

CRIMSON KART



Newsletter

April 2015

Greetings from the Crimson Racing Kart Team,

We would like to once again thank our faculty sponsors for funding Crimson Racing's Kart project.

As you may recall, the kart project is a way to get underclassmen involved with Formula SAE by designing and building a kart, and is a great way to prepare the next generation of members for the responsibilities of working on the main car.



Frame Team working on the frame

This month has mainly focused on machining and manufacturing. At the beginning of the month we purchased a majority of our raw materials.

Cain's Steel made several donations, which will be used for multiple components; their contribution is greatly appreciated.

We would also like to thank the machine shop for coming out and teaching us how to use the mill and lathe.

Main Car Update

The main car will be leaving for competition on May 12th, which is quickly approaching.

To ensure that the car is ready, kart project members are being brought in to help out, participating in a range of projects from fibreglassing to helping on the chassis dyno.

As a result, the kart project has been put on hold with the approval of Dr. Puzinauskas.

The kart's due date has been moved back to September 30th.

By helping the main car leaders, we have learned tremendous amounts that will get us ready for the coming years.



Crimson Racing team at the chassis dyno



Jessica Prestel and Jack Bardsley milling an upright for the suspension team

Machining

Part of the intention with the frame project is to expose the underclassmen to some of the machines and tools commonly used on the real car.

As of this month, our members have gained experience using the mill and lathe in the student machine shop, as well as bending and grinding steel tubes.

Kart Progress

The frame is making a lot of progress and is ahead of schedule. All of the planar tubes are cut and welded together. This progress allows other part groups to begin manufacturing.

Communication is very strong in all of the kart teams, especially our frame team. All of the members of the frame team are participating in the build, and are gaining experience jiggging, grinding tubes, and TIG welding.

Progress has been slow on the suspension. The spindles have just finished being machined. However, it took longer than originally anticipated, causing other suspension parts to fall behind schedule. Suspension team participation has been high, and each member is gaining experience in both milling and lathing.

The display box for the electronic screen was sent to the 3D printing lab this month. The box will mount to the steering shaft and allow the Arduino to display the karts information in real time. All of the programming for the Arduino is complete and functioning.



The frame is making a lot of progress!

Plans for Next Month

Now that a notable amount of progress has been made on the frame, our manufacturing can kick into high gear. Parts like the engine flanges and brake brackets can be started. This allows every team to begin manufacturing



Machined spindles

The next phase for the frame is to complete the front bumper. This will be the first of the 3D, which will present its own set of challenges. By using a set of 3D jigs, the tubes will be created with a much higher degree of precision.

The next phase for the suspension team is to mill the bearing housings and frame attachments.

A work order for the machine shop will be placed to thread the end of the spindles. Other parts, such as the pedals, will also need to be sent off to the machine shop as well.

Work on kart body will begin as soon as the body is finished on the main car. The first step for the body will be to manufacture the molds. The Body Team Leader is looking into high density foam. If successful with the kart body, it could be applied to the main car next year.