



## CASE STUDY.

### GEN3SYS®

Medium Carbon Steel Automotive

#### PROJECT PROFILE:

THE END-USER IS MANUFACTURING BUSHINGS AND BEARINGS FOR DIESEL ENGINES, TURBOCHARGERS, AND OTHER AUTOMOTIVE COMPONENTS. USING A MORI SEIKI VMC RUNNING WITH 220 PSI FLOOD COOLANT, THE CUSTOMER WAS MACHINING A BEARING MADE OUT OF MEDIUM CARBON STEEL.

#### + CHALLENGE:

PREVIOUSLY THE CUSTOMER WAS USING A TITEX SOLID CARBIDE DRILL RUNNING AT THE FOLLOWING PARAMETERS: 954 RPM, 196 SFM, 0.0078 IPR, AND 7.44 IPM. THE TOOL DRILLED A 0.1969" (5 MM) DEEP HOLE WITH A 0.7874" (20 MM) DIAMETER. THE TOOL HAD A CYCLE TIME OF 1.6 SECONDS AND A LIFE OF 14,000 HOLES. UNSATISFIED WITH THEIR CURRENT PRODUCTION PROCESS, THE CUSTOMER WANTED TO REDUCE THE CYCLE TIME.

#### + OUR SOLUTION:

AMEC RECOMMENDED THE GEN3SYS® HIGH PENETRATION DRILLING SYSTEM USING INSERT ITEM #5C120H-20 AND HOLDER #60320H-25FM RUNNING AT A SPEED OF 1192 RPM, 246 SFM, 0.0138 IPR, AND 16.44 IPM. THE RESULTS WERE EXCELLENT AND WENT BEYOND THE CUSTOMER'S EXPECTATIONS. THE GEN3SYS® TOOL REDUCED THE CYCLE TIME TO 0.7 SECONDS AND INCREASED THE TOOL LIFE TO 17,000 HOLES.

#### + PROJECT DATA:

THANKS TO THE SUCCESSFUL PERFORMANCE OF THE GEN3SYS® TOOLING THE CUSTOMER HAS ADOPTED THIS PRODUCT AS THEIR DRILL OF CHOICE THROUGHOUT THEIR SHOP.



*REDUCED  
CYCLE TIMES*