



CASE STUDY.

PROJECT PROFILE:

GEN3SYS[®] 1142 Automotive

The end-user is machining spring seats into shafts for power steering components, made from 1142 steel using a horizontal Fuji Turning Center, with 450 PSI, water soluble coolant.

+ CHALLENGE:

Previously the customer was using a special Seco Crownloc Drill, running at the following parameters: 1950 RPM, 0.006 IPR, (0,15 mm/rev) which resulted in 11.7 IPM (297,2 mm/min). The tool drilled a 0.53" (13,5 mm) diameter blind hole to a depth of 1.5" (38,1 mm). The tool life varied from 500 to 1500 holes. The customer needed to eliminate the inconsistent tool life and the premature tool breakage, which greatly increased the cost of this operation.

Looking for tool performance improvements, the customer asked if Allied had the solution they were searching for.

+ OUR SOLUTION:

Allied recommended the GEN3SYS[®] High Penetration Drilling System, holder #60313S-20FM, with a special form insert to produce the spring seat. The tooling ran at a speed of 2160 RPM, 0.0072 IPR (0,18 mm/rev) which resulted in 15.55 IPM (395 mm/min). GEN3SYS[®] a tool life of 2400 holes. This outcome met the customer's goals of eliminating the inconsistent tool life and premature tool breakage, which resulted in a reduction of drilling cost.

+ PROJECT DATA:

Allied Machine and GEN3SYS[®] made a significant difference for the customer. The significant increase in tool life, from as low as 500 holes to Allied's 2400 holes per drill insert, provided up to five-times the tool life. GEN3SYS[®] delivered a consistent tool life 60% better than the competitor's best effort, while producing the hole 33% faster.



*TOOL
PERFORMANCE
CONSISTENCY*