

# Kerbal Space Program - Bug #26955

## Elevon 1 Symmetry Separation Causes No Thrust

01/01/2021 09:07 AM - authorized411

<b>Status:</b>	New	<b>Start date:</b>	01/01/2021
<b>Severity:</b>	Low	<b>% Done:</b>	0%
<b>Assignee:</b>			
<b>Category:</b>	Parts		
<b>Target version:</b>			
<b>Version:</b>	1.11.0	<b>Language:</b>	English (US)
<b>Platform:</b>	Windows	<b>Mod Related:</b>	No
<b>Expansion:</b>	Breaking Ground, Core Game, Making History		

### Description

When I added the Elevon 1 part in mirror symmetry mode then separate them towards the outside, then my craft will produce zero thrust. This only occurs at a certain point in the separation. When I look at the Aero Debug window as well as the Juno engine itself, it says I'm producing thrust but the forces are not being applied. The craft will roll naturally down the runway.

(Sorry if duplicate files were uploaded. It said error for one set.)

The differences between the 2 crafts is only the separation of the Elevon 1 at the tail. That separation is enough for the thrust to no longer be applied to the craft.

### History

#### #1 - 01/02/2021 01:00 AM - dok\_377

You just found out how engines in the game work. And it's not a bug. All engines in the game (except the rcs ones) do something called "raycasting". It's basically the invisible line that is coming out from the nozzle of the engine and goes some way behind it. That is essentially the thrust "line" of the engine and it's located in the dead center of it. If you cover it with some part, engine starts to think that it is obstructed and will not produce any thrust. You are basically cancelling out your engines by trying to push against your own craft.

#### #2 - 01/02/2021 06:51 AM - authorized411

Hmm, I'll look in to that. If I can confirm for myself what you said, then this would be the first time I've ran in to this in the 100s of hours I've played. First time for everything!

#### #3 - 01/02/2021 02:36 PM - authorized411

I just confirmed in my game what dok\_337 said. It is indeed that my engine is inline with the elevators behind them. I moved the elevators out to confirm the "feature" again. Next, I moved the engines further out, keep the elevators more separated, and the craft had thrust again.

If possible, KSP should warn of such things.

Please disregard issue.

### Files

Will Not Thrust.craft	60.3 KB	01/01/2021	authorized411
Will Not Thrust.loadmeta	1.41 KB	01/01/2021	authorized411
Will Thrust.craft	60.3 KB	01/01/2021	authorized411
Will Thrust.loadmeta	1.41 KB	01/01/2021	authorized411