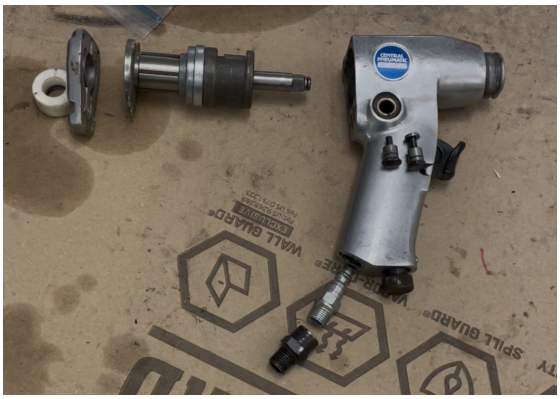
Fluid Mechanics Dissection



For this project, me and a group of students were tasked with dissecting a random mechanical object. The object we ended up dissecting was a pneumatic impact wrench. The goal was to understand how the object works using knowledge from fluid mechanics.

In addition to this, we made a 4 minute video explaining the fluid-dynamic operation of the tool—including mass-flow-rate control, the ideal gas law, and pressure-to-torque conversion inside the vane motor.

Throughout this project, I contributed through disassembly of the torque wrench, equation deriving, and presentation.

https://youtu.be/fv1IlAWsVhk