Eclipse 2019 Maintenance Notes

1.

John Munnerlyn

Kurt,

A relatively busy maintenance day.

Turned on the data system and if functioned fine. No problems with shutdown.

The Vertical winds still have an offset according to Cory and verified by looking at data..

Opened the radome and blew Gust Air from the drain port up to the inlet hole to see if there was anything in the lines. The Top line had a small amount of water come out. The bottom line was clear. I also opened the center port and blew it out, there was a very small amount of water that came out. I do not think any of the amounts of water that I saw would have been enough to totally block a line.

I looked at the Eclipse TF01 and OTREC Test data and I do see a 0.5 degree difference between AKRD and Pitch (Chris and I found this looking at data), this difference is also in the ECLIPSE TF01 data. That difference was not in the last SOCRATES ferry flight so I would conclude that between SOCRATES and OTREC Test something changed. Chris said that he looked at the code and there have not been any major changes since the SOCRATES data was processed. I looked at the raw NC files that we pulled during SOCRATES and the NC files from the last two projects. I am not sure if that eliminates a code change issue or not.

Between SOCRATES and OTREC-Test the aircraft was painted and a new erosion boot was put on the nose. Also during the paint job a drill bit was used (by hand) to clean out the holes making sure there was not paint overflow in the holes. Just prior to the OTREC test flights the center (QCR) port was fixed for a leak in the fiberglass tube (sleeve added and larger T used to accommodate that sleeve, this fix was also used in C130 prior to WECAN). Those are the only items that I can find that were done to the radome of the plane between the projects.

We do have a spare A/BDIF transducer. It was originally on the C130 but had a port leak that was fixed by John M. It has not flown since it was repaired. Since it was a leak and it appears to hold pressure there is no reason to suspect that the transducer is not good for flights.

Cory does not want to make any physical changes at this point since we are unable to leak test the system as the transducers in the pressure cart are out for calibration. He feels that we will be able to run a full set of calibration maneuvers on Monday's flight and does not want to risk system integrity before we accomplish that. Hopefully the transducers will be back before we go to Eclipse in late June so if a swap is desired we can run leak checks at that time.

I see two options at this point once we can run leak checks. We could remove the current ADIFR and pull the fittings out of the ports and see if we can see anything wrong (something blocking the port or just junk in it), or we can replace it with the spare, fly and see if that changes the error between AKRD and PITCH. Both of theses option would require a leak check to make sure we get everything tight before a flight to do maneuvers and calibrate the wind measurements.

Hope this helps some.

John

5-19-2019

All,
Relatively uneventful maintenance day. We set up the light source on the Genie lift and let the project scientists work. At the end of the day, they asked for permission to disconnect the LN2 fill hose after the last fill during flight. They believe the hose is transmitting vibration to their instrument and would like to isolate their instrument better. I conferred with the available mech (Matt) and we agreed to add an adele to the wall to act as a hook for the hose connector. Since pullout is at 6:30, I will be here at 6AM unless otherwise instructed.

John M.

- Reply
- Like
- May 19, 2019

2. 

John Munnerlyn

06/04/19

Replaced ADIFR transducer with spare. New is S/N78354. This was done due to 0.5 degree offset in attack angle. If this does not fix the problem the radome has changed an they will need new coefficiants. Broke all lines up to lines out of environmental box.

- Reply

- Like
- Jun 20, 2019

3. 

John Cowan

6/27/19

Cowan

Basic maintenance day today. We got everything set up and moved the plane around to see the afternoon sun which burned through the marine layer. We verified that our camera is working and in focus. Got the pump set up so they could pump down and verified that we had all the fitting for the LN2 setup.

No issues with the data system. We did not try satcom but it has been working fine. Will run a more though test tomorrow.

No issues to report.

NEW NOTES IN BODY START HERE.

6/28/19

Taylor noted that the comments section that we have been using is not backed up on the WIKI. So if something happened we might loose the information in the comments. If you scroll Up to the very top of this page and then back down you will see the date stamp for 6/28/19 which was the entry for today.

We are trying to decide how this will all work on the plane. The editor for the main pages is slow to load on Satcom so it might be an issue to use in the field. We will work with it on the project and see how it goes.

Our other option is a new page for each Maintenance day. That could work too and we might mess with it tomorrow and see how much of a pain it is to create new pages on satcom.

I will put a better note up there and paste in some of this information so it is easier to see where we are putting in the new information. I think running it all together will be an issue for finding new information

Basic maintenance day. Ran the data system without any issues. Had a tour from the Embassy. Supported the investigators.

No issues to report.