# PRB CONSULTING

## Rail Safety Bulletin

Issue 009 - October 2025

## Contents

# SPONSOR

## The Great Christmas Gathering

📅 Thursday 4th December 2025

📍 Hilton Garden Inn, Doncaster Racecourse, DN2 6BB

***Your contribution will be used to:***

- Help subsidise attendee ticket prices
- Provide festive gifts on the night
- Support TRC mission as we grow into 2026

***In return for sponsorship, each business will receive benefits of:***

- Half a table of complimentary tickets (due to capacity restrictions)
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- Logo placement on all tickets and gift bags
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- Live acknowledgments throughout the night by the band and DJ

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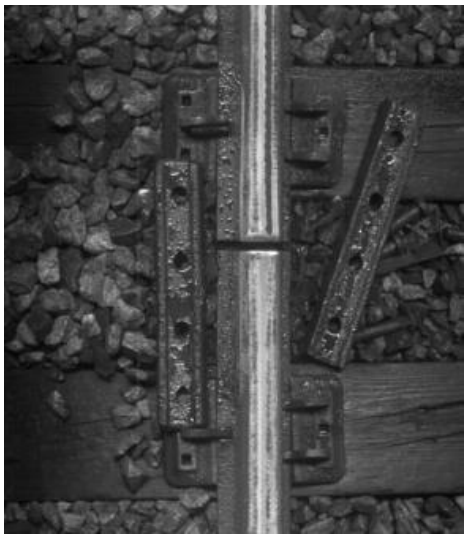
# NRB25-03 Fishplates Found Missing Following Track Inspection

**Overview**



On Thursday 4 September a review of data gathered from an Ultrasonic Test Unit train identified a track joint with all bolts and fishplates detached from the rail at Park South on the Cumbrian Coastline.

Actions were taken immediately to protect the line until repairs were carried out.

While the incident is subject to an independent Level1 investigation that has not yet concluded, some initial facts have been established.

A Basic Visual Inspection (BVI) of the track was completed at this location on 20th August in a routine midweek night line blockage. The BVI identified a cracked fishplate at a joint adjacent to this one.

Track standards require that a cracked fishplate is replaced within 24 hours of discovery. The team had sufficient access to replace the fishplate in the access they had so made arrangements to do so.

Due to difficulties in installing the replacement fishplates, the fishplates on the adjacent joint were removed to allow some movement of the rail. For reasons not yet understood, these fishplates were not reinstalled before the line blockage was handed back.

The Level 1 investigation will seek to understand the underlying reasons for this event.

**Discussion Points**

- What processes are in place to ensure the asset is safe for passage of trains following maintenance activity?
- How do you ensure work is completed as required before leaving a site of work?

# NRA25-10 – Operational Restrictions on use of FSKII Circuit Breakers

**Overview**

During Test before Earth of an isolation between Finnieston and Rutherglen in Scotland it became apparent that one of the electrical sections was still live. Applying the "test before earth" Life Saving Rule, the team avoided an accident which could have led to a fatality or life changing injury and instead led to the identification of a failure of this circuit breaker.

Subsequent investigations have found that a Circuit Breaker, which is an ABB supplied FSKII Circuit Breaker (top photo), had failed in the closed position.

**Failure Investigation**

Investigations were carried out with collaboration of the supplier, ABB. It has been determined that:

| | |
|---|---|
| • **Failure Cause**: The operating rod became detached from its base within the high-voltage (HV) pole. This detachment disrupted the mechanical transmission chain between the actuator and the vacuum interrupter, preventing proper operation. | • **Site Testing & Inspection**: Mechanical testing was conducted on the remaining FSKII units installed in Finnieston. Measurements of closing and opening time travel curves were compared against Factory Acceptance Test (FAT) certificates, confirming consistent alignment and positive results. |
| • **Vacuum Interrupter Condition**: The vacuum interrupter was inspected and found to be free of abnormalities. It remains fully functional. | • **Analysis of Similar Units**: A detailed examination of FSKII (FT/PR2), which had similar operational exposure to the original faulty FSKII (FT/PR1), was performed. Upon disassembly, the operating rod did not exhibit the same failure mode. |
| • **Supplier Investigation**: A detailed review of the operating rod's supplier did not reveal an underlying design flaw. | **Further Investigation**: A detailed analysis of an FSKII manufactured in the same batch as the faulty unit is planned to determine any potential batch related issues. |



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## Implementation of Operational Restrictions

**Emergency Switch-Offs**

Where an ABB FSKII Circuit Breaker is being used to affect an Emergency Switch-Off, a second open point shall be created in series with the FSKII breaker before confirming that the ESO has been taken.

