



BlueScope

# Electrical Incidents

# Key Learnings

ASP Manufacturing

2024 / #5



An electrician was called to a crane cabin to investigate water leaking near a light fitting. When they went to isolate the light at an electrical panel, they pushed a floor heater out of the way for access. As they did this, they felt a “tingle” (electric shock) between their hands touching the panel and the heater. The RCD circuit protection did not trip. After medical treatment and assessment, they were able to return to work.

The RCD breaker was later tested and confirmed as functioning correctly. The heater was constructed of a plastic external casing with a metal grille not attached to any internal components or earth. It was partially full of water which had most likely caused tracking of electricity to the grille.

Faults in the crane cabin’s roof had allowed water ingress into an area with several electrical panels and appliances designed only for indoor use.

**Key Learnings –**

- Crane and building maintenance must be prioritized to prevent water ingress into electrical equipment.
- When investigating water issues around electrical equipment, take care to broaden your focus from what you were originally looking at to also include any other possible water ingress hazards in the area.



Crane Cabin Heaters



Whilst performing isolations, an electrician noticed abnormal noise coming from a 6.6 kV board. High Voltage were notified, and a Power Control Officer sent to assess. The noise was deemed worthy of investigation, so circuits were off-loaded, the area barricaded and access to the switch room restricted.

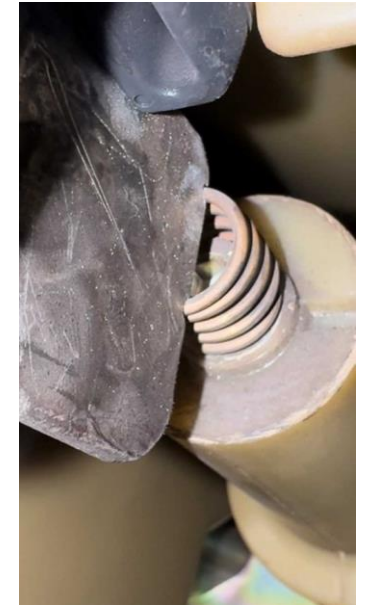


Investigations revealed contacts of the switch were worn and the noise was due to arcing activity.

It is important that we are aware of our surroundings and identify unusual noises as a potential hazard.

Acting on our findings by responding immediately can prevent an escalation of faults (keep the area clear and report the fault for urgent investigation).

Reviewing maintenance and failure records of equipment found like this will help determine if frequency and types of inspections need to be adjusted.



6.6kV Circuit Breakers and contacts inside



During fault finding, an electric roller door controller was found to have its overload reset button removed and exposed terminals from the control circuit inside were energised. These could be touched if someone put their finger in the pushbutton hole.

In the past, the overload inside the enclosure had been altered and was not in its original location.

Also, the isolation switch above isolated all power, but to enable a lock to be applied, someone had drilled a hole through it. There was no labelling indicating its function or point of supply.

This looks to have been in this condition for a long time.

Failings of the original installation, from incorrect repairs and missed maintenance all led to this potential hazard.

We must ensure equipment is installed, commissioned & labelled correctly.

Repairs and modifications must retain the original functionality and safety of equipment.

All electrical equipment shall have a maintenance and testing plan.

Roller Door Controller

Reference: i2490261 – Recalled circuit breaker found in service

During an audit of an electrical distribution board, a circuit breaker was identified as being of a type that was recalled several years ago. The Eaton Quicklag ELQ-TW earth leakage circuit breakers (RCBO's) had been recalled by suppliers due to the risk of electrical fire. This one was not identified at the time and remained in service.

Key Learning – it is important we act on product recalls by auditing our areas as soon as we are made aware of them and sharing notifications with others that may be affected. To audit your area - the effected models can be identified by a green test button as shown and were supplied nationally from 1<sup>st</sup> April 2004 to 15<sup>th</sup> December 2016.





## ELQ-TW recall

Recalled Product: Eaton Quicklag ELQ Earth Leakage Circuit Breaker Part Numbers

Current Rating	30mA 1 Pole	10mA 1 Pole	100mA 1 Pole	30mA 2 Pole
10A	ELQ110C3TW	ELQ110C1TW	ELQ110C10TW	ELQ216C3TW
16A	ELQ116C3TW	ELQ116C1TW	ELQ116C10TW	ELQ216C3TW
20A	ELQ120C3TW	ELQ120C1TW	ELQ120C10TW	ELQ220C3TW
25A	ELQ125C3TW	ELQ125C1TW	ELQ125C10TW	ELQ225C3TW
32A	ELQ132C3TW	ELQ132C1TW	ELQ132C10TW	ELQ232C3TW

## ELECTRICAL

SAFETY RECALL

Eaton Industries Pty Ltd - Quicklag ELQ Earth Leakage Circuit Breaker (RCBO)



**AFFECTED MODELS:**

Current Rating	30mA 1 Pole	10mA 1 Pole	100mA 1 Pole	30mA 2 Pole
10A	ELQ110C3TW	ELQ110C1TW	ELQ110C10TW	ELQ210C3TW
16A	ELQ116C3TW	ELQ116C1TW	ELQ116C10TW	ELQ216C3TW
20A	ELQ120C3TW	ELQ120C1TW	ELQ120C10TW	ELQ220C3TW
25A	ELQ125C3TW	ELQ125C1TW	ELQ125C10TW	ELQ225C3TW
32A	ELQ132C3TW	ELQ132C1TW	ELQ132C10TW	ELQ232C3TW

Affected models were sold nationally from April 2004.

**HAZARD:** A non-compliant material has been used in the manufacture of a component, and when operating under short circuit conditions the product may express ionised gases through the exhaust port which may result in conditions creating a fire risk.

**WHAT TO DO:** Building owners, managers and electrical contractors should check switchboards or loadcentres for potentially affected RCBOs. The affected models can be identified by the presence of a green test button, as shown in the above image. Products without a test button or with a white or an orange test button are not impacted by this recall. Further guidance on how to identify an affected model are available at [www.eatoncorp.com.au/elqtw-r](http://www.eatoncorp.com.au/elqtw-r)

If your RCBO is an affected model, contact Eaton at the contact details below to arrange for a replacement RCBO to be installed onsite at no charge.

**CONTACT DETAILS:** Please direct all inquiries regarding this recall to:  
Phone: 1800 870 851  
Website: [www.eatoncorp.com.au/elqtw-r](http://www.eatoncorp.com.au/elqtw-r)

See [www.productsafety.gov.au](http://www.productsafety.gov.au) for Australian product recall information