

# RECALL 229 ATTACHMENT A

## CHRONOLOGY OF EVENTS LEADING UP TO DEFECT DECISION

### ❖ September – October 2021

On September 15, 2021, NHTSA's ODI informed HMA's NASO of a crash incident involving a model year 2021 Hyundai Elantra vehicle where the driver-side seat belt pretensioner allegedly deployed abnormally causing metal fragments to enter the rear cabin and resulting in injury to an occupant's leg. NHTSA was notified of the incident by a law firm representing the operator of the incident vehicle. The law firm also notified HMA's external counsel on the same day, who then alerted HMA's Legal department of the incident.

In subsequent discussions with the agency following the initial notice, ODI requested Hyundai's assessment of the incident under cover of SGO 2015-01, a standing general order involving abnormal deployments of frontal airbag inflators manufactured by ARC. On September 22, 2021, in accordance with requirements set forth in SGO 2015-01, HMA submitted its first report notifying ODI of its receipt of the 2021 Elantra incident.

On September 30, 2021, NASO provided an update on its investigation of the 2021 Elantra incident. NASO informed ODI of plans to inspect the incident vehicle on October 8, 2021. NASO also informed ODI that it would be targeting seat belt pretensioners produced in the same production lot as the incident pretensioner for further study into root cause and manufacturing/design defect identification.

On October 6, 2021, NASO convened its North American Safety Decision Authority ("NASDA"). Although the cause of the abnormal deployment is unknown, NASO decided to conduct a safety recall of vehicles equipped with pretensioners produced within the same production lot to conduct a detailed part return analysis.

### ❖ December 2021

Hyundai actively continued its investigation to determine if a specific root cause and defect trend exists. On December 3, 2021, HMC notified NASO of a second incident occurring on a 2020 model year Hyundai Accent vehicle in Puerto Rico. According to supplier information, the incident pretensioner was produced thirteen months prior to the suspect production lot initially identified in Recall 211. In accordance with requirements set forth in SGO 2015-01, HMA submitted a report notifying ODI of the new incident on December 10, 2021.

Based on this information, on December 10, 2021, NASO re-convened its NASDA and decided to expand Recall 211 to include 2020-2021 model year Hyundai Accent vehicles equipped with pretensioners from the earlier suspect production lot. Hyundai will continue to actively investigate this condition and conduct detailed part return analysis on both suspect production lots to determine if a specific root cause and defect trend exists.

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### ❖ February 2022

On February 7, 2022, NHTSA's ODI met with NASO to discuss tentative plans to require all manufacturers to submit new recall filings when expanding the vehicle scope of an existing recall that has been filed and posted to NHTSA's recall website. ODI requested NASO to file a new recall for the 2020-2021 model year Hyundai Accent vehicles previously specified in Hyundai's amendment of Recall 211 filed December 17, 2021. In an effort to enhance customer notifications and comply with ODI's request, on February 8, 2022, NASO re-convened its NASDA and decided to conduct a new recall of 2020-2021 model year Hyundai Accent vehicles in the U.S. for the same defect specified in Recall 211.

On February 15, 2022, HMC notified NASO of a new incident involving a 2022 model year Hyundai Elantra vehicle in Singapore where the front left-side seat belt pretensioner deployed abnormally causing injuries to a rear passenger. The incident part was installed on the front left side of the vehicle as the subject vehicle is a right-hand drive vehicle. According to supplier information, the incident pretensioner production lot is different than the lots targeted in Recall 211 and 219. Additionally, the pretensioners from the subject production lot are equipped on the front right side of US specification left-hand-drive vehicles. Based on this information, and in continuation of Hyundai's investigation into root cause, NASO re-convened its NASDA on February 24, 2022 and decided to conduct a recall of 2022 model year Elantra and 2022 model year Elantra HEV vehicles potentially equipped with pretensioners from the new suspect production lot.

### ❖ March 2022 – May 2022

On March 25, 2022, NASO re-convened its NASDA to proactively increase the number of recovered pretensioners for analysis and identify the root cause. NASDA decided to conduct a new recall of Hyundai Accent and Elantra vehicles containing seat belt pretensioners from certain targeted pretensioner lots produced within approximately one (1) month before/after the identified suspect production lots associated with Recalls 211, 219, and 220, despite not receiving any new reports of occurrences in the U.S.

On March 28, 2022, investigative teams from NASO, HMC, and the supplier inspected the Puerto Rico incident Accent vehicle and found the crash pulse and duration data retrieved from the EDR compared similarly to the Singapore incident Elantra vehicle's crash data. Based on this information, HMC determined that the pretensioners used in the subject Elantra and Accent vehicles could exhibit unique deployment characteristics when compared to other models using the same pretensioners. The differences are largely attributed to variation in the pretensioner's load limiter specifications and vehicle-specific air bag control unit ("ACU") logic, with crash severity/duration also being a contributing factor.

In April 2022, Hyundai retained Exponent, a third-party engineering firm, conduct metallurgical analyses on the connection between the micro gas generator and pretensioner used in the subject

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Elantra and Accent vehicles and identify potential areas of stress and fracture initiation sites during deployment. On April 20, 2022, NASO provided an update of Hyundai's investigation to NHTSA's ODI.

On April 25, 2022, HMC informed NASO of recent testing by design affiliates and the supplier that were successful in replicating the abnormal deployment condition in the subject Elantra and Accent vehicles. HMC also informed NASO of a potential remedy which would secure the micro gas generator connection with a cap and eliminate stress sites that could potentially increase the risk of an abnormal deployment. In subsequent testing, Exponent was able to confirm the effectiveness of the cap in mitigating this risk. Exponent communicated the results to NASO on May 6, 2022.

On May 12, 2022, NASO met with NHTSA's VRTC and Exponent to discuss the results of Exponent's testing and analyses.

Based on the recent findings, NASO convened its NASDA on May 11, 2022, and decided to conduct a recall of all Elantra and Accent vehicles equipped with the subject pretensioner, including those already involved in Recalls 211, 219, 220, and 223, to receive the remedy cap. Hyundai is still actively investigating the remaining Hyundai Venue and Genesis GV70/GV80 vehicles involved in Recall 211.

As of the date of this filing, Hyundai is only aware of the three crash events resulting in injuries described above (two incidents in the U.S. and one in Singapore).