



**Australian Government**

**Australian Transport Safety Bureau**

# Derailment of freight train 82P7 and subsequent collision with coal train 9F02

near Marmor, Queensland, on 29 January 2023

**ATSB Transport Safety Report**  
Rail Occurrence Investigation (Short)  
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#### Addendum

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# Preliminary report

This preliminary report details factual information established in the investigation's early evidence collection phase, and has been prepared to provide timely information to the industry and public. Preliminary reports contain no analysis or findings, which will be detailed in the investigation's final report. The information contained in this preliminary report is released in accordance with section 25 of the *Transport Safety Investigation Act 2003*.

## The occurrence

On 29 January 2023, at about 1910 local time, a Pacific National freight train, 82P7, was travelling at about 100 km/h west on the down line near Marmor, Queensland. As the train approached the Bills Road<sup>1</sup> level crossing, the leading wheel set on the third bogie of the sixth wagon derailed. The derailed wheel set collapsed into the centre of the track and travelled in the derailed condition over the points, crossings, and Bills Road level crossing.

As the train had approached the level crossing, the driver applied the throttle. The driver reported that the train did not respond as expected and noted a slight drag. The driver stated they checked the locomotive mirrors, noticed sparks coming from the train, and subsequently the emergency brake applied. At 1910:33, as the train was slowing, the driver broadcast an emergency call over the ultra-high frequency (UHF) radio. The train stopped about 1,113 m from the point of derailment. Several multi-pack wagons from train 82P7 had derailed, significantly damaging points, crossings, level crossing equipment, and overhead wiring stanchions (Figure 1).

**Figure 1: Main wreckage site of train 82P7**



Source: ATSB

At about the same time as, or just prior to, the emergency call, the network controller located in Rockhampton, called Aurizon coal train 9F02 (travelling on the up line) via UHF radio about a loss of signalling detection at the points near the Bills Road level crossing. Around this time, the crew noticed a cloud of dust emanating from a train on the down line. The driver began to apply the emergency brake but collided with a container attached to a derailed wagon on train 82P7 fouling

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<sup>1</sup> The Bills Road level crossing is identified as Toonda Road by the track operator Aurizon.

the up line. The train stopped short of the main wreckage of train 82P7, located at the Bills Road level crossing.

Train 9F02 sustained significant impact damage to the driver's side of the cabin. Skidding impact damage was also evident along the side of the train (Figure 2).

