Part 573 Safety Recall Report 21V-029

Manufacturer Name : Smeal Holding, LLC
Submission Date : JAN 28, 2021
NHTSA Recall No. : 21V-029
Manufacturer Recall No. : NR

Manufacturer Information :

Manufacturer Name : Smeal Holding, LLC
Address : 610 West 4th Street
Snyder NE 68664
Company phone : 402 218 4685

Population :

Number of potentially involved : 616
Estimated percentage with defect : 90 %

Vehicle Information :

Vehicle 1 : 2009-2020 Smeal Holding, LLC Aerial Fire Apparatus
Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES
Body Style : OTHER
Power Train : DIESEL
Descriptive Information : The basis for the recall is vehicles equipped with a positional waterway and a shift timer.
Production Dates : JAN 01, 2009 - JAN 14, 2021
VIN Range 1 : Begin : NR End : NR ☐ Not sequential

Description of Defect :

Description of the Defect :	The positional waterway monitor is mounted to a trolley that slides on the fly section of the ladder. The trolley is always locked to either the fly section (water tower mode) or the upper-mid section (rescue mode) using a pair of locking tabs on locking arms. The arms are moved by a motor actuator linkage mechanism. Two proximity switches set to sense the location of a Z-bracket attached to the locking arm linkage mechanism (prox 1 -water tower, and prox 2-rescue mode). A third proximity switch (prox 3) is used to sense that the ladder is retracted. Only in the fully retracted condition is it physically possible for the mode shift to occur and the control logic allows the motor actuator to move the locking arms and locking tabs from one locking pocket to the other. When the operator desires to shift between one mode and the other, he/she retracts the ladder, and moves the mode switch. If prox 3 senses a fully retracted ladder, then the motor actuator begins moving the locking arm linkage mechanism. Once the Z-bracket moves out of the range of prox 1 or prox 2 a timer is initiated energizing a blocking valve that keeps the ladder sections from extending. The timer lasts for 10 seconds to ensure that the actuator motor has completed the mode shift. This prevents ladder extension if the operator fails to wait for the mode indicator lights to change before moving the ladder extension joystick. Prox 1 and prox 2 are set during the manufacturing process. If prox 1 or prox 2 are not set properly, the timer can be delayed and the blocking valve will not keep the ladder from being extended during the initial portion of the mode shift. In this case, if the operator fails to follow the operator manual instructions and attempts to both extend the ladder and shift from one mode to the other at the same time, the locking tabs can be caught mid-travel and locking tabs can be broken off the locking arms.
FMVSS 1 :	NR
FMVSS 2 :	NR
Description of the Safety Risk :	Without locking tabs on the locking arms, the trolley is free to move along the fly section. Pressurizing the waterway with the trolley free to travel will cause it to surge to the end of the fly section, damaging the waterway and the trolley. A damaged positional waterway trolley can become disconnected from the ladder and drop to the ground creating a risk of injury or death to people beneath the ladder.
Description of the Cause :	Proximity switches were not set properly during manufacturing.
Identification of Any Warning that can Occur :	Breaking locking tabs will be accompanied by a loud noise. Missing tabs can be observed from the side of the ladder with the ladder in the stowed position on the apparatus. Missing tabs should be caught during daily and weekly inspection as prescribed by the operator manual and/or NFPA 1911 Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles.

Involved Components :

Component Name 1 :	NR
Component Description :	NR
Component Part Number :	NR

Supplier Identification :

Component Manufacturer

Name :	NR
Address :	NR
	NR
Country :	NR

Chronology :

On December 24, 2020, Fort Worth Fire Department experienced an incident where the positional waterway trolley fell from the ladder. On January 2, 2021, Smeal was informed of the incident and made arrangements for an inspection. On January 4, 2021, Smeal personnel attended an inspection at Ft. Worth to observe the unit involved in the incident and inspect the other units in the Ft. Worth fleet. Between January 6-21, 2021, Engineering analysis of the incident, the design, the operator instructions, and the manufacturing methods. On January 21, 2021, Smeal determined that the proximity switch setting is critical to preventing damage to the locking tabs in the event that the operator instructions are violated, and that to adjust the proximity switches would lead to reduced safety risk. The issue was escalated to REV Group management. On January 28, 2021, the determination was made to issue a voluntary recall for this issue.

Description of Remedy :

Description of Remedy Program :	Smeal will pay for the adjustment of the proximity switches for those units equipped with a positional waterway mode shift timer interlock system.
How Remedy Component Differs from Recalled Component :	No new components are required.
Identify How/When Recall Condition was Corrected in Production :	The remedy was applied in production on, and after, January 14, 2021 by way of revised standard operating procedures, manufacturing training, and stop ship.

Recall Schedule :

Description of Recall Schedule :	Will notify dealers by March 15, 2021 and the owners a week later.
Planned Dealer Notification Date :	MAR 15, 2021 - MAR 19, 2021
Planned Owner Notification Date :	MAR 22, 2021 - MAR 26, 2021

* NR - Not Reported