



The team has been working tirelessly to get parts made and get the car assembled. A more efficient design/build cycle is being put to the test this year so the build phase started in February. The overall goal of a more complete design and a shorter build cycle is proving a good path to take and the car is coming together quickly. We recently submitted the last technical document required by the competition organizers and our full focus is on manufacturing.

IOWA STATE UNIVERSITY **FORMULA SAE**

Iowa State University
2025 Black Engineering
Ames, IA 50011

This year the car will be wrapped in fiberglass bodywork instead of aluminum panels. The main task so far has been making all of the molds for each body piece. Recently, the first coat of resin was applied to the right-hand sidepod mold. We plan on completing the nosecone and left sidepod molds in the upcoming weeks. Once the front bodywork foam molds come back from a lab on campus, we will be ready to start the lay-up process.



Jake Mazzio
Junior
Mechanical Engineering
Composites team leader

Last year's coolant overflow tank was a bit of an afterthought: a water bottle with holes in the lid for lines. This year I sought to remedy that by integrating the coolant and oil overflow tanks into two separate but connected parts (fig.1). Both are 3D-printed in two halves out of ABS plastic. They will feature aluminum inserts with NPT adapters for oil and coolant lines. Also worth mentioning is a design closer to CR-13's AKA Smokey's fuel tank design. There is a lot of compound geometry which American Waterjet was able to waterjet perfectly for us and a big thanks to Andrew Klein for doing a fantastic job welding and water testing it!



Greg Bott
Junior
Mechanical Engineering
Engine Integration team leader

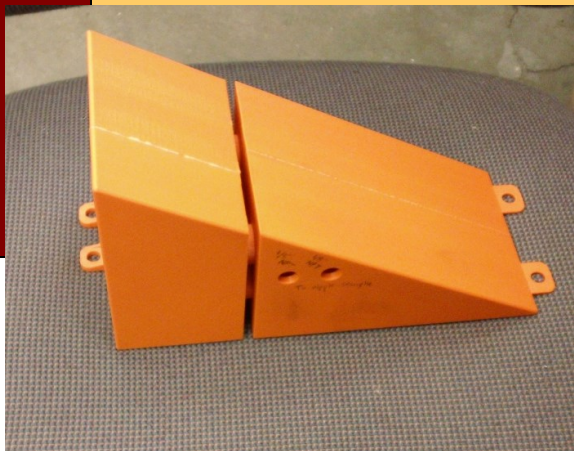
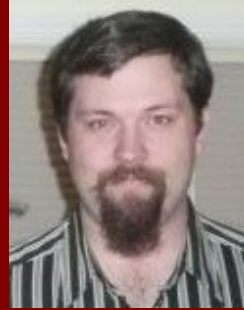


Figure 1. Two piece coolant and oil overflow tank.



The nose cone is produced one layer at a time by CNC routing the profile out of layers of foam.

Over the past few weeks a lot of sponsor made parts came in and final touches were made to them. This includes the base of the new pedal box which has been re-designed from last year to be easier to adjust and less prone to bending when pedals are depressed.



Jason Labbe
Senior
Materials Engineering
Controls Team Leader

First off, I'd like to thank all of our sponsors and supporters, without you, we wouldn't be able to build such a great car, Thanks!

Suspension components this year are being produced from machined aluminum, reducing the labor time, weight, and the number of manufacturing processes significantly.

Instrumentation is looking great this year, allowing strong feedback during testing to verify the car's competitiveness and our understanding of the mathematics behind it. The information that will be obtained is fundamental to the design of future vehicles for years to come.



Pat Sanderson
Senior
Mechanical Engineering
Vice President



This years front suspension for CR-18.



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