

## Kerbal Space Program - Bug #24855

### Small asteroids get incorrect mass property (e.g. Class A mass always = 150t, well outside the legal range for Class A)

02/14/2020 03:53 AM - tjandreas

<b>Status:</b>	Resolved	<b>Start date:</b>	02/14/2020
<b>Severity:</b>	Low	<b>% Done:</b>	100%
<b>Assignee:</b>	just_jim		
<b>Category:</b>	Parts		
<b>Target version:</b>	1.10.0		
<b>Version:</b>	1.9.0	<b>Language:</b>	English (US)
<b>Platform:</b>	Linux, OSX, Windows	<b>Mod Related:</b>	No
<b>Expansion:</b>	Core Game		

#### Description

DESCRIPTION: Small asteroids (less than 150t mass) spontaneously increase in mass to 150t upon opening the vessel.

STEPS TO REPRODUCE using the attached save file:

1. Enter Tracking Station.
2. Select the vessel "3.8t asteroid". The Info tab shows the total mass of the asteroid + tractor to be **15.68t**, as expected. [Fig 1]
3. Fly this vessel.
4. Right-click on the asteroid. This shows the expected mass of 3.8t. [Fig 2] However...
5. Switch to the Map screen. Now the Info icon shows a total mass of **161t!** [Fig 3]
6. Return to the Tracking Station. The total vessel mass now registers as **161t.** [Fig 4]
7. Save and exit KSP. The updated save file shows the affected PotatoRoid part now has a mass property of 150t.

The save file includes two other small asteroids <150t that show this behavior, as well as two large asteroids >150t which are apparently not affected.

#### OTHER INFO:

- Right-clicking on affected asteroids shows the expected mass; it is the "mass" property of the PotatoRoid part that is incorrectly clamped to 150t.
- Drilling an affected asteroid creates ore as expected, but does not reduce the mass property of the PotatoRoid part below 150t... leading to vessel mass increasing as you drill!
- Behavior first observed after updating to 1.9.
- 64-bit Windows, Steam, no mods.

#### History

##### #1 - 02/14/2020 12:35 PM - just\_jim

- Status changed from New to Confirmed

- Assignee set to just\_jim

- % Done changed from 0 to 10

##### #3 - 03/02/2020 06:47 AM - Dunbaratu

I can confirm - this just happened to me and is causing me to lose a contract and a lot of funds (I built a ship that could capture a Class A asteroid, but the mass of 150t is never what any Class A asteroid should be so of course I didn't build for that and the mission can't be completed.)

I first noticed the problem when the delta-V meter went from my ship having 1500 m/s dV to about 115 m/s dV as soon as I docked with the asteroid. The PAW **claims** the asteroid was only 2.5 tonnes and the resources on it were only 2.22 tonnes. But the actual part's real mass is 150 tonnes, despite the lie the PAW display is showing. I confirmed it was 150 tonnes by comparing the difference in my ship's total mass when docked to it versus not docked to it.

Since the problem will happen on ALL class A asteroids - I cannot complete the contract properly ("Land a newly discovered Class A asteroid on Kerbin") without building a ship that costs more than the contract reward (the reward **thinks** it's an easy task when it's actually very hard because of the 150t bug).

##### #4 - 03/03/2020 06:20 PM - Dunbaratu

- Subject changed from Small asteroids get incorrect mass property to Small asteroids get incorrect mass property (Class A mass always = 150t, well

outside the legal range for Class A)

#### #5 - 03/03/2020 06:21 PM - Dunbaratu

- Subject changed from Small asteroids get incorrect mass property (Class A mass always = 150t, well outside the legal range for Class A) to Small asteroids get incorrect mass property (e.g. Class A mass always = 150t, well outside the legal range for Class A)

#### #6 - 03/09/2020 05:32 AM - tjandreas

POSSIBLE WORKAROUND by editing game data files:

1. Make a backup of your primary save file.
2. In your KSP install directory, navigate to the directory `{KSP_ROOT}/GameData/Squad/Parts/Misc/PotatoRoid/`
3. Make a backup of the part data file `part.cfg`.
4. Open `part.cfg` in a text editor. Around line 21, a section begins  
21: `// --- standard part parameters ---`  
22: `mass = 150`  
23: `dragModelType = default`

5. Comment out the mass property on line 22 with two backslashes.

- ```
21: // --- standard part parameters ---  
22: //mass = 150  
23: dragModelType = default
```

6. Save and exit.

After making these changes, I can now launch KSP and do the following:

- Fly a craft attached to an existing Class-A/C asteroid. Assuming this asteroid did not already have the incorrect mass written to the save file, the asteroid keeps the expected mass.
- Dock with a new Class-C asteroid. As far as I can tell, the asteroid gets the expected mass.

