

Part 573 Safety Recall Report

23V-126

Manufacturer Name : Prevost Car (US) Inc.**Submission Date :** MAR 08, 2023**NHTSA Recall No. :** 23V-126**Manufacturer Recall No. :** SR23-05**Manufacturer Information :**

Manufacturer Name : Prevost Car (US) Inc.

Address : 201 South Avenue
South Plains NJ 07080

Company phone : 908-222-7211

Population :

Number of potentially involved : 555

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2018-2023 Prevost H3-45

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : DIESEL

Descriptive Information : The population was determined by identifying all vehicles equipped with an Automatic Fire Suppression System (AFSS) optical fire sensor positioned in the engine compartment's lower region. The recalled products are limited to these specific vehicles since they are the only ones with the problematic optical fire sensor configuration. It is to be noted that not all vehicles produced during the indicated production dates are concerned by this issue given that the Automatic Fire Suppression System is offered as an option for clients.

Other vehicles not included in this recall were also equipped with an AFSS optical fire sensor. However, the sensor in these vehicles is positioned in the engine compartment's upper region (different sensor configuration), which does not generate the issue addressed by this recall, thus justifying why these vehicles were not included in the recalled population.

The following vehicles are affected by the recall: 3 MY2018 Prevost H3-45, 194 MY2019 Prevost H3-45, 143 MY2020 Prevost H3-45, 5 MY2021 Prevost H3-45, 13 MY2022 Prevost H3-45, and 39 MY2023 Prevost H3-45.

Production Dates : NOV 01, 2017 - DEC 01, 2022

VIN Range 1 : Begin :

NR

End : NR

 Not sequential

Vehicle 2 : 2018-2023 Prevost H3-45 VIP

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : DIESEL

Descriptive Information : The population was determined by identifying all vehicles equipped with an Automatic Fire Suppression System (AFSS) optical fire sensor positioned in the engine compartment's lower region. The recalled products are limited to these specific vehicles since they are the only ones with the problematic optical fire sensor configuration. It is to be noted that not all vehicles produced during the indicated production dates are concerned by this issue given that the Automatic Fire Suppression System is offered as an option for clients.

Other vehicles not included in this recall were also equipped with an AFSS optical fire sensor. However, the sensor in these vehicles is positioned in the engine compartment's upper region (different sensor configuration), which does not generate the issue addressed by this recall, thus justifying why these vehicles were not included in the recalled population.

The following vehicles are affected by the recall: 2 MY2018 Prevost H3-45 VIP, 40 MY2019 Prevost H3-45 VIP, 35 MY2020 Prevost H3-45 VIP, 39 MY2021 Prevost H3-45 VIP, 31 MY2022 Prevost H3-45 VIP, and 11 MY2023 Prevost H3-45 VIP.

Production Dates : NOV 21, 2017 - OCT 14, 2022

VIN Range 1 : Begin :

NR

End : NR

Not sequential

Description of Defect :

Description of the Defect : On certain vehicles, the optical fire sensor could malfunction and wrongfully detect a fire. In this event, the Automatic Fire Suppression System (AFSS) may give false warning to the driver, command an unwarranted engine shutdown, and release chemical fire extinguishing agent in the engine compartment.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : An unexpected loss of motive power, caused by an unwarranted Automatic Fire Suppression System activation, can increase the risk of a crash without prior warning. A loss of motive power may also require a passenger evacuation in traffic and other potential hazards, which increases the risk of injuries. Prevost has not received any reports of death or injury associated with this defect. Therefore, we consider this as a proactive measure to protect the public from the potential risk associated with this defect.

Description of the Cause : On all concerned vehicles, the optical fire sensor was repositioned from the engine compartment's upper section to its lower section as part of a design change in 2017. Being positioned in the engine compartment's lower section, the optical fire sensor is now further exposed to water, road salt, and other

contaminants. The presence of road contaminants, combined with an optical fire sensor mounting bracket that was not adequately designed by Prevost for these operating conditions, promotes corrosion between the bracket and the sensor's housing. Under certain conditions, corrosion could damage the sensor's housing and allow water to ingress, ultimately causing the sensor to malfunction and to falsely detect fires.

