Chapter 2: Electrical

- AC vs. DC
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- Assured Equipment Grounding Program
- Battery Charging
- Electrical Burns
- Lightning Strikes
- Live Circuit Panels
- Overhead Power Lines
- Wires Can Mean Death
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- Proper Grounding
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AGC Tool Box Safety Talk

AC vs. DC

INTRODUCTION

1. Review any accidents or “near accidents” from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

It’s not the voltage that kills, but the current. There are two types of electrical current used in construction — alternating current (AC) and direct current (DC). AC alternates or changes its direction of travel many times a second whereas DC flows in only one direction. AC is the type of electricity used at most construction sites and in homes because it can be transformed to lower voltages and transported long distances without losing much power.

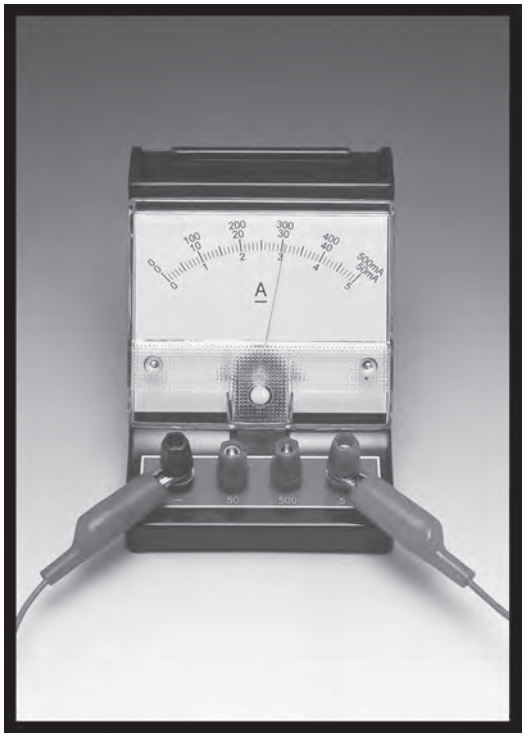
- Voltage, by its very nature, is a manifestation of potential energy. Both AC and DC currents can be deadly.

- 100 volts AC in the home and as little as 42 volts DC have killed people. The real measure of a shock's intensity lies in the amount of current (in milli-amperes) forced through the body.

- Any electrical device used on a house wiring circuit can, under certain conditions allow a fatal amount of current to flow. Use safe work practices when working around electricity of any voltage.

- Any voltage is considered to be capable of delivering dangerous amounts of current.

- Use GFCI protection and an assured equipment grounding program on all circuits in construction.



AGC Tool Box Safety Talk

ARC FLASH PREVENTION

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

An electric arc flash can occur if a conductive object gets too close to a high-amp current source or by equipment failure (for instance, while opening or closing disconnects). The arc can heat the air to temperatures as high as 35,000 F, and vaporize metal in the equipment. The arc flash can cause severe skin burns by direct heat exposure and by igniting clothing. Take these preventions to help prevent arc flash burns:

- Read and heed all signs warning of "arc flash protection boundary" (the distance at which PPE is needed to prevent incurable burns) around the circuit or equipment that has potential for arc flashes.

- Wear appropriate PPE when working within the arc flash protection boundary. The type of PPE depends on the electric work being done.

- If you have de-energized the parts you are going to work on, but are still inside the flash protection boundary for nearby live exposed parts and those parts cannot be de-energized, use barriers such as insulated blankets to protect against accidental contact or appropriate PPE.

- Follow safe work practices when working on or near live circuits. The process of energizing is "hot" work and can result in an arc flash due to equipment failure.

- Treat arc flash burns immediately. Arc flashes are extremely harmful and are potentially fatal.

AGC Tool Box Safety Talk

ASSURED EQUIPMENT GROUNDING PROGRAM

INTRODUCTION

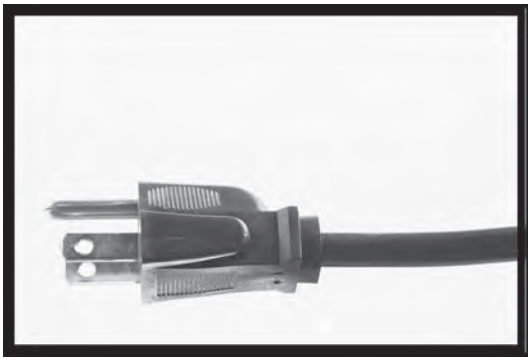
1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Grounding is one recognized means of preventing injury during electrical equipment use. Construction employers are required by OSHA to use either ground fault circuit interrupter (GFCI) or use an Assured Equipment Grounding Program (AEGP) to protect employees from hazards. Here are some key elements of an AEGP:

- When used on construction sites, the AEGP covers all cord sets, receptacles which are not part of the building or structure, and equipment connected by cord and plug which are available for use or used by employees.



