

Part 573 Safety Recall Report

23V-360

Manufacturer Name : Mercedes-Benz USA, LLC**Submission Date :** JUN 23, 2023**NHTSA Recall No. :** 23V-360**Manufacturer Recall No. :** 2023060004**Manufacturer Information :**

Manufacturer Name : Mercedes-Benz USA, LLC

Address : 13470 International Parkway

Jacksonville FL 32218

Company phone : 1-877-496-3691

Population :

Number of potentially involved : 7,558

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2022-2022 Mercedes-Benz EQS 450

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : NR

Descriptive Information : Mercedes-Benz Model Year 2022 ESQ 450 4285 vehicles. The recall population was determined through potentially affected software versions. Vehicles outside of the recall population have software that meets the current production specifications.

Production Dates : APR 20, 2021 - FEB 27, 2023

VIN Range 1 : Begin : NR End : NR

 Not sequential

Vehicle 2 : 2022-2022 Mercedes-Benz EQS 580

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : NR

Descriptive Information : Mercedes-Benz Model Year 2022 ESQ 580 2522 vehicles. The recall population was determined through potentially affected software versions. Vehicles outside of the recall population have software that meets the current production specifications.

Production Dates : APR 20, 2021 - FEB 27, 2023

VIN Range 1 : Begin : NR End : NR

 Not sequential

Vehicle 3 : 2023-2023 Mercedes-Benz S 580e

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : HYBRID ELECTRIC

Descriptive Information : Mercedes-Benz Model Year 2023 S-Class 580e 488 vehicles. The recall population was determined through potentially affected software versions. Vehicles outside of the recall population have software that meets the current production specifications.

Production Dates : APR 20, 2021 - FEB 27, 2023

VIN Range 1 : Begin : NR End : NR

Not sequential

Vehicle 4 : 2023-2023 Mercedes-Benz Maybach S 680

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : GAS

Descriptive Information : Mercedes-Benz Model Year 2023 Maybach S 680 138 vehicles. The recall population was determined through potentially affected software versions. Vehicles outside of the recall population have software that meets the current production specifications.

Production Dates : APR 20, 2021 - FEB 27, 2023

VIN Range 1 : Begin : NR End : NR

Not sequential

Vehicle 5 : 2023-2023 Mercedes-Benz Maybach S 580

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : GAS

Descriptive Information : Mercedes-Benz Model Year 2023 Maybach S 580 125 vehicles. The recall population was determined through potentially affected software versions. Vehicles outside of the recall population have software that meets the current production specifications.

Production Dates : APR 20, 2021 - FEB 27, 2023

VIN Range 1 : Begin : NR End : NR

Not sequential

Description of Defect :

Description of the Defect : Mercedes-Benz AG has determined that on certain S-Class (223 platform) and EQS (297 platform) vehicles, the monitoring software of the Electronic Stability Program ("ESP") might not meet current production specifications.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : Under certain conditions, the ESP monitoring software could erroneously determine a fault condition. In that event, the ESP fault response would limit the functionality of the vehicle's dynamics control systems (ABS, ASR, ESP, and EBD) and the speedometer would indicate a speed of 0 mph (0 km/h), regardless of the actual vehicle speed. These might increase the risk of a

crash.

Description of the Cause : Due to a deviation in the ESP monitoring software, internal monitoring routines may erroneously identify a failure condition at the beginning of a driving cycle, which would limit the functionality of the ESP system during vehicle operation.

Identification of Any Warning that can Occur : Before the issue occurs, the driver would not receive an advance warning due to the nature of the failure mechanism.

When the issue occurs, various warning messages and warning lamps would be shown in the instrument cluster to alert the driver.

Involved Components :

Component Name 1 : ESP Software

Component Description : ESP Software

Component Part Number : A 223 902 06 22

Supplier Identification :

Component Manufacturer

Name : Robert Bosch GmbH (Blaichach Plant)

Address : Robert-Bosch-Strasse 1
Immenstadt Foreign States 87509

Country : Germany

Chronology :

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). Please see the Chronology Supplement.

Description of Remedy :

Description of Remedy Program : An authorized Mercedes-Benz dealer will update the ESP control unit software on the potentially affected vehicles.

Pursuant to 49 C.F.R. § 577.11(e), MBUSA does not plan to provide notice about pre-notice reimbursement to owners since none of the involved vehicles would have been previously subject to the condition described and all remain covered under the new vehicle warranty.

How Remedy Component Differs from Recalled Component : The ESP control unit software meets the current production specifications.
Remedy Parts:
A 223 902 61 23 (ESP software)
A 214 902 58 01 (ESP software)

Identify How/When Recall Condition was Corrected in Production : The series introduction of a new ESP software version ensured that this issue would not occur after May 01, 2023.

Recall Schedule :

Description of Recall Schedule : Dealers will be notified of the pending voluntary recall campaign on March 26, 2023. Owners were notified of the voluntary recall campaign on June 23, 2023. A copy of all communications will be provided when available.

Planned Dealer Notification Date : MAY 26, 2023 - NR

Planned Owner Notification Date : JUN 23, 2023 - NR

* NR - Not Reported