

PENNSYLVANIA STATE RACING

DECEMBER

2018



TEAM NEWSLETTER



A MESSAGE FROM THE TEAM

Dear reader,

Over the month of December, including during winter break, our team continued progress on our car. Specifically, our Aerodynamics & Composites and Chassis teams remained in State College to finish testing for the Structural Equivalency Spreadsheet (SES), a document required for the Formula SAE Michigan event. Our strength tests confirmed that our carbon-fiber monocoque's body panels meet safety specifications. Completing this document means we can move forward with manufacturing our chassis. With molds completed and gel coated, we hope to have the carbon fiber laid up, coated, and cured this month. Members of our powertrain and suspension subsystems also remained in State College during part of the break to get ahead. The 2017 engine was torn apart and sent to a former Penn State Racing member who now specializes in rebuilding engines. The rebuild is less expensive than a new engine and will hopefully result in more power. Lastly, our bellcrank designs have been finalized.

Despite our notable progress, we will have to redouble our efforts during the Spring Semester. As our car materializes, we face new packaging challenges and discover areas in which our car may not comply with FSAE rules. Alongside the SES, other deadlines set both by our own team and FSAE Michigan are fast approaching. A sense of urgency is present among our membership.

In this edition of the Penn State Racing newsletter, you will meet our leadership. These members exhibit qualities that make them role models on our team, and are responsible for a given subsystem (or multiple) and its design, manufacturing, and maintenance. We hope you enjoy getting to know the people behind this incredible project!

Thank you for your continued support!

PENN STATE RACING

MEET THE LEADS



Dylan Combs, Team Captain/Chassis

Dylan, senior, has been a member of Penn State Racing since his junior year. Dylan's work ethic was evident early on as he devoted countless hours to the fabrication of the 2017 car's steel-tube space frame. Dylan has continued to fulfill his role as Chassis lead by completing this year's rear sub-frame in a timely fashion. Additionally, Dylan has proven a worthy Captain. Leading a team to develop an entirely new car is no easy task, but Dylan has performed admirably. This year's team has exhibited newfound productivity, which may be attributed to the spirit that Dylan brings to the table. He is excited to continue to exercise his interest for automotive design in the industry next year.

Daniel Moore, Technical Director

Dan, a junior, has been a member of Penn State Racing since his first semester freshman year. A passionate Formula One fan, Dan made his mark bringing some of the radical designs he admires in those cars to the table here at Penn State Racing. While his tenacity in defending those ideas has intimidated some, his fervor and intelligence have certainly inspired others. Dan has stepped into the role of Technical Director this year, a new position in our leadership. The freedom in design has tailored well to his creativity, and his meticulous design reviews have helped us to validate several designs on the 2018 car. Dan has proved an invaluable member of our team and will continue to contribute to our success throughout the Spring semester.





Jared Torres, Administration

I am happy to return to Penn State Racing as the Administrative Lead for my junior year. Leading this subsystem has been a fulfilling experience, and I take special pride and in producing our monthly newsletter. I hope you enjoy reading it as much as I enjoy writing it! Otherwise, I have also contributed to the Powertrain subsystem since my freshman year. I have found the design and manufacturing process to be engaging; learning something new with each project is stimulating to me. Being surrounded by so many dedicated and intelligent members is also inspiring, and has been the most rewarding part of being a member of Penn State Racing.

Carolyn Baker, Aerodynamics & Composites

Carolyn was integral to the completion of our aerodynamics package last year. Her contributions were recognized, and she is now a co-lead for the Aerodynamics & Composites subsystem. Carolyn is the only Aerospace Engineering major on our team, so she brings unique and necessary knowledge to our vehicle. Carolyn's accomplishments also earned her an internship position at Pratt & Whitney this past summer alongside another team member, where she learned even more practical skills. Carolyn is a junior, so we hope that she will return to Penn State Racing with her expertise for the 2018-2019 season.



David Farish, Aerodynamics & Composites

David is our other Aerodynamics & Composites co-lead. David's enthusiasm for cars inspired him to join our team last year, when he proved to be a knowledgeable and devoted member. David has spent considerable time designing our new underbody diffuser and sidepods and validating them in the Computational Fluid Dynamics Programs he is familiar with. David spent this summer in Austin, Texas at Bell Helicopters, where he learned concepts that may prove useful for Penn State Racing. David's sense of humor and positive attitude are also welcomed attributes.





David Hoffeditz, Chassis

David has taken on task of manufacturing of our carbon-fiber monocoque. His position as an Aerodynamics & Composites Lead last year prepared him for the mold preparation and carbon layup techniques needed for this year's chassis. David was one of the members who remained in State College over break to complete testing for our Structural Equivalency Spreadsheet. David's intelligence is apparent and he has contributed to the team in many ways. In his spare time, David draws hands-on experience from modifying and tending to the many problems on his 1995 Jeep Cherokee.