- Specifically, an AEGP covers receptacles or 120-volt, single-phase, or 30-amperes, and must comply with OSHA's requirements for GFCI's.

- An AEGP requires that each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects such as: deformed or missing pins, insulation damage, or indications of possible internal damage. Equipment found damaged or defective shall not be used until repaired.

- An AEGP requires two OSHA-required tests on all electrical equipment: a continuity test and a terminal connection tests to ensure that grounding systems are working properly.

- The AEGP requires testing of electrical equipment before first use; after any repairs before placing back in service; after suspected damage, and before returning to use; and every three months.

AGC Tool Box Safety Talk

BATTERY CHARGING

INTRODUCTION

1. Review any accidents or “near accidents” from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

The charging of lead-acid batteries can be hazards. Batteries emit explosive gasses while being charged, plus, battery fluid contains sulfuric acid, which can harm the eyes and skin on contact. Charging batteries is such a common task that many workers take it for granted and fail to use safe procedures. When changing a battery, use common sense and follow all manufacturer safety precautions.

- Charge batteries in a dry, well-ventilated area.
- Wear safety glasses or goggles and gloves when handling/charging batteries.
- Keep flames or sparks away from the battery to avoid contact with explosive gasses. Do not smoke while charging batteries.
- Before charging check the battery electrolyte level. Add distilled water if the electrolyte level is low before charging.
- Be sure to correctly connect positive and negative terminals: positive clamp (red) to positive(+) post and negative clamp (black) to negative (-) post.
- Leave the vent caps in place while charging.
- Immediately after the battery is fully charged, turn off and unplug the charger. Continuing to charge a fully charged battery may severely damage the internal plates and shorten battery life.

AGC Tool Box Safety Talk

ELECTRICAL BURNS

INTRODUCTION

1. Review any accidents or “near accidents” from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Electrical burns occur when current jumps from an electrical outlet, cord, or appliance and passes through your body. Electrical burns cause tissue damage, and are one of the most serious injuries you can receive and need to be treated immediately.

- Burns suffered in electrical incidents can be divided into three types: electrical burns, arc burns, and thermal contact burns. All three types of burns may be produced simultaneously.

- High voltage contact burns can burn internal tissues while leaving only very small injuries on the outside of the skin where it enters and much larger wound where it exits. Burns suffered in electrical accidents may affect the skin, muscles, and bone.

- High temperatures near the body produced by an electric arc or explosion cause arc or flash burns. They should also be attended to promptly.

- Thermal contact burns occur when skin comes in contact with overheated electric equipment, or when clothing is ignited in an electrical incident.

- If someone receives an electrical burn, seek medical attention immediately. If the victim is still in contact with the energized circuit, shut it off. Do not touch the victim. You do not want to be a victim too.

- To prevent electrical burns, use safe work practices, lock out and tag all machines/equipment/circuits during service, wear proper personal protective, and stay at least 10 feet away from overhead power lines.

AGC Tool Box Safety Talk

LIGHTNING STRIKES

INTRODUCTION

1. Review any accidents or “near accidents” from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

A single stroke of lightning may have 125,000,000 volts of electricity. That’s enough power to light a 100-watt light bulb for more than 3 months, or enough to seriously hurt or kill someone. For every five seconds you count, the lighting is one mile away. If you can see a flash and instantly hear thunder, the lightning strike is very close and you should seek shelter immediately. When you see lightning, follow these safety rules:

- If you're outdoors, seek shelter from lightning! Buildings are best for shelter, but if no buildings are available, try to find protection in a cave, ditch, or a canyon. Trees are not good cover! If you’re in the woods, look for an area of shorter trees and crouch down away from tree trunks.

- Stay off or away from anything tall or high including rooftops, scaffolding, utility poles and ladders.

- If you’re traveling, stay in your vehicle and roll up the windows. Don’t touch the metal parts of your vehicle.

- Do not use metal objects outside, such as golf clubs or metal tools.

