U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

NHTSA

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Investigation: DP 15-001
Prompted by:
Date Opened: 04/01/2015
Investigator: Chris Lash **Reviewer:** Jeff Quandt
Approver: Frank Borris
Subject: Electric power steering assist failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Ford Motor Company
Products: 2008 - 2011 Ford Escape, Mercury Mariner
Population: 740,878

Problem Description: Loss of torque sensor signal, sudden loss of electric power steering assist while driving.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	1	TBD	TBD
Crashes/Fires:	0	TBD	TBD
Injury Incidents:	0	TBD	TBD
Number of Injuries:	0	TBD	TBD
Fatality Incidents:	0	TBD	TBD
Number of Fatalities:	0	TBD	TBD

ACTION / SUMMARY INFORMATION

Action: A defect petition has been opened.

Summary:

On May 27, 2014, amended June 2, 2014, Ford Motor Company (Ford) submitted a Defect Information Report (DIR) to NHTSA describing a safety defect that may result in a sudden loss of power steering assist while driving in approximately 740,878 model year (MY) 2008 through 2011 Ford Escape vehicles equipped with electric power assisted steering (NHTSA 14V-284, Ford 14S05). Ford's DIR describes the defect condition as "a poor signal to noise ratio in the torque sensor within the Electric Power Steering (EPS) system [which] does not allow the PSCM to determine the driver's
steering input." When the system detects this fault condition, it transitions the EPS system to the fail-safe/manual steering mode. Ford's DIR indicates that loss of power steering assist while driving would require higher steering effort at lower vehicle speeds, which may result in an increased risk of a crash.

Ford's remedy instructs dealers to check the Power Steering Control Module (PSCM) for Diagnostic Trouble Codes (DTCs) to determine the proper repair procedure. If no DTCs are present, dealers will update the PSCM and instrument cluster module software. The updated PSCM software changes the torque sensor fault strategy to no longer remove power steering assist while driving for a single torque sensor fault and provide audible and visual warnings to the driver if a torque sensor fault is detected. If certain loss of steering assist DTCs are present during the initial recall inspection, the dealer will either replace the torque sensor or the PSCM, depending on the DTC present.

The Ford remedy is designed to reduce the possibility of a sudden loss of power steering while the vehicle is being driven. Subsequent failures of the EPS torque sensor of PCSM would not result in sudden loss of power steering assist while driving, but would provide audible and visual warnings to the driver that EPS service is required. If the system is not promptly serviced after warning symptoms appear, power assist may not be available upon subsequent key-"ON" vehicle start-up. Ford does not provide assistance for repairs in this circumstance under the safety recall.

On February 5, 2015, ODI received a petition "for a Determination of Whether Ford Motor Company ("Ford") Reasonably Met its Obligation to Remedy Recall14S05 regarding certain 2008-[2011] Model Year Escape and Mariner Vehicles" from an owner of a vehicle that experience a torque sensor failure after receiving the remedy for 14V-284 (VOQ 10670665). The petitioner alleges that the software update provided by Ford's recall does not adequately remedy the safety defect and that "the software update itself may in fact cause further issues with the affected vehicle's power steering, causing it to fail, and ultimately requiring replacement of the torque sensor or entire steering column."

ODI will evaluate the information provided by the petitioner and make a grant or deny decision.