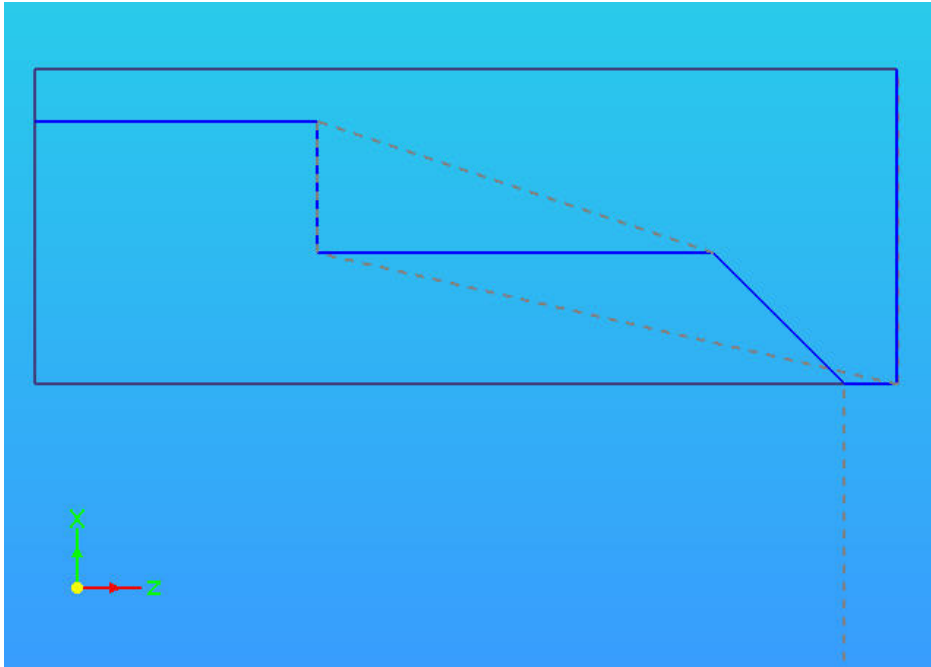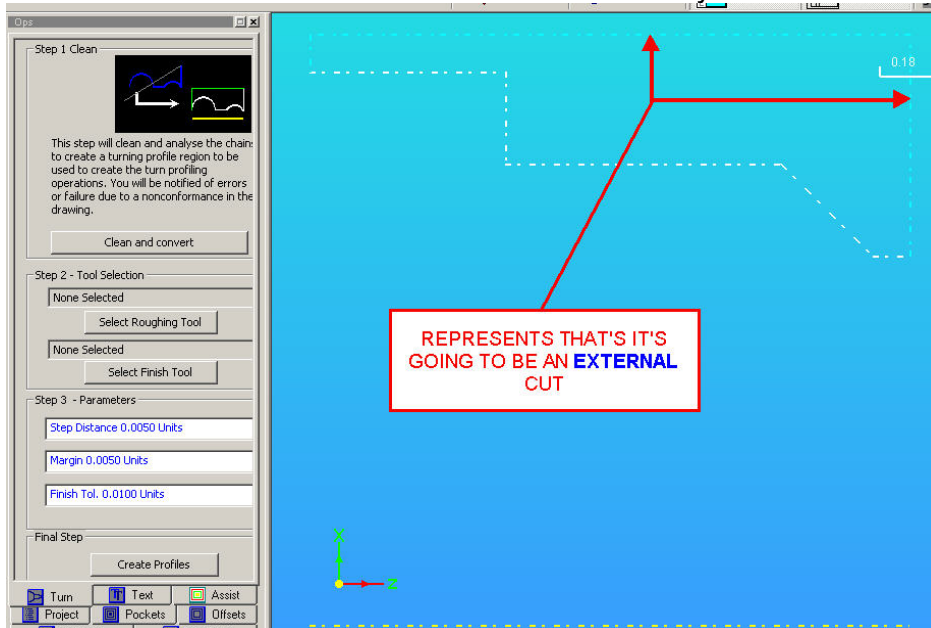# BACK ANGLE TOOL SETTING – LAZYCAM

