

Date of Submission: 2/16/2022

FSA #22S07 - Certain 2021 and 2022 model year Ford Mustang vehicles – Front Passenger Knee Airbag Weld Separation

Chronology

On September 28, 2021, the Critical Concern Review Group (CCRG) reviewed a report of a front passenger knee airbag that exhibited weld separation between the bladder and outer door during testing being conducted related to a previous anomaly (weld separation between the bladder and inner door).

The concern was identified by the front passenger knee airbag supplier, Faurecia, on September 20, 2021, after heat aging 25 passenger knee airbags and deploying at cold temperature (-20C). One knee airbag exhibited weld separation between the bladder and outer door resulting in loss of pressure within the bladder. The remaining 24 knee airbags performed per design intent. An additional 3 heat aged knee airbags were deployed at ambient temperature in linear impact testing resulting in acceptable performance.

October – November 2021 - Supplier Technical Assistance (STA) team conducted root cause analysis for the weld separation. Based upon elimination of all unique potential root causes, the team concluded that the cause of the weld failure was related to the original anomaly, weld separation between the bladder and inner door. The root cause for the original anomaly was a set up issue on the knee airbag hot plate welder during a tool changeover on August 20, 2021. On August 24, 2021, Faurecia reset process parameters and conducted weld testing to confirm proper weld strength. The front passenger knee airbags produced at Faurecia between August 20, 2021 and August 24, 2021 are considered suspect.

Full traceability between the front passenger knee airbag inflator serial numbers and the vehicle VIN's enabled the team to determine the suspect vehicle population that escaped Ford assembly plant.

December 2021 - Vehicle level Computer Aided Engineering (CAE) was conducted by Ford's Vehicle Crash Safety team simulating the concern in an unbelted frontal crash mode. The results indicated a small kinematic difference in head positioning during the event.

January 2022 - CCRG determined that while the CAE resulted in a small kinematic effect to occupant, the concern may represent an increased risk to occupant safety as the deployment does not meet design intent.

On **February 9, 2022**, Ford's Field Review Committee reviewed the concern and approved a field action.

Ford is not aware of any reports of accident or injury related to this condition.