



SOLID TEAM WEEK 6 REPORT

OBJECTIVES

1. Fabricating Bulkhead
2. Complete fabricating the nozzle
3. Re-designing the test stand
4. Procuring items
5. Assembling the motor
6. Performing first static test

1. Fabricating the Bulkhead



Bulkhead

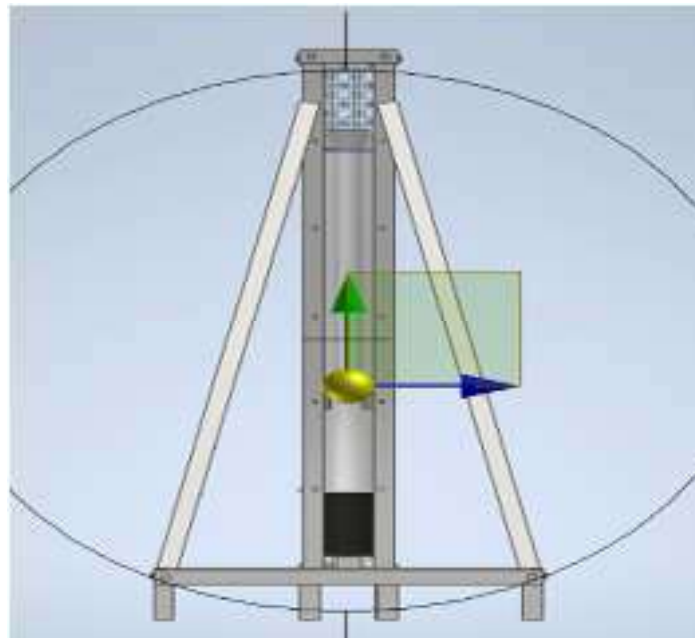


2. Fabricating the Nozzle



Nozzle

3. Fabricating the Test Stand



The test stand design

4. Procuring Items

Initially purchased O-rings failed because they weren't strong and were of large diameter

Ziplocks were purchased for storing the grains

Silica gel for drying the grains

*KNO₃ needed for cooking more grains

5. Assembling the Motor

Cut the Aluminium tube to a length for one grain

Grooving the nozzle and bulkhead to fit the O-Rings

Drilling the nozzle, bulkhead and casing

Testing the ignition circuit, data transmission and load cell code



Nozzle, bulkhead and casing



Drilling



Testing Ignition Circuit

We opted to use the electrical components and code for N3.5 before any improvement To avoid errors



Testing
Communication



Test Stand Assembly



Motor Assembly

6. Static Test

Done on 14th-June 1359Hours



Challenges Encountered

1. The casting tool design failed and had to be redesigned

[LATHE MACHINE OPERATION & SAFETY GUIDELINE - Google Docs](#)

1. Fabrication delayed due to mechanical damage on Lathe machine

Next Week Objectives

1. Continue cooking the grain
2. Fabricate second nozzle and bulkhead
3. Analysis of the static Test

