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October 25, 2021  
*VIA E-MAIL*

The Honorable Steven Cliff  
Acting Administrator  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue, S.E.  
West Building, Room 41-304  
Washington D.C. 20590

**Re: Mercedes-Benz Petition for Inconsequential Noncompliance Exemption,  
No. 21V-751**

Dear Administrator Cliff:

Pursuant to the Motor Vehicle Safety Act, 49 U.S.C. §§ 30118(d) and 30120(h), 49 C.F.R. 556 and other applicable regulations, Mercedes-Benz AG (“MBAG”) and Mercedes-Benz USA, LLC (“MBUSA”) (collectively referred to herein as “Mercedes-Benz,” “Mercedes” or “Company”) submit this Petition for Exemption from certain requirements of 49 U.S.C. §§ 30118-30120 (the “Petition”). Manufacturer MBAG is a joint stock company headquartered in Germany, and MBUSA is a Delaware limited liability company with its principal place of business at One Mercedes-Benz Drive, Sandy Springs, Georgia 30328. Mercedes-Benz requests that the agency grant this Petition and exempt it from the notice and remedy requirements of the Vehicle Safety Act on the ground that the noncompliance described herein is inconsequential as it relates to motor vehicle safety.

Mercedes-Benz has determined that the instrument cluster in certain model year (“MY”) 2019-2021 Mercedes vehicles may not fully comply at all times with display provisions of Federal Motor Vehicle Safety Standard (“FMVSS”) 101, *Controls and displays*, S5.3; FMVSS 102, *Transmission shift position* [], S3.1.4.1.<sup>1</sup> In certain limited and infrequent circumstances, illumination of the vehicle’s instrument cluster may be very briefly interrupted. As explained below, such momentary interruption would have very little, if any, effect on the driver, no effect on the operation of the vehicle, and would not generate adverse safety consequences.

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<sup>1</sup> The potentially affected vehicle population includes MY 2019-2021 E-Class (213 Platform), E-Class Coupe/Cabriolet (238 Platform), CLS-Class (257 Platform), and G-Class (463 Platform) vehicles that are equipped with the standard instrument cluster. Mercedes Benz’s Part 573 report indicated the illumination interruption potentially implicated FMVSS 135, but it has since determined compliance with that standard is not affected. *See infra* n. 3.

## **I. BACKGROUND**

In September 2020, Mercedes Benz distributed a software-update to the Communication Module of certain E-Class, CLS-Class and G-Class vehicles. In addition to other features, the updated Communication-Module software included advanced internal diagnostics-functions that provide enhanced vehicle safety and maintenance benefits. Mercedes Benz recently determined that an infrequent combination of circumstances involving those diagnostics (described below) could result in momentary interruption of instrument cluster (“IC”) illumination, and thus, momentary non-compliance with certain FMVSS indicator and telltale display requirements. Based on that technical non-compliance, Mercedes Benz filed a non-compliance report in accordance with the requirements of 49 CFR Part 573. *See Mercedes Benz Vehicle Report, NHTSA ID 21V-751 (Sept. 24, 2021) (stating intention to file inconsequentiality petition).* The Company now submits this Petition because it believes the reported non-compliance is inconsequential to motor vehicle safety.

Mercedes believes the reported momentary loss of IC illumination is the result of a low probability combination of conditions. The diagnostic functions included in the Communication Module software are designed to run infrequently (at least once per ignition cycle) and not on a time schedule. On rare occasions, it is possible that the diagnostics may run at the same time the instrument cluster CPU is under a very heavy load. This can create a risk of causing the instrument cluster to freeze or shut down. To protect against IC freezing and ensure functional safety, the IC software is designed to perform a brief reset of the instrument cluster. Such a reset is part of the functional safety design of the system, an intentional intervention to prevent the IC from freezing.

During an IC reset, the main display briefly fades to dark and then intensifies back to full illumination, over a period of 2.5 seconds or less. For part of that time, digital indicators on the main display, including the shift position indicator, digital speedometer (redundant to the primary analog gauge), time, and temperature display, are not visible to the driver.<sup>2</sup> During that same period, the reset may also interrupt illumination of the separate analog speedometer and tachometer for an instant (maximum of 0.8 second). Throughout, the analog gauges continue to operate properly and their accuracy is not affected by the reset. During daylight, the analog gauges are visible without additional illumination, and their visibility is not affected by the reset. However, under the unusual circumstances described in this paragraph, the digital display of the main instrument cluster would not meet illumination requirements of FMVSS Nos. 101 S5.3 and 102 S3.1.4.1.<sup>3</sup>

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<sup>2</sup> Because the IC illumination fades out and then back in over no more than 2.5 seconds, the time period in which the display is entirely dark and invisible to a driver is shorter.

