Office of Transport
Safety Investigations

Knowledge Article KA02/24

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Why park brakes matter: preventing bus rollaways

Introduction

Ensuring safety is paramount in public transport. Uncontrolled movement of buses, often referred to as 'bus rollaways', can lead to tragic outcomes, including severe injuries, fatalities, and substantial property damage. Even though there are multiple safety alerts and guidelines emphasising the importance of properly applying park brakes and not relying on door interlock brakes to secure the bus (see *Useful resources*), rollaways continue to occur with troubling frequency. In the first half of 2024 alone, 15 bus rollaways in NSW were notified to the Office of Transport Safety Investigations (OTSI), with over 90% occurring due to park brakes either not being applied or not being applied correctly.

Through industry consultation, OTSI has identified a potential safety opportunity to strengthen bus drivers' knowledge and understanding of the key functions of park brakes and door interlock brakes. In particular, bus drivers may not fully understand why park brakes are an essential risk control, even when door interlock brakes are engaged.

This article provides important information for bus drivers to enhance awareness of the role and limitations of door interlock systems and functions of park brakes.

Role and limitations of door interlock brakes

A door interlock brake system is an important safety feature installed in many NSW buses. When the bus doors are open, this system prevents the bus from moving, even if park brakes are not engaged. However, it is important to recognise its limitations:

1. *Electrical vulnerability*: Door interlock brakes rely on electrical components to work. If there is a fault in the electrical system, the interlock may disengage without warning, potentially allowing the bus to roll.
2. *Door operation issues*: If there is a fault with the doors, the interlock brakes may not engage correctly, increasing the risk of a rollaway.
3. *Manual disengagement:* Door interlock brake systems may sometimes be purposely disengaged due to prior faults or by maintenance staff. This can inadvertently leave the bus vulnerable to rollaways if the system is not reactivated before the bus is put back in operation.

Why park brakes are essential

Application of park brakes by bus drivers should be recognised as the last line of defence in preventing bus rollaways. Here is why the park brakes matter:

1. *Mechanical reliability*: Unlike door interlock brakes, park brakes do not rely on electrical inputs in most buses.* Once correctly applied, the park brakes remain effective, even if the electrical system fails.
2. *Driver control*: In most buses, drivers have direct control over park brakes through a mechanical lever. Engaging them is a simple and quick procedure, and once properly applied, the wheels become locked, and the bus cannot move.
3. *Human factors risk mitigation:* Distractions, momentary lapses in concentration or simple mistakes can happen to any driver regardless of their experience or expertise. There have been several reports where human error played a significant role in bus rollaways. For example, drivers might get distracted at a stop and leave the bus with doors open to attend to an operational issue without applying park brakes. The bus will be held by the door brake interlocking. Should the driver then close the doors using the external door close switch, there is a high risk of a rollaway. Applying park brakes significantly reduces the risk of rollaways in such circumstances.

Best practices for bus drivers

Here are the best practices for drivers for rollaway prevention as recommended by Transport for NSW, SafeWork and OTSI:

1. *Always apply the park brake before leaving the driver's seat*: Ensure that the park brake is applied before leaving the driver's seat. Check that the brake is correctly engaged by ensuring that the brake lever is securely locked and the park brake light on the dash is illuminated. Familiarise yourself with any alarms or indicators fitted in the bus to confirm park brake activation.
2. *Do not access bus controls through driver's window*: When a bus is fitted with an external door close control, ensure that the park brake is applied, and use the external control to close the bus doors. Do not access any of the bus controls through driver's window.
3. *Report all rollaway incidents to management*: Ensure that all rollaway bus incidents are reported to management.

Conclusion

Relying on door interlock brakes to secure the bus is inadequate and can lead to rollaways. Park brakes are a reliable risk control — they generally do not rely on electronics and offer greater safety. As a bus driver, prioritise safety by always applying park brakes before leaving the driver's seat.

* Some newer model buses now have electrically applied park brakes. However, most buses still have a mechanical lever for park brake application.

Useful resources

Bus Operator Accreditation Scheme Information Alert 1/16: Runaway Bus Information Procedure, Roads and Maritime Services, NSW 2016

Fact Sheet: Runaway Bus Procedures, Transport for NSW, 2020

Safety Alert: Uncontrolled Movement of Buses, SafeWork NSW, 2017

Bus Rollaway Prevention Video, ComfortDelGro Corporation (CDC), Northern Territory

Safety Alert SAL01/24: Bus and Coach Rollaways: Review Your Risk Controls, Office of Transport Safety Investigations, 2024

Share this article with your fellow bus drivers and reinforce the importance of park brake application in your daily routines.