PAGODA ELECTRICAL Inc.

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WEEKLY TOOL BOX TALK #1

Date: 3-4-2020

Topic: Stop Falls with Protective Gear

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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Stop Falls With Protective Gear

When you work off the ground, you need protection to prevent falls and to catch you if you do fall.

Fall protection includes personal fall arrest equipment, conventional equipment such as guardrails, and positioning device systems.

A fall arrest system is used to halt a person's fall from a working level 10 feet (three meters) above any surface. It may consist of anchors, connectors, a full body harness, a lanyard, deceleration device, lifeline or any suitable combination of this equipment.

A lanyard is a flexible line of rope, wire rope or strap that generally has a connector at each end to attach the body harness to a deceleration device, lifeline or anchorage.

An anchor is a secure point of attachment capable of sustaining 5,000 pounds (2,200 kilograms) for lifelines, lanyards or deceleration devices.

A positioning device system consists of a body belt or body harness rigged to allow a worker to be supported on an elevated vertical surface with both hands free.

Fall protection pointers:

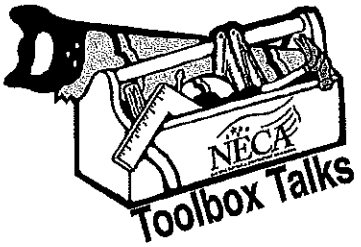
- Use a fall arrest system when climbing to or working on any unguarded elevated work area.
- When possible, conventional fall arrest protection should guard elevated work areas greater than four feet (1.5 meters) in height.
- A fall arrest system should be used when floor or wall openings cannot be protected by a handrail system or be covered to prevent someone from falling through the openings.
- Elevated walking/working surfaces should have a toeboard installed to prevent tools and other items from falling onto workers below. Hand tools should have wrist lanyards attached.
- Lanyards should not be used as climbing or rigging devices.

Never use makeshift equipment for fall protection. Workers have died using outdated gear such as that which requires the user to tie a knot or a belt which can cause internal injury to the abdomen. Safety harnesses, not safety belts, should be used when working at heights.

Many fatal falls have occurred when the worker temporarily disconnected fall protection gear from an anchorage point or unbuckled a safety harness. Stay hooked up all the time you are exposed to fall hazards.

Fall protection equipment requires proper training, regular inspection and cleaning. Equipment exposed to a fall must be taken out of service and not used again.

Make sure your personal protective equipment (PPE) is the best available – it could save your life.



Discussion leader duties for this session:

Obtain a fall restraint device and demonstrate its inspection and use during the discussion period.

What this Safety Talk covers:

Fall hazards and how to prevent becoming a victim of one.

Discussion notes :

Some facts

Fall-related accidents account for about 10% of all workplace fatalities.

Nearly all of the fall accidents on record were preventable.

Ways of protecting yourself include hazard elimination, fall protection, and work procedures.

Hazard elimination

The most effective way to deal with fall hazards is to eliminate them. For example, if you can lower a light to replace its lamp and then raise the light back up, you have eliminated the hazard.

Partial elimination is the second most effective way. For example, if you can preassemble items before going up in a lift or up on a ladder, you will spend less time being vulnerable to a fall.

Fall protection

You can't always eliminate a fall hazard, and partial elimination still leaves you with a hazard. Fall protection, as defined by the fall protection industry, is a passive way of preventing you from falling.

Fall protection examples are all around you. These include ladder cages, platform railings, and secured hole covers.

Fall restraint

This is what most people think of, when they think of fall protection.

It involves the use of a secure anchorage and a lanyard connected to your full body harness. The lanyard allows you to reach the work area, but prevents you from falling too far.

Fall restraints require you to have training in the proper use and inspection of your equipment.

Work procedures

Some situations make fall protection and fall restraint measures impractical or impossible.

The idea of changing the work procedure is not to find a cheaper way of protecting against the fall. The idea is to rethink the work process so fall protection measures become practical, possible, or unnecessary.

You may need to help change the procedure or find a way to eliminate the task completely. Your input is valuable, as you are the one doing the work.

Safety harness inspection

When using fall restraint devices, you must inspect them.

Look for fiber damage, pulled stitches, or frayed edges.

Examine D-rings, grommets, rivets, buckles, tongues, and straps.

Review and Discussion

If there are ten people in your crew, how many are statistically likely to die from a preventable fall accident?

What are three ways of protecting yourself from falls?

What are some examples of how might you eliminate or partially eliminate a fall hazard?

What is fall protection, as defined by the fall protection industry, and what are some examples?

What is fall restraint, and what are some examples?

What kind of training do you need if you are going to use fall restraint equipment?

What is the purpose of changing work procedures?

How do you inspect a harness?

How do you inspect a lanyard?

What do you need to know about attachment points?

Lanyard inspection

Look for fiber damage, pulled stitches, or frayed edges.

Inspect the snaphooks, carbineer, and any other mechanisms.

If it is a retractable lanyard, ensure the back nuts and rivets are tight.

If it is a retractable lanyard, test for smooth operation and proper locking.

Anchorage points

Before attaching to an anchorage point, look for cracks, sharp edges, or evidence of abuse.

In a particularly dangerous area, you will need to attach to a new anchorage point before unattaching from the one you are attached to.

Do not attach to guardrails, C-clamps, ladders, conduit, light fixtures, rebar, plumbing, roof stack, or any object that you aren't sure can support your weight plus the force of your fall. Anchorage points must be capable of supporting 5000 pounds per person because of the forces generated from the impact of a fall.

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WEEKLY TOOL BOX TALK #2

Date: 3-11-2020

Topic: Grounding & Shock

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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Grounding and Shock

Discussion leader duties for this session:

Read NEC Article 250 and IEEE-142, if those are available.

What this Safety Talk covers:

The facts about grounding for the purposes of shock prevention.

Discussion notes :

Why we ground

To remove voltage differences on metal parts of an electrical system to protect against lethal shock (permanent).

To limit or eliminate current flow on de-energized conductors as part of a lock-out/tagout process (temporary).

Grounding has its limits

Connecting metal parts of an electrical system to a ground rod does not remove voltage imposed by a line-to-ground fault.

Connecting metal parts of an electrical system to a ground rod does not cause the overcurrent protection device (OCPD) to open if current attempts to flow through them. Nor does it eliminate the potential for a flashover.

Electrical basics apply

Electricity leaving the power supply is not trying to go to ground. It is trying to return to the source.

Ohm's Law states that resistances add in series, but drop when in parallel.

Kirchoff's Law states that current will divide proportionately among the various paths, or resistances, before it. It does not take the path of least resistance.

Thus, current will not ignore your body in favor of a ground rod.

An example

Let's assume you are working on a 480V circuit.

Let's assume your body is 100 ohms and your feet are at earth potential. Your feet would be at essentially earth potential if you were standing on the ground rod, very near it, or in water.

For purposes of calculation, we can say you are in parallel with that ground rod.

Let's assume your ground rod is four times better than the NEC requirement and so is 10 ohms to earth.

Total resistance is about nine ohms, so total current would be about 53 amps. You would get about 5 amps through your body—far more than it takes to kill you.

If the breaker is 60 amps or larger, it will never trip while you roast.

To protect against lethal shock, you must remove unsafe voltage on metal parts of the electrical system and the building. At 120V, you have less than one second to do this. The required current rise of about 10 times the rating of the OCPD doesn't easily happen.

Bonding

A ground rod that isn't bonded back to the source is not ground.

OCPDs require a low impedance fault path. You create a low-impedance path when you bond together the metal parts of the electrical system and bond them to the power supply system grounded (neutral) conductor.

Review and Discussion

Why do we ground?

What are two limits of grounding?

When electricity leaves the source, where does it try to go?

What do resistances do in series?

What do resistances do in parallel?

Will current ignore your body if you have a low-impedance ground rod in place?

Can you count on a circuit breaker to protect you from lethal shock?

When is a ground rod not ground? What makes it part of the grounding system, and thus useful for grounding purposes?

What is the point of grounding conductors as part of lockout/tagout?

Why won't a driven rod do anything for you if it's not connected back to the source?

The earth cannot be the intended return path to clear a fault because of its high resistance, which is typically one billion times that of copper.

At most, an unbonded electrode will allow only a few amps to flow back to the source. The rest will flow through equipment and people.

Grounding conductors versus metal parts

A ground rod won't protect you from fault current touch potential from metal parts.

Grounding conductors as part of lockout/tagout, however, is not the same as grounding metal parts in case of a fault. You aren't seeking fault protection at all, in this case. Instead, you are seeking to bring those conductors to the same voltage potential as your body.

You cannot bring conductors to the same potential as your body if the path between you is billions of ohms through dirt. Always bond back to the source.

By grounding the de-energized current-carrying conductors, you are providing a direct fault. This should prevent the breaker from closing, trip any "unknown" breaker also supplying the circuit, and stop inadvertent current flow in the circuit.

However, you must ground to an electrode that is bonded back to the source. An unbonded driven rod does not provide a ground.

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WEEKLY TOOL BOX TALK #3

Date: 3-18-2020

Topic: Trench Safety

Project: _____

Superintendent: _____

Attending Employees:

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Working Safely in the Trenches

Excavation cave-ins cause about 75 deaths and 1,000 injuries a year in the US, including about140 that result in permanent disability.

Much more hazardous than they may appear, excavations can collapse unexpectedly and bury a worker or a bystander.

It is unsafe to enter an excavation unless it is properly supported. A hole dug for a basement, or a trench dug for utilities are some of the kinds of excavations which need to be shored up or sloped properly. The support must be adequate to handle the pressure of the soil and water content, as well as other pressures, such as piles of excavated dirt and rock, nearby buildings, traffic and heavy equipment.

You might be surprised to learn you can be killed by a cave-in even if you are not totally buried. Many cave-in victims suffocate before they can be dug out. Others buried only to the waist have died because of injuries caused by pressure from the soil.

Particularly dangerous are holes in or near soil previously excavated because the dirt remains loose. Moisture also increases the likelihood of a cave-in, as water pressure causes the walls of the excavation to collapse. Also hazardous is clay, which may crumble as it dries.

Frozen ground is no guarantee of safety and is not considered an alternative to proper support of excavation walls.

An excavation can be called a confined space, with the possibility of an atmosphere contaminated by toxic gases or other problems that make it unsafe to breathe the air.

An excavation could be located near an old chemical dump, a leaky underground gasoline tank or a sewer.

If your work takes you in to trenches, remember these safeguards:

- The excavation must be inspected by a competent person such as a certified engineer to determine if it is safe to enter.
- All equipment such as pumps and ventilators must be working properly.
- You need a way to exit quickly, such as a ladder.
- Your employer must have marked all utilities before digging so you don't run into an energized electrical cable, a natural gas line or a water pipe.
- The edge of the excavation must be properly sloped, benched or shored up so it won't collapse.
- Keep the excavated soil at a safe distance from the edge of the trench.
- Use a barrier if necessary to keep dirt and rocks from falling back into the trench.
- A barrier around the excavation to keep bystanders away is also recommended, particularly near sidewalks and crosswalks.

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Trench Safety

Anytime you dig a trench or an excavation, you're creating an unstable space. The walls of a trench are under extreme pressure since they are no longer supported by the dirt that's been removed. If you work in a trench or excavation without the proper planning and safeguards, you are putting your life at risk.

The dangers of trenching and excavations include cave-ins, falls, falling loads, hazardous atmospheres, and working around heavy equipment. Cave-ins present a serious risk and can happen in an instant. Never enter an unprotected trench. Remember that one cubic yard of soil can weigh as much as a car. You may think that you could just dig your way out if you were caught in a cave-in. But even if your face and shoulders were above ground, the weight of the soil could make it impossible for you to move your arms or even to breathe. You could suffocate.

Before you enter a trench, make sure you know the answers to these questions:

- Is there a competent person available?
- Has the soil been classified?
- Have all the necessary daily inspections occurred?
- Are there any utilities that need to be located and marked?
- What are the methods of access and egress?
- Is there a hazardous atmosphere?
- What type of protective system will be used?

A competent person is someone who is capable of identifying existing and predictable hazards in the surroundings or working conditions, and—importantly—who has authorization to take prompt corrective action to eliminate those hazards. Trenching work requires a competent person. He or she will inspect the trench, test for hazardous atmospheres, and decide whether or not it is safe to enter the trench.

A protective system is required anytime a person is in an excavation greater than 5 feet in depth unless the entire excavation is in stable rock. Protective systems include shoring, shields (also known as trench shields or trench boxes), and sloping or benching. Designing a protective system can be complex because many factors need to be considered: soil classification, depth of cut, water content of the soil, changes due to weather and climate, and other operations in the vicinity.

Falling into a trench is a real danger. Sometimes people forget to consider fall protection around trenches because they're working at ground level. But the bottom of the trench may be many feet lower than "ground level." Falling into a trench is particularly dangerous because the fall could cause a cave-in. Fall protection, like guardrails, may be required.

SAFETY REMINDER

Be sure to keep spoil piles and heavy equipment away from the edges of trenches.

NOTES:

SPECIAL TOPICS /EMPLOYEE SAFETY RECOMMENDATIONS/NOTES:

S.A.F.E. CARDS* PLANNED FOR THIS WEEK:

REVIEWED MSDS # SUBJECT:

MEETING DOCUMENTATION:

JOB NAME:

MEETING DATE:

SUPERVISOR:

ATTENDEES:

These instructions do not supersede local, state, or federal regulations.

If, in spite of all precautions, a cave-in begins, get out fast. Call for emergency help for your workers from outside the trench. Don't jump in, even for a rescue, because you could be killed.

Excavations are hazardous not only for the construction or utility crews who work in them, but anyone in the area. Keep a safe distance from construction sites, and keep your children away too.

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WEEKLY TOOL BOX TALK #4

Date: 3-25-2020

Topic: Personal Protective Equipment

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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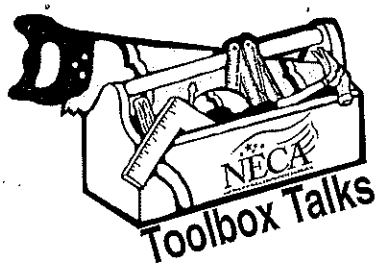

Discussion leader duties for this session:

Obtain a few pieces of PPE to demonstrate proper use.

