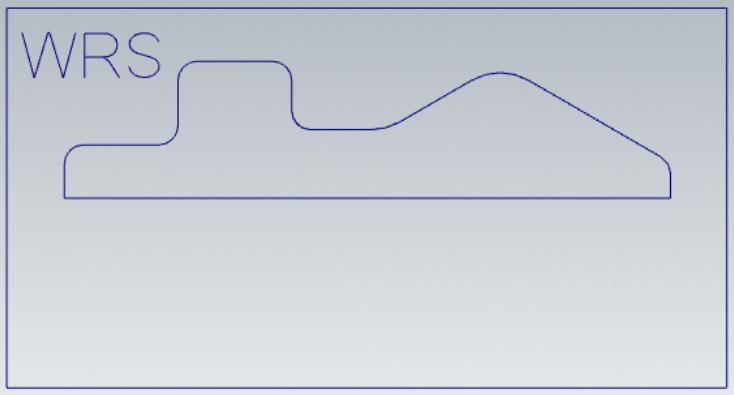
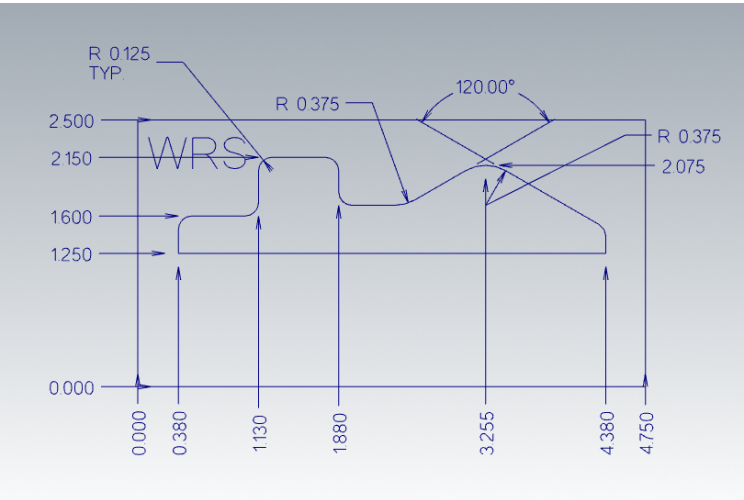


Mill Lesson 9 Second Exercise

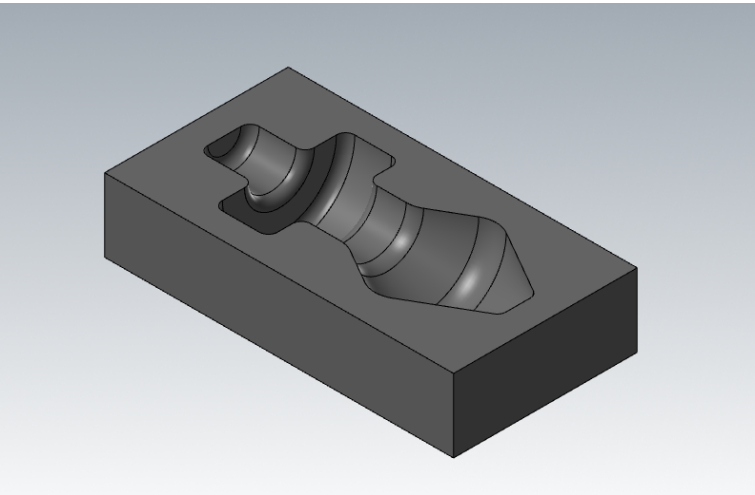
I. Wireframe:



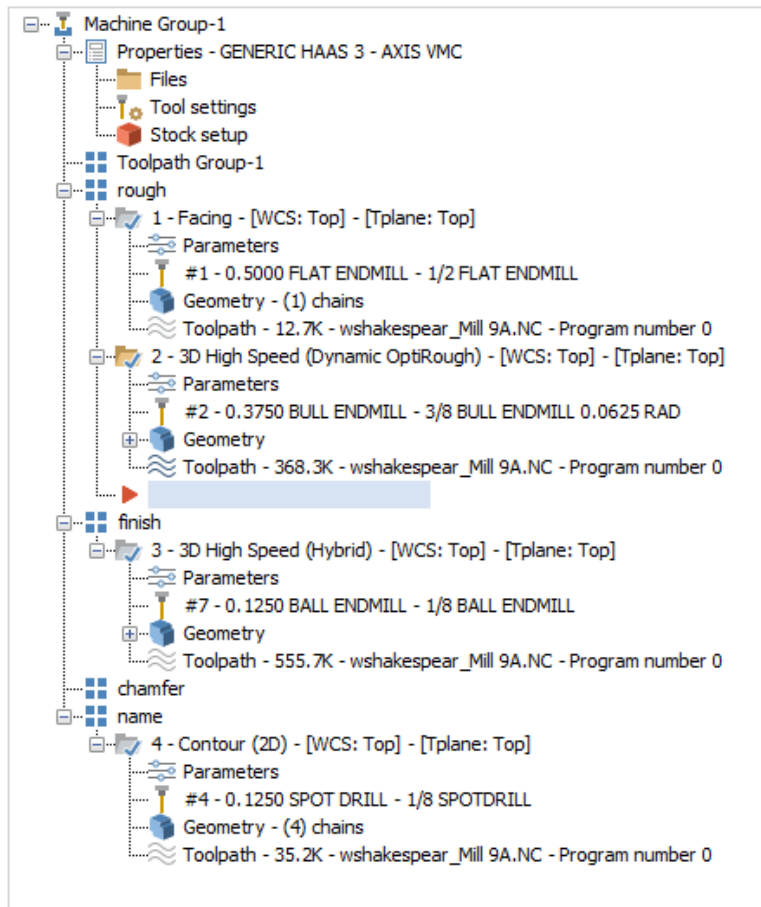
II. Dimensions:



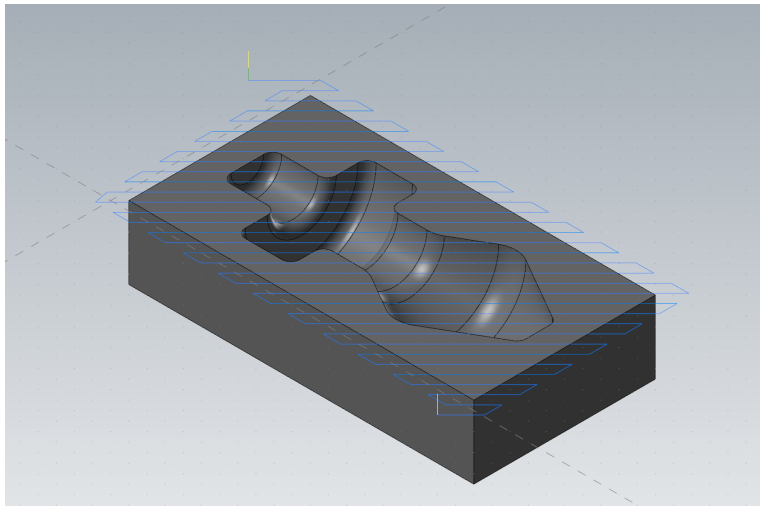
III. Solid:



