



Construction Tool Box Safety Talks

Volume III



CONSTRUCTION TOOL BOX SAFETY TALKS

The Associated General Contractors of America's (AGC) Construction Tool Box Safety Talks are designed by AGC's Safety & Health Committee to assist supervisory personnel in conducting tool box safety talk meetings. AGC believes the talks can be used effectively by all construction contractors to enhance safety and health on their job sites. Additional assistance is available from various sources including insurance carriers, equipment manufacturers, suppliers, local AGC Chapters, qualified safety consultants, OSHA and National AGC.

The enclosed information can be supplemented by referencing AGC's "Manual of Accident Prevention in Construction." Each Construction Tool Box Safety Talk topic has corresponding subject matter in the manual which can also be used to further enhance your company's safety program.

AGC's Construction Tool Box Safety Talks are not intended to be an exhaustive treatment of the various subjects and should not be interpreted as precluding other procedures which would enhance safe construction operations. AGC's Construction Tool Box Safety Talks are not intended to nor should they be construed as an undertaking to perform services on behalf of any party either for their protection or for the protection of third parties.

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2300 Wilson Boulevard, Suite 400 / Arlington, VA 22201
Phone: 800.242.1767 Fax: 703.837.5405
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CONSTRUCTION TOOL BOX SAFETY TALKS

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Chapter 1: Caught In Between

- Equipment: Barricading
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- Machine Guarding
- Forklift Trucks
- Nail Guns
- Pinch Points
- Trailer Hitches
- Unloading Trucks
- Worker Position
- Working Around Cranes

AGC Tool Box Safety Talk

EQUIPMENT: BARRICADING

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

More than 100 people each year are killed by mobile heavy equipment— including backhoes/excavators, mobile cranes, road grading and surfacing machinery, loaders, bulldozers, and tractors —on construction sites. Besides using safe work practices, you can help reduce such accidents by installing barricades to alert others to the hazards created by construction activities. Follow these guidelines to help improve safety at your work site:

- Install barricades whenever necessary for the physical protection of people or property. Barricades may include temporary cyclone fencing or plastic safety fencing and should be used only until more suitable barricades can be erected.
- Use signage and illumination on barricades where appropriate.
- Install barricades to separate workers on foot, pedestrians, and vehicles from moving equipment, where possible.
- Set a limited access zone and/or a swing radius for each piece of equipment.
- Barricade the swing radius of each crane to prevent employees from entering the swing radius.
- Ensure that all mobile equipment is equipped with a warning device such as a backup alarm if the operator does not have a clear and direct view of the edge of the excavation. Some other good safety practices are use of hand signals from a flag person, stop logs, barricades, or other mechanical signals.



AGC Tool Box Safety Talk

CIRCULAR SAWS

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

Serious injuries can result from the use of portable and stationary power saws. The greatest hazard is that the operator risks contact with a turning blade. Accidents may occur if the operator is inexperienced, improperly trained or if the blade is not properly guarded.

- Be sure that portable circular saws have an upper guard that covers the entire blade of the saw and a retractable lower guard.
- Make sure hand-held circular, reciprocating, saber, scroll, and jig saws are equipped with a constant-pressure control switch.
- When using a hand-held saw, direct the blade away from the aisle and any people who are in close proximity to the saw.
- Use the proper blade for the material being cut.
- Maintain sharp blades.
- Always wear eye, face and hearing protection.
- Avoid loose-fitting clothes, jewelry and long hair that might become entangled in a power tool.
- Always use GFCI protection with electric corded powered circular saws.



AGC Tool Box Safety Talk

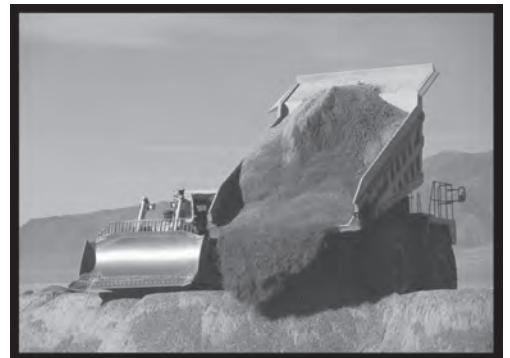
DUMP TRUCKS

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

Dump trucks are common on construction sites, as they bring in materials such as gravel, sand and fill dirt, and carry out waste materials such as old bricks and excavated dirt. Dump trucks pose several hazards on the worksite, including risk of tip-over and the potential to run over someone while backing up or changing positions. Here are some safety tips that both dump truck drivers and workers on foot can follow to help prevent accidents:

- Ensure that operators are trained to recognize areas hazardous to dumping, such as soft or uneven surfaces and inadequately compacted fill.
- Do not exceed a vehicle's rated load or lift capacity.
- Do not drive a dump truck in reverse gear with an obstructed rear view unless the truck has an audible reverse alarm and another worker signals that it is safe.
- Before dumping, make sure the tailgate is unlocked and that the vehicle is on a reasonably level surface. Dumping on surfaces that are not level is one of the main causes of tip-over.
- Avoid dumping when parked side by side with another vehicle. When a dump unit tips over, it is often the operator in the adjoining vehicle who is injured. Dumping operations should be spread out.
- Make sure that other personnel such as dozer operators, surveyors, and spotters should be warned not to work near a dumping truck in case it tips over.
- Lower dump bodies when not in use, and leave all controls in neutral position.
- Set parking brakes when vehicles and equipment are parked, and chock the wheels if they are on an incline.



AGC Tool Box Safety Talk

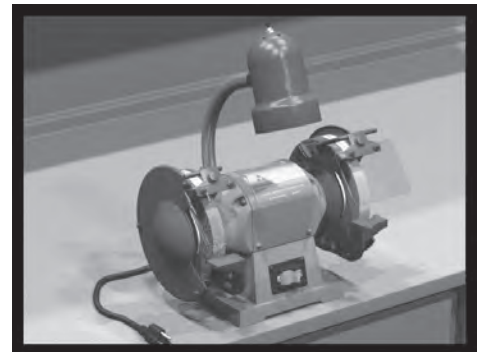
GRINDERS/ABRASIVE SAWS

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

Abrasive saws and grinders are among the most common pieces of machinery used in maintenance shops. They are also among the most dangerous. Operators are at risk of injury from the power source, blade, wheel, or from a disk failure or hazard from flying or airborne particles. Remember, abrasive saws and grinders are cutting tools. A hand or a finger that hits the moving wheel surface is in danger of being mangled or cut off. Fortunately, there are ways to protect yourself from injury and illness when you work with these powerful machines. Take these precautions:

- Visually inspect and ring test new abrasive wheels before mounting.
- Make sure the machine guards are in place and working properly.
- Always leave the wheel in good working order.
- Turn the grinder off when not in use.
- Do not exceed the safe maximum operating speed marked on the blade, wheel or disc.
- Do not wear anything loose that could get caught in the machine. If you’re wearing a long-sleeved shirt, button it at the wrist.
- Wear a face shield over safety glasses when using abrasive saws or grinders.



AGC Tool Box Safety Talk

MACHINE GUARDING

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

Employee exposure to unguarded or inadequately guarded machines is prevalent in many workplaces. Consequently, workers who operate and maintain machinery suffer approximately 18,000 amputations, lacerations, crushing injuries, abrasions, and over 800 deaths per year. Proper use of machine guards can help protect employee hazards related to the point of operation, power transmission devices, and operating controls. To ensure safety, it's important to use machine guards properly. Take these precautions:

- Do not attempt to by-pass machine guards in an effort to save time. Machine guards are there for your protection.
- Do not remove machine guards, except during repair or maintenance of the machine. Then, always use lockout/tagout procedures to protect accidental startup.
- Replace machine guards after repair or maintenance.
- Wear eye protection when cutting, sawing, drilling or grinding.
- Avoid wearing loose clothing or jewelry when operating power equipment. These could get caught in machines and drag you or parts of your body into the machinery.
- If using electrical tools always use GFCI protection.



AGC Tool Box Safety Talk

FORKLIFT TRUCKS

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 forklift can be one of the most dangerous pieces of equipment in the workplace. A medium-sized forklift weighs about the same as the average dump truck and can cause just as much damage. According the U.S. Bureau of Labor Statistics, an average of 100 workers are killed and 20,000 are injured each year due to forklift mishaps. Forklifts can put workers at risk of being caught between equipment and materials, so take these precautions:

- Setup a controlled access zone. Separate forklift traffic and foot traffic where possible, including having workstations, control panels, and equipment away from forklift traffic aisles, or having barriers.
- Do not operate a forklift unless you are trained and authorized to do so.
- Make sure backup and lifting alarms are operational.
- When operating a forklift, drive slowly and watch out for pedestrians and blind intersections.
- Check maintenance records of forklifts on a monthly basis at a minimum.
- Watch where you place your hands and feet. Be aware of and stay clear of pinch points such as the wheels and lift gears.
- Stay under the overhead guard. Keep your hands and feet inside the forklift and wear the seat belt.
- Do not drive up to anyone standing in front of a bench or other fixed object.
- As a pedestrian, always be aware of the presence of forklifts in the area and keep a safe working distance from them at all times. Even at low speeds, an unexpected movement of the forklift can crush a bystander against a fixed structure or another vehicle.



AGC Tool Box Safety Talk

NAIL GUNS

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

Nail guns can be lethal weapons. Nail guns have the capacity to fire several nails per second at a velocity over 1,000 feet per second. With the squeeze of a trigger, they can drive anything from a small finishing nail into a piece of plywood, to a three-inch nail into wood and concrete block. When this projectile strikes a human body, the resulting damage can be severe, and sometimes fatal. Exercise extreme caution whenever using a nail gun.

- Always wear safety glasses when operating pneumatic tools, including nail guns. Make sure your helpers wear them too.
- NEVER dismantle or bypass safety devices such as triggers, guards, or bumpers.
- Do not hold the trigger down unless you’re purposely firing the tool. Do not fire the tool unless the nose is firmly pressed against a work piece.
- Never point the tool at anyone. Treat a nail gun like a firearm. Always assume it is loaded and ready to fire.
- Always point the gun away from you when nailing materials. Never back-nail materials with the tip of the gun pointing toward your body.
- Always disconnect the air hose or power supply before clearing jams or adjusting the tool.
- Make sure the area behind the nailing is clear and/or protected from a nail penetrating through.



AGC Tool Box Safety Talk

PINCH POINTS

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 pinch point is defined as any point where it is possible for a body part to be caught between moving and stationary portions of machinery or equipment. If a person or body part occupies that space during the pinching movement, there is a high probability of injuries such as fractures, amputations, or even death. Be aware of pinch point hazards on your job and take these precautions:

- Prior to use, make sure that all covers and protective shields for equipment and machinery pinch point hazards are in place. Never work around moving machines while the guards are removed.
- De-energize, lock-out, and tag equipment being repaired.
- Be on guard whenever you put your hands, fingers, toes, or feet "between" anything.
- Make sure you have the proper hand clearance when setting down loads or carrying loads through doors.
- Wear gloves that are appropriate for the task. Keep in mind, however, that gloves may cause an additional hazard during some tasks if they get caught in moving parts.
- Avoid wearing jewelry or loose clothing that could be caught in moving parts. Tie back long hair.



AGC Tool Box Safety Talk

TRAILER HITCHES

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

Hitching trailers to trucks frequently involves potentially dangerous situations that can lead to accidents with serious consequences.

- Always know the hitch capacity. Never overload the hitch.
- Be wary of the ball size needed for the trailer you are using. Many accidents occur when too small a ball is used.
- Fingers are easily pinched when putting a trailer on a hitch. Make sure hands and fingers are clear before lowering the trailer onto the hitch.
- Use mechanical means where possible to hook a trailer onto a hitch. Always use proper lifting techniques when lifting a trailer.
- Never ride a hitch to see if it is working.
- Always use safety chains after hooking up a trailer to a hitch.



AGC Tool Box Safety Talk

UNLOADING TRUCKS

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

Loading and unloading materials, goods, and products from trucks is a daily activity in many businesses. It is also a regular and frequent source of workplace fatalities. Many injuries occur when workers are struck by equipment or materials, or caught between equipment and materials. Follow these safety tips to help prevent injuries:

- When unloading trucks, do not begin the “backing-in” process until a designated person is in place to assist and direct the driver.
- Use wheel chocks and other vehicle restraint devices to keep the truck from moving.
- Wear personal protective equipment, such as, safety glasses, hardhats, gloves, ear protection, etc.
- When moving or lifting boxes, pipe drums and other heavy items, place your hands carefully to avoid getting them pinched or caught.
- When using material handling equipment, be aware of pinch points, moving parts or conveyors and keep clear of them.
- Watch where you put your feet when unloading trucks and handling pallets. Make sure the work surface is stable and free of debris.
- Never walk between equipment and the loading truck when they are moving.
- Setup a controlled access zone.
- Since loads can shift during transport be aware when loosening ropes, chains and tie-downs.



AGC Tool Box Safety Talk

WORKER POSITION

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

Construction sites are busy places and they can be dangerous places. Where you position yourself could make a difference between safety and an injury. If you are injured, the degree of injury can also be affected by your location. Use these safety guidelines to help avoid accidental contact with machinery or equipment:

- Always position yourself clear of moving equipment parts.
- Avoid standing in close clearances between a piece of equipment you are operating and another piece of equipment or other stationary object.
- Always maintain eye contact with persons operating machinery that could possibly contact you and confirm their understanding of your position and your intentions.
- Avoid entering or standing in a driver’s blind spots.
- Avoid standing and talking near vehicle paths, grading operations, and other activities where heavy equipment is moving back and forth.
- Wear high visibility clothing such as a safety vest. Always wear a hardhat.
- Don’t walk under suspended loads or between unsecured equipment or materials.
- Anticipate problems and plan your escape route.



AGC Tool Box Safety Talk

WORKING AROUND CRANES

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

Crane accidents are a leading cause of death and injury on construction jobs. Workers may be at risk to being struck by loads or equipment or getting caught in between moving equipment, materials and power lines. When working around cranes, take these precautions:

- Stay off and away from cranes unless you are assigned to be on the crane.
- Always wear a hard hat to protect from falling or flying objects.
- Keep clear of the lower hoist block sheaves to prevent fingers or hands from jamming in the sheaves.
- Watch your hand placement on and around suspended loads.
- Know proper hand signals or maintain radio contact.
- Never walk within the swing radius of the crane unless it is absolutely necessary. Make sure the operator knows of your presence.
- Never ride the hook. There are too many things that can go wrong that you can't control.
- Review pre-task crane operations with supervisor.
- Barricade the swing radius of the crane. Maintain at least 10 feet of clearance and use a spotter if necessary.





Chapter 2: Electrical

- AC vs. DC
- Arc Flash Prevention
- Assured Equipment Grounding Program
- Battery Charging
- Electrical Burns
- Lightning Strikes
- Live Circuit Panels
- Overhead Power Lines
- Wires Can Mean Death
- Working in Electrical Boxes
- Electrocution
- Proper Use of Extension Cords
- Ground Fault Circuit Interrupters
- Insulated Gloves
- Lockout/Tagout
- Portable Generators
- Electrical Power Tools
- Proper Grounding
- Temporary Lighting
- Temporary Power Hookups

AGC Tool Box Safety Talk

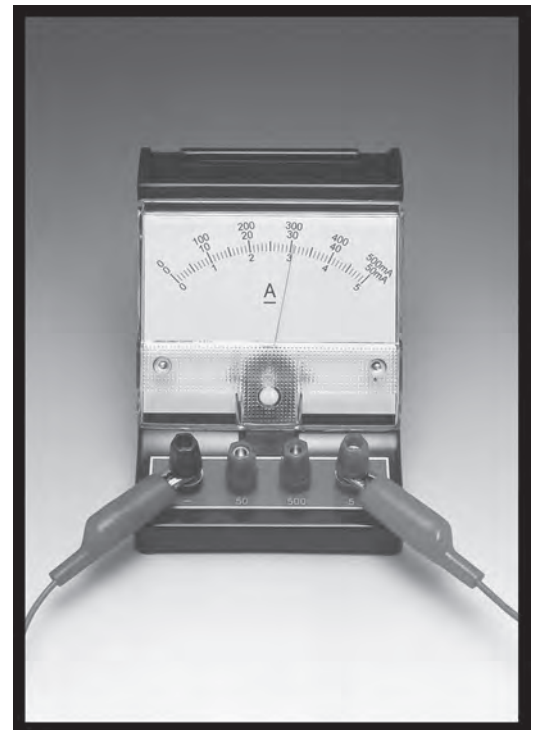
AC vs. DC

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 hazardous. 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 lightning 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

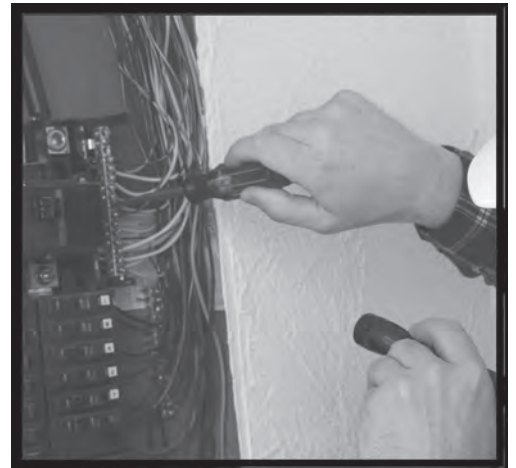
WIRES CAN MEAN DEATH

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 120-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.



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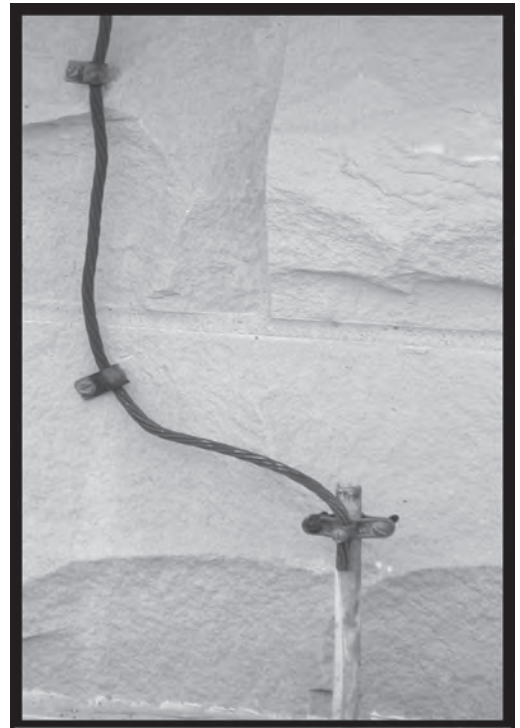
PROPER GROUNDING

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.





