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Brad Nailers - Do's & Don'ts for Best Results

At one time, the only place you would find a brad nailer was in the production shop. Now, many woodworkers use this versatile tool.

A nailer works great when there isn't enough space to swing a hammer. It's easy to use and makes building jigs and fixtures a snap.

But to get the most from your brad nailer, there are a few things you need to know. One of the first things you'll want to understand is the type of nail the gun uses. And how the nail acts once you pull the trigger.

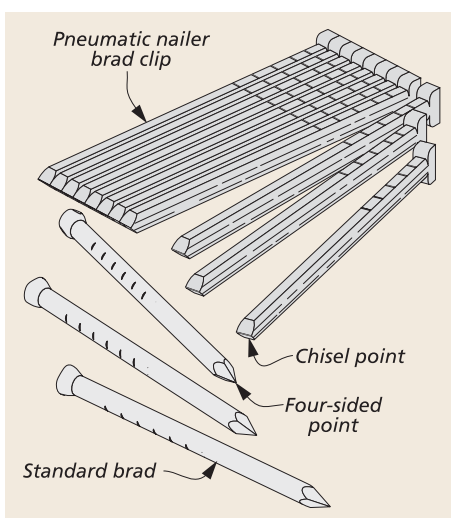
NAIL TIP. When you look at a clip of nails, you'll notice they're a little bit different from the brads you drive with a hammer. First of all, they come in a 100-nail clip that's a glued-up strip. The friction that occurs when you drive the nail actually heats up the glue and adds to its holding power in the wood.

If you take a closer look at the tip of the nail, you'll see it's shaped like a miniature chisel instead of the four-sided point you find on a standard brad nail (see drawing at left). This

makes it easier for the nailer to drive and set the nail in one single blow.

SPLIT WORKPIECE. You'll also notice the brad nailer uses a smaller gauge nail. This lessens the chance you'll split the wood as you drive the nail. Even so, the workpiece can still split if you're not careful.

Placing the chisel-shaped brad tip parallel to the wood grain or too close to the edge of the workpiece can make the nail act just like a bench chisel. This often splits the wood, like you see in the left photo below.



▲ Orienting the chisel point of the nail parallel with the grain of the wood increases the chance of splitting the workpiece.



▲ Turning the nail gun so the brad tip chisel point is positioned across the wood grain helps to prevent workpiece splitting.

So I always check the wood grain before pulling the trigger. Then I can orient the chisel tip across the grain (see right photo bottom of page 1). This way, the nail won't spread out the wood fibers along the grain and split the workpiece.

NAIL LENGTH. Another thing you'll want to consider is the length of nail you use. I like to make sure the nail penetrates into the underlying frame or substrate at least $\frac{3}{4}$ " when nailing softer woods. And since hardwoods tend to hold the nail better, I try for $\frac{1}{2}$ " or more of penetration here.

You'll also want to keep in mind the longer the nail, the greater the chance of the nail bending or blowing out the side as it's driven. Understanding more about blowout can also help prevent this problem.

BLOWOUT. Having a nail blow out the side of the workpiece typically occurs when you nail a piece of solid wood to the edge of another piece. The nail tip either lifts the surface of the wood slightly or it may come completely out the side, like you see in the photo at right.

Improper aiming of the nailer can cause blowout. But it frequently results from hitting a hard spot in

the wood. A knot in the wood or increased thickness of the annual rings in the wood is often the problem. In some cases, the brad can actually be bent as it passes through these hard areas in the wood, as shown in the drawing at right.

