



Craig Safety TECHNOLOGIES

Construction Tool Box Talks



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Getting Started

Why Safety Meetings are Important

Not long ago a worker was given the job of covering some large holes in the floor of a wooden elevated work platform to prevent someone from falling through accidentally. The worker decided to place large sheets of plywood over the openings.

While placing a panel of plywood they failed to notice that one edge of the panel was just barely supported at the side of the opening. Later, the worker stepped on the edge of the panel. The panel slipped, tilted and dropped many feet below to their death.

One way to prevent this type of accident is to “tack-nail” each panel with a few nails to secure it properly in place, as it is placed. In this case two or three pennies worth of nails would have saved that person’s life.

But, was it only the lack of a few cents worth of nails? Absolutely not! It was not only the lack of a few nails, but more important it was the lack of “safety sense” or a lack of simple “know how” that killed that person.

In almost every job there are possibilities of injuries-even death. It is important to question everything while working. Size up each job, each machine, each tool used, and apply the best “safety sense” to everything done. Develop the habit of seeking and learning simple “know-how” that might save a life or limb. Always ask, “Can I get hurt if I do the job this way?”

Guidelines for Safety Training Meetings

- The foreman or supervisor is responsible for preparing and conducting Safety Training Meetings for employees **on a weekly basis**.
- These meetings are an essential element of the Project’s Safety and Health Training Program. It is a proven fact that projects that conduct good meetings attain better safety records than those that have poor or no safety meetings.
- In order to assist in the preparation of the materials and in the presentation a safety training meeting, the following guidelines are provided:

Preparing for the Meeting

- Select the topic for the meeting several days in advance to become familiar with

the subject to be discussed. Present the talk in a convincing manner without reading it.

- Schedule the meeting at the same time every week, if possible, and hold it right in the work area. These meetings are generally 5 to 15 minutes in length so seating is not important. However, make sure everyone can easily see and hear. A good time to hold the meeting is just after a shift begins or immediately following the lunch breaks.
- Just prior to the meeting, gather all the material and/or equipment needed. When possible, use the actual demonstrations to illustrate points. For example, when talking about fire extinguishers, have one to show what it looks like, and how it is used. Have a mushroomed tool head or a broken hammer handle to show how they can cause accidents. If necessary, get assistance from someone.
- The entire crew, if possible, should be present before the meeting is started.

Conducting the meeting

- Start the meeting on time. Loss of interest can occur if there are unnecessary delays.
 - Make the meeting short and to the point. However, if a good discussion is going, use discretion about cutting it off to soon.
 - Start the meeting by complimenting the workers on some recent jobs well done.
 - The presenter should use his own words. The background material in this manual is just to give ideas and facts as to what should be covered in a talk.
 - Get people to participate in the meeting. The purpose of these meetings is to get workers to think about safety problems. Encourage them to offer suggestions for improving safety in the work area or their craft.
- Maintain control. Do not allow the meeting to develop into a wasteful, time-consuming “bull session” or a time to complain. Other Items to Cover if Applicable
 - ✓ Review any injury any crewmember had during the past week. Discuss: what the injury was, how it happened, and how it could have been prevented.
 - ✓ Review safety violations noted during the past week. Discuss: the nature of the violation, the danger involved and offers constructive criticism without naming anyone in particular.
 - ✓ Review the work planned for the week ahead. Discuss: hazards to avoid or control, safety equipment to be used, and safe procedures to be followed.

Record Keeping Requirements

- ✓ Make a copy of the attendance sheet found at the beginning of this manual for use at each meeting.
- ✓ Have each employee sign the attendance sheet the conclusion of the meeting and the supervisor conducting the meeting must sign it. A copy of the Attendance Sheet must be forwarded to the Safety's Manager's office.
- ✓ Make certain it is dated and the crafts attending and the meeting location are listed.
- ✓ Subjects discussed must be covered in detail. "General Safety" is not specific enough.

The contractor should consult with the Craig Safety Consultant or a Safety Manager to obtain the latest updates to this material or to receive additional information.

