



## GOALS

---

This safety session will teach trainees:

- What pneumatic tools are and about their hazards
- Safety precautions to follow when operating pneumatic tools

**Applicable Regulations: 29 CFR 1910.243 and 29 CFR 1926.302**



**1. Pneumatic tools are powered by compressed air, which gives them the necessary power to do many jobs easily.**

- Generally, you can use pneumatic (or air-powered) tools to nail, tack, or staple materials such as wood, roofing, and insulation.
- Common air-powered hand tools also include buffers, grinders, riveting guns, sanders, and jack hammers.

**2. All these tools have enormous speed and power—that makes them very effective but also very dangerous.**

- The air that powers pneumatic tools is dangerous.
- It is backed by enormous pressure—sometimes more than 100 pounds per square inch (psi)—that can blow right through skin or organs.
- Air hoses can be hazardous, too, if they whip around or even lie on the floor where they can be tripped over.

**3. Inspect pneumatic tools such as nail guns before every use—make sure every part is in place and works properly and that air hoses have:**

- A secure connection between the tool and hose attached, if possible, by a short wire or locking device.
- A safety clip or retainer that keeps tool attachments from being jettisoned accidentally.
- An excess flow valve at the air supply source to shut off air automatically if the hose breaks. It's required for hoses over half-inch in diameter.
- A muzzle safety device that keeps the tool from shooting fasteners unless the muzzle is in contact with the work surface.

**4. Always use your assigned personal protective equipment (PPE) when working with or around powered fasteners.**

- Protect your eyes and face with safety goggles and face shield,
- Your head with a hard hat,
- Your feet with sturdy shoes, *and*
- Your ears from noise with hearing protectors.
- Post warning signs so other workers can keep out of the danger area or wear PPE.



**5. Another hazard associated with some pneumatic tools is vibration.**

- Some pneumatic tools, such as jackhammers, produce rapid vibration that is transmitted from the tool to the hands and arms of the tool operator.
- Prolonged use of such tools can lead to “white fingers,” a health disorder that produces pain, tingling, and numbness in the hands.
- Always use work gloves when using vibrating tools; and take frequent, short breaks to reduce the risk of problems from vibration.

**6. You’ll need an air compressor with enough power for your tool and application, but more power isn’t better.**

- Use the lowest amount of pressure you need for the job—that’s the safest way.
- Never exceed the manufacturer’s safe operating pressure for hoses, pipes, or valves on your equipment.

**7. Remember the enormous—and dangerous—power of compressed air. Always follow these precautions:**

- Never point a fastening tool or an air hose at anyone—including yourself.
- Turn on the air only when you’re ready to start the work.
- Get a good grip on the handle and press the muzzle against the work surface while you use it.
- Cut off the air and release any pressure inside the air line before disconnecting the hose.
- Disconnect the tool when it’s not in use—this will prevent a possible accidental start-up.
- Don’t use compressed air to clean off your clothes or other surfaces.
  - The dust and dirt will just blow around and resettle on everything in the area, in your lungs, and on your work.
  - The Occupational Safety and Health Administration (OSHA) regulations say “Compressed air shall not be used for cleaning purposes except where reduced to less than 30 pounds psi and then only with effective chip guarding and personal protective equipment.”
- Be sure that the compressed air supplied to your tool is clean and dry—dust, moisture, and corrosive fumes can damage a tool.
- Never operate a tool if its hose shows any sign of cuts, bulges, or abrasion.



**DISCUSSION POINTS:**

What specific types of pneumatic tools are used in your workplace? Do you post warning signs or are they always used in areas where other workers are not exposed to their hazards?



**CONCLUSION:**

Pneumatic tools can certainly make performing many tasks much quicker and easier. It’s vital that we remember their extreme power and follow safety precautions to avoid a serious accident.



**TEST YOUR KNOWLEDGE:**

Have your employees take the Pneumatic Tool Safety quiz. By testing their knowledge, you can judge if they understand both the advantages and the hazards of using these powerful tools or whether they need to review this important subject again soon.