C – section of brake rotor (Image 3), Item D – radiator support (Image 4), and Item E – detached wheel assembly (Image 5).

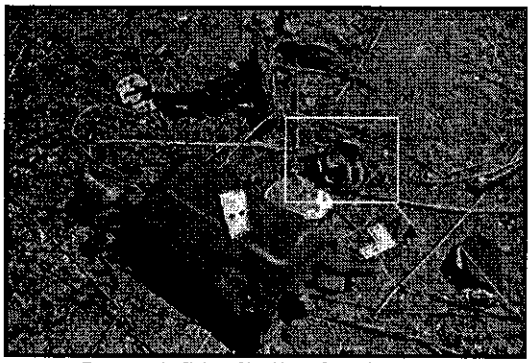


Image 1: Disc 3\...\IMG_2634.JPG

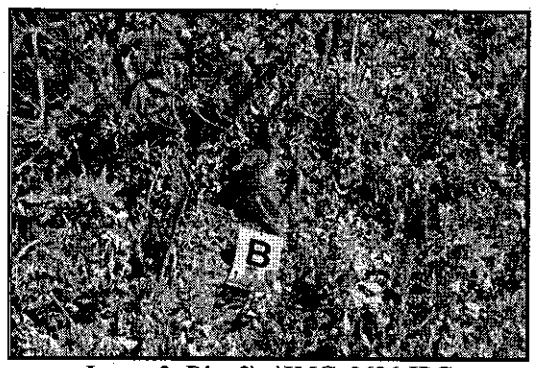


Image 2: Disc 3\...\IMG_2636.JPG

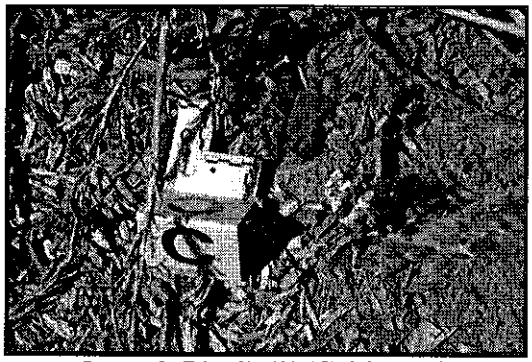


Image 3: Disc 3\...\IMG_2639.JPG

Image 4: Disc 3\...\IMG_2641.JPG

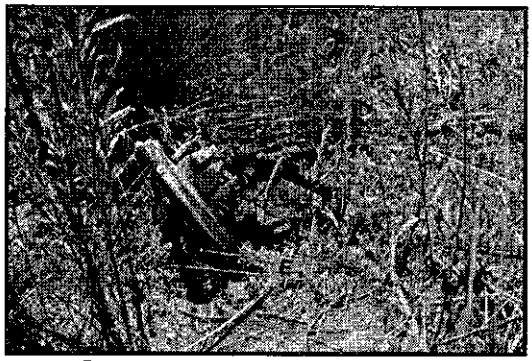


Image 5: Disc 3\...\IMG_2643.JPG

INSERT ENVIRONMENT DIAGRAM

DATE OF COLLISION *(MONTH-DAY-YEAR)*	TIME *(2400)*	NCIC	OFFICER I.D.	NUMBER	MAIT CASE NUMBER	PAGE
08/28/2009	1837	3700	4555	09056454	BL-020-09	12

INSERT SCENE DIAGRAM

INSERT PHYSICAL EVIDENCE DIAGRAM

MECHANICAL INSPECTION

Vehicle #1 (2009 Lexus ES 350)

Extent of Inspection

The purpose of this inspection was to collect data necessary to document the post-collision condition of certain brake components to determine if the brake system was operational prior to the collision. Additionally, a comparison of the position of the shift lever on the automatic transmission housing of Vehicle #1 was compared to that of the shift lever in the various positions (park, reverse, drive, and neutral) on an exemplar 2008 Lexus ES 350. The inspection of the brake components was limited to a visual analysis of the following:

- Rotors
- Pads
- Calipers and Brackets

Additional Information

On Thursday, September 3, 2009, prior to conducting the mechanical inspection, MCS-I Hearst assisted National Highway Traffic Safety Administration (NHTSA) Investigators Bill Collins and Stephen McHenry with their investigation by removing the left-rear tire-and-wheel assembly, brake caliper, and brake pads from Vehicle #1. These components were not reinstalled, but remained with the vehicle until the mechanical inspection was conducted.

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

On Friday, September 4, 2009, at 0715 hours, Investigator Nicholas and MCS-I Hearst arrived at the impound facility of Miller Towing to conduct a limited mechanical inspection of Vehicle #1. MCS-I Hearst disassembled the wheel brake assemblies and packaged the components separately. MCS-I Hearst transported these components to the Border Division MAIT office for an in-depth inspection. MCS-I Hearst conducted this inspection Saturday October 24, 2009, and Sunday October 25, 2009. At the conclusion of the investigation, all evidence items were delivered to the San Diego County Sheriff's Department.

Dates of inspection:	September 4, 2009 October 24-25, 2009
Inspection locations:	Miller's Towing 1402 Pioneer Way El Cajon, California 92020 CHP Border Division 9330 Farnham Street San Diego, California 92123
Manufacture date:	09/08
Model year:	2009
Manufacturer:	Toyota Motor Corporation
Make:	Lexus
Model:	ES 350
License:	6DRT323
Vehicle Identification Number:	JTHBJ46G792[redacted]
Odometer:	Indeterminate
Color:	White
Gross Vehicle Weight Rating:	4680 pounds
Gross Axle Weight Rating - Front:	2668 pounds
Gross Axle Weight Rating - Rear:	2359 pounds
Type of vehicle:	Passenger car

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Pre-Inspection Condition

The following images depict the condition of Vehicle #1 prior to removing the brake components on Friday, September 4, 2009:

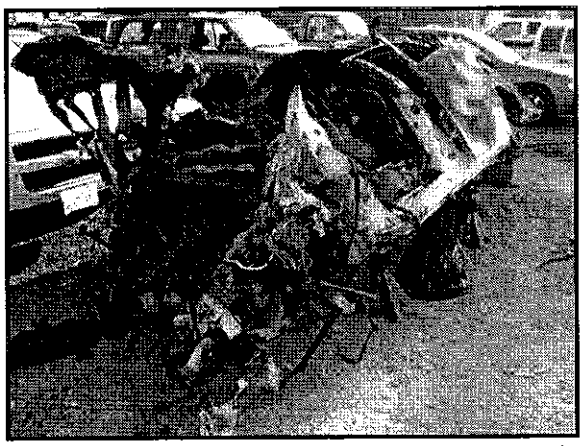


Image 6: Disc 3\DCIM\100CANON\IMG_0001.JPG

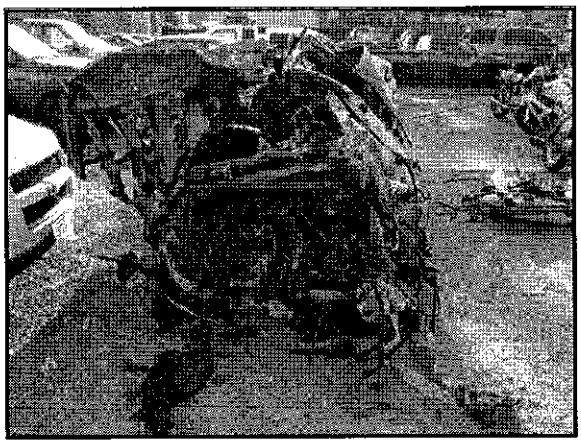


Image 7: Disc 3\DCIM\100CANON\IMG_0002.JPG

Image 8: Disc 3\DCIM\100CANON\IMG_0005.JPG

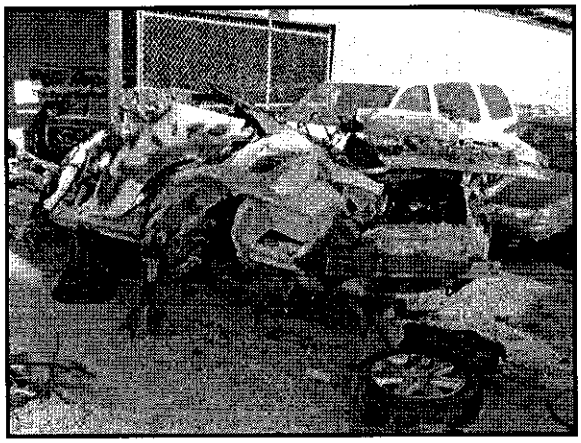


Image 9: Disc 3\DCIM\100CANON\IMG_0007.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Service Brake System

This vehicle was equipped with a vacuum-assisted, hydraulic power brake system. The dual-circuit base brake system was pedal-actuated, and equipped with disc-type brake assemblies on the front and rear. The base brake system was supplemented with a four-channel, four-sensor, non-integral, antilock brake system (ABS), vehicle stability control with traction control, and electronic brake force distribution with brake assist. The following images depict each brake assembly prior to disassembly:

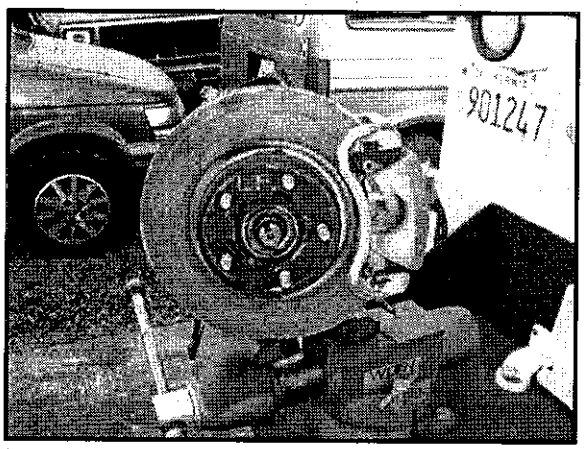


Image 10: Disc 3\DCIM\100CANON\IMG_0012.JPG

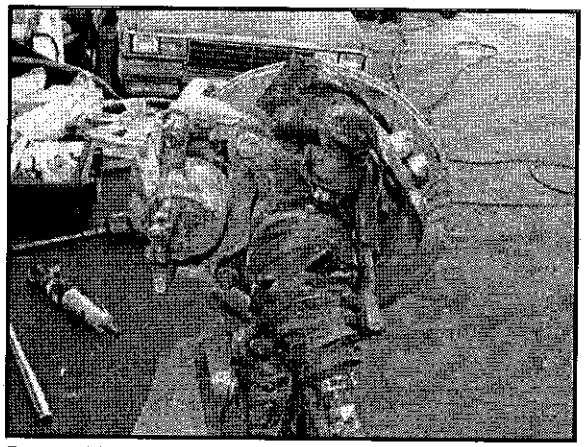


Image 11: Disc 3\DCIM\100CANON\IMG_0014.JPG

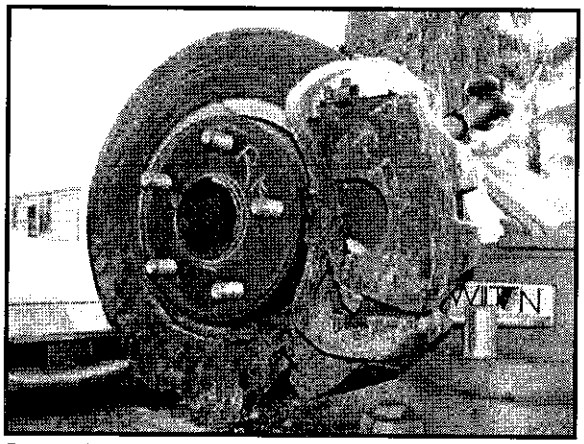


Image 12: Disc 3\DCIM\100CANON\IMG_0036.JPG

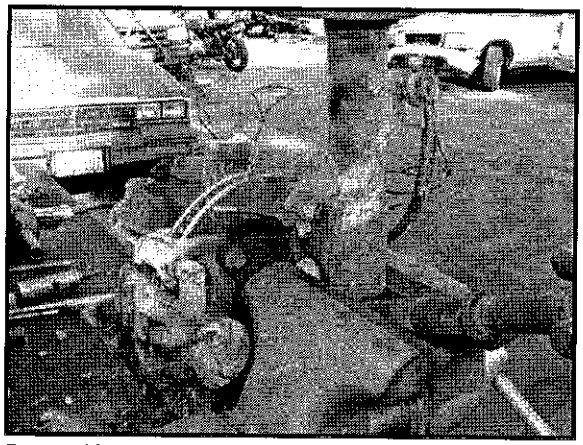


Image 13: Disc 3\DCIM\100CANON\IMG_0033.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Service Brake System (continued)

It should be noted that the brake caliper and brake pads are not present in images 14 and 15. As previously mentioned, MCS-I Hearst assisted NHTSA investigators by removing these components from Vehicle #1 on Thursday, September 3, 2009.

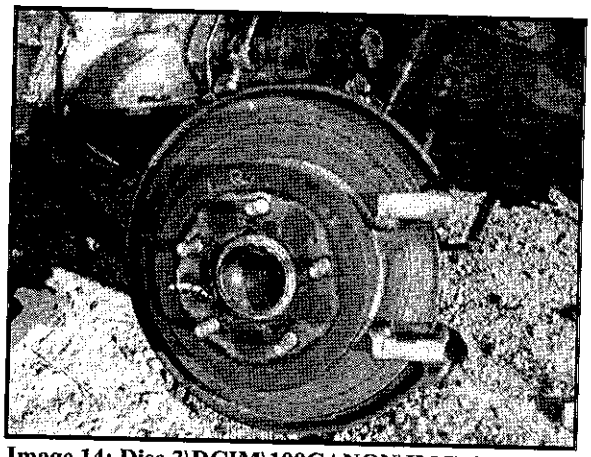


Image 14: Disc 3\DCIM\100CANON\IMG_0050.JPG

Image 15: Disc 3\DCIM\100CANON\IMG_0051.JPG

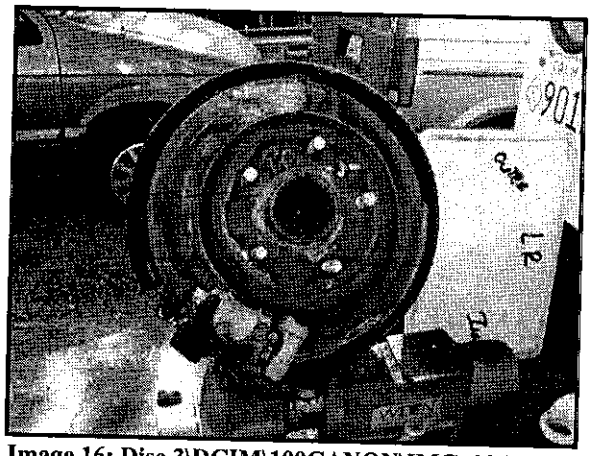


Image 16: Disc 3\DCIM\100CANON\IMG_0064.JPG

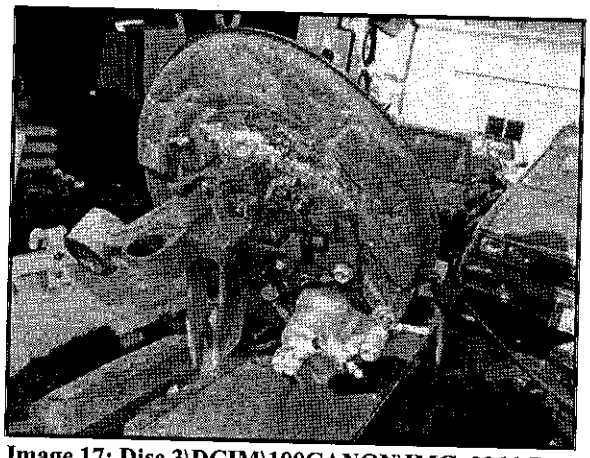


Image 17: Disc 3\DCIM\100CANON\IMG_0066.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Rotors

This vehicle was equipped with 296-millimeter (11.65-inch) diameter, ventilated, full-cast rotors on the front and 281-millimeter (11.06-inch) diameter, non-ventilated, full-cast rotors on the rear. The rear rotors were of a drum-in-hat design. The following minimum material thickness within the swept area on each brake rotor was noted:

LEFT FRONT	RIGHT FRONT	LEFT REAR	RIGHT REAR
1.100"	1.103"	0.383"	0.385"

Each rotor had a minimum thickness above the manufacturer's minimum specification of 25 millimeters (1.016 inches) for the front, and 8.5 millimeters (0.335 inch) for the rear. These limits were indicated on the exterior of each rotor.

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Rotors (continued)

Left Front

The rotor disc was circumferentially fractured and separated at the base of the rotor hat. The fractured surface had a rough crystalline appearance. Other than being fractured and separated from the disc, the rotor hat was generally unremarkable.

The ventilated design of the rotor was cast as two disc plates, separated by bridges (cooling fins) that joined them together, while allowing for the passage of air. The outer disc had a radial fracture that connected to the fracture at the base of the rotor hat and extended to the outer circumference of the disc (Image 18 boxed).

The swept areas on the disc were circumferentially scored and discolored to various shades of gray, blue, and bronze. There were sections on the swept areas of the rotor which where discolored darker than the surrounding surfaces. These sections appeared similar to the dimensions of the front brake pads. Within this same area, there were pieces of friction material bonded to the surface (Images 18 and 19 circled). There were discernible ridges about the inner and outer circumferences of the brake rotor discs, adjacent to the swept areas. There were two oblique gouges within the swept area of the outer disc (Image 19). The non-swept surface of the outer disc, adjacent to the fracture at the hat base, was discolored to a flat white. The remaining non-swept areas, including the cooling fins, were discolored to a reddish-orange.

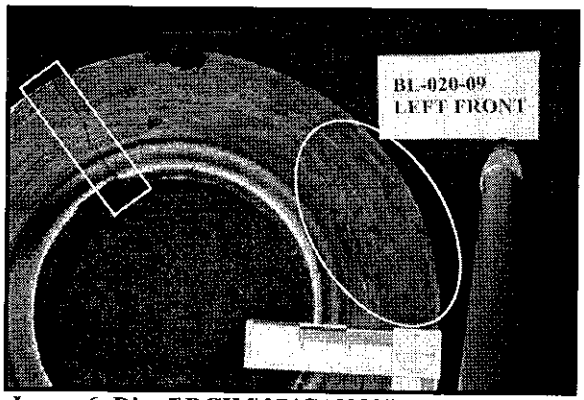


Image 6: Disc 5\DCIM\274CANON\IMG_0079.JPG

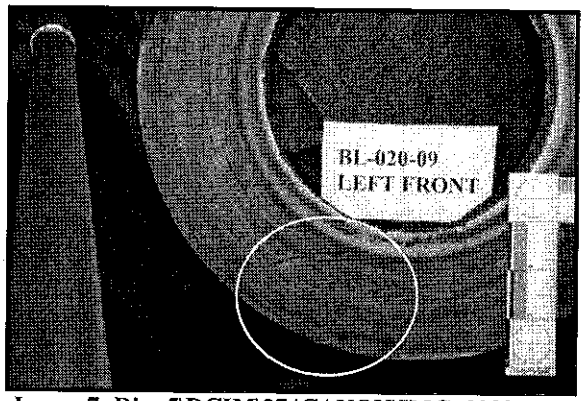


Image 7: Disc 5\DCIM\274CANON\IMG_0082.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Rotors (continued)

Left Front (continued)

There was an area of crescent-shaped dents within the swept area of the inner disc (Image 20 boxed). A section of the inner disc was fractured and missing along the outer circumference. This missing section was crescent-shaped, 3 1/2-inches in length, and 1-inch wide, exposing the cooling fins. The fractured surface was silver in luster with a rough crystalline appearance (Image 21).

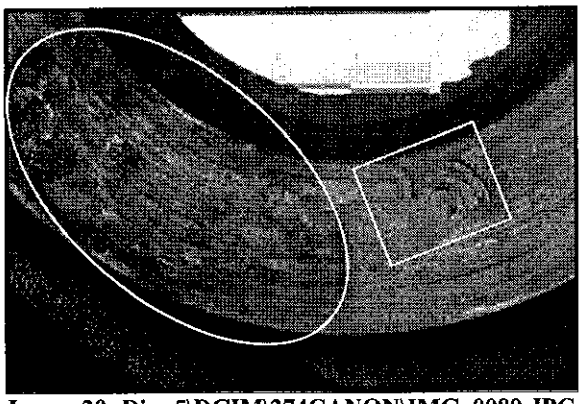


Image 20: Disc 5\DCIM\274CANON\IMG_0089.JPG

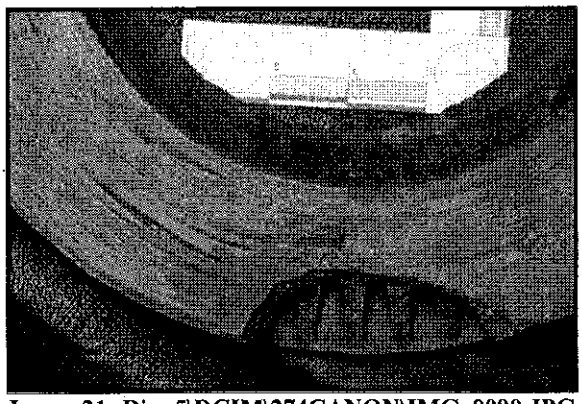


Image 21: Disc 5\DCIM\274CANON\IMG_0090.JPG

Right Front

The rotor disc was circumferentially fractured and separated at the base of the rotor hat. The hat was fractured into two pieces (Image 22).

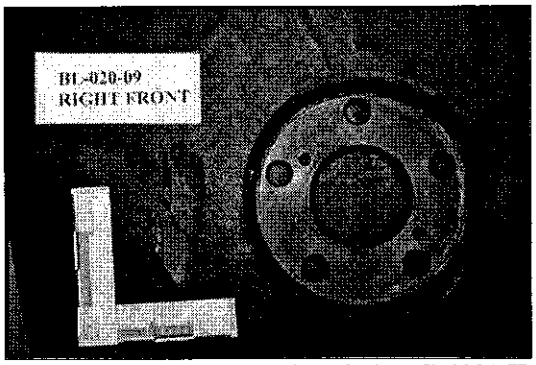


Image 22: Disc 5\DCIM\274CANON\IMG_0201.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Rotors (continued)

Right Front (continued)

The fractured surfaces of both pieces of the hat had rough crystalline appearances. The swept areas on the disc were soiled with dirt and a dry black contaminant. They were also circumferentially scored and discolored to various shades of gray, blue, and bronze.

This rotor also had sections on both swept areas which where discolored darker than the surrounding surfaces. Within this same area, there were pieces of friction material bonded to the surface. There were discernible ridges about the inner and outer circumferences of the brake rotor discs, adjacent to the swept areas. A 1 1/2-inch wide section of the rotor disc was missing (Image 23). Adjacent to this area, the rotor disc was displaced outward. Centered near the start of the rotor displacement, the inner disc had a radial fracture between the inner and outer circumferences of the disc (Image 23 boxed). At the fractured end of the displaced rotor, the inner disc was dented and displaced outward (Image 23 circled).

A piece of rotor recovered from the collision scene on Thursday September 3, 2009, and identified as Item C, was matched to the fractures within the missing disc area (Image 24). The fractured surfaces of Item C and the rotor disc were silver in luster with rough crystalline appearances. The non-swept surface of the outer disc, adjacent to the fracture at the hat base, was discolored to a flat white. The remaining non-swept areas, including the cooling fins, were discolored to a reddish-orange.

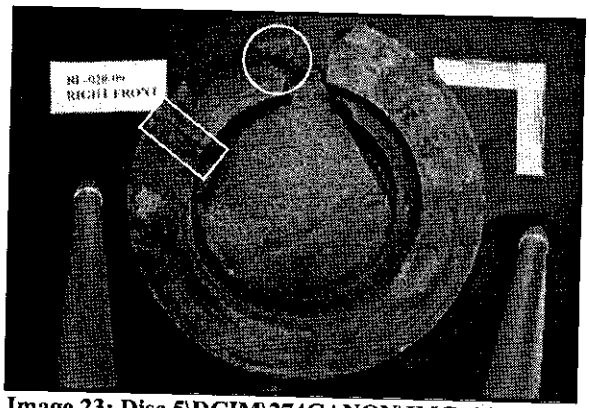


Image 23: Disc 5\DCIM\274CANON\IMG_0198.JPG

Image 24: Disc 5\DCIM\274CANON\IMG_0194.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Rotors (continued)

Left Rear

The swept areas on the disc were circumferentially scored (Image 25). The majority of the swept areas were discolored to various shades of gray and blue. There was friction material bonded circumferentially to the outboard side of the disc, within the grooves of the scoring, (Image 26). The swept areas of the rotor had sections that were discolored lighter than the surrounding areas of the disc. These were similar to the dimensions of a brake pad (Image 26 circled). There was a well-defined outline of a brake pad on the inboard side of the disc (Image 27). The disc surface, within the outlined area, was discolored to various shades of white, gray, blue, and black (Image 28). There were discernible ridges about the inner and outer circumference of the brake rotor disc, adjacent to the swept areas.

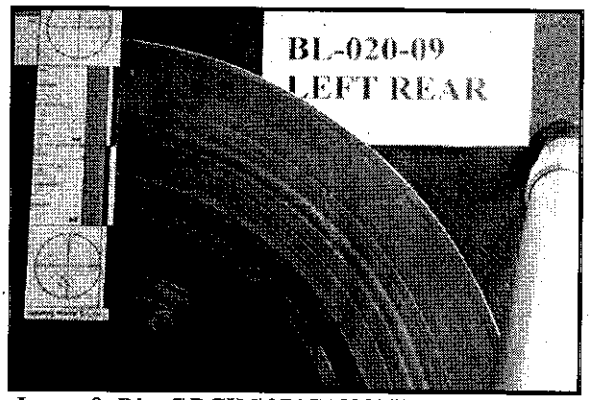


Image 8: Disc 5\DCIM\274CANON\IMG_0289.JPG

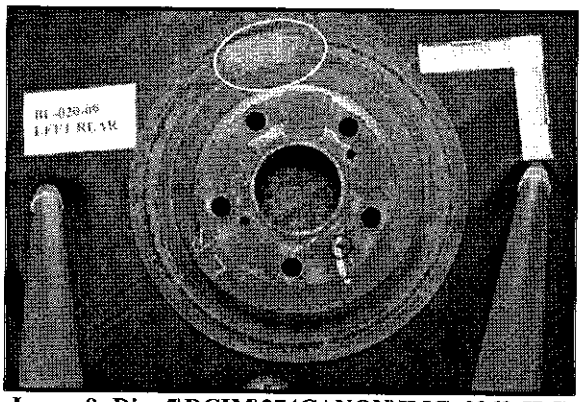


Image 9: Disc 5\DCIM\274CANON\IMG_0262.JPG

Image 10: Disc 5\274CANON\IMG_0272.JPG

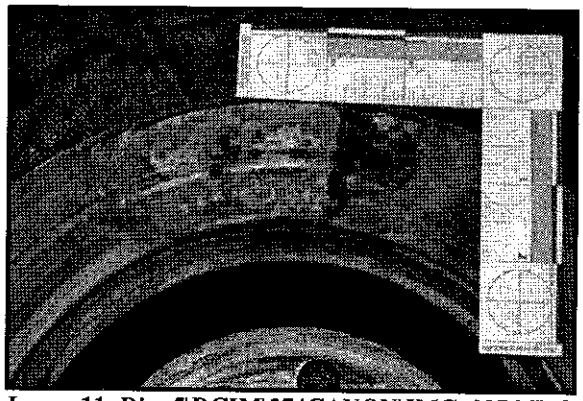


Image 11: Disc 5\DCIM\274CANON\IMG_0276.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Rotors (continued)

Right Rear

The right-rear rotor was circumferentially scored and the swept areas were discolored to various shades of white, gray, blue, and black (Images 29 and 30). This rotor also had sections that were discolored lighter than the surrounding areas of the disc and were similar to the dimensions of a brake pad (Image 31). The inboard side had a large amount of friction material bonded to the surface of the disc (Image 32). This rotor also had discernible ridges about the inner and outer circumference of the brake rotor disc adjacent to the swept areas. This rotor was soiled with dirt, and the circumferential coating of friction material on the outboard side of the disc was narrower and more intermittent compared to the left-rear rotor.

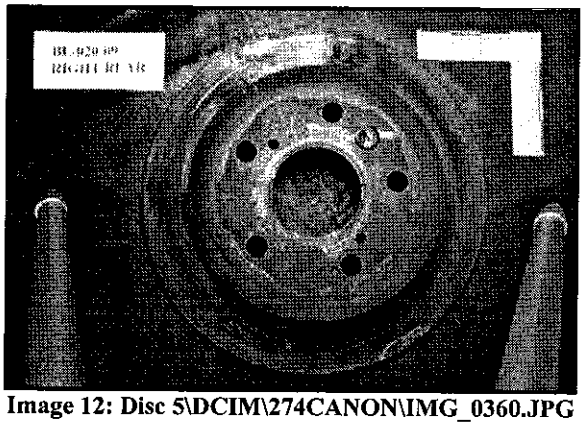


Image 12: Disc 5\DCIM\274CANON\IMG_0360.JPG

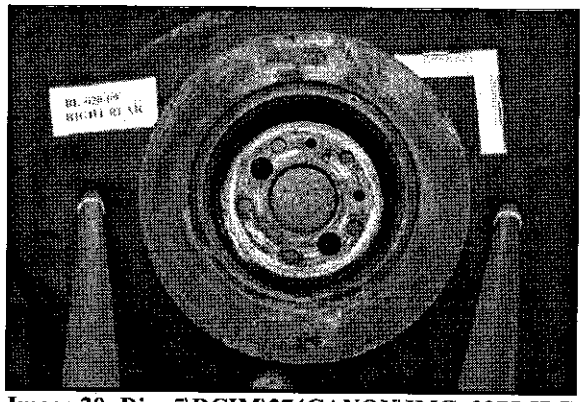


Image 30: Disc 5\DCIM\274CANON\IMG_0375.JPG

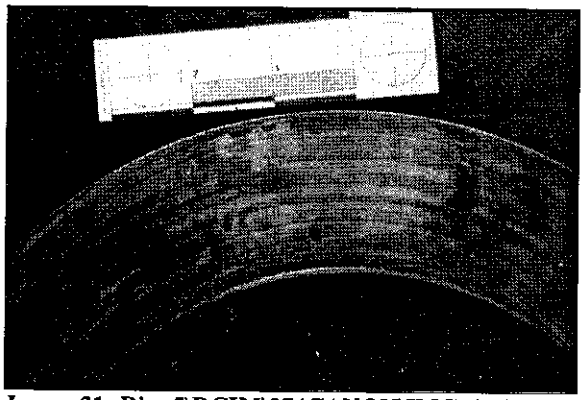


Image 31: Disc 5\DCIM\274CANON\IMG_0369.JPG

Image 32: Disc 5\DCIM\274CANON\IMG_0389.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Pads

Left Front

The brake pads were composed of a bonded semi-metallic friction material. The rotor contact surface of each brake pad was glazed with areas of pitted and arced scoring (Images 33 and 34). Each pad had two grooves cut into the friction material that were used as wear indicators and for cleaning and cooling. These grooves were filled with glazed friction material. The leading edge of the inner pad had a build up of glazed friction material that extended over the side. The surface of the metal support plate, adjacent to the leading edge of the friction material, had intermittent spots of glazed friction material bonded to it. The upper, lower, and trailing edges of both pads were missing material and had rough fibrous appearances. The surface of the metal anti-vibration shims that contacted the metal support plate were blistered and soiled with a glossy, black resin-like material. Pieces of the anti-vibration wire springs were bent and abraded.

