



HAND AND POWER TOOLS

1. PURPOSE

This chapter is to set out and define the proper use, inspection, and maintenance of hand tools, powered tools, and motorized equipment used by employees working at Okaloosa County. Numerous injuries occur every year from county employees improperly using or maintaining hand tools. Supervisors and employees shall make themselves familiar with all procedures in this policy.

Supervisors can get additional information by obtaining OSHA Pamphlet 3080, "Hand and Power Tools," Revised 1998, available via the Internet on page www.osha.gov/pls/publications/pbindex.list.

2. GENERAL REQUIREMENTS

- 2.1. Safety glasses will be worn when using any hammer, electrical drill, saw, tool and die cutter, grinder, sander, lathe, etc. or any tool or hand operation that may emit debris into the eyes. Personnel in the immediate area of the work being performed must also abide with this rule.
- 2.2. Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dusts, fumes, mists, vapors or gases, will be provided with the particular personal protective equipment necessary to protect them from the hazard.
- 2.3. Use the right tool for the right job. Inspect tools regularly for damage and defects. Replace or turn in all defective tools.
- 2.4. Wrenches, including adjustable, pipe, end, and socket wrenches, will not be used when jaws are sprung to the point that slippage occurs.
- 2.5. Impact tools such as drift pins, wedges, and chisels, will be kept free of mushroomed heads.
- 2.6. The wooden handles of tools will be kept free of splinters or cracks, and will be kept tight in the tool.
- 2.7. Do not carry sharp hand tools in clothes pockets.
- 2.8. Do not leave tools on top of ledges or ladders or lying around where they may cause a hazard.

- 2.9. All power tool guards will be in place while in operation and when required.
- 2.10. Use non-sparking tools in restricted areas that may cause explosion or fires.
- 2.11. Compressed air and other gasses under pressure must be used only for the purpose intended.
- 2.12. When using tools or power tools that may create sparks or flames, a fire watch must be provided.
- 2.13. Only qualified or licensed personnel shall operate power activated or power tools.

3. **ELECTRICAL HAND AND POWER TOOLS**

- 3.1. Double insulated portable electrical tools are internally grounded by incorporating insulation in case or frame when so designed. The wire containing one male plug will have two prongs in the place of three. Check the data plate on the tool to ensure that it states that the tool is "double insulated" and will not require prescribed ground wire and plug.
- 3.2. Personnel issued electrical tools will be responsible for their safe condition and operation.
- 3.3. Check all electrical cords for damage before using power tools
- 3.4. Always protect electrical cords from damage by oil. Ensure insulation is not frayed or broken, and keep clear of aisles where they may be run over by trucks or other equipment or cause a tripping hazard. If this happens, replace all frayed or broken cords.
- 3.5. Do not raise or lower power tools by their cords.

4. **USE OF GROUND FAULT CIRCUIT INTERRUPTERS**

- 4.1. In-line ground fault circuit interrupters (GFCI's) will be used on all electric hand power tools utilizing a drop cord powered directly from a two socket, 120 volt AC circuit. Note: GFCI's are not required for powered hand power tools that have a cord long enough to plug directly into the wall socket for operation.
- 4.2. Ground fault circuit interrupters used during confined space entries shall be placed outside the confined space during the entry.
- 4.3. Ground fault circuit interrupters will be tested prior to use. GFCI's failing the self-test will not be used and immediately taken out of service.

5. LADDER MAINTENANCE AND USE

- 5.1. All ladders must be used in compliance with safety instructions provided with ladder. No ladder will be painted as to hide possible breaks or weaknesses in the rungs or uprights.
- 5.2. All ladders (expandable and step) will be inspected for serviceability before each use by the person using the ladder. Ladders found damaged should be tagged and taken out of service.
- 5.3. Ladder components shall be surfaced so as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
- 5.4. A metal spreader or locking device shall be provided on each stepladder to hold the front and back sections in an open position when the ladder is being used.
- 5.5. Ladder shall not be placed in front of doors opening toward the ladder unless the door is blocked upon, locked, or guarded.

6. CHAIN SAW USE

- 6.1. Operating chain saws will require the mandatory use of chain saw resistant chaps, safety glasses, hard hat, ear protection, and safety shoes/toe caps. Failure to wear these items will result in disciplinary action up to and including termination. Leather gloves are suggested to be worn to relieve vibration.
- 6.2. Chain saws will be started by being placed firmly on the ground. The practice of starting the saw in the air is prohibited. Exception: chain saws may be drop started outside of the bucket of an aerial lift only if the area below the lift is clear of personnel.
- 6.3. Chain saws that have the chain rotate while motor is in idle will not be used until adjustments can be made by a qualified person.
- 6.4. Chain saws will not be running when being carried up into a tree or aerial lift.
- 6.5. Chain saws with damaged or inoperative emergency chain stop devices will be taken out of service for repair and not used until proper repairs are made.
- 6.6. When carrying a chain saw any distance, the saw will be carried by the handle, with motor stopped, emergency stop engaged, and guide bar to the rear.
- 6.7. When carrying the chain saw from cut to cut, the operator's finger will be removed from the trigger area.
- 6.8. Chain saws will be operated with sharp chain blades. Dull chain blades will be removed from service and sharpened as necessary. Possible results of dull chain blades are greater potential for kick back, and employees using twice as much effort

to operate saw. Both contribute to employee fatigue which could lead to personal injury.

