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(TURNING EXAMPLE.NC)
(T03 - 55 DEG FACE AND TURN TOOL - 0.031 TLR - TIP NUMBER 3)
(T01 - 35 DEG FINISHING TOOL - 0.015 TLR - TIP NUMBER 3)
(T06 - THREADING TOOL - 60 DEG V-SHAPE)
(T05 - 0.125 WIDE PART-OFF TOOL)

(T03 - FACE AND ROUGH CONTOUR)
N1 G20 G50 S3500 T0300 (INCH - 3500 RPM MAX - T03)
N2 G96 S500 M03 (500 SFPM - CW ROTATION)
N3 G00 X1.7 Z0 T0303 M08 (START POSITION - OFFSET - COOLANT ON)
N4 G01 X-0.07 F0.005 (FACE OFF BELOW CENTER LINE)
N5 G00 Z0.1 (CLEAR OFF THE FACE)
N6 G42 X1.55 (START POINT FOR CYCLE - RIGHT COMP)
N7 G71 P8 Q17 U0.04 W0.005 D1000 F0.012 (ROUGHING CYCLE)
N8 G00 X0.2 (START OF FRONT CHAMFER)
N9 G01 X0.5 Z-0.05 (CHAMFER CUTTING)
N10 Z-0.5 (0.5 DIA FOR THREAD)
N11 X0.65 (START OF 0.05 RADIUS)
N12 G03 X0.75 Z-0.55 R0.05 (0.05 RADIUS)
N13 G01 Z-0.9 (0.75 DIAMETER)
N14 X1.275 Z-1.0516 (30 DEG TAPER CUTTING TO RADIUS)
N15 G03 X1.4 Z-1.1598 R0.125 (0.125 RADIUS)
N16 G01 Z-1.68 (LARGE DIAMETER AT 1.4)
N17 X1.7 (CLEAR ABOVE DIAMETER)
N18 G00 G40 X5.0 Z4.0 T0300 M09 (COMP CANCEL - TOOL CHANGE POSITION)
N19 M01 (OPTIONAL STOP)

(T01 - FINISH CONTOUR)
N20 G50 S3500 T0100 (3500 RPM MAX - T01)
N21 G96 S650 M03 (650 SFPM - CLOCKWISE ROTATION)
N22 G00 G42 X1.7 Z0.1 T0101 M08 (START POSITION - OFFSET - COOLANT ON)
N23 Z-0.3041 (Z APPROACH TO CAVITY - SEMIFINISH)
N24 X0.6 (X APPROACH TO CAVITY - SEMIFINISH)
N25 G01 X0.44 Z-0.3841 F0.001 (SEMIFINISH CAVITY - CHAMFER)
N26 Z-0.49 (SEMIFINISH CAVITY - BOTTOM)
N27 X0.8 F0.003 (SEMIFINISH CAVITY - FACE)
N28 G00 Z0.1 (RAPID 0.1 TO THE FRONT OF WORKPIECE)
N29 X0.2 (RAPID TO START OF FRONT CHAMFER)
N30 G01 X0.5 Z-0.05 F0.003 (FINISH FRONT CHAMFER)
N31 Z-0.34 (0.5 DIAMETER TO START OF UNDERCUT)
N32 X0.4 Z-0.39 F0.001 (CHAMFER OF UNDERCUT)
N33 Z-0.5 (BOTTOM OF UNDERCUT)
N34 X0.65 F0.003 (FACE OF UNDERCUT TO RADIUS START)
N35 G03 X0.75 Z-0.55 R0.05 (0.05 RADIUS)
N36 G01 Z-0.9 (0.75 DIAMETER TO START OF TAPER)
N37 X1.275 Z-1.0516 (30 DEG TAPER TO START OF RADIUS)
N38 G03 X1.4 Z-1.1598 R0.125 (0.125 RADIUS)
N39 G01 Z-1.68 (1.4 DIA 0.13 PAST THE BACK FACE)
N40 X1.7 (CLEAR ABOVE WORKPIECE)
N41 G00 G40 X5.0 Z4.0 T0100 M09 (COMP CANCEL - TOOL CHANGE POSITION)
N42 M01 (OPTIONAL STOP)

(T06 - THREADING)
N43 T0600 (T06)
N44 G97 S1200 M03 (1200 RPM FOR THREADING - CW)
N45 G00 X0.75 Z0.4 T0606 M08 (START POSITION - OFFSET - COOLANT ON)
N46 G76 X0.4387 Z-0.475 I0 K0.0306 D0120 A60 F0.05 (THREADING CYCLE)
N47 G00 X5.0 Z4.0 T0600 M09 (TOOL CHANGE POSITION)
N48 M01 (OPTIONAL STOP)
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(T05 - PART-OFF)

N49 T0500  
N50 G97 S1700 M03  
N51 G00 Z-1.69 T0505 M08  
N52 X1.65  
N53 G01 X1.2 F0.003  
N54 G00 X1.5  
N55 G01 Z-1.575  
N56 X1.3 Z-1.675 F0.002  
N57 X-0.02  
N58 G00 X5.0  
N59 Z4.0 T0500 M09  
N60 M30  
%

(T05)  
(1700 RPM FOR PART-OFF - CW)  
(START POSITION Z-OFFSET-COOLANT ON)  
(START POSITION X)  
(OPEN UP SPACE FOR CHAMFERING)  
(CLEAR ABOVE WORKPIECE)  
(START CHAMFERING-RIGHT SIDE INSERT)  
(CUT THE CHAMFER)  
(PART-OFF PAST THE CENTERLINE)  
(TOOL CHANGE POSITION X)  
(TOOL CHANGE POSITION Z)  
(PROGRAM END)  
(END OF FILE MARKER)