



U.S. Department
of Transportation

National Highway
Traffic Safety
Administration

Part 573 Safety Recall Report

25V587

Manufacturer Name: Zero Motorcycles Inc.

Submission Date: Sep 15, 2025

NHTSA Recall No.: 25V587

Manufacturer Recall No.: SV-RCL-025-018

Manufacturer Information

Population

Manufacturer Name: Zero Motorcycles Inc.

Address: 380 El Pueblo Road
Scotts Valley CA, 95066

Total number of potentially involved: 319

Estimated percentage with defect: 0.6%

Vehicle Information

Vehicle 1: 2023-2023 ZERO DSR/X

Product Category: Motorcycles

Product Type: Motorcycles

Fuel / Propulsion: Electric Battery Power

Production Dates: Apr 04, 2022 - Mar 24, 2023

Number of potentially involved: 255

Descriptive Information:

This motorcycle model family has a unique assembly process than other model families within Zero's motorcycle line up.

Vehicle 2: 2024-2024 ZERO DSR

Product Category: Motorcycles

Product Type: Motorcycles

Fuel / Propulsion:

Production Dates: Apr 17, 2023 - Mar 07, 2024

Number of potentially involved: 10

Descriptive Information:

This motorcycle model family has a unique assembly process than other model families within Zero's motorcycle line up.

Vehicle 3: 2024-2024 ZERO DSR/X

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25V587**Product Category:** Motorcycles**Product Type:** Motorcycles**Fuel / Propulsion:****Production Dates:** Apr 17, 2023 - Mar 07, 2024**Number of potentially involved:** 23**Descriptive Information:**

This motorcycle model family has a unique assembly process than other model families within Zero's motorcycle line up.

Vehicle 4: 2024-2024 ZERO DS**Product Category:** Motorcycles**Product Type:** Motorcycles**Fuel / Propulsion:****Production Dates:** Apr 17, 2023 - Mar 07, 2024**Number of potentially involved:** 17**Descriptive Information:**

This motorcycle model family has a unique assembly process than other model families within Zero's motorcycle line up.

Vehicle 5: 2024-2024 ZERO DSRP**Product Category:** Motorcycles**Product Type:** Motorcycles**Fuel / Propulsion:****Production Dates:** Apr 17, 2023 - Mar 07, 2024**Number of potentially involved:** 14**Descriptive Information:**

This motorcycle model family has a unique assembly process than other model families within Zero's motorcycle line up.

Defect / Noncompliance Description

Description of the defect or noncompliance:

A low number of field cases have been reported involving damage to the key switch signal wires due to specific harness routing conditions. Although the overall failure rate is low, the nature of the failure may

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result in a sudden loss of propulsion while riding, which poses a potential safety risk.

The failure occurs when the key switch wires break as a result of one of two conditions:

- o Connector contact with the headtube – In certain harness routing configurations, the key switch connector is positioned too close to the headtube. Normal steering motion and vibration can cause the connector or attached wires to flex or press against the frame, leading to wire fatigue and eventual breakage.
- o Over-constrained harness at zip tie – In some cases, the harness is secured too tightly with a zip tie, creating a pinch point that places excessive stress on the key switch wires. This mechanical strain can cause internal wire fatigue and breakage over time, particularly under vibration or steering movement. In both scenarios, a broken wire results in the loss of the key switch signal. Under current system behavior, this signal loss causes an immediate shutdown of propulsion, even if the vehicle is in motion. While this response is consistent with the system's existing design, it may increase the risk of a crash if the rider is unable to safely maneuver or bring the motorcycle to a controlled stop.

FMVSS1:

FMVSS2:

Description of the safety risk, including crash, fire, death, injury:

If the key switch signal is lost during riding, the current system behavior causes immediate shutdown of propulsion without warning, which may result in a sudden and unexpected loss of forward motion, which could lead to a crash, injury, or death.

Description of the cause:

The loss of propulsion is caused by a break in the key switch signal wire due to mechanical stress in the harness. Two distinct failure modes have been identified:

- Connector contact with the headtube – In certain harness routing configurations, the key switch connector is positioned too close to the headtube. Normal steering motion and vibration can cause the connector or attached wires to flex or press against the frame, leading to wire fatigue and eventual breakage.
- Over-constrained harness at zip tie – In some cases, the harness is secured too tightly with a zip tie, creating a pinch point that places excessive stress on the key switch wires. This mechanical strain can cause internal wire fatigue and breakage over time, particularly under vibration or steering movement.

