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FASCO®
AIR DRIVEN TOOLS

Frequently Asked Questions

Table of Contents

USEFUL TIPS

What is the difference between a brad and a finish nail?

The finish nails are either 15 gauge or 16 gauge. Brads are 18 gauge. Finish nails are the correct choice for fastening larger crown and baseboard trim, brad nails are used to install smaller trim to help prevent splitting and to promote a cleaner looking job with less touch-up work after the nailing is done.

The initial tool purchased by most customers is some kind of brad nailer to attach finishes. Heavier finish nails often split smaller mouldings, so brads are preferred for the small trim pieces, or also for the lighter-weight mouldings. Most folks who have used a hammer to drive small brads know how frustrating it can be when nails bend, and you can often ding the moulding easily with the hammer. The brad nailer makes these small trim jobs a breeze with high-quality results.

The brad nail also has a smaller head, which may not need to be concealed with carpenter‘s putty. When a nail is not puttied over, it‘s called a „shiner“. Sometime a shiner is so small, it‘s difficult to be noticed. Brad nails leave such a small shiner, the putty touchup may not be necessary. Of course, it all depends on the application, or how easy it will be for people to see the surfaces that you have nailed.

The driven finish nail is almost always puttied over to conceal the shiner because it leaves a more visible hole in the wood surface. Again, for larger and heavier mouldings the finish nail is the correct fastener to use. The finish nail offers more support and withdrawl resistance than the brads making them a better choice for the bigger trim installation. Most finish carpenters have both a brad nailer for small mouldings, and a finish nailer for larger base or crown mouldings.

My nailer sparks when I drive nails with it. Is there something wrong with my tool?

No, it is normal for some sparking to occur when the fastener is driven by the driver. This is due to the metal-to-metal contact of the nail and the driver, and this condition will be more obvious with new tools. Sparking tends to decrease with continued use, but the possibility is always there.

How much oil should I use in my pneumatic nailer / stapler?

Two to three drops of oil each day is usually adequate. If the tool is used at a very high speed for long periods of time, add an additional two or three drops for the second half of the day. Over oiling will not damage tools, but may cause skipping problems due to clogged parts with the tools.

TECHNICAL QUESTIONS

My Fasco pneumatic nailer/stapler leaks air from the trigger area when I actuate the trigger, and the tool will not cycle. When the trigger is released, the leak will stop. What are the most common causes?

If the trigger valve leaks only when the trigger is actuated, the cause can be an internal leak at the head valve piston or at the trigger valve. The parts that are causes for this symptom are listed below from most common to least common:

1) o-ring on the trigger stud
2) o-ring on the outside diameter of the head valve piston
3) head valve piston
4) cylinder cap assembly

My Fasco pneumatic nailer/stapler is leaking air from the exhaust area. What are the most common causes?

The parts that are causes for air leaks from the exhaust are listed below from most common to least common:

1) o-ring on the inside diameter of the head valve piston
2) o-ring on the outside diameter of the head valve piston
3) Lower o-ring of the valve piston (cylinder seal)
4) cap
5) buffer above the valve piston

My pneumatic nailer / stapler will no longer drive the fastener completely; it seems to be losing power. Can this be repaired?

Most of the time, the tool simply needs a tune up. A tune up would consist of a cleaning and fresh lube applied, along with the installation of the appropriate o-rings and trigger valve assembly. These actions will greatly improve the cycle speed and energy of the tool. If a tune up does not solve the problem, some additional components should be checked:

1) Spring at the valve piston
2) Driver piston assembly – check to see if the driver is not bent and if it is smoothly driven inside the nose channel
3) Air pressure too low – check compressor level and performance

Why is my pneumatic nailer bending the nails?

Most often when the tool is bending the nails over, it is due to a lack of driving power due to worn o-rings or a lack of lubrication. The best way to correct low driving power is to clean the interior of the tool, install the appropriate o-rings, using fresh o-ring lubricant. Other possible causes for nails bending are:

1) driver – it is expected that the driver shows obvious wear at the tip. If it looks OK, it probably is.
2) driver piston assembly – check to see if the driver threads have loosened in the piston.
3) fasteners – defective, wrong collating angles, wrong fastener for the application.
4) air pressure too low

The driver that drives the nails will not return back up; it stays extended in the nose of the tool. What is wrong?

You must first understand the symptom. There are two separate failures that could cause a similar symptom description.

1) The driver is fully extended from the nose and does not return upward at all, unless the air supply is disconnected from the tool. Check that the driver is straight and that there are no interefence inside the nose channel.

2) The driver returns, but only partially, not enough to allow fasteners to advance. This usually suggests sluggishness, due to lack of lubricant, worn o-rings of the driver piston and bumpers. A complete rebuild with the appropriate parts would be the best option. Individual parts to be considered are:

A) lower o-ring of the cylinder
B) o-ring on the driver piston
C) bumper

My pneumatic nailer / stapler is skipping or misfiring. It cycles, but no fasteners come out or they only come out periodically. Is it the fasteners?

