

2018

HAND & POWER TOOL SAFETY PROGRAM

Pottawattamie County

Safety & Health Program

Section B 14

It is the policy of Pottawattamie County to provide a safe and healthful workplace for employees. It is the intent of this policy to comply with OSHA requirements listed in 29 CFR 1910.241, 242, 243, 244; all local, state, and federal laws.



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HAND & POWER TOOLS

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I. Objective

The purpose of this program is to ensure the safety of employees working with hand and power tools and other hand-held equipment. This program is intended to comply with OSHA standards on hand and power tools and other hand-held equipment. (29 CFR 1910.241, 242, 243 and 244)

II. Scope and Applicability

This procedure applies to employees and operations involving the use of hand tools and power tools and equipment, including chain saws, brush cutters, powder-actuated tools, and similar high-hazard implements.

The purpose of this standard is to provide guidelines for the safe use and handling of hand tools and power equipment.

III. Authority & Responsibility

A. Risk Management is responsible for:

1. Developing the hand and power tool safety program and revising as deemed necessary.
2. Developing and maintaining a general training program.
3. Maintaining training records; and
4. Periodically auditing program implementation.

B. Departments and Supervisors are responsible for:

1. Ensuring that hand and power tool safety measures are in place according to this Program and the applicable OSHA standards.
2. Ensuring that all hand and power tools and other hand held equipment are free from defects and are working and maintained properly.
3. Ensuring that all affected employees have been trained in accordance to the manufacturer recommendations and to the applicable standards outlined in this program.
4. Taking damaged tools out of service immediately if they are defective.
5. Providing Risk Management with records of training performed by the department.
6. Conducting periodic inspections of work areas.

C. Employees are responsible for:

1. Completing the required training programs.
2. Inspecting hand and power tools and equipment for defects or possible hazards prior to use.
3. Using hand and power tools and equipment safely.
4. Complying with the manufacturer's guidelines and guidelines listed in this program.
5. Tagging any defective tools as out of service immediately.
6. Reporting any defects to their supervisor immediately.

IV. General Requirements

A. Personal Protective Equipment (PPE)

Before working with hand and power tools, consult the PPE job hazard assessment for the job you will be conducting to determine if additional PPE will be needed.

B. General Safety Guidelines – Manual Hand Tools:

Hand tools are tools that are powered manually. Some examples of hand tools include anvils, axes, chisels, files, hammers, hand boring tools, planes, pliers, punches, saws, industrial scissors, screw drivers, tin snips, and wrenches. Hazards associated with hand tools result from misuse and improper maintenance. To prevent injury, follow the guidelines listed below:

1. Hand tools shall be used for their intended purpose.
2. Inspect tools for damage prior to use.
3. Hand tools shall be maintained and in good condition free of damage, i.e. wooden handles on tools such as hammer or an axe shall be tight and free from splinters or cracks.
4. Bent screwdrivers or screwdrivers with chipped edges shall be replaced.
5. Always direct tools such as knives, saw blades away from aisle areas and away from other employees working in close proximity.
6. Dull tools can cause more hazards than sharp ones. Keep blades sharp.
7. Cracked saw blades must be removed from service.

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8. Wrenches must not be used when jaws are sprung to the point that slippage occurs. Always pull on a wrench - never push.
9. Impact tools such as drift pins, wedges, and chisels must be kept free of mushroomed heads.
10. Iron or steel hand tools may produce sparks that can be an ignition source around flammable substances. Spark resistant tools made of non-ferrous materials should be used where flammable gases, highly volatile liquids, and other explosive substances are stored or used.
11. Keep the work area and tools clean. Dirty, greasy tools and floors may cause accidents.
12. Tools shall be stored in a dry secure location.
13. Carry and store tools properly. All sharp tools shall be carried and stored with the sharp edge down. Do not carry sharp tools in pockets.
14. Brace yourself by placing your body in the proper position so that in case the tool slips you will not fall.
15. Make sure hands and fingers have sufficient clearance in the event the tool slips.
16. When working with tools overhead, place tools in a holding receptacle or secure when not in use.
17. Do not throw tools from place to place, from person to person, or drop from heights.

