



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE06-007

Date Opened: 01/24/2006

Date Closed: 05/24/2006

Principal Investigator: Scott Yon

Subject: Front Coil Spring Fracture

Manufacturer: Honda (American Honda Motor Co.)

Products: 2000 - 2001 Honda Odyssey, Salt Belt States

Population: 116,000 (estimated)

Problem Description: Front suspension coil springs may fracture and puncture the adjacent tire.

FAILURE REPORT SUMMARY


	ODI	Manufacturer	Total
Complaints:	12	21	30
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	115	115

*Description of Other: Potentially related warranty claims

Action: This Preliminary Evaluation is closed; a defect trend has not been identified.

Engineer: D. Scott Yon 

Date: 05/24/2006

Div. Chief: Jeffrey L. Quandt 

Date: 05/24/2006

Office Dir.: Kathleen C. DeMeter

Date: 05/24/2006

Summary: The population of 116,000 vehicles is an estimate based on American Honda Motor Company (AHM) data identifying original state of sale or delivery.

The subject vehicles (SV) utilize light weight coil springs manufactured from high strength steel (HSS). If the coating material of a HSS spring is breached, corrosive elements (salt) may attack the spring. Spring corrosion results in a stress riser and may cause a fracture. Depending on the location where the spring breaks, the jagged edge may pierce the tire; a rapid deflation of the tire may occur and can result in a loss of control or crash.

SV spring failure mechanics and tire contact likelihood are discussed in an AHM presentation to ODI dated April 20th, 2006 (available on ODI's web site; www-odi.nhtsa.dot.gov). AHM's presentation identified two mechanisms which cause the spring coating to become breached; 1) contact with the lower spring seat, and 2) entrapment of abrasive materials between the silencer tube and spring. The presentation compared SV spring fracture rates to the Honda MDX model, a sister vehicle recalled for front spring fracture under NHTSA Recall 05V385, and to other vehicles investigated and or recalled for front spring fracture.

The spring fracture rate for the SVs, which is about half the rate of the MDX model even though the SVs have one year longer in service, is low in comparison to other investigations that have resulted in a safety recall. Of the 7 reports ODI identified alleging tire damage due to spring fracture, six involved spring - tire contact which resulted in slow or no loss of air pressure; ODI was unable to verify the one report alleging a puncture occurred. ODI notes that the SV front spring differs from the MDX spring in that it has a single silencer tube (upper only, as opposed to upper and lower on the MDX) which is, according to AHM, located in an area less likely to result in a tire puncture should a fracture occur.

A defect trend has not been identified at this time and further use of agency resources is not warranted. Accordingly, this investigation is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The Agency will take further action if warranted by the circumstances.