

Attaching the chucks to workholding devices/machines

A handout containing the highlights of the video titled *Identifying 3-Jaw and 4-Jaw Chucks Part 2*

Threaded tapered spindle

1. Wipe off the machine and chuck to make sure there is no debris.
2. Place the chuck on the machine and start threading it.
3. Spin the chuck around the thread until it is latched firmly or until you can no longer spin it.
4. You may use a crescent wrench to tighten the hold.



FIGURE 1. THE INSTRUCTOR STARTS THREADING THE 3-JAW CHUCK, WITH A THREADED TAPERED SPINDLE METHOD OF ATTACHMENT, TO AN INDEXING HEAD.

Camlock style

1. Wipe off the machine and chuck to make sure there are no debris, including the camlock holes on the workholding machine and the cams on the back of the chuck.
2. Align the lines on the chuck and on the spindle. Mount the chuck on the machine.



FIGURE 2. CIRCLED ON THE PHOTO ARE THE LINES ON BOTH THE SPINDLE AND THE CHUCK MEETING AT A POINT.

- Each camlock has a line on it. Around it, there are two chevron symbols pointing at each other. With a chuck wrench, turn the cams clockwise, until the line on the cam is in-between the two chevrons. Figure 3 shows a close-up of this step.



FIGURE 3. AS YOU TIGHTEN THE CAM CLOCKWISE TO LOCK IT IN PLACE, THE LINE ON THE CAM SHOULD BE IN-BETWEEN THE TWO CHEVRON MARKS ON THE SPINDLE.

- With the chuck in place, go around the camlocks on the spindle again, this time tightening each camlock.

Long nose tapered spindle

- Wipe off the machine and chuck to make sure there is no debris.
- Position the keyway so that it lines up with the key on the spindle nose. (See Figure 4)



FIGURE 4. THE INSTRUCTOR POINTS AT THE KEY ON THE SPINDLE NOSE. A SLOT CAN BE SEEN ON THE CHUCK, WHICH IS ALSO CALLED THE KEYWAY. THE KEY AND THE KEYWAY NEEDS TO BE ALIGNED TO MOUNT THE CHUCK IN PLACE.

3. Mount the chuck on the spindle nose. Thread the collar around the chuck.

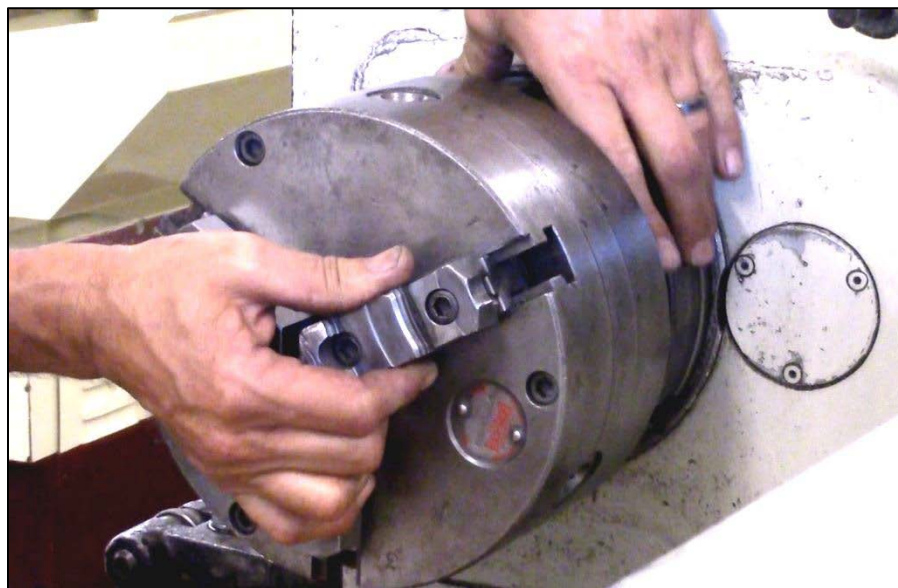


FIGURE 5. THE INSTRUCTOR HAND-TIGHTENS THE THREADED COLLAR AROUND THE CHUCK.

