

**Toyota Motor Engineering &
Manufacturing North America, Inc.**

Vehicle Safety & Compliance
Liaison Office
Mail Code: S-104
19001 South Western Avenue
Torrance, CA 90501

June 29, 2011

11V-342
(4 Pages)

Mr. Claude Harris
Acting Associate Administrator for Enforcement
National Highway Traffic Safety Administration
Attn: Recall Management Division (NVS-215)
1200 New Jersey Ave, SE
Washington, D.C. 20590

Re: Certain 2006-2007 Toyota Highlander Hybrid and Lexus RX400h Inverters
Part 573, Defect Information Report

Dear Mr. Harris:

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 safety recall of certain Toyota Highlander Hybrid and Lexus RX400h vehicles to address an issue with the hybrid inverter.

Should you have any questions about this report, please contact me at (502) 867-6027.

Sincerely,



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

Enclosures
Part 573, Defect Information Report

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

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 HV	2006 - 2007	TMC	#W21A	60001012 - 60033953 70016485 - 70034655	February 16, 2005 through August 29, 2006
Lexus/ RX400h	2006 - 2007	TMC	#W31U	60001007 - 60049416 62000101 - 62007397 72000975 - 72008129	February 23, 2005 through August 30, 2006

Note: Although the involved vehicles are within the above VIN range, not all vehicles in this range were sold in the U.S. In addition, not all vehicles in this range contain inverter control board transistors that require remedy as described further below.

No other Toyota or Lexus vehicles use the same hybrid inverter as the subject vehicles.

3. Total Number of Vehicles Potentially Affected:

Toyota Highlander HV:	45,528
Lexus RX400h:	36,745
Total:	82,273

4. Percentage of Vehicles Estimated to Actually Experience Malfunction:

Unknown

5. Description of Problem:

The inverter assembly is part of the hybrid system of the subject vehicles. Inside the inverter assembly is an Intelligent Power Module (IPM) which contains a control board equipped with transistors, known as Insulated-Gate Bipolar Transistors (IGBT). The transistors on the control boards in some of the subject vehicles were inadequately soldered and could be damaged from heat caused by a large current during high-load driving. If this occurs, various warning lamps, including the malfunction indicator lamp, slip indicator light, brake system warning light, and master warning light, will be illuminated on the instrument panel. In most cases the vehicle will enter a fail-safe driving mode, resulting in reduced motive power in which the vehicle can still be driven for short distances. In limited instances, the fuse of the power supply circuit could blow when the transistor is damaged. If this occurs, the hybrid system will stop while the vehicle is being driven.

6. Chronology of Principal Events:

February 15, 2011

NHTSA opened a Preliminary Evaluation (PE11-005) regarding this issue.

March 1, 2011

NHTSA sent Toyota an Information Request in connection with the Preliminary Evaluation.

April 29, 2011

Toyota initially responded to the Information Request. In its initial response, Toyota described the steps that it took to investigate and assess the issue up to that time. Please refer to the response for details.

May 2011 - June 2011

During the period following its response to the Information Request, Toyota continued its investigation. The investigation revealed that the transistors on the control board in some of the hybrid inverters of the subject vehicles may have been inadequately soldered due to improper preheating of the solder or microscopic uneven shape of the transistor, which could result in damage to the transistor due to overheating. All of the suspect inverters were either produced at a particular Toyota plant or contained transistors that were produced at this plant. (During the production period of the subject vehicles, inverters were also produced beginning in January 2006 by a supplier at a different plant that contained transistors produced by another supplier. The transistors in these inverters were properly soldered, and, therefore, these inverters used in the subject vehicles will not need to be replaced.)

If a suspect transistor becomes damaged, various instrument panel warning lamps will illuminate, and in almost all cases the vehicle will enter the fail-safe mode in which it can continue to be driven. However, some reports from the field indicated that the hybrid

system shut down while driving due to the failure of the inverter, and Toyota continued to investigate the effect on the hybrid system when a control board transistor is damaged. Toyota found in limited instances that there is a possibility that excess current could cause the fuse of the power supply circuit to blow, causing the hybrid system to shut down and resulting in the vehicle stopping while being driven.

June 23, 2011

Based on the result of its investigations, Toyota decided to conduct a voluntary safety recall of the subject vehicles.

7. Description of Corrective Repair Action:

All known owners of the subject vehicles will be notified by first class mail to return their vehicles to a Toyota or Lexus dealer. The dealer will inspect the hybrid inverter production number to determine whether the inverter contains suspect transistors. If so, the Intelligent Power Module (IPM) will be replaced.

Reimbursement Plan for pre-notification remedies

The owner letter will instruct vehicle owners who have paid to have this condition remedied prior to this campaign to seek reimbursement pursuant to Toyota's General Reimbursement Plan.

8. Recall Schedule:

Toyota/Lexus will mail an interim owner notification beginning in the middle of July, 2011 to advise owners of this recall and the fact that they will receive a future notice when parts become available to complete repairs. They will also be advised of Toyota's reimbursement plan. A second mailing will be scheduled when replacement parts are available.

A copy of the draft interim owner notification will be submitted for review by NHTSA as soon as it is available.

9. Distributor/Dealer Notification Schedule:

Toyota's notifications to distributors/dealers will be sent in the beginning of July, 2011. Copies of dealer communications will be submitted as they are issued.