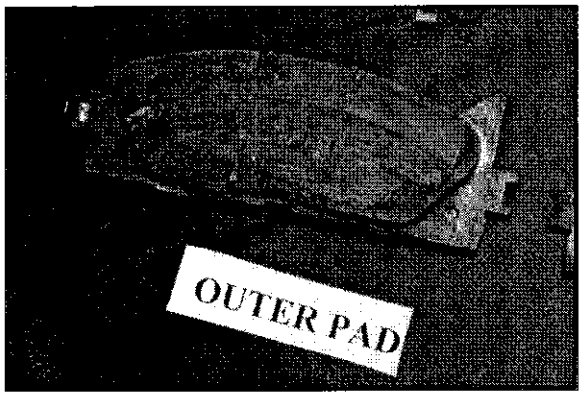


Image 33: Disc 5\DCIM\274CANON\IMG_0005.JPG

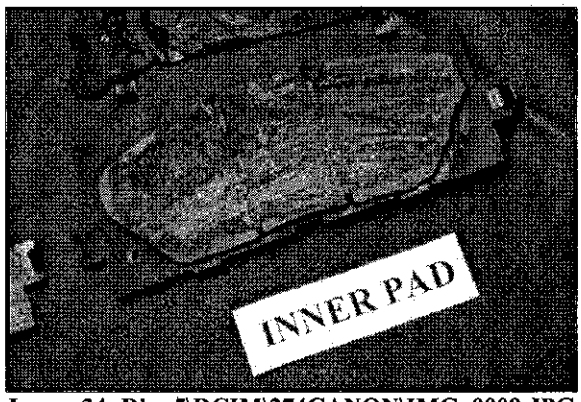


Image 34: Disc 5\DCIM\274CANON\IMG_0009.JPG

The following minimum friction material thickness of each pad was noted:

OUTER	INNER
10/32"	8/32"

Each pad had a minimum thickness above the Federal Vehicle In Use Inspection Standard of 1/32 inch [1].

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Pads (continued)

Right Front

The brake pads were composed of a bonded semi-metallic friction material. The surface of the pads was glazed with areas of pitted and arced scoring (Images 35). The grooves were filled with glazed friction material. The leading edge of the inner pad had a build up of glazed friction material that extended over the side. The upper, lower, and trailing edges of both pads were missing material and had rough fibrous appearances. The surfaces of the metal anti-vibration shims were blistered and discolored to various shades of gray and black. Pieces of the anti-vibration wire springs were bent and abraded.

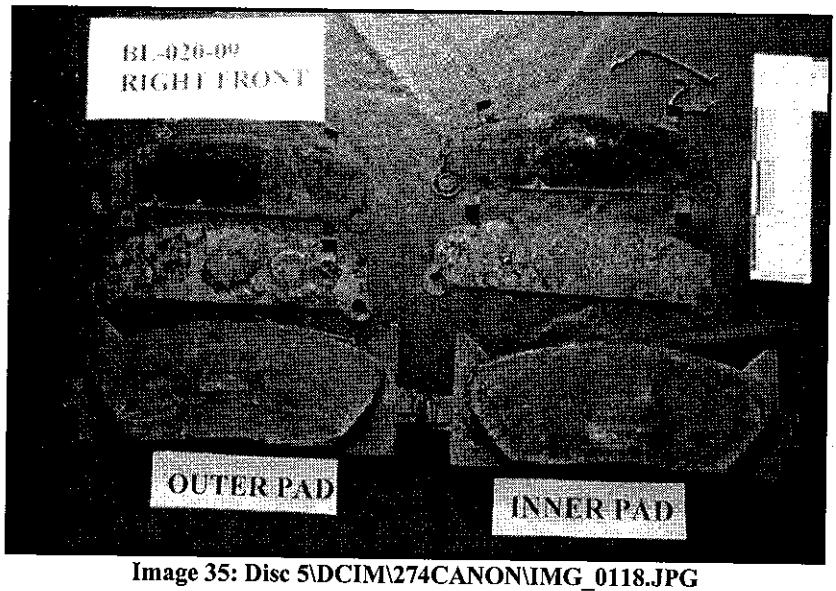


Image 35: Disc 5\DCIM\274CANON\IMG_0118.JPG

The following minimum friction material thickness of each pad was noted:

OUTER	INNER
10/32"	9/32"

Each pad had a minimum thickness above the Federal Vehicle In Use Inspection Standard of 1/32 inch [1].

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Pads (continued)

Left Rear

The brake pads were composed of a bonded semi-metallic friction material. The rotor contact surface of each brake pad was glazed with areas of pitted and arced scoring (Image 36). The friction material was discolored to various shades of white, gray, and yellow. The leading edge of both pads had a build up of glazed friction material. The surface of the metal support plate, adjacent to the leading and trailing edges of the friction material, had intermittent spots of glazed friction material bonded to it. Each metal anti-vibration shim was securely attached to its metal support plate.

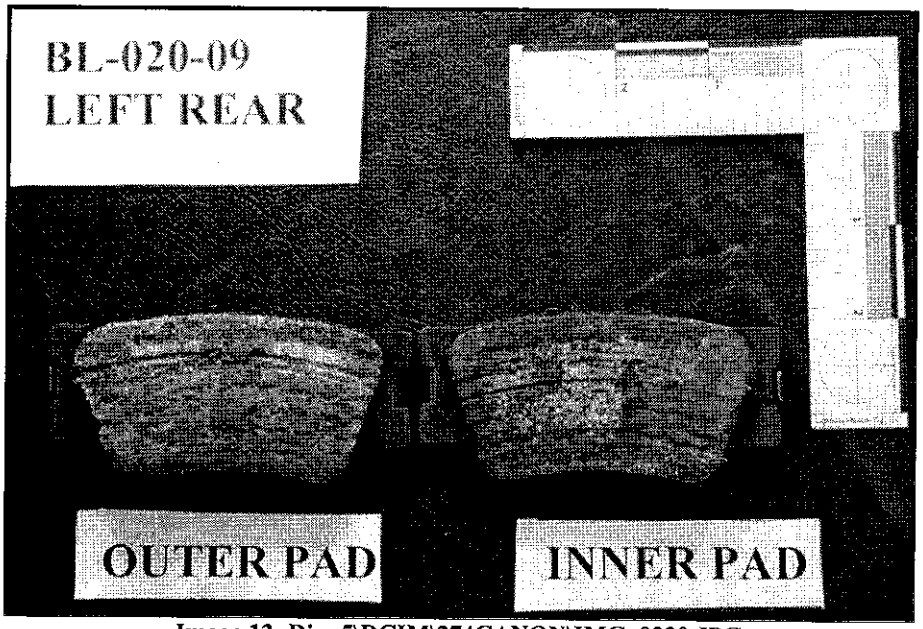


Image 13: Disc 5\DCIM\274CANON\IMG_0230.JPG

The following minimum friction material thickness of each pad was noted:

OUTER	INNER
6/32"	7/32"

Each pad had a minimum thickness above the Federal Vehicle In Use Inspection Standard of 1/32 inch [1].

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Pads (continued)

Right Rear

The brake pads were composed of a bonded semi-metallic friction material. The surface of the pads was glazed with areas of pitting and arced scoring (Image 37). The pitting of the inner pad measured 2/32 inch in depth. The friction material was discolored to various shades of white and gray. The surface of the metal support plate, adjacent to the edges of the friction material, had intermittent spots of glazed friction material bonded to it. The surfaces of the metal anti-vibration shims were blistered and discolored to various shades of gray and black.

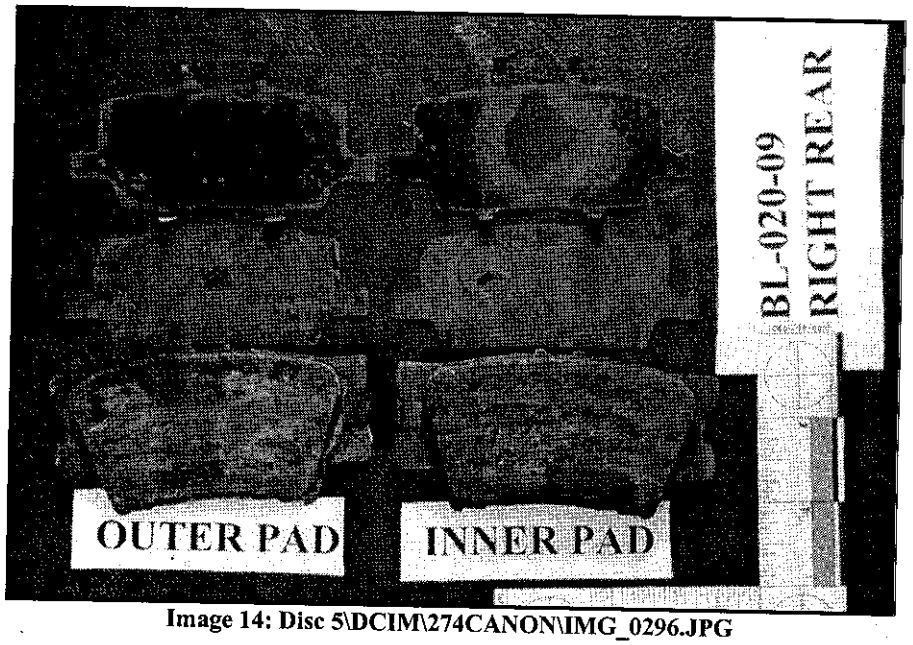


Image 14: Disc 5\DCIM\274CANON\IMG_0296.JPG

The following minimum friction material thickness of each pad was noted:

OUTER	INNER
6/32"	4/32"

Each pad had a minimum thickness above the Federal Vehicle In Use Inspection Standard of 1/32 inch [1].

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Calipers and Brackets

This vehicle was equipped with sliding, single-piston calipers. Prior to removal from Vehicle #1, each caliper was mounted to two sliding pins that were attached to a bracket. Threaded bolts were used to retain each caliper on the sliding pins.

Left Front

The exterior of the caliper and bracket was soiled with dirt. The caliper rubber dust boot and both bracket dust boots were complete and pliable. The surface of the caliper, adjacent to the piston and surrounding pad inspection opening, was soiled with a glossy resin-like material (Image 38). The banjo bolt on the inlet port and the bleeder screw were fractured and separated at their respective ports (Image 39). Each of the fractured surfaces had a rough crystalline appearance. Other than being soiled, the bracket and the anti-vibration springs were generally unremarkable (Images 40 and 41).

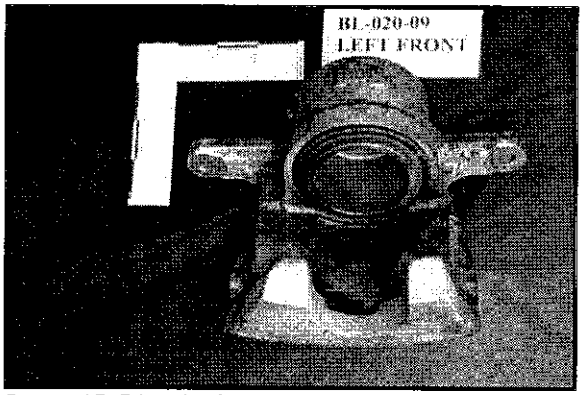


Image 15: Disc 5\DCIM\274CANON\IMG_0050.JPG

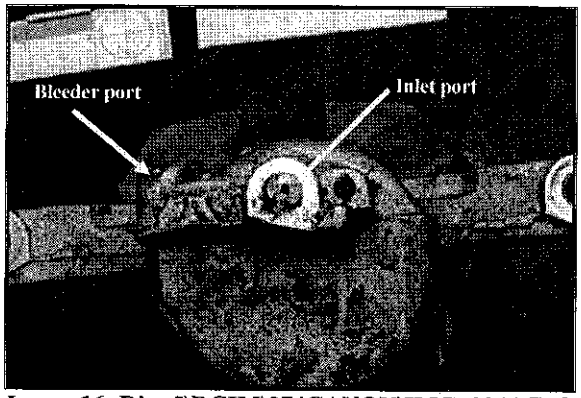


Image 16: Disc 5\DCIM\274CANON\IMG_0044.JPG

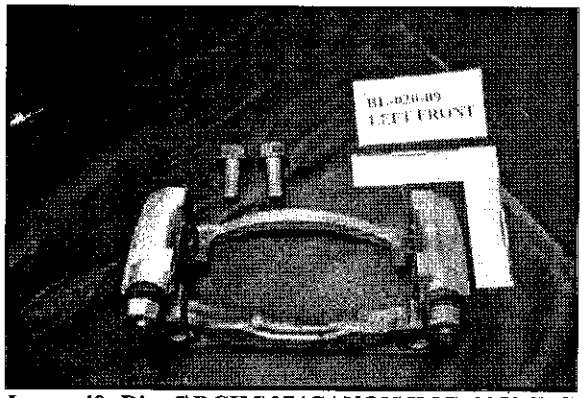


Image 40: Disc 5\DCIM\274CANON\IMG_0052.JPG

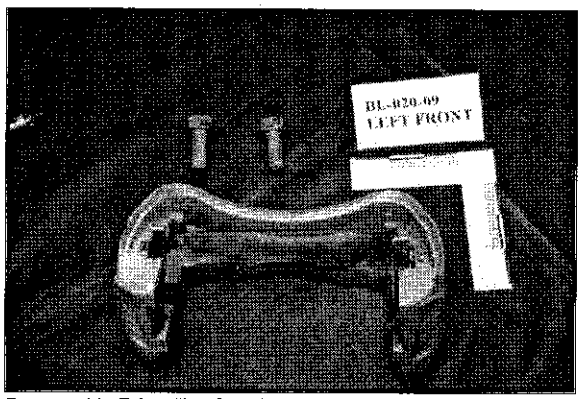


Image 41: Disc 5\DCIM\274CANON\IMG_0066.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Calipers and Brackets (continued)

Right Front

The exterior of the caliper was charred and discolored to various shades of black, gray, and white (Image 42). The majority of the rubber dust boot, between the caliper housing and piston, was missing and the remaining pieces were pitted, fractured, and brittle (Image 43). The rubber brake fluid hose was missing from the crimped fitting attached to the caliper (Image 44). The interior of the crimped fitting was charred and soiled with dirt. The exterior of the bracket was charred and discolored to various shades of black, gray, and white. Both the rubber dust boots, which were normally attached between the sliding pins and the bracket, were missing (Image 45). The anti-vibration springs were generally unremarkable.

Image 42: Disc 5\DCIM\274CANON\IMG_0149.JPG


Image 43: Disc 5\DCIM\274CANON\IMG_0152.JPG

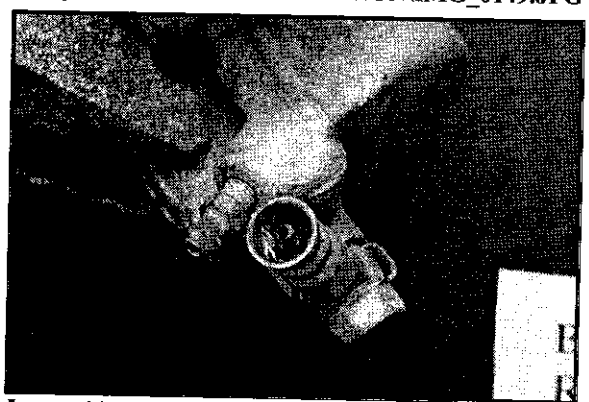


Image 44: Disc 5\DCIM\274CANON\IMG_0156.JPG

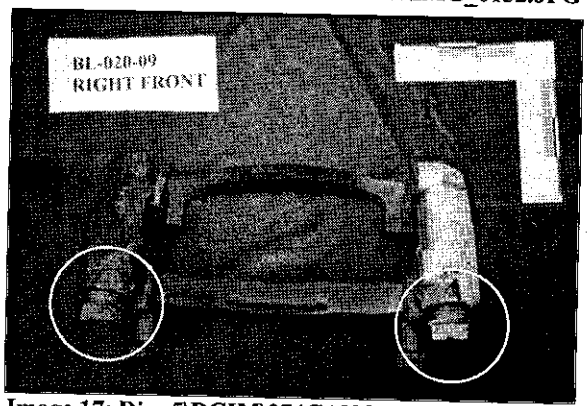


Image 17: Disc 5\DCIM\274CANON\IMG_0167.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Calipers and Brackets (continued)

Left Rear

The exterior of the caliper was charred and discolored to various shades of black and brown (Image 46). The rubber dust boot, between the caliper housing and piston, was complete and pliable. The rubber brake fluid hose was fractured at the outer edge of the crimped fitting attached to the caliper (Image 47). The interior of the crimped fitting contained a charred and melted piece of rubber hose. The exterior of the bracket was charred and discolored to various shades of black and brown (Image 48). Both the rubber dust boots were melted (Image 49). The anti-vibration springs were generally unremarkable.

Image 18: Disc 5\DCIM\274CANON\IMG_0233.JPG

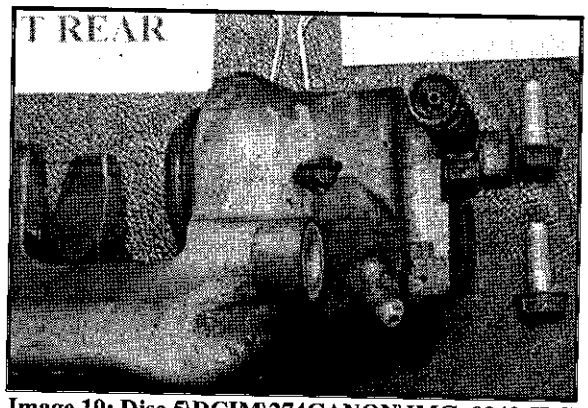


Image 19: Disc 5\DCIM\274CANON\IMG_0242.JPG

Image 20: Disc 5\DCIM\274CANON\IMG_0257.JPG

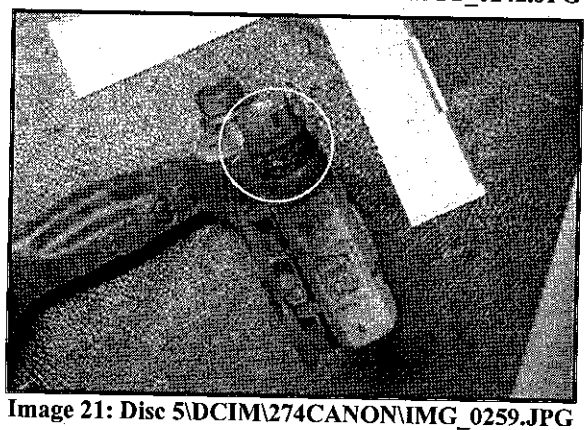


Image 21: Disc 5\DCIM\274CANON\IMG_0259.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Brake Calipers and Brackets (continued)

Right Rear

The exterior of the caliper was charred and discolored to various shades of black and brown (Image 50). Almost the entire rubber dust boot, between the caliper housing and piston, was missing. The small section remaining was charred (Image 51, arrow). The caliper piston was discolored to various shades of purple and blue. The rubber brake fluid hose was missing from the crimped fitting attached to the caliper. The interior of the crimped fitting was charred and soiled with dirt. The exterior of the bracket was charred and discolored to various shades of black and brown (Image 52). Both the rubber dust boots, which were normally attached between the sliding pins and the bracket, were missing (Image 52, circles). The anti-vibration springs were generally unremarkable.

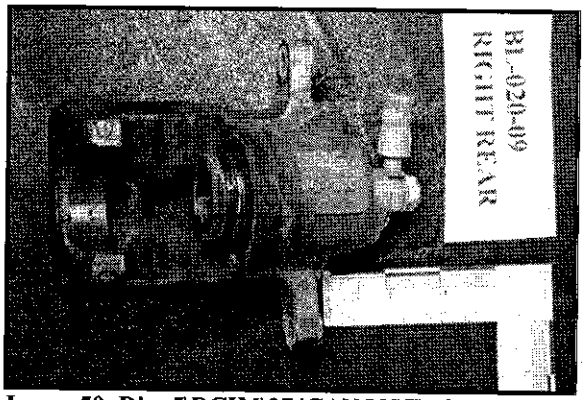


Image 50: Disc 5\DCIM\274CANON\IMG_0318.JPG

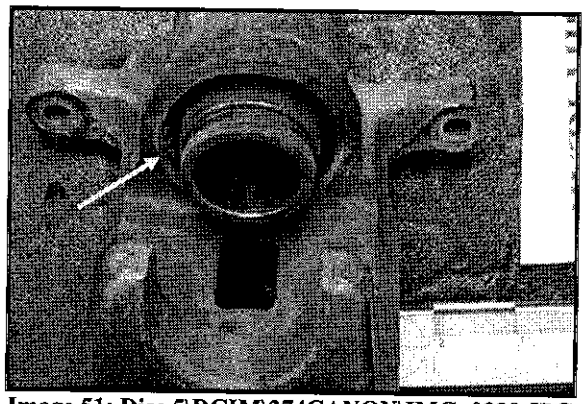


Image 51: Disc 5\DCIM\274CANON\IMG_0338.JPG

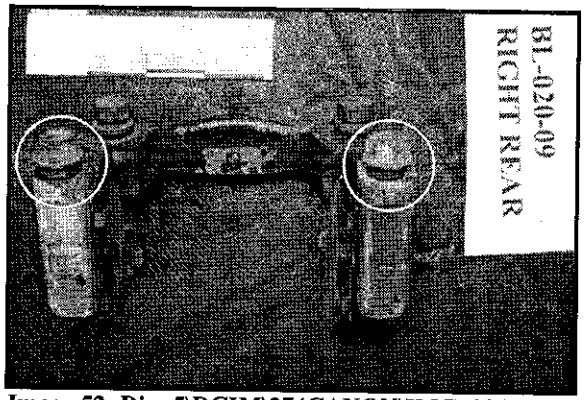


Image 52: Disc 5\DCIM\274CANON\IMG_0341.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Automatic Transmission Housing

On Thursday, September 24, 2009, at 1030 hours, Investigator Parent and MCS-I Hearst arrived at the impound facility of Miller Towing to conduct a visual inspection of the automatic transmission housing on Vehicle #1, specifically the position of the shift lever.

On Friday, September 25, 2009, at 0945 hours, Investigator Parent and MCS-I Hearst arrived at Seaside Buick Pontiac GMC, located at 6435 Miramar Road, San Diego, California, to conduct a visual inspection of the shift lever on an exemplar 2008 Lexus ES 350 in its various positions: park (Image 53), reverse (Image 54), neutral (Image 55), and drive (Image 56).

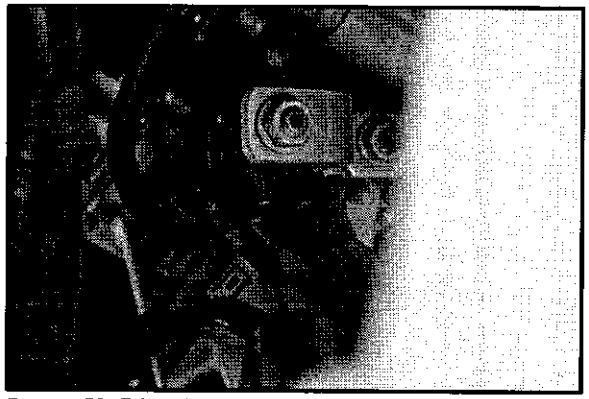


Image 53: Disc 4\DCIM\115CANON\IMG_2889.JPG

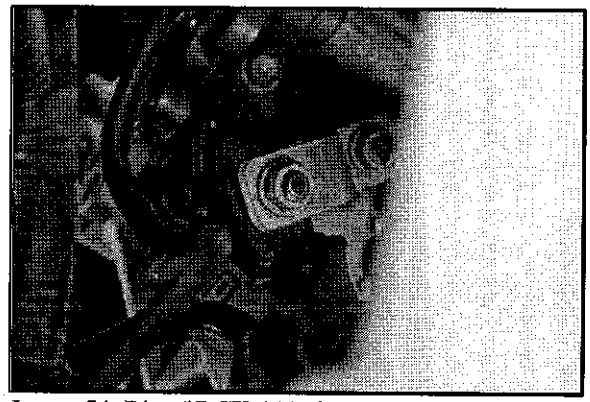


Image 54: Disc 4\DCIM\115CANON\IMG_2888.JPG

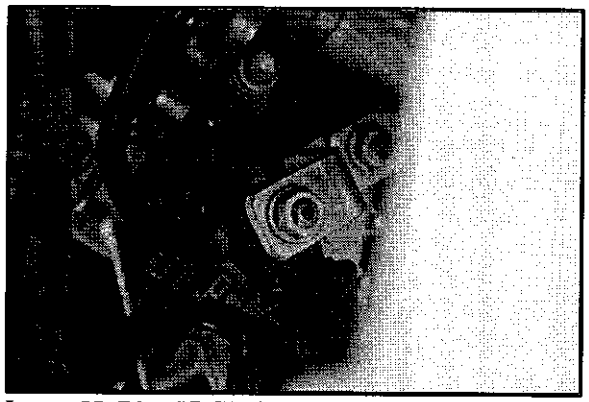


Image 55: Disc 4\DCIM\115CANON\IMG_2887.JPG

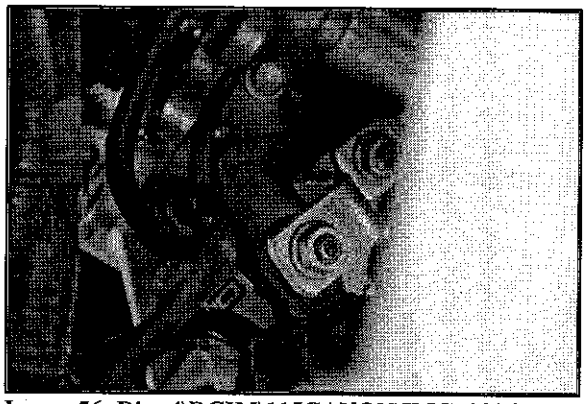


Image 56: Disc 4\DCIM\115CANON\IMG_2886.JPG

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Automatic Transmission Housing (continued)

Although the upper section of the shift lever on the transmission casing of Vehicle #1 was displaced rearward (Image 57, box)[1], a comparison between the shift lever of Vehicle #1 and the shift lever of the exemplar 2008 Lexus ES 350 (Image 58) was made using the orientation of the lower arm of the shift lever. A line was extended along the prolongation of the lower arm (depicted by the dashed line in the images below) of the shift lever of each vehicle, and using a symbol cast on the surface of the transmission housing as a reference (identified by the arrow in the images below), a comparison was made.

In comparing the positions of the transmission housing shift lever on the exemplar 2008 Lexus ES 350 to the position of the transmission housing shift lever on Vehicle #1, it was determined that the transmission shift lever on Vehicle #1 was in the drive position.

Image 57: Disc 4\DCIM\115CANON\IMG_2861.JPG

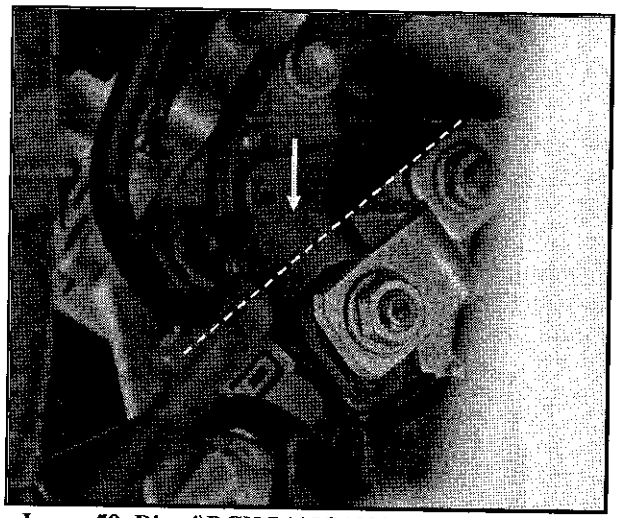


Image 58: Disc 4\DCIM\115CANON\IMG_2886.JPG

1 Image 57 was cropped and rotated to match the size and orientation of Image 58

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Conclusions

The inspection of the brake components revealed several conditions that indicated the components had been subjected to extremely high temperatures. Some of these conditions were a result of the post-collision vehicle fire and other conditions were a result of excessive heat generated by prolonged braking. The following conditions were a result of the post-collision fire:

- The charred, melted, or missing conditions of the caliper piston rubber dust boots at the right-front and right-rear positions.
- The charred, melted, or missing conditions of the slider pin rubber dust boots at the right-front, left-rear, and right-rear positions.
- The charred, melted, or missing conditions of the rubber brake fluid hoses at the right-front, left-rear, and right-rear positions.
- The discoloration of the right-rear caliper piston to various shades of purple and blue.

The heat generated by prolonged braking was of such intensity that the substrate in the brake friction material began to vitrify and bond to the disc surface of the rotor. Rotation of the rotors created the build up of vitrified friction material on the leading edge of the pads and deposited material on the support plates. The following conditions were also a result of the prolonged braking:

- The blistered appearance of the anti-vibration shims. This condition was a result of the heat transfer from the brake pad support plates through the shims to the caliper pistons.
- The non-swept surfaces of the outer disc, adjacent to the hat base, being discolored to a flat white on both front rotors. The remaining non-swept areas, including the cooling fins, being discolored to a reddish-orange. These conditions were a result of oxidation of the cast metal due to extreme high temperature.

MECHANICAL INSPECTION (continued)

Vehicle #1 (2009 Lexus ES 350) (continued)

Conclusions (continued)

The inspection of the brake components revealed the following collision-induced conditions:

- The fractured discs and hats on the left- and right-front rotors. The fractured surfaces had rough crystalline appearances which were a characteristic of an instantaneous failure usually associated with shock load. A shock load is a sudden and powerful force that exceeds the strength of the metal.

- The gouges and dents on the left- and right-front rotors.

- The fractured banjo bolt and bleeder screw on the left-front caliper. The fractured surfaces had rough crystalline appearances which were a characteristic of an instantaneous failure usually associated with shock load.

DIGITAL IMAGE LOG

As a part of this investigation, 666 digital images were taken by MAIT personnel. The digital images were saved to either a recordable compact disc(s) (CD) or digital versatile disc(s) (DVD), which were booked as evidence at the San Diego County Sheriff's Department, Santee Station. Requests regarding the digital images listed below should be made directly to:

San Diego County Sheriff's Department
8811 Cuyamaca Street
Santee, California 92071
(858) 956-4000

DISC	IMAGES (.JPG)	TAKEN BY	DATE TAKEN	LOCATION
1	IMG_2538 through IMG_2546	Parent	8/28/09	Collision Scene
	IMG_2547 through IMG_2623	Parent	8/29/09	
	IMG_8597 through IMG_8650	Snider	8/29/09	
2	IMG_2624 through IMG_2630	Parent	8/31/09	Miller's Towing
3	IMG_2631 through IMG_2650	Parent	9/3/09	Collision scene
	IMG_0001 through IMG_0076	Hearst	9/4/09	Miller's Towing
4	IMG_2860 through IMG_2865	Parent	9/24/09	Miller's Towing
	IMG_2866 through IMG_2889	Parent	9/25/09	Seaside Buick Pontiac GMC
5	IMG_0001 through IMG_0096	Hearst	10/24/09	CHP Border Division office
	IMG_0097 through IMG_0393		10/25/09	

PHYSICAL EVIDENCE ANALYSIS

Physical Evidence Identification

The following table represents the analyzed conclusions about the physical evidence documented by MAIT Investigators on Friday, August 28, and Saturday, August 29, 2009, at the collision scene. These analyzed conclusions were based upon the dynamics analysis, physical evidence, and vehicle damage.