- 6.9. When feasible, employees operating chain saws should employ the "buddy system" and not work alone.
- 6.10. Chain saws will be refueled with motor off and cool.

7. **POWER LAWN MOWERS**

This section pertains to walk-behind, riding-rotary, and reel power lawn mowers used throughout Okaloosa County.

7.1. **General Requirements**

- 7.1.1. All power lawn mowers used by Okaloosa County will conform to the following requirements:
 - 7.1.1.1. All power-driven chains, belts, and gears shall be so positioned or otherwise guarded to prevent the operator's accidental contact during normal starting, mounting, and operation of the machine.
 - 7.1.1.2. A shutoff device shall be provided to stop operation of the motor or engine. This device shall require manual and intentional reactivation to restart the motor or engine.
 - 7.1.1.3. All positions of the operating controls shall be clearly identified. Used, worn or illegible placards will be replaced.
 - 7.1.1.4. The words, "Caution. Be sure the operating control(s) is in neutral before starting the engine," or similar wording shall be clearly visible at an engine starting control point on self-propelled mowers.
 - 7.1.1.5. The mower housing and/or blade guards shall be installed and in good working condition before mower can be used.
 - 7.1.1.6. The word "Caution." or stronger wording shall be placed on the mower at or near each discharge opening.
- 7.1.2. Operators of walk behind lawn mowers will wear as a minimum, steel-toed shoes, hearing protection, and eye protection during operation. If steel-toed shoes are not available, protective toe caps will be worn. Leather gloves are suggested to reduce vibration on the hands.
- 7.1.3. All guards, protective devices, and deadman controls which come installed at purchase, will be maintained and retained on the lawn mower during use at Okaloosa County. These safety devices will not be removed, altered, or modified after purchase.
- 7.1.4. Lawn mowers will be refueled with motor off and cool.

7.2. Lawn Mower Maintenance

- 7.2.1. Before any part of any employee becomes exposed to lawn mower blade(s), the ignition will be placed in the "off" position, spark plug wires removed from the spark plug, controls neutralized, hydraulic power to blades relieved, and the blade(s) will be physically blocked as to prevent movement or accidental start-up.
- 7.2.2. The use of cut-resistant gloves is mandatory when handling, sharpening or making adjustments to reels and/or bed knives on reel mowers.
- 7.2.3. Sharpening lawn mower blades on grinding wheels will require the use of eye protection while sharpening.
- 7.2.4. To prevent inadvertent rotation of reels when setting clearances for reel blades to bed knives, the practice of placing a mechanical stop such as a wooden dowel or stick between the blades, will be used. Failure to use mechanical stops can produce cut, avulsed, or amputated fingers.

8. COMPRESSED AIR (PNEUMATIC) TOOLS

- 8.1. Only employees specially trained in their use may operate compressed air tools.
- 8.2. All pneumatic tools utilizing compressed air shall have tool retainers installed during use.
- 8.3. Hose and hose connections used for conducting compressed air to utilization equipment shall be so designed for the pressure and service to which they are subjected.
- 8.4. Safety clips or retainers must be installed on all times to prevent attachments from being ejected during tool operation.
- 8.5. Compressed air shall not be used for cleaning purposed except where the air pressure can effectively be reduced to no more than 30 psi., and then only with effective guarding and personal protective equipment.

9. HYDRAULIC TOOLS

- 9.1. Fluid for hydraulic tools must be approved fire resistant fluid, capable of operating at the temperatures to which it will be exposed, and be of the insulating type.
- 9.2. The manufacturer's recommended safe operating pressure for hoses, valves, pipes, filters, and other fittings must not be exceeded.

10. **PORTABLE ABRASIVE WHEEL TOOLS (grinders/wire wheels)**

- 10.1. The use of protective eyewear or face shield is mandatory when using portable grinders or wire wheels.
- 10.2. Grinder wheels will be inspected to be free from cracks before use. Test wheels by gently tapping the wheel with a non-metallic object. If the wheel does not give off a clear metallic ring, the wheel is cracked, unserviceable and not to be used.
- 10.3. Grinder abrasive wheels are not to be used above their stamped maximum spin speed.
- 10.4. Employees are to allow grinder wheels to reach maximum speed before applying the wheel to the work. Failure to do so may cause the wheel to break, possibly throwing flying pieces into employee.

11. **ROPE**

- 11.1. Rope shall be inspected before each use and, if unsafe (for example, because of damage or defect), may not be used.
- 11.2. Rope shall be stored away from cutting edges and sharp tools. Rope contact with corrosive chemicals, gas, and oil shall be avoided.
- 11.3. When stored, rope shall be coiled and piled, or shall be suspended, so that air can circulate through the coils.
- 11.4. Rope ends shall be secured to prevent their unraveling.
- 11.5. Climbing rope may not be spliced to effect repair.