

Ask Jon Eakes

Pro: How to Kill Your Pneumatic Tools

Last Updated: Sunday, May 13th, 2018, Created: Wednesday, November 29th, 2000

Pneumatic tools are amongst the most indestructible power tools you can buy - and yet we manage to kill them. So I took a trip to a few repair shops to find out what can possibly be done to maim, cripple and kill pneumatic construction site tools.

Let's start with the killers: dirty or moist air. If the air going into the system is not properly filtered, you're grinding grit right into the pistons. The only time this seems to be a real problem is when someone takes the filter off the compressor because it was totally clogged up, and then runs it without a replacement. Impatience can get expensive.

Now, moisture is something else. In a shop environment you will find an air drier or water separator on the line and, although it is a bit more trouble, you should have one on-site compressor as well. If you don't, your only recourse is to completely drain the tank every single day, if not twice a day. If you are not in the habit of doing that, you are probably spraying water -- non-compressible, rust-encouraging water -- right through the guts of the tool. I remember as a kid we used to clean the pistons of my old Chevy by pouring water into the carburetor of a fast running engine. The cloud of sooty smoke that came out the other end attested to the incompressibility of water, as did the occasionally cracked piston.

Precisely because you don't have a perfectly dry air supply, lubrication is even more important on a construction site than in a shop. And not just any lubricant at that. The heart, and weak link, of pneumatic tools is rubber "O" rings. These need to be lubricated, but many lubricants will attack rubber. WD40 will eat rubber. You must use a "non-detergent" oil or, specifically, a "pneumatic tool oil".

Some people like to put self-oiling valves on these tools. That is fine, if they work. All too often they either supply too much or, more critically, not enough oil. If you really want to know that your pneumatic nailer is getting what it needs, put two to three drops of pneumatic tool oil right into the hose coupling joint at the beginning and end of each day and fire it a few times. At the beginning to provide lubrication, at the end to resist rust. Repairmen tell me that they often bring condemned nailers back to life with nothing more than a few drops of oil.

The quick connectors also have the same rust and lubrication problems as the tool itself. Make sure they are clean, dry and lubricated every night and you won't develop leaky hoses. A quick wipe while rolling up the hose is all that is required, but it makes a difference.

Beyond killing pneumatic tools, there are a lot of reasons why tools don't perform as they should, and one can be cold weather. If you are working in below-freezing temperature, use a pneumatic tool oil with anti-freeze. Also, keep the gun as warm as possible and keep frost off of both the air intake to the compressor and the air exhaust on the tool.

Using the wrong fasteners can cause poor performance and premature wearing of parts, although this is more common with staplers than with nailers. Check both the gun listing and the fastener listing to see that they are compatible. Also, keeping the delivery end of nailers clean will reduce jamming. This is a constant but necessary task with asphalt in a roofing nailer.

Match Hose to Pressure

Although many nailers can take 120 lbs. of pressure, for some this much pressure will slowly destroy the anvil. Match your compressor pressure to the tool specs. Some nailers allow for high pressure at the compressor by providing depth adjustment at the nailer head, but when pressure gets low, nails from any tool begin to go in unevenly. A common problem with low pressure occurs with roofing shingles where the nails drive home well until you hit a truss, particularly an old or very dry truss. That nail will stand proud and if you don't catch it with your hammer, it will push up through the next shingle. But often it is not the compressor that is at fault.

If you do a lot of rapid fire shooting with any nails and can feel the difference at the beginning and at

the end of a shooting spree, either the compressor is too small to keep up or the connectors are restricting the flow from the compressor and you are using the hose itself as your power reservoir. The air is going through the gun faster than it can get through the hose connector. When the hose gives you its pressure, you have to stop and let it fill up again before it works right.

So some of us feel like we are caught in a nasty contradiction: set the compressor to the safe limit of the tool and get poor performance, or set the pressure high and wear the tool out prematurely.

There is a third way to go. You lose about 10 pounds of pressure for each section of hose. Actually it is probably more the connector than the hose that is giving you the trouble. A 1/4-inch hose is light and easy to use, but take a look at how small the passage is inside the connector. If you need more than 50 feet of hose, it is best to use a 3/8-inch hose on the compressor and then the lighter 1/4-inch on the tool. If you use long hoses or many hoses frequently you should probably invest in "high volume" connectors that keep the inside diameter the same as the hose. Shorter hoses or high-volume connectors will give you better access to the power of the compressor tank, and if your compressor is big enough, that means smooth consistent nailing.

An apple a day may keep you out of the doctor's office but clean dry air and non-detergent lubrication will keep your pneumatic tools out of the repair shop.

**Originally published as an article by Jon Eakes in Home Builder Magazine, the magazine of the Canadian Home Builder's Association.

Keywords:

Pneumatic, Power Tools, Techniques, Tools, Maintenance

Article 647

www.joneakes.com