U.S. Department of Transportation

National Highway Traffic Safety Administration

OFFICE OF DEFECTS INVESTIGATION

ODI RESUME

Investigation:	PE24011		
Prompted By:	Early Warning Reporting Field Report Review		
Date Opened:	04/11/2024	**Date Closed:**	08/21/2026
Investigator:	Kevin Mcgough	**Reviewer:**	Sharon Yukevich
Approver:	Tanya Topka		
Subject:	Electronic Brake Module Component Failure		

MANUFACTURER & PRODUCT INFORMATION

Manufacturer:	General Motors, LLC
Products:	2023 Cadillac LYRIQ
Population:	3,322
Problem Description:	Lose of brake assist and ABS performance is effected

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	1	68	0	0	68*	CONF
Crashes/Fires:	0	1	0	0	1	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

*Total eliminates duplicates received by the manufacturer

ACTION/SUMMARY INFORMATION

Action: This (PE) Preliminary Evaluation has been upgraded to an Engineering Analysis.

Summary:

On April 11, 2024, the Office of Defects Investigation (ODI) opened Preliminary Evaluation PE24011 after receiving complaints concerning a loss of brake assist in 2023 MY Cadillac Lyriq vehicles. These complaints allege a hard brake pedal, followed by a “Brake System Failure” message at start up or while driving.

GM shared records regarding several internal investigations for loss of brake assist due to alleged spindle fractures in the eBoost system. GM has stated that in the event of a spindle fracture, anti-lock brakes (ABS),

stability control, and traction control remain functional until the vehicle comes to a complete stop. At this point, ABS, brake assist, stability control, and traction control functions are lost. The loss of these functions causes the vehicle to set one of three Diagnostic Trouble Codes (DTCs) based on failed performance criteria for the Electronic Brake Control Module (EBCM). These DTCs, in turn, activate several driver alerts: an audible chime, a visual “Service Brake System” message in the display, and multiple illuminated Malfunction Indicator Lights (MILs) for the ABS, Traction Control, and Brakes informing the driver of loss of functionality. The vehicle speed will also be limited to 70 KPH (43 MPH).

Since opening PE24011, ODI has continued to receive reports of loss of brake assist. Some of these reports describe symptoms inconsistent with GM’s description of a spindle failure. These reports allege an immediate loss of brake assist functionality as opposed to the loss occurring after the vehicle comes to a complete stop. The sudden loss of brake assist during a braking event could result in extended braking distance, which increases the risk of a crash or injury. ODI believes further analysis is necessary to assess the potential for failures in GM’s eBoost system to resulting in safety-related outcomes.

At this time, ODI is aware of the following vehicles that are equipped with this eBoost system: 2023-2026 MY Cadillac Lyriq, Chevrolet Colorado, and GMC Canyon; 2024-2026 MY Buick Enclave, Envision; Chevrolet Blazer EV, Equinox EV, Traverse; Cruise Origin; and GMC Acadia; 2025-2026 MY Cadillac Celestiq and Optiq. ODI is also aware of 2024-2026 MY Acura ZDX and 2024-2026 MY Honda Prologue vehicles that were built with this system. The Acura and Honda vehicles were manufactured by GM in a joint venture with Honda, and will be included in the Engineering Analysis as peer vehicles.

ODI is upgrading this Preliminary Evaluation to an Engineering Analysis, EA26006, to gain further understanding of the safety-related consequences of a failed eBoost system. In addition, ODI is expanding the scope of the investigation to encompass all GM vehicles that share this eBoost system.

To review the ODI reports cited in the Closing Resume ODI Report Identification Number document, go to NHTSA.gov.