

Part 573 Safety Recall Report

23V-440

Manufacturer Name : Ford Motor Company**Submission Date :** SEP 13, 2023**NHTSA Recall No. :** 23V-440**Manufacturer Recall No. :** 23S33**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 : 14,452

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2019-2020 Ford Fusion

Vehicle Type : LIGHT VEHICLES

Body Style :

Power Train : NR

Descriptive Information : Affected vehicles were produced between 12/06/17 and 07/27/20 and are equipped with the 2.0L PHEV drivetrain and 30Ah high voltage batteries.

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.

Production Dates : DEC 06, 2017 - JUL 27, 2020

VIN Range 1 : Begin :

NR

End : NR

 Not sequential**Description of Defect :**

Description of the Defect : Current Interrupt Device (CID) activation in a high voltage battery cell can result in excess voltage and current flow through the Battery Energy Control Module (BECM), which can cause damage to the BECM.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : A damaged BECM caused by excess voltage and current flow can result in a loss of motive power which increases the risk of a crash, or a localized fire around the BECM, which increases the risk of injury.

Description of the Cause : The root cause of the battery cell CID activation is excessive gas generation inside one or more of the 84 battery cells. Excessive gas generation is caused by electrolyte depletion at the center of battery cells. Electrolyte depletion will

develop when the battery has multiple charge and discharge cycles per day, charging to and storage at 100% State of Charge (SOC), and/or battery has aged and been in service at least two years.

Identification of Any Warning that can Occur : Drivers may receive a stop safely now message prior to losing motive power.

Involved Components :

Component Name 1 : High Voltage Battery

Component Description : High Voltage Battery Assembly

Component Part Number : KG98-10B759-B*

Supplier Identification :

Component Manufacturer

Name : PANASONIC AUTOMTOIVE SYSTEMS COMPANY

Address : 194-4 TOKONABECHOU
KASAI CITY Foreign States 675-2332

Country : Japan

Chronology :

On 6/17/2022, Ford's Trend and Early Warning Support (TEWS) team informed the Critical Concern Review Group (CCRG) of five reports of fire allegations that occurred in the trunk area on 2019 Fusion PHEV vehicles in North America equipped with 30Ah high voltage (HV) batteries. All of the incidents occurred between March and May 2022. The fires occurred while the vehicles were at dealerships during a replacement Battery Energy Control Module (BECM) service to remedy one or more voltage sense Diagnostic Trouble Codes (DTCs), a check engine light, no start, or loss of motive power concern. Analysis of the vehicles by Ford's High Voltage Battery Systems Team identified the fires originated in the BECM. The HV batteries were sent to the supplier for analysis. The supplier confirmed the Current Interrupt Device (CID) was activated in HV battery cells from the suspect units, but the root cause of the CID activation is unknown. On 8/16/2022, Ford's CCRG placed the investigation on monitor based on the rate and severity of the concern. On 2/8/2023, a Technical Service Bulletin (TSB) was published providing direction to replace the HV battery if vehicles came in for service with one or more voltage sense DTCs rather than only replacing the BECM. On 5/2/2023, the issue returned to CCRG for review. Two additional fires occurred during the monitor period, both while a customer was driving the vehicle. At that time, the CCRG was aware of seven fires and 270 warranty claims resulting in a loss of motive power as a result of this concern. On 6/16/2023, Ford's Field Review Committee (FRC) reviewed the concern and approved a field action. From June to August 2023, Ford worked with suppliers to understand root cause of the CID activation. On 8/25/2023, Ford's FRC approved an updated remedy associated with the 23S33 field

action based on increased understanding of the issues root cause. Ford is not aware of any accidents or injuries as a result of this concern.

Description of Remedy :

Description of Remedy Program : When parts are available, owners will be notified by mail and instructed to take their vehicle to a Ford or Lincoln dealer to have the high voltage battery replaced and BECM software reflashed to lower the maximum state of charge. There will be no charge for this service.

As an interim remedy, when parts are available, owners will be notified by mail and instructed to take their vehicle to a Ford or Lincoln dealer to have a BECM fuse block installed and have the BECM software reflashed to disable charging. 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.

Ford will forward a copy of the notification letters to dealers to the agency when available.

How Remedy Component Differs from Recalled Component : The BECM fuse block KG98-10D811-AA will provide circuit protection in the event of a CID activation. The replacement battery KG98-10B759-CA will not be subject to excessive gas generation when installed in conjunction with the updated BECM software which reduces the maximum state of charge by 11%.

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 8, 2023. Mailing of owner notification letters is expected to begin October 27, 2023 and is expected to be completed by November 17, 2023.

Planned Dealer Notification Date : SEP 08, 2023 - SEP 08, 2023

Planned Owner Notification Date : OCT 27, 2023 - NOV 17, 2023

* NR - Not Reported