

Service Bulletin



Dual Frauscher Bracket Failure Investigation

Document 480063

Date Released 6/8/2025

Application: This service bulletin covers the mounting bracket (Comet PN#:400229 provided for application of the Frauscher zero speed wheel sensors to the Progress Rail Micro HBD.

Summary

Comet supplies a conversion kit to use Frauscher zero speed detectors for PRS HBDs. Recently, the field failure rate has warranted further inspection. Norfolk Southern (NS) technicians will inspect current installations, and Comet will replace failed brackets in the 90-day investigation period. Appropriate action will be agreed upon based on the discovered scope and severity of the problem.

Background

Comet has provided NS with a kit to convert the PRS Micro HBD to use Frauscher Zero Speed wheel sensors instead of the wheel sensors provided with the detector. In the months preceding the release of this bulletin, the reported failure rate is higher than normal. This bulletin is intended to collect information about the scope and severity of the problem.

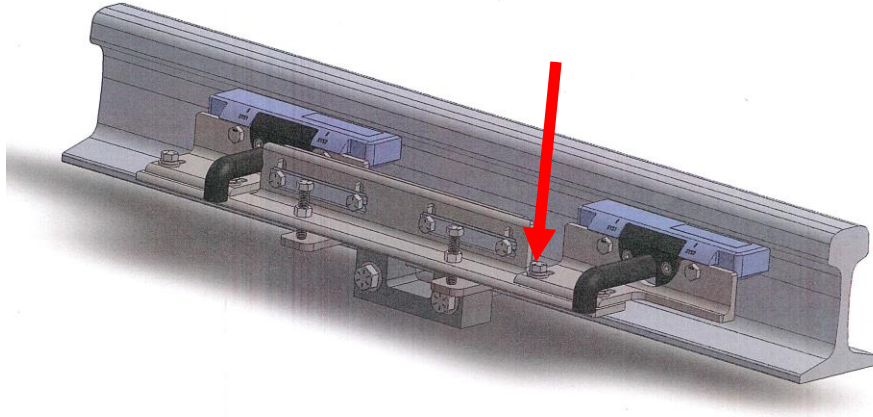
Affected Units

Over 450 units have been shipped since the introduction of this product in 2018. All units in the field are being considered as possible issues.

Failure Mode Details

Type: The bracket is failing in a classic fatigue pattern, which should allow for detection prior to complete failure. The timeframe from detection to failure is unknown.

Location: Failures are reported as occurring on the right side of the main bracket, at the root of the fillet where the angle has been removed and the wheel sensor extends beyond the bracket (as shown in the diagram directly below).



Factors: Factors that lead to failure are unknown. Suspected causes include elements that create a stronger or more consistent vibration, such as:

- Track pumping.
- Bolted track joints nearby.
- Tie or spike problems in the vicinity.
- Heavy traffic.

Stages of Failure

No Failure: There is no evidence of fatigue in the root of the transition.



Stage 1: Crack forming across the face of the fillet. Crack has not propagated into the flat of the piece.



Stage 2: The crack is propagated across the face of the horizontal bar.



Stage 3: Complete failure. The bar has cracked into two pieces.



Action

To collect the data and inform further mitigation, the sites in the field must be inspected. The field maintainer, during the scheduled 30-day inspection of the detector and site, should check for any signs of bracket fatigue failure. They should then document whether there are no signs of failure or note the stage of failure as described in the **Background** section of this document. This information should be relayed to Michael Fabery of NS for consolidation and communication to Comet.

Information to be Collected:

1. Site Name
2. Maintenance Region
3. Failure Stage (None to 3)
4. Install date/timeframe (best information available)
5. Site Traffic (trains per day)
6. Any damage to the face of the wheel sensors
7. Any other contributing factors that can be observed

Containment

To mitigate field impact, for the duration of this action (90 days) following the release of this bulletin, Comet will provide a replacement bracket free of charge for any site that can document any stage of failure.

To receive a free replacement bracket shipped without charge, please provide to sales@cometind.com your site's name, shipping address, collected information (as described in **Action**) and any other pertinent information.

Mitigation

A mitigation plan will be made based on feedback from the field, detailing the scope and severity of the problem.