<sup>3</sup> The Part 573 report also identified FMVSS 135 compliance as potentially affected. After further review, the Company has determined that the potential illumination interruption described here would not happen during the time that the brake function check is conducted (when the ignition switch is in the “on” or “run” position but the

The IC reset and non-compliance at issue have no effect on the operation of headlights, tail lights, other exterior lights, or other vehicle lights. Mercedes is aware of no reports or claims of crashes or injuries resulting from the non-compliance at issue.

## **II. ANALYSIS**

### *Inconsequentiality Exemption Standard*

Manufacturers may be exempted from the notification and remedy provisions of the Safety Act if NHTSA determines that the noncompliance is inconsequential to motor vehicle safety. See 49 U.S.C. §§ 30118(d), 30120(h). The basis upon which NHTSA evaluates an inconsequentiality petition is “whether the occupant who is affected by the noncompliance is likely to be exposed to a significantly greater risk than an occupant in a compliant vehicle.” See *Ruling on Petition for Inconsequential Noncompliance to General Motors* 69 Fed. Reg. 19897, 19900 (April 14, 2004). As demonstrated below, this Petition for exemption should be granted based on a determination that the noncompliance is inconsequential to motor vehicle safety because it does not present an increased risk to vehicle occupants, or to motor vehicle safety more generally.

#### **A. Application of the Standard Shows NHTSA Should Grant the Petition**

This section demonstrates that the technical non-compliance reported in Mercedes Benz Part 573 Report (NHTSA 21V-751) is inconsequential to motor vehicle safety for several reasons, including its low frequency and the absence of increased risk to safety in those instances when it may occur.

*First*, instrument cluster reset conditions are infrequent, and illumination interruption occurring at the precise instant a telltale signal is activated would be extremely rare. In order for the FMVSS 101 non-compliance to even occur, three infrequent and independent events must occur simultaneously.

- (i) Initially, there must be a very high CPU load that approaches the limits of the instrument cluster’s input capacity;

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engine is not started or running). The separate brake “function check” requirement applies only during period between turning the ignition switch to “on” and turning it to the “start” position to start the engine. See FMVSS 135, S5.5.2. Because the diagnostic tests would not be initiated during the time that the ignition switch is turned to “on” but the driver has not yet started the engine, such tests could not trigger an IC reset during that pre-start period. In the event that the brake indicator were activated during the time the engine is running, any illumination interruption would be subject to FMVSS 101 and the same compliance and inconsequentiality analysis as other indicators and telltales.

- (ii) At the time of that high CPU load, a specific diagnostic function is activated and the combined effect of already high CPU load and the diagnostics is sufficient to threaten an IC freeze, thereby triggering a preventive reset; and
- (iii) At the precise instant of the reset (no more than 2.5 seconds), a separate equipment malfunction or condition occurs that would activate an indicator or telltale.

By itself, the likelihood of a telltale being activated in any particular 2.5 second period is very low. The compound probability of that happening following the simultaneous occurrence of the first two infrequent events is negligible.

*Second*, even if a reset is triggered, any interruption of IC illumination is fleeting. Mercedes Benz engineers have determined that the *maximum duration* of diminished illumination of the main display would be 2.5 *seconds*, and the maximum time of analog display illumination loss would be 0.8 seconds. Thus, in the worst case, all active IC displays and signals would be fully illuminated and communicating information to the driver only 2.5 seconds after they began to fade. This anomaly would *not* cause the instrument cluster to report inaccurate information, the display of accurate information would just be very briefly interrupted.<sup>4</sup>

A brief interruption of the IC display presents no significant “increased risk to [the safety of] vehicle occupants.” *See* 69 Fed. Reg. at 19900. It is highly unlikely, during that 2.5 seconds or less, that a driver would be materially confused or misled as to the status of any of the functions or equipment conveyed by the instrument cluster displays.<sup>5</sup> Assume, for example, that the driver of a vehicle traveling on a highway at 60 MPH observes that the shift position indicator reads “D,” indicating that the transmission is in Drive. If the main display were to go dark for 2.5 seconds, it is very unlikely that the driver would be confused as to whether the vehicle was still in D during that interval.

