Part 573 Safety Recall Report 23V-626

Manufacturer Name : Ford Motor Company
Submission Date : SEP 08, 2023
NHTSA Recall No. : 23V-626
Manufacturer Recall No. : 23S53

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Manufacturer Information :

Manufacturer Name : Ford Motor Company
Address : 330 Town Center Drive
Suite 500 Dearborn MI 48126-2738
Company phone : 1-866-436-7332

Population :

Number of potentially involved : 2,954
Estimated percentage with defect : 1 %

Vehicle Information :

Vehicle 1 : 2020-2022 Lincoln Aviator
Vehicle Type : LIGHT VEHICLES
Body Style : ALL
Power Train : HYBRID ELECTRIC
Descriptive Information : Ford's team reviewed supplier process records to determine the population of affected parts. The Ford process is capable of tracing high voltage battery cell production to the vehicle in which the high voltage battery cell is installed. Affected vehicles are equipped w/ 3.0L PHEV engines and suspect high voltage battery cells

These vehicles are not produced in VIN order. Information as to the applicability of this action to specific vehicles can best be obtained by either calling Ford's toll-free line (1-866-436-7332) or by contacting a local Ford or Lincoln dealer who can obtain specific information regarding the vehicles from the Ford On-line Automotive Service Information System (OASIS) database.

2,941 Lincoln Aviator PHEV vehicles are affected.

Production Dates : JUN 18, 2019 - MAY 23, 2022
VIN Range 1 : Begin : NR End : NR ☐ Not sequential

Vehicle 2 :	2020-2022 Ford Explorer
Vehicle Type :	LIGHT VEHICLES
Body Style :	ALL
Power Train :	HYBRID ELECTRIC
Descriptive Information :	Ford's team reviewed supplier process records to determine the population of affected parts. The Ford process is capable of tracing high voltage battery cell production to the vehicle in which the high voltage battery cell is installed. Affected vehicles are equipped w/ 3.0L PHEV engines and suspect high voltage battery cells These vehicles are not produced in VIN order. Information as to the applicability of this action to specific vehicles can best be obtained by either calling Ford's toll-free line (1-866-436-7332) or by contacting a local Ford or Lincoln dealer who can obtain specific information regarding the vehicles from the Ford On-line Automotive Service Information System (OASIS) database. 13 Ford Explorer PHEV vehicles are affected.
Production Dates :	DEC 01, 2019 - DEC 12, 2021
VIN Range 1 :	Begin : NR End : NR ☐ Not sequential

Description of Defect :

Description of the Defect :	A manufacturing defect in one or more of the vehicle's high voltage battery cells may result in a lower capacity cell. In certain cases, the low capacity cell will develop an internal short circuit.
FMVSS 1 :	NR
FMVSS 2 :	NR
Description of the Safety Risk :	In the event of a high voltage battery cell internal short, customers may experience a battery power off. A battery power off will result in a loss of motive power with coasting, increasing the risk of crash. Customers will continue to have 12V accessories, steering, and braking control. If a second, still undetermined, factor is present with the folded tab, the customer may experience battery thermal venting potentially resulting in a vehicle fire, increasing the risk of injury.
Description of the Cause :	The root cause of this condition is partially due to the presence of a folded anode tab within a cell in the high voltage battery. The folded anode tab is introduced during the cell manufacturing process. A folded tab may result in a cell with lower capacity. In addition to the folded tab, a second factor must be present or induced for a cell internal short with thermal venting to result. This factor is still unknown and under investigation.
Identification of Any Warning that can Occur :	Customer will experience a Malfunction Indicator Light (MIL) in the event of a high voltage battery cell internal short.

Involved Components :

Component Name 1 :	UNT ASY BAT H/V TRCT
Component Description :	High Voltage Battery Pack
Component Part Number :	L1M* 10B759 AP

Supplier Identification :

Component Manufacturer

Name :	LGES
Address :	1 LG Way Holland 49423
Country :	NR

Chronology :

Chronology is provided as an attachment.

Description of Remedy :

Description of Remedy Program :	Owners will be notified by mail and instructed to take their vehicle to a Ford or Lincoln dealer to have a Battery Energy Control Module (BECM) diagnostic test performed. If a cell capacity anomaly, indicative of a folded anode tab introduced during cell manufacturing, is detected during the test, dealers will replace the high voltage battery pack. There will be no charge for this service. Ford provided the general reimbursement plan for the cost of remedies paid for by vehicle owners prior to notification of a safety recall in May 2023. The ending date for reimbursement eligibility is estimated to be December 14, 2023. Ford will forward a copy of the notification letters to dealers to the agency when available.
How Remedy Component Differs from Recalled Component :	Replacement high voltage battery packs will have cells that are produced post-supplier manufacturing process improvements.

Identify How/When Recall Condition was Corrected in Production :	NR

Recall Schedule :

Description of Recall Schedule :	Notification to dealers is expected to occur on September 13, 2023. Mailing of owner notification letters is expected to begin October 2, 2023, and is expected to be completed by October 6, 2023.
Planned Dealer Notification Date :	SEP 13, 2023 - SEP 13, 2023
Planned Owner Notification Date :	OCT 02, 2023 - OCT 06, 2023

* NR - Not Reported

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.