

RECALL 233 ATTACHMENT A (AMENDED 12-7-2022)

CHRONOLOGY OF EVENTS LEADING UP TO DEFECT DECISION

❖ August 2020 – October 2021

On August 11, 2020, HMA's NASO issued a Quality Information Report ("QIR") to HMC based on an increasing number of warranty claims for windshield wiper-related concerns on certain model year 2020-2021 Hyundai Palisade vehicles in the U.S. NASO began monitoring incoming claims for similar reports and potential part recovery for subsequent analysis by HMC and the supplier.

❖ November 2021

On November 5, 2021, NASO received HMC's response to the QIR. HMC confirmed the growing trend of wiper-related claims and requested active monitoring of new incidents to boost warranty part returns for additional analysis and study.

On November 24, 2021, NASO reviewed its initial investigation into windshield wiper performance on 2020-2021 Palisade vehicles during a recurring monthly review of top safety-related topics with the NHTSA's Office of Defect Investigations ("ODI").

By November 29, 2021, NASO received seven (7) new incidents related to the subject condition and shipped ten (10) P63H wiper motors to HMC for analysis.

❖ December 2021 – January 2022

By January 25, 2022, NASO received four (4) new incidents related to the subject condition and shipped six (6) additional P63H wiper motors to HMC for analysis.

On January 26, 2022, NASO provided a second update regarding its investigation to NHTSA's ODI during its recurring monthly review of safety-related topics.

❖ February 2022

On February 22, 2022, HMC provided tentative findings of its part returns analysis. According to HMC, out of six (6) components that were analyzed, two (2) were found inoperative while the remaining four (4) were confirmed to be working as designed. HMC noted that root cause could not be determined at that time and would require further testing. HMC also noted that the supplier discontinued the P63H wiper motor in December 2020 replacing it with a new version (PS56) that was already in-use across multiple vehicle platforms.

On February 23, 2022, NASO provided a third update on its investigation to NHTSA's ODI during its recurring monthly review of safety-related topics.

❖ March 2022

HMC informed NASO of new findings suggesting that the P63H wiper motor's internal gear could become damaged when subjected to external forces and/or obstructions during operation. For

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assistance in identifying a root cause, HMC requested that the ongoing part recovery request be modified to include complete wiper arm, linkage, and motor sub-assemblies.

On March 23, 2022, NASO provided a fourth update on its investigation to NHTSA's ODI during its recurring monthly review of safety-related topics.

❖ April – May 2022

On April 27, 2022, HMC provided updated findings of its part returns analysis. According to HMC, out of eighteen (18) total wiper motors that were analyzed, fourteen (14) were found inoperative due to broken gears or stripped gear teeth, while the remaining four (4) were confirmed to be working as designed.

On April 27, 2022, and May 25, 2022, respectively, NASO provided fifth and sixth updates on its investigation to NHTSA's ODI during its recurring monthly review of safety-related topics.

❖ June – July 2022

By June 10, 2022, ten (10) additional wiper motors were shipped to HMC. HMC initiated a request to collect working, in-use parts for further study. HMC also confirmed that the wiper motor used by the subject Palisade vehicles employed automatic overload protection via a circuit breaker and snow clutch. NASO analyzed VOQ's provided by the agency and identified a peak in VOQ's submitted in February 2021 that appeared to be influenced by multiple reports from a single internet forum alleging inoperative/intermittent wiper performance due to heavy snow/ice accumulation.

On June 22, 2022, and July 27, 2022, respectively, NASO provided seventh and eighth updates on its investigation to NHTSA's ODI during its recurring monthly review of safety-related topics. During these discussions, NASO reviewed its analyses of internal Hyundai field data and VOQ's, including comparisons of claim data associated with wiper motor types P63H and PS56 and additional VOQ studies confirming most reports alleging intermittent wiper operation did not have an associated warranty repair involving replacement of the wiper motor. NASO also reviewed competitor benchmark testing performed by HMC confirming that the alleged wiper condition was not unique to Hyundai Palisade vehicles.

❖ August – November 2022

Hyundai and NHTSA's ODI met on August 3, 2022, and August 11, 2022, to discuss Hyundai's findings from its investigation into the subject condition on 2020-2021 Palisade vehicles equipped with the P63H wiper motor. Hyundai informed the agency of its intent to continue investigating potential root causes and other causal factors that may contribute to the onset of an intermittent wiper condition through review of substantially similar vehicle platforms including, but not limited to, motor specification, wiper hardware arm/linkage etc.

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Based on HMC's findings, on August 8, 2022, NASO convened its North America Safety Decision Authority and decided to file a new safety recall to address the condition of intermittent wiper operation on 2020-2021 Palisade vehicles equipped with the P63H wiper motor. The root cause and a potential remedy are under investigation.

On August 16, 2022, HMC informed NASO of revisions to the affected vehicle population initially reported in Hyundai's filing of Recall 233 based on further analysis and confirmation with U.S. territory distributors. Hyundai is submitting these revisions as amended information to the initial Part 573 report for Recall 233.

On August 24 and September 28, 2022, NASO reviewed the status of its investigation with ODI during its recurring monthly review of active safety-related investigations.

On October 24, 2022, NASO met with ODI to review snow chamber testing results of each Palisade wiper motor specification and comparisons with other Hyundai and competitor vehicles.

In November 2022, HMC informed NASO of testing results indicating that accumulated snow and/or ice could prevent the wiper arm from returning to its original position and cause excessive load to the motor, causing the circuit breaker to open and disable the wiper system momentarily. Further benchmark analyses and testing confirmed that the average time and load rate to reach the automatic overload protection is specific to each motor. HMC concluded that a driver-side wiper arm redesign with greater clearance from the vehicle's cowl assembly improves the performance of the wiper system by reducing the average load rate and time required for circuit breaker activation. Based on this information, Hyundai is submitting amended root cause and remedy information to the Part 573 report for Recall 233.

As of the date of the initial filing, Hyundai has confirmed 57 unique incidents received from July 31, 2019, through June 8, 2022, in the U.S. There are no confirmed crashes or injuries related to this condition.