What this Safety Talk covers:

Key points about personal protective equipment.

Discussion notes :

Personal Protective Equipment

PPE zones

Systematically assess the danger to each body zone so you get the right PPE: head, eyes, ears, nose/mouth/lungs, torso, arms, hands, legs, feet.

Common PPE

■ **Safety glasses.**

Wear safety glasses any time you are on the job site, other than in an office or trailer—flying particles don't care what time it is or what your job function is.

To avoid scratching the lenses, don't take the glasses on and off throughout the day. Store them in a glasses case or other protective container when not in use.

■ **Hardhat.**

Wear your hardhat any time you are on the job site, other than in an office or trailer. Your hardhat also helps identify you, thus improving security for everyone.

It provides some protection from falling objects, arcs, and objects your head might strike in close quarters. It protects you from impact only if you have not altered the suspension system by placing things between the suspension and the shell. Ensure your suspension isn't so loose it wobbles and not so tight it pinches your skin.

It is mechanically protective if you maintain the shell integrity. This means you cannot drill holes into it or alter the shell in any way. The solvents in paint can weaken the hat. Crystal clear acrylic spray may be acceptable, but get approval from your safety director before use.

It is electrically protective if you maintain insulating properties. The more you alter its surface, the less protection the hat provides. Ink, pencil marks, paint, and paper create conductive paths on the hat, so keep writing and stickers to a minimum.

■ **Earplugs.**

Wear hearing protection any place where you must raise your voice to talk.

Hearing loss is permanent.

Damage to the inner ear often results in tinnitus, a maddening condition where you "hear" a constant buzz even when you are trying to sleep.

If using foam earplugs, replace them when they get dirty or lose their "sponginess." Roll them before inserting them—the expansion of the foam is what protects you. If these "slide right in," they won't protect you.

■ **Personal clothing.**

Wear sturdy shoes or boots, and long-sleeve shirts. Do not wear polyester. Do not wear tank-tops or shorts. Do not wear steel-shanked or steel-toed shoes when doing electrical work, unless the shoes are electrically qualified and so marked.

■ **Face shield.**

Wear a face shield whenever there is danger of debris hitting your face. This can be from grinding operations or arc flash, for example. Wearing safety glasses with a face shield adds an extra layer of protection.

Review and Discussion

Why do we use PPE?

What are the correct personal clothing choices?

When should you wear hardhat and safety glasses?

What are some important ways to ensure your hardhat protects you?

What are some important points about hearing protection?

■ **Gloves and sleeves.**

Work gloves provide mechanical protection to your hands. This is helpful during wire pulls, when carrying large objects, or when unpacking items such as light fixtures.

Insulated gloves provide electrical protection to your hands. Perform the roll-up test prior to use. Do not use these gloves without the protective outer glove.

Insulated sleeves extend the protection of gloves to your arms. If you are in a situation that requires gloves and sleeves, wear a face shield as well.

Other PPE

Mats. Standing on an insulated mat when testing live gear breaks the path from your feet to ground.

Blankets. Never stand on or walk on an electrical blanket. Use it to break the path from your body to ground or to provide an additional flash barrier.

Dust masks and respirators. Use these as directed to protect your respiratory system. Ensure a proper fit and seal before use. If you detect a failure of the device while in use, stop work and exit the area.

Extraction devices. These include wrist-mounted "come alongs" and other equipment designed to allow another person to pull you out. Have them securely in place before extraction becomes necessary. You may not have a second chance.

Goggles. Wear these when working with chemicals or in situations where safety glasses do not provide enough protection. You can wear safety glasses inside your goggles.

Hood and flash suit. If your task exposes you to arc blast potential, stay in your hood and suit until you leave the area. An arc blast vaporizes metal, and you can't see it coming.

Fall protection. If your task requires fall protection, do not remove the protection simply because your task has concluded or you are taking a break without coming down.

Demonstration

Have some crewmembers demonstrate how to use various PPE.

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WEEKLY TOOL BOX TALK #5

Date: 4-1-2020

Topic: 10 Ways to Prevent Accidents & Injuries

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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10 Ways to Prevent Accidents and Injuries

Accidents happen, but they don't have to happen to you if you remember your safety training and always follow the best work practices. Here are 10 ways to reduce your chances of suffering an accident or injury on the job:

1. Always wear the PPE that the task requires, both on and off the job. PPE can save your hearing, your eyesight, or your life. When it's well-maintained and used properly, PPE can prevent injuries that could cause chronic pain or permanent disability. Wearing a hard hat can help you prevent fatal and life-altering head injuries. Wearing your safety glasses can prevent flying fragments from becoming embedded in your eyeball.

2. Never bypass a safety device or remove a guard. Safety interlocks and guards keep you from coming in contact with dangerous parts. Before removing any safety device—for maintenance, repairs, to change a cutter, or to clear a jam—make the equipment or tool safe by following the appropriate lockout/tagout (LOTO) procedure.

3. Always follow LOTO procedures before you start to work on any machine or piece of equipment. You can die or be seriously injured if the power is turned on or the machine you are servicing or maintaining moves or starts up unexpectedly. At home, use LOTO before you reach into the garbage disposal, work on the lawn mower, unjam the snow blower, or work on an appliance.

4. Never smoke around flammables. You could cause a fire or explosion. Only smoke in designated areas.

5. Don't participate in horseplay or use shortcuts. Messing around, playing jokes, and taking chances usually leads to someone getting hurt.

6. Participate in as much training as time permits. Even if you've been to the training before, there are always new things to learn. The more you know, the safer you'll be.

7. Practice proper fall prevention and fall protection techniques. Falls are one of the top four causes of deaths in construction. Tie off or die off. Use ladders very carefully and make certain they are set up correctly.

8. Don't come to work intoxicated. Come to work fit for duty and with a clear head. Drug and alcohol problems at work aren't limited to use in the workplace. Use or abuse outside of work can have lingering effects that make it unsafe for you to work the next day.

9. Keep all work areas neat and clean. Pick up as you go; don't wait until the end of the day. A messy jobsite is a dangerous jobsite. Good housekeeping is good for you.

10. Drive defensively and avoid distractions. Pay attention so you can anticipate what other drivers will do. Don't use your phone while you drive. Texting and driving kills.

SAFETY REMINDER

Keep safety in mind when you're off the job. In 2013 alone there were 93,200 unintentional injury-related deaths in the home and the community.

NOTES:

SPECIAL TOPICS /EMPLOYEE SAFETY RECOMMENDATIONS/NOTES:

S.A.F.E. CARDS* PLANNED FOR THIS WEEK:

REVIEWED MSDS # SUBJECT:

MEETING DOCUMENTATION:

JOB NAME:

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SUPERVISOR:

ATTENDEES:

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WEEKLY TOOL BOX TALK #6

Date: 4-8-2020

Topic: How Much Do You Know About LOTO

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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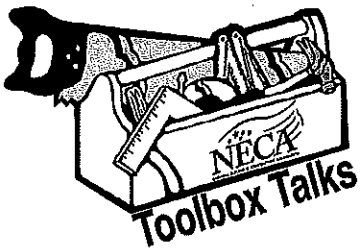


Discussion leader duties for this session:

Bring several items used for LOTO including locks, multi-lock hasp, tags and assorted locking devices for circuit breakers, switches, cords, and other devices.

What this Safety Talk covers:

The highlights of identifying energy sources that could cause personal injury if not properly isolated.

Discussion notes :

Lockout/Tagout Energy Sources

Energy sources

It is easy to overlook an energy source. Not all energy sources are obvious. Use proper lockout/tagout procedures required by regulatory agencies, your company, and the facility at which you are working. Failure to follow these procedures may result in loss of wages, employment or life.

Electricity is not the only energy source you must account for. Do not limit your investigation to the electrical side of the house.

Other energy sources that can cause personal injury: mechanical (springs), hydraulic (fluids under pressure), pneumatic (air systems), chemical, and thermal.

The failure to properly lockout and tag equipment may result in debilitating injuries. It may cause you or others to lose hearing, sight, limbs, or life.

Pre-work

Review the scope of work with your foreman.

Walk the system you will be working on. Look for all potential energy sources you may come in contact with in the course of the task you are preparing to do.

When you identify an energy source, determine the best method of isolating it. You can often isolate an energy source without having to lock it out, or you may need to lockout other sources to isolate that one. For example, if you are removing a bolted pressure switch, you can release the spring pressure by opening the switch and not charging the closing springs. Failure to release spring pressure (both opening and closing springs) may result in switch operation or cycling, and that can mean injuries to fingers or other body parts. Remember to isolate and lock out energy sources that may feed the switch.

Review the lockout/tagout procedures required by the facility at which you are working. These may differ from your own procedures, or require additional steps such as detailed interaction with operations people. Resolve any discrepancies with your foreman. Many facilities have specific LOTO procedures in place for every piece of equipment.

Look for automated controls that could re-enable energy sources. For example, you must lockout both sources of a dual fed electrical bus.

Determine how control devices will respond when power is removed. For example, electrically-operated valves may fail open, fail closed or maintain their position. Their failure mode is independent of their actuation because valves use two different means. For example, a valve that requires energy to open may also fail open upon loss of power. Be aware of how this affects the process so you don't create a hazard for others or the environment.

Be aware of residual stored energy in a system even after it has been isolated. The stored electrical energy in capacitors has killed many people, even though the associated electrical equipment was properly locked.

Be aware how changes in the ambient environment can affect energy devices. For example, changes in barometric pressure and temperature can create a pressure differential across a closed pressure vessel.

How Much Do You Know About Lockout/Tagout?

Electrical shock, burns, amputations and death are some of the horrible consequences of not locking and tagging out equipment before servicing or repairing it. Lockout/tagout procedures are a proven way to reduce accidents from unexpected start-up. Although only authorized employees are permitted to perform lockout/tagout, to be safe, you should know and understand the procedures. Take this quiz to find out how much you know about lockout/tagout.

1. Lockout is accomplished by:

a. locking the gates at your job site.
b. shutting down equipment for service or maintenance work.
c. installing a lockout device at the power source so equipment can't be operated.
d. tagging equipment to indicate it shouldn't be used.
e. none of the above.

2. Attaching a warning tag to a power source or piece of machinery telling others not to operate it is called:

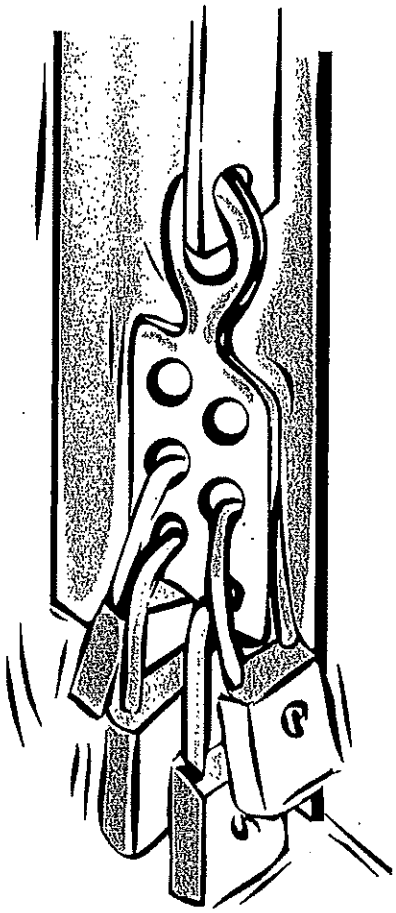
a. lockout.
b. tagout.
c. shutout.
d. none of the above.

3. OSHA rules require your employer to:

a. maintain a written copy of the lockout/tagout procedures.
b. make the procedures available to you.
c. instruct you in lockout/tagout procedures.
d. all of the above.

4. Lockout/tagout procedures are in place to prevent:

a. the accidental start-up of equipment.
b. workers from taking shortcuts while servicing equipment.
c. the release of stored, residual or potential energy.
d. all of the above.



5. Anytime electrical equipment is deactivated for repair:

a. it must be locked or tagged at the point where it can be turned on.
b. anyone can turn it back on.
c. it must stay off for 24 hours.
d. none of the above

6. Locks provided by your company for lockout purposes:

a. must be strong enough to prevent unauthorized removal.
b. can be used to lock your tool box.
c. can be taken home when not in use.
d. none of the above.

7. General requirements for your lockout/tagout procedure include:

a. Circuits and equipment must be disconnected from all electrical energy sources.
b. Control devices can't be the only means of de-energizing equipment.
c. Interlocks for electrical equipment may not be used as a substitute for proper procedures.
d. all of the above.
e. none of the above.

8. Tags must have a statement on them that:

a. refers you to the authorized person.
b. says what time the tag should be removed.
c. prohibits unauthorized operation of a switch and removal of the tag.
d. tells you where the tagout procedures are located.

Answers:: 1. c; 2. b; 3. d; 4. d; 5. a; 6. a; 7. d; 8. c.

Review and Discussion

What are some energy sources you may need to account for?

Is it a problem if you miss one energy source out of many when doing your lockout/tagout pre-work? Why or why not?

What are some energy sources that may not require a lock to isolate?

Why is it important to review the operation of any automated control system associated with equipment you are working on?

Why should you review the lockout/tagout procedures of the facility where you are working, if your company already has its own lockout/tagout procedures?

Give an example of residual stored energy.

How should you verify energy sources are isolated?

What task should you complete before removing locks and re-energizing the system? What if you aren't able to do this task yourself?

What are some concerns about starting a system after lockout/tagout?

Why is it important to walk your locks?

Verification

Ensure automated controls have been disabled. Remove power sources to charging motors, actuators and other controlling devices as required to fully isolate the energy source. Verify against the drawings and confirm with actual measurements.

Verify that energy sources are isolated. Use a meter to check for voltage, use pressure gauges and thermometers to verify no hydraulic or thermal energy and use your eyes to inspect everything.

Walk your locks before returning to work if you have left the work area, even for a few minutes.

Restoration

Inspect your work before restoring energy sources. Have a qualified employee review the work before removing locks and re-energizing energy sources.

You may need to follow detailed start-up procedures when re-energizing a system after lockout/tagout. If you do not know how to start it up, don't try. Ask your foreman to provide help from a qualified employee who is knowledgeable in the operation of the equipment and its overall system.

