



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

**Investigation:** PE 14-005  
**Date Opened:** 02/10/2014  
**Investigator:** Paul Simmons **Reviewer:** Jeff Quandt  
**Approver:** Frank Borris  
**Subject:** Brake booster failure

## MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** MAZDA MOTOR CORP  
**Products:** 2010-11 Mazda CX-9  
**Population:** 62,319 (Estimated)  
**Problem Description:** Owners allege incidents of hard brake pedal, increased brake effort, and reduced brake effectiveness.

## FAILURE REPORT SUMMARY

|                              | ODI | Manufacturer | Total |
|------------------------------|-----|--------------|-------|
| <b>Complaints:</b>           | 7   | TBD          | TBD   |
| <b>Crashes/Fires:</b>        | 0   | TBD          | TBD   |
| <b>Injury Incidents:</b>     | 0   | TBD          | TBD   |
| <b>Number of Injuries:</b>   | 0   | TBD          | TBD   |
| <b>Fatality Incidents:</b>   | 0   | TBD          | TBD   |
| <b>Number of Fatalities:</b> | 0   | TBD          | TBD   |

## ACTION / SUMMARY INFORMATION

**Action:** A Preliminary Evaluation has been opened.

### Summary:

The Office of Defects Investigation (ODI) has identified 7 complaints alleging incidents of unexpected loss of power assisted braking in model year (MY) 2010 through 2011 Mazda CX-9 vehicles. Complaints allege experiencing incidents of the brake pedal suddenly feeling hard requiring increased effort to stop the vehicle.

ODI previously investigated brake master cylinder leakage in MY 2008 Mazda CX-9 vehicles in PE11-026. Mazda identified a manufacturing process concern with the master cylinder primary plunger surface finish, that may result in leakage from the master cylinder into the brake booster. Analysis of the complaint data found that the master cylinder leak condition was generally detected by illumination of the brake malfunction indicator lamp and identified only 9 reports alleging any effect related to brake pedal feel or brake effectiveness. The investigation was closed April 9, 2012, based on the extremely slow leak rate associated with the master cylinder condition, the declining failure trend and the low probability that the condition could affect brake performance.

In contrast to PE11-026, the complaints in the MY 2010 through 2011 Mazda CX-9 vehicles allege symptoms indicating possible loss of power assist to the brakes, including hard pedal, increased effort and reduced brake effectiveness. Several allege hearing a hissing noise during brake application.

A Preliminary Evaluation has been opened to assess the scope, frequency and safety consequences of the alleged defect.

The VOQs associated with the opening of this investigation are: 10523719, 10535301, 10535955  
10546804, 10546841, 10493043, 10512943