IN THIS ISSUE:

It’s the beginning of February and the formula car is finished and ready to move into the testing phase. This will all take place after the Buffalo Auto Show, where the Formula and Baja vehicles are being displayed from the 6th to the 10th of February. Once the car is back we will begin testing to get it performing as best as possible for competition. Read on to find out what the University at Buffalo Formula SAE team has been up to the past two months, and the projection of what is to come. Enjoy!

THE BUFFALO AUTO SHOW!

The University at Buffalo Chapter of the Society of Automotive Engineers Formula Team is pleased to announce its presence at the 2008 Buffalo Auto Show. February 6th-10th in the Downtown Buffalo Convention Center, UB FSAE will be displaying its car, along with the UB Baja Team.

Throughout the week, the team will have members present at the auto show to display our car and talk with people interested in our project.

This is a great opportunity for our team to gain exposure, as well as an exceptional way to thank all of our sponsors for everything they have done for us. The Society of Automotive Engineers will be selling tickets for this event for the price of $6.00 to anyone interested. This is a special UB discount price. If you or your company is interested in purchasing tickets, please send an e-mail to UBFormulaSAE@gmail.com or call Greg Robbins at 315-345-3739 to set up a purchase.

ENGINEERING WEEK

Each year, the University at Buffalo Student Association holds what is known as engineering week. This is a week where all the engineering clubs on campus host different events while competing against each other for the overall title of engineering week champion. SAE has won e-week for the past 4 years in a row, and is hoping to continue this winning streak. This year the event will be taking place from Saturday February 16th to Friday February 22nd.

The final competition of the week is a battle bots war, where each club builds a robot under certain guidelines, then battles other clubs. Along with this, SAE will have a display at the Science Museum for children to interact with on Sunday February 17th.
New Trailer from UB Student Association

The University at Buffalo Student Association has recently agreed to aid SAE in the purchase of a new trailer for our clubs use. The trailer has not yet been ordered, but tentatively will be an all enclosed car hauling aluminum trailer. This trailer will be much safer than our current one and will help cut travel prices as it will increase our fuel mileage. Check the next issue for the complete information on the trailer with a picture once we have it.

SPONSOR SPOTLIGHT!

We would like to send a special thank you to McGard for becoming a new sponsor of the UB FSAE Team. Invented in 1966, McGard’s unique one piece wheel lock functions like an existing lug nut/bolt, but requires a special key (tool) for removal. Simple and easy wheel & tire theft protection. Spare tire and tailgate locks for light trucks, vans and sport utility vehicles round out our automotive security section. Finally, the finest chrome plated lug nuts available. Utilizing the same high quality manufacturing standards as our wheel locks, we produce lug nuts that are strong, safe, durable and don’t rust! McGard also carries marine and other security products. For more information, please visit them on the web at www.mcgard.com.

We would also like to send out a special thanks to PCB Piezotronics Inc. for their recent donation to the team of an ICP Microphone, battery powered signal conditioner, and some cables for hook up. This equipment will aid us in being sure that the car will be within the decibel limit at competition. PCB Piezotronics Inc. manufactures accelerometers, force sensors, load cells, microphones, pressure transducers, pressure transmitters, strain sensors, torque sensors, vibration sensors, signal conditioners, cables and accessories. This instrumentation is used for test, measurement, monitoring, and feedback control requirements in industrial, R&D, military, educational, commercial, and OEM applications. Visit www.pcb.com for more information on our new sponsor.

A LOOK AHEAD...

The next few months are going to become busy for the Formula Team. Here are some of our upcoming events:

February 16th: Projected car run date (pending weather and road conditions).

February 22nd: Program report is due for the FSAE competition.

March 1st: The Design Report and Spec Sheet and Impact Attenuator report is due. Also Cost Report for the Virginia Competition is due.

April 1st: The cost report for the Michigan Competition is due.
CLUB EXPOSURE

UB SAE will be recognized in the UB student magazine, Generation. The feature article will appear in the February 5th issue, and can be found on UB campus for free. It will include information on both the Formula and Baja teams, and is a great opportunity for us to gain on-campus awareness.

We hope that by promoting our club within the student body, it will continue to bring more and more talented students to join our teams. We feel that recruiting excellent members is one of the most important things we do, as it ensures the future success of our teams.

New Panels on Car

For the 2008 season, the car has its new and updated paint job. Thanks goes out to Sound Choice Audio Performance for help with painting the new panels. Remember, be sure to stop by the auto show if you have a chance and check out the new look of the car in person.

CURRENT ENGINEERING PROJECTS

CHASSIS TEAM:

The chassis team has recently completed the final stage of testing. The torsional stiffness was modeled and tested through the suspension and chassis. As expected the results were lower than the first test with the chassis alone. Compliance issues will need to be examined further to improve next year’s chassis.

We are excited to have all the data needed to move forward and start optimizing the current chassis for the 08-09 season.

SUSPENSION TEAM:

The suspension team has been working with MSC Software Corporation to become a part of their University program. MSC will be providing our team with their software products such as ADAMS/Car. Using this software will allow us to perform an in depth analysis of our current suspension geometry. The software has DOE (Design of Experiment) capability so we can optimize various parameters to improve performance and handling. Also we will be able to perform various simulations like constant radius (skid-pad), corner entry/exit, and straight line acceleration/deceleration. It will be a great tool to help save time and set up the car for competition.
DRIVETRAIN TEAM:
With the help of Mi-Tech Metals, we were able to use tungsten weights to help lower the engagement on our CVT. Tungsten has a high density which allowed us achieve the weight necessary while still being small enough to fit inside the housing. We will continue testing as soon as the car comes back from the auto show.

The team also completed the chain tensioning mechanism and the belt/chain guards. Thanks to Lee McElhinney, UB Engineering Machine Shop, and Custom Laser for your help.

Engine Team:
The Engine Team continued its forward progress by completing initial flow testing of the cylinder heads. This valuable information brings the team one step closer to having an accurate model of our engine. The model is important because it can be used to simulate testing as well as verify the results we obtain from physical testing. The remaining schedule is to finish the engine model with the new data and begin physical testing with our dynamometer. The team would also like to extend a heartfelt thank you to Carl Mcquillen Racing Engines for balancing our crankshaft.

Once again, UB FSAE would like to thank all of its supporters, and we hope to see many of you this week at the Buffalo Auto show!

Thanks again!

Gregory T Robbins
UB SAE Vice President
Sponsorship and Marketing Coordinator
Cell: 315-345-3739 E-mail: grobbins@buffalo.edu
www.eng.buffalo.edu/sae
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