

Kerbal Space Program - Bug #5269

Multi-part bits (strut / fuel pipe) do not respect craft rotation in mirror mode placement

07/26/2015 09:30 PM - Hexicube

Status: Updated	Start date: 07/26/2015
Severity: Low	% Done: 10%
Assignee:	
Category: Gameplay	
Target version:	
Version: 1.0.4	Language: English (US)
Platform: Any	Mod Related: No
Expansion:	
Description	
Steps to reproduce: 1. Create a vessel 2. Rotate the root node 3. Attach 2 struts in mirror mode The strut and fuel pipe start points will place fine, but the end points act as if the vessel was not rotated. Both parts function correctly if the vessel was not rotated. Also, maybe parts placed in mirror mode should use the local part rotation instead of the root part rotation? Otherwise, you end up rotating the entire vessel to place some parts.	
Related issues:	
Has duplicate Kerbal Space Program - Bug #5923: Incorrect behaviour with mirr... Duplicate 11/11/2015	

History

#1 - 07/26/2015 09:40 PM - Hexicube

Forgot to mention, this happens when using 2x symmetry placement.

#2 - 07/26/2015 11:28 PM - Squelch

- Status changed from New to Need More Info

Please could you refine your report? A useful guide in how to format and the required information can be found [here](#)

Some pointers if I am interpreting your report correctly so far:

1. Rotating the root node will effectively rotate the whole craft.
2. Complex parts such as the strut and fuel line will act differently depending on the order of attachment.
 - Attaching to the root part first (origin) and then a sub part (target) will attempt to maintain the original points of connection relative to the root part (eg vertical) when the sub part is rotated axially.
 - Attaching to a sub part first and then the root, will attempt to maintain the original points of connection relative to the sub part, but attempt to "twist" as the sub part is rotated.
 - This is also true for moving parts, but in both cases, the connection may become lost or reconnect in the wrong position.

It is advisable to make strut and fuel line connections after all rotations and movements have been made.

If this does not cover what you intended to report, then please do refine it with reproduction steps and images. This is possible by clicking edit followed by the pencil icon next to "Description" at the top.

#3 - 07/26/2015 11:48 PM - Hexicube

Squelch wrote:

Please could you refine your report? A useful guide in how to format and the required information can be found [here](#)

Some pointers if I am interpreting your report correctly so far:

1. Rotating the root node will effectively rotate the whole craft.
2. Complex parts such as the strut and fuel line will act differently depending on the order of attachment.
 - Attaching to the root part first (origin) and then a sub part (target) will attempt to maintain the original points of connection relative to the root part (eg vertical) when the sub part is rotated axially.

- Attaching to a sub part first and then the root, will attempt to maintain the original points of connection relative to the sub part, but attempt to "twist" as the sub part is rotated.
- This is also true for moving parts, but in both cases, the connection may become lost or reconnect in the wrong position.

It is advisable to make strut and fuel line connections after all rotations and movements have been made.

If this does not cover what you intended to report, then please do refine it with reproduction steps and images. This is possible by clicking edit followed by the pencil icon next to "Description" at the top.

What happens is this:

- Placing 2 struts at once using mirror symmetry acts weird when using a vessel that was rotated by the root part
 - Placing 2 struts on a vessel with a non-rotated root part works as expected
 - Rotating the vessel AFTER placement has no effect, the issue is during placement
- It's hard to describe what happens, would a video work better?

#4 - 07/27/2015 12:00 AM - Squelch

Hexicube wrote:

It's hard to describe what happens, would a video work better?

Yes it would. Use youtube unlisted if you can and post the link here. Thanks

I have been trying to find an issue with how the struts behave, and I can't seem to find anything beyond difficulties with placement on sloped surfaces.

#5 - 07/27/2015 12:02 AM - Hexicube

Squelch wrote:

Hexicube wrote:

It's hard to describe what happens, would a video work better?

Yes it would. Use youtube unlisted if you can and post the link here. Thanks

I have been trying to find an issue with how the struts behave, and I can't seem to find an issue beyond difficulties with placement on sloped surfaces.

The issue is specifically with placing the 2nd piece in mirror symmetry. I'll have the video up shortly.

#6 - 07/27/2015 12:10 AM - Hexicube

<https://www.youtube.com/watch?v=EhMVqNd7RV8>

Ignore those mod parts, it's my mod dev area and I removed most stock parts. I'm not using any dll plugins nor did I tamper with struts. This will occur in stock.

[edit] Interesting extra bit of info: The bug does not occur on 180 degree rotations, or rotations around the axis perpendicular to the mirror plane.

#7 - 07/27/2015 01:25 AM - Squelch

- *Category changed from Parts to 81*

- *Status changed from Need More Info to Confirmed*

- *% Done changed from 0 to 10*

Thanks for the demonstration, it clearly identifies the problem.

I have managed to reproduce this with a stock construction, and can confirm the issue. The mirrored symmetry for complex parts (struts and fuel lines) does not completely respect the root part's rotation. This leaves the ability to attach from an origin to a target in the north and south directions only. An east or west facing origin will attempt to connect north and south leading to strange connection behaviour. This applies to the VAB, and the favoured directions for SPH are east and west.

The origin coordinates do seem to be translated when the root is rotated, but the target coordinates are not. Rotating a sub part does not appear to rotate the origin. The same behaviour can be seen in both VAB and SPH.

Radial symmetry appears to not suffer from this behaviour.

The workaround is to ensure that the root part is facing north or south in the VAB and east or west in SPH before adding complex parts.

#8 - 07/27/2015 01:33 AM - Hexcube

That would accurately describe it, such an awkward thing to explain IMO.

Also, not sure how I missed the editor category. Was expecting "VAB/SPH" for some reason.

#10 - 07/27/2015 01:55 AM - Squelch

- *Version changed from 1.0.2 to 1.0.4*

No problem, thanks for reporting it, and your prompt replies.

#11 - 07/27/2015 09:22 AM - mostevil

Something similar also happens with mirror symmetry in the SPH.

If you build a plane by creating engine nacelles on one side (few tanks an engine and an intake, strut/fuel-line from the outer to inner hull)
Then detach and reattach the whole group to the main hull with mirror symmetry.

The struts and fuel lines often don't attach on one side, presumably because they're going the other way.

#12 - 11/11/2015 04:24 PM - RexKramer

- *Has duplicate Bug #5923: Incorrect behaviour with mirror mode symmetry on struts in VAB added*

#13 - 07/17/2016 09:30 AM - TriggerAu

- *Status changed from Confirmed to Needs Clarification*

- *% Done changed from 10 to 0*

#14 - 07/18/2016 03:52 PM - Alchemist

- *Status changed from Needs Clarification to Updated*

- *% Done changed from 0 to 10*

Confirming that this is still the same in 1.1.3. Starting point placement in mirror respects the rotation, but the strut directions don't

#15 - 03/17/2017 10:57 PM - sir_frost

confirming the existence of this bug in 1.2.2