

Intellipark Park Valve Module (PVM) rubber ball seal tear Chronology:

Prior to 9/20/2023: Bendix assembly line exclusively used a ball seal sourced from "supplier A".

9/20/2023: Bendix assembly line exclusively to use a ball seal sourced from "supplier B".

11/15/2023: An assembly line operator found small visible tear on the ball seal after a press operation.

11/19/2023: Unassembled components, in-process sub-assemblies, and fully assembled PVMs were inspected. Supplier B was contacted and informed of the quality concern.

11/19/2023 - 11/23/2023: Warranty investigation conducted and found no complaints from any customer related to a cracked or leaking ball seal.

11/23/2023: Quality alert issued on assembly line for visual inspection during ball seal installation process. Product engineering investigation opened to determine performance impact of a torn ball seal. No malfunction observed even on parts with a small tear in the ball seal.

12/20/2023 - Combined environmental (temperature, humidity, vibration, and valve cycling) accelerated test started on ball seals with visual cracks.

1/6/2024 - Initial data of combined environmental test sample progressed from a small tear to a fracture. Bendix product safety risk assessment (RA) team formed.

1/8/2024 – Supplier B provided improved ball seals produced by an improved process with no cracks, and resistance to tearing during the press operation. Customers notified of quality concern. Quality containment put in place.

1/9/2024 - 2/14/2024 Continued engineering evaluation. Combined environmental accelerated testing of PVM with improved ball seal from supplier B.

2/23/2024 - Extended durability testing of PVM.

3/20/2024 - Extended durability testing results collected. Improved ball seals sourced from supplier B were found to exhibit excessive leakage.

3/12/2024 – Bendix assembly plant stopped using ball seals from supplier B, reinitiated use of ball seals from supplier A.

3/14/2024 - 4/23/2024: RA team continues testing and analysis and prepares a recommendation.

4/23/2024 - Monitoring of warranty and field complaints affirmed no claims related to a cracked or leaking ball seals.

4/24/2024 - Bendix Product Integrity Committee determines that an equipment safety defect exists for PVM's assembled with ball seals from supplier B.