

Kerbal Space Program - Bug #21915

Interstage fairings now hold on to decoupled parts

04/17/2019 05:48 AM - dok_377

Status:	Resolved	Start date:	04/17/2019
Severity:	Normal	% Done:	100%
Assignee:	victorr		
Category:	Parts		
Target version:	1.11.0		
Version:	1.7.0	Language:	English (US)
Platform:	Windows	Mod Related:	No
Expansion:	Core Game		

Description

How to reproduce: take a fairing, attach either a heatshield with enabled staging or some decoupler with a part beneath it to the fairing. It can be the main fairing node or interstage node, doesn't matter. Then close the fairing on a heatshield or a part. Launch craft, then try to decouple. Parts that supposed to be decoupled stay attached as if they are still on the same vessel, but they are not. You can switch to them as shown in the second video, but they behave as if they are still attached. When you enable time warp, physics completely fail and decoupled parts just fall to the ground and explode.

Video #1: <https://youtu.be/7JU48QKtN8Q>

Video #2: <https://youtu.be/wvLroh3tsSc>

And apparently it doesn't work only in one direction. Only if you try to decouple something from the fairing. If you decoupling the fairing itself, it works as intended.

Video #3: <https://youtu.be/cuT0zviOW2M>

Also, rcs doesn't work until you leave the render range of the fairing.

Video #4: <https://youtu.be/PlzA5X7PfmQ>

I think it has something to do with the root part of the vessel. If the fairing stays with the root part of the vessel, nothing is decoupling from it. If the fairing decouples from the root of the vessel (i.e. interstage of the rocket on the first stage with the root part on the second stage), then it's fine. See the attached video for demonstration.

Video #5: <https://youtu.be/SgZHApejBs4>

Related issues:

Related to Kerbal Space Program - Bug #24798: Just a reminder. #21915	Duplicate	02/06/2020
Has duplicate Kerbal Space Program - Bug #24852: Interstage fairings now hold...	Duplicate	02/13/2020

History

#1 - 04/17/2019 06:21 AM - dok_377

- Description updated

#2 - 04/20/2019 08:44 PM - Anonymous

- File fairing.craft added

Before the fix to [#20354](#), when a fairing spanned two parts of a craft, and those parts decoupled, the fairing would be dropped from the physics simulation.

Now, in version 1.7.0:

1) Such an interstage fairing remains physically active, and snugly holds the part on the detached craft that it was 'closed' onto (video 1 and 2 above) **if** the fairing base is connected to the root part before decoupling.

2) The fairing continues to shield its contents from airflow, which in general is good because allows creative things like rescuing and recovering craft by re-entering them in cargo bays of other craft, and that shielding also generally prevents RCS from thrusting (video 4 above). Here, however, the fairing becomes **open** at one end, which generally turns off the shielding. KSP would preferably notice that the decoupling event has made the fairing ineffective.

Fairings do not have a decouple action--they never let go of attached parts--they only deploy their fairing shell. It looks like the designers' intention for using an interstage fairings was to deploy the shell before decoupling the craft that it joins.

Workarounds:

(1) if the fairing is closed on a part, probably we **should** be required to deploy it before it lets the part fly free. The workaround with putting root in the detached section depends on something that other players are likely to call a bug.

(2) after the craft are clear of each other, we can induce KSP to notice that the fairing no longer encloses the RCS thrusters by reloading physics (save/reload, or switch out of physics range and back). Alternatively, Module Manager can change the rules on shielded RCS
@PART[*]:HAS[@MODULE[ModuleRCSFX]] { @MODULE[ModuleRCSFX] { %shieldedCanThrust = True }}

#3 - 04/21/2019 12:26 AM - Anonymous

- File *cylindricalFairing.craft* added
- Status changed from *New* to *Confirmed*
- % Done changed from *0* to *10*

I was confused by the posts above with "If you decouple the fairing itself..". I see now that the situation there is "if the decoupler separates the fairing from the root part..."

By "fairings do not have a decoupler action" I only meant that there is no button to push on a fairing to say "let-go", only the button to say "open".

If the interstage fairing is a simple cylinder, appearing to go from the flat end of one stage to the flat end of the next (attached craft) it certainly **looks** like the fairing should allow separation, and usually it does. But, if the root part is on the side with the fairing base, after decoupling some strong force hold the two separate craft in position, until the fairing is deployed. Maybe a fairing has a function like struts between the base and part it is closed on, that is meant to auto-release when the parts are separated, and that auto-releasing no longer happens in some cases.