**Figure 2: Damage to leading locomotive of train 9F02**



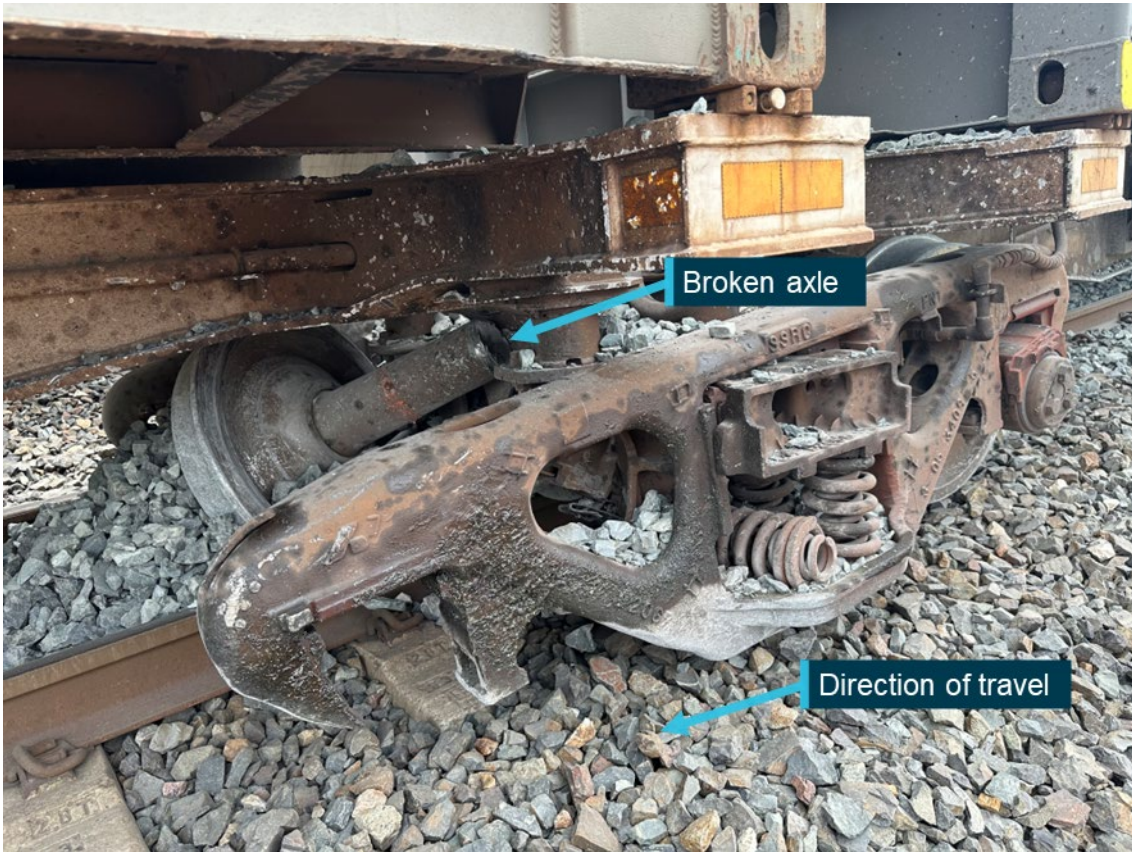
Source: ATSB

During on-site inspections, the ATSB found an axle from the sixth wagon (RNCY137-T) had fractured (Figure 3). This evidence correlated with rail wheel field-side<sup>2</sup> marks found on the rail head, identified as the point of derailment. The marks commenced on the field-side of the rail head and ran inwards towards the rail gauge face between both rails (Figure 4). There was no other evidence of derailment found on the approach to the point of derailment.

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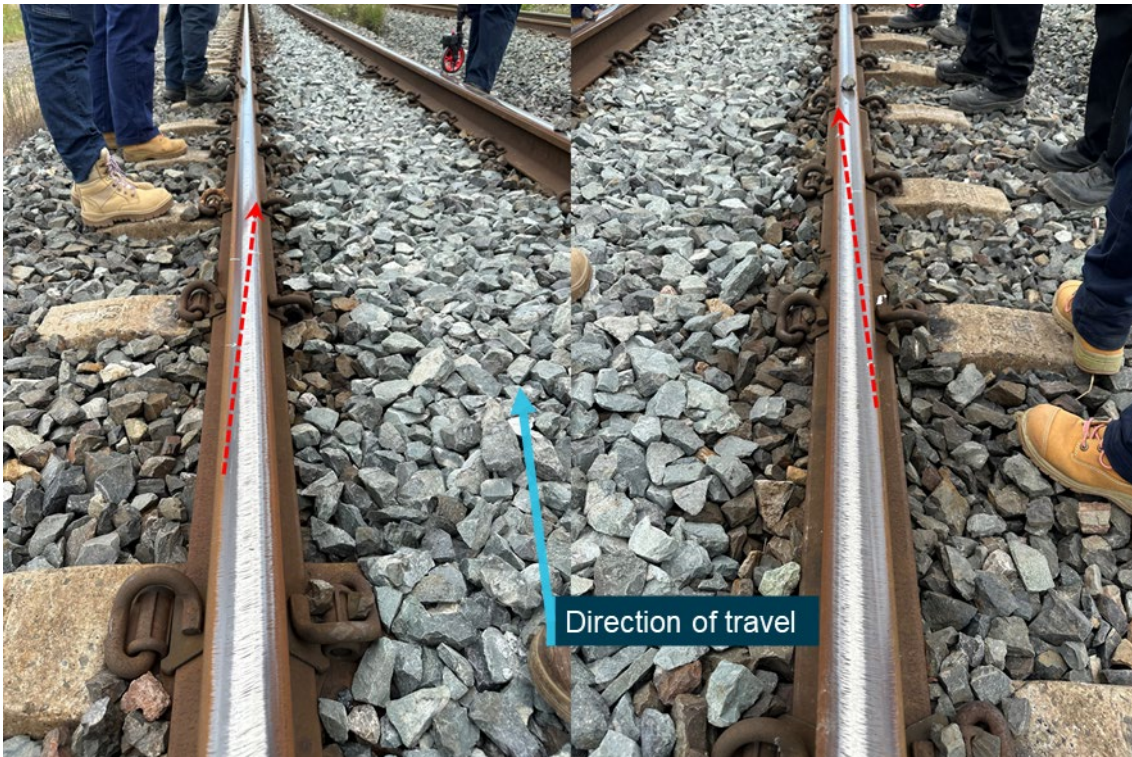
<sup>2</sup> The side of the rail opposite the gauge face (the inner side of the running rail head).

