



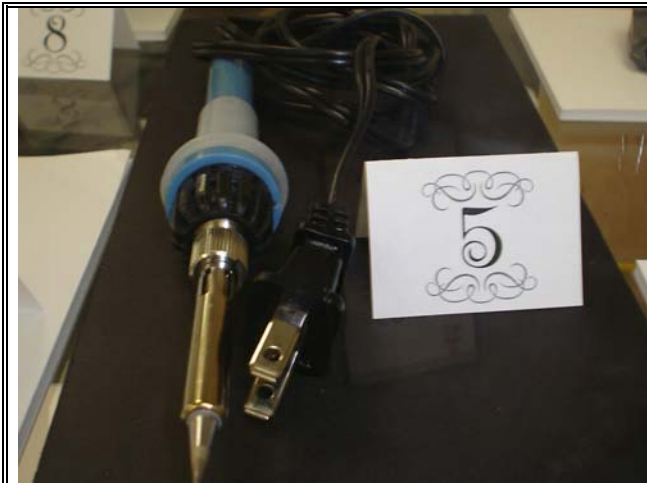


PICTURE	DESCRIPTION
	<p>Problem: Damaged extension cord – the outer insulation has pulled out from the molded plug end, exposing the internal wires.</p> <p>Fix: Remove from service.</p> <p>Note that the internal wires are individually insulated, compare this with the extension cord in picture 2. Extension cords listed for industrial use as opposed to residential use have double insulation.</p>
	<p>Problem: Extension cord listed for residential use. These flat type cords have only a single layer of insulation between the environment and the conductors. Because of the harsh environments cords are exposed to in industrial settings, such cords are double insulated. See the cord in picture 1.</p> <p>Fix: Replace with proper cord for environment.</p>
	<p>Problem: Missing ground pin, damaged cord.</p> <p>Fix: Remove from service</p> <p>Note that this soldering iron, listed for industrial use, has two layers of insulation on the conductors and is grounded. Compare with the residential solder iron in picture 5.</p>
	<p>Problem: Improperly repaired socket – the grounding pin of this socket came off at some point, and the user attempted to repair by using a bolt of similar diameter. This is not a listed component and actually damaged the extension cord connected to it.</p> <p>Fix: Have socket replaced by a qualified electrician.</p>



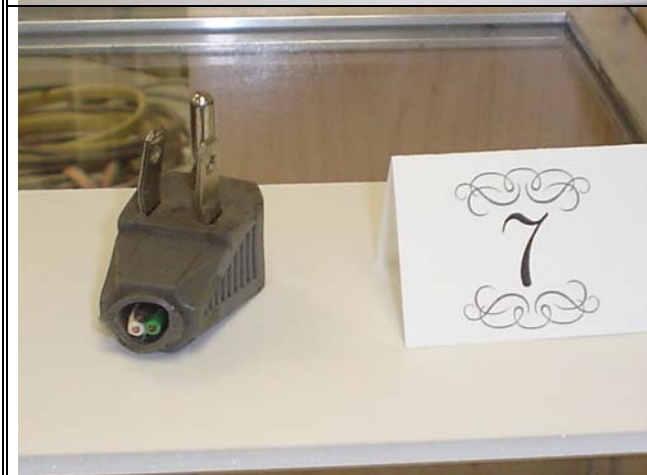
Problem: Soldering iron listed for residential use only. This soldering iron is not grounded and has a flat type cord with only one layer of insulation. OSHA requires that all electric hand tools be grounded or be doubly insulated (must be marked as doubly insulated).

Fix: Replace with soldering iron listed for industrial use. See example in picture 3.



Problem: Safety glasses without side shields. ANSI listings require side shields if there is flying debris. In the failure of electrical components, there is a high probability of particulates coming off from the point of failure.

Fix: SLAC requires the use of side shields for all safety glasses.



Problem: Damaged plug – prongs bent, insulation jacket around wires pulled out of molded plug end.

Fix: Remove from service any damaged cords for replacement or repair by qualified electricians.



