



CR-25

2019-2020 Sponsorship Proposal

What is the Formula SAE?

Formula SAE is a global engineering competition organized by SAE International. Each team must construct a prototype car as a company, focusing on the target market of the non-professional, weekend autocross racer. In addition, each student team must demonstrate their business skills by presenting the feasibility of engineering, manufacturing, and marketing these vehicles to representatives of the automotive industry. This gathering of the world's best engineering schools represents the largest engineering competition in the world with over 500 teams from 6 continents.



Iowa State Formula SAE

Cyclone Racing currently resides in the Advanced Manufacturing Systems Laboratory of Iowa State University in Ames, Iowa. The organization has built 24 vehicles for the Formula SAE competition. The long time involvement in this contest has allowed Cyclone Racing to evolve as a team and improve its product

The team continually alters it's design criteria to better reflect the intention of the series, putting Cyclone Racing on a winning path. Much of this success is attributed to the generous cash, product, and service contributions from sponsors. Without sponsors, the team would not be able to compete at such a high level!



Cyclone Racing History



2019 - 8th Place "CR-24"

2018 - 18th Place "CR-23"

2017 - 4th Place "CR-22"

2016 - 5th Place "CR-21".

2015 - 3rd Place "CR-20"

2014 - 16th Place "CR-19"

2013 - 40th Place "CR-18"

2012 - 47th Place "CR-17B"

2010 - 41st Place "CR-16"

2009 - 59th Place "CR-15"

2008 - 93rd Place "CR-14"

2007 - 8th Place "Smokey"

2006 - 7th Place "Lucky Seven"

2005 - 18th Place "Shrek"

2004 - 63rd Place "Aardy"

2003 - 22nd Place "Lucky"

2002 - 83rd Place "Homer"

2001 - 39th Place "Dick"

2000 - 55th Place "Al"

"Al" is most notable for its all aluminum chassis

1999 - 72nd Place "Little Red"

1998 - 63rd Place "Big Red"

1996 - 51st Place

1995 - 56th Place

1994 - 43rd Place

#43 was one of our first entries in Formula SAE. Though the team was small in numbers, #43 established a foundation for Cyclone Racing.



CR-25 At a Glance

CR-25 is currently in the design phase and will compete at Formula North and FSAE California in 2020. The focus this year is to improve engine performance, reduce overall weight, and to further reduce manufacturing time while still performing above and beyond previous cars. This will allow us the time necessary to properly test, tune and train drivers before competition.



CR-24 Specs

Performance

- Top Speed: 85 mph (tested, red line limited)
- 0-60 mph: 3.9 sec (est.)
- 2.7 g's cornering

Engine

- 2018 Yamaha YFZ 450R
- 45 Horsepower (Intake Restricted)
- Student Built Fuel Injection System
- Student Designed 3D-Printed Intake Manifold
- Fuel Type: E85

Drivetrain

- Drexler Limited Slip Differential
- CNC Milled aluminum uprights
- 5-Speed Sequential Manual Transmission

Controls

- Carbon Fiber Steering Wheel
- Paddle Shifting
- Lightweight Tilton M/C's and Wilwood Calipers
- Adjustable Pedal Tray and Brake Bias

Dimensions

- Weight: 405 lbs.
- Track Width: 45.5" Front, 50" Rear
- Wheelbase: 62"
- Overall Length: 105"

Suspension

- Ohlins TTX25 MKII Dampers
- Double Wishbone Suspension Setup
- Unequal Length, Non-Parallel A-Arms

Chassis

- Student Designed and TIG Welded

Body

- Student Built Composite Nosecone
- Aircraft Fabric Wrap for Bodywork

Aero

- Adjustable Multi-Element Wings
- Drag Reduction System (Rear Wing)
- Full Undertray



Project Budget

Total \$62,469.00

Final Drive

Drexler Differential	\$2,175.00
Axles & CV Joints	\$1,200.00
Hubs	\$3,200.00
Sprockets and Chain	\$167.00
Hardware	\$100.00
Subtotal	\$6,842.00

Aero/Body

Resin	\$400.00
Carbon Fiber Fabric/Fiberglass	\$1,500.00
Core & Ribs	\$800.00
Consumables	\$1,000.00
DRS Servos & Controls	\$450.00
Misc. & Hardware	\$300.00
Subtotal	\$4,450.00

Electrical

EarthX ETX Series Battery	\$350.00
Wire and Buttons/Switches	\$175.00
Connectors	\$200.00
Subtotal	\$725.00

Data Acquisition

Brake Pressure Sensors	\$300.00
Linear Potentiometers	\$600.00
Tire Temperature Sensors	\$400.00
Wheel Speed Sensors	\$340.00
AIM Channel Expander	\$500.00
AIM MXS	\$2,300.00
Subtotal	\$4,440.00

Competition Expenses

FSAE Lincoln Registration	\$2,300.00
FSAE Lincoln Mileage	\$572.00
FSAE Lincoln Hotel	\$1,472.00
Formula North Registration	\$1,800.00
Formula North Mileage	\$2,068.00
Formula North Hotel	\$1,640.00
Subtotal	\$9,852.00

