

Chronology of Defect/Noncompliance Determination

In the beginning of December 2017, MBAG launched initial investigations based on isolated field reports from outside the US claiming that the sliding roof detached from the vehicle. No damage or injuries were reported as a result of these events. The sliding roofs of the affected vehicles were requested and returned by the individual markets.

The returned field parts were analyzed by the supplier as well as by an external laboratory. The analysis of the supplier and outside laboratory were inconclusive. Since these analyses did not indicate a potential root cause and this type of sliding roof was already out of production, MBAG began to look for vehicles from the global used car market to carry out further investigations. By November 2018, three sliding roofs were retrieved and analyzed. From these three sliding roofs, two did not indicate any issues. While one of the sliding roof panels exhibited indications of an impaired bonding, and the others did not, it was unclear why the bonding on this particular sliding roof was less strong than the other field samples.

MBAG, along with the supplier, also undertook a thorough review of the supplier's production records to determine if there were any changes made during the course of production. That review concluded in May, 2019. MBAG found that the supplier had changed the process of the primer application several times over the course of the full production period, including having changed the drying time for the bonding agent.

MBAG then conducted testing featuring various test methods to determine whether reduction of drying time may have had an effect on bonding performance over time. MBAG additionally undertook to correlate the testing results, suggesting that there could be a diminution in bonding performance depending on the production period of sliding roofs.

In November 2019, MBAG determined that during a specific production period, in which the supplier reduced the drying time of the primer to two minutes from higher than 5 minutes, the adhesion of the glass panel bonding might not have met specifications.

It was then found that potentially affected parts from this production period were also supplied as spare parts. Since the document archival requirements of the workshop repair orders are limited to ten years, it was not possible to link the spare parts affected by this issue to customer vehicles. On December 13, 2019, MBAG decided out of an abundance of caution to conduct a safety recall for the complete production range of the potentially affected models identified in NHTSA 19V918.

In the course of 2020, additional examples of damaged parts that fell outside the original recall scope were returned from the field for examination. The supplier was asked to conduct further analyses of production processes for these parts. The investigation revealed that the supplier also did not utilize the proper bonding process for parts determined to be outside of the recall's original scope. As a result, the production range originally indicated by the supplier was expanded. It was confirmed that affected parts only were only used in the production of vehicles identified in the recall extended population. No additional affected parts were delivered for use as replacement parts.

Further analysis have been done to identify potentially affected vehicles. On March 12, 2021, MBAG determined that a potential safety risk cannot be ruled out and extended the population for the existing safety recall (19V918).