

Date of Submission: 9/8/2023

FSA **23S53** – Certain 2020 – 2022 Ford Explorer, and Lincoln Aviator PHEV Vehicles – Potential Battery Vent

### Chronology

On **June 28, 2023**, an issue pertaining to PHEV battery thermal venting was brought to Ford's Critical Concern Review Group (CCRG) for review. Ford received a report describing a 2021 model year Transit Custom experiencing PHEV battery thermal venting in France on January 19, 2023. Teardown analysis performed by the battery cell supplier was completed in May 2023 and identified an internal short of a cell in the vehicle's high voltage battery pack due in part to the presence of a folded anode tab. The supplier determined the folded anode tab was introduced during the cell manufacturing process.

#### **July – August 2023**

Supplier investigation and analysis indicated an additional, still undetermined, factor must be present for the cell folded anode tab condition to propagate to battery thermal venting. Supplier component level testing is ongoing to identify this second factor. With this second factor unknown, the CCRG focused on identifying the population of vehicles that may potentially have the cell folded anode tab condition.

Ford's review of cell supplier process identified cell manufacturing process improvements over the course of cell production to reduce instances of the folded anode tab condition. CCRG used the timing of introduction of these process improvements to determine the affected population.

Ford determined a low cell capacity relative to average capacity of all cells in a battery pack can be used as an indicator of folded anode tab condition. On vehicles where connected vehicle data sharing is enabled by the customer, cell capacity information was reviewed to rule out potential presence of folded anode tab condition.

As of **August 11, 2023**, Ford was aware of three additional instances of cells with folded anode tabs in the field. One of these instances involved a 2020 model year Aviator in the United States and resulted in PHEV battery thermal venting. The other instances involved a 2020 model year Aviator in the United States resulting in a MIL but no battery thermal venting, and a 2020 model year Aviator in Canada also resulting in a MIL but no battery thermal venting.

On **September 01, 2023**, 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.