

Report 06/2020: Signal passed at stop and near miss, Deansgate-Castlefield tram stop, Manchester

Summary

At around 17:19 hrs on 17 May 2019, a tram passed through the centre platform of Deansgate-Castlefield tram stop on the Manchester Metrolink system, without making its scheduled stop. The tram exited the platform at around 9 mph (14 km/h) and then passed a stop signal. This placed it in the path of a second tram, which was approaching a junction as part of a signalled movement. The driver of the second tram saw the first tram approaching and was able to stop in time to avoid a collision.

The incident occurred because the driver of the first tram did not stop at the platform or stop signal, due to a temporary loss of awareness. While some doubt remains as to the reason for this loss of awareness, RAIB considers that it was either the result of a medical event or the driver losing focus on the driving task. RAIB found that the driver had been involved in previous similar incidents but that the tramway operator, Keolis Amey Metrolink, had not adequately addressed his safety performance. RAIB also found that the driver's safety device on the tram did not detect or mitigate the driver's loss of awareness because it was not designed to do so.

The hazard of a driver losing awareness while operating a tram was not recognised by Thales when it risk assessed the new layout at the tram stop or by Transport for Greater Manchester when it approved the new layout for service. Keolis Amey Metrolink also did not recognise this hazard during its risk assessment of the new layout, although it did identify the hazard as part of a general risk assessment of tram driving tasks. Despite this, the associated risks were not effectively controlled.

Recommendations

RAIB has made three recommendations, all addressed to Keolis Amey Metrolink. The first recommendation concerns a review and updating of its strategy for managing the risk of trams passing signals at danger or stop. The other recommendations relate to factors that were not causal to the incident, but which address safety issues identified during the investigation. These are concerned with Keolis Amey Metrolink ensuring medical fitness requirements for drivers are based on an understanding of the risks of their activities, and that its fatigue risk management system meets with relevant industry guidance and best practice.

RAIB has also referred to two previous recommendations made in its report into the overturning of a tram at Sandilands junction, Croydon, on 9 November 2016. One of these previous recommendations was that UK tram operators, owners and infrastructure managers should jointly conduct a systematic review

of operational risks and control measures associated with the design, maintenance and operation of tramways. The second was that UK tram operators, owners and infrastructure managers should work together to research and evaluate systems capable of reliably detecting driver attention state and initiating appropriate automatic responses if a low level of alertness is identified.

Simon French, Chief Inspector of Rail Accidents said:

This alarming incident reinforces the need for the tramway industry to continue to pursue implementation of the important recommendations that RAIB made in the report on the Sandilands junction disaster of 2016. Trams are driven in accordance with the 'line of sight' principle, and safe operation is heavily reliant on drivers remaining focused on the driving task at all times. It is important that drivers' fitness and performance are carefully managed, and systems are in place to detect that a driver has lost awareness. It is therefore encouraging to learn that there is a lot being done in the tramway industry at present to develop, test and evaluate improved systems for the detection of drivers' loss of awareness.

In our investigation into this incident it was disappointing to find that management processes and action plans, intended to address previous safety incidents in which the tram driver had been involved, had not been carried out or were not fully implemented. The integrity of any safety management system relies on conscientious and intelligent application of the procedures that form part of it. If managers don't do this, the safety of the tramway is at risk.

Notes to editors

1. The sole purpose of RAIB investigations is to prevent future accidents and incidents and improve railway safety. RAIB does not establish blame, liability or carry out prosecutions.
2. RAIB operates, as far as possible, in an open and transparent manner. While our investigations are completely independent of the railway industry, we do maintain close liaison with railway companies and if we discover matters that may affect the safety of the railway, we make sure that information about them is circulated to the right people as soon as possible, and certainly long before publication of our final report.
3. For media enquiries, please call 01932 440015.

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