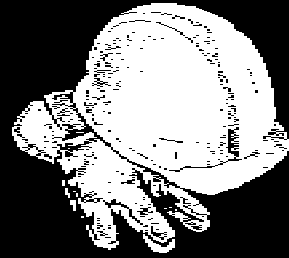



TRAINING GUIDE

TEMPORARY POWER



2001

Before you begin the meeting...

- Does this topic relate to the work the crew is doing? If not, choose another topic.*
- Did you read this Training Guide and fill in the blanks where the  appears? (To find the information you need, look over the Safety Walkaround Checklist for this topic.)*
- (If applicable): Did you bring a GFI (ground fault circuit interrupter) to show the crew?*
- (If applicable): Did you bring an extension cord with inspection markings?*

Begin: Temporary electrical wiring on a construction site requires special caution. A minor shock can be the shock of your life if it causes a serious burn or fall. Sometimes a small shock can interfere with your heartbeat or even kill you.

Whenever we install, repair, or change temporary wiring, a qualified electrician must do the work or supervise it. Don't try to reroute temporary power or add new boxes yourself.

You or a crew member may want to add a personal story about temporary power.

Next, discuss with the crew where temporary power is used at this particular job site:



ASK THE CREW THESE QUESTIONS:

After each question, give the crew time to suggest possible answers. Use the information following each question to add points that no one mentions.

- 1. If wiring is worn out or damaged, it could cause a shock or fire. To protect temporary wiring from wear and weather, there are certain places it shouldn't be used. Where?**
 - In damp or wet areas
 - In extremely hot or cold areas
 - On sheet metal or lath
 - Anywhere vehicles or equipment might run over it.
 - Near gases or fumes
 - Over sharp edges or projections
 - At pinch points

2. What are some of the things we look for when we inspect temporary wiring?

- Can temporary wiring safely carry the amount of current required?
- Is there a circuit breaker to prevent overload?
- Are all temporary wiring installations grounded?
- Are wiring and equipment in safe condition and secured firmly?
- Do all conductors have insulation? (Never use bare conductors.)
- Are switches labeled clearly, showing what they control and which position is off?
- Do boxes and fittings have covers or barriers to prevent contact with live parts?
- Is temporary wiring used only for periods of less than one year (unless special state permission is obtained)?
- Is temporary wiring removed promptly when construction is done or when the permit time expires?

3. What is a GFI grounding system and why is it important?

Show the crew the GFI you brought to the meeting, and/or an extension cord with inspection markings from the company's grounding conductor program.

- A GFI is a ground fault interrupter. It senses ground faults (accidental electrical paths to ground) and cuts off all power in the circuit.
- For example, if there is a short in a power tool, the metal casing can become "live." A GFI will cut off power before you can get a serious shock.
- Most 110-120 volt temporary wiring must have GFIs unless the company has an "assured equipment grounding conductor program." (This is a program where the company does regular testing of the ground on plugs, outlets, cords, and other electrical equipment. Inspection marks are placed on equipment and records are kept.)

4. What can you do to prevent shocks from your own tools and equipment?

- Make sure power tools have a 3-wire cord and are grounded. (Double-insulated tools don't need a ground.)
- Check power tools and cords daily for cracks, exposed wire, and insulation breaks.
- Tag faulty items and send them for repair.
- If a power tool buzzes, report it immediately and have an electrician check it out. Either the wiring or the tool itself may be defective.
- Store cords and tools neatly in a safe place to prevent damage.
- Don't touch any electrical equipment when the equipment is wet, you're wet, you're sweating, or you're standing on a wet surface. Moisture lowers your resistance. That can make your injury worse if you get a shock.
- Don't touch any electrical equipment if you're in contact with good conductors like metal pipes, tanks, or boilers.

- 5. What are some things you should *never* do when you work with electrical cords?**
- Never remove the third prong (the ground prong) from a plug.
 - Never force plugs into receptacles that don't match.
 - Never use an adapter (3-prong plug to 2-hole outlet) that isn't grounded.
 - Never use ordinary extension cords. Use 3-wire cords intended for heavy duty.
 - Never run cords near water, other liquids, or metal which can carry current.
 - Never splice flexible cords together.
 - Never overload a power box. If the circuit breaker trips, there's usually too much plugged in.
 - Never unplug safety lights to "borrow" the outlet, and never run extra lines off the light circuits.
- 6. What should always happen before an electrician begins repair work on wiring?**
- Wiring and equipment must be de-energized.
 - Energy must be dissipated from devices (like capacitors) that store it.
 - Wiring and equipment must be locked out or tagged out.
 - All affected personnel in the area must be notified.
- 7. Temporary wiring is usually low voltage (under 600 volts). What kinds of injuries can you get from a low voltage electric shock?**
- Fibrillation—a fast, irregular heartbeat.
 - Burns.
 - Injuries due to falls.
- 8. What should you do if someone gets a serious electric shock?**
- Don't touch the person **until** power has been disconnected.
 - Call 911.
 - Give immediate first aid or CPR if necessary.
 - Calm and reassure the injured person. Don't move them until trained help arrives.
 - Notify on-site first aid personnel or a supervisor as soon as possible.

CAL/OSHA REGULATIONS

Explain: Most of the safety measures we've talked about are required by Cal/OSHA. We have to take these precautions—it's the law. I have a Checklist of the Cal/OSHA regulations on temporary power. If you'd like to know more, see me after the meeting.

COMPANY RULES

(Only if applicable.) Besides the Cal/OSHA regulations, we have some additional company rules about temporary power.

Discuss company rules: _____



COMMENTS FROM THE CREW

Ask: Do you have any other concerns about temporary power? Do you see any problems on our job? *(Let the steward answer first, if there is one.)*

What about other jobs you've worked on? Have you had any experience with temporary power that might help us work safer on this job?