IV. Toolpaths:

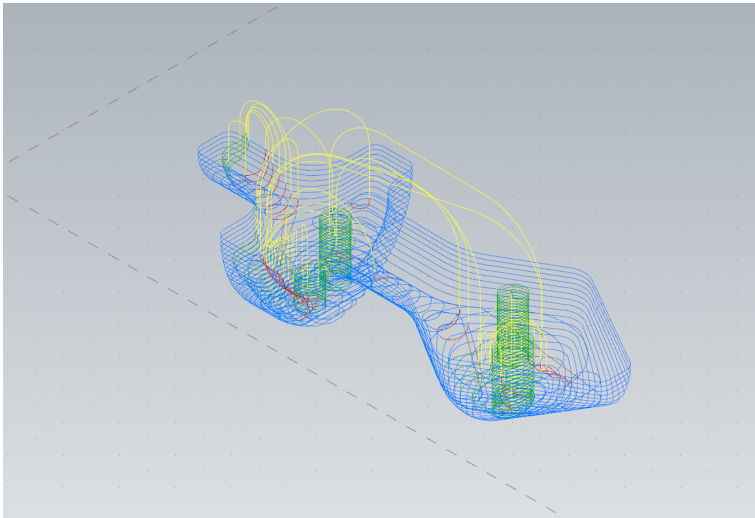


V. 1/2" Endmill:



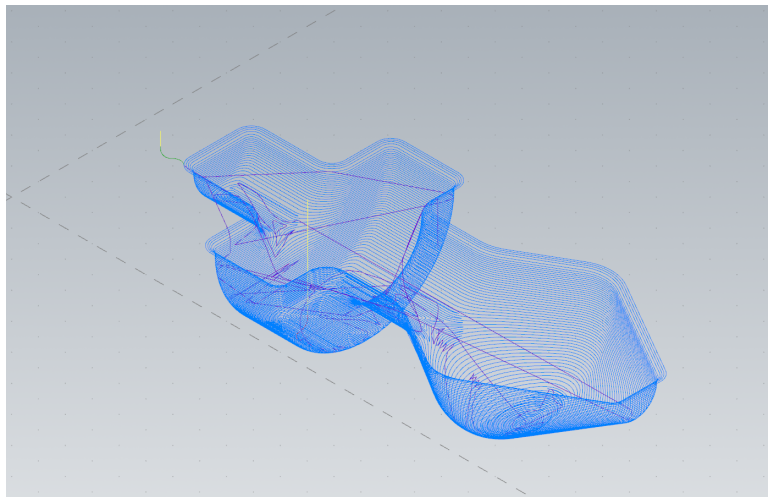
Tool diameter:	0.5			
Corner radius:	0.0			
Tool name: 1/2 FLAT ENDMILL				
Tool #:	1	Length offset:	1	
Head #:	0	Diameter offset:	1	
<input type="checkbox"/> RCTF				
Feed rate:		50.0	Spindle speed:	4966
FPT:		0.0025	SFM:	650.0
Plunge rate:		30.0	Retract rate:	40.0
<input type="checkbox"/> Force tool change		<input checked="" type="checkbox"/> Rapid Retract		

VI. 3/8” Bull Endmill (0.0625” corner):



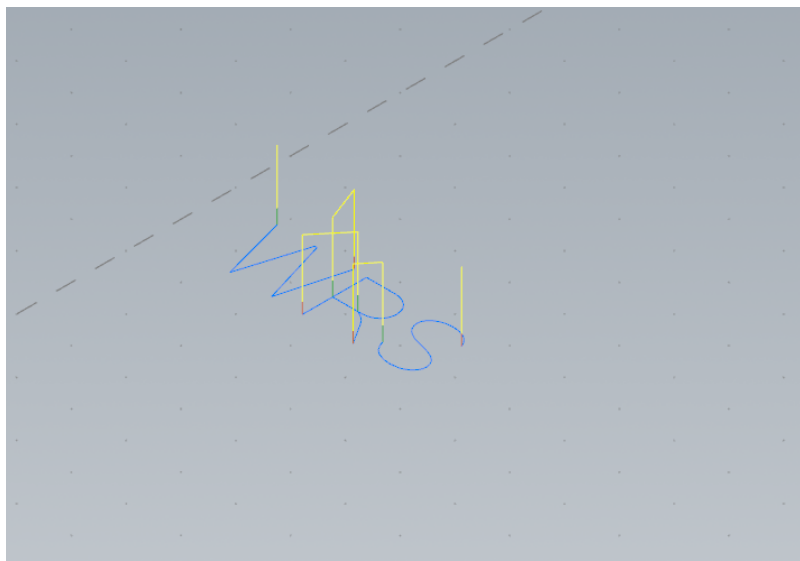
Tool diameter:	0.375			
Corner radius:	0.0625			
Tool name: 3/8 BULL ENDMILL 0.0625 RAD				
Tool #:	2	Length offset:	2	
Head #:	0	Diameter offset:	2	
<input type="checkbox"/> RCTF				
Feed rate:		50.0	Spindle speed:	6499
FPT:		0.0019	SFM:	637.9908
Plunge rate:		25.0	Retract rate:	8.442709
<input type="checkbox"/> Force tool change		<input checked="" type="checkbox"/> Rapid Retract		

VII. 3/8" Ball Endmill:



Tool diameter:	0.375		
Corner radius:	0.1875		
Tool name: 3/8 BALL ENDMILL			
Tool #:	3	Length offset:	3
Head #:	0	Diameter offset:	3
Spindle direction: CW			
Feed rate:	50.0	Spindle speed:	6621
FPT:	0.0019	SFM:	650.0
Plunge rate:	25.0	Retract rate:	6.4176
<input checked="" type="checkbox"/> Force tool change		<input checked="" type="checkbox"/> Rapid Retract	

VIII. 1/8" Spot Drill:



Tool diameter:	0.125		
Corner radius:	0.0		
Tool name: 1/8 SPOTDRILL			
Tool #:	4	Length offset:	4
Head #:	0	Diameter offset:	4
Spindle direction: CW			
Feed rate:	24.0	Spindle speed:	4966
FPT:	0.0024	SFM:	162.5
Plunge rate:	18.0	Retract rate:	22.0
<input type="checkbox"/> Force tool change		<input type="checkbox"/> Rapid Retract	

X. Method:

I drew in the first circle on the origin point and built the rest offsetting lines and then trimmed everything to be a silhouette for the revolve tool. Then I drew the square and did a revolve cut to create the final body.

XI. GCode Changes

To modify my gcode to be compatible with the machine I first made sure the HAAS 3 axis post processor was selected when exporting the gcode. Then I removed the long lines at the beginning and edited the last G28 home command to not zero the x axis.

XII. Finished Part

