

Formula UBC Under Way For 2008



Milling the chassis tubes



Fitting chassis tubes in the jig



Tack welding the chassis tubes



Machining the wheel hubs



Making the wiring harness

It has been a busy summer and fall for Formula UBC! Fresh off a great showing at FSAE West 2007 that saw the team complete all events, one of about twenty teams to do so, we are continuing to work hard into 2008 to produce another strong car. The team is setting a blistering pace, with car manufacturing already under way.

With several senior members graduating and moving on from the team, this year's group has a new team captain, Parisa Bastani. The summer's departures also meant leadership changes in the engine, electronics, body, drivetrain, and suspension groups. The new-look team is eager to get a project of their own under their belts!

The team is currently hard at work on early car manufacturing. The chassis jig has been set up, and the tubes have been machined, assembled in the jig and tack welded. The suspension group is in the process of machining various components such as the a-arms, bell crank posts and pushrods. The drivetrain group is also in the process of machining the wheel hubs, stub axels and CV joints. Furthermore, the new engine has arrived, and has been rebuilt and reassembled by the engine group.

Outside of the shop, the team has been busy showing the 2007 car at events such as the Langley Cruise-in, the UBC Alumni weekend, UBC festival, and the UBC Engineering Team Council event. Formula UBC is currently preparing for the upcoming events in winter such as the International Vancouver Autoshow and the Engineering festival which take place at the BC place and library square in downtown Vancouver respectively. As with all public showings, the car attracted plenty of attention and many inquiries. Also, the team is in the midst of another successful recruiting drive, with 92 interested students! Interviews have taken place and the successful candidates have started their involvement under mentorship of Formula UBC group leaders.

After a very strong showing in the 2007 design event, the 2008 team has decided to carry over 2007's design goals. They are:

- Ease of manufacture
- A simple yet elegant design with clean packaging
- Design for reliability



Assembling the engine



Machining the A-arms



New members machining session

With a young group taking over the project, emphasis is being placed on early manufacturing of the car and allowing four months of testing prior to the competition. This year's team has started development by studying the previous designs and making improvements while keeping our goals in mind for reliability and design for manufacturing. The team is continually considering new design improvements and discussing areas for further development for the 2009 car.

Some of the 2008 car's design changes in the suspension includes a brand new upright design for better wheel assembly packaging, weight savings and ease of manufacturing. Moreover, slight changes have been made to the a-arm geometry for better handling of the car. Also, better jiggging and alignment methods have been designed to increase the accuracy when assembling and tuning the suspension.

The chassis has been slightly rearranged and modified for better packaging and to allow suspension and steering design modifications. Meanwhile the chassis group leader has been focusing on drastic changes in the 2009 chassis design. The team will be using a Kawasaki 2004 ZX6-RR engine this year. The engine group has focused on a brand new intake design, new fuel pump set up and new fuel tank design. The engine group is currently in the process of machining various parts and preparing for dyno tuning.

The 2008 car will also see changes to the driver interface. The electronic controls, the pedal-box, and the seat have all been redesigned. A new LCD screen, a tachometer and new dash have been designed and is currently in the process of being manufactured. Furthermore, the electronics group has designed a shift computer to optimize the performance of the car and has been hard at work developing a data logging system to assist in future design work.

As you can see, the new 2008 team has been very busy and is still hard at work. As always we'd like to sincerely thank all of our sponsors for their continued support; without you this project would be impossible! Happy holidays from Formula UBC!

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