

HAZARD ALERT

Industry: Manufacturing

Age: 30 years

Experience: 8 weeks

Area: Richmond

Worker severely burnt in electrical explosion and fire

A maintenance worker was checking out why there was no power to a machine. At the electrical panel, the worker turned the disconnect switch for the machine to the “off” position. He then opened the switch panel door, and turned the switch back to the “on” position. A phase-to-phase or phase-to-ground fault occurred when the worker energized the switch, causing an explosion and fire. The worker was wearing safety glasses, but received burns to his hands, arms, and face.

An investigation into this accident determined the neutral line on the main electrical transformer was equipped with more than one ground connection, contravening the requirements of the Canadian Electrical Code. This contributed to the severity of the worker’s injuries by interfering with the ground fault protection relay, allowing the circuit to remain energized for a longer than normal period of time.

Safe work practices:

- Ensure all wiring meets the requirements of the Canadian Electrical Code.
- Ensure written safe work procedures are in place for electrical work.
- Ensure only qualified workers perform electrical work.
- Wear appropriate personal protective equipment, such as safety eyewear, face shield, gloves, and fire resistant coveralls.
- Whenever possible, disconnect and lock out energy sources prior to performing electrical work.



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