

SA200907 – 20/10/2009

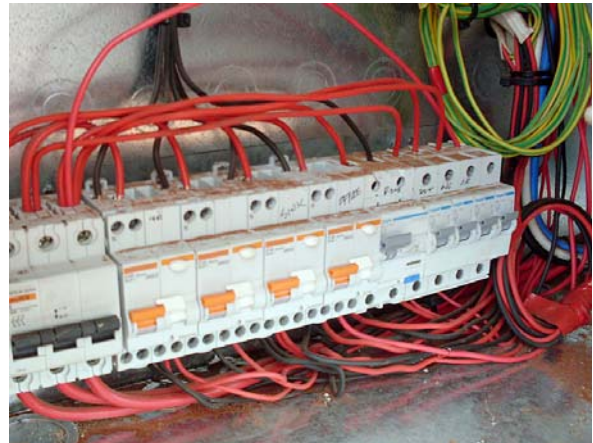
## Failure of Switchboard Mounted Electrical Protective Devices.

### Incident

NT WorkSafe was recently notified of failure of switchboard mounted electrical protective devices in remote desert Territory Housing premises:

Four types of devices affected are:

- Non Automatic Main Switches
- Circuit Breakers
- RCDs (Residual Current Devices commonly called Safety Switches)
- RCBOs (Residual Current Breaker with Over-Current Protection, a Circuit Breaker which incorporates a Safety Switch)



Fine desert dust readily invades switchboards

### Key Issues

Fine windblown dust with the consistency of talcum powder commonly called bull dust is invading the devices and causing them to fail whilst in an energised state.

Occupants of affected dwellings may face an increased risk of shock and fire as the protective devices may fail to function as designed under fault conditions causing the power supply to circuits to remain energised.

**Note:** this type of incident may occur in any arid and dusty conditions and so the recommendations also apply to outstations including cattle stations and mining and exploration environments.

### Recommendations

#### Prevent excessive dust build up

Where the switchboards are located external to the building in the meter box, the meter box door should be securely closed at all times to prevent excessive dust build up.

#### Testing

Devices should be tested regularly and records kept of outcomes. Whilst no licence is required to test the devices, **only a licensed electrician can change these devices**. If either of the following tests fails in a remote desert Territory Housing premises, report the failure to your Council Office immediately. Other premises will need to engage a licensed electrical contractor to rectify.

- **RCDs and RCBOs** – Test by pushing the test button, if the device fails to trip, or the switch toggle jams or the device trips but will not switch back on, report the failure immediately..
- **Main Switches and Circuit Breakers** – Test by switching off and then back on. If the switch toggle jams or will not switch back on, report the failure immediately.

NT WorkSafe is working with stakeholders to manage this type of hazardous occurrence.

Additional information on this issue or other safety matters is available at NT WorkSafe:

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