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The usage of motors in vex robots is very important, it's one of the components most necessary when it comes to the bot lifting, moving, or anything really to be able to be "useful" in competitions. So, because of this constant usage, the motor tends to overheat and have an extreme shakiness when it operates. Therefore, my team composed of Jose Rostro, Ismael Diaz, Yael Luna, Kevin Akowuah, Alejandro Valenzuela, and Erik Ramirez came up with the idea of an artifact to prevent shakiness along with a layer of protection.

As seen below, the artifact would surround the whole motor to prevent any out-of-the-ordinary movement. With the dimensions of 2.28" W x 2.84" L x 1.34" H for this project to have space for the motor to fit in without any problem, and secure it from falling out. The materials that would be used to create this artifact are rubber and ABS filament to 3D print it. The material ABS filament is a very strong but flexible material that would work great on this project due to the effortless procedure of removing or applying it into any bot. Also, rubber would be used as the top layer of this project, why? The reason for the rubber is like I said before, to facilitate the procedure of applying or removing it from the bot, along with creating any scratches or potential hazards towards the motor(Think of it as a phone case). This motor protection/placeholder has two holes of the dimension of 0.600" in the back, so it can be directly screwed in with any vex c-bars, L-bars, or any aluminum or steel materials. Also, a barrier is provided inside the 3D printed placeholder to prevent it from damaging the motor itself. As for where to place this motor protection, it was mainly aiming towards the moby from the Vex Building instruction manual "<https://www.vexrobotics.com/v5/downloads/build-instructions>" however, this component could be implemented on any bot that's created, of course, the only requirement is space.

As a closure, this motor placeholder will prevent the disturbing unnecessary shakiness of the motors when an axle directly or indirectly is connected to any gears or wheels. And with the rubber, it will assure to "trap" or conserve the heat if it starts to happen along with the case that surrounds it.