



CASE STUDY.

PROJECT PROFILE: **Ductile Iron Agricultural Equipment**

GEN3SYS®

The end-user is manufacturing rip-tillers made out of ductile iron using a Mori-Seiki MV-80 CNC machine, operating at 25 horsepower, with 1000 PSI through-tool water soluble coolant.

+ CHALLENGE:

Previously the customer was using a Seco CrownLoc drill running at the following parameters: 2600 RPM, 0.0215 IPR (0,55 mm/rev), which resulted in 55.9 IPM (1419,86 mm/min). The tool drilled a 0.75" (19,05 mm) diameter hole to a 0.5625" (14,29 mm) depth of cut. The tool had a cycle time of 0.60 seconds.

This application was averaging a tool life of 350 parts. Looking for improvements, the customer wanted to increase the tool life.

+ OUR SOLUTION:

Allied recommended GEN3SYS® using insert item 5C218H-0024-C1 and holder 6D318S-100F. The tooling ran at a speed of : 2700 RPM, 0.0223 IPR (0, 57 mm/rev), which resulted in 60.21 IPM (1529,33 mm/min). The tool drilled the same 0.75" (19,05 mm) diameter hole to a 0.5625" (14,29 mm) depth of cut. The GEN3SYS® had a cycle time of 0.56 seconds. The difference was in the number of holes drilled by Allied: 500-plus versus the previous average of 350. This outcome was favorable as it met the customer's goal of increasing the tool life.

+ PROJECT DATA:

GEN3SYS® provided improved tool life, which translated to a drop in the cost per hole. The competitive tool cost \$0.204 per hole, while the Allied solution cost the customer \$0.158 per hole, for a cost savings of 22.61%.



EXTENDED TOOL LIFE