



Nissan North America, Inc.

One Nissan Way
Franklin, TN 37067

Mailing Address:
PO Box 685001
Franklin, TN 37068

July 25, 2024

Ms. Eileen Sullivan
Associate Administrator for Enforcement
National Highway Traffic Safety Administration
Attn: Recall Management Division (NVS-215)
Room W48-302
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Dear Ms. Sullivan:

We are transmitting the enclosed Defect Information Report in accordance with 49 CFR Part 573. A voluntary recall campaign will be initiated and your office provided with the notices.

Very truly,

A handwritten signature in black ink, appearing to read "Will Swindell".

Will Swindell
Manager,
Technical Compliance

Encl.

DEFECT INFORMATION REPORT

1. Manufacturer:

Nissan Motor Co., Ltd. Tochigi Plant

2. Vehicles Potentially Involved:

Certain Model Year 2023 Nissan Ariya vehicles as shown in the table below:

<u>Model</u>	<u>Dates of Manufacture</u>	<u>Plant</u>
MY 2023 Nissan Ariya	September 8, 2022 – May 8, 2023	Tochigi

Based on Nissan production records, the issue (as described in Section 5 below) occurred on certain Model Year 2023 Ariya vehicles that were built with the subject component during the affected production period in the table above. All of these vehicles have been previously recalled under Recall 23V-657 (Nissan Ariya Inverter). Nissan Ariya vehicles that have received the reprogramming remedy for Recall 23V-657 no longer contain the issue (as described in Section 5 below) and are not included in this recall.

Based on Nissan recall campaign completion records, the issue (as described in Section 5 below) is present on certain Model Year 2023 Ariya vehicles that have not yet been repaired under the Recall 23V-657. This concern could potentially affect both 2WD and 4WD models.

Due to the unique electric motor type utilized on the vehicle, this issue affects only Nissan Ariya. No other Nissan or INFINITI vehicles are affected.

The name, description and part number of the subject components are below:

<u>Part Name</u>	<u>Part Description</u>	<u>Part Number</u>
Inverter – Power Electronics Box (PEB)	Inverter 2WD	291A0 5MP3G
Inverter – Power Electronics Box (PEB)	Inverter FR 4WD	291A0 5MP5G
Inverter – Power Electronics Box (PEB)	Inverter RR 4WD	291A0 5MP7G

3. Total Number of Vehicles Potentially Involved:

Approximately 1,188 MY 2023 Nissan Ariya vehicles total.

4. Percentage of Vehicles Estimated to Actually Contain the Defect:

Approximately 100%.

5. Description of the Defect:

On affected Ariya vehicles, the current sensor inside the battery junction box may detect a gap in the current ripple frequency of the motor while operating at high speeds. The misdiagnosis results in the inverter's Power Electronics Box (PEB) taking a protective measure by cutting the motor's torque. If this occurs, affected vehicles may experience fail-safe mode resulting in a sudden loss of motive power without prior warning, increasing the risk of a crash. The fail-safe mode is released following a vehicle power off and restart.

In this condition, a malfunction indicator lamp (MIL) and a warning message "EV System OFF" will illuminate on the instrument cluster display.

6. Chronology of Principal Events:

In April 2023, Nissan received a report of an incident in a foreign market, indicating that a Model Year 2023 Ariya vehicle went into fail-safe mode and shut off the electric motor while driving at high speeds. Nissan launched an investigation.

May 2023 – The incident vehicle was brought to a Nissan dealer. The dealer inspection revealed that the vehicle's Diagnostic Trouble Code (DTC) code showed that the current sensor in the junction box had detected an electrical abnormality, which caused a fail-safe mode activation, resulting in a sudden loss of motive power without prior warning.

June 2023 through September 2023 – Nissan continued to investigate the cause of the electrical abnormality. During this time, Nissan conducted in-vehicle driving tests and chassis dynamometer testing to recreate the concern. However, the issue could not be reproduced. Additionally, no abnormalities were found when the junction box was investigated.

September 28, 2023 – Nissan launched Recall 23V-657 to reprogram the inverter on Model Year 2023 Ariya vehicles to improve fail-safe protocols related to detection of an unrelated momentary over-current condition due to a short circuit caused by conductive fibrous shavings in the subject components.

December 2023 through February 2024 – Nissan initiated a field parts collection activity of warranty return parts to assess the electrical anomaly and fail-safe activation.

March 2024 through June 2024 – Nissan collected seven (7) warranty field return parts in US market. Nissan worked together with the supplier to conduct a thorough investigation. Although no abnormality was found, the investigation revealed the battery junction box electrical current sensor in the subject components may misdiagnose an error when it detects a gap in the current ripple frequency of the motor while operating at certain high speed conditions. The misdiagnosis results in fail-safe mode of the inverter's Power Electronics Box (PEB) to cut the motor's torque, and the vehicle may experience a sudden loss of motive power without prior warning. The fail-safe mode is released after the vehicle is completely powered off, allowing for a possible restart.

July 18, 2024 - Nissan decided to conduct a Voluntary Safety Recall to update the inverter/motor controller software to improve fail-safe protocols for any vehicles that may still have the subject components with the affected programming.

Nissan has confirmed a total of sixteen (16) warranty reports related to the subject condition. Nissan is not aware of any accident or injuries related to the subject condition.

7. Description of Corrective Action:

Dealers will be notified of the recall beginning July 30, 2024. Beginning on September 9, 2024, owners of all potentially affected vehicles will be notified to bring their Ariya vehicle to a Nissan dealer for an inspection. Dealers will verify whether the vehicle received the inverter software reprogram from Recall 23V-657 which improved fail-safe protocols:

- If the Recall 23V-657 reprogram was performed, no additional action is necessary.
- If the Recall 23V-657 reprogram was not performed, dealers are instructed to reprogram the inverter to improve the fail-safe protocols.

All inspections will be performed free of charge for labor and should take less than one half (0.5) hour to complete. If a repair is necessary, the dealer will reprogram the Inverter's Power Electronic Box with updated software to improve fail-safe protocols. For All-Wheel-Drive (AWD) vehicles, both front and rear inverters will need to be reprogrammed. This repair will also be performed free of charge for labor and may take up to one and a half (1.5) hours to complete.

Nissan will not include a statement in the Part 577 owner notification concerning reimbursement for the cost of obtaining a pre-notification remedy since the subject vehicles are under warranty.

8. Copy of Notices:

Copies of all notices will be provided to NHTSA as they become available.