



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

ODI RESUME

Investigation: PE09-024
Date Opened: 05/13/2009
Date Closed: 10/19/2009
Principal Investigator: Kerrin Bressant
Subject: Air in Brake System

Manufacturer: Honda (American Honda Motor Co.)
Products: 2006 – 2008 Honda Odyssey
Population: 536,904 (estimated)

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

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	69	613	656
Crashes/Fires:	4	12	14
Injury Incidents:	3	1	3
# Injuries:	7	2	7
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	2,259	2,259

*Description of Other: Warranty Claims

Action: This Preliminary Evaluation has been upgraded to an Engineering Analysis.

Engineer: Kerrin Bressant *HB*
Div. Chief: Jeffrey L. Quandt
Office Dir.: Kathleen C. DeMeter

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Summary: The Office of Defects Investigation (ODI) has received 69 complaints, and Honda has received 613 complaints and field reports, alleging low/soft/spongy brake pedal travel in Model Year (MY) 2006 through 2008 Honda Odyssey minivans. Twenty-six ODI complaints were also reported to Honda, resulting in a total complaint count of 656. Some complaints allege that the condition resulted in extended stopping distances, including some reports of rolling past stop signs or traffic lights. There are 14 alleged crashes in the subject vehicle population related to low/soft pedals.

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 rate of 0.67%. The MY 2006 Odyssey vehicles have experienced the alleged defect at a significantly lower rate (0.04%) than the MY 2007-08 Odyssey. Honda implemented a design change in the MY 2007 vehicles that changed the modulator self check sequence as a countermeasure for market complaints of noise for 2005 and 2006 model year vehicles.

This investigation has been upgraded to an Engineering Analysis (EA09-014) for the MY 2007-08 Odyssey vehicles to continue to investigate the scope, frequency, and safety-related consequences of the alleged defect.

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