Where available, the second open point should be a motorised air-break disconnector (e.g. Busbar disconnector) but otherwise may be the TNO/DNO Circuit Breaker, Feeder circuit breaker, bus coupler, set of track feed circuit breakers or overhead line switches and may be another FSKII circuit breaker.

**Overhead Line Isolations**

Where practicable, the same principle of creating a second open point should be applied to overhead line isolations.

Where such facilities are not practicable to use, then secondary indications (where available) may be used to confirm that the associated circuit breaker has correctly opened (e.g. through a low volts alarm). The ECO should draft and use a switching schedule to identify the actions being taken to disconnect the equipment and validate the associated secondary indications.
This shall be done before issuing the Form B permission to test and apply earths.

The test before earth and earthing of the equipment is the final confirmation that the equipment is disconnected from the supply and protected against re-energisation.

**Immediate action required**

Based on the investigation and testing conducted during this failure analysis, all findings indicate a one-off failure. However, to definitively rule out the possibility of a faulty manufacturing batch, further testing is required.

Until testing is completed, the operational restriction indicated above may be lifted for all FSKII breakers installed in NR infrastructure, except those manufactured in 2018.

**Manufacturing information**

The manufacturing date can be found in the rating plate in the HV pole, refer to the following pictures:

Rating plate in HV Pole, located at the magnetic actuator enclosure.

Rating plate in HV Pole, located at the magnetic actuator enclosure.


HV Pole Serial Number (125888)/ Manufacturing Date (11.2016)

**Identification and Implementation of Operational Restrictions**

If there is any uncertainty over the locations of ABB FSKII Circuit Breakers manufactured in 2018, contact your Regional or Route (E&P) Engineering team.

**Investigation of Trips**

In the event of any fault with the protection system (i.e. Circuit Breakers which are not normally associated with a section or area are seen to operate) and where ABB FSKII circuit breakers may be a contributory cause (i.e. by failure to open), you must raise a fault against the associated FSKII circuit breaker.

Regional and Maintenance teams shall investigate it to confirm the integrity of the operating rod and that the vacuum bottle is correctly operating.

# Changes to Controller of Site Safety Competence 5th December 2025

**Supply Chain transition arrangements following changes to the Controller of Site Safety (COSS) competence in December 2025**

**Introduction**

This document provides information on the transitional arrangements for changes to COSS competence that come into effect on 5th December 2025.

For detailed information on the new competence arrangements, refer to NR/L2/CTM/021 Competence and training in track safety issue 5. The new version of the Standard will be Briefed out from September through to December 2025.

**Background**

As the use of Lookout working is being reduced; this change needs to be reflected in the Controller of Site Safety (COSS) competence. After consulting with the industry, it was decided that COSS will no longer be include the ability to plan and carry out work involving Lookouts. Instead, this will become a separate competence. To hold this new competence, a person must first be qualified as a COSS.

**What this means to a Primary sponsor of COSS competence holders**

From 5th December 2025, the following COSS competencies will exist:

- COSS
- COSS (LKT) - This is a separate competence for those COSSs who need to plan and deliver SSOWs which use Lookouts as the warning method.

The Primary sponsor of a COSS will be required to decide whether an individual also needs to hold COSS Lookout COSS (LKT). COSS (LKT) will require approval from a Company Director. The Primary sponsor must confirm with the training provider that COSS (LKT) is required. If the training is completed successfully the individuals' records can then be updated on Sentinel

**Evidence required for COSS (LKT) at their first recertification after 5th December 2025**

COSS holders who also hold COSS (LKT) will, in addition to the COSS practice requirements, have to produce copies of completed Safe Work Packs (SWPs) that include Lookout warning arrangements at their first recertification event after the 5th December 2025, as outlined below.