ITEM #	PHYSICAL EVIDENCE IDENTIFICATION
1	A tire friction mark deposited by the right-rear tire of Vehicle #1 (2009 Lexus ES 350)
2	A tire friction mark deposited by the left-rear tire of Vehicle #1
3	A tire friction mark deposited by the left-rear tire of Vehicle #2 (1993 Ford Explorer)
4	A gray material transferred by an undetermined component of Vehicle #1 or Vehicle #2
5	A tire friction mark deposited by the right-rear tire of Vehicle #2
6	A gouge created by the right-rear wheel of Vehicle #2
7	A gouge created by the right-rear wheel of Vehicle #2
8	A tire friction mark deposited by the left-front tire of Vehicle #2
9	A trail of fluid deposited by an unknown component near the right-rear wheel of Vehicle #2
10	A scrape created by an undetermined undercarriage component of Vehicle #1
11	A gouge created by an undetermined undercarriage component of Vehicle #1
12	A scrape created by the detached left-front wheel of Vehicle #1
13	A scrape created by an undetermined undercarriage component of Vehicle #1
14	A section of window glass, broken from the rear window of Vehicle #2
15	A piece of plastic molding deposited by the left-rear door of Vehicle #1
16	A scrape created by the detached left-front wheel of Vehicle #1
17	A scrape created by the detached left-front wheel of Vehicle #1
18	An area of portland cement concrete curb damaged by the detached left-front wheel of Vehicle #1
19	A tire friction mark deposited by the right-rear tire of Vehicle #1

PHYSICAL EVIDENCE ANALYSIS (continued)

Physical Evidence Identification (continued)

ITEM #	PHYSICAL EVIDENCE IDENTIFICATION
20	A tire friction mark deposited by the right-front tire of Vehicle #1
21	An area of portland cement concrete curb damaged by the right-front wheel of Vehicle #1
22	A gouge created by the right-rear wheel of Vehicle #1
23	An area of vehicle debris deposited by Vehicle #1 and Vehicle #2
24	A gouge created by an undetermined component near the left front of Vehicle #1
25	A tire friction mark deposited by the right-rear tire of Vehicle #1
26A	The remaining base of a wooden fence post broken by Vehicle #1
26B	A section of wooden post-and-rail fence displaced and broken by Vehicle #1
26C	A section of wooden post-and-rail fence displaced and broken by Vehicle #1
26D	A section of wooden post-and-rail fence displaced and broken by Vehicle #1
26E	A section of wooden post-and-rail fence displaced and broken by Vehicle #1
27	A furrow created by the right-front tire and wheel of Vehicle #1
28	A furrow created by the left-front of Vehicle #1
29	A furrow created by the right side of Vehicle #1
30	A damaged section of the right-rear wheel of Vehicle #1
31	An area of vehicle components deposited by Vehicle #1
32	The front bumper cover detached from the front of Vehicle #1
33	The right sill detached from Vehicle #1
34	An area of vegetation and dirt disrupted by the left side of Vehicle #1
35	The rear bumper cover detached from Vehicle #1
36	A section of exhaust pipe and muffler detached from the undercarriage of Vehicle #1
37	A damaged section of the left-front wheel of Vehicle #1
38	A section of wooden post-and-rail fence displaced and broken by Vehicle #1
39	The tire detached from the left-front wheel of Vehicle #1

PHYSICAL EVIDENCE ANALYSIS (continued)

Physical Evidence Identification (continued)

ITEM #	PHYSICAL EVIDENCE IDENTIFICATION
A	A throttle body detached from the engine of Vehicle #1
B	A section of an oil filter housing detached from the engine of Vehicle #1
C	A section of brake rotor broken from the right-front brake rotor of Vehicle #1
D	A section of the radiator support detached from Vehicle #1
E	A wheel and strut assembly detached from the left front axle of Vehicle #1

DYNAMICS DIAGRAM

The dynamics diagram reflects the at- and -post impact positions of Vehicle #1 (2009 Lexus ES 350) and Vehicle #2 (1993 Ford Explorer). The dynamics diagram is dependent upon the observed vehicle damage and physical evidence documented by MAIT investigators during the course of this investigation. The vehicle positions depicted in the diagram are not relative to time.

INSERT
DYNAMICS DIAGRAM

AREAS OF IMPACT

The following areas of impact (AOI) were determined by considering the physical evidence, damage sustained by Vehicle #1 (2009 Lexus ES 350) and Vehicle #2 (1993 Ford Explorer), and vehicle dynamics analysis. The same coordinate system that was utilized to document the collision scene and physical evidence locations is used to describe the AOI's listed below:

AOI #1 (Vehicle #1 versus Vehicle #2)

The left front corner of Vehicle #1 impacted the right rear of Vehicle #2 at an easting of 6330293.6 and a northing of 1885681.5. These coordinates were equivalent to a location 8.7 feet north of (and perpendicular to) the north edge of the portland cement concrete (PCC) cross gutter and 62.0 feet west of (and perpendicular to) the east curb prolongation of State Route 125 northbound to Mission Gorge Road.

AOI #2 (Left-front tire/wheel assembly of Vehicle #1 versus PCC curb)

The detached left-front tire/wheel assembly of Vehicle #1 impacted the PCC curb at an easting of 6330270.0 and a northing of 1885770.9. These coordinates were equivalent to a location on the PCC curb bordering the north edge of Mission Gorge Road and 85.5 feet west of (and perpendicular to) the east curb prolongation of State Route 125 northbound to Mission Gorge Road.

AOI #3 (Right-front wheel of Vehicle #1 versus PCC curb)

The right-front wheel of Vehicle #1 impacted the PCC curb at an easting of 6330287.2 and a northing of 1885775.4. These coordinates were equivalent to a location on the PCC curb bordering the north edge of Mission Gorge Road and 68.3 feet west of (and perpendicular to) the east curb prolongation of State Route 125 northbound to Mission Gorge Road.

AOI #4 (Right-rear wheel of Vehicle #1 versus PCC curb)

The right-rear wheel of Vehicle #1 impacted the PCC curb at an easting of 6330292.1 and a northing of 1885776.5. These coordinates were equivalent to a location on the PCC curb bordering the north edge of Mission Gorge Road and 63.4 feet west of (and perpendicular to) the east curb prolongation of State Route 125 northbound to Mission Gorge Road.

AREAS OF IMPACT (continued)

AOI #5 (Vehicle #1 versus wooden post-and-rail fence)

The right front corner of Vehicle #1 impacted the wooden post-and-rail fence at an easting of 6330282.7 and a northing of 1885815.9. These coordinates were equivalent to a location 40.0 feet north of (and perpendicular to) the PCC curb bordering the north edge of Mission Gorge Road and 73.2 feet west of (and perpendicular to) the east curb prolongation of State Route 125 northbound to Mission Gorge Road.

AOI #6 (Vehicle #1 versus vegetation-covered dirt embankment)

The right front of Vehicle #1 impacted the ascending vegetation-covered dirt embankment at an easting of 6330281.2 and a northing of 1885820.0. These coordinates were equivalent to a location 44.3 feet north of (and perpendicular to) the PCC curb bordering the north edge of Mission Gorge Road and 74.2 feet west of (and perpendicular to) the east curb prolongation of State Route 125 northbound to Mission Gorge Road.

AOI #7 (Vehicle #1 versus vegetation-covered dirt ground)

The left side of Vehicle #1 impacted the vegetation-covered dirt ground at an easting of 6330290.1 and a northing of 1885882.9. These coordinates were equivalent to a location 103.6 feet north of (and perpendicular to) the PCC curb bordering the north edge of Mission Gorge Road and 65.3 feet west of (and perpendicular to) the east curb prolongation of State Route 125 northbound to Mission Gorge Road.

INVESTIGATION FINDINGS

The following conclusions were based on the totality of the investigation. The investigation included an analysis of the physical evidence, analysis of the motion of the vehicle during the collision sequence, and the limited mechanical inspection of Vehicle #1 (2009 Lexus ES 350):

Vehicle Factors

- A limited mechanical inspection of the brake components revealed the components had been subjected to extremely high temperatures as a result of prolonged braking

- The heat generated by prolonged braking was of such intensity that the substrate in the brake friction material began to vitrify and bond to the disc surface of the rotor. In addition, the non-swept surfaces of the outer disc, adjacent to the hat base, were discolored to a flat white on both front rotors and the cooling fins were discolored to a reddish-orange hue.

- The visual inspection of the shift lever on the automatic transmission housing revealed Vehicle #1 was in drive at the time of the inspection. While in drive, the shift lever is in its most rearward position. Front-to-rear collision forces would have forced the shift lever forward, not rearward. Therefore, it is unlikely the shift lever was forced into that position as a result of the impact with Vehicle #2 (1993 Ford Explorer) or the ascending vegetation-covered dirt embankment. However, the possibility of contact between a vehicle occupant and the shifter, mounted on the center console, during the collision cannot be ruled out.

RECOMMENDATIONS

It is recommended that this supplemental report be forwarded to the San Diego County Sheriff's Department, where it should be reviewed by the investigating officer to assist with the completion of Traffic Collision Report #09056454.

REFERENCES

1. **U.S. Department of Transportation.** *Code of Federal Regulations (Title 49, Part 570.5(g)).* Washington, D.C. : U.S. Government Printing Office, 2007. Vol. 5.

DATE OF COLLISION *(MONTH-DAY-YEAR)*	TIME *(2400)*	NCIC	OFFICER I.D.	NUMBER	MAIT CASE NUMBER	PAGE
08/29/2009	1837	3700	4555	09056454	BL-020-09	A1

ANNEX A (SURVEY DATA POINTS)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
1	6330240.0	1885769.4	329.4
2	6330285.8	1885378.7	330.5
3	6330295.4	1885378.6	330.7
4	6330296.9	1885378.8	330.9
5	6330306.3	1885379.6	330.7
6	6330303.3	1885403.7	330.4
7	6330309.8	1885387.1	330.5
8	6330318.5	1885379.9	330.4
9	6330321.8	1885380.6	330.3
10	6330325.0	1885380.0	330.2
11	6330333.8	1885388.9	330.0
12	6330336.6	1885380.2	330.0
13	6330345.0	1885380.3	329.9
14	6330355.5	1885381.0	329.3
15	6330356.5	1885380.6	329.6
16	6330373.1	1885381.9	333.3
17	6330375.1	1885473.0	333.4
18	6330363.7	1885465.6	330.9
19	6330361.3	1885461.4	331.5
20	6330360.8	1885462.8	330.4
21	6330355.4	1885469.3	328.4
22	6330344.9	1885469.9	328.8
23	6330359.3	1885494.3	329.1
24	6330341.6	1885493.9	328.8
25	6330333.7	1885484.7	329.1
26	6330321.8	1885479.5	329.3
27	6330309.7	1885482.8	329.5
28	6330296.9	1885481.9	329.7
29	6330295.3	1885482.0	329.5
30	6330292.0	1885459.8	331.1
31	6330295.3	1885459.5	329.8
32	6330287.5	1885478.5	329.4
33	6330293.4	1885926.4	318.5
34	6330302.1	1885926.6	318.8

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
35	6330302.7	1885933.6	318.6
36	6330294.7	1885932.4	318.6
37	6330289.2	1885558.3	329.4
38	6330355.5	1885549.5	327.9
39	6330354.3	1885549.6	328.0
40	6330356.2	1885549.6	328.2
41	6330356.1	1885559.5	328.1
42	6330360.7	1885559.6	328.4
43	6330355.3	1885559.5	327.5
44	6330355.3	1885571.6	327.5
45	6330354.2	1885592.5	328.6
46	6330345.0	1885582.7	328.6
47	6330345.2	1885590.3	328.7
48	6330354.1	1885599.1	328.7
49	6330366.0	1885598.4	329.9
50	6330336.6	1885614.3	329.2
51	6330325.2	1885609.7	329.2
52	6330321.9	1885603.7	329.2
53	6330318.6	1885605.3	329.2
54	6330306.4	1885600.5	329.4
55	6330309.8	1885576.3	329.3
56	6330297.0	1885574.8	329.4
57	6330292.6	1885575.3	329.9
58	6330288.4	1885590.2	329.3
59	6330292.2	1885616.0	329.1
60	6330292.5	1885614.3	329.2
61	6330291.7	1885623.9	330.6
62	6330292.0	1885632.7	329.2
63	6330295.2	1885637.9	329.4
64	6330292.3	1885639.7	329.3
65	6330289.7	1885637.6	329.4
66	6330294.3	1885641.5	329.7
67	6330297.1	1885642.5	329.7
68	6330310.0	1885647.5	329.8
69	6330322.1	1885652.2	329.8
70	6330334.0	1885656.7	329.9
71	6330346.1	1885661.4	329.9
72	6330354.1	1885664.3	330.0
73	6330364.0	1885668.2	329.8

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
74	6330355.5	1885635.3	329.2
75	6330360.3	1885658.9	329.6
76	6330365.8	1885668.9	329.8
77	6330375.3	1885679.7	330.0
78	6330387.2	1885688.1	330.2
79	6330399.2	1885692.9	330.3
80	6330409.3	1885694.9	330.1
81	6330409.1	1885696.1	330.2
82	6330395.0	1885689.1	330.9
83	6330389.4	1885686.7	330.8
84	6330410.0	1885689.2	331.0
85	6330399.0	1885686.8	330.9
86	6330395.5	1885683.6	330.8
87	6330395.8	1885681.9	330.8
88	6330393.0	1885680.8	330.6
89	6330392.6	1885682.9	331.0
90	6330388.9	1885681.9	330.7
91	6330368.1	1885655.2	330.3
92	6330362.8	1885646.7	329.9
93	6330361.2	1885635.2	329.8
94	6330362.5	1885638.0	329.8
95	6330379.0	1885627.3	333.0
96	6330397.2	1885651.4	333.3
97	6330457.9	1885687.3	332.1
98	6330389.5	1885676.6	331.0
99	6330392.8	1885674.7	331.1
100	6330393.8	1885683.3	331.0
101	6330390.4	1885702.2	330.6
102	6330386.9	1885719.0	331.2
103	6330384.1	1885735.8	331.5
104	6330372.0	1885666.3	330.5
105	6330354.1	1885676.8	330.2
106	6330352.4	1885686.7	330.2
107	6330317.3	1885678.7	329.9
108	6330288.2	1885670.7	329.8
109	6330240.0	1885655.1	329.5
110	6330243.4	1885645.8	329.4
111	6330241.6	1885572.5	327.9
112	6330240.4	1885572.6	327.6

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
113	6330240.7	1885548.5	328.2
114	6330239.4	1885548.5	328.2
115	6330231.3	1885520.8	329.1
116	6330250.1	1885512.9	328.8
117	6330261.0	1885517.1	329.0
118	6330274.2	1885551.5	329.1
119	6330280.3	1885547.8	329.2
120	6330268.2	1885547.9	329.0
121	6330268.3	1885573.1	329.0
122	6330275.0	1885600.0	329.3
123	6330275.3	1885629.5	329.5
124	6330288.2	1885637.2	329.7
125	6330262.1	1885571.7	328.8
126	6330261.1	1885594.1	329.0
127	6330242.7	1885614.1	328.8
128	6330217.5	1885620.3	329.0
129	6330209.1	1885621.7	329.1
130	6330215.4	1885634.0	329.4
131	6330211.3	1885644.0	329.3
132	6330161.0	1885620.2	329.0
133	6330160.5	1885621.4	329.0
134	6330191.0	1885625.6	329.2
135	6330208.1	1885621.0	329.0
136	6330220.5	1885613.2	328.7
137	6330236.1	1885592.1	328.5
138	6330240.4	1885572.6	327.6
139	6330239.6	1885560.5	327.6
140	6330232.7	1885584.3	329.0
141	6330223.3	1885591.6	329.3
142	6330205.2	1885616.0	329.6
143	6330202.3	1885620.9	329.7
144	6330196.4	1885622.3	329.8
145	6330175.3	1885645.9	329.6
146	6330182.4	1885649.2	329.6
147	6330189.2	1885652.2	329.6
148	6330188.4	1885664.7	329.9
149	6330151.8	1885648.0	329.7
150	6330161.1	1885665.5	330.0
151	6330160.9	1885666.6	330.1

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
152	6330160.4	1885667.3	330.5
153	6330160.1	1885668.3	330.2
154	6330189.1	1885679.1	330.2
155	6330207.9	1885686.6	330.3
156	6330207.1	1885688.2	330.7
157	6330203.1	1885698.2	330.7
158	6330202.5	1885700.0	330.3
159	6330136.5	1885675.8	329.8
160	6330134.4	1885689.1	329.4
161	6330134.1	1885702.4	329.2
162	6330140.7	1885705.6	329.2
163	6330169.6	1885718.1	329.5
164	6330169.2	1885704.9	329.7
165	6330133.3	1885715.2	329.2
166	6330131.7	1885718.4	329.1
167	6330131.1	1885719.6	329.0
168	6330130.6	1885720.3	329.1
169	6330118.0	1885757.4	325.5
170	6330125.8	1885760.8	325.6
171	6330161.1	1885730.1	329.3
172	6330159.5	1885732.2	329.1
173	6330165.0	1885729.0	329.4
174	6330197.4	1885699.5	330.2
175	6330211.8	1885700.0	330.3
176	6330221.0	1885698.9	330.4
177	6330231.2	1885696.8	330.5
178	6330232.1	1885696.1	330.5
179	6330231.4	1885695.2	330.4
180	6330222.1	1885691.9	330.3
181	6330193.8	1885681.0	330.2
182	6330196.2	1885681.1	330.2
183	6330231.0	1885709.7	330.3
184	6330223.9	1885730.3	329.8
185	6330217.6	1885756.5	329.7
186	6330213.7	1885758.5	329.3
187	6330214.7	1885755.6	329.6
188	6330216.7	1885759.5	329.4
189	6330228.4	1885758.0	329.5
190	6330230.0	1885753.6	329.7

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
191	6330259.6	1885767.5	329.7
192	6330310.4	1885780.5	329.8
193	6330321.3	1885790.7	330.1
194	6330322.0	1885783.6	330.3
195	6330326.8	1885790.8	330.2
196	6330324.5	1885786.6	330.3
197	6330307.2	1885784.3	329.8
198	6330331.0	1885788.2	330.0
199	6330350.8	1885791.1	330.5
200	6330353.5	1885794.5	330.5
201	6330349.5	1885788.2	329.9
202	6330331.0	1885829.0	326.8
203	6330326.6	1885827.1	326.8
204	6330362.8	1885832.2	327.1
205	6330403.5	1885834.5	327.8
206	6330413.9	1885797.8	330.4
207	6330447.2	1885784.8	331.1
208	6330449.4	1885774.1	331.2
209	6330438.6	1885760.8	331.4
210	6330424.9	1885748.7	331.6
211	6330427.1	1885739.2	331.8
212	6330427.2	1885737.9	331.9
213	6330427.1	1885737.5	332.4
214	6330427.2	1885736.7	332.4
215	6330427.2	1885736.4	331.9
216	6330427.2	1885735.1	331.8
217	6330401.1	1885734.0	332.2
218	6330371.4	1885729.4	332.0
219	6330356.9	1885726.1	331.6
220	6330355.7	1885726.6	331.7
221	6330356.6	1885727.6	331.6
222	6330381.6	1885739.9	331.5
223	6330376.8	1885733.8	331.6
224	6330379.0	1885742.7	331.4
225	6330375.9	1885744.7	331.2
226	6330371.6	1885741.5	331.3
227	6330364.8	1885740.4	331.3
228	6330366.7	1885730.7	331.6
229	6330362.9	1885751.0	331.1

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
230	6330360.5	1885762.9	330.7
231	6330361.4	1885763.1	330.8
232	6330361.7	1885774.1	330.5
233	6330355.8	1885788.1	330.2
234	6330368.5	1885715.6	331.1
235	6330376.1	1885716.9	331.1
236	6330374.5	1885705.6	330.7
237	6330390.1	1885708.4	330.9
238	6330364.9	1885703.9	330.8
239	6330357.9	1885701.0	330.7
240	6330351.0	1885696.9	330.6
241	6330345.1	1885690.9	330.4
242	6330341.3	1885684.8	330.2
243	6330335.6	1885670.9	330.1
244	6330334.6	1885665.0	330.0
245	6330334.1	1885660.1	330.0
246	6330231.9	1885741.4	329.7
247	6330224.4	1885744.0	329.6
248	6330222.6	1885738.5	329.7
249	6330230.5	1885735.5	329.7
250	6330298.3	1885676.6	330.0
251	6330297.8	1885685.8	330.2
252	6330297.8	1885698.1	330.5
253	6330296.9	1885704.1	330.8
254	6330296.7	1885713.3	330.9
255	6330292.7	1885679.2	330.0
256	6330292.8	1885687.3	330.3
257	6330292.7	1885695.0	330.4
258	6330292.5	1885701.0	330.7
259	6330292.0	1885707.0	330.8
260	6330291.7	1885710.9	330.9
261	6330288.1	1885680.8	330.1
262	6330287.8	1885685.8	330.2
263	6330286.3	1885692.3	330.3
264	6330283.2	1885700.7	330.6
265	6330279.3	1885706.4	330.7
266	6330272.3	1885712.7	330.7
267	6330267.6	1885715.5	330.6

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
268	6330291.8	1885681.1	330.1
269	6330291.6	1885681.6	330.1
270	6330290.6	1885687.4	330.2
271	6330287.7	1885693.2	330.4
272	6330286.0	1885696.3	330.5
273	6330283.1	1885700.9	330.6
274	6330277.9	1885705.6	330.7
275	6330273.3	1885708.6	330.7
276	6330268.0	1885711.1	330.6
277	6330262.7	1885713.8	330.5
278	6330262.3	1885717.4	330.5
279	6330262.8	1885720.9	330.4
280	6330261.8	1885725.5	330.3
281	6330259.9	1885729.5	330.2
282	6330253.2	1885733.9	330.0
283	6330248.9	1885735.3	330.0
284	6330239.9	1885738.5	329.8
285	6330232.1	1885741.4	329.6
286	6330290.6	1885688.3	330.3
287	6330290.2	1885689.4	330.3
288	6330289.9	1885690.0	330.3
289	6330289.5	1885690.9	330.3
290	6330289.2	1885691.4	330.3
291	6330286.8	1885695.7	330.5
292	6330286.7	1885695.9	330.5
293	6330286.1	1885696.8	330.5
294	6330285.9	1885697.2	330.6
295	6330274.8	1885712.9	330.7
296	6330270.3	1885718.3	330.6
297	6330266.2	1885722.4	330.4
298	6330264.5	1885723.3	330.4
299	6330264.7	1885710.6	330.6
300	6330261.9	1885716.7	330.5
301	6330258.2	1885731.1	330.2
302	6330246.1	1885735.8	329.9
303	6330235.3	1885739.2	329.8
304	6330293.9	1885698.4	330.6
305	6330293.5	1885700.4	330.6
306	6330293.5	1885701.1	330.7

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
307	6330293.9	1885701.3	330.7
308	6330294.3	1885701.6	330.7
309	6330294.2	1885702.5	330.7
310	6330294.6	1885702.6	330.7
311	6330294.7	1885702.1	330.7
312	6330294.7	1885701.0	330.7
313	6330294.2	1885700.4	330.7
314	6330291.4	1885695.3	330.4
315	6330291.4	1885695.4	330.4
316	6330291.3	1885695.7	330.4
317	6330289.1	1885698.8	330.6
318	6330289.0	1885699.5	330.6
319	6330288.9	1885700.1	330.6
320	6330292.1	1885698.0	330.5
321	6330291.9	1885698.9	330.6
322	6330291.8	1885699.8	330.6
323	6330291.8	1885700.5	330.7
324	6330291.8	1885701.1	330.7
325	6330298.3	1885711.1	330.9
326	6330297.4	1885711.8	330.9
327	6330298.2	1885712.5	331.0
328	6330298.7	1885712.8	331.0
329	6330298.8	1885713.4	331.0
330	6330299.4	1885713.0	331.0
331	6330299.4	1885711.8	331.0
332	6330298.8	1885711.5	330.9
333	6330298.3	1885711.4	330.9
334	6330298.3	1885711.1	330.9
335	6330291.6	1885715.0	330.9
336	6330293.0	1885716.6	330.9
337	6330288.3	1885702.3	330.7
338	6330287.8	1885703.5	330.7
339	6330287.4	1885704.6	330.7
340	6330286.8	1885706.0	330.7
341	6330273.4	1885757.4	329.9
342	6330273.1	1885758.6	329.9
343	6330272.7	1885760.0	330.0
344	6330268.8	1885770.8	330.2

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
345	6330269.4	1885770.6	330.1
346	6330269.4	1885770.5	330.2
347	6330270.7	1885770.9	330.2
348	6330270.8	1885771.3	330.1
349	6330271.0	1885771.4	330.1
350	6330293.1	1885763.5	330.1
351	6330292.9	1885765.5	330.1
352	6330292.5	1885769.5	330.0
353	6330292.2	1885774.9	329.9
354	6330287.9	1885765.4	330.0
355	6330287.9	1885768.4	330.0
356	6330286.9	1885773.5	329.8
357	6330287.0	1885775.2	330.2
358	6330286.7	1885775.6	330.0
359	6330287.4	1885775.6	330.2
360	6330287.5	1885775.3	330.2
361	6330292.1	1885776.5	330.2
362	6330313.0	1885784.7	329.9
363	6330318.7	1885771.1	330.2
364	6330318.5	1885763.7	330.2
365	6330313.6	1885762.1	330.3
366	6330320.4	1885744.9	330.7
367	6330324.6	1885728.7	331.1
368	6330315.1	1885723.4	331.1
369	6330309.5	1885720.2	331.0
370	6330301.0	1885698.8	330.6
371	6330288.2	1885699.2	330.6
372	6330269.2	1885715.6	330.6
373	6330259.2	1885710.6	330.5
374	6330255.8	1885726.2	330.2
375	6330239.5	1885736.3	329.9
376	6330241.9	1885751.1	329.8
377	6330243.1	1885762.5	329.6
378	6330259.7	1885768.8	330.0
379	6330273.5	1885785.8	328.7
380	6330271.4	1885802.2	327.0
381	6330298.0	1885811.1	326.9
382	6330296.7	1885791.1	328.8
383	6330283.5	1885774.3	330.2

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
384	6330291.5	1885776.3	330.3
385	6330291.6	1885776.8	330.2
386	6330284.2	1885816.3	327.4
387	6330276.7	1885814.2	326.8
388	6330291.6	1885818.3	327.0
389	6330283.9	1885818.2	326.2
390	6330280.9	1885818.3	326.8
391	6330281.7	1885820.7	327.5
392	6330279.7	1885817.7	326.7
393	6330277.7	1885812.3	326.8
394	6330276.9	1885818.4	327.5
395	6330275.0	1885821.2	328.7
396	6330281.4	1885818.4	326.8
397	6330281.0	1885822.5	328.2
398	6330280.3	1885826.8	330.7
399	6330280.7	1885819.7	327.3
400	6330277.9	1885819.9	327.5
401	6330279.7	1885824.3	329.4
402	6330277.1	1885824.4	329.9
403	6330286.8	1885822.6	327.8
404	6330284.5	1885821.8	327.8
405	6330282.3	1885824.6	329.1
406	6330281.8	1885828.6	331.1
407	6330285.4	1885829.7	331.1
408	6330288.3	1885828.7	330.3
409	6330287.2	1885826.8	329.7
410	6330283.8	1885830.0	331.5
411	6330283.1	1885830.3	331.6
412	6330283.0	1885829.6	331.4
413	6330283.6	1885829.3	331.1
414	6330282.9	1885828.2	330.7
415	6330282.6	1885828.0	330.7
416	6330281.8	1885828.7	331.2
417	6330280.9	1885827.4	330.8
418	6330279.6	1885827.2	330.8
419	6330279.6	1885828.1	331.1
420	6330278.7	1885828.9	331.5
421	6330279.6	1885829.6	331.7
422	6330281.3	1885829.4	331.6

ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
423	6330281.8	1885841.8	328.0
424	6330286.5	1885844.7	327.2
425	6330273.2	1885827.2	331.5
426	6330273.6	1885828.2	331.7
427	6330270.3	1885830.7	331.2
428	6330269.7	1885829.4	331.6
429	6330287.5	1885884.0	325.5
430	6330285.9	1885888.2	323.5
431	6330289.0	1885892.0	322.1
432	6330293.1	1885893.0	322.2
433	6330296.4	1885891.6	323.5
434	6330296.4	1885887.6	325.0
435	6330293.0	1885884.2	325.5
436	6330290.1	1885882.9	325.6
437	6330303.4	1885902.3	322.0
438	6330301.0	1885903.1	321.0
439	6330301.8	1885908.0	320.4
440	6330304.2	1885908.4	321.2
441	6330288.8	1885916.8	318.8
442	6330285.6	1885910.3	318.9
443	6330285.8	1885909.5	318.9
444	6330284.1	1885909.8	318.8
445	6330283.8	1885909.3	318.8
446	6330284.7	1885908.3	318.7
447	6330285.5	1885909.1	318.8
448	6330301.5	1885922.8	318.9
449	6330296.9	1885908.6	318.7
450	6330286.3	1885898.8	319.2
451	6330274.1	1885895.2	319.0
452	6330262.4	1885890.0	319.2
453	6330250.3	1885886.0	319.0
454	6330233.1	1885877.7	319.1
455	6330211.9	1885870.4	319.4
456	6330218.6	1885855.6	325.1
457	6330248.6	1885867.7	325.2
458	6330271.6	1885877.5	325.3
459	6330307.2	1885894.9	324.7
460	6330314.7	1885905.3	324.6
461	6330318.5	1885929.8	324.5

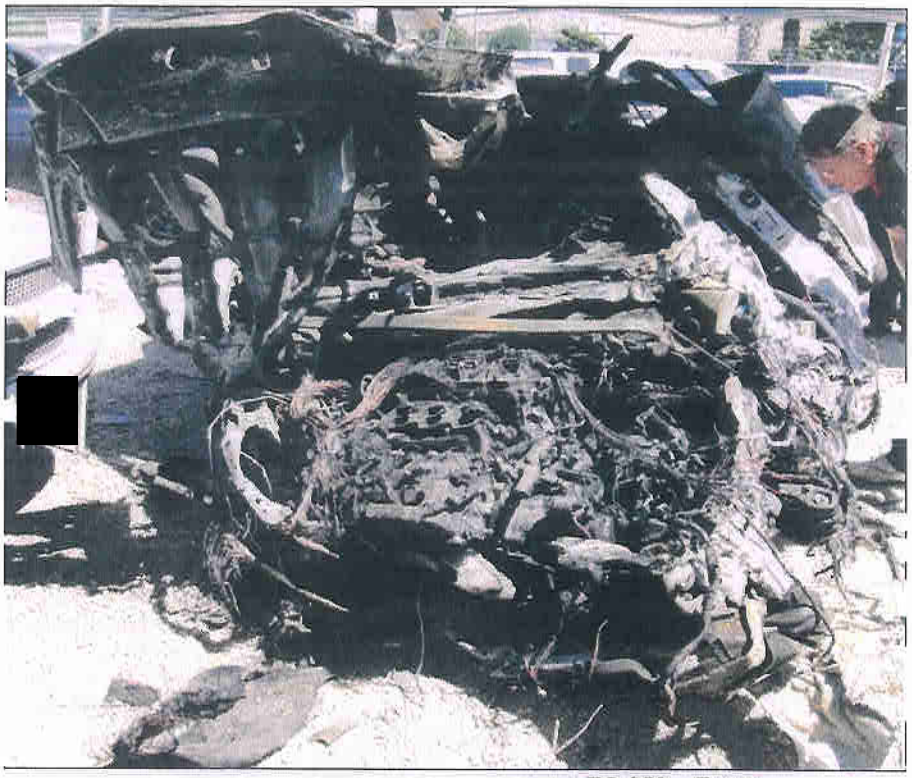
ANNEX A (SURVEY DATA POINTS) (continued)