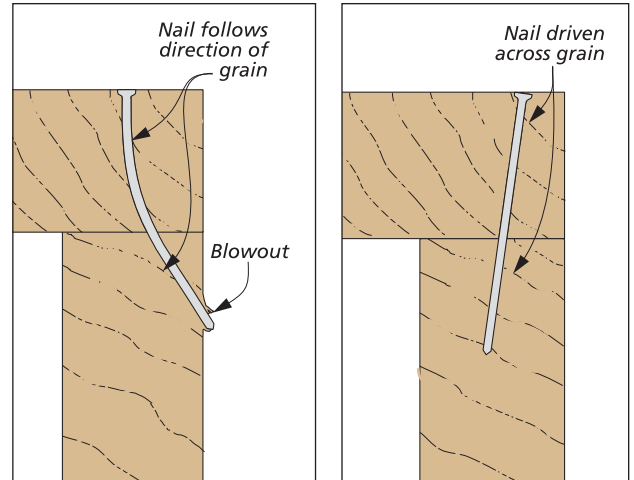
A common reaction is to solve the problem by moving the nailer farther away from the side of blowout and then tilting the tip away from blowout. But it's actually better to move the nailer tip closer to the edge and then point the tip slightly away from the side the nail has come out. This allows the nail to cut through the grain at more of an angle, like you see in the drawing at right.

Even doing all of this, blowouts can still occur. If this happens, the box below will show you the steps for repairing the problem.

CLAMP IT. One final thing. Your nailer isn't good at pulling joints or pieces of wood together. But it's great for holding everything in position once it's in place. So whenever possible, I try to clamp the pieces together before nailing them together. This way, the nail can use its holding power to maintain the workpiece or joint right where I want it. **W**



▲ As the pneumatic nailer is fired, the brad is sometimes deflected making the tip of the nail visible as it protrudes out the side of the workpiece.



Blowout. The nail can be deflected by the grain or a hard knot in the wood.

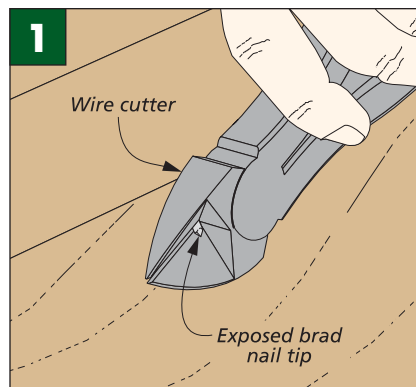
Nailer Orientation. Angle the nail across the grain to prevent blowout.

How-To: Blowout Repair

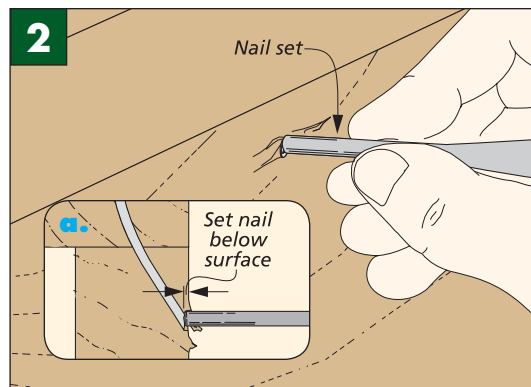
Making blowout repairs isn't difficult. But if it's done incorrectly, you can make matters worse. That's because the brad will often bend or break as you attempt to fix it. So don't try to pull the nail on through or back

it out. Instead, clip the protruding brad as close to the surface as possible, like you see in Fig. 1. Then countersink the clipped end beneath the surface (Fig. 2). Next, you'll want to carefully glue the damaged splinters back

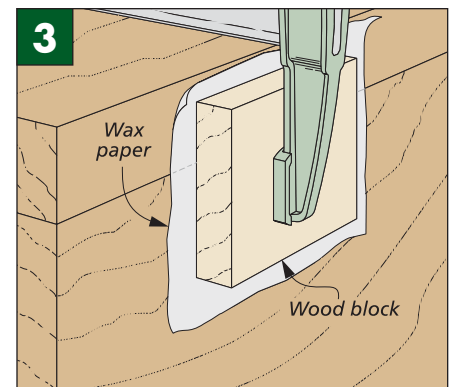
in place, cover the area with wax paper, and clamp a wood block in place to hold everything in position until the glue dries (Fig. 3). Finally, use wood filler to cover up the nail hole and any other surface defects.



Clip Exposed Brad. Use a pair of wire cutters to clip the exposed nail close to the surface of the workpiece.



Countersink the Nail End. A nail set or punch works best for positioning the remaining end of the nail below the surface of the wood.



Replace the Splinters. Carefully glue any splinters back in place, cover with wax paper, and clamp a block in place.