#4 - 06/30/2019 12:29 AM - Anonymous

- File *cylindricalFairing.jpg* added
- File *cylindricalFairing.craft* added
- Subject changed from *Interstage fairings broken.* to *Interstage fairings now hold on to decoupled parts*

The way fairings hold on, to the part on which they were closed, will cause difficulty if anyone makes a traditional inter-stage fairing on a rocket with the root part below the fairing (as cylindrical Fairing attached) because the discarded stage has no control with which to deploy the fairing as is now needed.

This came up recently on the forum at <https://forum.kerbalspaceprogram.com/index.php?topic/187777-stuck-in-undeployed-fairing/>

The problem with enclosed parts being considered stowed (which is resolved after a quicksave/quickload) came up recently on the forum <https://forum.kerbalspaceprogram.com/index.php?topic/185821-parachutes-not-deploying-while-stowed/> and <https://forum.kerbalspaceprogram.com/index.php?topic/187957-my-parachute-cant-open-up/>

#5 - 06/30/2019 12:30 AM - Anonymous

- File *deleted (cylindricalFairing.craft)*

#7 - 11/29/2019 05:20 AM - Anonymous

This bug-tracker has never been a good place to get information from Squad, but it is useful for getting updates and workarounds from other players.

In version 1.8.1, the secondary problem mentioned above is solved: when we decouple from an interstage fairing, things like RCS that were unusable inside the fairing become usable. (With bug [#23997](#), fairings sometimes fail to have any effect, but I made sure to test a case where the fairing does work.)

The primary bug remains: an un-deployed interstage fairing continues to hold on to decoupled parts, if the root part of the joined craft is on the part that stays with the fairing base after decoupling.

So, if we want to decouple from interstage fairings in 1.8.1 (without first 'deploying' the fairing to detach the fairing sides) then we need to set the root part of the craft to be one of the parts that detaches from the fairing base.

#8 - 02/13/2020 05:05 PM - Technicalfool

- Related to Bug [#24798](#): Just a reminder. [#21915](#) added

#9 - 02/13/2020 11:05 PM - dok_377

- Subject changed from *Interstage fairings now hold on to decoupled parts to 2*
- Description updated
- Category deleted (*Parts*)
- Private changed from *No* to *Yes*

#10 - 02/13/2020 11:05 PM - dok_377

- File *deleted (fairing.craft)*

#11 - 02/13/2020 11:05 PM - dok_377

- File deleted (cylindricalFairing.jpg)

#12 - 02/13/2020 11:05 PM - dok_377

- File deleted (cylindricalFairing.craft)

#14 - 03/04/2020 09:56 PM - TriggerAu

- Has duplicate Bug #24852: Interstage fairings now hold on to decoupled parts added

#15 - 03/04/2020 09:57 PM - TriggerAu

- Subject changed from 2 to Interstage fairings now hold on to decoupled parts

- Description updated

- Category set to Parts

- Severity changed from Low to Normal

- Private changed from Yes to No

Looking at this bug it is being duped into new bugs (#24972 and #24852) which changes where it sits in the triage process/queue. Am restoring this ones content and voting it up to help it come up higher in triage as the original issue.

For reference info - the new copy has less votes, is set as being a bug found in 1.9.1 and has no history. This bug with more votes, constant comments and more history will receive attention earlier than new copies

#16 - 03/08/2020 02:46 AM - Anonymous

- File Kerbal 1.craft added

- File Kerbal_1_fairing.jpg added

We lost the example craft, I think accidentally, so I attached a version of the stock example craft 'Kerbal 1' modified with an inter-stage fairing to demonstrate the issue.

If the root part is the booster tank, the fairing fails to let go of the upper stage.

If the root part is somewhere in the upper stage, the craft works as desired as in the screen shot.

Players who have this problem can escape it by selecting as root part something on the section of craft that leaves the fairing, root part **not** in the section that is left connected to the fairing base.

#17 - 03/08/2020 06:41 AM - TriggerAu

k-ohara5a5a@oco.net wrote:

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Unfortunately they dont appear to have been lost accidentally, thanks so much for attaching the craft file, will be super useful

#18 - 03/08/2020 08:28 AM - dok_377

This bug with more votes, constant comments and more history will receive attention earlier than new copies

Somehow I highly doubt that. There's a whole section of bugtracker that contains forgotten or lost bugs. You just need to check what was reported and if it was fixed or not. The percentage is not that great.