Jason Cornell, Design

After generating impressively detailed 3D models of several systems on the 2017 car, Jason was awarded the position of Design lead for the 2018 race season. Jason has since created a model of the entire 2018 car in Solidworks, complete with correct materials and a realistically actuated suspension assembly. Jason's customized Volkswagen Golf is also a testament to his attention to detail and hands-on aptitude. Interestingly, Jason is a 2-time winner of the Extreme Stater, a grueling footrace littered with obstacles that test physical strength and endurance.



Jason Gaydos, Manufacturing

Jason has manufactured an extensive resume of parts utilizing nearly every machine in the shop, including our ancient yet capable Computer Numerically Controlled (CNC) machine. Jason is also one of our team's drivers. He has experience racing his heavily modified Subaru WRX in SCCA autocross events, and his reflexes and intuition have helped him to succeed in our car as well. Jason spent his summer interning at Bridgestone, a valuable sponsor to our team who has contributed further by giving Jason precious knowledge about suspension and tire compounds. We are looking forward to seeing Jason push the 2018 car to it's limits.





John Ominski, Manufacturing

As a junior, John showed promising manufacturing capabilities and a matching willingness to learn. Now a senior, John co-leads our Manufacturing subsystem. John can constantly be found attending our CNC machine or at the computer writing code for it. His studious character suits him well for his role, as the parts he is tasked with making demand hours of patience and careful attention. Additionally, John's quirky sense of humor and sarcastic remarks relieve the sometimes tense atmosphere that comes alongside pressing deadlines. John and Jason complement each other well as our tag-team of Manufacturing leads.

Evan Dillen, Powertrain

Evan Dillen joined Penn State Racing during his freshman year. His dedication was quickly recognized and he was awarded the position of Manufacturing lead for his sophomore year, which he fulfilled with impressive efficiency. This year, Evan has applied the same industrious attitude to his role in Powertrain, managing his subordinates and his hands-on responsibilities with equal effectiveness. We hope that we can count on a 4th year from Evan, even though he has already contributed tremendously during his time with Penn State Racing. The Ford Motor Company is lucky to have accepted Evan into their internship program for this upcoming summer.



Josh Stroup, Suspension

Josh, who joined last year as a sophomore, quickly became familiar with the 2017 car's suspension system, which was designed by his older brother several years ago. Josh then spent this summer and the Fall semester completely redesigning our suspension system, which will be a platform that we can build upon for years to come. It was also Josh that decided to integrate the new lighter and more capable air springs. This summer at Bridgestone, Josh continued to learn about suspension and tires alongside Jason. Lastly, Josh is another one of our team's drivers, who has owned a handful of modified cars including a Mazda Miata, Mazdaspeed 3, and the short lived Pontiac Solstice.





THANK YOU!

In addition to our sponsors, we are thankful for the unending support of the following individuals:



Dr. Thomas Juska
Applied Research Lab



Dr. Karen Thole
Department Head,
Mechanical and Nuclear
Engineering



Admiral Paul Sullivan
Executive Director,
Applied Research Lab



Dr. Matthew Parkinson
Learning Factory Director



Dr. Todd Palmer
Applied Research Lab



Cindy Winkelblech
Program Administrator



Becky Benson
Administrative Support Assistant



Bill Genet
Learning Factory Supervisor



Dr. Stephanie Stockar
FSAE Faculty Advisor



Rob McAllister
Learning Factory Supervisor

We also thank all of the Penn State Formula SAE alumni that continue to provide us with invaluable guidance and assistance every year!

CONTACT US

Email:

pennstateracing@gmail.com

Website:

<http://sites.psu.edu/pennstateracing/>



Facebook

<https://www.facebook.com/PennStateRacing>



Instagram

@pennstateracing

2016-2017 CORPORATE SPONSORS

Penn State Formula SAE would like to express our most sincere gratitude for the generous university and corporate partners who made our project possible—it would be impossible without your continued support. Thank you for your support!

DIAMOND LEVEL SPONSORS

(\$10,000 + or equivalent in products or services)



BLM GROUP
USA

PENNSTATE



ARL

TIMET



THE PENN STATE
LEARNING
FACTORY

Collaborate. Educate. Innovate.

THE
LARSON
INSTITUTE

PLATINUM LEVEL SPONSORS

(\$8,000 + or equivalent in products or services)



PennState
College of Engineering

MECHANICAL AND
NUCLEAR ENGINEERING



PennState
College of Engineering

HAROLD AND INGE MARCUS
DEPARTMENT OF INDUSTRIAL AND
MANUFACTURING ENGINEERING

BRIDGESTONE
SIEMENS
GOLD LEVEL SPONSORS



\$5,000 + or equivalent in products or services)



JOHN DEERE



realize inc.
Your Partner in Product Realization

2016-2017 CORPORATE SPONSORS

SILVER LEVEL SPONSORS

(\$3,000 + or equivalent in products or services)



TITANIUM LEVEL SPONSORS

(\$1,000 + or equivalent in products or services)



Stuckeman School



BRONZE LEVEL SPONSORS

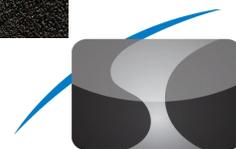
(\$500 + or equivalent in products or services)



3DEFYING PRINTS LLC
STATE COLLEGE, PA



MiSUMi



www.magplate.com

