KERBAL
SPACE PROGRAM

More

Create

Lisias

Search...

IRC Chat | KSPTV | KSP Wiki | Get Mods! | Store | Activity | Forum

Home > Add-ons > Add-on Releases >
[1.3] Kerbal Joint Reinforcement v3.3.3 7/24/17

Unread Threads since my last visit | Mark site read

[1.3] Kerbal Joint Reinforcement v3.3.3 7/24/17

Follow 214

By ferram4, October 28, 2013 in Add-on Releases

joint | kjr | kerbal joint reinforcement

★★★★★

Start new topic

ferram4
I Make Things Fly
●●●●●
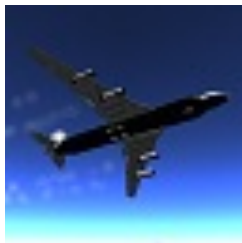
Members
⊕ 3,072
3,132 posts

Posted October 28, 2013 (edited)

Report post

Tired of rockets collapsing when physics initializes, but it would be fine if physics didn't start with a jerk?

Irritated launch clamps can twist your rocket apart when physics starts for no apparent reason?

Need more joint stiffness because you're playing Real Solar System and the stock joints just don't cut it?

Then you need KERBAL JOINT REINFORCEMENT!

Lessen the effects of physics glitches and get back to designing rockets to handle flight, not to handle the forces applied when the game loads.

EXCITING FEATURES!

- Physics Easing
  - Slowly dials up external forces (gravity, centrifugal, coriolis) when on the surface of a planet, reducing the initial stress during loading
  - All parts and joints are strengthened heavily

during physics loading (coming off of rails) to prevent Kraken attacks on ships
- Launch Clamp Easing
    - Prevents launch clamps from shifting on load, which could destroy the vehicle on the pad
- Increase stiffness and strengths of connections
    - Larger parts will have stiffer connections to balance their larger masses / sizes
    - Sequential parts in a stack will be connected with a stiff, but weak connection to add even more stiffness and counteract wobble
- Stiffen interstage connections
    - Parts connected to a decoupler will be connected to each other, reducing flex at the connection to reasonable levels
- Stiffen launch clamp connections
    - Less vehicle movement on vessel initialization
    - Warning: may cause spontaneous rocket disintegration if rocket is too large and over-constrained (far too many launch clamps; their connections will fight each other and give rise to phantom forces)
- Option to make connections fail at lower forces to maintain difficulty in launching

More documentation and changelog available in the README file.

Download v3.3.3 from SpaceDock!

Download v3.3.3 from GitHub!

Source code at GitHub

Licensed under GNU GPL v3

Changelog:

```
v3.3.3

        Features
        --Recompile against KSP 1.3,
ensure CompatChecker compatibility
with 1.3

v3.3.2

        Bugfixes
        --Fix multijoints breaking IR
joints and any other exempted parts
from moving

v3.3.1

        Bugfixes
        --Fix a critical bug
involving unphysical forces applied
to vessels on load / unload of other
```

FAQ

I still think that win64 is disabled, fix this!

This isn't a question, but win64 is no longer locked based on the apparent stability that I've noticed in testing. It will be relocked *if and only if* it proves to be crashtastic just as before and the support workload grows to the levels they were at previously. Currently I do not anticipate the need to relock on win64 at any time in the future.

Edited July 24, 2017 by ferram4

Realistic Aerodynamic Models in KSP -- Make your planes fly like planes and your rockets fly like rockets!

Ferram Aerospace Research -- Kerbal Joint Reinforcement

p1t1o

Just some guy, y'know?

●●●●●

Members

⊕ 3,120

2,772 posts

Location: In the walls.

Report post

Whats the catch?

Is interstage support still necessary or can you literally just go tank->engine->decoupler->tank ?

I don't want my rockets to be made *too* strong, if you know what I mean.

Time saving sanity check - Before you ask your space-related question, execute this quick check:
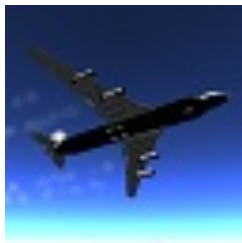
Is the answer:

A) Mass B) MAAAAAASS C) Anything to do with Mass? D) Money? Sorry, I meant: mass?

ferram4

I Make Things Fly

●●●●●

Members

⊕ 3,072

3,132 posts

Report post

You can literally just go tank->engine->decoupler->tank. There is no reason that you should have to add extra struts between connected engines when the interstage fairing and structure is *right there*, purely intended to support the stage above it.

