

PUBLIC

Mercedes-Benz Part 573 Submission

Original Submission to Portal May 19, 2023

Chronology-Only section

**Chronology of Defect/Noncompliance Determination Supplement for ODI 23-00855-29445-10**

In January 2022, MBAG investigated an individual field report claiming that a vehicle lost functionality of its dynamic control systems (including its anti-lock brake system, acceleration slip regulation, and electronic brake force distribution) and speedometer during operation. MBAG requested parts from the affected vehicle for further analysis.

MBAG began its analysis of the affected vehicle by focusing on the ESP pump motor. At that time, MBAG hypothesized that this component may be the source of the reported issues based on diagnostic data from the vehicle and review of the conditions that trigger this diagnostic code. That investigation did not reveal any defect in the vehicle's ESP pump motor and did not identify a failure mechanism.

MBAG conducted further investigations between February and April 2022 using simulations of field conditions that it suspected could trigger the reported failure. Based on these tests, MBAG determined that certain driving conditions could interfere with routines executed by the ESP monitoring software at the beginning of each driving cycle. It was concluded that this interference could lead to an erroneous detection of a fault condition of the ESP pump motor power supply.

Beginning in July 2022, to address this potential error, MBAG developed and tested an ESP software update.

At the end of 2022, MBAG conducted a general internal review of factors affecting the function of the ESP system as well as how such issues are classified and managed. Based on this review, in January 2023, MBAG commenced analyses to determine if there were potential safety consequences of an erroneous detection of a fault condition of the ESP pump motor power supply.

As part of this review, during March and April 2023, MBAG and its supplier, conducted driving tests to determine the potential impacts of the subject fault condition on vehicle performance (especially ESP and other dependent systems). In parallel, MBAG analyzed production records pertaining to this ESP control unit software version to identify the population of potentially affected vehicles.

On May 12, 2023, MBAG determined that a potential safety risk could not be ruled out and decided to conduct a recall.

MBAG is currently aware of 96 field reports (including warranty claims, field reports, and service reports) in the US from March 23, 2022 to May 12, 2023 that are potentially related to this defect. MBAG is not aware of any reported crashes, injuries, or property damage in connection with this issue.