Participant's Signature and Date

PAGODA ELECTRICAL Inc.

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WEEKLY TOOL BOX TALK #7

Date: 4-15-2020

Topic: Safe Lifting

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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Safe Lifting

If you've ever strained your back while lifting something, you'll know the importance of lifting safely. Whether or not lifting is a regular part of your job, it is important to know the basic techniques for safe lifting. (Related Article: How to Get Your Workers to Use Lifting Equipment)

Here are a few general tips to keep you and others safe.

Plan Your Lift
Size up the load - its weight, shape and position. Is the load too large, too heavy or too awkward to more alone?
Decide on the route you will take, and check for any problems or obstacles such as a slippery or cluttered floor. Also, check out the place where you will set down the load, so you can anticipate any difficulties.

Position Yourself Correctly
Get as close as you can to the load.
Place your feet about shoulder width apart, straddling the load if possible.
Tuck in your pelvis.
Bend your knees.
Do not bend at your waist or extend your upper body. These movements put a strain on your back.

Lift Correctly
Let your legs do the work. Use your thigh muscles to lift, rather than your weaker back muscles.
Don't twist your body. If you have to turn, move your feet instead of your trunk.
Make sure you can see over your load and move carefully toward your destination.

Set Down
If it must go to the back of a deep shelf, for instance, put the load down on the edge and push it into place.
Take care to avoid crushing your hands when you release the load.

Get Help
If you can't handle the load alone, don't be a hero. Get some human or mechanical help.

Team Lifting
Decide on one person to be in charge of the lift. This person will tell everyone when to lift, move and set it down. Ideally, this person should be the last in line on the load.
If you choose a mechanical helper like a hand truck, check it over to make sure it is in good repair and the wheels are working correctly.

Tricky Lifts
It's difficult to lift a load higher than your shoulders, so safely use a step stool, stepladder, platform, or

equipment to place loads higher.

Another difficult lift is from deep within a bin. You can modify the basic lift procedure by getting as close as you can to the load, squatting slightly and placing your bent knees against the bin. Use a similar procedure to safely lift heavy items from a car trunk.

For light, little objects in the bottom of a bin, you can use the golfer's lift. Swing one leg straight out behind you, flex the other knee, use one hand to balance yourself on the edge of the bin and the other hand to pick up the load.

A back injury is painful and can cause a big disruption in your life at work and off the job. Lifting safely is one very important way to keep your back healthy.

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WEEKLY TOOL BOX TALK #8

Date: 4-22-2020

Topic: Basics of Scaffolded Safety

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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The Basics of Scaffold Safety

Every year in the United States, about 60 workers die in falls from scaffolds. Many of these deaths can be prevented by proper set-up and use of scaffolding.

Scaffolds provide a safe and efficient way to work off the ground in construction, renovation, masonry, painting and other work.

The exact specifications for scaffold design vary somewhat from one region to the next and from one use to the next. The following are general safety guidelines:

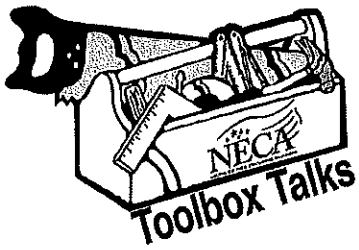
- Provide safe means of access and egress, such as a ladder, stairway, stair tower, ramp or walkway.
- Build with scaffold grade lumber.
- Leave wood planks unpainted so any cracks will show.
- Place the scaffold on a firm foundation. Never set up a scaffold on unsafe unstable footings such as barrels, boxes or loose concrete blocks.
- Brace uprights to keep them vertical and to prevent swaying.
- Install guardrails to prevent falls from scaffolds 10 feet (three meters) or higher.
- Install toeboards to stop things from falling off scaffolds 10 feet (or three meters) or higher.
- Make sure the scaffold is capable of supporting four times the maximum intended load, including its own weight.
- A scaffold showing signs of damage or defects must be removed from service immediately until it is effectively repaired.
- Never move a rolling scaffold while someone is on it.
- A qualified person must design the scaffold. A competent person must also inspect the scaffold before each work shift, and after anything happens that could affect the structure.

You must keep the scaffold a certain safe distance from any power line. Check with your local electrical utility company for the established limits of approach, often 10 feet (three meters). Many workers have died of electrocution when they – or the scaffolds they were touching – contacted power lines.

You must not work on a scaffold in high winds or a storm. You must not work on a scaffold with ice or snow on it – except to remove the snow or ice safely.

Scaffold work takes training. You need to understand the electrical and fall hazards, as well as the hazards of falling objects in the work areas. You need to know how to use a scaffold properly and how to handle materials safely while you are aloft. Use of fall protection equipment is also an important part of your training. Before you are assigned to assemble, take apart, move, operate, repair or maintain or inspect a scaffold, you need instruction from an experienced person.

You might not use scaffolds at work, but you could deal with them off the job during home renovation and maintenance. When you work off the ground, use a proper ladder or scaffold made for the job. Get



Scaffold Erection and Inspection

Discussion leader duties for this session:

Read your company policy on scaffolding so you can answer questions.

What this Safety Talk covers:

Issues that workers should be aware of when erecting or inspecting scaffolding.

Discussion notes :

Construction

You must be qualified to erect scaffolding. That means you have the training and experience to put the scaffolding up safely. If your site policies require certification, make sure you are certified. Otherwise, do not erect scaffolding. If you need it erected and are not qualified, ask your foreman to provide a qualified scaffold erector.

Each platform on each working level must be fully planked or decked.

Unless space prohibits, scaffold platforms and walkways must be at least 18 inches wide. This requirement does not apply to the following scaffolds: ladder jack, top plate bracket, roof bracket, or pump jacket, all of which must 12 inches wide.

Secure the cantilevered portions of platforms so they don't tip.

If you can't ensure the platform will support employees and materials without tipping, block access to the cantilever end.

If a supported scaffold has a height-to-base width ratio (including outriggers) of more than four to one, restrain it from tipping by guying, bracing or equivalent means.

Ensure that supported scaffold legs, poles, posts, frames, and uprights bear on base plates and mud sills or other adequate firm foundation.

Ensure that supported scaffold legs, poles, posts, frames, and uprights are plumb and braced, to prevent swaying or displacement.

If a scaffold is required to be secured to the structure due to height or stability requirements, ensure it's adequately secured at the prescribed vertical and horizontal points.

Inspection

Before using scaffolding at the start of your shift, ensure a (OSHA) competent person has inspected it. If your site requires inspection tags for this purpose, read the date to ensure the tag has not expired. Notify your foreman, the scaffold foreman, or the onsite safety director of any problems you are not qualified to fix.

If you are not a qualified person, you can still make a cursory inspection. Make sure the fasteners don't look loose, the planks or decks are secure, and the footing is firm.

Look for slippery materials on the surface. In cold weather, that might be ice or snow. In warm weather, that might be process waste. If such materials are present, clean them off before using the scaffolding for the intended job.

Use

Use the prop fall protection. For example, you need personal fall restraint if you are more than 10 feet off the ground and the scaffold is incomplete, which includes a missing guardrail. On job sites where the mandatory height is less, the lower height shall prevail.

Keep scaffolding free of debris to prevent slipping hazards and to prevent such debris from falling on people below.

Review and Discussion

Who can erect scaffolding?

Who can officially inspect scaffolding?

How wide must scaffold platforms and walkways be?

What kind of fall protection do you have for the scaffolding used on this project, and when do you need to wear it?

Why should you keep scaffolding free of debris?

What should you do with small parts and tools?

What should you do with large items?

What are some considerations for high winds?

If you need an extra six inches of reach and have a plaster bucket with you, is it OK to turn that bucket upside down and use it just for a minute?

What are some considerations when working near power lines while on scaffolds?

Keep small parts and tools in buckets, and lower larger items to the ground when you are done using them.

In storms or high winds, risk is much higher than normal. Fall restraint systems and wind screens can keep you on the scaffolding, but they will not help the scaffolding hold up when the wind reaches a higher speed than the scaffolding is rated for. If in doubt, get off the scaffolding.

Use taglines or other means to control swinging loads being hoisted onto or near enough to scaffolds where contact with employees or energy sources could pose a problem.

Maintain proper power line clearances.

Do not stand on boxes, barrels, or other makeshift means to raise your working height.

Ladders and scaffolds

If you use a ladder on a scaffold, you must meet the following requirements.

- Secure the scaffold so it can handle any lateral thrust imposed by the ladder.
- Secure the platform to the scaffold.
- Ensure all ladder legs are on the same platform or are isolated from unequal platform deflection.
- Secure the ladder legs, to prevent movement.

Participant's Signature and Date

Weekly Safety Meetings
Safety Training for the Construction Industry
Standard Subscription

COMPANY NAME: _____

Scaffolding

Scaffolding is an elevated, temporary work platform that allows you to get work done high above the ground. To be safe, a scaffold has to be erected under the supervision of a competent person and according to the manufacturer's specifications. You must follow safe work practices when you work on a scaffold. Wear fall protection or work behind a guardrail system.

When it comes to scaffolding, there are two major safety hazards. First, there is the potential for you to fall off the scaffold. You could fall from one level to the next one below, or fall several stories down to the ground. The second major safety hazard is being struck by objects that fall off the scaffold. Either of these hazards can cause severe injuries and even death. **Here are some ways to prevent falls from a scaffold:**

- Remember that anyone working on a scaffold more than 10 feet above a lower level must be protected from falling. Fall protection can include personal fall arrest systems or a guardrail system or both.
- Always inspect the scaffold before climbing it.
- If you climb a ladder to gain access, watch your step and maintain three points of contact. Don't carry materials and tools in your hands.
- Never jump from the scaffold to the ground.
- Be sure that scaffold planks do not extend more than six inches beyond the crossbeams. Long planks can tip up, causing falls and falling objects.
- Make sure the scaffold has handrails and toeboards.
- Never ride on a scaffold that is being moved.
- Clean ice and snow off the scaffold before you use it. Don't work on platforms that are covered with snow or ice.
- Do not work on scaffolds during high winds or storms.
- Keep scaffolds free of waste material, debris, and unneeded tools. All of these objects can cause tripping hazards and can become falling objects that may injure those working below you.

Workers below scaffolding need to be protected from falling objects. At a minimum, there should be toeboards in place on all four sides of your scaffold to prevent a tool or small piece of material from falling off the scaffold. If you don't have toeboards, then all tools should be restrained with tool lanyards. You can also barricade the area below the scaffold so other people can't enter the area where objects might fall on them. When access can't be restricted, or when the public is involved, you may need to install a canopy or net below the scaffold to catch or deflect falling objects. And of course, always wear your hard hat.

SAFETY REMINDER

Scaffolds provide us with a safe place to work—but only if we work safely!

NOTES:

SPECIAL TOPICS /EMPLOYEE SAFETY RECOMMENDATIONS/NOTES:

S.A.F.E. CARDS® PLANNED FOR THIS WEEK:

REVIEWED MSDS # SUBJECT:

MEETING DOCUMENTATION:

JOB NAME:

MEETING DATE:

SUPERVISOR:

ATTENDEES:

These instructions do not supersede local, state, or federal regulations.

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WEEKLY TOOL BOX TALK #9

Date: 4-29-2020

Topic: Hazardous Locations

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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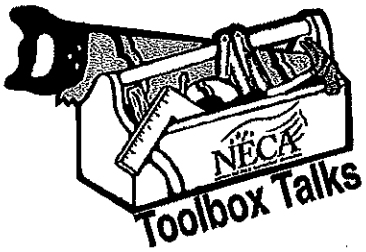

Hazardous Locations

Discussion leader duties for this session:

Read the company policy, guidelines, or other documentation on hazardous locations.

What this Safety Talk covers:

What hazardous locations are, and the cautions you should take.

Discussion notes :

Three classes

The hazardous class of a location depends on the ignition hazards present:

- Class I: Flammable vapors or gases
- Class II: Combustible gases
- Class III: Ignitable fibers

National Electrical Code

The NEC covers hazardous locations in Articles 500, 501, 502, and 503.

Article 500 defines hazardous locations and gives a good overview.

Articles 501, 502, and 503 give requirements for Class I, Class II, and Class III, respectively.

Articles 504, 505, and 510 give more detailed information on installation requirements.

Pre-job planning

Plan the job carefully. Part of a system may reside in an unclassified location, while another part may reside in Class I and yet another in Class III.

Review the MSDS for hazardous materials in the hazardous location, and understand the handling and disposal rules for those materials.

Understand the requirements for ignition source control, ventilation, and hazardous material monitoring.

Plan your communication system so it is compatible with the ignition control requirements of the location.

Know which tools you can and cannot use before starting the job. In some locations, you may need to use special tools to avoid spark. An example is the hydrogen cooling mechanism on a turbine—brass wrenches replace steel ones in that location.

Locate the fire alarms, fire exits, fire extinguishers, and emergency showers.

Always coordinate with the operators. You may have windows of time that are more hazardous or less hazardous than normal.

Work rules

Prior to starting work in a hazardous environment, you need to review NEC Article 500 and any of Articles 501 through 510 that apply to that location. Be sure to discuss any questions you have with your foreman—do not assume.

Follow login procedures and always inform the operator on duty that you are entering an area classified as hazardous, even if there is no login procedure.

Absolutely no smoking in a hazardous location. If you are a smoker, go to a designated smoking location. Standing just beyond the edge of a hazardous location is not sufficient.

Do not bring welding equipment into a hazardous location without a welding per-

Review and Discussion

What makes a location Class I?

What makes a location Class II?

What makes a location Class III?

Which National Electrical Code Articles apply to hazardous locations?

If the operator interface for a control system is in an unclassified location, does that have any bearing on whether a pressure transmitter for the same system is unclassified or not? Why or why not?

What do you need to review and understand in relation to materials in a hazardous location?

What are some things you need to know the requirements of, besides ventilation?

Why are login procedures and operator notification important?

What do you need to know about tools in a hazardous location?

What if you need to weld in a hazardous location?

mit that specifically addresses the concerns of that location.

Ensure motors, receptacles, and communications equipment are rated for the particular class of the location.

Check any arcing devices you will install to ensure they are approved for use in the location. Such devices include breakers, switches, motor controllers, and fuses.

