

Engineering Report

Date: 02/26/2016 at 6:30p.m.

Crew Engineer Name: Louis Maller

Diesel – 20%

Propane – 54%

Gasoline (5 Gallon containers for ATV) – 2 full containers

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 – 24.5in / 42in i.e.
62.23cm/106.6cm from the top

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

Water (loft) – 15.8 gallons i.e. 60 liters (slight overfill, but no spill)

Static to Loft Pump used – 24.8 gallons i.e. 94 liters

Water Meter: 104 908.4

Atv # Oil Checked: all ATVs full

Atv # Fuel Used Gals: almost no fuel used

Atv # Tires Status: ATVs used today and apparently no tire problem

Atv # Hours Used Day: ATVs used a little bit today for the sake of testing and TV

Atv # Notes and Comments: The ATVs were tested during EVA#5
ATV#1 not tested since it has a bad axle
ATV#2 managed to start and stroll around but it stopped after a few minutes and we weren't able to restart it
ATV#3 OK used during the EVA
ATV#4 OK used during the EVA, some problems for restarting
Red ATV was able to start and was used during the EVA

There was further testing during EVA#5b
ATV#1 not tested since it has a bad axle
ATV#2 Ok, during the morning EVA we should have turned the Res knob to on. Doing that helped a lot
ATV#3 OK
ATV#4 OK
Red ATV OK
Using the ATVs in the morning probably helped a lot

The ATVs were tested during EVA#5b

Summary of Engineering activities:

Engineering check:

The level of the static tank was checked. The levels of Propane and Diesel were also checked.

Rover:

The NorCal Rover is fully operational and has been tested outdoors. It came from the Hab to the EVA team and was able to observe some rocks.

The crew scientist who was indoors told us that they would be interesting to collect, so the EVA team sampled the rocks and sent them back on the rover. (As reported in EVA#5 Report)

Loft tank water filter

The measures for the loft tank water filter have been taken, and the part has been created using CATIA. If you have the exact dimensions of the part so we could be sure that our model is correct that would be great. Otherwise we will proceed with the measures we have taken. We plan on using the 3D printer to print it either this evening or tomorrow. As it seems to require an internet connection we might have to do it tomorrow given our current internet shortage.

Questions and Concerns to Mission Support:

Suspected Leak

We have seen water near the main airlock on the Martian Ground. It looks suspiciously like a leak. It was really wet this morning, and only slightly damp during EVA 5B, so maybe it's not a leak after all, or it was only temporary

Internet

We think that the journalist had an internet device turned on, because we lost a lot of internet between the moment he arrived and the moment he left. So we hope we'll have enough to send all the Reports tonight. We heard that there was a new internet set up today, maybe that's also linked to our problem?

All our devices are either shut down or on flight mode with us regularly checking that they aren't connecting to the WiFi, so it's a bit frustrating.