

Part 573 Safety Recall Report

21V-244

Manufacturer Name : New Flyer of America, Inc.**Submission Date :** APR 12, 2021**NHTSA Recall No. :** 21V-244**Manufacturer Recall No. :** R21-005**Manufacturer Information :**

Manufacturer Name : New Flyer of America, Inc.

Address : 711 Kernaghan Avenue

Winnipeg, MB Canada 00 R2C3T4

Company phone : 204-224-6706

Population :

Number of potentially involved : 227

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2013-2021 New Flyer XE40

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : HYBRID ELECTRIC

Descriptive Information : The supplier of the inverters used on the electric drive system for this model vehicle contacted New Flyer to indicate the potential for the firmware errors to cause an unexpected shut down of the electric drive system This issue would affect all Siemens ELFA2 Inverters delivered to New Flyer since January 2017 as well as select older buses upgraded to the ELFA 2 inverter after January of 2017. New model Siemens ELFA3 inverters do not have this problem.

Production Dates : AUG 20, 2013 - DEC 17, 2020

VIN Range 1 : Begin : 5FYB8FJ03DB043244 End : 5FYB8FJ19MB075446 Not sequential

Vehicle 2 : 2019-2021 New Flyer XE35

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : HYBRID ELECTRIC

Descriptive Information : The supplier of the inverters used on the electric drive system for this model vehicle contacted New Flyer to indicate the potential for the firmware errors to cause an unexpected shut down of the electric drive system This issue would affect all Siemens ELFA2 Inverters delivered to New Flyer since January 2017. New model Siemens ELFA3 inverters do not have this problem.

Production Dates : DEC 21, 2018 - DEC 15, 2020

VIN Range 1 : Begin : 5FYB8KJ19KF071606 End : 5FYB8KJ0XMF075562 Not sequential

Vehicle 3 : 2018-2021 New Flyer XE60

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : HYBRID ELECTRIC

Descriptive Information : The supplier of the inverters used on the electric drive system for this model vehicle contacted New Flyer to indicate the potential for the firmware errors to cause an unexpected shut down of the electric drive system This issue would affect all Siemens ELFA2 Inverters delivered to New Flyer since January 2017. New model Siemens ELFA3 inverters do not have this problem.

Production Dates : FEB 01, 2018 - OCT 20, 2020

VIN Range 1 : Begin : 5FYB8YJ09JF053843 **End :** 5FYB8YJ17MB075361 Not sequential

Vehicle 4 : 2016-2019 New Flyer XHE40

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : HYBRID ELECTRIC

Descriptive Information : The supplier of the inverters used on the electric drive system for this model vehicle contacted New Flyer to indicate the potential for the firmware errors to cause an unexpected shut down of the electric drive system This issue would affect all Siemens ELFA2 Inverters delivered to New Flyer since January 2017 as well as select older buses upgraded to the ELFA 2 inverter after January of 2017. New model Siemens ELFA3 inverters do not have this problem.

Production Dates : NOV 02, 2016 - JAN 24, 2019

VIN Range 1 : Begin : 5FYF8FX18GB050504 **End :** 5FYF8FX17KF055419 Not sequential

Vehicle 5 : 2015-2015 New Flyer XHE60

Vehicle Type :

Body Style :

Power Train : NR

Descriptive Information : The supplier of the inverters used on the electric drive system for this model vehicle contacted New Flyer to indicate the potential for the firmware errors to cause an unexpected shut down of the electric drive system This issue would affect all Siemens ELFA2 Inverters delivered to New Flyer since January 2017 as well as older buses upgraded to the ELFA 2 inverter after January of 2017. New model Siemens ELFA3 inverters do not have this problem.

Production Dates : OCT 12, 2015 - OCT 12, 2015

VIN Range 1 : Begin : 5FYF8YX16FC047931 **End :** 5FYF8YX16FC047931 Not sequential

Description of Defect :

Description of the Defect : Due to a programming issue, nuisance error codes may cause the electric drive system to shutdown unexpectedly requiring an ignition reset. The vehicle can then be restarted once brought to a complete stop.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : A sudden loss of motive power increases the potential for a vehicle crash and injury.

Description of the Cause : The Siemens ELFA2 inverter used for both motor power and auxiliary power on the New Flyer electric propulsion system, was found to have a timing issue between the microcontroller and the Static Random-Access Memory (SRAM). This non-optimum timing causes the inverter to deliver invalid data resulting in a "Trap10" error.

Identification of Any Warning that can Occur : None

Involved Components :

Component Name 1 : ELFA2 DV4-650WH Inverter with 1VPM

Component Description : NR

Component Part Number : A5E31725667

Component Name 2 : ELFA2 DC4-650WM Inverter

Component Description : NR

Component Part Number : A5E02503560

Supplier Identification :**Component Manufacturer**

Name : Siemens Industry, Inc.

Address : 100 Technology Drive
Alpharetta Georgia 30005

Country : United States

Chronology :

On 26 March 2021 – Siemens formally notified New Flyer of an internal programming issue within their ELFA2 inverters. The issue could result in a shut-down of the electric drive system without advanced warning. A corrective action to upgrade the firmware for the Siemens electric drive system is being provided.

On 31 March 2021 - New Flyer's Vehicle Safety Committee determined that this supplier issue was worthy of a vehicle safety recall.

On 7 April 2021 – New Flyer declared a vehicle safety recall.

Description of Remedy :

Description of Remedy Program : New Siemens firmware programming is being supplied and will be installed by New Flyer at no cost to the customer.

How Remedy Component Differs from Recalled Component : Software program revision level. This is a software change only to correct a data timing issue. There are no hardware changes.

Identify How/When Recall Condition was Corrected in Production : In late March of 2021 New Flyer began installing updated firmware programming onto production vehicles.

Recall Schedule :

Description of Recall Schedule : Customer notification letters will begin going out once the format is approved by the RMD. Possibly as early as the week of April 19th. There is no Dealer network for New Flyer.

Planned Dealer Notification Date : APR 19, 2021 - APR 19, 2021

Planned Owner Notification Date : APR 19, 2021 - APR 23, 2021

* NR - Not Reported