

Confidential Safety Information Reporting Scheme

Bus issue regarding Opal Ticketing and Thoreb Electronic Systems

A report from an employee of the State Transit Authority (STA) was received about the operation of electronic systems on buses:

All STA buses are fitted with the OPAL ticketing system. The OPAL electronic unit operates off the bus's battery supply and, as such, STA maintenance personnel have these units on a short 15-minute timed delay. Once the bus is turned off these units will automatically shut down to save battery power. The concern I have, is that I have witnessed on a number of occasions bus drivers leaving the bus running and then closing the door utilising the close door button through the driver's window which is strictly prohibited by STA. I believe STA can alleviate the situation by simply extended the timing sequence to at least an hour so drivers can have the assurance that they can turn off the vehicles, have a meal break, and not have to go through the whole start up sequence of the OPAL system.

Another problem I wish to raise is the Thorab system installed on Custom Coach type vehicles. I have noted on a number of occasions that the Thorab system freezes up and, when it does, it completely disengages the door interlock mechanism as the door interlock mechanism operates through the Thorab system. I believe it is just a matter of time that a bus runaway event will occur as a result of this system.

CSIRS Requirement

As part of the OTSI investigation, a Safety Valve Notification was issued to STA asking them to address these concerns and provide OTSI with the results of its findings and any remedial safety actions deemed necessary. Three OTSI investigators also visited the STA depot at Leichhardt to examine the operation of the door interlocking systems.

Investigation outcome

STA advised that they had investigated the claim made by the reporter and they provided details of their investigation. An extract of this response follows:

The Opal system configuration is standardised by Transport for NSW (TfNSW) on all Government and privately owned buses in the state. Any alteration to the configuration is a matter for determination by TfNSW and is not an alteration that State Transit can easily make.

The statement made by the Reporter relating to a 15 minute power shutdown is inaccurate. Our understanding is that the ticket validator units of the system are set to power off 6 minutes after the bus ignition has been turned off. The driver console

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remains on permanent power and unless turned off by the driver, goes into sleep mode when inactive. If the drivers account is inactive for 60 minutes the driver is logged out.

When the ignition is turned on, the validators take 3.5 to 5 minutes to power up and show "tap on" on the passenger interface screen. In addition the driver console powers up immediately upon the driver pressing the <enter> key.

Driver schedules are arranged to provide a minimum of between 6 or 8 minutes layover/recovery time at the end of every trip operated. Any period in excess of this is provided as additional timetable recovery time and not driver recovery or meal break. Driver meal breaks are rostered in such a way to allow sufficient time for the Opal system to be powered up.

As such State Transit does not consider it appropriate or necessary to leave the Opal system powered up during any extended layover or meal break period.

As the reporter correctly indicates State Transit's Bus Operations Handbook provides specific instruction for drivers not to access the bus through the driver's window. All State Transit buses feature the "no access" warning decal on the driver's window to remind drivers of the no access requirement.

It would be appropriate to advise the reporter that any incident witnessed where drivers access door or bus controls via the driver's window should be immediately reported. As a minimum and in the interests of work safety the reporter should attempt to intervene in any such event.

THOREB AND DOOR INTERLOCK ON CUSTOM COACH BUSES

It is assumed that when the reporter refers to the Thoreb system freezing, this pertains to the Thoreb system user interface, which is sometimes referred to as the C90. This comprises a visual screen located in the driver's cabin. The driver interface screen has been known to freeze in certain circumstances. Known circumstances include possible voltage spike when "jump starting" buses.

The door brake interlocks and associated functionality is not controlled via the driver interface screen, this is controlled through other parts of the multiplexing system that have independent power supply and programming. As a consequence, the door brake interlock is not affected by any freezing of the driver interface screen. To provide assurance this was tested and confirmed on a wide sample of buses.

State Transit has in place driver fault reporting systems and protocols where drivers can seek assistance or advice on how to reset or reboot the driver interface screen if frozen.

The Reporter could be advised to seek further instruction in relation to resetting the driver interface screen or to seek the assistance of the Network Control Centre (NCC) via the two way radio if experiencing any difficulties whilst in service.

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Given the current sensitivities surrounding potential bus runaways I have asked State Transit's safety division to again distribute our safety alert for securing buses.

OTSI Action

The outcomes of the inquiries made by both OTSI and STA have been recorded in the OTSI Safety Investigation Database for future review and trend analysis. The reporter was advised of the response from STA and was told that OTSI was satisfied with the validity of the response from STA.