U.S. Department of Transportation
National Highway Traffic Safety Administration

OFFICE OF DEFECTS INVESTIGATION

ODI RESUME

Investigation: PE24002
Prompted By: VOQs and Early Warning Reporting
Date Opened: 01/31/2024 **Date Closed:** 08/19/2024
Investigator: Joseph Teitelman **Reviewer:** Peter Kivett
Approver: Tanya Topka
Subject: Loss of Motive Power

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Ford Motor Company
Products: 2021-2023 Ford Bronco Sport
Population: 347,154

Problem Description: Loss of engine power accompanied by complete electrical system failure

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	61	367	0	1,005	1,368 *	CONF
Crashes/Fires:	1	1	0	0	2	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:
Manufacturer Warranty Claims

*Total eliminates duplicates received by the manufacturer

ACTION/SUMMARY INFORMATION

Action: This (PE) Preliminary Evaluation is closed with 24V267.

Summary:
On January 31, 2024, the Office of Defects Investigation (ODI) opened PE24002 to investigate allegations of loss of motive power in model year (MY) 2021 Ford Bronco Sport vehicles. At that time, ODI had received 31 Vehicle Owner Questionnaires (VOQs), with consumers commonly reporting a loss of engine power accompanied by complete electrical system failure which occurred either while driving, or after coming to a stop.
The investigation revealed that MY 2021-2024 Ford Bronco Sport and certain MY 2022-2023 Ford Maverick vehicles are equipped with a 12V enhanced flooded battery (EFB), which may experience an abrupt failure during a drive cycle. The failure is the result of an internal corrosion issue, which is influenced by long exposure to high under-hood temperatures. If the sudden loss of 12V battery voltage is not detected by the vehicle's battery management sensor, the vehicle can experience a loss of power event without providing any warning to the driver. Following a loss of power due to battery failure, the vehicle may be without all 12V accessories including hazard lights and typically will not be able to be restarted.
In its March 2024 response to ODI's information request, Ford provided 367 customer complaints (including field reports, lawsuits, and legal claims) and 1005 warranty claims relating to the alleged defect. When combining ODI and manufacturer failure report data, there are 1,368 unique VINs represented across MY 2021-2023 Ford Bronco Sport vehicles. One of the VOQs submitted to NHTSA reported a minor rear-end collision resulting from a loss of power event. Included within Ford's complaints were a reported single-vehicle collision and a vehicle fire which occurred following a loss of power event at a traffic light (fire cause and origin was not determined). Additionally, across ODI and manufacturer data, there were 12 allegations of either acid leaking from the 12V battery or smoke emitting from the battery area within the engine compartment.
On April 12, 2024, Ford submitted recall 24V267 for MY 2021-2024 Ford Bronco Sport and certain MY 2022-2023 Ford Maverick vehicles (total population 456,565). The recall remedy provides updated calibrations to the body control module and powertrain control module. Ford indicated that the update will result in improved detection of 12V battery state of charge during drive cycles and will provide notification to the driver if the battery significantly degrades while driving. Additionally, Ford has replaced the EFB with an absorbed glass mat (AGM) battery as both a service component for the subject vehicles and as original equipment for Bronco Sport vehicles with production dates beginning in mid-March 2024. The warranty claim rate for peer vehicles equipped with an AGM battery is substantially lower than that for the subject vehicle population.
In view of the recall action being taken by Ford, ODI is closing this Preliminary Evaluation. The agency reserves the right to take additional action if warranted by future circumstances. To review the reports cited in the Closing Resume ODI Report Identification Number document, go to NHTSA.gov.