When dealing with collated fasteners, factors such as collation angle and pitch of the fasteners can affect the tool‘s ability to feed the fasteners properly. However, most of the time, it is an indication that the tool is sluggish and most likely just needs a tune up. A tune up means a complete cleaning and lube, along with the installation of the appropriate o-rings would solve most skipping problems due to lack of cycling speed. Addtional parts that can cause skipping that are not included in most o-ring are:

1) bumpers
2) pusher springs (strip nailers and staplers only)
3) pusher assemblies (strip nailers and staplers only)
4) check for proper magazine canister adjsutment. Example: magazine canister must be set at the corresponding nail length (for coil nailers only).
5) feed paw and feed pawl springs (coil nailers only).

How do I clear the nail/staple jam from my pneumatic tool?

This can vary from tool to tool, depending upon design. Generally, a jam is a fastener that has collapsed and is lodged between the driver and the nose. This causes a lot of stress that must be relieved. There is nothing scientific about this process. Most jams can be cleared by pushing the driver back up into the tool. Safety first – disconnect the tool from the air supply using a hammer and punch. Push the driver upwards and past the jammed fastener by placing the punch at the tip of the driver exposed out of the nose and tapping the hammer against the punch. NOTE: only strike the driver, as it is the hardest part. It is also the only moving part in that area. If you strike the jammed fastener, you may worsen the stress. Smaller tools, such as finish nailers, staplers, and brad nailers may have to be disassembled at the nose to relieve the jam.

AIR/PRESSURE RELATED QUESTIONS

When running my pneumatic nailer/stapler quickly, the first few nails drive okay, but others stand up. Is the problem with my compressor?

Probably not. The problem is volume of air, not pressure. Restrictions in the air line will cause a pressure drop to occur as a tool is being used in a fast operation. As the pressure drop occurs, drive power is reduced and the fasteners will be driven in a staircase appearance. That is, the first fastener will be driven all the way in - the next fastener will be a little higher, with the next fastener being even higher.

Make sure you have the proper air hose requirements. Air supply hoses should have a minimum working pressure rating of 10 bars (150 psi) or 150 percent of the maximum pressure produced in the air supply system, whichever is higher. A good quality air hose with a minimum inside diameter of 5/16" should be used. Air hoses should always be kept as short as possibile.

A filer, regulator, and lubricator should always be included in the air system for proper operation. A filter will prevent excessive tool wear and corrosion by trapping pipe scale, dirt, solidified lubricants, oil, moisture, and other components. Moisture removal prevents frozen airlines when operating at low temperatures. The regulator is the most important requirement for proper tool operation and the correct air pressure for the job. If the tool is over pressured, tool wear is greatly increased.

If the tool is under-pressured, it will not perform satisfactorily. Heavy-duty lubricants applied at the factory and/or lubricating during a routine maintenance check cannot be expected to remain in the tool indefinitely. Consequently, a line lubricator that injects an oil mist into the tool's air supply becomes essential.

Check fittings and airline for restrictions. Even the smaller compressors can support a burst of at least 10 - 15 nails before pressure is so significantly reduced to affect the drive energy. Restrictions can be moisture, ice, dirt buildup, or even fittings and airlines too small to support the tools volume requirements.

My nailer drives the nail too deep. When I reduce the pressure to flush the nail, the tool will not feed the nails. Can I prevent this?

Yes. Reducing air pressure to reduce the countersink of the nail produces irregular results. When the pressure is so low that the nailer does not drive the nail too far, it basically is not charged with enough air to function properly; it will then begin to skip or cycle irregularly. The best way to solve this problem is with some sort of depth control that can be used with normal air pressures. This depth control is usually an adjustment on the exterior of the tool. Most tools sold today have this feature added. Contact Fasco (fasco@fasco-tools.com) with your tool model number to find if a depth control accessory is available.

How much air pressure should I use on my pneumatic nailer/stapler?

Consult your Operation and Maintenance Manual for the minimum to maximum ranges. Maximum ranges are also noted on the exterior of the tool for safety reasons. However, for best results and extended service life for you tools, always use the minimum amount of pressure necessary to drive the fastener properly. The amount of pressure required will vary greatly depending upon the density of the material being fastened and the length of the fastener.

How do my pneumatic nailers / staplers get water inside them?

Any water inside of the tools is a direct result of natural condensation that eventually settles in pools in compressor tanks and air hoses. The compressor tanks and air hoses should be drained daily for optimum performance; and even more frequently during cold or very humid conditions.

My compressor and hoses fill with water that eventually gets into my air tools. Is there something wrong with my compressor?

No. Water in the compressor tanks and hoses is a result of natural condensation that can then form into pools. The severity of the water buildup can vary greatly depending upon working conditions; specifically high humidity or cold temperatures. With humidity, the moist air passes through the pump, and the water will slowly collect at the bottom of the tanks. Cold temperatures are the most difficult. Cold air is drawn in through a very hot pump and heated. This hot air is then pumped through hundreds of feet of very cold hose to reach the tools. The result is excessive condensation inside the hoses that is carried on through the hose and settles in the air tools.

