

MONASH MOTORSPORT

F O R M U L A S A E 2 0 0 3

Newsletter - August Edition

Inside this issue:

| | |
|----------------------------|---|
| Welcome | 1 |
| Construction Progress | 2 |
| Monash Open Day | 3 |
| Unigraphics Progress Model | 4 |
| GDM Precision Engineering | 5 |
| JW Ford | 5 |

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Unigraphics NX Solid Edge™

 MONASH University

 Chisholm INSTITUTE

 Box Hill Institute

 Mercedes-Benz 

GDM Precision Engineering
Aurora Bearing
Special Patterns
Metal Treatment Services
Silcraft
Austuf
Gear Cutting and Manufacturing
RM Russell
Palmer Tube Mills
Engineers Australia
Wilson Transformer
Solid Solutions
Textron Fasteners
Composites Institute
BMC Filters
Vesco Plastics
BHP Steel
PBR
Structural Adhesives
Infineon Technologies
Modena Engineering
Beninca Motors

Another month has come and gone for Monash Motorsport in our 2003 campaign and there is plenty to talk about. While we are unfortunately unable to present a rolling chassis, we have not been idle over the past 31 days.

The 2002 car has been out and about showing off its wares to members of the public. Monash Open Day and the inaugural Monash MotorSports Club BBQ on the Southern side of the Clayton campus are just two of the appearances made. Further appearances are also scheduled at the Chisholm TAFE and Box Hill Institute Open Days this coming weekend with the 2000 car simulator also being utilised. This will no doubt create further interest in the team and its vehicles.

On the construction front, the team is moving ahead at full steam with an eye to the official car launch in the second week of October. Look out for details of this event in upcoming issues. Brakes, differential mounts, steering gears, wishbones, and the cooling system have all been completed during the month. A rolling car is expected within the month on receipt of the CV joints and completed hubs.

The team is also preparing the data acquisition system for installation into the new car once first testing begins. Effectively speaking, a plan has been put in place to ensure that all relevant data is monitored efficiently by the team. The idea behind this is to maximise the value of what is the biggest capital investment the team has ever made. By developing a framework for analysing the data, improvements identified from this can be implemented on the car quicker, thus improving the efficiency during the team's limited testing miles. And so, with the assistance of our sensor suppliers Honeywell and Davidson Measurement, the team should be well prepared come the competition.



Construction Progress



While the promised rolling chassis has not been delivered due to manufacturing and delivery delays with some critical driveline components, July still saw major construction completed. As a result of these delays, the team is taking the opportunity to powder coat the majority of the car's steel components.



Wing construction has now extended to actual part manufacture with an eye to having the wings on the car within two weeks of the first runs. Using carbon fibre fabric (supplied by Huntsman Composites), wet laid up in moulds and vacuum bagged the team has been able to improve surface finish and reduce weight compared to the 2002 wings. Other composite work included the production of a lightweight restrictor carefully developed to increase air flow efficiency.



The team also received our custom cut steering rack and pinions during the month thanks to Gear Cutting and Manufacturing. With one standard issue alloy steel rack produced, the team has taken the opportunity to develop a second rack utilising a special coating. The weight saved with this rack is a significant 350g.



CNC machining of components continued through the month at Box Hill Institute, with programs written by the team used to manufacture brake discs, differential mounts (shown on left) and other various parts. The quality finish produced on the NC machines is helping to significantly improve the finish on this year's vehicle.