Safety Reminders

The following basic safety requirements should be followed:

1. All guards and covers should be replaced after adjustments or maintenance of equipment.
2. Make sure handrails and walkways are in good repair and clear of tools, spare parts and obstructions.
3. Never adjust or lubricate equipment while it is operating.
4. Stand clear of hauling equipment that is dumping material into a hopper or anywhere else.
5. Always look around equipment before starting to make sure no one is near moving parts, making inspections or adjustments.
6. Do not drop material or tools from walkways or ladders without barricading the area below or having someone standing by to keep other persons away from the danger area.
7. Blocking under and around equipment or structure must be of suitable material and properly placed to support the structure. Periodically check blocking for signs of failure or shifting that could allow structure or equipment to fall.
8. Only electricians should handle any kind of work on electrical equipment. Avoid touching any loose or misplaced electrical wires. Consider them all dangerous.

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9. Mark all flammable materials: such as oils, grease and gasoline. Store these materials in an incombustible building situated always from other structures. NO SMOKING while handling flammable materials.
10. Proper clothing while on the job is important. Wear sturdy shoes to protect feet. Do not wear loosely hanging or torn clothing on the job. This type of clothing can get caught in moving parts of the equipment and generally hinders work. Wear gloves whenever possible. The use of hard hats and safety glasses or goggles is definite safety protective equipment and must be worn when required.
11. Think safety! Having and maintaining an attitude of safety on the job greatly reduces the chances of injury. Point out hazards and instruct new employees on safety.

General Building Site Safety

This section is not meant to cover every rule related to general building site safety, but to give an overview.

Some of the topics you want to touch on during an overview of general building site safety include:

1. Awareness of heavy equipment and machinery moving around on the site, and how to operate the ones required for the individual's job.
2. Picking the right tool for the job, and using it properly.
3. Knowledge of specialized procedures related to work the employee may be involved in on the general building site, like:
 - Blasting/explosives
 - Confined space entry
 - Excavating
 - Lockout/Tagout
 - Welding
4. Wearing the proper personal protective equipment (PPE) for the work being performed.
5. Stop working! Correct the safety hazards or notify the appropriate supervisor so they can correct the safety hazard.
6. By doing the above items during the work day, the odds are your site will be much safer.

Toolbox Talks Attendance Record

Company Name: _____

Topic Presented: _____

Date Presented: _____

Presenter Name (print): _____

Presenter Signature: _____

Attendee Name (print):

Attendee Signature:

_____	_____
_____	_____
_____	_____
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Power Tools/Hand Tools

Don't Take Hand Tools for Granted

Too many people do so, both at home and at work. Household jobs usually are light. So you sometimes can get away with using tools improperly or substituting one tool for another. Our work, however, makes rugged demands on tools. If we misuse a tool, or use one that's wrong for the job or in poor condition, it can result in injury or spoiled work.

CHOOSE THE RIGHT TOOL FOR THE JOB

Would you use an axe to drive nails? Obviously not. You'd use a claw hammer. It's the less obvious misuse of tools that gives us the most trouble, like using a screwdriver or a file as pry bar. Trouble also comes from trying to get by with a tool that's not the right size for the job. A common mistake is using a wrench that's the wrong size for the nut, or one with a handle that's too short. This can result in scraped knuckles or a broken wrench. How many times have you seen a person slip a cheater pipe over a wrench handle for more leverage on a tight nut? In many cases, the cheater pipe slips off the handle and the worker loses his balance and falls. And often it's off a ladder. Don't take chances. Get the right tool, even if it takes you a few minutes longer. You'll probably save yourself lost time and pay.

USE ONLY TOOLS IN GOOD CONDITION

Sometimes the hammer whose head comes off is less dangerous than the one whose head just wiggles a little. In the first case, we know the hammer is dangerous and fix it. In the second case, we never know when the head will twist enough to glance off the work, or just fly off. Tools in proper condition have handles and heads that are sound and securely fitted; cutting edges that are sharp and true. It's usually the dull tool that hurts you. Tools should be kept free of dirt and grease. If a tool doesn't meet these qualifications, don't use it. Otherwise, you're asking for trouble.

