



Approved: March 20, 2023

Preliminary Report RRD23LR006

*This information is preliminary and subject to change.*

## Safety Performance of Wheelsets

Springfield, Ohio

March 4, 2023

On March 4, 2023, about 4:54 p.m. local time, westbound Norfolk Southern Railway (NS) mixed freight train 179LC04 derailed 28 railcars at milepost 178.85 on the Dayton District near Springfield, Ohio.<sup>1</sup> (See figure.) Twenty-one of the derailed railcars were loaded and 7 were empty; none were carrying hazardous materials. The derailment downed a powerline, which caused about 47 homes to lose power. Local first responders initially ordered residents within a 1,000-foot radius to shelter in place. This order was lifted about 1:00 a.m. on March 5. No injuries were reported. NS estimated damages to equipment, track, and signal infrastructure to be about \$2.6 million. Visibility conditions at the time of the derailment were daylight and clear; the weather was 51°F with no precipitation.

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<sup>1</sup> (a) All times in this report are local time. (b) Train 179LC04 was traveling from Bellevue, Ohio, to Birmingham, Alabama.



**Figure.** Aerial view of derailment. (Courtesy of Clark County Emergency Management Agency.)

The crew of train 179LC04 consisted of an engineer and a conductor in the lead locomotive. The train was composed of 3 head-end locomotives, 2 mid-train distributed power units, and 212 railcars. The train was 13,470 feet long and weighed about 17,966 tons.<sup>2</sup>

After this derailment, on March 8, 2023, NS began removing 517 National Steel Car railcars from service until their wheelsets can be replaced.

Additionally, the Association of American Railroads issued an equipment inspection order on March 9, 2023, advising railroads to inspect and remove from service wheelsets that were mounted by National Steel Car between August 2022 and March 2023.<sup>3</sup>

The National Transportation Safety Board (NTSB) has initiated an investigation focusing on the performance of wheelsets. The NTSB requested that NS recover eight wheelsets from two of the derailed railcars; photographs taken on scene after the derailment show that three wheels from these wheelsets exhibited movement on their axles. The NTSB subsequently placed an investigative hold on these wheelsets, additional wheelsets and other truck components from the accident train, and

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<sup>2</sup> Train 179LC04 included 28 loaded hazardous materials tank cars; none of the hazardous materials tank cars derailed.

<sup>3</sup> The complete advisory is accessible at: <https://www.railwayage.com/wp-content/uploads/2023/03/AAR-NSC-Advisory.pdf>.

wheelsets from elsewhere in the NS fleet for examination. The wheelsets and other components were delivered to an NS facility in Altoona, Pennsylvania, for an examination performed before all parties that began on March 15, 2023.

The NTSB's investigation is ongoing. Future investigative activity will focus on failure analysis of the subject wheelsets and on industry-wide standards and practices for railcar wheel and axle assembly processes, specifications, and quality control.

Parties to the investigation include the Federal Railroad Administration, the Public Utilities Commission of Ohio, NS, and National Steel Car.