INSTRUCTIONS FOR USE OF TAPPED FACE PLATES

METHOD 1

Identify which three holes in the FP are tapped, and somehow mark one as “Hole A”. Use a piece of tape, or fingernail polish, whatever.

Place the FP flat and centered on the work piece. If you have a self-centering punch, use that to mark the center of the three tapped holes on the workpiece. Lacking that, use a sharp pencil to mark the outer edges of the screw holes. When you’ve done this, mark the hole on the work piece (WP)that corresponds with “Hole A”. Note that these two surfaces must be mated to each other for all further marking, checking, etc., and that these two holes must line up with each other.

Drill three 1/4” holes in the WP where required. Now turn the WP over, keeping the two surfaces mated as in paragraph 2, and check to see how the holes line up. (Make sure that you have the two marked holes lined up together.) If they’re okay, double check by threading a 1/4 X 20 machine screw through each WP hole and into the FP. If the FP is snugged down, go ahead and countersink the holes in the WP. IMPORTANT - Make sure you countersink on the opposite side that you marked in paragraph 2!

If the holes don’t line up as they should, depending on the degree of non-alignment, you have a couple of options. You can redrill one (or two) of the WP holes with an F or G drill. This will give you a little more slop in the fit, but should still provide the required holding force. If the holes are REALLY out of line, first make sure that you have the back of the WP in contact with the FP, and not the WP front. If you do, start over. Go back to paragraph 2, rotate the FP about 40º, and start over. (The 40º figure will give you two more attempts.)

Once you've completed the chuck, you can check for minimum runout for the entire system. If it's not nearly perfect, remove the spindle washer (if you have one installed). Or add one if you don't. Do keep in mind that the end usage of the chuck will be to finish the bottom of wooden bowls, which move on their own far more that the one or two thousandths that you might encounter here.

Lastly, I would appreciate feedback from you as to - 1) was there a difference with and without the washer, and 2), which one resulted in the least runout. If you have any numbers on this, I'd like to have those as well.

Tom Weber

METHOD 2

After writing this, I asked Bill Noble for his comments. He provided another method that he's used. So I'm including our emails below. One cautionary note, when you're drilling using the FP as a template, be careful to keep the drill perpendicular to the surface so as to not damage the threads.

On Nov 7, 2010, at 10:53 AM, Bill Noble wrote:

one addition - when I do this, i turn a recess for the FP to fit into that is a snug fit.

this process is less tedious

If you use a #7 drill, you can just put the FP into the recess, drill the first hole (only the first hole) with #7, remove FP, redrill to 1/4, countersink the other side, and screw the FP in using the one hole. Then drill the other two #7, mark the hole that goes with the screw already in place, drill the other holes and then reinstall.

On 11/7/2010 8:45 AM, Tom Weber wrote:
Sounds like a better method.
One question - How do you hold the plate for the initial recess turning? DS tape, vacuum chuck, what?

Bill Noble wrote:
well, one quick way is to put a tenon on one side - just glue or screw a scrap of something round to it - turn the recess and then after FP is mounted, cut it off as you face the thing. Another way is to mark the center, put a FP on the lathe (with or without anything on it), and use the tail stock to hold the disk to the FP - then turn the recess (you can leave the center 7/8 inch in place because that will go in the hole in the center of the FP, right.... you only need 1/8 inch or less, just something to center it accurately - the fit should be good, it doesn't have to be a press fit, but you don't want much slop or you will be trimming more off the disk's edges than you need to. I usually put a little glue on the FP before I mount it for the final time - RTV is good, I've also used gorilla glue. CA would not be good