Use only heavy-use industrial grade flexible cords. These will typically be thermoset-jacketed rather than thermoplastic or thermoplastic elastomer. Ensure the cord has the grounding pin intact and the jacket is free of cracks or other deformities. Support the cord so there is no tension on the terminal connections. Provide suitable seals where these enter boxes.

Ensure all non-current carrying metal parts are bonded to ground. Where you have locknuts or bushings, install bonding jumpers. You cannot use a locknut or bushing as part of the grounding path.

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WEEKLY TOOL BOX TALK #10

Date: 5-6-2020

Topic: How to Avoid Workplace Electrocution

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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How to Avoid Workplace Electrocution

Many victims of workplace electrocution are the people who maintain electrical equipment.

Here are some reminders for staying safe while making this equipment safe:

- Before you do maintenance or repairs on electrically powered equipment, you need to isolate the power source. Lock out and tag out switches when repairing equipment. That's why there are slots for locks on electrical circuit breakers.
- Follow all safety procedures for locking out equipment.
- Never work on a switch or outlet connected to a live (closed) circuit. First, turn off the circuit breaker and put a lock and warning sign on the breaker.
- When you are making adjustments to portable powered equipment, disconnect it but keep the cord in your sight so someone else can't plug it in and give you a shock. Better yet, use a locking device made for the plugs of portable tools and equipment. Several types of these devices are available at safety supply stores.
- Before using electrical cords, equipment or tools, check them carefully. Pull any damaged or defective equipment out of service and repair it right away.
- Install a ground fault interrupter on any outlet near a water source. Never work on electric equipment or wiring in a wet environment.
- Take off extra jewelry such as rings or bracelets when working with electricity.
- Never tape breakers in the "on" position. This interferes with their proper operation.
- Don't store combustible materials such as paper, wood, flammable liquids or paint in main service panel rooms because heat or sparks from an electrical source can start a fire.
- Keep main electrical equipment rooms locked at all times so that only authorized people can enter. Lock all electrical boxes that are outside the secured area.
- Keep the pathways to all electrical panels free of obstructions.
- Clean motors and keep them free of dirt, oily deposits and dust.
- Don't keep electrical equipment or motors in inaccessible locations such as attics.
- Maintain power cords and never use worn, broken, improperly repaired or patched cords.
- Replace any equipment that emits sparks, stalls or runs hot.

You must be trained and authorized to do repairs on electrical equipment. Do not attempt this kind of work unless you're qualified.

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WEEKLY TOOL BOX TALK #11

Date: 5-13-2020

Topic: Temporary Power

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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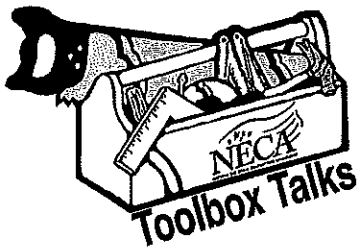

Temporary Power

Discussion leader duties for this session:

Review NEC Article 527 and be prepared to answer questions about it.

What this Safety Talk covers:

What the worker needs to know to prevent fire and shock when using temporary power.

Discussion notes :

Advantages

Temporary power is any power wiring supplied with the intention of removal in the near future, regardless of the wiring method used. Because this wiring is temporary:

- You don't need to put splices in junction boxes, provided you maintain equipment grounding continuity.
- You must route the wiring for safety, but you can disregard the appearance requirements of permanent wiring.

Limitations

NEC Article 527 provides the limitations. Some of them are:

- You can't install receptacles on temporary lighting circuits.
- You must have a suitable disconnecting means (switches or plug connectors) for each circuit.
- You must remove temporary wiring when you are done with the tasks that required having it in place.
- All lamps for general illumination must have protection from accidental contact or breakage. A suitable fixture or lampholder with a guard provides this protection.
- You must follow the same ampacity, overload protection, support, and mechanical protection rules as in the rest of the NEC. With portable cords, additional mechanical protection requirements apply.

NEC requirements for portable cords and cable assemblies

Avoid sharp corners and projections.

When routing through doorways or other pinch points, provide protection such as a portable cord guard.

If terminating (rather than plugging in) the cord at a device, use the appropriate fittings.

Use supports to prevent damage. These supports can be staples, cable ties, straps, or similar fittings installed in a way that doesn't pinch the cord. When running cord overhead, consider using a stand made for that purpose. Do not use vegetation to support overhead runs. Do not use steel wire (e.g. #9) to hang cords.

Other requirements for portable cords and cable assemblies

Use an industrial grade or contractor grade portable cord. Compared to "regular" cords, these have superior insulating ability and flexibility.

Ensure portable cords have the right jacket material for the environment. For example, only certain jacket materials are oil resistant. Read the cord jacket or product literature. This requirement is not spelled out in the NEC.

Never splice a portable cord or tape over an abrasion. Once the jacket integrity is lost, so is the safety of the cord.

Never remove the ground prong. Use an adapter and make the proper ground connection.

Review and Discussion

What is temporary wiring vs. permanent wiring?

What is the NEC Article governing temporary wiring?

When should you test a GFCI?

What are some requirements for portable cords?

What should you do if a given plug won't mate to a receptacle?

Observe the connector pattern. If a plug won't fit a receptacle, you are probably trying to mate incompatible systems. Don't force the connection or "wire around it." Find the right power supply.

If you can't find a free receptacle on a power box, don't just unplug something you think isn't in use. In addition to being rude, this action interrupts someone else's work and may cause unnecessary trips up and down ladders. Trace the cord to its point of use, and negotiate some time on that particular outlet.

GFCI

All temporary circuits that are 125V, single-phase up to 30A must be GFCI-protected, unless you have an assured grounding program. You can provide GFCI protection with a plug-in device rather than via the receptacle itself.

If you don't know whether the receptacle is GFCI-protected and you don't have an assured grounding program, use a plug-in device with GFCI protection.

Test each GFCI device prior to first use on each shift.

Assured grounding

An assured grounding program is an official program with a written policy and continuous enforcement. Don't assume it exists unless you see the policy.

Ensure equipment grounding conductors are continuous and each equipment grounding conductor is attached to its proper terminal.

Test each receptacle and attachment plug for correct attachment of the equipment grounding conductor. Record the results of these tests, and provide the results to your foreman or other company-designated person. In addition to the following schedule, the NEC requires tests at least every three months:

- Before first use on site.
- When there is evidence of damage.
- Before returning equipment to service.

Participant's Signature and Date

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WEEKLY TOOL BOX TALK #12

Date: 5-20-2020

Topic: Assured Grounding

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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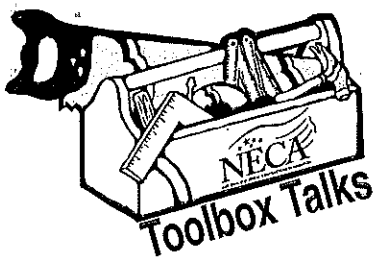

Discussion leader duties for this session:

Obtain a portable cord and a Digital Multimeter with an ohmic function to demonstrate continuity tests. Review your company's policy on assured grounding. If your company doesn't have an assured grounding program, this Toolbox Talk will still prove useful, because most of the concepts also apply to general safety and to a GFCI program.

What this Safety Talk covers:

What an assured grounding program is and how to follow it. Goals include understanding some key similarities and differences between assured grounding programs and GFCI programs, plus protections the programs provide and don't provide.

Discussion notes :

Assured Grounding

An assured grounding program is a formal program for inspecting:

- Equipment connected by cord and plug and available for use.
- Portable cords.
- Receptacles that are not part of the permanent wiring of the structure.

The inspections require:

- Visual checks of equipment for physical damage or defects, per a specific schedule.
- Continuity tests to ensure the grounding conductors are electrically continuous.
- Tests to ensure the equipment grounding conductors are connected to the proper terminals.

The specific schedule for inspections is:

- Before the day's first use.
- After any repairs.
- After any suspected damage and before subsequent use.

These inspections are all your responsibility, except those performed by your tool crib—if you have one on site. If the tool crib does perform continuity checks and inspections, you add an extra measure of safety by doing a visual inspection once you arrive at your specific work location. Additionally, OSHA requires your company to ensure the equipment undergoes inspection at 3-month intervals.

Other facts

The use of GFCI devices does not eliminate the need for an assured grounding program. The lack of an assured grounding program requires the use of GFCI devices.

The National Electrical Code prohibits using assured grounding program in lieu of GFCI protection, but OSHA does not. The combination of assured grounding and GFCI adds an extra measure of protection.

Both an assured grounding program and a GFCI program require inspection and testing. The assured grounding program simply requires more of these.

Neither an assured grounding program nor a GFCI program will protect you against a line to line or line to neutral short. They will protect you only from a ground fault.

Most assured grounding programs use a quarterly or monthly color tag or tape to allow quick visual confirmation of inspection.

If your company does not have an assured grounding program, you should still employ the principles of such a program. That is, check equipment before you use it. Look for insulation damage, missing ground plugs, and broken ground wires.

If your company does have an assured grounding program, you can add an extra measure of safety by using GFCI equipment when it's available, and testing such equipment prior to first day's use.

Review and Discussion

What is the central activity of an assured grounding program?

What are the three types of equipment an assured grounding program requires inspecting?

What are the three types of inspections an assured grounding program requires?

What are the three times you must perform an equipment inspection?

Does the use of a GFCI device eliminate the need for an assured grounding program?

Does the use of an assured grounding program mean you can't use GFCI devices?

In what ways are an assured grounding program and a GFCI program alike?

In what ways do an assured grounding program and a GFCI program differ?

Which standard forbids an assured grounding program to replace a GFCI program, and which organization permits it?

What will neither program protect you from? What *will* the programs protect you from?

Demonstration

Have a crewmember demonstrate ohmic testing of a portable cord to ensure the grounding conductor is not broken inside the cord. Note that you can obtain a good reading on a break, if the cord is in the right position. Thus, a good test requires flexing or wiggling the cord.

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WEEKLY TOOL BOX TALK #13

Date: 5-27-2020

Topic: Four Rules for Ladder Safety

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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Four Rules for Ladder Safety

Four rules cover safe use of ladders.

They are:

1. Pick the right ladder for the job you are going to do.
2. Make sure the ladder is in good condition.
3. Set up the ladder correctly.
4. Work safely on the ladder.

Let's examine these rules one at a time.

1. ***Pick the right ladder:***
   The ladder should be of the correct type and length. You will probably use an ordinary straight ladder for most purposes. An extension ladder may be required for high work. A step ladder is used when you need a free-standing ladder or one with a tool tray. Some situations may not require a ladder at all. Instead, you may need a scaffold. Never use a metal ladder around any electrical installation.

2. ***Check the condition of the ladder:***
   Never use a damaged ladder. Make sure all parts of the ladder are in good working order, free from corrosion, rust, rot, cracks and other defects. Check the rungs, side rails, braces, hinges, ropes and pulleys. See that the rungs are free of slippery substances such as oil. Never use a painted ladder because the paint can hide defects. To protect it, use a clear preservative instead of paint.

   Make sure that the non-slip rubber feet are in good condition. Check overall for any signs of warping or twisting.

3. ***Set up the ladder:***
   With a straight ladder, walk it into position hand over hand. Make sure the base is solid. Tie the top if you can.

   A straight ladder should be placed against the wall at an angle so that the base of the ladder is one foot away from the wall for every four feet of height. You can remember this formula as the "four up, one out" rule.A stepladder should be locked into a fully-open position before you attempt to use it.

   Raising an extension ladder is a two-person job. There should be a considerable overlap

between each section.

When using a ladder to gain access to a roof, place the ladder so that it extends at least three rungs above the edge.

4. ***Work safely on a ladder:*** When climbing or working on a ladder, maintain three-point contact. This means that two hands and one foot, or one hand and two feet should be in contact with the ladder at all times.
5. Keep centered on the ladder. Here's a way to remember to do so - your belt buckle should remain between the two side rails at all times. Never lean away from the ladder because you can cause it to topple.
6. Do not carry tools or materials in your hands. Keep tools in a belt, or hoist objects up after you.
7. Do not stand on the top few rungs of any ladder.
8. Footwear should have clean soles made of a non-skid material. Leather is too slippery.
9. Never move a ladder while you are on it.
10. Move slowly and carefully on a ladder.
11. Do not work on a ladder if you are ill, overly tired or possibly under the influence of alcohol or any drug. Stay off outdoor ladders during bad weather such as rain, wind or lightning.
12. Certain work situations may require the use of fall prevention equipment such as safety belts or harnesses. Be sure to use this equipment as directed and keep it in good condition.

If you remember to pick the right ladder, check its condition, set it up right and use it correctly - you will be ensuring that the job is done safely.

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COMPANY NAME: _____

Ladder Safety

You don't just need a ladder; you need a ladder that is in good condition and is appropriate for the task you're doing. You also have to use the ladder safely and correctly. When used properly, a ladder provides a safe way to access a higher location such as a roof, ceiling, a light fixture, or the top shelf of a cabinet or storage rack. Using ladders improperly leads to serious injuries, falls, and in some cases, even deaths. Let's review some best practices when it comes to ladder safety and fall prevention.

Ladder Selection:

- Choose the right ladder for the job. For instance, use a fiberglass ladder when working near power lines since metal ladders conduct electricity.
- Be sure your straight ladder is long enough to extend 36 inches above the top support.

Ladder Inspection:

- Before you climb, always check the ladder for defects such as loose, split, cracked, or missing rungs. Check rails for warping, cracks, and chips.
- Make sure spreader locks on stepladders and rung locks on extension ladders work correctly.
- If a ladder is defective, remove it from service and tag it "Do Not Use."

Ladder Setup:

- Keep ladders away from power lines.
- Always fully extend the A-frame legs of a stepladder. Don't try to use it as a straight ladder.
- Don't rest ladders on gutters, glass, or other weak support surfaces. Set up ladders on a solid footing against a solid support.
- Don't set ladders in areas such as doorways or walkways unless they are protected by barriers.
- Tie off ladders so they can't shift or slide.

