

Internship 2022

Week 6 Progress Report

Maureen Gichia

Tasks completed last week

- [#19] Static Test #1
- [#86] Fabricate snap rings groove
- [#87] Modify bulkhead to fit snap rings
- [#11] Continue casting tools fabrication
- [#84] Research on preparation of Potassium Perchlorate.

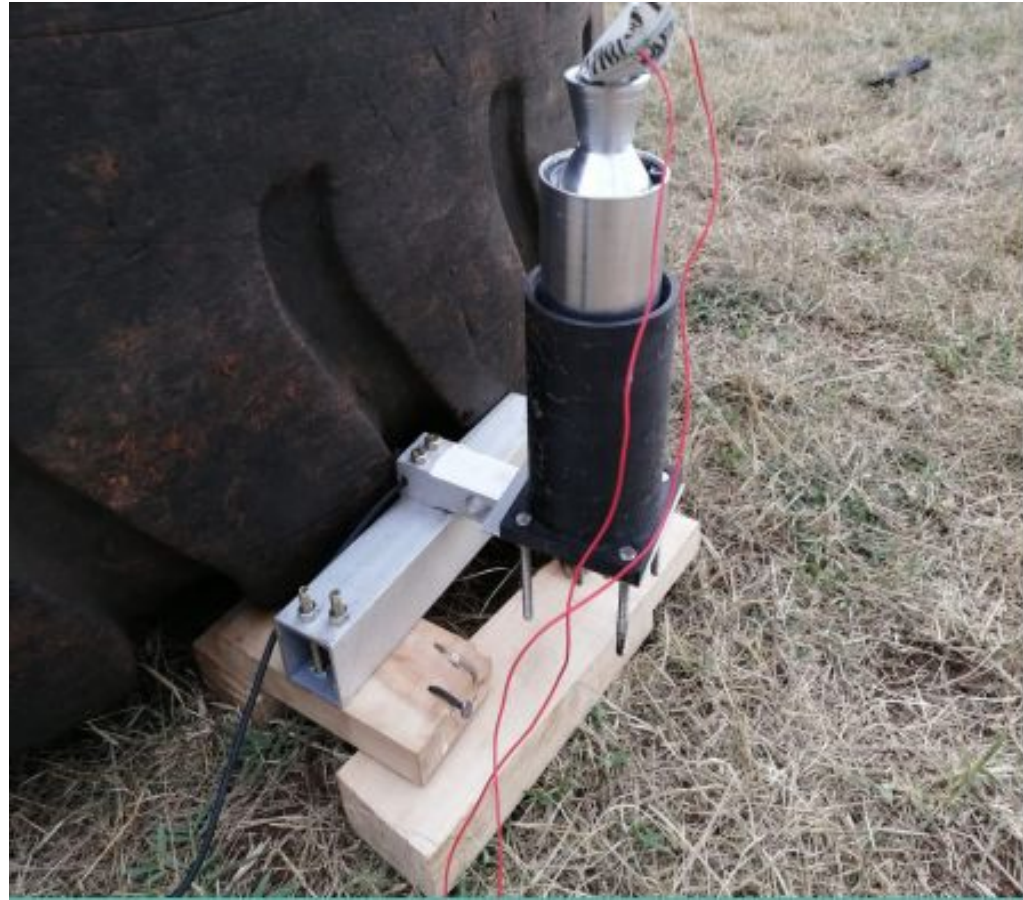
- **[#11] Continue casting tools fabrication**

- This is still in progress...



● [#19] Static Test #1

- The igniter took a few seconds before igniting opposed to the immediate response we expected.
- The fuel took close to one minute before it fully burnt out. According to the simulations, the fuel should take 2 seconds to burn out.
- No data was collected from the Raspberry Pi.



- **[#86] Fabricate snap rings groove**



- **[#87] Modify bulkhead to fit snap rings**

The bulkhead was a perfect fit and the snap ring was used to secure it in place.



- [#84] Research on preparation of Potassium Perchlorate.
 - We came up with a proposed manual on the preparation of potassium perchlorate and shared the document via email.
 - We are still waiting on the feedback.
 - In the meantime. We are exploring alternative methods of preparing the potassium perchlorate.

Tasks in this week

- [#71] Casing Fabrication [In progress]
- [#97] Data Fetcher - Test Stand
- [#19] Static Firing Tests #2 & #3
- [#32] Test stand PCB Etching
- [#68] Igniters improvement
- [#98] Temperature & Pressure measurement during static testing
- [#99] Camera mount for test stand

Timeline

Month	Intern week	Tasks
Jan		
	Week 1	Designs [Fuel, Casing, Nozzle, Bulkhead, Casting tools, Test stand]
	Week 2	Fabrication of items
	Week 3	Fuel Fabrication and test stand revamp
Feb	Week 4	Fabrication of items & Fuel casting
	Week 5	Iterative Fuel tests
	Week 6	Launch Pad design and iterative fuel tests
	Week 7	Iterative fuel testing and improvement