USE TOOLS PROPERLY

Very few of us are experts when it comes to using every tool made. If you don't know how to use a tool, don't be afraid to ask someone who does. Here are a few tips for using tools properly:

1. Pull a wrench. Don't push.
2. Use the full handle of the hammer. If you choke up on it, you'll lose control.
3. Always cut away from yourself.
4. Be sure to wear eye protection if there's any chance of chips or flying particles.
5. Don't use a file without a handle.
6. Don't use a chisel or screwdriver as a pry bar.

CARRY AND STORE TOOLS SAFELY

If you carry tools in your hands, keep sharp or cutting edges covered and hold them away from you. Use a tool box or belt when you carry a lot of tools. Don't stuff them in your pockets. Keep the tool box orderly so you can easily find the tool you need without getting cut or gouged. If your buddy wants to borrow one of your tools, hand it to him; don't toss it. Hand tool safety depends on the right tool for the job - in proper condition - used correctly -and carried and stored safely.

Portable Electric Tools

Each year many workers on construction sites suffer electric shock using portable electrical tools and equipment. The nature of the injuries, including those caused by ground faults, ranges from minor injuries to serious secondary injuries. There also is the possibility of electrocution. A secondary injury occurs when a worker recoils from an electric shock and, as a result, sustains an injury. Depending largely on the surrounding physical conditions, such an accident can result in a bruise, a broken bone, or a fatal fall.

HOW ELECTROCUTION OCCURS

Electrocution occurs when the shock current exceeds 70 mill amperes, or there about, causing ventricular fibrillation of the heart and death. Typically, electrocution occurs when employees contact electrically energized parts. It is usually the frame of the tool that becomes accidentally energized due to an electrical fault, providing a conductive path to the tool casing. This conductive path can occur instantaneously or can develop gradually over a relatively long period of time. If a worker contacts an energized tool, an unwanted path or circuit of electricity develops from the tool through the worker to ground. The amount of current that flows through the worker depends, primarily, upon the resistance of the fault within the tool the resistance of the worker, and the resistance of the path from the worker back to the electrical supply. Moisture in the atmosphere may contribute to the electrical fault by intensifying both the conductive path within the tool and the external path back to the electrical supply. Moisture also may increase the severity of the shock by decreasing the worker's contact resistance. Consequently, the extent of the hazard increases with an increase in the amount of moisture at the job site.

METHODS OF PROTECTION

One method of protection against injury caused by an electrical fault is the use of an equipment grounding conductor commonly known as the 3rd, or green, wire. This equipment grounding conductor grounds the exposed, non current carrying metal parts of tools or equipment and carries off the leakage and fault currents, thus limiting the voltage on the tool frame by providing a low resistance path to ground. This provides protection to tool users. Fuses or circuit breakers, on the other hand, will trip; thus shutting off the flow of current at 15 to 20 amperes. These provide protection from a fire safety standpoint but won't protect you, the tool user.

Another method of protection is the utilization of a ground-fault circuit interrupter (GFCI). This device continually monitors the current and detects current leaking to ground via a path outside of the circuit conductors. If the leakage current to ground (either through the equipment grounding conductor or through a person) exceeds the trip level, the circuit is interrupted quickly enough to prevent electrocution.

Before you use any portable electrical power tool, inspect the plug, cord, on-off switch and housing. Look for cracked, broken or frayed insulation, exposed wires or connections and for any evidence of damage in general. If you find any of these things, properly tag the tool and turn it in for repairs. Don't use it! After you've checked out the tool, you still have done only half the job. Now check out the extension cord or outlet you plan to plug into! Look for the same things you looked for when inspecting the tool - evidence of damage and exposed conductors.

One last thing before you plug in and start work: Check the outlet, extension cord, tool and work area to determine if they are clean and dry.