#19 - 03/08/2020 08:35 AM - dok_377

TriggerAu wrote:

k-ohara5a5a@oco.net wrote:

We lost the example craft, I think accidentally, so I attached a version of the stock example craft 'Kerbal 1' modified with an inter-stage fairing to demonstrate the issue.

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Unfortunately they dont appear to have been lost accidentally, thanks so much for attaching the craft file, will be super useful

Because I basically wanted to create a new report so this bug received some attention at least, but even if I try to delete the previous report (which I tried to do here) - somebody just comes in and reinstates it and closes the more recent one. By doing that this bugreport is not going to receive attention AGAIN and will be lost forever without a fix.

#20 - 03/08/2020 08:44 AM - dok_377

I think it has something to do with the root part of the vessel. If the fairing stays with the root part of the vessel, nothing is decoupling from it. If the fairing decouples from the root of the vessel (i.e. interstage of the rocket on the first stage with the root part on the second stage), then it's fine. See the attached video for demonstration.

Video #5: <https://youtu.be/SgZHApejBs4>

And again, there **IS** information about there being an issue with the root node and its location right there in the bugreport. Not like this bug happens only on a particular craft or something. If you can't just take that info and build a simple craft (which takes less than a minute, for god's sake) using the attached video (which **I DIDN'T DELETE**) - I don't even know how to help you anymore.

#21 - 03/08/2020 09:32 PM - TriggerAu

It feels like theres a few things being raised here, and Im happy to share insights;

- Im sorry if you feel that you dont know what to do, but I tried to help by explaining that closing the older version and reporting as a newer bug that started in a newer version is detrimental to this report getting attention.
- We dont simply look at the creation date or bug number of a report. Add comments if a new release comes out indicating that you feel this one deserves more attention, etc. It will be seen - as demonstrated by when this one was edited/closed we investigated and got it back in the state where it is most likely to get triaged/assessed for assignment.
- Whether an individual report is picked or not is a prioritization decision Im unable to discuss as im sure everyone understands
- Having player created craft is immensely valuable as it helps us to confirm when fixing that we've solved the reporters issue more directly. I never said I was unable to create it myself, I simply expressed thanks to by k-ohara5a5a@oco.net for providing something we ask for and find very useful as a double up

Hopefully that gives you a little more, and we do appreciate the time and passion you spend on identifying bugs like this

#22 - 07/06/2020 06:26 AM - Anonymous

There is a change-log item for version 1.10 that sounds like it might pertain to this bug, "Fixed Interstage fairings holding onto the payload in certain use cases." but it does not. There is no change to the behavior of the example craft.

Workarounds remain: (1) in the VAB, choose a part that stays attached to the fairing base to be the root part, (2) quicksave/quickload or switch to a distant craft and back to free the parts

#23 - 07/06/2020 03:08 PM - victorr

- Status changed from Confirmed to Ready to Test
- Target version set to 1.10.0
- % Done changed from 10 to 80

We've made some changes in this latest version and would like some feedback on this issue.

#24 - 07/06/2020 04:42 PM - dok_377

victorr wrote:

We've made some changes in this latest version and would like some feedback on this issue.

Still present, but now it relates to the open-ended fairings as well, see [#25660](#).

Also, I have a question. When the bug is not fixed like in this example, what are we supposed to set it to? "Not Fixed" or "Updated"? Or maybe don't touch it at all?

#25 - 07/06/2020 05:55 PM - Anonymous

- Status changed from Ready to Test to Not Fixed
- % Done changed from 80 to 50

#28 - 08/18/2020 04:14 PM - victorr

- Assignee set to victorr

#29 - 12/17/2020 08:47 PM - victorr

- Status changed from Not Fixed to Ready to Test
- Target version changed from 1.10.0 to 1.11.0
- % Done changed from 50 to 80

We've made some changes to the game in this latest version and would like to have some feedback on this issue. Thanks.

#30 - 12/17/2020 10:51 PM - dok_377

- Status changed from Ready to Test to Resolved
- % Done changed from 80 to 100

Seems to be working well. Somebody should update and close [#25660](#) as well, since it's related.

Files

Kerbal 1.craft	75.6 KB	03/08/2020	Anonymous
Kerbal_1_fairing.jpg	92.3 KB	03/08/2020	Anonymous