
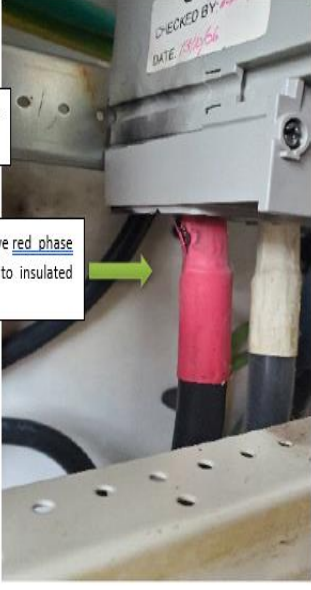


## Safety Bulletin-Switchboard Safety

Description of the incident	Duty holder obligations
<p>An electrical contractor was working in the vicinity of a live insulated incoming red 3 phase conductor, tightening up a lug on an existing neutral bar when their tool (socket wrench) slipped. The socket wrench hit the live incoming red 3 phase while it was still touching the neutral bar connected to the main link (main earth &amp; neutral), causing the mains supply fuse to fault out. There was no injury to anyone.</p> <p><b>Immediate action that was taken after the incident</b></p> <p>Immediately after the incident, the electrical contractor contacted their employer to advise them of the incident. The local electrical lines provider was then contacted. The service provider arrived on site, pulled the 3 pole fuses for isolation and then replaced the damaged red 3 phase crimp lug and restored power to all sites. Power to site was restored at 7.30pm.</p>	<p>Employers have a duty to provide and maintain a safe working environment to employees (including contractors) so far as is reasonably practicable.</p> <p>All qualified electricians are to review and follow the following Standards when working on switchboards: <b>Reference AS/NZ 4836:2011</b> safe working on or near low voltage electrical installations and equipment.</p>
Key considerations	
<p>The risk of electric shock, electrocution, arc, blast and flash burn injuries exists when performing work on or near exposed energised conductors or live conductive parts.</p> <p>Before commencing any work on or near live electrical energised conductors or live conductive parts, an assessment of the associated risks is required to be made and documented.</p>	

Photo	Risk control measures
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Figure 1: Image of live incoming 3 phase</p> </div> <div style="text-align: center;">  <p>Figure 2: Image of live incoming 3 phase</p> </div> </div>	<p><b>Risk control measures</b></p> <p><b>Electrical safety depends on:</b></p> <ul style="list-style-type: none"> <li>✓ Appropriate job planning.</li> <li>✓ Correct testing and isolation procedures and techniques.</li> <li>✓ Having a documented LOTO process in place.</li> <li>✓ The use of the correct safety equipment and tools, test instruments and PPE that are fit for purpose.</li> <li>✓ The work is being carried out by a qualified electrician.</li> <li>✓ Eliminating the hazard, which is always the first priority, eg. by switching off and isolating. This may require rescheduling the work to a time when it can be completed de-energised.</li> <li>✓ Electrical equipment not to be assumed to have been de-energised after isolation until it has been confirmed.</li> <li>✓ Conducting a HITRA before any work can commence when working on or near live exposed energised conductors or live conductive parts.</li> <li>✓ <b>Review NZ WI-A-4.5.0-01 Task Risk Assessment Table.</b></li> </ul>