Our team members have been busy all month manufacturing and pre-assembling their designs. Everyone has been hard at work, assisting each and every subsystem to make sure we keep up our momentum. The Chassis systems are coming together nicely, however the progress of some of them are dependent on the frame (see page 2). Powertrain systems are on track, waiting for parts or material to add to the manufacturing.

The anticipation is building, and with the completion of the frame this month our members are working overtime to install each subsystem on the car. As soon as Road Warrior 9 (aka Lily) hits the ground, you can be sure we’ll be running it all day and night until competition! (and afterwards as well!)
In the previous newsletter we’ve talked about the progress made to the suspension, brakes, drivetrain, and various other systems of the car. But what about the one that ties it all together? This month Road Warrior 9’s frame members arrived in our shop. All of the tubes were cut to length and notched. The frame jig was prepared and checked. Welding supplies were obtained and members honed their skills. The team was ready to bring the next car to life!

Once all of the pieces were unwrapped, there was an explosion of energy in the shop. With haste and precision the parts were cleaned and laid out, organized for optimal assembly. Following the lead of the Engineering Directors and Frame Captain, the frame members were set up in the jig piece by piece. As our welders began tacking the frame together, the team made sure the next pieces were ready to go. Time flew by, but incredible progress was being made.
In under a week, Warrior Racing’s frame went from a bunch of tubes to a sturdy chassis. All the major mounting points and the majority of the brackets have been installed as well. The torsion test was also completed, and the results validated our team’s quality design. This marks another record for Warrior Racing. In the history of the program, a frame has never been assembled this quickly or this early in a season. All done without sacrificing the quality and safety of the system.
Warrior Racing Goals & Records

This year our team laid out five main goals for the season. These concepts and ideas would guide us throughout the year, keeping us on track. They are as follows:

- Have the most successful competition of our program’s history and break all of our records!
- Improve sponsor relations and increase support from these companies and individuals.
- Promote our program in our university, the local communities, and throughout SAE International.
- Establish a consistent means of knowledge transfer, and create a proper succession plan.
- Enjoy ourselves and have fun doing the things we love!

After taking a quick look back at the season thus far, we’re glowing with the fact that we’re on track to achieve all five. Our team has really pulled together gained a magnitude of positive momentum. Already we’ve broken several team records, detailed below:

- Having a completely frozen design by the end of the first semester.
- Maintaining and recruiting 30 active members, the largest team in the program’s history.
- Obtaining donations and inkind sponsorships surpassing value of all previous years (and counting).
- Completely assemble, weld, and perform the torsion test on the frame in under a week.

So what’s next? Competition. We’ll be sure to break a few more records before we get there, but now we need to set our focus on making sure our team is ready for MIS in May. The business members are working on the cost and marketing events, bringing forth their years of experience for one final run. Our engineering team just finished submitting the design report, so all that’s left is preparing and presenting at the design event! Then there’s the matter of driving RW-9 through all 5 dynamic events. As long as we get in some solid testing time, there’s no doubt we’ll be able to finish all of those races!

Overall  38th - 213.61 points  California 2010
Design  16th - 97 points  California 2010
Cost  4th - $9728  Lincoln 2014
Marketing  17th - 66 points  Lincoln 2014
Acceleration  59th - 5.243 seconds  Michigan 2009
Skidpad  51st - 5.887 seconds  Michigan 2009
Autocross  62nd - 62.943 seconds  Michigan 2004
Endurance  31st - 1903.7 seconds  Michigan 2009
Fuel Economy  31st - 1.425 gallons  Michigan 2009
Supporting the Society of Women Engineers

Each year Wayne State’s chapter of the Society of Women Engineers hosts an awesome event to promote scientific education in young minds. There’s a whole bunch of demonstration stations, successful keynote speakers, and much more. Our team is always on board to promote engineering and education, so it’s always rewarding to participate in this event.

Due to the nature of our projects, we couldn’t have too many hands on experiments for the students who stopped by. We kept a safe shop environment, but thankfully they were able to see the frame being pieced together. The easiest way to view the frame assembly would be to compare it to a Lego set. You have all the pieces and a detailed instruction booklet, now make the design come to life! This connection to simpler engineering concepts set off a spark of questions in many of our guests. Of course seeing the final products got everyone excited too, and we were delighted to be able to show five years worth of engineering experience (RW 6 thru 8).

www.motorcitystatic.com
**Kart 2 Kart Mini Grand Prix**

Even though we feel a fair share of exhilaration driving on the winter roads, sometimes we want a safer way to have fun. We found excitement once again at Kart 2 Kart, racing in a mini Grand Prix! It was a fun fundraiser, and thanks to everyone who stopped by! Congrats (once again) to the Warmbold clan for taking the top ranks!