Ladder Use:

- Always face a ladder when using it. Don't lean; keep your body between the rails. Don't reach; instead climb down and move the ladder.
- Don't stand on the top two rungs of a stepladder or the top four rungs of a straight ladder.
- If the rungs are dirty, icy, or slippery, take the ladder out of service and don't use it until the rungs have been cleaned and are safe.
- Always maintain three points of contact (one hand and two feet, or two hands and one foot). Don't climb with your hands full.
- Never use a ladder horizontally as a platform, as a scaffold, or to support scaffold planks.
- Don't climb a ladder if you are using alcohol, drugs, or even some over-the-counter medicines.
- Never move a ladder while someone is on it.

SAFETY REMINDER

Your weight + tools + materials = the total weight on the ladder. Never exceed the weight limit for your ladder.

NOTES:

SPECIAL TOPICS /EMPLOYEE SAFETY RECOMMENDATIONS/NOTES:

S.A.F.E. CARDS® PLANNED FOR THIS WEEK:

REVIEWED MSDS # SUBJECT:

MEETING DOCUMENTATION:

JOB NAME:

MEETING DATE:

SUPERVISOR:

ATTENDEES:

These instructions do not supersede local, state, or federal regulations.

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WEEKLY TOOL BOX TALK #14

Date: 6-3-2020

Topic: Rigging & Slings

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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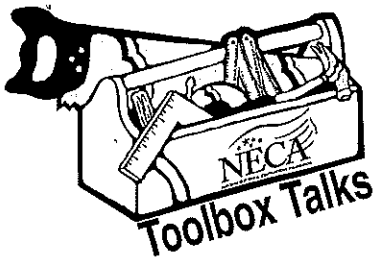

Rigging and Slings

Discussion leader duties for this session:

Obtain a sling to demonstrate making a hitch during the discussion portion.

What this Safety Talk covers:

Rigging dangers and precautions.

Discussion notes :

Importance

Each year, too many people who oversimplify or underestimate the value of proper rigging lose fingers, toes, hands, feet and, in some cases, their lives. Inadequate rigging also damages loads and anything in their path.

Hitches

You use a sling to make a hitch, which is what holds the load to the rest of the rigging.

The three basic kinds of hitches are basket, choker, and vertical.

The basket hitch requires an extra hook. It cradles, rather than pinches, the load.

Use the choker to lift cylindrical items that need extra sling adhesion and can take the force generated by their own weight. An example is a conduit bundle.

If a load has a lifting hook, you can use a vertical hitch to lift it.

Slings

Slings come in a wide range of lifting capacities, weaves, and materials.

Before using a sling, inspect the sling body and the seam of each eye. If a sling shows wear, replace it.

The four basic types of slings are the straight eye, reverse eye, endless, and metal triangle.

The straight eye is also called eye-and-eye, and is general-purpose. Avoid using it for the vertical hitch.

The reverse eye is general-purpose. Because the eyes are reversed, you should use this sling for making the choker hitch. Avoid using it for the vertical hitch.

Think of a no-eye sling. That's what the endless sling is. It can provide more strength than an eyed sling, and using it is trickier.

A metal triangle, or plate hardware, sling helps extend the life of a sling.

A sling may use a metal triangle on one end only, in which case it works well in a choker hitch used with lifting hook.

A sling may use a metal triangle on each end, making it ideal for a basket hitch but worthless as a choke hitch.

Slings vs. loads

To determine if a given sling can lift the intended load, calculate the maximum lifting angle the sling will experience in the intended lift.

Use the chart that came with the sling to see its lifting capacity for each angle.

The lifting capacity also applies when you use a sling to hold a load in place.

Remember, the lifting capacity decreases as the included angle increases.

Lines

Avoid using fiber rope on pulls that aren't straight. Pad all sharp corners.

Review and Discussion

Why is the subject of rigging and slings important?

What are the three basic hitches and how do you apply them?

In what ways can slings differ?

What is a straight-eye sling? What is its general applicability, and where should you avoid using it?

What is a reverse-eye sling? What is its general applicability, and where should you avoid using it?

How do you use a sling that has no eyes, and what is it called?

How do you determine if a given sling can lift the intended load?

What does lifting capacity do as the included angle increases?

Where should you avoid using a fiber rope?

Where should you position your hands and body in relation to the load when the lift is underway?

If using a wire rope, ensure the ends are correctly seized.

The lift

If possible, release the sling or choker from your grasp before giving the "all clear" signal. You may be able to make this possible by using a board or other prop.

If you must touch any part of the rigging, keep your hand clear of pinch points. Keep your hand as far from pinch points as you can to reduce the possibility a frayed wire will catch your glove and jerk your hand into a pinch point.

You can't always position the hook exactly over the load center, and loads can shift. Anticipate some load movement and position yourself accordingly.

Never place yourself between the load and an object that can trap you in the path of the load's swing. Never stand under the load.

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WEEKLY TOOL BOX TALK #15

Date: 6-10-2020
Topic: Aerial Lifts
Project: _____
Superintendent: _____

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Attending Employees:

Job Site Items Discussed:

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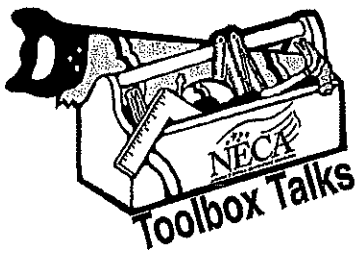

Aerial Lifts

Discussion leader duties for this session:

Obtain an aerial lift to demonstrate key points during the question and answer session.

What this Safety Talk covers:

Inspection, operation, and hazards of aerial lifts.

Discussion notes :

General information

One quarter of all aerial and scissor lift fatalities are electricians.

The major causes of death are falls, electrocutions, and collapses or tip-overs.

Yes, you can die from falling off a lift. But, a lift can also fall on you—be cautious in the presence of a lift, and don't assume the driver or operator can see you.

PPE

Wear your normal PPE when on a lift. The lift doesn't provide any additional protection to the eyes or other body parts.

If you are working near power lines, wear a Class E insulated hard hat, rubber gloves and coverings, rubber sleeves, voltage-rated shoes, and other protective clothing as the job requires.

Wear a body harness when working from the platform. Attach the lanyard to the boom or platform as appropriate.

Do not attach your lanyard to a pole, structure, or other equipment.

Inspection

The company lift inspection program cannot account for damage incurred between scheduled inspections. Thus, you need to look for obvious damage such as cracked welds. If the lift is involved in an incident (e.g., collision or tip-over), do not use it until it has passed a formal inspection.

Test the controls before using the lift. If the lift operates erratically, report the problem to your foreman.

The controls must be clearly identified. If the labels on the controls are damaged, faded, illegible, or missing, report the problem to your foreman.

Operation

Don't operate an aerial lift until you have been formally trained in using it.

Don't tamper with or modify controls or safety devices. For example, do not strap a deadman switch in the closed position "just this one time"—or any other time. Don't block the footswitch or set a heavy object on it.

Observe the manufacturer's specifications and limitations for loading, extension, terrain, and other criteria as noted in the manufacturer's documentation.

Don't move the lift when the boom is elevated and carrying people.

Don't drive the lift with the power take-off engaged.

If driving on a grade, use the lowest speed setting or gearing.

Don't raise the lift unless you can see that the area above the lift is clear of obstructions, especially wires.

Plan for clearances in all directions before initiating any machine functions.

After reaching the working position, lockout the controls if possible.

Stand on the floor; do not stand or sit on the guardrails.

Review and Discussion

Is aerial lift operation an important safety consideration for electricians? Why or why not?

What are the major causes of deaths related to use of aerial lift deaths?

How might an aerial lift pose a hazard to someone on the ground?

How should you attach a body harness and lanyard when you're on an aerial lift?

Who should and should not operate an aerial lift?

What should you do if you discover a problem with the controls?

What should you do if you can speed up the job by modifying the controls, perhaps just temporarily?

What should you not do with the power take-off engaged?

What kinds of operations might require support from people on the ground? What operations on this job site require support from people on the ground, and what should that support be?

What are three rules for operating boom lifts and bucket lifts?

Plan ahead for those operations that require additional people to serve as safety-watches or to provide such assistance as additional outrigging or blocking. Such operations include working around heavy traffic, working on grades, welding from the lift platform or bucket, and working in the presence of hot pipes or utility lines.

Boom lifts

Look in the direction the bucket is moving and be aware of any object in the path of the elbow.

Operate the bucket with the vehicle on an incline only if you are using outrigging approved for the application.

When the hoist vehicle is traveling, the boom must be locked down in its cradle.

Power lines

De-energize and ground, or at least insulate, power lines to the extent possible.

Use only insulated boom buckets, and ground the aerial lift.

Participant's Signature and Date

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WEEKLY TOOL BOX TALK #16

Date: 6-17-2020

Topic: Confined Space Pre-Planning

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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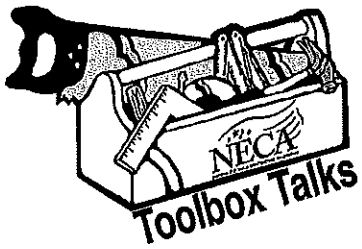

Confined Space Pre-Planning

Discussion leader duties for this session:

Obtain a copy of the company's confined space safety procedures and Confined Space Permit form, and make photocopies for each attendee. Obtain some gear used to work in confined spaces. This gear can include wrist-strap emergency extraction equipment, respirators, and gas meters.

What this Safety Talk covers:

What the worker needs to know and do to before signing off on the Confined Space Permit.

Discussion notes :

Confined spaces and your planning

Confined space work requires certain documentation and planning, which are the responsibility of your management. However, you are the one entering the confined space. While your foreman and other parties do their best to ensure your safety, they can make mistakes. So, be sure to do some advance work of your own. Such work should involve the following steps.

Generic

Review your company's confined space safety procedures. Read them with a highlighter and pen. If you don't understand something in that procedure, address the question to your foreman and/or the safety director.

Review a copy of your company's standard blank Confined Space Permit or Confined Space Permit blank form. Notice the kind of information this form requires. Think of how you would verify the items on that form.

For a specific job

Review the job safety survey personally. If you don't understand something in that survey, follow the "show me" principle until you do understand. Don't accept pat explanations.

Never sign off on something you have not personally verified. Don't sign off on a promise of correction, either. Sign off only when the condition is actually met.

You must re-verify with each entry into a confined space. You have no way of knowing what has changed or not changed in your absence. This means you need a new Confined Space Permit at the start of your shift. You cannot continue on the previous shift's permit.

The Confined Space Permit must bear the signatures of everyone entering the confined space, and it must be posted at or near the point of entry. Your signature means you have verified the conditions of the Permit have been met. Do not sign for anyone else, and do not let anyone sign for you. Do your own inspection. Do not allow a majority vote or other pressure to convince you to waive your responsibility to do a personal inspection.

Don't assume the checklists and other documentation cover everything you need—people make mistakes. Physically walk through the documentation in a "dry run" as close as possible to actual conditions. Look closely at the means of ingress and egress, emergency extraction, fall protection, and contingency plans.

Ensure the plan provides for a way to safely pass tools, equipment, and materials into and out of the work area.

Think through the job to be done, and assess how realistic the estimates are for time and personnel.

Assess the adequacy of ventilation. For example, a fan placed at the entrance of a large vessel might produce a reasonable temperature at the entrance. But, if the air isn't flowing through the vessel, the temperature farther in may be dangerous.

The same principle applies to gas mixtures. Use safe procedures to check for the presence of gases at all levels. Some gases are lighter heavier than air and will settle in low spots.

Review and Discussion

What are some important things to remember from the company's confined space safety procedures?

Why should you personally verify each item in the Confined Space Permit?

What are some key items to verify in any Confined Space Permit?

When must you verify what is on the Confined Space Permit?

Who must sign the Confined Space Permit?

If you are in a hurry, can someone you trust sign the Confined Space Permit for you? Why or why not?

What does your signature on the Confined Space Permit mean?

What do you need to know about MSDS?

What do you need to know about tools being brought into the confined space?

Is a safety measurement (such as temperature or gas concentrations) taken at any one point sufficient for the whole confined space? Why or why not?

Read the Material Safety Data Sheets (MSDS) for the materials you'll be using and ensure the plan covers all relevant PPE, monitoring requirements, containment measures, clean-up measures, and first-aid.

Ask who the attendant will be, what the qualifications of the attendant are, how you will communicate with the attendant, and how the attendant will communicate with others. Ensure the attendant has sufficient equipment and physical strength to extract everyone from the confined space in the event of an emergency. This may mean requiring more than one attendant.

Demonstration

Pass out copies of the company's confined space safety procedures and Confined Space Permit blank form. Identify key areas of concern. Identify proper ways to verify the information supplied by the person filling out the form.

Show the proper use of equipment you brought to the session.

Participant's Signature and Date

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WEEKLY TOOL BOX TALK #17

Date: 6-24-2020

Topic: Arc Blast Hazards

Project: _____

Superintendent: _____

Attending Employees:

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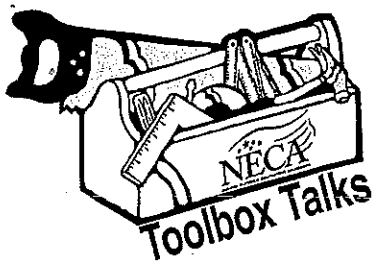

Arc Blast Hazards

Discussion leader duties for this session:

Obtain a flash suit, so you can demonstrate proper use during the discussion session.

What this Safety Talk covers:

How to reduce the likelihood of an injury from arc blasts, and how to reduce the likelihood of a blast in the first place.

Discussion notes :

Why an arc blast is serious business

An arc blast generates temperatures four times hotter than the surface of the sun. It will vaporize any material in its path.

An arc blast creates a pressure wave that can kill by percussion alone. This pressure wave can also introduce additional electrical hazards and additional impact hazards.

Hearing damage from an arc blast can be permanent.

The blast can force molten copper through the skin.

PPE for high-risk areas

Replace insertable earplugs with earmuffs. The acoustic pressure from the blast could drive an insertable earplug into the ear.

Wear flame-resistant clothing or a flash suit, even if you are not directly involved in the work. This suit greatly decreases the amount of injury you might receive.

Wear a face shield and hood with the flash suit. Safety glasses will not protect your face, though you do need to wear them with the face shield for additional projectile protection.

Do not wear synthetic clothing under the flashsuit. Should that clothing catch fire from a hot object driven through the flash suit, you will not get clothing off in time to prevent serious burns or death. This applies to socks and underwear, also. Wear natural fibers only.

