

Automotive

The Unique Challenge

GKN Driveline is the global leader in developing, building, and marketing an extensive range of automotive driveline components and systems. Specifically, GKN is the number one manufacturer of constant velocity jointed sideshafts and propshafts (CVJs) which are vital automotive driveshaft components.

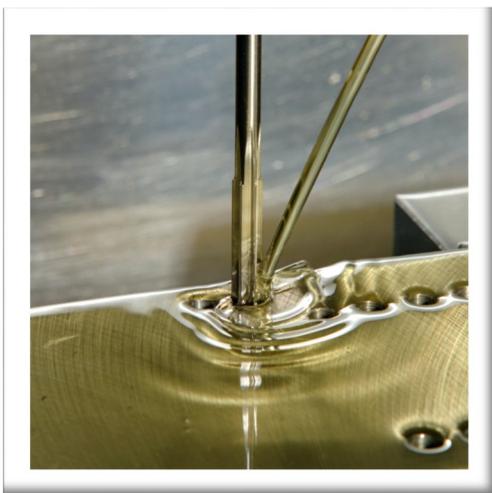
GKN was experiencing a number of issues:

- Using a competitor's cutting oil, GKN Celaya was able to machine no more than 6,000 inner race splines before having to dress the broaching tool.
- GKN was experiencing hot inner races during the broaching process which led to out-of-specification internal diameter measurements.
- Swarf was welding to the broaching tool.

The Houghton Approach

Houghton proposed switching to **Dascolene® 130**, a medium viscosity heavy duty cutting oil containing a balanced combination of anti-weld characteristics and anti-wear additives, designed for broaching operations on difficult to machine steel alloys.

The test machine was an Aumat broach with a 200 liter sump capacity, chiller, 20 liter/min oil flow, 3 bars flow pressure, and magnetic chip collector.



Case Study:

Dascolene® 130 tested very positive at GKN

Results and Benefits

After one month, the customer realized significant improvements in their operations:

- Tool life was extended; over 8,000 parts/tool could now be machined using a titanium coated NACHI broaching tool meeting GKN's target.
- Tighter tolerances held: inner race splines were now meeting internal diameter and surface finishing specifications.
- No cohesion of swarf to cutting edge.
- Reduced drag-out.
- Tighter tolerances limiting variability to +/-0.003mm.



Dascolene® 130 significantly increased production of Inner Race Splines by extending broaching machine tool life.

Fluid Partnerships Making A World Of Difference

Case study after case study demonstrates why Houghton International is leading the global Metalworking Fluids market today. Growth industries, such as automotive, aerospace, energy, steel and aluminum rolling, fabricated metal goods and energy, look to Houghton for Total Chemical Management. For over 150 years, our technology, coupled with value-added services such as formulation and on-site customization and monitoring, has reduced our customers' operating costs, improved productivity, increased product quality, and strengthened overall competitiveness. Currently, >13,000 customers worldwide, across a diversified range of manufacturing processes, have improved operations due to the mission-critical product portfolio of Houghton.

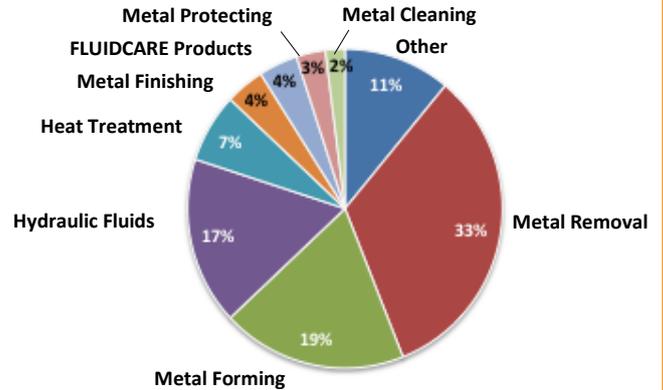
Building A Team For Customer Success

An approach that combines chemistry and technology with business expertise uniquely positions Houghton to support customer growth and changing market requirements. With over 2,000 employees in 33 countries, and 12 manufacturing facilities in 10 countries, we are well prepared to capture regional and local business opportunities and support growing expansion of global customers.

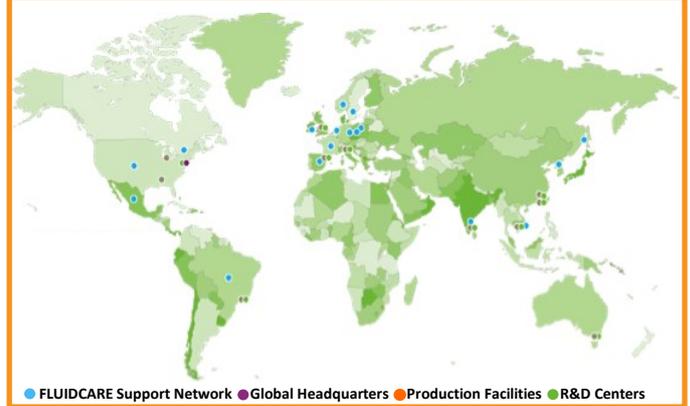
Through innovation, expertise and efficiency, our engineers and business specialists are able to build a team with the customer that ensures product optimization, employee health and safety, procurement and logistics management, and reduction of environmental impact. By providing both the solution to customers' fluid challenges and the foundation for continued improvement, Houghton offers a proven method of sustainable profitability.

For immediate consideration and evaluation of your fluids needs, and to request additional support material, please contact your Houghton International sales representative at houghtonintl.com/en-us/requestinfo.

Mission Critical Product Portfolio



Established Global Footprint



Established Client Relationships

Houghton International has long-standing partnerships with over

13,000 Leading Global Customers

servicing their metalworking fluids needs across a wide range of applications and diversified end-markets including **automotive, aerospace, fabricated metal goods, bearings, energy, non-ferrous and steel.**



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