To Our Sponsors...

Due to the funds, time and technical support donated to us from our many generous sponsors, the team has been able to produce highly competitive vehicles year after year. Within this sponsors’ edition of the newsletter we wish to acknowledge and showcase some of our sponsors and how their valued contributions have been utilised. It should be noted that not all contributions have been mentioned as they will be featured in the Sponsors Edition No. 2 to be released in the coming months.

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Monash University have supported the Monash F-SAE team since the commencement of the F-SAE Australasian competition in 2000. They provide support technically, financially and by providing us with the use of facilities including our own workshop, office/comp lab and the opportunity to test in the largest wind tunnel in the Southern Hemisphere.

This year the Engineering faculty was generous in funding the purchase of a new set of Öhlins /Cane Creek double barrel dampers and springs to be used in a pull rod-actuated inboard suspension setup for the 2010 car. This setup has the advantage of being lightweight with a lower centre of gravity than the previous arrangement. The setup will also feature greater adjustability and a more integral method of adjusting roll stiffness (more info to be supplied in later editions).

Thank you to University Vice Chancellor Richard Larkins for the purchase of a brand new Husqvarna TE 450. The change from the Honda CBR 600RR (4 cylinder) to a single cylinder engine will improve the fuel economy of the 2010 car and reduce the weight significantly with a target of 180kg (current 250kg).

Also we currently have 10 students completing final year projects on the car from a number of disciplines including mechanical, aerospace and electrical engineering and are looking forward to several exciting new designs to present at competition. These include the introduction of a pneumatic gear shifter, power control module, composite fuel tank and innovations in the pedal box, body work, engine performance and a few more surprises to come.

We are appreciative of the encouragement we have received from the university and are looking forward to seeing the 2009 car running in the near future.
This year we have furthered our longstanding relationship with Chisholm TAFE; Increasing our machining time from one to two nights a week. We are grateful to be under the supervision each week of qualified and dedicated staff who are able to share their passion for machining with the team.

A special thank you goes out to Sam Pop who recently assisted us in the machining of the 2009 engine plate on the Okuma 5 Axis CNC machining centre.

The engine plate is a mounting point for many components including the engine, driveline and rear suspension. This year’s design provided an increase in stiffness and an overall weight reduction. In addition to the engine plate, the increased machining time has allowed many other important parts to be manufactured. Several brake rotors were machined to allow for testing, including a new ceramic coated aluminium design. Suspension shock clevi, hub retaining nuts, rear hubs and steering components were machined on the Okuma 5 axis machining centre.

Chisholm has also produced some rapid prototype designs for the gear shifter paddles and nose cone. Having access to this machine gives the team an opportunity to preview designs before a final product is manufactured eliminating errors or oversights.

The wire cutter at Chisholm has cut many gears for the 2009 car. The steering system has required small gears and the wire cutter has completed this job successfully. In addition to the steering system a spline was cut for the gear shifting mechanism.

After hours access to Chisholm’s CNC machines have allowed the team to meet the tight deadlines put forward this year, and much is owed to them.

Thank you to GloverDay for contributing funds to assist in the purchase of carbon fibre which will contribute to the manufacture of the seat unit. This is currently underway. Carbon fibre is a highly sought after material in racing due to its light weight and properties of strength (high strength to weight ratio), and in the case of the seat the ability to produce a composite curve seamlessly. Carbon fibre is expensive and the opportunity for our team to both manufacture parts and enhance skills using the material increases our performance and hence competitiveness.
With the number of points allocated to the fuel event doubling in 2009, minimising fuel consumption has become an important area for improvement. Thanks to the support from the Monash Engineering Students’ Society (MESS), we have been able to utilise new pistons to increase the compression ratio of the engine. In doing so, we can increase the combustion efficiency and hence use less fuel.

Thank you Denso for the donation of a brand new radiator core. Each year Denso supplies the team with the main components required to put together our cooling system which is vital to the success of the Powertrain system.

The radiator was sent to Race Radiators in Dandenong where fabrication of our custom rear mounted radiator took place. The design is similar to that of previous years but aims to decrease overall engine temperature and reduce auxiliary power losses from the engine. Thank you to Race Radiators for the time they’ve spent on the radiator, we appreciate your help and expertise.

Evalife Aquarium in Frankston sells freshwater aquariums and supplies, specialising in rare cichlids. They have sponsored the team this year with a generous donation which has been used to purchase the competition tyres.

The 2009 chassis has recently returned from Multicoat; powder coated in ‘precious steel’. We are thrilled with the results and appreciate the effort Chris, Mark and the guys at Multicoat have gone to; ensuring all the right areas are covered and allowing gaps for additional panels and welding. We understand that it’s a fiddly job and are grateful for Multicoat’s continued support in 2009.
A1 kindly offered to sandblast a set of our rims for us. Our lightweight aluminium wheels are constantly loaded and if any cracks were to develop they would be at risk of collapsing. After A1 sandblasted our rims we were able to crack test them and ensure the safety of all our drivers.

K & H Technologies Australia

For the past few years K&H has supported the team supplying us with quality products such as spray paint, thinners, body filler, prepsol and primer. The team at K&H are always quick to help us out and we are fortunate to have them as a Silver Sponsor for 2009.

Skilled Engineering

In order to create an engine package that provides good drivability and sufficient torque while minimising fuel consumption, it is necessary to tune the new engine set up on the Monash University engine dynamometer. Thanks to the support from Greg Hargrave, CEO and Managing Director of Skilled Group, we have the resources to complete this testing and optimise our engine tune.
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A Big Thank you...
Thank you to all our sponsors for making it possible for us to continue racing. All of your generous contributions are greatly appreciated.

Also a big thank you to all those who have assisted us in writing articles for this edition,
Samuel Lister, Kerry Adams, Chris Heath, Rachel Mace, Jared Tyler, Michael Petrovic, Phoebe Lindsay, Simon Bicknell, James Raditsis.

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