**Figure 3: Damaged bogie showing half of the fractured axle half in-situ**



Source: ATSB

**Figure 4: Wheel marks identified at the point of derailment**



Source: ATSB

## Further investigation

To date, the ATSB has:

- attended and completed site inspections
- interviewed the crew of both trains
- received evidential material including recorded data
- conducted a detailed examination of rolling stock components.

The investigation is continuing and will include:

- detailed material analysis of specific rolling stock components
- detailed examination of maintenance records, procedures, and practices
- similar occurrences
- other relevant evidential material.

Should a critical safety issue be identified during the course of the investigation, the ATSB will immediately notify relevant parties so appropriate and timely safety action can be taken.

A final report will be released at the conclusion of the investigation.

# General details

## Occurrence details

Date and time:	29 January 2023 – 1910 EST	
Occurrence class:	Accident	
Occurrence categories:	Derailment	
Location:	near Marmor, Queensland	
	Latitude: 23° 41.027' S	Longitude: 150° 43.535' E

## Train 1 details

Track operator:	Aurizon	
Train operator:	Pacific National	
Train number:	82P7	
Type of operation:	Freight	
Consist:	1 locomotive, 16 wagons, length 685.32 m, weight 1,366.4 t.	
Departure:	Moolabin Yard, Queensland	
Destination:	Townsville, Queensland	
Persons on board:	Crew – 1	Passengers – N/A
Injuries:	Crew – Nil	Passengers – N/A
Damage:	Substantial wagon damage	

## Train 2 details

Track operator:	Aurizon	
Train operator:	Aurizon	
Train number:	9F02	
Type of operation:	Bulk coal	
Consist:	4 locomotives (distributed pairs), 100 wagons, length 1,586 m, weight 10,452 t.	
Departure:	Blackwater coal system, Queensland	
Destination:	Callemondah (Gladstone), Queensland	
Persons on board:	Crew – 2	Passengers – N/A
Injuries:	Crew – Nil	Passengers – N/A
Damage:	Substantial leading locomotive damage, minor damage to large portion of train	

# Australian Transport Safety Bureau

## About the ATSB

The ATSB is an independent Commonwealth Government statutory agency. It is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers.

The ATSB's purpose is to improve the safety of, and public confidence in, aviation, rail and marine transport through:

- independent investigation of transport accidents and other safety occurrences
- safety data recording, analysis and research
- fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia, as well as participating in overseas investigations involving Australian-registered aircraft and ships. It prioritises investigations that have the potential to deliver the greatest public benefit through improvements to transport safety.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, international agreements.

## Purpose of safety investigations

The objective of a safety investigation is to enhance transport safety. This is done through:

- identifying safety issues and facilitating safety action to address those issues
- providing information about occurrences and their associated safety factors to facilitate learning within the transport industry.

It is not a function of the ATSB to apportion blame or provide a means for determining liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner. The ATSB does not investigate for the purpose of taking administrative, regulatory or criminal action.

## Terminology

An explanation of terminology used in ATSB investigation reports is available on the ATSB website. This includes terms such as occurrence, contributing factor, other factor that increased risk, and safety issue.