Identification of any warning that can occur:

In some cases, riders reported intermittent symptoms prior to the failure, such as brief loss of power. However, not all incidents were preceded by warning signs. In several cases, the vehicle shut off abruptly at very low speeds without any prior indication, making the failure unpredictable.

Component Manufacturer

Tier of Supplier:

Supplier Type:

Name:

Address:

Country:

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Involved Components

Component Name 1: Ignition Switch**Component Description:** ZADI IMMOBILIZER MAIN SWITCH KEYED LOCKS AND OVERMOLDED KEYS SET WITHOUT BEZEL**Component Part Number:** 27-08133

Chronology

- o In 2023, Zero Motorcycles received an initial case related to intermittent startup issues, which was traced to the ignition switch circuit.
- o In 2024 Zero Motorcycles received 4 more cases, all diagnosed to be related to the ignition switch.
- o In 2025, Zero Motorcycles received five additional cases, one of which involved intermittent power loss while riding and a low-speed tip-over. No injuries were reported. Due to this warranty claim, Zero Motorcycles reviewed historic warranty claims and found these 10.
- o The Quality Engineering Team requested several ignition switch assemblies from the field for inspection. The investigation concluded that the switches themselves were not at fault; instead, the wiring exhibited damage consistent with tension and stress related to harness routing.

On September 5, 2025, the Product Integrity Team at Zero Motorcycles reviewed the claim history and determined that the root cause was wire damage resulting from stress and fatigue in the ignition switch harness due to certain routing conditions and over-constraint. While the motorcycles were built according to the existing design standard, certain routing conditions have proven vulnerable to wire fatigue over time.

Given the potential for power loss while riding, the team recommended a voluntary safety recall. A firmware revision was developed to mitigate the risk by detecting a loss of key switch signal and allowing the vehicle to remain operational, transitioning to a limited-power ("limp") mode after deceleration. Zero Motorcycles is aware of one incident involving a dropped motorcycle, with no injuries reported.

Related NHTSA Recall Number:

Description of Remedy

Remedy Type: Software, Software OTA**Consumer Advisories:** ☐ Do Not Drive ☐ Park Outside**Description of remedy program:**

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o The remedy will consist of a firmware revision that modifies the system's response to key switch signal loss while riding. If the signal is lost, a warning will appear on the dash, and the motorcycle will remain fully operational. After decelerating to 40 kph, the system will transition into a limited-power ("limp") mode. The vehicle will remain in this state until it comes to a complete stop and the key is turned off.

Should any customer experience this issue, all necessary repairs will be performed free of charge, and the manufacturer will reimburse any owner who previously paid for such repairs.

How remedy component differs from recalled component:

Remedied vehicles will include a firmware update that prevents sudden propulsion loss by detecting key switch signal interruption and initiating a controlled transition into limp mode after deceleration. Additionally, updated harness routing and zip tie orientation will reduce mechanical stress on the ignition switch wires.

Identify how/when recall condition was corrected in production:

Zero Motorcycles production began rerouting the ignition switch connector and wire harness on July 24, 2025 starting with VIN PAGDZAZ82TP002697.

This change reduces mechanical stress and prevents headtube contact, significantly lowering the risk of wire breakage.

Reimbursement Plan

Description of reimbursement program:

Owners that decide to have a dealer perform the FW update will generate a dealer warranty claim. Owners using the OTA update will be able to complete the remedy with minimal inconvenience.³¹

Period of reimbursement:

Firmware updates are covered for the life of the motorcycle.

Costs to be reimbursed:

Dealer's labor rate x .30 of an hour.

Address for reimbursement claims:

Recall Schedule

Description of recall schedule:

First notification of recall with a follow up notification of the remedy. Owner notification of recall with instructions for updating via OTA or dealer visit.

Planned Dealer Notification Date: Sep 11, 2025 - Sep 29, 2025

☐ No Dealers

Planned Interim Owner Notification Date: Sep 29, 2025 - Oct 10, 2025

☐ No Owners

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Planned Remedy Owner Notification Date: Sep 29, 2025 - Oct 10, 2025 ☐ Phased Recall

Date when VIN will be searchable: Sep 29, 2025