Common Tapping Problems & Causes

Tap breakage:
- The tap is dull.
- The wrong type of tap is used.
- The tap is incorrectly ground.
- The tap drill is too small.
- The drilled hole is too shallow.
- The tap is misaligned with the hole.
- The wrong machine is used.
- An incorrect fixture or holding device is used.
- Work hardened material.
- There is a lack of lubricant, or the wrong type is used.

Tap failure on reversal:
- The tap is cutting too tightly. The cutting face angle should be increased.
- The tap is galling. The face angle on the back of the land should be increased.
- Chips are wedged between the flutes.

Chips clogging flutes:
- The wrong type of tap is used.
- The chamfer is insufficient.
- The cutting face angle is incorrect.
- The flutes are rough.
- The flutes are improperly reground.
- There is a lack of lubricant, or the wrong type is used.

Stripped or chipped tap threads:
- The tap is misaligned.
- The tap is carelessly handled.
- The tap is dull.
- The tap is too hard.
- The tap is improperly sharpened.
- A surface treated tap is used in the wrong application.

Torn threads in tapped part:
- The cutting face angle is incorrect; usually, the angle is too small.
- The tap drill is too small.
- Chips are clogging the flutes.
- The tap has broken threads.
- The tap is improperly resharpened.
- There is a lack of lubricant, or the wrong type is used.

Tap sticking or binding:
- The tap drill is too small.
- The tap lands are too wide.
- The cutting face angle is incorrect.
- There is a lack of lubricant, or the wrong type is used.
- A surface treatment (lubricant) is required.

Excessive tap wear:
- The material is abrasive, or inclusions are present. A surface treated tap is required.
- The tap is misaligned.

Cutting face breakdown:
- The cutting face angle is incorrect.
- A surface treatment is required.

Tap overheating:
- The land width is excessive.
- There is a lack of lubricant, or the wrong type is used.
- The tap is dull.
- There is excessive flank contact. Pitch diameter relief is required.
- The tap is used at excessive speeds.

Poor finish on thread in tapped part:
- Pitch diameter relief is required.
- The face angle is incorrect; usually, the angle is too small.
- The tap drill is too small.
- There are an insufficient number of chamfered threads.
- The tap is dull.
- There is a lack of lubricant, or the wrong type is used.

Excessive frictional drag and power requirement:
- Pitch diameter relief is required.
- The point size on the tap is too small.
- The tap is dull.
- The cutting face angle is incorrect.
- The tapping speed is incorrect.
- There is a lack of lubricant, or the wrong type is used.
- The equipment used is incorrect or inadequate.
- The tap is misaligned.

Alfa Tools 7845 N Merrimac Ave., Morton Grove, IL 60053 p. 847-470-9595 f. 847-470-9696