- If your skin tingles or your hair stands on the end, a lightning strike may be about to happen. Crouch down on the balls of your feet with your feet close together. Keep your hands on your knees and lower your head. Get as low as possible without touching your hands or knees to the ground. DO NOT LIE DOWN!

- When someone is struck by lightning, get emergency medical help as soon as possible. Often the person can be revived with cardiopulmonary resuscitation (CPR). There is no danger to anyone helping a person who has been struck by lightning - no electric charge remains. Start CPR immediately.

AGC Tool Box Safety Talk

LIVE CIRCUIT PANELS

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Circuit panels are typically found in central locations inside buildings and often serve as the point at which electrical power is distributed within a building. Electrical panels or breaker boxes require special safety considerations. Because electrical panels or boxes contain "live" electricity, they require special safety considerations, including the following:

- Assume all electric panels are live.
- Label circuit breakers properly. Do not use tape to secure any breaker in either an on or off position.
- De-energize as much equipment as possible. Use portable floodlight systems for lighting.
- Wear heavy insulated rubber boots and gloves when working around energized wiring.
- Ensure that panel boxes have a cover on them at all times, except when being serviced.
- Do not block panel boxes. There should be at least 36 inches of clear space in front of a panel box.
- Be sure all live parts are covered.
- Always use breaker panel blanks in breaker boxes.

AGC Tool Box Safety Talk

OVERHEAD POWER LINES

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Overhead power lines at your site are especially hazardous because they carry extremely high voltage. Fatal electrocution is the main risk, but burns and falls from elevations are also hazards. Using tools and equipment that can contact power lines increases the risk. Investigate all construction sites prior to beginning of work to identify possible power line exposures and to establish proper warning and accident prevention controls. Take these precautions when working on or near overhead power lines:

- Unless you know otherwise, assume that overhead lines are energized.

- Stay at least 10 feet away from overhead power lines.

- Be especially careful when using scaffolds, ladders, and equipment around power lines. When dump trucks, cranes, work platforms, or other conductive materials (such as pipes and metal ladders) contact overhead wires, the equipment operator or other workers can be killed.

- Contact the local utility company to de-energize and ground overhead power lines when working near them. They may also provide other protective measures including guarding or insulating the lines.

- Use non-conductive fiberglass ladders when working near power lines.

- Never store materials and equipment under or near overhead power lines.

AGC Tool Box Safety Talk

WIRES CAN MEAN DEATH

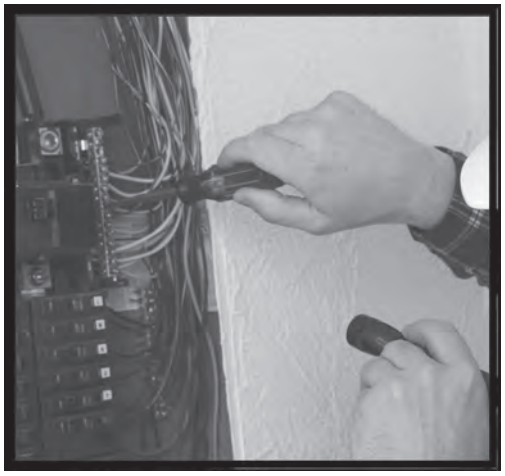
INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

In contemporary wiring, individual wires are run in a sheathed cable or conduit. The white wire is neutral and the green wire is the ground wire. The "hot wire," is usually black or red, and they are dangerous to touch. To protect from electrical shock, learn hazards associated with basic wiring, and take steps to avoid these hazards.



- Never attempt to handle any wires or conductors until you are absolutely positive that their electrical supply has been shut off. Properly Lock out and tag all machines/equipment/circuits to prevent accidental startup.

- You will receive an electrical shock if a part of your body completes an electrical circuit by touching a live wire and ground, or touching a live wire and another wire at a different voltage.

- Consider all electrical wires as "hot" or "live" until verified as safe by a qualified person.

- If you come in contact with an energized wire—and you are also in contact with a grounded path-current will pass through your body. You will receive an electrical shock.

AGC Tool Box Safety Talk

WORKING IN ELECTRICAL BOXES

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Electrical hazards – from shock, burns, or electrocution - exist where wires or other electrical parts are exposed. Wires and parts can be exposed if a cover is removed from a wiring or breaker box. When working on or around electrical boxes, take steps to protect yourself and others from electrical hazards.

- Recognize that an exposed electrical component is a hazard.

