

# MIE - H&S - 04 - Electrical

## ELECTRICAL

Under no circumstances is anyone to tamper with, or work with exposed wiring in the designated work areas. Failure to comply with this rule will result in immediate and permanent suspension of access privileges.

To ensure everyone's safety and to meet current Ontario legislation, all electrical equipment must be suitable for its use and certified by:

- (i) The Canadian Standards Association (CSA), or
- (ii) The Electrical Safety Authority (ESA).

The Ontario Electrical Safety Code recognizes certification organizations accredited by the Standards Council of Canada to approve electrical equipment. Only equipment bearing one of the [recognized certification marks or labels](#) is approved.

The Electrical Safety Authority (ESA) warns the Ontario public that unapproved electrical products present a high-risk of potential electrical shock and fire hazard. When obtaining electrical products, verify that the product has a [certification mark](#) from a recognized certification agency.



Electrical hazards can be avoided by following these rules:

- Only trained, qualified personnel may repair or modify electrical or electronic equipment.
- Electrical panels and boxes should **NEVER** be altered or tampered with.
- Access to electrical panels should not be blocked. Minimum 1 meter clearance.
- Never remove the ground pin of a three prong plug.



The use of extension cords should be used only as a temporary source of power. These cords must be in good condition and protected from mechanical damage. Extension cords on the floor can also become a trip hazard. Care should be taken to cover them with an appropriate cable protector and make them readily visible.

- Frayed wires or cords must not be used.
- Should a circuit breaker trip, the reason it tripped should be investigated before the power is turned on again. If the equipment is at fault or the circuit is overloaded, a qualified electrician must be called to check out the situation.
- Replace a blown fuse with the exact type and rating.
- Be aware that unusually warm or hot outlets may be a sign that an unsafe wiring conditions exists. Unplug any cords to these outlets and do not use until a qualified electrician has checked the wiring.
- Ensure that all wires are dry before plugging into circuits.
- If your equipment will be used in a damp or possibly wet environment then the circuit being used should have ground fault protection.



GFCI receptacle GFCI power cord and GFCI plug-in receptacle

(Leviton, Yellow Jacket)

### **Soldering**

1. Soldering should always be done in a well ventilated area.
2. Soldering irons reach temperatures between 360 to 650 °F. Be very careful when handling in order to avoid being burnt.



Soldering Station Soldering Iron

**Please proceed to take the Test for this section. Answering 4 out of 6 questions correctly is a pass and you may re-take the test if necessary (up to 3 times).**

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