DATA POINT	EASTING	NORTHING	ORTHOMETRIC HEIGHT
462	6330316.4	1885939.7	323.8
463	6330237.3	1885836.9	325.6
464	6330238.1	1885836.4	325.7
465	6330206.1	1885919.0	318.1
466	6330203.6	1885924.0	318.1
467	6330234.8	1885958.7	318.1
468	6330327.5	1885856.5	326.8
469	6330303.0	1885851.5	326.8
470	6330281.9	1885845.8	326.3
471	6330263.8	1885841.7	326.0
472	6330247.9	1885836.6	326.0
473	6330219.7	1885829.7	325.6
474	6330229.5	1885817.8	331.8
475	6330231.2	1885814.3	331.5
476	6330251.3	1885825.1	331.6
477	6330252.5	1885820.8	331.6
478	6330284.0	1885834.9	331.5
479	6330285.3	1885830.5	331.5
480	6330317.5	1885844.3	331.4
481	6330319.7	1885839.7	331.1
482	6330282.5	1885830.0	331.6
483	6330283.2	1885824.7	329.3
484	6330284.2	1885818.1	326.3

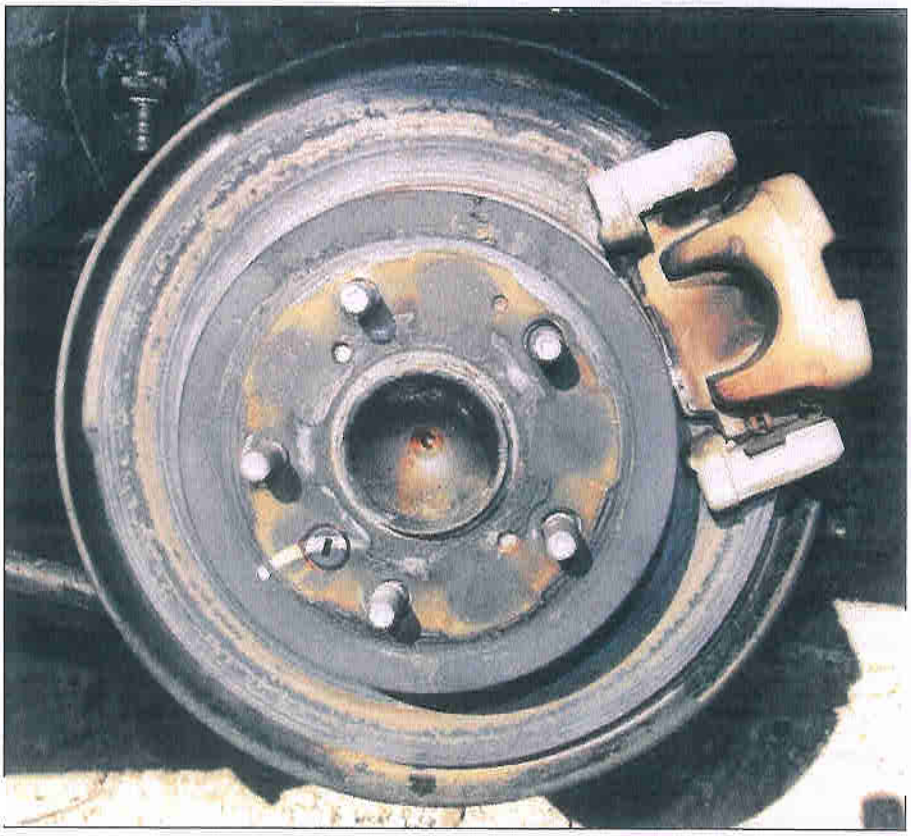
DP09-001

INME-DP09001-37211

Reg A Saul



...s ES-350 – Front



DP09-001

INME-PE04021-17494

U.S. Department
of Transportation
National Highway
Traffic Safety
Administration

Memorandum

Subject: Complaint Update

Date: March 23, 2004

From: Scott Yon

To: File for PE04-021, Toyota Throttle Control

This memo serves to update ODI's analysis of consumer complaints for relevance to the specific throttle control issues that are being investigated in PE04-021. Since opening the investigation March 3rd, 2004, the Office of Defects Investigation (ODI) has conducted detailed interviews of complainants identified in the opening resume to gather specific information concerning the failure incident(s) that are alleged in each instance. Information collected in ODI's interviews indicated that some of the complaints that were counted in the opening resume were not related to the throttle control issue that is under investigation. This memo identifies the complaints that are considered relevant to PE04-021. ODI also used the interviews to make arrangements for inspections of vehicles of interest where possible. ODI will be continuing in this effort over the coming weeks.

This investigation concerns the electronic throttle control system in model year 2002 and 2003 Toyota Camry, Camry Solara, and Lexus ES300 passenger cars (subject vehicles). Unlike most passenger cars, where the accelerator pedal uses mechanical linkages to control engine speed and power, the subject vehicles use an electronic throttle control system. Sensors at the accelerator pedal indicate pedal position (throttle demand) and an electronic control unit (ECU) interprets the pedal sensor signal to open or close the engine's throttle valve.

ODI has opened this investigation based on owner reports alleging that: A) an engine speed increase occurred without pressing on the accelerator pedal or, B) the engine speed failed to decrease when the accelerator pedal was no longer being depressed. In either event, ODI's position is that if such a failure were to occur the driver would be able to control or stop vehicle movement by pressing on the brake pedal. However, in certain close-quarters driving situations (such as parking), should the subject vehicle throttle control system open the throttle valve without driver intent, the resultant vehicle surge could result in a momentary loss of vehicle control. In some instances, a crash may then result when the driver is unable to react in time to apply the brakes effectively. Longer duration incidents involving uncontrollable acceleration where brake pedal application allegedly had no affect are not within the scope of this

investigation. Accordingly, based on the information gathered from complainant interviews, ODI is revising the number of pertinent VOQs to 11, of which 5 reports involve a vehicle crash. No injuries have been identified. A list of the pertinent VOQ numbers is included as an attachment to this memo.

One of the VOQs that have been removed (ODI 10056117) involved a serious injury that occurred after the vehicle went through a car wash. In this incident, the vehicle's transmission was placed in neutral so that a conveyor/roller could pull the vehicle through the car wash while the operator remained in the vehicle (ODI notes that the functionality of the shift interlock system would not require application of the brake pedal to move the shifter from neutral to drive). During ODI's interview, the vehicle operator mentioned that their foot was not squarely on the brake pedal when the transmission was engaged and that it subsequently slipped off and may have inadvertently struck the throttle. ODI also removed two sets of duplicate VOQs (10002266 duplicate of 10003640, 10019875 duplicate of 10025068) and one VOQ that was included by error (10056537). The other VOQs were removed because ODI does not currently consider them to be the result of a throttle control failure; they may be reconsidered should new information warrant.

ODI is regularly monitoring incoming VOQs for relevance to this investigation and where appropriate will be interviewing these complainants. Any VOQ deemed to be pertinent to the investigation will be added on an ongoing basis.

PE04 – 021; Toyota Throttle Control, March 22, 2004

11 VOQs – ODI Numbers

6900639, 8004502, 8013543, 8013908, 8015215, 10008367, 10026392, 10026512, 10045944, 10053774, 10055375

DP09-001

lexusimages


LEXUS

DP09-001
Memorandum
to file for Oct 7 09 meeting

U.S. Department of Transportation
National Highway Traffic Safety Administration

Memorandum

Subject: Meeting with Toyota Motor Corp, DP09-001

Date: November 17, 2009

From: Stephen McHenry

Reply to Attn. of:

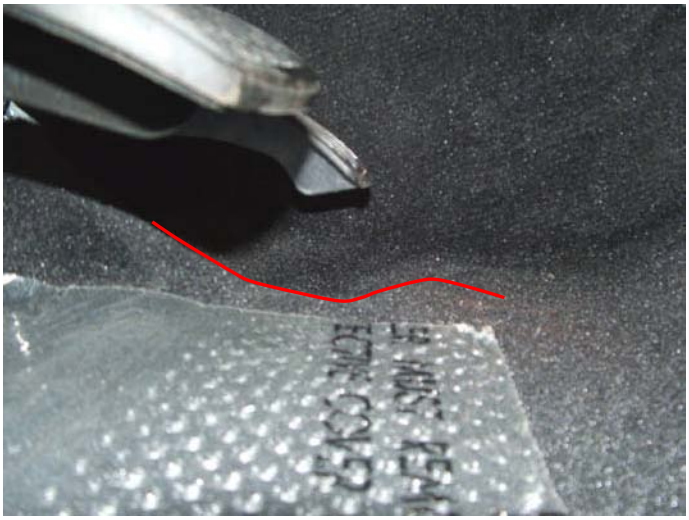
To: File for DP09-001

ODI visited with representatives of Toyota Motor Corporation (TMC) on October 7, 2009, at the Toyota technician training facility at 6710 Baymeadow Drive, Glen Burnie, MD, to review the issue of accelerator pedal entrapment by floor mats in MY 2007 Lexus ES 350 vehicles. Present from ODI were Jeffrey Quandt, Scott Yon, David Case, Ajit Alkondon, Gregory Magno, Bill Collins, and Stephen McHenry. Present from TMC were Chris Tinto, Chris Santucci, Erica Jones, and TMC engineers.

ODI diagramed their observation and concern with the fact that the accelerator pedal on the ES 350 at full stop is below the surface plane of the carpet created by a 1" Styrofoam block inserted on the floor pan, underneath the carpet, on the driver's seating side of the accelerator pedal. Photographs 1, 2, & 3 were shown to TMC. Also a video clip of an unsecured original equipment floor mat trapping the accelerator pedal in the petitioner's car was shown to TMC (video clip attached as attachment 1). Copies of complaints (VOQs) filed with ODI related to ES 350 pedal entrapments were presented to TMC. At the meeting TMC had an ES 350 for available for inspection. TMC also provided, for comparison inspection, examples of the following vehicles: IS 250, Camry, Prius (generation 2 and generation 3), Tundra, Avalon, Tacoma, Highlander (generation 2), Venza, and 4Runner. ODI also presented to TMC VOQs related to those vehicles.

Photograph 1

Photograph 2



Photograph 3

ES 350 VOQs given to TMC: 10156602, 10174071, 10175335, 10176450, 10180658, 10182245, 10182834, 10183821, 10186045, 10188471, 10189487, 10189528, 10189655, 10190446, 10192351, 10192435, 10193512, 10196509, 10197358, 10199857, 10200125, 10200150, 10200366, 10200973, 10203221, 10218118, 10223792, 10226564, 10226899, 10227943, 10228861, 10230929, 10232948, 10239477, 10241027, 10243157, 10244397, 10260824, 10261660, 10281605, 10282215, 10284241, 10284260, 10284427, 10284881, 10285021, 10285092, 10285779, 10286150, 10286278,

Other VOQs given to TMC: 1021509, 1039528, 10159914, 10163068, 10168886, 10169236, 10171354, 10171756, 10172030, 10177888, 10182047, 10182586, 10183012, 10184759, 10184918, 10187181, 10188142, 10188333, 10191791, 10198767, 10199820, 10200097, 10200324, 10203400, 10204283, 10205811, 10207709, 10207797, 10207846, 10209497, 10211498, 10212718, 10214714, 10219141, 10219777, 10220139, 10222206, 10222461, 10225929, 10229371, 10230931, 10238879, 10242678, 10253678, 10257140, 10258722, 10261149, 10261673, 10261772, 10263322, 10263536, 10269368, 10273044, 10276034, 10276270, 10276445, 10276982, 10278006, 10279326, 10279326, 10280698, 10284131, 10284620, 10284798, 10285143, 10285810, 10286018, 10286049, 10286282, 10286330, 10286341,

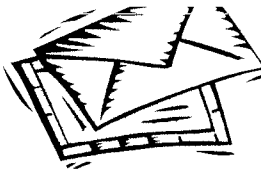
DP09-001
pedal trapped in AWM

DP09-001

Petition 10263408

NHTSA ccmMercury Routing Slip

CL-10263408-4819



Petition

Printed: 3/19/2009

NHTSA #: ES09-001570	Rec'd Date: 3/19/2009	Referred By: NPO-011
XREF #:	Doc Type: PET	Doc Date: 3/13/2009
Delivery: CRT	Address To:	**Due Date: 4/8/2009**
S10 #:	DOT/I #:	RMP #:

Subject: PETITION FOR ADDITIONAL INVESTIGATION INTO THE UNWANTED AND UNINTENDED ACCELERATION OF MODEL YEAR 2007 LEXUS ES350

Ack Date:	Ack By:	
Sign Office: ENFORCEMENT	Signature: SMITH	Signed For:
Cleared Date:	Cleared By:	Cleared For:
File Loc:	XREF File:	**Closed Date:**
Added By: SHARRIS x62534	Modified By: SANDRA.HARRIS	

Most Recent Comment:

Author:

[redacted]

PLYMOUTH, MN [redacted]

Tel [redacted] *Fax:* *E-mail:*

Assigned To	Task	Asgn Date	Deadline	Returned Date
NVS-200	REPLY	3/19/2009	4/8/2009	
NVS-010	INFORMATION	3/19/2009		3/19/2009

2009 MAR 23 PM 1:03

March 13, 2009

Administrator
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

RE: Petition of an Interested Party under Part 552 of 49 CFR Chapter V

Dear Sir/Madam:

Purpose

The purpose of petitioner's letter is to request an additional investigation into the unwanted and unintended acceleration of model year 2007 Lexus ES350 as the initial investigation (PE07-016) was too narrow in scope and did not adequately address all complaints made to the NHTSA with respect to vehicle speed control concerns. Related and contributory issues requiring further attention are noted below.

The petitioner also requests an additional investigation of model years 2002-2003 Lexus ES300 for those "longer duration incidents involving uncontrollable acceleration where brake pedal application allegedly had no effect" for which Ms. Kathleen C. Demeter, Mr. Jeffrey L. Quandt and Mr. D. Scott Yon determined was not within the scope of an earlier investigation (PE04-021) closed on July 22, 2004.

This additional investigation of model years 2002-2003 Lexus ES300 is relevant to the petition for the model year 2007 Lexus ES350 noted above. Reviewing all pertinent data across model years will better indicate the existence of any pattern.

1. Proper Party to Preliminary Evaluation PE07-016

On March 29, 2007 PE07-016 was opened by Ms. Kathleen C. Demeter, Mr. Jeffrey L. Quandt and Mr. D. Scott Yon with respect to the following Problem Description - accessory floor mat interference with the throttle pedal on 2007 Lexus ES350 vehicles. The ODI Resume prepared as of that date provided no explanation as to how the Problem Description was determined but did indicate there were five (5) complaints involving three (3) injury incidents and seven (7) injuries.

On or about April 7, 2007, Mr. Quandt sent Mr. Christopher J. Tinto, Vice President Technical and Regulatory Affairs for Toyota Motor North America, Inc. (Toyota NA) a letter informing him "...that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Preliminary Evaluation (PE07-016) to investigate incidents of vehicle runaway due to interference between the Lexus accessory floor mat (all-weather floor mat) and the accelerator pedal in model year (MY) 2007 Lexus ES350 vehicles manufactured by Toyota Motor North America, Inc. and to request certain information."

The Vehicle Certification Label within the driver's side door jam identifies the MY 2007 Lexus ES350 as being manufactured by Toyota Motor Corporation (TMC) at one of its locations within Japan.

Toyota Motor Sales, U.S.A., Inc. (Toyota USA) is a wholly-owned subsidiary of TMC, responsible for US sales and the parent company of Lexus, a division of Toyota Motor Sales, U.S.A., Inc. (Lexus Division), the company identified as the warrantor for Lexus warranties on page 16 of the Warranty and Services Guide for MY 2007 Lexus ES350. Toyota Motor North America, Inc. (Toyota NA), also a wholly-owned subsidiary of TMC, is the holding company for Toyota's manufacturing, financing, sales and marketing operations in Canada, Mexico and the US.

On page 2 of this same letter, "Toyota" is also defined as "Toyota Motor North America, Inc. ...including all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises ..." It is difficult to determine if this definition includes Toyota USA and Lexus Division; it leaves room for interpretation.

Issue # 1

Responses from Toyota to PE07-016 may have been limited in some manner by the failure to properly address the appropriate parties to the investigation, specifically Toyota USA and/or Lexus Division. Defining "Toyota" more broadly to include all US incorporated subsidiaries of TMC regardless of level or tier may be the most prudent approach. This corresponds more closely with the manner in which Mr. Quandt's March 30, 2004 letter to Mr. Christopher Tinto regarding PE04-021defines "Toyota".

2. Toyota's Response – Causes of Alleged Defect

Within his April 7, 2007 letter to Mr. Tinto, Mr. Quandt stated "This office has received ten vehicle owner questionnaires (VOQs) reports of unwanted acceleration in MY 2007 Lexus 2007 ES350 vehicles. Information collected by ODI indicates that at least five of these incidents appear to have been caused by interference between the Lexus all-weather rubber accessory floor mat and the accelerator pedal."

On page 2 of Mr. Quandt's letter, "Alleged defect" is defined as "Allegations of A) excessive engine speed and or power output without the driver pressing on the accelerator pedal or, B) the engine speed and or power output failing to decrease when the accelerator pedal was no longer being depressed or, C) the subject component interfering with the operation of the throttle pedal". On the same page, "Subject component" is defined as "all Toyota optional equipment (accessory) all-weather floor mats manufactured for use on the subject vehicles".

On May 16, 2007 Ms. DeMeter requested a test by the Vehicle Research and Test Center (VRTC) due to "Accessory all weather mat interferes with throttle operation."

Request # 16 in Mr. Quandt's April 7, 2007 letter asks for Toyota's assessment of the alleged defect. In Mr. Tinto's June 11, 2007 response to Mr. Quandt on behalf of Toyota, Response 16 states in part "Toyota has reviewed all applicable data available at the time and believes that some allegations of incident are likely related to the improper installation of the all weather floor mat in the driver's foot well." It is important to note the implied qualification made by Mr. Tinto that <u>not</u> all allegations of incident are related to the all-weather floor mat.

Issue # 2

Mr. Tinto's Response 16 on behalf of Toyota implies that not all allegations of incident (i.e., excessive engine speed and or power output without the driver pressing on the accelerator pedal or the engine speed and or power output failing to decrease when the accelerator pedal was no longer being depressed or all-weather floor mats interfering with the operation of the throttle pedal) were related to the improper installation of the all weather floor mat in the driver's foot well.

Even with this admission, the NHTSA did not further inquire of or investigate the allegations of incident not related to the improper installation of the all-weather floor mat in the driver's foot well.

3. Narrow Scope of Preliminary Evaluation PE07-016

The initial investigation was opened on March 29, 2007 after receiving ten vehicle owner questionnaires (VOQs) reports of unwanted acceleration in MY 2007 Lexus 2007 ES350 vehicles in the NHTSA office.

The April 7, 2007 letter Mr. Quandt sent Mr. Tinto, Vice President Technical and Regulatory Affairs for Toyota Motor North America, Inc. (Toyota NA) sought additional information. Request # 2 specifically requests the number of various items "a" through "f" received by Toyota, or of which Toyota is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles. These items include consumer complaints, field reports, reports based on claims against the manufacturer, notices received by the manufacturer, property damage claims, third party arbitration proceedings and pending and closed lawsuits.

Additional information from Toyota on June 11, 2007 indicates that there were 38 unique vehicles with customer complaints. Toyota further provided, "This includes 4 vehicles which are duplicated with the NHTSA VOQs attached to the inquiry letter."

Within VRTC Memorandum Report EA07-010 (VRTC-DCD-7113), it stated that a survey was sent to a sample size of 1,986 registered owners of a 2007 Lexus ES350 requesting information regarding episodes of unintended acceleration. Of the 600 responses received, 59 owners stated they experienced unintended acceleration. Thirty-five (35) of these reported that their vehicles were equipped with rubber Lexus all-weather floor mats and several commented that the incident occurred when the accelerator had become trapped in a groove in the floor mat.

On August 8, 2007, PE07-016 is officially closed by Ms. Demeter, Mr. Quandt and Mr. Yon. Within the ODI Resume of the same date, the Failure Report Summary has been updated to reflect both ODI and Manufacturer data. The report states that PE07-016 has been upgraded to an Engineering Analysis (EA07-10).

On October 11, 2007, Engineering Analysis (EA07-10) is officially closed by Ms. Demeter, Mr. Quandt and Mr. Yon.

Issue # 3

Upon NHTSA receiving additional information from the manufacturer (i.e., Toyota) on June 11, 2007, additional VOQs reports (as noted in the updated ODI Resume dated August 8, 2007 closing the Preliminary Evaluation investigation) and VRTC owner survey results that identified vehicles without all-weather car mats experiencing unintended acceleration, there was no evidence that the scope of the investigation was broadened or increased for additional causes beyond the all-weather floor mats.

4. Vehicle Certification Label – Compliance with Federal Safety Standard No. 124

Section 30112(a)(1) of Title 49 of the US Code provides "... a person may not manufacture for sale, sell, offer for sale, introduce or deliver for introduction in interstate commerce, or import into the United States, any motor vehicle or motor vehicle equipment manufactured on or after the date an applicable motor vehicle safety standard prescribed under this chapter takes effect unless the vehicle or equipment complies with the standard and is covered by a certification issued under section 30115 of this title."

Section 30115(a) of Title 49 of the US Code provides "A manufacturer or distributor of a motor vehicle or motor vehicle equipment shall certify to the distributor or dealer at delivery that the vehicle or equipment complies with applicable motor vehicle safety standards prescribed under this chapter. A person may not issue the certificate if, in exercising reasonable care, the person has reason to know the certificate is false or misleading in a material respect."

Code of Federal Regulations (CFR) Title 49, Part 571 identifies Federal Motor Vehicle Safety Standards originally established under section 103 of the National Traffic and Motor Vehicle Safety Act of 1966. Standard No. 124; Accelerator control systems should be examined with respect to vehicle speed control involving unwanted acceleration in MY 2007 Lexus ES350.

This standard establishes requirements for the return of a vehicle's throttle to the idle position when the driver removes the actuating force from the accelerator control, or in the event of a severance or disconnection in the accelerator control system. This standard applies to passenger cars and was last amended on March 4, 1995. Toyota has been operating under the knowledge of this Standard for over 10 years before MY Lexus ES350 was launched in April 2006.

S5.1 of Standard No. 124 provides, "There shall be at least two sources of energy capable of returning the throttle to the idle position within the time limit specified by S5.3 from any accelerator position or speed whenever the driver removes the opposing actuating force. In the event of failure of one source of energy by a single severance or disconnection, the throttle shall return to the idle position within the time limits specified by S5.3, from any accelerator position or speed whenever the driver removes the opposing actuating force."

S5.3 of Standard No. 124 provides in part, "Except as provided below, maximum time to return to idle position shall be 1 second for vehicles of 4536 kilograms or less GVWR, and 2 seconds for vehicles of more than 4536 kilograms GVWR." The GVWR for MY

2007 Lexus ES350 is less than 4536 kilograms. The exception is for a vehicle exposed to extreme cold conditions.

As has been stated in various owner/operator VOQs, there has been no opposing actuating force either by the driver or by car mats on the accelerator pedal once braking commenced. The throttles on the vehicle in question however failed to return to the idle position within the required 1 second time limit during these incidences of unwanted acceleration.

In my personal experience of this unwanted acceleration on February 3, 2009, attempts to dislodge the throttle by alternatively pumping the accelerator pedal and pulling up on it from the underside with my right foot followed by braking with two feet did not result in a return of the throttle to the idle position.

S4.1 of this standard defines "Driver-operated accelerator control system"; it "means all vehicle components, except the fuel metering device, that regulate engine speed in direct response to movement of the driver-operated control and that return the throttle to the idle position upon release of that actuating force."

Many vehicles uses a Throttle Position sensor to provide input to traction control, fuel injection and other systems but use a Bowden cable to directly connect the pedal with the throttle. The Electronic Throttle Control System (ETCS) within the MY 2007 Lexus ES350 has no such throttle cable. Instead, a Throttle Position (TP) sensor is mounted on the throttle body and detects the opening angle of the throttle valve. This sensor is a non-contact type. The TP sensor has two sensor circuits which each transmits a signal; they are referred to as VTA1 and VTA2. VTA1 is used to detect the throttle valve angle and VTA2 is used to detect malfunctions in VTA1.

The sensor signal voltages vary between 0 V and 5 V in proportion to the throttle valve opening angle and are transmitted to the VTA terminals of the Engine Control Module (ECM). As the throttle valve closes, the sensor output voltage decreases and as the valve opens, the sensor output voltage increases. A specific voltage difference is expected between the sensor terminals, VTA1and VTA 2, for each throttle valve opening angle. If the difference between VTA1 and VTA2 is incorrect, the ECM interprets this as a malfunction in the sensor and sets a DTC (Diagnostic Trouble Code). VTA1 and VTA2 each have a specific voltage range. If VTA1 or VTA2 is outside the normal operating range, the ECM interprets this as a malfunction in the sensor and sets a DTC.

In addition to the Throttle Position (TP) sensor, an Accelerator Pedal Position (APP) sensor is mounted on the accelerator pedal bracket and has 2 sensor circuits: VPA (main) and VPA2 (sub). This sensor is also a non-contact type. The voltage, which is applied to terminals VPA and VPA2 of the ECM, varies between 0 V and 5 V in proportion to the operating angle of the accelerator pedal (throttle valve). A signal from VPA indicates the actual accelerator pedal opening angle (throttle valve opening angle) and is used for engine control. A signal from VPA2 conveys the status of the VPA circuit and is used to check the APP sensor itself.

The ECM monitors the actual accelerator pedal opening angle (throttle valve opening angle) through the signals from VPA and VPA2, and controls the throttle actuator according to these signals.

These are the sole sensors within the ETCS; there are no sensors on the accelerator pedal to measure either pedal position or applied force. When there has been no evidence of malfunction (e.g., no DTCs appear when the vehicle is connected to Toyota's intelligent tester), Toyota has determined that either car mats are the issue or that all systems are fully functional. Toyota has not publicly found fault with the Electrical Throttle Control System or the Engine Control Manual.

Issue # 4

This ETCS within MY 2007 Lexus ES350 does not satisfy the requirements of Standard No. 124; Accelerator control systems, specifically S5.1 and S5.3 as previously discussed.

The existing TP and APP sensors do not measure either any force/pressure to the driver-operated control or any release of the actuating force to the driver-operated control (i.e., accelerator pedal) nor does it regulate engine speed in direct response to movement of the driver-operated control. These sensors were not designed to measure when the driver removes the actuating force from the accelerator control (i.e., release of the accelerator pedal).

The TP and APP sensors were designed to regulate engine speed based on voltage within their circuits; this voltage is converted into measurements. The TP sensor VTA1 expresses the throttle valve opening as a percentage based upon the voltage. The voltage from the APP sensor is also used to measure the throttle valve opening.

Due to non-compliance with Standard No. 124, it follows that the Vehicle Certification label on all MY 2007 Lexus ES350 vehicles does not comply with Section 30112(a)(1) of the US Code. Furthermore in exercising reasonable care, Toyota Motor Corporation (TMC) would have knowledge the certificate is false or misleading in a material respect – a violation of Section 30115(a) of Title 49 of the US Code. TMC had been operating under the knowledge of this Standard No. 124 for over 10 years before MY Lexus ES350 was launched in April 2006.

5. Adequacy of Service Brakes

Code of Federal Regulations (CFR) Title 49, Part 571 identifies Federal Motor Vehicle Safety Standards originally established under section 103 of the National Traffic and Motor Vehicle Safety Act of 1966. Standard No. 135; Light vehicle brake systems should also be examined with respect to vehicle speed control involving unwanted acceleration in MY 2007 Lexus.

The purpose of this standard is to ensure safe braking performance under normal and emergency driving conditions. This standard applies to passenger cars manufactured on or after September 1, 2000.

MY 2007 Lexus ES350 has a Brake power assist unit. According to page 137 of the Owner's Manual, "BA (Break Assist) Generates an increased level of braking force after the brake pedal is depressed, when the system detects a panic stop situation." As defined in S4 of this Standard No. 135, "Brake power assist unit means a device installed in a hydraulic brake system that reduces the amount of muscular force that a driver must apply to actuate the system, and that, if inoperative, does not prevent the

driver from braking the vehicle by a continued application of muscular force on the service brake control."

S4 of this standard also defines "Functional failure". It "... means a failure of a component (either electrical or mechanical in nature) which renders the system totally or partially inoperative yet the structural integrity of the system is maintained."

S5.5 of this standard provides that each vehicle shall have one or more visual brake system warning indicators. Per S5.5 (b) of this standard, "Vehicles manufactured with a split service brake system may use a common brake warning indicator to indicate two or more of the functions described in S5.5.1(a) through S5.5.1(g). If a common indicator is used, it shall display the word 'Brake'." A common indicator is not allowed for a vehicle manufactured without a split service brake system. Since MY 2007 Lexus ES350 uses the "Brake" word common indicator, it apparently has a split service brake system.

S7.11 of this standard provides for various testing requirements when the "Brake power unit" or "brake power assist unit" become inoperative due to a depleted system. The Performance requirements under S7.11.4 provide, "The service brakes on a vehicle equipped with one or more brake power assist units or brake power units, with one such unit inoperative and depleted of all reserve capability, shall stop the vehicle as specified in S7.11.4(a) or S7.11.4(b).

(a) Stopping distance from 100 km/h test speed: <= 168 m (551 ft).
(b) Stopping distance for reduced test speed: $S <= 0.10V + 0.0158V^2$

In Mr. Tinto's June 11, 2007 letter to Mr. Quandt of the NHTSA regarding PE07-016 he states, "As with any vehicle in production today, the ES350 service brakes are more than adequate in stopping a vehicle with a stuck throttle pedal. Customers would be aware that something is operating in an unusual manner, can apply the brakes and shut off the vehicle, as instructed in their owner's manual."

Issue # 5

Within the ODI Resume of EA07-010 dated August 9, 2007, the Summary states, "Complainants interviewed by ODI stated that they applied the throttle pedal to accelerate the vehicle then experienced unwanted acceleration after release. Subsequent (and sometimes repeated) applications of the brake pedal reduced acceleration but did not stop the vehicle. In some incidents drivers traveled significant distances (miles) at high vehicle speeds (greater than 90mph) before the vehicle stopped (ODI notes that multiple brake applications with the throttle in an open position can deplete the brake system's power [vacuum] assist reserve resulting in diminished braking)."

This appears to indicate a "Functional Failure" of the brake power assist unit for MY 2007 Lexus ES350 as defined in S4 of Standard 135. However, the vehicle is still required to meet the Performance requirements under S7.11.4 of Standard 135. With the significant distance traveled, it is unlikely this test requirement can be met nor are the Lexus "ES350 service brakes more than adequate in stopping a vehicle with a stuck throttle pedal" as recited by Mr. Tinto.