You *can* go into the config.xml and universally weaken all connections to add more difficulty if you like; details in the readme.

Realistic Aerodynamic Models in KSP -- Make your planes fly like planes and your rockets fly like rockets!

Ferram Aerospace Research -- Kerbal Joint Reinforcement

blubbermonkeys

Rocketry Enthusiast

● ●

Members

⊕ 19

81 posts

Report post ⤶

Looks interesting enough, I'll try this out.

👍

White Owl

Retired Videographer

● ● ● ●

Members

⊕ 552

1,353 posts

Location: WinterOwl's Aircraft Emporium

Report post ⤶

> **ferram4 said:**
>
> [*]Option to stiffen launch clamp connections
>
> - Less vehicle movement on vessel initialization
> - Warning: may cause spontaneous rocket disintegration if rocket is too large and over-constrained (far too many launch clamps; their connections will fight each other and give rise to phantom forces)

I imagine rockets will need far fewer launch clamps than we're used to, right? Like, only two or three at the base of a giganto-normous heavy lifter?

👍

Flying machine market has been very unsteady the past two ✕ ▾ days. Opened yesterday morning at about 208 (100% means even chance of success) but by noon had dropped to 110. These fluctuations would have produced a panic, I think, in Wall Street, but in this quiet place it only put us to thinking and figuring a little. — Orville Wright

Umlüx

LOX Swimmer

● ● ● ●

Report post ⤶

nice. how bout radial mounted SRBs? are the radial

decouplers strong enough with this? or do you still need struts? because when you strut radial mounted things, the decoupler force seems to become zero... and you need to mount sepratons... and there goes the partcount...

The Umlüx Project - KSP Missions, Photography and more. ✕ ▾

Autochton

Sr. Spacecraft Engineer
● ● ●

Posted October 28, 2013   Report post ⤴

Ferram, have I mentioned that you are like unto a god? Between you and NathanKell, KSP will be such a wonder to behold. This is added to my "Can't live without" mod list. 🤢

SpaceEnthusiast23 likes this

NathanKell

Keepin' it Real
● ● ● ● ●

Posted October 28, 2013   Report post ⤴

Holy smokes! Yay!

...and I have to wait til tomorrow to try it. Incredibly good work as always, ferram!

Real Solar System -- Real Fuels   ✕ ▾

Realism Overhaul -- Realistic Progression Zero

Reaching for the Stars: Earth's Rocket Age,

[RftS] Jane's All the World's Hunters of the French Civil War

---

Spanier

Crazy Scientist

Posted October 28, 2013   Report post ⤴

Holy Moly, you did it!

Is it compatible to any form of joints (respectively interstage adapters from the procedural fairings)?

ferram4

I Make Things Fly

●●●●●

Members

⊕ 3,072

3,132 posts

Posted October 28, 2013 (edited)

Report post

@White Owl: I'd still go with the same number, it's just that The Lurch at physics initialization is greatly reduced; depending on the rocket you might be better off with fewer clamps, since every launch clamp is exerting a force on the rocket and for very large rockets with lots of clamps the constraints can end up at odds with one another.

@UmlÃƒÂ¼x: Most SRBs seem fine without struts, with the exception of the big Thor SRBs from KW Rocketry, which still don't like it, but they're massive. And before you ask, you should probably use struts with similarly large liquid boosters as well.

@Spanier: Procedural fairings already has stiffening in them of the same method used for the decoupler and launch clamp stiffening. KJR will stiffen a connection between any two parts that have been connected in any way though.

Edited October 28, 2013 by ferram4
Some clarifications

p1t1o

Just some guy, y'know?

●●●●●

Members

➕ 3,120

2,772 posts

Location: In the walls.

Posted October 28, 2013

Report post

> **ferram4 said:**
>
> You can literally just go tank->engine->decoupler->tank. There is no reason that you should have to add extra struts between connected engines when the interstage fairing and structure is *right there*, purely intended to support the stage above it.
>
> You *can* go into the config.xml and universally weaken all connections to add more difficulty if you like; details in the readme.

