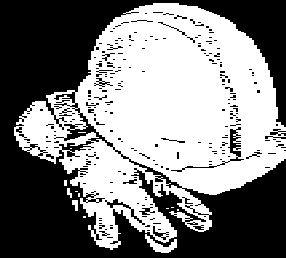



# TRAINING GUIDE

## 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?