Indeed, there is a strong likelihood that the driver, watching the road, would not even notice a 2 ½ second interruption of the digital display. As NHTSA summarized in granting a very similar petition, “the agency believes that a reset of the instrument panel would [happen] quickly within seconds, before the driver would be distracted or realize what was happening.” *See Silverado*, 81 Fed. Reg. 6928 (February 9, 2016), *infra*.

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<sup>4</sup> In other leading decisions, the Agency has granted inconsequentiality petitions when the non-compliance caused gauges to display erroneous readings. *See, e.g., Grant of Petition for Inconsequential Noncompliance to General Motors*, 81 Fed. Reg. 17761 (speedometer displayed zero MPH).

<sup>5</sup> The speedometer and tachometer would be invisible for less than one second, and even that only at night.

Moreover, even if the driver happened to notice a display momentarily going dark, it is difficult to conceive a condition communicated by the instrument display whose outcome would be materially different had the driver become aware of the condition a mere 2.5 seconds earlier. For example, if the ESC malfunction indicator illuminates, the driver may wish to take the vehicle to a repair facility soon to be inspected and repaired. However, receiving that notice two seconds earlier is unlikely to materially affect either the safety risk or the driver's response.

*Third*, the IC displays are purely informational—their purpose is to report vehicle and equipment functions, metrics, and status to the driver. They have no control over the actual operation of the vehicle or the equipment and functions they monitor and report. The temporary interruption of IC illumination thus would have no effect on the physical functioning or operation of the vehicle or its equipment.

*Fourth*, the IC reset is a functional safety measure, a failsafe designed to prevent a full and permanent IC display failure. Where the reset is triggered, it substitutes a very brief illumination interruption for the alternative—shutdown and full, continuing darkness of the instrument cluster. If that reset feature were deemed to be a non-compliance requiring a recall, OEMs would be required to remove or disable such reset capability. This would result in elimination of a functional safety measure and expose the vehicle occupants to a much higher and enduring safety risk. *See also, Silverado and GMC Denali, infra* (finding similar instrument cluster resets inconsequential, granting exemption).

The foregoing discussion demonstrates that the potential consequences of the reported noncompliance are insignificant and do not pose an increased risk to motor vehicle safety. Alone, the lack of adverse safety risk or effect is sufficient to grant this Petition. Further, even the inconsequential momentary display interruption is likely to occur only infrequently. Combined, the low frequency of the non-complying occurrence and the lack of adverse effect on safety if it does occur, compel the conclusion that the subject non-compliance is inconsequential to safety: NHTSA should grant Mercedes Benz's requested exemption.

The following section affirms that the Petition should be granted by discussing directly applicable NHTSA exemption petition decisions further supporting and confirming the above analysis and conclusions.

## **B. NHTSA Precedents Strongly Support Granting the Petition.**

NHTSA has consistently held that brief interruption of vehicle display visibility, lasting only seconds, is inconsequential to motor vehicle safety. In particular, NHTSA has granted petitions for inconsequential noncompliance in circumstances very similar to this case. Those decisions, involving instrument cluster resets that interrupted shift position, telltale, and indicator illumination, are discussed below.

In *Grant of Petition for Inconsequential Noncompliance to General Motors*, Docket No. NHTSA-2013-0134, 81 *Fed. Reg.* 6928 (February 9, 2016) (“*Silverado*”), NHTSA found that *Silverado* trucks’ noncompliance with FMVSS 101 and 102 due to an instrument cluster reset was inconsequential to motor vehicle safety. In that matter, the instrument cluster in affected vehicles would reset when the driver used the steering wheel controls to operate an external device connected to the vehicle’s USB port. During the reset, all warning lights and the shift position indicator (PRNDM) would extinguish and the analog gauges (such as speedometer) would drop to zero for 1 ½ seconds. Then, after the reset, all telltales would illuminate for 5 seconds.<sup>6</sup> The Agency’s decision granting the petition found that “a *reset of the instrument panel would be corrected* quickly within seconds, *before the driver would be distracted, or realize what was happening.*” *Silverado*, 81 *Fed. Reg.* at 6930 (emphasis added). NHTSA thus concluded the short duration of the loss of illumination precluded an adverse effect on safety.