Monash Open Day

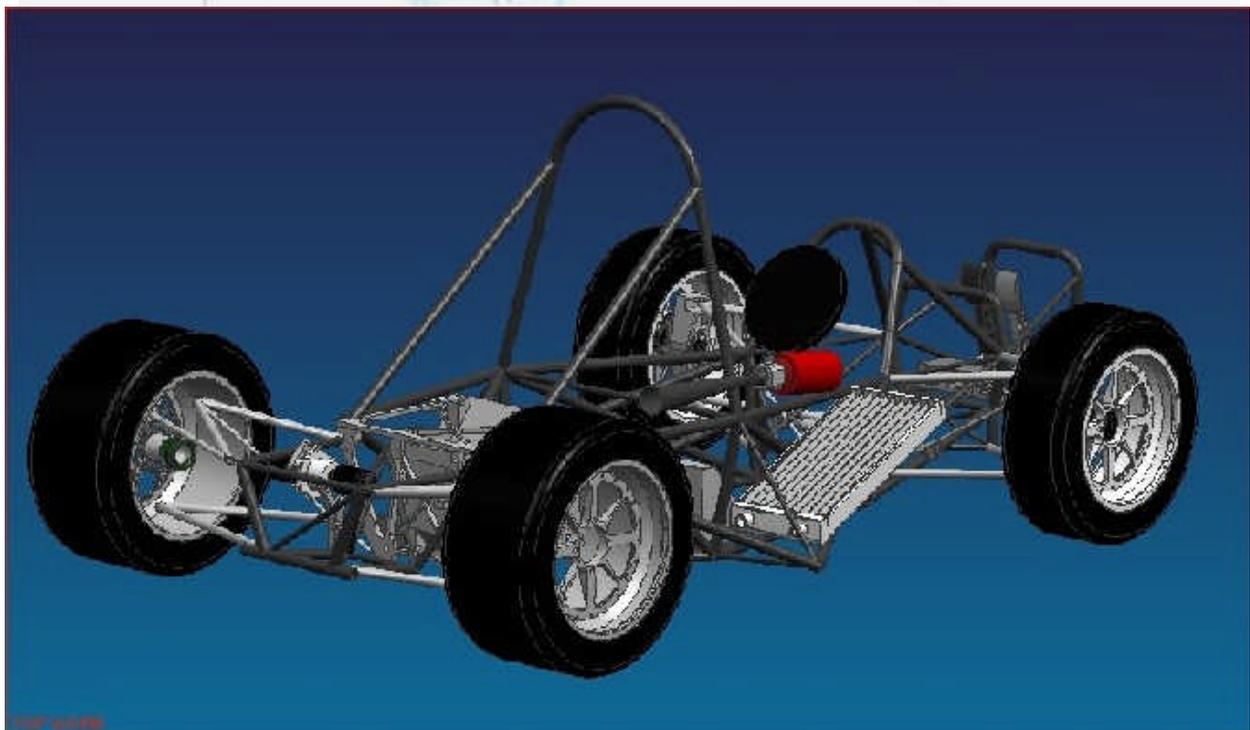
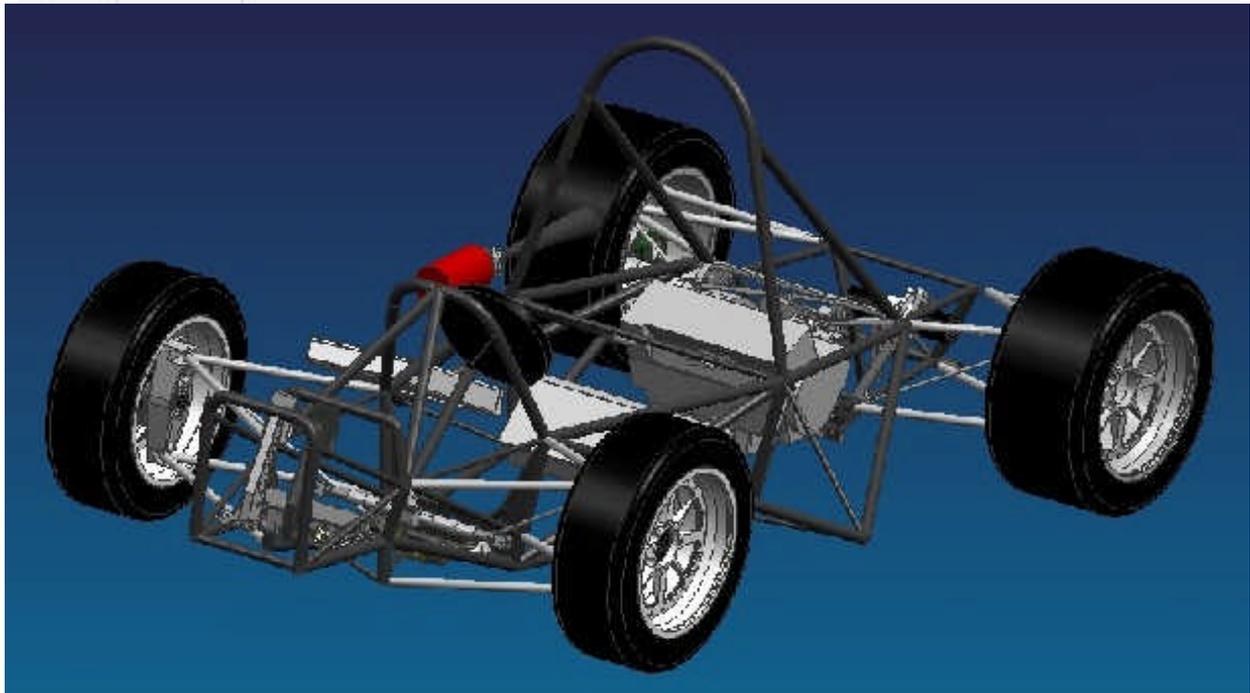
August 3rd saw the Monash Clayton Campus doors thrown open to the public, and Monash Motorsport was a star attraction. With two displays on hand, patron interest was plentiful. The Formula SAE simulator played host to many budding racers, and no doubt provided some enjoyment. And no, we do not spend all day playing computer games when studying engineering!!

