

Kerbal Space Program - Bug #1606

[Bug 0.22] Ground Contact Error at launch changed, causing launch clamp failures

10/22/2013 08:20 AM - MOARdV

Status:	Closed	Start date:	10/22/2013
Severity:	Low	% Done:	100%
Assignee:			
Category:	Gameplay		
Target version:			
Version:	0.22	Language:	English (US)
Platform:	Win32	Mod Related:	No
Expansion:			

Description

What happens:

When using launch clamps, the ship is subjected to a severe force when transitioning to the launch pad. This force can cause launch clamp failures on ships that worked just fine in 0.21.x. In the debug log, there is a "Ground Contact! Error = xxxx" message. In 0.21, the error was 0.006m, which caused ships to wobble a tiny bit. In 0.22, the error is now 0.141m, and it can break launch clamps.

How to Reproduce:

- Create a ship - I've used a Mk1-2 command pod, two Jumbo-64 tanks, and a Mainsail engine.
- Attach two launch clamps towards the lower 1/3 of the bottom J64 tank.
- Launch. Notice the ship is jarred pretty severely. Usually, a launch clamp fails, although even if it doesn't, at least one clamp will be vertically displaced.

Notes:

Clamps do not fail with smaller / lighter craft. Ship / clamp configurations that are stable in 0.21 can fail in 0.22. Fails consistently with some non-stock parts (for instance, KOSMOS URM L09 1.25m fuel tank). Can work-around by hacking the launch clamp to a much higher breaking force (I am using 1500 instead of the default 150) and strutting the ship to the launch clamps.

Can the joints be made unbreakable during the scene transition, and then switched to normal behavior after the ground contact corrections take place and the physics effects settle down?

Found on Win7 / Steam installation, verified on a clean install of KSP (no mods). Leaving priority at "Low", since I don't know what criteria applies for changing priority.

History

#1 - 11/03/2013 01:37 PM - Kerolyov

- Status changed from New to Confirmed

- % Done changed from 0 to 10

I needed to repeat this with 3 jumbo tanks a few times to get the clamps to break and got the same ground contact error in the debug log.

#2 - 11/03/2013 02:00 PM - MedievalNerd

Kerolyov wrote:

I needed to repeat this with 3 jumbo tanks a few times to get the clamps to break and got the same ground contact error in the debug log.

Not only can this cause clamps to break, but they are physically misaligned too. Here are some screenshots that showcase the issue quite clearly.

[url=http://postimg.org/image/n84g8hdkh/full/][img]http://s8.postimg.org/im8c04s1h/Clamp_Alignment_Issue_Stock_022.png[/img][/url]

#3 - 12/29/2013 11:37 PM - GusTurbo

This still occurs in .23.

#4 - 10/18/2014 12:02 AM - velusip

- File *scrot_hagalaz_201410180101.png* added

[dta demo]: ground contact! - error: -0.131m

Occurs when launching from VAB or SPH in version 0.25 even without launch clamps, 64-bit Linux build.

End up in situations like this: <http://i.imgur.com/ie1rQCB.png>

#5 - 07/27/2015 05:55 PM - Squelch

- Platform Win32 added

- Platform deleted (Windows)

#6 - 07/17/2016 09:30 AM - TriggerAu

- Status changed from Confirmed to Needs Clarification

- % Done changed from 10 to 0

#7 - 07/18/2016 12:39 PM - MOARdV

This issue is still present. (From a log yesterday:)

[LOG 14:52:19.343] [AeroEquus]: ground contact! - error: 0.009m

I haven't noticed as large of an error lately as happened when I submitted this bug, but I also use Kerbal Joint Reinforcement for its physics easing at scene transition, so the issue is masked.

I don't know if there's additional steps Squad can take, or if this is now "good enough"

#8 - 08/07/2016 12:14 PM - TriggerAu

- Status changed from Needs Clarification to Confirmed

- % Done changed from 0 to 10

#9 - 08/07/2016 12:14 PM - TriggerAu

Will keep this one open for now and give it a more detailed review later

#10 - 11/11/2016 12:48 PM - sal_vager

- Status changed from Confirmed to Ready to Test

- % Done changed from 10 to 80

This appears to no longer occur in 1.2

#11 - 11/11/2016 12:55 PM - MOARdV

- Status changed from Ready to Test to Resolved

- % Done changed from 80 to 100

I concur. The error isn't visible, and the physics easing in 1.2 seems to mostly eliminate the jarring (I still have a FASA gantry / launch clamp that occasionally releases early, but there may be something else going on there).

#12 - 11/14/2016 10:20 AM - JPLRepo

- Status changed from Resolved to Closed

Files

scrot_hagalaz_201410180101.png	826 KB	10/18/2014	velusip
--------------------------------	--------	------------	---------