Internship 2022

Personal Progress Report

Name: Washington Kamadi
09/03/2022 - 16/03/2022

Tasks completed last week

- [#19] Static Test #7
- [#135] 350kg Load Cell Purchase
- [#136] 42mm O-rings purchase
- [#18] Launch Pad Design

STATIC TEST #7 (CATO)

Report

1. Almost perfect burn
2. Data was recorded
3. Data was logged directly to PC using arduino

TEST AFTERMATH

Detailed Report

There was no pressure seal (O-ring) thus gasses leaked in the interface between the casing and the nozzle.

This made the casing to melt at that point due to very high temperatures. This caused the nozzle to be thrust outward but it remained safe due to the test stand cage.

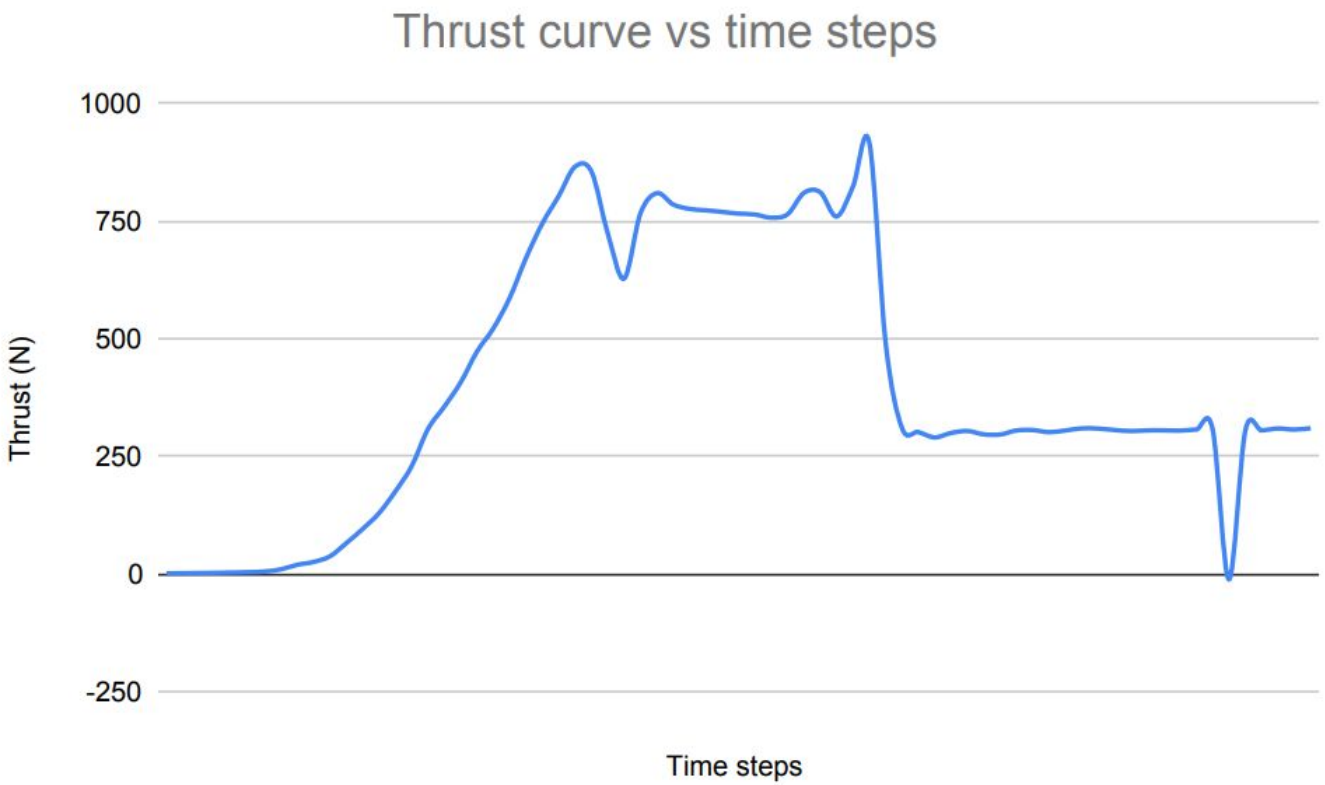
The aluminum nozzle performed well though it was charred and dented after the test

THRUST TIME CURVE

Thrust maxed out t around 950 N.

Load cell limit is 500N

Load cell was damaged



Tasks in this week

- [#19] Static Firing Tests #8 & #9
- [#32] Test stand PCB Etching [Yet another! #5]
- [#98] Temperature & Pressure measurement during static testing
- [#99] Camera mount for test stand
- [#111] Launch test (100m)

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