

TAP TROUBLES

Troubles

Causes

Remedies

1. Taps break

- | | |
|---|--|
| (a) Dull tap | (a) Sharpen tap |
| (b) Drill too small | (b) Check recommended drill chart P. P. |
| (c) Striking bottom of hole | (c) Check depth of drilled hole and limit of tapping machine |
| (d) Improper alignment | (d) Check machine |
| (e) Incorrect lubricant | (e) Check chart P. P. |
| (f) Loose fixture | (f) Check machine |
| (g) Lubricant starts after tap is engaged | (g) Lubricant must precede tap |
| (h) Material too hard | (h) Try roughing |
| (i) Tap not cutting freely | (i) Check relief |
| (j) Not enough chip clearance | (j) Widen flutes |
| (k) Tap pushing instead of cutting | (k) Check hook or rake angle |
| (l) Wrong lead screw | (l) Check gearing |
| (m) Not enough chamfer relief | (m) Regrind relief into tap |
| (n) Not enough thread relief | (n) Relieve |

2. Taps chip; Taps loading

- | | |
|---------------------------|-----------------------------|
| (a) Improper flute design | (a) Have hook angle checked |
| (b) Improper lubricant | (b) Check chart P. P. |
| (c) Improper relief | (c) Have tap checked |
| (d) Tap too hard | (d) Check Rockwell |

3. Go gage will not enter

- | | |
|--|------------------------------|
| (a) Tap too small | (a) Check Pitch Diameter |
| (b) Distortion of part due to wall thickness | (b) Try rougher and finisher |

4. Go gage only enters part way

- | | |
|----------------------------|--------------------------|
| (a) Possible lead error | (a) Check lead on tap |
| (b) Taper thread being cut | (b) Check alignment |
| (c) Tap too small | (c) Check Pitch Diameter |

5. No go gage enters full length

- | | |
|---|--|
| (a) Tap worn on Major Diameter and cutting oversize | (a) New tap |
| (b) Too much feeding pressure | (b) Use lead screw or correct pressure |
| (c) Poor spindle alignment | (c) Check |
| (d) Wrong tap tolerance | (d) Check tap |
| (e) Taper or bell mouth | (e) Check spindle |

6. No go gage enters part way

- | | |
|--|--------------------------------|
| (a) Tap holder not concentric with spindle | (a) Secure accurate tap holder |
|--|--------------------------------|

7. Torn threads

- | | |
|------------------------------------|--|
| (a) Wrong chamfer | (a) Increase length of chamfer |
| (b) Tap pushing instead of cutting | (b) Incorrect hook angle |
| (c) Lands too wide | (c) Grind narrower |
| (d) Improper thread relief | (d) Use proper tap |
| (e) Material condition | (e) Check lubricant, speed, tap design, hardness of material |

8. Torn crests

- | | |
|---------------------|----------------------------|
| (a) Drill too small | (a) Check drill size P. P. |
|---------------------|----------------------------|

9. Steps in flanks

- | | |
|-------------------------------|--------------------|
| (a) Improper feeding pressure | (a) Use lead screw |
|-------------------------------|--------------------|