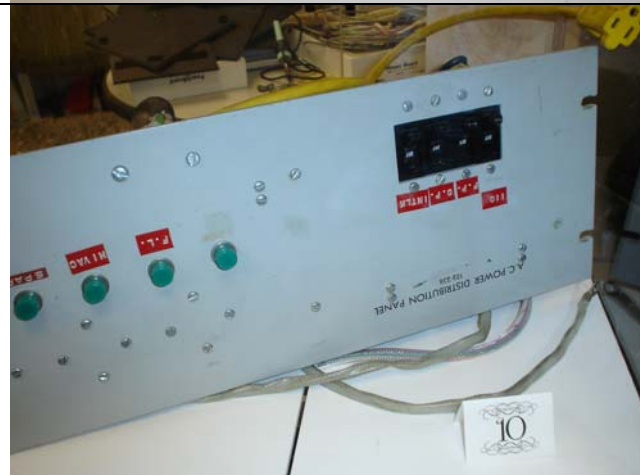
Problem: Improper insulation over 120 VAC connection. Device not used within its listing and device not inspected by SLAC Electrical Equipment Inspection Program.

Fix: Use UL or other listed equipment within their intended uses. Have all non-UL listed equipment inspected by a SLAC Electrical Equipment Inspection Program inspector (see www-group.slac.stanford.edu/essg/eeip)



Problem: Inappropriate equipment for 110VAC connections. The connector is not listed for 110VAC applications. The equipment is not UL or similar approved, nor inspected by the SLAC Electrical Equipment Inspection Program.

Fix: Use equipment within its designed parameters. All electrical equipment needs to be inspected by UL or similar, or SLAC's Electrical Equipment Inspection Program (see www-group.slac.stanford.edu/essg/eeip)



Problem: Exposed 110VAC connectors on back of panel. Electrical equipment not UL or similar listed nor inspected under SLAC's Electrical Equipment Inspection Program.

Fix: Use UL or similar listed equipment or run through SLAC's Electrical Equipment Inspection Program. No exposed conductors allowed. (see www-group.slac.stanford.edu/essg/eeip)



Problem: Damaged power cord improperly repaired. OSHA requires all equipment with damaged cords to be taken out of service.

Fix: Remove equipment from service and have repaired by an authorized/qualified service technician/electrician.



Problem: Exposed 110VAC and improper use of equipment. These types of cords are not meant to be used with the inner conductors exposed to the environment. The clips present exposed AC conductors. Device not listed by UL or similar, nor inspected under SLAC's Electrical Equipment Inspection Program.

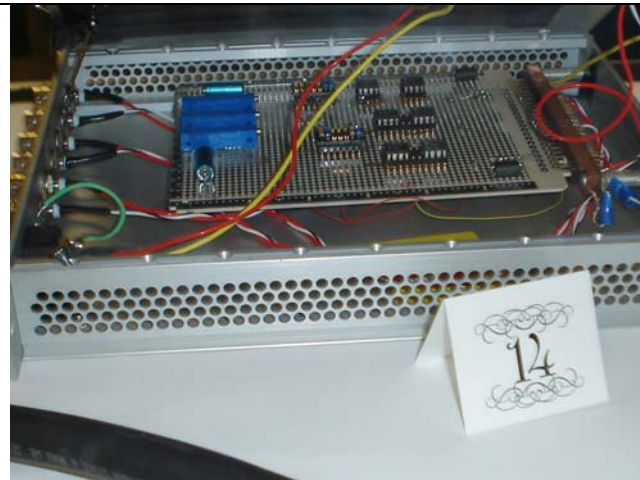
Fix: Use UL or similar listed equipment or run through SLAC's Electrical Equipment Inspection Program. No exposed conductors allowed. (see www-group.slac.stanford.edu/essg/eeip)



Problem: Non-UL listed (or similar) equipment. Note, upon inspection by SLAC's Electrical Equipment Inspection Program, this equipment fails because

- 1) it is not grounded
- 2) Cord is not polarized
- 3) Case becomes energized if cord plugged in with reversed polarity
- 4) Cord is not properly restrained at back of equipment

Fix: Remove for use. Only UL or similar listed equipment may be used at SLAC. Unlisted equipment must comply with SLAC's Electrical Equipment Inspection Program – www-group.slac.stanford.edu/essg/eeip



Problem: Problem: Non-UL listed (or similar) equipment. Equipment not inspected by SLAC's Electrical Equipment Inspection Program. Note, equipment is missing a fuse on the 110VAC input, which is required to protect the undersized wiring in chassis. Also, exposed 110VAC contacts inside housing too close to conductive chassis.

Fix: Remove for use. Only UL or similar listed equipment may be used at SLAC. Unlisted equipment must comply with SLAC's Electrical Equipment Inspection Program – www-group.slac.stanford.edu/essg/eeip