U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

NHTSA

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Investigation: PE 20-003
Date Opened: 04/01/2020
Investigator: Kyle Bowker **Reviewer:** Bruce York-B
Approver: Stephen Ridella
Subject: Vehicle Roll Away

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Autocar, LLC, Mack Trucks, Inc., Autocar Industries, LLC
Products: 2008-2020 Autocar & Mack Refuse Trucks w/ Bendix PP-1 Valve
Population: Confidential

Problem Description: A restriction at the park brake control valve exhaust port, when combined with an internal valve leak due to normal wear and tear, may allow back-pressure to inadvertently send a signal to release the parking brakes, which may result in a vehicle roll away event.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	4	TBD	4
Crashes/Fires:	2	TBD	2
Injury Incidents:	1	TBD	1
Number of Injuries:	1	TBD	1
Fatality Incidents:	0	TBD	0

ACTION / SUMMARY INFORMATION

Action: A Preliminary Evaluation has been opened.

Summary:

The Office of Defects Investigation (ODI) received a tip from a large fleet operator of refuse trucks about a potential defect condition that may result in a vehicle roll away. The subject vehicles are single-unit trucks equipped with certain Bendix PP-1 push-pull pneumatic park brake control valves. These subject components are mounted to the dashboard and allow the driver to apply and release the parking brakes. They have a 1/8” NPT threaded fitting in the exhaust port and an exhaust pipe to vent exhaust air outside the truck cab.

The subject components may experience an accelerated wear out condition in certain severe-duty applications with high-frequency use of the parking brakes. When the knob is pulled out to apply the parking brakes, supply side air may continuously leak past the worn valve and escape through the exhaust port. This wear out condition may not be readily detected by the driver because the sound is muffled by the exhaust pipe configuration. An exhaust flow restriction, such as an insufficient diameter exhaust port, threaded fitting or exhaust pipe, may allow back-pressure to develop and pressurize the delivery port. This may inadvertently send a signal to the park control port of the SR-7 spring brake modulating control valve to release the parking brakes, possibly resulting in a vehicle roll away.

The reporting fleet operator is aware of at least 4 roll away incidents related to the alleged defect on subject vehicles in the United States. In one case, surveillance video recorded the driver applying the parking brakes moments before the vehicle rolled away. In some cases, the root cause was determined by post-incident examination of subject components by the component supplier and/or by a third-party forensic engineering company hired by the fleet operator. In one incident, a subject vehicle rolled more than 100 meters away and crashed into a parked car and a residential structure, causing in excess of $150,000 in property damage. In another incident, a subject vehicle rolled away and crashed into several other refuse trucks parked at the depot. The reported injury incident occurred when a driver dumped a load of refuse at a landfill, pulled into the clean out area, set the parking brakes, locked out the main

battery disconnect and proceeded into the rear body to perform normal clean out duties. While inside the rear body, the driver reportedly heard the sound of rushing air, the parking brakes reportedly released and the truck began to roll away. In a panic, the driver jumped out of the moving vehicle and broke his ankle, which later required surgery. The truck came to rest approximately 50 meters away against a dirt berm.

A Preliminary Evaluation has been opened to assess the alleged defect.