U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION
NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Investigation: RQ23004
Prompted By: VOQ and EWR Field Report Review
Date Opened: 08/17/2023 **Date Closed:** 12/06/2023
Investigator: Jayson Winick **Reviewer:** Peter Kivett
Approver: Tanya Topka
Subject: High Voltage Battery Contactor Failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Ford Motor Company
Products: 2021-2022 Ford Mustang Mach E
Population: 64,847

Problem Description: High voltage battery contactors may overheat resulting in a loss of motive power.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	29	1,017	0	1,923	1,090	CONF
Crashes/Fires:	0	0	0	0	0	0
Injury Incidents:	0	0	0	0	0	0
Number of Injuries:	0	0	0	0	0	0
Fatality Incidents:	0	0	0	0	0	0
Number of Fatalities:	0	0	0	0	0	0

Description of Other: Warranty Claims

ACTION/SUMMARY INFORMATION

Action: This (RQ) Recall Query is closed with recall 23V687.

Summary:

On August 17, 2023, the Office of Defects Investigations (ODI) opened RQ23-004 to investigate instances of loss of motor power due to overheating high voltage battery contactors in model year (MY) 2021-2022 Ford Mustang Mach-E vehicles (subject vehicles). This Recall Query (RQ) was opened after receiving 12 consumer complaints alleging a high voltage battery main contactor failure in subject vehicles that were

included in Recall 22V-412 and remedied prior to the reported incidents. The remedy in 22V-412 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.

On October 13, 2023, Ford filed Recall 23V-687 of 34,762 2021-2022 Ford Mustang Mach-E vehicles produced from May 27, 2020 to May 24, 2022 with recalled Bussed Electrical Center parts NK48-10C666-AA, NK48-10C666-BA, or LK98-10C666-AB. Affected vehicles are equipped with the extended range battery. Ford stated that preexisting damage to the contactors caused by heat and accumulated wear may reduce the effectiveness of the software update remedy in 22V-412. The remedy of 23V-687 is to complete a replacement of the Bussed Electrical Center, or High Voltage Battery Junction Box.

In addition, Ford stated that subject vehicles equipped with standard range batteries, in comparison to vehicles equipped with extended range batteries, are less at risk of experiencing this failure due to their smaller battery capacity and lower output electric drive motors.

In view of the recall action taken by Ford, ODI is closing this investigation. ODI will continue to monitor reports of this failure in both extended range and standard range models. The Agency reserves the right to take additional action if warranted by future circumstances. To review the ODI reports cited in the Closing Resume ODI Report Identification Number document, go to NHTSA.gov.