

Part 573 Safety Recall Report

22V-090

Manufacturer Name : Lucid Motors, Inc.**Submission Date :** FEB 21, 2022**NHTSA Recall No. :** 22V-090**Manufacturer Recall No. :** N01**Manufacturer Information :**

Manufacturer Name : Lucid Motors, Inc.

Address : 7373 Gateway Blvd.

Newark CA 94560

Company phone : 1-510-648-3553

Population :

Number of potentially involved : 203

Estimated percentage with defect : 1 %

Vehicle Information :

Vehicle 1 : 2022-2022 Lucid Motors, Inc. Air (All grades)

Vehicle Type : LIGHT VEHICLES

Body Style : 4-DOOR

Power Train : NR

Descriptive Information : Lucid was initially notified by its supplier, Thyssenkrupp Bilstein (“Bilstein” or “Supplier”) of suspect parts, the front damper assemblies. The Supplier certified that as of January 10, 2022, only conforming parts were supplied to Lucid. Lucid implemented a production countermeasure that included quarantining all incoming parts from the supplier for inspection, inspecting all parts installed on vehicles, and replacing any affected parts. Based on this information, Lucid determined that suspect parts were installed on 188 vehicles built and delivered to customers during the period from October 22, 2021, to January 9, 2022. Lucid inspected and verified parts were conforming on all other vehicles produced during this period. On February 16, Supplier notified Lucid that due to a software failure in its new visual inspection system, and contrary to its previous certification, Supplier may have continued to ship suspect parts to Lucid until January 27, 2022. Supplier provided an expanded list of suspect parts serial numbers. From these serial numbers, Lucid identified 15 additional vehicles delivered to customers with suspect parts, manufactured through February 12, 2022. This brings the total vehicles subject to recall to 203. Supplier is implementing additional manufacturing inspections to inspect all damper assemblies at production and before shipment, and labeling all conforming parts as such. Lucid is inspecting all damper assemblies at its logistics warehouse, at its manufacturing plant, and installed in vehicles. As of February 20, Lucid has also implemented additional inspections at its logistics warehouse and manufacturing plant to prevent acceptance or installation of any suspect parts from Supplier in the future. Vehicles produced after this date range are not affected as they were produced after the production countermeasure was implemented.

Production Dates : OCT 22, 2021 - FEB 12, 2022

VIN Range 1 : Begin : 50EA1DCA6NA001017 End : 50EA1DAA4NA003397 Not sequential

Description of Defect :

Description of the Defect : The snap ring below the front damper lower spring seat may have been installed incorrectly by the Supplier which may result in snap ring failure, causing sudden loss of ride height, damping force, and possible damage to the front brake line hoses.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : Possible loss of vehicle control and possible diminished braking authority, leading to increased likelihood of an accident.

Description of the Cause : The cause was an incorrect build and inspection during the Supplier's manufacturing process. The Supplier reported that it may have installed some spring seat snap rings upside down, which may result in the snap ring failing and loss of spring seat retention.

Identification of Any Warning that can Occur : The driver would not receive a warning prior to a front damper snap ring failure. If the failure caused damage to the electrical connections to the damper solenoids, the driver would receive a warning message stating "Suspension Control Fault. Contact Service Center." If the failure resulted in a brake hose leak, the driver would not receive any immediate warning. If the brake fluid level fell below 81.9% of the minimum recommended reservoir brake fluid volume, the driver would receive a warning message stating "Brake Fluid Level Low. Refill Required, Contact Service Center," with an accompanying audible warning.

Involved Components :

Component Name 1 : Thyssenkrupp Bilstein

Component Description : Front Left Damper Spring Assembly

Component Part Number : P11-SDFSL1-01/-02

Component Name 2 : Thyssenkrupp Bilstein

Component Description : Front Right Damper Spring Assembly

Component Part Number : P11-SDFSR1-01/-02

Supplier Identification :

Component Manufacturer

Name : Thyssenkrupp Bilstein of America
Address : 8685 Bilstein Boulevard
Hamilton Ohio 45015
Country : United States

Chronology :

On Jan. 6, 2022, Supplier notified Lucid that a failure of Supplier's vision system allowed for incorrect installation of spring seats on front damper assemblies. On Jan. 7, Lucid began a containment protocol to quarantine potentially affected parts. By Jan. 10, Lucid quarantined all parts and began inspecting all quarantined and already installed parts.

