

Kerbal Space Program - Feedback #24577

Mk2 and Mk3 parts are unbalanced...

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Status:	New		
Severity:	Low		
Assignee:			
Category:	Parts		
Target version:			
Version:	1.8.1	Language:	English (US)
Platform:	Windows	Mod Related:	No
Expansion:	Core Game		

Description

I like the looks of the Mk2 and Mk3, however it is difficult to build with them since they are often quite a bit heavier relative to other parts.

Most of the fuel tanks in KSP store 1600 fuel (or fuel+oxidizer) per dry ton except the Mk2 and Mk3 tanks and the C7 adaptor that are about 1400 fuel per dry ton and small tanks with various numbers equal to or below 1600. IMO, standardizing all at 1600 per dry ton would be a good idea although I can see the reasoning of the small tanks being less (however I don't they they should differ from each other as much as they do). Maybe the Mk2 and Mk3 should be a bit less to account for the shape, but not that much less IMO. The Mk2 tanks store exactly as much fuel as the 1.25m tank of the same length while they look like they should store quite a bit more and the Mk3 tanks store only 25% more (5000) than the slightly shorter stack of Rockomax X200-32 plus X200-8 (4000) while they look like they should store a bit more than the Kerbodyne S3-2500 (7200). So I think they should both be heavier and store quite a bit more fuel. I suggest for the Mk2 regular size 1200 fuel at 6.75t total mass (half for the short). For Mk3 regular size tanks 7360 fuel at 41.4t total mass (half for the short). I didn't look at the adapters but they should also be adjusted to hold fuel proportional to size and weigh in at 1600 fuel per dry ton. Most (maybe all?) of the adapters other than Mk2, Mk3, and C7 are already at 1600 fuel per dry ton.

The Mk3 tanks look like they have a 1.25m empty tube in the middle that kerbals can walk through so to account for that maybe subtract 1000 fuel and 5t (based on FL-T800 plus FL-T200 that is almost the same length as the Mk3 tank). That would leave it at a bit over 1382 fuel per dry ton, a bit below the current value; I guess this could be the reasoning for the current fuel per dry ton stat, however that would still leave it at 6360-ish fuel vs the current 5000. Maybe that tube makes sense for in atmosphere use of the cargo ramp in some cases, but in most of my designs there is nothing to reach that way and it is just wasted space. Maybe variants with and without the center tube would make sense. Similarly, the Mk2 currently looks like there is just a TL-T800 in the middle but I'm not sure why it should be like that. I'd suggest a slight visual change along with the capacity change I suggested, or maybe in both cases just change a new variant to avoid breaking current designs.

For cargo bays, the Mk2 seem reasonable compared to the 1.25m and 2.5m service bays and airstream shells. The Mk3 cargo bays are much heavier. It looks like the smallest CRG-25 should be 1t, 2t and 4t for the CRG-50 and CRG-100, and 3t for the Mk3 Cargo Ramp. Currently the CRG-25 is 1.5t.

The Mk3 Engine Mount is also too heavy compared to engine plates; the similar diameter 3.75m engine plate is only .07t. There is extra material on the engine mount (more than seems necessary, maybe it should store some fuel or have a cargo bay or just not be so big) but .15t or .2t seems reasonable for the current part (currently .7t).

Passenger carriers look ok to me for Mk2 and Mk3 is if anything too light for a change (currently 6.5t). Making the Mk3 Passenger Module 8t would make it equivalent mass to 4x Mk2 crew cabins that would also hold 16 passengers. I would also suggest making the PPD-10 Hitchiker Storage Container 2t (currently 2.5t) and with these changes all would be .5t per passenger.

The Mk2 Clamp-O-Tron seems good. It looks like the Inline Clamp-O-Tron should be .2t rather than .3t.

I think the Mk2 and Mk3 command pods are ok. For other command pods, I'd say the KV-3 should be a larger 1.875m part and the PPD-12 Cupola should hold 2 kerbals at the same size and weight. The Cupola is another part that I would love to use more but is very heavy currently.