OD12 CORNELL BAJA RACING

2015-2016
SPONSORSHIP PAMPHLET

ABOUT THE

Cornell Baja SAE is an engineering project team that builds, designs, tests and races an off-road vehicle each year. The Cornell Baja SAE team was founded in Fall 2003 and participates in the annual SAE International Baja Series competitions against upwards of 200 teams from around the world.

The project promotes the application of the theoretical concepts in a practical environment while balancing budget and design requirements. The team is made up primarily of undergraduate students with a handul of graduate members. Although most of the members are engineers, the team represents eight majors and three of Cornell's seven collges.

48 MEMBERS.
6 SUB-TEAMS.
1 GOAL.

TEAM.

THE COMPETITION

WHAT DO WE DO?

We design and build an off-road vehicle to compete in the SAE Collegiate Baja Design Series.

HOW DO WE WIN?

The object of the competition is for a fictitious firm to accept one team's design for manufacturing; simulating the tasks involved in introducing a new product to the consumer industrial market.

WHO PARTICIPATES AT COMPETITION?

There are three North American competitions annually; each draws 100 international teams for a four-day competition of static and dynamic events. These competitions require students to balance design and cost with dynamic performance, while following a strict set of safety guidelines and standardize rules.

WHAT HAPPENS AT COMPETITION?

The first two days of competition consist of the Static Events, focused on the cost report, sales presentation, and design report. The last two days are devoted to the dynamic events. The third day of competition focuses on time trial events, including maneuverability, acceleration, and a hill climb or tractor pull. Additionally, each competition includes a unique hosts' choice event which can be: water maneuverability, hill climb, suspension and traction or rock crawl.

The fourth and final day is reserved for the Endurance Race. This culminating event is worth the most points and is the ultimate test of a teams design, fabrication, and durability. All 100 teams race wheel-to-wheel on a single obstacle-strewn track to complete the most laps in the four-hour time frame.

2015-2016 TIMELINE

AUGUST
RECRUITMENT

SEPTEMBER
NEW MEMBER TRAINING

OCTOBER
DESIGN & INNOVATION PHASE

NOVEMBER - DECEMBER
FINAL DESIGN REVIEW
FABRICATION BEGINS

JANUARY
FRAME & SUSPENSION FABRICATION COMPLETED
MAJORITY OF PARTS MACHINED

FEBRUARY - MARCH
CAR COMPLETED
TEST CYCLE BEGINS
COST & DESIGN REPORTS SUBMITTED

SPONSORSHIP LEVELS

ELITE

($3000+) The Elite Sponsor includes prominent large logo placement on the car and on the sponsor page of the website. The logo will also be included on T-shirt merchandise as well as other promotional products. This also includes a large poster and a framed picture of this year's team.

GOLD

($2000-$2999) The Gold Sponsor receives prominent large logo placement on the car. The logo will also be included on the T-shirt merchandise as well as other promotional products. This also includes a framed picture of this year's team and a name on the sponsor page of the website.

CONTRIBUTOR

($1-$499) A Contributor receives a logo on the car and on the sponsor page of the website.

AND SUCCESSES

SILVER

($1000-$1999) The Silver Sponsor receives a logo on the car as well as logo placement on T-shirt merchandise and other promotional products. This also includes a framed picture of this year's team and a name on the sponsor page of the website.

BRONZE

($500-$999) The Bronze Sponsor receives a logo on the car as well as logo placement on T-shirt merchandise and other promotional production. This also includes a name on the sponsor page of the website.

PRIOR SUCCESSES

ORGANIZED BY THE LAST 4 YEARS, ONLY 1ST PLACE VICTORIES ARE LISTED

2012

1st place overall
Auburn: overall, suspension and traction
Wisconsin: overall design, overall static events

2013

1st place overall
Tennessee: overall, acceleration, suspension and traction

2014

1st place overall
Mike Schmidt Memorial Iron Team Award
Illinois: overall, endurance, hill climb

2015

1st place overall
Maryland: overall, endurance, design
Oregon: design

MEET THE SUBTEAMS

FRAME

The frame subteam is tasked with designing and manufacturing the roll cage and main structure of the Baja car, creating a safe, protective barrier between our driver and the harsh obstacles of the course. The frame also must attach all of the other components of the car through a solid foundation. We must work with all of the other subteams to verify that their designs fit within the bounds of our frame, as well as the mountings for their systems. By working to create as light of a frame as possible while still providing the safety and strength necessary, we can reduce our weight and create the fastest, lightest car possible.

