



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

ODI RESUME

Investigation: PE07-007
Date Opened: 02/01/2007
Date Closed: 07/11/2007
Principal Investigator: Stephen McHenry
Subject: Electronic Stability Control Malfunction

Manufacturer: Mercedes-Benz USA, LLC.
Products: MY 2000 -2001 Mercedes M-Class
Population: 95,900 (Estimated)

Problem Description: Uncommanded brake application to one or more wheels may occur due to Electronic Stability Program (ESP) system malfunction.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	5	7	10
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	462	462

*Description of Other: Warranty claims for ESP yaw rate sensor replacement

Action: This Preliminary Evaluation has been closed.

Engineer: Stephen McHenry SMH 7/16/07
Div. Chief: Jeffrey L. Quandt
Office Dir.: Kathleen C. DeMeter

Date: 07/11/2007
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Summary: ODI opened PE07-007 after receiving four complaints within a six week period alleging incidents of uncommanded brake application in Model Year (MY) 2000 through 2001 Mercedes M Class sport utility vehicles. Information contained in the reports or gathered in subsequent consumer interviews indicated that the incidents were caused by faults in the Electronic Stability Program (ESP) system which were repaired by replacing the yaw rate sensors. Although the same yaw rate sensor is used in approximately 800,000 other Mercedes M-Class, C-Class and SLK models, to date there has been only one related complaint to ODI in those vehicles.

During this investigation Mercedes Benz provided ODI with 327 complaints related to the ESP system in the MY 2000 through 2001 M-Class vehicles. Seven of the complaints submitted by Mercedes alleged incidents of uncommanded brake activation while driving, with two of these involving vehicles identified in the ODI complaints. None of the incidents resulted in crash or injury. However, the owners did express safety concerns due to the sudden, unexpected change in vehicle speed and direction.

On May 10, 2007 Mercedes Benz met with NHTSA to provide a technical presentation and conduct a driving demonstration of the ESP system performance with simulated electrical faults in the

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yaw rate sensor. Mercedes showed that the ESP system is programmed to diagnose electrical faults and that brake applications resulting from yaw rate sensor electrical faults are very short in duration (0.3 seconds or less) and do not affect vehicle control or stability.

Nine of the Consumer Complaints to ODI and Mercedes alleged brake activations longer than 0.3 seconds, with several alleging that the incident lasted until the vehicle came to a stop. A complaint vehicle that alleged multiple incidents was evaluated by ODI at the Vehicle Research and Test Center (VRTC) in East Liberty, Ohio. VRTC was unable to duplicate the condition.

Due to the low complaint rate and only one new complaint to ODI or Mercedes since January 2007, this investigation has been closed. ODI will continue to monitor complaints in the subject vehicles and other Mercedes products using the same yaw rate sensor and Mercedes will provide updates on field experience (complaints, field reports and warranty claims) through the end of 2007.

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