



## CASE STUDY.

### PROJECT PROFILE:

# GEN3SYS<sup>®</sup> Inconel Aircraft

The end-user is machining aircraft components made from a 700 series Inconel using a Vertical Machining Center, with 800 PSI oil-based coolant.

### + CHALLENGE:

Previously the customer was using a standard spade drill, running at the following parameters: 180 RPM, 0.003 IPR, (0,08 mm/rev) which resulted in 0.54 IPM (13,70 mm/min). The tool drilled a 0.748" (19 mm) diameter blind hole to a depth of 1.5" (38,10 mm). The tool had a cycle time of 2.78 minutes per hole and a tool life of 3 holes, or 4.5 linear inches. Looking for improvements, the customer asked if Allied could provide a tool that would deliver better cycle times along with an improved tool life.

### + OUR SOLUTION:

Allied recommended the GEN3SYS<sup>®</sup> high penetration drill, using a special insert in a standard holder, 60318S-100F. The tool ran at a speed of 290 RPM, 0.0048 IPR (0,12 mm/rev) which resulted in 1.38 IPM (35 mm/min). The tool had a cycle time of 1.09 minutes per hole and a tool life of 15 holes, or 22.5 linear holes. The outcome met the customer's goals of improved cycle times and tool life.

### + PROJECT DATA:

Allied Machine and GEN3SYS<sup>®</sup> made a significant difference for the customer. The cycle time was cut in half, which resulted in the cost per hole dropping from \$18.08 to \$9.51, for a significant cost savings of 47.4%



## REDUCED CYCLE TIMES