Chapter 3: Environmental

- Fire Extinguishers
- Fire Protection and Burn Permits
- Disposing of Oily Rags
- Spill Cleanup
- Spill Prevention
- Storm Water Runoff
- Trash
- Equipment and Vehicle Leaks
- Washing Equipment

AGC Tool Box Safety Talk

FIRE EXTINGUISHERS

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

Almost all fires are small in their early stage and can be put out quickly if the proper fire extinguisher is available, and the person discovering the fire has been trained to use the fire extinguisher at hand. There are basically three different types or classes of fire extinguishers, each of which extinguishes specific types of fire.

- Class A extinguishers will put out fires in ordinary combustibles, such as wood and paper. Extinguishers that are suitable for Class A fires should be identified by a triangle containing the letter "A." If in color, the triangle should be green.
- Class B extinguishers will put out fires in ordinary combustibles, such as wood, paper and plastic. Extinguishers that are suitable for Class B fires should be identified by a square containing the letter "B." If in color, the square should be red.
- Class C fire extinguishers is used on fires that involve energized electrical equipment which require the use of electrically nonconductive extinguishing. Extinguishers that are suitable for Class C fires should be identified by a circle containing the letter "C." If in color, the circle should be blue. The presence of the letter “C” indicates that the extinguishing agent is non-conductive.
- Every project should have ABC class fire extinguishers during construction. The number of extinguishers required is dependent upon the project size, materials and work activity.
- Be familiar with the location of the fire extinguishers on your jobsite.



AGC Tool Box Safety Talk

FIRE PROTECTION AND BURN PERMITS

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

Jurisdictions require outdoor burning permits to limit air pollution. While laws vary, the following may apply: State and local regulations may prohibit fires in burn barrels and burning stumps to clear land, and burning construction or demolition debris.

- Regulations may prohibit open burning of materials including treated lumber and timber, hazardous wastes, asbestos, automobile parts, wire insulation, rubber products, tires, styrofoam and other plastics, tar paper, wet garbage; oil, petroleum, or petroleum-treated products, including painted wood and wood treated with creosote or pentachlorophenol, asphalt, industrial wastes, food wastes, and any material that creates dense smoke or noxious odors.
- Regulations may prohibit burning in any areas of the state that exceed federal or state ambient air quality standards for pollutants emitted by outdoor burning.
- Individual fire districts may prohibit open burning based on local fire safety concerns. Many communities have local laws prohibiting or restricting open burning.
- It is the responsibility of the permit holder to become familiar with the rules and regulations before doing any burning. Failure to follow established regulations will result in revocation of your permit, fines, or possible jail time.
- Make sure any fire is completely out before leaving the jobsite.



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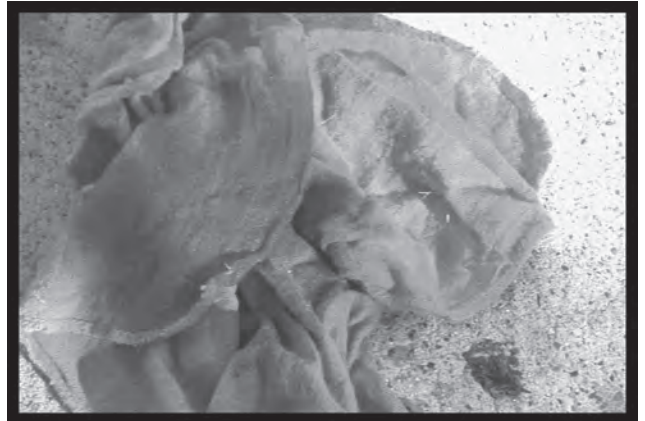
DISPOSING OF OILY RAGS

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

Oily rags are a serious fire hazard because they can spontaneously combust. Many states regulate the disposal of oily rags as “oily waste.” The Environmental Protection Agency (EPA) does not regulate oily rags as waste as long as the rags do not have any free-flowing oil, contain hazardous contaminants, or meet the definition of a characteristic oil hazardous waste. Follow these procedures for safe disposal of oily rags:

- Properly dispose of oily rags or send to a rag cleaning service.
- Oily rags should be placed in an approved and clearly-labeled airtight container. Always keep containers closed securely.
- If the rags are contaminated with other chemicals, especially those that are "hazardous," (heavy metals, toxic chemicals, paint, etc.) do not burn them. Rather, treat the rags as a hazardous waste and dispose of them accordingly.
- If you are unsure whether the rags contain hazardous materials, consult the Material Safety Data Sheet for information proper disposal or contact your supervisor.



AGC Tool Box Safety Talk

SPILL CLEANUP

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

Chemical spill prevention plans required by state and federal law must include provisions for spill cleanup. The following Best Management Practices will help prevent runoff in the event of a spill:

- Properly clean up and dispose of any spilled substance immediately to protect personnel from potential fire and health hazards and the environment.
- Ensure that no spilled materials are washed into the streets, gutters, storm drains, or creeks.
- If possible, use dry cleaning methods to clean up spills to minimize the use of water.
- Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Clean up chemical materials with absorbents, gels, and foams. Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- If the spilled material is hazardous, then used cleanup materials are also hazardous and must be handled as hazardous waste.



AGC Tool Box Safety Talk

SPILL 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

Typically, most businesses and public agencies that generate hazardous waste and/or produce, transport, or store petroleum products are required by state and federal law to prepare spill control and cleanup plans. A Spill Prevention Plan is applicable to facilities that transport, transfer, and/or store hazardous materials, petroleum products, or fertilizers that can contaminate storm water runoff. Regulations include the following provisions:

- Spill response and prevention plans should clearly state measures to stop the source of a spill, contain the spill, cleanup the spill, dispose of contaminated materials, and train personnel to prevent and control future spills.
- Spill prevention plans are most applicable to construction sites where hazardous wastes are stored or used.
- The preliminary steps include: (i) identifying potential spill or source areas such as loading and unloading, storage, and processing areas; places that generate dust or particulates; and areas designated for waste disposal; and, (ii) evaluating stationary facilities that include manufacturing areas, warehouses, service stations, parking lots, and access roads.
- Employees must be trained in spill control response procedures, post-spill response procedures and be provided with emergency phone numbers.
- Emergency spill containment and cleanup kits should be located at the facility site. The contents of the kit should be appropriate to the type and quantities of chemical or goods stored at the facility.
- Spill kits must be inspected and maintained in all activity areas.
- Re-fuel equipment in a designated area to minimize contamination. Pay attention to location so that spills would not enter water streams or storm water. Consider dikes or a secondary containment system.



AGC Tool Box Safety Talk

STORM WATER RUNOFF

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

Operators of construction sites one acre or larger (including smaller sites that are part of a larger common plan of development) must obtain authorization to discharge storm water under an NPDES construction storm water permit. These facts help explain the requirements:

- Storm water runoff from construction activities can have a significant impact on water quality. In addition to sediment, as storm water flows over a construction site, it can pick up other pollutants like debris, pesticides, petroleum products, chemicals, solvents, asphalts and acids which also contribute to water quality problems.
- The EPA estimates that 20 to 150 tons of soil per acre is lost every year to storm water runoff from construction sites.
- Items installed for storm water pollution must be inspected regularly and maintained properly.
- Site owners and their construction operators of regulated construction sites are required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to prevent storm water runoff and obtain permit coverage from an authorized state or from the EPA, if the state is not authorized by EPA to issue NPDES permits.
- The EPA recommends Best Management Practices to protect natural features, minimize exposure of soil, control erosion, and control sediment runoff.



AGC Tool Box Safety Talk

TRASH

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

Construction sites can present many hazards to employees. Keeping a construction site clean of debris can further reduce hazards. Also, managing waste can contain certain pollutants at their source before they can contaminate the ground or streams via storm water runoff. Use the following Best Management Practices when disposing of trash:

- Collect debris from work areas and place in containers on a daily basis.
- Separate potentially hazardous waste from non-hazardous construction site waste and place in approved containers with lids. Hazardous Wastes can include used oil, used oil filters, oily rags and flammable wastes as well as caustics, acids, harmful dusts, etc.
- Do not place collected litter and debris in or next to drain inlets, storm water drainage systems, or bodies of water.
- Provide dumpsters to contain the solid waste generated by the project.
- Make sure hazardous wastes are not disposed of in dumpsters designated for construction debris. This could include form oil, sealers, paint, curing compounds etc.
- Remove construction debris and waste from the site as frequently as necessary.
- Do not bury construction waste materials on site.
- Place proper trash receptacles throughout the construction site.
- Pull nails from lumber.
- Remove debris to prevent fire hazards.
- A clean jobsite allows for safe movement of workers materials and vehicles.



AGC Tool Box Safety Talk

EQUIPMENT AND VEHICLE LEAKS

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

Equipment and Vehicle leaks are potential water and soil pollutants. Rain can wash contaminants to the nearest stream. A car leaking only a few drops a day can contribute to water pollution. For example, one pint of oil can contaminate an area larger than a football field. Follow these steps to reduce pollution caused by vehicle leaks:

- If you see a leak from a vehicle, contain it with a drip pan or absorbent material.
- Repair all fluid leaks as soon as possible to reduce discharge into the environment.
- Sweep up leaks using granular, absorbent material such as cat litter. Clean up residue and dispose of it properly.
- Properly dispose of fluids such as solvents, antifreeze, brake fluid, and motor oil.
- Report all leaks to your supervisor.
- Check equipment and vehicles on a daily basis.



AGC Tool Box Safety Talk

WASHING EQUIPMENT

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

Cleaning activities can pollute waters with contaminants such as grease, oil, automotive fluids, and the aggressive and toxic cleaning agents used to aid in the cleaning process, such as muriatic acid and degreasers. The Environmental Protection Agency (EPA) Clean Water Act establishes regulations for discharging wastewater into sanitary sewers. The Standard includes these basic provisions:

- Contractors may not clean vehicles and equipment on site unless a properly designed wash area prevents run-off from entering the storm drain system.
- A National Pollutant Discharge Elimination System (NPDES) permit may be required if wash water is allowed to run off the property and into a conveyance, including a storm water drain, leading to U.S. waters; and if wash water is collected and transported off site, where it is then discharged.
- Even with a permit, if the wastewater generated contains any significant levels of oil, grease and metals, the wastewater must be pretreated prior to discharging to the on site sewer or it must be hauled by a licensed waste hauler.
- Best Management Practices recommended for washing vehicles and equipment include filtering and recycling wash water; using phosphate-free detergents; reducing the amount of water used when washing vehicles and equipment; reduce solvent use by using a wire brush or a bake oven to clean parts and equipment; and sweeping or using a shop vacuum to clean up saturated absorbents and disposing of saturated material appropriately in the trash or as hazardous waste.





Chapter 4: Excavations

- Competent Person
- Emergency Response Plan
- Atmospheric Conditions
- Barricades
- Site Conditions
- Soil Types
- Basic Requirements
- Trench Box/Shields

AGC Tool Box Safety Talk

COMPETENT PERSON

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

OSHA requires that a “Competent Person” be responsible for the safety of all workers in a trenching/excavation operation. OSHA defines a Competent Person as “an individual who is capable of identifying existing and predictable hazards or working conditions that are hazardous, unsanitary, or dangerous to employees and who is authorized to take prompt corrective measures to eliminate or control these hazards and conditions.” The Competent Person is required to:

- Have training in soil analysis and the use of protective systems, be knowledgeable about OSHA requirements, and have authority to immediately eliminate hazards.
- Inspect the trench, adjacent areas, and any protective systems for possible cave-ins, failure of protective systems, hazardous atmospheres, or other hazardous conditions. Inspections must be performed daily: before work begins, throughout the shift, and after every rainstorm or other hazard-increasing occurrence.
- Review a pre-task plan with supervisor on a daily basis.
- Assure that the location of underground installations or utilities have been properly located.
- Identify and ensure use of adequate protective systems, work methods, and personal protective equipment (PPE) on the excavation site.
- Test for low oxygen, hazardous fumes and toxic gases, especially when gasoline engine-driven equipment is running, or the dirt has been contaminated by leaking lines or storage tanks. Insure adequate ventilation or respiratory protection, if necessary.
- Provide safe access within 25 feet of workers into and out of the excavation.
- Provide appropriate protections if water accumulation is a problem.



AGC Tool Box Safety Talk

EMERGENCY RESPONSE PLAN

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

Trench collapses cause dozens of fatalities and hundreds of injuries each year. Because trench collapse rescues are technical and demanding, it's essential to have an Emergency Response Plan in place before an emergency occurs. Quick and efficient response can save lives. Follow these procedures for emergency preparation:

- Prior to beginning an excavation project, determine and implement procedures for emergency response that is specific for that site. Ensure the plan is part of the overall site safety plan.
- Notify all personnel involved with the project of the emergency response procedures.
- Include at a minimum the following items: procedures for notification of emergency response agencies; responsibilities of individuals on the site; posting of local emergency response agencies; notification of these agencies of the scheduled work prior to commencement; and identification of the nearest accessible telephone, radio, or other methods of communication.
- Where hazardous atmospheric conditions exist or could develop during the course of the work in the excavation, keep emergency rescue equipment such as a safety harness and line or basket stretcher readily available to personnel working at the excavation site.
- If you are about to be buried in a cave-in, yell to get attention. Cover your face with your arms. Do not struggle to free yourself, just wait calmly for rescue.
- If you are watching someone being buried in a cave-in, do not attempt to rescue them yourself. Never enter the excavation. Follow emergency procedures designated for your work site.
- Review the emergency plan. Make sure new hires and new workers to the site are aware of the emergency response plan



AGC Tool Box Safety Talk

ATMOSPHERIC CONDITIONS

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

One hazard associated with excavation and trenching is the possible presence of hazardous atmosphere. A hazardous atmosphere is an atmosphere that by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen-deficient, toxic, or otherwise harmful may cause death, illness, or injury to persons exposed to it. In excavation work, hazardous atmospheres may be generated as toxic gasses and can be released by the digging or accumulate at the bottom of the trench. To help ensure exposure to hazardous atmospheres, take these steps:

- Ensure that the competent person tests the atmosphere in excavations over 4 feet deep if a hazardous atmosphere exists or could reasonably be expected to exist. A hazardous atmosphere could be expected, for example, in excavations in landfill areas, in excavations in areas where hazardous substances are stored nearby, or in excavations near or containing gas pipelines.
- Conduct testing for atmospheric contaminants before employees enter the trench and on a regular basis to ensure that the trench remains safe.
- Increase the frequency of testing if equipment is operating in the trench or if welding, cutting, or burning is done in the trench. These operations, too, can generate toxic fumes.
- Take precautions to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions may include providing proper respiratory protection or forced ventilation of the workspace.
- Make sure that employees required to wear respirators are trained, fit-tested, and enrolled in the respiratory protection program.



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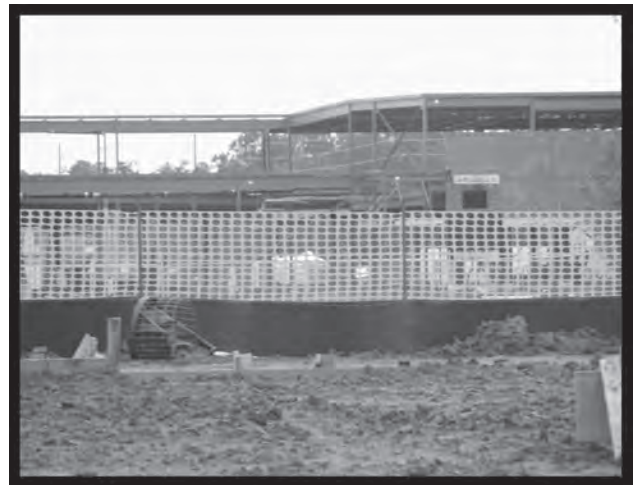
BARRICADES

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 open trench can be a hazard not only to the workers on the site, but also to the public. In many instances, barricades and/or warnings are required to prevent unauthorized or accidental entry. Here are some “barricade basics” to help ensure a safe excavation site for everyone:

- Install barricades, fences, protected walkways and/or signs to protect the public from the excavations site. Install warning systems prior to excavation.
- Install barricades, guardrails, or fences around excavations adjacent to walkways, roads, paths or other traffic areas.
- Install standard guardrails on walkways or bridges used by the general public to cross excavations.
- Install barricades or other means to protect employees from underground utilities left in place during excavation.
- Install a barricade or fence on any excavation left unattended to protect against accidental entry from pedestrians. If the excavation is in a remote location where visitation by residents is unlikely, a barricade of posts and warning tape, with a sign, is sufficient. If the excavation is in a traveled area, however, a physical barrier such as a fence must isolate it.
- Install barricades around the site to help control both vehicular and pedestrian traffic.
- Install a warning system such as a barricade, hand or mechanical signal or stop logs when mobile equipment is operated adjacent to the edge of an excavation.



AGC Tool Box Safety Talk

SITE CONDITIONS

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

No two excavation sites are alike. Each job must be treated individually because conditions vary from job to job, and hazards may vary from job to job. Follow these procedures to help ensure a safe site:

- Conduct a soil test to determine appropriate sloping, benching, and shoring.
- Remove surface encumbrances such as equipment, materials, supplies, trees, brush, boulders and other objects at the surface that could present a hazard to employees working in the excavation.
- Check the location of underground utilities/ installations that may be encountered during excavation before digging. Arrange with the appropriate utility agency for the protection, removal, shutdown, or relocation of underground installations.
- Install barricades and/or warnings to protect employees and the public from the excavation and from vehicular traffic.
- In excavations deeper than four feet with the potential for a hazardous atmosphere or oxygen deficiency check the atmosphere with a gas monitor as often as necessary to ensure the atmosphere remains safe. Provide adequate protection.
- Ensure that workers are protected in excavations where water is accumulating. This protection involves specific shoring, water removal to control the level of accumulating water, use of lifelines and harnesses, and careful monitoring by a competent person.
- Check the stability of adjacent structures or sources of vibration. Do not excavate below the base or footing of a foundation, wall, sidewalk, pavement or other structure unless shoring or bracing is provided to prevent cave-in or the excavation is in stable rock.
- The competent person should check the excavation on a daily basis or as site conditions change.



