

Safety and health alert

11/04 Electrocution in metal framed roof

Incident

A licensed A-Grade electrical worker fault finding on a domestic air conditioning system received a fatal electric shock from a 240-volt live terminal. The electrical worker was alone in the ceiling checking faulty zone controls. The zone control motor being examined was not electrically isolated. The worker contacted a live terminal of the motor while his body was in contact with the steel roof framing and he received a fatal electric shock.

Factors

- Steel roof framing provides an effective path to earth for electrical current.
- Insulation on wiring in roof spaces may be damaged or exposed by heat, rodents or other agents and these spaces are often poorly illuminated.
- All wiring should be considered potentially live unless the power is known to be isolated.
- Locking out and tagging power sources ensures that the job remains safe during electrical work.

Recommendations

1. Circuits to wiring and electrical equipment should be isolated before entering roof spaces for any purpose.
2. Power should always be isolated prior to work on any electrical installation.
3. Clear responsibility should be delegated to de-energise, isolate and lock out all energy sources before work proceeds.
4. All appropriate switches, circuit breakers, plugs, valves, energy sources and/or operating controls should be locked out and tagged prior to working.
5. All electrical isolations should be tested before commencing work.
6. All electrical testing equipment should be reliable and well maintained.
7. Where it is not practicable to de-energise live parts or reschedule the work, a risk assessment should be carried out and adequate controls implemented which could include:
8. Safe working procedures to be followed at all times;
9. Suitable electrical worker's clothing including insulated gloves as appropriate;
10. Insulating mats and barriers to prevent worker contact with exposed live terminals or earthed structures;
11. Electrically insulated tools and accessories.

Further Information

Further information can be obtained from the WorkSafe internet site www.worksafe.wa.gov.au, or by contacting customer service on 1300 307 877 or email: safety@docep.wa.gov.au.

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