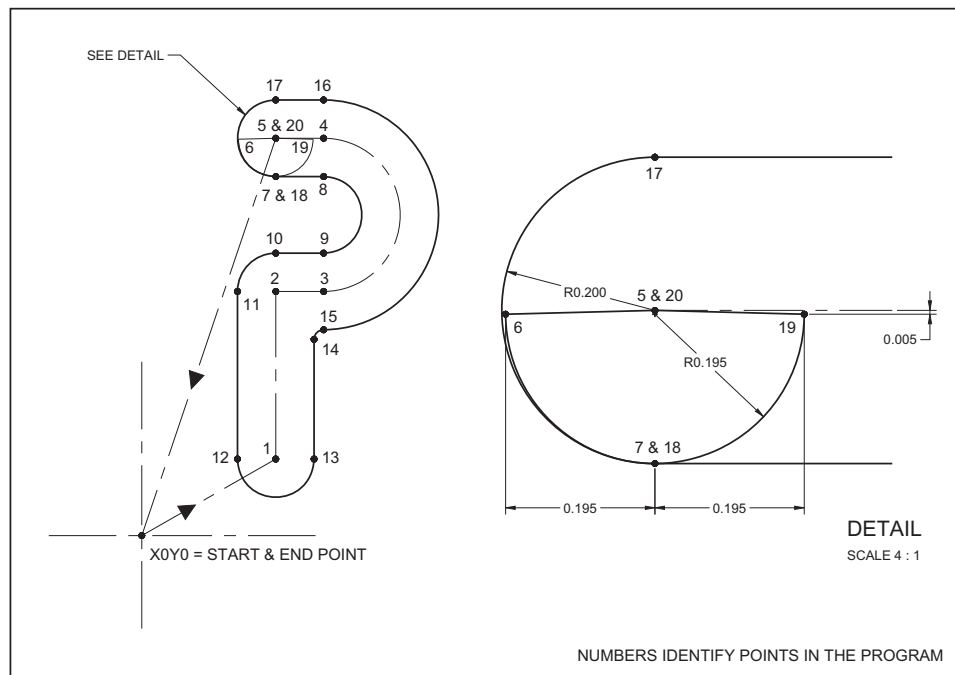


Mirror Image - Hooks

The following drawing details are related to the CNC program that follows.



O4126 (MIRROR IMAGE - HOOKS)

(T03 = 0.25 DIA CENTER CUTTING END MILL - D53=0.125)

(T19 = 0.375 DIA 45-DEG CHAMFERING END MILL = D69=0.145 AT 0.1 DEPTH)

(X0Y0 AT THE CENTER OF THE PART - Z0 AT THE TOP FACE - ORIENT AS PER DRAWING)

(M21 - MIRROR IMAGE ALONG THE X AXIS)

(M22 - MIRROR IMAGE ALONG THE Y AXIS)

(M23 - MIRROR IMAGE CANCEL)

(*** CHANGE M-FUNCTIONS TO MATCH THE MACHINE CONTROL ***)

(T03 = 0.25 DIA CENTER CUTTING END MILL - D53=0.125)

N1 G20

(ENGLISH UNITS)

N2 M23

(MIRROR OFF AT PROGRAM START)

N3 G17 G40 G80 G49 T03

(STARTUP BLOCK - T03 READY)

N4 M06

(T03 IN THE SPINDLE)

N5 G90 G54 G00 X0 Y0 S2500 M03 T19

(RAPID TO POINT COMMON TO ALL MIRRORS-T19 READY)

N6 G43 Z0.1 H03 M08

(CLEAR ABOVE PART FOR END MILLING-DO NOT CHANGE)

N7 M98 P4176

(QUADRANT I)

N8 M21

(X MIRROR ON)

N9 M98 P4176

(QUADRANT II)

N10 M22

(X AND Y MIRROR ON)

N11 M98 P4176

(QUADRANT III)

N12 M23

(MIRROR CANCELED)

N13 M22

(Y MIRROR ON)

N14 M98 P4176

(QUADRANT IV)

N15 M23

(MIRROR OFF)

N16 G28 Z0.1 M09

(Z-AXIS MACHINE ZERO RETURN)

N17 M01

(OPTIONAL STOP)

