Sean McClanahan's MEGR 2156 Design Project: Air Brake

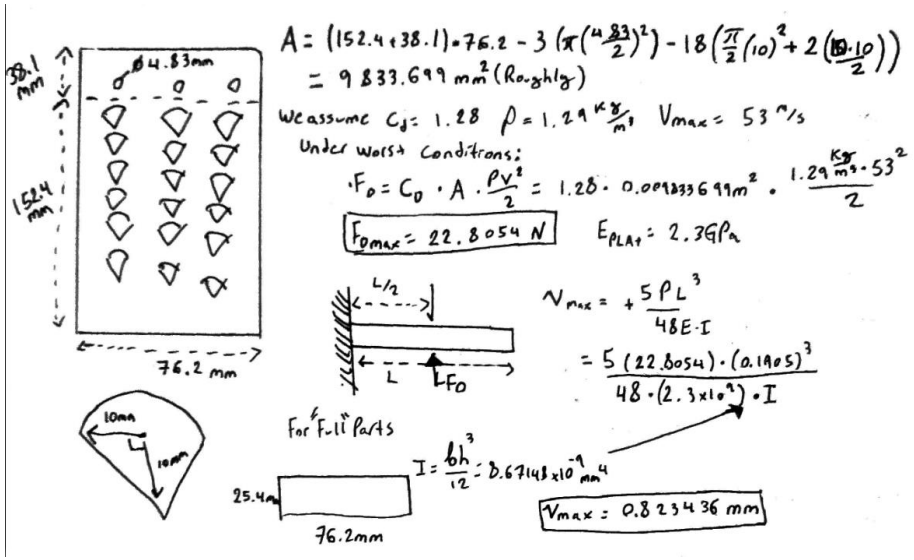
Purpose

I have a strong interest in rocketry. There is one main issue, it is very dangerous and getting a rocket working properly is difficult that's why I designed this small and semi-modular air brake. This brake is made to fit on most NAR level 2 rockets with some changes. This brake is made to use most motors of choice, all the user needs to do is make a new adapter and bracket to hold the motor. The brake is also a test of 3D printing technology as the brake itself is made of PLA +.

Major Decisions Made

The project began with three main strategies to be made all following my first decision I needed to make which was: what problem do I want to fix? After choosing on a simple air-brake design there was six variations of the brake itself, throughout the concept and modules phases. After many hours of research and calculations I decided on this design and then many hard decisions had to be made on the specifics of the components within this assembly.

Major Calculations



What did I learn?

I learned much throughout this process, but there is one main thing I took from this assignment, and that is to design what you are interested in. If I were not interested in this design, it would show in my design. Another thing I learned is that if you are scared to try something because you don't understand it or because its too complicated, you could ruin a great opportunity!