

# CRIMSON RACING NEWSLETTER

April 2016

## Greetings from Crimson Racing!

Spring has arrived here in Alabama, and students are definitely excited about the higher temperatures, and more importantly, the upcoming end of the semester. For most students, the month left before finals might be a slow one, but we here on the Crimson Racing Team know we need to make the most of every day left until the May competition. The car has been coming along well, and with just a few improvements left to be made, we are looking forward to seeing all of our hard work pay off next month when we head to Michigan.

## Spring Break and APR Visit

While most students spent their Spring Break on vacation relaxing, several of our most dedicated team members stayed in Tuscaloosa. They used the time off of classes as an opportunity to continuing making improvements on the car without distractions. Their hard work has put us into a great position going forward, and we are excited about the progress that is being made.

This semester, we had the opportunity to visit APR, an engine tuning facility in Opelika, AL. Some of the calibrators and managers there were involved in Formula SAE while in college, and one of them was an Alabama alum. They graciously allowed us to utilize their resources and expertise to help tune our engine. Getting the proper tune for our car is one of the most difficult aspects of preparing for the competition; even if everything else is perfect, a car's performance suffers greatly from an improper tune on the engine. During Spring Break, some members of the team traveled to APR and got in a lot of time working with the car. Unfortunately, we faced a slight cooling issue, but APR was kind enough to let us return, and on our second visit, the team was able to improve the tune even more. As of this time, we are still facing slight issues with signal integrity of the cam and crank sensors, preventing the completion of the tune at greater than the 10,000 rpm range.

## Suspension Tuning and Drive Day

This year, we have designed and built a suspension tuning device. The device allows us to more accurately measure the suspension, creating the best possible set up. It allows us to tune within 0.1 degrees, and we can tune camber and toe with the same device. We have also spent time setting up our linear potentiometers, and plan to make calibration curves in the future.

After completing the suspension tuning device, and working on the tune at APR, the team was able to take the car for a drive in a University parking lot. The car did a few runs before the team ran into a slight problem with the manifold air pressure sensor. Still, we were able to obtain some valuable data before the issue occurred, and we now have a better plan for avoiding for similar failures.



## Looking Forward

With only a month left before our big competition, the team is energized and ready to go. As we head into the final stretch, we want to thank all of you for your continued support of our program. We would not be able to do any of this without your help. If you have any last minute advice, comments, or questions, feel free to contact us at the email below. We can't wait to share the results with you next month!

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