

## Kerbal Space Program - Feature #300

### Jet engine flameouts are not synchronous on symmetrical engines

03/06/2013 10:16 PM - Switchblade88

<b>Status:</b>	Closed	<b>% Done:</b>	100%
<b>Severity:</b>	Unworthy		
<b>Assignee:</b>			
<b>Category:</b>	Physics		
<b>Target version:</b>			
<b>Platform:</b>	Win32	<b>Mod Related:</b>	No
<b>Expansion:</b>			

#### Description

Previously noted on forums and various YouTube videos; adding here for consistency in reporting.

#### Reproduction:

- Build any form of spaceplane capable of reaching approx. 20km altitude
- Make sure there is an even number of jet engines; two attached symmetrically is the easiest to reproduce. Make sure all other parts are symmetrical to avoid bias in results.
- Fly to an altitude with insufficient airflow to maintain the jets; observe the flame-out resulting in a flat spin of your aircraft.

#### Notes:

- Is this behaviour intentional? If so some Dev input would be useful to clarify.
- Appears to be caused by the order of placement of parts on the craft. I have yet to verify this fact.
- Adding a third engine in the centre will cause it to flame-out first, allowing maintained stable flight for an extra period. This does NOT apply if the centre engine is placed before the other two.

#### History

##### #1 - 03/09/2013 12:51 PM - C7

- Tracker changed from Bug to Feature

##### #2 - 04/15/2013 06:38 PM - Ruedii

Shouldn't this depend on the cause of the flame-out?

If due to lack of intake air, it should be simultaneous.

If due to overheat or other issue, it should depend on if the issue is also symmetrical.

##### #3 - 04/15/2013 09:42 PM - Switchblade88

Actually, since air is considered a shared resource then once one engine flames out it frees up that airflow for the other running engines to use. Overheating is independent of flameouts, although none of the jet engines run hot enough to explode from overheating like the Rockomax's do.

##### #4 - 08/16/2013 11:32 AM - Ted

- Category set to Physics

- Severity changed from Petty to Unworthy

- Version set to 0.18.4

- Platform Windows added

##### #5 - 10/21/2013 07:24 PM - lipatden

This matches up perfectly with Real Life - engines are not all identical and invariably one will fail before the other(s). This may be a code bug, but it's one of the more realism-inducing glitches.

It'd be interesting to see this behaviour extended to SRBs and other engines, at least as long as they have an instantaneous power cutoff at the end of their fuel.

##### #6 - 04/28/2015 02:15 AM - RexKramer

- Status changed from New to Resolved

- % Done changed from 0 to 100

The new aero model has corrected this issue. Although honestly, IRL flameouts are seldom symmetrical. The large yaw moment in KSP resulting from asymmetric flameout was indeed difficult to work with, so I doubt there will be many objections to this issue being resolved in 1.0.

**#7 - 07/27/2015 05:55 PM - Squeelch**

- Platform Win32 added
- Platform deleted (Windows)

**#8 - 07/17/2016 09:17 AM - TriggerAu**

- Status changed from Resolved to Closed