**Work Piece - All Applications:**

- What are the size and depth of the hole?
- Will it be a through or blind hole?
- Is the hole drilled to the correct size?
- Is the work piece rigidly held against rotation and upward movement?
- If tapping a bottom-hole, does drilled depth allow for chamfer teeth of tap and sufficient clearance to keep tap from bottoming out in hole?
- What is material and hardness of the work piece?

**Tap - All Applications:**

- Do you have the correct tap design for the application?
- What are the tap sizes and styles?
- What material is the tap made from?
- Is the tap sharp?
- Is the tap properly aligned with the drilled hole?
- Is there sufficient clearance between the tap and the hole to allow for retraction?
- Who is the tap manufacturer?
  
  What speed do they recommend for optimum performance of their tap in this material?

**Machine Tool Manual - Applications**

- Is machine stop set so the tap releases in neutral to prevent bottoming?
- Is the machine retraction correct for tapping attachment being used?
- Is the torque control set to prevent tap breakage?
- Is depth control set to correspond with machine stop to provide the total thread depth required and prevent bottoming?

**Manual - Applications**

- Is machine stop set so the tap releases in neutral to prevent bottoming?
- Is the machine retraction correct for tapping attachment being used?
- Is the torque control set to prevent tap breakage?
- Is depth control set to correspond with machine stop to provide the total thread depth required and prevent bottoming?

**CNC Applications**

- What type of machine is in use?
- What is the horsepower?
- What is the spindle taper?
- What is the method of fixturing?
- Are machine feed and speed set correctly?

The machine retraction must be correct for the tapping attachment being used.

- What is the feed rate?
- What is the actual tapping speed?
- What is the clearance plane height?
- Is the potentiometer canceled?
- Be sure to follow programming instructions for the tool.
- When using a self-reversing head, has the ramp, dwell or exact stop been disabled?

**COARSE THREADS - - - Advantages:**

- Easier and faster assembly, providing a better start with less chance of cross threading.
- Nicks and burrs from handling are less liable to affect assembly.
- They are less likely to seize in temperature applications and in joints where corrosion will form.
- Less prone to strip when threaded into lower strength metals.
- More easily tapped in brittle materials and or materials that crumble easily.

**FINE THREADS - - - Advantages:**

- They are about 10% stronger that coarse threads due to their greater cross-section area.
- In very hard materials, fine threads are easier to tap.
- They can be adjusted more precisely because of their smaller helix angle.
- Where length of engagement is limited, they provide greater strength.
- Thinner wall thickness can be used because of their smaller thread cross section.

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**TAPPING CHECKLIST**

1-800-328-4655 (Personnally answered) · 1-800-328-4654 (Electronically answered)

355 State Street • Saint Paul, Minnesota 55107 • norsemandrill.com

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