

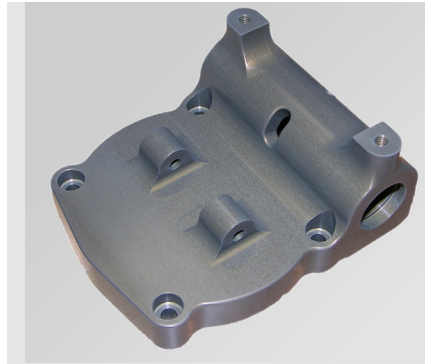
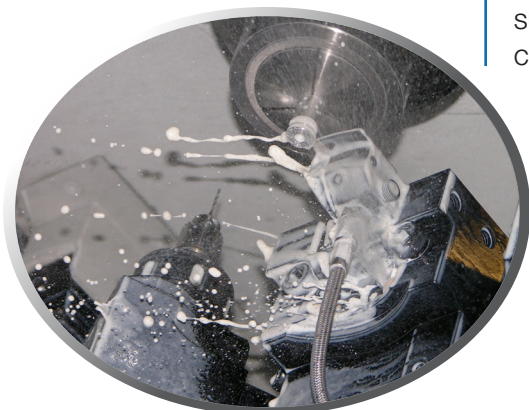


Andretti Autosport™ Taps Acculube as Technical Supplier



Andretti Autosport™ has won three IZOD IndyCar Series championships, two Indy 500 races, two Firestone Indy Lights titles and one USF2000 championship.

Success at the track depends on many factors, many of which are far from the spotlight, in a precision machine shop cloaked inside the company's Indianapolis headquarters.



This 7075 aluminum air gun component, with precise bores and O-ring grooves, is critical to the ability to change tires in 4 seconds. It was machined by Andretti Autosport™ using MB50 coolant recommended and supplied by Acculube.

Andretti Autosport™ continuously fine-tunes its cars to the needs of diverse tracks – and even more diverse drivers. Event rules restrict modifications, but still allow technicians substantial flexibility in critical areas such as suspension and aerodynamics, as well as cockpit components, such as steering wheels and driver comfort needs. Here, “flexibility” translates into the ability to design and manufacture all-new components – often quickly, between events. The company also fabricates its own tooling, and crucial pit-stop maintenance parts, all with the goal of enhancing track performance.

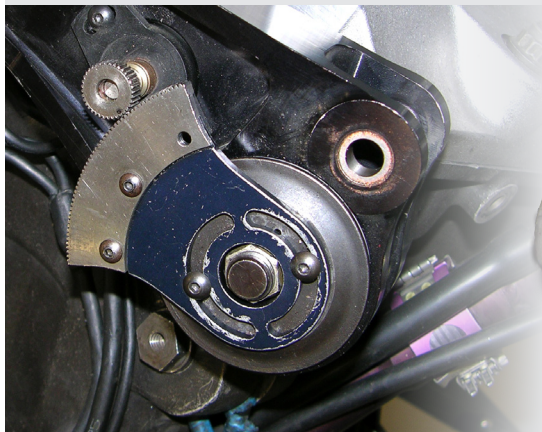
Tim Broyles manages Andretti Autosport's machine shop, and supervises its team of machinists and fabricators. “We

design and fabricate a broad range of original, and highly proprietary short-run parts,” explains Broyles. “These are mainly for IZOD IndyCar Series cars; also for the Firestone Indy Lights, Star Mazda and USF2000 series. In addition to manufacturing and prototyping, we thoroughly test components before approving for production.”

Materials include carbon fiber (for structural components), aluminum, 4340 and 4130 steel, titanium, and special alloys such as Inconel. Equipment in this very high-tech environment includes lathes, grinders, and a range of CNC machine centers. The company recently upgraded its machining capability through a partnership with DMG/Mori Seiki. The manufacturer,

acculube

ACCURATE LUBRICANTS AND METALWORKING FLUIDS, INC.



Pictured Left: Rear Suspension Subassembly.



Pictured Right: Honeycomb material links with carbon fiber skin and provides a mounting surface using specialized bobbins engineered and fabricated by Andretti Autosport™ using coolant supplied by Acculube.

currently the world's largest supplier of machine tools, provided 3D high-speed machining centers that will hold tolerances to ± 0.0001 .

Through this partnership, Andretti Autosport™ received a recommendation for upgrading its coolant strategy as well: a second alliance, this one with Acculube, a prominent supplier of coolant products for high-performance machinery headquartered in Dayton, Ohio.

Andretti Autosport™ was highly specific in the coolant it required, explains Broyles. "We wanted a single coolant formula that would provide exceptional performance on any of our machines, and all of our materials. We also needed a coolant that would hold its integrity over time. Coolant degradation is a huge issue, and you see it first in tooling wear, then with poor surface finishes. We needed to avoid

both, despite long machine idle times, which can cause coolants to break down. We wanted to improve sump life, too, and, while a biocide component was clearly required, we needed one that wouldn't present dermatitis or other issues," Broyles added.

Acculube's research and technical team met with Andretti Autosport™ machinists and analyzed the severity of various operations such as tapping, turning, drilling and milling. After months of lab trials and testing for several high-performance coolants, Acculube provided a recommendation for Hysol MB50, a water soluble fluid manufactured by Castrol and recommended for all grades of aluminum and ferrous alloys. MB50 performs like heavy duty soluble oils, and is chlorine and sulfur-free. Its tight, stable emulsion gives it extended service life.

"MB50 was chosen by Acculube based on our operation, and the parts we were machining," says Broyles. "They came over and tested it in our machines, replenishing as needed to maintain concentrations and microbial counts. We found machining performance to be spot-on. The rust inhibitors were highly effective, and, where previously we had to change-out coolant every 9 months or so, the MB50 has been running more than a year, with no fouling or other workplace issues."

Acculube was tapped as a technical supplier of Andretti Autosport™ based on their longstanding reputation as experts in specialty machining, and their extensive technical support resources. Acculube continues to provide Andretti Autosport™ with comprehensive coolant testing and analysis.

