



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

ODI RESUME

Investigation: PE08-044
Date Opened: 07/17/2008
Principal Investigator: Stephen McHenry
Subject: Engine Stalling – Fuel pump failure
Date Closed: 09/03/08

Manufacturer: Hyundai Motor Company
Products: MY 2007-2008 Hyundai Elantra
Population: 177,235

Problem Description: The fuel pump may fail causing engine stall.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	17	69	81
Crashes/Fires:	1	0	1
Injury Incidents:	1	0	1
# Injuries:	1	0	1
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	695	695

*Description of Other: Warranty claims

Action: This Preliminary Evaluation is closed. Recall 08V-429.

Engineer: Stephen McHenry *SMH*
Div. Chief: Jeffrey L. Quandt
Office Dir.: Kathleen C. DeMeter

Date: 09/03/2008
Date: 09/03/2008
Date: 09/03/2008

Summary: On August 19, 2008, Hyundai submitted a defect information report to NHTSA concerning fuel pump failure resulting in engine stall in approximately 65,000 Model Year 2008 Hyundai Elantra vehicles with 2.0 liter beta engines produced from November 5, 2007, through June 28, 2008 (NHTSA Recall No. 08V-429, Hyundai Campaign 086). The recalled vehicles are equipped with fuel pumps manufactured with upper body components from a different supplier than those manufactured prior to November 5, 2007. According to Hyundai, the new supplier's upper body components had incorrect dimensional characteristics resulting in misalignment of the armature shaft, which caused some of the fuel pumps to experience poor brush-to-commutator contact conditions that could result in engine stall.

The use of ethanol blend fuel, containing up to 10 percent Ethanol, causes a film build-up that creates high resistance between the brush and commutator. The misaligned armature shaft prevents the brush and commutator from making sufficient contact to overcome the high resistance film build-up, therefore producing less pumping pressure than required to supply the fuel injection system.

(Continued on page two)

Sixty-four of the complaints (72%), including the crash and injury allegation, involve the recalled vehicles. The complaint rate in the subject vehicle population is 98.5 per 100,000 vehicles, compared with 21.4 in the remaining population, which has on average been in service over a year longer. The warranty claim rate is also significantly higher in the recalled vehicles, which had 569 claims (0.9 percent claim rate) compared with 126 claims in the remaining population (0.1 percent claim rate).

Hyundai will replace the fuel pump sub-assemblies in the recalled vehicles free of charge. This Preliminary Evaluation is closed with Hyundai's recall.

#