- Up to 5th March 2026: 1 SWP
- From 6th March to 5th June 2026: 2 SWPs
- From 6th June to 5th September 2026: 3 SWP
- From 6th September to 5th Dec 2026: 4 SWPs

After 5th December 2026 COSS (LKT) practice requirements will be as per the revised Standard (4 times in each 12-month period).

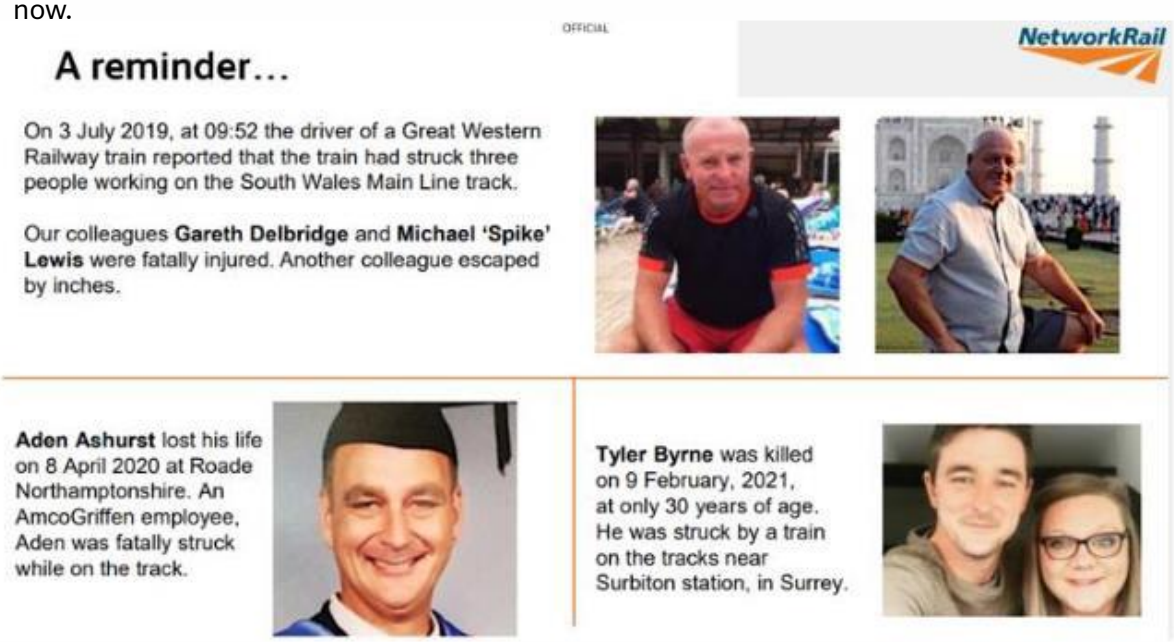
# NRX25-01- Track Workers Safety - Reducing Near Misses

**Overview**

We made significant improvements to reduce risk for tracks workers and have now eliminated unassisted lookout working (>25mph). But risk still remains…

Last month we had five incidents where track workers were close to being struck by a train. The events happened on our tracks near Ruislip, Ampthill, West Allerton, Washwood Heath and Norwood but they could have happened anywhere on our infrastructure and within your area.

In each case we came too close to the sort of fatal incidents depicted in the image shown. It has been four and half years since we last lost a track worker after being struck by a train, but the recent near misses show that another serious incident is inevitable unless we take direct action now.




## Don't be next to get that call……take the following actions: -

**Planning**

• The Planner and PIC MUST discuss and agree the Safe Work Pack and the PIC MUST be familiar with area and the access point.
• The Planner and PIC MUST confirm the Safe Work Packs (SWP) are clear and concise, and the track diagrams are fully understood.

You can do this by checking how your planners liaise with PIC's and allocating time to discuss the plans in their rosters or by talking to PIC's and planners on your site visits. Be as visible as you can, especially at night. When you do sample checks of SWP's avoid a checklist approach, talk to planners and PIC's to verify.

**Additional Protection**

• The Planner and PIC must use the safest protection method available to them.
• If better additional protection could be used but isn't currently available, tell your manager.

