



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 13-003
Prompted by: Consumer Complaints, PE12-001
Date Opened: 03/15/2013 **Date Closed:** 12/19/2014
Investigator: John Abbott **Reviewer:** Scott Yon
Approver: Frank Borris
Subject: Fuel Leakage From The Fuel Tank

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Mercedes-Benz USA, LLC.
Products: MY 2003-2008 E-Class Vehicles
Population: 281,727
Problem Description: Gasoline leakage from the upper side/area of the fuel tank, including the fuel filling limiter valve, the in-tank fuel filter/sender, and the in-tank fuel pump.

FAILURE REPORT SUMMARY

| | ODI | Manufacturer | Total |
|----------------------------|-----|--------------|-------|
| Complaints: | 945 | 393 | 1,338 |
| Crashes/Fires: | 0 | 0 | 0 |
| Injury Incidents: | 0 | 0 | 0 |
| Fatality Incidents: | 0 | 0 | 0 |
| Other*: | 10 | 6 | 16 |

*Description of Other: Model Year 2009 E-Class reports.

ACTION / SUMMARY INFORMATION

Action: Close this investigation.

Summary:

The Office of Defects Investigation (ODI) opened this investigation on January 23, 2012 as PE12-001 based on 20 consumer reports in model year (MY) 2003-2006 E55 AMG vehicles. Based on new reports in other E-Class vehicles, ODI upgraded the investigation to Engineering Analysis (EA) 13-003 on March 15, 2013, and expanded the scope to all E-Class vehicles through MY 2008.

The complainants alleged a strong odor of gasoline fuel both inside and outside of their vehicle, particularly after refilling the fuel tank. Many of the complainants noted that the odor subsided or went away after driving some distance thereby lowering the fuel level in the tank. Other owners reported they would only fill the tank to about three quarters full to avoid the odor altogether. Some complainants alleged fuel leaked from the fuel filter/sender, located on the top of the fuel tank on the driver's side, and collected on top of the tank. There were also allegations that the fuel leaks were associated with an Emissions Recall Campaign (No. 2008020001) conducted by Mercedes-Benz USA, LLC (Mercedes) in 2008 on MY 2003-2006 E-Class and CLS-Class AMG models. The issue in the recall involved small cracks in the pressurized outlet fitting of the fuel filter/sender. AMG vehicles are high performance models that operate at higher fuel pressure and use a different fuel filter/sender and fuel pump than non-AMG models. Information on Recall No. 2008020001 is available from the U.S. Environmental Protection Agency (EPA) website at www.EPA.gov.

ODI's investigation found various leak sources that are unrelated to the outlet fitting cited in the EPA recall campaign. Through interviews with complainants, field inspections of complaint vehicles, and the collection and laboratory analysis of failed parts, three identifiable leak sources were found. The component parts and areas of the leaks involve the On-Board Diagnostic fuel tank pressure sensor (located on top of the fuel filter/sender), the outlet of the centrally mounted fuel tank fuel filling limiter valve, and the top of the fuel pump. These areas of leakage are located at

the top of the fuel tank in unpressurized parts of the fuel system. When the tank is full, fuel can slowly weep/seep from micro-cracks in these components and may collect in cavities on top of the filter/sender, pump, or tank.

Contrary to complainant's allegations that fuel entered the inside of their vehicle under the rear seat bench, neither ODI nor Mercedes found a plausible way for this to occur. The fuel tank is located outside of the passenger compartment, attached to the underside of the vehicle. The service access ports for the fuel filter/sender (driver's side) and fuel pump (passenger's side) are located under the rear seat bench, covered by a steel plate, sealed and bolted to the vehicle floor. When technicians service the fuel filter/sender, which has a regularly scheduled 60,000 mile service interval, and/or the fuel pump, the work is performed from inside the vehicle by working through the access ports.

By letter dated September 4, 2014, Mercedes has notified the agency that it will extend the original warranty coverage to 15 years and unlimited mileage on "Covered Fuel Tank Components" in E-Class vehicles in MY 2003-2009 and CLS-Class vehicles in MY 2006-2011. The covered fuel tank components for the warranty extension include the fuel tank, fuel filter/sender, fuel pump, and all related gaskets/seals and retention rings.

ODI is closing this investigation based on the manufacturer's extend warranty of the affected fuel system components and in consideration that the nature of the leaks does not appear to present an unreasonable risk to motor vehicle safety. Additional information concerning this investigation, including a list of the above ODI reports and Vehicle Research and Test Center Report No. VRTC-DCD-3206, can be found at <http://www-odi.nhtsa.dot.gov/owners/SearchSafetyIssues> (search for EA13-003).

EA13-003 VOQ List Through 7/31/2014

MY 2003 through 2008:

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EA13-003 VOQ List Through 7/31/2014

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MY 2009:

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