AGC Tool Box Safety Talk

SOIL TYPES

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 greatest hazard in excavation and trenching is the risk of a cave-in. Of the deaths resulting from excavation and trenching incidents, the majority are from injuries received during the collapse of the trench. The type of soil in the trench influences the stability of the trench. A soil analysis is critical in determining appropriate sloping, benching, and shoring.

- Trench failure can be deadly. Trench failures often occur in multiples, starting with a movement of soil material near the bottom of the trench wall. After the failure of the base, the support of the wall will quickly erode and the wall will collapse. The collapsing soil is extremely heavy and can weigh one and a half tons per cubic yard, producing a tremendous crushing force
- Before excavation, ensure that a “Competent Person” conducts a soil test to determine the stability of the soil.
- Type A soil (clay, silty clay and hardpan) is the most stable.
- Type B soil (silt, sandy loam, medium clay, and unstable dry rock) has medium stability.
- Type C (gravel, loamy sand, soft clay, submerged soil, or dense, heavy, unstable rock) is the least stable, and requires the greatest safety precautions when excavating.
- Stable Rock is a natural, solid mineral material can be excavated with vertical sides and remains intact while exposed.
- After the soil has been classified, use prescribed methods of wall retention, piling, cribbing, sloping, shoring, trench boxing and sheeting to maintain trench and excavation walls. For each trenching or excavation situation, employ the proper sloping, shoring and bracing structures and measures designed specifically for the particular situation.



AGC Tool Box Safety Talk

BASIC REQUIREMENTS

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

Trenching and excavation are among the most hazardous jobs in construction. The primary hazard is employee injury from collapse. Other potential hazards include falls, falling loads, hazardous atmospheres, and incidents involving mobile equipment. Follow these basic safety procedures when working on excavation sites:

- Inspect trenches before each shift. Look for evidence of possible cave-ins, indications of failure of protective systems, presence of hazardous atmospheres and other hazardous conditions. Make necessary repairs before starting operations.
- Make sure trenches 5 feet or more in depth are stabilized by either shoring, sloping, or have some protective system to prevent a cave-in.
- Verify that there’s a safe means of access and egress (ladders, stairways etc.) in trenches that are over four feet deep. Make sure the means of access/egress requires no more that 25 feet of lateral travel for a person to reach the exit structure. The top of the ladder must extend at least 3 feet above the walk-off surface.
- Place spoil piles at least two feet from trench edges.
- Ensure underground utilities are marked and their location verified.
- Test for low oxygen, hazardous fumes and toxic gases.
- Trenches 5 feet deep or greater require a protective system unless the excavation is made entirely in stable rock.
- Keep heavy equipment away from trench edges.
- Know who the competent person is for your crew. It is their responsibility to ensure that proper protection is in place for that excavation. Know your rescue plan



AGC Tool Box Safety Talk

TRENCH BOX/SHIELDS

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 greatest risk in trenching and excavation is the risk of cave-ins. Cave-ins are much more likely than other excavation-related accidents to result in worker fatalities. To ensure safety, it's important to install a protective system such as a trench box or shield to protect employees workers from collapsing material. Follow these safety requirements when installing a trench box/shield:

- Install a trench box/shield on all excavations five feet or deeper. Unless a competent person provides no indication of a potential cave-in.
- Ensure that the protective system has been designed by a registered professional engineer and is constructed to exact engineering specifications.
- Install trench box/shields in such a way as to restrict lateral or other hazardous movement in the event of sudden trench failure.
- Install trench box/shields so they extend to no more than two feet from the bottom of the trench and no less than eighteen inches above the vertical top of the trench or excavation face.
- Avoid exposing the trench box/shield system to load exceeding the design standard.
- Make sure workers are protected from the hazards of cave-ins when entering or leaving the area protected by the shield.
- Do not enter the shield or ride on the shield during installation, removal, or relocation of the trench box/shield.





Chapter 5: Falls

- Aerial Lifts
- Falls Arrest
- Fall Prevention
- Fall Retrieval/Rescue
- Location of Falls—Fatal
- Location of Falls—Non-Fatal
- Personal Fall Arrest Systems: How to Wear a Harness
- Trigger Heights for Fall Protection
- Working Around Rebar
- Holes/Skylights
- Open Sided Floors/Leading Edges
- Proper Seating While Traveling
- Scissor Lifts
- Slips/Trips
- Stairways
- Working on Roofs
- Accessing Equipment
- Inspecting Fall Protection Systems
- Lanyards
- Proper Tie-Off Anchorage Techniques
- Safety Harnesses
- Proper Use of Nets for Fall Protection
- Selecting a Proper Anchor Point

AGC Tool Box Safety Talk

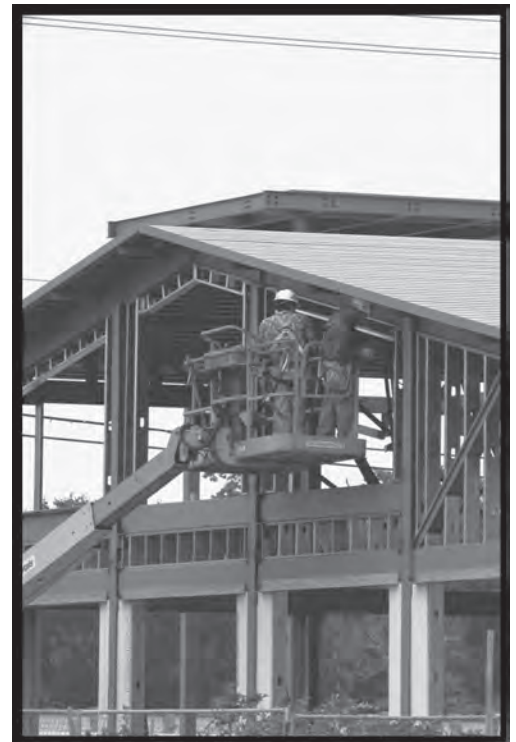
AERIAL LIFTS

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

Falls from elevations can result in serious injuries or even death. Aerial platforms are designed and built with safety features to help minimize the potential for worker injuries. These features include handrails, mid-rails, and toe-boards to help prevent falls and injuries from falling materials. To help ensure safety when using aerial lifts, follow these procedures:

- Test lift controls each day prior to use to determine that such controls are in safe working condition.
- When riding on aerial lifts, stand firmly on the floor of the basket. Do not climb on the edge of the basket or use planks, ladders, or other devices for a work position.
- Use a full body harness with a lanyard attached to the boom or basket to prevent the worker from being ejected or pulled from the basket.
- Maintain a minimum clearance of at least 10 feet away the nearest overhead power lines. High voltage lines require more distance.
- Do not exceed the load limits of the equipment. Allow for the combined weight of the worker, tools, and materials.
- Never move the equipment with workers in an elevated platform unless the manufacturer permits it.
- Never use an aerial lift unless you have been properly trained in its use.



AGC Tool Box Safety Talk

FALL ARREST

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

Personal fall arrest systems (PFAS) minimize injury in case there is a fall. PFAS consist of an anchorage, connectors, body harness and may include a deceleration device, lifeline, or suitable combinations.

- A PFAS, when stopping a fall must limit maximum arresting force on an employee to 1,800 lbs.
- A PFAS must be rigged such that an employee can neither free fall more than six feet nor contact any lower level.
- PFAS must bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.
- PFAS must limit maximum weight of an individual with tools to 310 pounds.
- Use PFAS only if you’re authorized and trained to do so.
- Inspect PFAS prior to each use for wear, damage, and other deterioration. Remove defective PFAS from service.
- To minimize fall distance, tie off at or above the “D” ring height, wherever possible.
- Ensure that all employees are trained prior to using a PFAS.



AGC Tool Box Safety Talk

FALL 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

Nearly 6.5 million people work at approximately 252,000 construction sites across the nation on any given day. The fatal injury rate for the construction industry is higher than the national average for all industries. Studies show that using guardrails, fall arrest systems, safety nets, covers and restraint systems can prevent many deaths and injuries from falls. Take these steps to help reduce falls in your workplace:

- Select fall protection systems appropriate for given situations.
- Construct and/or install all fall protection systems in accordance with manufacture guidelines.
- Supervise employees properly.
- Use safe work procedures.
- Train workers in the proper selection, use, and maintenance of fall protection systems.
- Evaluate the effectiveness of all steps.
- Control fall exposures.
- Review the pre task plan or job hazard analysis with employees for work requiring fall prevention.



AGC Tool Box Safety Talk

FALL RETRIEVAL/RESCUE

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 imperative to immediately rescue workers who have fallen while wearing Personal Fall Arrest Systems. Some studies have indicated permanent damage occurs to the lower extremities when the worker hangs for more than twenty minutes. Other studies indicate that hanging in a harness for more than a half-hour can be fatal. In the event of a rescue operation, follow these procedures to help ensure a safe rescue:

- Be sure to have a rescue plan in place in case a fall occurs on the worksite.
- Promptly rescue employees in the event of a fall.
- Communicate with the subject, establish the level of consciousness, and evaluate injuries. Comfort and monitor the fall victim continually.
- Encourage the victim to try to move their legs in the harness and try to push against any footholds
- Evaluate the scene to determine how to safely gain access, whether via ladders, man-lifts or hoists or call rescue personnel as necessary.
- Ensure that all rescuer personnel wear Personal Fall Arrest System (PFAS) if exposed to heights of six feet or more.
- Communicate with your local fire department so they are aware of your activities and can respond accordingly.



AGC Tool Box Safety Talk

LOCATION OF FALLS—FATAL

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

Falls are the leading cause of fatalities in the construction industry. Construction workers, especially in roofing and framing, are exposed to falls from rooftops, skylights, scaffolding, upper-level floor openings and ladders. Recent statistics show an average of 362 fatal falls have occurred each year, with the trend on the increase. These falls include:

- 37% from roofs.
- 20% from scaffolds
- 15% from ladders.
- 9% from structural steel.
- 4% from floors, loading docks and ground level.
- 3% from non-moving vehicles.



To protect yourself from falls, watch your step, wear non-skid footwear, and always use available fall protection systems.



AGC Tool Box Safety Talk

LOCATION OF FALLS—NON-FATAL

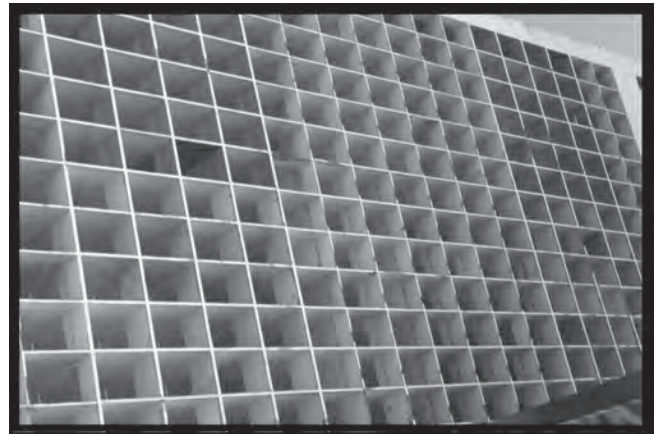
INTRODUCTION

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 possibilities for falls are enormous in the construction industry. A number of factors are often involved in falls, including unstable working surfaces, misuse or failure to use fall protection equipment and human error. Every year, more than 100,000 are injured as a result of falls at construction sites. These falls include:

- 35% from ladders.
- 15% from scaffolds
- 12% from roofs.
- 9% from non-moving vehicles.
- 7% from stairs/steps.

Studies show that using guardrails, fall arrest systems, safety nets, covers and restraint systems can prevent many deaths and injuries from falls. Don't be a statistic: be safe.



AGC Tool Box Safety Talk

PERSONAL FALL ARREST SYSTEMS: HOW TO WEAR A HARNESS

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

Personal Fall Arrest Systems (PFAS) when used properly can be life-saving devices. However, careless or improper use can lead to serious injury or death. Before using any PFAS, make sure you are trained to do so and follow these safety precautions:

- Make sure the PFAS is appropriate for the job and rigged and positioned properly.
- Adjust the harness so you can reach your D-ring with your thumb.
- Allow four (flat) fingers of slack at the legs.
- Position leg straps as high as comfortably possible.
- Make sure the chest strap is across the chest/breastbone.
- Always tie off at or above the D-ring point of the belt or harness except when using lanyards three feet or less in length. This ensures that the free fall is minimized, and that the lanyard doesn't interfere with personal movement..



AGC Tool Box Safety Talk

TRIGGER HEIGHTS FOR FALL PROTECTION

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 “trigger height” is the minimum height at which fall protection is required. Trigger heights vary depending on the type of work. Know the trigger heights for your work and use fall protection as necessary.

- OSHA defines the standard trigger height for fall protection at six feet above a lower surface for construction applications, but there are exceptions in certain operations.
- The trigger height for work on scaffolds is 10 feet when fall protection is required.
- The trigger height for most steel workers is 15 feet, and 30 feet for connectors.
- The trigger height for roofers on roofs with pitches 8:12 or less in residential type, wood frame construction is 25 feet.
- “The six foot rule” is a rule of thumb that states that any worker exposed to a fall of six feet or more must be protected from falls to lower levels..
- The “100% tie-off rule” is a rule of thumb that states that any employee working six feet above a lower level must be protected from falls 100 percent of the time.



AGC Tool Box Safety Talk

WORKING AROUND REBAR

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

Working around rebar poses hazards such as impalement, tripping, and falling. To help prevent accidents, take these precautions:

- Guard all protruding ends of steel rebar with appropriate caps to prevent impalement.
- Maintain vigilance around exposed rebar ends.
- Provide fall protection when working at any height above exposed rebar.
- When climbing or otherwise moving at heights of more than 6 feet, wear fall protection and tie off during the climb.



AGC Tool Box Safety Talk

HOLES/SKYLIGHTS

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

Unprotected holes or openings in the floors or walls at construction sites are extremely dangerous. They need to be securely covered or guarded in order to protect against injuries resulting from falls through these openings. Serious injuries and even deaths have occurred when workers have fallen through holes, shafts, or other openings that were unguarded, covered by materials that were not strong enough to support the workers, or protected by improperly secured barricades or covers. To ensure safety, take these precautions.

- When there is risk of falls through holes (including skylights) that are more than six feet above lower levels, use fall protection systems (Personal Fall Arrest Systems, covers, or guardrails systems).
- Cover all floor holes so they will effectively support two times the weight of employees, equipment, and materials that may be imposed on the cover at any one time, and secure them in place.
- Make sure covers are secured.
- Mark all covers with high visibility paint and the word “HOLE.”
- Guard skylights by a fixed standard railing or protect with a cover capable of supporting a 200 lb. person.
- Install toe-boards around the edges of permanent floor openings (where persons may pass below the opening).



AGC Tool Box Safety Talk

OPEN SIDED FLOORS

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

Falls are the leading cause of deaths in the construction industry. Most fatalities occur when employees fall from open-sided floors and through floor openings. When working at heights, take the following precautions:

- Be alert to fall hazards; areas that require vigilance include open-sided floors, hoist areas, platforms, holes, walking/working surfaces, access to ladders and stairways, and faces of formwork.
- When exposed to open edges with vertical drops of six feet or more, ensure safety by placing guardrails around the hazard area, deploying safety nets, or by using a Personal Fall Arrest System (PFAS).
- If using guardrail system, install top rails, mid-rails, and toe-boards.
- Ensure that guardrails are capable of withstanding, without failure, a force of at least 200-pounds applied within two inches of the top edge, in any outward or downward direction.
- When working at heights, stay away from edges unless your job requires it and always be protected from falling.



AGC Tool Box Safety Talk

PROPER SEATING WHILE TRAVELING

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

Falls from four to six feet can cause serious lost-time accidents or even death Falls from elevation account for one third of all deaths in construction. Do not ride equipment that does not provide a seat for you.

- Always wear seatbelts or restraints for riding in cars, trucks and personnel carriers
- Do not get off of moving vehicles. Wait for the operator to stop before dismounting.
- Do not ride in the back of pickups.
- Do not ride on fork-trucks or use fork-trucks as a platform without a proper basket.
- Do not ride in buckets of loaders.



AGC Tool Box Safety Talk

SCISSOR LIFTS

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

Scissor lifts, while lifting employees to heights, not considered to be a type of aerial lift, and are regulated as scaffolds. Scissor lifts can pose fall hazards when used improperly. While OSHA specifically addresses provisions for scissor lifts, fall hazards exist and require safety precautions used with any scaffold. While there are no OSHA provisions that specifically address scissor lifts, they do meet the definition of a scaffold,

- Test all operator controls before using.
- Do not exceed the manufacturer’s load capacity, including the weight of tools or materials.
- Ensure that all workers are trained in the hazards and safe operation of the scissor lift.
- Ensure that workers inside the scissor lift are protected from falls by guardrails and keep their feet on the floor.
- Before moving with workers inside the scissor lift, ensure that the surface on which the lift is being moved is within three degrees of level and free of pits, holes, and obstructions (such as overhead electrical hazards).
- Limit travel speeds according to workplace conditions, such as holes in the deck or un-level surfaces.



AGC Tool Box Safety Talk

SLIPS/TRIPS

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

Each year slips and falls injure too many construction workers. Slipping on the floor is bad enough, but falling from a height can be disastrous. Workers can eliminate many slipping and tripping hazards by following the principles of good housekeeping. Take these steps to help keep your workspace “fall proof”:

- Clean up all spills immediately.
- Remove clutter from stairs and walkways.
- Cover or elevate cables that cross walkways.
- Repair uneven, defective flooring, or worn stairs.
- Maintain proper lighting.
- Keep trash and loose objects picked up and dispose of them regularly.
- Store all tools and materials in their place.
- Keep ramps slip resistant with special anti-slip paint or other slip resistant material.
- Avoid carrying materials that will block visibility.



