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Electrical Standards and Safety

Hazard Alert

Cable Insulation

What is the hazard?

Cable insulation may have deteriorated, allowing live conductors to be exposed with increased potential for electric shock, arcing and fire.

How does this hazard occur?

The insulation of the conductor has deteriorated and detached sufficiently to expose the conductive core. It is presumed that this is a result of either a manufacturing defect or an external influence.

Background

Electrical inspections have identified existing electric cables within an energised installation that had severely degraded insulation. This cable has been removed and replaced where necessary.



Figure 1: Degraded cable found in Hobart

Risk

Cables that have insufficient insulation may result in shock or arcing that could cause substantial injury and/or damage to the installation.

Safety considerations

The Australian Standard AS/NZS 4836 *Safe working on or near low-voltage electrical installations and equipment* is an essential consideration to manage the risks. Unknown cable condition should be factored into your risk assessment prior to removing panels.

Isolate the installation

Ensure that supply is isolated when working in close proximity to electric cables.

Inspect for degradation

Look for any visible evidence of deterioration to the cables such as insulation cracking.



Figure 1: Degraded cable found in Hobart

Advise the owner

The installation owner needs to be advised of all instances where deterioration has been identified, if there is an immediate risk of shock, arcing or fire isolate the area immediately until rectification is completed.

Document Development History

Version	Application Date	Sections amended
1.0	May 2020	Original release
2.0	September 2022	Format update

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