

Modifying NC Formats

1.0 Overview

This document explains how you make some simple modifications to your NC Format.

2.0 Modifying the NC Format

In this example, we wish to add an L A0 F MAX move before a tool change, and then a L Y+Q94 F MAX after the tool change. The code looks like this before hand:

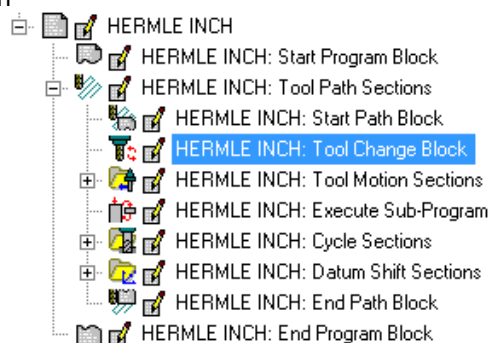
```
94 ; --- Perform Tool Change ---
95 ; Cutting Tool = T5: (Imported) Bullnose (1-0.03125 in) - Bullnose (1-0.03125 in)
96 L M140 MB MAX
97 TOOL CALL 5 Z S9513
98 M140 MB MAX
99 ; --- Approach 3+2 Plane ---
100 ; --- Move To Clear Position ---
102 L A90 C+0 R0 F MAX M126
```

We want it to look like this when we are done:

```
94 ; --- Perform Tool Change ---
95 ; Cutting Tool = T5: (Imported) Bullnose (1-0.03125 in) - Bullnose (1-0.03125 in)
96 L M140 MB MAX
97 L A0 F MAX
98 TOOL CALL 5 Z S9513
99 M140 MB MAX
100 L Y+Q94 F MAX M91
101 ; --- Approach 3+2 Plane ---
102 ; --- Move To Clear Position ---
103 L A+90 C+0 R0 F MAX M126
```

Since this is a TOOL CHANGE block, we need to edit this section of the NC Format.

- 1) Start the CAMplete TruePath application
- 2) Go to Tools > Edit NC Formats
- 3) Select the NC Format section you wish to use
- 4) Find the Tool Change section



- 4) Click Edit

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5) Insert a new line before the existing TOOL CALL line. Do this by selecting the TOOL CALL line click Insert New Line:

Tool Change Lines:		Insert New Line	
Index	Default Settings	Code Layout	
1	Code Comment --- Perform Tool Change ---	[Comment]	
2	Auto Tool Description:	[Auto Comment: Tool Info]	
3	<input type="radio"/> Rapid <input checked="" type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp. <input type="radio"/> Circular Interp. Tool Axis Retract [MAX]	[L] [Tool Axis Retract]	
4	<input checked="" type="checkbox"/> Change the cutting tool Select Tool <input type="checkbox"/> Over-ride [QUOTES=ON] <input checked="" type="radio"/> Z <input type="radio"/> Y <input type="radio"/> X <input type="radio"/> Other Spindle Speed 0	TOOL CALL 1 Z S0	
5	Tool Axis Retract	[Tool Axis Retract]	

6) This will get you a new line before the TOOL CALL

7) Now we need a new line at the end of the TOOL CALL after the Tool Axis Retract command. To do this, simply click Insert New Line again and you will get the new line:

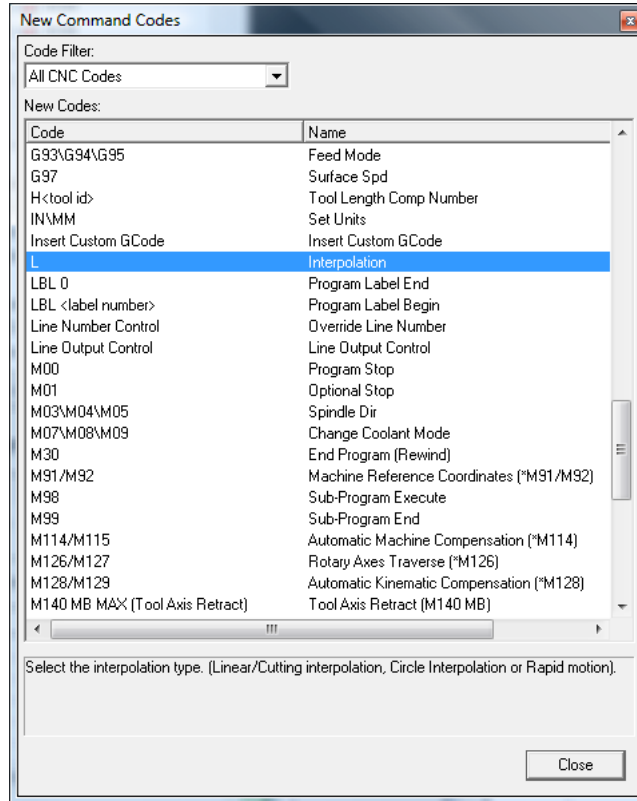
Tool Change Lines:		Insert New Line	
Index	Default Settings	Code Layout	
1	Code Comment --- Perform Tool Change ---	[Comment]	
2	Auto Tool Description:	[Auto Comment: Tool Info]	
3	<input type="radio"/> Rapid <input checked="" type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp. <input type="radio"/> Circular Interp. Tool Axis Retract [MAX]	[L] [Tool Axis Retract]	
4	<input checked="" type="checkbox"/> Change the cutting tool Select Tool <input type="checkbox"/> Over-ride [QUOTES=ON] <input checked="" type="radio"/> Z <input type="radio"/> Y <input type="radio"/> X <input type="radio"/> Other Spindle Speed 0	TOOL CALL 1 Z S0	
5	Tool Axis Retract	[Tool Axis Retract]	
6	Tool Axis Retract	[Tool Axis Retract]	
7			

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8) Next, we want to add the new codes. First, we will add the 'L' code. Click on the New Codes Window button at the bottom of the Wizard.

