

Part 573 Safety Recall Report

24V-497

Manufacturer Name : Lucid USA, Inc.

Submission Date : JUL 01, 2024

NHTSA Recall No. : 24V-497

Manufacturer Recall No. : SR-24-03-0



Manufacturer Information :

Manufacturer Name : Lucid USA, Inc.

Address : 7373 Gateway Blvd.

Newark CA 94560

Company phone : 1-510-648-3553

Population :

Number of potentially involved : 5,251

Estimated percentage with defect : 1 %

Vehicle Information :

Vehicle 1 : 2022-2023 Lucid Air

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : NR

Descriptive Information : Lucid Airs employ a High Voltage Interlock (HVIL) safety mechanism to protect against high voltage (HV) exposure at HV connections, typically accessed during vehicle assembly, inspection, maintenance, or repair. To provide protection, the HVIL logic opens contactors to remove HV from the HV bus if any connection point is deemed incomplete. The activities protected by the HVIL all occur while the vehicle is stationary, in park or neutral; though, the HVIL design could also open contactors while a vehicle was in drive or reverse.

Vehicles manufactured prior to Dec. 2022 (“Affected Vehicles”) were susceptible to intermittent hardware connection faults, which could lead the HVIL to open contactors while driving. Lucid observed 10 occurrences of unwarned loss of power while driving in customer vehicles manufactured through Nov. 2022 caused by HVIL detection of intermittent connections. Changes to manufacturing procedures, harness design and routing, inspections, and testing through Nov. 2022 led to quality improvement reflected by zero loss of drive power incidents due to detection of intermittent connections after Nov. 2022. Lucid has determined that in 5,251 model year 2022 and 2023 U.S. vehicles manufactured prior to Dec. 2022, the possibility of intermittent hardware connections leading to loss of drive power while in Drive or Reverse due to HVIL logic poses an unreasonable risk to safety. The 10 occurrences in 5,251 Affected Vehicles are a 0.2% rate. The Remedy Software, transmitted to all customers via over-the-air update starting on June 24, 2024, modifies the HVIL logic to prevent removal of HV from the HV bus while in Drive or Reverse gear. Instead, a Drive System Warning with direction to contact customer care is displayed while in Drive or Reverse, and a Drive System Fault will occur once the vehicle is placed in Park or Neutral. Lucid is issuing this recall to notify Affected Vehicle owners of this safety risk and the availability of the Remedy Software.

Production Dates : OCT 22, 2021 - NOV 30, 2022

VIN Range 1 : Begin : NR

End : NR

Not sequential

Description of Defect :

Description of the Defect : Affected Vehicles are susceptible to intermittent hardware connection faults, which could lead the HVIL software to remove HV from the HV bus while driving.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : If the HVIL software removes HV from the HV bus while a vehicle is driving, the vehicle would lose propulsion without warning, which may increase the risk of a crash.

Description of the Cause : In Affected Vehicles, intermittent hardware connections could cause the HVIL

software to remove HV from the HV bus, resulting in loss of drive power. The 12-volt systems are not affected and would continue to provide power to steering, brakes, displays, and other systems.

Identification of Any Warning that can Occur : Before installation of the Remedy Software, no warning would be provided before loss of drive power.

Involved Components :

Component Name 1 : HVIL Software

Component Description : HVIL Software

Component Part Number : HVIL Software prior to version 2.2.10

Supplier Identification :

Component Manufacturer

Name : NR

Address : NR

NR

Country : NR

Chronology :

From December 29, 2021, to May 11, 2024, Lucid observed 10 instances in customer vehicles in which the HVIL software detected an intermittent hardware connection and removed HV power from the HV bus. Those 10 customer vehicles were manufactured between October 15, 2021, and November 19, 2022. Of the 10 customer vehicle occurrences, the HVIL detected at least 6 different intermittent hardware interruptions.

On April 1, 2024, Lucid engineers first raised a potential issue with HVIL occurrences to Lucid's Product Safety Working Group, which opened a PSWG investigation on April 18. Through June 18, 2024, the PSWG and Lucid engineering groups investigated the HVIL software logic, the nature of the underlying intermittent hardware occurrences, other potentially related hardware, and the development of harness design and routing, manufacturing processes, training, and testing. On June 24, 2024, the PSWG briefed Lucid's Product Safety Executive Council (PSEC) and the PSEC concluded an unreasonable risk to safety existed in vehicles manufactured prior to December 2022 due to intermittent hardware connections which could cause the HVIL software logic to remove HV from the HV bus, leading to unwarned loss of drive power.

Description of Remedy :

Description of Remedy Program : Owners of vehicles in the recall population who have not updated their software will be notified by email and first-class mail with instructions to update their software to the latest version and that they may contact Lucid Customer Care or a Lucid Service Center if they need assistance with software updates. There will be NO COST for this service. At NHTSA's direction, owners of vehicles in the recall population who have already updated their software will be notified by first-class mail and advised that no further action is required.

Lucid will reimburse owners for costs an owner reasonably incurred to obtain a remedy for this safety defect during the period starting from initial vehicle delivery through 10 days after Lucid's mailing of the owner notification letter concerning this defect. If an owner has such a claim for pre-notification reimbursement, they may contact Lucid Customer Care at 1-888-99-LUCID or 1-888-995-8243.

How Remedy Component Differs from Recalled Component : The hardware monitored by the HVIL software underwent changes to manufacturing procedures, harness design and routing, quality inspections, and testing through November 2022. The combination of these design, manufacturing and quality improvements is reflected in the zero occurrence rate for this defect in vehicles produced after November 2022.

Identify How/When Recall Condition was Corrected in Production : Changes to manufacturing procedures, harness design and routing, quality inspections, and testing implemented related to hardware monitored by the HVIL software occurred through November 2022. Since then, Lucid has detected no loss of drive power incidents caused by the HVIL logic due to detection of intermittent connections.

Recall Schedule :

Description of Recall Schedule : Owners of vehicles in the recall population who have not updated their software will be notified by email and first-class mail with instructions to update their software to the latest version and that they may contact Lucid Customer Care or a Lucid Service Center if they need assistance with software updates. There will be NO COST for this service. At NHTSA's direction, owners of vehicles in the recall population who have already updated their software will be notified by first-class mail and advised that no further action is required.

Planned Dealer Notification Date : JUL 01, 2024 - JUL 01, 2024

Planned Owner Notification Date : AUG 15, 2024 - AUG 29, 2024

* NR - Not Reported