AGC Tool Box Safety Talk

STAIRWAYS

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

Slips, trips, and falls on temporary stairways are a major source of injuries and fatalities among construction workers. Since falls from upper levels account for such a high percentage of construction accidents, it's important to build railings and guard rails in conjunction with the building progress. Follow these general guidelines when building/using temporary stairways:

- Provide stairways on worksites when there is a break in elevation of 19 inches or more and no ramp, runway, embankment, or personnel hoist is available.
- Install stairways at least 30 degrees - and no more than 50 degrees - from the horizontal.
- Install handrails on stairways with four or more risers or rising more than 30 inches in height – whichever is less – along each unprotected side or edge of the stairway.
- Do not use stair pans for access until poured or filled in and guardrails and handrails have been installed.
- Keep stairways free of debris and/or projections that may cause injury or snag clothing.
- Fix slippery conditions before using stairs.
- Watch for tripping hazards at the top and bottom of stairs.



AGC Tool Box Safety Talk

WORKING ON ROOFS

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

Work on roofs is one of the most common exposures to fall hazards experienced in the construction industry. Workers may encounter fall hazards during roof access and near roof edges. Roofers may also risk falls near skylights, roof hatches, and other openings. When working on roofs, provide fall protection as a backup system in the event a worker slips, trips, or falls.

- When there is risk of falls from low-sloped roofs with unprotected sides and edges six feet or more above lower levels, use fall protection such as guardrail systems, safety net systems, personal fall arrest systems or a combination of a warning line system and guardrail system, warning line system and safety net system, warning line system and personal fall arrest system, or warning line system and safety monitoring system.
- When there is risk of falls from steep roofs with unprotected sides and edges six feet or more above lower levels, use either guardrail systems with toe-boards, a safety net system, or a personal fall arrest system.
- Cover roof openings securely or surround with a guardrail.
- Use ladders correctly. Set up your ladder on a level surface at an angle consistent with the manufacturer's specifications. Extend the ladder 3 feet above the working surface, and tie the top securely to the roof. Always inspect the ladder before climbing it, and use another if it's damaged.
- Do not store materials and equipment near a roof edge unless guardrails are erected at the edge.
- When storing materials make sure the materials are stable and self-supporting.
- Watch for slipping and tripping hazards, such as slippery or wet areas or lose tools and equipment.



AGC Tool Box Safety Talk

ACCESSING EQUIPMENT

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

Falls from equipment, are a leading cause of injuries in construction. When accessing equipment, take these precautions to help prevent slips, trips, and falls:

- Maintain 3-point contact at all times (two hands and a foot or two feet and a hand) while mounting and dismounting equipment
- Keep steps and grab rails or hand holds clean and in good condition.
- Wear appropriate footwear. Keep shoes free of mud or other materials that could pose slipping hazards.
- Make sure you have a firm grip.
- Avoid carrying any materials while mounting or dismounting
- Always look in the direction you’re traveling.
- Face the machine when you are mounting or dismounting.
- Avoid mounting or dismounting equipment while it is in motion.
- No Jumping.



AGC Tool Box Safety Talk

INSPECTING FALL PROTECTION SYSTEMS

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

Regular and proper inspection of components of Personal Fall Arrest Systems (PFAS) is mandatory. When inspecting a PFAS, consider the following:

- Inspect PFAS before each use for wear, damage, and other deterioration, and remove defective components from service.
- Look for faulty connectors (D-rings, snap-hooks etc.)
- Before each use check lanyards, static lines, and body harnesses for tears, cuts, frays, or other damage, that could limit the integrity of the system.
- Make sure anchorage points are secure.
- If equipment looks as if it needs repair – or it is time for maintenance – tag it, “Do not use,” and remove it from service.
- Keep fall protection equipment as clean as possible to facilitate inspection of the equipment.
- Store in a clean, dry place.



AGC Tool Box Safety Talk

LANYARDS

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

Lanyards (or self-retracting lifelines) reduce the arresting forces on a worker during a fall. The standard lanyard length could vary. Follow these guidelines for safe use of lanyards:

- Inspect lanyards before each use. Remove from service any lanyard that has broken someone's fall, or is frayed or worn.
- Wear lanyards with the impact absorber/shock pack at the “D” ring.
- Make sure lanyards have the appropriate locking safety latch for the intended anchorage points.
- Do not use large climbing/rebar/ladder hooks with “beamers.”
- Do not tie lanyards back to themselves. Unless the lanyard is designed for this service.
- Do not hook lanyards to a retractable. This can cause hook failures and affect the locking capability of the retractable. Rather, hook the retractable to the “D” ring.
- Protect lanyards from cuts and abrasions.



AGC Tool Box Safety Talk

PROPER TIE-OFF “ANCHORAGE” TECHNIQUES

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 tie-off point “anchorage” is where the lanyard or static line is attached to a structural support. A proper tie-off is crucial when using a Personal Fall Arrest System (PFAS). Always follow these safety procedures:

- Always try to tie off at or above the D-ring point of your harness. This ensures that the free fall is minimized, and that the lanyard doesn’t interfere with personal movement.
- Only tie off at approved anchorage points.
- Before connecting to the anchor point, inspect it for damage. Look for excessive wear or deformity that could weaken the anchor point, cracks, or sharp edges.
- Make sure the anchorage point is secure.
- Tie off in a manner that ensures you will not hit a lower level. To do this, add the height of the worker, the lanyard length, and an elongation factor of 3.5 feet. Using this formula, a six-foot tall worker requires a tie-off point at least 15.5 feet above the next lower level. Shock absorbers built into the system can reduce this level to level distance. Keep in mind that certain tie-offs can reduce the static line or lanyard strength.
- Avoid such tie-offs. Never use knots or tie off around sharp edges.



AGC Tool Box Safety Talk

SAFETY HARNESES

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 safety harness is part of a Personal Fall Arrest System (PFAS) and is one option of protection that OSHA requires for workers on construction sites who are exposed to vertical drops of six feet or more. When worn correctly, a harness can save your worker's life. A full-body harness is the most fundamental component of a PFAS. Follow these guidelines for safe use of harnesses:

- Wear a safety harness and proper lanyard attached to an adequate anchoring point when working at heights of six feet or more.
- Inspect your body harnesses and lanyards before each use. If the harness is defective or has been exposed to an impact, take it out of service immediately.
- Make sure the harness fits and is properly adjusted. A harness should be snug but comfortable, and should not bind the wearer.
- Do not modify a harness.
- Do not use body belts as part of a personal fall arrest system because they impose a danger of internal injuries when stopping a fall.
- Do not use a body harness to hoist materials.
- Do not put on a harness unless you have been properly trained in its use and how to wear it properly.



AGC Tool Box Safety Talk

PROPER USE OF NETS FOR FALL PROTECTION

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

Safety nets are often used when there is a likelihood that a fall will occur. There is no margin for error when using safety nets. They must be of an approved type and used in accordance with the manufacturer’s recommendations. To ensure safety, take these precautions when using safety nets:

- Use safety nets when workplaces are more than 25 feet above the ground or water surface, or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or fall protection systems are impractical.
- Make sure safety nets extend at least eight feet beyond the edge of the work surface where employees are exposed.
- Install nets as close under the work surface as practical but in no case more than 25 feet below the work surface.
- Hang nets with enough clearance to prevent a falling person from hitting the surface or structure below (as determined by impact load testing). Make sure there are no obstructions between the work area and the net. Inspect each safety net daily.
- Do not allow trash or other debris to collect in nets. Remove trash immediately.



AGC Tool Box Safety Talk

SELECTING A PROPER ANCHOR POINT

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 anchor point is a secure point of attachment for lifelines, lanyards or deceleration devices, and which is an independent means of supporting or suspending the employee. Secure anchor points are the most critical component when employees must use fall arrest equipment. Follow these guidelines for installation and safe use of anchor points.

- Anchor points may be permanent or temporary.
- Plan for suitable anchorage points before beginning construction.
- When selecting an anchor point, analyze all hazards below and to the side of the anchor point to ensure that a falling worker does not strike or swing into any obstacles.
- Select a location, strength and design that will allow the worker enough mobility to do the job.
- To avoid fall hazards during hook up, select structures/ anchors that are easily accessible.
- Do not use guardrail systems, scaffolds, ladders, light fixtures, conduit, plumbing, duct work, roof stacks or another lanyard as anchor points.
- Never use piping, conduit, sprinkler systems, etc. as an anchor point. Always use a structural member as an anchor point.





Chapter 6: Health Hazards

- Cold Weather
- Cuts and Scratches
- Flashburn
- High Pressure Air
- Hot Weather
- Housekeeping
- Mold
- Pesticides
- Proper Lifting and Stretching
- Sandblasting
- Smoking
- Sun Exposure/Skin Cancer
- Working and Drinking Alcohol
- Asbestos
- Bloodborne Pathogens
- Preventing Concrete Burns and Contact Dermatitis
- Diesel Hazards
- Gasoline Hazards
- Proper Labels
- Material Safety Data Sheets
- Respirators and Proper Fit
- Eye Protection and Safety Glasses
- Silica
- Soft Tissue Injuries
- Using Hazardous Chemicals

AGC Tool Box Safety Talk

COLD WEATHER

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

Exposure to cold can cause injury or serious illness such as frostbite or hypothermia. The likelihood of injury or illness depends on factors such as physical activity, clothing, wind, humidity, working conditions, and a person’s age and state of health. Follow these tips to stay safe in cold weather:

- Learn the signs and symptoms of cold-induced illnesses/injuries and what to do in the event of an emergency.
- Select proper clothing for cold, wet, and windy conditions. Layer clothing to adjust to changing environmental temperatures. Wear a hat and gloves and underwear that will keep water away from the skin (polypropylene).
- Take frequent short breaks in warm dry shelters to allow the body to warm up.
- Avoid exhaustion or fatigue because energy is needed to keep muscles warm.
- Use the buddy system (work in pairs).
- Drink warm, sweet beverages (sugar water, sports-type drinks). Avoid drinks with caffeine (coffee, tea, or hot chocolate) or alcohol.
- Eat warm, high-calorie foods like hot pasta dishes.



AGC Tool Box Safety Talk

CUTS AND SCRATCHES

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

Minor cuts and scratches can become major problems if ignored. With any open wound, large or small, there is always the risk of infection. Take these steps to treat minor cuts and scratches:

- Stop the bleeding. Minor cuts and scrapes usually stop bleeding on their own. If they don't, apply gentle pressure with a clean cloth or bandage.
- Clean the wound by washing it with clear water. Clean the skin around the wound with soap and a soft washcloth. Try to keep soap out of the wound itself because soap can cause irritation.
- If debris remains embedded in a wound after cleaning, see your doctor.
- Apply a thin layer of an antibiotic cream or ointment such as Neosporin or Polysporin to help keep the surface moist. The products discourage infection and allow your body's healing process to close the wound.
- Cover the wound with a sterile bandage. Bandages can help keep the wound clean and keep harmful bacteria out. After the wound has healed enough to make infection unlikely, exposure to the air will speed healing.
- Watch for signs of infection. See your doctor if the wound isn't healing or if you notice any redness, drainage, warmth, or swelling.



AGC Tool Box Safety Talk

FLASHBURN

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

Flashburn to the eye can result when ultraviolet rays emitted by an arc welder are absorbed into the eye’s cornea. Your cornea can repair itself in one to two days and usually heals without leaving a scar. However, if the flash burn is not treated, an infection may start. This can be serious and may lead to some loss of vision. Follow these safe work practices to prevent flashburn:

- Be alert to the risks of flashburn. Even brief exposure to UV radiation can cause flashburn.
- Keep in mind that you do not have to be looking at the arc to get flash burns. If the UV light can reach your eye, even from the side, you will get burned; it often happens to people working near the welder.
- Wear appropriate eye protection. Helmet-type shields offer the most complete shading against arc radiation. Also use safety glasses with side shields to protect eyes when the helmet is lifted up.
- Make sure welder’s helpers or bystanders wear appropriate eye protection. Anyone within 20 feet of a welding arc should be wearing the appropriate type of safety glasses or shielded by an opaque barrier.
- Use screens, if available, to protect people from the welding arc.
- If you experience pain, swelling of your eye or if your vision is blurred, see a physician. Your caregiver may put an antibiotic eye ointment in your eye and cover it with a patch. You may need medicine to lessen the pain and swelling.



AGC Tool Box Safety Talk

HIGH PRESSURE AIR

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

High-pressure air is used so commonly in industry that it is often taken for granted. But that can be a deadly mistake. A stream of compressed air can blind you if it strikes your eye, or it can cause deafness if it goes into your ear. If compressed air enters the body through the nose, mouth, or a break in the skin, it can cause fatal injuries. Follow these safety guidelines when using high-pressure air:

- Before use, check all air hoses, couplings and connections to determine if leakage or other damage exists.
- To prevent injuries from the hose whipping around, always attach the tool securely to the hose before turning on the air.
- Avoid stringing hoses across floors or aisles where they could cause tripping hazards. When possible, air supply hoses should be suspended overhead, or otherwise located to allow efficient access and protection against damage.
- Wear suitable personal protective equipment. Wear hearing and eye protection when operating a compressor.
- Use air pressure only high enough for the task you are doing. Never exceed the recommended air pressure for any equipment.
- Do not lift air tools by the hose.
- Never point the hose at another person. Wait until other people are out of the line of the air-flow. Make sure no one is near the point of operation of the air tool.
- Do not use compressed air to remove dirt or dust from clothing or bare skin.



AGC Tool Box Safety Talk

HOT WEATHER

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

Working in high temperatures and/or humidity can lead to heat-induced illnesses such as heat stress, heat exhaustion, or the more severe heat stroke, which can result in death. When working in hot weather take these precautions:

- Know the signs/symptoms of heat-related illnesses; monitor yourself and coworkers.
- Block out direct sun or other heat sources.
- Use cooling fans/air-conditioning; rest regularly.
- Drink lots of water; about 1 cup every 15 minutes.
- Wear lightweight, light colored, loose-fitting clothes.
- Avoid alcohol, caffeinated drinks, or heavy meals.
- If someone exhibits symptoms of heat stress move them to a cool, shaded area; loosen or remove heavy clothing; provide cool drinking water: and fan and mist the person with water.



AGC Tool Box Safety Talk

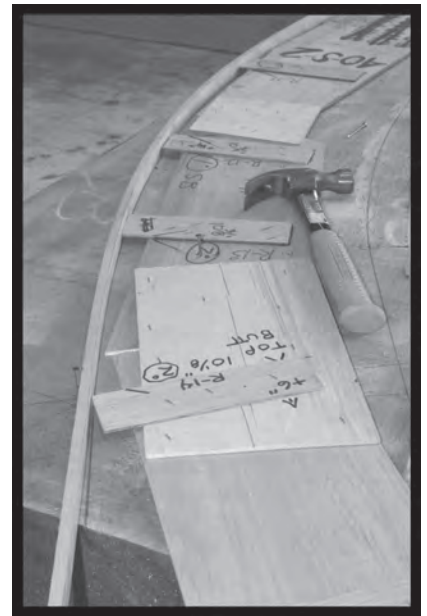
HOUSEKEEPING

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 safe workplace begins with good housekeeping. Routine housekeeping in the workplace can prevent accidents as fires and slips, trips, and falls. Follow these suggestions to help keep your workspace safe:

- Keep floors clear of debris and spilled liquids. Place warning signs or cones on wet floors.
- Put away tools and materials when you are through with them.
- Pick up all trash and scrap materials and dispose of them in correct containers. Place oily rags in an approved container, which is emptied on a daily basis or as warranted.
- Clean up dust. It can be flammable and explosive.
- Store materials properly. Do not place heavy items overhead. Secure materials so that they cannot fall or roll.
- Keep traffic areas clear of clutter, which can cause falls. This can include boxes of materials, cords, or cables.
- Make sure emergency exits and emergency equipment are not blocked. Never put equipment or furniture in front of an emergency exit - even for just a moment. Fire alarms, fire extinguishers and first aid kits should always be readily accessible.



AGC Tool Box Safety Talk

MOLD

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

Molds are microscopic organisms found everywhere in the environment, indoors and outdoors. When present in large quantities, molds have the potential to cause adverse health effects, such as sneezing, cough and congestion, runny nose, aggravation of asthma, eye irritation, and dermatitis (skin rash). Take these steps to help prevent mold growth in your workplace:

- Always use proper mold remediation techniques.
- Learn to recognize mold. Mold usually appears as colored, wooly mats and often produces a foul, musty, earthy smell.
- Remove excess moisture with a wet-dry vacuum and dry out the building as quickly as possible.
- Use fans to assist in the drying process.
- Clean wet materials and surfaces with detergent and water.
- Discard all water damaged materials.
- Discard all porous materials that have been wet for more than 48 hours.
- If cleaning up mold, make sure the work area is well-ventilated. Use appropriate respiratory protection and hand and eye protection.



AGC Tool Box Safety Talk

PESTICIDES

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

Pesticides can cause harm to humans because they are designed to kill or otherwise adversely affect living organisms. Pesticides can enter the body in three ways--by mouth, through the skin and eyes, and through inhalation (breathing into the lungs). Take these precautions when working with pesticides:

- Read labels carefully to determine hazards and methods of protection against the hazards. Follow precautions that appear on the label.
- Choose the correct pesticide for the job. Minimize use when possible.
- Inspect pesticide containers for leaks before handling.
- Wear appropriate personal protective equipment and clothing when handling and spraying pesticide products.
- Wash hands and other exposed areas of the skin after removing personal protective equipment, prior to eating, drinking or smoking, and before leaving the work area (or as soon as feasible).
- Learn to recognize the typical signs of poisoning and the correct first aid procedures.
- Stop work and seek medical attention immediately if you feel ill during pesticide operations.



AGC Tool Box Safety Talk

PROPER LIFTING AND STRETCHING

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

Repeated lifting can result in a variety of injuries. Back strain is the most common type of injury and can result from overstretching muscles. To avoid injury, stretch your muscles before starting your workday and use safe lifting techniques with every lift.

- Size up the load. Use mechanical assistance if necessary.
- Get a firm footing. Keep your feet a shoulders’ width apart for a stable base.
- Bend at your knees, not your waist. Let your leg muscles do the work. Lift with your legs not with your back.
- Keep the load close to your body. For greater strength and stability, lift and carry the object near your waist.
- Move your feet when you change directions; do not twist your upper body while carrying your load.
- Set the load down properly. Bend at your knees and not your back.
- Take mini-breaks throughout the day to stretch and reduce muscle tension that has built up.
- Use lifting equipment such as dolly’s and pallet jacks when available.



