



NATIONAL TRANSPORTATION SAFETY BOARD  
**Investigative Hearing**

Norfolk Southern Railway general merchandise freight train 32N  
derailment with subsequent hazardous material release and fires,  
in East Palestine, Ohio, on February 3, 2023

<b>GROUP</b>	<b>H</b>
<b>EXHIBIT</b>	
45	

Agency / Organization

**Norfolk Southern**

Title

**Statement for the Record - Jared Hopewell**

## **Jared Hopewell, Opening Statement**

### *Panel 3: "Wheel Bearings and Wayside Defect Detectors"*

Good afternoon. My name is Jared Hopewell. I am the Assistant Vice President of Communications and Signals at Norfolk Southern and have been with the company since 2005. At Norfolk Southern, safety is our top priority. We've long deployed safety systems to monitor equipment performance and identify potential defects and irregularities as trains move across the system, using a variety of wayside detectors, including hot bearing detectors (HBDs). We use HBDs to assess the temperature conditions of wheel bearings. In 2022 alone, HBDs scanned the temperatures of more than 2.2 billion bearings.

As we saw in East Palestine, when a hot bearing detector detects that a bearing is more than 170 degrees above ambient temperature, it emits a radio transmission that provides an audible, real-time alarm to the train crew, who are trained to respond to the alarm immediately. Hot bearing detectors announced 618 alarms directly to the train crew in 2022. Approximately 43% (265) resulted in the identification of an issue requiring attention with 14% of the alarms resulting in a car being set out from the train. The detectors also relay temperature measurements on a near real-time basis to the Wayside Desk, where we monitor for potential developing issues, including heat trends across multiple locations during the course of travel of a railcar, that have not risen to a level that would trigger an audible alarm to the crew. In 2022, based on this, the Wayside Desk performed 876 "interventions" by instructing rail crews to stop trains for inspection. Nearly 65% (568) of these resulted in train crews identifying potential problems with the train that could be addressed before they became more severe.

In the last 30 miles before Train 32N derailed in East Palestine, it passed three HBD systems. The first two detectors did not trigger any alarms or alerts that would have required action by the on-shift Wayside Desk operator or the train crew. As the train passed through the East Palestine HBD, however, the detector identified an elevated temperature from a wheel bearing on car 23 and announced a critical alarm to the crew to stop the train and inspect the axle. As the NTSB noted in its preliminary report, our train crew responded to the alarm in accordance with applicable policies and procedures and acted appropriately to bring the train to a safe stop. Unfortunately, the train derailed before it was able to come to a complete stop.

While safety mechanisms were not able to prevent this accident in this instance, we are committed to learning from it, and we have worked every day since the derailment—with public officials, industry partners, regulators, legislators, and the NTSB—to continue to improve railroad safety. Norfolk Southern has already taken steps to enhance our wayside detector system and is participating in an industry-wide initiative to reevaluate alarm threshold temperatures for bearing heat sensors. In addition to expanding our use of existing technologies, we are making plans to install new kinds of detectors that will provide us with more data that we can use to identify potential issues before they result in an incident. And we are working to deploy inspection portals that use machine vision and ultra-high-resolution cameras to provide a 360-degree health check on railcars. We are committed to improving the safety of our railway operations at Norfolk Southern and intend to lead efforts to make industry-wide safety improvements.

I would be happy at this time to answer any questions the Board has about our wayside detector systems.