Chassis

Steel Tube & Laser Cut	\$4,000.00
Mounting Tabs	\$1,500.00
Assembly Jig	\$1,100.00
Welding Supplies	\$150.00
6-Point Harness	\$460.00
Subtotal	\$7,210.00

Suspension

Dampers	\$2,600.00
Springs	500.00
Tires	\$2,125.00
Wheels	\$1,100.00
Uprights	\$8,500.00
Misc. & Hardware	\$750.00
Subtotal	\$15,575.00

Controls

Steering Rack	\$535.00
Wilwood PS-1 Calipers	\$340.00
Master Cylinders (Tilton 78)	\$575.00
Brake Rotors	\$350.00
Pingel Electronic Shifter	\$1,100.00
Misc. & Hardware	\$900.00
Subtotal	\$3,800.00

Engine

YFZ 450R engine	\$3,000.00
Intake	\$2,000.00
PE3 ECU	\$1,500.00
Throttle Body	\$150.00
Muffler	\$350.00
Radiator and fan	\$700.00
Fuel System	\$1,575.00
Misc. & Hardware	\$300.00
Subtotal	\$9,575.00



Why Sponsor Us?

Cyclone Racing will provide its sponsors with a source of skilled engineers and business people. Students involved in the program gain valuable real world experience. Many companies choose to recruit our students for their experiential education programs and full-time careers including:

- 3M
- Boeing
- Continental Automotive
- FCA
- General Motors
- John Deere
- Polaris
- Rockwell Collins
- Rolls-Royce
- Roush Performance
- SpaceX
- Tesla



Cyclone Racing often experiences media coverage on a local and international level. We take these opportunities to promote our sponsors. Some of our recent media coverage includes:

- Des Moines Register
- Iowa State Daily
- Ten Tenths Podcast
- Ames Tribune
- KCCI 8 News
- Automotive Engineering International Magazine



Cyclone Racing participates in outreach events in both the Iowa State and local community. Some of these events include:

- Destination Iowa State
- Iowa State Homecoming Parade
- Iowa Speedway IndyCar and Xfinity Series
- Des Moines Mini Maker Fair
- First Lego League

Donations to our team are tax deductible.



NEWS RELEASES VIDEO RESOURCES MORE NEWS CONTACT US

Formula racers earn a top-10 finish, analyze the data to find even more speed

Posted Jun 18, 2019 2:32 pm



Sponsorship Packages

Diamond | \$10,000

- Ability to Select Car Livery
- Prominent Name/Logo on Car
- Name/Logo on Team T-shirts
- 18" Name/Logo on Trailer
- Ability to Display Car at Business
- Framed Picture with Car & Team
- Sponsorship Plaque
- Dynamic Link To Your Website



Platinum | \$4,000

- Extra Large Name/Logo on Car
- Name/Logo on Team T-shirts
- 12" Name/Logo on Trailer
- Framed Picture with Car & Team
- Sponsorship Plaque
- Dynamic Link to Your Website



Gold | \$2,000

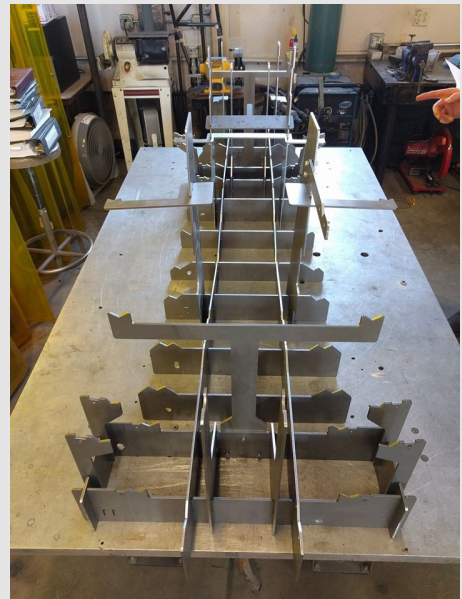
- Large Name/Logo on Car
- Name/Logo on Team T-shirts
- 8" Name/Logo on Trailer
- Framed Picture with Car & Team
- Sponsorship Plaque
- Dynamic Link to Your Website

Silver | \$1,000

- Medium Name/Logo on Car
- Name/Logo on Team T-shirts
- 6" Name/Logo on Trailer
- Framed Picture with Car & Team
- Sponsorship Plaque
- Dynamic Link to Your Website

Bronze | \$250

- Small Name/Logo on Car
- Name/Logo on Team T-shirts
- Framed Picture with Car & Team
- Dynamic Link to Your Website



Besides cash donations, sponsors have chosen to support us through:

- Part Donations
- Material Donations
- Design & Fabrication Services
- Software Licenses
- Manufacturing Equipment Donations
- Marketing Support

Donations ensure the success of our program and allow a greater chance of victory at competition. Without our generous sponsors, the team would cease to exist!

Contact

Zach Barnewolt

Project Director

309-713-6372

ztb@iastate.edu

Please write checks out to:

Formula SAE - Iowa State University

Please address all shipments to:

Formula SAE
ATTN: Zach Barnewolt
2025 Black Engineering
Ames, IA 50014

