

THE SPARTAN RACER AUGUST 2023

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Season In Review

Welcome back friends, families, and sponsors! The team is in a very exciting period in its history with several monumental changes underway, but before we dive into that let's take a moment to recap the 2023 FSAE season results.

Jumping Over The Hurdles

For those unfamiliar with FSAE, before any teams can compete at events or run tests on their vehicles they must pass a technical inspection, dynamic technical inspection, sound test, and a brakes test. Passing all of the technical inspections is the first step to success. The technical judges were tough and vigilant, but the team made improvements that allowed the SR-23 to pass all inspection and compete in the dynamic events.

Design Event

As soon as the SR-23 touched down at the Michigan International Speedway it garnered massive attention. Teams from all over the nation stopped by the Michigan State bay to admire the spartan green machine and it's unique design. Many inquired about the process behind the design and manufacturing of the prominent aerodynamic package and the massive, but sturdy carbon fiber chassis.

Other teams were not the only ones impressed by the SR-23. The design, validation, and documentation behind the SR-23 scored the team enough points to qualify for Design Event Finals. Team Leads and members presented brilliantly at design finals earning the team a **final placement of 5TH PLACE in the design event.**

The Business Event

The first part of the Business Event last season was held online during the season. The team presented a 10 minute proposal to a board of engineers over a video conference and answered questions and received feedback. The team was delighted to hear that we had qualified for the Business Event Finals. Once the team arrived at MIS, we presented our proposal in person to industry experts and business professionals. **After the scoring was completed the team placed 12th overall for the business event!**

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The Cost Event

The cost event has 2 parts: a cost scenario similar to the business event and a cost breakdown of every component on the vehicle. **After a thorough inspection of the cost breakdown and cost scenario the team placed 19th in the Cost Event!**

The Dynamic Events

For skidpad the team decided to experiment with setups on a wet track. **The team placed 65th with a time of 5.9 seconds for skidpad.** The SR-23 was not tuned for acceleration and had an issue with the launch control. **Despite the complications the team put down some laptimes and the SR-23 placed 40th in acceleration with a time of 4.764 seconds.**

On the day of the autocross event the weather forecast forced the team to make a tough strategy call. The weather forecast predicted rainfall in the afternoon and evening. The team could either go early and set times for the autocross event on a cold track that was guaranteed to be dry, or wait until the afternoon to set times on a hot track, but risk losing grip and therefore speed due to wet conditions. **The team decided to play it safe and compete early, setting a time of 49.865 seconds earning 23rd place!**

The endurance race gave the team a scare. The SR-23 started out smoothly, overtaking a few vehicles and setting great laptimes, but near the middle of the race the car went off track and stopped. After speaking to the drivers, it turned out the clutch cable had an issue, but thanks to their quick thinking our drivers were able to get the car back into the race. **The SR-23 completed the endurance race in 25 minutes and 33 seconds earning the team 14th place!** The team was incredibly proud to complete the 22 kilometer endurance race.



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The Final Verdict

After a long year of countless all-nighters at the shop, design meetings, testing days, and competition preparation the team is delighted with how FSAE Michigan 2023 went.

Despite all the challenges the team faced, we made it to the Michigan International Speedway and put on a great show. We passed all of the technical inspections, qualified for two event finals and competed in every single event. **After tallying up the points earned from the various events the team's overall placement this year at FSAE Michigan 2023 was... 19th place!**

We would like to thank you all: our friends, our families, and our sponsors for your endless support! We could not have accomplished these results without your support and the team is forever grateful for your contribution!

A New Home

For as long as anyone can remember Jolly Rd. has been the home of the Michigan State University Formula Racing Team. There have been hundreds if not thousands of Michigan State students who have spent countless hours at the Jolly Rd. Shop designing and manufacturing the Spartan Racer. Unfortunately, the legacy of the Jolly Rd. shop is coming to an end along with the end of the ICE Spartan Racer.

Although the story of the Jolly Rd. workshop is coming to an end, the MSU Formula Racing Team lives on. **The team is relocating to the new Demmer Engineering Center, a \$4 million project dedicated to engineering student organizations thanks to William and Linda Demmer!** The Demmer Engineering Center is located on campus which will allow the team to recruit a larger number of incoming members due to the logistics of transportation being simplified and the center being accessible via the free on campus CATA bus routes.

The space will be shared with several engineering student organizations including our old friends from Baja and Solar racing. We look forward to building new relationships with other student organizations and beginning a new legacy for the MSU Formula Racing Team at the Demmer Engineering Center.

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