

# Part 573 Safety Recall Report

# 23V-776

**Manufacturer Name :** Xos, Inc.**Submission Date :** NOV 17, 2023**NHTSA Recall No. :** 23V-776**Manufacturer Recall No. :** REC 004-23**Manufacturer Information :**

Manufacturer Name : Xos, Inc.

Address : 3550 Tyburn St.  
Los Angeles CA 90065

Company phone : 316-1890

**Population :**

Number of potentially involved : 97

Estimated percentage with defect : 100 %

**Vehicle Information :**

Vehicle 1 : 2021-2022 Xos SV05

Vehicle Type : BUSES, MEDIUM &amp; HEAVY VEHICLES

Body Style : OTHER

Power Train : NR

**Descriptive Information :** The recall population was determined by production records. The recalled products differ from other products that were not included in the recall because, during the specified production period, vehicles may have been produced with an electronic parking brake that may malfunction under certain circumstances. The recall population includes 97 Xos SV05 vehicles as potentially involved vehicles.

Production Dates : OCT 31, 2022 - AUG 04, 2023

VIN Range 1 : Begin : NR End : NR

 Not sequential**Description of Defect :**

**Description of the Defect :** In certain vehicles, the electronic parking brake (EPB) controller system was programmed by the supplier with defective software. The software installed in the EPB controller was not properly sending failure messages to the vehicle controller when caliper failures occurred, and therefore an EPB malfunction warning would not appear on the dash.

Separately, in certain vehicles the AC compressor generated electromagnetic interference (EMI) to its ground which was shared with the EPB controller.

Either instance may cause the EPB controller to lose connection with the vehicle controller, in which case the EPB may malfunction or fail to engage and the driver may not receive warning that the EPB system has malfunctioned or not engaged.

FMVSS 1 : NR

FMVSS 2 : NR

**Description of the Safety Risk :** The malfunction may cause the EPB not to engage, or to fail to disengage.

If the EPB cannot be engaged and the driver does not receive a warning, and the Manual Park Brake warning is ignored, and the vehicle is parked on a grade, the vehicle could rollaway, increasing the risk of a crash.

If the EPB cannot be disengaged, the vehicle may be immobilized.

**Description of the Cause :** The EMI ground issue was caused by a failure to install an EMI filter with the EPB controller.

The EPB controller issue was caused by a defect in the software the supplier installed in the EPB controller.

**Identification of Any Warning that can Occur :** NR

## Involved Components :

**Component Name 1 :** Dual Caliper Controller

**Component Description :** NR

**Component Part Number :** VN00-MB-M0039

## Supplier Identification :

### Component Manufacturer

**Name :** Wilwood Engineering

**Address :** 4700 Calle Bolero  
Camarillo California 93012

**Country :** United States

## Chronology :

In December 2022, Xos became aware of an EPB malfunction in a vehicle in which the EPB caliper did not disengage and there was no failure indicated from the EPB controller. At Xos's request, the supplier of the EPB controller investigated the issue and identified an issue in the component software resulting in failure codes not being sent on caliper failure. The supplier requested software changes from their component supplier and began validating the updated component software in January 2023. Xos began performing testing on the updated component software in March 2023.

In June 2023, the Xos engineering team separately concluded that EMI generated by the AC compressor, which is on the same electrical ground as the EPB, could result in EPB controller messaging failure to the vehicle controller. Testing conducted throughout June 2023 identified the installation of a filter to address the EMI.

On November 13, 2023 the topic was presented to Xos's Product Safety Committee. Based upon the information presented, the Product Safety Committee decided to initiate a recall to address this condition. There have been 18 reports related to this issue, dating from September 20, 2022 to August 17, 2023, with no reports of accidents or injuries related to this condition.

## Description of Remedy :

**Description of Remedy Program :** The affected hardware on the impacted vehicles will be replaced at no cost to customers. All of the subject vehicles remain under the manufacturer's warranty. Therefore, pursuant to 49 CFR 577.11 ( e), Xos requests an exemption from the reimbursement plan requirements.

**How Remedy Component Differs from Recalled Component :** The recall remedy components can be distinguished from the recalled components because the remedy components will respectively address the EMI and contain updated software in the EPB controller component from the supplier. In addition, the vehicle software system will be updated to include a warning that displays instructing the driver to engage the manual parking brake any time the vehicle is placed into park, instead of only displaying when the EPB fails to engage.

**Identify How/When Recall Condition was Corrected in Production :** Vehicles shipped after August 5, 2023 were produced with an EPB system that is not impacted by this recall.

## Recall Schedule :

**Description of Recall Schedule :** Customers and Dealers will be notified of the pending voluntary recall campaign beginning in December 2023. Copies of communications will be provided when available.

**Planned Dealer Notification Date :** DEC 04, 2023 - DEC 04, 2023

**Planned Owner Notification Date :** JAN 04, 2024 - JAN 04, 2024

\* NR - Not Reported