

DEFECT OF THE MONTH

February 2018

Maintenance of Electrical Equipment



Over the past year, ESA inspectors have identified close to 11,000 defects regarding the maintenance of electrical equipment. Ongoing maintenance is important to ensure electrical equipment will operate in a safe and predictable manner in response to operating demands. For example, a disconnect switch with corroded blades and/or springs may cause an arc flash when operated manually as the spring may not latch in a timely manner..

The following are typical examples of defects where electrical equipment has not been maintained:

- Faulty or damaged devices need to be repaired or replaced (such as receptacles, luminaires, panel boards, disconnecting switches, etc.)
- Deteriorated equipment needs to be replaced
- GFCI circuit breakers and/or receptacles fail to trip upon test
- Deteriorated knob-tube wiring needs to be replaced



Rule 2-300 of the Ontario Electrical Safety Code (Code), which covers general requirements for maintenance and operation, requires all operating electrical equipment to be kept in safe and proper working condition. Additionally, the rule requires electrical equipment maintained for emergency service to be periodically inspected and tested to ensure its fitness for service.

The rule also addresses safety concerns related to infrequently-used electrical equipment: it must be thoroughly inspected before use; and damaged, deteriorated or defective electrical equipments and devices must be put in good order (safe operating conditions) or permanently disconnected and replaced.

ESA strongly recommends maintenance staff and facility operators perform periodic inspection and testing of electrical equipment to ensure it is in safe and proper working order.