Greetings from Crimson Racing,

The summer has unfortunately come to an end, and we must all return to school. Through the nice weather and occasional vacation, our team was still able to dedicate a lot of time to the design and funding of next year’s car. We hope you are as excited as us about the improvements that we are making.

A lot of the summer was spent designing the new frame. Other than minor adjustments pending the completion of other systems on the car (suspension and intake), the design of the frame is complete. Through SolidWorks finite element analysis, we found that the new design adds nearly two and a half times the strength of the previous frame. At the same time, the design decreases the car’s weight by 8 pounds.

The focus of the suspension group this summer was to improve the design of the uprights. One of the greatest features of last year was that the same upright was used for each corner. The use of a single design allowed for easier and cheaper fabrication because we only required one back-up upright to serve as a replacement. Our new design retains the strategy of the one upright for all four corners but at the same time, increases the strength and decreases the weight.

One of our biggest improvements over other years is that the frame has already been designed. The fabrication is pending the approval by a design review staff. It also lacks a few minor adjustments; for example the suspension and the intake that require certain mounting points on the frame. We are hoping to complete the assembly of the frame before Christmas break.

For all the systems on the car, our goal has been to lower the weight of the car while also maintaining or increasing the strength and reliability of the car. The frame and upright designs have done a wonderful job meeting these goals, and we hope all of the other systems are able to keep to the pattern. The car weighed 518 pounds at competition in May and we are trying to bring it down to below 500 pounds. We are also striving to complete the car by March 1\textsuperscript{st} so that we can then get plenty of data from the car that we will take to competition.

Thank you for your encouragement of Crimson Racing. We would not be in the position that we are in if it were not for your donations and support. We hope you continue to follow us through the year. Please email us if you have any questions.

Sincerely,
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