CANNED / FIXED CYCLES

Chapter 25
Review

- Interpolation
  - Linear G01
  - Circular G02/3
- Feed rates are required – F word
- Can involve one, two, or more axis
- Circular interpolation must include a plane identifier
  - G17 = XY (IJ), G18 = XZ (IK), G19 = YZ (JK)
- ALL ARE MODAL
Canned / Fixed Cycles

- Canned cycles are intended to be a cycle that is easily selected / repeated / combined with other cycles to cut down on program time

- They can be cycles that are used for drilling, milling, pocketing, boring

- They can also be combined to do two or more operations
  - *i.e. set up a drilling and taping cycle*
  - *Have it repeated over a pattern cycle*
Important Notes

■ Many manufacturers have their own set of cycles

■ While some are similar, they may vary by machine
  - *They may have different commands per block*

■ They way the machine sets up the cycles may vary
  - *Bottom corner or top*

■ Some commands are modal and will not be canceled until told
  - *EG. Drilling cycles will stay until canceled*
  - *Patterns will only last for the single line*
Drilling Cycles

- G81 – Drilling cycle
- G82 – Spot drilling cycle
- G83 – Deep hole drilling cycle – Standard
  - Commonly called peck
- G73 – Deep hole drilling cycle – High speed
  - Commonly called high speed peck
- G84 – Tapping cycle – Right hand thread
- G74 – tapping cycle – Reverse hand thread
- G85 thru 89 and G76– Boring and reaming cycles
Cycles

- Ensure you know what cycles you are applying
- If you are applying a boring / drilling cycle remember they are modal
- If you are using a canned cycle to pattern remember that it is not modal
- If you can try and pattern as many holes as you can without changing cycles

- Ensure that you cancel any cycles by using G80 before moving on to the next operation
Homework

- Complete homework assignment in lab on FlashCut computers.
- Turn in today
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