

## Do you **Thurst** us?

During one of my technological meditations, I delved into Mr. Jeff Bezos matters. For those who are always on top of everything might wonder that I am going to talk about divorce. Nope!! Marriage is more difficult than science, so I prefer to talk about easier topics by now, science.

**The Blue Origin** is another company owned by Mr. Bezos. The company caught my attention because they are designing and testing a BE-4, which can be the most powerful rocket engine ever created. Experts advocate that the engine produces 2400 KN (kilonewtons) of thrust.



**I thrust you... I trust you... whatever the phonetic is the same, bilingual headache, hahaha.**

For this paper thrust is what matter the most. Thrust is the force that allows a flying device to move through the air. This force is created taking in consideration the third Law of Newton, which states that for every action, there is a reaction. Moreover, the aircraft propulsion system is the machine that moves the aircraft forward due to the thrust force generated by the engine. To make it understandable for everyone, the engine of the propulsion system accelerates the propellant or working fluid, a fuel and an oxidant, to one direction, as a result there must be another force to counterattack the acceleration of the fluid. This force is the thrust, which is usually directed to the center of gravity of the aircraft and opposes the aircraft's drag.

To summarize, thrust is crucial to the Air vs Aircraft relationship. To cruise it, thrust and drag must be balanced; whereas to accelerate it excess thrust is required. So, when you see that large amount of exhaust being expelled on the back of a spacecraft, propellant is being accelerated, burned, combusted to increase thrust.

**Engineers are trustworthy or thurstworthy... whatever.**