Granting a different petition filed the following year, NHTSA similarly concluded that an instrument cluster reset was inconsequential to motor vehicle safety. *Grant of Petition for Inconsequential Noncompliance to General Motors*, Docket No. NHTSA-2014-0045, 81 *Fed. Reg.* 17761 (March 30, 2016) (*GMC Denali*). In that matter, the instrument cluster in certain GMC vehicles would reset if the design input rate of the CPU was exceeded due to simultaneous use of multiple functions (such as navigation, Bluetooth calling, pairing a media device, or others). Again, during the reset, all digital warning lights and the shift position indicator would go dark. At the same time, the indicator gauges dropped to zero for 1.3 seconds. Following the reset, all telltales would illuminate for 5 seconds. Granting the petition, NHTSA concluded that “if the instrument panel reset were to happen it would only be a momentary condition, the instrument panel telltales and indicators would extinguish and return to normal very quickly, with little, if any, impact to the driver.” 81 *Fed. Reg.* 17761, 17762 (March 30, 2016).

1. The instrument cluster reset in question is likely to be infrequent

As in *GMC Denali* and *Silverado*, the momentary display interruption at issue is likely to be infrequent because it is triggered by the simultaneous occurrence of two unusual and independent events. Here, the reported phenomenon has even been difficult for Mercedes engineers to induce or observe, in large part because of the infrequent coincidence of the two events. As discussed, Mercedes has determined that such a reset could occur only when (i) activation of IC diagnostic tests happens to coincide with (ii) a very high CPU load in that instrument cluster. Each of those conditions occurs infrequently, and the probability of those

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<sup>6</sup> Note that in this case, telltale activation would be obscured for 6.5 seconds (the period of lost illumination plus the period in which all telltales are illuminated, preventing detection of an actual telltale alert). This is more than 2 ½ times the maximum time that digital displays might be invisible to the driver in the present situation, and more than eight times the maximum length the analog meters might be invisible in the affected Mercedes vehicles. While FMVSS 101 allows a telltale “bulb check,” the salient point is that in both *Silverado* and *GMC Denali* (6.3 seconds) the Agency found that a reset resulting in interruption of meaningful telltale display for a substantially longer period was inconsequential.

infrequent occurrences coinciding is low. The likelihood that the display interruption resulting from a reset would coincide with a telltale or other indicator activation is substantially lower.

Following customer reports of an instrument display briefly going dark, Mercedes-Benz initiated an investigation, including attempts to reproduce the reported occurrence. Despite repeated attempts under a variety of conditions, it took an expert test team more than 5 ½ straight days of testing to produce a single reset.

Again, the reset function in the instrument cluster is a functional safety failsafe feature, designed to prevent instrument cluster freezing. Therefore, even when an instrument cluster occurs, the system is functioning as designed to prevent an actual malfunction.

In *GMC Denali*, the affected vehicles would also trigger a system reset if design input rate of the instrument cluster were exceeded. As with the affected Mercedes-Benz vehicles, this would only occur under very rare circumstances that were also difficult to reproduce during vehicle testing. NHTSA agreed with GM that “the possibility of th[e] condition occurring is improbable because multiple specific actions must be taken . . . simultaneously.” The same is true for the affected Mercedes-Benz vehicles. An instrument cluster reset would only occur in rare circumstances when the internal diagnosis-function activates while the instrument cluster is simultaneously subject to a high CPU-load. Therefore, there risk of occurrence in the affected vehicles is also very low.

2. Momentary loss of display visibility is not likely to cause driver distraction or other increased risk to motor vehicle safety

The interruption of illumination that may be associated with an instrument cluster reset is very brief. Illumination of the speedometer and tachometer would be interrupted for up to 0.8 seconds. Digital indicators and telltale lamps would be incapable of illumination for less than 2.5 seconds. It is highly unlikely that an IC indicator or telltale would activate during the momentary reset period. Even in that unlikely event, activation of the indicator or telltale after the 2.5 second reset would not pose any increased safety risk.

Mercedes-Benz has found no previous instance in which NHTSA required a recall to address a seconds-long interruption of instrument cluster illumination. In *Silverado* and *GMC Denali*, the duration of interruption was up to 6.5 seconds – *more than twice* that of the reset in affected Mercedes-Benz vehicles. In both cases, NHTSA found that the affected displays would return to normal quickly with little to no impact to the driver. This logic applies with equal or greater force to the affected Mercedes-Benz vehicles, given the shorter time period in which the gauge readings are obscured. Therefore, the momentary interruption in the affected vehicles’ instrument cluster is also inconsequential to safety.

