

## Safety Alert

# Apprentice suffers electric shock and falls from roof

The purpose of this Safety Alert is to remind electrical contractors and workers of the electrical risks within ceiling spaces and the requirement to manage the risk of falls. The alert is also a reminder for home and business owners of the need to regularly test Residual Current Devices (RCDs) fitted to their property.

## Background

On 6 December 2023, a third year apprentice electrician working at a residential property was attempting to locate electrical wiring located above the eaves in the ceiling space. The apprentice was unable to reach the wiring from the manhole, so climbed onto the roof to unscrew and lift a roofing sheet to reach the wiring.

The apprentice received an electric shock and fell off the roof, onto a fence and into the neighbouring yard.

Preliminary findings indicate a connector used to insulate the wiring was damaged, exposing live parts which the apprentice grabbed. WorkSafe Inspectors also found the RCD protecting the circuit had failed.

The worker received electrical burns to both hands and was also injured from the fall.



**Image:** The apprentice fell from the roof, onto the fence and landed in the neighbouring yard after an electric shock. **(Insert)** A connector used to insulate the wiring was damaged, exposing live parts.

## Possible contributing factors

- Power was not switched off at the switch board.
- The electrical wiring was damaged with live parts exposed.
- The RCD protecting the circuit had failed.
- The pitch of the roof was steep.
- Fall protection was not used when the apprentice climbed on the roof.

## Action required

- Always lock out and tag out the switch board and ensure the power is off before entering the ceiling space or handling electrical wiring located in the ceiling space.
  - Electrical wiring in ceiling spaces may deteriorate due to high temperatures, or become damaged due to vermin or from sharp objects in roof trusses and ceiling joists, such as protruding screws and nails.
- Before entering a ceiling space, advise someone onsite when you are entering and how long you expect to be in the ceiling space.
- Be mindful that electrical wiring supplying the switchboard will be live unless the property has been disconnected.
- Supply cables from the solar panels to the inverter unit will also be live when the solar panels are generating electricity.
- When working on a roof or at heights, manage the risk of falls by using:
  - a fall prevention device; or
  - if it is not reasonably practicable to provide a fall prevention device, provide a work positioning system; or
  - if it is not reasonably practicable to comply with either A or B, provide an alternative fall arrest system, so far as is reasonably practicable; and
  - ensure the safe system of work selected is deemed fit for purpose by a competent person, such as an engineer or used in accordance to the manufacturers guidelines or relevant Australian Standards.

## Supervision of apprentices

- Electrical Contractors are reminded that they must comply with [the requirements for the supervision of apprentices published by the Electrical Workers and Contractors Licensing Board](#).

## Information for home owners and business owners

- Home and business owners must test the RCD's fitted to your property regularly. NT WorkSafe recommends testing every three months.
- Press and release the test button on the RCD.
- If the RCD fails to operate, contact a licensed electrical contractor to test and replace the RCD, if required.

### Disclaimer

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