



CASE STUDY.

PROJECT PROFILE:

GEN2 T-A[®]

SAE 52100 Hydraulics

The end-user is machining V35 vane pump rings made from 52100 using a Mazak vertical machining center, with 1000 PSI, thru-tool synthetic coolant.

+ CHALLENGE:

Previously the customer was using a KSEM drill, insert grade KC 7315 HP (M), running at the following parameters: 1200 RPM, 0.012 IPR, (0.30 mm/rev) which resulted in 14.4 IPM (365.76 mm/min). The tool drilled a 0.984" (25 mm) diameter thru-hole to a thickness of 2.5 inches (63.5 mm). The tool had a cycle time of 10 seconds per hole, and a tool life of 40 holes. Looking for improvements, the customer asked if Allied could provide a tool that would lower their cost per hole. The KSEM was presently \$2.59 per hole, a cost that was kept high due to poor tool life and sporadic catastrophic failures.

+ OUR SOLUTION:

Allied recommended the GEN2 T-A[®] Drilling System, using insert item 452H-25 and holder 22020S-125F. The Allied tool ran at the same parameters as the KSEM drill, but the outcome was much different. While the GEN2 T-A[®] had an identical cycle time of 10 seconds, the tool life jumped from 40 holes to 104 holes. This helped to meet the customer's goals of eliminating catastrophic failures during the entire operation while the GEN2 was in place.

+ PROJECT DATA:

The GEN2 T-A[®] Drilling System made a significant difference for the customer. The improved tool life, nearly 3X that of the KSEM tool, along with the elimination of catastrophic failures, reduced the cost per hole from \$2.59 to \$0.71, for a considerable savings of 72.6%.



*LOWER
COST PER HOLE*