



## Pneumatic Nail and Staple Gun Safety

***Pneumatic fastening tools are powered by compressed air and primarily include staplers and nailers. Unfortunately, injuries associated with nail guns are rapidly increasing. Between 1997 and 2006, Oregon Department of Consumer and Business Services reported 596 disabling claims attributed to nail guns. U.S. Consumer Product Safety Commission and National Institute of Occupational Safety and Health data for 2001-2005 indicate that about 37,000 people go to emergency rooms every year with injuries from nail guns.***

Because of the dangerous nature of these tools, it is important to know more about them. The facts contained in this Hazard Alert will give you basic information, good work practices, and helpful resources to prevent injuries.

### General safety guidelines

- Review the owner's manual carefully with all operators.
- Observe each employee demonstrating safe operating procedures.
- Always wear safety glasses.
- Do not touch the trigger unless firing the tool against a work piece.
- Use extreme caution when using an air tool around other workers.
- Never point the tool at anyone. Treat the tool like a firearm and assume it's loaded.
- Disconnect the air hose before clearing a jam or making adjustments.
- Use manufacturer's specified pressures for the tool.
- Keep your free hand safely out of the way of the tool.
- Secure the hose when working on scaffolding to prevent the weight of the hose from dragging the tool off the scaffold if you set the tool down.



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[www.orosha.org](http://www.orosha.org)  
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Hazard alerts provide information on hazardous materials, equipment, or practices. For more information contact the Oregon OSHA Standard and Technical Resources Section at 503-378-3272, toll-free at 800-922-2689, or visit our Web site at [www.orosha.org](http://www.orosha.org).

### Trigger selection

Sequential mode and bump mode are the two basic trigger mechanisms used in pneumatic nailers and staplers. It is important to understand the differences between the two triggers in order to prevent injuries. To find out whether your nail gun is a sequential trigger or bump trigger model, fire a nail as usual and keep the trigger depressed. Lift the nail gun and carefully press its nose against the work surface again. If the gun fires a second nail, you have a bump trigger model. If the gun doesn't fire, you have the safer sequential trigger model.

#### Sequential mode trigger

In the sequential mode, also known as a restrictive trigger or operating in the trigger fire mode, you must first press the nail gun firmly against the workpiece and then press the trigger. One nail is fired and you must release the trigger before you can begin the next nailing cycle.

**Advantages:** Use this mode for intermittent nailing where you need accurate placement, such as framing, cabinetry, and carpentry tasks. It will reduce the possibility of driving an unwanted nail or staple (double fire) if you accidentally bump the safety element against yourself or others. It also reduces the speed of operation compared to the bump trigger mode.

**Cautions:** Ricochet accidents can occur if you nail into another nail, the surface is too hard, or the tool is at an angle. Work with a nail gun only from a sturdy and stable surface. Do not press your finger on the trigger unless you're ready to fire, especially when climbing ladders.

#### Bump mode trigger

In the bump mode trigger, also known as dual-action, bottom fire, or contact trip, you must press the trigger before you bring the nail gun into contact with the workpiece. Each time you press the nailer against the workpiece, a nail is fired and a nailing cycle begins. You must keep the trigger pulled while moving the tool along the work surface with a bouncing motion, depressing the safety element where you want to drive a nail or staple. By repeatedly "bumping" the nail gun against the workpiece, you can rapidly fire any number of nails.

**Advantages:** Use the bump action trigger for high-production jobs. Use for rapid nailing on flat, stationary surfaces such as decking, sheathing, and siding. This mode is very fast and can reduce the risk of musculoskeletal disorders such as trigger finger.

**Cautions:** The bump mode is less precise than the sequential mode and can be more dangerous. It can result in driving unwanted nails or staples because of a double fire, rebound, recoil, or leaving your finger on the trigger and bumping yourself or a co-worker.

### **New American National Standards Institute (ANSI) Standard for Pneumatic Tool Triggers (manufactured after the effective date of May 1, 2003)**

The revised ANSI SNT-101-2002 Standard, Section 4.1.3 Actuation System Options, reads:

***"All (pneumatic) tools – other than light-duty tools, heavy-duty staplers, and coil nailers – shall be manufactured with an actuation system meeting the requirements of single sequential actuation, full sequential actuation, selective actuation or automatic reversion actuation."***

The new standard for actuation systems exempts heavy-duty staplers and tools that do not require a safety coil.

#### **Additional resources**

**ANSI SNT-101-2002 Standard**  
[www.ansi.org](http://www.ansi.org)

**The International Staple, Nail and  
Tool Association (ISANTA)**  
512 West Burlington Ave., Suite 203  
La Grange, IL 60525-2245  
708-482-8138  
[www.isanta.org](http://www.isanta.org)

**Home Builders Association of Marion  
and Polk Counties**  
385 Taylor St NE  
Salem, OR 97301  
503-399-1500  
[www.homebuildersassociation.org](http://www.homebuildersassociation.org)