Cadillac Connectors Robotics 5086 | March 11, 2017

ROBO TIMES

We Made It!!!!!!!

"Sporting competitions seem to be what we obsess over, frankly. So if we can put engineering, science, technology into a format of healthy, fun competition, we can attract all sorts of kids that might not see the kind of activity we do as accessible or rewarding." - Dean Kamen

Members celebrate after winning playoffs

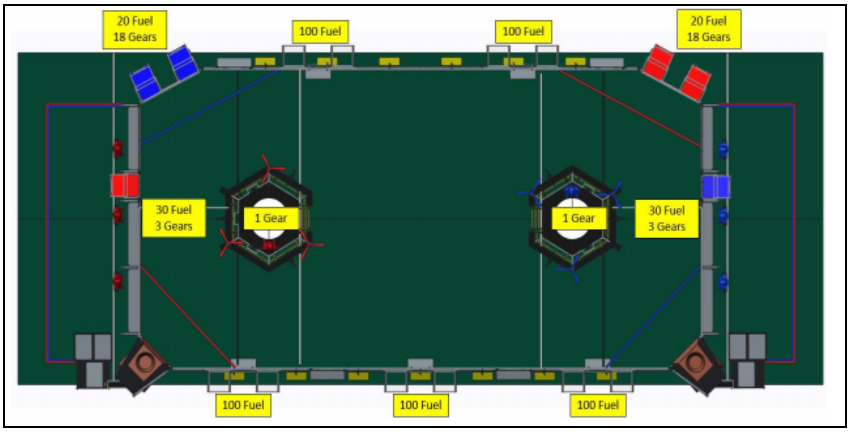
FLINT- The screaming was deafening, and the bleachers shook with the endless pounding of excited feet. Smiles where on everyone's face. Could it be true? Then came the official announcement: "Let's take a look at those scores, shall we?" Like the report of no school on the news, an entire audience of 500 fell silent. It was so quiet you could hear a bolt drop. All eyes were glued to the board as slowly, painstakingly slowly, the scores were shown. 310 to 305. We are going to Regionals. .

Our Rankings: Then and Now

COMPETITION: The competition itself was close the entire way. We constantly moved ranks from as high as 1st. Going into the Playoffs we were ranked 3rd.
NOW: We are ranked 2nd in the state!

So How Does Competition Work?

There are two "Alliances" on the field at one time. These alliances are composed of 3 teams that work together. Goal number one is to build STEAM Pressure: Each team has a boiler located on their side of the field and ball hoppers are scattered along the sides of the arena. Robots gather these balls and shoot them into either the high boiler. For every 9 balls shot into the low boiler the alliance receives 1 point (or 1 kPa of pressure), or 3 balls shot in the high boiler for 1 point (or 1 kPa of pressure). If a team exceeds 40 kPa the team will receive an extra 20 points (in playoffs). The second goal is to engage rotors located on top of the towers. Robots race to the opposite side of the field to receive gears from human players and take them to the bottom of the towers and place them on a peg. Pilots raise this peg up into the tower and place the gear on a belt. Gears placed on the belt can be turned, causing an attached rotor will start to turn. Each rotor takes a different number of gears: 1,2,4, and 6, respectively. For each rotor that turns the alliance is awarded 40 points and getting all 4 of the rotors turning would be an additional 100 points. A final goal is to climb the rope at the end of the match. During the last 30 seconds of play (the entire match is 2 minutes and 30 seconds long), pilot's release ropes from the towers. Robots equipped with the ability climb the rope and press a buzzer race to do so. Each buzzer activated by the end of the match receive an extra 50 points. The alliance with the most points wins!



Rankings During Competition

Written by Andrew Peters

Overall ranking points at competition are awarded by four things: How well you do in qualification, how well you do in playoffs, where and when you are placed or chosen in the alliance selection, and any awards you get. (As a bonus, first year teams get an additional 10 points, and second year teams get an additional 5). Championship rankings is comparative based. We were ranked 3rd in qualification, so we get the 3rd most points. Teams picked 3rd in alliance get marginally less points. Playoff performance is divided equally among each alliance. Our alliance got first, so all three of our teams get the same (more than the other team's) amount of points. The next alliance all got less points than us, and the two alliances before them got even less.

Three Teams: One Alliance

How to choose your alliance members 101.