@Dunbaratu, can you try this workaround and see if it helps your situation?

#### #7 - 03/09/2020 07:47 PM - dave-m

- Platform Linux added

Hi,

thanks for this hint. I tried it and it apparently solved the problem for me.

tjandreas wrote:

POSSIBLE WORKAROUND by editing game data files:

5. Comment out the mass property on line 22 with two backslashes.  
21: `// --- standard part parameters ---`  
22: `//mass = 150`  
23: `dragModelType = default`

#### #8 - 03/25/2020 12:39 AM - KerbalabreK

It happened on mine too. Definitely destroyed my mission. It shows that the asteroid is 3t but in fact it's way over 100t.

#### #9 - 05/19/2020 03:44 PM - channsoden

I also got this bug. As it was my first ever asteroid I was quite confused and I struggled for a long time before realizing it's mass was 30x larger than I thought. The work-around worked for me, and although it should be obvious I should note for others that a game restart is required.

#### #10 - 05/19/2020 09:40 PM - Neilski

Wow, over 3 months now... where does the time go.

I chose to just stop playing (I had a bunch of asteroid missions) and wait for the fix to come in, rather than patch the data. Turns out I've been waiting a lot longer than I expected :-S

#### #11 - 06/07/2020 07:56 AM - niquil

- Platform OSX added

#### #12 - 06/18/2020 04:02 PM - krillz

This happened to me as well. Said mass was 2.7 tons when I right clicked on the captured asteroid, but my delta-v went from like 1000 to 50 and kerbal engineer mod said my ship mass went up by 150 tons.

**#13 - 07/01/2020 02:47 PM - Wolvyreen**

I wasted 3 days trying to figure out why I was not able to complete the scenario only to find that this bug was causing all my headaches. I see now that update 1.10 has dropped without this being attended to. Very frustrating indeed!!

**#14 - 07/01/2020 10:16 PM - tjandreas**

**This bug appears RESOLVED by the 1.10 update.**

~~I was fully ready to come on and put Squad on blast if it was true this issue was not resolved in 1.10. However...~~

The asteroid mass issue is mentioned in the 1.10 Release Notes:

**Bug fixes**

...

- Fix asteroids having incorrect mass when docking.

To verify this, I launched the game and docked with an **undisturbed** Class C asteroid under the 150t limit. The save file shows the asteroid mass is correct.

@Wolvyreen, the bugfix in 1.10 only stops asteroids being assigned incorrect mass from this point forward. If you docked with an affected asteroid before the bugfix, the incorrect mass has already been written to your save file. The bugfix does not automatically undo this (my guess is it would complicate the fix and risk unintended changes). If you want to fix an asteroid that already has the incorrect mass, you can try manually editing the PotatoRoid's mass property in the save file (make a backup first).

Any other users can confirm this issue is resolved?

**#15 - 07/03/2020 10:51 AM - just\_jim**

- Status changed from Confirmed to Being Worked On
- % Done changed from 10 to 30

**#16 - 07/03/2020 10:52 AM - just\_jim**

- Status changed from Being Worked On to Ready to Test
- Target version set to 1.10.0
- % Done changed from 30 to 80

This should be working now in 1.10

**#17 - 07/06/2020 08:53 AM - Wolvyreen**

[tjandreas](#), Thank you for your explanation :-). That is indeed what had happened. All is good in the world again.

**#18 - 07/18/2020 02:19 AM - tjandreas**

The fix for this bug has introduced a related bug in 1.10, [#25730](#). Every asteroid in the game is affected.

**#19 - 08/17/2020 08:49 PM - just\_jim**

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

**#20 - 12/18/2020 12:42 PM - svpluto2**

tjandreas wrote:

The fix for this bug has introduced a related bug in 1.10, [#25730](#). Every asteroid in the game is affected.

This hasn't been fixed on console yet.

**Files**

|                |        |            |           |
|----------------|--------|------------|-----------|
| fig1.jpg       | 224 KB | 02/14/2020 | tjandreas |
| fig2.jpg       | 334 KB | 02/14/2020 | tjandreas |
| fig3.jpg       | 219 KB | 02/14/2020 | tjandreas |
| fig4.jpg       | 236 KB | 02/14/2020 | tjandreas |
| persistent.sfs | 465 KB | 02/14/2020 | tjandreas |