



Australian Government
Australian Transport Safety Bureau

Train 7MD3 collision with motor vehicle

Katherine, Northern Territory | 12 October 2014



Investigation

ATSB Transport Safety Report
Rail Occurrence Investigation
RO-2014-017
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Addendum

Page	Change	Date

What happened

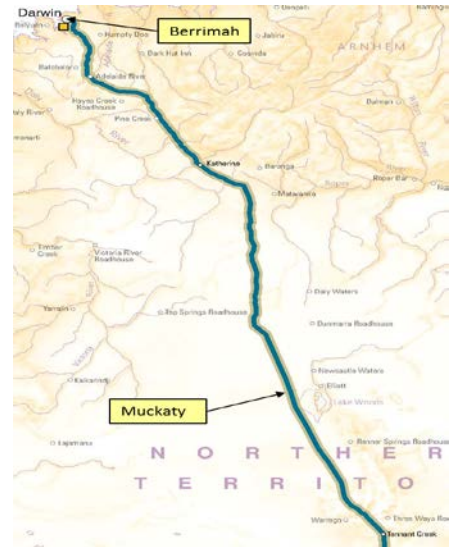
On 11 October 2014, GWA train 7MD3 departed Muckaty, NT for Berrimah Freight Terminal (Figure 1). Measuring 977 m in length, with a gross weight of 6924 t, the train was crewed by a driver and co-driver, and consisted of two locomotives, crew car and 78 wagons loaded with manganese ore.

At about 0100¹ on 12 October 2014, train 7MD3 passed through Katherine at a speed of 80 km/h. As the train passed over the Novis Quarry Road level crossing, the co-driver noticed a white car alongside the track. Soon after, the driver saw a white light being waved near the track further ahead and immediately applied full train brake.

About 6 seconds later, as train 7MD3 rounded a bend, the driver saw a green utility road vehicle in the middle of the track immediately before the Katherine River Bridge. The driver made an emergency application of the train brake and sounded the locomotive horn.

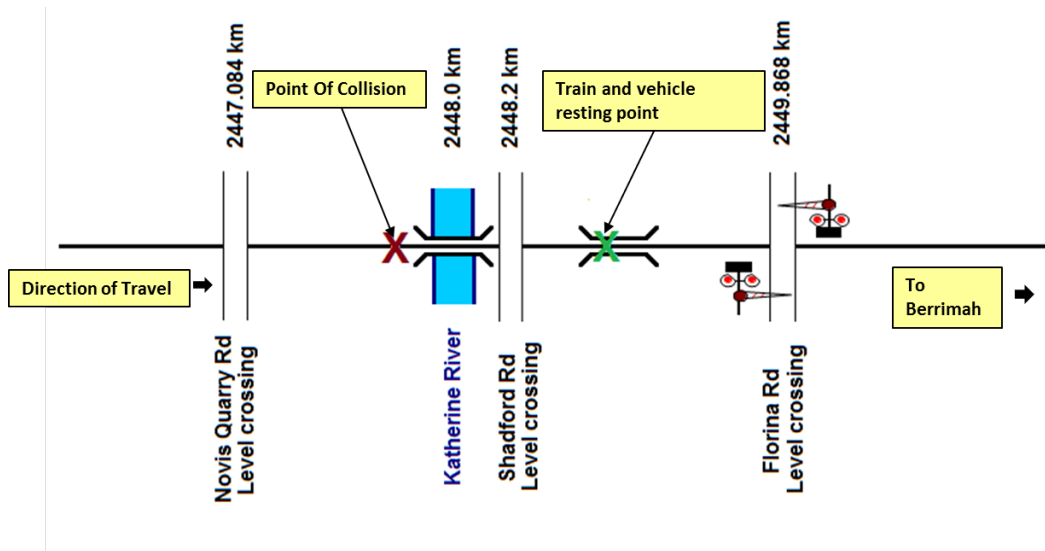
At about 0102, the lead locomotive of train 7MD3 struck the utility vehicle at a speed of about 70 km/h. The train crew believed that the impact had derailed the locomotive and they were about to fall off the bridge and into the Katherine River. While the road vehicle became lodged under the lead bogie, the locomotive and the trailing wagons remained on track. The train travelled approximately 500 m further (Figure 2) before finally coming to rest atop a culvert bridge, with the damaged vehicle hanging precariously over the right side of the bridge (Figure 3).

Figure 1: NT rail network map



Source: Geoscience Australia annotated by ATSB.

Figure 2: Collision and resting point



The co-driver contacted Train Control and reported the collision while the driver went to the crew car to ensure the wellbeing of the other train crew before all three returned to the lead locomotive. One of the crew inspected the road vehicle and ascertained that no one was trapped inside.

Northern Territory Police officers attended the scene and provided assistance to all four crew members. Neither the driver of the vehicle nor any of the train crew was injured in the collision, although one member of the train crew was taken to hospital as a precautionary measure. All crew members were relieved from duty.

¹ The 24 hour clock is used in this report to describe the local time of day, Central Standard Time (CST).

Figure 3: Vehicle position post collision

Source: Northern Territory Police

Train 7MD3 remained in situ while GWA personnel inspected the site and ensured the safety of the train and the track infrastructure. During the subsequent day, the train was moved back off the bridge and the remains of the vehicle extracted from under the locomotive bogie. At 1450 on 12 October 2014, Train 7MD3 recommenced its journey and continued to Berrimah Freight Terminal with a new train crew.

The driver of the vehicle was interviewed by the Northern Territory Police. During the interview, the driver informed the interviewing officers that he had been attempting to traverse the track just west of town when his car became stuck. Upon realising the approach of a train he had attempted to warn the train by flashing a torch.

ATSB comment

The point where the road vehicle attempted to traverse the railway did not contain any structure that resembled a level crossing, or any other provisions for road vehicles to safely cross the track. Evidence showed that in the attempt to traverse the rail line, the driver entered the rail corridor and mounted the east side of a steep embankment topped by the ballast formation supporting the rail track. The vehicle's front wheels subsequently 'hung' on the east rail, such that its chassis rested on the track ballast and embankment with the rear wheels only lightly contacting the ground and unable to provide sufficient tractive effort.

There were a number of vehicle level crossings and road overpasses near Katherine, the closest being Novis Quarry Road, less than 1 km from where the road vehicle attempted to traverse the track.

While there is risk of injury or death to road vehicle occupants in the event of a collision with a train, there is also a very serious risk of injury or death to train crew and passengers in the likely event the train subsequently derails. At this location, derailment could have resulted in a train (freight or passenger) falling many metres into the Katherine River.

Safety message

This occurrence highlights the very significant risk of injury, death and serious damage that is associated with road vehicle operators attempting to cross railway tracks in areas other than designated level crossings. Risks are not confined to the road vehicle and occupants – there is also a high likelihood of train derailment after any track collision, with significant associated risks to the train crew, passengers, freight and infrastructure.



General details

Occurrence details

Date and time:	12 October 2014, 0102
Occurrence category:	Accident
Primary occurrence type:	Collision
Location:	5.9 km North of Katherine (approximately 2448.0 km mark Darwin line)

Locomotive details

Registration:	GWU 008	
Operator:	Genesee Wyoming Australia	
Type of operation:	Heavy freight haulage	
Persons on board:	Crew – 2	Passengers – 2 (Non-operating train crew)
Injuries:	Crew – 0	Passengers – 0
Damage:	Minor	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and 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 that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

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

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine 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.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.

Australian Transport Safety Bureau

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