



## CASE STUDY.

### PROJECT PROFILE:

## GEN3SYS®

### Alloy Steel Heavy Equipment

The customer manufactures locomotive diesel engine components. The customer is machining a connecting rod for diesel engines made out of 4140 alloy steel using a Giddings & Lewis HMC with thru-tool coolant.

#### + CHALLENGE:

Previously the customer was using an AMEC T-A® drill insert and holder running at the following parameters: 990 RPM, 150 SFM, 0.007 IPR, and 6.93 IPM. The tool drilled a 0.5780 $\times$  diameter hole 1.305 $\times$  deep and had a cycle time of 16 seconds and a life of 96 holes. Looking for improvements, the customer wanted to reduce the cycle time and improve chip control while maintaining the existing excellent hole quality.

#### + OUR SOLUTION:

AMEC recommended the GEN3SYS® High Penetration Drilling System using insert item #5C114H-.578 and holder #60514S-075F running at a speed of 1850 RPM, 280 SFM, 0.0095 IPR, and 17.58 IPM. The results of the test were excellent and met the customer's expectations. The GEN3SYS® tooling reduced the cycle time to 9 seconds and increased the tool life to 336 holes while achieving superior chip control. Therefore, the customer was able to decrease their cost of production and save \$330.47 per 1000 holes.

#### + PROJECT DATA:

Once again, AMEC has proven their dedication to providing their customer with the best available tooling. The GEN3SYS® tooling improved the customer's production process and generated a cost savings of 41.5%.



## REDUCED CYCLE TIMES