

Multilevel Drilling Operations

The following program illustrates the use of G98 and G99 commands. Keep in mind that although written at the *beginning* of the fixed cycle block, both commands become active only *after* the hole is completed.

(26-05 - R-LEVEL IS 0.1 ABOVE EACH Z-PLANE)

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(T01 - 1.0 SPOT DRILL TO MAKE 0.015 X 45 DEG CHAMFER)
N1 G20
N2 G17 G40 G80 T01
N3 M06
N4 G90 G54 G00 X0.625 Y0.5625 S900 M03 T02      (START AT HOLE A)
N5 G43 Z1.0 H01 M08                              (INITIAL LEVEL)
N6 G99 G82 R-0.15 Z-0.64 P500 F5.0              (HOLE A)
N7 G98 Y1.9375                                    (HOLE B)
N8 G99 X2.15 R0.1 Z-0.39                         (HOLE C)
N9 Y0.5625                                        (HOLE D)
N10 X3.5625 R-0.4 Z-0.89                        (HOLE E)
N11 Y1.9375                                       (HOLE F)
N12 G80 G00 Z1.0 M09                             (RETRACT TO INITIAL LEVEL)
N13 G28 Z1.0 M05
N14 M01

(T02 - 1/2 DIA DRILL)
N15 T02
N16 M06
N17 G90 G54 G00 X3.5625 Y1.9375 S573 M03 T03    (START AT HOLE F)
N18 G43 Z1.0 H02 M08                              (INITIAL LEVEL)
N19 G99 G81 R-0.4 Z-1.45 F8.0                    (HOLE F)
N20 G98 Y0.5625                                    (HOLE E)
N21 G99 X2.15 R0.1                               (HOLE D)
N22 Y1.9375                                       (HOLE C)
N23 X0.625 R-0.15                               (HOLE B)
N24 Y0.5625                                       (HOLE A)
N25 G80 Z1.0 M09                             (RETRACT TO INITIAL LEVEL)
N26 G28 Z1.0 M05
N27 M01

(T03 - 3/4 DIA SHORT END MILL OR COUNTERBORE)
N28 T03
N29 M06
N30 G90 G54 G00 X0.625 Y0.5625 S450 M03 T01    (START AT HOLE A)
N31 G43 Z1.0 H03 M08                              (INITIAL LEVEL)
N32 G99 G81 R-0.15 Z-0.5 F7.0                   (HOLE A)
N33 G98 Y1.9375                                    (HOLE B)
N34 G99 X2.15 R0.1 Z-0.25                       (HOLE C)
N35 Y0.5625                                       (HOLE D)
N36 X3.5625 R-0.4 Z-0.75                        (HOLE E)
N37 Y1.9375                                       (HOLE F)
N38 G80 Z1.0 M09                             (RETRACT TO INITIAL LEVEL)
N39 G28 X3.5625 Y1.9375 Z1.0 M05
N40 M30
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