

Biography of Bruce Ashmore



Bruce has had a very successful career in the design and development of many winning racing cars. Beginning in 1976, he studied engineering at University in Cambridge while working through an Engineering Apprenticeship at Lola Cars. During his training he spent time in each of the departments learning the use of metal cutting machines along with the skills of fabrication, welding, pattern making, model making and styling, in fact everything that goes into making a racing car. Lola Cars Ltd was often described as being the University of Motoracing as it has trained some of the most successful racing car designers in the world. During Bruce's apprenticeship he had the chance to help with the design of cars like this 1978 Indy 500 winning Lola driven by Al Unser Sr. The five year training concluded in the drawing office designing projects such as IndyCars, Sports cars, Formula Fords, and larger Formula cars. In the early days of his

career there were few people employed in the drawing office, allowing guys to get involved in all aspects of the car design.

The first project Bruce was solely responsible for was the very successful Lola T640 Formula Ford 1600. This car won the series championship in the USA and England, along with the prestigious Formula Ford Festival at Brands Hatch near London. These cars have no downforce and the T640 gained its advantage from the reduced drag compared to the competition, and had excellent structural integrity. This series allows a designer to understand the true mechanical grip and suspension geometry effect without the influence of aerodynamics, making it a perfect subject for a thesis at the University of Motoracing. The T640 is shown below.



The next project was the Corvette racing car. The car was completely designed and built by Lola, then mothballed for a year by General Motors before it raced with Hendrick Motorsport in the US GTP championship.



The car fueled Bruce's passion for Sports cars and Sports prototypes. This vehicle had a complex design criteria because it had to surpass its tough competition while maintaining the GM edict to incorporate styling features from the Corvette road car.

The IndyCar championship was Bruce's next challenge, and this was to be his home for the next 18 years. The cars in the mid eighties had moved on from the 1978 car shown above. The car to the left is a 1984 Lola Indycar driven by Mario Andretti. This was the first big step in IndyCar design in this era as it used a stressed carbon body as part of the chassis and utilized large ground effect tunnels. Mario won the championship and narrowly missed a win at Indy. Over the years to come speeds increased dramatically and so the governing bodies tried to slow them down by changing the rules each year. Developments occurred to overcome these rule changes, each new car being quicker than the last despite the governing bodies' efforts. This was an interesting time in racing car design as anything went into making a winning car. Wind Tunnels, shaker rigs and other test equipment were developed also to aid the improvement of the cars. Engineers from this period are very creative and tend to think outside the box.



After working in this design department through 1987 Bruce was then promoted to Chief Designer of the Indy Car. By 1990 he produced the dominant Indianapolis 500 winning car and championship winning cars for the 1990 through 1993 seasons inclusive. These cars were similar to that shown to the left.



At this point he was made co-chief designer of Lola and under his guidance during this period fell the design of the NISSAN Group C sports car. These cars were designed over the next few years to go to Le-Mans and run in the American IMSA series. In 1990 they captured the pole position and ran competitively in the Le Mans race.



Bruce then moved to Reynard in 1993 where he concentrated on the development of the IndyCars. This was a new role for Bruce because up until this time he was responsible for the overall design layout and specification of the cars. In his new role he was to develop the design handed to him from the people in the Reynard Design office. The cars under his Technical Leadership in the USA won the championship every year from 1995 to 2001. This resulted in the most successful

run of customer racing cars in this series by any company. Also in 1995 Jacques Villeneuve won the Indy 500 with a Reynard chassis. This was the last year this great race saw entries from all the wealthy teams, a variety of chassis and several engine manufacturers. By 1997 the team at Reynard decided to design, build, and run a technical center known as the Auto Research Center, ARC, to aid in the development of these cars. The ARC was entrusted to Bruce to create. This entailed project managing the building and overseeing the design and build of a 50% scale



moving ground plane windtunnel. The Center is based in the heart of Indianapolis and today is a thriving stand alone business. ARC has just completed a 35,000 sq-ft Technical Center, shown below, to house model shops, design offices and other support functions for their "state of the art" scale model Wind Tunnel and a seven post circuit simulation suspension test rig.

Bruce served his last 2 years at Reynard North America as President, and was also responsible for operations at the Auto Research Center along with Riley & Scott Inc. a USA based racing car constructor that was purchased for an IPO attempt.



Bruce then moved to the Players race team, which competed in the highly competitive Championship Auto Racing Teams series (CART). Here he held the position of Technical Director, and was responsible for the factory Ford racing effort for Gerry Forsythe. The series had major manufacturer support at the time. Something that made matters interesting during this time was the un-foreseen changes at the Reynard Company which left Players with managing their own development along with the manufacture of the race car components. The engineering team under Bruce's leadership did not miss a beat and finished third in the championship in the toughest year of competition the series had ever seen. The team went on to win the championship the following year with driver Paul Tracy.



The next two years initially found Bruce assisting John Menards race team in the IRL series running such programs as a full model test program at Dallara in Italy along with developing Menard Competition Technologies MCT a new company born out of the acquisition of the defunct Tom Walkinshaw Racing Company. The second year of this

relationship with Menard allowed time to concentrate on the development of MCT while allowing the addition of a freelance engineering relationship with the new RuSPORT racing team out of Denver Colorado. Bruce traveled to all of the ChampCar races as part of the engineering team.

Recently Bruce's company Ashmore Design has been contracted to oversee the C&R Racing Incorporated Engineering design office. This has encompassed various projects from the design of the Silver Crown racing car to designing complete NASCAR transmissions and related components. C&R Racing Incorporated is the leading manufacturer of cooling systems and drivetrain components for the Motorsport industry.