C. General Safety Guidelines – Power Tools:

Power tools must be equipped with safety switches and guards (if provided by the manufacturer). Types of power tools are determined by their power source: electric, pneumatic, liquid fuel, hydraulic, and powder-actuated. To prevent hazards associated with the use of power tools, employees shall observe the following general precautions:

1. Read the owner's manual to understand the tool's proper applications, limitations, operation, and hazards.
2. Never carry a tool by the cord or hose.
3. Never yank the cord or the hose to disconnect from the receptacle.
4. Keep cords and hoses away from heat, oil, and sharp edges.
5. Disconnect tools when not using them, before servicing and cleaning, and when changing accessories such as blades, bits and cutters.

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6. Ensure tools are properly grounded. In wet or damp location, use ground fault circuit interrupters (GFCI) outlets or extension cords.
7. Keep all people not involved in the work at a safe distance from the work area.
8. When possible, secure work with clamps or vise, freeing both hands to operate the tool.
9. Avoid accidental starting. Do not hold fingers on the switch button while carrying a plugged in tool.
10. Maintain tools clean and sharp.
11. Be sure to keep good footing and maintain good balance when operating power tools.
12. Wear proper apparel for the task. Loose clothing, ties, jewelry, long hair can be caught in moving parts.
13. Inspect tools for damage before each use. Remove all damaged tools from use and tag them: "Do Not Use".
14. Ensure that cords from electric tools do not present a tripping hazard.
15. Keep work areas well-lit when operating electric tools.
16. Store electric tools in a dry place when not in use.
17. Wear PPE and appropriate footwear when using electric tools.

D. General Safety Guidelines – Grinding Tools:

1. Power grinding tools shall be equipped with guards to protect employees from the moving wheel surface and also from flying fragments in case of wheel breakage. Inspect work rests and tongue guards for grinders. Work rest gaps should not exceed 1/8 inch (3 mm). Tongue guards gap should not exceed 1/4 inch (6 mm).
2. Do not adjust work or tool rests while the grinding wheel is moving.
3. Inspect the grinding wheel for cracks, chips or defects. Remove from service if any defects are found.
4. Wear goggles when grinding. A clear full-face shield may be worn with the goggles.
5. Do not use the side of a grinding wheel unless the wheel is designed for side grinding.
6. Always stand to the side of the blade, never directly behind it.

7. Use grinding wheels only at their rated speed.
8. Grinding aluminum is prohibited.

E. General Safety Guidelines – Power Saws:

1. Circular saws are required to be fitted with blade guards.
2. Remove damaged, bent or cracked saw blades from service immediately.
3. Table saws are required to be fitted with blade guards and a splitter to prevent the work from squeezing the blade and kicking back on the operator.
4. Guards shall cover the blade to the depth of the teeth on hand held circular saws. The guard should freely return to the fully closed position when withdrawn from the work surface.

F. General Safety Guidelines – Wood Working Machinery:

1. Do not use compressed air to remove dust, chips and from wood working machinery.
2. Locate the on-off switch to prevent accidental start up. The operator must be able to shut off the machine without leaving the workstation.
3. Guard planers and joiners to prevent contact with the blades.
4. Use a push stick when:
 - a. The cutting operation requires the hands of the operator to come close to the blade.
 - b. Small pieces are being machined.
5. Adjust saw blades so they only clear the top of the cut.
6. Automatic feed devices should be used whenever feasible.

G. General Safety Guidelines – Pneumatic Tools and Equipment:

1. Require that pneumatic tools have:
 - a. Tool retainers to prevent the tool from being ejected from the barrel during use.
 - b. Safety clip or tie wire to secure connections between tool/hose/compressor if they are of the quick connection (Chicago fittings) type.
2. Do not lay hose in walkways, on ladder or in any manner that presents a tripping hazard.
3. Never use compressed air to blow dirt from hands, face or clothing.
4. Compressed air exhausted through a chip-guarded nozzle shall be reduced to less than 30 psi. Proper respiratory, hand, eye and ear protection must be worn.
5. Never raise or lower a tool by the air hose.