4. Tighten using a spanner wrench. Hook the spanner wrench on the notches on the threaded collar.

**Tip: Turn on the machine and set it to low speed. It will help hold the chuck when you use the spanner wrench to tighten the threaded collar to the mounted chuck.*

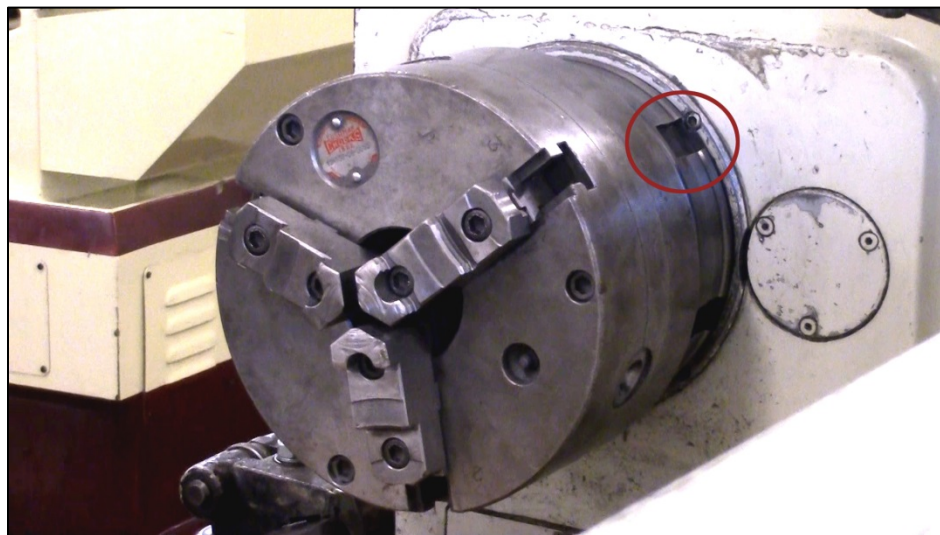


FIGURE 6. A PHOTO OF THE CHUCK MOUNTED ON THE MACHINE. NOTCHES ARE AROUND THE THREADED COLLAR TO HOOK THE SPANNER WRENCH TO.

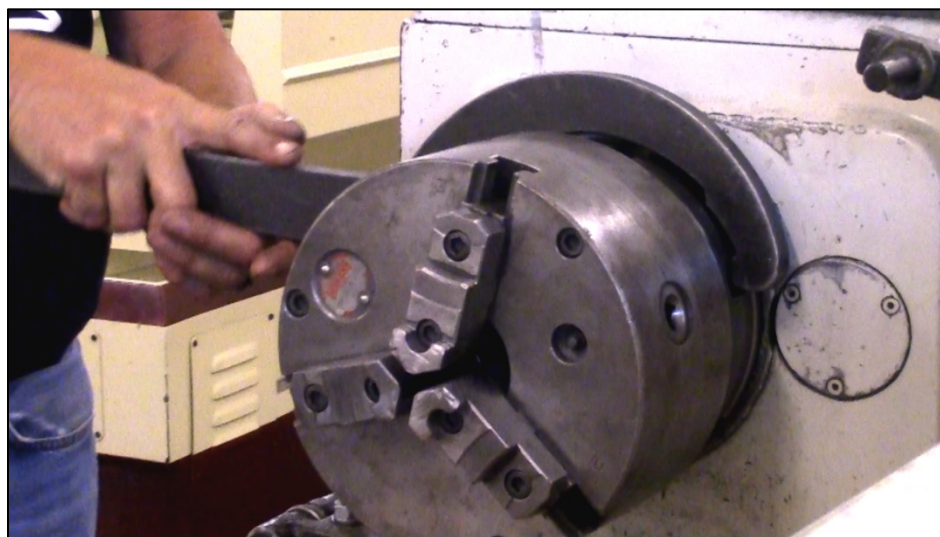


FIGURE 7. THE INSTRUCTOR HOOKS A SPANNER WRENCH ON ONE OF THE NOTCHES OF THE THREADED COLLAR.

5. With the spanner wrench hooked on a notch and the handle on a horizontal position, tighten the collar with a quick jerk.



FIGURE 8. THE INSTRUCTOR PREPARING TO TIGHTEN THE THREADED COLLAR AROUND THE CHUCK.

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