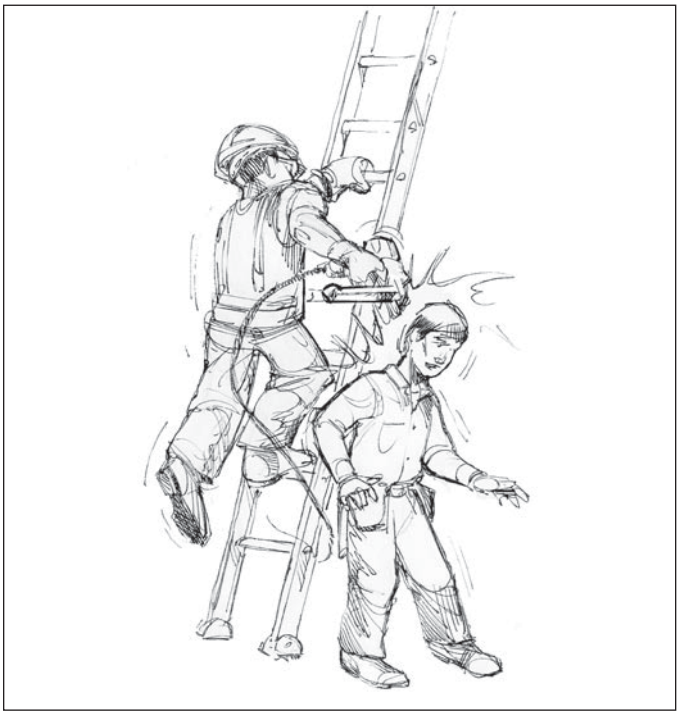
Preventing nail gun injuries

A worker on a ladder was nailing a soffit backing plate. As he stepped down, his finger was on the nail gun trigger. When the gun bumped a worker below him, it fired a 2-inch nail into the worker's head. The worker suffered a serious head injury.



Who are the injured workers?

An increasing number of nail gun operators are injuring themselves and nearby workers. Most of these injuries are to hands and fingers, but some are to other body parts. The potential for serious injury or fatality is highest when a nail is shot into the chest, face, eye, head, or abdomen.

Why are serious nail gun injuries occurring?

The most common reason for serious nail gun injuries – to the chest or head, for example – is that workers using contact trip guns keep the trigger depressed when moving about. When the gun tip accidentally hits a surface, the nail is fired and may hit the operator or another worker. The Occupational Health and Safety Regulation says that the operator of a pneumatic nailing tool must not keep the trigger depressed while moving between operations.

What are the two main ways that nail guns work?

Nail guns work in two different ways: sequential trip and contact trip. Some models can be switched to either type. The safer type is the sequential trip, which requires two separate actions to fire the gun.

Sequential trip

A sequential trip (also called restricted) nail gun is the safest kind available. It gets its name from the "sequence" required to operate it.

To drive a nail, the worker must first place the gun's nose against the nailing surface and then pull the trigger. To drive a second nail, the worker has to lift the tool from the work surface, release the trigger, and then repeat the two-step sequence above.

The sequential trip nail gun offers a positive safety advantage. It will not accidentally drive a nail if the operator – while holding the tool with the trigger pulled – bumps the nail gun against a surface or a worker. It also eliminates the chance of a second nail firing if the gun happens to recoil.

> The Occupational Health and Safety Regulation has a requirement for pneumatic nail guns that use nails larger than 1.2 mm (0.05 inches) or 18 gauge. These guns must not activate unless the operator performs two actions, one of which is to place the tool against a work surface.

Contact trip

A contact trip (also called bump or bounce) nail gun is not as safe as a sequential trip nail gun.

With a contact trip nail gun, the worker depresses the trigger and places the gun's nose against the nailing surface. Every time the nose of the gun hits the surface, a nail fires. It is possible to move the gun with the trigger depressed, but you *must not*.

> The Occupational Health and Safety Regulation says that a nail gun's trigger must not be taped or secured in the "on" position by any other means. A worker must not hold a nail gun in the "on" position while moving between operations.

Some nail guns have an attachment – generally different trigger mechanisms – to switch them from contact trip to sequential trip. Some employers are not aware that nail guns can be changed to the safer sequential mode, and so they leave the guns with the contact trigger.

How do I know which model — sequential or contact trip — I have?

To find out whether your nail gun is a sequential trip or contact trip model, fire a nail as usual and keep the trigger depressed. Lift the nail gun and then carefully press its nose against the work surface again. If the gun fires a second nail, you have a contact trip model. If the gun doesn't fire, you have the safer sequential trip model.

What can I do to prevent nail gun injuries?

Learn to use nail guns safely

- Use the owner's manual to understand safe operation and maintenance.
- Have a supervisor or experienced nail gun operator show you how to use the nail gun safely.

Use the nail gun safely

- Always use the nail gun in sequential trip mode.
- Always wear safety glasses.
- Always wear hearing protection. Nail gun noise can cause hearing loss.
- Never point the nail gun towards yourself or anyone else, even if it doesn't contain nails or is disconnected from the air supply. Make sure the area behind the nailing surface is clear of people.
- Never hold down the trigger unless the nose of the nail gun is pressed against the item to be nailed.
- Always disconnect the nail gun air supply when leaving it unattended, clearing jammed nails, or performing any other maintenance.
- Never use a nail gun that's defective, for example, with loose bolts, screws, or fittings.
- Inspect replacement nails for bent nails before inserting them into the gun.

Maintain the nail gun for safe operation

- Complete a daily safety check that includes the nail gun's connection to its energy supply.
- Follow the directions in the user manual to clear jammed nails.
- Get an authorized person for repairs or maintenance.

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