During the downtime for the air tools, the water will pool in the low areas of the hose and freeze, causing severe air flow restrictions that will choke the tools. The water vapours that made it all the way to the air tool will freeze in the head valves and cause sluggish cycling. The compressor tanks and hoses should be drained several times per day in
these conditions.

How do I clear up the water that has built up inside my air hoses?

The best way is to use a blow tip. This is a tool that is normally used with air hoses to blow dust off tools and equipment; it offers a free flow of air when the trigger is actuated. To clear water, make sure the compressor is at a higher position than the hose by putting it up on saw horses or workbench. The hoses should be uncoiled; and if possible, run them downhill so that the blow tip attached to the end of the hose is at the lowest point. With the compressor plugged in, turn the switch on and be sure that it pumps up to maximum pressure. Leave the compressor switch on and open the blow tip by pulling the trigger and allow air to simply free flow through. Be sure that the blow tip is pointed away from anyone in the area and also away from any object that you do not want to stain. If there is a lot of water, it can spray excessively in the initial flow of air, and any sand, rust, or oil particles that are in the hose will come out with it. Continue the air flow until you are satisfied that all of the excess moisture is out of the hose. This procedure is especially important in colder conditions if the hose is to be stored outdoors or in cold conditions when not in use; pooling water will freeze solid, causing long delays in morning startups.

How do I clear water that has built up in the bottom of the tank of my compressor?

All compressors have drain valves at the bottom of the air tanks. These are used both for relieving pressure from the tanks at the end of the day, and to expel the water that builds up due to normal condensation. Allow the compressor to run up to top pressure and shut off automatically. In normal conditions, you may then shut the compressor switch off and open the drain valves. The air pressure that is released will carry excess water out of the tanks. (Note: Open these valves outside; as any rust or oil buildup will be expelled as well, and can cause staining to floors or carpets.) In extreme circumstances, where a lot of water has built up, leave the compressor switch on, so that it will kick on and and continue to pump pressure until the water stops draining. You may then turn the compressor switch off.

My pneumatic tools become sluggish and skip in cold weather. When it is warmer, they work fine. What may be causing this problem?

When pneumatic nailers and staplers become sluggish in colder weather, it is almost always as a result of moisture / water in the tools that can cause icing, especially in the head valve area. Outside temperatures as high as 0° Celsius can cause freezing conditions in the heads of the tools in high speed applications. There are on the market “winter” lubricants available. These lubricants are to be used to replace your everyday lubricant only during the colder months. These lubricants act like anti-freeze inside the nailer. Some of them are not even to be used in the air lines; they should be put directly into the air tool at the air fitting at the same rate as normal lubricating oil.

Can I put airline drying liquids in my compressor and hoses to remove excess water?

Airline or fuel line drying liquids are not recommended. Most of these commercial liquids can cause harm to the seals and bumpers in any pneumatic nailer or stapler. Anything that is put into the airlines will eventually get into the air tools and could cause expensive damage.

My compressor runs and builds up pressure, but no air comes out of the hose to my air tool.

All air pressure to the hoses is controlled by the pressure regulator. On new compressors, the regulator may be shut off similar to a water faucet. To adjust the regulator to the desired pressure for your tool, turn the knob (usually red) clockwise to open and increase the pressure level. You should be able to see the pressure level increase on the gauge that is attached to the regulator. Certain models require the knob to be pulled up slightly to unlock the knob to allow adjustment. When the desired pressure is achieved, push the knob back down to lock it so it cannot self-adjust from normal vibration of the compressor. If the pressure regulator adjustment does not solve the problem, the regulator has failed and must be replaced.

What is the ideal compressor for my nailer?

This depends from the air consumption your tool has for each shot. Small staplers need 0.4 lt. per shot at 6 bars (90 psi), while big nailer require more than 2 litres. Of course also the cycle speed should be considered. Usually a 25 lt. compressor for small tools and a 50 lt. compressor for the big nailers should be chosen.

But another important aspect in a compressor is the power (HP). If the compressor has a big air tank but is equipped with a small engine, it has to be running most of the time, in order to reach the pressure level. On the contrary, a high powered compressor requires less time to refill the tank again.

What shall we know about lubrication?

The typical size of staplers, bradders, finish nailers, and pinners that are used in the cabinet industry can be lubricated with as few as 2-3 drops of #10 weight non detergent oil once or twice a day - if an “oiler” assembly is not already in use. Applying the drops of oil is done through the handle of the tool where the male coupler (air inlet) is located. As a rule of thumb – it is advisable to perform an O-ring overhaul every six months for preventive maintenance.

While lubrication is vital, WRONG LUBRICATION does more harm to the tool than no lubrication.

Examples of misguided lubricant choices are: Marvel Mystery Oil (has a Ben-Gay smell), transmission fluid (has a sweet smell), WD 40, and pneumatic tool oils that were intended for rotary vane, automotive, and air impact tools. These INCORRECT oils are often the wrong viscosity and/or are detergent based with additives which can swell, dry, and crack O-rings. Additionally, they may actually wash out the factory installed grease lubrication that is good for the tool. A correctly lubricated tool can be identified with a very fine film of oil around the exhaust area. Inside the tool, the lubrication should be colourless.

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