Both immediately before and after the momentary reset, all activated controls, indicators and telltales in the affected Mercedes vehicles would be displayed as required. Just as in

*Silverado* and *GMC Denali*, none of the vehicles' operating functions, such as actual gear position or cruise control, would be affected by the instrument cluster reset.

A brief interruption or delay associated with the controls, indicators, or telltales on the instrument cluster display is unlikely to cause any driver distraction or confusion that would result in a safety risk. Many signals on the digital main instrument cluster involve comfort or convenience features (e.g. fuel consumption, or radio/media information) that are unrelated to vehicle safety. Conditions communicated by other indicators or telltales (e.g., fuel level, engine oil pressure, or electrical charge) do not require, and would not be significantly affected by, driver response that is 2.5 seconds earlier. Moreover, the analog gauges (e.g. speedometer) would continue to display the correct information even when illumination is interrupted. During daylight, the analog gauges remain visible to communicate accurate information to the driver throughout.

3. Any risk to safety associated with the present non-compliance is lower than the risk posed by instrument cluster malfunctions NHTSA has previously exempted

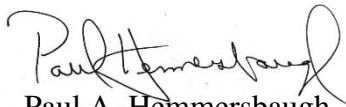
When compared to the instrument cluster consequences held inconsequential in *Silverado* and *GMC Denali*, the safety risk associated with affected Mercedes-Benz vehicles is even lower. *First*, the analog gauge readings in those cases dropped to zero during a reset. The analog gauges in affected Mercedes-Benz vehicles will continue to display accurate information (e.g., speed). *Second*, in *Silverado* and *GMC Denali*, the instrument clusters would stop functioning completely during the reset. The ICs in affected Mercedes Benz vehicles would lack illumination, but otherwise remain fully functional during the reset period. *Third*, in both *GMC Denali* and *Silverado*, the operation of the entire instrument panel was interrupted. Here, only the illumination of the display is interrupted, and the analog displays' interruption is so instantaneous as to be barely perceptible. *Fourth*, following the reset in the prior cases, any meaningful message would be further obscured while all telltales illuminated for another 5 seconds. This could potentially lead to confusion regarding the need for service or other action by the driver, but no such confusion would arise in Mercedes-Benz vehicles. Once the reset is completed in affected Mercedes-Benz vehicles, *only* those controls or telltales that have been activated would be displayed to the driver. The instrument cluster reset in this case presents an even lower risk to safety than existed in *Silverado* and *GMC Denali*, which NHTSA concluded were inconsequential to safety.



### **III. CONCLUSION**

For all the reasons stated above, Mercedes-Benz has carried the burden of demonstrating that the reported noncompliance is inconsequential to safety. Accordingly, Mercedes-Benz requests that the Agency grant this Petition and exempt it from the notification and remedy provisions under the Safety Act. *See* 49 U.S.C. §§ 30118-30120, 49 CFR Parts 573, 577.

Respectfully submitted,

  
Paul A. Hemmersbaugh

cc: Otto Matheke

attachment



Mercedes-Benz USA, LLC

## Vehicle Report

NHTSA ID: 21V751 Transaction ID: 21-00855-26694-10 (Original Report)

Required fields indicated with \*

<b>Manufacturer: Mercedes-Benz USA, LLC</b>	
13470 International Parkway Jacksonville FL 32218	<a href="#">Bibi Analij</a> 201-749-7315,

This is a Noncompliance Report. Filing a petition pursuant to [49 CFR 556](#)

