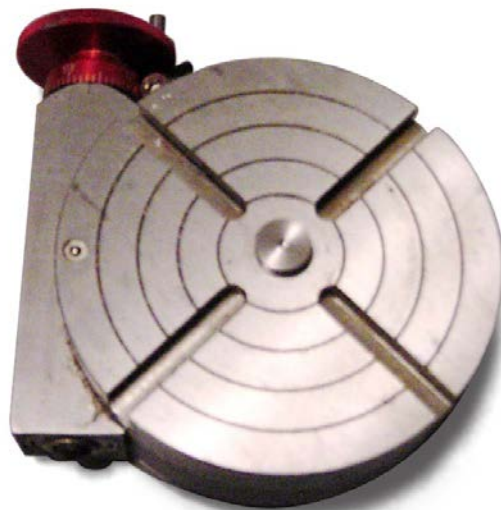


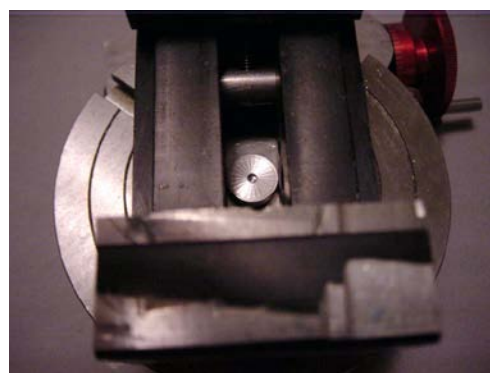
## TIP 41a — A Simple Centering Fixture for the Rotary Table/Robert Bielka

Recently, I was faced with the need to mill circular paths in several pieces that I was using for a prototype item I was making. This meant that I had to align the center of the rotary table with the center of the milling cutter and then offset the cutter to the desired radius of each cut. It was not possible to realign the vise every time and get the job done in the required time. It was clear that I needed a way to keep the vise centered along one axis and to adjust it along the other. I noted that the threads in the center of the rotary table were 3/8" in diameter so I figured that the head of a bolt could be turned down to fit in the bottom slot of the vise, which is 1/2" wide. The head of the bolt also had to be made shorter so it wouldn't come in contact with the bottom end of the screw that clamps the vise. I drilled a hole in the center of the bolt head after it was shortened so I could use the tapered centering device (part # 40380) to align the rotary table and the milling cutter center. By aligning the rotary table with the centering device before clamping it to the milling table, I could easily get it in place. I established the center of rotation on each workpiece and after clamping it in the vise, moved the vise and the workpiece

on top of the rotary table until it was centered and then clamped the vise to the rotary table. All I had to do then was to move the horizontal table until the cutter was at the desired radius and make the cut, while turning the rotary table by its handwheel.



*This centering device was turned on the lathe, using a 3/8-16 bolt.*

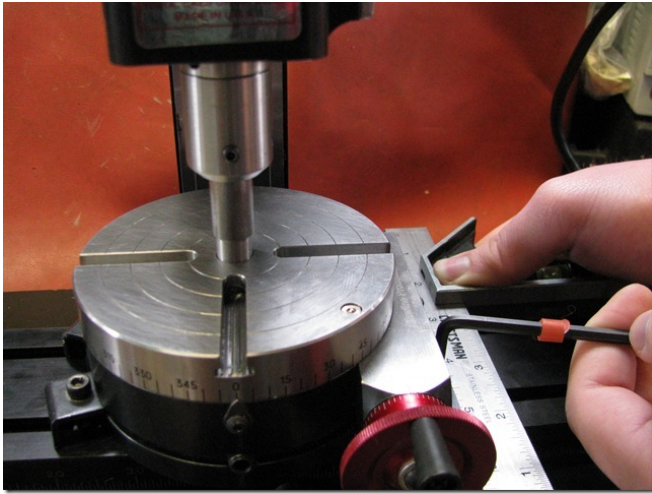


*The above pictures show the bolt and its position in the rotary table with the vise also in place.*

*TIP 41b Continued on Page 2*

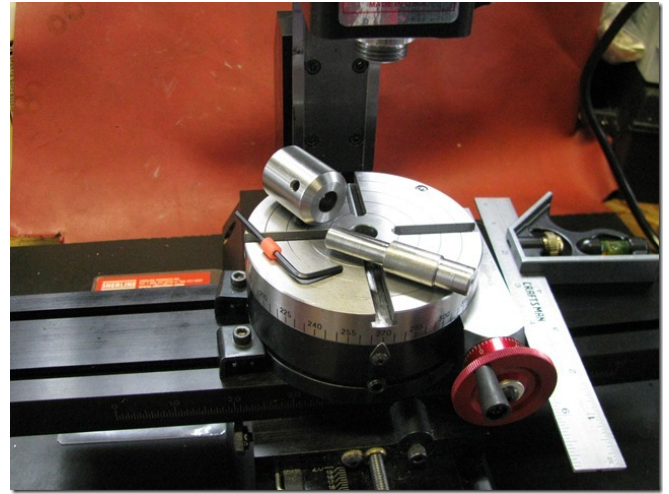
## TIP 41b — Another Rotary Table Centering Fixture/Roger Monroe

I am hesitant to send in this tip because I am so new to machining. However, I am sure you know if it is worth passing on. I found it takes my novice hands considerable time to locate the rotary table under the mill spindle, and this is my solution.



*Securing the rotary table after aligning the mill spindle and squaring it to the mill.*

First, I turned the steel pin between centers on the lathe, which made it easy to slowly reduce the diameters to the 3/8" end mill holder on one end and the rotary table center hole on the other for a close fit.



—Roger Monroe