HEULE CASE STUDY

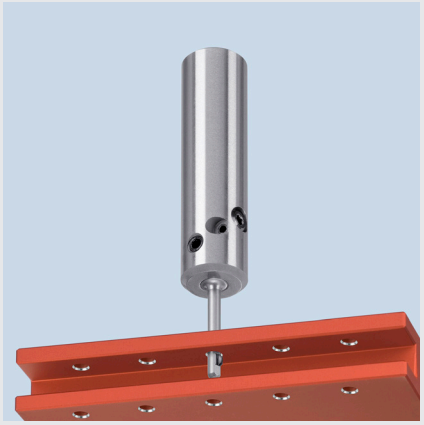
Automotive Application

SNAP

Automating Back Deburring in High Production Automotive

Challenge

A precision machining supplier to the automotive industry who produces more than 1 million common rails per year was looking for a solution to automate the back deburring of a low pressure bore.



Application details:

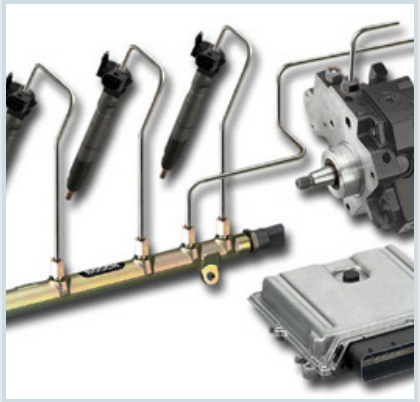
Low pressure bore: Ø2.4 mm
Main bore: Ø9.0 mm
Max. deburred diameter: Ø2.8 mm
Material: case hardened steel, foreged (1000-1300 N/mm²)

Solution

The solution is the simple efficient SNAP tool. The reverse chamfer tool is a customized SNAP2/2.4 with a special working length of 30 mm.

The deburring / chamfering of the back bore is done by the standard SNAP blade Ø2.8 mm made of carbide with a TiAlN coating. The blades achieve a tool life of 500 bores (= 500 common rails) in this tough material.

Machining parameters:
Speed 3300 rev./min, Cutting speed vc 25 m/min, Feed 0.05 mm/rev.



Results:

In the past, the common rails were deburred by a competitor tool. With the SNAP tool, the deburring process has become reliable and the process costs have been reduced.