

Part 573 Safety Recall Report

25V-217

Manufacturer Name : Isuzu Motors Limited

Submission Date : APR 08, 2025

NHTSA Recall No. : 25V-217

Manufacturer Recall No. : V2502



Manufacturer Information :

Manufacturer Name : Isuzu Motors Limited

Address : 46401 Commerce Center Drive
Plymouth MI 48170-2473

Company phone : 6344648

Population :

Number of potentially involved : 73

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2025-2025 ISUZU NRR-EV

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : HYBRID ELECTRIC

Descriptive Information : This recall applies to all 2025MY Isuzu NRR-EV vehicles that were filled at the factory with Valvoline Zerex Dex Cool coolant.

Production Dates : AUG 29, 2024 - JAN 24, 2025

VIN Range 1 : Begin : 54DE5W1V0SSE00005 End : 54DE5W1V2SSE00250 ☒ Not sequential

Description of Defect :

Description of the Defect : Isuzu has received reports of loss of propulsion in the affected vehicles. Although Isuzu has not definitively identified the root cause, it believes, based on its investigation, that the Valvoline Zerex Dex Cool coolant in these vehicles may react with additives in the Valvoline G40 coolant and components within the Electric Vehicle (EV) drive motor cooling system, and may be forming debris and causing the EV cooling system to malfunction. In incident vehicles, Isuzu has observed debris which may condense into a black gel-like substance which, in turn, adheres to the cooling pump shaft, causing the rotor assembly to seize to the shaft. In the event the EV system cooling pump ceases to operate, the EV drive motor and inverter temperatures will increase. As coolant temperature increases, the vehicle control system responds by entering a reduced power mode to prevent thermal damage to the EV drive motor system components. Continued operation of the vehicle in this state results in a progressive reduction of motor torque, up to and including a total loss of propulsion.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk :	<p>If the EV system cooling pump stops functioning, the following events will occur – increasing the risk of a crash:</p> <ul style="list-style-type: none">• The electric drive motor torque will initially be reduced from 100% to 75%.• Continued operation of the vehicle will result in a total loss of propulsion.
Description of the Cause :	<p>In the Isuzu EVs, the electric drive motor manufacturer prefills the EV drive motor cooling circuit with Valvoline G40 coolant. Although Isuzu has not definitively identified the root cause, it believes, based on its investigation, that the Valvoline Zerex Dex Cool coolant in these vehicles may react with additives in the Valvoline G40 coolant and components within the EV drive motor cooling system, and may be forming debris and causing the EV cooling system to malfunction. In incident vehicles, Isuzu has observed debris which may condense into a black gel-like substance which, in turn, adheres to the EV system cooling pump shaft, causing the rotor assembly to seize to the shaft.</p>
Identification of Any Warning that can Occur :	<ul style="list-style-type: none">• First, a Red EV System malfunction and triangle ! icon will illuminate on the instrument cluster.• Upon illumination of the Red EV System malfunction and triangle ! icon, the electric drive motor torque will be reduced from 100% to 75%.• Continued operation of the vehicle will illuminate a turtle icon on the instrument cluster.• Upon illumination of the turtle icon, the electric drive motor torque will be further reduced from 75% to 0% to prevent thermal damage of the EV drive motor and inverter.

Involved Components :

Component Name 1 : Pump, Cooling

Component Description : EV System Cooling Pump

Component Part Number : 8978715890

Supplier Identification :

Component Manufacturer

Name : Aisin Corporation

Address : 2-1 Asahi-machi

Kariya, Aichi Foreign States 448-8650

Country : Japan

Chronology :

On January 23, 2025, Isuzu received a Technical Assistance Case reporting loss of vehicle propulsion on a NRR EV truck. Isuzu promptly began an investigation, including collecting relevant parts and conducting duplication testing.

In February, Isuzu continued its investigation. Six additional reports of reduced power mode related to loss of propulsion were received. Upon inspecting the incident vehicles, Isuzu observed small black debris floating in the coolant tank of one vehicle, and black gel-like material adhered to the metal rotor shaft of the EV drive motor/system coolant pump on other vehicles. Isuzu also confirmed that the incident vehicles lost all vehicle propulsion when the coolant pump rotor seized to the pump shaft. Testing confirmed that the black gel-like deposits found inside the coolant pumps of affected vehicles contained components derived from the coolant.

In March, Isuzu focused its investigation on the coolant used in the coolant system, including reproduction testing to confirm contribution of the specific coolant used in the NRR EV trucks in the United States. Isuzu’s investigation also revealed that NRR EV trucks manufactured in Japan use a different coolant in the cooling system and have had no incidents of pump seizure.

On April 1, 2025, Isuzu made a decision to conduct a safety-related recall to address this issue. Isuzu has received a total of 8 reports of loss of propulsion related to this issue. Isuzu is not aware of any crashes, fatalities or injuries associated with this issue.

Description of Remedy :

Description of Remedy Program :	Dealers will replace the EV System cooling pump in the affected vehicles and flush, drain, and refill all three cooling systems with Besco Type E coolant. Before this remedy, if dealers verify the coolant level is full, dealers will determine whether the coolant level sensors are illuminating the insufficient coolant message on the multi-informational display. In the event the insufficient coolant message is illuminating erroneously (when all three coolant reservoirs are full), the level sensors for all three systems will be replaced also. In addition, dealers will provide owners with an Owner’s Manual page to replace the page in the current manual regarding what coolants to use when it is necessary to replace or refill the coolant. The new page will specify for owners a commercially available coolant or specification that will not cause the problems described in this 573 Report. Finally, the dealers will replace the under-cab label regarding the type of coolant to use when replenishing coolant with a new label that also will specify for owners a commercially available coolant or specification that will not cause the problems described in this 573 Report.
How Remedy Component Differs from Recalled Component :	The Besco Super Type E coolant is formulated with additives that are compatible with Valvoline G40 coolant and the NRR-EV system’s components. There is no inherent problem with the Valvoline Zerex Dex Cool coolant itself, but it appears to contain additives that are not compatible with Valvoline G40 coolant and the NRR-EV system.

Identify How/When Recall Condition was Corrected in Production :	A Stop Ship at the factory was placed on 2025MY Isuzu NRR-EV vehicles on March 25, 2025. (By that date, production of 2025MY Isuzu NRR-EV vehicles was finished.) 2026MY NRR-EV vehicles will be produced with Besco Super Type E coolant.
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Recall Schedule :

Description of Recall Schedule :	Isuzu dealers and owners will be informed that the recall remedies will be provided free of charge. For additional information, Isuzu owners may contact Isuzu Customer Relations at 1-866-441-9638.
Planned Dealer Notification Date :	APR 08, 2025 - MAY 23, 2025
Planned Owner Notification Date :	MAY 30, 2025 - MAY 30, 2025

* NR - Not Reported