CASE STUDY.

PROJECT PROFILE:

GEN3SYS®

Medium Carbon Steel Automotive

IMPROVED CHIP FORMATION

The End-user manufactures automotive components and is machining an axle made out of medium carbon steel for light and medium sized trucks. The customer is machining the axle using a Chiron VMC with water soluble coolant.

+ CHALLENGE:

Previously the customer was using a Sumitomo SMD drill running at the following parameters: 2425 RPM, 406 SFM, 0.009 IPR, and 21.83 IPM. The tool drilled a 0.6400" diameter hole to a 0.44" depth. The tool had a cycle time of 2.2 seconds and a life of 1800 holes. Looking for improvements, the customer wanted to increase tool life and decrease their costs.

+ OUR SOLUTION:

AMEC recommended the GEN3SYS® High Penetration Drilling System using a C1 carbide insert with LR geometry and AM200 coating item #080214-4 and holder #60316S-075F. The tooling ran at the recommended speed of 2425 RPM, 406 SFM, 0.009 IPR, and 21.83 IPM. The results were excellent and met the customer's goals of increasing tool life and reducing costs. The GEN3SYS® tooling increased tool life by 42% to 2560 holes and matched the previous cycle time of 2.2 seconds. The customer succeeded in reducing their costs and saved $13,949.00 per 1,872,000 holes.

+ PROJECT DATA:

The GEN3SYS® tooling improved the customer's production by increasing tool life and generating a cost savings of 11% per 1,872,000 holes.