



Electrical Shocks

SAFETY ALERT

During 2018, 7 electrical shock incidents have been reported by TAPS apprentice plumbers. Below are the details with some of them and each has a learning we can take from it.

Incident 1 - While draining water from a ceiling mounted hot water tank, the apprentice lent on the tank with one arm and grabbed the cover plate with the other hand, and received a shock. The electrical insulation in the tank had deteriorated and a circuit was formed via the flow of water and his hands.

Incident 2 - An apprentice received an electrical shock when digging a trench. As he cut to repair the gas pipe, he received the shock. A circuit was formed between his hand, the pipes and ground, plus a breakdown of the electrical connections and earth bonding of the installation.

Incident 3 - As the apprentice held the 2 ends of a copper pipe, he received a shock across both hands.

Recommendations

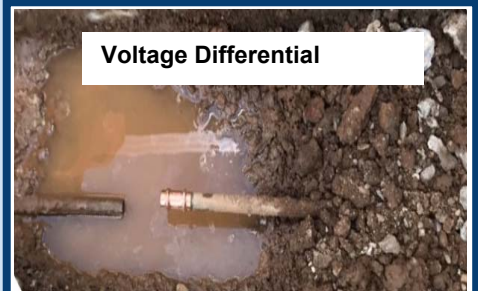
When working on a hot water service make sure you and those around you are using the appropriate isolation procedures as outlined by your SWMS and your Restricted Electrical License training. Always isolate the hot water service before working on it - never take someone else's word for it.

Before cutting, removing or holding the 2 ends of a pipe (gas or water) check for the presence of voltage using a voltage detector, and / or use a temporary earth lead to equalize any voltage that may be present.

Insulation Breakdown



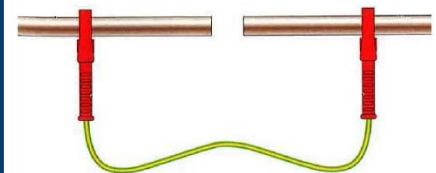
Voltage Differential



Voltage Detectors (Neon Screwdriver and Volt Stick)



Temporary Earth Lead



Equipotential Bonding

STOP — THINK — DO

Need More Information

Contact: Graeme Webster – WHS Manager. Mobile: 0450 291 702 E: graemew@tapssa.com.au