

Kerbal Space Program - Bug #17975

Dumpling and doughnut tanks incorrect mass

03/10/2018 12:36 PM - GoSlash27

Status: Being Worked On	Start date: 03/10/2018
Severity: Low	% Done: 30%
Assignee:	
Category: Parts	
Target version:	
Version: 1.4.0	Language: English (US)
Platform: Windows	Mod Related: No
Expansion:	

Description

The Dumpling tank is listed as .3375 tonnes empty mass in the config file. Should be .01375
The Doughnut is listed as .01, should be .0375

History

#1 - 03/10/2018 01:41 PM - RuBisCO1

- File *ToroidTank.cfg* added
- File *RadialTank_Round.cfg* added
- File *RadialTank_Capsule.cfg* added

Also fuel:ox ratio is incorrect: Normal ratio is 9:11, but the 'R-4' has a ratio of 5:6 and 'R-11' has a ratio of 4:5, these leaves extra fuel/oxide after use.

I have changed the fuel amounts and masses of my tank .cfg files to fix this.

'R-12' Toriod: mass = 0.025

'R-11' Capsule: mass = 0.0375, fuel amount = 40.5 oxidizer amount = 49.5

'R-4' Round: mass = 0.0125, fuel amount = 13.5 oxidizer amount = 16.5

#2 - 03/10/2018 04:21 PM - Renegade

I believe Squad has indicated that they wanted to make *all* LF/O tanks a 9:1 ratio (unfortunately). If this is *still* the case, then it should be more like this:

```
externalTankToroid
  mass = 0.025
  amount = 20.25 // LF
  amount = 24.75 // O
```

```
externalTankCapsule
  mass = 0.0375
  amount = 30.375 // LF
  amount = 37.125 // O
```

```
externalTankRound
  mass = 0.0125
  amount = 10.125 // LF
  amount = 12.375 // O
```

#3 - 03/10/2018 04:27 PM - Nebbie

- Status changed from *New* to *Confirmed*
- % Done changed from 0 to 10

This is a known bug, and at least for the Dumpling is fixed in 1.4.1 according to RoverDude.

#4 - 03/10/2018 05:54 PM - RuBisCO1

Renegade wrote:

I believe Squad has indicated that they wanted to make **all** LF/O tanks a 9:1 ratio (unfortunately). If this is *still* the case, then it should be more like this:

```
externalTankToroid
mass = 0.025
amount = 20.25 // LF
amount = 24.75 // O
```

```
externalTankRound
mass = 0.0375
amount = 30.375 // LF
amount = 37.125 // O
```

```
externalTankCapsule
mass = 0.0125
amount = 10.125 // LF
amount = 12.375 // O
```

Well aside for the 9:1 mass ratios the numbers you provide makes no sense for the size of the tanks: I think you need to switch 'round' and 'capsule'. Also there is the disconcerting nature of how the 'round' tank is bigger than the old Oscar-B tank yet holds less.

#5 - 03/11/2018 04:43 PM - Renegade

I've fixed the reversal issue there.

I actually just used your dry mass figures and recomputed for 9:1. The Oscar-B probably has too much fuel anyhow, as it's about 1/6th of the volume (roughly) of a FT-100 and yet holds 40% of the fuel (1/2.5 fuel vs. 1/4 or 1/6 vol).

I thought 1.4 was supposed to involve a part balance and sanity pass, but I think that was either skipped or coming in **1.4.1**. Tail fins (even the craptastic AV-T1 winglet) are still more expensive than a rocket engine (500x3 or 500x4 of those > 1200 fund T-45?? the heck?).

#6 - 03/12/2018 06:11 PM - Nebbie

There was a balance pass done over Xenon and Monoprop tanks. I think they just forgot to do it on the new small LFO tanks. There has been no talk of fixing relative part costs.

#7 - 03/12/2018 06:17 PM - Squelch

- Status changed from Confirmed to Being Worked On

- % Done changed from 10 to 30

#8 - 03/12/2018 10:58 PM - RuBisCO1

- File deleted (ToroidTank.cfg)

#9 - 03/12/2018 10:58 PM - RuBisCO1

- File deleted (RadialTank_Round.cfg)

#10 - 03/12/2018 10:59 PM - RuBisCO1

- File deleted (RadialTank_Capsule.cfg)

#11 - 03/12/2018 11:06 PM - RuBisCO1

This all depends on what you guys want to do with the wet:dry ratio, if you want to keep it at 9:1 or not and also there is how the Oscar-B tank simply holds too much fuel compared to these tanks. To be in line with the Oscar-B these are the numbers to use:

R-4 'Dumpling'	R-11 'Baguette'	R-12 'Doughnut'	Oscar-B	
Wet Mass	0.225	0.675	0.3375	0.225
Dry Mass	0.025	0.075	0.0375	0.025
Wet:Dry Ratio	9:1	9:1	9:1	9:1
Fuel	18	54	27	18
Ox	22	66	33	22
Fuel:Ox Ratio	9:11	9:11	9:11	9:11
Prop Mass	0.2	0.6	0.3	0.2

If on the other hand the Oscar-B was to be cut to half its present fuel load then these numbers would make sense as the Dumpling is 133% the volume of the Oscar-B, and the Baguette is 400% the volume of the Oscar-B:

R-4 'Dumpling'	R-11 'Baguette'	R-12 'Doughnut'	Oscar-B	
Wet Mass	0.1485	0.4455	0.3375	0.1125
Dry Mass	0.0165	0.0495	0.0375	0.0125
Wet:Dry Ratio	9:1	9:1	9:1	9:1

Fuel	11.88	35.64	27	9
Ox	14.52	43.56	33	11
Fuel:Ox Ratio	9:11	9:11	9:11	9:11
Prop Mass	0.132	0.396	0.3	0.1

#12 - 03/12/2018 11:09 PM - RuBisCO1

- File KSP gold tank parameters.ods added

#13 - 03/12/2018 11:10 PM - RuBisCO1

- File KSP gold tank parameters.xls added

Files

KSP gold tank parameters.ods	17.4 KB	03/12/2018	RuBisCO1
KSP gold tank parameters.xls	11 KB	03/12/2018	RuBisCO1