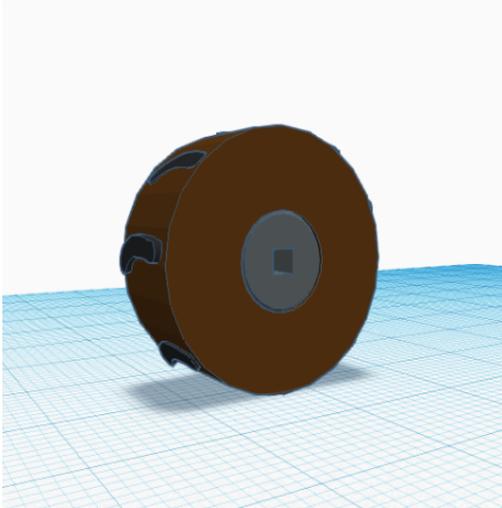


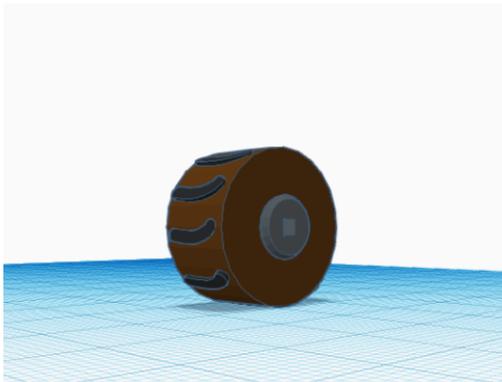
TEAM LUNATECHS (50566D)

Our 3D Tire



Intro: We created this part because we thought that traction might be a problem in the arena. Also, we thought that climbing up the platforms was going to be a big problem. The tire on the left is made to increase traction on the foam ground of the arena. It was also made to make climbing up the platforms easier.

Description: This new part would be another wheel on the robot, it will provide enough traction to move around the field without worry. It will stop other robots from pushing it off any of the platforms. Also, it will allow you to get your robot to stay in one place when you are getting ready to flip a cap or shooting a ball. With this design, if you fall off of the top platform, your robot will not feel anything. This is because it will have air in it, so the wheel will absorb the fall better than any other current wheel there is. If you put it on a clawbot, you might be able to feel better with going quickly to each cap, without any worry about damaging this wheel. It will stand sturdy in case that any robot from an enemy alliance comes to mess you up when you flip the cap. If you put this on a robot that shoots balls to score points, you will be able to make quick easy stops where you want to shoot and when you are picking up balls. You will be able to pump up this wheel after every match because if you have a pneumatic system, you will already have a pump or something. Speaking of pneumatic systems, if you use this wheel with a pneumatic system, this wheel will make quick stops to quickly use your system, so you will have more precision with the shot, or flipping a cap over.



Production: "I made this tire by using a round tube to make the main bulk of the tire. After that, I edited the tube and the vertices. Then I lifted individual groups of vertices up to create the traction that you can see. This part took a while because there are so many different things that needed to

be popped up, on top of that, I had to make them all the same size. Also, I had to have the same pattern all around the tire to create traction all around the tire. I exported it to Allegorithmic's Substance Painter to produce the textures you see here."

Reflection: "I learned that from this some tips and tricks with Inventor. It really helped me in modeling this tire. Honestly, I would not use Inventor and would rather use 3DS Max for model production, so I will probably not use it in the future. 3D printing using Fusion or Inventor can help me on my team because then I can 3D print example VEX balls, so I can remember their size, the same thing goes for Vex caps, flags, and the platforms. Learning 3D printing will help us in our career because technology is taking over the world, so learning to use this will help a lot. **This essay was super fun to write, and thank you for the challenge.**