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

ODI RESUME

Investigation: EA09-014
Prompted By: PE09-024
Date Opened: 10/19/2009
Principal Investigator: Kerrin Bressant
Subject: Air Brake System

Manufacturer: Honda (American Honda Motor Co.)
Products: 2007 - 2008 Honda Odyssey
Population: 343,924

Problem Description: Air may enter the brake system via the VSA Modulator, resulting in complaints of low/soft/spongy brake pedals and extended stopping distances.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	62	574	610
Crashes/Fires:	4	8	10
Injury Incidents:	3	1	3
# Injuries:	7	2	7
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	2,186	2,186

*Description of Other: Warranty Claims

Action: An Engineering Analysis has been opened.

Engineer: *Kerrin Bressant* HKB — Date: *10/19/2009*
Div. Chief: *Jeffrey Quandt* — Date: *10/19/2009*
Office Dir.: *Kathleen C. DeMeter* — Date: *10/19/2009*

Summary: The Office of Defects Investigation (ODI) has received 62 complaints, and Honda has received 574 complaints and field reports, alleging low/soft/spongy brake pedal travel in model year (MY) 2007 and 2008 Honda Odyssey minivans. Twenty-six of the ODI complaints were also reported to Honda, resulting in a total complaint count of 610. Some complaints allege that the condition resulted in extended stopping distances, including some reports of rolling past stop signs or traffic lights. There are 10 alleged crashes in the subject vehicle population that may be related to the alleged defect.

In response to ODI's Information Request for Preliminary Evaluation (PE09-024), Honda indicated that small amounts of air may enter the brake system during initial diagnostics of the Vehicle Stability Assist (VSA) modulator while the pump is briefly actuated for system diagnostics after the engine is started. The amount of air gradually increases with each successive engine start cycle, resulting in progressively increasing brake pedal stroke. According to Honda, the condition does not present a significant risk to motor vehicle safety because "the pedal stroke gradually increases, providing the driver with information that the brake pedal height is changing and requires attention."

Honda has further indicated that there is no deterioration of braking performance caused by the subject condition, even though the pedal height and feel are different, until pedal stroke has reached the end of travel and the driver cannot produce any additional brake line pressure. Honda states that it is unaware of any vehicles that have reached such a condition and Honda testing using a leaking field return modulator indicates that it would take over a year before the pedal travel would reach its limit during hard stops with 200 N (45 pound - force) of pedal effort - the nominal force required to reach ABS braking mode.

ODI's analysis of warranty data indicates that the MY 2007-08 Odyssey vehicles have experienced the alleged defect at a significantly higher rate (0.67%) than the MY 2006 Odyssey (0.04%), which has a different VSA diagnostic program than the subject vehicles. This investigation has been upgraded to an Engineering Analysis to continue to investigate the scope, frequency, and safety-related consequences of the alleged defect.

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