Portable air compressors and nail guns can provide a valuable boost to production on the jobsite. However, the use of these tools requires constant attention to the tremendous amount of stored energy they have. When misused, they can be deadly.

The first step to safe operation of these tools is to read the operations manual on how to assemble, use and maintain the pneumatic system. Every worker should have thorough training in the operational procedures specific to the nail gun and compressors you use.

Second, always wear the proper personal protective equipment (PPE). Eye wear (safety glasses) is a must because of the potential for high velocity flying objects. Ear protection is also important because many compressors and guns exceed the noise levels for safe operation. Hearing protection, such as foam-rubber ear plugs or ear muffs, can greatly reduce the noise level of the pneumatic equipment used on the job site.

Gas-operated air compressors should only be operated in well-ventilated outdoor areas. Jobsite air compressors should never be used to supply breathing-quality air.

Before each use compressors should be inspected. Fuel systems and electrical components should be inspected for signs of damage, deterioration, loose controls and leakage of fuel or air. Compressors that have fallen off of a roof should be re-inspected by a manufacturer service center before using them again.

Compressors with severely dented air or gas tanks should be replaced or removed from service. Learn how to properly store portable compressors on sloped roofs. Many roofers choose to have their compressors stored on the ground.

Air compressors are equipped with a safety valve that will relieve pressure if the tank is overfilled. Keep the safety valve clean and free from any debris. Never remove and replace this safety valve with a plug. Make sure to drain the tank on a regular basis of accumulated water.

Nail guns or (Nailers) should be handled like all weapons -- always assume the gun is loaded. Never carry the nailer with your finger on the trigger. Many guns can be discharged if bumped or a person loses balance on a slopped roof. Workers should never wire back the safety latch on nail guns.

Plant your feet before operating the nailer. Always keep your hands and feet away from the discharge area. Nails can easily hit a knot or other hard material in the wood and bend back through the deck. Never leave the tool attached to the power source when left unattended.

Always reconnect the air line before loading any fasteners. If a tool were to malfunction and cycle unintentionally, it would do so when first connected. It’s better to have the tool dry-fire than drive a nail.

Use a sequential trigger unless the application absolutely calls for the rapid application of a large number of fasteners, such as in roofing. A sequential trigger is safer than a bump-fire trigger because the sequential trigger will not drive a nail unless the safety is pushed down before pulling the trigger.

Air hoses should be rated for at least 1.5 times the maximum compressor pressure and flow. Regularly check the condition of hoses and fittings and replace any damaged components. If a pressurized air hose breaks loose, “fish tailing” could injure workers or damage equipment.

By following common sense and respecting the stored energy contained in a pneumatic system, workers can safely enjoy the productivity boost of air-powered fastening.