Vehicle Information	
<b>Mercedes-Benz CLS450 2020</b>	
* <b>Model Yr. Start:</b> 2020	* <b>Model Yr. End:</b> 2020
* <b>Make:</b> Mercedes-Benz	<b>Type:</b> LIGHT VEHICLES
* <b>Model:</b> CLS450	<b>Body Style:</b> 4-DOOR
	<b>Powertrain:</b> GAS
<b>Production Dates</b>	<b>Descriptive Information:</b>
Begin: 01/29/2018	Mercedes-Benz 2020 CLAS450 9 Vehicles The recall population was determined through production records. Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.
End: 08/25/2020	
<b>VIN Range(s):</b> Begin: End:	
<b>Mercedes-Benz E300 2019</b>	
* <b>Model Yr. Start:</b> 2019	* <b>Model Yr. End:</b> 2019
* <b>Make:</b> Mercedes-Benz	<b>Type:</b> LIGHT VEHICLES
* <b>Model:</b> E300	<b>Body Style:</b> 4-DOOR
	<b>Powertrain:</b> GAS
<b>Production Dates</b>	<b>Descriptive Information:</b>
Begin: 01/29/2018	Mercedes-Benz 2019 E300 17,128 vehicles The recall population was determined through production records. Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.
End: 08/25/2020	
<b>VIN Range(s):</b> Begin: End:	
<b>Mercedes-Benz E350 2020 - 2021</b>	
* <b>Model Yr. Start:</b> 2020	* <b>Model Yr. End:</b> 2021
* <b>Make:</b> Mercedes-Benz	<b>Type:</b> LIGHT VEHICLES
* <b>Model:</b> E350	<b>Body Style:</b> 4-DOOR
	<b>Powertrain:</b> GAS
<b>Production Dates</b>	<b>Descriptive Information:</b>
Begin: 01/29/2018	Mercedes-Benz 2020-2021 E350 478 Vehicles The recall population was determined through production records. Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.
End: 08/25/2020	
<b>VIN Range(s):</b> Begin: End:	
<b>Mercedes-Benz E450 2019 - 2020</b>	
* <b>Model Yr. Start:</b> 2019	* <b>Model Yr. End:</b> 2020
* <b>Make:</b> Mercedes-Benz	<b>Type:</b> LIGHT VEHICLES
* <b>Model:</b> E450	<b>Body Style:</b> 4-DOOR
	<b>Powertrain:</b> GAS
<b>Production Dates</b>	<b>Descriptive Information:</b>
Begin: 01/29/2018	Mercedes-Benz 2019-2020 E450 9259 Vehicles The recall population was determined through production records. Vehicles outside of the recall
End: 08/25/2020	



The installed diagnostic software in combination with the processing power of the standard variant instrument clusters might cause the system to reboot (fail-safe measure).

**Identify any warning which can precede or occur:**

The customer will not receive a warning due to the nature of the failure mechanism.

**This Recall affects all vehicles.**

If applicable, identify the manufacturer of the defective or noncompliant component. If the manufacturer of the component is unknown, provide the information for the company that supplied the subject component.

Component manufacturer

Company Information

**Company Name:** Mercedes-Benz AG

**Country:** Germany

**Address 1:**

**Address 2:**

**City:**

**State:** FOREIGN STATES

**Zip/Postal Code:**

Company Contact Information

**First Name:**

**Last Name:**

**Position:**

**Email:**

**Phone:**

**Involved Components**

If the defect or noncompliance involves a specific component(s), identify that component(s) below.

**Component Name:** Software communication module

**Component Description:** Software communication module

**Component Part Number:** A2229029220

**Component Name:** Software communication module

**Component Description:** Software communication module

**Component Part Number:** A2229022621

**Component Name:** Software communication module

**Component Description:** Software communication module

**Component Part Number:** A2229020021

**Component Name:** Software communication module

**Component Description:** Software communication module

**Component Part Number:** A2479025009

**Component Name:** Software communication module

**Component Description:** Software communication module

**Component Part Number:** A2229021021

**Component Name:** Software communication module

**Component Description:** Software communication module

**Component Part Number:** A2479021108

**Component Name:** Software communication module

**Component Description:** Software communication module

**Component Part Number:** A2479020809

**Chronology of Defect / Noncompliance Determination**

**Provide the chronology of events leading up to the defect decision or test data for the noncompliance decision.:**

In November 2020, MBAG was made aware of an initial customer complaint stating that the instrument cluster briefly restarted during vehicle operation. MBAG initiated an investigation of this complaint, but due to the sporadic nature of these resets, was unable to reproduce the alleged malfunction. At the end of March 2021, MBAG installed data loggers into vehicles to further investigate the potential malfunction. Based upon data collected by those devices, in early summer 2021 MBAG was able to determine that the installed diagnostic software could result in the instrument cluster performing a reboot as a fail-safe measure. In the following months, the duration and effect of a reset of the instrument cluster during vehicle operation was analyzed, and the number of potentially affected vehicles was determined. On September 17, 2021, MBAG determined that there was a technical noncompliance with certain provisions of FMVSS 135, FMVSS 101 and FMVSS 102. MBAG intends to file an inconsequentiality petition regarding the noncompliance.

**Identify the Remedy****Describe the defect/noncompliance remedy program, including the manufacturer's plan for reimbursement.**

MBAG intends to submit a petition for inconsequential noncompliance for NHTSA review.