Arc blast prevention

Certain situations are high risk. For example, Medium Voltage switchgear handles a high-energy load. Perhaps you wish to operate this switchgear to take the load offline. The proper way to do this is to shut off the smaller loads (the branches) and work your way up the "energy tree" to the MV switchgear (the trunk). When you take this approach, you greatly reduce the amount of energy jumping across the contacts or from the contacts to ground.

When connecting or disconnecting test equipment, work with one lead at a time. If you remove test leads simultaneously from energized equipment, you will very likely create an ionized path that makes a phase to ground fault almost a certainty.

Use tools insulated for the voltage levels at which the equipment is rated, regardless of whether the equipment is energized or not. If this is a new installation with no incoming power wiring, this caution doesn't apply.

If you can de-energize the equipment and ground it out, always do so.

If you must work hot, reduce the working load on the equipment as much as possible.

If you must work hot, ask operations people to suspend use of the equipment as much as possible. Your goal is to reduce the number of variables and the number of changes that could result in a fault.

Use only tools and test equipment rated for use on the equipment you are working on.

Review and Discussion

How hot can an arc blast get?

What kind of damage can an arc blast do to you?

Why should you not wear insertable earplugs, if the danger of an arc blast exists?

When should you wear a flash suit?

What PPE should you wear with a flash suit?

What should you wear under a flash suit?

In reference to loads on equipment, how can you reduce the risks of an arc blast?

Why should you inspect test leads before use?

What equipment inspections can reduce the risk of an arc blast?

What do you need to know about the system the equipment is part of? What about branch circuits, panels, feeders, and disconnect devices? What part of this should be part of your lockout/tagout efforts?

Inspect the equipment and the environment before doing the work.

Prevention through inspection

Inspect your test leads before use. Damaged insulation can create an ionized path between the leads. When they are connected between energized equipment and ground, a ground fault will exist and that can easily create an arc blast.

Inspect the equipment before working on it. Look for signs of misuse, tampering, and corrosion. Look for missing barriers at the terminals. Do a thermographic scan to determine if a fault is in progress or likely to happen. If the equipment is faulty, you are at very high risk for an arc blast. Stop work and consult your foreman immediately. A process shutdown may be unavoidable, or even desirable, versus the cost of working hot on equipment that is likely to go into a catastrophic failure mode if the work continues.

Inspect the system. Drawings are often wrong, outdated, or incomplete. You may think you have done a proper lockout/tagout, but if you relied purely on the drawings you may not have found all the energy sources for a given piece of equipment.

Participant's Signature and Date

PAGODA ELECTRICAL Inc.

Progressive • Professional • Prestigious

WEEKLY TOOL BOX TALK #18

Date: 7-1-2020

Topic: Tools - Power Tool Safety

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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Tools–Power Tool Safety

Discussion leader duties for this session:

Obtain a manual for one of your power tools and read it.

What this Safety Talk covers:

Avoiding injury from misuse of power tools.

Discussion notes :

General rules for use

The minimum PPE is a pair of safety glasses. Hearing protection is usually warranted.

Do not wear loose clothing around rotating equipment, including power tools. This includes work gloves—use the proper type. Ask your foreman if you are unsure.

If you have long hair, wear it put up in a hairnet, ponytail, or other restraint to keep it from getting caught in the rotating parts.

Use the correct attachments and any guards that go with them.

Do not use a dull drill bit or a rounded screwdriver bit.

Inspect the tool before use.

Don't carry tools up and down ladders. Raise and lower them in buckets or other devices, or have someone hand them to you.

Drilling

Mark your hole and set up the job so you can drill as straight as possible.

Don't hold a drill by the vents. An arc can burn your hands.

Use the handle that attaches to the side of the drill to reduce the chance of wrist injury as you break through the hole or if you have other high-torque demands.

Use a sharp drill bit that is appropriate for the material you are drilling.

Avoid turndown shanks. Using such shanks often causes you to exceed the capacity of the tool.

Use cutting fluid if appropriate.

Do not use a wood bit on a pre-existing hole. Doing so will bind the bit, and the twisting of the drill can injure—or even break—your wrist. It could also snap the bit and throw it in your face.

Make sure you are on good footing so you don't slip.

Use the right hole saw for the material, preferably one with a starter drill to reduce slippage. See the manual if in doubt.

If drilling masonry, use a masonry bit and a masonry drill or other tools made for that purpose. Do not use these tools for non-masonry holes.

Deburr any hole after making it.

Corded tools

Use corded tools with a GFCI, unless you have an assured grounding program. If you do have such a program, using a GFCI adds even more protection.

Avoid tripping hazards when laying out portable cords. Inspect portable cords before use. Never wrap a power cord or portable around your wrist, leg, or other body part. Keep cords out of water. Use industrial cords.

Match the capacity of the tool to the job.

Review and Discussion

What is the minimum PPE for using power tools?

What are some issues with work gloves and power tools?

What do you need to do to avoid "catch" injuries from rotating parts?

Why should you not use a dull drill bit or rounded screwdriver bit?

When should you inspect a power tool?

How should you get power tools to your work location if you are working on an elevation such as a ladder?

If you need to set anchors in masonry, what kinds of power tools and attachments should you use? Not use?

Why should you use the handle attachment when drilling? What are some drilling errors that can lead to injury?

What are some rules for corded tools?

What are some rules for battery-powered tools?

Use tools or fixtures, rather than bare hands, to hold and support materials being worked on. For example, use clamps, pliers, vices, or pipe cutting tripods.

Battery tools

A double-insulated battery-powered tool is very safe. It is not a license for carelessness. Drilling into a live conductor, even with such a tool, can be lethal.

Charge your battery before us, so you don't have to climb up and down ladders to get a replacement.

Don't use a battery-powered tool that is reaching the end of its charge. This is like using a worn screwdriver. Something will slip.

If you can use a self-locking chuck rather than key-tightened chuck, do so. This prevents slippage.

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WEEKLY TOOL BOX TALK #19

Date: 7-8-2020

Topic: Injury Prevention Ears

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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PROTECT YOUR EARS!

posure to loud noise kills nerve endings in the inner ear. The result is permanent hearing loss that nnot be corrected by surgery or medicine. You may not realize how noise exposure can damage you aring, even at relatively low levels of noise. The following chart shows sound pressure levels with ex ples of sounds that generate these pressures and an indication of the amount of time you can be posed before permanent hearing loss can occur.

Sound Pressure Level	Sound Example	Time Limit
80dB	Traffic at 10 metres	24 Hours
85dB	Radio or TV	8 Hours
90dB	Lawnmower	2 Hours 30 Minutes
95dB	Noisy Restaurant	45 Minutes
100dB	Power Tools	15 Minutes
105dB	Nightclub	5 Minutes
110dB	Live Orchestra	1 Minutes 30 Seconds
115dB	MP3 player on maximum	30 Seconds
120dB	Rock Concert	10 Seconds
125dB	Fireworks	3 Seconds
130dB	Jet taking off at 100 metres	1 Second
Above 130dB	Gun Shot	None

BAPP HEARING PROTECTION SUGGESTIONS:

- Wear high-quality industrial earplugs or ear muffs to protect your ears when in high noise environments.
- Always wear hearing protection when operating heavy equipment.
- Avoid high noise areas if you don't need to be in them.
- Quit smoking - studies show that smoking affects cells throughout the body, including those in the ear canal.
- Never stick anything inside your ear canal, including objects to remove earwax. Not only can cotton swabs and other stick-like devices damage your hearing by puncturing your ear drum, but they can also inadvertently push the wax and debris farther inside your ear canal.
- Many experts agree that continual exposure to more than 85 decibels is dangerous to your ears. Chains saws,pneumatic drills, snowmobiles, and sandblasting are just some of many examples of things that produce >85dB.
- Ordinary cotton balls or tissue paper wads are very poor substitutes for proper ear protection and only reduce noise approximately 7dB.

Injury Prevention–Ears

Discussion leader duties for this session:

Take a walk and look for high noise areas on this jobsite. Note what kinds of hearing protection would apply to those areas, and ask crew members to tell you what they think would apply.

What this Safety Talk covers:

False assumptions about ear protection and cautions to take.

Discussion notes :

Why this is important

Hearing loss is a major preventable health problem.

Damaged hearing reduces your ability to communicate on the job, and it results in social and marital problems.

There is no sense in leaving yourself open to a personal loss.

False assumptions

Many of us assume that wearing foam ear plugs when the sign tells us to "wear hearing protection" is all we need to do to protect our ears. This isn't true. Ear plugs are just one form of ear protection, and areas with signs requiring hearing protection are just one situation where you should wear ear protection.

Many of us assume hearing protection and ear protection are the same. This isn't true. Ear protection is more inclusive than hearing protection, but ear protection equipment doesn't necessarily provide hearing protection and vice-versa.

Many of us assume hearing loss is a natural result of aging. This isn't particularly true. Hearing loss due to excessive noise is preventable.

Many of us assume we can always get a hearing aid, so hearing loss isn't important. This isn't true. Hearing aids do not provide the same quality of hearing that undamaged ears do.

Many of us assume that if we have passed a hearing test we don't need to worry about our hearing. This isn't true. Hearing tests don't catch damage until it has happened, and standard hearing tests are not comprehensive enough to catch all damage that does occur.

Hearing protection

Wear hearing protection whenever you must raise your voice to carry on a normal conversation.

Wear hearing protection whenever you are around machinery that could start without notice and alarm systems that are likely to go off,

You should wear hearing protection whenever the noise levels exceed OSHA limits on or off the job. Damage can occur even when you are having fun.

Wear hearing protection any time you operate a firearm.

Personal hearing protection includes rollable foam plugs, molded plugs, over the ear muffs, or other devices.

Do not wear ear plugs if you are at risk for an arc blast. The concussion could drive those plugs into your ears and render you permanently deaf.

Environmental hearing protection includes noise shields, soundproofing, restricted access, and closed doors. If you find any of this hearing protection damaged or not functioning properly, report that to your foreman.

Noise isn't the only thing that can damage the inner ear.

Be careful when blowing your nose. In addition to damaging your inner ear, excess pressure can rupture your nasal membranes. There isn't much between them and your brain.

Review and Discussion

What are some reasons ear protection and hearing protection are important?

Are hearing protection and ear protection the same?

Is hearing loss a consequence of aging, or is it preventable?

Should you preserve your hearing or just plan on getting a hearing aid?

If you passed a hearing test, are your ear protection worries over?

When should you wear hearing protection?

What are forms of personal hearing protection?

What are forms of environmental hearing protection?

What are steps you can take to prevent hearing loss?

How can you protect your outer ears?

If you are congested, drink plenty of water. Also, take a decongestant to alleviate ear pressure. Because antihistamines have a hangover period, you should take them early enough that the medication's effective time ends two hours before you start work or operate a motor vehicle. For example, take a 4-hour antihistamine no less than 6 hours before you must be alert.

Outside ear protection

Your outer ear does not have great blood flow, and is in an exposed location if your hair isn't growing over it. It is prone to both sunburn and frostbite. It's a prime location for the start of skin cancer, as well.

In summer, apply sunscreen to your ears and nose to prevent sunburn and to reduce the likelihood of skin cancer. Even if you are a person of color, sunscreen will help you in this regard.

A winter hardhat liner provides added cold weather protection for your outer ear.

You may need to supplement your winter liner with a cotton headband around your ears. Do not wear polyester or other synthetic fabrics.

Do not wear a winter knit cap unless you expand your suspension system to allow room for it and the hardhat is still secure with the hat under it. Never wear anything between your suspension and your liner.

Participant's Signature and Date

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WEEKLY TOOL BOX TALK #20

Date: 7-15-2020

Topic: General Duty Clause

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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Weekly Safety Meetings Standard Subscription
Safety Training for the Construction Industry
Safety Meeting Outlines, Inc.

COMPANY NAME: _____

The General Duty Clause

Maybe you've heard of the General Duty Clause. That's the common name for Section 5(a)(1) of the Occupational Safety and Health Act of 1970. Its goal is to make sure that your work environment is safe. It states: "Each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his or her employees."

The General Duty Clause is important for you. If you face a serious and recognized hazard on the job, the company has an obligation to protect you—even if there is no OSHA standard that addresses that specific hazard. Tell your supervisor so you can work together to fix the problem. Here are some examples of General Duty Clause violations:

- work tasks that include repeated lifting over shoulder height,
- the lack of an emergency stop on machinery,
- ineffective ventilation, and
- workplace violence.

OSHA can issue a General Duty Clause citation only when all of the following conditions are met:

- There must be a hazard.
- The hazard must be recognized.
- The hazard causes or is likely to cause serious harm or death.
- The hazard must be correctable.

We all have to watch for and identify hazards. The company has a responsibility to provide a safe place to work, but no one can protect you from unknown or unidentified hazards. Pay attention to your instincts. If there's a situation that just doesn't feel right to you or you have a sense that it might be dangerous, talk to your supervisor. There's a very good chance that you're right, and it might also be a General Duty Clause violation. Use your knowledge and training. Think carefully about the job before you start. Sometimes habits can make a dangerous job seem safe because "that's the way we've always done it."

No matter how many safety rules and OSHA standards there are, no one person can identify every hazard. You play a very large part in safety. You are the "boots on the ground." You see what's happening on the jobsite every day—and you may notice hazards before anyone else does. When you see a dangerous situation or a situation that could potentially become dangerous, do something. If you have the authority and know what to do, stop the work and get people out of danger. If you can't, tell your supervisor immediately! Don't wait for an accident to happen. Ignoring danger could mean a costly citation for the company; it could also mean a deadly accident.

SAFETY REMINDER

Next time you walk past a fire extinguisher, check the gauge and the inspection tag. If the gauge isn't in the green or the tag is more than a year old, tell the boss.

NOTES:

SPECIAL TOPICS /EMPLOYEE SAFETY RECOMMENDATIONS/NOTES:

S.A.F.E. CARDS® PLANNED FOR THIS WEEK:

REVIEWED MSDS # SUBJECT:

MEETING DOCUMENTATION:

JOB NAME:

MEETING DATE:

SUPERVISOR:

ATTENDEES:

These instructions do not supersede local, state, or federal regulations.