Oh I was referring to a case with no interstage fairing, if the fairings are still needed for proper support then I'm all in 😀

Even so, the fact that the option exists in a config -> great modding!

Time saving sanity check - Before you ask your space-related question, execute this quick check:

Is the answer:

A) Mass B) MAAAAAASS C) Anything to do with Mass? D) Money? Sorry, I meant: mass?

ferram4

I Make Things Fly

●●●●●

Posted October 28, 2013

Report post

Eh... it doesn't check for the interstage fairing. It just assumes it's there, since about 99% of the parts that exist already take care of it. Depending on how the math for works out for the engine though, it might make the connection much weaker. I'll make sure that happens for future releases though.

Members
3,072
3,132 posts

rosenkranz and Pigbear like this

Realistic Aerodynamic Models in KSP -- Make your planes
fly like planes and your rockets fly like rockets!

[Ferram Aerospace Research](#) -- [Kerbal Joint
Reinforcement](#)

Pigbear
Sr. Spacecraft Engineer
● ● ●

Members
57
424 posts

Posted October 28, 2013   Report post ⤳

ferram you boss you are amazing have all my rep

Hello! My name is Pigbear!

CoriW
Sr. Spacecraft Engineer
● ● ● ●

Members
232
697 posts

Posted October 28, 2013   Report post ⤳

Oh man this is awesome, good job.

[JNSQ Probes Before Crew Rebalance /
Contract Pack](#)

Yaivenov
Ex-Satellite Jockey
● ● ●

Posted October 28, 2013   Report post ⤳

How does this mod function regarding multi-docking port
connections?
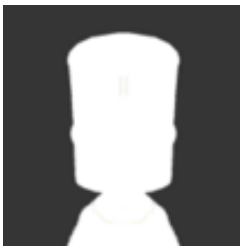
ferram4

I Make Things Fly
● ● ● ● ●

Posted October 28, 2013   Report post ⤳

It *should* stiffen them equally. To be honest, I haven't tested it myself (I've been more focused on massive launch vehicles, not massive interplanetary vessels), but I don't see why it wouldn't work properly.

👍

✕ ▾

Realistic Aerodynamic Models in KSP -- Make your planes fly like planes and your rockets fly like rockets!

Ferram Aerospace Research -- Kerbal Joint Reinforcement

Surefoot

Sr. Spacecraft Engineer
● ● ●
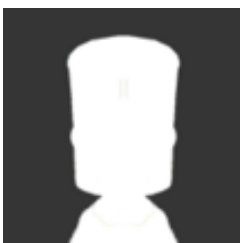
Posted October 28, 2013   Report post ⤳

Very nice, cannot wait to test it with my flying noodles aka long rockets... Using FAR means having long, thin launchers, and that was really a pain to stiffen up.
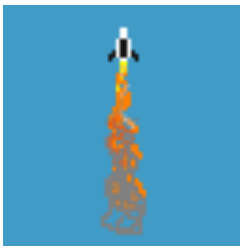
👍

wasmic

Capsule Communicator
● ● ● ● ●

Posted October 28, 2013   Report post ⤳

ferram4... you have done it again. Thank you very much for this, we all thought it was impossible!

> **TehGimp666 said:**
>
> It appears that your game menu is undergoing atmospheric re-entry... on the Mun... 🧟
>
> Only with KMP folks!

Yaivenov
Ex-Satellite Jockey
● ● ●

Posted October 28, 2013 (edited)   Report post ⤴

> **ferram4 said:**
>
> It *should* stiffen them equally. To be honest, I haven't tested it myself (I've been more focused on massive launch vehicles, not massive interplanetary vessels), but I don't see why it wouldn't work properly.

Alright, I'm in the process of building a very large couple hundred ton interplanetary ship that uses several sets of MDP connections, I'll let you know how it works. Oh, by the way... THANK YOU!!! 🧟 I've been looking for something like this for a while.

Update: So, preliminary testing, where I had RCS enabled on a 10 ton part assembly, and was using it to swing an 80 ton part assembly about madly resulted in no visible deformation of the multi-docking port node. Sorry I can't get more technical than that, Bob accidentally jettisoned the material stress analyzer when he decided to "go outside for a stroll."

