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CIM, Period 2
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W12: Superman Logo CNC NC Code

Instructions: Comment on each of the lines of code. Make sure to clearly state what the design is doing on that line of code. Insert a screenshot of the design below.

N1 ;USE 3" X 2" X 1.5" MACHINABLE WAX
N2 ;INITIALIZE STOCK TO X=0, Y=0, Z=0
N3 ;T1 IS A 1/8" END MILL
N4 G0 Z.1 ; Rapid move up to safe Z-height (0.1")
N5 G90 X.417 Y1.333 ; Set Absolute Positioning, rapid to start XY
N6 S1500 M3 ; Set Spindle 1500 RPM, Spindle ON (Clockwise)
N7 G1 Z-.02 F8 ; Linear feed (cut) down to Z-0.02" at 8 in/min
N8 G2 X1.583 I1.000 J.314 ; Clockwise arc (Outer shield top)
N9 X1.000 Y.314 I.401 J1.333 ; Clockwise arc (Outer shield bottom point)
N10 X.417 Y1.333 I1.599 ; Clockwise arc (Complete shield, return to start)
N11 G0 Z.1 ; Rapid move up to safe Z-height
N12 X1.200 Y1.267 ; Rapid move to "S" start position
N13 G1 Z-.02 ; Linear feed (cut) down to Z-0.02"
N14 G3 X1.067 Y1.333 I1.067 J1.167 ; Counter-clockwise arc (Top of "S")
N15 G1 X.933 ; Linear feed (straight line)
N16 G3 Y1.000 I.933 ; Counter-clockwise arc (Middle of "S")
N17 G1 X1.067 ; Linear feed (straight line)
N18 G2 Y.667 I1.067 J.834 ; Clockwise arc (Bottom of "S")
N19 G1 X.933 ; Linear feed (straight line)
N20 G2 X.800 Y.733 I.933 ; Clockwise arc (Bottom of "S")
N21 G0 Z.1 M5 ; Rapid move up to safe Z-height, Spindle OFF
N22 X0 Y0 ; Rapid move back to origin X0 Y0
N23 M2 ;END OF PROGRAM

Insert the screenshot of the design and insert below.

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N18 G2 Y.667 I1.067 J.834
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N21 G0 Z.1 M5
N22 X0 Y0
N23 M2 ;END OF PROGRAM

Verify

Jog Control

Jog   Speed
  Y   Z   5   20   60
X W X   Step Size
  Y   Z   0.001 0.01 0.1

Actual Position

	Absolute		Relative		Machine		Dist to go
	X 0.0000 in		X 0.0000 in		X 0.0000 in		X 0.0000 in
	Y 0.0000 in		Y 0.0000 in		Y 0.0000 in		Y 0.0000 in
	Z 0.0000 in		Z 0.0000 in		Z 0.0000 in		Z 0.0000 in

Machine Info

Tool	00	TDiam	0.125	Feed	10.00	Spindle	2500.0
Pass	001	Coord	Work	Block	23 of 24	Parts	

Operator Panel

Run Program   Feed Override
                     100   100 %
                     0   200
Run Settings   Spindle Override
                     100   100 %
                     50 150