CUSTOMER SUCCESS

Automotive | Cast Iron - Ductile

H-Carb

Series 77MS

Material
Cast Iron - Ductile

Part Type
Planet Carrier

SGS Product
10.00mm Dia, 7 Flute, Square End Mill

Competitor Product
0.3937" Dia. 1 Flute

Application
Milling Finishing

SGS Tool Information
- 0.3937" Cutting Dia.
- 1.1811" Length of Cut
- 3.1496" Overall Length
- TM (Ti-NAMITE-M) Coating
- EDP: 74409

Learn more about the H-Carb

Goal

The customer wanted to decrease tool cost, improve part quality and surface finish, and increase tool life by moving away from a competitor's custom tool and into a standard tooling solution.

Strategy

The existing process used a custom indexable cutter that expanded inside the bore to finish multiple surfaces, requiring spindle stops to retract the insert. SGS recommended switching to an H-Carb end mill and using a radial finish-milling approach.

Result

The new approach improved surface finish and extended tool life while significantly reducing tooling cost and lead time by replacing a special with a standard tool. Machining cycle time was reduced by **14%**, machining cost decreased by **14%**, and cost per part was reduced by **31%**, resulting in total cost savings of **$348,448**.

Total Cost Savings **$348,448**

Machining Cycle Time ↓ **14%**

Machining Cost ↓ **14%**

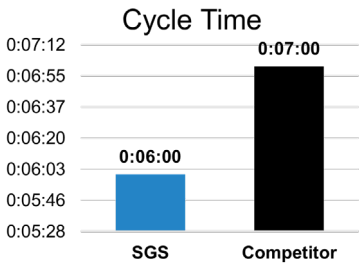
Cost Per Part ↓ **31%**

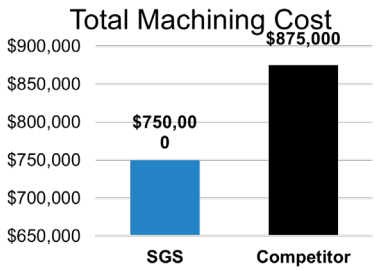
Tools	Cutting Dia. (DC)	RPM	SFM	IPM	IPR	Radial Depth (AE)	Axial Depth (AP)	Coolant
SGS H-Carb (7-Flute)	0.3937"	3500	361	19.60	0.0056	0.1000"	1.0000"	Flood
Competitor (1-Flute)	0.3937"	3000	309	3.00	0.0010	0.1000"	0.0100"	Flood

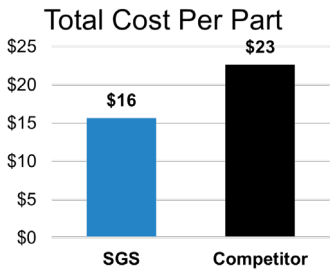
Cycle Time ↓ **14%**

New Tool Cost ↓ **14%**

Cost Per Part ↓ **31%**







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