Edited October 28, 2013 by Yaivenov

HoneyFox
Toybox Manufacturer
● ● ● ●

Posted October 28, 2013   Report post ⤴

Is this plugin creating joints around the rocket by the assessed radius when a rocket "OnFlightStart" / is docked to another vessel? haven't checked the source codes... just

my guess. 🐸

Senshi

Spacecraft Engineer

● ● ●

Posted October 28, 2013   Report post ⤴

First: Wonderful idea and concept. One of the most annoying things in KSP tackled by the guy who already brought us the indispensable FAR mod.

Will give it a whirl (especially curious about how it affects some of my more delicate planes/SSTOs) and then return with feedback 🐸 .

Nose engine mount with air intake for FireSpitter

StainX

Sr. Spacecraft Engineer

● ● ●

Posted October 28, 2013   Report post ⤴

Can't wait to test this little beauty.

Ferram and Nathan rule! Keep it coming guys, we appreciate your hard work.

ANWRocketMan

Sr. Spacecraft Engineer

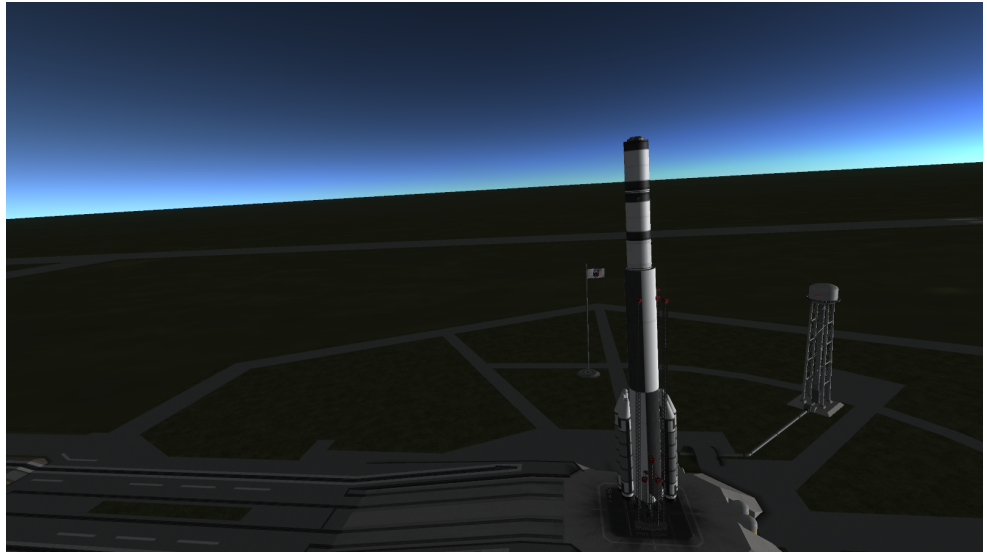Posted October 28, 2013   Report post ⤴

Very good work @ferream4!

I've only found one joint that does not stiffen so far:

The joint between the KW Rocketry 3.75m decoupler and the bottom of the Wildcat-XR engine. Otherwise, it works beautifully!

leopardenthusiast

gotta go fast m8

Posted October 28, 2013   Report post

I tested this with some short, medium, and long arms made out of girders. They held together impressively well.

I was originally going to have orange tanks on the ends, but the launch supports kept breaking off, and I couldn't get a decent screenshot.

Mihara

Mad (social) scientist

●●●●●

Members

⊕ **381**

1,511 posts

Report post

I was looking forward to using this, but apparently, it also affects joints it shouldn't, namely, joints *within* Damned/Infernal Robotics parts. With the plugin installed, they lose most of their range of movement, which makes them useless, once I remove the plugin, the normal range of movement is restored.

Could they be considered a special case somehow?
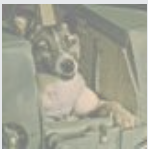
Not modding anymore.

| 1 | 2 | 3 | 4 | 5 | 6 | NEXT | » | Page 1 of 106 ▾ |

⚠ **This topic is now closed to further replies.**

❮ GO TO TOPIC LISTING

NEXT UNREAD TOPIC ❯

📑 Unread Threads since my last visit   ✔ Mark site read

Language ▾   Theme ▾   Privacy Policy   Contact Us