



CASE STUDY.

PROJECT PROFILE:

GEN3SYS®

Automotive, Truck Brake Carriers

An end-user is manufacturing brake carrier components for trucks, in the automotive industry. They are using a Hitachi Seiki, 50Kw, outfitted with water-soluble thru-spindle coolant. The part being machined is made of SG Iron. The production run for this application requires drilling 2 holes per carrier. Depth of Hole: 14mm (0.5512"), Hole Diameter: 12.05mm (0.4744")

+ CHALLENGE:

Previously the customer was using a Guhring solid carbide drill, with a TiAlN coating. The Speeds & Feeds of this drill were 95 M/min, (311 SFM), 2509 RPM, .20mm/rev (.008 IPR), 500 mm/min (19.68 IPM), with a cycle time of 1.7 seconds. Tool life achieved was 9600 holes. The cycle time was acceptable, but the tool life was not what the end-user expected, so AMEC was brought into the project.

+ OUR SOLUTION:

AMEC suggested using the GEN3SYS® High Penetration Drilling System with insert item #5C212H-12.05 and holder #60312S-20FM. This drilling system came with a price tag at about half of what the Guhring tool costs. AMEC recommended the running parameters of 102 M/min (334 SFM), 2706 RPM, .20 mm/rev (.008 IPR), 541.2 mm/min (21.31 IPM), with a cycle time of 1.55 seconds. The results were positive. The GEN3SYS® tool increased the tool life from 9600 to 10,280 holes, in nearly identical cycle times, actually, about one and a half tenth of a second faster.

+ PROJECT DATA:

AMEC enable the customer to increase tool life and output in the same time frame, drilling an additional 680 holes at half the tooling cost to customer, enabling a significant savings in all manufacturing costs.



EXTENDED TOOL LIFE