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WEEKLY TOOL BOX TALK #21

Date: 7-22-2020
Topic: Hard Hats
Project:
Superintendent:

Attending Employees:

Job Site Items Discussed:

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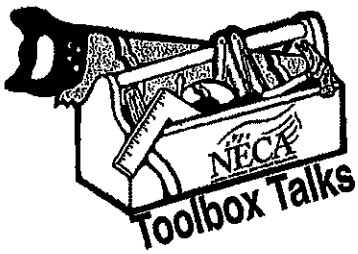

Discussion leader duties for this session:

Obtain a spare hardhat and a small hammer for a demonstration. Also, read the label in your hardhat and note its type and class.

What this Safety Talk covers:

The advantages of wearing a hardhat, and why they are required.

Discussion notes :

Hardhats

When to wear

Wear your hardhat any time you are on the job site, other than in an office or trailer.

Types and classes of hardhats

Type I hats reduce impact from a blow to the top of the head.

Type II hats reduce impact from a wider range of blows.

Class C hats provide no electrical protection.

Class E hats provide protection from high voltage, and are proof-tested to 20,000V.

Class G hats provide protection from low voltage, and are proof-tested to 2200V.

What the hard hat does for you

Your hardhat helps identify you, thus improving security for everyone.

It provides some protection from falling objects, arcs, and objects your head might strike in close quarters. Your hat protects you from impact only if you have not altered the suspension system by placing things (other than a cold weather liner) between the suspension and the shell. Ensure your suspension isn't so loose it wobbles and not so tight it pinches your skin.

It is mechanically protective to the extent you have maintained the shell integrity. This means you cannot drill holes into it or alter the shell in any way. The solvents in paint can weaken the hat. Crystal clear acrylic spray may be acceptable, but get approval from your safety director before use.

It is electrically protective to the extent you have maintained shell integrity plus insulating properties. The more you alter the surface of the hat, the less protection it provides. Ink, pencil marks, paint, and paper create conductive paths on the hat, so keep writing and stickers to a minimum.

It keeps you cool. Measurements taken in hot weather show that the temperature in a properly worn hardhat is often less than the temperature outside. That's due to a combination of airflow, evaporation, and shading.

What you should do for your hard hat

Properly adjust the suspension system.

Leave the shell intact. Don't drill holes in it, and don't swath it in stickers or other decorations.

Store it in a clean place out of the path of concentrated sunlight. Your car's rear window is not such a place.

Wash it with warm soapy water, and rinse the soap off thoroughly, when the hat shows signs of dirt accumulation. Wash the sweatbands and cradles, too.

Replace the suspension system if it is worn or damaged.

Replace the hat if it has dents, cracks, or signs of wear.

Replace the hat if it's been subjected to an impact. It might not have been damaged, but you don't know for sure.

Review and Discussion

When should you wear your hardhat?

What is the type and class of the hardhat you are wearing? Is it correct for the kind of work you are doing?

How does a hardhat protect you mechanically?

How does a hardhat protect you electrically?

What must you do to ensure the integrity of this electrical protection?

Can a hardhat increase your hot weather comfort? Why?

Why is the suspension system important, and what must you do to ensure it works for you?

How should you store your hardhat?

When should you replace your hardhat?

What are some "don'ts" for hardhats?

Don'ts

Don't heat it or bend it, and don't modify the visor.

Don't use the area between your head and the shell as a storage bin.

Don't wear it backwards or sideways. The front brim is designed as eye and face protection.

Demonstration

Have a volunteer wear the sample hard hat, adjusted properly. Tap the hat with the hammer, but don't use much force. You can get the point across without causing a neck injury! Ask the crew members present if anyone wants to volunteer to do this trick without the hat. Note that the hat, having absorbed the impact, may be damaged and should be replaced.

Participant's Signature and Date

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WEEKLY TOOL BOX TALK #22

Date: 7-29-2020

Topic: Emergency Response

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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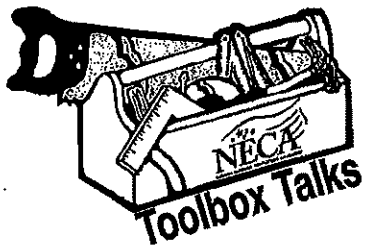

Emergency Response

Discussion leader duties for this session:

Obtain a map of the site's emergency exits and assembly areas. Provide a copy for each crew member.

What this Safety Talk covers:

Some things to keep in mind when an emergency arises.

Discussion notes :

Fires

You can extinguish small fires with a class C fire extinguisher. Do not use a water-charged extinguisher around electrical gear or fuel. Look for a pillar with a red band or other red marking to locate a nearby fire extinguisher.

If the fire is too large or too smoky, or the smoke is acrid, do not attempt to fight the fire. Use the extinguisher to aid your escape. You can use it to sweep a hole through a barrier of fire, bash a window or door open, or push smoke out of your way. Stay low to the ground when escaping. Most fire-related fatalities are from smoke inhalation. How low you should be depends on how much smoke there is. You want to keep your head below the smoke, if possible.

If an extinguisher is charged, do not use it as a battering tool. When using an extinguisher to bash, say, a door, aim the top of the extinguisher so the valve and regulator point away from your head and body.

Do not use a fire hose unless you are trained and part of a team. Improper use can easily result in decapitation or electrocution.

If escaping a fire, report to your assembly area so your foreman knows where you are. You do not want a rescue attempt undertaken for a person who is not already safely outside the danger area.

Weather and other natural disasters

In the case of hurricanes, high winds, tornadoes, or earthquakes, report to the designated assembly area. If there isn't one designated, go inside for hurricanes or tornadoes and stay away from windows. For earthquakes, go outside and stand away from buildings.

In the event of a flood, de-energize at the main panel as the water approaches. Then, get to high ground. If flood water is already at the main panel, leave it.

Do not attempt to cross a flood area with any moving current, whether on foot or in a vehicle.

Bomb Threats

Always assume a bomb threat is valid. Follow the evacuation directions announced over the over the PA system.

If you get a phone call announcing a bomb, write down as much information as possible, and notify your foreman immediately.

Terrorists

In this post-September 11 era, the rule is "fight back." Do not count on terrorists to release you safely. Anything can be a weapon—rigid metal conduit is an example.

If you suspect terrorist activities, report your observations to your foreman.

Trapping

It is possible for someone to be trapped under debris from a lift truck accident, excavation collapse, or other disturbance. Stay calm, even if this happens.

Review and Discussion

If you are not on the first response team, do you still need to know about emergency response? Why?

What are some important things to remember about using a fire extinguisher?

Should you use a fire hose? Why or why not?

Where should you report to, after you escape a fire?

Where should you report in the case of earthquake, tornado, or hurricane? What are some rules about this?

What should you do as floodwaters approach? What if floodwater is already at the main panel?

What should you do in response to a bomb threat?

What is the rule about terrorists, in the post-September 11 era? What does this mean to you, personally, and what are some options you have?

What should you do if a lift truck knocks a stack of outgoing product boxes onto a coworker, who is subsequently buried in those boxes? What if an operator opens a discharge from a plastics or grain silo and buries your coworker?

What should you do if a backhoe breaks a utility line? What are the rules regarding the various types of utilities?

Call for help immediately and cordon off the area to prevent traffic.

Be careful moving items off the trapped person—you could dislodge something that is preventing that person from being crushed.

Utility break

In case of a gas break, shut off the gas supply and provide ventilation. Call the gas company.

In case of a water break, shut off the water supply and provide drainage. Call the water company.

In case of an electrical break, shut off the power source. Keep everyone out of the area until the utility can safely restore power.

Participant's Signature and Date

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WEEKLY TOOL BOX TALK #23

Date: 8-5-2020

Topic: Protecting Workers from Heat Stress

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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OSHA - PROTECTING WORKERS FROM HEAT STRESS

The past few summers have shown that the risk of heat illness from high temperatures is one of the most serious challenges to the safety and health of workers. There are precautions you should take any time temperatures are high and the job involves physical work.

Risk Factors for Heat Illness:

- High temperature and humidity, direct sun exposure, no breeze or wind
- Low liquid intake; previous heat illness
- Heavy physical labor
- Waterproof clothing
- No recent exposure to hot workplaces

Symptoms of Heat Exhaustion:

- Headache, dizziness or fainting
- Weakness and wet skin
- Irritability or confusion
- Thirst, nausea or vomiting

Symptoms of Heat Stroke:

- May be confused, unable to think clearly, pass out, collapse or have seizures (fits)
- May stop sweating

To Prevent Heat Illness, You Should:

- Provide training about the hazards leading to heat stress and how to prevent them.
- Provide a lot of cool water to workers close to the work area. At least one pint of water per hour is needed.
- Schedule frequent rest periods with water breaks in shaded or air-conditioned areas.
- Routinely check workers who are at risk of heat stress due to protective clothing and high temperature.
- Consider protective clothing that provides cooling.

Always remember, if the worker is not alert or seems confused, this may be a heat stroke. CALL 911 IMMEDIATELY and apply ice as soon as possible.

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WEEKLY TOOL BOX TALK #24

Date: 8-12-2020

Topic: Injury Prevention - Eyes

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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Watch Your Eyes

Your power drill or sander can throw particles into the air faster than you can see them coming. Any machine which cuts or grinds, or the force of air bursts from an air compressor, could shoot a tiny piece of metal into your face. Suddenly you could have a serious eye injury. You might not be the employee who is operating the equipment or working with the hazardous material, but if you are in the vicinity without protection your eyes could be in danger.

Other hazards to your eyes on the job as a custodian could include a splash of a chemical cleaning compound or a blow to the eye from a falling object such as a storage box.

Eye protection can help prevent these types of damage. Safety glasses come in the plain form or with side shields or face shields. You can get goggles, and even hoods or helmets, depending on the task and its hazards.

Prescription or non-prescription lenses in protective eyewear can protect you from specific hazards such as heat, infrared or ultraviolet radiation or impacts.

Keep in mind you may need eye protection not only for your own work, but for work being done in the area you are cleaning or maintaining. For example, if someone is welding, you will need specially tinted glasses to prevent a painful injury called welder's flash.

Here are some types of eye protection used in different work environments:

- Safety glasses protect you from impact from the front.
- Side shields on safety glasses provide additional protection.
- The correct eyewear, such as goggles, should be worn under face shields and welders' helmets for added impact protection.
- Goggles give protection from solid particles coming at the eyes from the top, bottom and sides.
- Welding goggles filter the intense light.
- Chipping goggles protect from sparks and particles but not from intense light.

Keep your safety eyewear in clean and good condition by replacing damaged lenses or loose frames. Your eye protection should not fog up, slip off easily or cause you headaches. If it fits well and is comfortable you will be more likely to be wearing the safety gear when a particle comes flying at you.

You should also know the locations of eyewash stations in your workplace, and be prepared for any emergency by knowing how to use them.

Never use compressed air to clean anything, because the force of the air could hurtle an object into someone's face.

Learn what the proper protection is for your job, then wear it. And don't forget about sunglasses when you are working outside.

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WEEKLY TOOL BOX TALK #25

Date: 8-19-2020

Topic: Blood-Borne Pathogens

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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Bodily Fluid Cleanup Safety

Helpful tips for reducing your risk of serious disease

Sometimes the workplace brings surprises when we least expect it. That includes coming in contact with blood or other bodily fluids such as vomit. Pagoda Electrical, Inc. wants you to be prepared to protect yourself from bloodborne pathogens and other infectious materials that can be hazardous to your health.

Know How to Stay Protected

Blood and body fluids can contain microbes that cause illness and disease when you come into contact with them. This may occur when you're handling and disposing of contaminated trash or waste, or when you're cleaning up after an accident or unusual situation involving bodily fluids. To minimize your exposure, consider the following recommendations:

- Wear appropriate personal protective equipment (PPE). This may include gloves, protective eye goggles or a mask. Always check to make sure the PPE is not damaged before use, and remove it carefully to avoid self-contamination. Dispose of contaminated protection properly in a leak-proof container that is marked for disposal or decontamination.
- Do not clean up a mess involving blood or bodily fluids unless you've been trained on the proper use of PPE. Notify your supervisor, who can find someone who is adequately trained in safe cleanup methods.
- Wash yourself thoroughly after removing PPE. Cover any open wounds or cuts to protect against unnecessary exposure.
- Use good work practices and common sense while cleaning up blood and bodily fluids. Try to avoid splashing these materials as you soak them up.
- Clean and disinfect all equipment and surfaces in contact with blood or other infectious material safely.

What to Do if You're Exposed

If you are exposed to blood or other bodily fluids, immediately do the following:

- Wash the affected area thoroughly.
- Report the incident to your supervisor, complete an incident report form and receive prompt follow-up care by a medical professional.

If your eyes, mouth or broken skin come in contact with blood or other infectious materials, flush the area with water and request immediate medical treatment. You may also have to do the following:

- Document what occurred.
- Identify and test the source of the fluids, if possible.
- Test your blood for possible disease exposure.

Be safe and healthy on the job at **Pagoda Electrical, Inc.** with these helpful tips provided by **EHD.**

Three of the most serious infectious diseases that are transmitted through human blood products and bodily fluids are hepatitis B, hepatitis C and HIV.

EHD

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WEEKLY TOOL BOX TALK #26

Date: 8-26-2020

Topic: Fire Extinguisher Safety

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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Fire Extinguisher Safety

Properly fighting small fires

Fire extinguishers are designed to fight fires in their early stages when the fire presents a relatively small hazard. An extinguisher can be used when the fire possesses the following characteristics:

- Small
- Slow growing
- Giving off minimal smoke
- Emitting minimal heat

If a fire is too large, if there is too much smoke or if you are too frightened, evacuate immediately.

PASS

Use the PASS method:

P=Pull

- The safety pin is usually held in place by a plastic seal and will pull off. Do not push down on the operating lever while pulling the pin, it won't come out.

A=Aim

- Aim at the base of the fire, the lowest flame closest to you. The base of the fire will recede from you as you use the extinguisher, so you must adjust your aim.

S=Squeeze

- The operating lever is above the carrying handle. The operating lever opens the valve when you squeeze it down. When you let go, the valve closes and the discharge stops

S=Sweep

- Sweep the nozzle by moving your arm at the elbow. Direct the discharge to cover the entire width of the base of the fire.