6. Ignition/Engine Switch

MY 2007 Lexus ES350 utilizes a "push button" ignition/engine switch. This is contrast to the more traditional "key type" ignition/engine switch used for many years in vehicles and still used most frequently in vehicles. With the electronic key on your person, the engine can be started by simply pressing the engine switch, while depressing the brake pedal. (A mechanical key can not be used to start the engine.)

Within the ODI Resume of EA07-010 dated August 9, 2007, the Summary states, "The subject vehicles have an engine control button instead of a traditional ignition key. Some drivers reported that their attempts to turn off the engine by pressing the control button were unsuccessful. In these cases it appears that the drivers were unaware that the button's functionality changes when the vehicle is in motion requiring that it be depressed for 3 seconds (instead of momentarily) to stop the engine."

Within page 95 of the MY 2007 Lexus ES350 Owner's Manual, three separate engine switch modes are identified – (1) OFF mode * (2) ACC mode and (3) IG-ON mode. Modes can be switched by pressing the engine switch when carrying the electronic key on your person. *: The engine cannot be switched to OFF unless the shift level is in P.

On page 9 of the MY 2007 ES 350 Quick Guide, three different features to help protect the vehicle from theft are identified as part of the Theft Deterrent System. One such feature is "Steering Lock". It states, "The steering wheel locks when the engine switch is in OFF mode. To release the steering wheel lock, gently turn the wheel left or right while pressing the engine switch."

Within page 38 of the MY 2007 Lexus ES350 Owner's Manual, the functionality of the "Auto tilt away" feature of the Steering wheel is explained. It provides, "When the engine switch is turned OFF, the steering wheel returns to its stowed position by moving up and away to enable easier driver entry and exit. Switching to ACC or IG-ON mode will return the steering wheel to the original position."

Not only does the steering wheel lock as stated in the 2007 ES 350 Quick Guide, it also moves up and away from the operator. This places the driver in a dangerous situation, one that Lexus recognizes as well. Within page 38 of the MY 2007 Lexus ES350 Owner's Manual, there is a "CAUTION" alert. It provides, "Caution while driving Do not adjust the steering wheel while driving. Doing so may cause the driver to mishandle the vehicle and an accident, resulting in death or serious injury."

Issue # 6

Operators of vehicles with the traditional "key type" ignition/engine switch can turn their engines off by shifting their transmission to "Neutral" and turning the key away from the "on" position in the ignition switch.

Contrary to what is reported in the ODI Resume dated August 9, 2007, the MY 2007 Lexus ES350 Owner's Manual clearly indicates "The engine cannot be switched to OFF unless the shift level is in P." Even if the Owner's Manual is not correct and depressing the "push button" engine switch for 3 second will stop the vehicle, doing so will lock the steering wheel and move it up and away from the driver. This action has the same effect as adjusting the steering wheel while driving. Lexus recognizes this places the driver in a

dangerous situation and has a "CAUTION" alert stating not to adjust the steering wheel while driving. Drivers of vehicles who are already experiencing unwanted acceleration would magnify the intensity of their current dangerous situation by shutting off their engine in this manner.

The inability to turn off the engine in a safe manner is a significant safety issue with this "push button" ignition issue.

7. ECM and ECUs – Lack of Inputs and Receipt of Contradictory Inputs

The Electronic Throttle Control System (ETCS) is composed of the throttle actuator, Throttle Position (TP) sensor, Accelerator Pedal Position (APP) sensor, and ECM.

The throttle actuator is operated by the ECM and opens and closes the throttle valve using the gears. The opening angle of the throttle valve is detected by the Throttle Position (TP) sensor, which is mounted on the throttle body. The TP sensor provides feedback to the ECM. This feedback allows the ECM to appropriately control the throttle actuator and monitor the throttle opening angle as the ECM responds to driver inputs.

Vehicle Speed Sensor "A" detects the wheel speed and sends the appropriate signals to the skid control ECU. The skid control ECU converts these wheel speed signals into a 4-pulse signal and outputs it to the ECM via the combination meter. The ECM determines the vehicle speed based on the frequency of these pulse signals. This speed sensor is a key component within the Engine Control System, Cruise Control System and Transmission Control System.

The stop light switch is a duplex system that transmits two signals: STP and ST1-. These two signals are used by the ECM to monitor whether or not the brake system is working properly. If the signals, which indicate the brake pedal is being depressed and released, are detected simultaneously, the ECM interprets this as a malfunction in the stop light switch and sets the DTC. The purpose of the stop light switch is to reduce fuel cutoff and RPM resumption when the brake pedal is depressed to improve driveability characteristics of the vehicle. Unfortunately, there is no sensor that measures the amount of force or pressure on the brake pedal. This stop light switch only detects that the brake pedal is being depressed, it does not measure the time duration of brake depression or amount of sustained force on the brake pedal.

Toyota has stated in an internet publication, "During closed throttle deceleration periods from moderate to high engine speeds, fuel delivery is not necessary or desirable. To prevent excessive decel emissions and improve fuel economy, the ECM will not open the injectors under certain decel conditions. The ECM will resume fuel injection at a calculated RPM."

Within page 341 of the MY 2007 Lexus ES350 Owner's Manual, it indicates that the Brake system warning light indicates the following; Low brake fluid and/or Malfunction in the brake booster system. The former is a result of a signal from the brake fluid warning switch (Direct Line) and the latter upon receipt of a signal from the Skid Control ECU with the communication line being the CAN(CAN No. 1 Bus).

Issue # 7

The ECM and various ECUs within the subject vehicle are receiving/providing inconsistent inputs based on the language within the Summary section of ODI Resume for EA07-010 dated August 9, 2007.

The Summary states, "Complainants interviewed by ODI stated that they applied the throttle pedal to accelerate the vehicle then experienced unwanted acceleration after release. Subsequent (and sometimes repeated) applications of the brake pedal reduced acceleration but did not stop the vehicle. In some incidents drivers traveled significant distances (miles) at high vehicle speeds (greater than 90mph) before the vehicle stopped (ODI notes that multiple brake applications with the throttle in an open position can deplete the brake system's power [vacuum] assist reserve resulting in diminished braking)."

Contradictory sensor data (e.g., open throttle and sustained extreme brake pressure) should error on the side of caution and safety. When this data is not available to the sensors, this safety deficiency becomes insuperable. Failures in the control systems, whether through operation or design, can result in an unstoppable run-away vehicle. Why should a vehicle's control systems allow it to continue down a highway at a high rate of speed at the same time that the brake's system power assist is being depleted ?

Current VOQ Status

There are now at least 45 VOQs on record with respect to vehicle speed control involving unwanted acceleration in MY 2007 Lexus ES350. I experienced my own incident on February 3, 2009 and sent the first of two letters to Lexus Customer Satisfaction on February 7. After waiting for three weeks for the Lexus Division of Toyota Motor Sales, USA, Inc., to reply with their findings of a field service technician's February 18th inspection of my vehicle, I have now filed my own VOQ as of March 12th.

The original investigation was quite narrow in scope focusing on vehicle runaway due to interference between the Lexus accessory floor mat (all-weather floor mat) and the accelerator pedal in model year (MY) 2007 Lexus ES350 vehicles manufactured by Toyota Motor North America, Inc. With significant evidence suggesting this was but one possible cause, it is appropriate to open a new investigation, one that is much broader in scope and addresses other possible contributory factors.

Review of the VOQs already on record indicate that <u>not</u> all these incidents are related to an accessory all weather floor mat entrapping the throttle pedal. See ODI File numbers 10192384, 10199857, 10203221, 10218118, 10218961, 10219328, 10223792, 10226564, 10230560, 10230929, etc. for such examples. By their own admission, Toyota believes that some but <u>not</u> all allegations of incident are likely related to the improper installation of the all weather floor mat in the driver's foot well.

I personally experienced uncontrollable acceleration that placed me in an extremely dangerous situation. This occurrence was not the result of any floor mat interference as I was able to place my foot under the accelerator pedal and pull up; this action on my part did nothing to stop this unwanted acceleration. If a car floor mat had been causing interference with the accelerator pedal this action on my part would have eliminated both

the interference and the uncontrollable acceleration. (See VOQ ODI File number 10261660 attached.)

A review of other VOQs on record will show that other parties specifically stated that floor mats were not a factor in their cases either. There are at least five other VOQs where floor mats were not involved in the unwanted acceleration. See ODI File numbers 10199857, 10203221, 10226564, 10230560 and 10230929.

If you have any questions or need additional information, contact information is noted below.

Thank you for your consideration of this petition.

Sincerely.

Plymouth, MN
Phone

Enclosure

cc: Representative James L. Oberstar, Chairman Transportation and Infrastructure Committee
Senator Amy Klobuchar, Minnesota

safercar.gov

NHTSA www.nhtsa.gov

Safety Ratings | Defects & Recalls | Safe Driving Information | Resources

Office of Defects Investigation
File a Complaint
Search Complaints
Defect Investigations
Safety Recalls
Service Bulletins
Downloads
Foreign Campaigns
EWR Information
Sitemap
Contact ODI
(888) 327-4236
TTY: (800) 424-9153

DEFECTS & RECALLS

FILE A COMPLAINT

Consumer » Complaint » Vehicle » Preview

VOQ Confirmation

Your Complaint Information is successfully submitted.

Your Confirmation number (ODI Number) is: **10261660**

Click on the "Print Complaint" button to see a print version of the confirmation page to print for your records.

Print Complaint

Acknowledgement

An e-mail was sent to [redacted]

Consumer Information

Name:	[redacted]
Daytime Phone:	
Evening Phone:	
E-mail:	
Fax:	
Address:	
City, State, Zip:	Plymouth, MN [redacted]
Country:	USA
Referral Source:	Internet Search Engine

top

Complaint Information

Description: Driving home from work, I experienced a sudden uncontrollable surge in acceleration causing my speed to increase from about 60 MPH to 80+ MPH. Immediately I began to brake hard as I was rapidly approaching traffic just ahead of me. Fortunately the inside left lane was unoccupied and I was able to make an immediate lane change. Initially I depressed the brake pedal as hard as I could using both feet but only managed to slow the vehicle to 40-45 MPH. With my speed reduced, I alternated between pumping the accelerator pedal and pulling up on it from the underside with my right foot as it became clear that the throttle was stuck in an open position. The vehicle continued to speed back up to over 65 MPH with less pressure on the brake pedal. With traffic just ahead of me, I moved over to the left shoulder next to the center barrier and continued to try to release the open throttle. There were clouds of smoke around the vehicle and the smell of burning materials from the overheating brakes. After finally getting the vehicle slowed down to about 25-30 MPH, I shifted into "Neutral" and depressed the start/stop push button a number of times hoping to stop the engine but nothing happened. Instead the RPMs moved up into the redline range on the tachometer. I quickly shifted back into "Drive"; the vehicle jolted and rapidly accelerated to 60+ MPH. As

the brakes were fading quickly, I was certain that I would need to shift back into "Neutral" and let the engine blow up to stop the vehicle. Suddenly the acceleration surge stopped and I was able to bring the vehicle to a stop – about 1 ½ to 2 miles from where it had started. I quickly shifted into "Park" and depressed the start/stop push button to turn off the engine. The vehicle seemed to "shutter" as I did so. Upon restarting the car, I drove cautiously to Lexus of Wayzata a short distance away fully prepared to shift into "Neutral" if the acceleration repeated. The car remains there over 5 weeks later.

Approximate Incident Date:	2/3/2009	**Fire:**	No
Num. Deaths:	0	**Property Damage:**	No
Num. Injured:	0	**Crash:**	No
		Police Report:	No

top

Vehicle Information

VIN:	JTHBJ46G07[redacted]
Year, Make, Model:	2007, LEXUS, ES350
Failure Mileage:	18390
Speed:	60

Vehicle Component Information

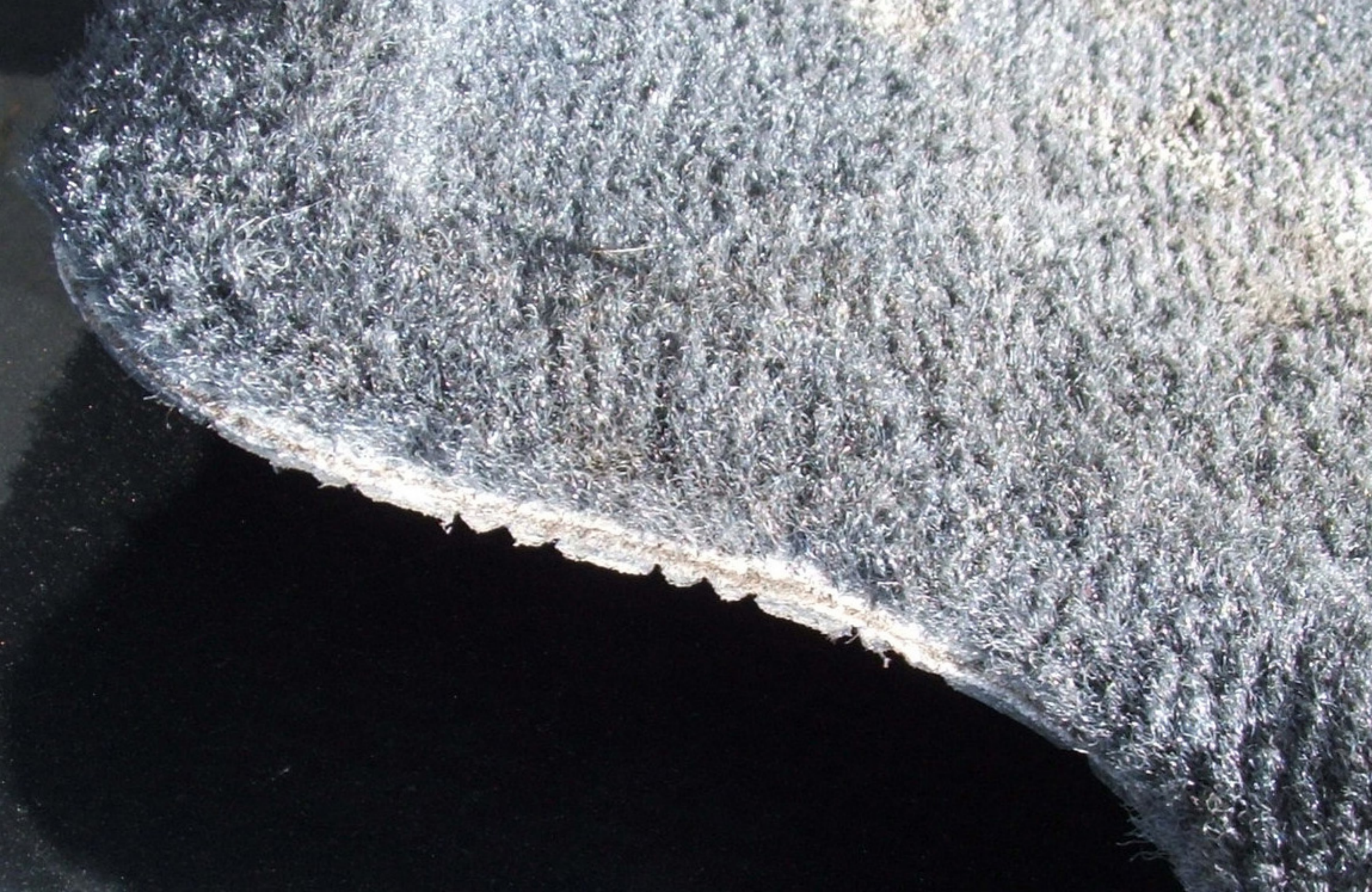
Component 1:	VEHICLE SPEED CONTROL
Component 2:	UNKNOWN OR OTHER

top

Back Exit

DP09-001

Petition Trip Photos



DP09-001

Photographs, various


TANSKY
TANSKY
SAWMILL
TOYOTA
www.tansky.com
SAWMILL TOYOTA


FLOOR MATS

LEXUS


FLOOR MATS


23
22
16
1
2


P
R
N
D
S
+
-


TANSKY
TANSKY
BARRELL
TOYOTA

DP09-001

Prior Investigations


Baelow Building
5454
FedEx
Express

>PP-TD40< A1

KY

17893-0H010


78110-07010
07072A1A
4599148135 6
LHD


78110-07010
07072A1A
4599914813S6
LHD

2004 and August 31, 2006, as originally manufactured, conform to many FMVSS in the same manner as their U.S. certified counterparts, or are capable of being readily altered to conform to those standards.

Specifically, the petitioner claims that non-U.S. certified 2005–2006 Mercedes Benz SLK class (171 chassis) passenger cars manufactured between August 31, 2004 and August 31, 2006 are identical to their U.S. certified counterparts with respect to compliance with Standard Nos. 102 *Transmission Shift Lever Sequence, Starter Interlock, and Transmission Braking Effect*, 103 *Windshield Defrosting and Defogging Systems*, 104 *Windshield Wiping and Washing Systems,* 106 *Brake Hoses*, 109 *New Pneumatic Tires*, 113 *Hood Latch System*, 116 *Motor Vehicle Brake Fluids*, 124 *Accelerator Control Systems*, 135 *Passenger Car Brake Systems*, 201 *Occupant Protection in Interior Impact*, 202 *Head Restraints*, 204 *Steering Control Rearward Displacement*, 205 *Glazing Materials*, 206 *Door Locks and Door Retention Components*, 207 *Seating Systems*, 212 *Windshield Mounting*, 214 *Side Impact Protection*, 216 *Roof Crush Resistance*, 219 *Windshield Zone Intrusion*, 225 *Child Restraint Anchorage Systems*, and 302 *Flammability of Interior Materials.*

In addition, the petitioner claims that the vehicles comply with the Bumper Standard found in 49 CFR Part 581.

The petitioner also contends that the vehicles are capable of being readily altered to meet the following standards, in the manner indicated:

Standard No. 101 *Controls and Displays:* (a) Inscription of the word ''brake'' on the dash in place of the international ECE warning symbol; (b) replacement of the speedometer with a unit reading in miles per hour, or modification of existing speedometer so that it reads in miles per hour; and (c) installation or activation of U.S.-version software in the vehicle's computer system.

Standard No. 108 *Lamps, Reflective Devices and Associated Equipment:* (a) installation of U.S.-model sidemarker lamps and headlamps; and (b) inspection of all vehicles and installation, on vehicles that are not already so equipped, of U.S.-model components to meet the requirements of this standard.

Standard No. 110 *Tire Selection and Rims:* installation of a tire information placard.

Standard No. 111 *Rearview Mirrors:* installation of a U.S.-model passenger side rearview mirror, or inscription of the required warning statement on the face of that mirror.

Standard No. 114 *Theft Protection:* installation of a supplemental key warning buzzer, or installation or activation of U.S.-version software to meet the requirements of this standard.

Standard No. 118 *Power-Operated Window, Partition, and Roof Panel Systems:* installation or activation of U.S.-version software in the vehicle's computer system to meet the requirements of this standard.

Standard No. 208 *Occupant Crash Protection:* inspection of all vehicles and replacement of any non U.S.-model seat belts, air bag control units, air bags, and sensors with U.S.-model components on vehicles that are not already so equipped; and (b) installation or activation of U.S.-version software to ensure that the seat belt warning system meets the requirements of this standard.

The petitioner states that the crash protection system used in these vehicles consists of dual front airbags and combination lap and shoulder belts at the front outboard seating positions. The seat belt systems are described as self-tensioning and capable of being released by means of a single red push-button.

Standard No. 209 *Seat Belt Assemblies:* inspection of all vehicles and replacement of any non U.S.-certified model seat belts with U.S.-model components.

Standard No. 210 *Seat Belt Assembly Anchorages:* inspection of all vehicles and replacement of any non U.S.-model seat belts anchorage components with U.S.-model components.

Standard No. 301 *Fuel System Integrity:* inspection of all vehicles and replacement of any non U.S.-model fuel system components with U.S.-model components.

Standard No. 401 *Interior Trunk Release:* inspection of all vehicles and installation of U.S.-model components on vehicles that are not already so equipped.

The petitioner additionally states that a vehicle identification plate must be affixed to the vehicles near the left windshield post to meet the requirements of 49 CFR Part 565.

All comments received before the close of business on the closing date indicated above will be considered, and will be available for examination in the docket at the above addresses both before and after that date. To the extent possible, comments filed after the closing date will also be considered. Notice of final action on the petition will be published in the **Federal Register** pursuant to the authority indicated below.

Authority: 49 U.S.C. 30141(a)(1)(A) and (b)(1); 49 CFR 593.8; delegations of authority at 49 CFR 1.50 and 501.8.

Issued on: August 27, 2008.

Claude H. Harris,

Director, Office of Vehicle Safety Compliance.

[FR Doc. E8–20397 Filed 9–2–08; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

Denial of Motor Vehicle Defect Petition

AGENCY: National Highway Traffic Safety Administration, (NHTSA), Department of Transportation.

ACTION: Denial of a petition for a defect investigation.

SUMMARY: This notice sets forth the reasons for the denial of a petition (Defect Petition DP08–001) submitted by Mr. William Kronholm to NHTSA's Office of Defects Investigation (ODI) by letter dated January 10, 2008, under 49 U.S.C. 30162. The Petition requests that the agency commence a proceeding to determine the existence of a defect related to motor vehicle safety within the electronically actuated throttle control system that is allegedly causing sudden and uncontrolled acceleration in model year (MY) 2006 to 2007 Toyota Tacoma pickup trucks (vehicles).

After conducting a technical review of the material cited and provided by the petitioner and other information, and taking into account several considerations, including, among others, allocation of agency resources, agency priorities, and the likelihood that additional investigation would result in a finding that a defect related to motor vehicle safety exists, NHTSA has concluded that further investigation of the issues raised by the petition is not warranted. The agency accordingly has denied the petition.

FOR FURTHER INFORMATION CONTACT: Mr. Scott Yon, Vehicle Control Division, Office of Defects Investigation, NHTSA, 1200 New Jersey Avenue, SE., Washington, DC 20590. Telephone 202–366–0139.

SUPPLEMENTARY INFORMATION:

I. Introduction

Interested persons may petition NHTSA requesting that the agency initiate an investigation to determine whether a motor vehicle or item of replacement equipment does not comply with an applicable Federal motor vehicle safety standard or contains a defect that relates to motor vehicle safety. 49 CFR 552.1. Upon receipt of a properly filed petition, the agency conducts a technical review of

the petition, material submitted with the petition, and any additional information. § 552.6. After considering the technical review and taking into account appropriate factors, which may include, among others, allocation of agency resources, agency priorities, and the likelihood of success in litigation that might arise from a determination of a noncompliance or a defect related to motor vehicle safety, the agency will grant or deny the petition. § 552.8.

II. Defect Petition Background Information

The Petitioner, Mr. William Kronholm of Helena, Montana, purchased a new model year (MY) 2006 Toyota Tacoma pickup (VIN 5TEUU42N26Z258969, Petitioner's vehicle) on May 10, 2006. The vehicle is equipped with a V6 engine (4.0 L, 1GR–FE), five speed automatic transmission, air conditioning (A/C), cruise control, antilock brakes (ABS), limited slip rear differential, and four-wheel drivetrain (4WD), and was manufactured in April 2006. The Petitioner's vehicle is also equipped with an electronically actuated throttle control system.[1] The Petitioner is the primary driver of the Petitioner's vehicle and he drove the vehicle for approximately 24,500 miles without experiencing a problem with the throttle control system.

On the morning of January 5, 2008, the Petitioner and his wife drove the vehicle to a cross-country skiing area about 100 miles from their home. After skiing several hours, they returned home on Rt. 141. During the return trip, the Petitioner pulled off the road and stopped briefly at the intersection with Rt. 271. The transmission was placed in Park and the engine was left running.

When the Petitioner was ready to resume the trip south on Rt. 141, he engaged Drive and allowed the vehicle to move forward under its own power (without accelerator pedal application). As he approached the intersection, and while braking and checking for oncoming traffic, he sensed that the vehicle was not slowing as expected from the brake application.[2] He struggled with the vehicle for about 10 seconds, continuing to press on the brake, before regaining control of the vehicle. By this time the vehicle had moved about 7 to 10 meters beyond where the Petitioner had intended to stop, coming to rest in the southbound lane of Rt. 141. He was alarmed by the event and wasn't quite sure what had happened. However, he could not identify a specific problem with his vehicle, so he continued driving.

When the Petitioner arrived at his home, he began to back the vehicle into his short driveway.[3] While steering the vehicle into the driveway and using the brake to regulate the vehicle speed, the Petitioner reports that the vehicle began to accelerate suddenly in the rearward direction. He applied the brakes forcefully, which slowed the vehicle,[4] but he was concerned that he was nearing the garage door. He concluded that his vehicle was out of control and, fearing a crash, he turned the ignition switch off. He estimates the duration of this event was approximately 10 seconds. He subsequently restarted the vehicle and it operated normally.

Due to the similarity with his earlier incident, and since both incidents had occurred within a two hour period, he suspected that a defect with his vehicle was the likely cause. He conducted some research, including finding some related news articles and news broadcasts via Web research that reported similar occurrences on other MY 2006 and 2007 Tacoma vehicles. He also found the NHTSA Web site, where he filed his Vehicle Owner Questionnaire (VOQ) report (ODI 10214130) and conducted a VOQ search for other Tacoma reports similar to his. His search identified a number of reports for MY 2006 and 2007 Tacoma vehicles that he considered similar to the incidents he had experienced, as well as a small number of reports for peer vehicles (non-Toyota) of similar age, usage, and design type.

The Petitioner took his Tacoma to a local Toyota dealer on January 7, 2008, advised it of the two incidents he had experienced, and requested that they inspect the vehicle for a potential problem or defect that caused the unintended accelerations. The dealership tested the vehicle, inspected the air intake, throttle and accelerator pedal wiring, and checked for any stored diagnostic codes or service messages in the engine control unit. The dealer also checked for any pertinent bulletins or ''health'' updates. The dealer could not duplicate the unintended acceleration, no codes were stored and no bulletins or updates were available. No repairs were made and the vehicle was returned to the Petitioner.

The Petitioner filed a Defect Petition (DP) with NHTSA that was received in NHTSA on January 18, 2008. The petition identified his previous VOQ and discussed his research on Tacoma and peer vehicle VOQs with throttle control complaints. He requested that NHTSA open an investigation into sudden and uncontrolled acceleration on the MY 2006 and 2007 Toyota Tacoma vehicles. In a letter to Toyota dated January 25, 2008, the Petitioner described the two ''spontaneous and uncommanded sudden acceleration incidents in the span of less than two hours'' and the results of his search for related complaints on the NHTSA Web site. The letter takes issue with Toyota's response to his and other complaints of sudden acceleration and requests that Toyota conduct a ''full and complete investigation of the defect'' in his Tacoma.[5]

ODI contacted the Petitioner on January 24, 2008, to advise that we received his petition. During this call, ODI staff briefly reviewed the specifics of the two incidents the Petitioner reported and requested that he provide the ODI numbers of the reports he identified in his petition for both the Toyota and non-Toyota vehicles. During this conversation, the Petitioner confirmed his assessment that during both incidents, his vehicle's brake system had functioned properly and that the cause of the incidents was a failure of the throttle control system, specifically that the throttle control system opened the throttle without accelerator pedal application. In other words, the vehicle self-accelerated. In his opinion, this acceleration made the vehicle difficult to control and unsafe to operate.

The Petitioner provided a list of 37 VOQ reports via e-mail, 33 for Toyota Tacoma, including the Petitioner's report ODI 10214130, and four for non-Toyota pickups.[6] The Toyota Tacoma reports included 16 reports on MY 2006 and 17 reports on MY 2007 Tacoma. ODI notes that two reports (10180652 and 10181486) were submitted by the

[1] The design of the Tacoma throttle control system is similar to that reviewed in PE04–021. Interested persons can refer to this investigation for more information on the basic design and operation of the system.

[2] His wife also recognized that the vehicle was not stopping as she had expected, or that something was wrong, and she asked her husband what was going on.

[3] There is a slight grade that would allow the vehicle to reverse without accelerator application.

[4] The Petitioner states his vehicle's rear wheels were spinning freely as he recalls hearing the sound of gravel hitting the inside of the rear wheel wells.

[5] See *http://www.safercar.gov* under VOQ report ODI 10214130 to view the 1/25/2008 letter.

[6] ODI numbers for MY 2006 Tacoma: 10152011, 10172030, 10183012, 10184332 (Canadian vehicle), 10184375, 10184416, 10184759, 10185253, 10186996, 10191371, 10201595, 10202727, 10211100, 10212718, 10214130, 10215598. For MY 2007 Tacoma: 10180652, 10181411, 10181486 (same complainant as 10180652), 10182045, 10187789, 10197535, 10198196, 10199820, 10201655, 10202283, 10207528, 10208120, 10208868, 10208890, 10212294, 10212602, 10212656. For non-Toyota products: 10166548, 10183144, 10199048, 10203722.

same complainant, and one (10184332) was submitted by a Canadian consumer.

In response to the petition, ODI opened Defect Petition (DP) 08–001 on January 31, 2008. ODI sent an Information Request (IR) letter to Toyota on February 8, 2008, with a response due date of March 28, 2008. The IR letter sought information relating to a range of potential consumer complaints and defined the MY 2004 [7] to 2008 Tacoma models as the subject vehicles.[8] Toyota requested and was granted extensions to the original response date, with partial submissions made on the agreed upon dates, and the submission was completed on April 25, 2008.[9] Toyota also conducted a technical meeting with ODI on May 21, 2008.

III. NHTSA Review—VOQ Data

ODI began its assessment of the petition by attempting to contact each of the persons who had submitted a VOQ report on a Tacoma, as identified by the Petitioner. We interviewed 26 of the 31 consumers.[10] In the interviews, consumers described events that could be attributed to a throttle control system issue. Their concerns stemmed from a variety of vehicle operating conditions and driving circumstances. Some owners described events similar to the Petitioner's allegations, in that unintended acceleration occurred on vehicles equipped with an automatic transmission while slowing or stopped. Other complainants described unintended acceleration that was minor in comparison to the events that the Petitioner described. Other owners described events that varied significantly from what the Petitioner reported. For example, some consumers described events that occurred on manual transmission vehicles at highway speeds when the clutch was depressed, while others reported that a condition only occurred after the accelerator pedal had been depressed significantly (intentionally) or only when the cruise control or A/C system was engaged. Some consumers reported events occurring when more than one of these conditions was present.

After the initial interviews, ODI elected to expand its analysis to include a broader representation of Tacoma reports in the VOQ complaint database. Noting that the DP subject vehicles were of a consistent design type (generation) from MY 2005 through MY 2008,[11] we searched the complaint database to identify all reports potentially involving the throttle control system for MY 2005 and later Tacoma vehicles. Table 1 shows the number of Tacoma VOQ reports, by MY, that include an allegation possibly related to the throttle control system. We attempted to interview each person who submitted a report. We have interviewed 64 of these 97 consumers (about 66%).

TABLE 1—UNIQUE TACOMA THROTTLE CONTROL SYSTEM COMPLAINTS, THROUGH 5/31/2008

MY	2005	2006	2007	2008	Totals
Complaints	18	36	38	5	97

As shown in Table 1, there were fewer reports for MY 2005 Tacoma reports than for MY 2006 and 2007. When vehicles share a common design configuration over more than one model year, there typically tends to be higher rates of reports on the older vehicles than the newer ones. The trend found here may reflect an abnormal variability or another factor such as more recent publicity.

Based on the report descriptions and the interviews conducted, ODI separated the consumer complaints into (1) those that may involve the throttle control system, (2) those that did not relate to the throttle control system (or that relate to a different system or component), and (3) those that we could not categorize, often because of limited information. The analysis revealed that some VOQs implicate more than one of the above issues, resulting in a total of 104 discrete complaints in these three categories.

