

WR1 warwick RACING



Last weekend, the Warwick Racing team took the WR1 car to the Formula Student competition at Silverstone to compete against 107 teams from across the world. Despite a number of setbacks in the weeks leading up to the competition, the team arrived at the competition on Wednesday 13th July with a fantastic car ready to compete.

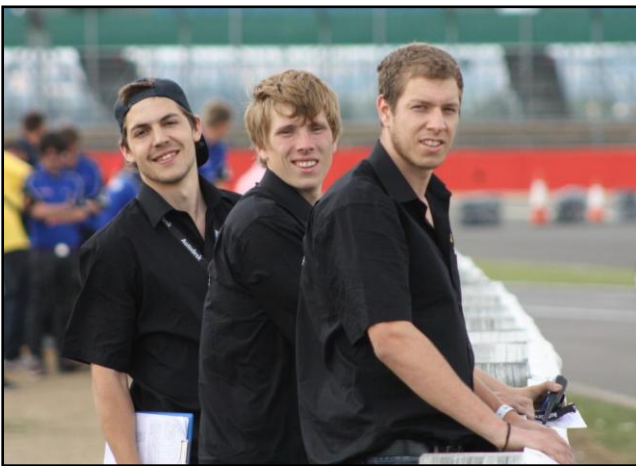
On Thursday 14th July, the team joined the scrutineering queue and due to the dedication of the team throughout the year, all but the

brake and egress checks were completed by the end of the day. In the evening however, it was noticed that one of the chassis tubes that supported the differential had sheared at some point during the day, thus, Friday morning saw the team fixing the problem with the help of a WMG technician Darren. With a new supporting plate welded onto the back of the WR1, the team's attention turned to the static events. These took the form of presentations to the judges and the team's results were as follows; 15th in design, 37th in cost and 49th in business. The team were thrilled with the design result which indicates the high level of achievement during the early stages of the project.

On Saturday 16th July, the acceleration, skid pad and sprint events were held. The rainy conditions were favourable for the WR1 during the acceleration event and James Haythornthwaite's skilful driving resulted in a time of 5.29 seconds being achieved placing Warwick Racing 25th overall, a fantastic achievement. Although the car completed the skid pad and sprint event, the deteriorating weather

conditions meant that the team did not achieve quite as high as hoped in these events.

The endurance event was held on Sunday 17th July and because of Warwick's placing in the events the previous day, the car was out on the track early in the morning. Unfortunately, a very simple failure of the bolt securing the shifter arm in place led to the WR1 retiring after only 4 out of 22 laps. This was very disappointing for the team as in the short space time we were out on the track, the car was showing much potential setting fastest times and overtaking the other runners.



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Overall, the WR1 came 36th out of 79 teams and 15th out of the UK teams. Although this does not reflect the overall achievement of the Warwick Racing team, the event organisers noted that the car was the best ever submission by the University of Warwick and that they hoped the next team would produce an even more competitive car. We also got many positive comments about the styling of the car which reflects the hard work put in by the team during the initial design stages. Coming 15th in the design event also shows how successful the car was at fulfilling the Formula Student brief and we hope that this knowledge can be passed onto the WR2 team to produce an even more successful car next year.

The team would like to say an enormous thank you to all of the sponsors who have helped us throughout the year. Your support and guidance has been invaluable and we hope that we can continue to develop these relationships in years to come.

The WR1 team have now graduated so for information on the WR2 team, please contact Sagar Depala on S.R.Depala@warwick.ac.uk.



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Warwick Racing 2 arrived at Silverstone with a fully developed electric concept version of the WR1 car to present in the Class 2a competition to be judged on design, business potential and overall sustainability against an international field. Despite the meticulous scrutiny of the Formula Student judges, the concept came first in all three of the Class 2a categories, winning the category outright by a very large margin.



The WR2 team have spent the year working on various Formula Student projects understudying the WR1 team's work and have developed a concept in preparation for the 2012 competition. They visited Silverstone already having gained experience of building and racing electric go-karts in the American EVGP in early June where they finished fourth out of thirty despite considerable logistical and technical challenges.

The WR2 concept keeps the well designed WR1 chassis and dimensions but replaces the Internal Combustion powertrain with a twin-motor electric powertrain. The powertrain is actually a scaled up version of the powertrain used on the go kart with modifications made to conform to the Formula Student competition rules. The concept carefully balances optimal performance with minimal environmental impact and where possible, alternative materials such as hemp fibre were used. The WR2 concept was also praised on using efficient manufacture methods to minimise the life cycle carbon footprint and the level of depth to which environmental impact was considered.

Having successfully presented the WR2 concept, the team concentrated on learning as much about the competition as they could to ensure they would be ready for FS 2012. The team left boosted by their successes and full of ideas for the coming year. Initial ideas carry over the ethos of simplicity, lightweight, life cycle sustainability and ease of manufacture. One of the key lessons learned from the EVGP and WR1's experience is the importance of practice and pre-competition testing. As such, one of the key aims of next year's team will be to ensure maximum reliability. We are, however, fully confident we can achieve this; a confidence which is consolidated by the fact that the WR1 team had delivered an excellent car on which to base next year's evolution on.