- Ensure that only licensed electrician's work on electrical systems and equipment that uses or controls electrical power.

- Wear appropriate personal protective equipment (insulated gloves, tools etc.) when working on live circuits.

- Make sure junction boxes, plug receptacles, and switches have tight-fitting covers or plates in place.

- Verify that all unused openings (including conduit knockouts) in electrical enclosures and fittings are closed with appropriate covers, plugs or plates.

- Report damaged electrical enclosures such as switches receptacles and junction boxes.

- Do not store anything within three feet of an electrical circuit control enclosure.

AGC Tool Box Safety Talk

ELECTROCUTION

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Electricity can, and does kill. Over four hundred workers die each year from contact with electrical energy, the fifth leading cause of workplace deaths. Construction workers, including laborers, electricians, painters, and others account for almost half the total. Take steps to help minimize risk of electrocution:

- Stay at least 10 feet away from overhead power lines.
- Keep all tools and equipment away from high voltage lines. You can get a serious shock if anything you're using or carrying accidentally contacts a line.
- Use ground-fault circuit interrupters (GFCIs) on all 120-volt, single-phase, 10, 15- and 20-ampere receptacles.
- Ground all power supply systems, electrical circuits, and electrical equipment.
- Use double insulated tools.
- Follow safe work practices when working on/with electrical equipment. Use insulated gloves and tools when working with high voltage equipment.
- If you find someone who has suffered an electric shock, don't touch the person until power has been disconnected. Call 911.

AGC Tool Box Safety Talk

PROPER USE OF EXTENSION CORDS

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

An extension cord looks harmless, but most extension cords carry 110 volts of electricity, and 110 volts can kill. Extension cords, if not used correctly, can cause electric shock, fires (from overloading circuits), and even slipping and tripping hazards. Follow these tips for safe use:

- Check that extension cords are correctly rated for the amount electricity they are to carry and are Underwriter Laboratory (UL) approved. Heavy commercial duty cords are the minimum recommended on any construction site.

- Ensure that all extension cords are serviceable and free of exposed wiring and splices, frayed areas, and/or deteriorated insulations. Discard extension cords with broken wires or damaged insulation.

- Connect only one device at a time to extension cords.

- Use extension cords for temporary purposes, not for permanent installation. Where there is a permanent need for an electrical outlet, one should be installed. Always use GFCI's with extension cords.

- Do not tape or splice extension cords.

- Do not place extension cords across walkways or doorways where they could pose a tripping hazard.

- Do not place extension cords under carpets, under doors, or other locations that subject the cord to abrasion or other damage.

- Do not drive any vehicle over extension cords.

AGC Tool Box Safety Talk

GROUND FAULT CIRCUIT INTERRUPTERS

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

A ground-fault circuit interrupter, or GFCI, is a device that detects a fault failure by comparing the amount of current flowing to electrical equipment with the amount of current returning from the equipment. Whenever the difference is greater than five milliamps, the GFCI trips and thereby interrupts the flow of electricity. GFCI's are designed to shut off electric power quickly enough to prevent an electrical incident.

- In general, install GFCIs in the home and/or workplace in wet or humid environments, high-risk areas such as construction sites, and places where people could come into contact with live equipment.

- Use approved GFCI's for all l20-volt, single-phase, 15- and 20-ampere receptacle outlets on construction sites that are not a part of the permanent wiring of the building.

- Select the right GFCI for the job. The three basic types used in homes and the workplace are the GFI outlet, the GFI circuit breaker, and the portable GFI. All perform the same function but each has different applications and limitations.

- To help ensure safety, limit exposure of connectors and tools to excessive moisture, water, melting ice or rain.

- Test GFCI's monthly to determine that they are working correctly.

- Never remove the third (ground) wire connection from plugs.

AGC Tool Box Safety Talk

INSULATED GLOVES

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Electricity is a serious workplace hazard, exposing employees to such dangers as life-threatening electric shock and electrical burns. Personal protective equipment can provide an important line of defense when exposed to electrical hazards.

- Always wear insulated rubber gloves (with canvas or leather outer gloves) when working with high voltage equipment.
- Verify that gloves are of the maximum voltage rating for the job.
- Wear gloves under leather gloves to prevent punctures.
- Make sure gloves fit snugly.
- Inspect gloves daily for holes, tears, punctures, cuts, texture changes, embedded objects etc. If gloves are damaged, do not use them.
- Maintain insulated gloves in a safe, reliable condition. Verify that they are periodically inspected and tested as required by OSHA.

