

CRAFTSMAN'S CRIBSHEET

NUMBER
37

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30 Potential Causes of Part Length Variation on Screw Machine Parts

There are many different ways that part length can vary when using a cut-off tool on multiple-spindle automatic screw machines.

Here are some of the major reasons grouped into a rough classification by where the cause exists.

The Cut-Off Tool Itself

- Tool is dull
- Tool is improperly ground (point angle too large)
- Tool is loose/improperly inserted into holder
- Tool blade is too thin
- Cut-off tool is hitting while in high speed
- Cut-off tool is being hit by die head or chasers

The Cut-Off Toolholder

- Toolholder itself is loose
- Toolholder is hitting work spindle
- Toolholder is hitting tool post
- Toolholder is warped or bent
- Toolholder is worn

The Work Spindle

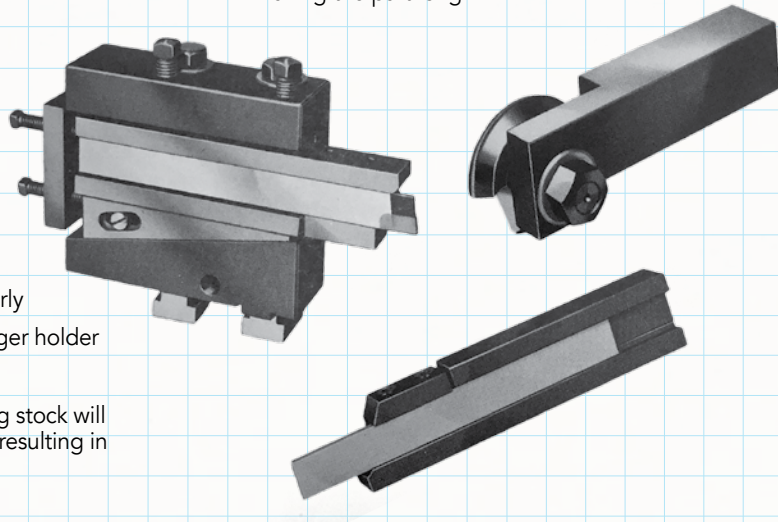
- Spindle has end play
- Spindle has worn bearings
- Spindle carrier has end play
- Index lock pin spring is broken
- Finger holder is not adjusted properly
- Broken pins or fingers are in the finger holder
- Feed tubes are bent or beat up
- Wrong stock feed cam. Overfeeding stock will cause bounceback from stock stop resulting in short part
- Incorrect collet tension

The Cross Slide

- Cross slide has play
- Cross slide is loose
- Cam is loose
- Cut-off cam is too large and causes too much feed
- Cam drum is loose

Other Tools

- Stock pushed back into collet by drill (dull drill pushing stock rather than cutting chip)
- Stock pushed back into collet by reamer
- Face-off tool is loose
- Face-off tool is dull
- Face-off toolholder is loose
- Die head is pulling stock out of collet making the part long



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