On Jan. 13, this matter was raised as a safety concern to Lucid's Product Safety Working Group (PSWG). The PSWG reviewed Supplier's fatigue testing of incorrectly installed parts, which showed such parts could fail at between 4% and 44% of design life. Lucid began analysis of the impact of a failure on vehicle controllability, the likelihood of a spring seat contacting the vehicle's braided brake lines, and the impact thereof.

On Feb. 2, Supplier communicated to Lucid that, "The durability life ... can happen at extremely low cycle counts. ... The Bilstein recommendation based on the information we have is that this condition needs to be assessed on vehicles."

On Feb. 3, the Lucid PSWG met to consider Supplier's recommendation and additional analysis by Lucid engineers. Analysis of vehicle controllability impacts indicated that the front corner experiencing a failure would drop downwards and the diagonally opposite corner would experience reduced loading, resulting in degraded steering and braking performance. Analysis of the failure on braided brake lines was ongoing. It was unknown whether the damper would contact the brake lines and if it did, whether the brake lines would be damaged. Assuming the braided brake lines were damaged and a leak occurred, over time, worst case loss of braking authority would be a reduction of 50%.

On Feb. 7, the PSWG briefed Lucid's Product Safety Executive Council (PSEC) on the issue. On Feb. 9, the PSEC concluded that, out of an abundance of caution, Lucid would conduct a recall of affected vehicles.

Description of Remedy :

Description of Remedy Program : All owners of subject vehicles will be notified by first class mail with instructions to bring their vehicles to Lucid studios or Lucid satellite service centers for inspection and replacement, if necessary, of front strut dampers AT NO COST to the customer. Technicians will perform a visible inspection of the left and right front damper assemblies for proper snap ring installation. If technicians identify an incorrect snap ring orientation on either damper assembly, Lucid will replace the affected damper assembly AT NO COST to the customer.

How Remedy Component Differs : The Supplier initially replaced the detection system in its assembly process and certified to Lucid that all subsequent front damper assemblies

from Recalled Component : were being produced with the snap ring installed in the correct orientation. Supplier is correcting the detection system software error, implementing parts inspections at manufacture and shipment, and labeling all conforming parts for easy verification.

Identify How/When Recall Condition was Corrected in Production : On January 6, 2022, the Supplier notified Lucid of the possibility of spring seats installed incorrectly. On January 7, Lucid implemented a containment protocol to quarantine all potentially affected parts received. By January 10, all received parts were quarantined at the Lucid factory, and Lucid began inspecting all quarantined parts and all parts installed on vehicles. Bilstein certified that all parts supplied after January 10 were OK. Lucid established an initial clean point for production on January 10, 2022.

On February 16, Supplier notified Lucid that due to a software failure in its new visual inspection system, and contrary to its previous certification, Supplier may have continued to ship suspect parts to Lucid until January 27, 2022. Supplier provided an expanded list of serial numbers of suspect parts. From these part serial numbers, Lucid identified 15 additional vehicles delivered to customers with suspect parts, which were manufactured through February 12, 2022. Supplier is implementing additional manufacturing inspections to inspect all damper assemblies at production and before shipment, and labeling all conforming parts as such. Lucid is inspecting all damper assemblies at its logistics warehouse, at its manufacturing plant, and installed in vehicles. As of February 20, Lucid has also implemented additional inspections at its logistics warehouse and manufacturing plant to prevent acceptance or installation of any suspect parts from Supplier in the future.

Recall Schedule :

Description of Recall Schedule : NR
Planned Dealer Notification Date : FEB 16, 2022 - FEB 17, 2022
Planned Owner Notification Date : FEB 24, 2022 - FEB 25, 2022

* NR - Not Reported