

To: Dr. Trevas
From: Portable Carrier A
Date: 03/29/2019
Hardware Review 2

In this Hardware, our team discussed multiple things during the presentation to the class. The team first reminded the class of our project and its goal, which is carrying five shopping bags from trunk to apartment in a range of 100-500 ft. Then, the team went furthermore into the details of what has been accomplished like the new things purchased. The team bought a half gallon air tank that can provide enough air to do 3-4 lifts for the cylinder that will be carrying the bags. Two batteries have been also bought to help the pneumatic system to witch air circle, which can actually help to bring the cylinder down rather than only up. The batteries also provide power to the motor and arduino to achieve its goal of controlling the device. The team explained also about the changing the plate of the telescoping. The plate have been changed to two layers of steel in order to be able to do its job of carrying the bags. During the presentation, the team showed the class the new parts that will implemented into the device and where they will be located.

Between Hardwares Action Items:

Salman installed the air tank, shown in **Figure 1**, into the pneumatic system to replace the air compressor due to the compressor's inability to be portable and high noise. Saleh wired the solenoid, as shown in **Figure 2**, to enable it to be connected with the arduino, to enable the launching and contracting of the pneumatic cylinder remotely. Abdullah install our new arriving battery, shown in **Figure 3**, into the base of our design Mohammad Changed the plate of the telescoping hanger from plastic to steel, shown in **Figure 4**. to enable it to withstand 50 pounds.

Action Item for final product testing proof:

-Salman Alostaz: he will be going to connect the air tank to the solenoid and complete the circle with making sure to avoid leaking. He will also try to apply the batteries into the system, so the air goes in both ways and become a two action cylinder.

-Saleh Alnasim: He will make sure that the arduino is complete and working. This consists of controlling the pneumatic cylinder using a sensor, and the DC motors using a joystick.

-Abdullah Alroumi: Assemble the base once again to make the surface bigger, so it can fit everything we want to install on it and to enable it to climb stairs.

-Mohammed almutairi: He will be testing the telescope with the new plate multiple times and check if it's going to hold the weight. He will also try to cut the pipes and make them shorter, so it wouldn't be too tall for the system and effect the balance when we put the cylinder under the pipe.

Appendix:

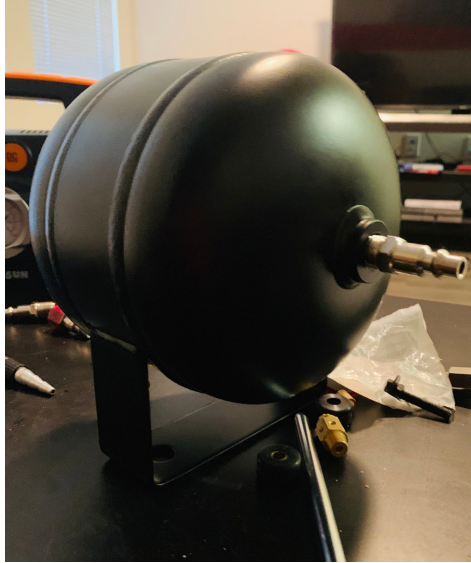


Figure 1: Air Tank

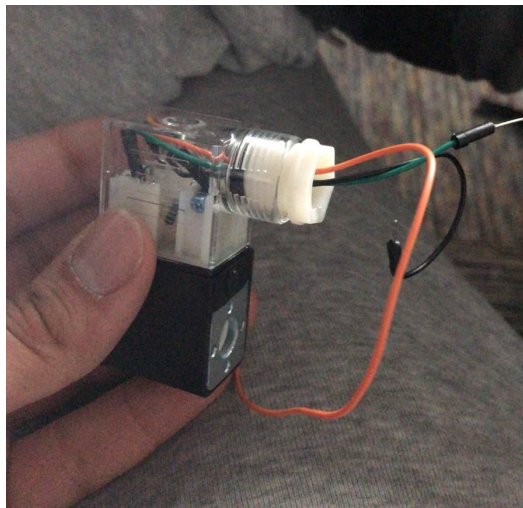


Figure 2: Solenoid



Figure 3: Two batteries



Figure 4: Telescope