**Feed Status**

|  |  |
| --- | --- |
| Document last update | 2021-06-28 |
| Feed ser. num. (rev) | 5C4-014-A |
| Last worked on | 2017-06-14 |
| Antenna (previous/current) | 2J, 2E |
| Original build date | 2016-03-01 |
| Number of cooldown cycles | 3 (2017-06-14) |
|  |  |

**Critical Component Summary**

|  |  |
| --- | --- |
| ATA Feed  Control Board | S.N. 14a |
| Sunpower CryoTel GT  Cryocooler | S.N. GT15-79 |
| Sunpower GT Gen II  Cryo Controller | S.N. 50031064047 |
| Pfeiffer Hi Pace 80  Turbo Pump | S.N. 15861528 |
| Pfeiffer TC 110  Electronic Drive Unit | S.N. 74480890 |
| Pfeiffer MVP 006-4  Diaphragm Pump | S.N. 28411642 |
| H.S. Martin  Borosilicate Glass Radome | S.N. 022 |
| Pyramid | S.N. 014 |

**Retrofits**

|  |  |
| --- | --- |
| Temp S. Isolation | X |
| New Wire Harness | X |
| Bellow Removed | X |
| Cryo Tuned | X |
| Firmware 5.4 | X |

**Vibration Measurements**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Before Tuning | Tuned | Re-tune #1 | Re-tune #2 | Re-tune #3 |
| X | 0.37 | 0.07 |  |  |  |
| Y | 0.08 | 0.03 |  |  |  |
| Z | 0.19 | 0.15 |  |  |  |

|  |  |
| --- | --- |
| **Chassis Up-Dates** | **Vac & Cryo Up-Dates** |
| 15 pin Hermetic Feedthur Filter | RTD Wire Routing |
| 48v Through Control Board | Buna-n O-Rings |
| Vibration System (Metal Flex) | Turbo Centering Ring w/Screen |
| Control Board 12v Jumper |  |
| Control Board Firmware 3.12 |  |
| Foreline/Valve Layout Change |  |
|  |  |
|  |  |
|  |  |

**HISTORY**

2016-03-01 Started Chassis & sub-assembly build-up

2016-04-13 Enclosure assembled with SS base plate, Cooler vibration system, Metal Flex bellows 347/304ss, honeycomb vents, ducts & fan.

Wiring, board tray, diaphragm pump & foreline assemblies ready.

2016-04-(18-22) Installed Turbo/Diaphragm pumps, Cryo pump with suspension system.

2016-04-28 Installed temp sensors, wiring harnesses & foreline valve assy.

2016-06-24 Enclosure & PAX case 99% completed.

2016-09-01 Started working on LNA‘s & Group Assy.

2016-10-13 Systems test & firmware & Jumper on to Control board, did Control Board reset & set board to auto mode, 3rd attempt turbo made it to full speed (1-1/2hrs). (vac 90K rpms/10 watts & cryo 268K/80watts)

2016-11-16 Installed Pyramid assembly on SS Base Plate, wiring & coax hooked-up.

Glass Dome installed & Feed ready for pumpdown/cooldown. Started pumpdown

auto mode, Turbo reaches 90k/17watts at 65min mark, *Cryo* starts at 75min mark.

2016-11-17 Feed running fine, Turbo at 90k/12watts, Cryo 65/68K/210watts.

2016-11-18 Powered up Test PAX box, LNA bias turned on, both LNA’s working & biasing normally, Feed ready for testing.

2017-01-20 Started noise testing, Vac & Cryo good, X & Y poles working fine, 4+ dB (data recorded), Feed ready to deliver to HCRO.

2017-02-01 Delivered to HC (2of4), installed on antenna 2J, 24 + 48v power supply

up-dates added to Rim Box. Turbo, Cryo & LNAs working properly, Noise test preformed for X & Y(data saved), left rs-232 adapter cables at Minex, they will not be able to communicate with the Control board, need to send adapter cables to HC for them to install, cable sent on Friday Feb 3rd. (data saved).

2017-02-08 Feed Test Report sent to HCRO (Elin).

**----------------------------------------------------------------------------------------------------------**

2017-05-01 RTD ColdHd temp sensor fluctuating +/- 5K, power fluctuating, sensor now reading 400K some of the time.

2017-06-(13-14) Went to HCRO, shutdown Cryo & Turbo, once Feed warmed-up, bleed off vacuum, on the antenna removed glass dome, installed Coldhd temp sensor with up-dated wire length & support, re-installed glass, started pump & *cooldown,* vac & cryo working fine.