



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

**Investigation:** EA 13-008  
**Prompted by:** Consumer allegations, PE13-026  
**Date Opened:** 12/20/2013 **Date Closed:** 05/12/2014  
**Investigator:** Evan Frings **Reviewer:** Scott Yon  
**Approver:** Frank Borris  
**Subject:** Loss of rear lighting assembly

## MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** Mercedes-Benz USA, LLC.  
**Products:** 2008-2011 Mercedes Benz C-Class  
**Population:** 252,867  
**Problem Description:** Consumers allege a loss of one or both rear lighting assemblies due to an overheated electrical connector that, in some cases, resulted in melting, smoke, or possibly a fire.

## FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
<b>Complaints:</b>	163	380	492**
<b>Crashes/Fires:</b>	3	2	5
<b>Injury Incidents:</b>	1	0	1
<b>Number of Injuries:</b>	1	0	1
<b>Fatality Incidents:</b>	0	0	0
<b>Other*:</b>	0	23,980	23,980

\***Description of Other:** Warranty claims reported by Mercedes Benz (as of April 1st 2014) which may relate to the alleged defect.

\*\* Total eliminates duplicates received by ODI and manufacturer.

## ACTION / SUMMARY INFORMATION

**Action:** Close this Engineering Analysis (Recall 14V-177).

### Summary:

The Office of Defects Investigation (ODI) opened an investigation based on consumer allegations of loss of rear lighting in model year (MY) 2008-2011 Mercedes Benz C-Class vehicles. Complainants alleged that one or both rear lighting assemblies fail to illuminate (i.e., all lights housed within the assembly extinguish, including the stop, tail, and turn signal functions) or illuminate dimly. In some reports, complainants also alleged that the failure was accompanied by a burning smell emanating from the trunk of the vehicle. When examined, these vehicles showed evidence of overheating at the lighting assembly harness connector, including damaged (blackened) wiring and plastic. The rear lighting failures typically involved one side of the vehicle however in some cases both assemblies failed (although probably not simultaneously).

ODI identified 5 fire and one injury allegations during the course of this investigation. Two fires occurred while the vehicles were parked. One originated in the vicinity of the driver's side light assembly where the fire and associated damage was confined to the trunk area, and the fire self extinguished due to oxygen starvation. As a result of the fire, the vehicle was repurchased by Mercedes and salvaged. The second fire originated on the passenger's side and required fire department response to extinguish; the fire damaged the tail light and surrounding body panels as well as the trunk area and wiring. The vehicle was repaired and returned to service. Two fires occurred while the vehicle was being driven. In the first instance, the driver detected an odor and pulled over to observe smoking and a small flame at the lighting assembly wiring in the trunk. The owner was able to extinguish the fire before any significant damage occurred. In the second instance, the driver smelled smoke, pulled over, and opened the trunk to find smoke

and sparks emanating from the forward facing side of the tail light. The driver was able to extinguish the sparks and drive the vehicle to the dealer. A fifth fire was reported by a fleet manager who observed a vehicle with fire damage originating near one of the tail light assemblies. The injury incident occurred when a technician burned their hand while diagnosing a failed light. The technician touched the tail light wiring which was hot enough to burn him although the injury did not require medical attention.

On April 10th, 2014, Mercedes notified ODI that it would conduct a safety recall to remedy the rear light assemblies in approximately 252,867 MY 2008 - 2011 C-Class vehicles including the C300, C350 and C63 AMG models. Each rear light assembly has separate bulbs that act as brake, tail lamp, backup and turn signal indicators. The bulbs are mounted in a "bulb carrier" which uses a common electrical ground circuit at the harness connection. According to Mercedes, oxidation due to the use of dissimilar metals on the harness and bulb carrier electrical connectors can result in increased resistance and a subsequent dimming or loss of lighting function. The heat caused by the increased resistance/oxidation can also lead to the melting of the surrounding plastic, or in some cases, present a fire hazard.

In conducting recall 14V-171, Mercedes dealers will inspect the left and right bulb carriers and harness connectors for the presence of dissimilar electrical connectors and/or evidence of related thermal damage; affected bulb carriers and/or harness connectors will be replaced free of charge. Mercedes notes that service replacement bulb carriers produced from January 2012 eliminate the dissimilar metal condition and that these bulb carriers will not require replacement.

The recall action initiated by the manufacturer appears to address the safety risks of concern to ODI. Accordingly, the investigation is closed.

EA13-008 Additional Information

The ODI reports cited above can be reviewed at <http://www-odi.nhtsa.dot.gov/owners/SearchNHTSAID> under the following identification (ODI) numbers:

10475771, 10524992, 10525528, 10525174, 10537746, 10519533, 10523816, 10525026, 10531821, 10547369, 10525416, 10532677, 10547177, 10525818, 10511017, 10533409, 10525551, 10550717, 10535874, 10551423, 10532083, 10525367, 10554996, 10531718, 10535414, 10542994, 10537717, 10545332, 10525105, 10550608, 10511033, 10508108, 10524886, 10535240, 10532317, 10535999, 10525429, 10534513, 10536684, 10524819, 10524849, 10525335, 10525099, 10466181, 10531757, 10541792, 10536346, 10544138, 10542566, 10525264, 10548646, 10441621, 10549908, 10513304, 10446191, 10531751, 10535018, 10548145, 10549003, 10538533, 10531930, 10525692, 10534430, 10533697, 10520672, 10538329, 10489338, 10499828, 10525299, 10514998, 10551868, 10544839, 10524856, 10479913, 10505806, 10513735, 10502606, 10454173, 10509639, 10544663, 10519714, 10509272, 10551897, 10548994, 10537224, 10535880, 10535128, 10533895, 10531638, 10525312, 10525060, 10525010, 10524967, 10498161, 10551735, 10547471, 10546745, 10542549, 10542284, 10534352, 10533792, 10525200, 10524991, 10537999, 10556248, 10556136, 10556003, 10555888, 10553842, 10553796, 10553096, 10552989, 10552645, 10552501, 10552144, 10565028, 10564973, 10564735, 10564159, 10563852, 10563775, 10563571, 10563487, 10563222, 10562687, 10562683, 10562556, 10562499, 10561745, 10561436, 10560902, 10560861, 10560708, 10560570, 10560564, 10560340, 10560317, 10559731, 10559336, 10559083, 10558919, 10558909, 10558723, 10558627, 10558572, 10558541, 10558498, 10558224, 10558165, 10557948, 10557930, 10557884, 10557725, 10557662, 10557594, 10557592, 10557590, 10557575, 10557258, 10557220, 10556829, 10556792, 10556638.