



**Office of
Transport Safety
Investigations**

BUS SAFETY ALERT

20 JANUARY 2021

RISKS OF ELECTRICAL FIRES ON VOLVO BUSES WITH VOLGREN CR228L BODIES (RIGID AND ARTICULATED)

The Office of Transport Safety Investigations (OTSI) recently conducted a preliminary investigation in relation to a bus fire at Glebe on 11 January 2021. The bus was a Volvo B12BLEA fitted with a Volgren CR228L body manufactured in August of 2009.

The bus operated by Transit Systems was destroyed by fire, likely the result of an electrical fault. Preliminary investigations found high amperage auxiliary cables running between the jump start socket and the battery isolator switch panel had abraded against the rear most upper edge of the saloon heater assembly. The abrasion wore through the outer conduit and insulation of the positive cable, likely causing the cable to short circuit.

A review of other Volgren bodied Volvo buses fitted with this remote jump start plug, including Volvo B7BLE's, indicated that similar instances may exist where abrasion of the jump start cables against the heater housing could occur.

The jump start cable is connected to the main batteries via Volvo Fuse F101 and is isolated from the main batteries by the main battery cut-off switch. The cables are designated red as positive and black as negative and are located together within a convoluted insulating conduit.

Even though the circuit is fused, it is possible that a direct short to earth will result in significant heat damage and the possibility of commencing a fire. It is also noted that the emergency cut-off switch, located on the drivers' console panel, does not isolate this circuit and in the event of a fire the circuit will remain active. The circuit must be isolated via the main battery isolator switch located adjacent to the main battery compartment.

KEY POINTS FOR OPERATORS

Assess the risks (as per your SMS) relative to your specific vehicle to ensure that controls are in place to minimise the risk of electrical fires. The following actions should be considered:

- Inspect jump start cabling to ensure wiring is undamaged and secured correctly with adequate clearance of any possible points of contact.
- Review maintenance regimes to ensure inspections adequately address wiring integrity and security.
- Review emergency response procedures and training protocols relating to bus fires and evacuations.

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