



CASE STUDY.

PROJECT PROFILE:

GEN2 T-A[®]

Gray Cast Iron Automotive

The end-user is manufacturing automotive pump housings made out of gray cast iron using a Haas VF4 machining center, with water soluble coolant.

+ CHALLENGE:

Previously the customer was using a YG-1 spade drill running at the following parameters: 1400 RPM, 0.008 IPR (0.203 mm/rev), which resulted in 11.2 IPM (284.48 mm/min). The tool drilled a 0.843" (21.41 mm) diameter through hole to a depth of 1.5" (38.1 mm). The tool had a cycle time of 8 seconds and a life of 1500 holes. Looking for improvements, the customer wanted to eliminate the problems of inconsistent tool life due to tool breakage. The machine 'down time' also elevated the cost per hole. Initially, the customer thought the YG-1 blade was the better value because it came with lower import pricing. This end-user was in a perfect position to learn the difference between pricing and quality. Too many times, a disparity in pricing is misinterpreted as the basis for selecting the better value.

+ OUR SOLUTION:

Allied recommended GEN2 T-A[®] using insert item 4C21H-0027 and a special holder for this application. The tooling ran at a speed of 1650 RPM, 0.008 IPR (0.203 mm/rev), which resulted in 13.2 IPM (335.28 mm/min). GEN2 provided a cycle time of 7 seconds and a drastically increased tool life of 3200 holes.

+ PROJECT DATA:

The cost per hole was reduced from \$0.020 to \$0.017, and met the customer's requirements by providing consistency, as it eliminated machine down time. YG-1 provided a tool that was selected based on the initial price tag, but it cost the end-user far more at the spindle. GEN2T-A[®] decreased the cost per hole by over 15%, while providing consistent tool performance. This result convinced the end-user that Allied's solution saved them time and money. The customer made the switch to Allied.



*TOOL
PERFORMANCE
CONSISTENCY*