Know Your A, B, Cs

Using the wrong fire extinguisher can result in more damage than the fire itself. All extinguishers have nameplates identifying their usage instructions, as outlined below.

Class A Fires

- Only use Class A extinguishers for wood, paper, trash and other items that produce glowing embers as they burn. Class A extinguishers should never be used on gas or electrical fires.

Class B Fires

- Only use a Class B extinguishers to fight fires caused by flammable liquid and gas (gasoline, paint thinners, solvents, grease and acetylene).

Class C Fires

- Use a Class C extinguisher only to fight energized electrical equipment fires.

There are also extinguishers known as a Class ABC extinguishers, which can be used for all types of fires.

Be safe and healthy on the job at **Pagoda Electrical, Inc.** with these helpful tips provided by **EHD.**

Never feel like you have to stay and fight a fire. If at any point you feel like your safety is threatened while using a fire extinguisher, get out immediately.

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WEEKLY TOOL BOX TALK #27

Date: 9-2-2020

Topic: Are You A Qualified Employee

Project: _____

Superintendent: _____

Attending Employees:

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Job Site Items Discussed:

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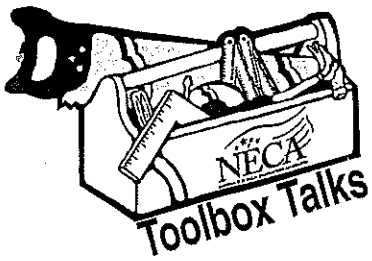

Are You a Qualified Employee?

Discussion leader duties for this session:

Think of an example, from the job at hand or from your own experience, where a particular task is dangerous for an unqualified person to do. Explain this example during the discussion session.

What this Safety Talk covers:

The meanings and implications of the phrase "qualified employee."

Discussion notes :

Background

Many injuries happen because people performing a certain task make errors that proper training would have prevented. Too many people misapply the phrase "qualified employee." This has nothing to do with how smart you are, what trade you are in, whose payroll you are on, or whether you are authorized to be in a given area of a facility. The phrase applies to specific tasks.

Examples of misapplications

A Master Electrician energizes a control circuit, despite not understanding the process. This causes the release of sulphur dioxide into the atmosphere.

A foreman asks, "Can you take a look at some Medium Voltage Switchgear for us?" An electrician trained only in low voltage operations throws the breaker under full load. The result is an arc blast that kills three people.

An electrician who is certified to operate a particular model of scissor lift obtains a bucket truck for a particular job. He takes all the precautions that apply to the scissor lift, but he extends the bucket too far laterally and tips over the entire apparatus from 30 feet up.

In these examples, each person is highly qualified. But, he is not qualified for the task at hand. That is the key concept to understand. In no case is someone from a trade other than the electrical trade qualified to do electrical work. An apprentice or journeyman who has not received formal training in a particular task may be considered a qualified employee for that task if working under the direct supervision of a person who has completed the necessary training to be a qualified employee.

You may be a "qualified employee" if

- You have up-to-date formal training in the hazards and precautions involved in a specific type of task and in the equipment used to complete it.
- You understand the hazards and precautions involved in a specific type of task or operation and in the equipment used to complete it.
- You have up-to-date formal training in the emergency procedures specific to the job at hand and to the equipment used to complete it.
- You understand the emergency procedures specific to the job at hand and to the equipment used to complete it.
- You know how to identify, lock out, and tag out energy sources particular to the task.
- You know how to verify de-energization of a given circuit, breaker, or equipment being worked with the appropriate measurement device.
- You know the approach distances, PPE requirements, grounding requirements, and insulating requirements for a given piece of equipment.
- You know the decision-making process for determining the extent of potential hazards and you can do the planning necessary to do the job safely.

Review and Discussion

Is it bad to admit you are not a qualified employee? Why or why not?

What should you do if you don't understand the task to be done?

Give an example from this job where only a qualified employee should do the work.

If you know a coworker is about to do a task for which she or he is not qualified, what should you do? Should you ask that person to stop and see your foreman?

If you are short-handed, can a carpenter help you pull 500 MCM wire through a stub-up in a new construction that doesn't have power on site?

If you are short-handed, can a carpenter help you rack out a 2,000 Amp breaker in an energized panel in an operating facility?

Can you be trained and certified, but still not qualified? Why or why not?

Why does knowing the energy sources of a particular piece of equipment fall under the requirements of being a qualified employee?

What are some other requirements of being a qualified employee?

What if you and your foreman disagree on whether you are a qualified employee? How should you resolve this?

Points to remember

Qualification in one skill area doesn't confer qualification in another.

Your having a certificate doesn't necessarily mean you are qualified. If you don't understand the task and its requirements completely, you are not qualified to perform it. Ask for help.

If your foreman determines you are not a qualified employee, you are not a qualified employee. However, it is possible for your foreman to mistakenly determine you are a qualified employee. If you don't feel you are a qualified employee, don't do the work until you can correct the deficiencies.

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WEEKLY TOOL BOX TALK #28

Date: 9-9-2020

Topic: Asbestos Awareness

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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Safety Matters

Provided by: EHD

Asbestos Awareness

Even though most uses of asbestos have been banned, it can still be found in a variety of products, such as building materials and vehicle brakes. Employees can be exposed to this hazardous material during the manufacturing process, brake and clutch repairs, and renovations and demolitions.

The inhalation of asbestos fibers can cause serious damage to the lungs and other organs that may not appear until years after exposure. Asbestos fibers associated with these health risks are too small to be seen with the naked eye, and smokers are at a higher risk for developing asbestos-related diseases if exposed.

The Occupational Safety and Health Administration (OSHA) has standards to protect employees from exposure to asbestos in the workplace, as well as permissible exposure limits and exposure monitoring. OSHA regulations also exist for controlled zones and regulated areas that are designed to protect employees where certain work with asbestos is performed.

Avoid Asbestos Inhalation

The following tips are safety reminders for those who work near or with asbestos-containing materials:

- Never enter a controlled zone that the company has designated as a regulated area where asbestos work is being performed.
- If you are not wearing appropriate respiratory protection, do not enter an asbestos regulated area.
- Do not eat, smoke, drink, chew gum or apply cosmetics in an asbestos regulated area.
- Read and obey all warning signs displayed in asbestos regulated areas.
- When working with asbestos, keep the material wet and vacuum the dust using a HEPA vacuum. Immediately collect and close all waste in bags designed to hold asbestos.

Protect Yourself

- Always wear required protective clothing such as coveralls or similar full-body clothing, head coverings, gloves and foot coverings when working with asbestos. Face shields, goggles and other protective equipment are also necessary.
- Make sure you receive proper training and medical clearance if your work requires use of a respirator for asbestos protection. Use the correct type of respirator for the level of exposure. If you disturb or remove asbestos, you must wear at least a half-face respirator

with N-, R- or P-100 (HEPA) cartridges. OSHA also requires the use of a respirator in some cases when performing roofing and flooring work. Ask your supervisor regarding whether you have sufficient protection.

- Follow all required hygiene and decontamination practices after working with asbestos.

- Leave your work clothes and shoes at work and wash them at work if they are not disposable. Family members of workers exposed to asbestos can get sick from asbestos taken home on an employee's clothing or shoes. If required, shower at work after working with asbestos.

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WEEKLY TOOL BOX TALK #29

Date: 9-16-2020

Topic: Working Safely With Lead

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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Safety Matters

Provided by: EHD

Working Safely With Lead

Lead is a toxic substance that builds up in the body, posing serious health risks to those exposed to it. When you work with lead, it accumulates on your clothing and skin in the form of dust. It can be inhaled or ingested, and can damage the lungs, kidneys, nervous system, intestines and reproductive system. There is no cure for lead poisoning.

Does my Property Contain Lead-Based Paint?

Lead can be found in the paint of buildings built before 1978. The older the home or building, the greater the likelihood that lead is present. Of course, more recent additions to homes are less likely to contain lead-based paint and contaminated dust. Before selling, leasing or performing work on any property, check records to see if you have information about it regarding lead-based paint, and consider lead testing by a certified inspector or renovator. Under a federal disclosure law, any known information about lead-based paint must be provided to the buyer or tenant of a pre-1978 property.

Renovation, Repair and Painting

During activities such as demolition, window replacement or opening up walls, dangerous amounts of built-up lead dust can be released, putting you at risk of exposure. For this reason, firms must be certified to perform this kind of work, and must have one or more "certified renovators" assigned to jobs where lead-based paint is disturbed. Make sure everyone involved in a renovation job, including workers, supervisors and residents, has been trained in safe work practices or has proper information regarding lead-based paint. For more information on regulations on renovation, repair and painting with lead-based paint, refer to the Environmental Protection Agency's website: www.epa.gov.

Doing the Work Yourself

When a landlord works on his or her own property that contains lead-based paint, he must use lead safe work practices. If you perform any activity that disturbs lead-based paint or built-up lead dust, follow these methods.

Contain the Work Area

Contain your work area to keep occupants out and to be sure that other areas of the building are not contaminated with lead dust.

Protect Yourself

Without the right protective equipment, you may ingest or inhale lead or risk bringing it home to your family. Always wear proper protective equipment, including safety goggles, protective coveralls and shoe covers, gloves, a painter's hat and a well-fitting HEPA respirator. Thoroughly wash your hands and face whenever you stop to eat, smoke or use tobacco. Carefully remove all clothing and launder it separately before returning home for the day.

Minimize the Dust

Use wet sanders or misters to minimize dust from sanding and drilling, and never practice

high-powered methods of paint removal that create excess dust.

Leave the Work Area Clean

Clean the entire area using the following methods each day, throughout the day. Wet sweep and wet mop your work area, changing the mop water frequently. Strain out paint chips and debris from the mop water and dispose of them in a plastic bag. Vacuum the walls, tops of doors and windows and the plastic barrier to the work area daily. Use a vacuum equipped with a HEPA filter. Dispose of your personal protective equipment before returning home or place it in a separate laundry container or plastic bag.

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WEEKLY TOOL BOX TALK #30

Date: 9-23-2020

Topic: Demolition & Cleanup

Project: _____

Superintendent: _____

Attending Employees:

Job Site Items Discussed:

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OSHA FactSheet

Demolition and Cleanup

Before starting a demolition, the person or persons in charge must adequately prepare for the task with regard to the health and safety of the workers. These preparatory operations involve the overall planning of the demolition job, including the methods to be used to bring the structure down, the equipment necessary to do the job, and the measures to be taken to perform the work safely. Before doing demolition work, inspect available personal protective equipment (PPE), and select, wear and use the PPE appropriate for the task.

Demolition work involves many of the same hazards associated with construction work. However, demolition also poses additional hazards due to unknown factors such as: deviations from the structure's original design, approved or unapproved modifications that altered the original design, materials hidden within structural members, and unknown strengths or weaknesses of damaged materials. To counter these unknowns, all personnel involved in a demolition project need to be fully aware of these types of hazards and the safety precautions available to control these hazards.

Preliminary Tasks

A written engineering survey must be performed on each structure being considered for demolition to determine the condition of the framing, floors and walls, and to assess the possibility of an unplanned collapse of any portion of the structure. Brace or shore the walls and floors of structures which have been damaged and which employees must enter. Inspect and maintain all stairs, passageways and ladders. Properly illuminate all stairways.

Shut off or cap all electric, gas, water, steam, sewer and other service lines outside the building line. Notify appropriate utility companies. Temporarily relocate and protect any essential power, water, or other utilities.

Determine the types of hazardous chemicals, gases, explosives, and flammable materials which have been used in any pipes, tanks, or other equipment on the property. Test and purge the hazardous chemicals, gases, explosives, or flammable materials. Survey for asbestos or other hazardous materials.

Guard wall openings to a height of 42 inches. Cover and secure floor openings with material able to withstand the loads likely to be imposed. Debris dropped through holes in the floor without the use of chutes must be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Floor openings used for material disposal must not be more than 25% of the total floor area. Use enclosed chutes with gates on the discharge end to drop material to the ground. Design and construct chutes that will withstand the loads likely to be imposed without failing.

Post signs at each level of structures, warning of the hazard of falling materials. Protect entrances to multi-story structures with sidewalk sheds or canopies for a minimum of 8 feet. Canopies must be at least 2 feet wider than the structure entrance and be able to hold a load of 150 lbs./sq. ft. Storage of material and debris must not exceed the allowable floor load.

Removing Walls and Masonry Sections

Demolition of exterior walls and floors must begin at the top of the structure and proceed downward. Masonry walls must not be permitted to fall on the floors of a building in

masses that would exceed the safe carrying capacities of the floors.
No wall section, one story in height or higher, shall be permitted to stand alone without lateral bracing, unless such a wall was originally designed and constructed to stand without such lateral support, and is safe enough to be self-supporting. All walls must be left in a stable condition at the end of each work shift. Employees shall not work on the top of a wall when weather conditions create a hazard.

Structural or load-supporting members on any floor must not be cut or removed until all stories above such a floor have been removed. In buildings of "skeleton-steel" construction, the steel framing may be left in place during the demolition of masonry. Walkways or ladders must be provided to enable workers to safely reach or leave any scaffold or wall. Walls, which serve as retaining walls to support earth or adjoining structures, must not be demolished until the supporting earth has been properly braced or until adjoining structures have been properly underpinned. Walls, which will serve as retaining walls against which debris will be piled, must not be used unless they are capable of supporting the imposed load. Dismantle steel construction column length by column length, and tier by tier.

Mechanical Demolition

No workers shall be permitted in any area when using a crane's headache ball or clamshell to remove debris. Only those workers necessary to perform such operations must be permitted in this work area at any time. The weight of the demolition ball must not exceed 50 percent of the crane's rated load. The crane boom and loadline must be as short as possible. The ball must be attached to the loadline with a swivel-type connection to prevent twisting of the loadline, and it must be attached by positive means in such a manner that the weight cannot become accidentally disconnected.

When pulling over walls or portions thereof, all steel members affected must have previously been cut free. All roof cornices or other such ornamental stonework must be removed prior to pulling walls over. During demolition, continuing inspections by a competent person shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, or walls, or loosened material. No employee shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means.

For more complete information:

OSHA Occupational Safety and Health Administration

U.S. Department of Labor
www.osha.gov
(800) 321-OSHA