

Hello from the Warwick Racing 2013/2014 team!

Welcome to the first newsletter of the new academic year from Warwick Racing. With a new team in place, this year brings a revolutionary change to the Warwick Racing infrastructure and is something that we are all really excited about! In recent years electric entries have taken centre stage at Formula Student competitions and as such Warwick Racing has taken the momentous decision to implement a two year design cycle to go electric.

The team consists of a Powertrain and Chassis class 1 entry, with an additional Electric class 2 entry. With this new look two year design cycle in place; Warwick Racing will look to enter a complete electric vehicle entry to FSUK 2015.

Each edition of our new newsletter will update you on the team's progress in the run up to the FSUK 2014 competition, including events we attend, sponsorship news and most importantly our progress on the new WR4 and WR5 cars.



G'Day mate!

This year we will achieve a Warwick Racing first and compete in a Formula Student competition outside the UK, at the Formula SAE-Australasia competition in Melbourne. This has all been made possible through the University of Warwick's new alliance with Monash University, Australia. This winter, Monash Motorsport (pictured below) will kindly host 5 members of Warwick Racing from 29th November - 18th December, competing alongside each other at the Australasia competition from 12th - 15th December. For all the latest updates on the team's progress be sure to like our Facebook page and follow us on Twitter!





The WR4 team are working towards building an IC-engine single-seat racing car to compete at FSUK 2014. The team consists of two sub-teams, Chassis and Powertrain, who work closely together with a common Project Manager and Chief Engineer to ensure good communication.

Chassis

The previously separate Body Structures and Chassis Dynamics teams in WR3 have now been combined, enabling this year's Chassis team to highlight key areas of improvement with greater focus, as opposed to general modifications of the whole car. This year we'll be focussing our attention on: a removable rear bulkhead to hold the new drivetrain; a removable combined seat-firewall to provide superior access to the powertrain package; a new composite crash structure to further innovate and save weight on previous designs and a class leading steel-tubular space frame to encase the powertrain package.

So far, concepts for each aspect have been decided upon and testing and analysis of initial designs and their respective materials is underway. Looking forward, we hope to complete a majority of our design work before Christmas, with our new space frame to also be manufactured.



The WR5 team are working towards designing an electric single-seat racing car to compete in the Class 2 competition at FSUK 2014, with their groundwork forming the basis of an electric Class 1 entry in FSUK 2015. With a common Project Manager and Chief Engineer to WR4, WR5 falls nicely into the Warwick Racing brand.

Electric

This year's Electric team are highly enthused to be designing and developing Warwick Racing's first electric race car, spearheading the team's transition from an IC to an EV vehicle for FSUK 2015 Class 1 competition. With a two year cycle to address initial conception all the way through to roll-out, this year's aim revolves around 100% vehicle design and procurement and preliminary testing of key components. This will provide next year's team with ample time for extensive testing, improvements and calibration to help our 2015 entry go that extra mile! We are also actively seeking sponsorship this year as we strongly believe real-world testing will be crucial in achieving an optimized design.

Powertrain

This year, the Powertrain team are looking to integrate an entirely new engine and differential package into the vehicle. The resulting redesign of the rear radically aids accessibility of our new engine bay, when compared with the WR3 design, with these new lightweight, higher quality components significantly improving performance.

Additionally, we are looking to enhance the vehicle electronics and deliver a reliable closed-loop lambda control system that actively optimises engine performance and delivers key information to the driver through a heads-up dashboard display.

Furthermore, the cooling system will be analysed and improved to ensure its capabilities match the demands of the new powertrain.

Training

As we enter the latter half of the term the team are finalising their initial designs and beginning to think more about manufacture. Considering our invaluable link with WMG and The School of Engineering, we strive to produce a vast majority of our parts in house, making the most of the facilities at our disposal. This has led to an intensive manufacturing training program for the WR4 team and we thank the staff in Engineering and WMG for giving up so much of their precious time!

Over 90% of the WR4 team have been trained on basic workshop machinery, including both the band and chop saws. A further 80% of the team have been trained on the tube notching machine ready for the arrival of the space frame material at the end of November. Soon, TIG welding training will also be underway to enable us to tack the chassis and support the team in WMG. Five members of our team have also been trained on the lathe and milling machines situated within the Engineering Workshops, with signs of significant ability on display.

Finally there was some additional fire extinguisher training for the team travelling to Australia, which hopefully we won't need to put into practice.



Events

WR3 Handover

On 5th October earlier this month, last year's WR3 team kindly made their way onto campus to pass on valuable advice and lessons learnt from last year onto the new Warwick Racing team. The handover proved to be extremely beneficial for those involved, with the new team benefitting from both their knowledge and expertise. We thus want to say a big thank you to the alumni who gave up their weekend to help us get off to the best possible start this year.



Millbrook

On Saturday 12th October, six members of our team took the WR3 car down to Millbrook Proving Ground to get some on track experience in the run up to Australia. The trip enabled us to identify and iron out the last niggling technical problems, and was a great opportunity to get to know the car before it ships. We sincerely thank Millbrook for letting us use their amazing facilities for the day and can't wait to take the new WR4 car there this summer for pre-competition testing.



Coming Up in November...

- Bruntingthorpe – final test day before Australia.
- Bosch kick-off and wiring loom workshop.
- WR3 ships to Melbourne.
- WR4 leave for Australia.

Friends of Warwick Racing



Warwick Racing is extremely grateful for any financial contributions our fans can offer us, to aid us in making this year the most successful year to date. All our friends will receive monthly newsletter updates on the team's progress and will be invited to our prestigious launch event in the summer.

Sponsorship

First of all we'd like to take this opportunity to thank all of our partners for their sponsorship and continued support throughout last year, without which, much of our success may not have been possible. As you know, Formula Student is a fourth year engineering project at the University of Warwick and is funded almost entirely by external sponsors. As such, we are extremely grateful for any support you can offer us and in return we can offer you a number of benefits including promotion of your company brand on our WR4 car, throughout our assembly area and on our website, as well as promotional opportunities within our university and access to our highly sought-after graduate recruitment market.

Warwick Racing welcomes support of any kind, whether it be direct financial or in-kind contributions, expertise, advice, materials, use of manufacturing facilities or assistance with testing.

If you would like to sponsor Warwick Racing or if you have any further queries, please do not hesitate to get in touch using the details below. Furthermore, our new Sponsorship Opportunities 2013/14 brochure contains a brief summary of our history, our core design philosophies for the WR4 car and a look at our diverse range of sponsorship packages.

Link to brochures:

http://www2.warwick.ac.uk/fac/sci/eng/meng/warwickracing/fs/sponsorship/formula_student_wr4_brochure_2013-14.pdf

http://www2.warwick.ac.uk/fac/sci/eng/meng/warwickracing/fs/sponsorship/formula_student_wr5_brochure_2013-14.pdf

Omar Sabri

Sponsorship & Finance Manager

Warwick Racing 2013/14

Tel: +44 7786 520880

Email: O.Sabri@warwick.ac.uk

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BOSCH



MOTORSPORT



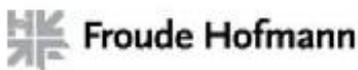
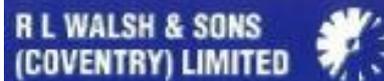
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