Power Tools Safety Tips

Famous last words:

"It's only 110—it can't really hurt you."

"Let me just stretch a little and drill this one hole."

"I emptied this nail gun..."

"Let me pull this saw blade guard back just to finish this one cut."

Portable power tools are one of the greatest time and energy savers around. Since they're so readily available and useful, we tend to forget that they're powered, and have the potential to amputate, break bones, electrocute, and kill. Some of the serious accidents using power tools have involved situations like the following:

"A sheet metal man was installing flashing on a church roof. Using a power drill on the roof edge, he lost his balance when the drill cut through the material. Failing to use a safety belt, he toppled 30 feet to his death."

"A carpenter amputated three fingers using a portable circular saw incorrectly. He tried to adjust the blade depth with one hand, with the other on the grip handle. He accidentally hit the trigger."

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Problems:

Solutions:

- Inadequate instructions
- Use of improperly grounded, non-double insulated tools
- Protective guards were defective, or removed
- Dull, cutting edges of blades and bits
- Hang-up of power cord twist plugs on ladder rungs
- Non-secure operator position

- Proper training in power tool use
- Preventive maintenance on power tools
- Inspections and defective tool reports
- Shorten power cord to prevent hang-ups
- If you are performing elevated work, use safety belts

Questions for Discussion:

1. Have you noticed any tools which appear to be defective? Did you report it?
2. Have you had any close calls recently while using power tools? Can you share it with us?

Table Saw

NO SINGLE SATISFACTORY GUARD

No single satisfactory guard has been developed for the ordinary table saw. Why? Because so many different kinds of jobs are done on these saws. Each individual kind of sawing job can be well guarded. But no single guard can protect us on all operations. Be sure you know the safe way to perform each operation. And be sure to do it that way. Table saws probably cutoff more fingers than any other kind of machine.

EXAMINE THE SAFETY DEVICES

Is the guard the kind that rides on top of the work? It should be for all ordinary sawing, particularly ripping. See that it moves up and down freely without side play. Saws should have anti-kickback dogs and spreaders. See that the anti-kickback dogs move freely and are sharp enough to dig into the stock, if it starts to kick back. See that the spreader is close to the saw teeth, stiff, and well secured. Check the guide (fence) to make sure it lines up parallel with the saw blade. Then set it for

the cut you want. All inspections should be performed with the saw un-plugged.

CHECK YOUR FOOTING

When you have a sawing job, check your footing. Be sure the floor isn't slippery and there isn't anything for you to stumble over. Place your feet securely and comfortably. See that there is nothing loose on the saw table to get in the way. Be sure there is enough light so you can see what you are doing.

STAND IN THE RIGHT POSITION

If you have more than a piece or two to rip, place the stock on a hand truck or where you can easily reach it from the saw table. Avoid standing in line with the saw blade whenever possible. Stand far enough right or left of the line of the saw blade so that a kickback will miss you. But not so far that it's awkward to feed the wood through. Make sure no one else gets behind the saw while you are ripping. In some shops or on some jobs, an extension is added to the saw table, so that the operator can't stand directly in line with the saw blade. It also permits long stock to be controlled more easily.

AVOID KICKBACK

Unless you have seen a kickback, you don't realize how vicious one can be. Those saw teeth may be moving from 10,000 to nearly 20,000 feet per minute. The teeth at the top of the saw blade are running toward you. If they get caught in the wood, they'll shoot it right back the way it came. Saws don't kickback if they are treated right. If used correctly, a properly mounted saw blade, in good condition, will cut its way cleanly through the wood. But if you don't feed the wood in straight, it will get caught against those up-running teeth. The saw may grab it, lift it up, and throw it back.

Some people will tell you that the way to prevent kickback is to keep the saw as low as you can and still have it cut through the wood. They are right, if those teeth are sharp so they'll cut clean. And if the

stock is fed straight. The amount of set a saw has will also have a bearing on how it cuts. Slide the material smoothly ahead along the guide and through the saw. Be sure to keep it against the guide all the way through.