**Describe what distinguishes the remedy component from the recalled component.**

None - MBAG is submitting a petition for inconsequential noncompliance

**Identify and describe how and when the recall condition was corrected in production.**

This issue can no longer occur in vehicles produced after the introduction of a new version of the standard variant of instrument cluster on August 26, 2020.

**Identify the Recall Schedule****Describe the recall schedule for notifications.:**

Dealers will be notified of the pending voluntary recall campaign on October 1, 2021. Owners will be notified of the voluntary recall campaign after launch to the dealers before November 23, 2021. A copy of all communications will be provided when available.

**Planned Dealer Notification Begin Date:** 10/01/2021

**Planned Dealer Notification End Date:**

**Planned Owner Notification Begin Date:** 11/23/2021

**Planned Owner Notification End Date:**

**Manufacturer's identification code for this recall (if applicable):**

Please be reminded that owner notification letters must be mailed no more than 60 days from submission of this report.

**Manufacturer Comments to NHTSA Staff**

For any questions, please contact Gregory Gunther at [gregory.gunther@mbusa.com](mailto:gregory.gunther@mbusa.com)

**Document Upload**

There are 1 documents associated with this report.

1200 New Jersey Avenue, SE, West Building Washington DC 20590 USA 1.888.327.4236 TTY 1.800.424.9153

This application works best in IE9 and above and recent versions of Firefox, Chrome and Safari

# Part 573 Safety Recall Report

# 21V-751

**Manufacturer Name :** Mercedes-Benz USA, LLC**Submission Date :** SEP 24, 2021**NHTSA Recall No. :** 21V-751**Manufacturer Recall No. :** NR**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 : 27,742

Estimated percentage with defect : 100 %

**Vehicle Information :**

Vehicle 1 : 2020-2020 Mercedes-Benz CLS450

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : GAS

Descriptive Information : Mercedes-Benz 2020 CLAS450 9 Vehicles

The recall population was determined through production records.

Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.

Production Dates : JAN 29, 2018 - AUG 25, 2020

VIN Range 1 : Begin :

NR

End : NR

 Not sequential

Vehicle 2 : 2019-2019 Mercedes-Benz E300

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : GAS

Descriptive Information : Mercedes-Benz 2019 E300 17,128 vehicles

The recall population was determined through production records.

Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.

Production Dates : JAN 29, 2018 - AUG 25, 2020

VIN Range 1 : Begin :

NR

End : NR

 Not sequential

Vehicle 3 : 2019-2020 Mercedes-Benz E450

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : GAS

Descriptive Information : Mercedes-Benz 2019-2020 E450 9259 Vehicles

The recall population was determined through production records.

Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.

Production Dates : JAN 29, 2018 - AUG 25, 2020

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Vehicle 4 : 2019-2019 Mercedes-Benz AMG E53

Vehicle Type : LIGHT VEHICLES

Body Style : 2-DOOR

Power Train : GAS

Descriptive Information : Mercedes-Benz 2019 AMG E53 3 vehicles

The recall population was determined through production records.

Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.

Production Dates : JAN 29, 2018 - AUG 25, 2020

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Vehicle 5 : 2019-2020 Mercedes-Benz AMG G63

Vehicle Type : LIGHT VEHICLES

Body Style : SUV

Power Train : GAS

Descriptive Information : Mercedes-Benz 2019-2020 AMG G63 272 vehicles

The recall population was determined through production records.

Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.

Production Dates : JAN 29, 2018 - AUG 25, 2020

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Vehicle 6 : 2020-2021 Mercedes-Benz E350

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : GAS

Descriptive Information : Mercedes-Benz 2020-2021 E350 478 Vehicles

The recall population was determined through production records.

Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.

Production Dates : JAN 29, 2018 - AUG 25, 2020

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Vehicle 7 : 2019-2020 Mercedes-Benz G550

Vehicle Type : LIGHT VEHICLES

Body Style : SUV

Power Train : GAS

Descriptive Information : Mercedes-Benz 2019-2020 G550 593 vehicles

The recall population was determined through production records.

Vehicles outside of the recall population are equipped with a standard variant of the instrument cluster that meet requirements of FMVSS 135, 101 and 102.

