



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

**Investigation:** RQ 23-004  
**Date Opened:** 08/17/2023  
**Investigator:** Jayson Winick  
**Approver:** Tanya Topka  
**Subject:** High Voltage Battery Contactor Failure  
**Reviewer:** Peter Kivett

## MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** Ford Motor Company  
**Products:** 2021-2022 Ford Mustang Mach E  
**Population:** 64,727 (Estimated)  
**Problem Description:** High voltage battery contactors may overheat resulting in a loss of motive power.

## FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
<b>Complaints:</b>	12	TBD	12
<b>Crashes/Fires:</b>	0	TBD	TBD
<b>Injury Incidents:</b>	0	TBD	TBD
<b>Number of Injuries:</b>	0	TBD	TBD
<b>Fatality Incidents:</b>	0	TBD	TBD
<b>Number of Fatalities:</b>	0	TBD	TBD
<b>Other*:</b>	44	Confidential	Confidential

\*Description of Other: Early Warning Reporting Field Reports

## ACTION / SUMMARY INFORMATION

**Action:** Open this Recall Query (RQ)

### Summary:

On June 10, 2022, Ford Motor Company (Ford) issued a safety recall (NHTSA Recall 22V-412) on 48,924 model year (MY) 2021-2022 Ford Mustang Mach-E vehicles produced from May 27, 2020, to May 24, 2022. This recall addressed high voltage battery main contactors that may overheat from direct current ("DC") fast-charging and repeated wide-open pedal events. Overheating may lead to arcing or deformation of the electrical contact surfaces, which may result in a contactor that remains open or a contactor that welds closed. An overheated contactor that opens while driving may result in an immediate loss of motive power without re-engagement, increasing the risk of a crash.

The Office of Defects Investigation (ODI) has opened this Recall Query (RQ) after receiving 12 consumer complaints alleging a high voltage battery main contactor failure in MY 2021-2022 Ford Mach-E vehicles (subject vehicles) that were included in Recall 22V-412 and remedied prior to the reported incidents. The remedy in this recall was a Secondary On-Board Diagnostic Control Module (SOBDMC) software update to monitor contactor temperature and reduce battery power to prevent damage to the contactor, and a Battery Energy Control Module (BECM) software update to monitor contactor resistance to identify an overheated contactor and reduce vehicle power to prevent further damage.

Following the recall, Ford issued Technical Service Bulletin TSB 23-2020, to replace the High Voltage Battery Junction Box (HVBJB) on the subject vehicles. Consumers who experienced loss of motive power after receiving the recall remedy reported that their vehicle had the HVBJB replaced, as outlined in TSB 23-2020, to properly remedy the failure of the contactors. This RQ has been opened to assess the remedy of Recall 22V-412.

The ODI complaints cited above can be viewed at [NHTSA.gov](https://www.nhtsa.gov) under the following ODI identification numbers:  
11472202, 11475350, 11477025, 11479095, 11479421, 11485995, 11493140, 11510437, 11511316, 11517977,  
11525550, 11526050.