AGC Tool Box Safety Talk

LOCKOUT/TAGOUT

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Lockout/tagout procedures are used to isolate hazardous energy sources from electrical, hydraulic, pneumatic or rotary machinery when service or maintenance work is required. Lockout/tagout devices help prevent accidental start-up of equipment or machinery, and ensure personal safety from possible energy releases. Take the following steps to help prevent exposure to hazardous energy:

- Know and follow all procedures for lockout/tagout in your workplace.

- Assume at all times that power is "on." This practice ensures a cautious approach that may prevent an accident or injury.

- Lockout and tag all machinery and equipment before performing maintenance.

- Do not lock out and tag machinery/equipment unless you are authorized to do so.

- Do not attempt to operate any switch, valve, or other energy isolating device bearing a lock or a tag.

- Do not remove tags from machines or equipment unless authorized to do so. OSHA regulations state that only the person who applies the lock and/or tag can remove it, except in an emergency.

AGC Tool Box Safety Talk

PORTABLE GENERATORS

INTRODUCTION

1. Review any accidents or “near accidents” from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Portable generators can offer great benefits when electrical power is not readily available. However, every year people die in incidents related to portable generator use. The primary hazards to avoid when using a generator are carbon monoxide (CO) poisoning from the toxic engine exhaust, electric shock or electrocution, and fire. Follow the directions supplied with the generator, and use these safe work practices:

- Always use generators outdoors, away from doors, windows and vents. NEVER use generators inside homes, garages, basements, crawl spaces, or other enclosed or partially enclosed areas, even with ventilation.

- Follow manufacturer's instructions for safe operation.

- Keep the generator dry. Operate on a dry surface under an open, canopy- like structure.

- Plug appliances directly into the generator or use a heavy-duty outdoor- rated extension cord. If using an extension cord, make sure the entire cord is free of cuts or tears, and that the plug has all three prongs, especially a grounding pin.

- NEVER plug the generator into a wall outlet. This practice, known as back feeding, can cause an electrocution risk to utility workers and others served by the same utility transformer. If necessary to connect generator to house wiring to power appliances, have a qualified electrician install appropriate equipment. Or, ask your utility company to install an appropriate transfer switch.

- Before refueling the generator, turn it off and let it cool. Fuel spilled on hot engine parts could ignite.

- Always store fuel outside of living areas and away from any fuel-burning appliance. Store in properly labeled, non-glass containers.

AGC Tool Box Safety Talk

ELECTRICAL POWER TOOLS

INTRODUCTION

1. Review any accidents or “near accidents” from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Every year, many workers on construction sites suffer electric shock using portable electrical tools and equipment. The nature of the injuries, including those caused by ground faults, ranges from minor injuries to serious, secondary injuries. There also is the possibility of electrocution. A secondary injury occurs when a worker recoils from an electrical shock and, as a result, sustains an injury. To help prevent injury, follow these safety tips when using electrical power tools:

- Always use a Ground Fault Circuit Interrupter to protect against potentially hazardous ground faults.
- Before using any portable electrical tool, inspect the cord for the proper type. Ensure that the tool has either a three-wire cord with ground or is double insulated. Never use a plug that has its ground prong removed.
- Inspect the tool for frayed cords, loose or broken switches, and other obvious problems. Do not use tools that fail this. Remove from service and label "Do Not Use" until repaired.
- Be sure the outlet, extension cord, tools, and work area are clean and dry. Do not use electrical-powered tools in damp or wet locations.
- Verify that the tool is turned “off" before you plug it in or unplug it.
- Disconnect power tools while servicing or storing.
- Do not lower or carry a power tool by its cord.