Identification of Any Warning that can Occur : In some cases, the Automatic Fire Suppression System trouble light may be intermittently illuminated prior to the event. The driver will also receive a visible and audible alert prior to the engine shutdown.

Involved Components :

Component Name 1 : Fire Sensor PM-3M

Component Description : Optical Fire Sensor

Component Part Number : 563457

Component Name 2 : AFSS Optical Sensor Bracket

Component Description : AFSS Optical Sensor Bracket

Component Part Number : 061167

Component Name 3 : AFSS Optical Sensor Bracket

Component Description : AFSS Optical Sensor Bracket

Component Part Number : 0610076

Supplier Identification :

Component Manufacturer

Name : NR

Address : NR

NR

Country : NR

Chronology :

2022-10-07 One field report related to this issue involving one vehicle was received.

2022-10-21 Internal Prevest investigation was opened to identify the root cause and to determine if the issue is safety related.

2022-11-16 Case was presented on Volvo Product Safety Working Group (PSWG) to evaluate if there is a potential safety related issue. It was concluded that further investigation was required to complete the assessment.

2022-11-28 A failed sensor was sent to an external laboratory for exhaustive corrosion analysis.

2023-01-16 All field reports and warranty claims related to this issue were analyzed. Two other field reports related to this issue were reported. The first field report was received on 2019-11-28 and indicated that one MY2019 H3-45 experienced a false AFSS activation, most likely due to a corroded optical fire sensor. The report indicated that the same issue targeted five other H3-45. The second field report was received on 2022-06-24 and indicated that two MY2019 H3-45 experienced a false AFSS activation, potentially due to a Linear Thermal Detector malfunction. The investigation revealed that the false activation probably resulted from a corroded optical fire sensor. Four warranty claims related to this issue were received, all on MY2019 H3-45. The claims were received on 2020-01-27, 2020-01-30, 2020-02-05, and on 2022-04-28. Note: Two of these warranty claims were included in the field reports.

2023-01-24 Case was presented on Volvo PSWG. Decision made to raise the potential safety issue to Volvo Product Safety Committee (PSC) for review and determination.

2023-02-14 Internal campaign was launched to solve the issue on all vehicles in production before being delivered.

2023-02-23 Case was presented to Volvo PSC. It was concluded that there was a safety related defect and that a recall is needed.

2023-02-24 Safety Recall report submitted to authorities.

No accidents, injuries, or fatalities related to this issue were reported.

Description of Remedy :

Description of Remedy Program : Prevest will inspect all concerned vehicles, replace the optical fire sensor if required, and install spacers between the optical fire sensor and its bracket to stop corrosion. Letters will be sent to customers to inform them on how to proceed. Prevest will execute this correction free of charge (parts and labor) for the customers. In case a customer has already inspected and corrected this defect before the safety recall has been launched, this customer will be reimbursed according to Prevest reimbursement plan.

How Remedy Component Differs The remedy consists of adding spacers between the optical fire sensor and

from Recalled Component : its bracket. The remedied assembly (fire sensor and its bracket) will therefore include spacers that maintains a void between the sensor's housing and the bracket, thus preventing all corrosion. The recalled assembly does not include spacers that creates a void (the optical fire sensor is in contact with its bracket).

Identify How/When Recall Condition was Corrected in Production : The recall condition was corrected in production on February 14, 2023, when an internal campaign was launched to add spacers between the fire optical sensor and its bracket on all concerned vehicles before being delivered to customers.

Recall Schedule :

Description of Recall Schedule : Please note that Prevost does not have a dealer network and the dates entered for the planned dealer notification begin/end date are only to avoid NHTSA Recall Portal error while submitting the recall report.

Planned Dealer Notification Date : APR 15, 2023 - APR 15, 2023

Planned Owner Notification Date : APR 15, 2023 - APR 15, 2023

* NR - Not Reported