AGC Tool Box Safety Talk

SANDBLASTING

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

Abrasive blasting involves forcefully projecting a stream of abrasive particles onto a surface, usually with compressed air. Because silica sand is commonly used in this process, workers who perform abrasive blasting may be exposed to silicosis, an untreatable, irreversible, and often fatal illness. Take these precautions to prevent exposure to silica and other contaminants such as lead during abrasive blasting operations:

- Make sure you have received training that includes information about health effects, safe work practices, and protective equipment for crystalline silica.
- Use containment methods such as blast-cleaning machines and cabinets to control hazards and protect adjacent workers from exposure.
- Wear respiratory protection when source controls cannot keep silica exposures at safe levels. Wear the most protective respirator that is feasible and consistent with the tasks to be performed.
- Ensure that dusty clothes do not contaminate cars, homes, or worksites other than the blasting area. Change into disposable or washable work clothes at the worksite and change into clean clothes before leaving the worksite.
- Practice good personal hygiene to avoid unnecessary exposure to silica dust. Wash hands and faces before eating, drinking, or smoking; avoid eating, drinking or using tobacco products in the blasting area; and shower before leaving the worksite.
- Park cars where they will not be contaminated with silica and other substances such as lead.



AGC Tool Box Safety Talk

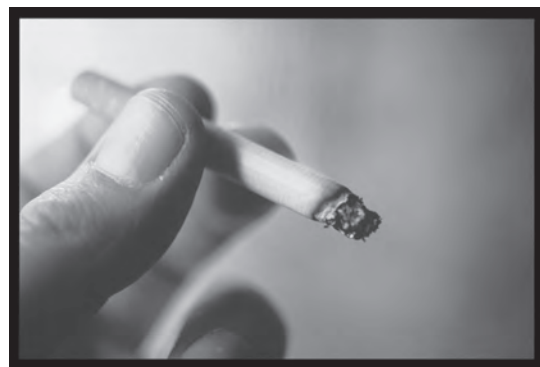
SMOKING

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 adverse health effects from cigarette smoking account for 440,000 deaths, or nearly 1 of every 5 deaths, each year in the United States. More deaths are caused each year by tobacco use than by all deaths from human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders combined. Consider these facts:

- Cigarette smoking increases the risk for many types of cancer, including cancers of the lip, oral cavity, and lungs.
- The risk of dying from lung cancer is more than 22 times higher among men who smoke cigarettes, and about 12 times higher among women who smoke cigarettes compared with never smokers.
- Cigarette smoking damages the heart and circulatory system. Cigarette smokers are 2–4 times more likely to develop coronary heart disease than nonsmokers. Cigarette smoking approximately doubles a person’s risk for stroke.
- Cigarette smoking contributes to respiratory disease. Cigarette smoking is associated with a ten-fold increase in the risk of dying from chronic obstructive lung disease. About 90% of all deaths from chronic obstructive lung diseases are attributable to cigarette smoking.
- Secondhand smoke exposure causes heart disease and lung cancer in nonsmoking adults. Nonsmokers who are exposed to secondhand smoke at home or work increase their heart disease risk by 25–30 percent and their lung cancer risk by 20–30 percent. Secondhand smoke exposure has immediate adverse effects on the cardiovascular system.
- If you are a smoker, you can help prolong your life and the quality of your life by quitting.
- Sign up for a smoking cessation program. Smoking cessation treatments have been found to be safe and effective. Treatments include counseling and medications, or a combination of both.



AGC Tool Box Safety Talk

SUN EXPOSURE/SKIN CANCER

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

Sunlight contains ultraviolet (UV) radiation, which causes premature aging of the skin, wrinkles, cataracts, and skin cancer. The amount of damage from UV exposure depends on the strength of the light, the length of exposure, and whether the skin is protected. There are no safe UV rays or safe suntans. Take these precautions protect against overexposure to sunlight:

- Cover up. Wear tightly woven clothing that blocks out light.
- Use sunscreen. A sun protection factor (SPF) of at least 15 blocks 93 percent of UV rays. Block both UVA and UVB rays to guard against skin cancer. Be sure to follow application directions on the bottle.
- Wear a hat. A wide brim hat (not a baseball cap) is ideal because it protects the neck, ears, eyes, forehead, nose, and scalp.
- Wear UV-absorbent shades. Sunglasses don't have to be expensive, but they should block 99 to 100 percent of UVA and UVB radiation.
- Limit exposure. UV rays are most intense between 10 a.m. and 4 p.m.
- Examine your body monthly to look for signs of skin cancer. The most important warning sign is a spot on the skin that changes in size, shape, or color during a period of one month to one or two years. Skin cancers detected early can almost always be cured.



AGC Tool Box Safety Talk

WORKING AND DRINKING ALCOHOL

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

Drinking alcohol on the job is not permitted. In many workplaces, 20 to 25% of accidents involve intoxicated people injuring themselves and innocent victims. Consider these facts:

- Those who drink on the job are at risk not only to themselves but to every employee on the site.
- Drinking on the job could lead to disciplinary action and ultimately, job loss.
- Drinking during off-duty hours can affect a person’s ability to perform at work. If a worker drinks heavily close to the time he or she is scheduled to report to work judgment and reaction times may become compromised.
- Signs of a drinking problem include habitual drinking to calm nerves or alter mood; irritable, resentful, or unreasonable behavior when not drinking; increased tardiness and absenteeism; missing work without notifying management in advance; excessive sick leave due to alleged illness; and increasing errors and a drop in work performance.
- Alcohol abuse not only impairs one’s ability to work, it can also affect a person’s health and relationships with family and friends.
- Help is available for employees with drinking problems, either through company Employee Assistance Plans or family physicians.



AGC Tool Box Safety Talk

ASBESTOS

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

Asbestos is the name given to a group of naturally occurring minerals used in certain products to resist heat and corrosion. The inhalation of asbestos fibers by workers can cause serious diseases of the lungs and other organs that may not appear until years after the exposure has occurred. When there is risk of exposure to asbestos, take these precautions:

- Become familiar with the types of materials that could contain asbestos.
- Treat any suspicious material as if it contains asbestos. You cannot tell if floor or ceiling tiles contain asbestos just by looking at them. Always advise your supervisor so proper identification can be made.
- Do not disturb any material that may contain asbestos. Asbestos fibers can be released when the material is disturbed.
- If you need to do work that might involve asbestos (lifting ceiling tiles, repairing insulated pipelines, etc.), check with your supervisor to learn requirements for safety.
- Always wear a National Institute for Occupational Safety and Health (NIOSH) approved respirator and protective clothing which includes coveralls, gloves, hats, boots, and a mask when there is risk of exposure to asbestos. Seek approval prior to wearing any respirator.
- In construction, follow special regulated-area requirements for asbestos removal, renovation, and demolition operations.



AGC Tool Box Safety Talk

BLOODBORNE PATHOGENS

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

Bloodborne pathogens are infectious materials in blood that can cause disease in humans, including hepatitis B and C and human immunodeficiency virus, or HIV. Workers exposed to these pathogens risk serious illness or death. Workers other than health professionals are likely to risk exposure to bloodborne pathogens while giving first aid. Although the risk of giving or getting HIV or other serious diseases when administering first aid is very small, it's best to take precautions.

- Bloodborne diseases are spread through direct contact of the blood of an infected person with blood or of a non-infected person through open cuts or sores on the skin or in the mouth or eyes.
- To reduce contact with blood when you are trying to control bleeding, use a barrier—gloves, several dressings, plastic wrap – between you and the victim's blood whenever possible.
- Try to avoid direct contact with other bodily fluids such as saliva, vomit, feces, and urine.
- Try to avoid touching surfaces or objects that have been contaminated with the blood or bodily fluids.
- Always wash your hands immediately with disinfectant soap after giving first aid, even if you wore gloves.
- If you come into contact with a victim's body fluids, seek advice from your physician and report the incident to your supervisor.
- Keep in mind that Good Samaritan Laws in the United States protect from liability for those who choose to aid others who are injured or ill. The law is intended to reduce bystander's hesitation to assist, for fear of being prosecuted for unintentional injury or wrongful death. Obtain first aid training where practical.



AGC Tool Box Safety Talk

PREVENTING CONCRETE BURNS AND CONTACT DERMATITIS

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

Cement and concrete are so common on a construction site that workers often don't think much about them. They're just part of the job. But skin contact with cement dust or wet cement can cause burns, rashes, and other kinds of skin irritation. Cement dust and wet cement can also irritate your eyes. When working with concrete, take these precautions:

- Wear goggles or safety glasses with side shields to protect yourself from splashes.
- Wear boots and other protective clothing if necessary. Make sure boots are high enough to prevent concrete from flowing into them.
- Wear gloves that are impermeable — the cement can't get through them. Leather or cloth work gloves won't protect you.
- Use waterproof pads between fresh concrete surfaces and knees, elbows, and hands when finishing concrete.
- If you get wet or dry cement on your skin or in your eyes, wash or rinse it off immediately with lots of water.
- Rinse clothing saturated with fresh concrete with clean water.
- Use protective barrier creams when practical.



AGC Tool Box Safety Talk

DIESEL HAZARDS

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

Diesel fuel powers lots of equipment and vehicles, but exposure can be hazardous to your health. Direct contact with diesel fuel can irritate skin and aggravate existing skin problems. Exposure to exhaust from diesel fuel can irritate the respiratory tract and cause chronic health problems. Take these precautions to minimize exposure:

- Maintain and tune-up diesel equipment. Check the exhaust system for leaks.
- Fix cracks in vehicles with weather stripping and repair holes in the floor to prevent exhaust from seeping into the vehicle.
- Control exposure to diesel exhaust in enclosed areas by using both local exhaust ventilation and general ventilation systems. Monitor the air when required.
- Minimize diesel engines operations in garages where there is no exhaust system.
- Avoid direct contact with diesel fuel. Wear protective gloves to reduce exposure.
- If you get diesel fuel on your skin or clothing, thoroughly wash the affected skin and remove and isolate contaminated clothing (in a sealed bag). If symptoms such as redness or irritation develop, see a physician.
- If you are overexposed to diesel vapor, leave the contaminated area immediately and take deep breaths of fresh air. If you experience symptoms such as wheezing, coughing, shortness of breath or burning in the mouth, throat or chest, immediately contact your immediate supervisor for further instructions and if medical intervention is appropriate.



AGC Tool Box Safety Talk

GASOLINE HAZARDS

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 gallon of gasoline has the explosive energy of several sticks of dynamite. It is the gasoline vapors, not the liquid that are likely to ignite. The vapors are heavier than air, and can move around in unventilated areas like a fluid. Static electricity will ignite gasoline, and the results can be disastrous. Take these precautions when using gasoline:

- Use gasoline only for its intended purpose - to fuel an engine.
- Do not use gasoline as a solvent, cleaner, barbeque starter, or for any other non-engine use.
- Only use gasoline products outdoors, in well-ventilated areas.
- Avoid smoking, lighting matches, or using lighters around gasoline.
- Do not use or store gasoline near possible ignition sources, such as electrical devices, oil or gas-fired appliances, or any other device that contains a pilot flame or a spark.
- Store gasoline in approved containers and appropriately label the container.
- When emptying gasoline from one container to another make sure the containers are properly grounded.



AGC Tool Box Safety Talk

PROPER LABELS

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

OSHA's Hazard Communication Standard requires that all containers of hazardous chemicals be clearly labeled and that warning signs be posted in the workplace. Labels must contain the identify of the hazardous chemical, appropriate hazard warnings, and the name and address of the manufacturer or distributor. Proper labeling helps ensure safe use of chemicals.

- OSHA's Hazard Communication Standard states that labels must be prominently displayed on all containers of hazardous chemicals in the workplace, and MSDS's are readily available in the work area throughout each work shift.
- Additional labeling information may be required in certain states. A few states require the National Fire Protection Association (NFPA) code on the label. Other states may require the Chemical Abstract Services (CAS) number to be on the label. Check your local requirements.
- Read the labels on the hazardous chemicals in your workplace. Follow the label's instructions for safe handling, use, and storage. Always use required Personal Protective Equipment when handling hazardous materials.
- Do not remove or deface labels.
- Do not use products that are not labeled.

LABEL TYPE	HEALTH	FLAMMABILITY	REACTIVITY	PERSONAL PROTECTION	EXAM
4 - Severe	Flash Points	4 - May Detonate	4 - May Detonate	OX - Oxidizer	
3 - Extreme Danger	4 - Serious - Above 73°F	3 - Shock and Heat	3 - Shock and Heat	AC - Acid	
2 - Hazardous	3 - Serious - Above 100°F	2 - May Detonate	2 - May Detonate	AL - Alkali	
1 - Slightly Hazardous	2 - Moderate - Above 200°F	1 - Unstable	1 - Unstable	CS - Corrosive	
0 - Normal Material	1 - Slight - Above 300°F	0 - Stable	0 - Stable	W - Use MS WATER	
	0 - Minimal - Will Not Burn			W - Wash	



AGC Tool Box Safety Talk

MATERIAL SAFETY DATA SHEETS

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 Material Safety Data Sheet (MSDS) is a detailed information bulletin prepared by the manufacturer or importer of a chemical that provides basic safety information on that chemical. Information on an MSDS helps prepare employers and employees to respond effectively to daily exposure situations as well as to emergency situations.

- Material Safety Data Sheets are addressed in OSHA’s Hazard Communication Standard, which requires chemical manufacturers and importers to provide information on the hazards of the chemicals they produce or import.
- According to OSHA’s Hazard Communication Standard, employers are required to make MSDS’s available to employees for all hazardous chemicals used or stored in the workplace.
- Material Safety Data Sheets are divided into sections. At a minimum, OSHA requires that MSDS’s contain at least the following information: Chemical Identity, Hazardous Ingredients, Physical and Chemical Characteristics, Fire and Explosion Hazard Data, Reactivity Data, Health Hazards, Precautions for Safe Handling and Use, and Hazard Control Measures.
- Always read the MSDS on a chemical before using that product. When reading an MSDS, concentrate on the information that is applicable to your situation. Generally, hazard information and protective measures should be the focus of concern.
- Follow instructions for safe use described in the MSDS. If you have questions, ask your supervisor or safety representative.
- Know where the MSDS’s are located. They are to be accessible to all employees.



AGC Tool Box Safety Talk

RESPIRATORS AND PROPER FIT

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

There are many daily jobs that require the use of respirators to protect your lungs from hazardous atmospheres. To receive their full benefit it's important to use respirators correctly. Follow these safe work practices:

- Wear appropriate respirators to protect against adverse health effects caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors.
- Wear a respirator only if you have been trained in its safe use including prior use fit testing and have been cleared by a licensed health care professional.
- Select the right respirator for the job. The appropriate respirator will depend on the contaminant's to which you are exposed and the protection factor (PF) required.
- Make sure the respirator fits properly. Otherwise, the respirator will not be effective. Facial hair will interfere with proper fit of respirators and should be restricted.
- Perform a fit test each time you use a respirator. Check for a tight seal between the face piece and your face.
- Do not use a respirator if it has not been approved for the specific hazard you are protecting yourself against; if it does not accommodate for glasses, or if you have a beard, mustache, long sideburns, a deep facial scar or deformity.
- If you have lung disease, heart trouble or breathing problems, consult a doctor before using a respirator.
- Do not poke holes in filters.



AGC Tool Box Safety Talk

EYE PROTECTION AND SAFETY GLASSES

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

Eye injuries in the workplace are very common. More than 2,000 people injure their eyes at work each day. Of the total amount of work-related injuries, 10-20 % will cause temporary or permanent vision loss. Experts believe that the correct eye protection could have lessened the severity or even prevented 90% of eye injuries in accidents. When there is risk of eye injury, wear appropriate eye protection.

- Use the appropriate eye protection for the job.
- Each type of protective eyewear is designed to protect against specific hazards.
- Wear safety glasses with side shields to provide protection from the sides for tasks such as sanding, buffing, and drill- press work.
- Wear safety goggles instead of safety glasses or wear a face shield over safety glasses when hazards come from above and below as well as the side, as in lathe work or other high speed cutting and shaping operations.
- If you wear prescription corrective lenses, keep in mind that these will not provide adequate protection against most occupational eye and face hazards. Either wear eye protection that is prescription safety glasses or wear additional eye protection over your prescription lenses.
- If you wear contact lenses, wear eye or face PPE when working in hazardous conditions.



AGC Tool Box Safety Talk

SILICA

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

Silicosis is caused by exposure to respirable crystalline silica dust. Crystalline silica is a basic component of soil, sand, granite, and most other types of rock, and is used as an abrasive blasting agent. Silicosis is a progressive, disabling, and often fatal lung disease. Cigarette smoking adds to the lung damage caused by silica. To prevent silicosis, use these safe work practices:

- Use all available engineering controls such as blasting cabinets and local exhaust ventilation.
- Minimize dust by following good work practices, such as removing dust with a water hose or vacuum with a high-efficiency particulate filter rather than blowing it clean with compressed air, or by wet sweeping or by using a compound instead of dry sweeping.
- Substitute with non-crystalline silica blasting material.
- Use respirators approved for protection against silica; if sandblasting, use abrasive blasting respirators.
- Do not eat, drink or smoke near crystalline silica dust.
- Wash hands and face before eating, drinking, or smoking away from exposure area.
- If you believe you are overexposed to silica dust, visit a doctor who knows about lung diseases and report it to your supervisor.



AGC Tool Box Safety Talk

SOFT TISSUE INJURIES

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

Soft tissue injuries are a leading cause of injuries in the workplace. Soft tissue injuries include bumps and bruises (contusions) and small tears of muscles (minor strains) or of ligaments and tendons near joints (minor sprains). Most are caused by overexertion and slips, trips, and falls. Take these precautions to help prevent soft tissue injuries:

- Stretch lightly before using your muscles.
- Avoid overexertion. Use ladders to reach overhead objects and mechanical equipment to carry and move heavy materials.
- Use proper techniques. Lift with your legs, not your back.
- Take advantage of breaks to stretch muscles that have become tense from continuous sitting and/or exposure to vibration.
- Use tools properly. Keep most tools between your waist and shoulder height – the “lifting zone” — during use. This gives you the most leverage, and allows the strongest muscles to do the work.
- Keep your work area clean and free of hazards. Pick up loose objects from the floor and clean up spills immediately to eliminate tripping and slipping hazards.
- Maintain a total wellness lifestyle that includes physical conditioning, avoidance of tobacco products, weight management, and healthy eating habits.