Of the 104 complaints, 59 relate or may relate to the throttle control system. These complaints include allegations of high idle speed on cold start; short duration (less than one second), small magnitude vehicle surges while the vehicle is at rest and in gear (possibly related to A/C system operation); excessive engine speed and transmission downshifts when the cruise control is engaged and the vehicle encounters an uphill grade; and failure of the engine to return to ''idle'' in a normal manner while at highway speeds when the clutch is depressed for shifting (termed by Toyota as ''catalyst protection'').

Regarding the vehicle's throttle control system, we note that NHTSA's Office of Vehicle Safety Compliance (OVSC) conducted testing on a MY 2007 Tacoma for compliance with Federal Motor Vehicle Safety Standard (FMVSS) No. 124, Accelerator Controls in September 2007. In a November 23, 2007, report, OVSC indicated that the Tacoma throttle control system is compliant with the requirements set forth in FMVSS No. 124.[12] OVSC completed this testing prior to the opening of DP08–001.

Of the 59 complaints that may be related to the vehicle's throttle control system, two of the complaints (about three percent) related to high idle speed on cold start. None of these reports allege a crash or injury. NHTSA's Vehicle Research and Test Center (VRTC) conducted testing to compare two MY 2008 Tacoma (four- and six-cylinder engines with automatic transmissions) to 15 other non-Tacoma vehicles. The objective was to determine the engine RPM and the sustaining brake pedal force (effort required to maintain a stationary position) during cold start.[13] For the vehicles tested, the Tacoma idle speeds and pedal forces were both above the average of the 17 vehicles tested but within the range of values measured.

Thirty-seven of the 59 complaints (about 63 percent) related to a short duration, small magnitude vehicle surge increase while the vehicle is at rest and in gear. None of these reports allege a crash or injury. In assessing the safety consequence of these at-rest surge complaints, we note first that these events occur only on vehicles equipped with automatic transmissions. Like many other vehicles, the Tacoma idle speed varies depending on whether the A/C compressor is engaged. We note also that the A/C compressor operates

[7] The MY 2004 vehicles are an earlier design version that used different engines and body style.

[8] This was done to ensure a comprehensive sample of the types of complaints Toyota received.

[9] Some portions of the response were submitted with a request for confidentiality.

[10] The five remaining consumers failed to respond to requests for an interview, or could not be contacted.

[11] At MY 2005, the Tacoma vehicle line underwent a major design revision from the MY 2004 vehicle, with a new body style and powertrain being introduced.

[12] See *http://nhthqnwws111.odi.nhtsa.dot.gov/acms/docservlet/Artemis/Public/OVSC/2007/Test%20Reports/TRTR–639126–2007.PDF* for vehicle specification, test results, and details on obtaining more information.

[13] This work was completed prior to the opening of DP08–001 also.

when the front windshield defroster is enabled, regardless of the state of the A/C compressor switch.

In our IR to Toyota, we asked the company to explain the functionality of the Tacoma A/C system and how it affects the idle speed. According to Toyota's response, there is a modest increase in idle speed when the AC compressor engages. With this functionality, it is possible for the vehicle to inch forward if, after it is stopped and in gear, the driver applies only enough braking to prevent the vehicle from rolling forward under normal conditions without the A/C engaged and the A/C compressor subsequently engages. However, a small additional brake force suppresses this forward movement.

Some of these 37 consumers, typically those with 4WD, reported that within about five seconds after stopping the vehicle, they experienced a surge that felt like a sharp jolt in the vehicle as though a following driver had tapped the rear bumper (some consumers reported looking in the rearview mirror to see if this was the case). The duration of the jolt was very short (< 1 second), would occur only once per stop, and occurred randomly—perhaps on a weekly basis or less frequently. Consumers did not report a simultaneous change in engine speed, so it is unclear if this issue involves the vehicle's throttle control system.[14] We were not able to simulate this event on a vehicle. However, to the extent that these events could be related to the throttle control system, we note that consumers reported they easily controlled vehicle movement with normal brake force.

Eleven of the 59 complaints (about nineteen percent) involve excessive engine speed and transmission downshifts when the cruise control is engaged and the vehicle encounters an uphill grade. None of these reports allege a crash or injury. We note that this occurs only on vehicles equipped with automatic transmissions and cruise control, and that it appears to be more prevalent on the four cylinder models. We identified VOQ report ODI 10183271 that provided detailed information regarding this issue. The report states that while on the interstate with the cruise control engaged and set within a speed range of about 65 to 75 miles per hour, if the vehicle encounters an uphill grade, the vehicle will first downshift to a lower gear, then apply additional throttle, resulting in the engine revving to a high RPM.[15] The VOQ alleges that the combined effect of downshifting then opening the throttle can cause a yaw or loss of control condition and that a crash could result, and that a near crash incident occurred on one occasion.[16]

We interviewed this consumer[17] and discussed the results of testing conducted on his vehicle by a local Toyota dealer. He provided a description of what he learned from Toyota's testing, and agreed to allow us to inspect his vehicle. We met with him on March 12, 2008, and test drove the vehicle on local interstates where he had previously experienced the alleged event. We connected a commercially available test device to the vehicle's diagnostic connector to monitor throttle and transmission data. We confirmed that when the vehicle cruise control is set to a specific speed range and it encounters an incline, the transmission will downshift to second gear and the engine will rev to a high RPM. However, we could not confirm that the transmission downshift preceded the throttle application. To the contrary, the data showed that the transmission downshift was in response to throttle opening, similar to what would occur if the operator were to manually apply the accelerator pedal under similar circumstances (same speed range, on an incline). We do not perceive a significant safety risk related to this phenomenon.

Nine of the 59 complaints (about 15 percent) relate to an alleged failure of the engine to return to ''idle' in a normal manner while at highway speeds when the clutch is depressed for shifting (what Toyota describes as catalyst protection). One of these reports alleges a crash with no injury, as discussed below. We note first that this event only occurs on vehicles equipped with four cylinder engines and manual transmission. The condition is typically described in reports as a failure of the engine to return to normal idle speed and an increase in engine speed that occurs when the clutch is depressed while shifting from 4th to 5th gear (see ODI 10150731, 10157923, 10175527, and 10208505).

In its IR response, Toyota described the system used on four cylinder vehicles to protect the long-term durability of the catalytic converter, a component of the emissions control system. Toyota reported that under certain operating conditions and when the accelerator pedal is not being depressed (i.e., an overrun condition), the vehicle's catalytic converter can be damaged if there is inadequate air flow through the engine. In simplified terms, the throttle control system opens the throttle without driver input to provide a minimal airflow through the engine. This can produce a temporary elevated idle speed if the clutch is depressed. However, according to Toyota's IR response, the air flow increase by the throttle control system is limited so that it does not result in a net power output to the vehicle. Toyota advised that while increased air flow diminishes engine braking (deceleration caused by engine drag in an overrun condition), it cannot produce vehicle acceleration.

VRTC testing of a MY 2006 Tacoma equipped with a four cylinder engine and manual transmission verified that the catalyst protection feature operated as Toyota described.[18] We confirmed that the strategy is only implemented when the transmission is in 4th or 5th gear and note that when the clutch was depressed we observed free-wheel engine speeds as high as 3,000 RPMs. However, at the road speeds where this occurred (60 to 75 MPH), and with the limited amount of airflow involved, the effect on vehicle control, though perhaps annoying to consumers, did not appear to be consequential.

One VOQ report (ODI 10152011) alleged that this operation caused the operator to lose control of his vehicle and crash on a rural/semi-urban Colorado roadway. However, the road was snow-covered at the time of the crash. Based on the information in the report, the vehicle was travelling at a high speed when the crash occurred (70 MPH on a snow-covered rural/semi-urban road). Since speed and road conditions may have been a factor, the incident described in this report is of little probative value with regard to the alleged defect described in the petition.

Beyond the 59 reports, ODI identified 19 reports that did not relate to the throttle control system, or that relate to a different system or component. Fourteen of these appear to have been caused by floor mat interference with the accelerator pedal, including 4 crashes and 3 injuries. The other five reports were related to dual pedal application, where the operator inadvertently depresses both the

[14] Some consumer's have alleged that the vehicle's drivetrain or suspension causes the condition.

[15] He states that he met with a Toyota technical representative and observed the results of test work they conducted. The consumer claims that the test results verified the system operated in the manner described in his report, though he did not obtain copies of the test results.

[16] See the VOQ report ODI 10183271 for details of the near loss of control incident that was alleged.

[17] The complainant is an engineer who owns a four cylinder Tacoma with automatic transmission.

[18] Also, Toyota demonstrated this system to ODI during the May 21, 2008, technical meeting.

accelerator pedal and the brake pedal when intending to apply the brake only. One of these reports alleges a minor crash with no injury (ODI 10221144). These five complaints involve vehicles equipped with automatic transmissions. When dual pedal application occurs, the vehicle moves forward further than the driver intends. During ODI interviews, complainants reported that they had inadvertently applied both the brake and gas pedals at the same time. Three complainants determined this prior to filing VOQs (ODI 10210488, 10221144, and 10223599), one concluded it after filing and disclosed it during the interview (ODI 10208868), and one mentioned that this may have been a factor during our interview (ODI 10198196). To the extent that causes are identified that are not related to the electronic throttle control system but which may raise possible safety defect issues, such as floor mat interference or pedal placement, ODI will continue to examine them as part of our regular screening process and will open investigations if warranted.

In a few reports, consumers questioned the design of the pedal configuration, suggesting that the pedals were too close to one another (lateral separation) or that there was insufficient step-over [19] clearance. We note that, dimensionally speaking, the pedal configuration of the MY 2005 to 2008 Tacoma is typical of other light trucks and passenger vehicles. Some complainants noted that they had been wearing larger or stiffer than usual shoes, such as work boots, when the dual pedal application occurred, and they reported that this was a factor in the occurrence.

Related to this topic, ODI interviewed the Petitioner and inspected his Tacoma at his home on March 26, 2008. In an earlier interview, the Petitioner advised that he was wearing his cross-country ski boots (shoes) when his two incidents occurred, so we took this opportunity to look at them. The cross country ski shoes (Merrell brand, men's size 9½), unlike down-hill ski boots, are similar in size and width to a work boot with the exception of an extension at the toe of the boot that acts as a binding for the ski. The binding is of the same thickness as the sole of the shoe and it extends forward (outward) from the shoe about ⅝ of an inch. During a test drive, we noted that the Petitioner used his right foot to operate the brake and gas pedal, and that he lifts and relocates his foot when he transitions from one pedal to another.[20]

Considering that the shoes may have played a role in his incidents, we discussed the issue of dual pedal application with the Petitioner. He noted that he skied two to three times per year, that he typically drove with his ski shoes on to save time at the ski facility, and that he had never had a problem before. Additionally, he noted that he had made this same trip using the Tacoma a few times the prior ski season without incident. We asked the Petitioner to assess the vehicle with his ski shoes on to see if he could apply both pedals at the same time and to advise us of his findings. He subsequently reported that it was possible for him to inadvertently hit both pedals while wearing the ski shoes but that his foot had to be in an abnormal orientation for this to occur, one that would be plainly obvious to him. In his estimation this was not the cause of his two incidents.

Finally, for the remaining 26 complaints, these are reports where we have assessed the available information from the complainants, yet we are unable to identify a cause that may be related to the vehicle's throttle control system or, in many cases, any specific cause or explanation. These reports allege 13 crashes with four injury allegations (one minor, two moderate, one severe). In some cases, the VOQ was inconclusive and the consumer filing the VOQ could not be contacted for an interview. However, in no instances did the complainants report or allege a specific component failure or replacement, the illumination of a warning indicator, the detection of a stored trouble or fault code, or the identification of any other physical evidence supporting a vehicle-based problem. The incidents occur randomly and are therefore unable to be reproduced for testing or further analysis.[21]

IV. NHTSA Review—Toyota IR Response Data

ODI reviewed the information Toyota provided in its IR response for the MY 2005 to 2008 vehicles.22 We reviewed the population data and provide the number of vehicles by MY and transmission type in Table 2.

TABLE 2—VEHICLE POPULATION BY MY AND TRANSMISSION TYPE

	2005	2006	2007	2008*	Totals
Auto	111,625	152,727	134,665	83,828	482,845
Manual	40,013	42,441	31,156	19,105	132,715
Totals	151,638	195,168	165,821	102,933	615,560

*—partial MY.

We reviewed Toyota's responses to several other questions to ensure we fully understood any product or design changes, the studies of issues relevant to the alleged defect conducted by Toyota, the design and operation of the systems that interact with the throttle control system, and Toyota's assessment of the possible problem with the Tacoma throttle control system. We did not identify any information indicating a product- or component-based issue that could explain or cause a throttle control system failure.

We conducted a limited review of the responses to questions regarding the complaint and warranty data. Our review of the field report, legal claim,[23] and warranty claim data did not identify any concern or trend. We also conducted an analysis of the consumer complaints as described below. Table 3 shows the count of consumer complaints by MY.

[19] This is the difference in the height (distance) of the pedals from the floor board.

[20] The toe of the Petitioner's foot is oriented to the right of his heel when he applies either the brake or gas pedal.

[21] As an example of the type of analysis possible, for the Petitioner's vehicle, we have interviewed the Petitioner (multiple times), interviewed his wife (she was a passenger for one of the incidents), conducted a physical inspection of the Petitioner's vehicle, reviewed the Petitioner's vehicle service and warranty history, test driven the Petitioner's vehicle, and monitored the Petitioner's vehicle diagnostic/control system using a commercially available diagnostic tool; the Petitioner's vehicle has not exhibited another incident as of this date.

[23] The legal claims were duplicative of the consumer reports, which were also reviewed.

TABLE 3—CONSUMER COMPLAINT COUNTS BY MY FROM TOYOTA'S IR RESPONSE

	2005	2006	2007	2008	Total
Consumer Complaints	176	167	90	13	446

We based our review of the Toyota consumer complaints on the information provided in the IR response. We first note that the trend we saw in the VOQ data—that the MY 2006 and 2007 vehicles were over-represented (or MY 2005 was under represented)—does not appear in the consumer complaint data submitted by Toyota. In fact, Toyota's consumer complaint data do not suggest any identifiable reporting trend for any MY(s).

In reading the consumer complaint reports, we noted most were similar to the complaints identified in the VOQ reports. Accordingly, we followed the same approach used for VOQ reports and conducted an analysis of a random sample of consumer complaints. We reviewed 133 reports [24] from MYs 2005 to 2008 and identified 142 separate complaint types. ODI categorized 96 (about 68%) of the complaints as potentially related to the vehicle's throttle control system, 23 (about 16%) as not related to the throttle control system (or related to a different system or component), and 23 (about 16%) as not permitting us to identify a cause that relates to the vehicle's throttle control system.[25] These proportions are similar to the VOQ analysis.

For the crashes and injuries reported in the Toyota IR response, we reviewed the reports for the MY 2006 and 2007 Tacoma (since these were the subject of the DP request) where a crash or injury was alleged. From these reports, we identified 33 unique incidents. Eight of these incidents, with three injuries, were duplicates of reports to ODI that we had reviewed. For the remaining 25 reports unique to the Toyota response, we determined that four reports, with no injuries, fell outside the scope of the alleged defect (these involved brake system or other unrelated issues), two involved dual pedal application errors, and six involved other issues not related to the throttle control system. For the remaining 13 crash allegations, with one injury allegation, we were unable to make an assessment of the underlying cause of the crash.[26]

Conclusion

ODI's review of the petition, assessment of VOQs, interviews of persons who filed VOQs, testing, and review of Toyota's IR response reveals that about three-quarters of the complaints involved various explained aspects of the Tacoma's throttle control system that do not seem to present a significant safety risk under most circumstances, or did not involve a failure of the throttle control system. For the remaining quarter, although there may have been an issue with the throttle control system as one possible explanation, we have been unable to determine a throttle control related or any underlying cause that gave rise to the complaint. For those vehicles where the throttle control system did not perform as the owner believes it should have, the information suggesting a possible defect related to motor vehicle safety is quite limited. In our view, additional investigation is unlikely to result in a finding that a defect related to motor vehicle safety exists with regard to the Tacoma's throttle control system or a NHTSA order for the notification and remedy of a safety-related defect as alleged by the petitioner at the conclusion of the requested investigation. Therefore, in view of the need to allocate and prioritize NHTSA's limited resources to best accomplish the agency's safety mission, the petition is denied. This action does not constitute a finding by NHTSA that a safety-related defect does not exist. The agency will take further action if warranted by future circumstances.

Authority: 49 U.S.C. 30162(d); delegations of authority at 49 CFR 1.50 and 501.8.

Issued on: August 25, 2008.

Daniel C. Smith,

Associate Administrator for Enforcement.

[FR Doc. E8–19994 Filed 9–2–08; 8:45 am]

BILLING CODE 4910–59–P

[24] We actually reviewed 143 reports but deemed 10 reports fell outside the scope of the alleged defect.

[25] As with the VOQ reports, these consumer complaints did not contain evidence of a vehicle causation but were simply allegations that the vehicle had suffered a throttle control system-related incident. Based on this analysis, we estimate that of the 257 MY 2006 and 2007 Toyota consumer complaints, about 40 would be in this category. This number will be reflected as the manufacturer failure counts in the closing resume for DP08–001.

[26] None of the 25 reports contained any specific evidence of a failure of the throttle control system.

DEPARTMENT OF VETERANS AFFAIRS

Enhanced-Use Lease of VA Property for the Improvement and Operation of the Memorial Stadium at the Department of Veterans Affairs Medical Center, Chillicothe, OH

AGENCY: Department of Veterans Affairs (VA).

ACTION: Notice of Intent To Enter into an Enhanced-Use Lease.

SUMMARY: The Secretary of the Department of Veterans Affairs (VA) intends to enter into an enhanced-use lease of approximately 4.273 acres of underutilized land and improvements at the VA Medical Center in Chillicothe, Ohio. The selected lessee will finance, preserve, improve, design, build, operate, manage and maintain the property, which includes the VA Memorial Stadium and its accessory facilities (e.g., bleachers, dressing rooms, concession buildings, playground, and a grassy area adjacent to the stadium). As consideration for the lease, the lessee will be required to make annual capital improvements, pay VA fair market annual rent, and allow VA to use the stadium at no cost for mission-related events at least 5 times annually during the lease term. The value of the consideration meets or exceeds the net present value of the property to be leased.

FOR FURTHER INFORMATION CONTACT: Edward Bradley, Office of Asset Enterprise Management (044C), Department of Veterans Affairs, 810 Vermont Avenue, NW., Washington, DC 20420, (202) 461–7778 (this is not a toll-free number).

SUPPLEMENTARY INFORMATION: Title 38 U.S.C. 8161 *et seq.* states that the Secretary may enter into an enhanced-use lease if he determines that implementation of a business plan proposed by the Under Secretary for Health for applying the consideration under such a lease for the provision of medical care and services would result in a demonstrable improvement of services to eligible veterans in the geographic service-delivery area within which the property is located. This project meets this requirement.

U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: EA07-010
Prompted By: PE07-016, Consumer Complaints
Date Opened: 08/08/2007 Date Closed: 10/11/2007
Principal Investigator: Scott Yon
Subject: Unwanted Acceleration, Floor Mat

Manufacturer: Toyota Motor Corporation
Products: MY 2002 - 2008 Lexus ES350 and Toyota Camry
Population: 55,000 (estimated)

Problem Description: The accessory all weather floor mat can entrap the throttle pedal.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	26	31	49
Crashes/Fires:	7	7	10
Injury Incidents:	8	6	8
# Injuries:	11	6	13
Fatality Incidents:	1	0	1
# Fatalities:	1	0	1
Other:	35*	4*	39

Description of Other: *ODI: Reports from VRTC Survey, MFR: Related Warranty Claims

Action: This Investigation is closed. Recall 07E-082

Engineer: *D. Scott Yon* 10/15/07 Date: *10/11/2007*
Div. Chief: *Jeffrey L. Quandt* Date: *10/11/2007*
Office Dir.: *Kathleen C. DeMeter* Date: *10/11/2007*

Summary: The driver side floor mat will not interfere with the throttle pedal if properly secured using the retaining hooks provided by Toyota. However, if the all weather mat is unsecured and moves forward from its intended position it can entrap the throttle pedal at the fully open position after it has been depressed. This can happen regardless of whether or not another mat (carpet) is underneath.

When this occurs, some operators react by applying the brake pedal multiple times, depleting the braking system's (vacuum based) power assist. Stopping the vehicle with unassisted braking while the throttle is fully open requires significant pedal force, which some operators did not, or were unable to, apply for the required duration. Continued driving in this condition results in overheated brakes, which further diminishes the braking effectiveness. Some operators attempted to turn the vehicle off by depressing the engine control button, however they were unaware the button had to be depressed for three seconds to stop the engine when the vehicle is in motion; this functionality was not explained adequately in the owner's manual.

In ODI interviews owners reported they were unaware the all weather mat had the potential to interfere with the throttle pedal, advising that this was never properly explained given the significant hazard it represented. Owners reported several explanations for why the mat was unsecured, including that the vehicle was delivered in this condition (most common reason), or that they had (unwittingly) installed the mat themselves, or that another party, such as a car wash attendant, had disturbed the mat without the owner's knowledge. One consumer reported that their vehicle was delivered without the retaining devices installed.

Continued on page 2

In a September 26, 2007 letter to NHTSA, Toyota indicated that they would conduct a safety recall to replace the all weather mat with a redesigned mat. According to Toyota, the new mat design will reduce the potential for mat interference with the throttle pedal.

The population noted above represents the number of subject mats that have been sold in the United States. Since Toyota cannot identify which vehicles may have the subject mats, they will send a letter to all registered owners of the subject vehicles (estimated 750k) advising them of the concern and remedy. A copy of that letter will be posted on NHTSA's web site under Recall 07E-082; it contains a description of the condition and the actions an operator should take in the event throttle entrapment occurs while driving.

The fatality incident noted above occurred in July 2007 and was investigated by NHTSA's Special Crash Investigations office. It has not been reported on a Vehicle Owner Questionnaire. The operator reportedly traveled at speeds in excess of 100 mph for an estimated eight miles on an interstate in California before it struck two other vehicles. One of the struck vehicles and the subject vehicle caught fire. The occupant of the struck vehicle did not evacuate and died at the scene. The subject vehicle driver suffered a broken bone. The California Highway Patrol is investigating the incident also.

ODI did not issue an Information Request letter during this investigation. The Toyota reports noted above were reported during Preliminary Evaluation, (PE) 07-016 and are current through April 2007 for MY 2007 Lexus ES350 only. ODI does not have field experience data from Toyota for Camry vehicles.

Throttle entrapment due to improperly installed floor mats could be a concern in all vehicles. Therefore, drivers should always ensure their floor mats are properly and safely installed. This includes original equipment mats (carpet and accessory) and especially aftermarket mats. Operators of vehicles with engine control buttons should also ensure they fully understand the button's functionality.

#

U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: PE 04-021
Prompted By: Consumer Complaints, Petition Request DP04-004
Date Opened: 03/03/2004
Principal Investigator: Scott Yon
Subject: Throttle Control System

Manufacturer: Toyota Motor Sales, USA, Inc.
Products: MY 2002 - 2003 Toyota Camry, Camry Solara and Lexus ES300
Population: 1,010,000 (Estimated)

Problem Description: Complainants allege that the throttle control system fails to properly control engine speed resulting in vehicle surge.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	37	tbd	37
Crashes/Fires:	30	tbd	30
Injury Incidents:	4	tbd	4
# Injuries:	5	tbd	5
Fatality Incidents:	0	tbd	0
# Fatalities:	0	tbd	0
Other*:	0	tbd	0

*Description Of Other:

Action: A Preliminary Evaluation has been opened.

Engineer: *D. Scott Yon* 3/4/04 Date: *03/03/2004*
Div. Chief: *Jeffrey L. Quandt* Date: *03/03/2004*
Office Dir.: *Kathleen C. DeMeter* Date: *03/03/2004*

Summary: Crashes noted above varied from minor to significant and may have involved other vehicles and or building structures. One of the noted injuries was serious; it occurred when a pedestrian was struck by a vehicle which allegedly surged forward unexpectedly. The Lexus models were the subject of a Defect Petition, see DP04-003 for further details.

The subject vehicles are manufactured with an electronic throttle control system that uses sensors at the accelerator pedal to indicate pedal position (throttle demand). An electronic control unit (ECU) interprets the signals of the pedal sensors and then controls the position of the throttle valve (TV) in the throttle body (TB). The ECU also monitors the TV's position via sensors in the TB.

Complainants allege that the vehicle may suddenly and unexpectedly surge or accelerate, stating that the condition is generally of short duration when it occurs. Some reports allege the condition has occurred intermittently on multiple occasions. It may occur during slow speed vehicle maneuvers (where the brake pedal is being used to control vehicle speed) and/or after shifting the transmission and/or at higher speeds under cruise control operation. In most cases, the brake system was reportedly functional and could be used to control the vehicle when the condition occurred.

ODI is opening this Preliminary Evaluation to determine the manufacturer failure report counts and to investigate if the throttle control system could be the cause of vehicle surge or unwanted acceleration.

WC 3-4-04

PE04 – 021; Toyota Throttle Control

37 VOQs – ODI Numbers

763094, 6900639, 8001010, 8004502, 8013543, 8013908, 8015215, 8017143, 8022453, 10002266, 10002533, 10003476, 10003640, 10003939, 10008367, 10008754, 10015971, 10017187, 10019875, 10023329, 10024048, 10024313, 10025068, 10026392, 10026512, 10032815, 10038103, 10039916, 10045644, 10045944, 10048030, 10053774, 10055375, 10055820, 10056060, 10056117, 10056537

U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: PE07-016
Date Opened: 03/29/2007
Principal Investigator: Scott Yon
Subject: Accessory Floor Mat

Manufacturer: Toyota Motor Corporation
Products: MY 2007 Lexus ES350
Population: 80,000 (estimated)

Problem Description: The accessory floor mat interferes with the throttle pedal

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	5		
Crashes/Fires:	3		
Injury Incidents:	3		
# Injuries:	7		
Fatality Incidents:	0		
# Fatalities:	0		

Action: Open a Preliminary Evaluation

Engineer: *D. Scott Yon* 3/29/07 Date: *03/29/2007*
Div. Chief: *Jeffrey L. Quandt* Date: *03/29/2007*
Office Dir.: *Kathleen C. DeMeter* Date: *03/29/2007*

Summary: The subject vehicles come equipped with a standard floor mat made from a carpeted material. Two plastic hooks that are secured to the vehicle flooring are used to retain the mat in its proper position. The vehicle manufacturer also supplies an optional equipment winter floor mat made from a rubberized material (only a portion of the subject vehicles contain winter mats). The hooks used for mat retention will only secure one floor mat at a time, either the winter mat or the carpet mat. The winter mat contains a written statement warning "Do not place on top of existing floor mats." Consumers interviewed by ODI have indicated that the warning was not discernable. If the driver side winter mat is placed (unsecured) on top of the carpet mat it may interfere with the throttle pedal preventing it from returning to the closed position after application and thus increasing the risk of a vehicle crash. A Preliminary Evaluation has been opened to investigate this issue.

U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: EA07-010
Prompted By: PE07-016, Consumer Complaints
Date Opened: 08/08/2007 Date Closed: 10/11/2007
Principal Investigator: Scott Yon
Subject: Unwanted Acceleration, Floor Mat

Manufacturer: Toyota Motor Corporation
Products: MY 2002 - 2008 Lexus ES350 and Toyota Camry
Population: 55,000 (estimated)

Problem Description: The accessory all weather floor mat can entrap the throttle pedal.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	26	31	49
Crashes/Fires:	7	7	10
Injury Incidents:	8	6	8
# Injuries:	11	6	13
Fatality Incidents:	1	0	1
# Fatalities:	1	0	1
Other:	35*	4*	39

Description of Other: *ODI: Reports from VRTC Survey, MFR: Related Warranty Claims

Action: This Investigation is closed. Recall 07E-082

Engineer: *D. Scott Yon* 10/15/07 Date: *10/11/2007*
Div. Chief: *Jeffrey L. Quandt* Date: *10/11/2007*
Office Dir.: *Kathleen C. DeMeter* Date: *10/11/2007*

Summary: The driver side floor mat will not interfere with the throttle pedal if properly secured using the retaining hooks provided by Toyota. However, if the all weather mat is unsecured and moves forward from its intended position it can entrap the throttle pedal at the fully open position after it has been depressed. This can happen regardless of whether or not another mat (carpet) is underneath.

When this occurs, some operators react by applying the brake pedal multiple times, depleting the braking system's (vacuum based) power assist. Stopping the vehicle with unassisted braking while the throttle is fully open requires significant pedal force, which some operators did not, or were unable to, apply for the required duration. Continued driving in this condition results in overheated brakes, which further diminishes the braking effectiveness. Some operators attempted to turn the vehicle off by depressing the engine control button, however they were unaware the button had to be depressed for three seconds to stop the engine when the vehicle is in motion; this functionality was not explained adequately in the owner's manual.

In ODI interviews owners reported they were unaware the all weather mat had the potential to interfere with the throttle pedal, advising that this was never properly explained given the significant hazard it represented. Owners reported several explanations for why the mat was unsecured, including that the vehicle was delivered in this condition (most common reason), or that they had (unwittingly) installed the mat themselves, or that another party, such as a car wash attendant, had disturbed the mat without the owner's knowledge. One consumer reported that their vehicle was delivered without the retaining devices installed.

Continued on page 2

In a September 26, 2007 letter to NHTSA, Toyota indicated that they would conduct a safety recall to replace the all weather mat with a redesigned mat. According to Toyota, the new mat design will reduce the potential for mat interference with the throttle pedal.

The population noted above represents the number of subject mats that have been sold in the United States. Since Toyota cannot identify which vehicles may have the subject mats, they will send a letter to all registered owners of the subject vehicles (estimated 750k) advising them of the concern and remedy. A copy of that letter will be posted on NHTSA's web site under Recall 07E-082; it contains a description of the condition and the actions an operator should take in the event throttle entrapment occurs while driving.

The fatality incident noted above occurred in July 2007 and was investigated by NHTSA's Special Crash Investigations office. It has not been reported on a Vehicle Owner Questionnaire. The operator reportedly traveled at speeds in excess of 100 mph for an estimated eight miles on an interstate in California before it struck two other vehicles. One of the struck vehicles and the subject vehicle caught fire. The occupant of the struck vehicle did not evacuate and died at the scene. The subject vehicle driver suffered a broken bone. The California Highway Patrol is investigating the incident also.

ODI did not issue an Information Request letter during this investigation. The Toyota reports noted above were reported during Preliminary Evaluation, (PE) 07-016 and are current through April 2007 for MY 2007 Lexus ES350 only. ODI does not have field experience data from Toyota for Camry vehicles.

Throttle entrapment due to improperly installed floor mats could be a concern in all vehicles. Therefore, drivers should always ensure their floor mats are properly and safely installed. This includes original equipment mats (carpet and accessory) and especially aftermarket mats. Operators of vehicles with engine control buttons should also ensure they fully understand the button's functionality.