This little tutorial should provide you with some insight on the back angle tool setting. Look at the different screen shots taken from LazyCam and make note of the settings. I have created a LCAM file, namely TURNTOOL.LCAM to save you some steps. The DXF is also attached.
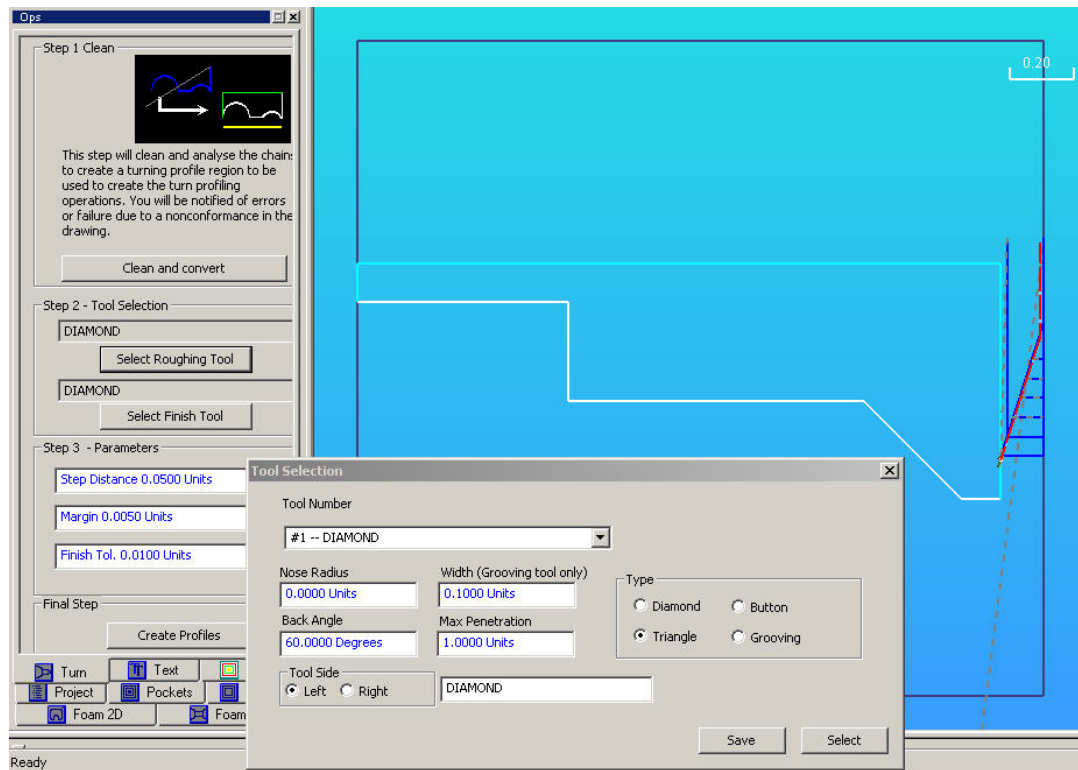
If you want to start with the DXF here is what the screen may look like after importing.
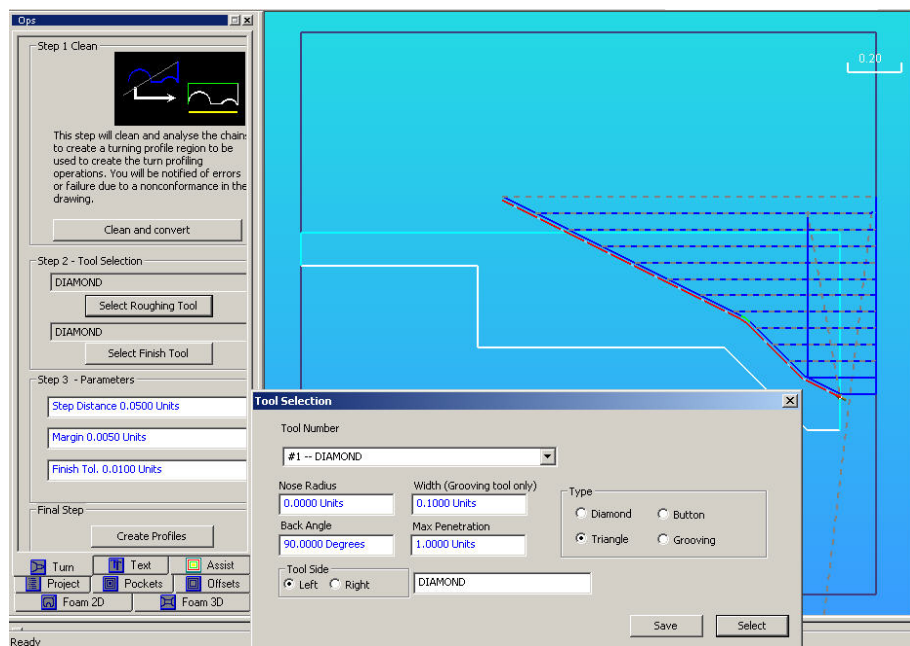

Here is what the Lcam file should look like in LazyCam:

Step 1 Clean

This step will clean and analyse the chains to create a turning profile region to be used to create the turn profiling operations. You will be notified of errors or failure due to a nonconformance in the drawing.