Production Dates : JAN 29, 2018 - AUG 25, 2020

VIN Range 1 : Begin :

NR

End : NR

Not sequential

## Description of Noncompliance :

Description of the Noncompliance : Mercedes-Benz AG ("MBAG"), the manufacturer of Mercedes-Benz vehicles, has determined that on certain Model Year ("MY") 2019-2021 E-Class (213 platform), E-Class Coupe/Cabriolet (238 platform), CLS-Class (257 platform) and G-Class (463 platform) vehicles equipped with the standard instrument cluster variant, the instrument cluster may not consistently meet illumination specifications. In certain circumstances, instrument cluster illumination may be momentarily interrupted, which would be a non-compliance with FMVSS 135 "Light Vehicle Brake Systems", FMVSS 101 "Controls and displays" and FMVSS 102 "Transmission shift position sequence, starter interlock, and transmission braking effect" requirements

FMVSS 1 : 101 - Control and displays

FMVSS 2 : 135 - Light vehicle brake systems

Description of the Safety Risk : MBAG intends to file a petition for a NHTSA determination of inconsequentiality because it assesses the non-compliance as inconsequential to motor vehicle safety:

The diagnostic software installed in certain vehicles with the standard



instrument cluster variant might lead to the instrument cluster performing a short reset during vehicle operation.

In the event of a reset, the speedometer and the tachometer illumination would be temporarily interrupted for less than a second. The position and accuracy of the gauge needles are not affected by the reset. Additionally, amongst others, any warning messages, the transmission shift position and Malfunction Indicator Lamps (MILs) would not be displayed for a maximum of 2.5 seconds. In those instances, the instrument panel would not meet certain requirements of FMVSS 135, FMVSS 101 and FMVSS 102.

Due -in part- to the short duration of the reset and even shorter duration of any interruption of the speedometer's and tachometer's illumination, the non-compliance is not consequential to motor vehicle safety.

MBAG intends to file a petition for a determination of inconsequential noncompliance.

Description of the Cause : The installed diagnostic software in combination with the processing power of the standard variant instrument clusters might cause the system to reboot (fail-safe measure).

Identification of Any Warning that can Occur : The customer will not receive a warning due to the nature of the failure mechanism.

## Involved Components :

Component Name 1 : Software communication module

Component Description : Software communication module

Component Part Number : A2229029220

Component Name 2 : Software communication module

Component Description : Software communication module

Component Part Number : A2229022621

Component Name 3 : Software communication module

Component Description : Software communication module

Component Part Number : A2229020021

Component Name 4 : Software communication module

Component Description : Software communication module

Component Part Number : A2479025009

Component Name 5 : Software communication module

Component Description : Software communication module

Component Part Number : A2229021021

Component Name 6 : Software communication module

Component Description : Software communication module

Component Part Number : A2479021108

Component Name 7 : Software communication module

Component Description : Software communication module

Component Part Number : A2479020809

## Supplier Identification :

### Component Manufacturer

Name : Mercedes-Benz AG

Address : NR

Foreign States

Country : Germany

## Chronology :

In November 2020, MBAG was made aware of an initial customer complaint stating that the instrument cluster briefly restarted during vehicle operation. MBAG initiated an investigation of this complaint, but due to the sporadic nature of these resets, was unable to reproduce the alleged malfunction. At the end of March 2021, MBAG installed data loggers into vehicles to further investigate the potential malfunction. Based upon data collected by those devices, in early summer 2021 MBAG was able to determine that the installed diagnostic software could result in the instrument cluster performing a reboot as a fail-safe measure. In the following months, the duration and effect of a reset of the instrument cluster during vehicle operation was analyzed, and the number of potentially affected vehicles was determined. On September 17, 2021, MBAG determined that

there was a technical noncompliance with certain provisions of FMVSS 135, FMVSS 101 and FMVSS 102. MBAG intends to file an inconsequentiality petition regarding the noncompliance.

## Description of Remedy :

Description of Remedy Program : MBAG intends to submit a petition for inconsequential noncompliance for NHTSA review.

How Remedy Component Differs from Recalled Component : None - MBAG is submitting a petition for inconsequential noncompliance

Identify How/When Recall Condition was Corrected in Production : This issue can no longer occur in vehicles produced after the introduction of a new version of the standard variant of instrument cluster on August 26, 2020.

## Recall Schedule :

Description of Recall Schedule : Dealers will be notified of the pending voluntary recall campaign on October 1, 2021. Owners will be notified of the voluntary recall campaign after launch to the dealers before November 23, 2021. A copy of all communications will be provided when available.

Planned Dealer Notification Date : OCT 01, 2021 - NR

Planned Owner Notification Date : NOV 23, 2021 - NR

\* NR - Not Reported