AGC Tool Box Safety Talk

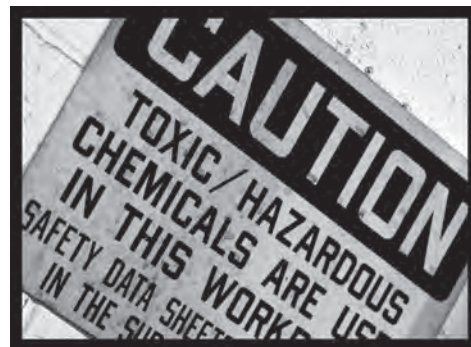
USING HAZARDOUS CHEMICALS

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

Hazardous chemicals are used routinely in the workplace. Hazardous chemicals may pose physical or health hazards. They may be highly flammable or explosive, corrosive, reactive, dangerous to health, or a combination of these.

- Always use safe work practices when using hazardous chemicals.
- Make sure you are familiar with the hazardous chemicals present in your workplace through your ability to have access to the Material Safety Data Sheet (MSDS) of the product.
- Avoid using chemicals until you receive training on the hazards and protective measures.
- To learn more about a chemical and methods of protection, consult the Material Safety Data Sheet (MSDS) and or the label on the product.
- Always read labels on chemicals before use. Follow directions for safe use.
- When handling chemicals, use personal protective equipment appropriate for the hazards.
- Do not mix products unless directed to do so by label directions. Improper mixing can cause explosive or chemical reactions. Even different brands of the same product can contain incompatible ingredients.
- Be prepared for an emergency. Know how to report a fire, a chemical spill or a chemical release.
- Do not store materials in unmarked containers. Never use materials from unmarked containers.





Chapter 7: Highway Hazards

- Animals, Insects, Snakes, and Poisonous Plants
- Barricades and Warning Devices
- Flaggers' Responsibilities
- High-Visibility Clothing
- Traffic Zones
- Working on Bridges
- Working Around Heavy Equipment
- Working Under the Lights
- Working With Asphalt
- Working with Chain Saws

AGC Tool Box Safety Talk

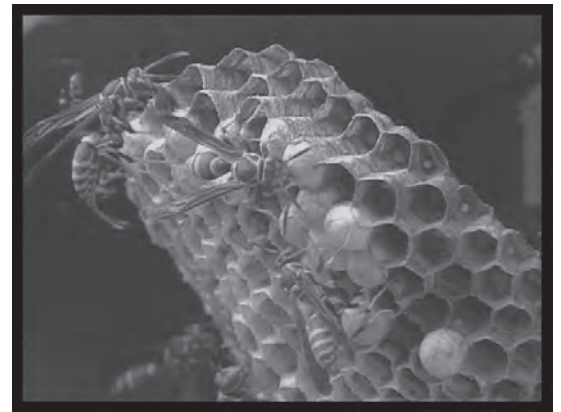
ANIMALS, INSECTS, SNAKES, AND POISONOUS PLANTS

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

Plants and animals can cause rashes, illness, and even death. Outdoor work can expose you to animal bites, such as from dogs or snakes, and to plants like poison ivy and poison oak. To prevent problems:

- Watch for snakes, animals and insects that may be seeking shelter in high grass, debris or equipment.
- Steer clear of any animals.
- Wear the recommended protective clothing such as boots and gloves.
- If you are allergic to insect bites or stings, carry your emergency kit to control the reaction. It is advisable to notify your supervisor of your allergy.
- Learn to identify the poisonous snakes, spiders and stinging insects in your area. Snakes are unlikely to bite unless they are trapped or threatened.
- Learn to recognize and avoid poisonous plants such as poison oak, ivy, and sumac.
- Seek treatment immediately for bites or contact with poisonous plants.



AGC Tool Box Safety Talk

BARRICADES AND WARNING DEVICES

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

Work zones on roadways are increasingly dangerous places, both for workers and for those traveling through them. Use barricades and warning devices at job sites to direct traffic flow and help ensure safety for motorists and workers.

- Install and maintain temporary traffic control devices, such as signage, warning devices, paddles, and concrete barriers, in a consistent manner as required by the Manual of Uniform Traffic Control Devices throughout the work zone.
- Set up temporary traffic control within a reasonable time prior to construction so that motorists do not become complacent and ignore warning signs and devices when work begins.
- Provide flaggers with devices that increase their visibility to passing motorists and construction vehicles.
- Ensure that all traffic control devices are operating properly and in place at all times. Missing traffic control devices create the potential for motorists to inadvertently enter the work space or exit the highway in the wrong place.
- At night, use signs that are made of reflective material or are illuminated.
- Reduce space between channelizing traffic control devices during hours of darkness to compensate for reduced driver visibility.
- When work is suspended for short periods, all signs that are no longer appropriate shall must be removed, covered, turned, or laid flat so they are not visible to drivers.



AGC Tool Box Safety Talk

FLAGGERS' RESPONSIBILITIES

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

Flaggers have been injured when vehicles intrude into traffic work zones and by internal vehicle-related incidents. Flaggers should only be used when other methods of traffic control are inadequate to direct or control traffic and to ensure the safety of work zone workers and public drivers. When working as a flagger, follow these guidelines:

- Do not attempt to direct and control traffic unless you have been trained and designated to do so.
- Wear high visibility clothing that meets local, state and federal requirements - Orange, yellow, or green vest. Night work requires additional visibility clothing.
- Wear other protective equipment, including a hard hat and a long-sleeved shirt and pants, and appropriate clothes for expected weather.
- Stand alone on the shoulder in clear view being sure to face traffic at all times.
- Never stand in the open traffic lane.
- Stay alert, focused on work and avoid distractions.
- Plan an escape route for emergencies.



AGC Tool Box Safety Talk

HIGH-VISIBILITY CLOTHING

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

Flaggers and other road crew workers on foot are at risk of being struck by vehicles, either public cars and trucks or construction equipment. One of the best defenses is to wear high-visibility clothing. This helps prevent accidents associated with struck by and struck against hazards.

- Always wear high-visibility safety apparel when working in traffic work zones.
- For daytime work, wear a vest, shirt or jacket that is bright orange, yellow, strong yellow-green, or a fluorescent version of these colors.
- For nighttime work, or work in low visibility light conditions, wear highly reflective apparel that is orange, yellow, white, silver or strong yellow-green and visible at a minimum of 1,000 feet.
- Ensure that reflective clothing is designed to clearly identify the wearer and be visible through a wide range of body motions.
- Inspect high-visibility clothing regularly to verify that color has not faded and that reflective properties have not been severely diminished or lost.
- Continuously monitor and maintain effective signage and traffic travel path definitive guidance.



AGC Tool Box Safety Talk

TRAFFIC ZONES

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

Many workers have been killed or seriously hurt after being hit by a vehicle while in traffic work zones for highway and street construction. This danger exists when traffic is not properly routed and/or adequate barriers are not placed between workers or traffic. To help prevent accidents, follow these safe work practices

- Know the work zone and your position location in it.
- Know the internal job traffic control plan.
- If you have specific traffic control responsibilities, be sure you are trained in traffic control techniques, are qualified to use these techniques for traffic control device usage, and placement.
- Always wear appropriate high-visibility clothing such as reflective safety vests. Workers exposed to traffic must be seen by other drivers. Use the correct clothing for the time of the day that it is being worn. Different types of clothing and amounts may be required for different times of the day.
- Make sure barriers are provided between workers and equipment, when possible.
- Use designated site specific routes for equipment and workers.
- Workers must stay within the designated work zone.
- Know the locations of other workers, including equipment operators, and establish a method of communication with them making sure eye contact is made when you are in the area.



AGC Tool Box Safety Talk

WORKING ON BRIDGES

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

Work zones on bridges can be hazardous to workers and traffic control personnel because motorists may not see the advance warning signs. There is little or no room to escape if motorists drive into the work zone. Take these precautions when working in bridge work zones:

- If possible, do not position traffic control personnel on bridges. Place them well ahead of the work that is being done and protect them with barricades if possible.
- Wear high-visibility apparel that is appropriate for the time of day work is being done.
- Make sure the bridge and approaches are well-lit during hours of darkness.
- Give motorists plenty of advance warning of upcoming work zones.
- Consider increasing the number of signs to warn motorists in order to avoid mishaps.
- Carefully plan and maintain full compliance for Personal Fall Protection Program requirements.



AGC Tool Box Safety Talk

WORKING AROUND HEAVY EQUIPMENT

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

Being struck is the biggest danger in roadwork. Workers on foot must be alert at all times. To help avoid accidents, take these precautions:

- Wear appropriate high-visibility clothing, proper class of safety vest, and head gear.
- Check surroundings often. Listen for warnings.
- Know the traffic control plan and stay clear of vehicles.
- Work in only those areas necessary to carry out the job at hand. Where possible, stay behind barriers.
- Stay out of “blind” spots and outside a “safety circle” around equipment. If you can’t see the operator, he/she can’t see you. Make eye contact with the operator to let him or her know that you are there.
- Communicate with operators by radio and/or eye contact and confirm acknowledgement.
- Use spotters when you must work with your back to equipment or traffic.



AGC Tool Box Safety Talk

WORKING UNDER THE LIGHTS

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

Working on roads or highways at night can be particularly dangerous because of poor visibility for both motorists and workers. There is also a risk posed by impaired or drowsy drivers and sleep-deprived or drowsy workers. To help ensure safety:

- Report to your supervisor: Any lighting that shines directly into oncoming traffic. Non-working lights, flashers, beacons arrow boards, etc. Signage, cones or other traffic control devices that are defective or improperly placed or have been moved.
- Make sure work vehicles have appropriate beacons and light signals to ensure operator and traffic visibility.
- Provide clear signage. Place drums and cones and other traffic control devices closer together at night.
- Wear reflective clothing that meets night work criteria.
- Know your surroundings, including vehicle and equipment paths, assigned work areas, and safe paths to and from work.
- On foot, watch out for equipment.
- On equipment, watch out for workers.
- See and be seen.



AGC Tool Box Safety Talk

WORKING WITH ASPHALT

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

Crews working on roads and highways risk exposure to asphalt. Asphalt fumes may cause eye and respiratory tract irritation. Hot asphalt can severely burn the skin. To prevent injuries from asphalt, take these precautions:

- Work upwind whenever possible.
- Maintain a lower temperature when possible to minimize fumes.
- Use positive ventilation on paving machines if required.
- Wear gloves and sleeved shirts and pants to prevent skin contact.
- Do not eat, smoke or drink where asphalt is handled.
- If you feel ill while working with asphalt, let your supervisor know right away.
- Especially during hot or warm outdoor temperature conditions carefully monitor personnel who have not been acclimated to such heat exposure.
- Maintain constant vigilance regarding backing asphalt vehicles as well as nearby public traffic.



AGC Tool Box Safety Talk

WORKING WITH CHAIN SAWS

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

Tools and materials are two major hazards associated with road and/or highway work. Chainsaws, in particular, are inherently dangerous. If chainsaws are used improperly, both the operator and nearby workers are at risk of injury. Follow these procedures to help prevent accidents:

- Inspect chainsaws before use. Make sure controls and chain tension is functioning properly and are adjusted according to the manufacturer’s instructions.
- Wear proper personal protective equipment, including hand, foot, leg, eye, face, hearing and head protection. Do not wear loose-fitting clothing.
- Carefully assess and pre-plan an escape plan prior to cutting a tree.
- Avoid reliance on the chain tip for cutting as this portion of the saw is a primary reason for dangerous kickbacks.
- Clear away dirt, debris, small tree limbs and rocks from the saw’s chain path. Look for nails, spikes, or other metal in the tree before cutting.
- Check the area to make sure that all bystanders are clear of the cutting site.
- Keep your hands on the saw’s handles, and maintain secure footing and balance while operating the saw.
- Watch for branches under tension, they may spring out when cut.
- Shut off the saw or engage its chain brake when carrying the saw on rough or uneven terrain.





Chapter 8: Scaffolds and Ladders

- Ladders: Climbing
- Ladders: Extension Ladders
- Ladders: Fixed
- Ladders: Job-Built Ladders
- Ladders: Proper Access
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- Ladders: Metal Ladders
- Ladders: Stepladders
- Scaffolds: Basic Requirements
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- Scaffolds: Overhead Hazards
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- Scaffolds: Erecting/Dismantling
- Scaffolds: Foundations
- Scaffolds: Safe Work Practices

AGC Tool Box Safety Talk

LADDERS: CLIMBING

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

OSHA estimates that there are 24,882 injuries and as many as 50 fatalities per year due to falls on stairways and ladders used in construction. When using ladders, be mindful and follow these basic safety rules:

- Make sure rungs and steps are clear of grease, oil, dirt, snow, or ice before climbing.
- Clean muddy or slippery boot soles before climbing a ladder.
- Always face a ladder when climbing up or down.
- Follow the three-point rule: keep at least both feet and one hand or both hands and one foot on the ladder at all times.
- Keep your body centered between the side rails of the ladder so you don't tip over the ladder. A good rule is to always keep your belt buckle inside the rails of a ladder.
- Avoid carrying materials or tools when climbing a ladder. Carry tools up or down in a belt or hoist them in a bag or bucket.
- Never stand on the top two steps of a stepladder and the top four rungs on other ladders.
- Inspect the ladder before climbing to make sure it is in good shape. Report all defects to your supervisor.
- Do not use any ladder that is defective.



AGC Tool Box Safety Talk

LADDERS: EXTENSION LADDERS

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

Each year, an estimated 50 construction workers are killed by falls from ladders. Falls from extension ladders can be particularly dangerous because people are usually working at greater heights. Follow these safety tips when using extension ladders:

- When choosing an extension ladder, keep in mind that the length of a ladder is different from its usable length. The height these ladders can safely reach is reduced by the angle at which the ladder must be set up.
- Position an extension ladders so that the base of the ladder is one foot away from the wall for every four feet of ladder height. This ratio is important because if the angle is too steep, you can fall backward. If the angle is too horizontal, the ladder can slip out from under you.
- Make sure that both feet are on stable and level surfaces, and that both rails are resting evenly on the resting spot. Secure ladders to prevent accidental movement.
- Make sure side rails are at least three feet above the landing point, or that an adequate grab rail is provided.
- After you set up an extension ladder, lock the top section in place.
- If using multi-section ladders, make sure sections overlap — by at least 3 feet for ladders up to 32 feet, by 4 feet for ladders 32 feet to 48 feet, and by 5 feet for ladders 48 feet to 60 feet.
- When working from an extension ladder, consider using a fall protection system attached to a secure anchor point on the building, especially if doing work that involves pushing, pulling, or prying.



AGC Tool Box Safety Talk

LADDERS: FIXED

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 fixed ladder is a ladder permanently attached to a structure, building or equipment. Fixed ladders pose hazards including slippery surfaces, unsure footing, and structural damage. Take these precautions when using fixed ladders:

- Check rungs to ensure that they’re free of splinters, sharp edges, burrs or projections that may create a hazard. Report all defects promptly.
- Clean muddy or slippery boot soles before mounting a fixed ladder, or any ladder.
- When climbing fixed ladders on towers, tanks, or chimneys, use appropriate ladder safety devices as instructed. A ladder safety device is an appliance that will arrest the fall of an individual working at elevated heights.
- Wait until the other person has exited the ladder before ascending or descending.
- When climbing fixed ladders, follow the same basic rules as with portable ladders.
- Take advantage of landing platforms to rest when climbing or descending from heights.



AGC Tool Box Safety Talk

LADDERS: JOB-BUILT LADDERS

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 Job-made ladder is a ladder that is fabricated by employees, typically at the construction site. Job-built ladders must conform to certain standards to ensure safety of the user. While job-built ladders can provide safer solutions than using makeshift arrangements for access, they must be used with care. Here are some tips to help ensure safety when using job-built ladders:

- Do not load ladders beyond the maximum intended load for which they were built.
- Allow only one person at a time on a single-width ladder and no more than two people on a double width ladder, each on a separate side.
- As with all ladders, set job-built ladders on a level, solid surface.
- Keep ladders from passageways, doorways, or driveways where they could be bumped or damaged by adjacent activities, unless the ladder area is barricaded.
- Always secure the ladder at the top and whenever possible, secure or stake the bottom too.
- Job built ladders should be inspected on a regular basis.
- When using a job-built ladder be sure to remove rungs which are over the upper level.



AGC Tool Box Safety Talk

LADDERS: PROPER ACCESS

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

Ladders are one of the biggest hazards of overhead work and result in many accidents. The worker on the ladder is exposed to the risk of a fall, and other workers could slip or trip on the ladder or tools and materials left at the access point. Take these precautions to protect yourself and your co-workers when using ladders to access upper levels:

- Always select a ladder that is the correct length to safely reach the working height.
- Position ladders so that the base of the ladder is one foot away from the wall for every four feet of ladder height.
- Do not tie ladders together to create longer sections.
- When using a ladder to access elevations, make sure that it extends three feet above the landing surface for ease in mounting and dismounting. If this is not possible, secure the ladder and use a grasping device such as a grab rail to assist in mounting and dismounting the ladder.
- Position the ladder so that both feet are resting on a stable, level surface and that both rails are resting evenly against a solid, secure surface. Secure the ladder to prevent movement.
- Keep all access points to ladders clear of tools, materials or debris.
- When using ladders near doors, equipment travel paths or similar areas make sure the area is blocked off to prevent the ladder from being struck or dislodged.
- Secure straight ladders in place prior to use.



AGC Tool Box Safety Talk

LADDERS: TIE-OFFS

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

Each year about 50 construction workers are killed by falls from ladders. To ensure safety when working from a ladder or using a ladder to access upper levels, take these precautions:

- When accessing an upper level from a ladder, position the ladder so the side-rails extend at least three feet above the landing point.
- Secure the ladder by tying off to a stationary object.
- Attach the ties to side-rails of the ladder, not the rungs.
- While tying off the top, make sure someone “foots” the bottom or the bottom is tied off.
- If it is not practical to tie off or secure a ladder for whatever reason, make sure the ladder is “footed” at the base by another person with both hands on the side-rails to prevent any movement or overturning of the ladder.



