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June 1, 2011

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: '01-'03 Toyota Prius Power Steering Gear Part 573, <u>Defect Information Report</u>

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 Prius vehicles to address an issue with the electric power steering gear assembly.

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

Sincerely,

V. Vingood

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

DEFECT INFORMATION REPORT

1. <u>Vehicle Manufacturer Name</u>:

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. <u>Identification of Affected Vehicles</u>:

Based on production records, we have determined the affected vehicle population as in the table below.

Make/	Make/ Model		VIN		Production
Car Line	Year	turer	VDS	VIS	Period
Toyota/ Prius	2001 - 2003	TMC	BK1#U	10001005 - 30088781	January 28, 2000 through May 30, 2003

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 vehicles use the same steering gear box assembly as the subject vehicles.

3. <u>Total Number of Vehicles Potentially Affected:</u>

52,377

4. <u>Percentage of Vehicles Estimated to Actually Experience Malfunction</u>:

Unknown

5. <u>Description of Problem</u>:

In the electric power steering system of the subject vehicles, due to the inadequate fixation of nuts that secure the pinion shaft in the steering gear box assembly, if the steering wheel is repeatedly and strongly turned to the full-lock position, there is a possibility that the nuts may become loose. If the vehicle is continuously operated in this condition, the pinion shaft may become unstable. In left-hand drive vehicles, such as those sold in the United States, this may cause power generated by the electric motor to not be fully transmitted, which could result in significant increased steering effort when making a left turn.

6. <u>Chronology of Principal Events</u>:

August 2007 – December 2008

In August 2007 Toyota received a field technical report from the Japan market indicating that the steering wheel locked up in a first generation Prius vehicle. Toyota began an investigation, including an inspection of the returned steering gear box assembly, and found that double nuts (one is the adjust nut and the other is the lock nut) that secure the pinion shaft had loosened, but there were traces that indicated that the nuts had been tightened with the specified torque. The cause of the loose nuts could not be identified. Since similar incidents occurred sporadically in the field, analyses of the production history and design change history were performed. However, no concentration of incidents or cause was identified at that time.

January 2009 – June 2010

Toyota continued to conduct replication tests and tried to identify the conditions which create the loosening of the nuts. It was found that the nuts may become loose in a steering gear box service part that utilized a higher tightening torque than the production part if the steering wheel was turned to the lock position very hard at a very low vehicle speed. If this occurs, the steering wheel may not return to the center and/or the steering effort may increase, both which the customer can notice easily.

July 2010 – December 2010

Toyota continued its investigation to attempt to determine how the nuts can become loose. (During this period, in August 2010, Toyota received a field technical report from the U.S. market indicating no power steering assist when turning to the left. This was the only U.S. FTR that was related to the issue under investigation.) Toyota confirmed that (1) a loose nut condition could be replicated if the axial force between the adjust nut and bearing is low, and (2) the adjust nut may be loosened when the lock nut is tightened. In addition, seepage of grease used in the rack-and-pinion assembly was observed at nuts in certain failed returned parts. Therefore, additional tests were initiated to identify the effect of grease seepage.

January 2011 – May 2011

As a result of the investigation, it was found that, if grease penetrates into the fastening surface of the nut, there is a possibility that, during long-term usage, the nuts may loosen. In addition, it was confirmed that, if the nuts loosen, the pinion shaft may not be stabilized firmly, causing the motor assist power to not be fully transmitted, which could result in the steering effort becoming increased. In a right-hand drive vehicle, if the loose nut contacts the cap located at the bottom of the gear box, the steering wheel may intermittently stick. In a left-hand drive vehicle, because of the different direction of the thread on the pinion shaft, the steering wheel does not stick even if the nut contacts the cap. However, the steering effort could increase significantly when turning the steering wheel to the left, which the driver could perceive as sticking or binding.

May 26, 2011

Based on the results of the investigation described above, Toyota decided to conduct a voluntary recall campaign in the U.S., Japan, Europe and other countries.

7. <u>Description of Corrective Repair Action</u>:

All known owners of the subject vehicles will be notified by first class mail to return their vehicles to a Toyota dealer for the replacement of both nuts with improved nuts.

Reimbursement Plan for pre-notification remedies

The owner letter will instruct vehicle owners who have had the steering gear 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. <u>Recall Schedule</u>:

Toyota's mailing of the owner notifications will commence in early July 2011 and be completed by late July, 2011.

Copies of the owner notification and dealer instructions will be submitted as soon as they are available.

9. <u>Distributor/Dealer Notification Schedule</u>:

Toyota's notifications to distributors/dealers will be sent in late June, 2011.