Clean and convert

Step 2 - Tool Selection

None Selected

Select Roughing Tool

None Selected

Select Finish Tool

Step 3 - Parameters

Step Distance 0.0050 Units

Margin 0.0050 Units

Finish Tol. 0.0100 Units

Final Step

Create Profiles

Turn   Text   Assist
Project   Pockets   Offsets

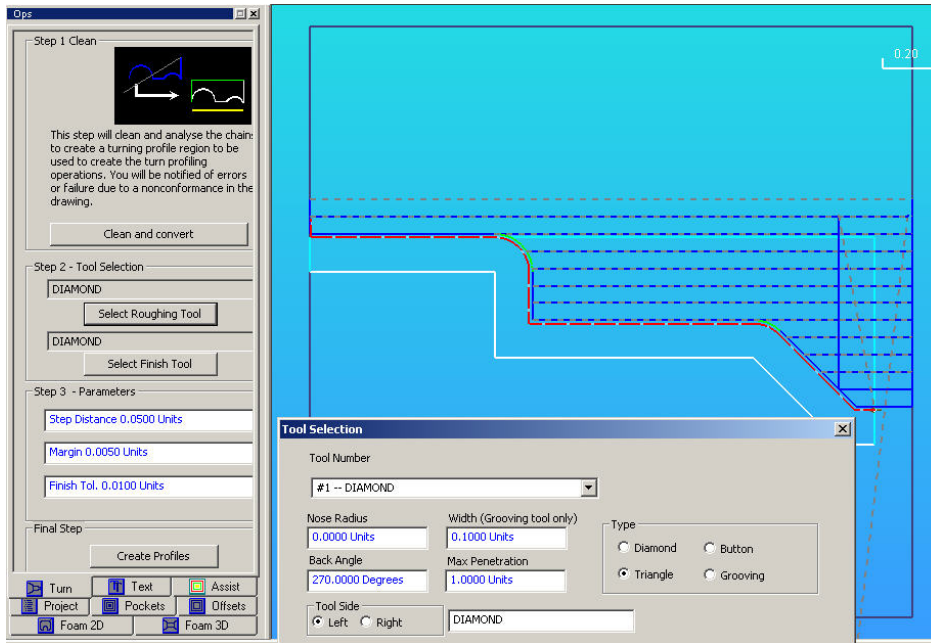REPRESENTS THAT'S IT'S GOING TO BE AN **EXTERNAL** CUT

The following three shots show a few back angle settings, namely 60, 90, and 270 degrees. Note the difference in tool paths. Remember that all you have to do is change the setting and create profiles. To go back and try something different just use the **Oops** button till your back at the clean and converted screen post opening the Lcam file.
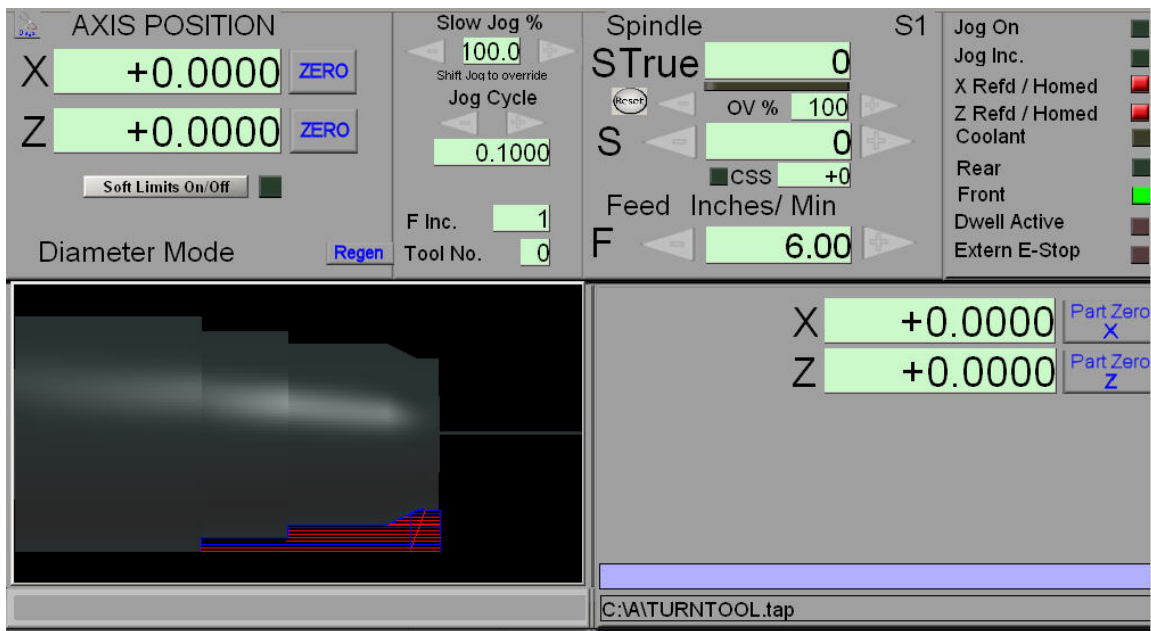

