

Special Electric Issue

No, not a special "Election Issue", but an issue devoted solely to electrical safety.

There are several reasons one would want to be in compliance with electrical safety. The first is you want to be in compliance, so if there is an audit, your site looking good means an inspector may do less "digging".

There is also employee safety; generally speaking controlling electrical items promulgates a safer workplace.

And last but not least, electrical problems can lead to downtime; measured in hours, days or months depending on the severity.

There's also a couple of things related to your basic electrical panel; easy to fix so these should never be a problem. Electrical panels must have 36 in / 91 cm clearance in front of them; OSHA 1910.303(h)(3)(i) states: *...minimum clear working... may not be less than specified in Table S-2...* (Table S-2 specifies 3 feet (91 cm) for voltages below 2,500 volts).

The selfsame panels also must be kept closed, unless one is working on it; keep live electrical panels closed unless service is being performed. OSHA 1910.303(g)(2)(i): *...live parts of electric equipment operating at 50 volts or more shall be guarded against accidental contact by approved cabinets or other forms of approved enclosures...*

A personal favorite is exposed electrical knock-outs on an electrical box. OSHA 1910.305(b)(1) says: *... Unused openings in cabinets, boxes, and fittings shall be effectively closed.*

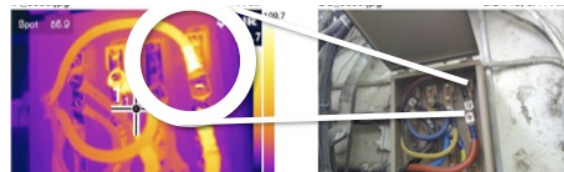
What this means is any electrical box that has exposed knock-outs is **verboten**. You must either cover the knock-outs with plugs/insert, or use proper surface-mount boxes.



Here's one that is a prudent practice: ground **all** flammable liquid storage cabinets. While OSHA 1910.107(e)(9) says: *Whenever flammable or combustible liquids are transferred from one container to another, both containers shall be effectively bonded and grounded to prevent discharge sparks of static electricity*, this is not required by OSHA. This does represent **best management practice** when attempting to eliminate flammable liquid fires. In a cabinet, containers can leak, producing flammable vapors that can be ignited by a static spark. Also note that someone may be dispensing from a cabinet without notifying anyone.

This is one that may surprise you. OSHA requires protective sleeves on, or cover over, fluorescent tube light fixtures. The fixture does not necessarily have to be in close proximity to damage, OSHA states in 1910.305(a)(2)(ix): *All lamps for general illumination shall be protected from accidental contact or breakage by a suitable fixture or lampholder with a guard.*

And last but not least, infrared testing of switchgear, motors, transformers etc., is recommended by most loss prevention professionals. An infrared camera identifies hotspots before they can become a problem.



App Corner - Arc Flash Calculator

How do you implement Arc Flash? An app like **Electrical Edge: Arc Flash Calculator** is based on the IEEE 1584-2002, *Guide for Performing Arc-Flash Hazard Calculations*. The calculator provides the user with the ability to calculate the following using variable parameters: Bolted Fault Current, Arcing Fault Current, Incident Energy, and Flash Hazard Boundary.