AGC Tool Box Safety Talk

PROPER GROUNDING

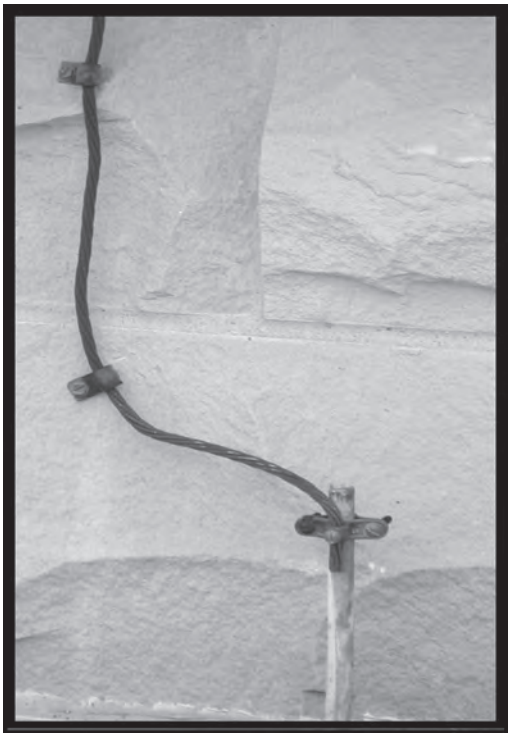
INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

"Grounding" a tool or electrical system means intentionally creating a low-resistance path that connects to the earth. When properly done, current from a short or from lightning follows this path, thus preventing the buildup of voltages that would otherwise result in electrical shock, injury, and even death. Proper grounding for both the system and electrical equipment is particularly relevant in construction.



- Use Ground Fault Interrupters (GFCI) to protect against shocks from ground faults. A GFCI detects current leakage at very low levels (as little as 5 milliamps) and rapidly cuts off the power.

- Ground all power supply systems, electrical circuits, and electrical equipment.

- Frequently inspect electrical systems to insure that the path to ground is continuous. Always follow an assured grounding program rules.

- Visually inspect all electrical equipment before use. Take defective equipment out of service.

- Do not remove ground prongs from cord-and plug-connected equipment or extension cords.

- Use double-insulated tools or grounded tools that have an approved three-wire cord with a three-prong plug. Insure that the plug is plugged into a properly grounded three-pole outlet.

- Never cut off or bend the ground pin of a three-pronged plug.Proper grounding is essential to minimize fire and shock hazards.

AGC Tool Box Safety Talk

TEMPORARY LIGHTING

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Temporary lighting is any electrical power and light wiring which is removed upon completion of construction or when permanent wiring has been completed. When using temporary lighting, keep in mind that electricity, no matter how low the voltage, is always a potential source of danger. To protect employees from electrical shock, take these precautions:

- Install Ground Fault Circuit Interrupters (GFCI) on all 120 volt, 15 and 20 amp receptacle outlets on construction sites or use portable devices.

- Cage all lamps to protect the bulbs from accidental contact or breakage. Replace broken bulbs immediately.

- Verify that all extension cords are of the three-wire type, and that extension cords and flexible cords used with temporary and portable lights are designed for hard or extra hard usage.

- Make sure that light fixtures don't have any live exposed parts to prevent accidental employee contact.

- Do not use 120 volt lights in wet locations unless they are protected by a GFCI.

- Do not suspend portable lights in wet locations unless operated at 12 volts or less.

- Do not suspend temporary lights by their electrical cords.

- Do not use metal tie wires to suspend temporary light cords.

AGC Tool Box Safety Talk

TEMPORARY POWER HOOKUPS

INTRODUCTION

1. Review any accidents or "near accidents" from the past week.

2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.

3. Give the TOOL BOX SAFETY TALK

Much construction work occurs before a permanent electrical system is in place, creating potential dangers. Shocks from temporary wiring, even if they are low voltage, can cause burns, a fall from a ladder or scaffold, or a fast, irregular heartbeat. By its very nature, temporary wiring is subject to rapid deterioration. When required to utilize temporary wiring, install in a safe manner.

- Use approved Ground Fault Circuit Interrupters (GFCI) on all 120 volt, 15 and 20 amp receptacle outlets on construction sites, which are not part of the permanent wiring of the building.
- Keep temporary hookups (extension cords) away from damp or wet areas; near gases or fumes that might make it deteriorate; in extremely hot or cold areas; over sharp edges or projections that could damage it; on sheet metal or lath; at pinch points; anywhere vehicles or equipment might run over them and off of stairways and across walkways. Any of these situations increase the risk of damaging the wiring, and causing a shock or starting a fire.
- Ensure that extension cords are of the three-wire type and are designed for hard or extra hard usage (type S, ST, SO, STO).
- Do not remove the third prong (the ground) from a plug.
- Inspect cords regularly. If the cord is damaged, discard it.
- Do not overload a power box. If the circuit breaker trips, there's too much plugged in. Find another outlet.
- Remove temporary wiring as soon as the construction or remodeling is completed.
- Never use metal tie wire to hang extension cords or temporary lighting.