

## Kerbal Space Program - Bug #20306

### Game develops stutter when clusters of tank-mounted engines are staged (UPDATED 1 Nov 2018)

10/30/2018 10:04 PM - phreakish

<b>Status:</b>	New	<b>Start date:</b>	10/30/2018
<b>Severity:</b>	Low	<b>% Done:</b>	0%
<b>Assignee:</b>			
<b>Category:</b>	Bug Tracker		
<b>Target version:</b>			
<b>Version:</b>	1.5.1	<b>Language:</b>	English (US)
<b>Platform:</b>	Windows	<b>Mod Related:</b>	No
<b>Expansion:</b>	Core Game, Making History		

#### Description

11/1/2018 update:

More testing revealed this behavior is isolated to engines mounted to tanks.

To reproduce:

Use any capsule, stack 3-5 S4 tanks underneath.

Terminate stack with kerbodyne cluster tank/adapter.

Attach small tanks to each engine node. (the cluster tank and engines is considered an 'engine block').

Attach engine (vector or wolfhound) to node at end of small tank

Assign 'toggle engine' to action group 1

Using symmetry, attach clusters of 'engine blocks' to either side of main stack.

Most prevalent with 5+ 'engine blocks'

Alt+F12, hack gravity to 0.01

Launch, alt+f12 to orbit

Turn on SAS, set to retrograde.

Activate action group 1

Throttle to max, wait for craft to begin to rotate toward retro.

Activate action group 1 (to turn off engines).

Now stage using spacebar.

Game should 'stutter' and 'skip' as it animates the rotating craft.

Now repeat above after replacing the tank under the engines with an octagonal strut. There should be no stutter at the end. Same part count, but the craft won't stutter.

Expected behavior:

Regardless of activating engines with an action group or staging, the performance should be the same, especially once throttled down.

Observed behavior:

Performance is as expected with such a large craft and large part count. But as soon as the engines(when attached to tanks) are staged, performance is altered and physics begins to slow time down. When engines are deactivated, performance goes back to as-expected, but any time they're activated (regardless of throttle setting) the game slows massively. Autostrutting, etc, has no effect and if it's 'normal' it should not matter HOW the engines are activated.

\*\*\*\*\*original report\*\*\*\*\*

When using spacebar to stage many engines, game begins to 'stutter'. UT updates 1 game second every ~4 stutters.

See craft file. There are no launch clamps as I was trying to rule them out as a contributor.

Steps to reproduce:

- 1) See craft file link
- 2) Cheat craft into orbit (hack gravity to min to prevent explosion, see note about launch clamps above).
- 3) Stage engines to activate them using spacebar.
- 4) Watch UT clock.

Expected: Engines will stage.

Observed: UT clock flashes, game develops a 'stutter'

Additional steps:

- 5) Revert to launch, cheat back to orbit
- 6) Activate engines using action group 1
- 7) Compare to previous results

Expected: If this was a hardware issue, game would behave the same as first 4 steps.

Observed: Game does not behave the same. UT clock does not flash. No stutter. FPS is low due to part count, but is smooth despite it.

- 8) Now hit spacebar and watch UT clock.

Expected: There are no additional stages. Spacebar should have no effect.

Observed: stutter develops.

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## History

### #1 - 11/01/2018 04:42 PM - phreakish

- Subject changed from *Game stutter when staging large number of radially mounted engines* to *Game develops stutter when clusters of tank-mounted engines are staged (UPDATED 1 Nov 2018)*

- Description updated

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## Files

Super Freighter.craft	534 KB	10/30/2018	phreakish
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