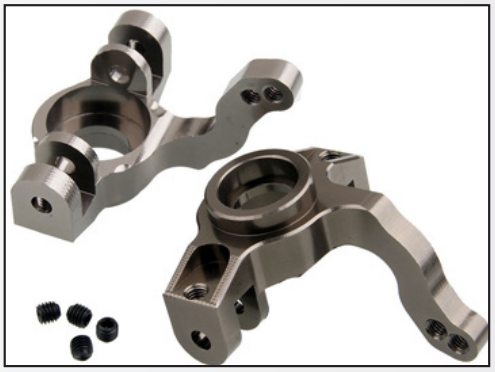
ALVAN® Cutting Ring Reamer

Steering Knuckles: ALVAN® Reamer

A contract production and short run job shop is manufacturing automotive steering knuckles made out of ductile cast iron. They are using five Mori Seiki NH5000 HMCs with 40 taper spindle and 1000 PSI *(69 bar)* thru-spindle coolant.

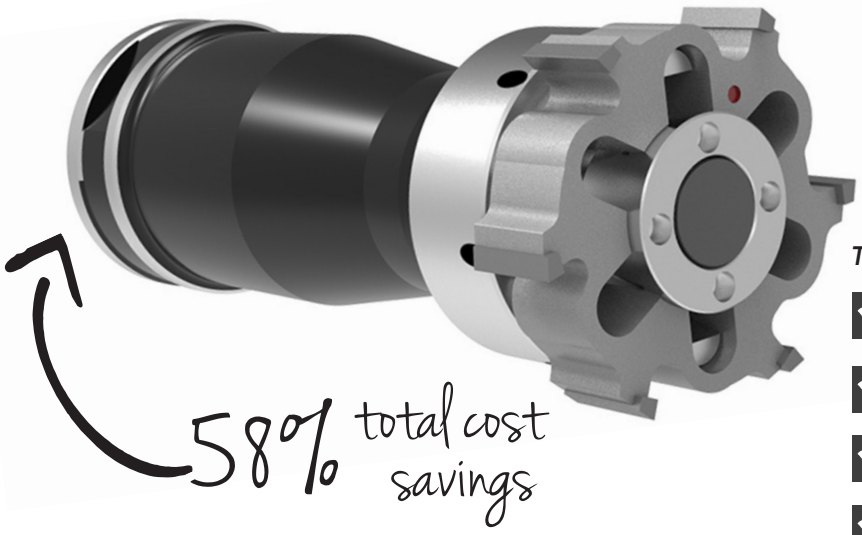
The customer needed to decrease the cycle time while maintaining a 1.79 CPK level. They also needed to minimize the amount of tools used and still maintain a hole tolerance of +\- .0005" *(0.0127 mm)*.

The **ALVAN® Reamer** and EcoCut extended tool life and also reduced the number of tools needed. They achieved a lower cycle time while still maintaining the desired hole tolerance.



		Competitor Reamer	ALVAN® Reamer
Product:	ALVAN® Cutting Ring Reamer	• Holes #1 and #2 (EcoCut tooling) • Core drill • Twin bore • Single point bore • Chamfer • Hole #3 • Core drill • End mill • Twin bore • Single point bore • Chamfer	• Holes #1 and #2 (EcoCut tooling) • Core • 500 SFM *(152.4 M/min)* • 0.008 IPR *(0.203 mm/rev)* • Bore • 300 SFM *(91.44 M/min)* • 0.003 IPR *(0.0762 mm/rev)* • Chamfer • 500 SFM *(152.4 M/min)* • 0.006 IPR *(0.1524 mm/rev)* • Hole #3 (ALVAN Reamer) • 200 SFM *(60.96 M/min)* • 0.010 IPR *(0.254 mm/rev)* • 180 SFM *(54.864 M/min)* • 0.059 IPR *(1.499 mm/rev)*
Objectives:	(1) Decrease cycle time (2) Maintain hole tolerance		
Industry:	Automotive		
Part:	Steering knuckles		
Material:	Ductile cast iron		

▸ ALVAN® Cutting Ring Reamer
Item No. 92440 P01



The ALVAN® Cutting Ring Reamer provided:

- ✓ Increased tool life
- ✓ Decreased cycle time
- ✓ Decreased required tooling
- ✓ Maintained hole tolerance