A good way to have an accident is to use the saw without a spreader, especially when cutting green or twisted wood. The spreader is located right after the blade to keep the stock from binding. The anti-kickback dog should be used, too, because the wood might bind against the teeth before it reaches the spreader.

KEEP HANDS AWAY FROM BLADE

Always keep your hands a safe distance away from the saw blade, at least six inches and preferably twelve inches. You can do this by using a push stick or push block. If the stock or block is made to fit the lumber and has a good handle, you can do a better job with it at the finish of the cut than you can using your hand only., And if something should go wrong, you won't lose your hand.

DON'T CROWD THE SAW

Don't crowd the saw. A blade in good condition will take the wood easily. It will almost feed itself. If it doesn't, something is wrong.

GAS-FUELED SAWS

If table saws are gasoline powered ,there is the possibility of fire. Housekeeping becomes doubly important. Mufflers should be tight and no sparks should be emitted during operations. Engines should be shut off and allowed to cool before refueling. Spilled fuel should be cleaned up before restarting the engine. If a funnel is needed, use one. Belts should be covered with guards at all times.

PROTECTIVE EQUIPMENT

Whenever using a power saw, don't forget to protect your eyes by wearing your safetygoggles.

HOUSEKEEPING

Whatever kind of a saw you are using, gasoline powered or otherwise, good house- keeping is important. Continually pick up sawdust and scrap that accumulates near the saw. And also keep a fire extinguisher handy.

IT'S UP TO YOU

Because there is no single satisfactory guard for table saws, the main responsibility for avoiding accidents is up to you.

Portable Abrasive Wheels

Portable abrasive wheels have most of the hazards of the wheels mounted on fixed stands. The fact that they're portable makes them more hazardous in some ways. They have to take lots of punishment because they get banged around and dropped. Unless the wheel has already stopped before it's dropped, it's apt to jump around some and that's not so good.

If portable wheels are properly mounted and used right, you won't get hurt, but if you misuse them, you may get hurt. The biggest danger is that the wheel may explode. It's probably running at 2,000 or 3,000 rpm's, and if you bang it into something or give it a good blow it's apt to let go. Don't forget that those chunks from an exploding wheel are plenty hard and have sharp corners. They can crack your skull and tear your flesh.

Overspeed can explode a wheel, too, but you can hardly overspeed a motor-driven wheel unless you mount an oversized wheel on the grinder, for instance, put an 8-inch wheel on in place of a 4-inch one. You'd get twice the rim speed that way, and the wheel would probably let go. Of course, you'd have to take the guard off to put the 8-incher on, and that would be a fool thing to do. It's been done though.

You never should use a portable grinder on any ordinary grinding job without a guard. The guard should cover at least half the wheel. See that it's secure and set to give you the best possible protection if the wheel should let go. Always handle the grinder and yourself to keep the guard

between your face and the wheel. That can mean the difference between getting a chunk of wheel in the face and merely hearing it zip past you. The guard will turn a lot of the dust and sparks away from you, too. Without a guard you'd eat plenty of it.

Suppose we run through the safe way to do a job with a portable grinder. First, check the tool over carefully. Is the cord in good condition? Is the guard on tight? Are the washers full size? Does the trigger work right? Does it cut off the power when you take your finger off? Does the wheel run smoothly and without vibration?

If the answer to each of these is "yes," you're ready to get on with the job. Or are you? How about your goggles? Safety shoes, too? You shouldn't drop that grinder, but you might, and a grinder dropped on your toes would make them plenty sore for a while.

Next, check the area around the job. If there's anything loose underfoot, pick it up. If there's anything you can't pick up that you might trip over — like a pipe — notice where it is and keep clear of it. Then decide where you want to run the extension cord. You don't want anyone to trip over it or interfere with it, and you don't want to get your feet tangled in it. The record shows that an extension cord which isn't safely out of the way is practically a sure-fire device for causing injury. If the cord isn't long enough to run where it's safe, get another and hook it up. Don't take chances with that kind of trouble.