



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 18-006
Date Opened: 05/21/2018
Investigator: Frederick Lamance
Approver: Stephen Ridella
Subject: Front Subframe Corrosion
Date Closed: 11/02/2018
Reviewer: Jeff Quandt

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Mazda Motor Corp.
Products: 2009-2010 Mazda6
Population: 84,641

Problem Description: Complaints allege front subframe corrosion has caused failures of the right-side steering rack mounting bolt or lower control arm attachment, resulting in compromised vehicle handling and steering control.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	40	13	53
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	30	68	98

*Description of Other: Complaints alleging subframe corrosion detected prior to failure.

ACTION / SUMMARY INFORMATION

Action: This Preliminary Evaluation is closed. Recall 18V-631.

Summary:

In a letter dated September 14, 2018, Mazda North American Operations (Mazda) notified the National Highway Traffic Safety Administration (NHTSA) of a defect in the front subframe assemblies of model year (MY) 2009 through 2010 Mazda6 vehicles in certain states with high road salt use in winter months (Recall 18V-631). The recall covers approximately 48,814 vehicles that were sold or ever registered in the following states and District of Columbia: Connecticut, Delaware, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, and Wisconsin. Mazda indicated that the recalled vehicles may have insufficient paint coating on the front cross member, which after continuous use in salt states may cause premature corrosion of the cross member. As the corrosion progresses over time, the structural integrity of the mounting point at the passenger side of the lower control arm may deteriorate and cause the steering alignment to change. If the steering alignment changes significantly while the vehicle is in motion this may increase the risk of a vehicle crash.

ODI's analysis of complaints it has received from the public (VOQ's) and Mazda complaint data submitted in response to the information request letter for PE18-006 identified a total of 53 non-duplicative reports alleging incidents in which front cross-member corrosion had progressed to the stage of complete or partial separation of the subject steering or suspension components and another 98 reports alleging premature and/or excessive corrosion of the subject components with no separation. Mazda's recall will inspect the subframe and apply structural reinforcements, anti-corrosive wax and an AC drain tube free of charge. In cases of excessive corrosion, the subframe will be replaced free of charge.

All 53 complaints alleging complete or partial separations involved vehicles that will be covered under Mazda's recall,

resulting in a failure rate of 108.6 reports per 100,000 vehicles (R/100k) in the recalled population. When all complaints are analyzed by region, 150 involve vehicles included in Mazda's recall (307.3 R/100k) and just 1 involved a MY 2009 through 2010 Mazda6 vehicle not included in 18V-631 (2.8 R/100k). The field data indicate that Mazda's recall adequately covers vehicles with a risk of experiencing premature corrosion-related failure of the subject steering and suspension components in the subject vehicles. Based on Mazda's safety recall, this investigation is closed.

The following VOQs allege loss or compromised steering control while vehicle was in motion:

11115277, 11115790, 11128449, 10706604, 10846298, 10899584, 11019306, 11033821, 11048014, 11074634, 11078734, 11080014, 11083781, 11090944, 11091913, 11098279, 11101718, 11102209, 11102796, 11110606, 11110773, 11112830, 11113461, 11113963, 11114039, 11114567, 11114939, 11115303, 11119368, 11119423, 11121341, 11123997, 11124647, 11128648, 11128774, 11130281, 11132046, 11133295, 11133511, 11138829, 11139187, 11139486

The following VOQs allege subframe corrosion detection prior to subframe failure:

11141172, 11131161, 11129747, 11129349, 11129185, 11128591, 11128223, 11124644, 11122948, 11120047, 11119752, 11119362, 11118786, 11118242, 11115432, 11114568, 11114477, 11114061, 11105334, 11104096, 11103756, 11103724, 11101659, 11100420, 11099962, 11097874, 11084411, 11081783, 11034064, 11025276, 10956316

Some VOQs have been omitted from this list due to duplicate VOQ submission between ODI records and Mazda records.