TOYOTA

TOYOTA MOTOR NORTH AMERICA, INC.

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April 21, 2011

11V-245
5 Pages)

Mr. Daniel C. Smith
Associate Administrator for Enforcement
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Part 573, Defect Information Report
Certain Toyota Highlander and RAV4 Models

Dear Mr. Smith:

In accordance with the requirements of the National Traffic and Motor Vehicle Safety Act of 1966 and 49 CFR Part 573, on behalf of Toyota Motor Corporation ["TMC"], we hereby submit the attached Defect Information Report concerning a voluntary recall of certain Toyota Highlander and RAV4 vehicles to address an issue with the curtain shield airbag system.

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

Sincerely,
TOYOTA MOTOR NORTH AMERICA, INC.

Vinnie Venugopal, General Manager
Toyota Motor Engineering & Manufacturing
North America, Inc.

VV:mh
Attachment

DEFECT INFORMATION REPORT

1. Vehicle Manufacturer Name:

Toyota Motor Corporation ["TMC"]
1, Toyota-cho, Toyota-city, Aichi-pref., 471-8571, Japan

Affiliated U.S. Sales Company

Toyota Motor Sales, USA, Inc. ["TMS"]
19001 South Western Avenue, Torrance, CA 90509

Manufacturer of Airbag Sensor Assembly

DENSO CORPORATION
1-1, Showa-cho, Kariya-city, Aichi-pref., 448-8661, Japan
Telephone: +81-566-25-5511

2. Identification of Affected Vehicles:
Based on production records, we have determined the affected vehicle population as in the table below.

Make/ Car Line	Model Year	Manufac-turer	VIN		Production Period
			VDS	VIS	
Toyota/ Highlander Highlander HYBRID	2008	TMC	##4#A	82000129 - 82063948	May 25, 2007 through January 31, 2008
Toyota/ RAV4	2007 - 2008	TMC	##3#V	75007823 – 75124308 76004337 - 76054737	November 1, 2006 through January 31, 2008
				85015779 – 85169084 86010018 - 86072697	

Note: Although the involved vehicles are within the above VIN range, not all vehicles in this range were sold in the U.S.

3. Total Number of Vehicles Potentially Affected:

Toyota Highlander, Highlander HYBRID : 94,023
Toyota RAV4 : 213,825
Total : 307,848

4. Percentage of Vehicles Estimated to Actually Experience Malfunction:

Unknown

5. Description of Problem:

In the curtain shield airbag (CSA) system of the subject vehicle, there are two sensors in the airbag sensor assembly which are designed to detect vehicle roll angle. If one of these sensors malfunctions, the airbag warning light (Malfunction Indicator Light: MIL) will illuminate and the roll detection system will be suspended; however, the airbag (CSA) remains available in the event of a side crash. If both sensors fail nearly simultaneously after initial airbag system check, the CSA and the seat belt pretensioner could be inadvertently activated. Inadvertent activation of the CSA and/or the seat belt pretensioner can cause injury to a vehicle occupant.

6. Chronology of Principal Events:

October 2007 – January 2008

In October 2007 Toyota received a field technical report from the US market indicating that the curtain shield airbag installed in a certain 2007MY RAV4 vehicle inadvertently deployed. Toyota began an investigation, including an inspection of the recovered airbag sensor assembly, and found that a short circuit occurred at the upper and lower electrodes in each of the two roll rate sensors installed in the airbag sensor assembly located under the center console. These short circuits were caused by a leak path developed between the upper and lower electrode. To eliminate any possibility of short circuits at the electrodes in the two sensors, the structure of the sensors was changed in January 2008.

February 2008 – mid-April 2011

After receiving the first field technical report in October 2007, and implementing the running change in January 2008, Toyota continued to receive reports from the field (including some reports of minor injuries), and field technical reports. Toyota worked with its supplier to analyze the FTRs. It was found that most of the failures occurred on vehicles produced in certain months between December 2006 and December 2007. In addition, Toyota's supplier estimated, based on an accelerated environmental test involving 2,700 test components built with the same structure as the one prior to the running change, that the progress of the leak path development at the electrode would have a finite duration; specifically, the analysis indicated that the leak path would cease propagating the leak within 30 months after production. Moreover, Toyota concluded that the risk of inadvertent deployment is not present unless two short circuits occur nearly simultaneously after initial airbag system check. Toyota concluded in June 2009 that the possibility of essentially simultaneous short circuits occurring in the field was

very low. Toyota deemed it more likely that, if any leak path is present in the vehicle, a single sensor would first develop a short circuit, in which case the MIL would illuminate, but the air bag would remain available in the event of a side impact, and the consumer would respond to the MIL and have the sensor assembly replaced. Toyota therefore concluded that no field action was required at that time (June 2009), but rather it would monitor data from the field.

Toyota's continued field monitoring noted that short circuits continued to occur (as evidenced by warranty claims for repair after MIL illumination), and that some reports of inadvertent CSA deployments continued to occur, including some in vehicles that were more than 30 months old and some that involved reports of minor injuries. Therefore Toyota started to reexamine and question the result of the analysis done in 2009, including the prediction that future occurrences would be rare. Field experience showed that, although short circuits were occurring, in general, consumers were responding appropriately to the illuminated MILs, and obtaining repairs while the air bag functionality was still available in the event of a crash.

In March 2011, Toyota received information indicating that a CSA deployed inadvertently and that a driver had an injury in this incident. As a result of the inspection of the customer's vehicle and investigation, it appears that the customer may have been cut in the palm by the seat belt webbing when it retracted with high speed movement in conjunction with activation of the seat belt pretensioner which is designed to be activated with the CSA deployment. As a result of this incident, Toyota reconsidered the necessity of a field action.

April 14, 2011

Based on further examination and reconsideration, Toyota decided to conduct a voluntary safety recall to replace the airbag sensor assembly with the modified one on all affected vehicles identified above.

7. Description of Corrective Repair Action:

Toyota intends to replace the airbag sensor assembly in the subject vehicles with the new one in which the modified roll rate sensors were installed, when sufficient parts become available. Because the schedule for parts availability is not known at this time, Toyota intends to send an interim notice to all known owners of the subject vehicles and will coordinate the content of that notice with NHTSA ODI staff. Once the replacement airbag sensor assembly becomes available, owners will be notified again, and the airbag sensor assembly will be replaced with the new one without charge.

Reimbursement Plan for pre-notification remedies

The owner letter will instruct vehicle owners who have had the airbag sensor assembly replaced for this condition prior to this campaign to seek reimbursement by mailing a copy of their repair order, proof-of-payment, and proof-of-ownership for reimbursement consideration.

8. Recall Schedule:

Toyota is currently working on the remedy. In the interim, Toyota will begin sending an Interim Owner Notification Letter to vehicle owners in early to mid-May, 2011. A second owner letter will be mailed to owners when the remedy is available. Toyota will provide the agency with a schedule when it becomes available.

9. Distributor/Dealer Notification Schedule:

Toyota is currently working on the remedy. In the interim, Toyota will notify our dealerships of this recall in early May, 2011. An updated dealer notification will be sent once a remedy is available. Toyota will provide the agency with a schedule when it becomes available.