#

U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

MAR 30 2004

400 Seventh Street, S.W.
Washington, D.C. 20590

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Christopher Tinto
Director of Technical and Regulatory Affairs
Toyota Motor Corporation
1850 M Street, NW - Suite 600
Washington, D.C. 20036

NVS-213dsy
PE04-021

Dear Mr. Tinto:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Preliminary Evaluation (PE04-021) to investigate allegations that the electronic throttle control system fails to properly control engine speed in model year (MY) 2002 and 2003 Toyota Camry, Camry Solara and Lexus ES300 model vehicles manufactured by Toyota Motor Corporation, and to request certain information.

ODI initially opened this investigation with 37 VOQs alleging problems involving the throttle control system on model year (MY) 2002 and 2003 Toyota Camry, Camry Solara and Lexus ES300 model vehicles. Based on information gathered while conducting complainant interviews shortly thereafter, ODI no longer considers 27 of these reports to be within this PE's scope because they mostly concern longer duration incidents of uncontrollable acceleration where brake pedal application reportedly had no affect. Additional details regarding this decision may be found in the March 23, 2004 memorandum to file (attached). ODI now recognizes twelve reports to be within the scope of this investigation. This count includes two received since opening this PE – 10060806 and 10062212. Five crashes (of minor to moderate severity) are reported. No injuries are alleged. Ten reports involve the Camry, with one report each for the Camry Solara and ES300 models. The ES300 was the subject of a Defect Petition.

Complaints allege that, while the vehicle is in gear and stopped or when driving slowly, a substantial increase in engine speed occurs without pressing on the accelerator. The driver must then control the resulting vehicle surge by applying the brake. Crashes occurred during those engine surge incidents where drivers could not apply the brakes quickly enough to stop the vehicle. These are short duration events where the vehicle subsequently returns to normal operation immediately after the occurrence. One complaint alleges the condition resulted in extended stopping distance and some complaints report multiple occurrences.

An electronic copy of each of the VOQ reports (in 12 Adobe PDF files) is provided on the enclosed CD-ROM for your information. A list of the ODI numbers is included at the end of this document.

Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject vehicles:** all MY 2002 and 2003 Toyota Camry, Camry Solara and Lexus ES300 models manufactured for sale or lease in the United States.

- **Subject component:** the subject vehicle's throttle control system, including the accelerator pedal assembly (with pedal position sensors), the throttle body assembly (with throttle valve position sensors and throttle control motor), all interconnecting wiring and harnessing, any electronic control unit(s) involved in the throttle control process, and any other devices which may have an impact on the throttle control system or its operation.

- **Toyota:** Toyota Motor Corporation, all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of Toyota (including all business units and persons previously referred to), who are or, in or after 1998, were involved in any way with any of the following related to the alleged defect in the subject vehicles:
  a. Design, engineering, analysis, modification or production (e.g. quality control);
  b. Testing, assessment or evaluation;
  c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
  d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers.

- **Alleged defect:** Allegations of A) an engine speed increase without the driver pressing on the accelerator pedal or, B) the engine speed failing to decrease when the accelerator pedal was no longer being depressed – both circumstances requiring greater than expected brake pedal application force to control or stop the vehicle where brake system function was reportedly normal. This includes short duration events where drivers could not react in time to apply the brakes effectively.

- **Document:** "Document(s)" is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages,

notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by Toyota, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available, "document(s)"also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by Toyota or not. If a document is not in the English language, provide both the original document and an English translation of the document.

- **Other Terms:** To the extent that they are used in these information requests, the terms "claim," "consumer complaint," "dealer field report," "field report," "fire," "fleet," "good will," "make," "model," "model year," "notice," "property damage," "property damage claim," "rollover," "type," "warranty," "warranty adjustment," and "warranty claim," whether used in singular or in plural form, have the same meaning as found in 49 CFR 579.4.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as Toyota has previously provided a document to ODI, Toyota may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the organization of this information request letter (including all individual requests and subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response. After Toyota's response to each request, identify the source of the information and indicate the last date the information was gathered.

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.

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 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.

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.

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.

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.

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.

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.

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.

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.

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).

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.

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.

This letter is being sent to Toyota pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49 and to request reports and the production of things. It constitutes a new request for information. Toyota's failure to respond promptly and fully to this letter could subject Toyota to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) Please note that maximum civil penalties under 49 U.S.C. § 30165 have increased as a result of the recent enactment of the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, Public Law No. 106-414 (signed November 1, 2000). Section 5(a) of the TREAD Act, codified at 49 U.S.C. § 30165(b), provides for civil penalties of up to $5,000 per day, with a maximum of $15 million for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. This includes failing to respond to ODI information requests.

If Toyota cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, Toyota does not submit one or more requested documents or items of information in response to this information request, Toyota must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, the name and position of the person(s) from, and the person(s) to whom it was sent, and the name and position of any other recipient (to include all carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

Toyota's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by May 17, 2004. Please refer to PE04-021 in Toyota's response to this letter. If Toyota finds that it is unable to provide all of the information requested within the time allotted, Toyota must request an extension from me at (202) 366-5207 no later than five business days before the response due date. If Toyota is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information Toyota then has available, even if an extension has been granted.

If Toyota claims that any of the information or documents provided in response to this information request constitute confidential commercial material within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, Toyota must submit

supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512, as amended (68 Fed. Reg. 44209 et seq; July 28, 2003), to the Office of Chief Counsel (NCC-113), National Highway Traffic Safety Administration, Room 5219, 400 Seventh Street, S.W., Washington, D.C. 20590. Toyota is required to submit two copies of the documents containing allegedly confidential information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.

If you have any technical questions concerning this matter, please call Scott Yon of my staff at (202) 366-6761.

Sincerely,

Jeffrey Quandt, Chief
Vehicle Control Division
Office of Defects Investigation

Enclosure 1, One CD ROM titled PE04-021 Attachments containing 12 VOQs (ODI numbers listed below) in Adobe PDF format and three MS Access database files.

U.S. Department
of Transportation
National Highway
Traffic Safety
Administration

Memorandum

Subject: Complaint Update

Date: March 23, 2004

From: Scott Yon

To: File for PE04-021, Toyota Throttle Control

This memo serves to update ODI's analysis of consumer complaints for relevance to the specific throttle control issues that are being investigated in PE04-021. Since opening the investigation March 3rd, 2004, the Office of Defects Investigation (ODI) has conducted detailed interviews of complainants identified in the opening resume to gather specific information concerning the failure incident(s) that are alleged in each instance. Information collected in ODI's interviews indicated that some of the complaints that were counted in the opening resume were not related to the throttle control issue that is under investigation. This memo identifies the complaints that are considered relevant to PE04-021. ODI also used the interviews to make arrangements for inspections of vehicles of interest where possible. ODI will be continuing in this effort over the coming weeks.

This investigation concerns the electronic throttle control system in model year 2002 and 2003 Toyota Camry, Camry Solara, and Lexus ES300 passenger cars (subject vehicles). Unlike most passenger cars, where the accelerator pedal uses mechanical linkages to control engine speed and power, the subject vehicles use an electronic throttle control system. Sensors at the accelerator pedal indicate pedal position (throttle demand) and an electronic control unit (ECU) interprets the pedal sensor signal to open or close the engine's throttle valve.

ODI has opened this investigation based on owner reports alleging that: A) an engine speed increase occurred without pressing on the accelerator pedal or, B) the engine speed failed to decrease when the accelerator pedal was no longer being depressed. In either event, ODI's position is that if such a failure were to occur the driver would be able to control or stop vehicle movement by pressing on the brake pedal. However, in certain close-quarters driving situations (such as parking), should the subject vehicle throttle control system open the throttle valve without driver intent, the resultant vehicle surge could result in a momentary loss of vehicle control. In some instances, a crash may then result when the driver is unable to react in time to apply the brakes effectively. Longer duration incidents involving uncontrollable acceleration where brake pedal application allegedly had no affect are not within the scope of this

investigation. Accordingly, based on the information gathered from complainant interviews, ODI is revising the number of pertinent VOQs to 11, of which 5 reports involve a vehicle crash. No injuries have been identified. A list of the pertinent VOQ numbers is included as an attachment to this memo.

One of the VOQs that have been removed (ODI 10056117) involved a serious injury that occurred after the vehicle went through a car wash. In this incident, the vehicle's transmission was placed in neutral so that a conveyor/roller could pull the vehicle through the car wash while the operator remained in the vehicle (ODI notes that the functionality of the shift interlock system would not require application of the brake pedal to move the shifter from neutral to drive). During ODI's interview, the vehicle operator mentioned that their foot was not squarely on the brake pedal when the transmission was engaged and that it subsequently slipped off and may have inadvertently struck the throttle. ODI also removed two sets of duplicate VOQs (10002266 duplicate of 10003640, 10019875 duplicate of 10025068) and one VOQ that was included by error (10056537). The other VOQs were removed because ODI does not currently consider them to be the result of a throttle control failure; they may be reconsidered should new information warrant.

ODI is regularly monitoring incoming VOQs for relevance to this investigation and where appropriate will be interviewing these complainants. Any VOQ deemed to be pertinent to the investigation will be added on an ongoing basis.

U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

APR - 5 2007

400 Seventh Street, S.W.
Washington, D.C. 20590

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Christopher J. Tinto, Vice President
Toyota Motor North America, Inc.
Technical and Regulatory Affairs
601 Thirteenth Street, NW
Suite 910 South
Washington, DC 20005

NVS-213dsy
PE07-016

Dear Mr. Tinto:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Preliminary Evaluation (PE07-016) to investigate incidents of vehicle runaway due to interference between the Lexus accessory floor mat (all-weather floor mat) and the accelerator pedal in model year (MY) 2007 Lexus ES350 vehicles manufactured by Toyota Motor North America, Inc., and to request certain information.

This office has received ten vehicle owner questionnaires (VOQs) reports of unwanted acceleration in MY 2007 Lexus ES350 vehicles. Information collected by ODI indicates that at least five[1] of these incidents appear to have been caused by interference between the Lexus all-weather rubber accessory floor mat and the accelerator pedal. In each incident the pedal was apparently trapped by the floor mat after the driver pressed the accelerator pedal to a wide open throttle (WOT) or near WOT position. A field investigation conducted by ODI confirmed that the all-weather mat can trap the accelerator pedal in such a position. The drivers in these incidents all reported vehicle runaway events of varying duration in which they were able to slow the vehicle with the brakes, but in some incidents could not bring it to a stop or turn the engine off. In some cases the driver reported that the brakes were applied multiple times which may have depleted the power assist reservoir (vacuum booster), thus increasing the brake pedal effort required to stop the vehicle. In addition, some of the drivers reportedly were unable to stop the engine by pressing the engine control button and or were unable to disengage the transmission by shifting into a non-drive gear position. Three crashes with a total of 7 injuries

[1] Of the five reports not reflected in this count; one involves an aftermarket (non-Toyota) rubber floor mat, one complainant has not responded to multiple contact requests, and three other reports are currently under review to determine if they are related or not.

are alleged in the complaints relating to the all-weather floor mats. An electronic copy of each report is included on the enclosed CD-ROM for your information and a list of the five VOQs appear at the end of this document.

Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject vehicles:** all MY 2007 Lexus ES350 manufactured for sale or lease in the United States.

- **Subject component:** all Toyota optional equipment (accessory) all-weather floor mats manufactured for use on the subject vehicles.

- **Toyota:** Toyota Motor North America, Inc., and all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of Toyota (including all business units and persons previously referred to), who are or, in or after 2004, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

  a. Design, engineering, analysis, modification or production (e.g. quality control);
  b. Testing, assessment or evaluation;
  c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
  d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers.

- **Alleged defect:** Allegations of A) excessive engine speed and or power output without the driver pressing on the accelerator pedal or, B) the engine speed and or power output failing to decrease when the accelerator pedal was no longer being depressed or, C) the subject component interfering with the operation of the throttle pedal.

- **Document:** "Document(s)" is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes,

manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by Toyota, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available, "document(s)"also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by Toyota or not. If a document is not in the English language, provide both the original document and an English translation of the document.

- **Other Terms:** To the extent that they are used in these information requests, the terms "claim," "consumer complaint," "dealer field report," "field report," "fire," "fleet," "good will," "make," "model," "model year," "notice," "property damage," "property damage claim," "rollover," "type," "warranty," "warranty adjustment," and "warranty claim," whether used in singular or in plural form, have the same meaning as found in 49 CFR 579.4.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as Toyota has previously provided a document to ODI, Toyota may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the organization of this information request letter (including all individual requests and subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response. After Toyota's response to each request, identify the source of the information and indicate the last date the information was gathered.

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. Whether the vehicle was supplied by Toyota with the subject component (i.e., the vehicle was ordered with Port of Entry installed all-weather mats)[2];
   c. Date of manufacture;
   d. Date warranty coverage commenced; and
   e. 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, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

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 "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" 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.

---

[2] See Request 12 regarding Port of Entry installed mats.

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 the vehicle was inspected by Toyota as a result of the incident;
   j. Number of floor mats installed in the driver's footwell;
   k. Type(s) of mat(s) installed in the driver's footwell (none, carpet, rubber/all-weather, both carpet and rubber, unknown, etc.);
   l. Manufacturer of mat(s) installed in driver's footwell (Toyota, aftermarket, unknown, etc.);
   m. Person/entity who installed the driver's side floor mat (dealer, owner, unknown, etc.);
   n. Whether the driver's side floor mat is alleged to be the cause of the incident;
   o. Whether Toyota has determined the driver's side floor mat was the cause of the incident;
   p. Whether a crash is alleged;
   q. Whether property damage is alleged;
   r. Number of alleged injuries, if any; and
   s. Number of alleged fatalities, if any.

   Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

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.

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, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

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.

7. Produce copies of all service, warranty, service parts, and other documents that relate to, or may relate to the subject component, the retail sale of the subject component, or 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.

8. Produce copies of any consumer letters or other documents that relate to, or may relate to the subject component or the alleged defect in the subject vehicles, that Toyota has issued to any operators, owners or lessees of the subject vehicles. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications. Also include the latest draft copy of any communication that Toyota is planning to issue within the next 120 days.

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:

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.

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 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.

11. State the number of subject components that Toyota has sold, either through service parts sales or through Port of Entry vehicle processing, 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. State whether Toyota has prohibited wholesale or retail sale of any subject component part number and, if so, state the date of sales prohibition, and the reason the prohibition was implemented. 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.

12. Describe Toyota's vehicle ordering process that results in the subject vehicle having the subject component included with the vehicle during Port of Entry (POE) operations. Describe all POE processes that involve floor mats (including carpet or non-subject floor mats) and whether or not any process involves placing floor mats in the driver's footwell of the vehicle. State the location of each POE where subject vehicles are processed and for each provide contact details (name, title, company affiliation, and phone number) for an individual knowledgeable of subject vehicle POE operations.

13. Produce a copy of the installation instruction and any other documentation (including packing materials if pertinent) provided when the subject component is purchased as a service part. Also produce copies of any documents discussing the proper installation of floor mats in general (of any type, for subject and non-subject vehicles) especially any which include precautions or warnings regarding improper installation, and or any hazards or detrimental results that may occur if improper installation is performed. State the intended recipient of each document and how it is made available.

14. Describe in detail the operation of the engine control push-button (labeled "Engine Start Stop" and located on the driver's side of the instrument panel) when the vehicle is at rest (stopped) including how its functionality is effected by brake pedal application and gear shift position. Describe in detail any changes in the button's functionality that occurs when the vehicle is in motion (as opposed to at rest).

15. State whether there are any normal operating conditions (such as certain throttle positions and or engine/vehicle speeds, and excluding a failure of the shift control system and or an internal transmission component) that can prevent the transmission from disengaging a forward drive gear when the shift lever is moved from the Drive to Neutral position. If so, state the conditions under which this could occur.

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

    a. The causal or contributory factor(s);
    b. The risk to motor vehicle safety that it poses;
    c. The adequacy of the warnings provided to the subject component installer regarding the installation of the subject component and the potential hazards that could result; and
    d. The reports included with this inquiry, including for each whether Toyota has determined if the vehicle had improperly installed all-weather mats, and if so whether Toyota has determined who installed the mats incorrectly.

This letter is being sent to Toyota pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49 and to request reports and the production of things. It constitutes a new request for information. Toyota's failure to respond promptly and fully to this letter could subject Toyota to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) Please note that maximum civil penalties under 49 U.S.C. § 30165 have increased as a result of the recent enactment of the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, Public Law No. 106-414 (signed November 1, 2000). Section 5(a) of the

TREAD Act, codified at 49 U.S.C. § 30165(b), provides for civil penalties of up to $6,000 per day, with a maximum of $16,375,000 for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. See 49 CFR 578.6 (as amended by 71 Fed. Reg. 28279 (May 16, 2006)). This includes failing to respond to ODI information requests.

If Toyota cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, Toyota does not submit one or more requested documents or items of information in response to this information request, Toyota must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, the name and position of the person(s) from, and the person(s) to whom it was sent, and the name and position of any other recipient (to include all carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

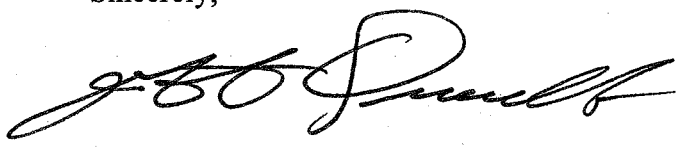
Toyota's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by May 23, 2007. **All business confidential information must be submitted directly to the Office of Chief Counsel as described in the following paragraph and should not be sent to this office.** In addition do not submit any business confidential information in the body of the letter submitted to this office. Please refer to PE07-016 in Toyota's response to this letter and in any confidentiality request submitted to the Office of Chief Counsel. If Toyota finds that it is unable to provide all of the information requested within the time allotted, Toyota must request an extension from me at (202) 366-5207 no later than five business days before the response due date. If Toyota is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information Toyota then has available, even if an extension has been granted.

If Toyota claims that any of the information or documents provided in response to this information request constitute confidential commercial material within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, Toyota must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512, as amended (69 Fed. Reg. 21409 et seq; April 21, 2004), to the Office of Chief Counsel (NCC-113), National Highway Traffic Safety Administration, Room 5219, 400 Seventh Street, S.W., Washington, D.C. 20590. Toyota is required to **submit two copies of the documents containing allegedly confidential information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.** Please remember that the word "CONFIDENTIAL" must appear at the top of each page containing information claimed to be confidential, and the information must be clearly identified in accordance with 5 U.S.C. § 512.6.

Please send email notification to Scott Yon (scott.yon@dot.gov) and to ODI_IRresponse@dot.gov when Toyota sends its response to this office and indicate whether there is confidential information as part of Toyota response.

If you have any technical questions concerning this matter, please call Scott Yon of my staff at (202) 366-0139.

Sincerely,



Jeff Quandt, Chief
Vehicle Control Division
Office of Defects Investigation

List of referenced VOQs (5): 10186045, 10183821, 10182749, 10182245, 10180658

Enclosure 1, consisting of one CD ROM titled Data Collection Disc containing three MS Access database files (response format examples) and one file (Adobe PDF format) summarizing the 5 VOQ reports.

its crash worthiness. NABI has two primary manufacturing facilities, one in Hungary, the other in Anniston, Alabama.

FTA has determined that in this case, a final assembly waiver for a two-year period is in the public interest. FTA acknowledges the technical difficulties and increased costs associated with new technology and the consequent benefits of a single manufacturing facility. FTA supports the continued development of new vehicle technology that will result in more choices for FTA grantees and better buses for the riding public. This waiver will accomplish that goal. These advances are important enough to allow NABI time to further develop the technology. FTA declines to provide a seven-year waiver because we want to encourage continued changes in the marketplace and must be in a position to review this decision in two years and consider any such changes. However, FTA is also aware of the time lapses between entering into a contract and building a bus; therefore, this waiver applies to CompoBus models 40C–LFW and 45C–LFW for all procurements for which solicitations are issued within two years of the date of this letter.

Component Wavier Request

You also request a non-availability waiver for the CompoBus' integrated frame/chassis structures for use in model numbers 40C–LFW and 45C–LFW. Based on the information you have provided, I have determined that the grounds for a non-availability waiver exist, as it does not appear that there is another source for this product. Therefore, pursuant to the provisions of 49 U.S.C. § 5323(j)(2)(B), a non-availability waiver is granted for the CompoBus models 40C–LFW and 45C–LFW integrated frame/chassis structure for all procurements for which solicitations are issued within two years of the date of this letter.

Conclusion

NABI has offered sufficient justification for a public interest waiver for the final assembly of the CompoBus for a period of two years. The grounds necessary for a non-availability component waiver also exist for the integrated frame/chassis structure, and FTA hereby grants such a waiver for a period of two years. To ensure that the public is aware of these waivers, this letter will be published in the **Federal Register**.

The public interest waiver is predicated on the fact that it is in the public's interest to waive the Buy America final assembly requirements in this case; however, FTA is not of the opinion that that public interest overrides the government's interest in full and open competition. It is for this reason that FTA has reviewed the three procurements that resulted in an award to NABI for the CompoBus. FTA has reviewed the underlying competition for each contract and found that in two cases, the waiver will have no impact on the full and open competition required in federally funded procurements. Therefore, this waiver will apply to those contracts between NABI and the City of Phoenix and between NABI and the Los Angeles County Metropolitan Transportation Authority (LACMTA) for 30 CompoBuses.[1] Another LACMTA procurement is affected by this waiver, a contract for 370 buses, the last 20 of which will be composite buses.[2] Because that award would have had a different result if NABI had certified non-compliance and requested a waiver prior to award, it is FTA's position that NABI is bound by its original certification of compliance and, therefore, must assemble those vehicles in the U.S.

If you have any questions, please contact Meghan G. Ludtke at 202–366–1936.

Very truly yours,

Gregory B. McBride,
Deputy Chief Counsel.

Issued on: April 4, 2002.

Jennifer L. Dorn,

FTA Administrator.

[FR Doc. 02–8551 Filed 4–8–02; 8:45 am]

BILLING CODE 4910–57–M

[1] The contract with the City of Phoenix was awarded to NABI, the only bidder, which certified compliance with Buy America. Had NABI certified non-compliance, it would have been eligible for award as the only bidder, and Phoenix would have qualified for a non-availability waiver under 49 C.F.R. 661.7(c)(1). The contract with LACMTA for 30 CompoBuses was awarded after a negotiated procurement with two responsive and responsible proposers in competitive range. Both proposers certified compliance with Buy America; however, the other bid was more than twenty-five percent over NABI's bid. Thus, had NABI certified non-compliance, it would have been eligible for award because there was more than a twenty-five percent price difference between the two offers, and LACMTA would have qualified for a waiver under 49 C.F.R. 661.7(c)(1).

[2] This was a sealed bid with two responsive and responsible bidders, both of which certified compliance. There was not more than a twenty-five percent difference in the bids; therefore, had NABI certified non-compliance, it would not have qualified for the award.

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

Partial Grant and Partial Denial of Motor Vehicle Defect Petition, DP01–003

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation.

ACTION: Partial grant and partial denial of petition for a defect investigation.

SUMMARY: This notice sets forth the reasons for the partial grant and partial denial of a petition submitted to NHTSA under 49 U.S.C. 30162, requesting that the agency commence a proceeding to determine the existence of a defect related to motor vehicle safety. The petition is hereinafter identified as DP01–003.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Squire, Office of Defects Investigation (ODI), NHTSA, 400 Seventh Street, SW., Washington, DC 20590. Telephone 202–493–0212.

SUPPLEMENTARY INFORMATION: Mr. James J. Johnston, President of the Owner-Operator Independent Drivers Association, Inc. (OOIDA), submitted a petition to NHTSA by letter dated March 21, 2001, requesting that an investigation be initiated to determine whether to issue an order concerning safety defects in model year 1989 through 2000 Volvo heavy trucks (subject trucks). The petition is extremely broad in that the petitioner alleges multiple defects on more than 30 models of Volvo trucks produced over a span of 12 model years.

The petition identified alleged deficiencies in nine areas. Those areas were identified as: (1) Shaking and vibration in the front end; (2) steering problems; (3) premature front tire wear; (4) wheel alignment problems; (5) problems with axle parts, including an overweight condition on the steering axle; (6) suspension problems; (7) transmission and clutch problems; (8) problems with the engine, including unintended ''racing'' or ''shutting down,'' and (9) electrical problems.

The OOIDA petition and subsequent information forwarded to the NHTSA Office of Defects Investigation (ODI) contained complaints from 180 persons. A review of the ODI database for additional complaints pertaining to the alleged defects on the subject trucks revealed an additional 41 complainants. Many of the complainants cited multiple problems with one or more subject trucks. To assist with evaluation of the petition, ODI staff communicated directly with approximately 74 persons, including representatives of 13 fleet operations.

Review of the OOIDA and ODI data revealed that approximately 92% of the complaints involved model year 1995 and newer subject trucks. Eighteen complaints involved model year 1994 subject trucks, while 11 complaints involved model year 1993 and older subject trucks. Unfortunately, many complaints failed to identify the vehicle model, model year and/or vehicle identification number. Although this lack of information hampered the analysis, data from these complaints were nonetheless reviewed to the fullest extent possible.

After conducting an extensive review of the issues raised in the petition, NHTSA has granted it with respect to the following issues:

1. Alleged steering defects on model year 1998 through 2000 VN–610, 660, and 770 series trucks regarding ''lock up,'' ''binding,'' or ''pulling'' of the

steering system. An investigation has been opened (PE01–041).

2. Alleged front axle component failure regarding steer axle U-bolts on model year 1998 through 2000 VN–610, 660, and 770 series trucks. An investigation has been opened (PE01–042). An alleged defect with respect to the drive or rear axle U-bolts was previously under way (EA01–011).

The allegations regarding the scope of Volvo's recall to address front axle overweight conditions on model year 1998 through 2001 VN-series trucks is being addressed through a Recall Audit (AQ02–018).

It is unlikely that NHTSA would issue an order for the notification and remedy of the other alleged defects as defined by the petitioner for the subject vehicles at the conclusion of the investigation requested in the petition. Therefore, in view of the need to allocate and prioritize NHTSA's limited resources to best accomplish the agency's safety mission, the petition is denied with respect to the remaining allegations. However, information obtained by the agency during its evaluation of the petition has led it to open an investigation with respect to alleged electrical problems potentially leading to fires in the sleeper berth of model year 1998 through 2000 VN–610, 660, and 770 series trucks. An investigation has been opened (PE01–040).

A description of NHTSA's analysis of the issues raised by the petition and the reasons for its decisions are set forth in an Addendum to this notice.

Authority: 49 U.S.C. 30162(d); delegations of authority at CFR 1.50 and 501.8.

Issued on: April 1, 2002.

Kenneth N. Weinstein,

Associate Administrator for Safety Assurance.

DP01–003 Addendum

In March 2001, the Owner-Operator Independent Drivers Association, Inc., (OOIDA) petitioned the National Highway Traffic Safety Administration (NHTSA) to investigate numerous alleged defects on all Volvo truck tractors manufactured between the years of 1989 and 2000. The complaints provided in the OOIDA petition and those extracted from the NHTSA database were often vague and provided few details to assist with conclusively identifying an allegedly defective component. The petition itself was extremely broad and appeared to cover almost every system on the subject trucks.

Evaluation of the petition involved the review of information provided by approximately 180 complaints submitted by OOIDA on behalf of Volvo truck owners. Complaints from an additional 41 (non duplicate) complainants contained within the NHTSA database were likewise reviewed. Since July 1, 2001, no additional complaints have been received through OOIDA; however, individual owners have contacted the Office of Defects Investigation (ODI) directly. ODI staff interviewed a total of 74 individuals, including 13 fleet [1] representatives, by telephone. These individual contacts increased the original number of complainants by 64 for a total of 285.[2] Some complainants owned more than one truck (not counted as a fleet).

The petition claimed that the problems spanned twelve model years, 1989 through 2000. Review of the complaints, however, revealed that most involved recent model year (MY) trucks, MY 1994 and newer. Vehicle model and model year could not be identified for approximately 4% of the complaints. The table below illustrates the percent of complaints within various vehicle model year ranges.

Percent of Total Complaints by Model Year

Model year 1998-2001	78%
Model year 1997-2001	85%
Model year 1996-2001	89%
Model year 1995-2001	92%
Model year 1994-2001	95%

The OOIDA petition divided the complaints into nine general categories: Vibration (front-end); Steering; Premature front tire wear; Wheel alignment; Axle (components and gross axle weight); Suspension; Transmission (clutch); Engine; and Electrical. The table below illustrates the source of each complaint alleged within each area.

[1] Fleet sizes ranged from 5 to 500 vehicles. See contact sheet in DP01–003.

[2] Not all owners interviewed had complaints nor were they dissatisfied with their vehicle.

Area of Complaint by Source

Complaint	OOIDA Petition	ODI Database	Other[1]	Total
Vibration	20	11	5	36
Steering	7	5	12	24
Tire Wear	64	12	42	118
Alignment	42	7	3	52
Axle Parts	4	109	15	128
Front Axle Weight	66	16	28	110
Suspension	4	3	5	12
Transmission/Clutch	6	9	5	20
Engine	2	3	0	5
Electrical	27	6	32	65
Total	242	181	147	570

[1] Direct telephone contact

Additional information regarding each complaint area is provided below. A breakdown by vehicle model and model year is also provided for each complaint area.

Complaint 1—Shaking and vibration through the front of the truck (36 complaints). Although this was a recurring complaint, analysis of the written complaints and telephone interviews failed to establish a specific causal factor. Although ''front end'' vibration was referred to in the OOIDA petition, interviews revealed that vibration complaints also included the driveline and rear axles. Interviews with individual owners illustrated that this complaint was subjective in nature and often was dependant upon the driver's expectations. Fleet operators tended to have fewer complaints than owner/operators and specifically noted that they tended to adhere to regular maintenance schedules. The majority of complaints involved tractors with integral sleeper berth units.

A complaint of front-end vibration frequently accompanied a report of excessive front axle weight and/or premature front axle tire wear. There was no indication that this condition rendered the vehicle uncontrollable or created a significant risk to safety. No further action on this issue will be taken.

Complaint 1: Vibration (36 Complaints)

Model Year	Model	Total	
1994	White	1	
	WIA	2	
	WHL	1	4
1995	WIA	4	4
1997	WIA	2	
	UNK	1	3
1998	VNL	1	
	VN-610	3	
	VN-770	8	12
1999	VNL	1	
	VN-610	1	
	VN-770	5	
	UNK	2	9
2000	VN-770	4	4

1998 and newer vehicles	69%
1997 and newer vehicles	78%
1996 and newer vehicles	78%
1995 and newer vehicles	89%
1994 and newer vehicles	100%
Vehicle unspecified	0%

Complaint 2—Steering deficiencies (24 complaints). Some recurring problems with the steering system on model year 1998 and newer trucks were alleged. The OOIDA petition alleged that Volvo trucks were prone to steering problems and cited 45 complaints related to ''steering.'' In addition, ''excessive sway'' and ''road wander'' were terms used to describe a steering deficiency. Unfortunately, detailed information was lacking in many of the complaints. Analysis of the complaints revealed a total of 24 complaints with sufficient information to indicate a potential problem related to the steering system (this total excludes one fleet that reported problems with multiple vehicles).[3] In all but two cases, the problems involved VN-model trucks. A majority of the complaints involved the 770 model, Volvo's heaviest tractor. In addition to the VN-models, two complaints regarding the WIA model were received, one from a MY 1996 vehicle and one from a MY 1997 vehicle. The complaints noted one of several symptoms, including: steering wheel or shaft binding, steering lock-up, steering ''pull,'' and steering gear box leak or failure. The table below provides a summary of these complaints.

