



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 06-055
Date Opened: 11/21/2006 Date Closed: 03/28/2007
Principal Investigator: Andrea Noel
Subject: Sudden loss of Power Steering Assist

Manufacturer: Toyota Motor Corporation
Products: 2006 MY Toyota Highlander (Hybrid only)
Population: 43,931

Problem Description: The Electronic Power Steering (EPS) Electronic Control Unit (ECU) malfunctions, resulting in sudden loss of power steering assist.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	2	8	8
Crashes/Fires:	1	3	3
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	109	109

*Description of Other: Warranty claims related to the Electronic Power Steering Assembly.

Action: This Preliminary Investigation has been closed.

Engineer: Andrea Noel *A.N.* 4/2/07
Div. Chief: Jeffrey L. Quandt
Office Dir.: Kathleen C. DeMeter

Date: 03/28/2007
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Summary: The Office of Defects Investigation (ODI) opened PE06-055 based on two complaints of loss of EPS assist in 43,931 MY 2006 Toyota Highlander Hybrid vehicles. One of the complaints alleged that a loss in power steering assist resulted in a crash.

In response to an Information Request letter from ODI, Toyota submitted information about 6 additional Consumer Complaints, including 2 alleged crashes, and 109 warranty claims related to the EPS assembly in the subject vehicles. ODI's analysis of the crash incidents revealed that each incident of alleged loss in power steering assist occurred at very low speeds and presented minor safety consequences.

Toyota's response also identified three potential issues that could result in a loss of EPS assist in the subject vehicles. Two of the conditions are related to electrical current surges within the EPS ECU. The other is related to EPS motor magnets becoming dislodged because of poor adhesion. The two issues related to current surges can only occur when the vehicle is being parked or being operated at very low speeds. The third issue could theoretically occur at any speed, but occurs as a result of a specific type of impact to one of the front wheels. Toyota states that in all three cases, and during any loss of power steering assist to the vehicle, the front wheels can still be directed without assist, manually, via the steering wheel.

ODI's analysis of the complaint data and other information submitted by Toyota indicates that there is a low overall failure rate for all of the conditions combined that can result in loss of EPS in the subject vehicles (18 complaints per 100,000 vehicles and a 0.2% warranty claim rate) and there is no evidence of any failure that could cause a loss of steering control. The change in steering effort is greatest at very low speeds when the steering is at or near end of travel. 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 continue to monitor complaints and other information relating to the alleged defect in the subject vehicles and take further action in the future if warranted.

A.N.