H. General Safety Guidelines – Powder Actuated Fastener Tools:

1. Use powder-actuated tools that comply with the requirements of the American National Standards Institute (ANSI) Standard A 10.3 - 1970.
2. Use only individuals that have been trained by a manufacturer's representative and possess the proper license to operate, repair, service and handle powder-actuated tools.
3. Never use a powder-actuated tool in a flammable or explosive atmosphere.
4. Require the use of goggles or a full-face shield as well as safety glasses during operation of powder-actuated tools.
5. Powder-actuated tool must not be able to be fired unless the tool is pressed against the work surface.
6. The tool must not be able to fire if the tool is dropped when loaded.
7. Firing the tool should require two separate operations, with the firing movement being separate from the motion of bringing the tool to the firing position.
8. Never fire into soft substrate where there is potential for the fastener to penetrate and pass through, creating a flying projectile hazard.
9. Do not use powder-actuated tools in reinforced concrete if there is the possibility of striking the re-bar.

10. Do not use on cast iron, glazed tile, surface hardened steel, glass block, and live rock or face brick.
11. Never load and leave a powder-actuated tool unattended. It should only be loaded prior to intended firing.
12. Test tools each day prior to loading by testing safety devices according to manufacturer's recommended procedure.

I. General Safety Guidelines – Chain Saw:

1. Inspect the saw prior to each use and periodically during daily use.
2. Operate the chain saw with both hands at all times.
3. Never cut above chest height.
4. Require that the idle be correctly adjusted on the chain saw. The chain should not move when the saw is in the idle mode.
5. Start cutting only after a clear escape path has been made.
6. Shut the saw off when carrying through brush or on slippery surfaces. The saw may be carried no more than 50 feet (15 meters) while idling.
7. Require applicable protective gear. This may include, but is not limited to
 - a. Hard hat
 - b. Safety glasses
 - c. Steel-toed boots
 - d. Protective leggings
 - e. Hearing protection
8. Inspect saws to require that they are fitted with an inertia break and hand guard.
9. *Never* operate a chain saw when fatigued.
10. Do not allow others in the immediate area when chain saws are operated.
11. Make sure there are no nails, wire or other imbedded material that can cause flying particles.
12. Do not operate a chain saw that is damaged, improperly adjusted, or is not completely and securely assembled. Always keep the teeth sharp and the chain tight. Worn chains should immediately be replaced.

13. Keep all parts of your body away from the saw chain when engine is running.

J. General Safety Guidelines – Hand Operated Pressure Equipment:

1. Pressure equipment such as grease guns, paint and garden sprayers shall be directed away from the body and other personnel in the area. The person operating any equipment such as this, which has a potential for eye injury, must wear protective goggles.
2. The noise produced when using certain types of pressure equipment may require the use of hearing protection.
3. Never allow the nozzle of a pressurized tool to come in contact with any body parts while operating. There is potential for injection of a chemical directly into the user's body, resulting in severe injury or death.

K. General Safety Guidelines – Gasoline Powered Tools:

1. Never pour gasoline on hot surfaces.
2. Never fuel around open flame or while smoking.
3. Shut down the engine before fueling.
4. Provide adequate ventilation when using in enclosed spaces.
5. Use only OSHA approved safety cans to transport flammable liquids.

V. Inspection

Inspect all hand tools on a regular basis. Defective tools shall be immediately removed from service, tagged or destroyed to prevent further use.

VI. Training & Recordkeeping

A. Training

1. All employees shall be trained in the proper use of tools prior to using hand and power tools and other hand-held equipment.

2. General training is provided by Risk Management. Departments shall conduct training that is specific to the hand and power tools being used.
3. Employees shall be trained in the following:
 - a. Recognition of the hazards associated with different types of tools and the safety precautions necessary for use.
 - b. The PPE required during use.
 - c. The proper use of hand and powers tools and other hand-held equipment.

B. Recordkeeping:

1. Safety training records will be maintained by Risk Management.
2. Departments are required to forward copies of training records to Risk Management to include, training rosters , site briefings regarding tool use.
3. Maintenance and repair records must be documented and kept by the department, i.e. records of tools removed from service, tool inspection documentation.
4. Powder actuated tool licenses (as applicable) shall be forwarded to Risk Management for the training file.