

Lesson: Tools

- Lesson Objectives:**
- Recognize tool hazards and apply the control hierarchy principles.
 - Identify and demonstrate safe practices for using hand and power tools.
 - Control a variety of power-operated tools effectively and safely.
 - Practice safety measures using these specific tools; portable circular saws, portable drills, sanders, cordless power tools, woodworking tools, and jacks.

- Topics:**
- Hazards and Controls
 - Tool Safety
 - Types of Tools

Topic: Hazards and Controls

This topic introduces a control methodology for safe operation of hand and power tools. Having completed this topic, you should be able to:

- Recognize the need for tool safety
- Discuss engineering, administrative, and personal protective equipment as the preferred order of controlling the proper use of tools
- Identify the safety materials recommended for personal protective equipment
- Apply the five basic safety rules when using tools

Topic summary:

Please take a moment to review these major points before you continue with the next topic.

- Workers must learn to recognize and prevent the hazards associated with using different tools.
- The hierarchy of controls is (1) engineering controls, (2) administrative controls, and (3) personal protective equipment.
- Depending on the tools being used, workers may be required to use a variety of personal protective equipment.
- There are five basic tool safety rules:
 1. Keep all tools in good condition with regular maintenance.
 2. Use the right tool for the job.
 3. Examine each tool for damage before use.
 4. Operate according to the manufacturer's instructions.
 5. Provide and use the proper protective equipment.

Topic: Tool Safety

Although it is important to recognize the hazards of misusing tools and how to apply the control hierarchy, it is imperative that you demonstrate safe tool use to prevent accidents. In this topic you learned the specific safety practices for hand and power tools, including the proper use of their accessories. Having completed this topic, you should be able to:

- Recognize the safe use and maintenance of hand tools
- Recognize the safe use and maintenance of power tools
- Describe the safeguards for using accessories, tool guards, and safety switches
- Utilize the training checklist to evaluate your safety compliance

Topic summary:

Please take a moment to review these key points before you continue with the next topic.

- Manufacturers' manuals are the best source for proper procedures for specific tool use.
- Eight common safety rules apply to all power tools:
 - Know the power tool.
 - Ground all tools unless double insulated.
 - Avoid dangerous environments.
 - Be aware of mechanical hazards.
 - Maintain tool control.
 - Unplug/plug cords safely.
 - Wear proper apparel.
 - Maintain tools with care.
- Give careful consideration to safety requirements when selecting accessories/attachments, tool guards, and safety switches.
- Always use the training checklist to verify your tool safety compliance.

Topic: Types of Tools

This topic explains the different types of power-operated tools. From electrical to powder-actuated, you will learn the chief hazards and preventions for working with all power-operated tools on the job site. In addition, you will learn specific safety usage of common tools used on construction sites. Having completed this topic, you should be able to:

- Control a variety of power-operated tools effectively and safely
- Identify the specific hazards and safety practices for common tools

Topic summary:

Please take a moment to review these key points before you continue with the next topic.

- When using electrical tools, always wear PPE and work in a dry place.
- Powered abrasive wheel tools should be safeguarded against flying fragments.
- Protect yourself from being hit by an attachment or fastener when using pneumatic tools.
- When using fuel-powered tools, consider the concentration of toxic gases.
- The fluid in hydraulic powered tools must be an approved, fire-resistant fluid.
- Secure pneumatic power tools to the hose and whip to prevent accidental disconnecting.

- Only specially trained employees can operate powder-actuated tools, because these tools are as dangerous as a loaded gun.