Jackson Coyle
Matthew Cerda
Kristen Miller
Yeolim Jo
Jake Paul
Sam Hyatt
Remy Walk
Deepthi Krovvidi
Francisco Blankemeyer

Kellen McCormick
Thomas Balk
Taisu Kumar
Ishmail Grady
Sophie Crisp
Kyle Burns
Joaquin Jerez

UNSPRUNG

The Unsprung sub-team works primarily on the brakes system, and also does some work on the wheel assemblies. We design and manufacture custom master cylinders and brake calipers, as well as the brake and throttle pedal. Last year, we incorporated cutting brakes into our system, which provides additional challenges, but results in improved maneuverability. This system was also custom-made. In addition, we created a system to lock the differential that was required in order to have cutting brakes. This year, for the first time, we are working on producing composite wheels as a weight saving measure.

ELECTRONICS

The Electronics sub-team is responsible for developing our custom suite of testing equipment. In order to validate the design for a component, we run it through a battery of tests. Nothing is added to the car unless it has gone through our through design and testing process. We collect essential data in real-time competitive environments and bench-tests and extend the technological capabilities of the vehicle as a weight saving measure.

Jay Fetter
Raghava Kumar
Eric Berg
Shaurya Luthra
Keshav Varma
Joseph Dwyer
Kristen Vilcans

Armen Berberian
Ethan Kramer
Mark Lantieri
Leor Alon
Emmet Hiemstra
Jose Del Peso
Matthew Lombana
Melaney Chen

SUSPENSION

The Suspension sub-team develops the components that help our car climb over railroad ties, jump over logs, and maneuver hair pin turns. We research and design new concepts throughout the Fall semester, then manufacture and test throughout the Spring semester to develop the fastest and most maneuverable car. Through in-house manufacturing and TIG welding, our subteam designs all-aluminum suspension that saves 6 pounds compared to the steel alternative - making our car one of the lightest at competition.

DRIVETRAIN

The drivetrain subteam is primarily responsible for efficiently transferring torque from the engine to the wheels. This is done using a custom designed CVT and gearbox to provide an adequate torque reduction. In addition, we are in the process of implementing a gearbox dynamometer, in order to gauge efficiency of our secondary reduction. We also design the wheel hubs which serve as the interface between the suspension and the wheels. Overall, we try to maximize powertrain efficiency, responsiveness and performance.

Tyler Green
Manuel Martinez
Dan Masetti
Diego Horna
Mark Funari
Alexander Wood-Thomas
Liana Margolese
Joseph Adas
Jordan Wakser

Ambar Soni
Andrew Halpern
Jose Bakovic
Amber Chen
Sean Pathawinthranond
Kristen Vilcans
Hana Cummings
Nancy Liu

The Business sub-team acts as the liaison between the team and the Cornell community. We are responsible for recruiting new team members at the beginning of each semester, compiling a cost report for the competition, conducting purchases for the team, contacting alumni, corporations, and members of the community for sponsorships, designing and distributing public relations material, and maintaining the team website.

BUSINESS

Sponsorship and...

the Benefits of Partnering

We would like to extend our thanks to our past and present sponsors. Their generous contributions, whether they are monetary, material, or service, make this continuation of our project and its success possible.

For more information about our team and to stay updated on our progress, please:

Visit our WEBSITE at cornellbaja.com
Find us on TWITTER (@CUBaja)
Email us at bajasae@cornell.edu
Check us out on YOUTUBE at http://www.youtube.com/user/CornellBaja

BENEFITS

- Tax deduction
- Recruiting visibility on campus
- National visibility at competition through logo placement
- Opportunity to showcase or further develop a company's new products
- Opportunity to support students engaged in learning through collaborative interdisciplinary hands-on team projects

CORNELL BAJA RACING

GM FOUNDATION

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SGS

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MSC SOFTWARE

Liu

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sigmatex

3M

ROCKSTAR ENERGY DRINK

BRIGGS & STRATTON

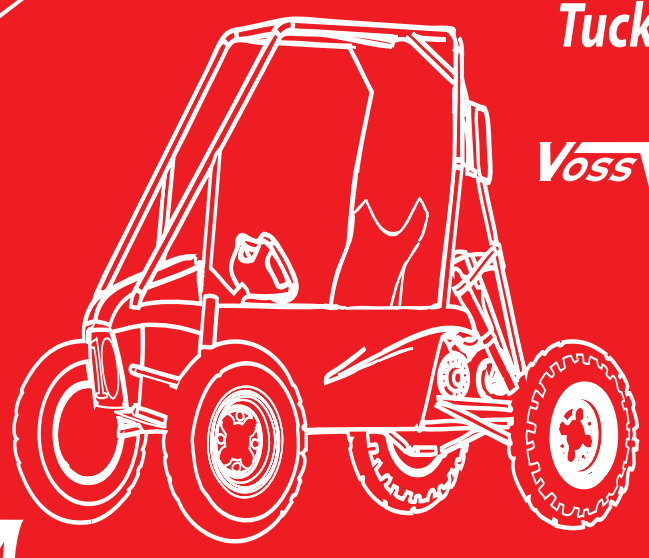
AIRTECH

Heller

Tuck Staggs

MAXXIS

Garmezy



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