During the first Qualifying rounds, teams compete in a randomized matches, with alliances chosen by an algorithm accounting for many factors. However, nobody is eliminated just yet. The purpose of the qualifying rounds is for teams to be ranked based on their performance in these rounds. Each team can "scout" during these matches, to discover aspects of each team, as well as to determine if they would be a favorable future ally. These observations will be taken into account after the last qualifying match, in which teams then choose their final alliances for playoffs. These playoff alliances are different than the qualifying alliances because they will not change during the upcoming matches. Those teams scoring 8th rank or above have the opportunity to choose which teams they would like to align with. This process kicks off with team representatives being called down to the arena where teams ranked 8th or better stand on the field as alliance captains. As alliance selection begins, the alliance captains pick one more member for their alliance, starting with the top alliance, and moving to the eighth. They may choose any team, including one of the other captains, and the team picked may either accept or decline the offer of alliance. If an alliance captain accepts an offer, each team below them moves up one position (the 9th ranking team would become the 8th ranked team and have a chance to choose an alliance). Selections are then made by alliances 2 through 8, respectively. After the 8th captain selects another member, the selection works back up, with the 8th alliance getting the first selection for their third team. Those teams who did not make top 8 may receive a chance in continuing play if they get offered an alliance invitation. Teams not making it into an alliance are done with play.

The cheer section erupts with applause after a match

Our Alliance

Our team partnered with The Charge (Team 2619: Dow High School), and The Steagles (Team 5215: Frankenmuth) to achieve our victory.

Our Drive Team of Alex Whipple, Leif and Seth Olson, Andrew Peters, Josh Jacobson, Tucker Bachman, Christian Croskey, and Kyle Pike pose after victory.

Calendar:

April 6-8th: TC District Competition, Traverse City Central HIgh School 1150 Milliken Dr, Traverse City, MI 49686

Thursday: Small team (TBD) for a few hours

Friday: Full day of competition.

Saturday: Full day of competition from 8:00 AM to 6:00 PM

April13-16th Regional Competition: Saginaw

April 19th: Save the Date!!!! Details TBA

Visit our website:
connectors5086.org
And social media to see all our wacky pictures and progress on the current season!

@Team5086

Sidewinder in action during competition.

Awards! Written by Joshua Jacobson

Winner of the Engineering Inspiration Award:

Most people could tell you a pretty good definition of engineering. Most would say that it is about "designing" or "planning" about how to do something. Inspiration is another word that people can define fairly easily. "Motivating" and "demonstrating" are probably words that come to mind when you think of what it means to inspire.

So how do these two words go together? According to firstinspires.org, the Engineering Inspiration Award "Celebrates outstanding success in advancing respect and appreciation for engineering within a team's school or organization and community".

What have we done to inspire engineering in our community? One huge part of our team is our mentors. Many of the mentors on our team are engineers in many different fields in local shops, plants, and firms in our area. We not only learn about engineering inside our team, we also try to show it to others through our blogs and newsletters.

Runner up for the UL Safety Award:

Workplace Safety, a defining characteristic that sets the high-tech facilities of today apart from the dangerous factories of the Industrial Revolution. FIRST recognizes that safety must be a priority in all new STEAM-minded individuals, saying that the Industrial Safety Award, Sponsored by UL, “Celebrates the team that progresses beyond safety fundamentals by using innovative ways to eliminate or protect against hazards” on their website.

We’ve done tons this year to improve our safety program. Our safety captain, Anna-Marie Seitter, has done a lot of work to make sure that we have information on file about every member of the team and have documentation on every incident that has happened.

We would like to thank all the parents who have pledged countless support in travel, food, and experience. Also thanks to our wonderful mentors who have spent countless hours working and teaching us, the school for it’s wonderful support and transportation, the many families that donated and coordinated food at Kettering, G&D Pizza for the subs and pizza, to the Safety first of Traverse City for help in adding to our Safety kit, and to the multiple organizations who have agreed to sponsor us:

Supporters ($50-200)**:** Lifetouch, G&D Pizza, Home Depot, Bandeen, Driver’s Choice Auto & Truck, Networking Butler, BC Pizza, Canfield Automotive

Advocates ($200-500)**:** Cadillac Computer, Family Eye Care Associates

Sustaining Sponsor ($500-1000):Stagg Machine Products, DK Design, Godfrey Chevrolet, Exxon Mobile, Cadillac ENT

Executive Sponsors ($1000-2500)**:** *Rexair, Kendall Electric, Baker College, BorgWarner, Cadillac Casting, Avon Automotive*

Visionary Partners ($2500+) *Cadillac Area Industrial Group*

50 86
5086
Cadillac Connectors

Why was the robot angry?
Beats me.
Because someone kept pushing his buttons!

50 86
5086
Cadillac Connectors