

Engineering Report 164.7

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Date: 02/28/2016 at 6:30p.m.

Crew Engineer Name: Louis Maller

Diesel – 14% (a big dip from the last reading)

Propane – 51%

Gasoline (5 Gallon containers for ATV) – 1 full container, one empty  
(which was placed in the trailer)

Water (trailer) measured in cm from the bottom– 42in / 42in i.e.  
106.6cm/106.6cm from the bottom (full)

Water (static) measured in cm from the top – 31.4in / 42in i.e.  
79.7cm/106.6cm from the top

Trailer to Static Pump used – 0in i.e. 0cm

Water (loft) – 9.2 gallons i.e. 35 liters

Static to Loft Pump used – 15.85 gallons i.e. 60 liters

Water Meter: 105 703.5

Atv # Oil Checked: all ATVs full

Atv # Fuel Used Gals: 1.5 gallons i.e. 5.6 liters

Atv # Tires Status: No tire problems

Atv # Hours Used Day: ATVs used around 1h

Atv # Notes and Comments: The ATVs were used during EVA#5

ATV#1 not used

ATV#2 OK

ATV#3 OK

ATV#4 used during EVA, but has problems changing gears, and no parking break

Red ATV OK

Summary of Engineering activities:

Backpack:

The Backpack #1 which had its battery replaced yesterday failed to work today. But it doesn't seem to be a battery problem but actually a fan problem.

Camille and the crew suggest trying to make a new backpack with the spare parts we have. If we can't do that we will ask for permission to maybe use parts from backpack #1. We think we won't use backpack #1 during further EVAs since it isn't fully functional.

Questions and Concerns to Mission Support:

Water:

We are also trying to track precisely our water consumption and would like to know what is your method of calculus for our daily per capita consumption? Because we can use the static to loft measure, or the variation of the volume in the static tank, or the measure of the water meter. By the way, what is the unit of the water meter? Because it is written "US gallons" on it, but we did a test during a crewmember shower, using the level in the static tank before and after his shower, comparing it to the water meter, and it seemed like the measure was actually in liters, which is quite bizarre.

I'll try to analyze the data I gathered on our water consumption. We will also use the half flush; we didn't know it existed. Our high per capita consumption might be partly due to the fact that two crewmembers were sick at the beginning of the rotation (and that meant quite a lot of flushing...)

Cheers,

Louis Maller

Crew Engineer for MDRS Supaero Crew 164