AGC Tool Box Safety Talk

LADDERS: TYPES/CATEGORIES

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

Ladders come in all shapes, sizes and material types. When using a ladder, the first step to safety is to select the right ladder for the job.

- When selecting a ladder, make sure it is of the correct duty, or weight rating.
- Type I-AA ladders are extra heavy duty and can handle up to 375 pounds.
- Type 1-A ladders are heavy duty and can handle up to 300 pounds.
- Type I ladders can hold up to 250 pounds.
- Type II ladders can hold 225 pounds.
- Type III ladders are for light duty or household use. Type III ladders should not be used on construction sites.
- When selecting a ladder, keep in mind that the combined weight of the user, their tools and materials should NEVER exceed the duty rating of that ladder.



AGC Tool Box Safety Talk

LADDERS: WARNING LABELS

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

Improper use of ladders can lead to serious injury as a result of falls, and in some cases electrocution. Warning labels provide information on hazards and instruction for safe use, plus they describe ladder weight and height limits that help you choose the proper ladder for the job.

- Always read and follow warning labels on ladders.
- Choose the right ladder for the job.
- Do not choose a ladder with height or weight limits that are less than you need to perform the job.
- Follow instructions for safe use.
- Do not remove labels.
- If labels have become worn or damaged, replace them if possible.
- Remove ladder from service if unsure of suitable condition and usability.



AGC Tool Box Safety Talk

LADDERS: METAL LADDERS

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

While all ladders can be hazardous when used incorrectly, metal ladders pose additional risks, particularly when working around electricity. Work safely with metal ladders by taking these steps:

- Inspect the ladder before using to ensure that it free of sharp edges, dents, and bent steps, rungs, or rails. If the ladder is defective, remove it from service.
- Do not attempt to straighten a bent metal ladder.
- Make sure metal ladders have slip-resistant rubber or plastic feet.
- Keep rungs free of slippery material (grease, oil, paint, snow ice etc.).
- DO NOT use metal ladders around electrical equipment. Keep at least 10 feet away. Metal ladders conduct electricity.
- If you or the ladder could contact exposed, energized equipment, use a ladder with nonconductive side-rails.
- When working from a metal ladder, use only double-insulated or properly rounded electrical tools.



AGC Tool Box Safety Talk

LADDERS: STEPLADDERS

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

When using a stepladder, falls can occur if the stepladder collapses or tips sideways. To prevent such accidents while using stepladders, take these precautions:

- Erect stepladders only on a flat, level surface.
- Before climbing a stepladder, make sure that its legs are fully extended and the spreader is locked.
- Do not step on the bucket shelf or attempt to climb or stand on the rear section supports.
- Do not work from the top two steps.
- Do not use a stepladder as a straight ladder or lean a stepladder against a wall.
- Do not use a stepladder for getting onto a roof or other platform.
- Do not place a stepladder on a table or any similar platform for added height.



AGC Tool Box Safety Talk

SCAFFOLDS: BASIC REQUIREMENTS

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

When scaffolds are not erected or used properly, fall hazards can occur. About 2.3 million construction workers frequently work on scaffolds. Protecting these workers from scaffold-related accidents would prevent an estimated 4,500 injuries and 50 fatalities each year. Take these steps to help protect workers and reduce accidents:

- Follow industry guidelines for erecting scaffolds: verify that each scaffold and its components is capable of supporting, without failure, its own weight and at least four times the maximum intended load. Erect and dismantle under the direction of a scaffold competent person.
- Inspect scaffolds daily before use; check footing, guardrails, connectors, fastening, tie-ins and bracing.
- Do not use unstable objects such as barrels, boxes, loose bricks, or concrete blocks to support scaffolds or planks.
- Fully plank platforms on all working levels.
- Install guardrails and toe-boards on all open sides and ends of platforms on scaffolding over 10 feet above floor or ground.
- If a scaffold is more than two feet above or below a level, provide adequate access, such as a ramp, ladder, or steps.
- Do not erect, use, dismantle, alter or move scaffolds so they, or any conductive material handled on them, might come closer than 10 feet to energized overhead power lines.
- Obtain scaffold user training prior to working on scaffolding.
- Inspect all scaffolds prior to use or at least on a daily basis.



AGC Tool Box Safety Talk

SCAFFOLDS: USE OF BRACES FOR GUARDRAILS

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

Guardrails are installed on scaffolding to protect workers from falls. Cross-braces are used to support the structure and keep the scaffold square. In some instances, cross bracing may be used as guardrails. Follow these basic guidelines for installing guardrails:

- When working on scaffolds more than 10 feet above a lower level, install guardrails, mid-rails, and toe-boards along all open sides and ends of platforms.
- Install top rails so the top edge is between 39 and 45 inches.
- Install mid-rails halfway between the work platform and the top rail.
- Install toe-boards of a substantial material at least 4 inches high on all open sides and ends of platforms if there are workers below.
- You may use cross bracing as a top rail provided where it crosses is between 39 and 42 inches above the work platform.
- You may use cross bracing as a mid-rail provided the crossing point is approximately 20 inches above the work platform and you install a top-rail 39 to 45 inches above the work platform.
- You cannot use cross bracing as both top and mid-rail. Cross bracing can be only used as either a mid-rail or top-rail.



AGC Tool Box Safety Talk

SCAFFOLDS: MOBILE

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

One of the greatest hazards associated with mobile scaffolds is the risk of overturning. Employees who erect, disassemble, or otherwise use mobile scaffolds must follow all OSHA requirements to ensure safety. Follow these basic guidelines when working with mobile scaffolds:

- Erect mobile scaffolds with cross, horizontal, or diagonal braces, as designed, to provide a rigid structure.
- Make sure scaffolds are plumb, level, and squared with all brace connections securely fastened.
- To prevent movement of the scaffold while it is being used in a stationary position, lock all scaffold casters and wheels with positive wheel and swivel locks.
- Check overhead clearance for power lines or other possible hazards before moving a mobile scaffold. Stay at least 10 feet away from all power lines.
- When using manual force to move the scaffold, apply the force as close to the base as possible, but not more than five feet above the supporting frame.
- Never move a mobile scaffold while you are on it.
- Inspect all scaffolds prior to use or at least on a daily basis.



AGC Tool Box Safety Talk

SCAFFOLDS: MASONRY

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

Masonry scaffolds pose unique hazards because they are subject to heavy loads. If not constructed properly, scaffolds may collapse, and cause serious injury or death. To help ensure safety, take the following precautions:

- When erecting a supported scaffold, make sure its erected properly.
- Ensure poles, legs, posts, frames, and uprights rest on base plates and mud sills. Masonry assumes heavy duty loading, and good footing is critical.
- Inspect scaffolds prior to use to ensure that they are stable and secure. A scaffold must be capable of supporting its own weight plus four times the maximum intended load.
- Ensure that masonry materials placed on a scaffold do not exceed the design capacity of the scaffold.
- Bricks and blocks shall be stored in a safe manner, on a firm and level.
- Do not remove cross braces from a supported scaffold. This drastically reduces the load capacity of the scaffolding.
- Guardrails that are removed to load material must be immediately replaced.
- Inspect all scaffolds prior to use or at least on a daily basis.



AGC Tool Box Safety Talk

SCAFFOLDS: OVERHEAD HAZARDS

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

Workers on scaffolds risk injury from overhead hazards such as falling tools, equipment, and materials and energized overhead power lines. To protect employees from falling objects and electrical shock, take these precautions:

- Install overhead protection when there is risk of exposure to falling objects. Types of overhead protection include toe-boards at edges of platforms, screens, guardrails, debris nets, catch platforms, canopy structures.
- Designate a fall zone under scaffolding with barricades or danger tape to protect employees working below scaffolds.
- Keep scaffolds 10 feet or more from power lines, unless you verify the power lines are de-energized.
- Secure tools and equipment so that they don't become falling objects.
- Always wear approved head and foot protection when working on or around scaffolds.
- Inspect all scaffolds prior to use or at least on a daily basis.
- When stacking materials above toe-boards either secure and / or use a screen.
- Pay attention to material handling while working on scaffolding to avoid contact with energized power lines.



AGC Tool Box Safety Talk

SCAFFOLDS: SUPPORTED

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

Supported scaffolds consist of one or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, or similar rigid support. Supported scaffolds include fabricated frame scaffolds, tube and coupler scaffolds, wall brackets, form brackets, and ladder jack and pump jack scaffolds. Follow these precautions to help provide adequate structural support and fall protection for workers:

- Construct scaffolds on a level foundation. Make sure poles, legs, posts, frames, and uprights are set on base plates and mud sills when required.
- Make sure footings can support the loaded scaffold without settlement or displacement. Inspect scaffolds prior to use to ensure they are stable and secure. A scaffold must be capable of supporting its own weight plus four times the maximum intended load.
- Plumb or brace legs, posts, frames and uprights to prevent swaying or displacement. Connect frames and panels by cross, horizontal, or diagonal braces, as designed, to secure vertical members together laterally.
- Do not use unstable objects to support scaffolds or platforms such as boxes, buckets, barrels, etc. Only use scaffold system components.
- When a supported scaffold reaches a height that is more than four times its minimum base dimension (4:1), restrain the scaffold by guys, ties, or braces to prevent it from tipping.
- Use fall protection (either a guardrail system or a personal fall arrest system) when working on any scaffold 10 feet or more above a lower level. When working on a suspension scaffold, use both a guardrail and a personal fall arrest system.
- Inspect all scaffolds prior to use or at least on a daily basis.
- Always use scaffolds under the oversight of a competent person.



AGC Tool Box Safety Talk

SCAFFOLDS: SUSPENDED

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

Suspended scaffolds are platforms suspended by ropes, or other non-rigid means, from an overhead structure. Suspended scaffolds include swing stage, multipoint scaffolds, and catenary scaffolds. Suspended scaffolds can pose serious risks if there is a failure in integrity of the structure or the ropes. In addition, workers at heights risk serious injury or death from falls if fall-protection systems are not in place. Follow these tips to help ensure safety:

- Suspended scaffolds must be designed by a competent person.
- Make sure all suspension support devices are resting on surfaces capable of supporting at least four times the intended load. Supporting devices include outrigger beams, cornice hooks, parapet clamps and similar devices.
- Verify that each suspension rope, including connecting hardware, is capable of supporting, without failure, at least 6 times the maximum intended load.
- When inspecting scaffolds for capacity, keep in mind that adjustable suspension scaffolds are designed to be raised and lowered while occupied by workers and materials, and must be capable of bearing their load whether stationary or in motion.
- Restrain outrigger beams to prevent movement.
- To keep a scaffold from falling to the ground, use counterweights and attach them to an acceptable anchor point
- Use fall protection (either a guardrail system or a personal fall arrest system) when working on any scaffold 10 feet or more above a lower level. When working on a suspension scaffold, use both a guardrail and a personal fall arrest system.
- Inspect all scaffolds prior to use or at least on a daily basis.



AGC Tool Box Safety Talk

SCAFFOLDS: ERECTING/DISMANTLING

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

Many scaffolding accidents occur during the erecting and dismantling and missing tie-ins or bracing. Always follow OSHA guidelines for erecting and/or dismantling scaffolds and use these safe work practices:

- Erect, move, dismantle, or alter scaffolds only if you are trained and under the supervision of a competent person qualified in such activities.
- Wear fall protection whenever feasible. A qualified person must determine where fall protection is feasible and does not create a greater hazard.
- If using a personal fall arrest system, do not use scaffolds as an anchorage unless authorized to do so by a qualified person.
- Stay on structurally sound and stable portions of the scaffold while erecting or dismantling other portions of the scaffold.
- Unless they can be handed down, use ropes to lower components to the ground when dismantling a scaffold. This prevents the components from being damaged that can occur if tossed down.
- Stage materials to minimize fall hazards and to permit safe access.
- Wear approved head and foot protection.



AGC Tool Box Safety Talk

SCAFFOLDS: FOUNDATIONS

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 safe scaffold begins with a solid foundation. Scaffolding foundations must be able to carry and distribute all the weight of the scaffold, including any extra loads placed on the scaffold. When designing the foundation of the scaffold, take the following safety precautions:

- A qualified person should inspect all scaffolding erections.
- Set scaffold legs on base plates and mudsills adequate to support the maximum intended load without settling or displacing.
- Use mudsills, usually made of wood planks, to provide additional support on soft surfaces or uneven terrain.
- Do not use unstable objects to support scaffolds or platform units.
- Do not use masonry blocks and bricks for support.
- Do not use front-end loaders and similar pieces of equipment to support scaffold platforms.
- Scaffold legs must be set with base plates or screw jacks.
- Inspect all scaffolds prior to use or at least on a daily basis.



AGC Tool Box Safety Talk

SCAFFOLDS: SAFE WORK PRACTICES

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

Failure to follow safe work practices when using scaffolds is a major cause of scaffolding-related accidents. To ensure safety, learn to recognize hazards, and always use these safe work practices:

- Inspect scaffolds before each work shift and after any incident that could affect the structural integrity of the scaffold. Take any questionable scaffold out of service, tag it and report damage or defects immediately.
- Do not load scaffolds beyond their capacity. Keep only the tools and materials you need on the scaffold.
- Keep the platforms and area around the scaffold clear of debris and unneeded equipment, material, and other hazards that could cause a worker to trip or fall.
- Use guardrails and/or personal fall arrest system working on a scaffold that is 10 feet high or higher.
- Maintain proper clearance near power lines (at least 10 feet, plus 4 inches for every kilovolt above 50 kilovolts).
- Wear head protection and other personal protective equipment as necessary.
- Do not work on scaffolds during storms or high winds and clear all ice and snow from the platforms before using them.
- Keep others away from the base of the scaffold while work is occurring overhead.





Chapter 9: Steel

- Concrete Strength
- Decking
- Proper Rigging
- Securing Bolts
- Shear Connector
- Erecting Steel Structures

AGC Tool Box Safety Talk

CONCRETE STRENGTH

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

Concrete footings and walls are commonly used to support structural steel members. Beginning the steel erection process before the concrete has properly cured can provide serious safety hazards. These hazards could include: Employee falls, equipment damage and catastrophic failure and collapse.

- Make sure that the concrete has been properly tested with appropriate American Society for Testing and Materials standard test methods designed to indicate that the concrete has gained sufficient strength to support its weight and superimposed loads.
- Do not erect steel unless the concrete has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.
- Column anchor bolts must be installed per the plan and may not be modified or repaired without the approval of the Engineer of Record.



AGC Tool Box Safety Talk

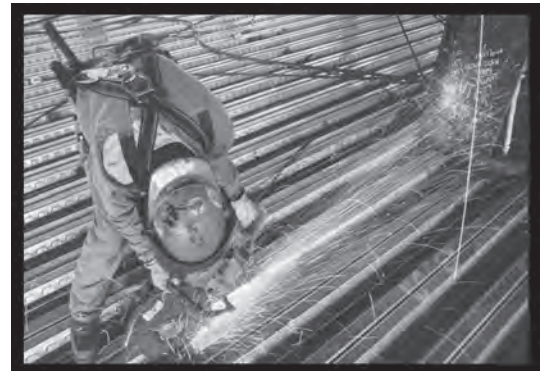
DECKING

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

Many accidents that occur on decking are the result of falls that occur while stepping onto or working on unsecured decking that slipped out of place when fall protection was not provided or used. Take the following steps to help reduce accidents on decking:

- Develop a fall protection program before starting steel erection. Include all phases of the steel erection in the program and eliminate, to the extent possible, employee exposure to falls.
- Install safety nets or a fully planked or decked floor directly under any erection work being performed within two stories or 30 feet, whichever is less.
- Protect employees walking/working on surfaces with an unprotected edge more than 15 feet above a lower level from fall hazards with a guardrail system, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.
- Make sure holes or roof openings are adequately guarded or covered.
- Mark the CDZ clearly so that employees who are not engaged in leading-edge work and properly trained in the hazards involved are prohibited from entering the CDZ.
- No more than 3000 square feet of decking may be installed before being secured and attached to the structure.



AGC Tool Box Safety Talk

PROPER RIGGING

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

Rigging and hoisting of steel members and materials are essential parts of the steel erection process. However, in addition to the dangers usually associated with cranes and derricks, steel erection can also create hazards, such as suspended loads over employees. Because of the specialized hazards, take these precautions when rigging and hoisting steel:

- Inspect rigging and all equipment before each shift. If a competent person determines that there is a deficiency, remove the equipment from service until the deficiency is corrected.
- Make sure slings are not kinked and that the load is balanced and secured. Position the hoist line so that it is vertical prior to the lift.
- Make sure all rigging is done by qualified riggers
- Take up slack slowly. Do not lift loads over the rated capacity.
- Check tags on slings for load capacity. Take care to avoid tip loading and loading on the latch hook. Avoid side pulls or end pulls, and quick reversal operations.
- These can cause the hoist rope to slip out of the drum groove, damaging the rope or destabilizing the crane or hoist.
- Do not lift people; do not lift loads over people, and never ride the hoisting load.



AGC Tool Box Safety Talk

SECURING BOLTS

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

Handling and installation of steel securing bolts presents many safety hazards. Containers used to haul and store connectors are heavy and must be moved in accordance with safe lifting practices. Store containers outside of main walkways or near equipment traffic to prevent them from being knocked over. Keep the area under the steel that is being connected clear of personnel.

- Provide containers for storing and carrying bolts, drift pins, and rivets.
- Secure the containers against accidental displacement when aloft.
- When knocking out bolts or drift pins, provide a means to keep them from falling.
- Securely bolt or fasten into position each structural steel member with at least two (2) bolts before releasing from the load line. Cantilevered or systems engineered steel may require more bolts.
- Anchor all columns by a minimum of four anchor bolts.
- Do not repair, replace or field modify anchor bolts without the approval of the project structural engineer of record.
- Always wear approved eye protection.



