

SET-UP TROUBLE SHOOTING:

1. When form tool diameter changes size, varies or chatters.
 - Check for maximum rigidity in tool set-up and head positioning.
 - Check for sloppy work spindle bearings.
 - Check for proper center height setting on tool.
 - Check for proper grind of your tool (hook of tool).
 - Check to see if there is proper work support while cutting.
 - Check for loose slide or tool.
 - Check to see if all bolts are tight.
 - Dull tool.
 - Check stop screw pressure.

2. When the hole gets big.
 - Head locking in the proper position.
 - Sloppy spindles.
 - Center drill chipped or off center.
 - Check to see if drill is dull or loaded up.
 - Check drill alignment and spindle alignment.

3. When threads come out stripped.
 - Head locking properly.
 - Check if hole or body size is correct.
 - Check for spindle alignment.
 - Dull, loaded up tap or die.
 - Check summary settings.

4. Variation in length.
 - Worn or sloppy bearings in spindle.
 - Dull end working tools pushing work back into collets, such as drills, broaches, etc.
 - Loose worn or dirty collets.
 - Check for proper feed finger tension on all 5 spindles.
 - Check for clean cut-off on bar end.
 - Stock stop should be tight, highly polished, and proper length of stop plate.
 - Check and make sure the stock is feeding out to stock stop.
 - Check head thrust bearing.
 - Check for worn rolls and pins on end working cam lever.

5. When parts have a burr on the cut-off.
 - Check for proper pressure on stop collar.
 - Is pick-off collet adjusted properly.
 - Check to see if cut-off is on center.
 - Check the timing of the closing dog.

6. When box tool dimension is rough or varies in size.
 - Check for proper grind on box tool.
 - Check for proper feed.
 - Check rollers for proper tension.
7. When hollow mill dimension is rough or varies in size.
 - Check for proper grind.
 - Worn or loaded cutting edges.
 - Check for proper alignment (work piece to mill).
 - Check for proper feed.
8. When improper step or shoulder appears.
 - Check form tools for alignment.
 - Check box tools for alignment or distance of travel.
 - Check if drills are of proper depth and make sure they they are sharp.
 - Check for loose tools or holders.
9. If rolled threads are out of form or flaky (scissor type).
 - Check feed or penetration of work.
 - Check for proper blank size.
 - Check blank for taper.
 - Check to see if rolls are on center of work.
 - Check for proper roll synchronization.
 - Check rolls for nicks.
10. If reamer chatters.
 - Too much clearance on spiral relief.
 - Check for proper alignment.
 - Make sure feed is right for size of reamer.
 - Check for low cutting edges.
11. If tap trouble.
 - If tap is cutting under size (low cutting edges).
 - Right tap for the job?
 - Tap alignment with work piece.
 - Check for proper float in holder.
 - Check to make sure hole is proper size.
 - Check summary settings.
12. If knurl is out of form or flaky.
 - Make sure blank is proper size.
 - Check feed or penetration of work.
 - Check blank for taper.
 - Check knurl pins and knurls for wear or nicks.