

Pressman's Toolbox: Tapers and hole depths

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Ever wonder about those little threads that protrude out of the frame of the press?

They're called taper pins.

These pins are usually installed by the press manufacturer to align frame pieces, stacked units or folder pieces so that when the components are reassembled they are accurately in line with one another.

The taper pin is normally tapered at one quarter-inch per foot and come in various sizes, depending on the size and weight of the object that is to be kept in line.

If the pins need to be removed, do so by placing a couple of washers over the threads. Next, twist the proper size nut onto the threads. The taper pin will extract as you tighten the nut.

If you intend to move a newspaper press or any other machine that requires perfect alignment, make sure it has taper pins before disassembling. Otherwise you may have difficulty reinstalling.

What can you do if the newspaper press or machine doesn't have taper pins?

Install your own. Decide where you want the pin and then drill a hole. The hole's size is determined by the taper reamer used. Purchase a taper pin reamer from a tool supplier.

Correct alignment

Drilling holes between the frame parts will ensure correct alignment of the newspaper press.

If you don't have access to a taper pin reamer or have limited access to the area in which you want to install a pin, an alternative is to drill straight holes and then use drill rods to align the equipment.

You'll want to drill a minimum of four holes and I usually drill quarter-inch holes at 90-degree angles. This allows you to place drill pins in both the machine's direction and the traverse direction, further ensuring correct alignment.

When I reassemble the press. I cut enough quarter-inch drill rod pieces to fit each drilled hole in the frame. As soon as I get the pieces to align, I insert the pin. It usually takes a little longer to drive in straight pins than taper pins because as you drive taper pins into the frames, the frames align themselves as the taper pin is seated into place.

Managing depth

Drill collars are used to drill a hole to certain depth. Drill collars are needed whenever you drill a hole but need the hole to extend only partially thru the work piece.

The drill collar is sized for the individual drill bit that you are using and it is locked onto the drill bit by tightening a setscrew against the drill bit. The drill will stop when the collar comes in contact with the surface being drilled.

Tape or other marks placed on the drill bit will provide an indication of how deep the hole is, but normally those marks aren't an accurate representation of the hole's actual depth.

When a drill collar is not available, use a wooden dowel. First, drill a hole through the dowel. Then cut the dowel so that only the proper length of the bit is exposed.

The dowel is then slipped onto the drill bit and the hole will be drilled to the proper depth.

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