**Correct safe position**

• Is there enough support and visibility on site?
• Are supervisors and managers regularly 'checking in' to provide assurance?
• How do your teams know they are in the right location and line before they step onto the track?
• If you find the Access Point information is incorrect in the National Hazard Directory, report it to your local Safety Manager for correction.

You can do this through your site visits and ensuring everyone either uses the Access Point App that gives you your exact location and what are the adjacent lines or, by making sure all Access points have signs or track ID markers that your staff can use to confirm they are using the right access point from the right side of the railway.

**Safety Critical Communications**

• Safety critical communications (SCCs) and briefings must be clear, concise, and easily understood. Remember: “Just because I know what I said doesn’t mean I know what was heard.”

You can do this by encouraging COSS and PIC briefings close to or on site so the team can see the points of entry and work site limits and get staff to repeat back what they heard. Check in your site visits that staff really understand the plans and especially the correct details of access. Review sample recorded communications and follow up on any poor or unclear conversations.

**Immediate Action Required**

**4 key points to remember**:

**Plan**: Is the information in the Safe Work Pack correct with clear expectations.

**Additional Protection**: Do you have the highest level of warning or protection available?

**Correct safe position**: Are you at the correct access point and inside your protection when on or near the line?

**Safety Critical Communication**: Have you provided clear information and both parties have come to a common and safe understanding?

# NRB25-03 - Aspen Hi-Flow Condensate Pump Burn Out

**Overview**

On Sunday, 14 September 2025 at 11:55, the Signaller at Warrington Power Signal Box (PSB) reported activation of the fire alarm within the Telecommunications Room. The Signalling Supervisor promptly obtained the key to access the room, whereupon they discovered the area was filled with smoke. The Fire and Rescue Service was immediately contacted.

The Fire Service arrived on site at 12:04 and determined that the source of the smoke had self-extinguished prior to their arrival. The origin of the incident was identified as the Aspen Hi-Flow Condensate Pump, as depicted in the attached photograph. No other equipment within the room sustained damage as a result of heat or smoke. Notably, no fire suppression systems or water-based extinguishing methods were required or deployed. As a precautionary measure, the Fire Service isolated the air conditioning unit and disconnected the pump from its power supply.

The precise cause of the pump failure remains under investigation. The unit has been inspected and returned to the manufacturer for detailed analysis. Further updates will be provided as additional information becomes available. The pump underwent its most recent scheduled maintenance in May 2025, at which time it was assessed to be in satisfactory working condition.

North-West route have reviewed their signal boxes and currently have this model of pump deployed at over 30 locations. These pumps are widely used across the country by all regions, so all areas should review their asset information.

**Discussion Points**

- Are the scheduled maintenance activities for air-conditioning units and condensate pumps being undertaken to the correct frequency?
- Do high demand or older systems require more regular maintenance activities?
- Do maintenance activities include regular cleaning to the filters and drain lines to prevent clogs?
- Are the units installed according to the manufacturer's instructions?

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# QUIZ TIME

There were quite a few correct entries to the Quiz that was set in August 2025 Rail Safety Bulletin

## The Question

**What is the name of the new Head Protection Standard?**

***Answer: EN 397:2025 Industrial Safety Helmets***

**The first name out of the stationmaster's hat was… Michael Baxter**

**Congratulations Michael, the M&S Voucher is on its way!!**

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So, this month we have another opportunity to create a winner!

There is a £25 M&S Voucher up for grabs in this, the August Rail Safety Bulletin.

***To be a winner this month, just answer the simple question below;***

## The Question

***On what date will the COSS changes come into effect?***


Answers by email please to info@prb-consulting.co.uk to be in with a chance of winning the £25.00 M&S voucher – Put QUIZ in the subject.

Closing Date: 30th November 2025

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|---|---|---|---|
| Briefed By: | | Briefers Role: | |
| Briefing Date: | | Briefers Signature: | |
| Sentinel Coordinator: | | Sentinel Coordinator Signature: | |

**By signing below, I confirm that I have received and understood the briefing material contained within this bulletin.**

| NAME | SENTINEL NUMBER | SIGNATURE | DATE |
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