Part 573 Safety Recall Report 23V-083

Manufacturer Name : New Flyer of America, Inc.
Submission Date : APR 21, 2023
NHTSA Recall No. : 23V-083
Manufacturer Recall No. : R23-002

Manufacturer Information :

Manufacturer Name : New Flyer of America, Inc.
Address : 711 Kernaghan Avenue
Winnipeg, MB 00 R2C3T4
Company phone : 204-224-6706

Population :

Number of potentially involved : 219
Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2021-2023 New Flyer XE35, XE40, XE60
Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES
Body Style : OTHER
Power Train : NR
Descriptive Information : The recall population was determined based on the specific type of ESS used.

Product difference will be determined when the remedy is defined.

Affected models and MY:
2021 XE35 - 8
2022 XE35 - 28
2021 XE40 - 71
2022 XE40 - 83
2023 XE40 - 3
2021 XE60 - 24
2022 XE60 - 2

Production Dates : MAR 31, 2021 - FEB 13, 2023
VIN Range 1 : Begin : NR End : NR ☐ Not sequential

Description of Defect :

Description of the Defect : Buses in the recall population may allow liquid accumulation in the ESS unit that may not be detected.
FMVSS 1 : NR
FMVSS 2 : NR
Description of the Safety Risk : If a leak occurs inside of an ESS and is uncorrected, liquid can accumulate, leading to an electrical short, increasing the risk of a fire.
Description of the Cause : Root-cause is unknown at this time. As inspections progress, New Flyer will analyze any ESS with liquid present and address.

Identification of Any Warning that can Occur :	If the bus is on, warning lights on the dash would indicate an issue with a high voltage isolation fault.

Involved Components :

Component Name 1 :	ASSY-ENCLOSURE
Component Description :	ESS enclosure, fiberglass
Component Part Number :	822311

Supplier Identification :

Component Manufacturer

Name :	New Flyer of America
Address :	106 National Drive Anniston Alabama 36201
Country :	United States

Chronology :

July, 2022, An electric bus at a customer's site was reported with a no-start condition. Prior to arrival of our Service technician, the lower rear battery enclosure was reported to be smoking, and the bus was moved outside. Ultimately, a thermal event with runaway occurred on July 27, 2022. August through October, 2022: investigation continues while reviewing data from the bus, as well as from other electric buses. The event bus's rear battery enclosures (upper and lower) were removed, quarantined, and scheduled for thorough teardown and review with multiple parties. The review of enclosure was inconclusive due to extent of damage, but internal markings indicated possible fluid collection inside the lower enclosure. November, 2022 through January, 2023: Testing and validation continued with our Service and Engineering teams.

January 18, 2023, An electric bus at a customer's site was reported with a no-start condition, and reported the lower, rear battery enclosure smoking, and the bus was moved outside. Upon our Service technician's arrival, no smoke was evident, thermal imaging showed no measurable elevation in temperature of the suspect enclosure and remained steady throughout the day. Both rear enclosures were removed from the bus and placed in a secure location. The enclosure was reviewed at the customers site the following week. Physical inspection showed internal markings that indicated possible fluid collection inside the lower enclosure. January 30th through February 8th, data analysis continues, and physical bus inspections occur. Two other enclosures were found among the buses on-site with liquid inside.

As the symptoms indicate similarity between the events, and finding of liquid, these were deemed sufficient for

formal review on February 10th, and a special Safety Committee meeting was scheduled for February 13th. The latter meeting resulted in a recall determination.

Description of Remedy :

Description of Remedy Program :	The remedy is currently being determined. In the interim, buses in the recall population will be inspected for liquid in the ESS units and addressed accordingly. New Flyer will add 4 automatic activating drain valves in each ESS assembly. This remedy may occur in 2 phases. 1) Apply appropriate holes in the ESS and install adhere a threaded port with a plug. 2) Install the automatic drain valves (expected to be available in June/July-2023). If customers have costs associated with this recall, reimbursement will occur through New Flyer's normal warranty process.
How Remedy Component Differs from Recalled Component :	The remedy is currently being determined. Current ESS do not have drain valves - these will be noticeable by the additional ports in the ESS
Identify How/When Recall Condition was Corrected in Production :	The remedy is currently being determined. Shipments of affected buses were halted. Buses in the production cycle will have the same remedy installed, prior to release/sale.

Recall Schedule :

Description of Recall Schedule :	Notifications will be issued soon after approval of the Interim Draft letter. Letter with the remedy described will be uploaded for review/comment the week of 24-April-2023, and sent shortly after comments are received. A final customer notification letter will be drafted and sent once the remedy is defined and the letter is approved.
Planned Dealer Notification Date :	FEB 20, 2023 - FEB 20, 2023
Planned Owner Notification Date :	FEB 20, 2023 - FEB 20, 2023

* NR - Not Reported