

MainPower Safety Bulletin

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INCIDENT – Electric Shock from Disconnected Service Mains Cable

1. Detail incident

On Thursday 19 April 2018 at approximately 11:30 a.m. a supervised MainPower trainee cable jointer received a brief minor electric shock between his bare right hand and exposed right elbow, while stripping the outer sheath on a disconnected service mains cable for testing purposes. The electric shock occurred when the blade of the uninsulated knife being used contacted the neutral conductor of the single-phase neutral screened service mains cable. The service mains cable supplies a semi-rural residential property in Giles Road, Kaiapoi, and the incident occurred within an open trench on the roadside outside the property. The employee was transported to Durham Health Medical Centre, Rangiora, for assessment. He was assessed and deemed fit to return to normal duties.

2. Initial Findings

The source of the electric shock was a backfeed from another transformer supply to the property. Existing non-compliant electrical work within the installation had created a dormant potential unsafe backfeed condition. The non-compliant electrical work was within a switchboard having two supplies. This switchboard was being used as a distribution board for one supply (original supply), and the main switchboard for the other supply (second supply). There was no multiple earthed neutral (MEN) connection between the common earth bar and the neutral bar for the main switchboard partition. An alarm system had been incorrectly connected to the switchboard (phase conductor from the distribution board partition (original supply), and neutral conductor from the main switchboard partition (second supply)). The unsafe backfeed condition occurred the moment the supply neutral was disconnected from the service mains.

3. Detail outcome of incident

WorkSafe has been notified in accordance with notifiable incident requirements.

The existing non-compliant electrical work within the property was a significant contributing factor and will be subject to a complaint to the Electrical Workers Registration Board.

This incident is currently subject to an internal investigation. Further information will be provided in due course.

4. Provide instruction of action required by staff to ensure a similar incident does not occur within MainPower

When working on isolated or disconnected service mains, use live work practices and wear appropriate insulating PPE at all times to protect against potential backfeeds.

If you have staff, subcontractors, or suppliers affected by this announcement notice, please brief them on the content of the announcement notice at your next meeting or distribute copies as appropriate.

If you have any questions about the information in this bulletin please contact the HSEQ department.