U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: EA 06-016
Prompted By: PE06-016
Date Opened: 09/14/2006
Principal Investigator: Derek Rinehardt
Subject: Crank Position Sensor Failure - Stall

Manufacturer: General Motors Corp.
Products: MY 2001 Chevrolet and GMC 2500/3500 Series w/8.1L Engine
Population: 8,300 (Estimated)

Problem Description: The crank position sensor failure may result in sudden engine shutdown, with no restart or delayed restart.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	16	56	72
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	52	52

*Description Of Other: Warranty claims of stalls while driving.

Action: An Engineering Analysis has been opened.

Engineer: *Derek Rinehardt* DR Date: *09/14/2006*
Div. Chief: *Jeffrey L. Quandt* Date: *09/14/2006*
Office Dir.: *Kathleen C. DeMeter* Date: *09/14/2006*

Summary: The Office of Defects Investigation (ODI) opened a Preliminary Investigation (PE06-016) on May 4, 2006 based on eleven Vehicle Owner Questionnaires (VOQs) and Early Warning (EWR) data alleging sudden engine shutdown while driving as a result of crank position sensor failures in MY 2001-2002 General Motors (GM) C/K platform vehicles equipped with 8.1L engines.

In response to an information request letter sent by ODI, GM Provided owner complaint information, field reports and warranty claim data based on a population of 108,338 vehicles. The data was categorized by engine stalls while driving, engine stalls with an unknown driving condition, no start conditions and claims where it was indeterminate if an engine stall occurred while driving.

General Motors' response included 1,213 owner complaints and field reports of which 289 were categorized as engine stalls while driving allegedly caused by crank position sensor failures.

General Motors also submitted warranty claims from its regular warranty (5 years/50,000 miles) and from its extended warranty database. From the regular warranty database, there were 3,140 claims of crank position sensor replacement of which 147 claims were from consumers alleging engine stall while driving. General Motors stated that 2,841 of the claims were indeterminate if an engine stall occurred while driving.

From its extended warranty database, GM submitted 1,561 claims of crank position sensor failure that it also stated were indeterminate as to whether an engine stall occurred while driving. In total, GM reports 4,701 claims of crank position sensor failure combining regular warranty and extended warranty.

Similar to GM's statistical analysis, ODI's analysis showed that the failure rate for warranty claims of engine stall while driving at three years in service is low (less than 1%). However, further analysis determined that the MY 2001 vehicle build period from May 2000 through October 2000 had significantly higher (more than four times) crank position failure rates in both consumer complaint data and warranty claim data than in the build period from November 2000 through July 2001. Adding the claims of known engine stall while driving and claims where engine stall was indeterminate, the failure rate at three years in service for this population is over 6%.

An engineering analysis is being opened based on high complaint and warranty rates of vehicles built from May 2000 through October 2000 to further assess the frequency and potential safety consequences associated with the alleged defect.

DR 9/14/2006