Kerbal Space Program - Bug #26942

Strut Connectors used in EVA construction mode disconnect for unknown reasons

12/29/2020 01:29 PM - kewyn.ryan@gmail.com

Status:	New	**Start date:**	12/29/2020
Severity:	Low	**% Done:**	0%
Assignee:			
Category:	EVA		
Target version:			
Version:	1.11.0	**Language:**	English (US)
Platform:	Windows	**Mod Related:**	No
Expansion:	Breaking Ground, Core Game, Making History		

Description

I am building a space station and in its current size it is in need of structural reinforcements. When I try to place Strut connectors around the station, some of them disconnect from their end points after I leave the station for Tracking Station or the Space Center. I can't see a pattern to the cables that disappear.

I'm leaving my save file for testing. The station is named Kerbin Space Station and is close to a synchronous orbit around Kerbin.

History

#1 - 01/06/2021 12:28 PM - dok_377

Can confirm. Struts just disconnect after the scene reload with no traceable or reproducible cause.

Only have this in the console when clicking the first part of the strut:

[LOG 15:23:27.190] [CompoundPart]: Part: CompoundPart craftID: 4290482420 No target found with craftID: 4294415250
[LOG 15:23:27.190] [CompoundPart]: Part: CompoundPart craftID: 4290482420 No target found with craftID: 4294415938
[LOG 15:23:27.190] [CompoundPart]: Part: CompoundPart craftID: 4290482420 No target found with craftID: 4292408738
[LOG 15:23:27.190] [CompoundPart]: Part: CompoundPart craftID: 4290482420 No target found with craftID: 4294414562
[LOG 15:23:27.216] [CompoundPart]: Part: CompoundPart craftID: 0 No target found with craftID: 4294079290

#2 - 01/07/2021 06:45 AM - dok_377

It might have something to do with the craft you trying attach struts to. I can only attach struts normally to the original craft I launched an engineer kerbal with. If I try to do that with the same kerbal, but different craft - struts disappear after the reload. Only a few struts stayed. Very strange.

#3 - 04/05/2021 02:05 PM - dpirch

The bug is still present in 1.11.2.

#4 - 04/07/2021 10:42 PM - dpirch

This seems to happen when the strut is from a different launch than the target part it connects to (the second-click part).

To reproduce this:

1. launch a rover, drive it away to clear the runway
2. launch a command module with an engineer with a strut
3. have the engineer walk to the rover and connect the strut to it somewhere
4. save and reload -> the strut is not connected anymore.

Apparently the target part is identified by its *cid* in the save file, but in docked vessels the *cid* may not be unique (for example when launching the same ship twice and docking them), so the game probably looks for a part which also has the same *mid* as the strut... which was ok before there was an EVA construction mode because all parts from the same launch (including struts stored in containers) have the same *mid*. But now we can add a strut with a different *mid*, which will result in something like this:

```
            PART
            {
                name = Mark2Cockpit
                cid = 4293887110
                uid = 2609479683
                mid = 561745801
```

```
            ...
        PART
        {
            name = strutConnector
            cid = 4293534200
            uid = 3183770596
            mid = 1311823345
            ...
            PARTDATA
            {
                tgt = 4293887110
                ...
```

When loading this, it logs

"[CompoundPart]: Part: CompoundPart craftID: 4293534200 No target found with craftID: 4293887110"

to Player.log and the strut isn't connected anymore. After editing the save file and changing the *mid* of the strut to that of the target part, it loads correctly.

#5 - 04/26/2021 05:47 PM - xmnovotny

It's 4 months without response from KSP team even there was all investigated and the cause was found.
So I had to learn how KSP mods works and fix this annoying bug myself.
You can download it here: https://github.com/xmnovotny/KSP-CModuleLinkedMeshFix
Thanks to dpirch for finding easy way how to fix it.

#6 - 06/28/2021 07:30 PM - odin

Interesting.

I'd noticed that there was a link between the vessels being launched together and struts sticking to them, but the problem (and solution) seems to be simpler than I'd expected. It seems odd that this bug isn't getting more traction.

#7 - 06/30/2021 06:09 PM - lhervier

The problem is that struts are referencing their target part using a CraftID (instead of - for example - the FlightId) in their "tgt" attribute. At runtime, KSP will then use the strut's MissionID and the tgt to find the target. It works well even when a vessel is docked to another instance of itself.

But with EVA Construction Mode, this produces the described bug because you can link a strut to a part that does not have the same MissionID. But that's not enough...

It seems that there is also a problem when adding parts stacked in the same inventory location.

On the newly attached part, the game will :
- Set a MissionID to "0" (it seems that it only set the MissionID on struts... with the wrong value, ok)
- Keep the CraftID of the part present in the inventory location

So, when adding two parts from the same inventory location, they will have the same CraftID and MissionID.
And now, if you try to link a strut to this new part, this will fail, because the MissionID/CraftID couple associated with the part is not unique.

Before seeing your plugin, I made one myself which takes into account the two facets of the problem. But mine is not solving the problem in existing savegames...

xmnovotny Maybe you can complete your plugin ? If I have time, I may send you a pull request.

Here is my version of the plugin : https://github.com/lhervier/KSP-Bug26942Fix

#8 - 07/25/2021 04:47 AM - kaa253

This bug is also confirmed for 1.12.1 Linux version. It is presumably present in all KSP versions.

Now that Kerbal Joint Reinforcement mod isn't working on account of the Dock Rotate function this bug is game breaking. Reloading a space station with all the EVA struts disconnected just invites in the shake-to-destruction Kraken.

Thanks xmnovotny for your plugin.

#9 - 08/04/2021 06:47 PM - dpirch

Seems to be fixed in 1.12.2!

The changelog says "Fix compound parts losing their connections when edited in EVAConstruction mode with dropped parts."

I can't reproduce the problem anymore with the steps from my comment #4. In the save file struts now have a "tpersID" value referencing the target's persistentId, which likely solves the problem.

Files

persistent.sfs	3.7 MB	12/29/2020	kewyn.ryan@gmail.com
20201229101608_1.jpg	186 KB	12/29/2020	kewyn.ryan@gmail.com
20201229101646_1.jpg	191 KB	12/29/2020	kewyn.ryan@gmail.com
20201229101655_1.jpg	193 KB	12/29/2020	kewyn.ryan@gmail.com
20201229101803_1.jpg	206 KB	12/29/2020	kewyn.ryan@gmail.com
20201229101809_1.jpg	202 KB	12/29/2020	kewyn.ryan@gmail.com
20201229101840_1.jpg	204 KB	12/29/2020	kewyn.ryan@gmail.com
20201229101927_1.jpg	264 KB	12/29/2020	kewyn.ryan@gmail.com