60 DEGREE BACK ANGLE

90 DEGREE BACK ANGLE
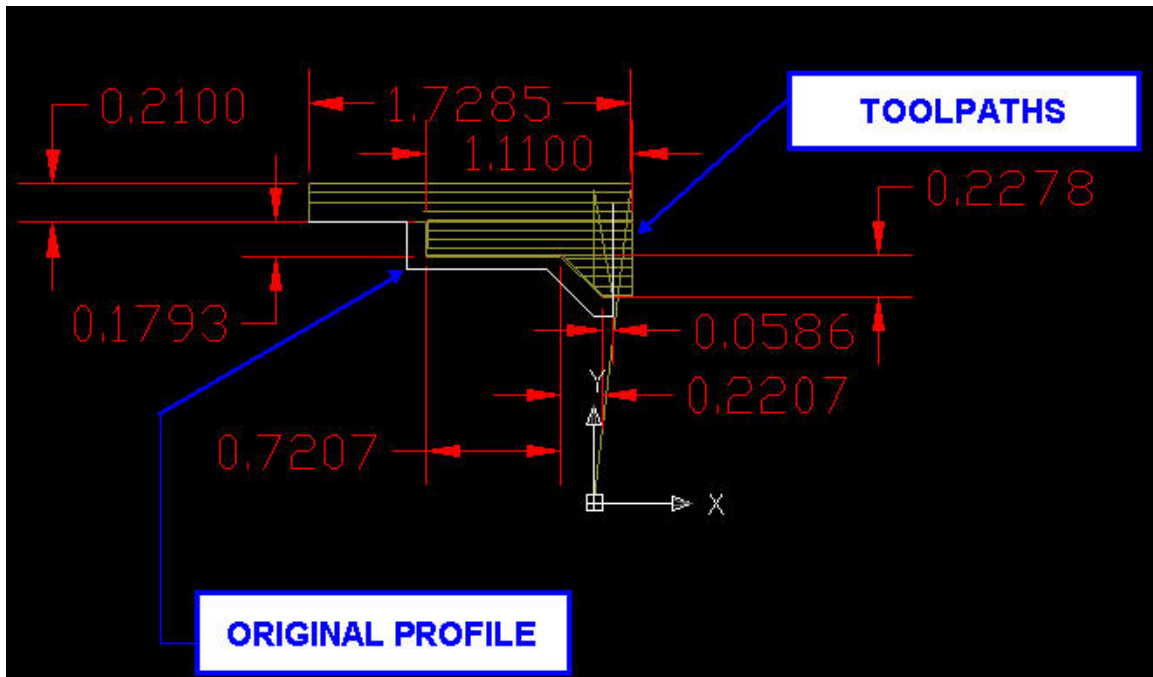
270 DEGREE BACK ANGLE

The tool paths on the above don't look to bad and only minimum editing of the gcode should be required. So the gcode can generated using the Post Code button. Remember that you can Setup posting options and import options in the SETUP pulldown.

Here is screen shot in Mach. I had to modify the code to remove a number of circles which were generated from LazyCam. Just deleted any line which had I & K in it.
This tutorial is about the back angle setting, so,….. you would want to do a few additional code edits before using it for actual cutting.

Here is a "how to" should you wish to explore the tool paths using a CAD program.
The g code TAP or TEXT file of the code was brought into Microsoft word,
a word search was done, such that I replaced all the X's to Y's and then all the
Z's with X's. The text was then converted back to a DXF file using a gcode
to dxf converted. There is a forum posting on this.

Here is a screen shot of the LazyCam generated gcode / tool paths in Autocad. I added the
dimensioning just for show and also referenced in the original profile.

HOPE THIS HELPS & HAVE FUN,
RICH