Complaint 2: Steering (24 Complaints[1])

Model Year	Model	Total	
1996	WIA	1	1
1997	WIA	1	1
1998	VN	2	
	VN-610	2	
	VN-770	3	7
1999	VN-610	1	
	VN-770	6	7
2000	VN-660	1	
	VN-770	6	7

1998 and newer vehicles	91%
1997 and newer vehicles	96%
1996 and newer vehicles	100%
Vehicle unspecified	0%

Complaints specifics

Steering wheel binding - general	4
Gear box failure - general	3
Gear box leak	4[1]
Steering lock-up	5
Steering "pulls"	4
Power steering pump - general	1
Unidentified	3

[1]Includes 1 fleet entry for multiple occurrences models unknown

The evaluation of steering complaints also led to contact with an engineering firm that reportedly has investigated approximately 11–12 collisions involving VN-series trucks where a steering defect is suspected. In addition to speaking with a representative of the engineering firm, 18 of the ''steering problem'' complainants were contacted.

An investigation of this issue has been opened.

Complaint 3—Premature tire wear (118 complaints). This complaint was the predominant recurring issue. Nearly all the complainants were owner-operators, with one fleet operator reporting tire wear problems with the steering axle tires. Most complainants generally reported 50,000 to 80,000 miles of operation before tire replacement was necessary. Many complainants reported unusual ''cupping,'' scalloping,'' or edge wear. In a majority of cases owners blamed heavy front-end weight for the wear. In March 2001, Volvo initiated a recall (NHTSA #01V–093) to address the front axle weight problem. Evaluation of the OOIDA petition failed to identify a representative number of vehicles that had undergone repairs per recall 01V–093 to assess whether the remedy improved tire wear. The issue of the scope of that recall is being considered in a Recall Audit (AQ02–018). Tire wear was cited not as a safety issue, but one of economics. Owners reported that tire purchases tended to be one of the most costly recurring expenses they faced.

In view of the apparent lack of a safety issue, no further action on this issue will be taken.

[3] The fleet representative stated that this occurred on ''several'' vehicles, but was unable to provide specific vehicle information at the time of the conversation.

Complaint 3: Front Tire Wear
(118 Complaints)

Model Year	Model	Total	
1988	White	1	1
1992	WIA	1	1
1993	WIA	1	1
1994	White	3	
	WIA	2	5
1995	WIA	3	3
1996	WIA	6	6
1997	WIA	3	3
1998	VN	9	
	VN-610	2	
	VN-770	10	21
1999	VN	10	
	VN-610	3	
	VN-770	8	21
2000	VN	18	
	VN-610	4	
	VN-660	4	
	VN-770	9	35
Unidentified		21	21

1998 and newer vehicles	65%
1997 and newer vehicles	68%
1996 and newer vehicles	73%
1995 and newer vehicles	75%
1994 and newer vehicles	80%
Vehicle unspecified	18%

Complaint 4—Wheel alignment problems (52 complaints). Although there were a few complaints that wheel alignment could not be maintained, few specifics were provided to indicate a probable cause. Alignment complaints typically coincided with tire wear and front axle weight distribution complaints. In some situations where owners reported alignment problems, they also reported problems with axle U-bolts. In many cases the U-bolts were found to be loose or fractured at the time the wheel alignment was performed. In the interviews conducted by ODI staff, only four (4) complainants reported having difficulty keeping the vehicle ''in alignment.'' A substantial number of complainants reported having repeated alignment procedures completed in an attempt to correct problems with steer axle tire wear or vibration. These complainants reported no problem with the vehicle retaining alignment. Although complainants frequently equated poor alignment with tire wear and ''lane drift'' or ''road wander,'' the issue of ''alignment'' did not appear to raise safety concerns. Complainants reported having full control of their vehicles, and no crashes or injuries were reportedly related to this issue. No further action on this issue will be taken.

Complaint 4: Alignment
(52 Complaints)

Model Year	Model	Total	
1988	White	1	1
1993	WIA	1	1
1994	White	1	
	WIA	6	7
1995	WIA	3	3
1996	WIA	2	2
1997	WIA	2	2
1998	VN	15	15
1999	VN	5	5
2000	VN	7	7
Unidentified		9	9

1998 and newer vehicles	52%
1997 and newer vehicles	56%
1996 and newer vehicles	60%
1995 and newer vehicles	65%
1994 and newer vehicles	79%
Vehicle unspecified	17%

Complaint 5—Axle problems (238 complaints, total). This complaint area was divided into two parts. One area focused solely on (A) axle components and the other on (B) steer axle weight. The OOIDA petition alleged that Volvo trucks were prone to failure of axle components, thereby increasing the risk of a crash and compromising safety. Analysis of the complaints indicated that the only axle parts subject to alleged failures were the axle U-bolts and steer axle wheel bearings.

(A1) Axle Component: U-Bolt (22 complaints). A review of the OOIDA petition and NHTSA database at the time the petition was submitted revealed a total of 10 complaints alleging defective axle U-bolts, primarily on model year 1995 through 2000 Volvo trucks. Specific models mentioned included the WIA and VN-series trucks. During the petition evaluation, twelve (12) additional complainants alleging defective axle U-bolts were identified and interviewed. These complaints all involved the VN-series truck.

During the petition evaluation, it was observed that the occurrence rate for failure or problem with the front axle U-bolts exceeded that of the drive axle. Drive axle U-bolt failure is currently the subject of an Engineering Analysis, EA01–011. The scope of this investigation involves the drive axle U-bolt assemblies on model year 1996 through 2000 Volvo trucks.

Several complainants alleging defective U-bolts were interviewed during the petition evaluation. Most complained of a recurrent loosening of the U-bolts, with eventual fracturing. Statements provided by some complainants suggested that loosening of the U-bolt is a precursor to failure. Some complainants reported hearing a ''popping'' or ''clunking'' noise, particularly during turning maneuvers. Subsequent inspection frequently revealed loose steer axle U-bolts. The Volvo owner's manual guide to service recommends checking the torque of the U-bolts at 15,000-mile intervals. Nearly all complainants reported never experiencing loose U-bolt conditions with other vehicle makes.

U-bolt failure can lead to a displacement of the axle and increase the potential for a crash. At least one incident of steer axle U-bolt failure allegedly led to a crash. James Gardiner reported that while operating at highway speed, his truck unexpectedly veered to the right, departed the highway, and overturned. A post-collision inspection revealed a fractured right steer axle U-bolt. Gardiner believes that the fracturing of the U-bolt resulted in a rearward displacement of the steer axle on the right side. He believes this caused the vehicle to depart the highway.

Available information indicates that nearly all U-bolt complaints and failures involve MY 1998 through 2000 VN series trucks. An investigation of this issue with respect to those vehicles has been opened.

(A2) Steering Axle Wheel Bearings (106 complaints). A review of the OOIDA petition and NHTSA database at the time the petition was submitted revealed a total of 106 complaints alleging defective steer axle wheel bearings. The complaints involved model year 1998 through 2000 VN 610, 660, and 770 models with only one complaint outside this range, a model year 1994 WIA.

Complainants alleging wheel bearing failure described one of several symptoms. Symptoms included loose wheel bearings at the time of vehicle delivery, accelerated wear, and/or complete failure leading to the loss of a wheel. Of the 106 complaints, 103 originated with a single fleet, so there were only four different complainants.

Even though many of the complainants contacted during the petition evaluation did not complain of steer axle wheel bearing failure, they did report recurrent front-end work to correct tire wear problems. Most reported repeated procedures involving removal of the wheel and/or retorquing of the wheel bearings.

Consultation with local Volvo service managers and technicians failed to reveal any additional information or acknowledgement of problems. In a worst-case scenario, the failure of a steer axle wheel bearing can result in wheel separation and the potential for a crash. However, no crashes, injuries, or fatalities have been reported involving bearing failure on these Volvo trucks. Volvo trucks exhibited no previous recalls or investigations related to this issue.

The available information does not warrant opening an investigation of this issue at this time.

Complaint 5a: Axle Deficiencies - Parts (U-Bolts and Wheel Bearings – 128 Complaints)

Model Year	Model	Total	
1994	White	1	1
1995	WIA	1	1
1997	WIA	1	1
1998	WHT	1	
	VN	46	
	VN-610	22	
	VN-770	5	74
1999	VN	41	
	VN-610	1	
	VN-770	4	46
2000	VN	1	
	VN-610	1	
	VN-770	2	
	WG	1	5

1998 and newer vehicles	98%
1997 and newer vehicles	"
1996 and newer vehicles	"
1995 and newer vehicles	99%
1994 and newer vehicles	100%
Vehicle unspecified	0%

(B) *Steering Axle Weight (110 complaints).* The OOIDA petition alleged that Volvo trucks were prone to an overweight condition on the steer axle. Evaluation of the complaints revealed that with few exceptions, this complaint typically involved the newer VN series trucks. An overwhelming majority of the complaints involved the 770 model, Volvo's largest tractor with an integral sleeper. Complaint review, personal interviews and field studies have revealed, however, that model series 610 and 660 vehicles are also often operated in an overweight condition.

A total of 110 complaints alleging an overweight condition on the front axle were reviewed. The OOIDA petition had listed 66 individual complaints of a steer axle overweight condition. Unfortunately, many of the OOIDA complaints contained few specifics regarding the interpretation of ''overweight.'' ODI contacted 47 complainants who specifically noted that the actual axle weight exceeded the front axle weight rating (GAWR—gross axle weight rating). These complainants reported that the actual axle weight ranged from 12,400 to 13,500 pounds. For most vehicles the front GAWR was 12,350 pounds. A total of 17 complainants provided copies of scale tickets exhibiting an overweight condition.

Review of the complaint documents and personal interviews with owners revealed differing interpretations for defining an overweight condition on the steer axle. Many owners tended to define an ideal weight condition based upon past experience or the restrictions of individual states. Many owner/drivers reported the desire to keep the front axle weight below 12,000 pounds and defined an overweight condition as any weight in excess of this number. Regarding state highway restrictions, five states[4] reportedly restrict the gross front axle weight to 12,000 pounds.

Federal regulations require the manufacturer to install a label specifying the GAWR. The GAWR should not exceed the weight rating of the weakest individual axle component, including the tires. According to Volvo, the GAWR is based on the component with the lowest load capacity inclusive of the tires, wheels, suspension, brakes, and other axle components. In most cases the GAWR is equal to the tire load capacity. Through a review of the complaints and conversations with owners, front axle gross weight ratings specified on the Federal label exhibited a range between 11,620 and 12,350 pounds.

In April 2001, Nick Barber petitioned NHTSA concerning the adequacy of Volvo's actions with respect to Recall 01V–093[5] (DP01–006). This petition challenges the effectiveness and scope of recall 01V–093 and alleges other problems with regard to establishing the weight distribution on VN model trucks. Since filing his petition with NHTSA, Mr. Barber has provided information on approximately 100 trucks (including having owners contact NHTSA directly). It was through these contacts that the overweight issue was more precisely defined. All of the ''confirmed'' overweight cases involved VN 610, 660, and 770 model trucks. Overweight complaints existed across all three model lines; however, the 770 models exhibited the greatest number of complaints.

Volvo states that the front axle weight should be measured with the vehicle fully fueled and in a bobtail (no trailer) configuration. Allowances are also made for the driver and personal cargo. Some of the ''overweight'' vehicles were weighed with trailers and/or auxiliary equipment installed on the tractor.

Nearly all complainants reported that when the tractor is coupled to a trailer under any load, the 5th wheel must be at the full aft position to maintain a front axle weight less than the GAWR. Some drivers complained, however, that the ''full aft'' 5th wheel position creates additional problems. They cite the large gap between the tractor and trailer as being responsible for decreased fuel efficiency. The use of only one position on a moveable 5th wheel also negates

[4] According to the 2001 edition of Transport Topics Size & Weight Update (American Trucking Associations), the following states restrict the gross front axle weight to 12,000 pounds—Alabama, Arizona, Arkansas, California, and Kentucky. Some states impose additional restrictions limiting tire gross weight to the product of a specified number of pounds per inch of tread width.

[5] In March 2001, Volvo initiated recall RVXX0103 (NHTSA 01V–093), applicable to 1,577 VN model trucks, stating that ''under certain operating conditions, the weight certification label which contains the front GAWR information . . . does not accurately reflect the actual front gross axle weight.'' The recall involves trucks manufactured between 11/22/97 and 08/28/99.

the advantage of moving the coupler to further distribute axle loads. Volvo contends that the addition of auxiliary equipment (tools boxes, cab protection devices, generators, etc.) could increase the front axle weight and therefore discourages and accepts no responsibility if such additions are made. Owners, however, have stated that some installation of the auxiliary equipment is performed or facilitated by the dealer. In other instances, owners report that they informed the dealer of the additions at the time of purchase.

NHTSA granted DP01–006 after evaluating the issues raised in that petition and has opened a Recall Audit (AQ02–018).

Complaint 5b: Front Axle Overweight (110 Complaints)

Model Year	Model	Total	
1988	White	1	1
1992	WIA	1	1
1993	WIA	1	1
1994	White	2	2
1995	WIA	2	2
1996	WIA	5	5
1997	WIA	3	3
1998	VN	4	
	VN-610	3	
	VN-660	1	
	VN-770	22	30
1999	VN	2	
	VN-610	4	
	VN-770	23	29
2000	VN-610	8	
	VN-660	10	
	VN-770	15	33
2001	VN-770	3	3

1998 and newer vehicles	86%
1997 and newer vehicles	89%
1996 and newer vehicles	94%
1995 and newer vehicles	95%
1994 and newer vehicles	97%
Vehicle unspecified	0%

Complaint 6—Suspension problems (12 complaints). This issue involves many of the same issues raised in the axle component complaints. Most complaints also cited vibration, alignment, and premature steer axle tire wear as being suspension related. Regarding this issue, no failed components, other than axle U-bolts, were identified. As such, no specific suspension problems were identified. The number of complaints citing suspension problems is tallied in the table below. No further action on this issue will be taken.

Complaint 6: Suspension (12 Complaints)

Model Year	Model	Total	
1994	WIA	1	1
1996	WIA	6	6
1998	VN	3	
	VN-610	2	5

1998 and newer vehicles	42%
1997 and newer vehicles	42%
1996 and newer vehicles	92%
1995 and newer vehicles	92%
1994 and newer vehicles	100%
Vehicle unspecified	0%

Complaint 7—Transmission and clutch problems (20 complaints). There were a few complaints of transmission failure; however, all but one of the owners interviewed reported that the transmission was replaced under warranty. Two owners complained of difficulty with shifting and another reported that the transmission shifted into the wrong gear. Two owners complained of the transmission overheating. None of the transmission complaints indicated that the situation presented a recurring safety hazard. There were no reports of collisions or injuries related to this issue.

Regarding clutch complaints, most complainants reported premature wear

requiring expensive replacement. Other complaints noted that the clutch required repeated adjustment. None of the complaints indicated that a hazard to safety existed. No further action on this issue will be taken.

Complaint 7: Transmission and Clutch (20 Complaints)

Model Year	Model	Total
1990	TD365	2
1998	VN	3
1999	VN	4
2000	VN	8
2001	VN	1
Unidentified		2

2	1998 and newer vehicles	80%
3	1997 and newer vehicles	80%
4	1996 and newer vehicles	80%
8	1995 and newer vehicles	80%
1	1994 and newer vehicles	80%
2	Vehicle unspecified	10%

Complaint 8—Engine defects (5 complaints). Very few complaints alleged engine problems and none exhibited any trend that could be considered a hazard to safety. The OOIDA petition specifically noted unexpected ''acceleration'' and ''shut down'' (stalling) as issues of contention. One complaint noted the occurrence of engine ''rev up'' while at idle while most of the engine problems cited poor wiring connections leading to difficult starting or rough idle. No trend regarding engine problems was observed. No further action on this issue will be taken.

Complaint 8: Engine Complaints (5 Complaints)

Model Year	Model	Total
1995	WIA	1
1997	WIA	2
1998	VN	1
Unidentified		1

1	1998 and newer vehicles	20%
2	1997 and newer vehicles	60%
1	1996 and newer vehicles	60%
1	1995 and newer vehicles	80%
	1994 and newer vehicles	80%
	Vehicle unspecified	20%

Complaint 9—Electrical defects (65 complaints). A substantial number of complaints noted ''electrical problems.'' Of the OOIDA petition complaints that contained specific information, most defined electrical problems with the ''instrumentation'' or ''dash.'' These issues were analyzed in greater detail through vehicle owner and truck service center interviews. Nearly all instrument problems appeared to be related to the ''SmartDash'' or vehicle management display and instrument panel lighting.

The SmartDash component at issue is a small LCD screen located on the instrument panel that displays a range of information to the driver. The unit provides information such as miles per gallon, trip time, axle and coolant temperature, diagnostic fault codes, and other information. Volvo representatives have acknowledged that the display screen on model year 1998 through 2000 vehicles is subject to failure. They report that a quality control problem with the vendor necessitated a change in the unit's design and construction (new vendor). Volvo identifies this unit as an accessory item and notes that all crucial gauges are duplicated in analog form elsewhere on the dash. This complaint was common among both individual and fleet owners and comprised about 38% of the complaints expressed through telephone interviews.

Instrument panel lighting was another recurring electrical-related complaint. Regarding this complaint, many owners, including at least three fleets, reported recurrent problems with instrument panel lighting prematurely ''burning out'' or experiencing poor electrical connections. This problem was cited in approximately 11% of the complaints expressed through telephone interviews. None of the complainants reported simultaneous failure of all instrument lighting. They complained that lamp replacement was needed every other month or so. Some complainants also noted that the lamps exhibited poor or loose connections.

Analysis of electrical problems revealed allegations of six (6) fires involving model year 1998 through 2001 VN series tractors with four (4) fires, potentially electrical in origin (one involving just smoke), originating in the sleeper compartment.

The four (4) sleeper berth fires involved VN 610 and 660 models. In each case fire investigators identified the fire's origin in the proximity of electrical wiring, with three cases originating near the sleeper ventilation control panel. Unfortunately, the exact cause of the fire was not determined although electrical short-circuiting was indicated as a possible source. The

sleeper berth of the VN-series truck is equipped with an individual heating and air conditioning blower located below the lower bunk and just right of the center of the vehicle. A controller unit used to adjust HVAC temperature and blower fan speed is located on the left side wall of the berth about midway between the ceiling and floor. At least three (3) fires reportedly originated in the area of this control panel.

The two remaining fire complaints involved a 2001 VN–610 and a 1998 VN–770. Investigation of the VN–610 fire failed to reveal the exact origin of the fire although the investigator believed it began in the vehicle's engine compartment. The VN–770 fire reportedly began in the dash wiring due to a faulty ''dimmer switch.'' Limited information was available regarding these two incidents. Complaints regarding fire and electrical problems in the sleeper berth appear to contain similar elements that warrant additional analysis.

Other than the sleeper berth fires, no trends were observed indicating a potential safety defect trend. An investigation into the sleeper berth fires has been opened.

Complaint 9: Electrical Complaints (65 Complaints)

Model Year	Model	Total	
1995	WIA	3	**3**
1996	WIA	1	**1**
1997	WIA	1	**1**
1998	VN-610	5	
	VN-660	2	
	VN-770	12	**19**
1999	VN-610	3	
	VN-660	2	
	VN-770	8	**13**
2000	VN-610	8	
	VN-660	10	
	VN-770	4	
2001	VN-610	1	
	VN-770	1	**24**
Unidentified		4	**4**

1998 and newer vehicles	86%
1997 and newer vehicles	88%
1996 and newer vehicles	89%
1995 and newer vehicles	94%
Vehicle unspecified	6%

ODI has compared the number of complaints regarding Volvo trucks with the number of complaints about similar problems on other makes of other heavy trucks. The comparison was limited to the complaint areas noted in the OOIDA petition. The table below compares the total number of Volvo truck complaints (all sources) against the complaints in the ODI database for other manufacturers' vehicles. Prior to the OOIDA petition, the total number of Volvo truck complaints recorded in the database was approximately 190.

Heavy Truck Manufacturer Complaint Comparison
ODI Complaint Database for
Model Year 1993-2001

	Mack	Freightliner	International	Hino	Peterbilt	Kenworth	Volvo
Vibration[1]	1	6			4	1	10
Steering	9	8	5	1	9	3	5
Tire Wear		3			1		12
Alignment		3			1	1	7
Axle (parts)[2]	3	35	1		5	7	109
Overweight							16
Suspension[3]	2	6	2		3	5	3
Transmission	4	9	2	1	6	1	5
Clutch	2	3	1		2	2	3
Engine[4]		3					3
Electrical[5]		1	1		1	1	6
Fires[6]		5			5	3	3
Database Total[7]	136	334	124	20	157	113	182

[1] All Occurrences
[2] All Complaints/Components
[3] May Overlap Axle Complaints
[4] Stalling or Unintended Acceleration
[5] All Interior Cab or Engine Compartment
[6] Considered Electrical in Origin
[7] Total Complaints in ODI Database

Additional Data

	Freightliner	Peterbilt	Kenworth
Reports of wheel separation	4	3	1
Reports of U-Bolt failure	2		
Reports of wheel bearing failure	1	1	
Reports of electrical fire	4	5	2

Analysis of the information made available through and as a result of the petition supports a conclusion that this petition should be partially granted and partially denied. The petition is granted with respect to three areas of concern—(1) steering problems, (2) front axle U-bolt problems and (3) sleeper berth fires. Additionally, the issue of steering axle overweight condition is being addressed through Recall Audit AQ02–018 while an issue pertaining to drive axle U-bolts is being investigated in an Engineering Analysis, EA01–011. No further action will be taken with respect to the remaining issues raised by the petition.

[FR Doc. 02–8520 Filed 4–8–02; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2002–11878]

Notice of Receipt of Petitions for Decision that Nonconforming 2001 and 2002 Porsche GT2 Turbo Passenger Cars are Eligible for Importation

AGENCY: National Highway Traffic Safety Administration, DOT.

ACTION: Notice of receipt of petitions for decision that nonconforming 2001 and 2002 Porsche GT2 Turbo passenger cars are eligible for importation.

SUMMARY: This document announces receipt by the National Highway Traffic Safety Administration (NHTSA) of two separate petitions for a decision that 2001 and 2002 Porsche GT2 Turbo passenger cars that were not originally manufactured to comply with all applicable Federal motor vehicle safety standards are eligible for importation into the United States because (1) they are substantially similar to vehicles that were originally manufactured for importation into and sale in the United States and that were certified by their manufacturer as complying with the safety standards, and (2) they are capable of being readily altered to conform to the standards.

DATES: The closing date for comments on the petition is May 9, 2002.

ADDRESSES: Comments should refer to the docket number and notice number, and be submitted to: Docket Management, Room PL–401, 400 Seventh St., SW, Washington, DC 20590. [Docket hours are from 9 am to 5 pm].

FOR FURTHER INFORMATION CONTACT: George Entwistle, Office of Vehicle Safety Compliance, NHTSA (202–366–5306).

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 30141(a)(1)(A), a motor vehicle that was not originally manufactured to conform to all applicable Federal motor vehicle safety standards shall be refused admission into the United States unless NHTSA has decided that the motor vehicle is substantially similar to a motor vehicle originally manufactured for importation into and sale in the United States, certified under 49 U.S.C. 30115, and of

U S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

Investigation: PE04-021
Prompted By: Consumer complaints, Defect Petition (DP04-003) ddy 7/18/2005
Date Opened: 03/03/2004 Date Closed: 07/22/2004
Principal Investigator: Scott Yon
Subject: Throttle Control System

Manufacturer: Toyota Motor North America, Inc.
Products: MY 2002 - 2003 Toyota Camry, Solara (L4), and Lexus ES300
Population: 982,108

Problem Description: Complainants allege that the throttle control system fails to properly control engine speed resulting in vehicle surge.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	14	18	20
Crashes/Fires:	2	2	2
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	43	43

*Description of Other: Warranty Claims

Action: A defect trend has not been identified; This Preliminary Evaluation has been closed.

Engineer: *D. Scott Yon* DSYon - Ammended 7/18/2005 Date: *07/22/2004*
Div. Chief: *Jeffrey L. Quandt* Date: *07/22/2004*
Office Dir.: *Kathleen C. DeMeter* Date: *07/22/2004*
ddy 7/18/2005

Summary: The Lexus models were the subjects of Defect Petition (DP) 04-003. Twelve ODI complaints are duplicative to Toyota reports, including the two minor crashes. The V6 equipped Solara models have been excluded because they do not contain the subject throttle control system.

Toyota introduced electronic throttle control (ETC) on the subject vehicles beginning in model year (MY) 2002. ODI opened the investigation to determine if the system could be the cause of complaints alleging the engine speed increased, or failed to decrease, (for a short duration) when the accelerator pedal was not depressed (the alleged defect). During the course of the investigation, ODI analyzed agency data and reviewed vehicle owner questionnaire (VOQ) reports, conducted interviews involving 113 VOQ and 36 Toyota reports, inspected two complainant vehicles, reviewed relevant Toyota service and new car feature documentation, reviewed and analyzed Toyota's responses to ODI's information request letter, conducted a limited control pedal assessment, and attended a Toyota technical presentation that included the assessment of two demonstration vehicles.

Through interviews, ODI identified 14 VOQ and 6 Toyota reports (20 unique vehicles) where complainants report multiple occurrences of the alleged defect. In some cases the condition was experienced by different vehicle operators or was witnessed by other occupants. ODI was unable to make a determination as to the cause of 9 Toyota and an additional 37 VOQ reports (which describe 28 unique incidents) due to insufficient information. The remaining complainants interviewed (62 VOQ, 21 Toyota) described conditions not caused by a failure of the throttle control system and were thus considered unrelated to the investigation. None of the complainants interviewed reported a component failure (or other indicator of a system failure) as the potential cause of incidents relevant to this investigation. In many cases, the complaint vehicles were subsequently inspected by dealership or manufacturer representatives who also failed to identify a fault within the vehicle. Toyota identified 43 related warranty claims, 24 of which were for diagnostic purposes only (no repairs performed). ODI found nothing abnormal in the control pedal configuration of the subject vehicles.

A defect trend has not been identified at this time and further use of agency resources does not appear to be warranted. Accordingly, this investigation is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The Agency will take further action if warranted by the circumstances. See the attached summary for further detail.

ALLEGED DEFECT

Allegations of A) an engine speed increase without the driver pressing on the accelerator pedal or, B) the engine speed failing to decrease when the accelerator pedal was no longer being depressed – both circumstances requiring greater than expected brake pedal application force to control or stop the vehicle and where the brake system functioned normally.

DISCUSSION

The investigation focused on the electronic throttle control (ETC) system and whether it may have been the source of consumer complaints of the alleged defect. The ETC system was one of several new or revised vehicle systems (including transmission and braking system) introduced for the MY 2002 subject vehicles. It consists of an accelerator pedal sensor (APS), a throttle control motor, a throttle position sensor (TPS), and the engine control module (ECM).

To control throttle position and monitor system operation, the system uses redundant hardware at the APS and TPS (main and sub sensor) and the ECM (main and sub processor). Redundant software strategies are also utilized between the two ECM processors. In the event an ETC system fault is detected by the ECM, a warning lamp is illuminated on the instrument panel and a diagnostic trouble code (DTC) related to the specific fault is stored in the ECM, as was demonstrated by Toyota during a June technical meeting (see the July 7, 2004 memo to file for further detail). ETC system diagnostics are reported by 23 DTC's.

When a fault is detected and depending on its nature, the ECM takes specific countermeasures (such as closing the throttle, or de-powering the throttle control motor) and then employs one of four failsafe modes of operation. Each mode has a specific effect on vehicle operation including: 1) operation at a slightly elevated idle speed (fixed throttle position, limp-off-road mode), 2) operation at limited power and delayed throttle response, 3) operation at idle speed only, or 4) engine shut down. Once employed, the failsafe mode remains in effect until the ignition key is turned off. Each failsafe mode was demonstrated during the technical meeting, and ODI notes that it was readily apparent from dash indications and substantial reduction in available throttle opening that the vehicle was operating in a failsafe condition.

At the close of this investigation, approximately 260 VOQ reports had been identified in the ODI database involving the subject vehicles and containing certain key words (e.g., surge, accelerate, throttle, crash, etc.) in the complaint description. Based on ODI review, 84 were found not to be related to the throttle control system because they involved unrelated matters such as transmission, engine control, or brake system issues. ODI selectively interviewed complainants, or other persons knowledgeable of a reported incident, for 113 of the VOQ reports.

ODI identified 14 reports involving 14 vehicles (ODI numbers listed below) where complainants report that the alleged defect occurred on multiple occasions (3 or more incidents) that in some cases were experienced by more than one vehicle operator or were witnessed by other occupants. Two minor crashes without injuries were reported. Complainants state that the incidents were of short duration (~5 seconds), occurred while the vehicle was in gear, moving at slow speeds or fully stopped, and that the brake was

effective in overcoming the engine. In some cases, the operator would take action to stop the vehicle from surging (shift to neutral and/or turn off the engine) while in other cases the vehicle returned to a normal state without any operator action. The incidents occur randomly and occurrences are often separated by long periods of time or mileage accumulation. ODI also identified 6 additional reports (6 unique vehicles, for a total of 20 vehicles) with the same circumstances from Toyota complainant interviews.

Through the interviews conducted ODI also identified 28 incidents from 37 VOQ reports (some duplicative, ODI numbers listed below) where a determination as to the cause could not be made due to insufficient information. The reports claim 21 crashes and no injuries; one VOQ (ODI 10065859) involved a fatal crash when a subject vehicle drove off the fourth floor of a parking garage killing the operator and the single passenger. Complainants report the occurrence of a single incident that often occurs during close quarters vehicle maneuvering (e.g., parking or entering a garage) and thus often results in a crash. During interviews, many complainants are unsure of the details that led up to the incident, such as the position of their right foot and which pedal, if any, they may have actuated or attempted to actuate; a crash occurs and in the aftermath the operator believes it was caused by the vehicle. In some cases the complainant continues to own and operate the vehicle on a regular basis, often through long periods and distances, without further incident. ODI also identified 9 reports (involving 3 crashes and one injury) with the same circumstances from Toyota complainant interviews.

ODI eliminated 62 VOQ and 21 Toyota complaints through the interviews conducted because the circumstances described in the interview could not be explained, or solely explained, by a failure of the ETC system.

ODI failed to find any evidence in the interviews conducted (113 VOQ and 36 Toyota reports, 149 total), or in the information provided in Toyota's IR response, of instrument panel warning lamp illumination or ETC diagnostic codes detection. None of the complainants interviewed described conditions similar to failsafe mode operation. One report (10062931) was found where an ETC component replacement occurred in connection with a repair attempt related to the alleged defect, no others were found. Toyota's warranty claim rate is low with 24 of the 43 warranty claims submitted involving diagnostic repairs (that did not result in component replacement because no fault was detected). Many warranty claims were not related to the alleged defect. Toyota's ETC parts sales rate for the subject vehicles is low also. There are no service bulletins or campaigns that relate to the alleged defect.

VOQ numbers: 6900639, 10026512, 10055375, 10060785, 10060806, 10060886, 10062072, 10062212, 10062931, 10063035, 10063095, 10071432, 10073842, 10073900.
37 indeterminate: 8013543, 8015215, 10008367, 10026392, 10045644, 10045944, 10048030, 10053774, 10061716, 10061725, 10061737, 10061753, 10061791, 10062013, 10062702, 10062892, 10062956, 10062975, 10063340, 10065859, 10066756, 10067011, 10067142, 10067327, 10067780, 10068089, 10071703, 10072208, 10072248, 10072621, 10072722, 10073382, 10073396, 10073435, 10074340, 10080050, 10080160