Also on hand on the engineering lawn was the 2002 race car in full race trim. As a static display the car generated steady interest with numerous questions being answered about the formula and its part in the university degree.

Once the engine was fired, the crowd suddenly swelled. As can be seen by the images below, spectators were drawn to the sound of the CBR engine at 12,000 rpm in large numbers. This encouraging phenomena continued throughout the day, with the 2002 car eager to please the excited onlookers. Fortunately, the gear shifter was removed prior to the event in order to prevent any temptations being brought to fruition on such lovely green grass!!



Unigraphics Progress Model



Sponsor Feature - GDM Precision Engineering

As precision manufacturing engineers to industry GDM Precision Engineering are involved in toolmaking, general engineering and specialized machinery manufacture and repair.

Working for a multitude of industries as varied as confectionery production to fastener production, GDM can undertake Turning, CNC Milling 3D, Surface and Cylindrical Grinding, Tool and Cutter Grinding and Welding (Oxy, MIG and TIG) operations. This allows the company to do a wide range of work including Fabrication, 3D and Production Milling, Screw Cutting, Gear Cutting, Worm and Worm Wheel Manufacture and Repair, Surface Grinding, Blade Sharpening, Tool and Cutter Sharpening, Drilling and Tapping, Gear and Shaft Reclaiming, and Repairs and Reconditioning of most of the above and many other items.

As a supporter of the 2002 and 2003 cars GDM have precision turned our hubs from EN26 steel to exacting tolerances. The team must thank Garry Benn for producing these components to such a quality end product.



Sponsor Feature - JW Ford

J.W Ford specialise in the manufacture of small to large batch quantities of connectors and assemblies as well as precision components for electronic / electrical, medical, photographic, automotive, aeronautical, white goods, instruments and other industries.

With the latest technology CNC Lathes and machining centres, J.W Ford can produce precision components and assemblies from 1mm to 52 mm diameter on lathes as well as small to medium size components on machining centres, using all types of materials and plating finishes.

J.W Ford is the market leader in Swiss type machining with the capacity to produce on conventional and CNC type machines.

J.W Ford is assisting the 2003 Formula SAE team by manufacturing the rear uprights to the highest standard. Manufactured from Billet Aluminium, the team is extremely indebted to Neil Cartledge and his team for the production of these critical components

