

CRIMSON RACING NEWSLETTER

January 2016

Greetings from Crimson Racing!

Happy New Year! 2015 was an amazing year for all of us here at Crimson Racing, and we're looking forward to what 2016 has in store for us. After a month-long break from classes, the University of Alabama's students will soon be making their way back to Tuscaloosa to begin the spring semester. Our team members work incredibly hard to ensure classroom success while also devoting their time to helping our car excel. With the competition only four months away, we will be working harder than ever this semester to make sure this year's car is the best one yet.

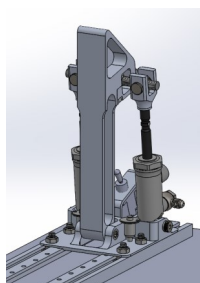
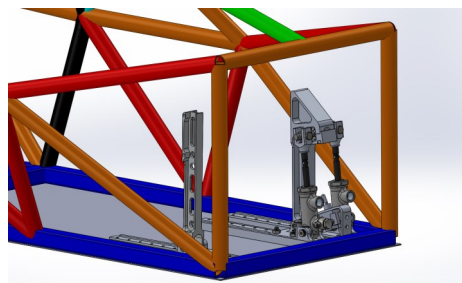
Frame and Suspension

Some of our most dedicated team members stayed nine days after finals in order to complete the frame. In that time, we fabricated and welded all of the suspension points, various coolant mounting brackets, brackets for the pedal, and the differential mounting brackets. After all the pieces were welded, we heat treated the major welds. This process includes heating the welds to 550 degrees Celsius for a minute before letting them cool, in order to increase the ultimate strength of the metal at the points that experience the most stress. Since the frame was completed on time we had it powder coated during winter break.

Prior to leaving for break, we dropped off all of the uprights at a machine shop, where they have pressed our upright bearings. The spindles are near completion; the only step left requires threading the ends for the nuts. Though we experienced a short delay in receiving some necessary parts for the a-arms, they have arrived over break. Now that several key parts have come together, we have been able to finish the a-arms. Before they are ready to bolt onto the car we need to paint them and install the spherical bearings. Now once the spindles are finished, the car will be rolling.

Pedals and Rear Box

Since the freshmen were so successful in the tasks we provided for them last year, we once again decided to recruit first year engineering students to design the pedals for our car. They spent the last two months in the design phase; we have ordered the necessary materials so that once we return to Tuscaloosa, they will be able to make the final product.



This year, we have decided not to use the rear box that the team has utilized for the last five years. Instead, we will mount the rear a-arms and differential to the rear of the frame. In order to do this, we designed a mount that holds the differential in the necessary position that allows for the proper position of the sprocket, so that it may attach to the engine by the chain. We were also able to move the sprocket forward and down, allowing us to move the rear wheels four inches forward, creating the ideal weight distribution for the car. We ordered the material for the mounts and sent the parts to be made before leaving for break, so we anticipate receiving them shortly after returning.

Looking Forward

This year, two university-published magazines featured Crimson Racing. The articles showcased our car, as well as commended the project on its ability to provide experience to future engineers. If you are interested in reading them, the links are listed below.

<http://undergraduate.ua.edu/undergraduate-magazine-not-the-race-but-the-journey/>

<http://www.mosaic.ua.edu/formula-sae>

As always, thank you for your support. If you have any questions, comments, or suggestions for our team as we approach the competition, feel free to contact us using the information below.

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