

Part 573 Safety Recall Report

23E-097

Manufacturer Name : Haldex Commercial Vehicle Systems

Submission Date : APR 22, 2024

NHTSA Recall No. : 23E-097

Manufacturer Recall No. : n/a



Manufacturer Information :

Manufacturer Name : Haldex Commercial Vehicle Systems

Address : 10930 North Pomona Avenue
Kansas City MO 64153

Company phone : 816-801-2335

Population :

Number of potentially involved : 4,717

Estimated percentage with defect : 10 %

Equipment Information :

Brand / Trade 1 : Haldex

Model : Inversion Valve

Part No. : Multiple

Size : NR

Function : Brake System Ai

Descriptive Information : A defect in the inversion valve may cause the park brake engagement to be delayed. As such, vehicles may fail to comply with the requirements of Federal Motor Vehicle Safety Standard (FMVSS) 121, "Air Brake Systems". If this condition exists, the park brake may not be applied within 3 seconds, resulting in inadvertent vehicle movement and a potential safety concern.

Production Dates : DEC 01, 2022 - MAY 05, 2023

Description of Defect :

Description of the Defect : An internal piston, incorporated into the inversion valve may have out of specification concentricity.

FMVSS 1 : 121 - Air brake systems

FMVSS 2 : NR

Description of the Safety Risk : Failure of park brake to engage within 3 seconds could result in unexpected vehicle movement, a crash and possible injury to persons or damage to property in the vehicle's path.

Description of the Cause : Inversion valve piston fails to allow parking brake air pressure to vent.

Identification of Any Warning that can Occur : Vehicle movement more than 3 seconds after parking brake engagement.

Involved Components :

Component Name : Inversion valve

Component Description : An inversion valve is a multi-port, air pressure management device, designed to direct air pressure in air brake systems to brake actuators or to vent air pressure to the atmosphere.

Component Part Number : 9718990020

Component Name : Inversion Valve

Component Description : An inversion valve is a multi-port, air pressure management device, designed to direct air pressure in air brake systems to brake actuators or to vent air pressure to the atmosphere.

Component Part Number : KN28032

Component Name : Inversion valve

Component Description : An inversion valve is a multi-port, air pressure management device, designed to direct air pressure in air brake systems to brake actuators or to vent air pressure to the atmosphere.

Component Part Number : N20950CA

Component Name : Inversion valve

Component Description : An inversion valve is a multi-port, air pressure management device, designed to direct air pressure in air brake systems to brake actuators or to vent air pressure to the atmosphere.

Component Part Number : N20950CB

Component Name : Inversion valve

Component Description : An inversion valve is a multi-port, air pressure management device, designed to direct air pressure in air brake systems to brake actuators or to vent air pressure to the atmosphere.

Component Part Number : N50002B

Component Name : Inversion valve

Component Description : An inversion valve is a multi-port, air pressure management device, designed to direct air pressure in air brake systems to brake actuators or to vent air pressure to the atmosphere.

Component Part Number : RKN28032

Supplier Identification :

Component Manufacturer

Name : Haldex Brake Products Corporation

Address : 10930 North Pomona Avenue
Kansas City Missouri 64153

Country : United States

Chronology :

05MAR23 - Haldex was notified by one customer that inversion valves manufactured and sold by Haldex were sticking and causing delayed park brake applications. The failures were detected by a single customer on their production line and was presented as a supplier quality issue by the customer that would be detected at installation.

05MAY23 – Haldex determines that a small number of inversion valve pistons from Supplier, CNC, may be out of specification. Haldex begins 100% secondary, inversion valve timing checks to contain the apparent defect, regular shipments were resumed after validation.

01JUN23 – Haldex implements incoming material concentricity checks.

July & August 2023 Root cause analysis, from a supplier quality perspective, continues.

12SEP23 - Spartan Motors submits a NHTSA Part 573 report related to 659 suspect vehicles built between 01JUN22 and 14JUN23. Recall ID 23V631.

15SEP23 – Haldex stops shipping suspect Inversion Valves

29SEP23 – Haldex implements 100 % receipt inspection of purchased parts (valve piston) on a CMM, which mitigated the apparent defect.

30SEP23 - Haldex warranty data review confirms 3 alleged failures out of 45,995 inversion valves sold over an 8 years period, between January 2016 – June 2023. The warranty failures were not associated with the defect in question for this recall.

03OCT23 – Haldex resumes production of inversion valves after implementing new inspection method and process controls.

09OCT23 – Initial briefing of senior leadership at Haldex. Root cause of sticking inversion not known, the investigation continues.

08NOV23 – First field failure confirmed by inspection and operational check at Haldex.

18DEC23 – Haldex leadership directs the submission of a Part 573 report to NHTSA, regarding 4,717 defective Inversion Valves sold between 01DEC22 – 05MAY23. Delayed park brake apply times can result in vehicle roll-away incidents.

21DEC23 – Haldex files initial Part 573 report with NHTSA.

Description of Remedy :

Description of Remedy Program : The remedy will be for owners of equipment on which inversion valves are installed to do an operational check of the parking brakes and replace the inversion valve if the parking brake fails to engage within 3 seconds.

How Remedy Component Differs from Recalled Component : An inversion vale that either passed inspection or was replaced will be noted by a line across the valve with the green permanent marker to indicate the valve has been inspected and/or replaced and now operates properly.

Identify How/When Recall Condition was Corrected in Production : Applicable drawing for inversion valve piston was modified to include a specification for concentricity. PPAP approval occurred on 05MAY23.

Recall Schedule :

Description of Recall Schedule : A customer notification letter will be submitted to NHTSA for review and approval during the week of 22APR24.

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : MAY 31, 2024 - MAY 31, 2024

Purchaser Information :

The following manufacturers purchased this defective/noncompliant equipment for possible use or installation in new motor vehicles or new items of motor vehicle equipment:

Name : NR

Address : NR

NR

Country : NR

Company Phone : NR

* NR - Not Reported