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(T19 = 0.375 DIA 45-DEG CHAMFERING END MILL - D69=0.145 AT 0.1 DEPTH)
N18 T19 (T19 READY - CONFIRMATION)
N19 M06 (T19 IN THE SPINDLE)
N20 M23 (MIRROR OFF AT THE BEGINNING OF TOOL)
N21 G90 G54 G00 X0 Y0 S2200 M03 T03 (RAPID TO POINT COMMON TO ALL MIRRORS-T03 READY)
N22 G43 Z0.1 H19 M08 (CLEAR ABOVE PART FOR CHAMFERING - DO NOT CHANGE)
N23 M98 P4186 (QUADRANT I)
N24 M21 (X MIRROR ON)
N25 M98 P4186 (QUADRANT II)
N26 M22 (X AND Y MIRROR ON)
N27 M98 P4186 (QUADRANT III)
N28 M23 (MIRROR CANCELED)
N29 M22 (Y MIRROR ON)
N30 M98 P4186 (QUADRANT IV)
N31 M23 (MIRROR OFF)
N32 G28 Z0.1 M09 (Z-AXIS MACHINE ZERO RETURN)
N33 G28 X0 Y0 (XY-AXES MACHINE ZERO RETURN)
N34 M30 (END OF PROGRAM)
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O4176 (SUBPROGRAM FOR MIRROR IMAGE HOOKS IN QUADRANT I - ROUGHING AND FINISHING)
N101 G91 G00 X0.7 Y0.4 (1 - START POINT FOR ROUGHING)
N102 G01 Z-0.3 F6.0 (SLOT DEPTH FOR CONTOURING - INCREMENTAL MODE)
N103 Y0.875 (2 - ROUGH AT CENTERLINE)
N104 X0.25 (3 - ROUGH AT CENTERLINE)
N105 G03 Y0.8 I0 J0.4 (4 - ROUGH AT CENTERLINE)
N106 G01 X-0.25 (5 - ROUGH AT CENTERLINE)
N107 G41 X-0.195 Y-0.005 D53 (6 - D-OFFSET AT START IS FOR FINISHING)
N108 G03 X0.195 Y-0.195 I0.195 J0 (7 - LEAD-IN ARC)
N109 G01 X0.25 (8 - CONTOURING)
N110 G02 Y-0.4 I0 J-0.2 (9 - CONTOURING)
N111 G01 X-0.25 (10 - CONTOURING)
N112 G03 X-0.2 Y-0.2 I0 J-0.2 (11 - CONTOURING)
N113 G01 Y-0.875 (12 - CONTOURING)
N114 G03 X0.4 I0.2 J0 (13 - CONTOURING)
N115 G01 Y0.625 (14 - CONTOURING)
N116 G02 X0.05 Y0.05 I0.05 J0 (15 - CONTOURING)
N117 G03 Y1.2 I0 J0.6 (16 - CONTOURING)
N118 G01 X-0.25 (17 - CONTOURING)
N119 G03 Y-0.4 I0 J-0.2 (18 - CONTOURING)
N120 X0.195 Y0.195 I0 J0.195 (19 - LEAD-OUT ARC)
N121 G40 G01 X-0.195 Y0.005 (20 - RADIUS OFFSET CANCELED-SAME AS POSITION 5)
N122 G90 G00 Z0.1 (CLEARANCE ABOVE THE PART - ABSOLUTE LOCATION)
N123 X0 Y0 (RAPID TO POINT COMMON TO ALL MIRRORS)
N124 M99 (END OF SUBPROGRAM - RETURN TO MAIN PROGRAM)
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O4186 (SUBPROGRAM FOR MIRROR IMAGE HOOKS IN QUADRANT I - CHAMFERING)
N201 G91 G00 X0.7 Y2.075 (5 - START POINT FOR CHAMFERING)
N202 G01 Z-0.2 F7.0 (SLOT DEPTH FOR CHAMFERING - INCREMENTAL MODE)
N203 G41 X-0.195 Y-0.005 D69 (6 - D-OFFSET AT START IS FOR CHAMFERING)
N204 G03 X0.195 Y-0.195 I0.195 J0 (7 - LEAD-IN ARC)
N205 G01 X0.25 (8 - CHAMFERING)
N206 G02 Y-0.4 I0 J-0.2 (9 - CHAMFERING)
N207 G01 X-0.25 (10 - CHAMFERING)
N208 G03 X-0.2 Y-0.2 I0 J-0.2 (11 - CHAMFERING)
N209 G01 Y-0.875 (12 - CHAMFERING)
N210 G03 X0.4 I0.2 J0 (13 - CHAMFERING)
N211 G01 Y0.625 (14 - CHAMFERING)
N212 G02 X0.05 Y0.05 I0.05 J0 (15 - CHAMFERING)
N213 G03 Y1.2 I0 J0.6 (16 - CHAMFERING)
N214 G01 X-0.25 (17 - CHAMFERING)
N215 G03 Y-0.4 I0 J-0.2 (18 - CHAMFERING)
N216 X0.195 Y0.195 I0 J0.195 (19 - LEAD-OUT ARC)
N217 G40 G01 X-0.195 Y0.005 (20 - RADIUS OFFSET CANCELED)
N218 G90 G00 Z0.1 (CLEARANCE ABOVE THE PART - ABSOLUTE LOCATION)
N219 X0 Y0 (RAPID TO POINT COMMON TO ALL MIRRORS)
N220 M99 (END OF SUBPROGRAM - RETURN TO THE MAIN PROGRAM)
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