

# Struck-by injuries—Compressor tools

## Explain dangers

Tools that are powered by compressed air are fast, powerful, and ideal for repetitive tasks like nailing.

However, nail guns are the most common source of struck-by injuries in Ontario's homebuilding sector. Each year, workers being struck by nails, brads, and tacks account for close to 100 lost-time injuries (LTIs).

The most common parts of the body affected by these struck-by injuries are the fingers, hands, and eyes.

Severe nail gun injuries have resulted in blindness, brain damage, bone fractures, and even death.

When using high-powered pneumatic tools, even the smallest mishandling can cause injury to workers or damage to equipment.

## Identify controls

- Read all the safety materials and follow the manufacturer's instructions when using compressor tools. Workers should have some training on the specific tool they will be using.
- Ensure tools are in proper working order. Remove broken or malfunctioning tools from service immediately.
- Never modify the safety features of a tool or compressor.
- Wear all required personal protective equipment when using high-pressure tools. This includes safety glasses to protect against flying particles from both the front and sides.
- Adjust the air pressure to the psi recommended by the manufacturer for the task you're doing and the tool you're using. Never exceed the maximum recommended air pressure.
- Disconnect the air hose before reloading, cleaning, or clearing a jam.
- Turn off the air pressure and safety release any pressure remaining in the system when it is not in use or before changing pneumatic tools or attachments.
- Never "kink" a hose to stop air flow.

- Never use an air compressor to blow away dust and dirt. At only 40 psi, compressed air can accelerate debris such as metal shavings or wood chips to over 70 mph (113 kph). This is enough force to penetrate the skin.
- Always secure hose connections with wire or safety clips to prevent the hose from whipping—except when automatic cut-off couplers are used.
- Choose nail guns that have **sequential triggers** rather than **contact triggers**. Contact triggers can accidentally fire if the trigger is pressed and the nose accidentally touches anything. Studies have shown that using sequential triggers can cut injury rates in half without affecting productivity.
- Never hold or carry a nail gun with your finger on the trigger.
- Know where the joists or studs are before nailing through plywood or particle board. Nail guns can fire nails straight through this type of wood.
- Never point a nail gun towards anybody or yourself, even if you think it's not loaded.
- Keep your hand away from the spot where you're nailing.
- Check surfaces before nailing into them. Look for knots, other nails, straps, hangers, or gusset plates that can cause recoil or ricochet.
- Match the speed rating of saw blades, grinding wheels, cut-off wheels, etc. to the tool speed. Too fast or too slow a rotation can damage the wheels, release fragments, and injure workers.

## Demonstrate

Demonstrate how to use the specific type of compressor tools you are using on the jobsite. Give workers an opportunity to handle the tools and provide feedback. Show workers where to find the manufacturer's instructions.

Discuss awkward working positions such as toe nailing and working overhead.

Encourage workers to report injuries and close calls associated with using compressor tools.