

# RAIB on buffer collision: driver was distracted by mobile phone and falling bag

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A Rail Accident Investigation Branch (RAIB) report into a train hitting buffers in Kirkby says it happened because the driver was distracted by their mobile phone and their bag, the latter of which fell to the floor.

The driver was checked in hospital as a precaution, and nobody was hurt. RAIB says the accident would have been worse had there been more passengers on the train or in the platform area behind the buffers.

## The accident

At around 18:53 hrs on Saturday 13 March 2021, a Merseyrail train hit the buffer stop at Kirkby station, Merseyside.

The train was travelling at 41 mph (66 km/h) as it entered the platform. Soon afterwards, the driver applied the emergency brake, but there was insufficient distance remaining to prevent the collision, and the train struck the buffer stop at around 29 mph (47 km/h). The train came to rest under a bridge, around 28 metres beyond the original buffer stop position. The driver was taken to hospital as a precaution and was discharged the following day. There were no other reported injuries to the guard or to the 12

passengers on board. The collision caused significant damage to the station infrastructure and the front of the train, with the station remaining closed for eight days.

RAIB points out the accident occurred because the driver of the train did not apply the brakes in time, as he was distracted from the driving task by his mobile phone and by his bag falling onto the cab floor.

No engineered systems automatically applied the train's brakes, as the conditions for their intervention were not met. The driver continued to operate the controls for two of these systems (the automatic warning system and the driver's safety device), preventing their activation, despite not being entirely engaged in the driving task. A third system (the train protection and warning system) did not activate until after the driver had already applied the emergency brake. This system was installed in compliance with the relevant standards but it did not protect against the particular scenario of this accident.

The risk assessment processes used by Merseyrail and Network Rail did not identify the risk of the buffer stop being hit at relatively high speed. RAIB also observed that Merseyrail's fatigue risk management procedure did not follow current industry good practice.

RAIB adds this accident would almost certainly have had a worse outcome if there had been more passengers on the train or in the platform area behind the buffer stop. At the time, the COVID-19 pandemic had led to restrictions on social contact which resulted in a reduction in passenger numbers.

## **RAIB's recommendations**

RAIB has made three recommendations. The first is addressed to RSSB and relates to research into devices to monitor the alertness and awareness of drivers. The second, addressed to Merseyrail and Network Rail, seeks to improve the risk assessment process for collisions with buffer stops at terminal platforms. The final recommendation asks Merseyrail to improve its fatigue management process to follow industry good practice. RAIB also identified two learning points. The first reminds train drivers of the risks posed by using a mobile phone while driving a train. The second reminds train operating companies of the importance of understanding the limits of protection offered by the train protection and warning system when risks assessing terminal platforms.