AGC Tool Box Safety Talk

SHEAR CONNECTOR

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

Shear connectors such as headed steel studs, steel bars, or steel lugs pose tripping hazards on walking surfaces during steel assembly, and can worsen the risks of falls from elevations. Use the following safe procedures when installing shear connectors:

- When using shear connectors in construction of composite floors, roofs and bridge decks, lay out and install the shear connectors after the metal decking has been installed, using the metal deck as flooring or provide some other form of access.
- Do not attach shear connections to the top flanges of beams, joists or beam attachments so that they project vertically from or horizontally across the top flange of the member until after the metal decking, or other walking/working surface, has been installed or where appropriate fall protection is in place.
- Do not install shear connectors within a Controlled Decking Zone.
- Ensure that fall protection systems are in place when working on members with shop or pre-installed shear connectors.
- Always wear a Personal Fall Arrest System when walking/working on a surface with an unprotected edge.



AGC Tool Box Safety Talk

ERECTING STEEL STRUCTURES

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

Working with steel poses many fall hazards. Hoisting, connecting, welding, bolting and rigging structural steel are all activities that can put the worker at risk of a fall. Take these precautions to help protect against fall hazards:

- Use conventional fall protection (PFAS, safety nets, or guardrail systems) if there of risk of falling more than 15 feet doing most iron work, including bolting, welding etc.) Fall protection may be required at 6 feet on some projects.
- Ensure that connectors wear a complete PFAS or other allowable fall protection device and wear equipment necessary for tying off while working at heights over 15 and up to 30 feet. Or two stories, whichever is less. Fall protection may be required at 6 feet on some projects.
- A Controlled Decking Zone (CDZ) may be established as a substitute for positive fall protection where metal decking is initially being installed and forms the leading edge of a work area over 15 and up to 30 feet above a lower level. Fall protection may be required at 6 feet on some projects. Allow only employees are who are engaged in leading-edge work and properly trained in the hazards involved to enter the CDZ.
- Guard all protruding reinforcing steel to prevent impalement hazard.





Chapter 10: Struck By

- Backing Vehicles and Equipment
- Compressed Gas Cylinders
- Equipment Rollover
- Falling Objects (Hardhats)
- Loading Equipment (Onto Trailers)
- Maintenance Hazards
- Material Handling Equipment
- Nail Guns
- Rigging Failures
- Sling Inspection
- Stacking/Storing Materials
- Use of Taglines
- Transporting/Unloading Materials
- Watch Your Head (Low Clearance)
- Walking/Working Around Equipment/Vehicles
- Working With Cranes

AGC Tool Box Safety Talk

BACKING VEHICLES AND EQUIPMENT

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 there are many accidents resulting in injury and damage due to carelessness when backing vehicles. Incidents involving backing vehicles are not uncommon among worker-on-foot fatalities. Backing accidents are preventable. Whether you are a driver or a pedestrian, always stay alert to what is going on around you.

- When backing up, make sure you have an unobstructed view. Visibility is all-important to safely completing the maneuver. If you do not have an unobstructed view, use a flag person.
- Keep the windows clean and remove obstructions from your sight line.
- Ensure that your intended path is clear.
- Back up slowly. It’s easier to control a vehicle when moving at a speed of less than 3 mph.
- Pay extra attention to blind spots. Adjust mirrors to eliminate blind spots before you start the engine.
- If you are a pedestrian, never position yourself between moving and fixed objects.
- Wear high-visibility clothes near equipment and vehicles.
- Make sure back-up alarms are operating.



AGC Tool Box Safety Talk

COMPRESSED GAS CYLINDERS

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

Compressed gas cylinders can be hazardous. Sudden release of the gas can cause a cylinder to become a missile-like projectile, destroying everything in its path. To prevent such a dangerous situation, follow procedures for safe handling:

- Store cylinders in an area specifically designated for that purpose. Ensure that the area is well ventilated, away from sources of heat, and protect cylinders from being struck by another object.
- Do not drop cylinders or allow them to fall. Secure them in an upright position during use and storage.
- Move cylinders with a compressed gas cylinder cart designed for that purpose.
- When moving a cylinder, even for a short distance, ensure that all the valves are closed, the regulator is removed, and the valve cap is installed.
- Do not remove a cylinder cap until the cylinder is secured in place and ready to use. Cylinder caps protect the valve on the top of the cylinder from damage if it is knocked over. Also, if gas is accidentally released through the valve, the cap will vent the gas out of both sides, minimizing the likelihood that the cylinder will topple.
- Before using the gas, install the proper pressure-reducing regulator on the valve and verify that the regulator is working, that all gauges are operating correctly, and that all connections are tight to ensure that there are no leaks.
- When you are ready to use the gas, open the valve with your hands. Never use a wrench or other tool. If you cannot open it with your hands, do not use it.



AGC Tool Box Safety Talk

EQUIPMENT ROLLOVER

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

Any piece of heavy equipment can tip over under extreme conditions or if used improperly; i.e., at a high speed, especially going down an incline, or being too near an unstable edge. To help prevent accidents, make sure you are properly trained to operate the equipment and follow these safe work practices:

- Ensure that all equipment used in a location where there is a danger of overturn is equipped with a Rollover Protective Structure (ROPS).
- Always wear the seat belt to take advantage of ROPS protection. To survive an equipment rollover, the operator must remain inside the protective structure.
- Learn to identify those areas where a rollover could happen. Use extra caution when using heavy equipment on steep or hilly terrain.
- Keep in mind that equipment outfitted with ROPS can still roll over. Be prepared to take appropriate control measures.
- Do not try to jump away in a rollover. You could become a victim and be crushed by the ROPS.
- Do not operate equipment in ways for which it was not designed. This could increase the likelihood of a rollover.



AGC Tool Box Safety Talk

FALLING OBJECTS (HARDHATS)

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

Among the most common causes of serious work injuries are accidents involving falling objects. You are at risk from falling objects when you are adjacent to cranes, scaffolds etc., or where overhead work is being performed. Injuries can range from minor abrasions to concussions, blindness, or death. Take these precautions to prevent injury:

- Wear a hard hat when operations are being conducted adjacent to and overhead of your work area, or wherever the potential exists for injuries due to falling objects.
- Choose the right hard hat for the job. Hard hats are classified according to protection against impact and penetration hazards, as well as electrical hazards.
- Choose the appropriate hard hat for your application. (Class A, B or C.).
- Wear the hat properly. Follow manufacturer information on how to tighten the suspension to achieve a proper fit.
- Inspect the hard hat before each use. Look for signs of wear, cracks, dents, cuts, holes, burns, or other material damage. Inspect the webbing, headband, and suspension attachment points for signs of cuts, tears, and frayed material.



AGC Tool Box Safety Talk

LOADING EQUIPMENT (ONTO TRAILERS)

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

Loading equipment onto trailers can cause serious injuries if the equipment slips or falls. Often, the equipment will be just as wide as the trailer and there will be little room for error. No matter what type of equipment you are loading or what type of trailer you are using, follow these general rules:

- Make sure all non-essential personnel are removed from the loading area.
- Secure the truck or trailer to prevent movement. Use chocks or wheel blocks.
- Verify that the equipment is in line with the trailer. Make sure the trailer is level.
- If you’re driving equipment onto a trailer, watch and follow your guide.
- Do not steer sharply.
- Before transit, make sure the weight is evenly distributed on the trailer and the equipment is secured.



AGC Tool Box Safety Talk

MAINTENANCE HAZARDS

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

Workers doing maintenance on machinery and equipment are at risk of being struck by machine and or equipment parts and misused tools. Injuries can range from minor cuts and lacerations to serious fractures; puncture wounds, amputations, and fatalities. Take these precautions when performing maintenance:

- Lock out equipment and machinery to render it inoperable during maintenance and repair.
- Wear appropriate protective equipment; i.e. safety goggles, hard hat etc.
- Block and prevent the movement of all equipment being repaired.
- Never tamper with machine guards.
- Always replace guards after making repairs or adjustments to equipment.
- Be sure potential energy is rendered harmless.
- When moving equipment use proper lifting techniques.



AGC Tool Box Safety Talk

MATERIAL HANDLING EQUIPMENT

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

Operating heavy construction equipment for moving dirt and other materials can be dangerous. Not only is there a risk of rollover, there is also the potential for hitting or running over other employees. Follow these guidelines to help ensure safety:

- Maintain all safety devices such as ROPS (Rollover Protective Structures) to prevent unintentional lowering of buckets on front-end loaders and other similar equipment.
- Always wear a seat belt.
- Make sure other workers are clear of the loading area and visible to the operator at all times.
- Load the bucket evenly and avoid overloading to prevent turnovers. Check your operator’s manual for load capacity.
- Watch where you are going. Avoid holes, rocks, loose fill, or other obstacles which could upset the trailer.
- If working inside buildings, watch for low ceiling beams and doorways to prevent being pinned or crushed between them and the tractor.
- Use the loader only for its specific purpose. Never use it to tow an object or to knock something down. Never allow people to ride in the bucket.



AGC Tool Box Safety Talk

NAIL GUNS

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

Nail guns can be lethal weapons. With the squeeze of a trigger, they can drive anything from a small finishing nail into a Nail guns have the capacity to fire several nails per second at a velocity over 1,000 feet per second. With the squeeze of a trigger, they can drive anything from a small finishing nail into a piece of plywood to a three-inch nail into wood and concrete block. When this projectile strikes a human body, the resulting damage can be severe, and sometimes fatal. Exercise extreme caution whenever using a nail gun.

- Always wear safety glasses when operating pneumatic tools including nail guns. Make sure your helpers wear them too.
- NEVER dismantle or bypass safety devices such as triggers, guards, or bumpers.
- Do not hold the trigger down unless you’re purposely firing the tool. Do not fire the tool unless the nose is firmly pressed against a work piece.
- Never point the tool at anyone. Treat a nail gun like a firearm. Always assume it is loaded and ready to fire.
- Always point the gun away from you when nailing materials. Never back-nail materials with the tip of the gun pointing toward your body.
- Always disconnect the air hose or power supply before clearing jams or adjusting the tool.
- Make sure the area behind the nailing is clear and or protected from a nail penetrating through.



AGC Tool Box Safety Talk

RIGGING FAILURES

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, workers lose their lives as a result of improper rigging or rigging failure that allowed a load to fall while being hoisted. Some deaths occur when the load slips from the rigging, when the rigging breaks and allows the load to fall, and when the load breaks into pieces and falls while being lifted. Always exercise caution when working around cranes.

- Inspect all rigging prior to use to minimize the possibility of rigging failure. Look for hazardous conditions such as wire rope deformation, strain, binding, or kinking.
- Do not wrap hoist lines around the load.
- Know the rated capacities of rigging and slinging and use the proper size.
- Ensure that loads are rigged to minimize the potential for dropped loads.
- Do not exceed the load chart capacity while making lifts.
- Determine a safe location to stand to avoid being struck by the load if rigging fails, or the load shifts while making lifts.
- Do not walk or work under overhead loads.
- Watch sharp corners on loads when using synthetic slings.
- Do not tie knots in synthetic slings.



AGC Tool Box Safety Talk

SLING INSPECTION

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 slings that cranes use to hold suspended loads are a key element in crane operation. If the sling is damaged or defective, the load could drop and strike workers beneath it. Inspect each sling and its fastenings and attachments for damage or defects each day before use. Remove damaged or defective slings from service.

- Ensure that alloy steel chain slings have permanently affixed, durable identification stating size, grade, rated capacity, and reach.
- Inspect slings before each use.
- If synthetic slings show signs of wear such as deep frays or red warning threads are exposed, take the sling from service.
- When inspecting wire rope slings, check the twists or lay of the sling. If ten randomly distributed wires in one lay are broken, or five wires in one strand of a rope lay are damaged, do not use the sling.
- Check for wear or scraping; kinking, crushing, bird caging or any other damage resulting in distortion of the wire rope.
- Look for evidence of heat damage. Remove a sling from use if it's exposed to temperatures of 200 degrees F or higher or there's evidence of heat or wire rope structure damage.



AGC Tool Box Safety Talk

STACKING/STORING MATERIALS

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

Stacking materials can be dangerous if workers do not follow safety guidelines. Falling materials and collapsing loads can crush or pin workers, causing injuries or death. To help prevent injuries when storing and stacking materials, take the following precautions:

- In buildings under construction, avoid placing stored materials near a hoist-way or floor opening, or an exterior wall that doesn't extend above the top of the material.
- Observe height limitations. Stack lumber no higher than needed to handle manually.
- Remove all nails from used lumber before stacking.
- Make sure that stacks are stable and self-supporting.
- Stack bags and bundles in interlocking rows to keep them secure.
- Stack bagged material by stepping back the layers and cross-keying the bags at least every ten layers. To remove bags from the stack, start from the top row first.
- Do not lean material against a vertical surface.
- Do not store pipes and bars in racks that face main aisles to avoid creating a hazard to passersby when removing supplies.
- Make sure the floor/ deck is capable of supporting the weight of the stacked materials.



AGC Tool Box Safety Talk

USE OF TAGLINES

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

Hundreds of people are injured or killed as a result of crane accidents in the United States every year. Many accidents happen as a result of failure to control the load. To help eliminate this risk, use taglines for controlling awkward loads and maneuvering them into difficult positions. For safe use, follow these procedures:

- Use taglines to control loads when their use is practical and will not create additional hazards.
- After securing a load with taglines, stay clear of the path of the load and well forward of the load.
- If it's necessary to guide the load, stay well away from the wheels or tracks of the crane.
- When guiding a load, remain clearly visible to the crane operator at all times.
- Never walk between the suspended load and the crane.
- When working around electrical equipment or lines, make sure the tagline stays clear of the equipment or lines.




AGC Tool Box Safety Talk

TRANSPORTING/UNLOADING MATERIALS

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

There are hundreds of thousands of material handling accidents every year, from small splinters, cuts or scrapes, to crushed fingers, hands and feet, even deaths. Whether moving materials manually or mechanically, help prevent accidents by following these safety guidelines:

- When manually moving materials, attach handles and holders to loads to reduce the chances of getting fingers pinched or smashed.
 - Place support blocks in a manner that keeps your hands from under the load.
 - Wear appropriate protective equipment, such as gloves, eye protection, and steel-toed safety shoes.
- 
- When mechanically moving materials, avoid overloading. All materials handling equipment has rated capacities that determine the maximum weight the equipment can safely handle and the conditions under which it can handle those weights.
 - When picking up items with a powered industrial truck, ensure that the load is centered on the forks and as close to the mast as possible to minimize the potential for the truck tipping or the load falling.
 - Never overload a lift truck. This could make the truck hard to control and put it at risk of a tip over.
 - Take care when off-loading from a flat trailer with a crane. Make sure you have a means of getting away from the load should it shift or fade. Have proper access to the back of a truck. Use a ladder.



AGC Tool Box Safety Talk

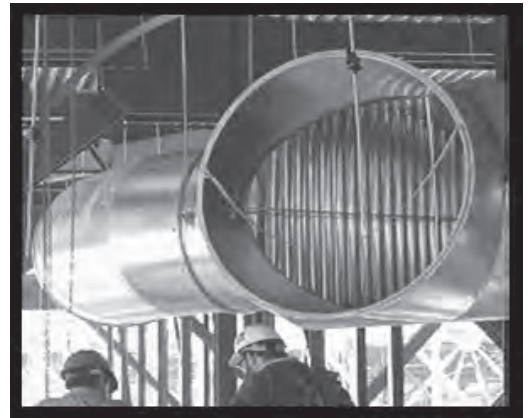
WATCH YOUR HEAD (LOW CLEARANCE)

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 obstructions such as low clearance pipes, valves, hangers, or beams can cause bumping hazards. Take precautions when entering low-clearance areas, whether to work or to access equipment/materials.

- Be alert to fixed objects, such as exposed pipes and beams and protruding bolts, pipes and valves.
- Place warning signs to alert workers of low clearance areas.
- Always wear head protection when on the jobsite.
- When selecting head protection, consider the exposure hazards. Wear only hardhats that meet ANSI standards.
- To maximize protection provided by your hardhat, the liner must always be worn in the proper direction. Only turn the hardhat around with the bill in the back if approved by the manufacturer and your employer.



AGC Tool Box Safety Talk

WALKING/WORKING AROUND EQUIPMENT/VEHICLES

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 second highest cause of construction-related deaths is being struck by an object. If vehicle safety practices are not observed at your site, you risk being pinned between construction vehicles and walls, struck by swinging backhoes, crushed beneath overturned vehicles, or other similar accidents. If you work near public roadways you risk being struck by trucks or cars. Follow these safety tips to help protect yourself and, if you're driving a vehicle, other workers:

- Drive vehicles or equipment only on roadways or grades that are safely constructed and maintained. Obey all project speed limits.
- Do not drive a vehicle in reverse gear with an obstructed rear view unless it has an audible reverse alarm, or another worker signals that it is safe.
- Make sure that you and all other personnel are in the clear before using dumping or lifting devices.
- Lower or block bulldozer and scraper blades, end-loader buckets, dump bodies, etc., when not in use, and leave all controls in neutral position.
- Set parking brakes when vehicles and equipment are parked, and chock the wheels if they are on an incline.
- Use traffic signs, barricades and flaggers when construction takes place near public roadways.
- If you're working near roadways, make sure you're highly visible in all levels of light. High visibility clothing is required; and if worn for night work, must be of reflective material.



AGC Tool Box Safety Talk

WORKING WITH CRANES

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

Crane accidents are one of the leading causes of death and injury in the construction industry today. Fatalities and serious injuries can occur if cranes are not inspected and used properly. Many fatalities can occur when the crane boom, load line or load contact power lines and electrically energize the equipment. Other incidents happen when workers are struck by the load, are caught inside the swing radius, or fail to assemble/disassemble the crane properly. Use safe work practices to help reduce accidents when working with or around this potentially dangerous equipment.

- Make sure the crane is on a firm/stable surface and level.
- Inspect cranes, rigging and hoists before use to see that all components, such as wire rope, lifting hooks, chains, etc., are in good condition.
- Fully extend outriggers and barricade accessible areas inside the crane’s swing radius.
- Watch for overhead electric power lines and maintain a safe working clearance from the lines.
- Use the correct load chart for the crane’s current configuration and setup, the load weight and lift path.
- Do not exceed the load chart capacity while making lifts.
- Do not move loads over workers.
- Be sure to follow signals and manufacturer instructions while operating cranes.





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