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**Warrior Racing’s Next Bake Sale!**

Back by popular demand, our team is going to bring forth the delicious bake goods everyone has been craving! From samosas to pumpkin pie, we’ll have it all. And that means our President’s Famous Apple Pie will be there as well, so you better come early! But if you want to beat the lines & guarantee a pie for yourself, you can pre-order a whole pie for only $15!!! Email adam.niner@wayne.edu for more details, but hurry as there’s only going to be a limited number of pre-orders available! We’ll also have some fantastic raffle prizes, like more passes to Kart 2 Kart!!!

See you there, Wednesday March 11th in the College of Engineering!

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**RW9 Unveiling**

On Sunday, April 12th, we will be unveiling Road Warrior 9! The details are still being worked out, so keep your calendars open. As the car will still be testing during that month, it’ll be a great experience to witness the fine tuning and progress of the car!

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**Warrior Racing Bake Sale**

Wednesday, March 11th
11:30 am - 4:00 pm
Plenty of delicious baked goods, including our President’s Famous Apple Pie!
Raffle supporting the ACS!

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**Road Warrior 9 Unveiling**

Sunday, April 12th
Location
To Be Determined
12:00 pm - 4:00 pm
RSVP / Questions
Email adam.niner@wayne.edu

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**Formula Michigan**

May 11th - May 16th
Michigan International Speedway
Brooklyn, MI
Over 100 teams registered!
Warrior Racing will be representing the number 95!
Metalmite has been kind enough to help out Warrior Racing again! They machined our oil pan and bearing cup mounts for Road Warrior 9!

Warrior Racing is excited to welcome back Ford Motor Company! Ford made a generous financial contribution to our program which will help us on our journey to the Michigan International Speedway in May!
Warrior Racing is proud to announce our newest Detroit Legacy Sponsor, Monster Tool! They provided our program with a large quantity of drill bits and end mills. This donation will aid in our manufacturing processes for years to come! Thank you Monster Tool!
Thanks to our new sponsor Kaiser Aluminum! They donated a substantial amount of aluminum for our Road Warrior parts!

www.kaiseraluminum.com

Thanks to our new sponsor O & S Tool & Machine for manufacturing our suspension clevises. They came out great and perform as designed on our suspension system!

www.ostool.net
Cammand Machining joined the Warrior Racing family as a Motor City sponsor by machining our suspension uprights! The picture doesn't do the precision and quality of the parts justice! There's a sneak peak of their final assembly on the first page, so if you didn't notice them the first time be sure to take a look!

Livonia Tool & Laser played a big part in the manufacturing of our frame members. Thanks to them, we had cut and notched tubes ready for assembling.
Opus Mach is Warrior Racing’s newest Motor City Sponsor! They were generous enough to machine our body molds for Road Warrior 9! They came out perfectly, and our Chassis team can’t wait to create the best bodywork the program has ever seen with them!
Our new sponsor Mityvac donated a wide variety of testing kits to our team. From brakes to fuel, we'll be able to validate the safety and designs of our systems!

Thanks to our new sponsor Aliant Ultralight Battery for helping us out with some batteries for Road Warrior 9! We’re looking forward to putting them to use running RW-9 day and night!
Warrior Racing is happy to welcome Denso International to the family! They made a generous donation to our program, and we can't thank them enough!

www.densocorp-na.com

Thanks to our returning sponsor Suburban Bolt for providing us with a wide variety of bolts, nuts, and washers. Needless to say, they're what hold our awesome cars together!

www.suburbanbolt.com
Thanks to our new sponsor Alro Steel for providing us with additional stock aluminum! The wide variety of material they provided gives us the comfort that we’re using the right stock for a given project!

www.alro.com

Warrior Racing is happy to welcome back Barrday to the program! They provided us with a healthy supply of carbon fiber, which needless to say our team is excited to put to use!

www.barrday.com
Thanks to our new sponsor RevPart for 3D printing some sliders for the brakes system. There's more exciting parts coming from them soon!

www.revpart.com

Warrior Racing is happy to welcome back Aurora Bearing! They provided us with a wide variety of bearings that will be put to use in our suspension system!

www.aurorabearing.com

Thanks to our new sponsor Anixter for donating stock electrical wire! We could never make our wiring harnesses without it!

www.anixter.com
Our team’s success is made possible through the generous donations and support from the following companies. Without them our team would not have the resources needed to provide invaluable hands on experience and to manufacture our formula cars. From all members of our team, thank you Warrior Racing sponsors!
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