9) Find the L code in the New Codes Window:



10) Drag and drop this code to the Code Layout column on the new line before the TOOL CALL.

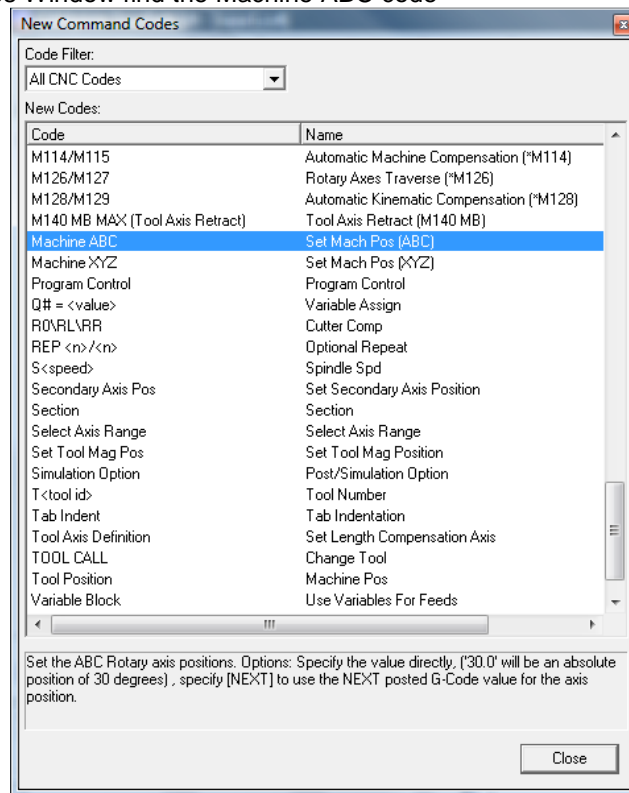
11) Do another drag and drop with this same code to the new line at the end

12) You should have two interpolation codes like this:

Tool Change Lines:		
Index	Default Settings	Code Layout
1	Code Comment --- Perform Tool Change ---	:Comment
2	Auto Tool Description:	:Auto Comment: Tool Info
3	<input type="radio"/> Rapid <input checked="" type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp Tool Axis Retract [MAX]	L Tool Axis Retract
4	<input type="radio"/> Rapid <input type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp	Interpolation
5	<input checked="" type="checkbox"/> Change the cutting tool Select Tool <input type="checkbox"/> Over-ride [QUOTES=ON] <input checked="" type="radio"/> Z <input type="radio"/> Y <input type="radio"/> X <input type="radio"/> Other Spindle Speed 0	TOOL CALL 1 Z S0
6	Tool Axis Retract	Tool Axis Retract
7	<input type="radio"/> Rapid <input type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp	Interpolation

13) Set their options to RAPID

14) Now in the New Codes Window find the Machine ABC code



15) Drag and drop this to the line before the TOOL CALL. Drop it in the Code Layout column for that line AFTER the Interpolation code

16) Check the Set A option and enter +0 as the value

17) Now find the Machine XYZ code in the New Codes Window and drag and drop it to the last line, similar to what you did for the Machine ABC code

18) Check the Set Y option and enter +Q94 as the value

19) Select the F MAX code from the New Codes Window and drag it to each line after the Machine ABC code and the Machine XYZ code.

20) Finally, select the M91 code and drag it to the line with the Machine XYZ

21) Set the option for the M91 code to First Datum

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20) After completion, your NC Format for the tool change should look like this:

Tool Change Lines:		
Index	Default Settings	Code Layout
1	Code Comment --- Perform Tool Change ---	:Comment
2	Auto Tool Description:	:Auto Comment: Tool Info
3	<input type="radio"/> Rapid <input checked="" type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp Tool Axis Retract [MAX]	L Tool Axis Retract
4	<input checked="" type="radio"/> Rapid <input type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp <input checked="" type="checkbox"/> Set A 0.000000 <input type="checkbox"/> Set B 0.000000 <input type="checkbox"/> Set C 0.000000 Modeless Rapid	L Machine Pos ABC F MAX
5	<input checked="" type="checkbox"/> Change the cutting tool Select Tool <input type="checkbox"/> Over-ride [QUOTES=ON] <input checked="" type="radio"/> Z <input type="radio"/> Y <input type="radio"/> X <input type="radio"/> Other Spindle Speed 0	TOOL CALL 1 Z S0
6	Tool Axis Retract	Tool Axis Retract
7	<input checked="" type="radio"/> Rapid <input type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp <input type="checkbox"/> Set X 0.000000 <input checked="" type="checkbox"/> Set Y +Q94 <input type="checkbox"/> Set Z 0.000000 Modeless Rapid <input checked="" type="radio"/> First Datum <input type="radio"/> Additional Datum	L Machine Pos XYZ F MAX M92

21) Click Finish to commit your changes

Now when you use this NC Format you should get the new code.