U.S. Department of Transportation
National Highway Traffic Safety Administration

OFFICE OF DEFECTS INVESTIGATION

ODI RESUME

Investigation: PE21018
Prompted By: VOQ Review
Date Opened: 07/16/2021 **Date Closed:** 10/10/2025
Investigator: David Thornton **Reviewer:** Joshua Neff
Approver: Tanya Topka
Subject: Haldex Brake Chamber Failures

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Haldex Commercial Vehicle Systems
Products: 2015-2019 Kenworth T680, 2017 Peterbilt 579, and Haldex Air Brake Actuator
Population: 800,000 (Estimated)

Problem Description: The power spring fractures, puncturing the diaphragm and causing air loss within the spring-brake circuit, resulting in brake drag without sufficient warning to the driver.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	11	17	0	0	24*	0
Crashes/Fires:	9	17	0	0	24*	0
Injury Incidents:	0	0	0	0	0	0
Number of Injuries:	0	0	0	0	0	0
Fatality Incidents:	0	0	0	0	0	0
Number of Fatalities:	0	0	0	0	0	0

Description of Other:

*Total eliminates duplicates received by the manufacturer

ACTION/SUMMARY INFORMATION

Action: This Preliminary Evaluation (PE) is closed without a manufacturer action.

Summary:

The Office of Defects Investigation (ODI) opened this Preliminary Evaluation (PE21018) based on eleven Vehicle Owner Questionnaires (VOQ). These VOQs included seven wheel-end fires on various Kenworth and Peterbilt trucks. Several of the VOQs were submitted by a maintenance facility stating that the fires were due to power spring fractures within brake chambers manufactured by Haldex Commercial Vehicle Systems (Haldex). According to the reports, the fractured spring punctured the brake chamber diaphragm, resulting in a partial loss of compressed air to the park brakes, causing the brakes to drag and overheat.

ODI sent an information request letter to Haldex on August 3, 2021. On October 17, 2021, Haldex submitted a complete response.

In this investigation, ODI analyzed thousands of warranty claims as well as fleet reports of brake chamber replacements. ODI gathered information from multiple vehicle manufacturers and reviewed legal testimony alleging defects and laboratory reports that raised concerns about spring failures initiated by corrosion. ODI found that spring failures were often detectable as soon as they occurred. In the subject incidents, after detecting the failures, some operators continued driving to a maintenance facility rather than stopping and waiting for a mobile technician to address the issue, increasing the risk of fire.

While over twenty entities purchased the subject component from Haldex, the VOQs that ODI received involved only PACCAR vehicles. Haldex completed replacement campaigns for several fleets operating PACCAR vehicles, reducing the risk of further failures.

Brake chambers have a limited service life. Industry guidance generally recommends replacement every two to four years depending on operating conditions, with some manufacturers and fleets recommending even shorter intervals. Vehicles operating in salt-belt states—where the majority of VOQs originated—require more frequent replacement than vehicles in less corrosive environments. Haldex's standard warranty is four years and unlimited mileage. ODI determined that the average time in service for warranty claims was 4.9 years and 260,000 miles. Currently, all of the chambers subject to this investigation are between five and ten years old.

Given the absence of recent failures and because the subject components are now older than their expected service life, ODI is closing this investigation. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The Agency reserves the right to take additional action if warranted by future circumstances. To review the ODI reports cited in the Closing Resume ODI Report Identification Number document, go to NHTSA.gov.