

# TOYOTA

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

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

August 1, 2012

Ms. Nancy Lummen Lewis  
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 Toyota RAV4 and Lexus HS250h Rear Suspension Arm No.1 Assembly  
Part 573, Defect Information Report

Dear Ms. Lewis:

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 RAV4 and Lexus HS250h vehicles to address an issue with the Rear Suspension Arm No.1 Assembly.

Should you have any questions about this report, please contact me at (310) 468-8551.

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

Toyota Motor Manufacturing Canada Inc. ["TMMC"]  
1055 Fountain Street North, Cambridge, Ontario, Canada N3H 5K2

Affiliated U.S. Sales Company

Toyota Motor Sales, USA, Inc. ["TMS"]  
19001 South Western Avenue, Torrance, CA 90501

Manufacturer of Rear Suspension Arm No.1 Assembly:

SOMIC ISHIKAWA INC.  
500 Furukawa-cho, Hamamatsu-city, Shizuoka-pref. 435-8560, Japan  
Telephone: +81-53-425-2111

Country of Origin: Japan

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/ RAV4	2006 - 2010	TMC	##3#V	TBD	October, 2005 through August, 2010
	2009 - early 2011	TMMC		TBD	October, 2008 through September, 2010
Lexus/ HS250h	2010	TMC	BB1BA	TBD	July, 2009 through August, 2010

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

No other Toyota or Lexus vehicles use the same Rear Suspension Arm No.1 Assembly as the subject vehicles.

3. Total Number of Vehicles Potentially Affected:

Toyota RAV4:	Approx. 760,000
Lexus HS250H:	Approx. 18,000
Total:	Approx. 778,000

4. Percentage of Vehicles Estimated to Actually Experience Malfunction:

Unknown

5. Description of Problem:

In the Rear Suspension Arm No.1 Assembly (hereinafter called “arm”) of the subject vehicles, if nuts for adjusting the rear wheel alignment are improperly tightened when the alignment is performed in the field, backlash may develop at the thread portion of the arm (shaft and turn-buckle), followed by formation of rust. If this occurs, threads may wear, causing the arm to separate, which could result in loss of vehicle control.

6. Chronology of Principal Events:

June 4, 2012

NHTSA opened a Preliminary Evaluation (PE12-013) regarding a failure of the left or right rear suspension arm No.1 assembly potentially causing a loss of vehicle control on certain 2006-2008MY Toyota RAV4 vehicles.

Toyota had previously investigated this issue, making the decision to monitor further and then subsequently conducted a further investigation based on additional field information, as discussed below.

Initial Investigation 2008

Toyota began sporadically receiving Field Technical Reports (FTR’s) from the field concerning the loosening of the locking nuts and separation of the arm, and started to investigate and analyze the reported issues, including the examination of the assembly process, the inspection and analysis of failed parts, and field surveys.

Toyota’s investigation confirmed that the turn-buckle lock nuts were tightened using a torque wrench to proper specification during the installation process at the vehicle plants. The production process was updated to assure that proper torque continued to be applied during vehicle assembly. It was also confirmed that the lock nuts would not loosen in

normal usage of the vehicle in the field when tightened properly and to specification. The investigation concluded that the loosening of the nuts, which could lead to a backlash in the arm and potential thread corrosion, was caused by improper tightening of the nuts during adjustment of the rear wheel alignment in repair/alignment facilities by service technicians and, therefore, this issue was attributed to improper service operation. There was no clear trend of failure and the failure rate was determined to be low at that time. Toyota updated the lock nut tightening instructions in the service manual to provide more detail and continued to monitor the field information. In August 2010 a new arm was introduced to communize it with other models being introduced in the 2011 model year.

#### August 2011

Toyota noted that it had received additional Field Technical Reports concerning the separation of the arm. Toyota undertook additional investigation, including replication testing, a field survey, and recovered part inspection, to determine if any other contributing factors which could lead to this condition existed other than the improper service operation during the adjustment of the rear wheel alignment. Toyota inspected 52 in-use vehicles in the field by October 2011 and a nut loose condition was found in one vehicle which had a rear wheel alignment adjustment history. It continued the failed part recovery and field survey activities.

#### May 2012

Toyota received a customer complaint alleging loss of vehicle control while driving on a highway, resulting in an accident. Toyota inspected and analyzed the scene of the accident and the vehicle. As a result of this investigation, it was found that the left arm separated at the outer side of the turn-buckle. The arm also showed evidence that a non-factory applied lubricant had been applied to the right arm in the past indicating that some service to the arm had occurred. Toyota could not identify whether the arm separated before the accident or after the accident; however, according to the customer's allegation that a loud noise was heard before the vehicle swerved, the arm could have separated before the accident. Based on the evidence of the adjustment of the arm found on this vehicle, it is possible that, due to the improper service operation during the adjustment of the rear wheel alignment, a backlash may have developed at the threaded portion, causing the threads to corrode and wear, which resulted in the separation of the arm.

In addition, Toyota was able to conclude a part recovery investigation from 25 in-use vehicles. The inspection of the parts recovered indicated a loose nut was present in one vehicle which had a rear wheel alignment adjustment history.

#### July 26, 2012

Toyota has concluded that this issue is caused by the improper tightening of the lock nut during adjustment of the rear wheel alignment in the field. However, Toyota decided to conduct a voluntary safety recall campaign to ensure proper tightening of the lock nuts. In connection with PE12-013 Toyota has provided field report and warranty information to the agency.

7. Description of Corrective Repair Action:

The remedy is being finalized, but will involve notification of all known owners of the subject vehicles by first class mail to return their vehicles to a Toyota or Lexus dealer, as applicable, for a nut torque inspection of the rear suspension arm and possible replacement of the arm, as necessary. Toyota will provide NHTSA with additional details at a later time.

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:

The owner notification schedule will be provided at a later time. The draft owner notice will be submitted for review in accordance with the regulations.

9. Distributor/Dealer Notification Schedule:

The distributor /dealer notification will be provided at a later time. Copies of all notices will be provided when issued.